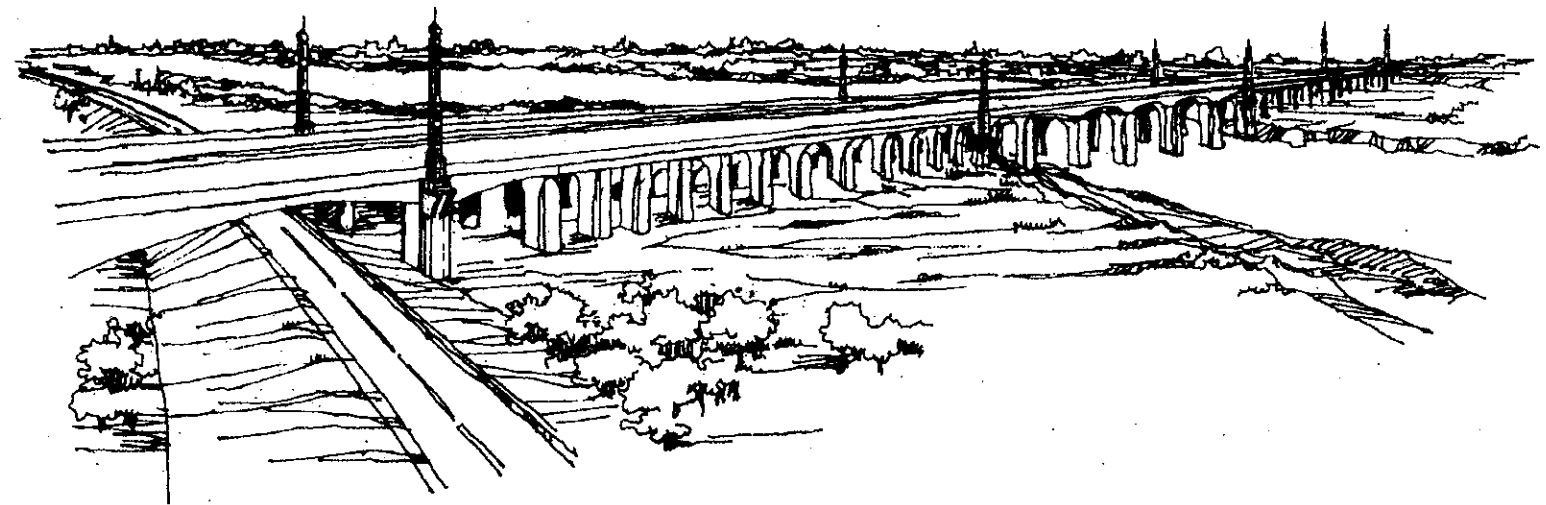


JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  
PROJECT MANAGEMENT UNIT THANG LONG  
MINISTRY OF TRANSPORT  
THE SOCIALIST REPUBLIC OF VIET NAM

# **THE DETAILED DESIGN OF THE RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT IN THE SOCIALIST REPUBLIC OF VIET NAM**

FINAL REPORT

VOLUME VIII : DRAWINGS  
〈 PACKAGE - 2 〉



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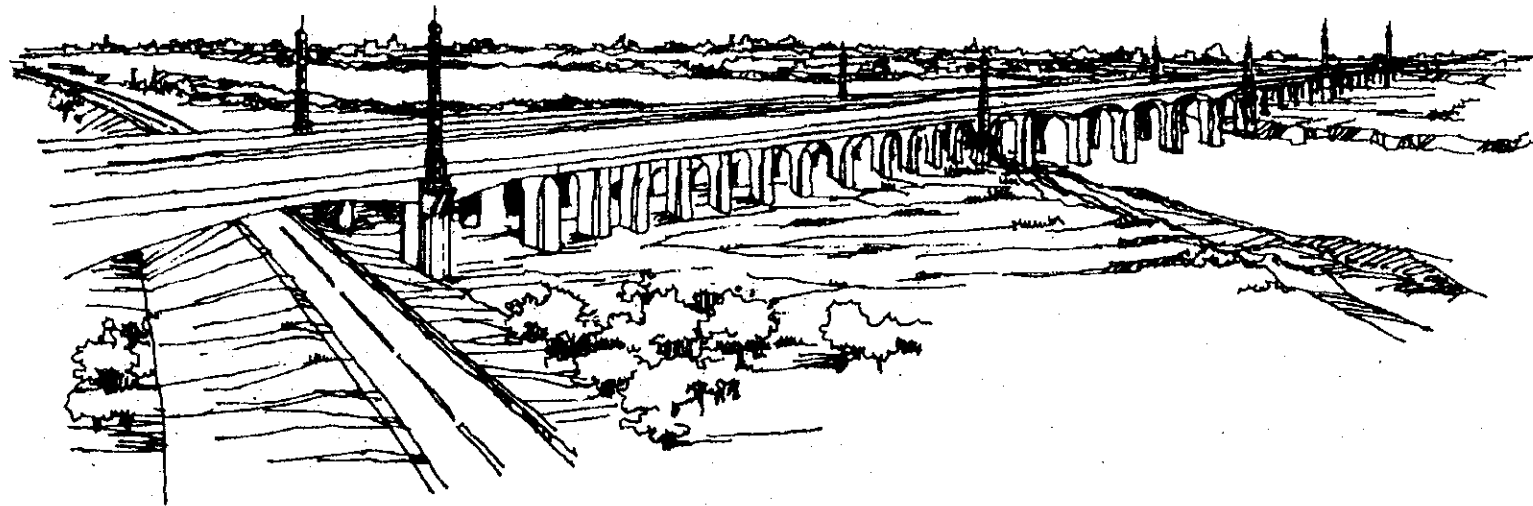
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

PROJECT MANAGEMENT UNIT THANG LONG  
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1158663 [3]

# **A. GENERAL**

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. MATSUDA
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE 	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.3.19	

# DRAWING SCHEDULE (1)

PACKAGE 2	SCALE	DRAWING No. A-1	SHEET No.
DRAWING SCHEDULE (1)			

## A. GENERAL

- A-1 DRAWING SCHEDULE (1)
- A-2 DRAWING SCHEDULE (2)
- A-3 DRAWING SCHEDULE (3)
- A-4 PROJECT LOCATION MAP
- A-5 ABBREVIATION AND SYMBOLS
- A-6 LEGEND
- A-7 GENERAL NOTES

## B. HIGHWAY

### B-1 TYPICAL CROSS SECTION

- B-1-1 TYPICAL CROSS SECTION (STA.9+300)
- B-1-2 TYPICAL CROSS SECTION (STA.10+340)
- B-1-3 TYPICAL CROSS SECTION (STA.11+160)
- B-1-4 TYPICAL CROSS SECTION (TYPE F3 & F4)
- B-1-5 TYPICAL CROSS SECTION (TYPE R2 & R5)
- B-1-6 PAVEMENT DETAIL

### B-2 ALIGNMENT LAYOUT

- B-2-1 ALIGNMENT LAYOUT (STA 9+302.50 - STA 10+000)
- B-2-2 ALIGNMENT LAYOUT (STA 10+000 - STA 10+700)
- B-2-3 ALIGNMENT LAYOUT (STA 10+700 - STA 11+400)
- B-2-4 ALIGNMENT LAYOUT (STA 11+400 - STA 12+100)
- B-2-5 ALIGNMENT LAYOUT (STA 12+100 - STA 12+800)
- B-2-6 ALIGNMENT LAYOUT (STA 12+800 - STA 13+130.802)
- B-2-7 ALIGNMENT LAYOUT (GIA LAM DYKE I.C)
- B-2-8 ALIGNMENT LAYOUT (NH5 I.C)

### B-3 PLAN AND PROFILE

- B-3-1 THROUGH WAY (STA 8+800 - STA 9+300)
- B-3-2 THROUGH WAY (STA 9+300 - STA 10+000)
- B-3-3 THROUGH WAY (STA 10+000 - STA 10+900)
- B-3-4 THROUGH WAY (STA 10+900 - STA 11+400)
- B-3-5 THROUGH WAY (STA 11+400 - STA 12+100)
- B-3-6 THROUGH WAY (STA 12+100 - STA 12+800)
- B-3-7 THROUGH WAY (STA 12+800 - STA 12+831.94)
- B-3-8 GIALAM DYKE INTERCHANGE PLAN
- B-3-9 GIALAM DYKE INTERCHANGE PROFILE (1/2)
- B-3-10 GIALAM DYKE INTERCHANGE PROFILE (2/2)
- B-3-11 NH No.5 INTERCHANGE PLAN
- B-3-12 NH No.5 INTERCHANGE PROFILE (1/2)
- B-3-13 NH No.5 INTERCHANGE PROFILE (2/2)
- B-3-14 FRONTAGE ROAD PROFILE (LEFT SIDE) (1/2)
- B-3-15 FRONTAGE ROAD PROFILE (LEFT SIDE) (2/2)

### B-4 INTERCHANGE PLAN (SCALE 1/1000)

- B-4-1 GIA LAM DYKE INTERCHANGE (1/2)
- B-4-2 GIA LAM DYKE INTERCHANGE (2/2)
- B-4-3 NH No.5 INTERCHANGE (1/2)
- B-4-4 NH No.5 INTERCHANGE (2/2)

### B-5 INTERSECTION

- B-5-1 GIA LAM DYKE ROAD INTERSECTION
- B-5-2 NH No.5 INTERSECTION (1/2)
- B-5-3 NH No.5 INTERSECTION (2/2)

## B-6 SOFT GROUND TREATMENT

- B-6-1 SOFT GROUND TREATMENT (TYPE C)
- B-6-2 SOFT GROUND TREATMENT (TYPE D & E)
- B-6-3 SOFT GROUND TREATMENT (TYPE J & K)

## B-7 LAYOUT OF TRAFFIC SIGNS

- B-7-1 LAYOUT OF TRAFFIC SIGNS (KM. 9+302.50 - KM. 10+000)
- B-7-2 LAYOUT OF TRAFFIC SIGNS (KM. 10+000 - KM. 11+400)
- B-7-3 LAYOUT OF TRAFFIC SIGNS (KM. 11+400 - KM. 12+831.94)
- B-7-4 LAYOUT OF TRAFFIC SIGNS FOR NH No.5 INTERCHANGE
- B-7-5 LAYOUT OF TRAFFIC SIGNS FOR GIA LAM DYKE INTERSECTION
- B-7-6 LAYOUT OF TRAFFIC SIGNS FOR NH No.5 INTERSECTION (1)
- B-7-7 LAYOUT OF TRAFFIC SIGNS FOR NH No.5 INTERSECTION (2)

## C. BRIDGE

### C-1 THROUGHWAY

#### C-1-1 GENERAL VIEW

- C-1-1-1 GENERAL VIEW OF CAU BAY CANAL BRIDGE
- C-1-1-2 GENERAL VIEW OF GIA LAM ROAD BRIDGE
- C-1-1-3 GENERAL VIEW OF NH-NOS FLYOVER

#### C-1-2 SUPERSTRUCTURE ( BOX GIRDER AND PC I - GIRDER )

##### C-1-2a BOX GIRDER

- C-1-2a-1 BOX GIRDER BRIDGE GENERAL ARRANGEMENT
- C-1-2a-2 SIMPLE SPAN BRIDGE, STRUCTURAL DIMENSIONS (1/2)
- C-1-2a-3 SIMPLE SPAN BRIDGE, STRUCTURAL DIMENSIONS (2/2)
- C-1-2a-4 SIMPLE SPAN BRIDGE, TENDON ARRANGEMENT (1/2)
- C-1-2a-5 SIMPLE SPAN BRIDGE, TENDON ARRANGEMENT (2/2)
- C-1-2a-6 SIMPLE SPAN BRIDGE, REINFORCEMENT ARRANGEMENT (1/3)
- C-1-2a-7 SIMPLE SPAN BRIDGE, REINFORCEMENT ARRANGEMENT (2/3)
- C-1-2a-8 SIMPLE SPAN BRIDGE, REINFORCEMENT ARRANGEMENT (3/3)
- C-1-2a-9 SIMPLE SPAN BRIDGE, REBAR BENDING SCHEDULE (1/3)
- C-1-2a-10 SIMPLE SPAN BRIDGE, REBAR BENDING SCHEDULE (2/3)
- C-1-2a-11 SIMPLE SPAN BRIDGE, REBAR BENDING SCHEDULE (3/3)
- C-1-2a-12 2-SPAN BRIDGE, STRUCTURAL DIMENSIONS (1/2)
- C-1-2a-13 2-SPAN BRIDGE, STRUCTURAL DIMENSIONS (2/2)
- C-1-2a-14 2-SPAN BRIDGE, TENDON ARRANGEMENT (1/3)
- C-1-2a-15 2-SPAN BRIDGE, TENDON ARRANGEMENT (2/3)
- C-1-2a-16 2-SPAN BRIDGE, TENDON ARRANGEMENT (3/3)
- C-1-2a-17 2-SPAN BRIDGE, REINFORCEMENT ARRANGEMENT (1/4)
- C-1-2a-18 2-SPAN BRIDGE, REINFORCEMENT ARRANGEMENT (2/4)
- C-1-2a-19 2-SPAN BRIDGE, REINFORCEMENT ARRANGEMENT (3/4)
- C-1-2a-20 2-SPAN BRIDGE, REINFORCEMENT ARRANGEMENT (4/4)
- C-1-2a-21 2-SPAN BRIDGE, REBAR BENDING SCHEDULE (1/3)
- C-1-2a-22 2-SPAN BRIDGE, REBAR BENDING SCHEDULE (2/3)
- C-1-2a-23 2-SPAN BRIDGE, REBAR BENDING SCHEDULE (3/3)

##### C-1-2b PC I - GIRDER

- C-1-2b-1 DETAIL OF GIA LAM ROAD BRIDGE
- C-1-2b-2 DETAIL OF CAU BAY CANAL BRIDGE
- C-1-2b-3 DETAIL OF NH No.5 FLYOVER ( 1-1 )
- C-1-2b-4 DETAIL OF NH No.5 FLYOVER ( 1-2 )
- C-1-2b-5 DETAIL OF NH No.5 FLYOVER ( 2 )
- C-1-2b-6 DETAIL OF NH No.5 FLYOVER ( 3 )
- C-1-2b-7 DETAIL OF NH No.5 FLYOVER ( 4 )

- C-1-2b-8 DETAIL OF NH No.5 FLYOVER ( 5 )
- C-1-2b-9 DETAIL OF NH No.5 FLYOVER ( 6 )
- C-1-2b-10 DETAIL OF NH No.5 FLYOVER ( 7 )
- C-1-2b-11 DETAIL OF NH No.5 FLYOVER ( 8 )
- C-1-2b-12 DETAIL OF NH No.5 FLYOVER ( 9 )
- C-1-2b-13 DETAIL OF NH No.5 FLYOVER ( 10 )
- C-1-2b-14 DETAIL OF NH No.5 FLYOVER ( 11 )
- C-1-2b-15 DETAIL OF NH No.5 FLYOVER ( 12 )
- C-1-2b-16 DETAIL OF NH No.5 FLYOVER ( 13-1 )
- C-1-2b-17 DETAIL OF NH No.5 FLYOVER ( 13-2 )
- C-1-2b-18 DETAIL OF NH No.5 FLYOVER ( 14 )
- C-1-2b-19 DETAIL OF NH No.5 FLYOVER ( 15 )
- C-1-2b-20 DETAIL OF NH No.5 FLYOVER ( 16 )
- C-1-2b-21 DETAIL OF NH No.5 FLYOVER ( 17 )
- C-1-2b-22 DETAIL OF NH No.5 FLYOVER ( 18 )
- C-1-2b-23 DETAIL OF NH No.5 FLYOVER ( 19 )
- C-1-2b-24 DETAIL OF NH No.5 FLYOVER ( 20 )
- C-1-2b-25 DETAIL OF NH No.5 FLYOVER ( 21 )
- C-1-2b-26 GENERAL VIEW GIRDER
- C-1-2b-27 RE-BAR ARRANGEMENT OF GIRDER ( 1 )
- C-1-2b-28 RE-BAR ARRANGEMENT OF GIRDER ( 2 )
- C-1-2b-29 RE-BAR ARRANGEMENT OF GIRDER ( 3 )
- C-1-2b-30 RE-BAR ARRANGEMENT OF GIRDER ( 4 )
- C-1-2b-31 RE-BAR BENDING SCHEDULE OF GIRDER ( 1 )
- C-1-2b-32 RE-BAR BENDING SCHEDULE OF GIRDER ( 2 )
- C-1-2b-33 RE-BAR BENDING SCHEDULE OF GIRDER ( 3 )
- C-1-2b-34 RE-BAR BENDING SCHEDULE OF GIRDER ( 4 )
- C-1-2b-35 PC CABLE ARRANGEMENT OF GIRDER ( 1 )
- C-1-2b-36 PC CABLE ARRANGEMENT OF GIRDER ( 2 )
- C-1-2b-37 PC CABLE ARRANGEMENT OF GIRDER ( 3 )
- C-1-2b-38 PC CABLE ARRANGEMENT OF GIRDER ( 4 )
- C-1-2b-39 RE-BAR ARRANGEMENT OF DIAPHRAGM ( 1 )
- C-1-2b-40 RE-BAR ARRANGEMENT OF DIAPHRAGM ( 2 )
- C-1-2b-41 RE-BAR ARRANGEMENT OF DIAPHRAGM ( 3 )
- C-1-2b-42 RE-BAR ARRANGEMENT OF DIAPHRAGM ( 4-1 )
- C-1-2b-43 RE-BAR ARRANGEMENT OF DIAPHRAGM ( 4-2 )
- C-1-2b-44 RE-BAR ARRANGEMENT OF DIAPHRAGM ( 5 )
- C-1-2b-45 RE-BAR ARRANGEMENT OF DIAPHRAGM ( 6 )
- C-1-2b-46 RE-BAR ARRANGEMENT OF DIAPHRAGM ( 7-1 )
- C-1-2b-47 RE-BAR ARRANGEMENT OF DIAPHRAGM ( 7-2 )
- C-1-2b-48 RE-BAR ARRANGEMENT OF DIAPHRAGM ( 8 )
- C-1-2b-49 RE-BAR ARRANGEMENT OF DIAPHRAGM ( 9 )
- C-1-2b-50 RE-BAR ARRANGEMENT OF DIAPHRAGM ( 10 )
- C-1-2b-51 RE-BAR ARRANGEMENT OF DECK SLAB ( 1-1 )
- C-1-2b-52 RE-BAR ARRANGEMENT OF DECK SLAB ( 1-2 )
- C-1-2b-53 RE-BAR ARRANGEMENT OF DECK SLAB ( 1-3 )
- C-1-2b-54 RE-BAR ARRANGEMENT OF DECK SLAB ( 1-4 )
- C-1-2b-55 RE-BAR ARRANGEMENT OF DECK SLAB ( 1-5 )
- C-1-2b-56 RE-BAR ARRANGEMENT OF DECK SLAB ( 1-6 )
- C-1-2b-57 RE-BAR ARRANGEMENT OF DECK SLAB ( 1-7 )
- C-1-2b-58 RE-BAR ARRANGEMENT OF DECK SLAB ( 1-8 )
- C-1-2b-59 RE-BAR ARRANGEMENT OF DECK SLAB ( 2-1 )
- C-1-2b-60 RE-BAR ARRANGEMENT OF DECK SLAB ( 2-2 )
- C-1-2b-61 RE-BAR ARRANGEMENT OF DECK SLAB ( 2-3 )
- C-1-2b-62 RE-BAR ARRANGEMENT OF DECK SLAB ( 2-4 )
- C-1-2b-63 RE-BAR ARRANGEMENT OF DECK SLAB ( 2-5 )
- C-1-2b-64 RE-BAR ARRANGEMENT OF DECK SLAB ( 2-6 )
- C-1-2b-65 RE-BAR ARRANGEMENT OF DECK SLAB ( 2-7 )
- C-1-2b-66 RE-BAR ARRANGEMENT OF DECK SLAB ( 2-8 )
- C-1-2b-67 RE-BAR ARRANGEMENT OF DECK SLAB ( 2-9 )
- C-1-2b-68 RE-BAR ARRANGEMENT OF DECK SLAB ( 2-10 )
- C-1-2b-69 RE-BAR ARRANGEMENT OF DECK SLAB ( 2-11 )
- C-1-2b-70 RE-BAR ARRANGEMENT OF DECK SLAB ( 2-12 )
- C-1-2b-71 RE-BAR ARRANGEMENT OF DECK SLAB ( 2-13 )
- C-1-2b-72 RE-BAR ARRANGEMENT OF DECK SLAB ( 2-14 )
- C-1-2b-73 RE-BAR ARRANGEMENT OF DECK SLAB ( 2-15 )

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		S. MATSUDA
PROJECT	RED RIVER BRIDGE (THANH TRU BRIDGE) CONSTRUCTION PROJECT	SIGNATURE
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE
		2000. 3. 14

# DRAWING SCHEDULE (2)

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		A-2	
DRAWING SCHEDULE (2)			

## C-1-3 SUBSTRUCTURE

### C-1-3a CAU BAY CANAL BRIDGE

- C-1-3a-1 DETAIL OF ABUTMENT A1
- C-1-3a-2 BAR ARRANGEMENT OF ABUTMENT A1(1)
- C-1-3a-3 BAR ARRANGEMENT OF ABUTMENT A1(2)
- C-1-3a-4 BAR ARRANGEMENT OF ABUTMENT A1(3)
- C-1-3a-5 BAR ARRANGEMENT OF ABUTMENT A1(4)
- C-1-3a-6 DETAIL OF PIER P1R, P4R, P5L
- C-1-3a-7 BAR ARRANGEMENT OF PIER P1R, P4R, P5L(1)
- C-1-3a-8 BAR ARRANGEMENT OF PIER P1R, P4R, P5L(2)
- C-1-3a-9 BAR ARRANGEMENT OF PIER P1R, P4R, P5L(3)
- C-1-3a-10 DETAIL OF PIER P1L, P4L, P3R(1)
- C-1-3a-11 DETAIL OF PIER P1L, P4L, P3R(2)
- C-1-3a-12 DETAIL OF PIER P2L, P2R(1)
- C-1-3a-13 DETAIL OF PIER P2L, P2R(2)
- C-1-3a-14 BAR ARRANGEMENT OF PIER P1L, P4L, P3R, P2L, P2R(1)
- C-1-3a-15 BAR ARRANGEMENT OF PIER P1L, P4L, P3R, P2L, P2R(2)
- C-1-3a-16 BAR ARRANGEMENT OF PIER P1L, P4L, P3R, P2L, P2R(3)
- C-1-3a-17 BAR ARRANGEMENT OF PIER P1L, P4L, P3R, P2L, P2R(4)
- C-1-3a-18 DETAIL OF PIER P3L
- C-1-3a-19 BAR ARRANGEMENT OF PIER P3L(1)
- C-1-3a-20 BAR ARRANGEMENT OF PIER P3L(2)
- C-1-3a-21 BAR ARRANGEMENT OF PIER P3L(3)
- C-1-3a-22 BAR ARRANGEMENT OF PIER P3L(4)
- C-1-3a-23 DETAIL OF ABUTMENT A2(1)
- C-1-3a-24 DETAIL OF ABUTMENT A2(2)
- C-1-3a-25 OTHER DETAIL OF ABUTMENT A1-A2
- C-1-3a-26 BAR ARRANGEMENT OF ABUTMENT A2(1)
- C-1-3a-27 BAR ARRANGEMENT OF ABUTMENT A2(2)
- C-1-3a-28 BAR ARRANGEMENT OF ABUTMENT A2(3)
- C-1-3a-29 DETAIL OF D=100CM CAST-IN PLACE CONCRETE PILE
- C-1-3a-30 DETAIL OF D=150CM CAST-IN PLACE CONCRETE PILE
- C-1-3a-31 BAR ARRANGEMENT OF D=100, 150CM CAST-IN PLACE CONCRETE PILE

### C-1-3b GIA LAM ROAD BRIDGE

- C-1-3b-1 DETAIL OF ABUTMENT A1, A2
- C-1-3b-2 BAR ARRANGEMENT OF ABUTMENT A1, A2(1)
- C-1-3b-3 BAR ARRANGEMENT OF ABUTMENT A1, A2(2)
- C-1-3b-4 BAR ARRANGEMENT OF ABUTMENT A1, A2(3)
- C-1-3b-5 DETAIL OF D=150CM CAST-IN PLACE CONCRETE PILE

### C-1-3c NH No.5 FLYOVER

- C-1-3c-1 DETAIL OF ABUTMENT A1
- C-1-3c-2 BAR ARRANGEMENT OF ABUTMENT A1 (1)
- C-1-3c-3 BAR ARRANGEMENT OF ABUTMENT A1 (2)
- C-1-3c-4 BAR ARRANGEMENT OF ABUTMENT A1 (3)
- C-1-3c-5 BAR ARRANGEMENT OF ABUTMENT A1 (4)
- C-1-3c-6 DETAIL OF PIERS P1, P2, P3, P4
- C-1-3c-7 DETAIL OF PIER P5
- C-1-3c-8 DETAIL OF PIER P6
- C-1-3c-9 DETAIL OF PIER P7
- C-1-3c-10 DETAIL OF PIER P8 (1)
- C-1-3c-11 DETAIL OF PIER P8 (2)
- C-1-3c-12 DETAIL OF PIER P9
- C-1-3c-13 DETAIL OF PIER P10
- C-1-3c-14 DETAIL OF PIER P11 (1)
- C-1-3c-15 DETAIL OF PIER P11 (2)
- C-1-3c-16 DETAIL OF PIER P12
- C-1-3c-17 DETAIL OF PIER P13 (1)
- C-1-3c-18 DETAIL OF PIER P13 (2)
- C-1-3c-19 DETAIL OF PIER P14 (1)
- C-1-3c-20 DETAIL OF PIER P14 (2)
- C-1-3c-21 DETAIL OF PIER P15 (1)

- C-1-3c-22 DETAIL OF PIER P15 (2)
- C-1-3c-23 DETAIL OF PIER P16 (1)
- C-1-3c-24 DETAIL OF PIER P16 (2)
- C-1-3c-25 DETAIL OF PIER P17 (1)
- C-1-3c-26 DETAIL OF PIER P17 (2)
- C-1-3c-27 DETAIL OF PIER P18 (1)
- C-1-3c-28 DETAIL OF PIER P18 (2)
- C-1-3c-29 DETAIL OF PIER P18 (3)
- C-1-3c-30 DETAIL OF PIER P19 (2)
- C-1-3c-31 DETAIL OF PIERS P20, P21
- C-1-3c-32 BAR ARRANGEMENT OF PIERS P1, P2, P3, P4, P5, P6, P7, P8R, P9R, P10R (1)
- C-1-3c-33 BAR ARRANGEMENT OF PIERS P1, P2, P3, P4, P5, P6, P7, P8R, P9R, P10R (2)
- C-1-3c-34 BAR ARRANGEMENT OF PIERS P1, P2, P3, P4, P5, P6, P7, P8R, P9R, P10R (3)
- C-1-3c-35 BAR ARRANGEMENT OF PIERS P1, P2, P3, P4, P5, P6, P7, P8R, P9R, P10R (4)
- C-1-3c-36 BAR ARRANGEMENT OF PIERS P1, P2, P3, P4, P5, P6, P7, P8R, P9R, P10R (5)
- C-1-3c-37 BAR ARRANGEMENT OF PIERS P1, P2, P3, P4, P5, P6, P7, P8R, P9R, P10R (6)
- C-1-3c-38 BAR ARRANGEMENT OF PIERS P1, P2, P3, P4, P5, P6, P7, P8R, P9R, P10R (7)
- C-1-3c-39 BAR ARRANGEMENT OF PIERS P1, P2, P3, P4, P5, P6, P7, P8R, P9R, P10R (8)
- C-1-3c-40 BAR ARRANGEMENT OF PIER P8L (1)
- C-1-3c-41 BAR ARRANGEMENT OF PIER P8L (2)
- C-1-3c-42 BAR ARRANGEMENT OF PIER P8L (3)
- C-1-3c-43 BAR ARRANGEMENT OF PIER P8L (4)
- C-1-3c-44 BAR ARRANGEMENT OF PIER P8L (5)
- C-1-3c-45 BAR ARRANGEMENT OF PIERS P9L, P14R (1)
- C-1-3c-46 BAR ARRANGEMENT OF PIERS P9L, P14R (2)
- C-1-3c-47 BAR ARRANGEMENT OF PIERS P9L, P14R (3)
- C-1-3c-48 BAR ARRANGEMENT OF PIERS P9L, P14R (4)
- C-1-3c-49 BAR ARRANGEMENT OF PIERS P10L, P11L, P13L, P14L, P15L, P15R, P16L, P17L (1)
- C-1-3c-50 BAR ARRANGEMENT OF PIERS P10L, P11L, P13L, P14L, P15L, P15R, P16L, P17L (2)
- C-1-3c-51 BAR ARRANGEMENT OF PIERS P10L, P11L, P13L, P14L, P15L, P15R, P16L, P17L (3)
- C-1-3c-52 BAR ARRANGEMENT OF PIERS P10L, P11L, P13L, P14L, P15L, P15R, P16L, P17L (4)
- C-1-3c-53 BAR ARRANGEMENT OF PIERS P10L, P11L, P13L, P14L, P15L, P15R, P16L, P17L (5)
- C-1-3c-54 BAR ARRANGEMENT OF PIERS P10L, P11L, P13L, P14L, P15L, P15R, P16L, P17L (6)
- C-1-3c-55 BAR ARRANGEMENT OF PIER P11R (1)
- C-1-3c-56 BAR ARRANGEMENT OF PIER P11R (2)
- C-1-3c-57 BAR ARRANGEMENT OF PIER P11R (3)
- C-1-3c-58 BAR ARRANGEMENT OF PIER P11R (4)
- C-1-3c-59 BAR ARRANGEMENT OF PIER P11R (5)
- C-1-3c-60 BAR ARRANGEMENT OF PIER P12L (1)
- C-1-3c-61 BAR ARRANGEMENT OF PIER P12L (2)
- C-1-3c-62 BAR ARRANGEMENT OF PIER P12L (3)
- C-1-3c-63 BAR ARRANGEMENT OF PIER P12L (4)
- C-1-3c-64 BAR ARRANGEMENT OF PIER P12R (1)
- C-1-3c-65 BAR ARRANGEMENT OF PIER P12R (2)
- C-1-3c-66 BAR ARRANGEMENT OF PIER P12R (3)
- C-1-3c-67 BAR ARRANGEMENT OF PIER P12R (4)
- C-1-3c-68 BAR ARRANGEMENT OF PIER P13R (1)
- C-1-3c-69 BAR ARRANGEMENT OF PIER P13R (2)
- C-1-3c-70 BAR ARRANGEMENT OF PIER P13R (3)
- C-1-3c-71 BAR ARRANGEMENT OF PIER P13R (4)
- C-1-3c-72 BAR ARRANGEMENT OF PIERS P16R, P17R, P18L (1)
- C-1-3c-73 BAR ARRANGEMENT OF PIERS P16R, P17R, P18L (2)
- C-1-3c-74 BAR ARRANGEMENT OF PIERS P16R, P17R, P18L (3)
- C-1-3c-75 BAR ARRANGEMENT OF PIERS P16R, P17R, P18L (4)
- C-1-3c-76 BAR ARRANGEMENT OF PIERS P16R, P17R, P18L (5)
- C-1-3c-77 BAR ARRANGEMENT OF PIER P18R (1)
- C-1-3c-78 BAR ARRANGEMENT OF PIER P18R (2)
- C-1-3c-79 BAR ARRANGEMENT OF PIER P18R (3)
- C-1-3c-80 BAR ARRANGEMENT OF PIER P18R (4)
- C-1-3c-81 BAR ARRANGEMENT OF PIER P19L (1)
- C-1-3c-82 BAR ARRANGEMENT OF PIER P19L (2)
- C-1-3c-83 BAR ARRANGEMENT OF PIER P19L (3)
- C-1-3c-84 BAR ARRANGEMENT OF PIER P19L (4)
- C-1-3c-85 BAR ARRANGEMENT OF PIERS P19R, P20, P21 (1)
- C-1-3c-86 BAR ARRANGEMENT OF PIERS P19R, P20, P21 (2)
- C-1-3c-87 BAR ARRANGEMENT OF PIERS P19R, P20, P21 (3)
- C-1-3c-88 BAR ARRANGEMENT OF PIERS P19R, P20, P21 (4)

- C-1-3c-89 BAR ARRANGEMENT OF PIERS P19R, P20, P21 (5)
- C-1-3c-90 DETAIL OF ABUTMENT A2
- C-1-3c-91 BAR ARRANGEMENT OF ABUTMENT A2 (1)
- C-1-3c-92 BAR ARRANGEMENT OF ABUTMENT A2 (2)
- C-1-3c-93 BAR ARRANGEMENT OF ABUTMENT A2 (3)
- C-1-3c-94 DETAIL OF D=160CM CAST-IN PLACE CONCRETE PILE (1)
- C-1-3c-95 DETAIL OF D=160CM CAST-IN PLACE CONCRETE PILE (2)
- C-1-3c-96 DETAIL OF D=100CM CAST-IN PLACE CONCRETE PILE (1)
- C-1-3c-97 DETAIL OF D=100CM CAST-IN PLACE CONCRETE PILE (2)
- C-1-3c-98 DETAIL OF D=100CM CAST-IN PLACE CONCRETE PILE (3)
- C-1-3c-99 DETAIL OF D=100CM CAST-IN PLACE CONCRETE PILE (4)
- C-1-3c-100 DETAIL OF D=100CM CAST-IN PLACE CONCRETE PILE (5)
- C-1-3c-101 DETAIL OF D=100CM CAST-IN PLACE CONCRETE PILE (6)
- C-1-3c-102 DETAIL OF D=100CM CAST-IN PLACE CONCRETE PILE (7)
- C-1-3c-103 DETAIL OF D=100CM CAST-IN PLACE CONCRETE PILE (8)
- C-1-3c-104 DETAIL OF D=100CM CAST-IN PLACE CONCRETE PILE (9)
- C-1-3c-105 DETAIL OF D=200CM CAST-IN PLACE CONCRETE PILE (1)
- C-1-3c-106 DETAIL OF D=200CM CAST-IN PLACE CONCRETE PILE (2)

## C-2 RAMP BRIDGE

### C-2-1 GENERAL VIEW

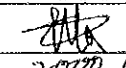
- C-2-1-1 GENERAL VIEW OF A-RAMP BRIDGE
- C-2-1-2 GENERAL VIEW OF B-RAMP BRIDGE

### C-2-2 SUPERSTRUCTURE

- C-2-2-1 DETAIL OF NH No.5 A-RAMP BRIDGE
- C-2-2-2 DETAIL OF NH No.5 B-RAMP BRIDGE
- C-2-2-3 RE-BAR ARRANGEMENT OF A-RAMP BRIDGE
- C-2-2-4 RE-BAR ARRANGEMENT OF B-RAMP BRIDGE

### C-2-3 SUBSTRUCTURE

- C-2-3-1 NH NO.5 FLYOVER RAMP A - DETAIL OF ABUTMENT A1A
- C-2-3-2 NH NO.5 FLYOVER RAMP A - BAR ARRANGEMENT FOR ABUTMENT A1A (1)
- C-2-3-3 NH NO.5 FLYOVER RAMP A - BAR ARRANGEMENT FOR ABUTMENT A1A (2)
- C-2-3-4 NH NO.5 FLYOVER RAMP A - BAR ARRANGEMENT FOR ABUTMENT A1A (3)
- C-2-3-5 NH NO.5 FLYOVER RAMP A - BAR ARRANGEMENT FOR ABUTMENT A1A (4)
- C-2-3-6 NH NO.5 FLYOVER RAMP A - DETAIL OF PIERS P1A, P2A
- C-2-3-7 NH NO.5 FLYOVER RAMP A - BAR ARRANGEMENT FOR PIERS P1A, P2A (1)
- C-2-3-8 NH NO.5 FLYOVER RAMP A - BAR ARRANGEMENT FOR PIERS P1A, P2A (2)
- C-2-3-9 NH NO.5 FLYOVER RAMP A - BAR ARRANGEMENT FOR PIERS P1A, P2A (3)
- C-2-3-10 NH NO.5 FLYOVER RAMP A - BAR ARRANGEMENT FOR PIERS P1A, P2A (4)
- C-2-3-11 NH NO.5 FLYOVER RAMP A - BAR ARRANGEMENT FOR PIERS P1A, P2A (5)
- C-2-3-12 DETAIL OF D=150CM CAST-IN PLACE CONCRETE PILE (1)
- C-2-3-13 DETAIL OF D=150CM CAST-IN PLACE CONCRETE PILE (2)
- C-2-3-14 DETAIL OF D=100CM CAST-IN PLACE CONCRETE PILE (1)
- C-2-3-15 DETAIL OF D=100CM CAST-IN PLACE CONCRETE PILE (2)
- C-2-3-16 NH NO.5 FLYOVER RAMP B - DETAIL OF ABUTMENT A1B
- C-2-3-17 NH NO.5 FLYOVER RAMP B - BAR ARRANGEMENT FOR ABUTMENT A1B (1)
- C-2-3-18 NH NO.5 FLYOVER RAMP B - BAR ARRANGEMENT FOR ABUTMENT A1B (2)
- C-2-3-19 NH NO.5 FLYOVER RAMP B - BAR ARRANGEMENT FOR ABUTMENT A1B (3)
- C-2-3-20 NH NO.5 FLYOVER RAMP B - BAR ARRANGEMENT FOR ABUTMENT A1B (4)
- C-2-3-21 NH NO.5 FLYOVER RAMP B - DETAIL OF PIERS P1B, P2B, P3B
- C-2-3-22 NH NO.5 FLYOVER RAMP B - BAR ARRANGEMENT FOR PIERS P1B, P2B, P3B (1)
- C-2-3-23 NH NO.5 FLYOVER RAMP B - BAR ARRANGEMENT FOR PIERS P1B, P2B, P3B (2)
- C-2-3-24 NH NO.5 FLYOVER RAMP B - BAR ARRANGEMENT FOR PIERS P1B, P2B, P3B (3)
- C-2-3-25 NH NO.5 FLYOVER RAMP B - BAR ARRANGEMENT FOR PIERS P1B, P2B, P3B (4)
- C-2-3-26 NH NO.5 FLYOVER RAMP B - BAR ARRANGEMENT FOR PIERS P1B, P2B, P3B (5)
- C-2-3-27 DETAIL OF D=150CM CAST-IN PLACE CONCRETE PILE (1)
- C-2-3-28 DETAIL OF D=150CM CAST-IN PLACE CONCRETE PILE (2)
- C-2-3-29 DETAIL OF D=100CM CAST-IN PLACE CONCRETE PILE (1)
- C-2-3-30 DETAIL OF D=100CM CAST-IN PLACE CONCRETE PILE (2)

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATANE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		
PROJECT RED RIVER BRIDGE (THANH TRU BRIDGE) CONSTRUCTION PROJECT	SIGNATURE 	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.6.1	

# DRAWING SCHEDULE (3)

PACKAGE 2	SCALE	DRAWING No. A-3	SHEET No.
DRAWING SCHEDULE (3)			

## C-3 MISCELLANEOUS

### C-3-1 LIGHT POLE BASE, EXP. JT, PARAPET, SHOE, DRAINAGE ARRANGEMENT

- C-3-1-1 LIGHT POLE BASE
- C-3-1-2 BRIDGE ACCESSORY OF CAU BAY CANAL BRIDGE
- C-3-1-3 BRIDGE ACCESSORY OF GIA LAM ROAD BRIDGE
- C-3-1-4 BRIDGE ACCESSORY OF NH No.5 FLYOVER
- C-3-1-5 BRIDGE ACCESSORY OF RAMP A
- C-3-1-6 BRIDGE ACCESSORY OF RAMP B
- C-3-1-7 SD-40 EXPANSION JOINT (A) (1)
- C-3-1-8 SD-40 EXPANSION JOINT (A) (2)
- C-3-1-9 SD-80 EXPANSION JOINT (B) (1)
- C-3-1-10 SD-80 EXPANSION JOINT (B) (2)
- C-3-1-11 DETAIL OF POT BEARING SHOE (MOVE)
- C-3-1-12 DETAIL OF POT BEARING SHOE (FIX)
- C-3-1-13 DETAIL OF ELASTOMERIC BEARING
- C-3-1-14 DRAINAGE ARRANGEMENT OF CAU BAY CANAL BRIDGE
- C-3-1-15 DRAINAGE ARRANGEMENT OF GIA LAM ROAD BRIDGE
- C-3-1-16 DRAINAGE ARRANGEMENT OF NH No.5 FLYOVER
- C-3-1-17 DRAINAGE ARRANGEMENT OF RAMP A
- C-3-1-18 DRAINAGE ARRANGEMENT OF RAMP B
- C-3-1-19 DETAIL OF DRAINAGE ON BRIDGE (1)
- C-3-1-20 DETAIL OF DRAINAGE ON BRIDGE (2)

### C-3-2 APPROACH SLAB, SLOPE PROTECTION

- C-3-2-1 DETAIL OF APPROACH SLAB FOR NH NO.5 FLYOVER (1)
- C-3-2-2 DETAIL OF APPROACH SLAB FOR NH NO.5 FLYOVER (2)
- C-3-2-3 DETAIL OF APPROACH SLAB FOR NH NO.5 FLYOVER - RAMP A
- C-3-2-4 DETAIL OF APPROACH SLAB FOR NH NO.5 FLYOVER - RAMP B
- C-3-2-5 ECAVATION TYPES OF STRUCTURE FOR NH NO.5 FLYOVER
- C-3-2-6 DETAIL OF SLOPE PROTECTION FOR NH NO.5 FLYOVER
- C-3-2-7 ECAVATION TYPES OF STRUCTURE FOR NH NO.5 FLYOVER - RAMP A
- C-3-2-8 DETAIL OF SLOPE PROTECTION FOR NH NO.5 FLYOVER - RAMP A
- C-3-2-9 ECAVATION TYPES OF STRUCTURE FOR NH NO.5 FLYOVER - RAMP B
- C-3-2-10 DETAIL OF SLOPE PROTECTION FOR NH NO.5 FLYOVER - RAMP B
- C-3-2-11 DETAIL OF APPROACH SLAB FOR CAU BAY CANAL BRIDGE
- C-3-2-12 ECAVATION TYPES OF STRUCTURE FOR CAU BAY CANAL BRIDGE
- C-3-2-13 DETAIL OF SLOPE PROTECTION FOR CAU BAY CANAL BRIDGE
- C-3-2-14 DETAIL OF APPROACH SLAB FOR GIA LAM ROAD BRIDGE
- C-3-2-15 ECAVATION TYPES OF STRUCTURE FOR GIA LAM ROAD BRIDGE
- C-3-2-16 DETAIL OF SLOPE PROTECTION FOR GIA LAM ROAD BRIDGE

## D. OTHER STRUCTURES

### D-1 BOX CULVERT

- D-1-1 P - BOX CULVERT (STA. 9+900)
- D-1-2 P - BOX CULVERT (STA. 10+550)
- D-1-3 V - BOX CULVERT (GIA LAM I.C (ON RAMP STA. 0+224.300))
- D-1-4 V - BOX CULVERT (GIA LAM I.C (OF RAMP STA. 0+225.960))

### D-2 RETAINING WALL

- D-2-1 DETAILS OF RETAINING WALLS & STONE MASONRY
- D-2-2 LAYOUT OF RETAINING WALLS

## E. DRAINAGE

### E-1 DRAINAGE SYSTEM

- E-1-1 THROUGH WAY AND FRONTAGE ROAD (1)
- E-1-2 THROUGH WAY AND FRONTAGE ROAD (2)
- E-1-3 THROUGH WAY AND FRONTAGE ROAD (3)
- E-1-4 THROUGH WAY AND FRONTAGE ROAD (4)
- E-1-5 THROUGH WAY AND FRONTAGE ROAD (5)
- E-1-6 NH No.5 INTERCHANGE (1/2)
- E-1-7 NH No.5 INTERCHANGE (2/2)

### E-2 PIPE CULVERT

- E-2-1 LIST OF PIPE CULVERT
- E-2-2 PIPE CULVERT (FRONTAGE ROAD STA. 0+150, A RAMP STA. 0+160)
- E-2-3 PIPE CULVERT (A RAMP STA. 0+820, B RAMP STA. 0+700)
- E-2-4 PIPE CULVERT ( STA. 9+383.5, STA. 9+584.5, STA. 9+695)
- E-2-5 PIPE CULVERT ( STA. 9+932, STA. 10+301.5, STA. 10+490)
- E-2-6 PIPE CULVERT (STA. 10+694, STA. 10+874, STA. 11+009)
- E-2-7 PIPE CULVERT ( STA. 11+228, B RAMP STA. 0+039, C RAMP STA. 0+047)
- E-2-8 PIPE CULVERT (B RAMP STA. 0+158, C RAMP STA.0+115.4, STA. 12+585.5)
- E-2-9 HEAD WALL OF PIPE CULVERT F 1.25
- E-2-10 HEAD WALL OF PIPE CULVERT 2x F1.25
- E-2-11 HEAD WALL OF PIPE CULVERT F1.50
- E-2-12 HEAD WALL OF PIPE CULVERT 2x F1.50
- E-2-13 DETAIL OF PIPE CULVERT INLET (TYPE A) AT STA. 9+383.5
- E-2-14 DETAIL OF PIPE CULVERT OUTLET (TYPE A) AT STA. 9+383.5
- E-2-15 DETAIL OF PIPE CULVERT OUTLET (TYPE B) AT STA. 9+584.5
- E-2-16 DETAIL OF PIPE CULVERT INLET (TYPE B) AT STA. 9+695
- E-2-17 DETAIL OF PIPE CULVERT OUTLET (TYPE C) AT STA. 9+695
- E-2-18 DETAIL OF PIPE CULVERT OUTLET (TYPE D) AT STA. 9+932
- E-2-19 DETAIL OF PIPE CULVERT INLET (TYPE C) AT STA. 10+490
- E-2-20 DETAIL OF PIPE CULVERT OUTLET (TYPE E) AT STA. 10+490
- E-2-21 DETAIL OF PIPE CULVERT OUTLET (TYPE S)
- E-2-22 DETAIL OF PIPE FOUNDATION (F1.25)
- E-2-23 DETAIL OF PIPE FOUNDATION (2x F1.25)
- E-2-24 DETAIL OF PIPE FOUNDATION (F1.50)
- E-2-25 DETAIL OF PIPE FOUNDATION (2x F1.50)
- E-2-26 REINFORCEMENT DETAILS (FOR PIPE F1.25)
- E-2-27 REINFORCEMENT DETAILS (FOR PIPE F1.50)

### E-3 DETAILS OF CHANNEL, PIPE, BASIN

- E-3-1 DRAINAGE CHANNEL DETAILS (1/2)
- E-3-2 DRAINAGE CHANNEL DETAILS (2/2)
- E-3-3 DETAIL OF DRAINAGE PIPE F 600
- E-3-4 DETAIL OF DRAINAGE PIPE F 750
- E-3-5 CATCH BASIN TYPE CB-R1 (1/2)
- E-3-6 CATCH BASIN TYPE CB-R1 (2/2)
- E-3-7 CATCH BASIN TYPE CB-R2 (1/2)
- E-3-8 CATCH BASIN TYPE CB-R2 (2/2)
- E-3-9 CATCH BASIN TYPE CB-R3
- E-3-10 CATCH BASIN TYPE CB-R4 (1/2)
- E-3-11 CATCH BASIN TYPE CB-R4 (2/2)
- E-3-12 CATCH BASIN TYPE CB-F (1/2)
- E-3-13 CATCH BASIN TYPE CB-F (2/2)
- E-3-14 CATCH BASIN TYPE CB-S1
- E-3-15 CATCH BASIN TYPE CB-S2
- E-3-16 CATCH BASIN TYPE CB-S3

## F. ROAD LIGHTING AND TRAFFIC SIGNAL

- F-1 ABBREVIATIONS AND GENERAL NOTES
- F-2 GENERAL PLAN - 4
- F-3 TRAFFIC SIGNAL DIAGRAM
- F-4 PROFILE OF ROAD LIGHTING - 1
- F-5 PROFILE OF ROAD LIGHTING - 2
- F-6 PROFILE OF ROAD LIGHTING - 3
- F-7 PROFILE OF ROAD LIGHTING - 4
- F-8 PROFILE OF ROAD LIGHTING - 5
- F-9 PROFILE OF ROAD LIGHTING - 6
- F-10 PROFILE OF ROAD LIGHTING - 7
- F-11 PROFILE OF ROAD LIGHTING - 8
- F-12 PROFILE OF ROAD LIGHTING - 9
- F-13 PROFILE OF ROAD LIGHTING - 10
- F-14 PROFILE OF ROAD LIGHTING - 11
- F-15 PROFILE OF ROAD LIGHTING - 12
- F-16 SUBSTATION TYPE IA
- F-17 SUBSTATION TYPE IIA
- F-18 DIAGRAM OF MDP
- F-19 PANEL DETAIL
- F-20 LIGHTING DETAIL - 1
- F-21 LIGHTING DETAIL - 2
- F-22 TRAFFIC SIGNAL
- F-23 NAVIGATION SYSTEM DIAGRAM
- F-24 INSTALLATION DETAIL - 1
- F-25 INSTALLATION DETAIL - 2A
- F-26 INSTALLATION DETAIL - 3
- F-27 INSTALLATION DETAIL - 4
- F-28 FOUNDATION DETAIL - 1A

## G. EMPLOYERS AND ENGINEERS SITE OFFICE

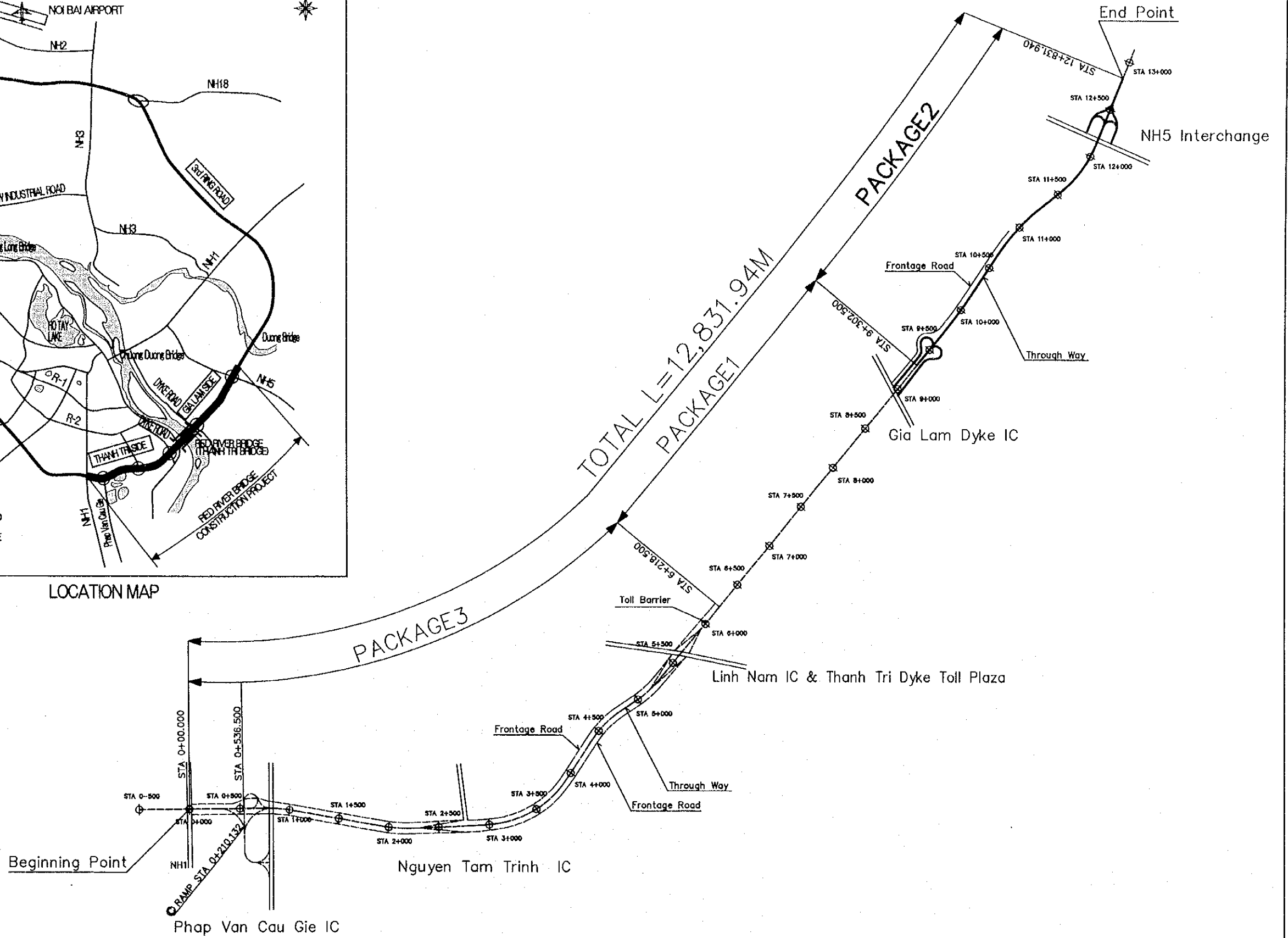
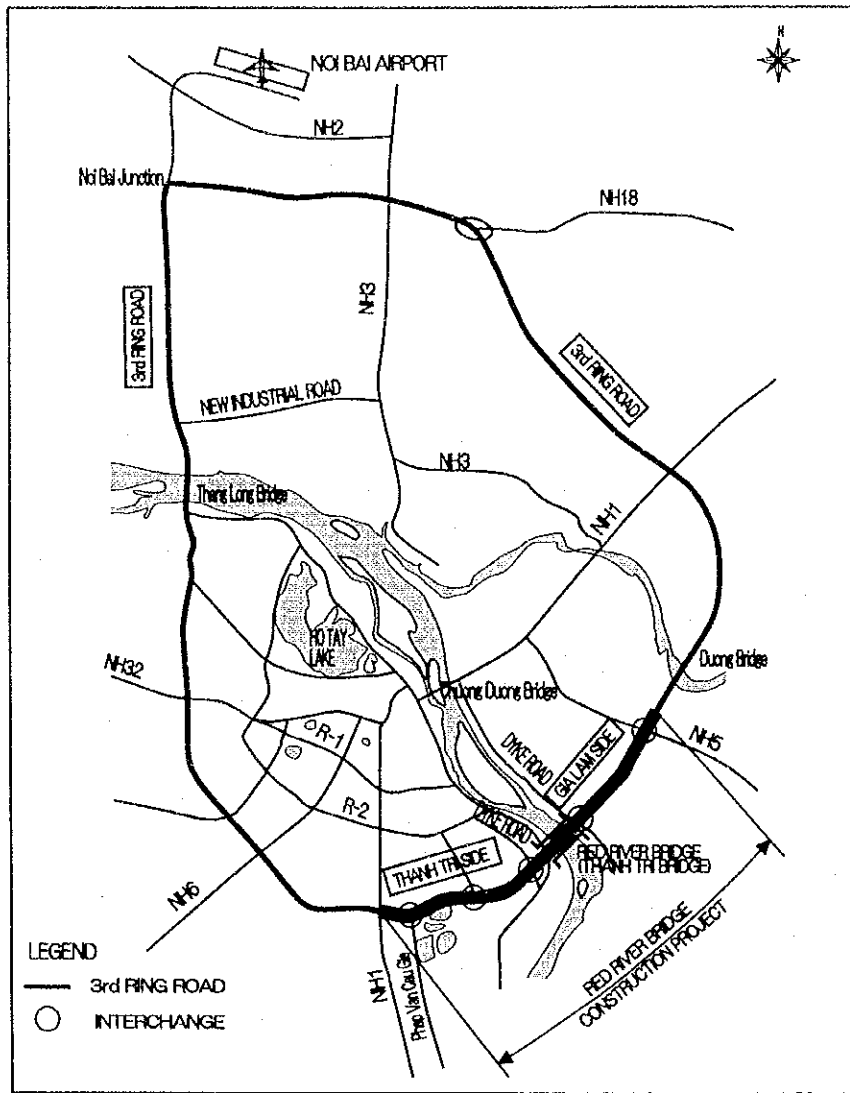
- G-1 EMPLOYERS AND ENGINEERS SITE OFFICE (WITH ACCOMMODATION)
- G-2 EMPLOYERS AND ENGINEERS SITE OFFICE (WITH OUT ACCOMMODATION)


## H. MISCELLANEOUS WORKS

- H-1 SUPERELEVATION DIAGRAMS
- H-2 STEEL BEAM GUARDRAIL GR-A (1)
- H-3 STEEL BEAM GUARDRAIL GR-A (2)
- H-4 REMOVABLE GUARDRAIL GR-B
- H-5 TYPICAL ROAD MARKING
- H-6 KILOMETER POST
- H-7 TRAFFIC POST
- H-8 STANDARD OF TRAFFIC SIGNS (1)
- H-9 STANDARD OF TRAFFIC SIGNS (2)
- H-10 INSTALLATION OF TRAFFIC SIGNS
- H-11 SUMMARY TABLES OF TRAFFIC SIGNS
- H-12 SLOPE PROTECTION IN POND
- H-13 NOSE DETAILS
- H-14 GENERAL VIEW OF MONUMENT

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2002.3.14	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE	DRAWING No. A-4	SHEET No.
PROJECT LOCATION MAP			



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY NAME S. WATAGE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE 
PROJECT RED RIVER BRIDGE (THAM TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.3.14	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

# ABBREVIATIONS AND SYMBOLS





















PACKAGE 2	SCALE	DRAWING No. A-5	SHEET No.
ABBREVIATIONS AND SYMBOLS			

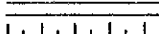

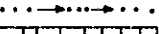
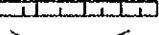
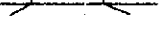

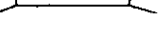



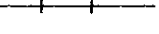






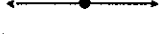



A	PARAMETER OF CLOTHOID CURVE	LC	LENGTH OF CIRCULAR CURVE
@	AT	LS	LENGTH OF SPIRAL CURVE
Ai	LOCATION OF ABUTMENT	LVC	LENGTH OF VERTICAL CURVE
&	AND	LIN.M	LINEAR METER
A > B	A IS LARGER THAN B	m	METER
BOR	BORING	m <sup>2</sup>	SQUARE METER
BVCC	BEGINNING VERTICAL CURVE STATION	m <sup>3</sup>	CUBIC METER
BVCE	BEGINNING VERTICAL CURVE ELEVATION	MAX	MAXIMUM
CTC	CENTER TO CENTER	MIN	MINIMUM
$\bar{C}$	CENTERLINE	M	MOVABLE
ST	SPIRAL CURVE TO TANGENT	OV	OVER BRIDGE
TS	TANGENT TO SPIRAL CURVE	%	PERCENT
CS	CIRCULAR CURVE TO SPIRAL CURVE	P	PIPE CULVERT
SC	SPIRAL CURVE TO CIRCULAR CURVE	PC	BEGINNING POINT OF SIMPLE CURVE
DIA or $\phi$	DIAMETER	P.W.	PARAPET WALL
DC	DRAINAGE CATCH BASIN	P.C	PRE STRESSED CONCRETE
DEL	DELINEATOR	PVC	POLYVINYL CHLORIDE
DH	HEAD WALL	PVI	POINT OF VERTICAL INTERSECTION
DI	DRAINAGE INLET	PH	PLAN HEIGHT
DL	DATUM LINE	PI	POINT OF INTERSECTION FOR HORIZONTAL ALIGNMENT
DO	DRAINAGE OUTLET	PT	END OF POINT OF SIMPLE CURVE
DS	DRAINAGE SIDE DITCH	PC	BEGINNING OF POINT OF SIMPLE CURVE
D.S.W	DRAF STONE WALL	R.	RADIUS OF CIRCULAR CURVE
DW	MORTARED RUBBLE PAVED WATERWAY	R.C	REINFORCED CONCRETE
EP	END POINT	R.O.W	RIGHT OF WAY
EV	MIDDLE ORDINATE VERTICAL CURVE	RW	RETAINING WALL
ELEV (EL)	ELEVATION	S	SCALE
EQ	EQUAL	SC	SPIRAL CURVE TO CIRCULAR CURVE
EVCS	END VERTICAL CURVE STATION	SP	SLOPE PROTECTION
EVCE	END VERTICAL CURVE ELEVATION	SQ	SQUARE
F	FIXED	ST	SPIRAL CURVE TO TANGENT
FR	FRONTAGE ROAD	STA	STATION
FS	SEPARATOR FENCE	SM	STONE MASONRY
FTOF	FACE TO FACE	STAIR	STAIR CASE
GF	GUARD FENCE	T	THICKNESS
GR	GUARD RAIL	TS	TANGENT TO SPIRAL
GIR	GIRDER	TL	TANGENT LENGTH OF CIRCULAR CURVE
GWL	GROUND WATER LEVEL	Ta	TANGENT LENGTH OF SPIRAL
H	HEIGHT	V	DESIGN SPEED IN kph
H1%	FLOOD WATER LEVEL	W	WIDTH
I	GRADIENT	X	EASTING COORDINATE IN METERS
IP	POINT OF INTERSECTION	Y	NORTHING COORDINATE IN METERS
kg	KILOGRAM		
km	KILOMETER		
kph	KILOMETER PER HOUR		
L	LENGTH OF CURVE WITH SPIRAL		



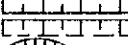














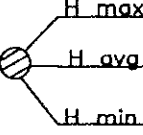
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		S. MATSUDA
PROJECT	RED RIVER BRIDGE (THANH TRU BRIDGE) CONSTRUCTION PROJECT	SIGNATURE
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE
		2002.11.18

# LEGEND

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		A-6	
LEGEND			

-  : CONCRETE HOUSE (1 STOREY)
-  : CONCRETE HOUSE (2.. - STOREY)
-  : TILE-ROOFED BRICK-WALLED HOUSE
-  : THATCHED-ROOF TEMPORARY HOUSE
-  : METAL-ROOFED HOUSE
-  : CHURCH
-  : PAGODA, TEMPLE
-  : POST-OFFICE
-  : SWIMMING POOL
-  : WATER TANK
-  : WELL
-  : WATER TOWER
-  : MONUMENT
-  : PORCH (GATE)
-  : FENCE
-  : CEMETERY, GRAVE YARD
-  : RAILWAY
-  : STATION
-  : SEMAPHORE, SIGNAL LIGHT
-  : LIGHT POLE

-  : LATERITE ROAD
-  : EMBANKMENT (FILL)
-  : SIDE DITCH
-  : CANAL, DRAINAGE CHANNEL
-  : CONCRETE BRIDGE
-  : STEEL BRIDGE
-  : SLAB CULVERT
-  : PIPE CULVERT
-  : ASPHALT (CONCRETE) PAVED ROAD
-  : BRICK WALL
-  : WATER PIPE
-  : OIL, PETROL PIPE
-  : GAS PIPE
-  : PROVINCIAL BOUNDARY
-  : DISTRICT BOUNDARY
-  : \* TELECOM LINE (DENSE HOUSE AREA)
-  : TELECOM LINE (SPARSE HOUSE AREA)
-  : \* ELECTRIC LINE (DENSE HOUSE AREA)
-  : ELECTRIC LINE (SPARSE HOUSE AREA)
-  : HIGH VOLTAGE ELECTRIC LINE (6 kV - 35 kV)
-  : HIGH VOLTAGE ELECTRIC LINE (110kV - 220kV)

-  : EXCAVATION
  -  : SLOPE PROTECTION (STONE)
  -  : DIKES, LEVEES
  -  : RIVER, STREAM
  -  : POND, LAKE
  -  : ROCK MOUNTAIN
  -  : COCONUT TREE
  -  : RICE FIELD
  -  : CROP FIELD (PEANUT, SUGAR CANE, SESAME...)
  -  : FOREST
  -  : GPS : GLOBAL POSITIONING SYSTEM
  -  : TP : TRAVERSE POINT
  -  : BM : BENCH MARK
  -  : DMC : DEMARCATION ( R.O.W)
  -  : KP : km POST
  -  : GIA1 : BOREHOLE
  -  : INTERVIEWED POINT FOR FLOOD WATERLEVEL
- 
  
H<sub>max</sub>: Maximum flood water level recorded  
H<sub>avg</sub>: Average water level Recorded  
H<sub>min</sub>: Minimum water level recorded



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2/20/01	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

# GENERAL NOTES

PACKAGE 2	SCALE	DRAWING No. A-7	SHEET No.
GENERAL NOTES			

## I. DESIGN SPECIFICATIONS

AASHTO Standard Specifications for Highway Bridges, 16th edition, 1996 (hereinafter called as AASHTO) shall be adopted in conjunction with Vietnamese Bridge Design Codes 22TCN 018-79 and Japanese Specifications for Highway Bridges, the 1996 edition.

## II. LOADS

### 1. Dead Load

- a) Reinforced/ Prestressed Concrete : 2,500 kgf/m<sup>3</sup>
- b) Plain Concrete : 2,350 kgf/m<sup>3</sup>
- c) Steel and Cast Steel : 7,850 kgf/m<sup>3</sup>
- d) Cast Iron : 7,250 kgf/m<sup>3</sup>
- e) Asphalt Pavement : 2,300 kgf/m<sup>3</sup>
- f) Rolling : 50 kgf/m

### 2. Live Load

HS20-44 x 125%

- Note: 1. Application of live loading and reduction in loading intensity for multiple lanes shall follow Articles 3.11 and 3.12 of AASHTO.  
2. Live loads H30 and XB80 specified in Vietnamese Bridge Design Codes 22TCN 018-79 are also considered.

### 3. Impact

$$I = 15.24 / (L + 38)$$

in which, L = impact fraction (maximum 30 percent)  
L = length in meter of the portion of the span that is loaded to produce the maximum stress in the member

### 4. Wind Load

The requirements of AASHTO Article 3.15 with a base wind velocity of 160 km/hr shall be adopted to the design.

### 5. Longitudinal Force

5% of the lane load in all lanes carrying traffic headed in the same direction (AASHTO Article 3.9)

### 6. Centrifugal Force (AASHTO Article 3.10)

$$C = 0.79 \times S^2 / R$$

in which, C = the centrifugal force in percent of the live load, without impact  
S = the design speed in km per hour  
R = the radius of the curve in meters

### 7. Shaking Force

0.4 tf/m (without impact) irrespective of the number of traffic lanes (Vietnamese Bridge Design Codes 22TCN 019-79, Article 2.19)

### 8. Effect of Temperature

Range of Air Temperature : 5C to 45C

### 9. Earthquake Load

Seismic Acceleration Coefficient : 0.17

### 10. Vessel Collision Force

In Direction Parallel to the Navigation Channel : 631 tf

In Direction Normal to the Navigation Channel : 316 tf

Note: The vessel collision force shall be calculated in accordance with Article 3.14 of AASHTO LRFD Bridge Design Specifications, 2nd edition, 1998.

### 11. River Flow Force

$$P = 52.5 \times K \times V^2 \text{ (AASHTO Article 3.18.1)}$$

in which, P = pressure in kgf per square meter  
V = velocity of water in meters per second  
K = a constant, being 1.4 for all piers subjected to drift build-up and square-ended piers, 0.7 for circular piers, and 0.5 for angle ended piers where the angle is 30 degrees or less.

### 12. Earth Pressure

Earth pressure shall be calculated by Coulomb's equation.

### 13. Combinations of Loads and Load Factors

Combinations of loads and load factors shall be in accordance with Section 3, Part B of AASHTO.

## III. MATERIALS

### 1. Concrete

Design strengths  $f'_c$  (by cylinder specimen) of concrete are as follows:

Class	Strength $f'_c$ (kgf/cm <sup>2</sup> )	Description
A-1	400	cast-in-place prestressed concrete box girders for cantilever erection
A-2	400	cast-in-place prestressed concrete box girders (H=2.75m)
A-3	400	precast prestressed concrete I-girders (PC I-girder)
B-1	350	(not applicable)
C-1	290	reinforced concrete (RC) deck slabs, diaphragms of PC I-girder, parapet and foundation of lighting poles excluding those for RC hollow slab
C-2	290	precast RC panels
C-3	290	precast RC piles
C-4	290	RC piers (including cantilevered pier heads, pier columns and footings), RC abutments (including wing walls), RC retaining walls, box culverts
C-5	290	RC hollow slab, parapet and foundation of lighting poles for RC hollow slab
D-1	240	(not applicable)
E-1	210	approach slabs
E-2	210	pipe culverts
E-3	210	slab for foundation (piled) below pipe and box culverts
E-4	210	precast concrete curbs
G	-	lean concrete, leveling concrete
P	-	concrete pavement
Y	290	cast-in-place reinforced concrete piles

### 2. Reinforcing Steel

Reinforcing steel for concrete shall conform to the followings or equivalent:

Type	JIS G3112	
	Designation	Yield Strength (kgf/cm <sup>2</sup> )
Round Bar	SR 235	2,400
Deformed Bar	SD 295A	3,000

### 3. Prestressing Steel

Prestressing steel shall conform to the followings or equivalent:

Type	Designation	Yield Strength (kgf/cm <sup>2</sup> )	Tensile Strength (kgf/cm <sup>2</sup> )
A	JIS G3536, SWPR7BL	12T15.2	16,000
B	JIS G3536, SWPR7BL	4T15.2	16,000
C	JIS G3536, SWPR7BL	3T15.2	16,000
D	JIS G3536, SWPR7BL	12T12.7	16,000
E	JIS G3536, SWPR7BL	7T12.7	16,000
F	JIS G3112, SBPR930/1180	φ 32	9,500

## IV. ALLOWABLE STRESSES

### 1. Concrete

1-1 Prestressed Concrete Structures : unit in kgf/cm<sup>2</sup>

Description	Class of Concrete
	A-1, A-2 and A-3
(1) Compressive Stress	
- Temporary stress before losses due to creep and shrinkage	0.55 $f'_c$
- Stress at service load after losses have occurred	160 (=0.4 $f'_c$ )
(2) Tensile Stress	
- Temporary stress before losses due to creep and shrinkage	0.794 $(f'_c)^{1/2}$
- Stress at service load after losses have occurred except slab	31.8 (=1.59 $(f'_c)^{1/2}$ ) 15.8 (=0.79 $(f'_c)^{1/2}$ )
(3) Anchorage Bearing Stress	210 but not to exceed 0.9 $f'_c$

[Note]  $f'_c$ : compressive strength at time of initial prestress (kgf/cm<sup>2</sup>, by cylinder specimen)  
 $f_{ci}$  shall be not less than 360kgf/cm<sup>2</sup>

1-2 Reinforced Concrete Structures and Plain Concrete Structures : unit in kgf/cm<sup>2</sup>

Description	all classes except Class Y	Class Y
(1) Compressive Stress	0.40 $f'_c$	96.0
(2) Shear Stress	0.25 $(f'_c)^{1/2}$	3.9

### 2. Reinforcing Steel : unit in kgf/cm<sup>2</sup>

Allowable Tensile Stress	Designation	
	Round Bar (SR 235)	Deformed Bar (SD295A)
- general members	1,400	1,800
- reinforced concrete slab	1,400	1,400

### 3. Prestressing Steel : unit in kgf/cm<sup>2</sup>

Allowable Tensile Stress	Designation	
	7 wire strands (JIS G3536)	bors (JIS G3112)
- during prestressing work	14,400	8,350
- immediately after prestressing	13,280	8,070
- at service load	12,800	7,120

## V. CONSTRUCTION

- The formwork shall provide a 2cm x 2cm smooth and straight chamfer on all exposed faces of structures unless otherwise specified.
- Minimum concrete cover to a reinforcing bar in substructures shall be 50mm unless otherwise specified.
- Minimum concrete cover to a reinforcing bar in superstructures shall conform to Article 9.26.1 of the AASHTO.
- Prior to prestressing of the slab transverse tendons, temporary load on the slab during construction of PC box girder bridge including cantilever erection bridge shall not exceed 250kgf/m<sup>2</sup>, but less than 1tf per meter in the longitudinal direction.
- Grouting of tendons shall be subject to Engineer's approval.
- Removal of staging shall be subject to Engineer's approval.

## VI. OTHER DESIGN CONDITIONS

- Hooks, development and splices of reinforcing steel shall conform to Articles 8.23 through 8.32 of the AASHTO.
- Minimum N-value of standard penetration test for bearing stratum shall be 50.
- Safety factor for foundation design shall be in accordance with Article 4.5.6.2 of the AASHTO.
- Allowable horizontal displacement at the top of pile:
  - a) except earthquake force 15mm
  - b) for earthquake force 50mm

## VI. OTHERS

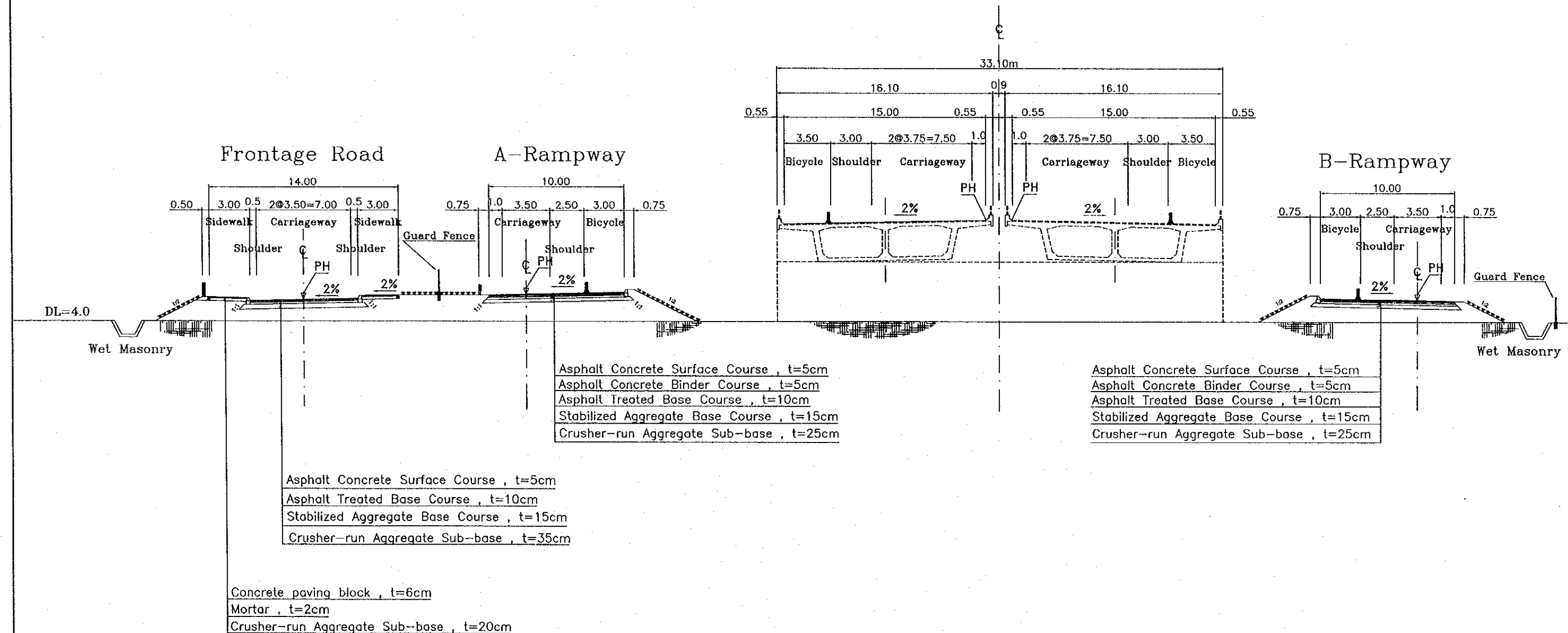
- Elevations, stations and coordinates are shown in meters. Other dimensions are shown in millimeters unless otherwise specified.
- In the pedestrian box culverts, suitable lighting and drainage system shall be designed and installed.

# **B. HIGHWAY**

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. MATSUDA
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	21/02/01

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/300	B-1-1	
TYPICAL CROSS SECTION (STA0+300)			

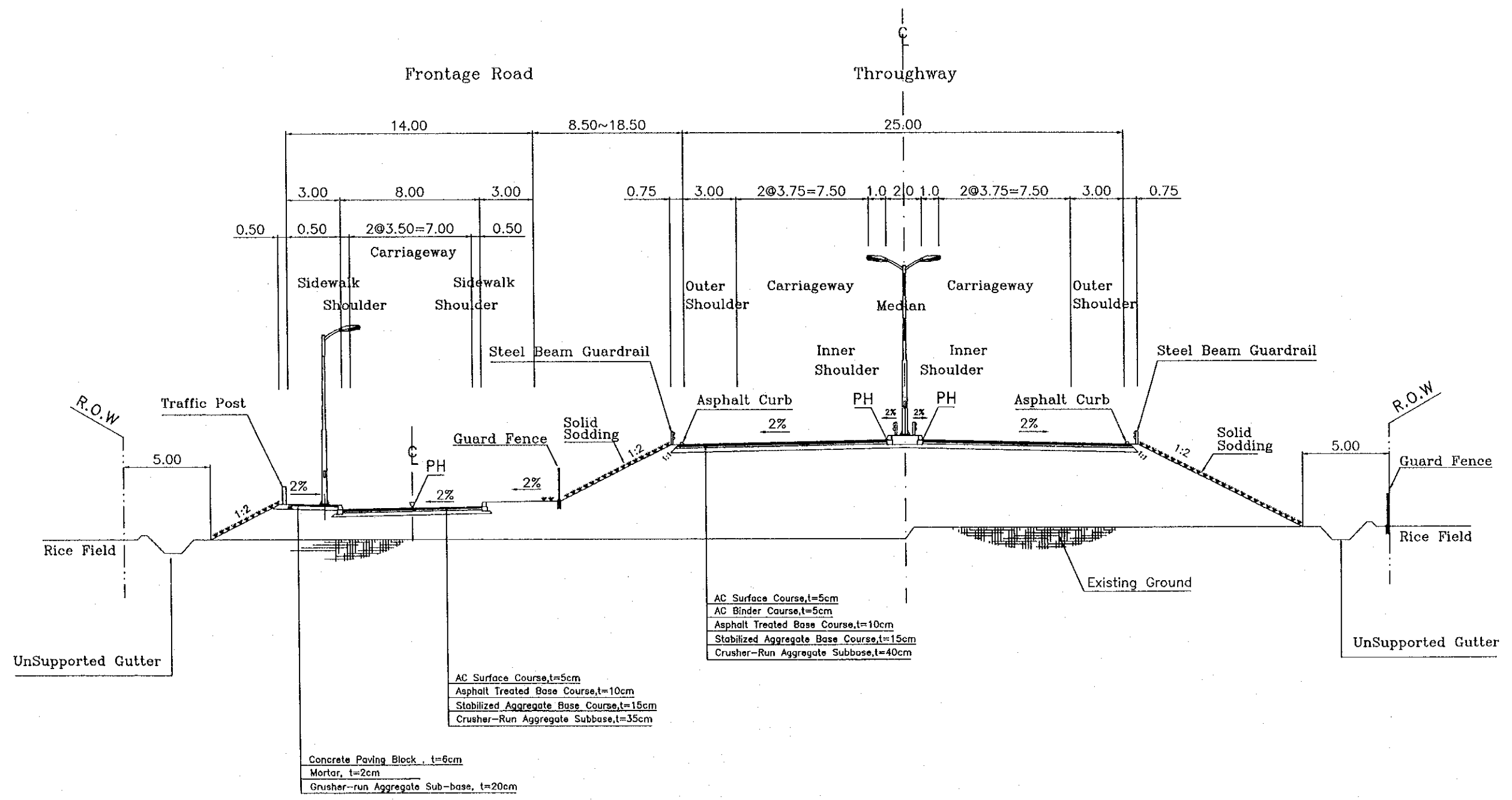
## TYPICAL CROSS SECTION STA9+300 (GIA LAM DYKE INTERCHANGE)



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JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	DATE 2-02-00 6.1
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/250	DRAWING No. B-1-2	SHEET No.
TYPICAL CROSS SECTION STA10+340			

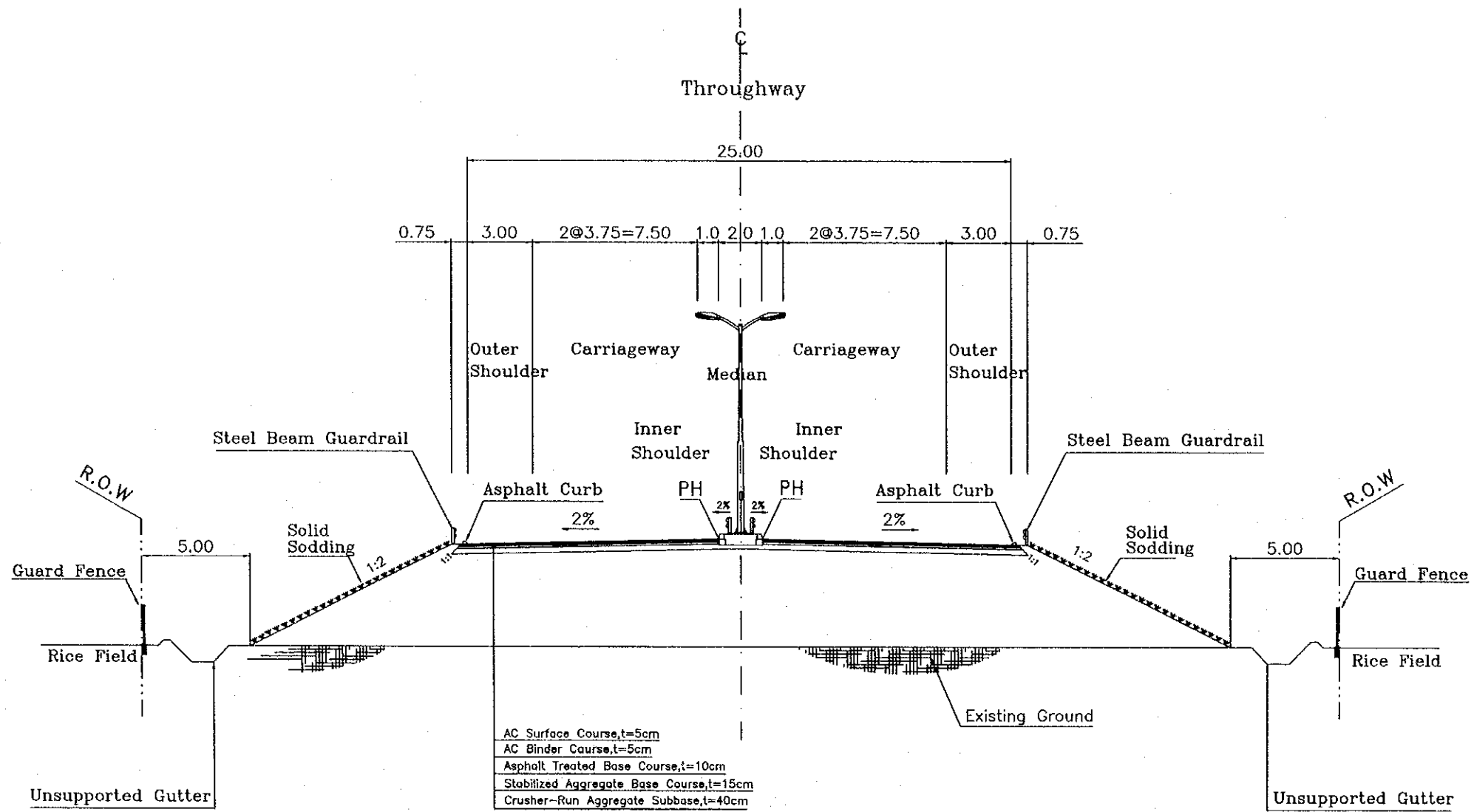
## TYPICAL CROSS SECTION STA10+340 (THOUGHWAY WITH ONE SIDE FRONTAGE ROAD)



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JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	DATE 2000.6.1
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/250	DRAWING No. B-1-3	SHEET No.
TYPICAL CROSS SECTION STA11+160			

## TYPICAL CROSS SECTION STA11+160 (THOUGHWAY WITHOUT FRONTAGE ROAD)

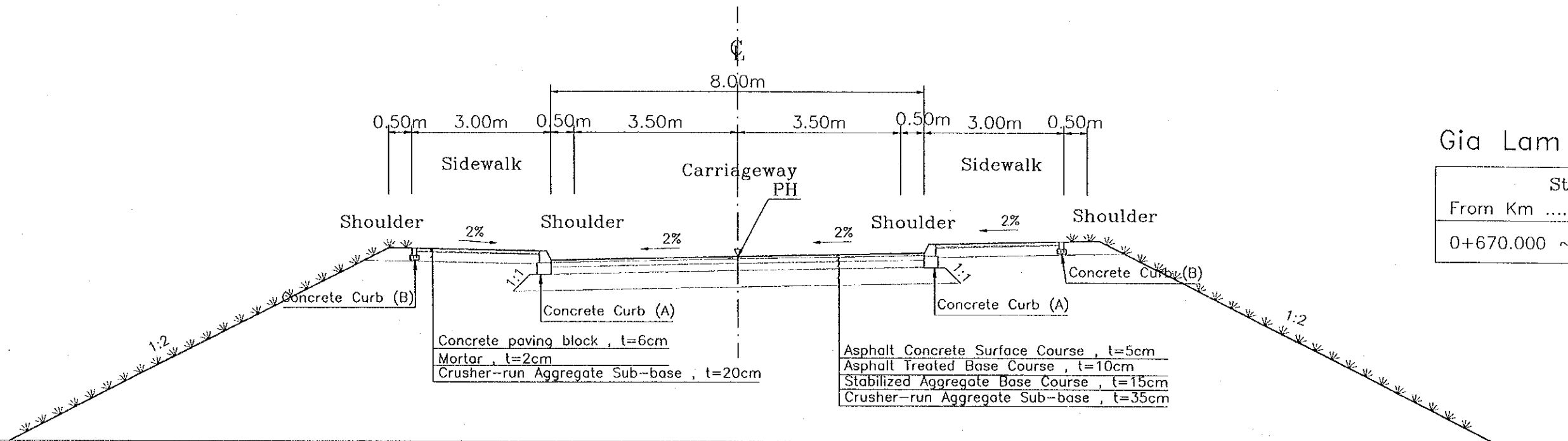


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	DATE 2000. 8. 19
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/100	DRAWING No. B-1-4	SHEET No.
TYPICAL CROSS SECTION FRONTAGE ROAD (Type - F3&F4)			

## TYPICAL CROSS SECTION

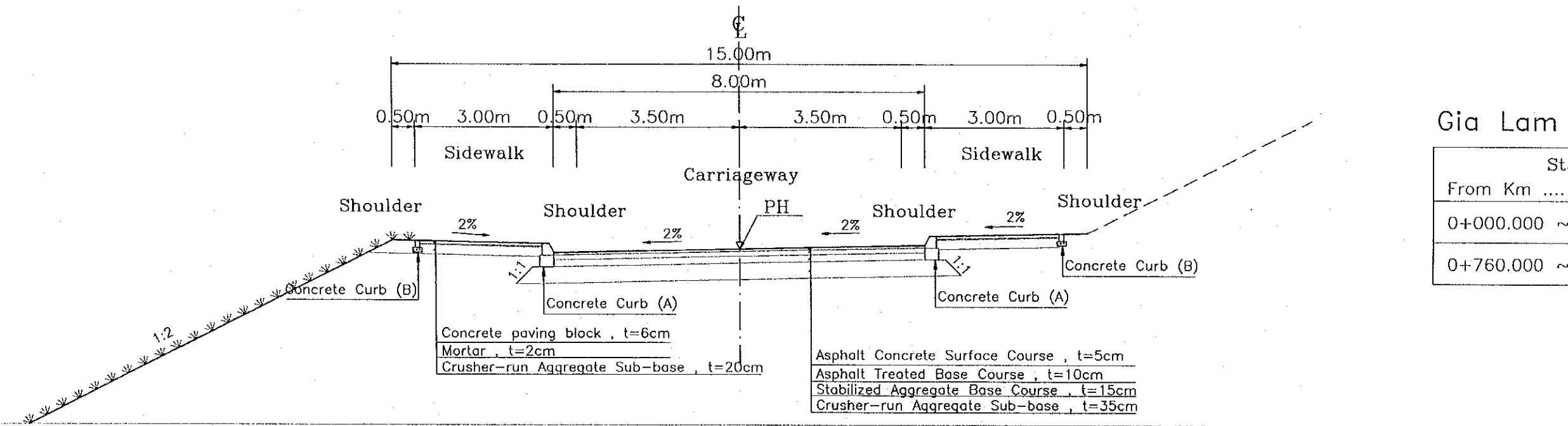
### FRONTAGE ROAD (TYPE F-3)



### Gia Lam Section

Station	
From Km ....	To Km ....
0+670.000 ~ 0+760.000	

### FRONTAGE ROAD (TYPE F-4)



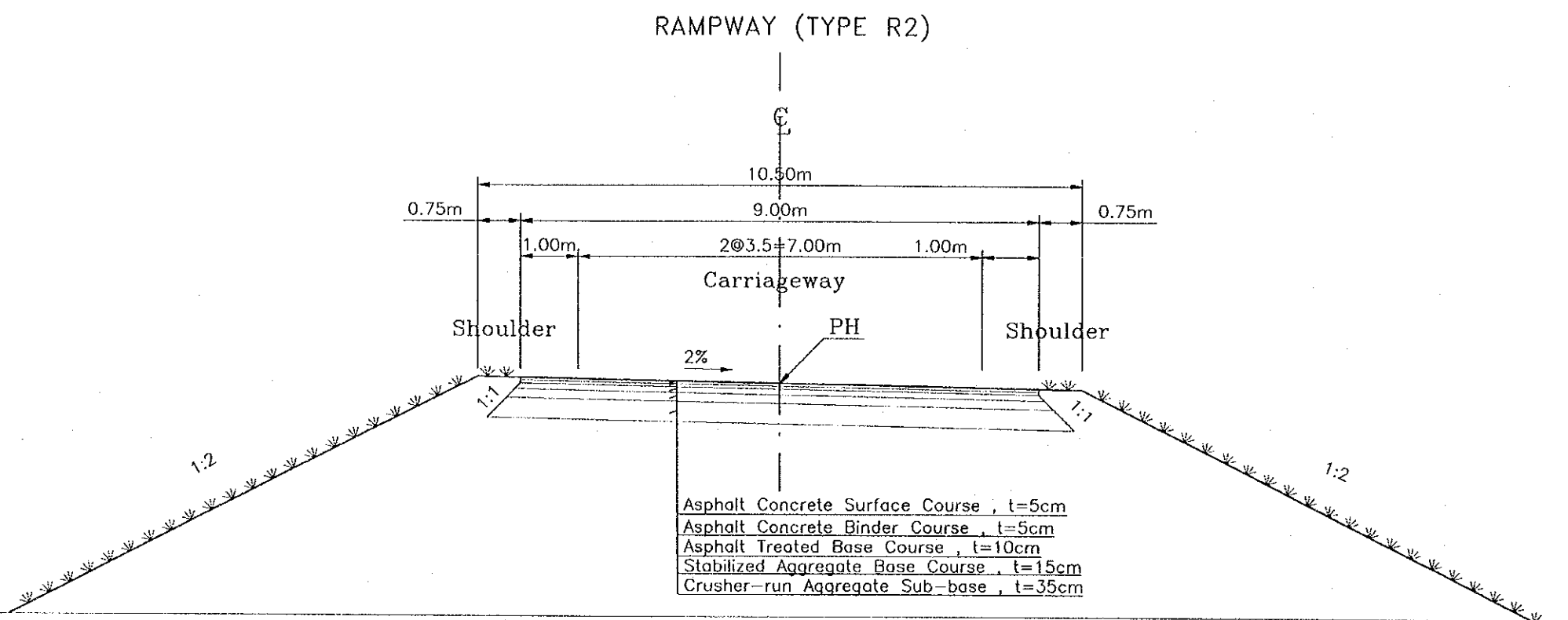
### Gia Lam Section

Station	
From Km ....	To Km ....
0+000.000 ~ 0+670.000	
0+760.000 ~ 2+028.160	

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JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (TRANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.8.14

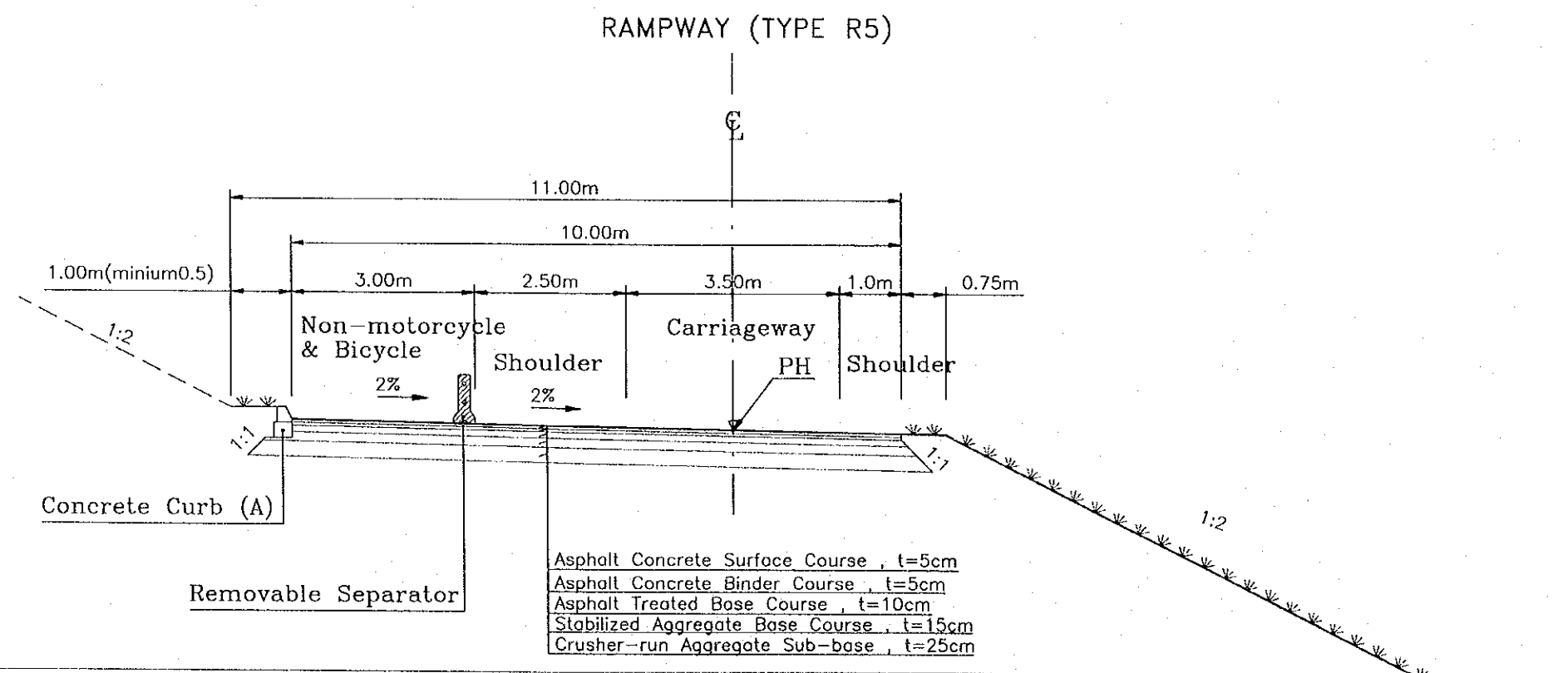
PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	B-1-5	
TYPICAL CROSS SECTION (Type - R2&R5)			

## TYPICAL CROSS SECTION



### NH5 Interchange

Ramp	Station	
	From Km ....	To Km ....
A	0+000.000 ~	0+300.320
B	0+000.000 ~	0+338.820
C	0+000.000 ~	0+375.880
D	0+000.000 ~	0+383.650



### Gia Lam Dyke Interchange

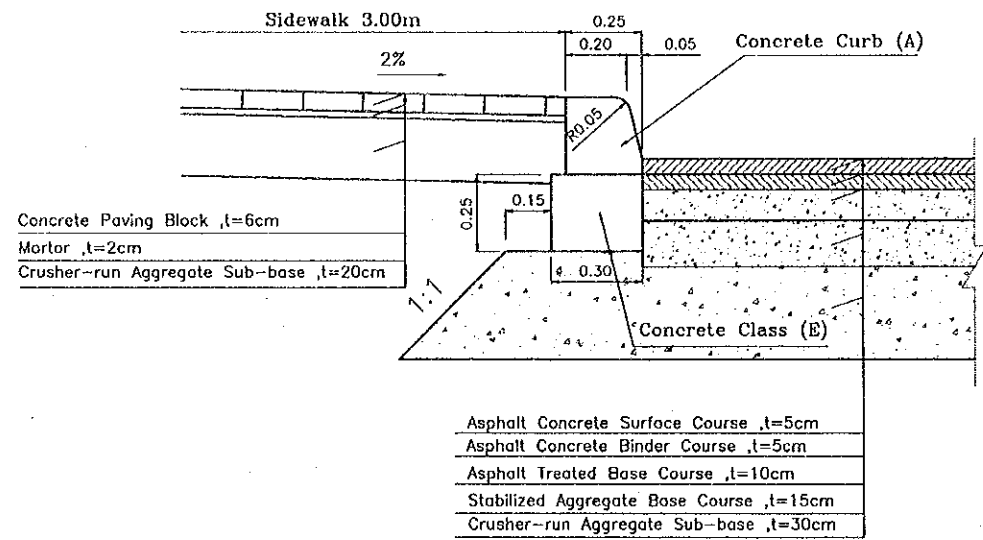
Ramp	Station	
	From Km ....	To Km ....
A	0+000.000 ~	0+741.598
B	0+000.000 ~	0+784.388

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATADA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATADA
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
COMPANY	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.14

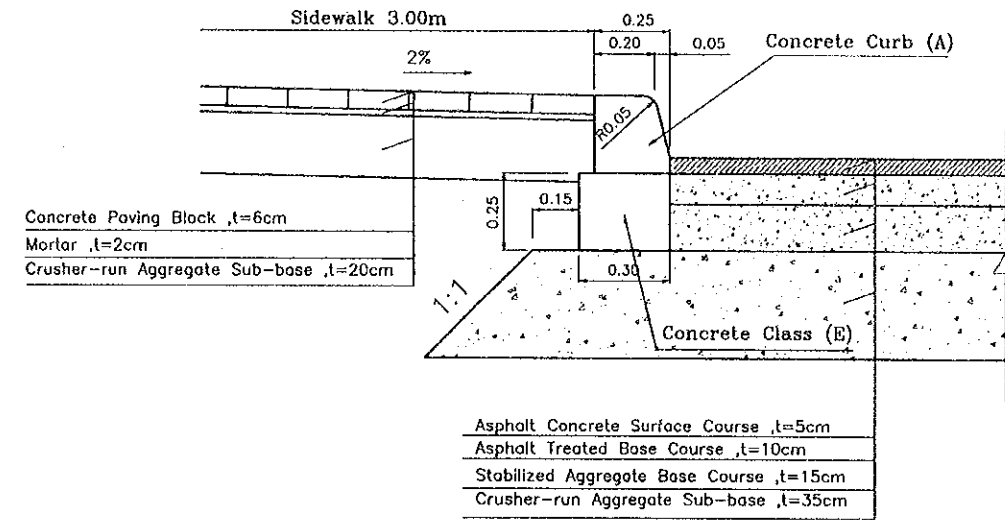
PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/600	B-1-6	
PAVEMENT DETAIL			

## PAVEMENT DETAIL

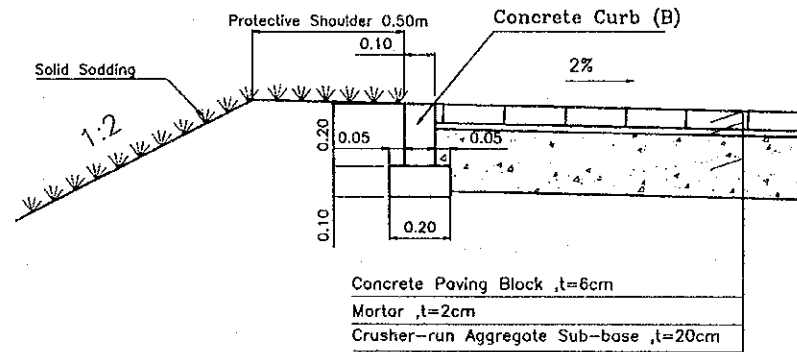
### Frontage Road (Type F-1)



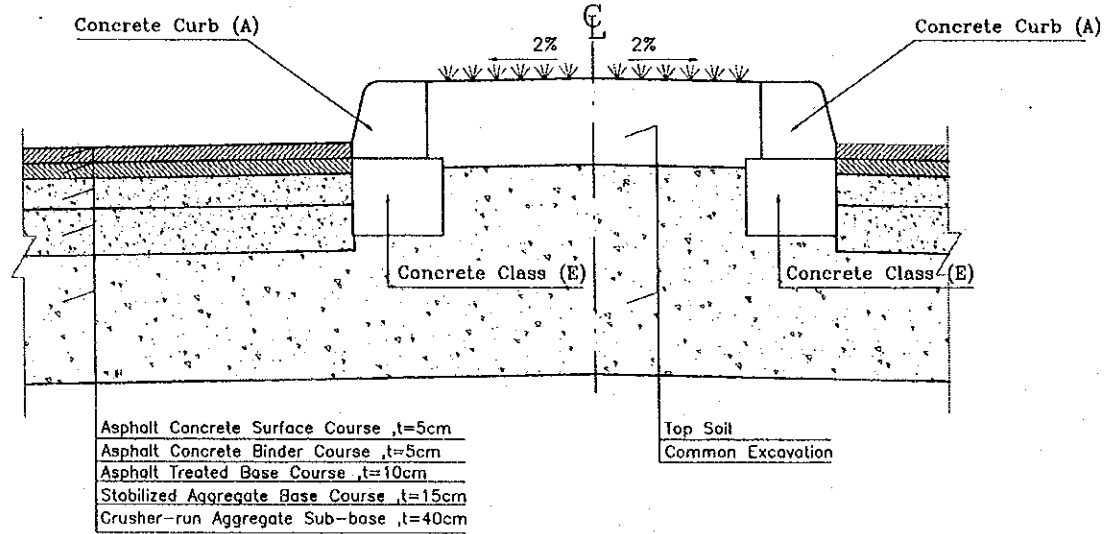
### Frontage Road (Type F-2~F-6)



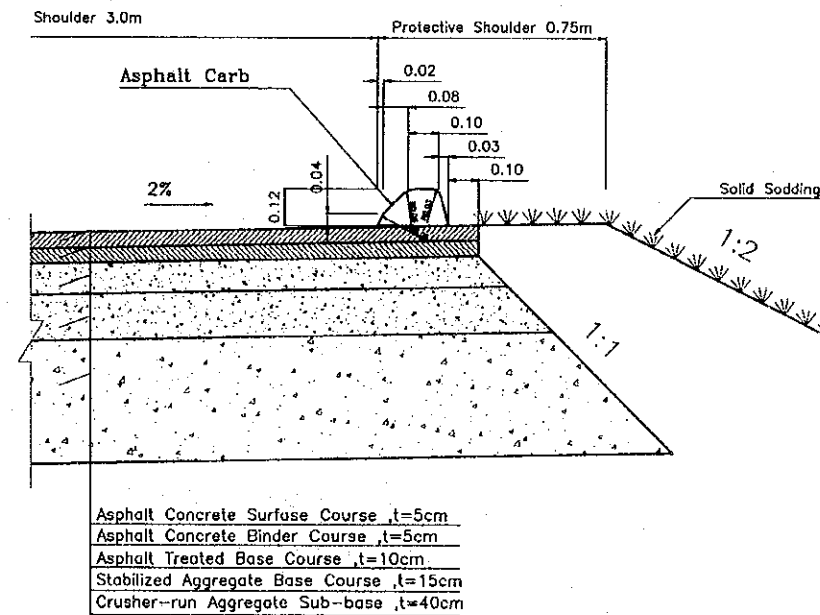
### Side Walk



### Median



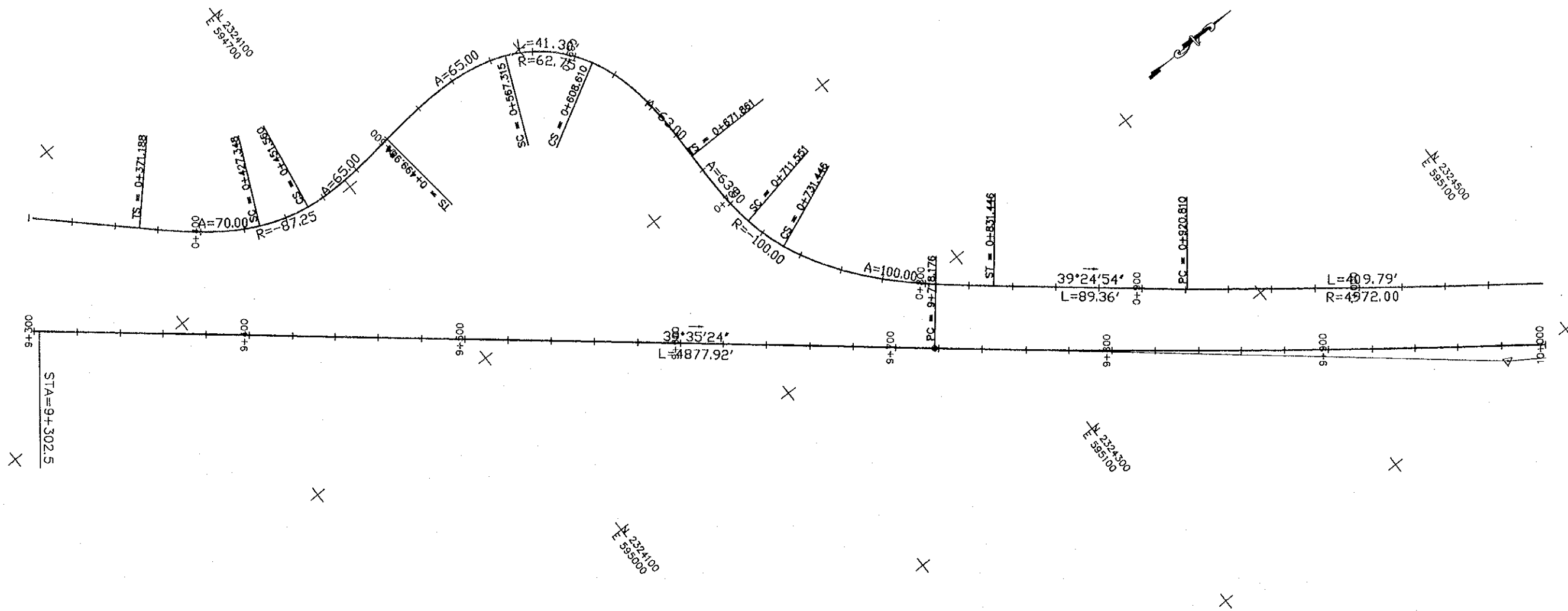
### Throughway





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JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. NATAKE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.3.19

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/2000	B-2-1	
ALIGNMENT LAYOUT (Km 9+302.5 TO Km 10+000)			



EXPRESSWAY

	STA	X(N)-COORDINATE	Y(E)-COORDINATE
IP6	9+982.816	2324470.000	595195.000
PC	9+718.176	2324266.062	595026.348
STA	9+302.500	2323945.732	594761.443

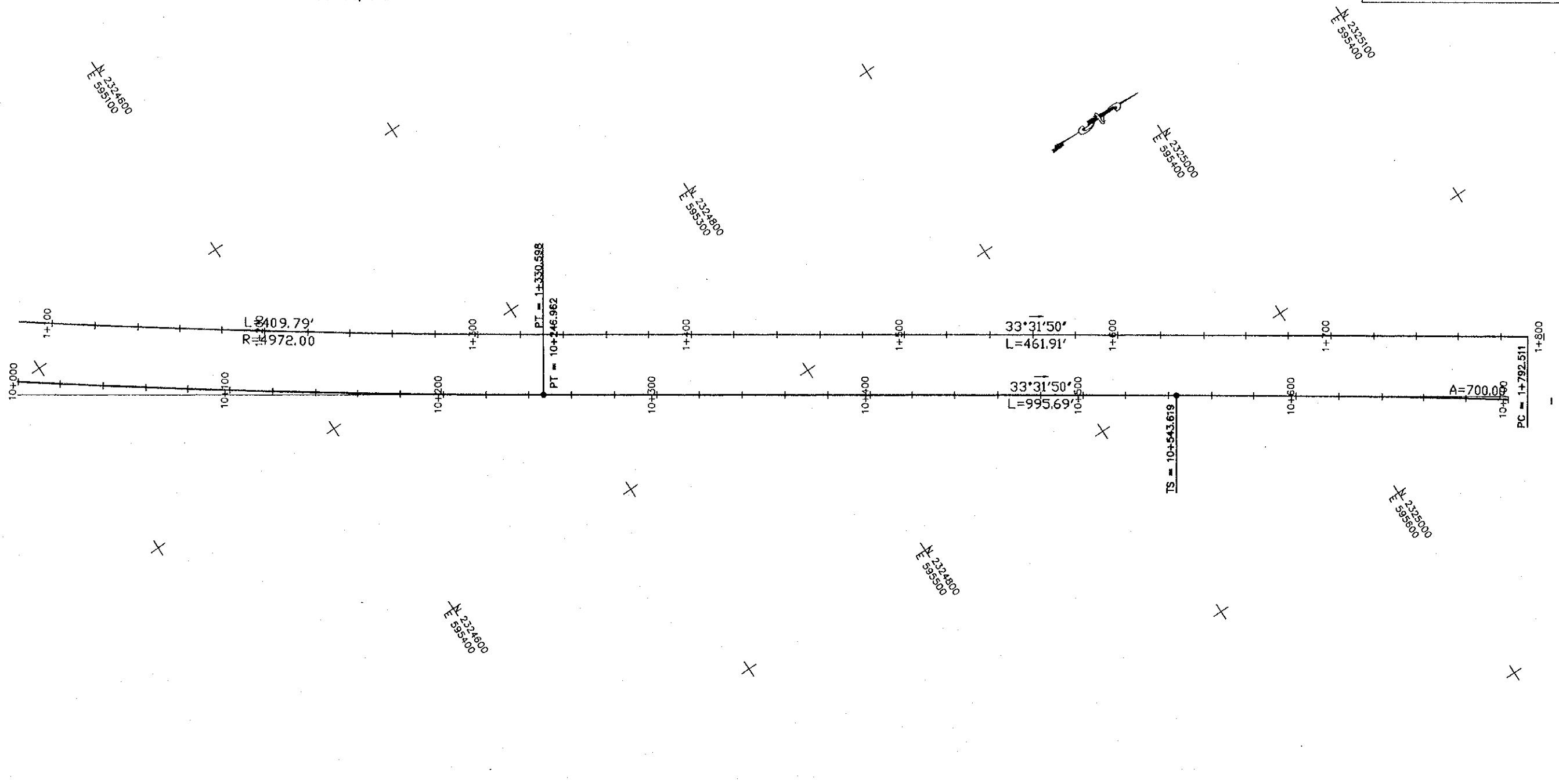
FRONTAGE ROAD (LEFT SIDE)

	STA	X(N)-COORDINATE	Y(E)-COORDINATE
IP1	0+440.283	2324061.455	594801.342
TS	0+371.188	2324011.543	594753.562
SC	0+427.348	2324055.829	594787.677
CS	0+451.560	2324078.864	594794.879
SC	0+451.560	2324078.864	594794.879
ST	0+499.984	2324127.112	594793.874
IP2	0+607.694	2324234.132	594781.701
TS	0+499.984	2324127.112	594793.874
SC	0+567.315	2324193.445	594798.200

CS	0+608.610	2324233.054	594825.911
SC	0+608.610	2324233.054	594825.911
ST	0+671.861	2324232.592	594887.720
IP3	0+744.585	2324231.536	594960.436
TS	0+671.861	2324232.592	594887.720
SC	0+711.551	2324234.636	594927.287
CS	0+731.446	2324240.190	594946.357
SC	0+731.446	2324240.190	594946.357
ST	0+831.446	2324305.142	595020.929
PC	0+920.810	2324374.182	595077.670

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. NAITABE
RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.3.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/2000	B--2--2	
ALIGNMENT LAYOUT (Km 10+000 TO Km 10+700)			



EXPRESSWAY

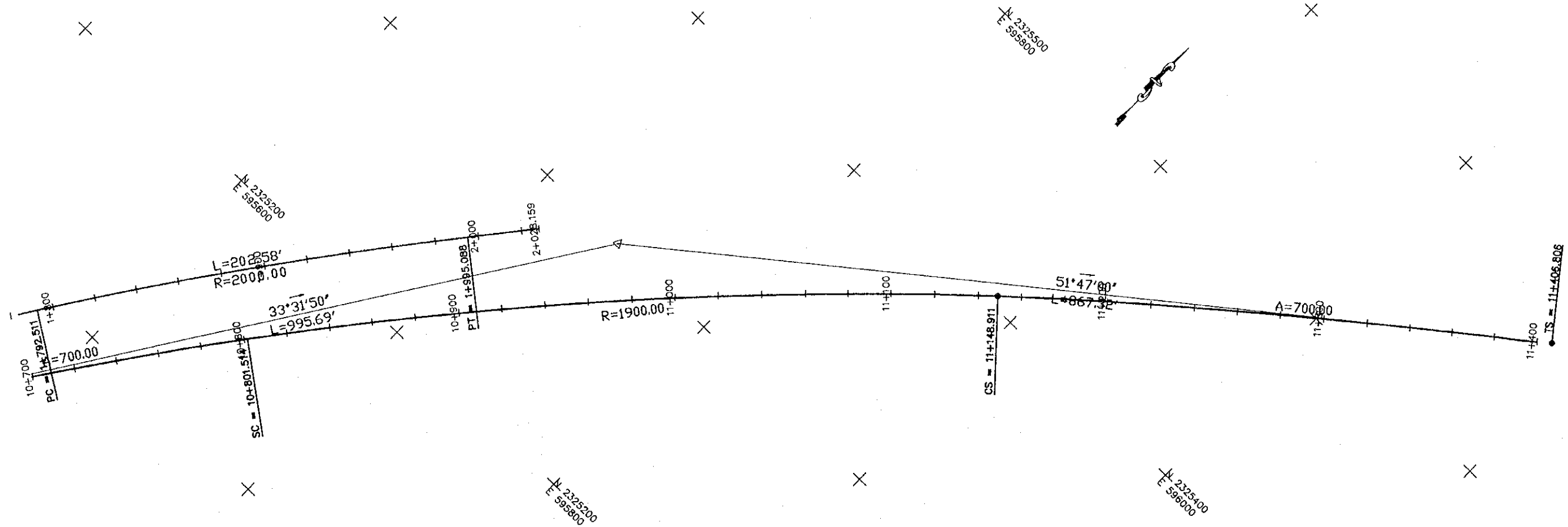
	STA	X(N)-COORDINATE	Y(N)-COORDINATE
PT	10+246.962	2324690.602	595341.182
TS	10+543.619	2324937.893	595505.050

FRONTAGE ROAD (LEFT SIDE)

	STA	X(N)-COORDINATE	Y(N)-COORDINATE
IP4	1+125.820	2324535.174	595204.598
PT	1+330.598	2324706.068	595317.841

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATADA
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.5.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/2000	B-2-3	
ALIGNMENT LAYOUT (Km 10+700 TO Km 11+400)			



EXPRESSWAY

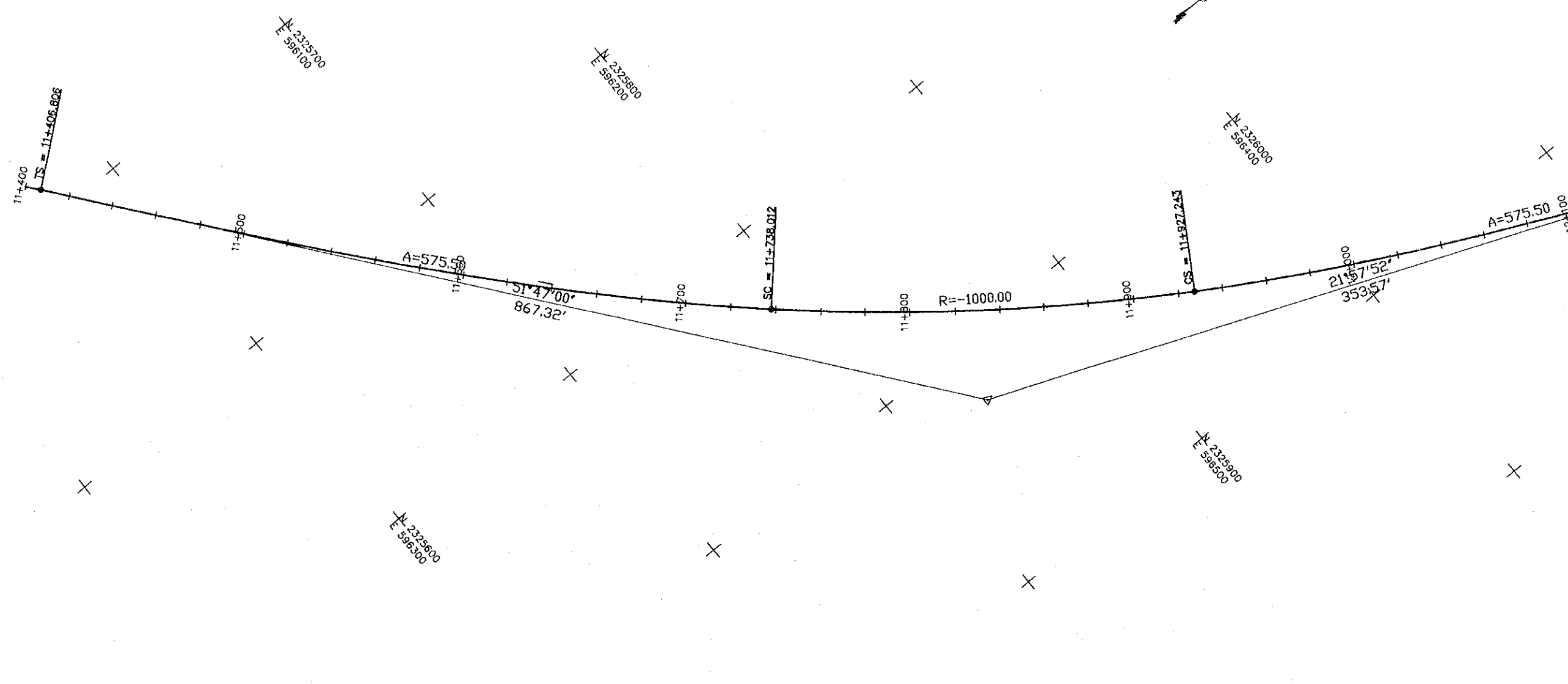
	STA	X(N)-COORDINATE	Y(N)-COORDINATE
IP7	10+978.013	2325300.000	595745.000
SC	10+801.514	2325149.551	595652.302
CS	11+148.911	2325404.680	595887.373

FRONTAGE ROAD (LEFT SIDE)

	STA	X(N)-COORDINATE	Y(N)-COORDINATE
IP5	1+893.887	2325175.622	595628.991
PC	1+792.511	2325091.116	595572.993
PT	1+995.088	2325254.032	595693.247
EP	2+028.159	2325279.611	595714.208

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATASE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2006.3.14	

PACKAGE 2	SCALE 1/2000	DRAWING No. B-2-4	SHEET No.
ALIGNMENT LAYOUT (Km 11+400 TO Km 12+100 )			

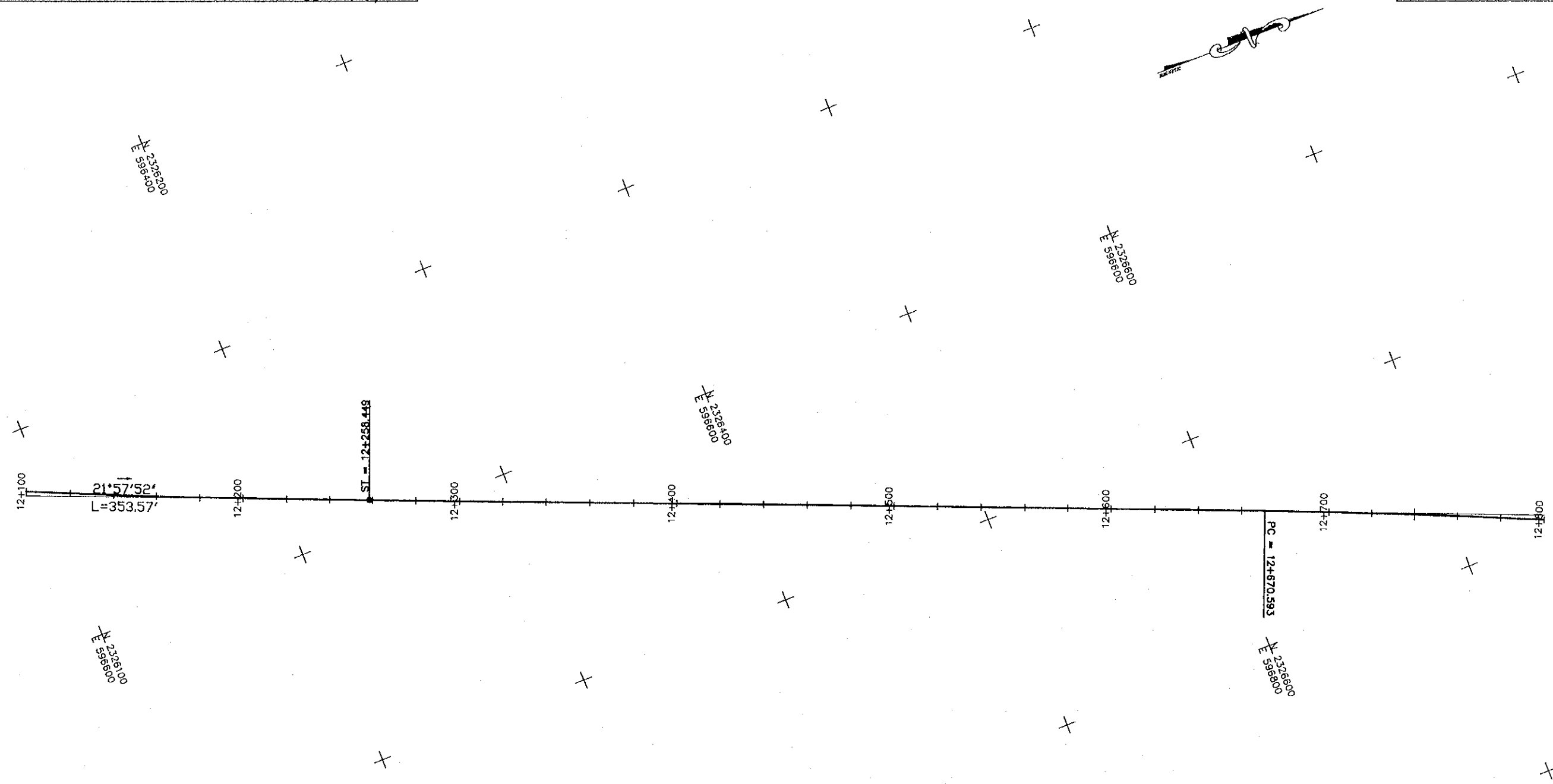


EXPRESSWAY

	STA	X(N)-COORDINATE	Y(N)-COORDINATE
IP8	11+839.729	2325836.553	596426.432
ST	11+406.806	2325568.732	596086.294
TS	11+406.806	2325568.732	596086.294
SC	11+738.012	2325787.403	596334.514
CS	11+927.243	2325938.553	596447.894

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.3.14	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/2000	DRAWING No. B-2-5	SHEET No.
ALIGNMENT LAYOUT (Km 12+100 TO Km 12+800)			

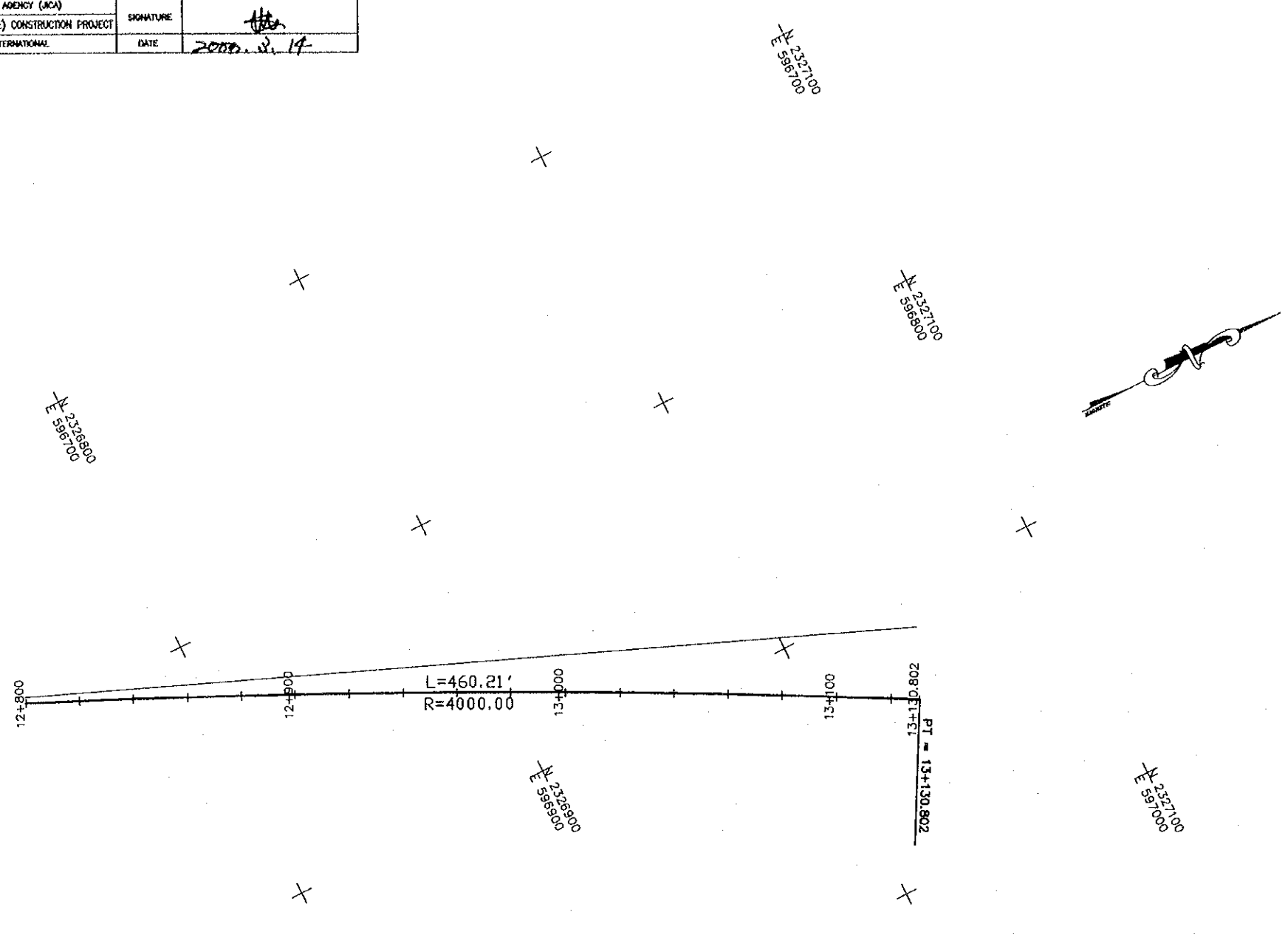


EXPRESSWAY

	STA	X(N)-COORDINATE	Y(N)-COORDINATE
ST	12+258.449	2326238.052	596588.360
PC	12+687.593	2326620.281	596742.516

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE <i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000. 8. 14

PACKAGE 2	SCALE 1/2000	DRAWING No. B-2-6	SHEET No.
ALIGNMENT LAYOUT (Km 13+800 TO Km 13+130.802)			

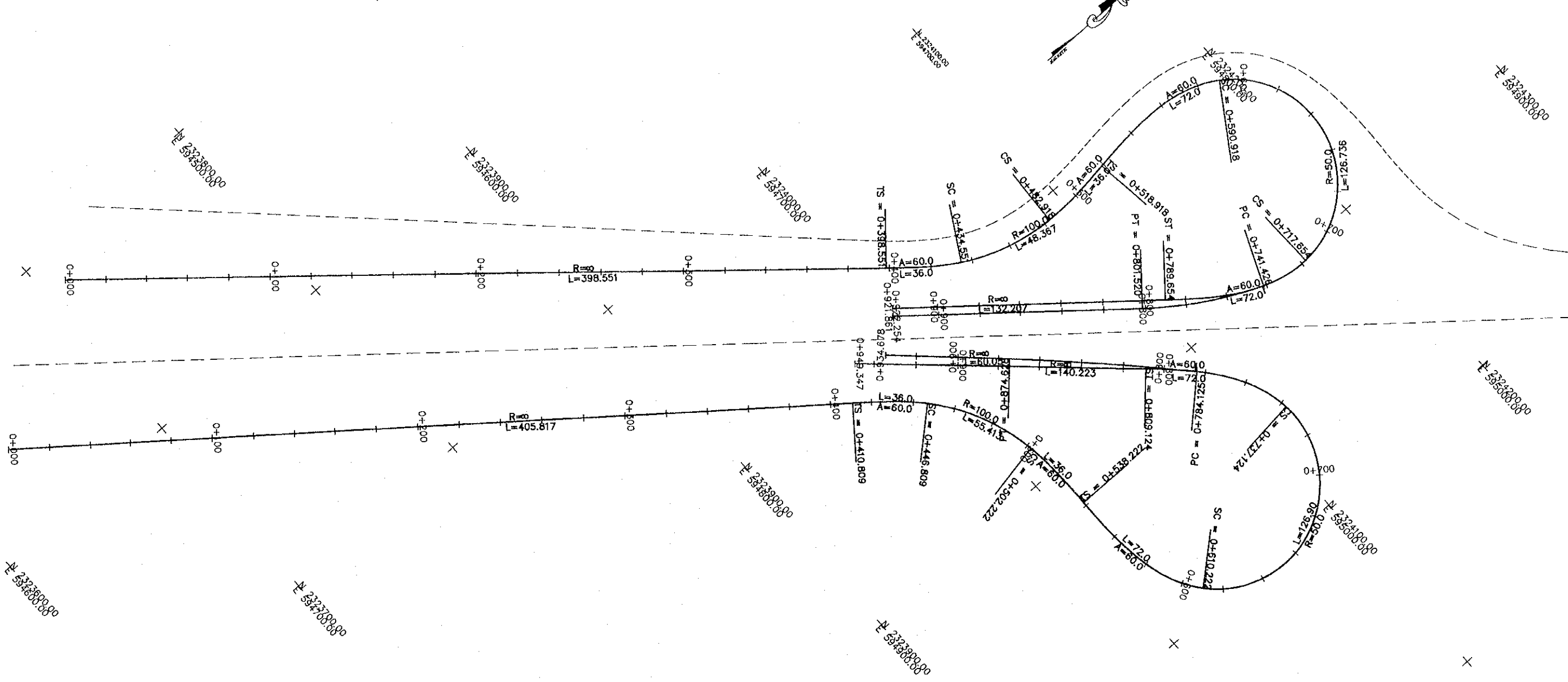


EXPRESSWAY

	STA	X(N)-COORDINATE	Y(N)-COORDINATE
EP	13.130.802	2327036.253	596938.796

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2008.3.19	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/2000	DRAWING No. B-2-7	SHEET No.
ALIGNMENT LAYOUT (Gio Lam I.C)			



**STAGE 2**

**RAMP A**

	STA	X-COORDINATE	Y-COORDINATE
BP	0+000.000	2323711.520	594515.489
IP1	0+334.773	2323966.176	594732.797
IP2	0+461.651	2324062.690	594815.157
TS	0+398.551	2324014.691	594774.197
SC	0+434.551	2324043.386	594795.850
CS	0+482.918	2324089.356	594809.298
ST	0+518.918	2324125.197	594806.524
TS	0+518.918	2324125.197	594806.524
SC	0+590.918	2324195.189	594813.666
PT	0+717.654	2324168.877	594905.399
IP3	0+742.906	2324143.929	594906.148
SC	0+717.654	2324169.170	594905.391
ST	0+789.654	2324105.853	594874.719
EP	0+921.861	2324003.971	594790.465

**RAMP B**

	STA	X-COORDINATE	Y-COORDINATE
BP	0+000.000	2323636.620	594557.933
IP1	0+365.517	2323924.002	594783.795
IP2	0+478.234	2324012.625	594853.447
TS	0+410.809	2323959.613	594811.783
SC	0+446.809	2323986.494	594835.650
CS	0+502.222	2324010.173	594884.967
ST	0+538.222	2324011.989	594920.869
IP3	0+451.567	2324012.807	594834.219
TS	0+538.222	2324011.989	594920.869
SC	0+610.222	2324027.994	594989.379
CS	0+737.124	2324115.608	594951.425
SC	0+737.124	2324115.608	594951.425
ST	0+809.124	2324076.577	594892.890
EP	0+949.347	2323972.968	594798.403

**STAGE 1**

**RAMP A**

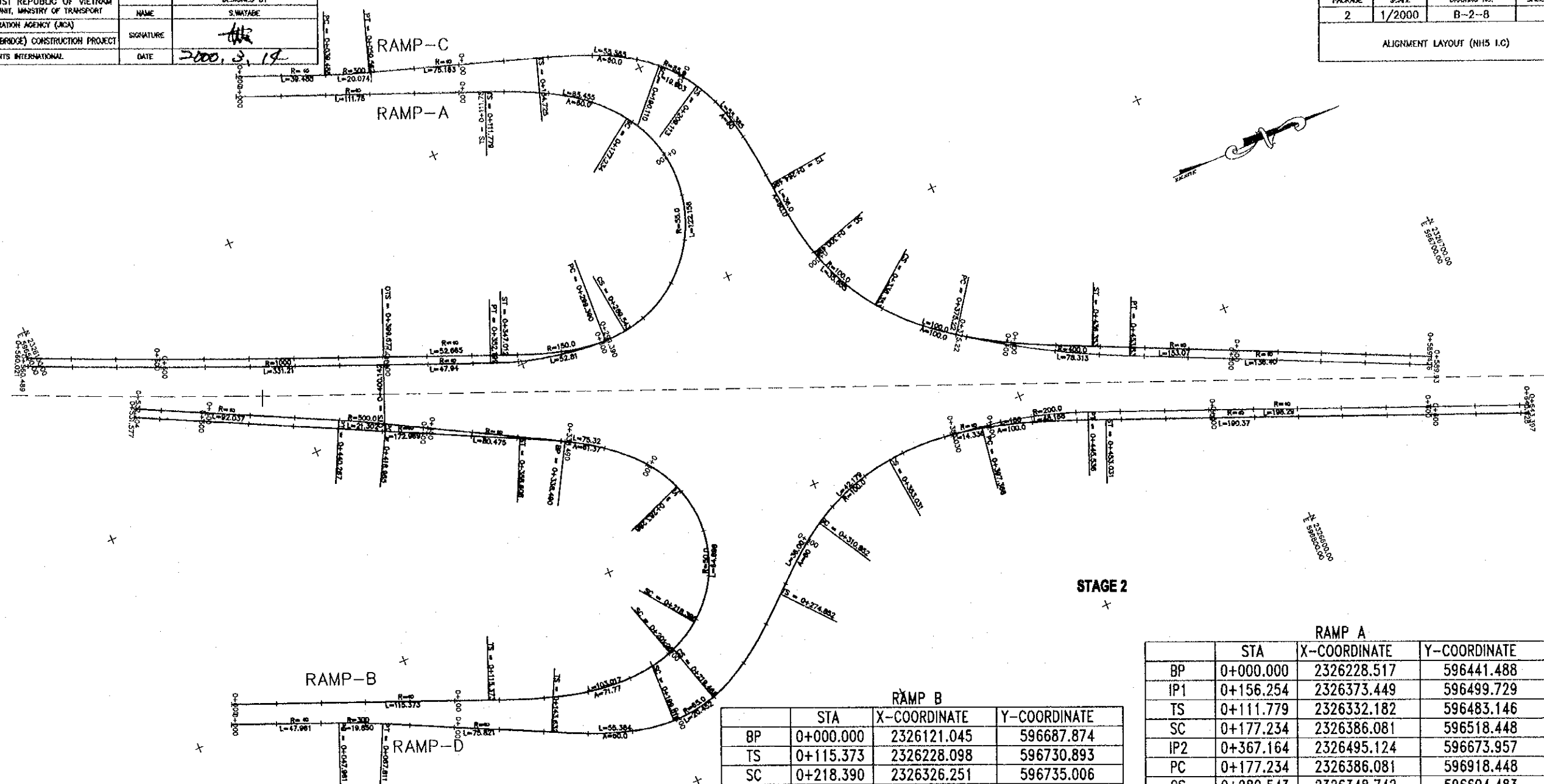
	STA	X-COORDINATE	Y-COORDINATE
BP=PC	0+741.426	2324145.943	594901.125
IP1	0+771.701	2324117.949	594889.595
PT=IP2	0+801.520	2324094.622	594870.297
EP	0+922.254	2324001.581	594793.355

**RAMP B**

	STA	X-COORDINATE	Y-COORDINATE
BP=PC	0+784.125	2324094.471	594910.335
IP1	0+829.390	2324063.551	594877.276
PT=IP2	0+874.628	2324030.694	594846.141
EP	0+934.678	2324030.812	594805.148

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATASE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.3.19	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/2000	DRAWING No. B-2-B	SHEET No.
ALIGNMENT LAYOUT (NH5 I.C)			



STAGE 1

STAGE 2

RAMP A			
	STA	X-COORDINATE	Y-COORDINATE
BP=PC	0+299.390	2326338.786	596605.053
IP1	0+326.071	2326312.118	596604.218
PT=IP2	0+352.199	2326287.374	596594.238
EP	0+560.489	2326095.006	596514.406

RAMP C			
	STA	X-COORDINATE	Y-COORDINATE
BP=PC	0+375.220	2326484.606	596663.863
IP1	0+414.502	2326516.642	596686.596
PT=IP2	0+453.533	2326552.489	596702.663
EP	0+589.931	2326676.575	596759.293

RAMP B			
	STA	X-COORDINATE	Y-COORDINATE
BP	0+338.490	2326304.399	596639.059
IP1	0+429.618	2326224.249	596595.697
PC	0+418.965	2326233.618	596600.765
PT	0+440.267	2326214.673	596591.031
EP	0+532.304	2326131.931	596550.723

RAMP D			
	STA	X-COORDINATE	Y-COORDINATE
BP=PC	0+383.030	2326465.014	596703.828
IP1	0+421.569	2326503.163	596709.302
PT	0+445.536	2326525.607	596718.354
EP	0+643.828	2326709.506	596792.522

RAMP B			
	STA	X-COORDINATE	Y-COORDINATE
BP	0+000.000	2326121.045	596687.874
TS	0+115.373	2326228.098	596730.893
SC	0+218.390	2326326.251	596735.006
CS	0+283.288	2326342.590	596676.819
ST	0+358.608	2326286.054	596629.948
EP	0+531.577	2326130.549	596554.210

RAMP A			
	STA	X-COORDINATE	Y-COORDINATE
BP	0+000.000	2326228.517	596441.488
IP1	0+156.254	2326373.449	596499.729
TS	0+111.779	2326332.182	596483.146
SC	0+177.234	2326386.081	596518.448
IP2	0+367.164	2326495.124	596673.957
PC	0+177.234	2326386.081	596918.448
CS	0+289.543	2326348.742	596604.483
ST	0+347.012	2326293.063	596592.758
EP	0+560.021	2326096.319	596511.159

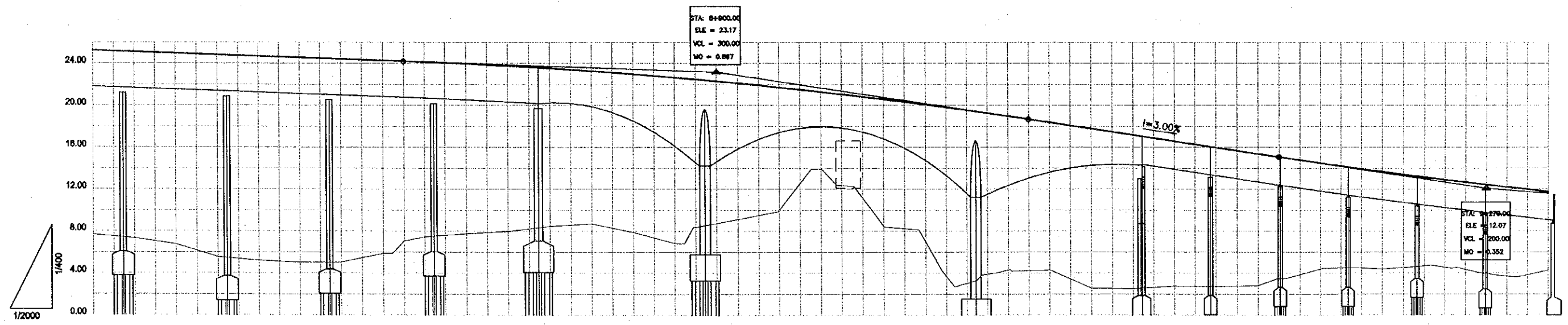
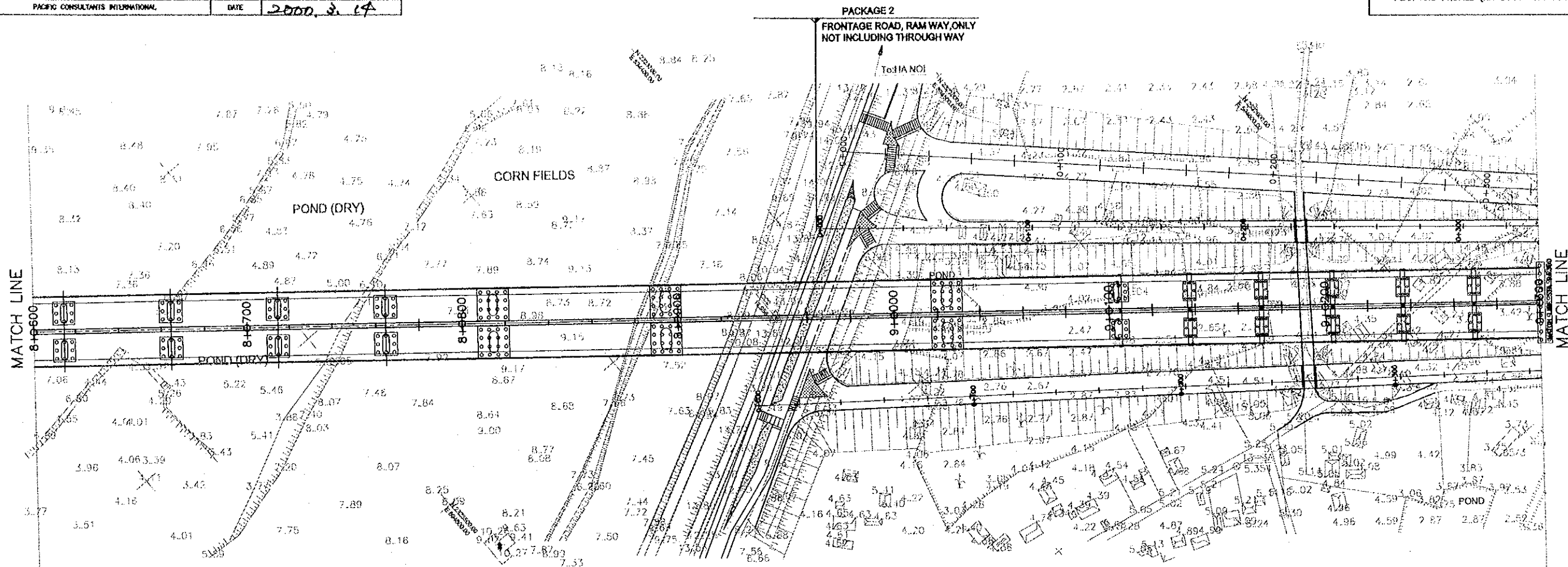
RAMP C			
	STA	X-COORDINATE	Y-COORDINATE
BP	0+000.000	2326232.075	596433.219
IP1	0+049.529	2326278.032	596451.687
PC	0+039.488	2326268.715	596447.943
PT	0+059.562	2326287.578	596454.799
IP2	0+205.375	2326426.208	596500.000
TS	0+134.725	2326359.039	596478.099
SC	0+190.110	2326408.340	596502.341
CS	0+209.113	2326420.297	596517.024
ST	0+264.498	2326434.047	596570.214
IP3	0+344.113	2326442.881	596649.339
TS	0+264.498	2326434.047	596570.214
SC	0+300.498	2326440.170	596605.637
CS	0+336.353	2326456.337	596637.427
ST	0+436.353	2326538.656	596692.230
EP	0+589.426	2326677.910	596755.788

RAMP D			
	STA	X-COORDINATE	Y-COORDINATE
BP	0+000.000	2326117.419	596696.116
IP1	0+057.889	2326171.133	596717.701
PC	0+047.961	2326161.921	596713.999
PT	0+067.811	2326180.081	596722.005
IP2	0+215.345	2326313.039	596785.947
TS	0+143.632	2326248.411	596754.866
SC	0+199.016	2326300.790	596771.441
CS	0+219.468	2326320.971	596768.698
ST	0+274.852	2326367.027	596738.745
IP3	0+358.623	2326430.092	596683.606
SC	0+310.852	2326395.460	596716.748
CS	0+353.031	2326435.101	596703.279
ST	0+453.031	2326531.674	596724.575
EP	0+643.397	2326708.222	596795.778



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATADE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (NHANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.3.17	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

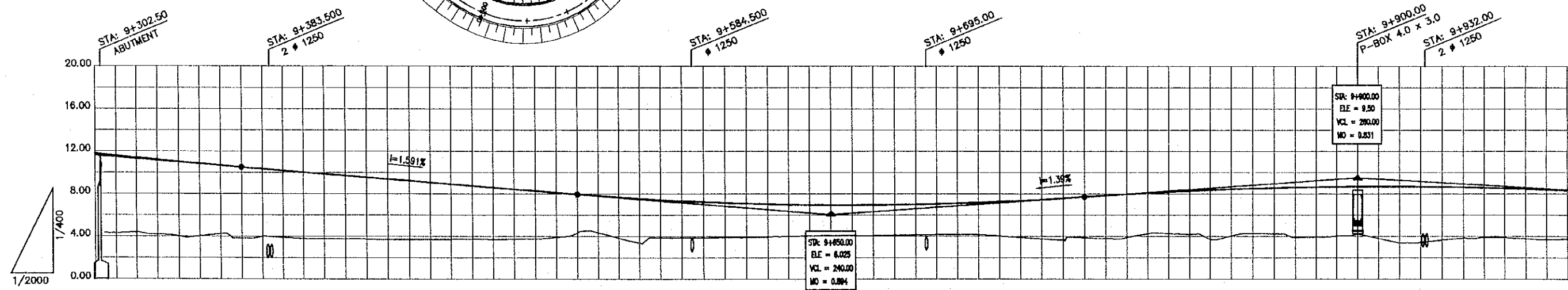
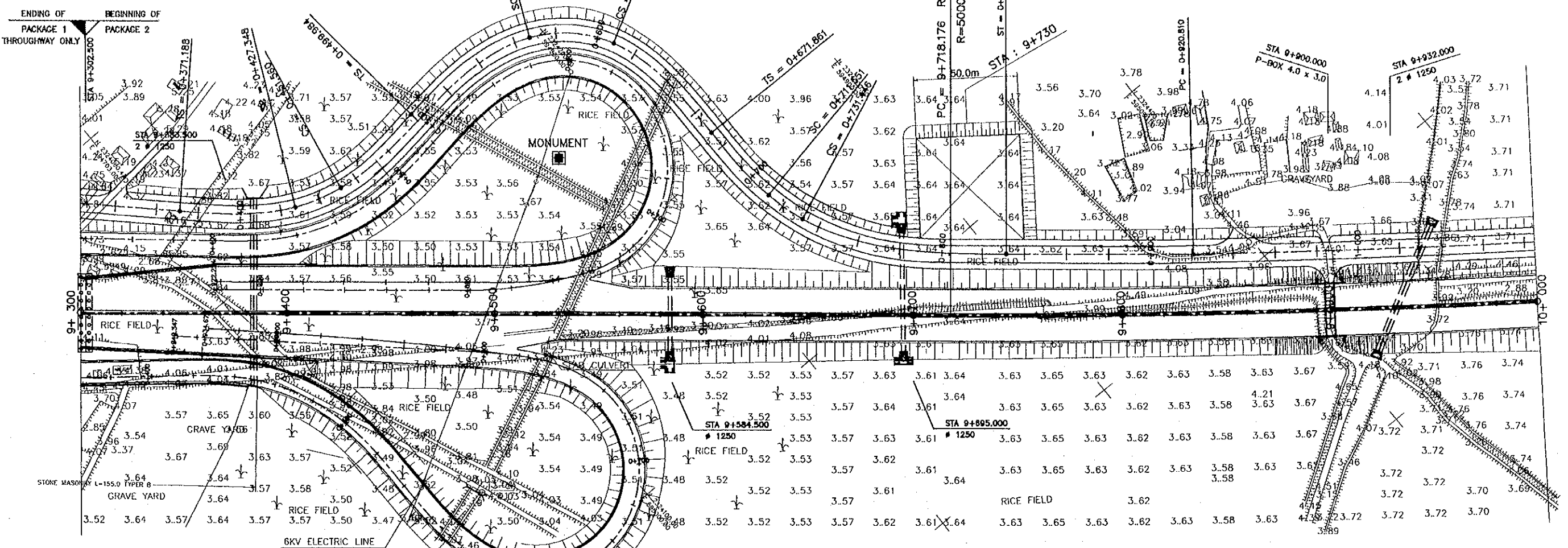
PACKAGE 2	SCALE 1/2000	DRAWING No. B-3-1	SHEET No.
PLAN AND PROFILE (KM 8+600-KM 9+300)			



PROPOSED HEIGHT CAO ĐỘ THIẾT KẾ	25.237	25.099	24.962	24.824	24.686	24.548	24.410	24.273	24.135	23.992	23.763	23.533	23.271	22.980	22.667	22.303	21.919	21.504	21.099	20.914	20.391	20.074	19.535	18.966	18.370	17.770	17.170	16.570	15.970	15.370	14.774	14.202	13.668	13.143	12.655	12.196	11.765			
GROUND LEVEL CAO ĐỘ TỰ NHIÊN	7.88	7.34	6.75	5.54	5.21	5.03	5.05	5.87	7.45	7.76	7.98	8.46	8.71	7.89	6.85	8.74	9.51	12.55	12.26	8.31	7.89	3.02	4.29	4.32	2.57	2.51	2.76	2.72	2.82	4.25	4.50	4.39	4.88	4.33	3.70	4.27				
SUPERELEVATION SẪU CAO	-																																							
CURVE BAND ĐOẠN THẲNG - ĐOẠN CỎNG	R=∞																																							
STATION LÝ TRÌNH	8+600	+620	+640	+660	+680	8+700	+720	+740	+760	+780	8+800	+820	+840	+860	+880	8+900	+920	+940	+960	+980	9+000	+920	+940	+960	+980	9+100	+120	+140	+160	+180	9+200	+220	+240	+260	+280	9+300				

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT: RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT: PACIFIC CONSULTANTS INTERNATIONAL		DATE

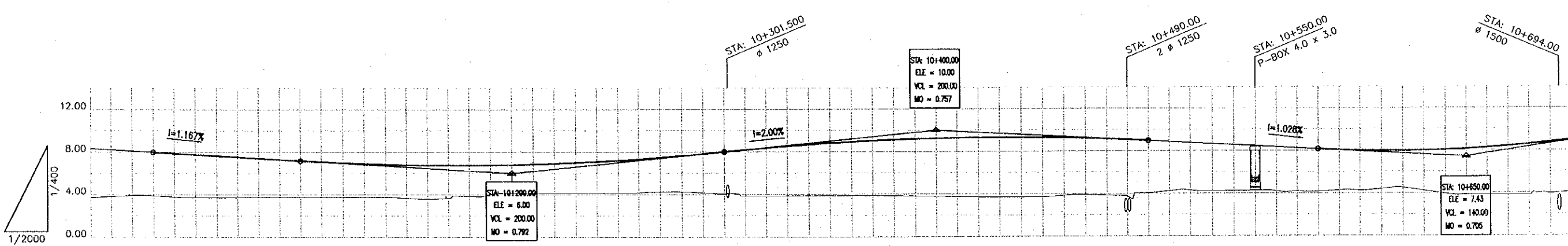
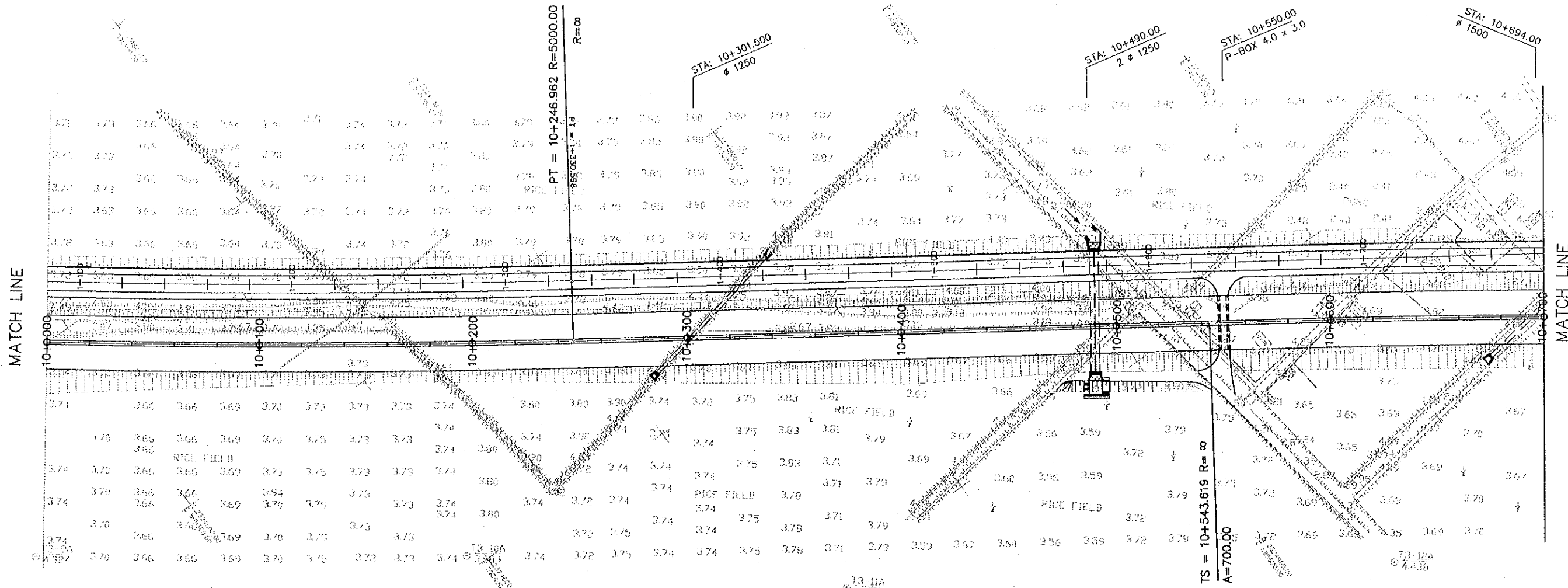
PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/2000	B-3-2	
PLAN AND PROFILE (KM 9+300 - KM 10+000)			



PROPOSED HEIGHT cao 3 thi ki	11.765	11.363	10.988	10.642	10.320	10.002	9.684	9.366	9.048	8.729	8.411	8.093	7.781	7.513	7.294	7.125	7.005	6.935	6.915	6.945	7.024	7.153	7.332	7.580	7.827	8.066	8.285	8.425	8.546	8.627	8.669	8.672	8.655	8.559	8.444	8.289
GROUND LEVEL cao 3 thi nhin	4.27	4.38	3.99	4.22	3.98	3.78	3.76	3.70	3.69	3.72	3.72	3.89	4.33	3.37	3.86	3.89	3.94	4.02	4.05	4.08	4.15	4.15	3.89	3.63	3.78	4.24	4.17	4.03	4.25	3.91	4.20	3.37	3.63	3.89	3.76	3.73
SUPERELEVATION stru cao	-																																			
CURVE BAND soan binh - soan cong	R=0															R=5000																				
STATION 1 thi nh	9+300	+320	+340	+360	+380	9+400	+420	+440	+460	+480	9+500	+520	+540	+560	+580	9+600	+620	+640	+660	+680	9+700	+720	+740	+760	+780	9+800	+820	+840	+860	+880	9+900	+920	+940	+960	+980	10+000

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WAKABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.14

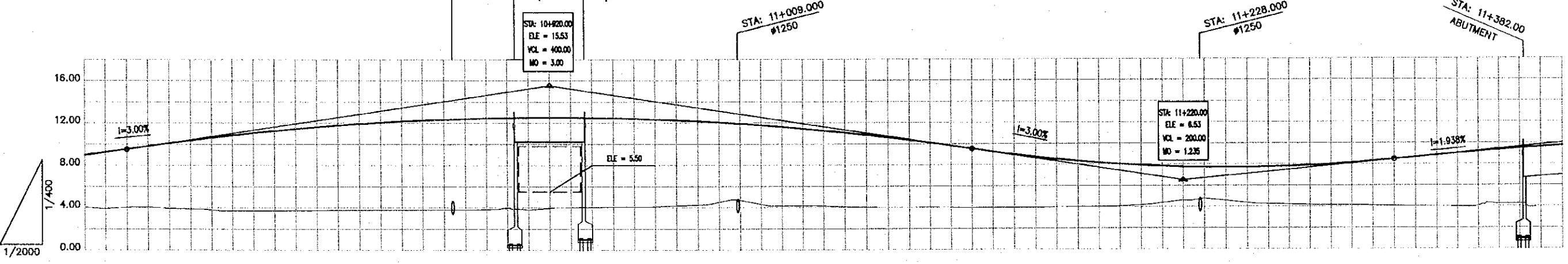
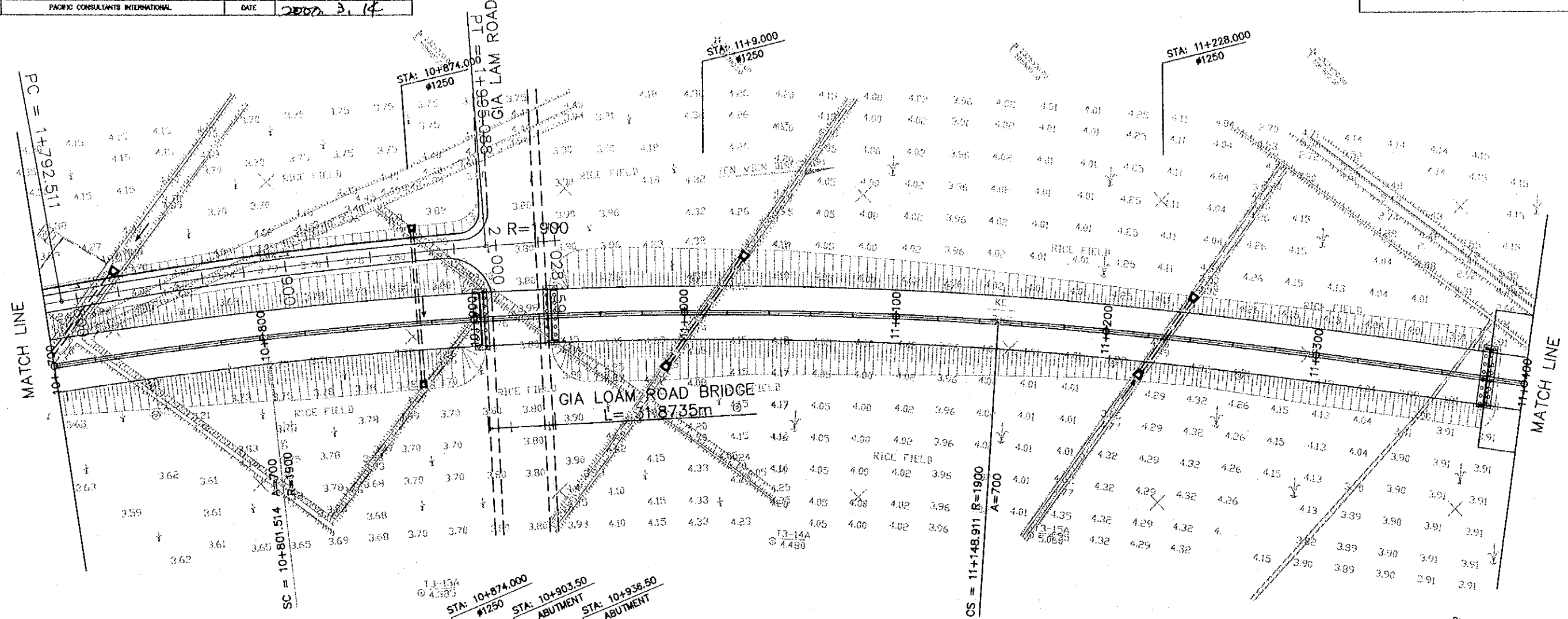
PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/2000	B-3-3	
PLAN AND PROFILE (KM 10+000 - KM 10+700)			



PROPOSED HEIGHT CAO ĐỘ THIẾT KẾ	8.289	8.095	7.867	7.633	7.400	7.167	6.965	6.827	6.752	6.740	6.792	6.907	7.085	7.327	7.632	8.000	8.370	8.679	8.927	9.116	9.243	9.310	9.316	9.262	9.147	8.972	8.766	8.561	8.355	8.150	8.002	7.969	8.051	8.248	8.560	8.988			
GROUND LEVEL CAO ĐỘ TỰ NHIÊN	3.73	3.93	3.79	3.73	3.74	3.74	3.75	3.75	3.59	3.85	4.12	4.16	4.14	4.19	4.26	4.06	3.87	3.88	3.88	3.86	3.79	3.71	3.70	3.84	3.84	4.05	4.31	4.25	4.21	4.17	4.27	4.52	3.94	3.87	3.62	4.06			
SUPERELEVATION SIÊU CAO	-																																						
CURVE BAND ĐOẠN THANG- ĐOẠN CÔNG	R=5000										R=∞										A=700																		
STATION LÝ TRÌNH	10+000	+20	+40	+60	+80	10+100	+120	+140	+160	+180	10+200	+220	+240	+260	+280	10+300	+320	+340	+360	+380	10+400	+420	+440	+460	+480	10+500	+520	+540	+560	+580	10+600	+620	+640	+660	+680	10+700			

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.3.14	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

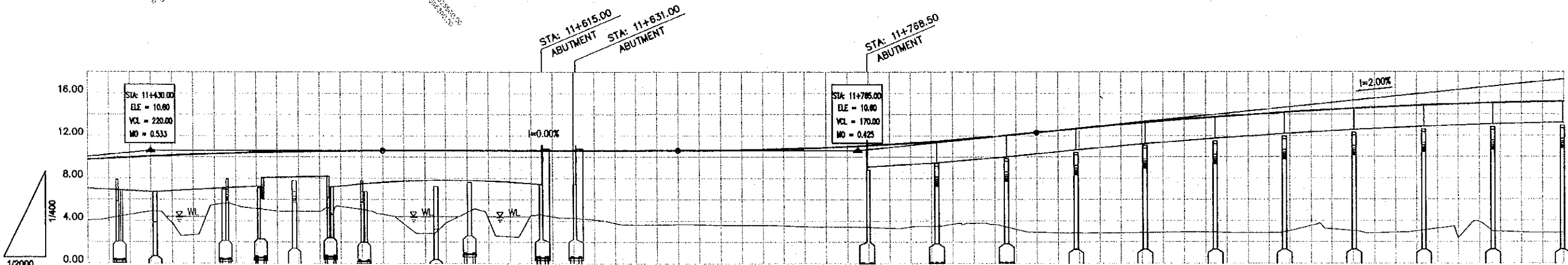
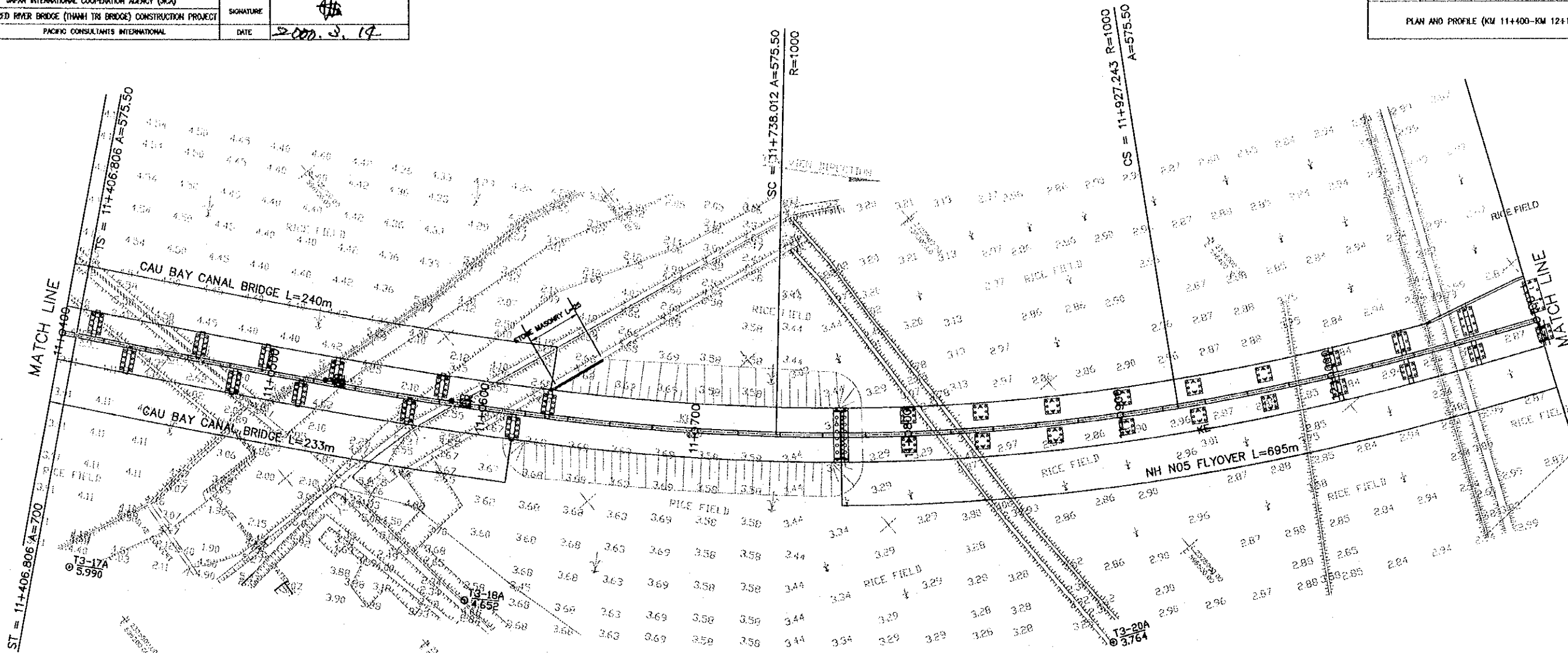
PACKAGE 2	SCALE 1/2000	DRAWING No. B-3-4	SHEET No.
PLAN AND PROFILE (KM 10+700 - KM 11+400)			



PROPOSED HEIGHT CAO ĐỘ THIẾT KẾ	8.988	9.530	10.100	10.610	11.060	11.450	11.780	12.050	12.260	12.410	12.500	12.530	12.500	12.410	12.260	12.050	11.780	11.450	11.060	10.610	10.100	9.530	8.979	8.528	8.174	7.920	7.765	7.708	7.750	7.890	8.130	8.468	8.838	9.173	9.472	9.737		
GROUND LEVEL CAO ĐỘ TỰ NHIÊN	4.06	4.05	3.94	3.81	3.71	3.73	3.77	3.78	3.79	3.81	3.95	3.97	4.06	4.08	4.18	4.51	4.32	4.17	4.08	4.01	4.02	3.97	3.97	4.00	4.01	4.18	4.61	4.57	4.27	4.17	4.13	4.06	4.01	4.06	4.23	4.04		
SUPERELEVATION SIÊU CAO																																						
CURVE BAND ĐOẠN THẲNG - ĐOẠN CỎNG	A=700										R=1900										A=700																	
STATION LÝ TRÌNH	10+700	+720	+740	+760	+780	10+800	+820	+840	+860	+880	10+900	+920	+940	+960	+980	11+000	+020	+040	+060	+080	+100	+120	+140	11+160	+180	11+200	+220	+240	+260	+280	11+300	+320	+340	+360	+380	11+400		

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.3.17	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/2000	DRAWING No. B-3-5	SHEET No.
PLAN AND PROFILE (KM 11+400-KM 12+100)			

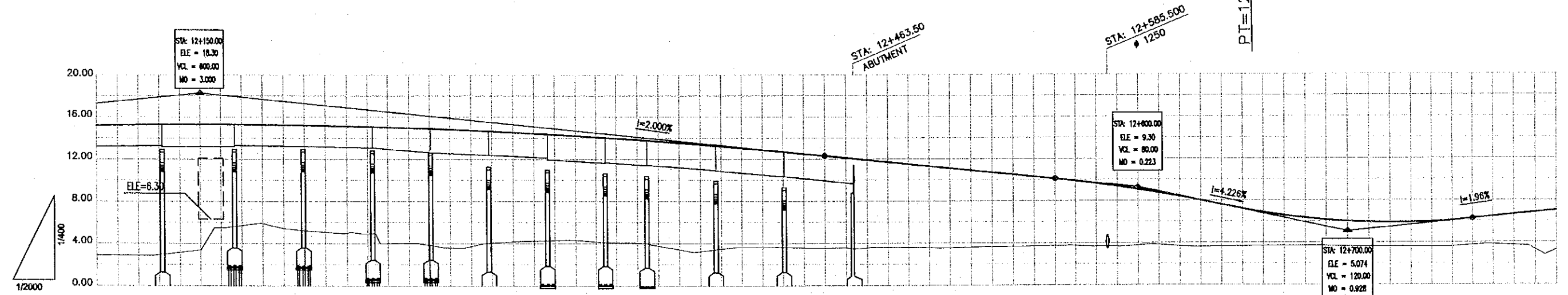
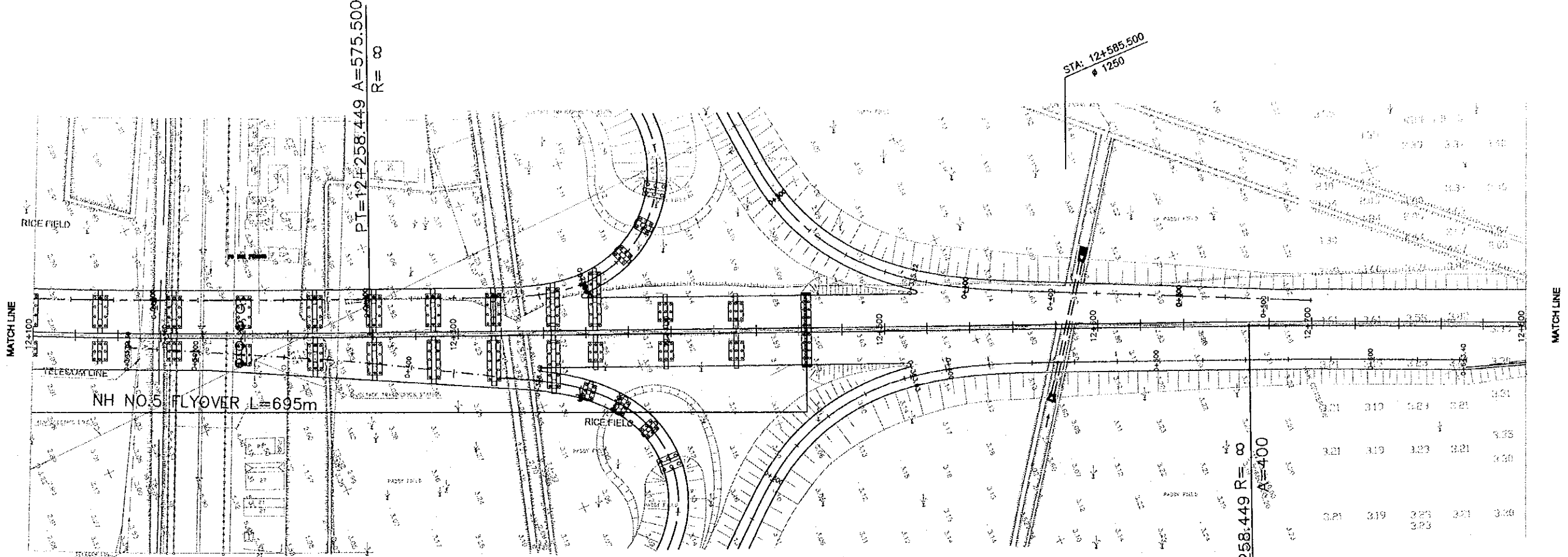


PROPOSED HEIGHT CAO ĐỘ THIẾT KẾ	9.737	9.966	10.160	10.318	10.441	10.530	10.562	10.600	10.600	10.600	10.600	10.600	10.600	10.624	10.694	10.812	10.976	11.188	11.447	11.753	12.106	12.496	12.867	13.207	13.519	13.800	14.052	14.274	14.467	14.630	14.763	14.867	14.941	14.985			
GROUND LEVEL CAO ĐỘ TỰ NHIÊN	4.04	4.58	4.46	5.53	5.14	4.88	5.35	4.53	2.82	4.82	2.54	4.42	4.12	3.64	3.68	3.60	3.58	3.47	3.44	3.33	3.49	3.78	3.22	2.89	2.86	2.89	2.94	2.90	2.88	3.53	3.07	2.91	3.28	3.85	2.91	2.89	
SUPERELEVATION SIÊU CAO																																					
CURVE BAND ĐOẠN THANG - ĐOẠN CÔNG	STA 11+406.806																	R=1000										STA 11+930.00									
STATION LÝ TRÌNH	11+400	+420	+440	+460	+480	11+500	+520	+540	+560	+580	11+600	+620	+640	+660	+680	11+700	+720	+740	+760	+780	11+800	+820	+840	+860	+880	11+900	+920	+940	+960	+980	12+000	+020	+040	+060	+080	12+100	



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THUONG LOAN PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. NATARU
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.3.14	
CONSULTANT FACINO CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/2000	DRAWING No. B-3-6	SHEET No.
PLAN AND PROFILE (KM 12+100-KM 12+800)			

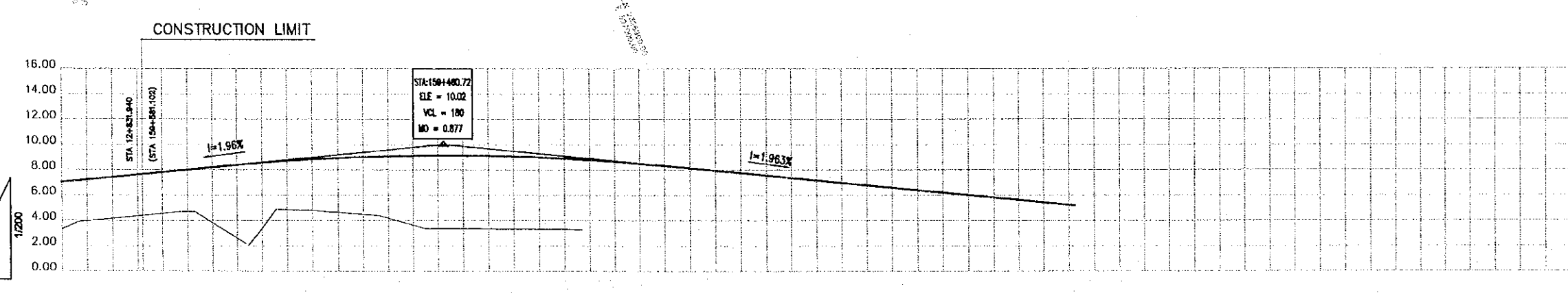
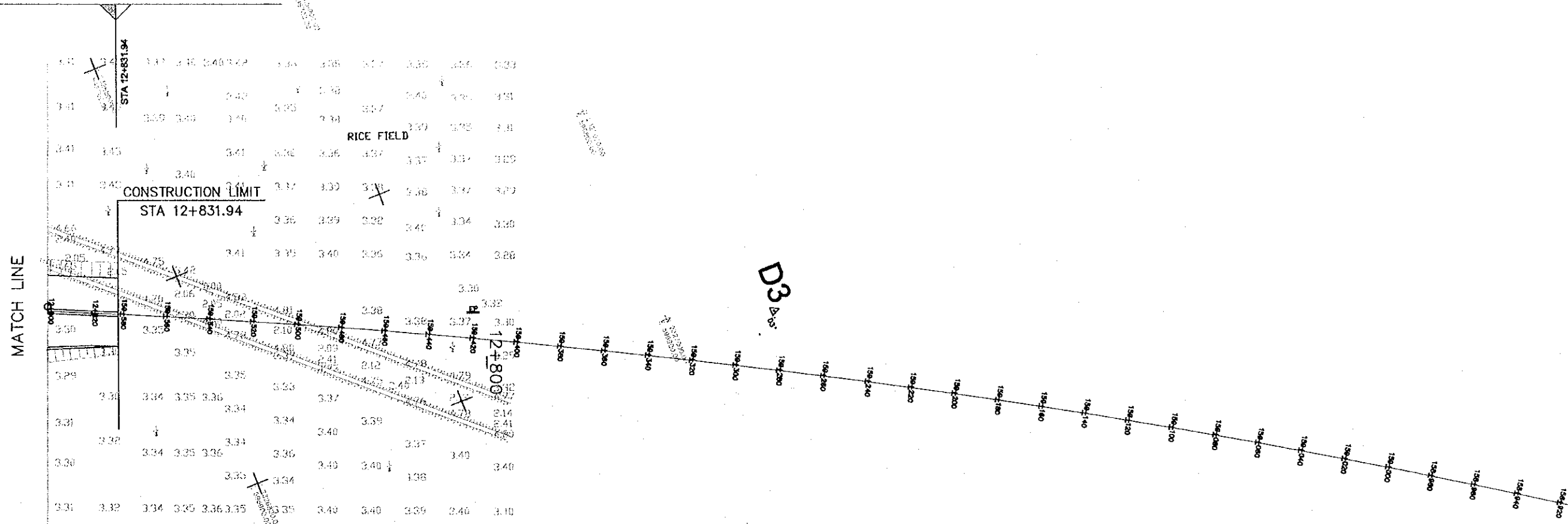


PROPOSED HEIGHT CAO ĐỘ THIẾT KẾ	15.217	15.270	15.297	15.297	15.270	15.217	15.137	15.030	14.897	14.737	14.550	14.337	14.097	13.830	13.537	13.217	12.870	12.497	12.100	11.700	11.300	10.900	10.500	10.100	9.644	9.077	8.399	7.810	6.868	6.332	6.002	5.878	5.861	5.740	5.642	7.034		
GROUND LEVEL CAO ĐỘ TỰ NHIÊN	2.89	2.88	3.16	5.49	5.88	5.23	5.00	4.01	3.84	3.73	4.17	4.29	4.18	4.04	3.43	3.47	3.64	3.58	3.59	3.62	3.58	3.61	3.67	3.74	3.71	3.77	3.69	3.65	3.70	3.71	3.64	3.61	3.59	3.74	3.72	3.83		
SUPERELEVATION SIÊU CAO																																						
CURVE BAND ĐOẠN THẲNG - ĐOẠN CỎNG																																						
STATION LÝ TRÌNH	12+100	+120	+140	+160	+180	12+200	+220	+240	+260	+280	12+300	+320	+340	+360	+380	12+400	+420	+440	+460	+480	12+500	+520	+540	+560	+580	12+600	+620	+640	+660	+680	12+700	+720	+740	+760	+780	12+800		

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TIU BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	DATE 2000.3.12
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/2000	DRAWING No. B-3-7	SHEET No.
PLAN AND PROFILE (KM 12+800-KM 13+000)			

ENDING POINT OF PACKAGE 2

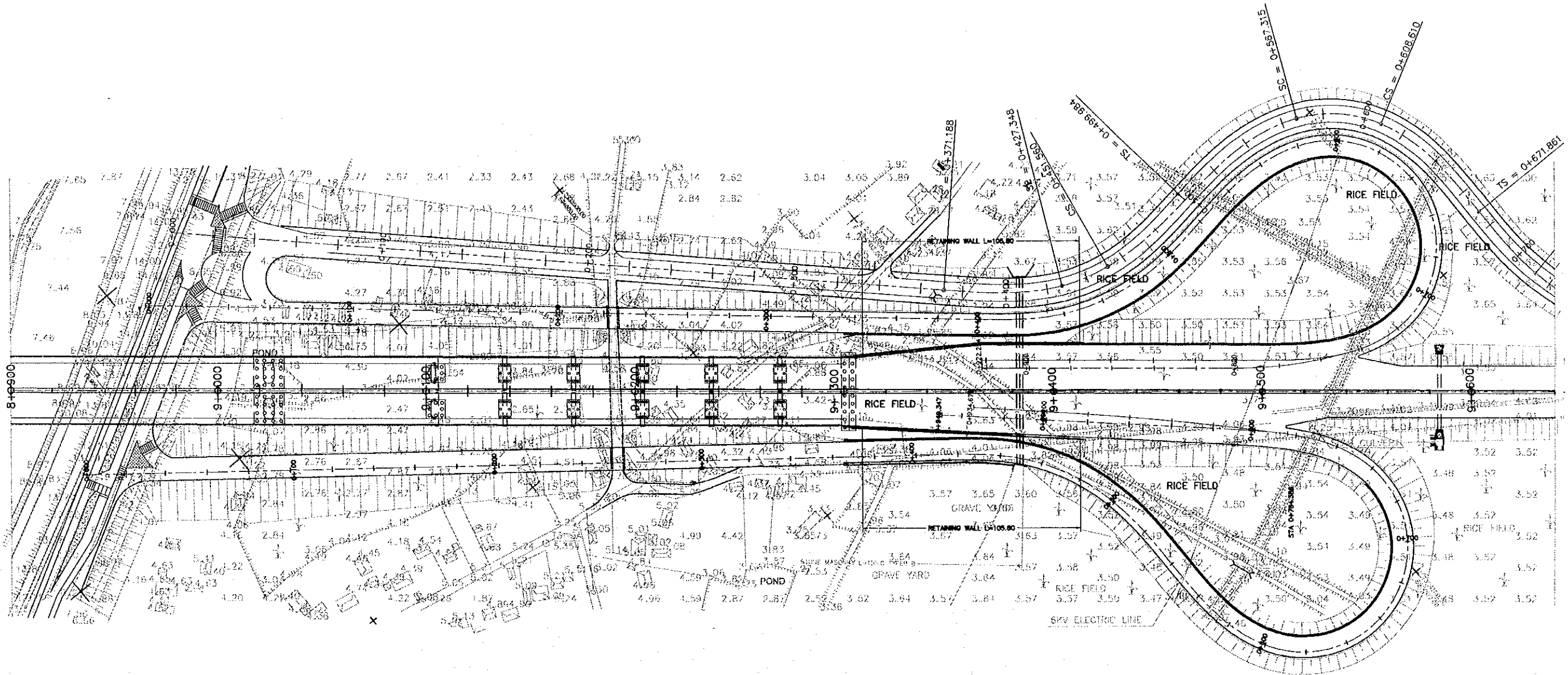


PROPOSED HEIGHT CAO ĐỘ THIẾT KẾ	7.034	7.305	7.426	7.681	7.818	8.102	8.353	8.535	8.841	9.026	9.125	9.136	9.040	8.903	8.656	8.322	7.935	7.548	7.161	6.774	6.387	5.999	5.612	5.225	5.180
GROUND LEVEL CAO ĐỘ TỰ NHIÊN	3.83	4.16	4.56	3.82	2.91	4.81	4.49	3.65	3.38	3.34	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.32
SUPERELEVATION SIÊU CAO	-																								
CURVE BAND ĐOẠN THẲNG ĐOẠN CONG	R=4000																								
STATION LÝ TRÌNH	12+800	+820	+80	+60	+40	+20	129+500	+80	+60	+40	+20	129+400	+80	+60	+40	+20	129+300	+80	+60	+40	+20	129+200			

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THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. NAYABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000. 3. 17	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/2000	DRAWING No. B-3-B	SHEET No.
GIA LAM DYKE INTERCHANGE PLAN			



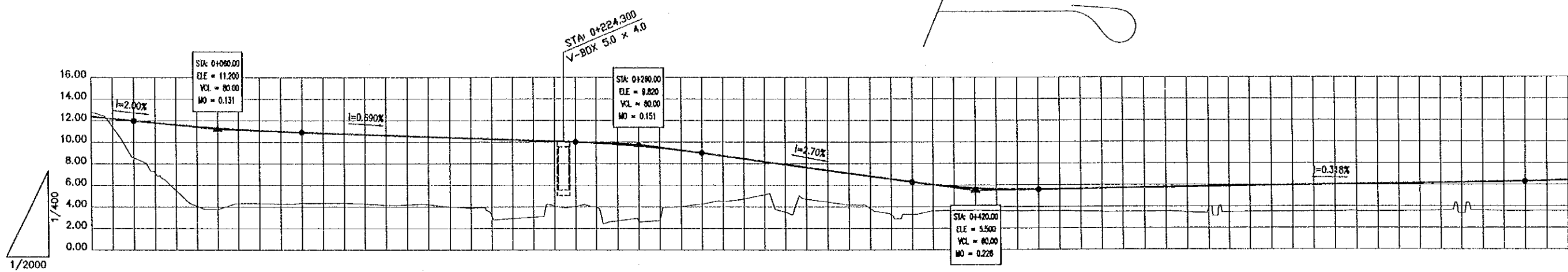
37



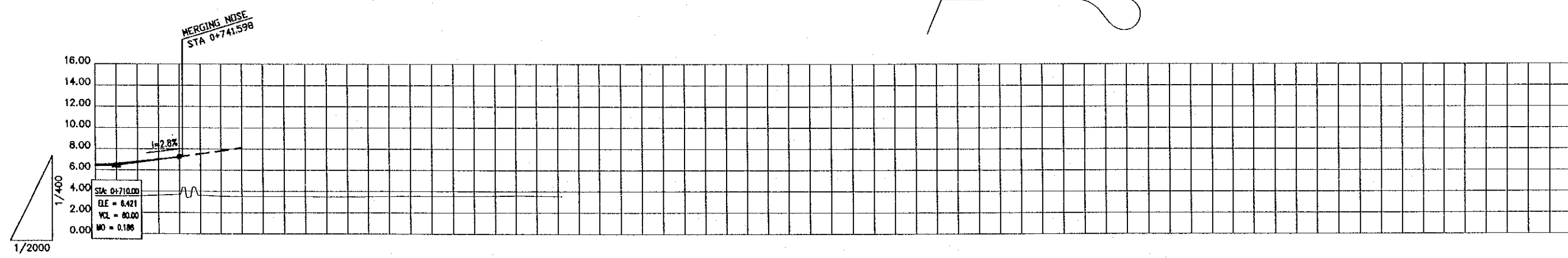
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATANE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.3.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/2000	B-3-9	

GIA LAM DYKE INTERCHANGE PROFILE (1/2)



PROPOSED HEIGHT CAO ĐỘ THIẾT KẾ	12.400	12.200	12.000	11.808	11.633	11.474	11.331	11.205	11.095	11.001	10.924	10.855	10.786	10.717	10.648	10.579	10.510	10.441	10.372	10.303	10.234	10.165	10.096	10.027	9.941	9.822	9.669	9.483	9.263	9.010	8.740	8.470	8.200	7.930	7.660	7.390	7.120	6.850	6.580	6.310	6.065	5.871	5.726	5.632	5.589	5.595	5.627	5.659	5.691	5.722	5.754	5.786	5.818	5.849	5.881	5.913	5.945	5.976	6.008	6.040	6.072	6.103	6.135	6.167	6.199	6.230	6.262	6.294	6.326	6.378	6.472
GROUND LEVEL CAO ĐỘ TỰ NHIÊN	12.80	8.56	5.53	3.79	4.34	4.36	4.36	4.15	4.22	3.89	2.92	3.66	3.98	2.69	4.04	4.49	5.14	4.72	4.19	3.26	3.62	3.67	3.59	3.59	3.52	3.53	3.47	3.47	3.51	3.51	3.55	3.55	3.62	3.62	3.56	3.54																																			
SUPERELEVATION SIÊU CAO	[Graph showing superelevation curves]																																																																						
CURVE BAND ĐOẠN THẲNG ĐOẠN CÔNG	[Graph showing curve bands with R=18, R=100.00, R=50.00, and A=60.00 values]																																																																						
STATION LÝ TRÌNH	0+000	+020	+040	+060	+080	0+100	+120	+140	+160	+180	0+200	+220	+240	+260	+280	0+300	+320	+340	+360	+380	0+400	+420	+440	+460	+480	0+500	+520	+540	+560	+580	0+600	+620	+640	+660	+680	0+700																																			



PROPOSED HEIGHT CAO ĐỘ THIẾT KẾ	6.472	6.607	6.784	7.002	7.261	7.506										
GROUND LEVEL CAO ĐỘ TỰ NHIÊN	3.54	3.57	3.72	3.56	3.53	3.52	3.50	3.55	3.56	3.57	3.63	3.57				
SUPERELEVATION SIÊU CAO	[Graph showing superelevation curves]															
CURVE BAND ĐOẠN THẲNG ĐOẠN CÔNG	[Graph showing curve bands with A=60.00 and R=18 values]															
STATION LÝ TRÌNH	0+700	+720	+740	+760	+780	0+800	+820	+840	+860	+880	0+900	+920	+940	+960	+980	1+000

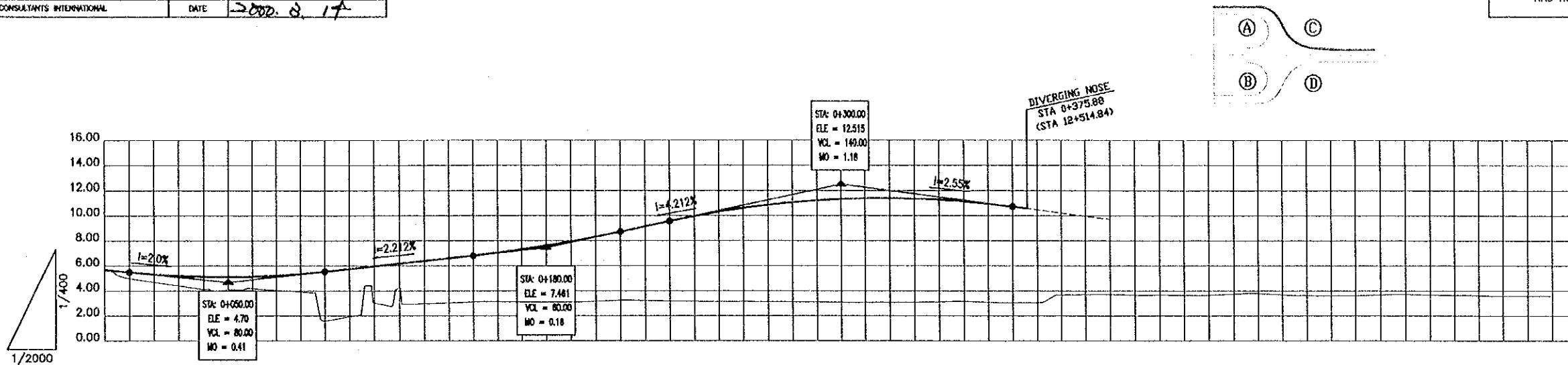




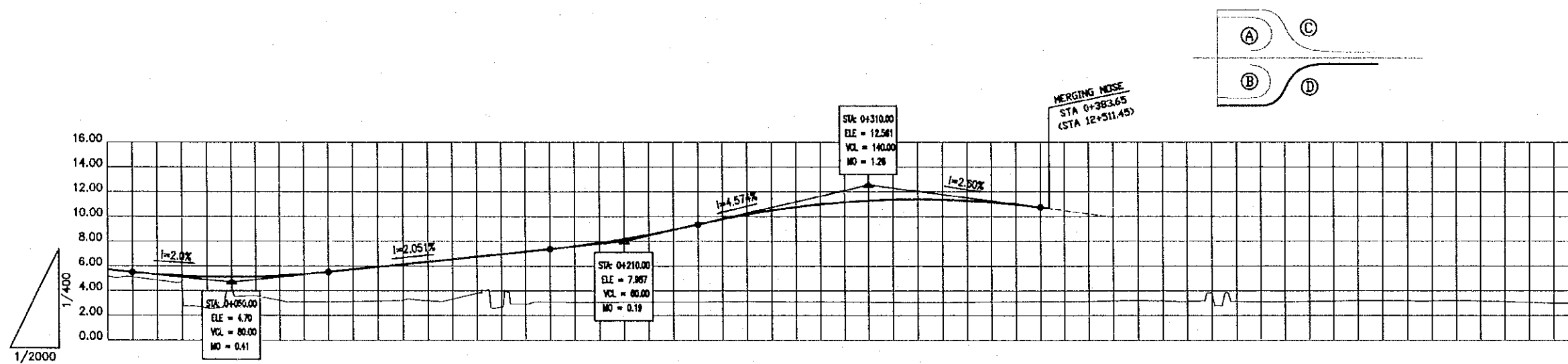


THE GOVERNMENT OF THE SOCIAL REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATADA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2002. 8. 17	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/2000	DRAWING No. B-3-13	SHEET No.
NH5 No.5 INTERCHANGE PROFILE (2/2)			



PROPOSED HEIGHT CAO ĐỘ THIẾT KẾ	5.700	5.500	5.326	5.203	5.132	5.112	5.144	5.228	5.363	5.550	5.762	5.974	6.187	6.399	6.611	6.824	7.054	7.318	7.618	7.952	8.321	8.725	9.146	9.567	9.964	10.313	10.613	10.865	11.069	11.224	11.332	11.391	11.401	11.364	11.278	11.143	10.961	10.730	10.580
GROUND LEVEL CAO ĐỘ TỰ NHIÊN	5.69	4.70	3.31	4.19	3.92	2.41	4.27	3.05	3.14	3.11	3.17	3.23	3.16	3.14	3.12	3.08	3.08	3.13	3.10	3.07	3.70	3.66	3.65	3.76	3.69	3.62	3.68	3.68	3.63	3.60									
SUPERELEVATION SẼU CAO	STA 0+030		STA 0+040		STA 0+070		STA 0+190		STA 0+210		STA 0+261		STA 0+300		STA 0+340		STA 0+375.88																						
CURVE BAND ĐOẠN THẲNG	STA 0+039.49		STA 0+059.56		A=60.00		R=65.00		A=60.00		STA 0+264.50		R=100.00		STA 0+336.35		STA 0+436.35																						
STATION LÝ TRÌNH	0+000	+020	+040	+060	+080	+100	+020	+040	+060	+080	+020	+040	+060	+080	0+300	+020	+040	+060	+080	0+400	+020	+040	+060	+080	0+500	+020	+040	+060	+080	0+600									

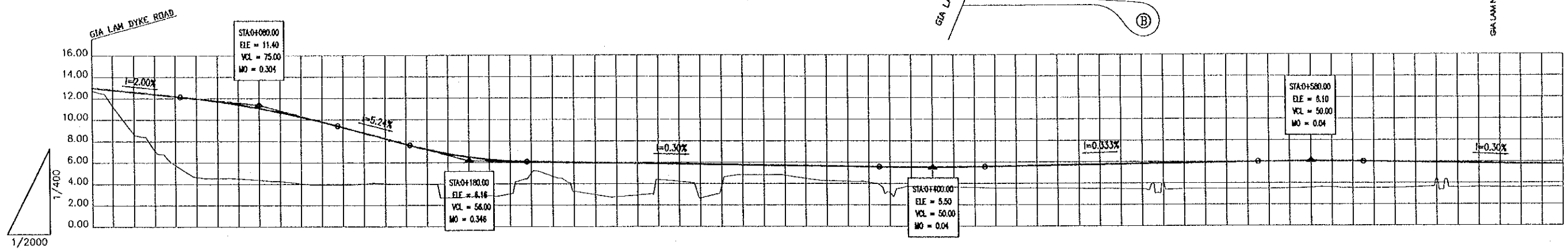


PROPOSED HEIGHT CAO ĐỘ THIẾT KẾ	5.700	5.500	5.325	5.201	5.128	5.105	5.133	5.212	5.342	5.522	5.727	5.933	6.138	6.344	6.549	6.754	6.960	7.165	7.371	7.597	7.866	8.176	8.528	8.923	9.359	9.791	10.172	10.501	10.779	11.006	11.181	11.306	11.379	11.400	11.371	11.290	11.158	10.975	10.746
GROUND LEVEL CAO ĐỘ TỰ NHIÊN	5.17	4.86	2.61	3.58	3.10	3.14	3.23	3.34	3.44	2.68	3.10	3.07	3.09	3.10	3.15	3.12	3.10	3.07	3.07	3.07	3.11	3.14	3.15	3.21	3.15	3.14	3.13	3.16	3.21	3.19	3.17	3.08	3.01						
SUPERELEVATION SẼU CAO	STA 0+040		STA 0+050		STA 0+080		STA 0+200		STA 0+220		STA 0+271		STA 0+310		STA 0+350		STA 0+383.65																						
CURVE BAND ĐOẠN THẲNG	STA 0+047.96		R=300		STA 0+067.01		STA 0+143.63		STA 0+199.02		STA 0+219.47		A=60.00		R=100.00		A=100.00																						
STATION LÝ TRÌNH	0+000	+020	+040	+060	+080	+100	+020	+040	+060	+080	+020	+040	+060	+080	0+300	+020	+040	+060	+080	0+400	+020	+040	+060	+080	0+500	+020	+040	+060	+080	0+600									

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATARE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.3.17	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

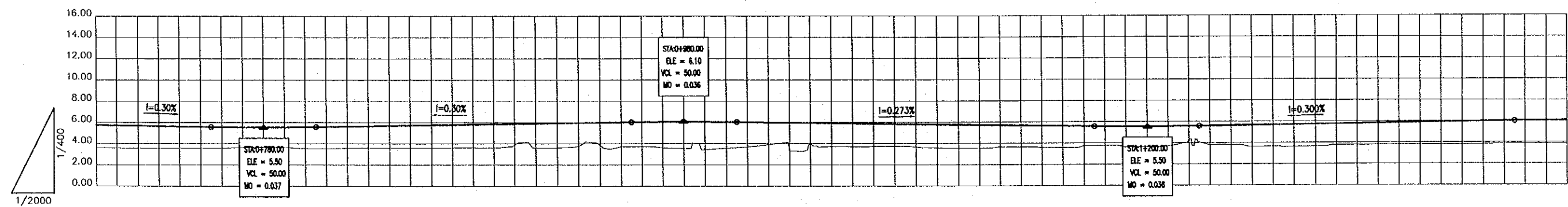
PACKAGE 2	SCALE 1/2000	DRAWING No. B-3-14	SHEET No. FRONTAGE ROAD PROFILE (LEFT SIDE) 1/2
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### LEFT SIDE



PROPOSED HEIGHT CAO ĐỘ THIẾT KẾ	13.000	12.600	12.200	11.734	11.096	10.286	9.304	8.256	7.236	6.506	6.128	6.040	5.980	5.920	5.860	5.800	5.740	5.680	5.620	5.562	5.540	5.568	5.633	5.700	5.767	5.833	5.900	5.967	6.032	6.060	6.038	5.980	5.920	5.860	5.800	5.740		
GROUND LEVEL CAO ĐỘ TỰ NHIÊN	12.71	8.70	5.79	4.55	4.37	4.06	3.93	4.05	3.99	2.77	3.07	4.71	3.00	2.96	4.23	3.82	4.84	4.50	4.21	3.16	3.73	3.63	3.56	3.53	3.50	3.46	3.47	3.47	3.49	3.57	3.53	3.55	4.37	3.62	3.58	3.61		
SUPERELEVATION SIÊU CAO	[Graph showing superlevation curves]																																					
CURVE BAND ĐOẠN THẲNG ĐOẠN CONG	[Graph showing curve bands with R and A values]																																					
STATION LÝ TRÌNH	0+000	+020	+040	+060	+080	+100	+120	+140	+160	+180	+200	+220	+240	+260	+280	+300	+320	+340	+360	+380	+400	+420	+440	+460	+480	0+500	+520	+540	+560	+580	0+600	+620	+640	+660	+680	0+700		

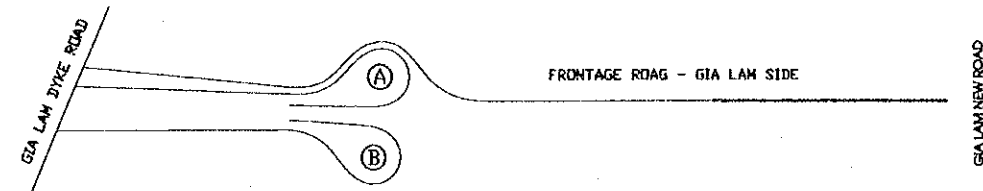
### LEFT SIDE



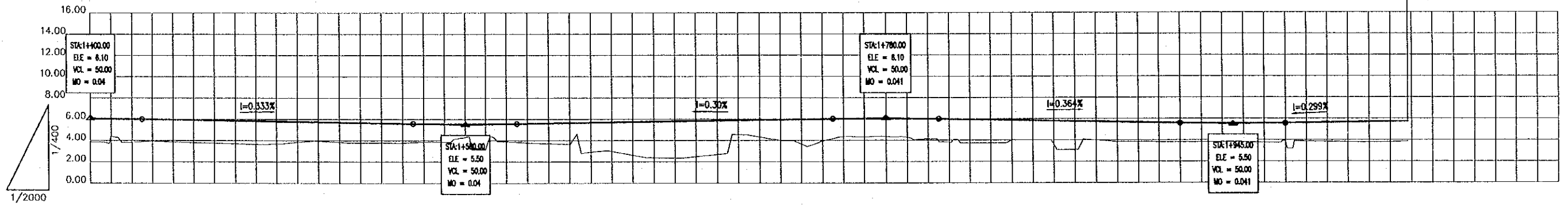
PROPOSED HEIGHT CAO ĐỘ THIẾT KẾ	5.740	5.680	5.620	5.561	5.537	5.561	5.620	5.680	5.740	5.800	5.860	5.920	5.980	6.039	6.064	6.044	5.991	5.936	5.882	5.827	5.773	5.718	5.664	5.609	5.556	5.536	5.561	5.620	5.680	5.740	5.800	5.860	5.920	5.980	6.038	6.060		
GROUND LEVEL CAO ĐỘ TỰ NHIÊN	3.61	3.58	3.57	3.60	3.64	3.56	3.58	3.61	3.59	3.64	3.87	3.61	3.87	3.72	3.55	3.56	3.91	3.94	3.72	3.74	3.59	3.57	3.65	3.58	3.78	3.61	4.25	3.82	3.66	3.55	3.79	3.50	3.80	3.84	3.87	3.87		
SUPERELEVATION SIÊU CAO	[Graph showing superlevation curves]																																					
CURVE BAND ĐOẠN THẲNG ĐOẠN CONG	[Graph showing curve bands with R and A values]																																					
STATION LÝ TRÌNH	0+700	+720	+740	+760	+780	0+800	+820	+840	+860	+880	0+900	+920	+940	+960	+980	1+000	+020	+040	+060	+080	1+100	+120	+140	+160	+180	1+200	+220	+240	+260	+280	1+300	+320	+340	+360	+380	1+400		

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (NHAM TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.3.19	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/2000	DRAWING No. B-3-15	SHEET No.
FRONTAGE ROAD PROFILE (LEFT SIDE) 2/2			



### LEFT SIDE

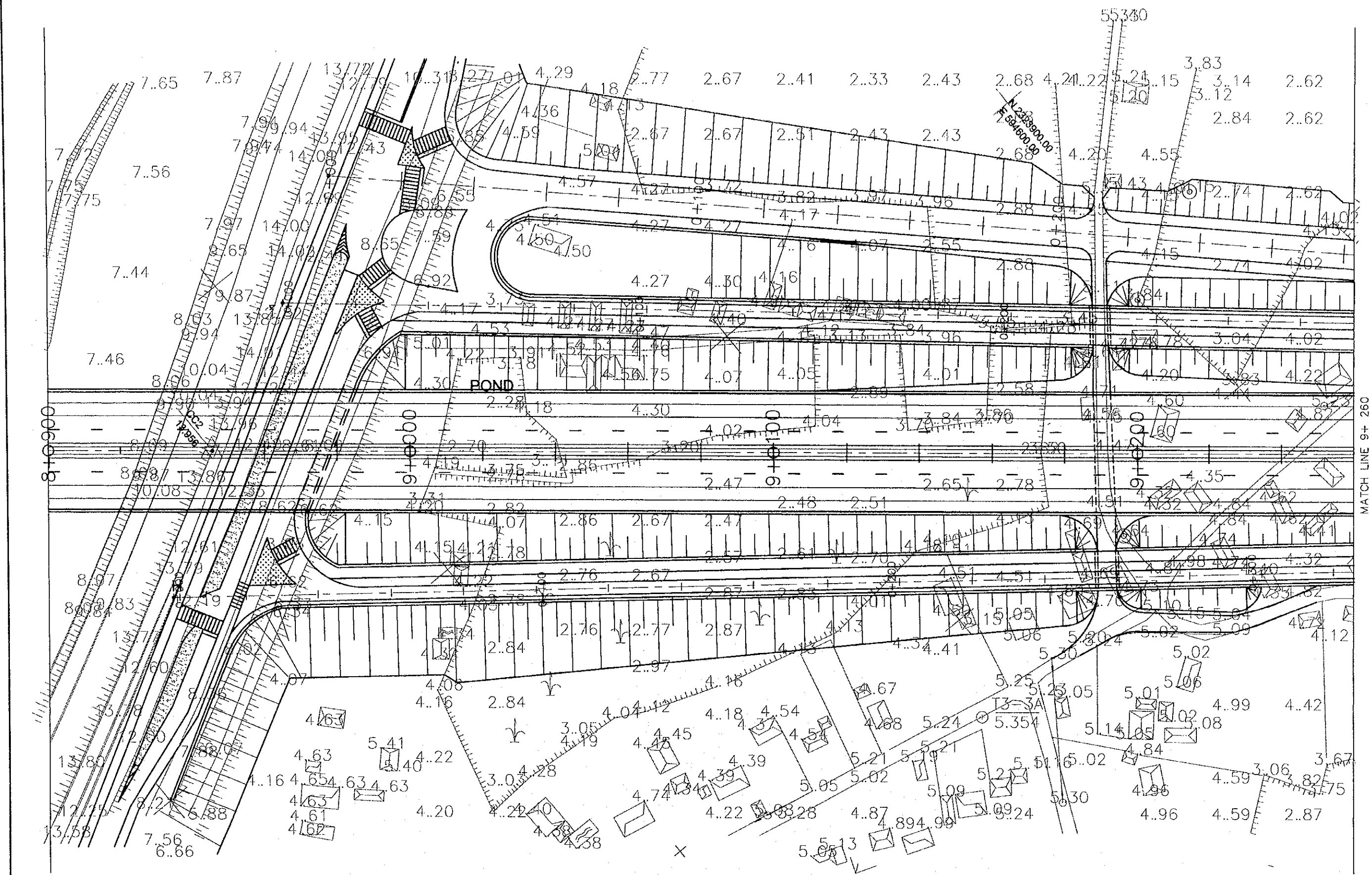


PROPOSED HEIGHT CAO ĐỘ THIẾT KẾ	6.060	6.032	5.967	5.900	5.833	5.767	5.700	5.633	5.566	5.540	5.562	5.620	5.680	5.740	5.800	5.860	5.920	5.980	6.038	6.059	6.026	5.955	5.882	5.809	5.736	5.664	5.591	5.545	5.552	5.605	5.665	5.725	5.749			
GROUND LEVEL CAO ĐỘ TỰ NHIÊN	3.87	3.85	3.89	3.77	3.68	3.85	3.84	3.79	3.87	4.32	3.90	3.73	2.95	2.63	2.38	2.69	4.33	3.67	4.35	4.37	4.13	3.73	4.02	3.62	4.00	3.85	3.83	3.84	3.78	3.88	3.82	3.84	3.88			
SUPERELEVATION SIÊU CAO	[Diagram showing superelevation curves]																																			
CURVE BAND ĐOẠN THẲNG ĐOẠN CỎNG	R=2000.00																	R=2000.00																		
STATION LÝ TRÌNH	1+400	+420	+440	+460	+480	1+500	+520	+540	+560	+580	1+600	+620	+640	+660	+680	1+700	+720	+740	+760	+780	1+800	+820	+840	+860	+880	1+900	+920	+940	+960	+980	2+000	+020	+040	+060	+080	2+100



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.8.17	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/1000	DRAWING No. B-4-1	SHEET No.
GIALAM DYKE INTERCHANGE (1/2)			





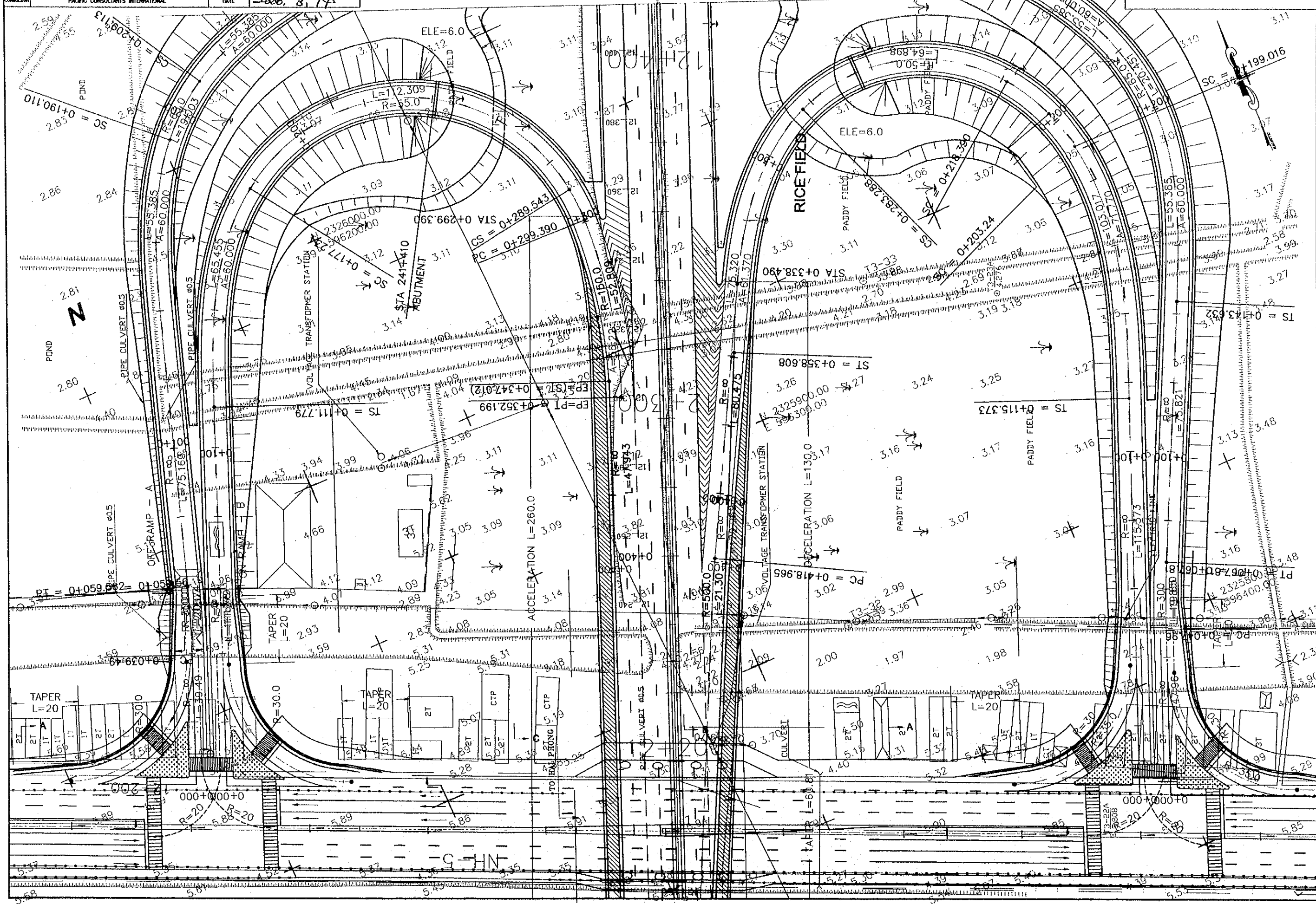


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM  
 THANH LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT  
 JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  
 PROJECT: RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT  
 CONSULTANT: PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED BY: S. MATSUDA  
 NAME: S. MATSUDA  
 SIGNATURE: [Signature]  
 DATE: 2000. 3. 17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/1000	B-4-3	

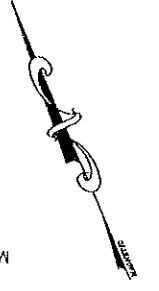
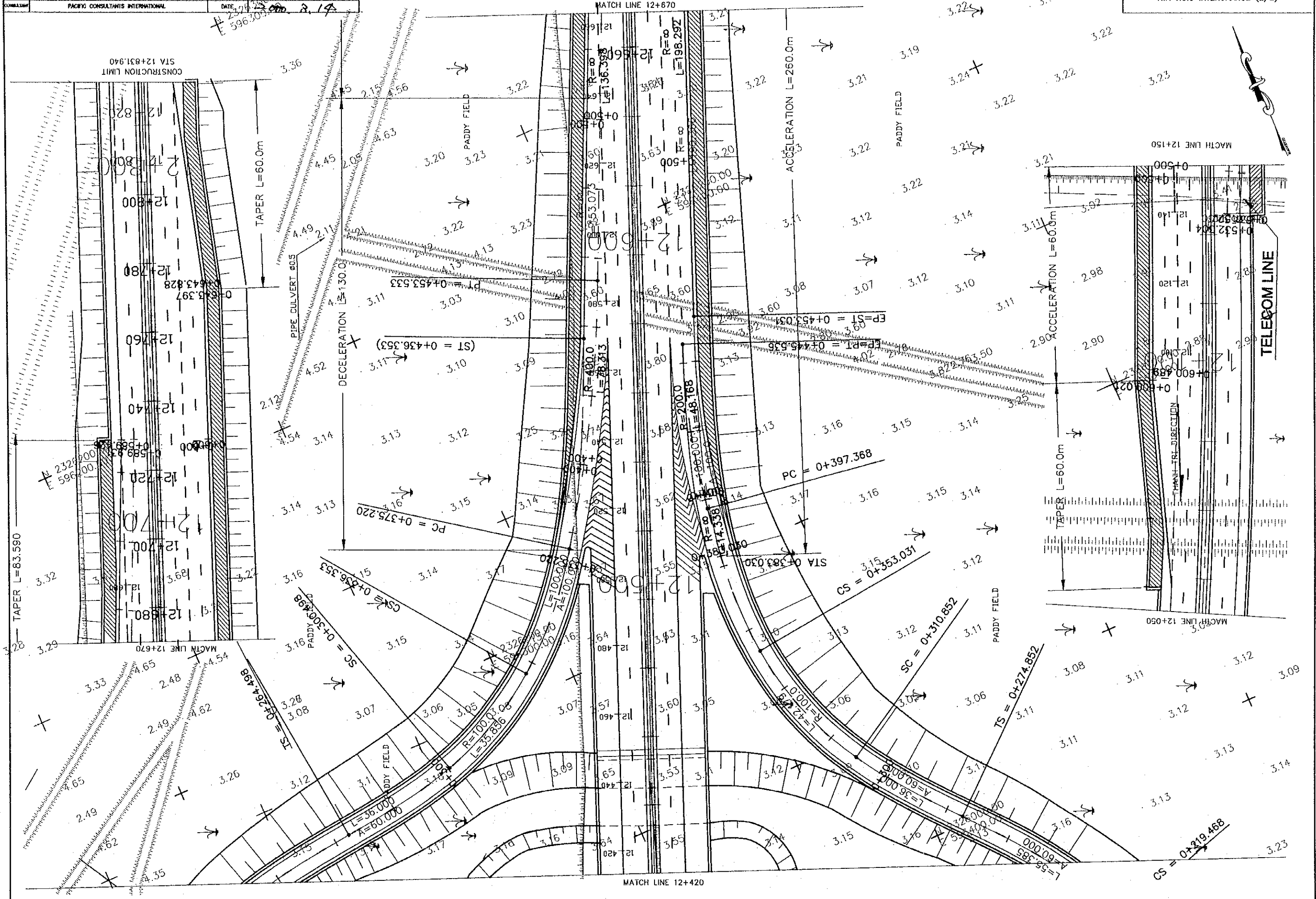
N.H NO.5 INTERCHANGE (1/2)



MATCH LINE 12+420

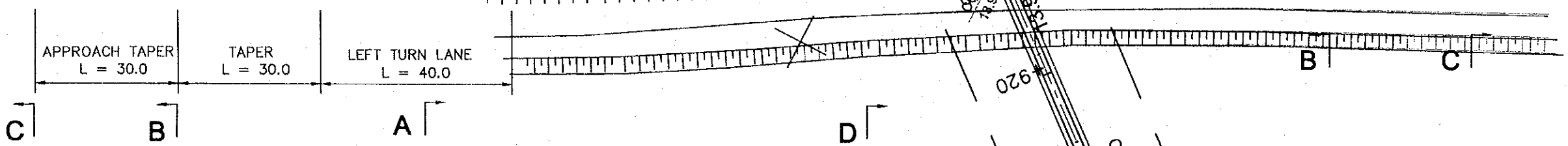
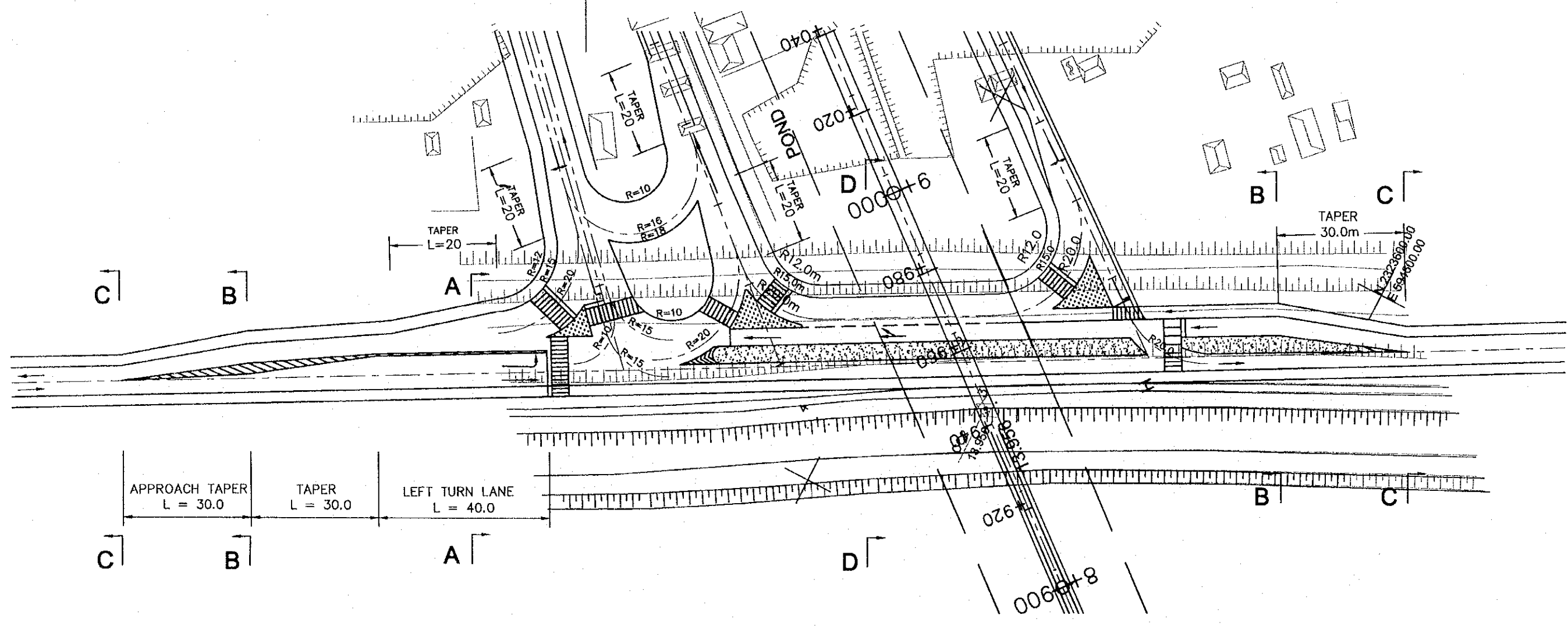
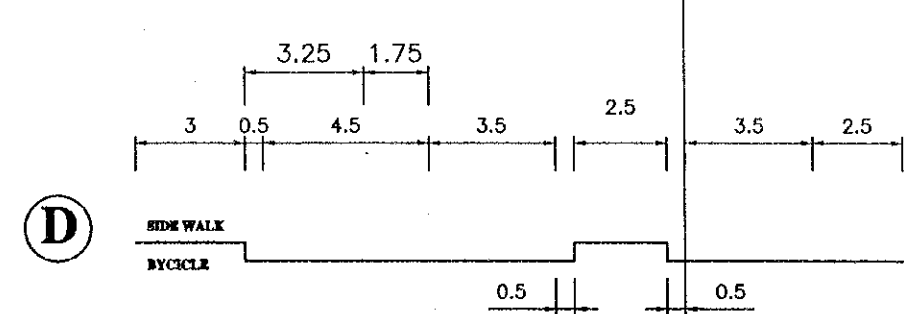
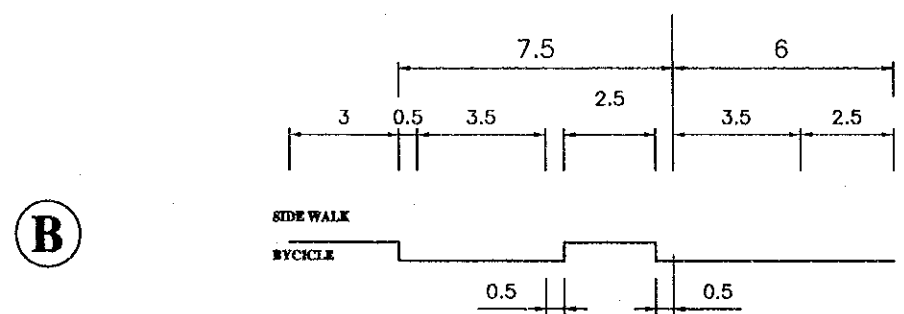
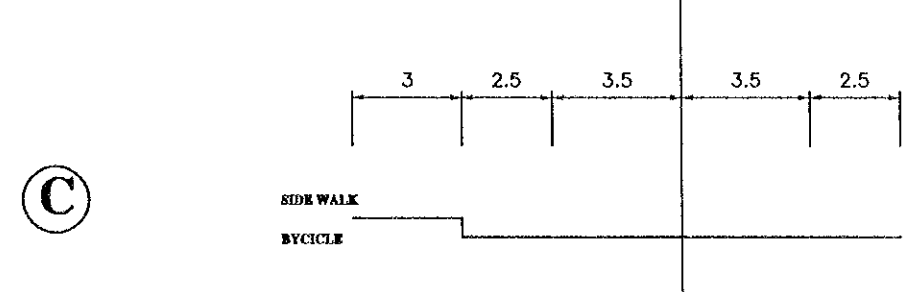
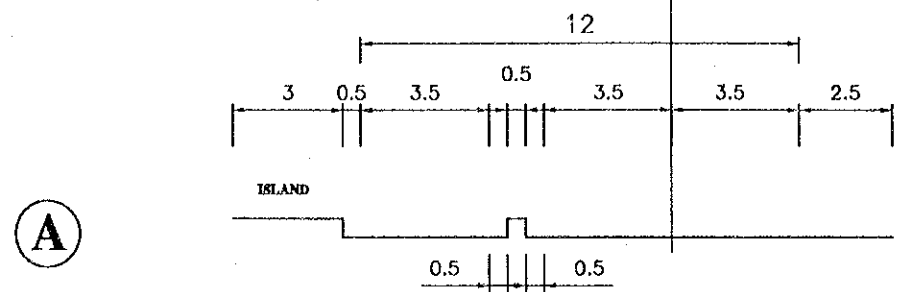
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. NAITABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 21/08/2000	DATE 21/08/2000
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/1000	DRAWING No. B-4-4	SHEET No.
N.H NO.5 INTERCHANGE (2/2)			



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATANABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000. 5. 14	SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

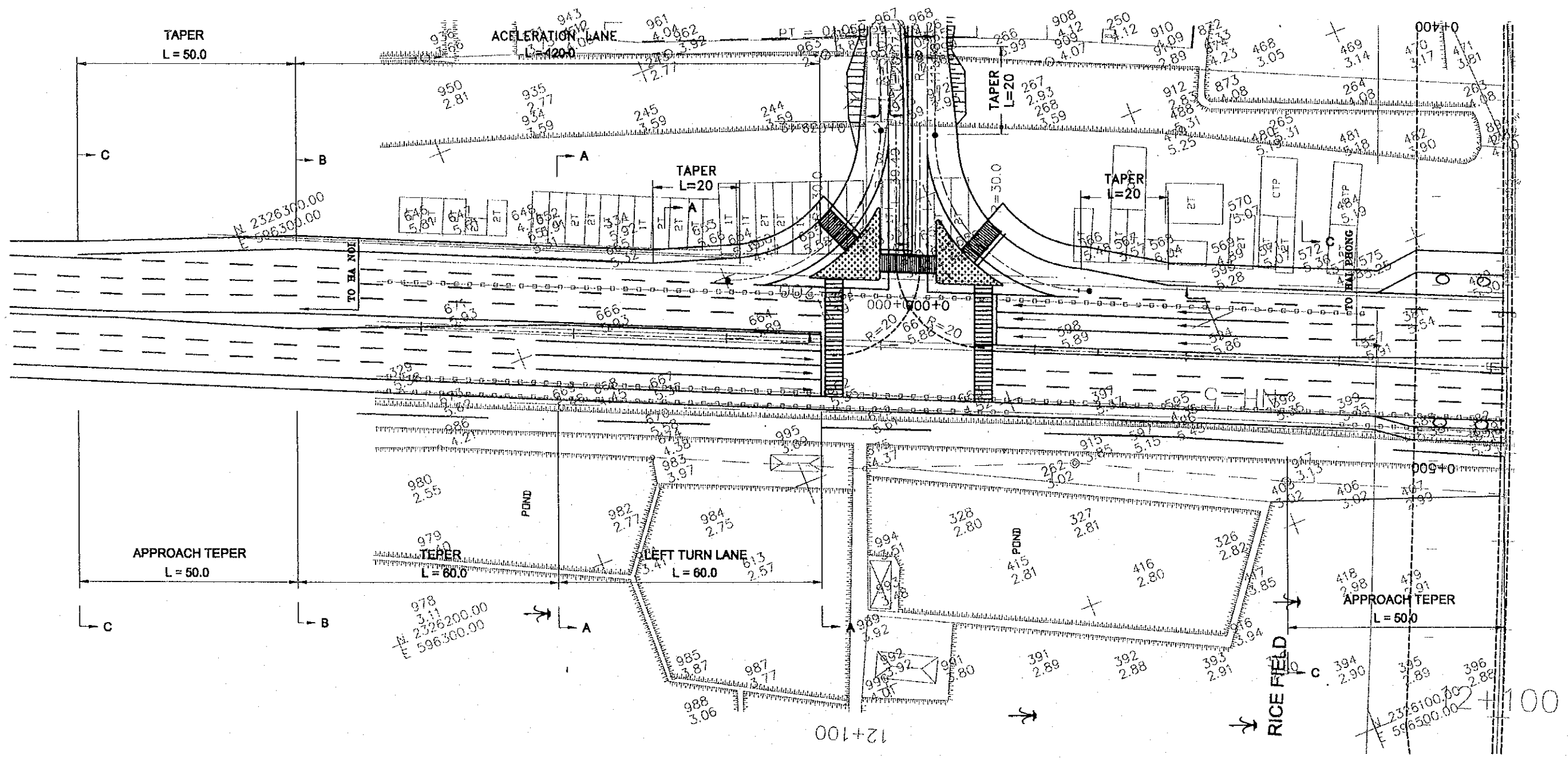
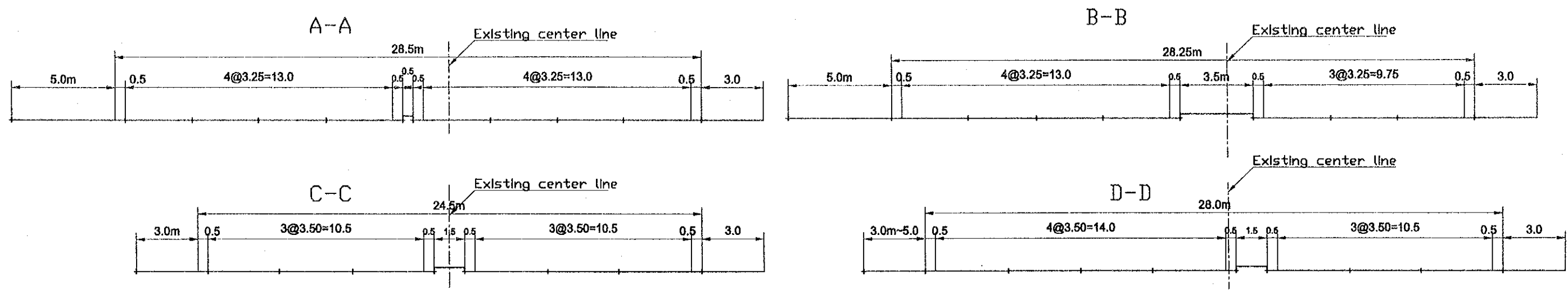
PACKAGE 2	SCALE 1/1000	DRAWING No. B-5-1	SHEET No.
GIA LAM DYKE ROAD INTERSECTION			





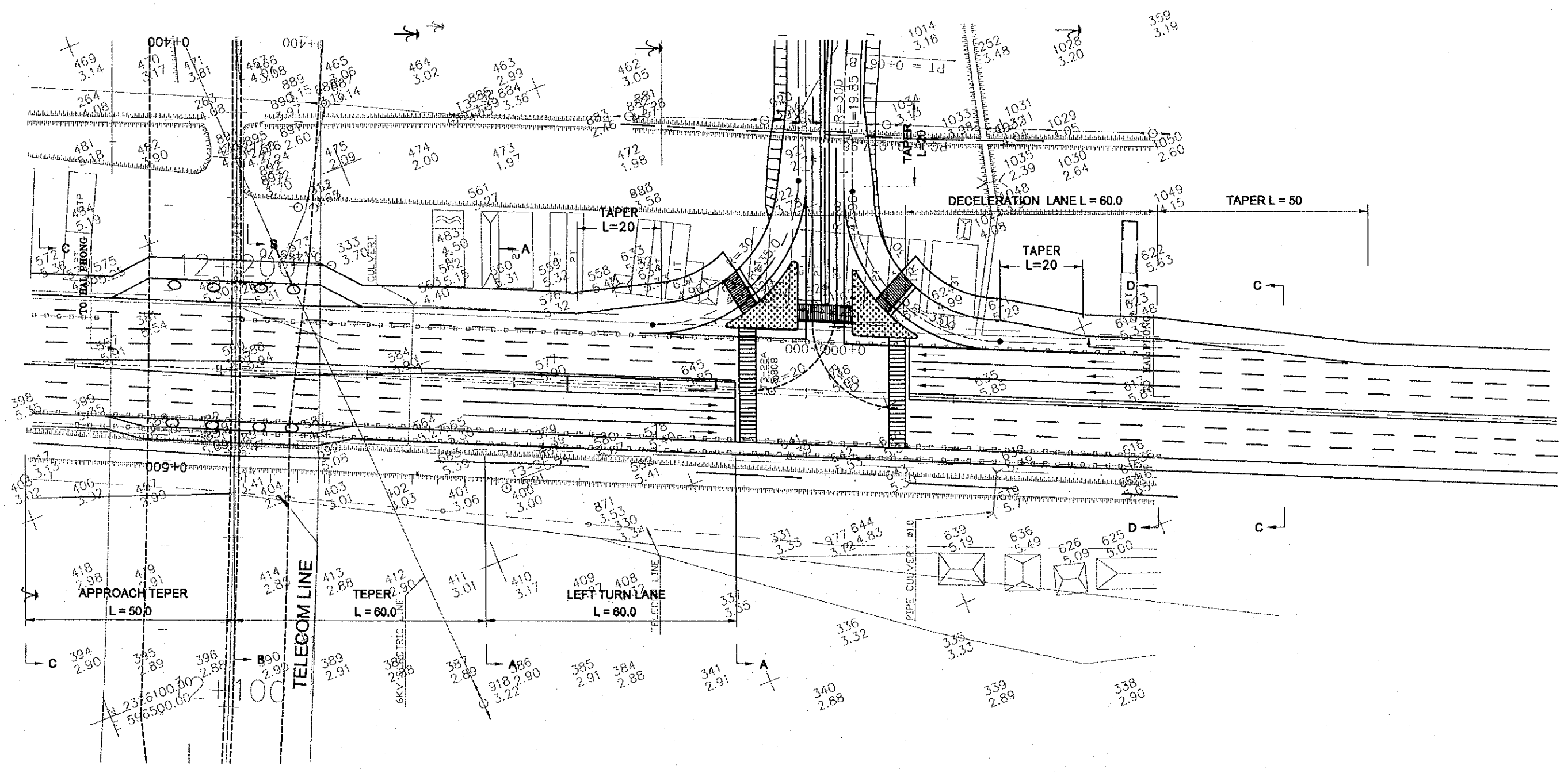
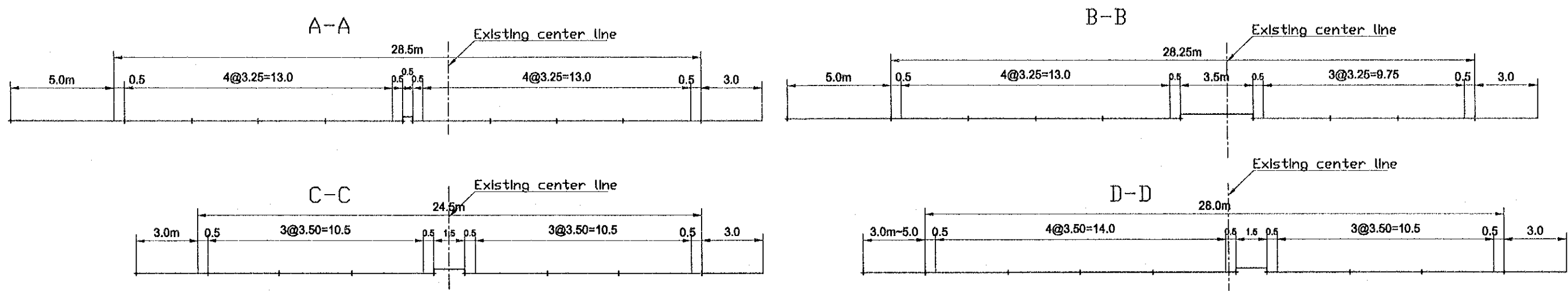
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SURNAME
PROJECT	RED RIVER (BRIDGE (THANH THE BRIDGE)) CONSTRUCTION PROJECT	SIGNATURE
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE
		2000. 9. 14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/1000	B-5-2	
NH 6&5 INTERSECTION (1/2)			



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATANE
PROJECT: RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	
CONSULTANT: PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.3.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/1000	B-5-3	
NH No.5 INTERSECTION (2/2)			

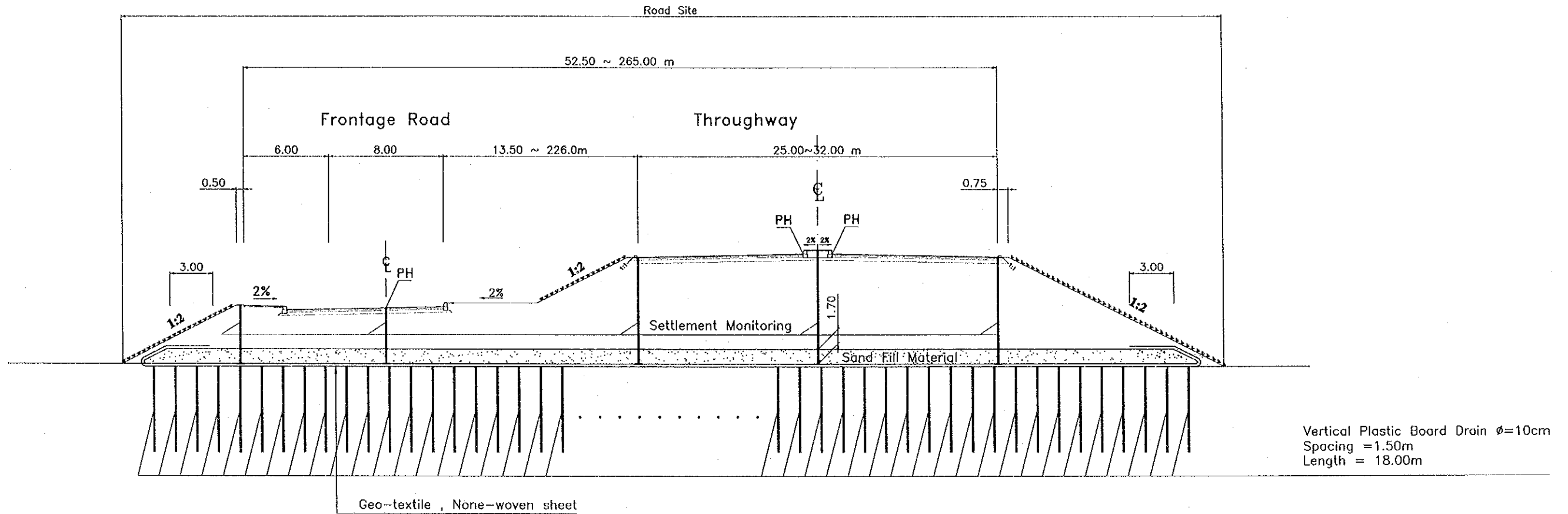


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		DESIGNED BY S. WATAGE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE 
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000. 2. 17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	As Shown	B-6-1	
SOFT GROUND TREATMENT (Type - C)			

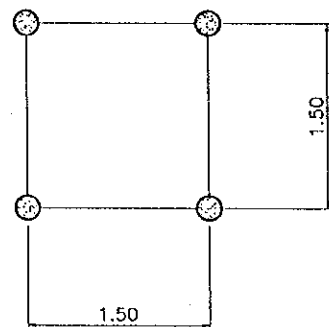
# Soft Ground Treatment (Type - C)

Scale=1:300



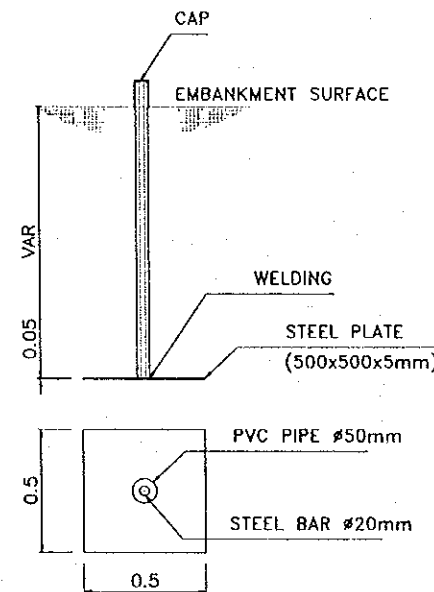
ARRANGEMENT OF PLASTIC BOARD DRAIN

Scale=1:60



SETTLEMENT MONITORING AND MEASURING DEVICES

Scale=1:30



THOUGHWAY & FRONTAGE ROAD (GIA LAM SIDE)

Location	Diameter(φ) of Vertical Sand Drain (cm)	Spacing (m)	Length (m)	Sand Fill Depth at the Center Line (m)
9+303 ~ 9+420	10	1.5	18.0	1.7
9+420 ~ 9+700	10	1.5	18.0	1.7
10+700 ~ 10+904	10	1.5	18.0	1.7

NOTES :

- (1) Settlement monitoring devices shall be installed at intervals of 100m.
- (2) Settlement shall be monitored during construction, and abutment piling and pavement construction shall not proceed until consolidation has reached 90%.

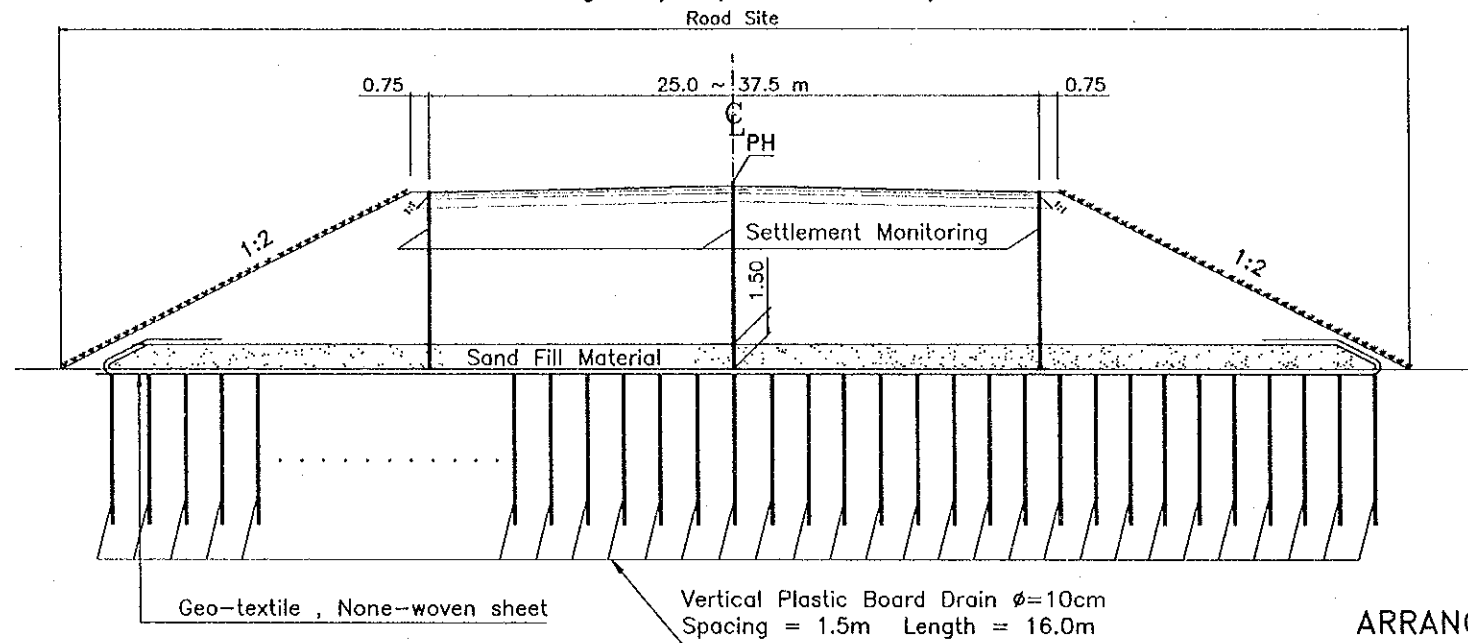
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATASE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATASE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	
COMPANY PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.8.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/300	B-6-2	
SOFT GROUND TREATMENT (Type - D&E)			

## Soft Ground Treatment (Type - D)

Scale=1:300

### Thoughway (Gia Lam Site)

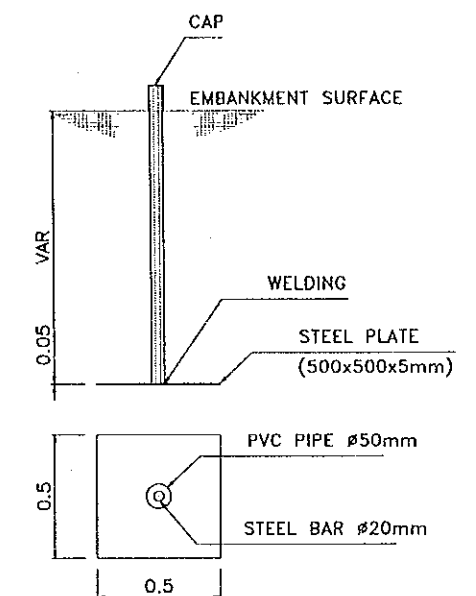


### THOUGHWAY (GIA LAM SIDE)

Thoughway Location	Diameter(φ) of Plastic Board Drain (cm)	Spacing (m)	Length (m)	Sand Fill Depth of the Center Line (m)
10+937 ~ 11+240	10	1.50	16.0	1.5
11+240 ~ 11+382	10	1.50	16.0	1.5
11+615 ~ 11+764	10	1.50	16.0	1.5
12+460 ~ 12+832	10	1.50	16.0	1.5

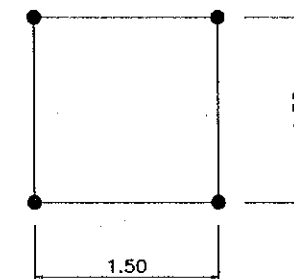
### SETTLEMENT MONITORING AND MEASURING DEVICES

Scale=1:30



### ARRANGEMENT OF PLASTIC BOARD DRAIN

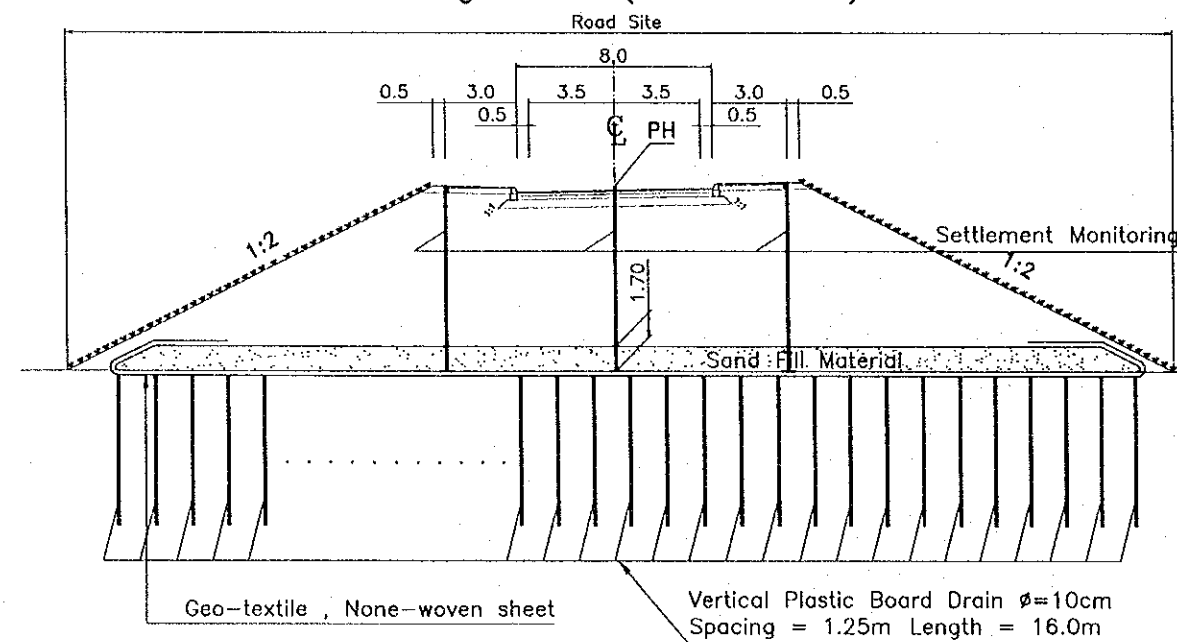
Scale=1:60



## Soft Ground Treatment (Type - E)

Scale=1:300

### Frontage Road (Gia Lam Side)



### FRONTAGE ROAD (GIA LAM SIDE)

Frontage Road Location	Diameter(φ) of Plastic Board Drain (cm)	Spacing (m)	Length (m)	Sand Fill Depth of the Center Line (m)
0+040 ~ 0+200	10	1.25	18.0	1.7
0+200 ~ 0+670	10	1.25	18.0	1.7

### NOTES :

- (1) Settlement monitoring devices shall be installed at intervals of 100m.
- (2) Settlement shall be monitored during construction, and abutment piling and pavement construction shall not proceed until consolidation has reached 90%.

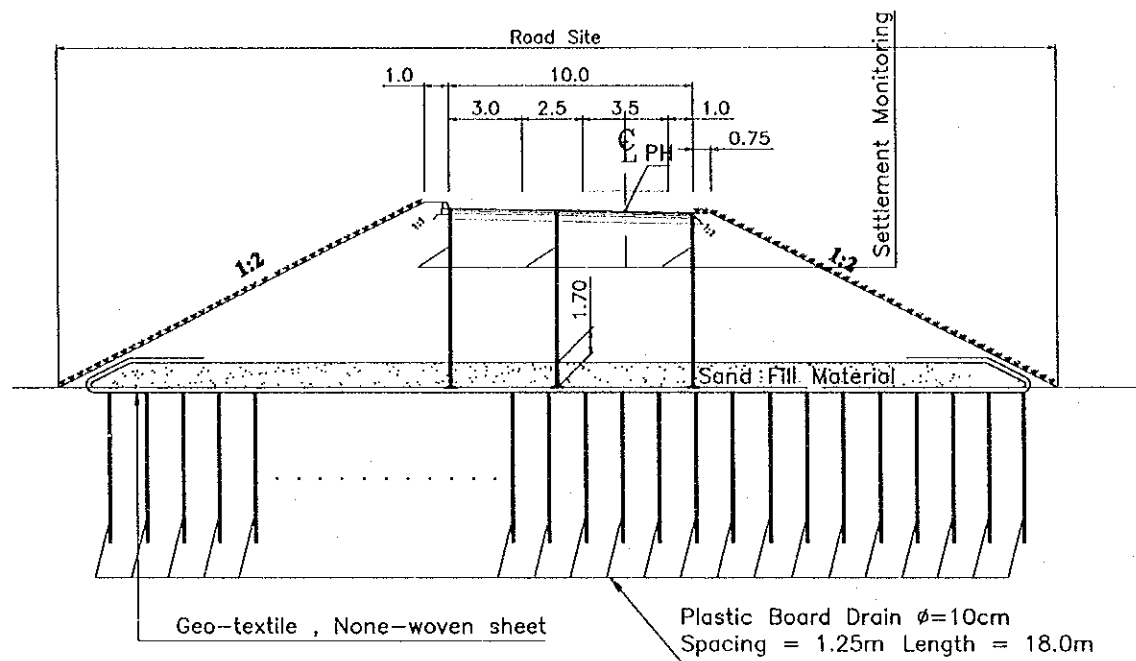


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S.WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.3.14	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/300	DRAWING No. B-6-3	SHEET No.
SOFT GROUND TREATMENT (Type - J&K)			

## Soft Ground Treatment (Type - J)

Scale=1:300

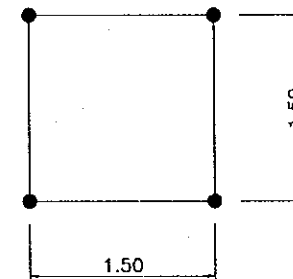


## GIA LAM INTERCHANGE

Ramp	Ramp Location	Diameter(φ) of Vertical Sand Drain (cm)	Spacing (m)	Length (m)	Sand Fill Depth at the Center Line (m)
A	0+000 ~ 0+220	10	1.25	18.0	1.7
	0+220 ~ 0+742	10	1.25	18.0	1.7
B	0+000 ~ 0+250	10	1.25	18.0	1.7
	0+250 ~ 0+784	10	1.25	18.0	1.7

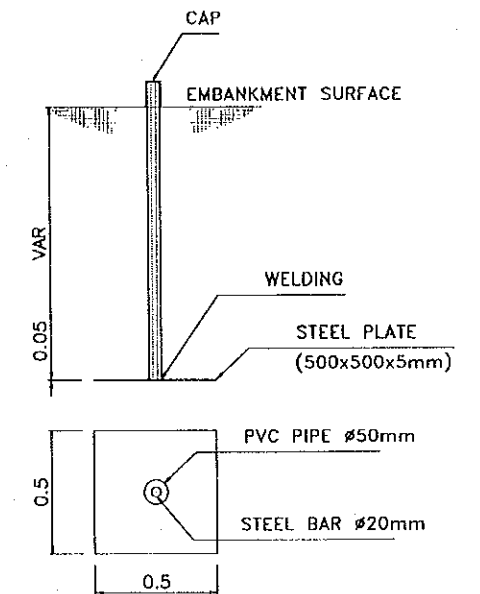
## ARRANGEMENT OF PLASTIC BOARD DRAIN

Scale=1:60



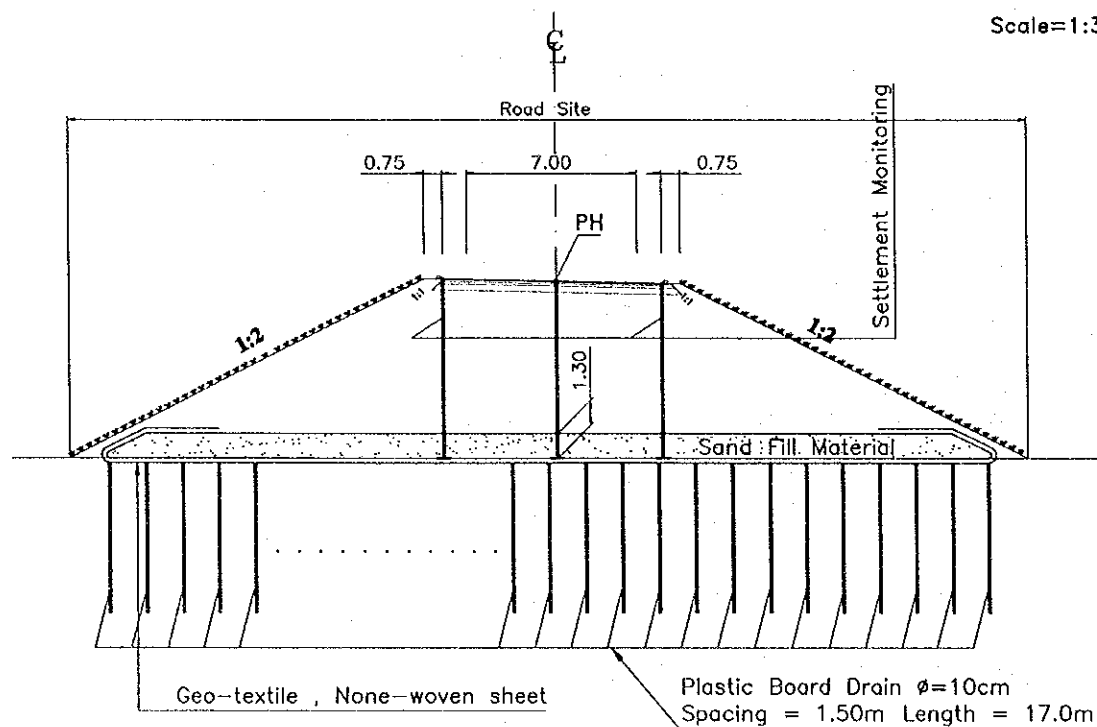
## SETTLEMENT MONITORING AND MEASURING DEVICES

Scale=1:30



## Soft Ground Treatment (Type - K)

Scale=1:300



## NH5 INTERCHANGE

Ramp	Ramp Location	Diameter(φ) of Vertical Sand Drain (cm)	Spacing (m)	Length (m)	Sand Fill Depth at the Center Line (m)
A	0+000 ~ 0+339	10	1.5	17.0	1.3
B	0+000 ~ 0+384	10	1.5	17.0	1.3
C	0+000 ~ 0+300	10	1.5	17.0	1.3
D	0+000 ~ 0+376	10	1.5	17.0	1.3

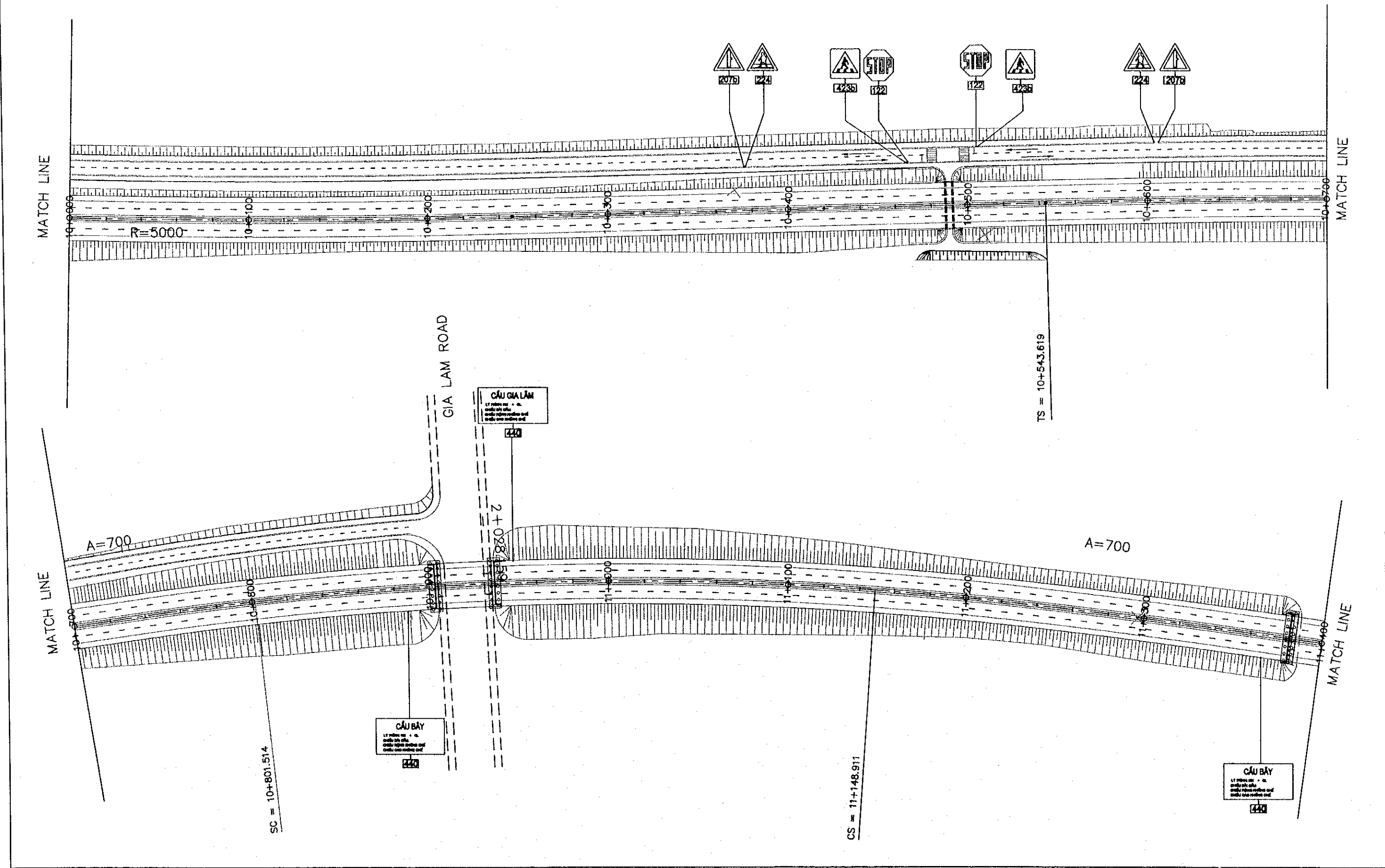
## NOTES :

- (1) Settlement monitoring devices shall be installed at intervals of 100m.
- (2) Settlement shall be monitored during construction, and abutment piling and pavement construction shall not proceed until consolidation has reached 90%.



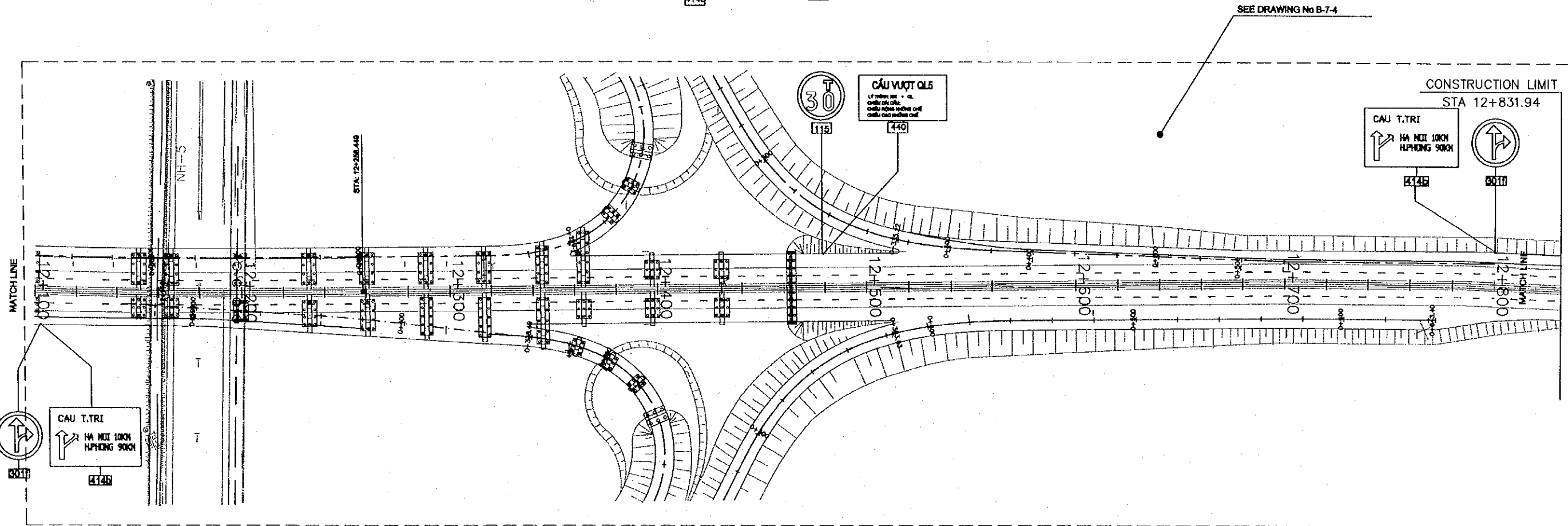
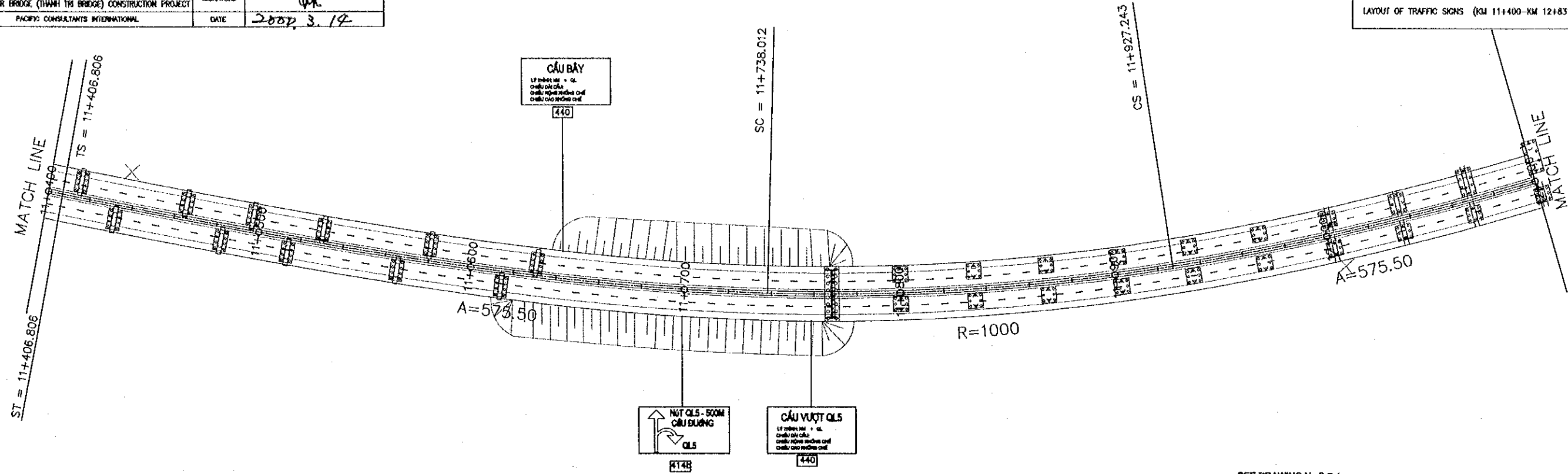
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. NAYABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRIE BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.3.12	

PACKAGE 2	SCALE	DRAWING No. B-7-2	SHEET No.
LAYOUT OF TRAFFIC SIGNS (KM 10+000 - KM 10+700)			



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2007.3.14

PACKAGE 2	SCALE	DRAWING No. B-7-3	SHEET No.
LAYOUT OF TRAFFIC SIGNS (KM 11+400-KM 12+831.94)			



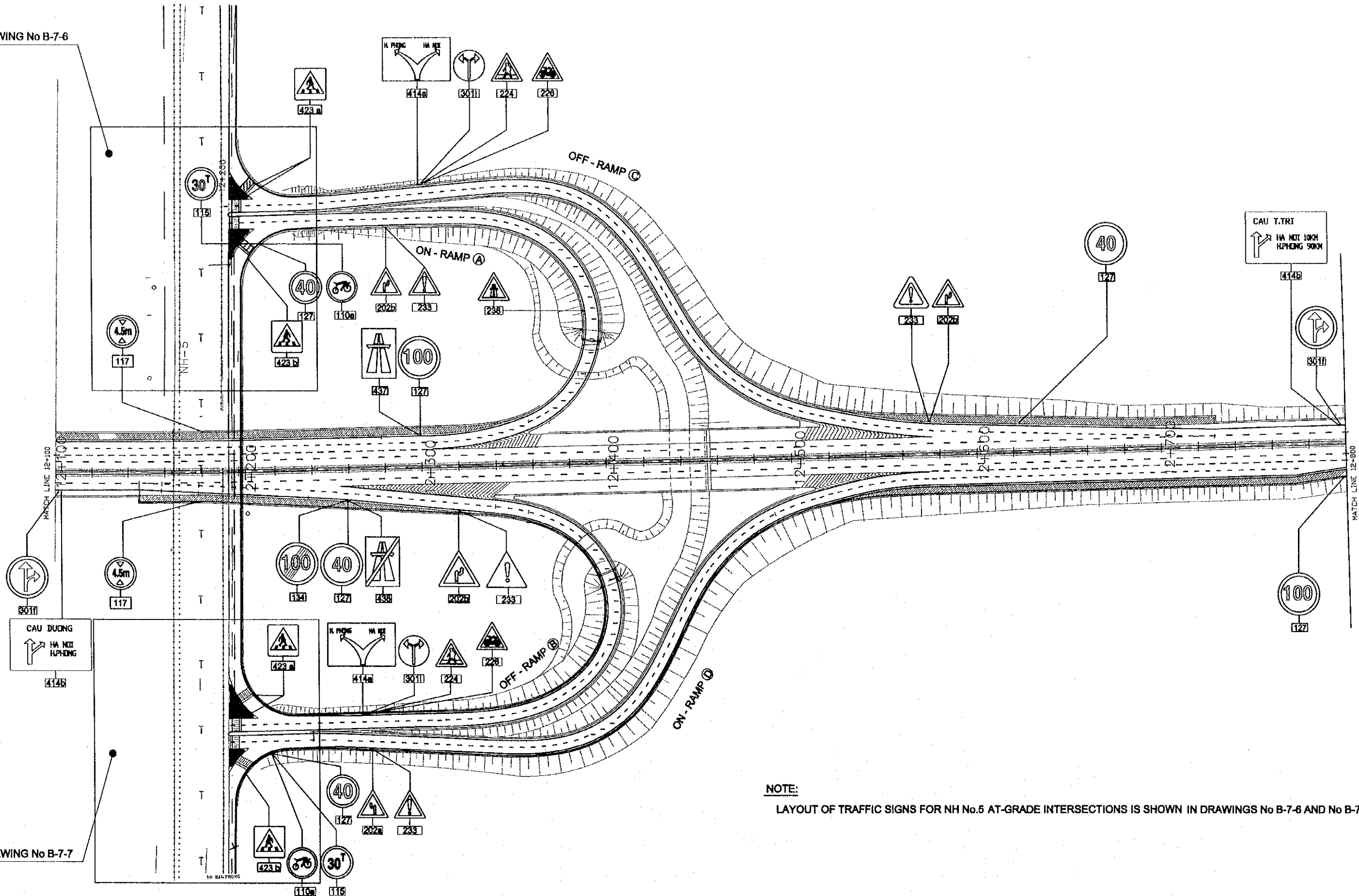
**NOTE:**  
LAYOUT OF TRAFFIC SIGNS FOR NH No5 INTERCHANGE  
IS SHOWN IN DRAWING No B-7-4

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THAI HO LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.3.14	

PACKAGE 2	SCALE	DRAWING No. B-7-4	SHEET No.
LAYOUT OF TRAFFIC SIGNS FOR NH No.5 INTERCHANGE			

DRAWING No B-7-6

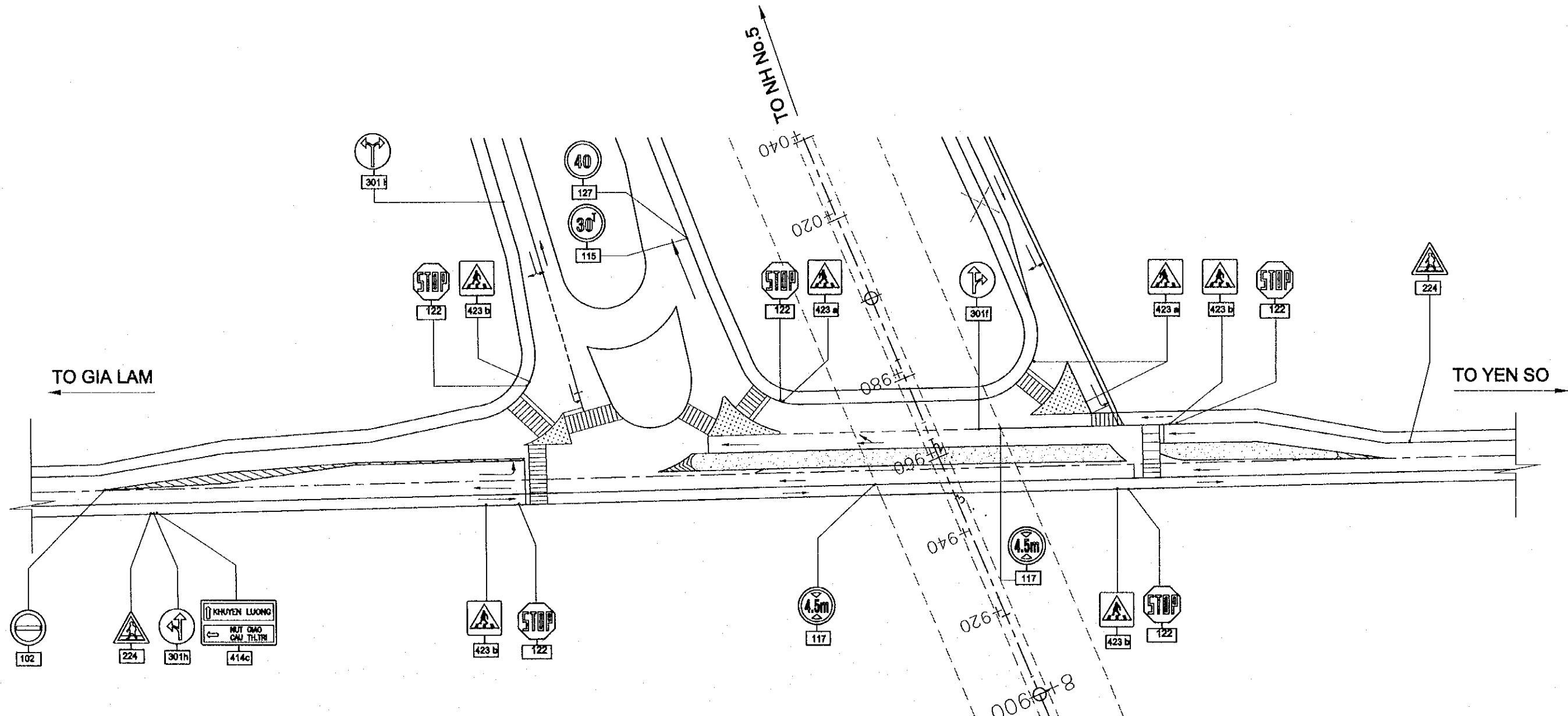
DRAWING No B-7-7



NOTE:  
LAYOUT OF TRAFFIC SIGNS FOR NH No.5 AT-GRADE INTERSECTIONS IS SHOWN IN DRAWINGS No B-7-6 AND No B-7-7

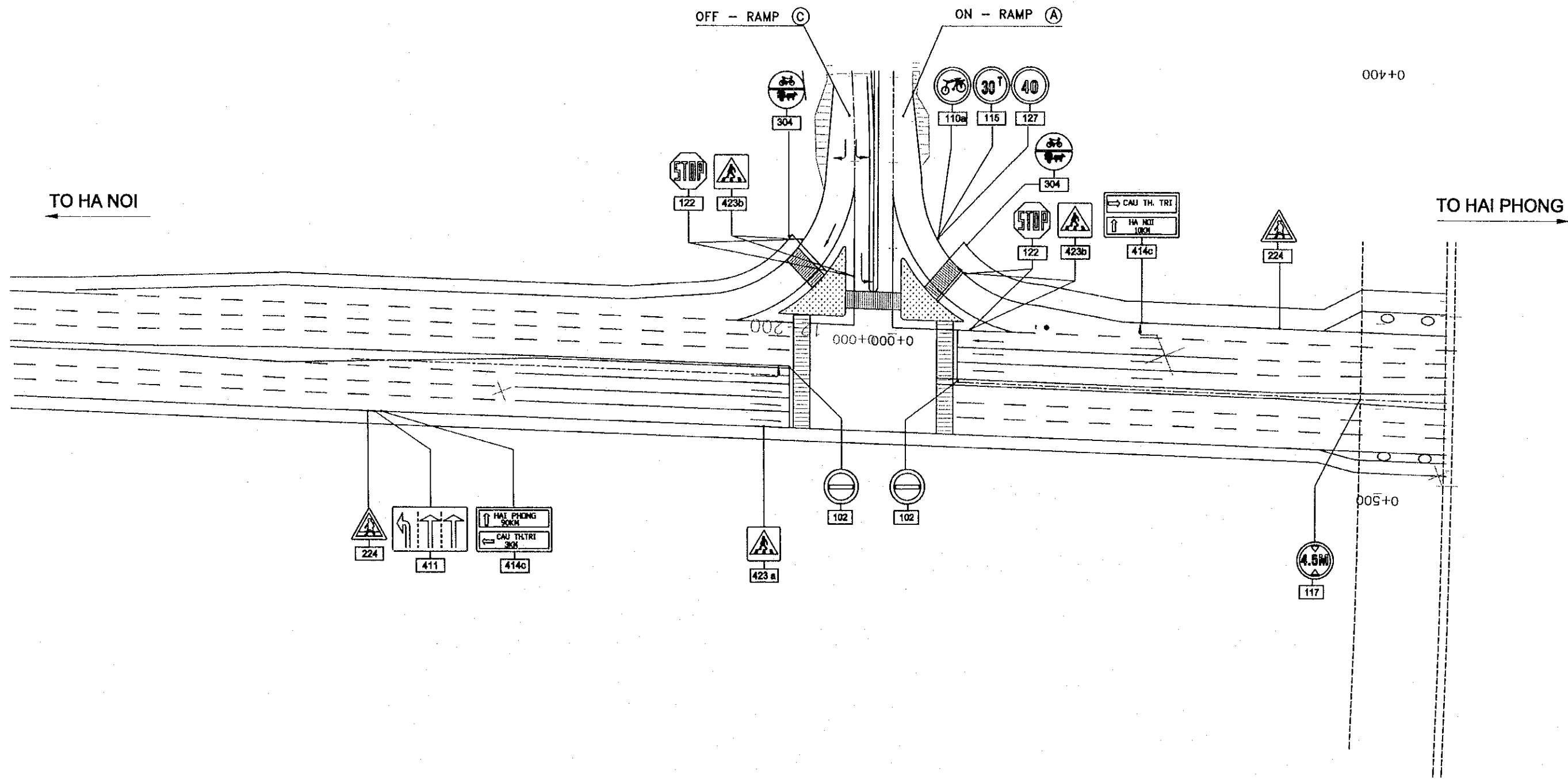
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.0.19

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/1000	B-7-5	
LAYOUT OF TRAFFIC SIGNS FOR GIA LAM DYKE INTERSECTION			



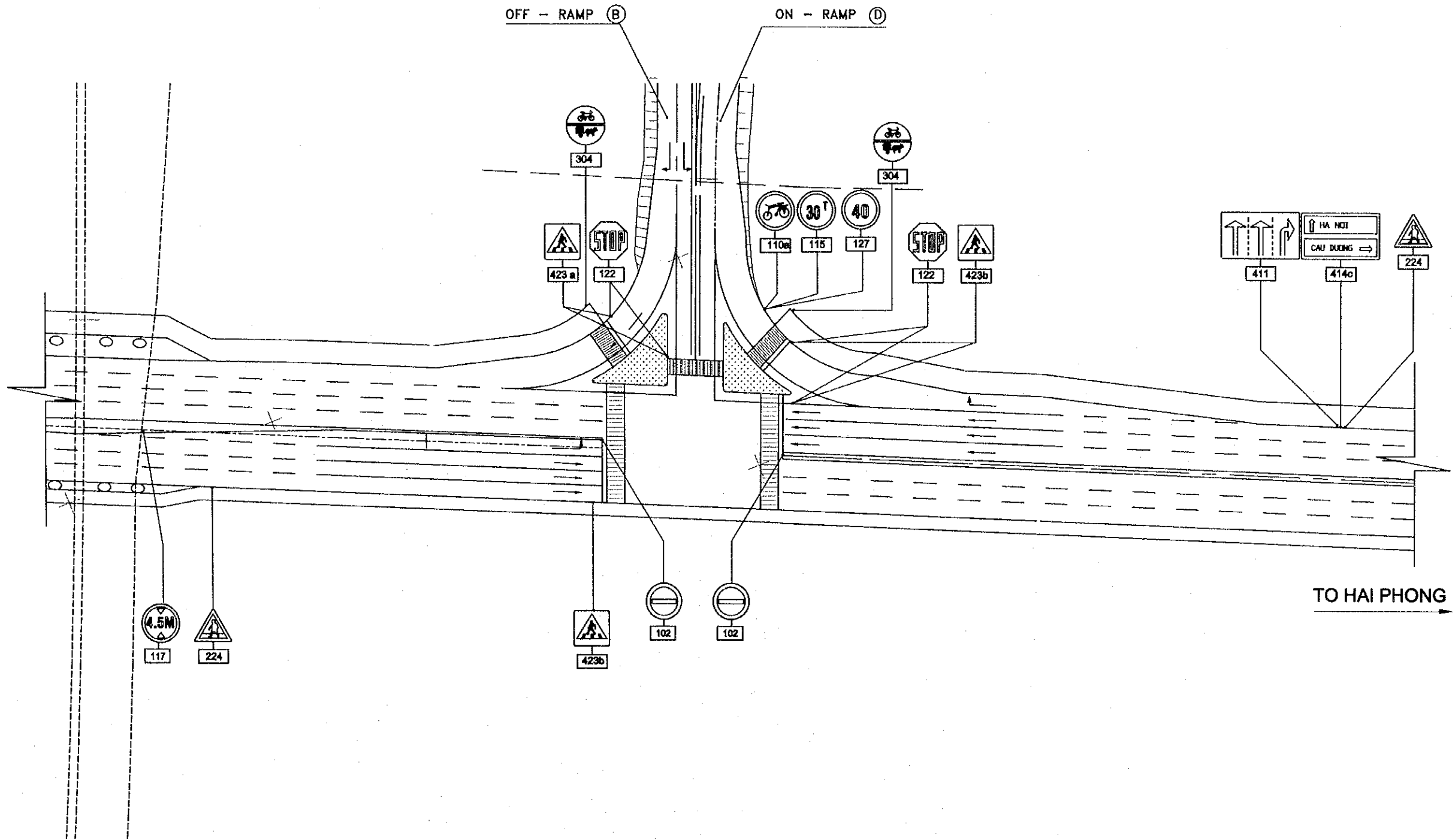
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.3.12	
COMPANY PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/1000	DRAWING No. B-7-8	SHEET No.
LAYOUT OF TRAFFIC SIGNS FOR NH No5 INTERSECTION (1)			



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (HANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.3.14	

PACKAGE 2	SCALE 1/1000	DRAWING No. B-7-7	SHEET No.
LAYOUT OF TRAFFIC SIGNS FOR NH No5 INTERSECTION (2)			



TO HA NOI ←

→ TO HAI PHONG



# C. BRIDGE

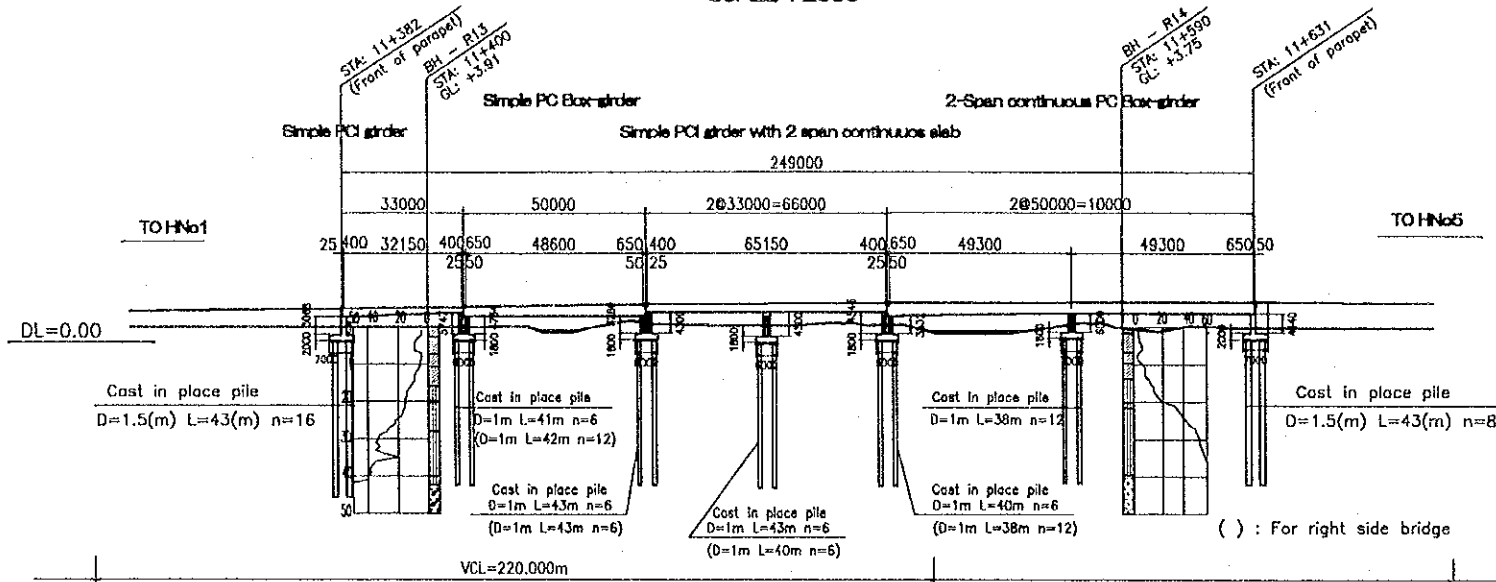
**C-1 THROUGHWAY**

**C-1-1 GENERAL VIEW**

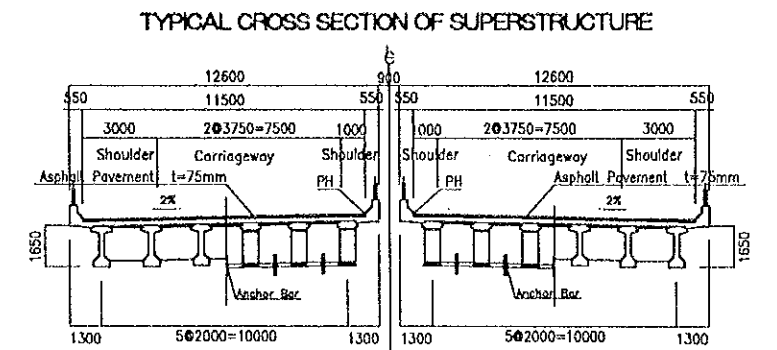
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THAM THU BRIDGE) CONSTRUCTION PROJECT	CONTRACTOR PACIFIC CONSULTANTS INTERNATIONAL	SIGNATURE <i>[Signature]</i>
		DATE 2000.6.11

PACKAGE 2	SCALE	DRAWING No. C-1-1-1	SHEET No.
GENERAL VIEW OF CAUBAY CANAL BRIDGE			

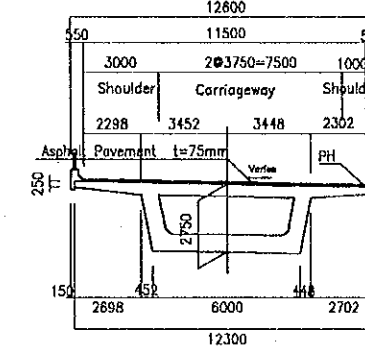
PROFILE - LEFT SIDE BRIDGE  
SCALE 1:2000



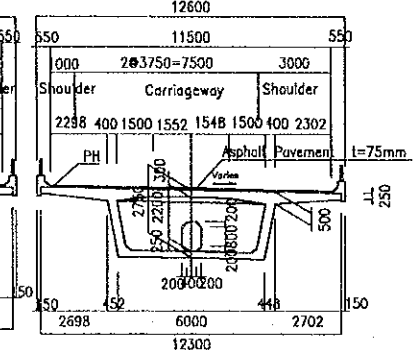
TYPICAL CROSS SECTION OF BRIDGE (SCALE 1:300)



AT END SPAN

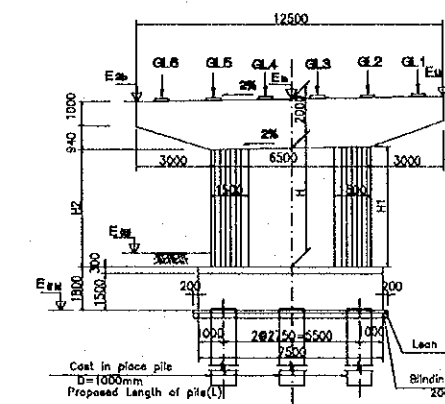


AT MIDDLE SPAN

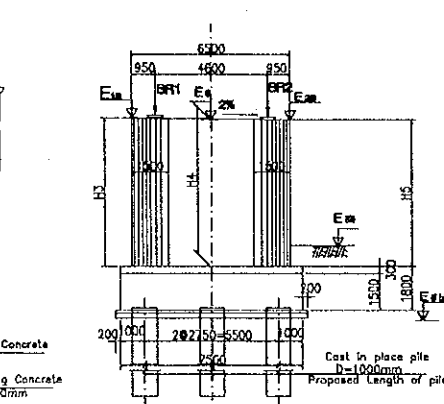


TYPICAL CROSS SECTION OF SUBSTRUCTURE

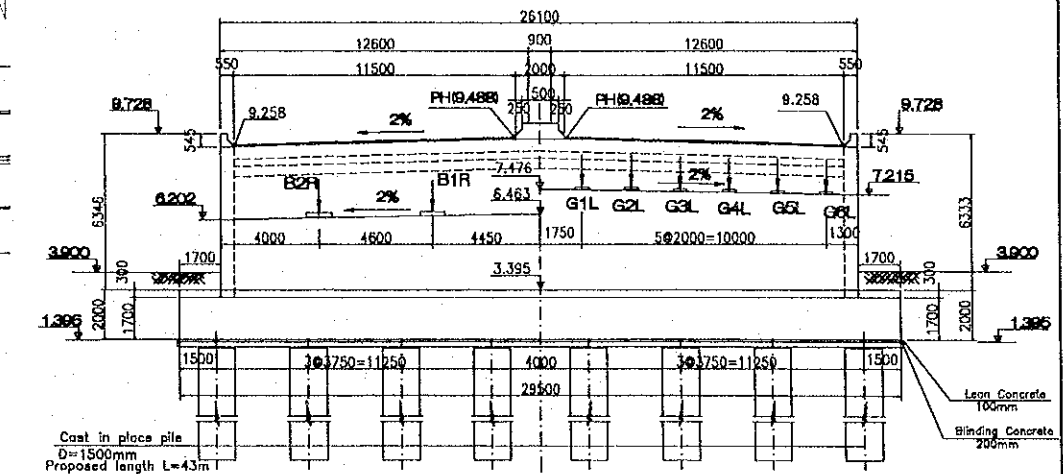
P2R (NH-No.5 SIDE)



P2R (NH-No.1 SIDE)

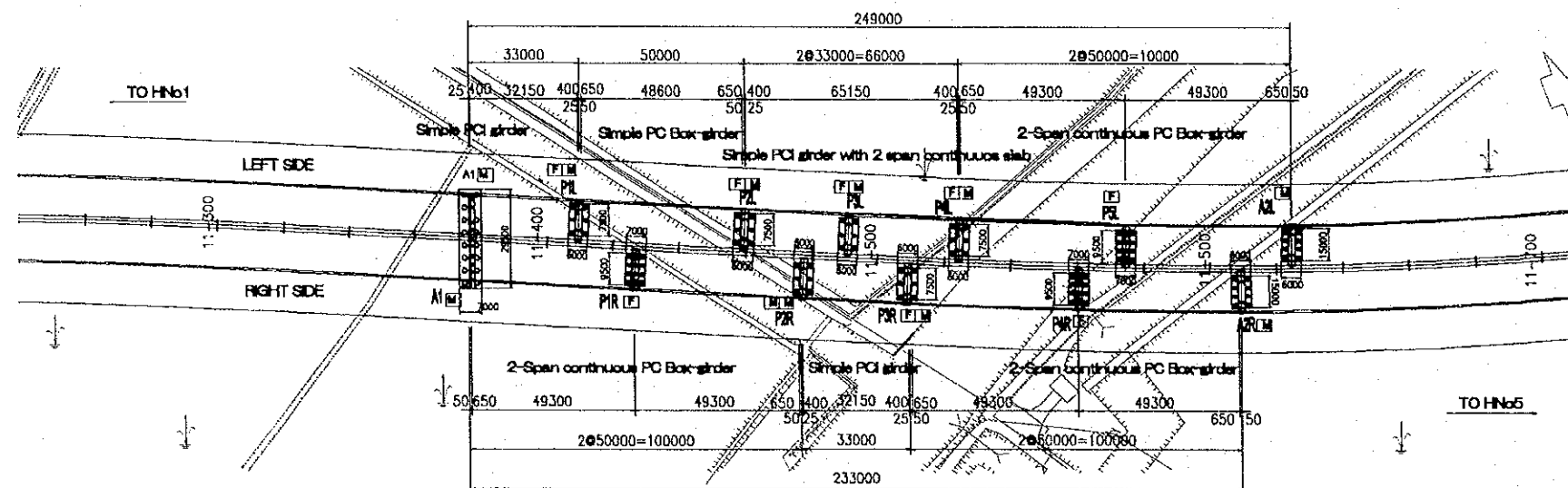


A1(NH-No.1 SIDE)



GRADE	LEVEL															
	L=335.00m															
ELEVATION	8.468	9.501	9.912	10.067	10.086	10.352	10.452	10.522	10.572	10.596	10.600	10.600	10.600	10.800	10.500	10.600
GROUND HEIGHT	4.01	3.91	2.60	4.45	4.11	4.45	4.40	4.40	4.40	4.40	2.00	2.00	3.15	3.67	3.68	3.68
STATION	11+320	11+382	11+415	11+430	11+432	11+465	11+482	11+498	11+515	11+531	11+540	11+565	11+581	11+615	11+631	11+680

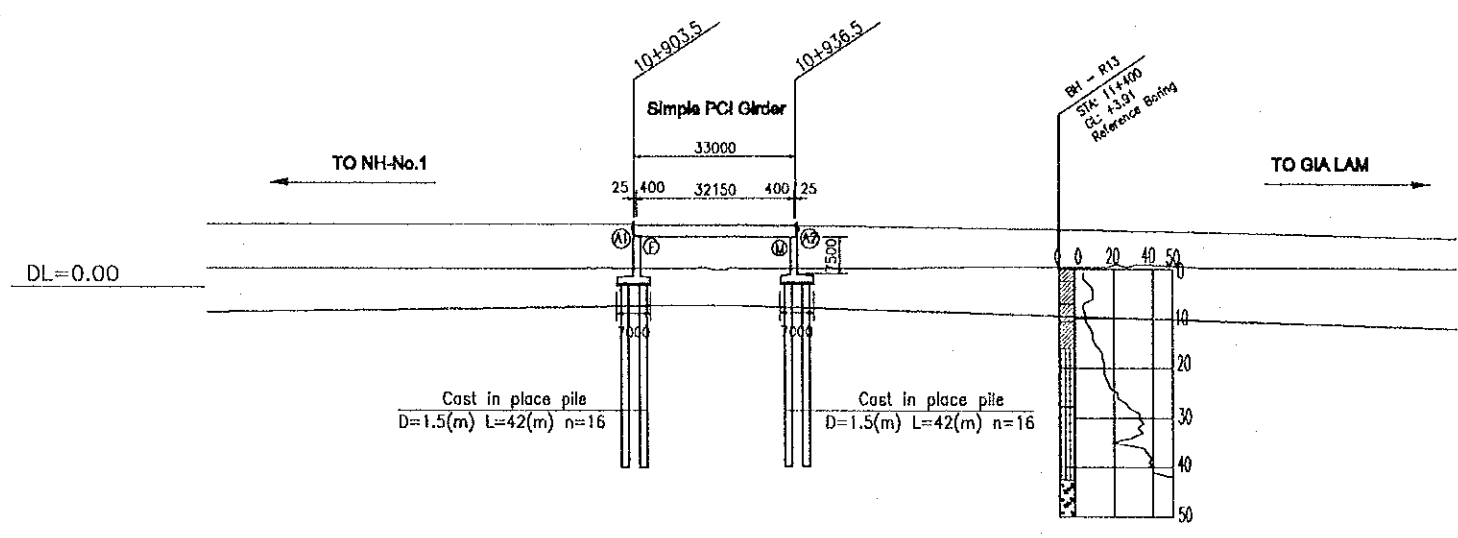
PLANE



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANH LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	DATE 2000.6.1
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

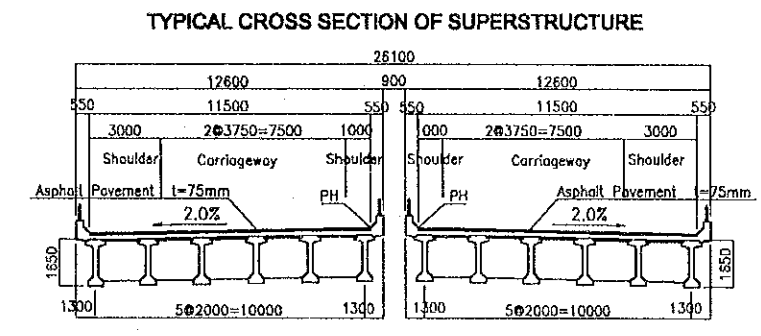
PACKAGE 2	SCALE 1:1500	DRAWING No. C-1-1-2	SHEET No.
GENERAL VIEW OF GALAM ROAD BRIDGE			

PROFILE (SCALE: 1:1500)

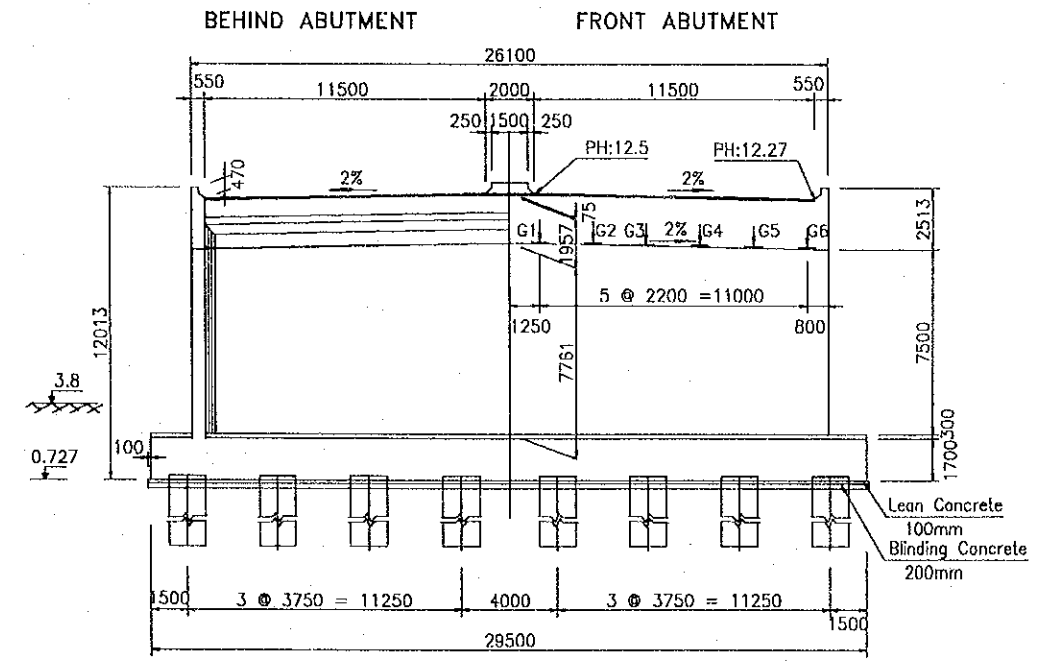


GRADE	$i=3.00\%$ $L=270.000m$			15.53	$i=3.00\%$ $L=300.000m$		
ELEVATION		12.51	12.53		12.51		
GROUND HEIGHT		3.95			4.06		
STATION		10+903.5	10+920.0		10+936.5		

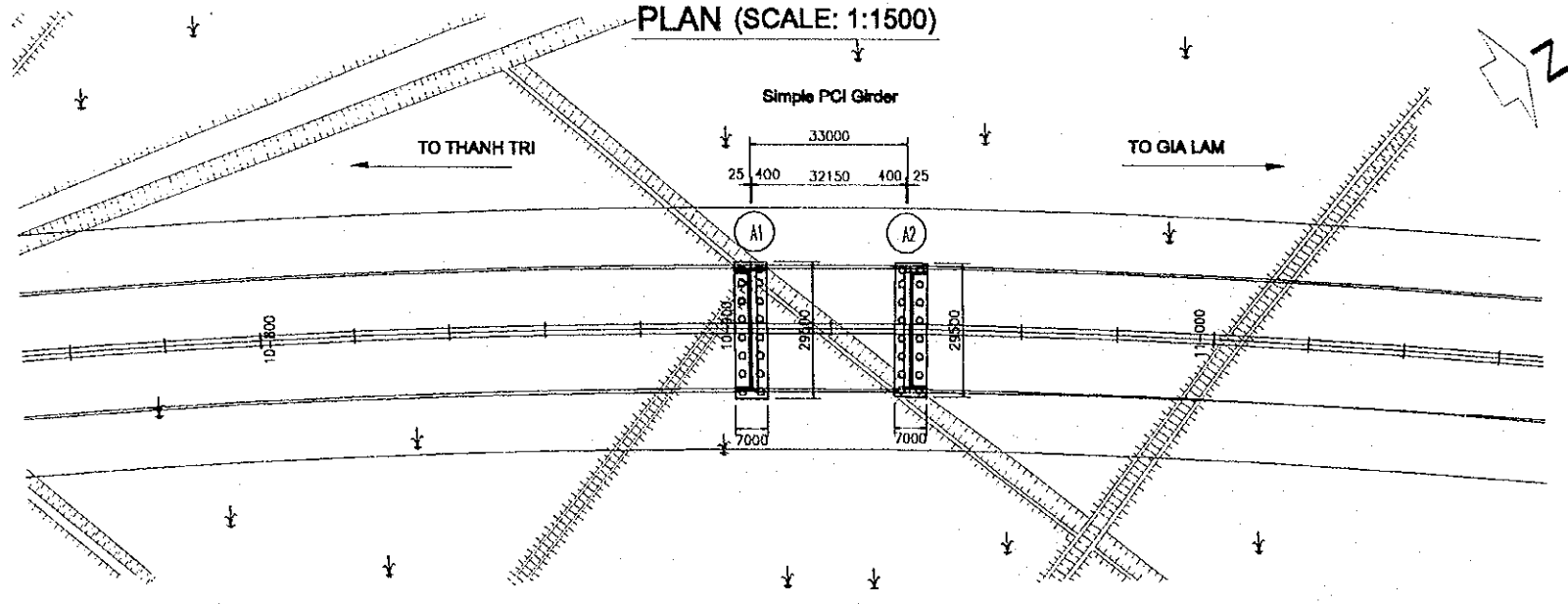
TYPICAL CROSS SECTION OF BRIDGE  
(S=1/300)



TYPICAL CROSS SECTION OF SUBSTRUCTURE

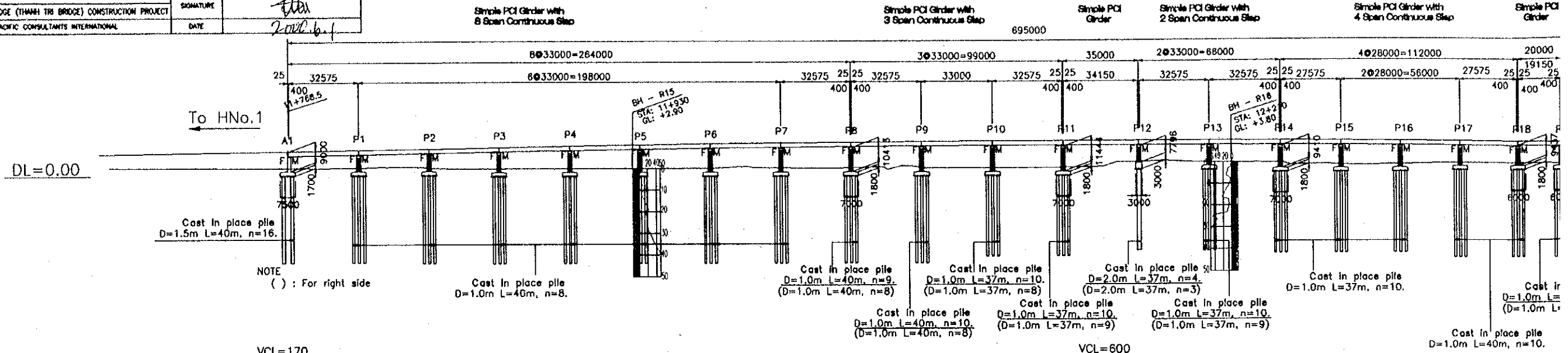


PLAN (SCALE: 1:1500)

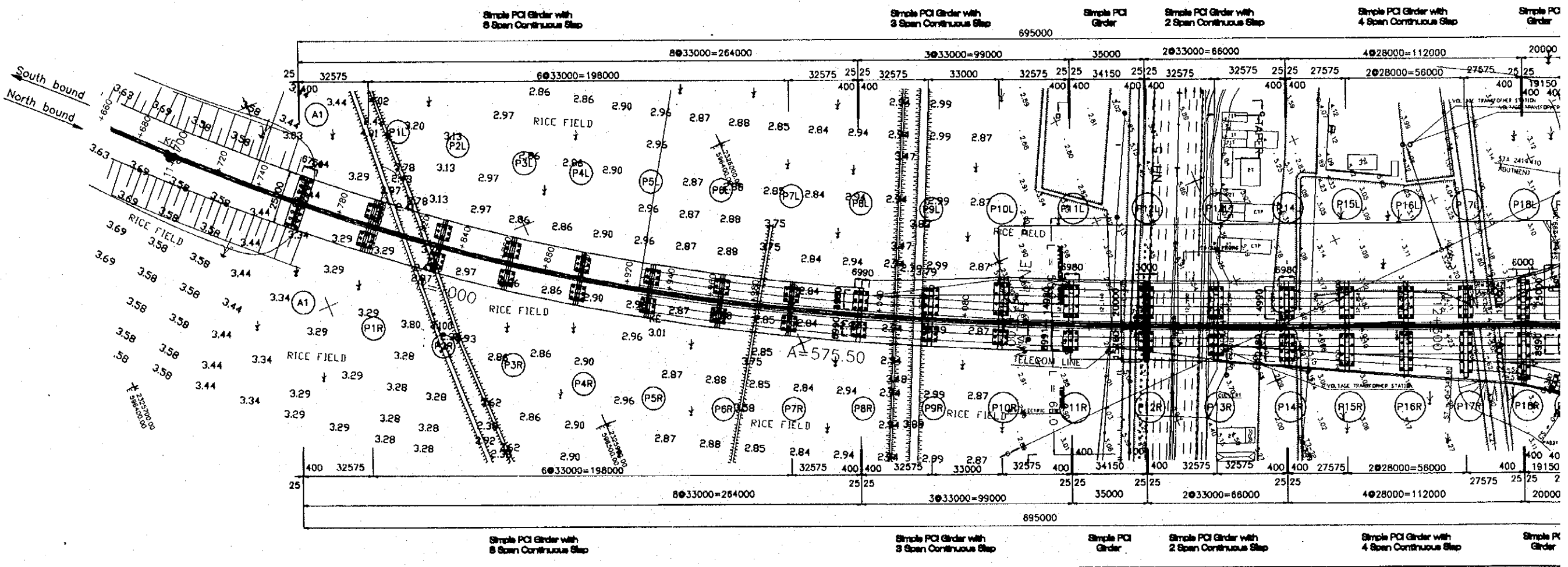


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. NAYABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2002.6.1

# PROFILE - LEFT SIDE BRIDGE

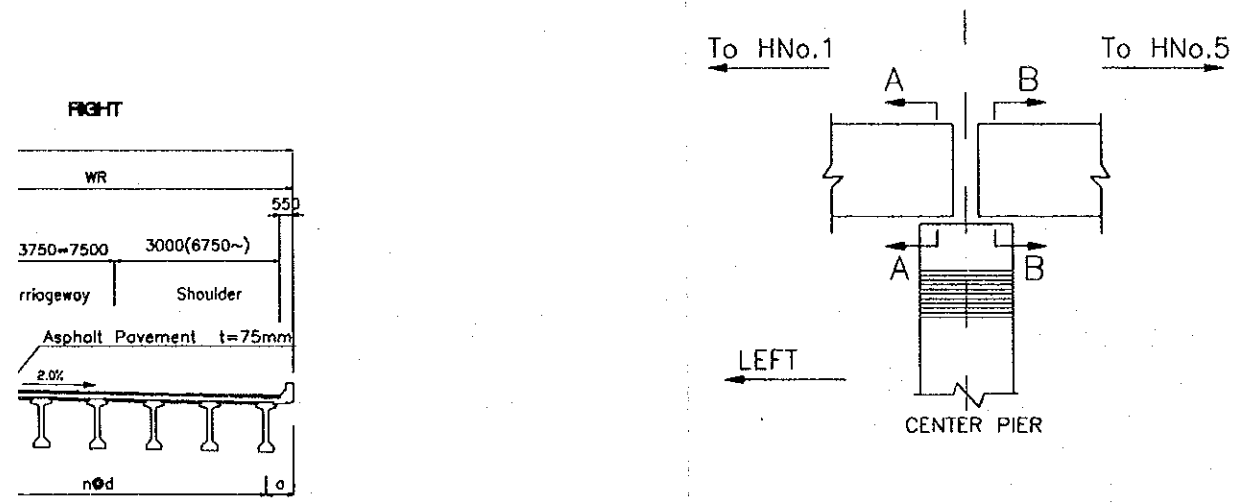


GRADE	Level	i=2.00% L=385.0m																					
	L=335.0m	10.600																					
ELEVATION		10.175	11.061	11.468	12.004	12.641	13.227	13.740	14.179	14.546	14.841	15.063	15.212	15.289	15.299	15.291	15.219	15.074	14.894	14.662	14.378	14.041	13.768
GROUND HEIGHT		3.423	3.409	3.490	3.485	2.860	2.890	2.924	2.906	3.077	3.092	3.094	2.888	2.972	3.397	5.609	5.239	4.938	3.823	4.005	4.274	4.110	4.000
STATION		11+765.0	11+768.5	11+801.5	11+834.5	11+867.5	11+900.5	11+933.5	11+966.5	11+999.5	12+032.5	12+065.5	12+098.5	12+131.5	12+150.0	12+166.5	12+199.5	12+232.5	12+260.5	12+288.5	12+316.5	12+344.5	





## TYPICAL CROSS SECTION OF BRIDGE (S=1/300)



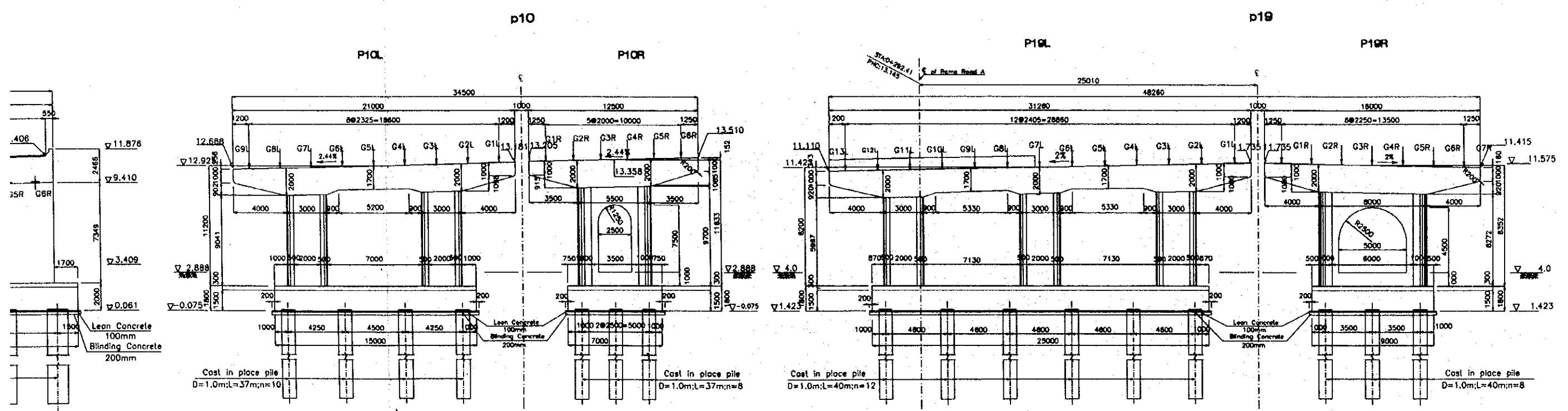
DIMENSION OF SUPERSTRUCTURE CROSS SECTION OF THE LEFT BRIDGE

LOCATION	SECTION A				Number of Girder	SECTION B			
	n	d (mm)	a (mm)	WL (mm)		n	d (mm)	a (mm)	WL (mm)
A1-P7	5	2000	1300	12800	8	5	2000	1300	12800
P8	5	2000	1300	12800	8	7	1943	1250	18100
P9	7	2300	1250	18600	8	8	2013	1250	18800
P10-P16	8	2325	1250	21100	9	8	2325	1250	21100
P17	8	2330	1250	21140	9	9	2071	1250	21140
P18	9	2364	1250	23778	10	12	1773	1250	23778
P19	12	2405	1250	31362	13	6	2250	1300	18100
P20-A2	6	2250	1300	18100	7	6	2250	1300	18100

DIMENSION OF SUPERSTRUCTURE CROSS SECTION OF THE RIGHT BRIDGE

LOCATION	SECTION A				Number of Girder	SECTION B			
	n	d (mm)	a (mm)	WR (mm)		n	d (mm)	a (mm)	WR (mm)
A1-P10	5	2000	1300	12800	6	5	2000	1300	12800
P11	5	2000	1300	12800	6	6	2267	1250	18100
P12	6	2227	1250	15860	7	6	2227	1250	15860
P13	6	2415	1250	18991	7	7	2070	1250	18991
P14	7	2387	1250	19211	8	8	2089	1250	19211
P15	8	2333	1250	21162	9	9	2074	1250	21192
P16	9	2291	1250	23122	10	10	2082	1250	23122
P17	10	2258	1250	25081	11	11	2053	1250	25081
P18	11	2319	1250	28005	12	8	2250	1300	18100
P19-A2	6	2250	1300	18100	7	6	2250	1300	18100

## TYPICAL CROSS SECTION OF SUBSTRUCTURAL



# **C-1 THROUGHWAY**

## **C-1-2 SUPERSTRUCTURE (BOX GIRDER AND PC I GIRDER)**

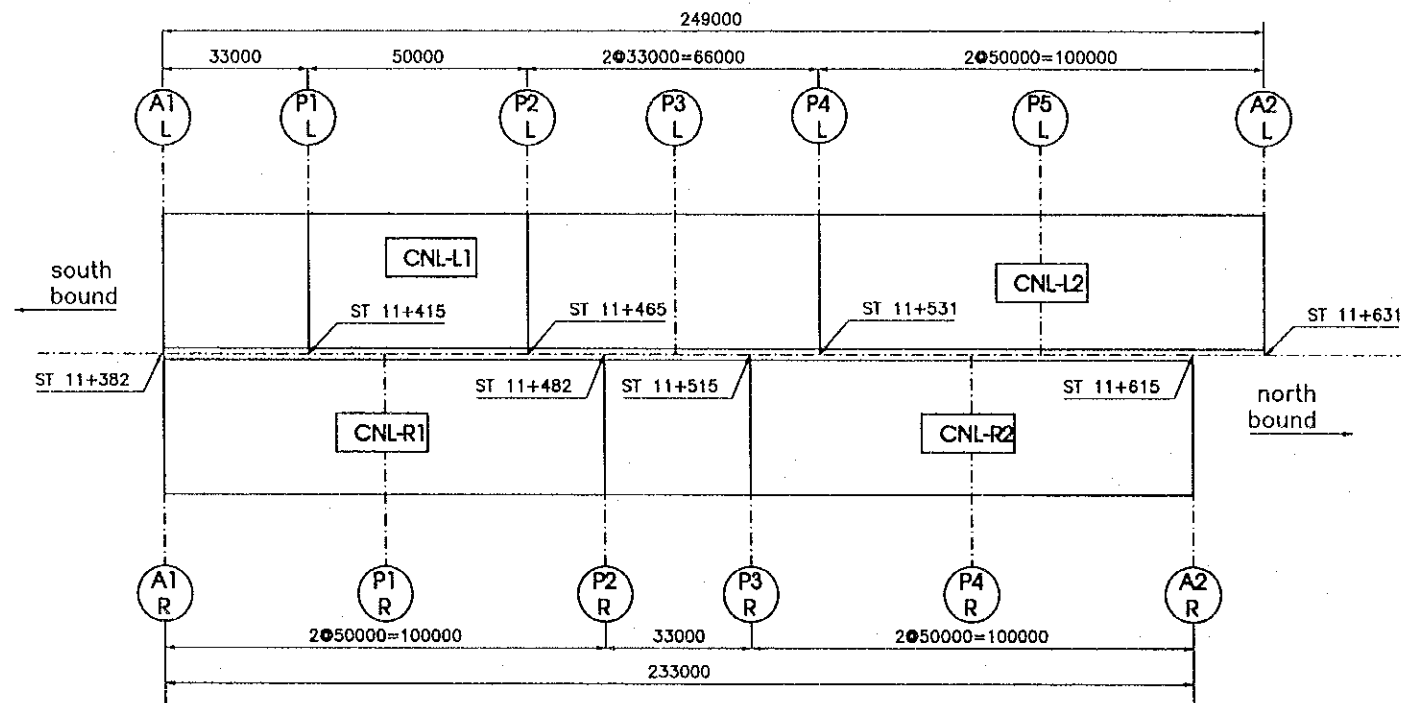
### **C-1-2a BOX GIRDER**



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		DESIGNED BY S.WATASE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE <i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.2.19

PACKAGE 2	SCALE	DRAWING No. C-1-2a-1	SHEET No.
BOX GIRDER BRIDGE GENERAL ARRANGEMENT			

CAU BAY CANAL BRIDGE

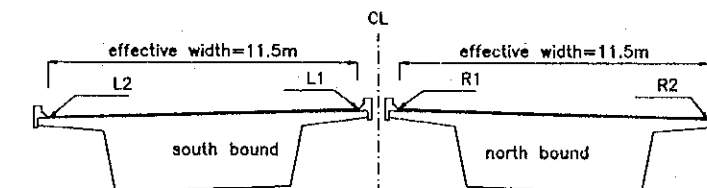


BRIDGE LIST

Designation	Bridge length (m)	Station		Span Arrangement	Number of Span	Bridge Width (m)	
		Start	End			Total	Effective
CNL-R1	100.0	11+382	11+482	2@49.3	2	12.6	11.5
CNL-L1	50.0	11+415	11+465	48.6	1	12.6	11.5
CNL-R2	100.0	11+515	11+615	2@49.3	2	12.6	11.5
CNL-L2	100.0	11+531	11+631	2@49.3	2	12.6	11.5

GEOMETRIC DATA

PIER NO.		A1R A1L	P1L	P1R	P2L	P2R	P3L	P3R	P4L	P4R	A2R	A2L
STATION		11+382	11+415	11+432	11+465	11+482	11+515	11+531	11+565	11+581	11+615	11+631
ELEVATION	CL,R1,L1	9.500	9.912	10.086	10.352	10.452	10.572	10.596	10.600	10.600	10.600	10.600
	R2	9.285	9.950	10.255	10.582	10.682	10.802	10.826	10.830	10.830	10.830	10.830
	L2	9.715	9.874	9.917	10.122	10.222	10.342	10.366	10.370	10.370	10.370	10.370
COORDINATES	CL	N										
		E										
	R1	N										
		E										
	L1	N										
		E										
	R2	N										
		E										
	L2	N										
		E										

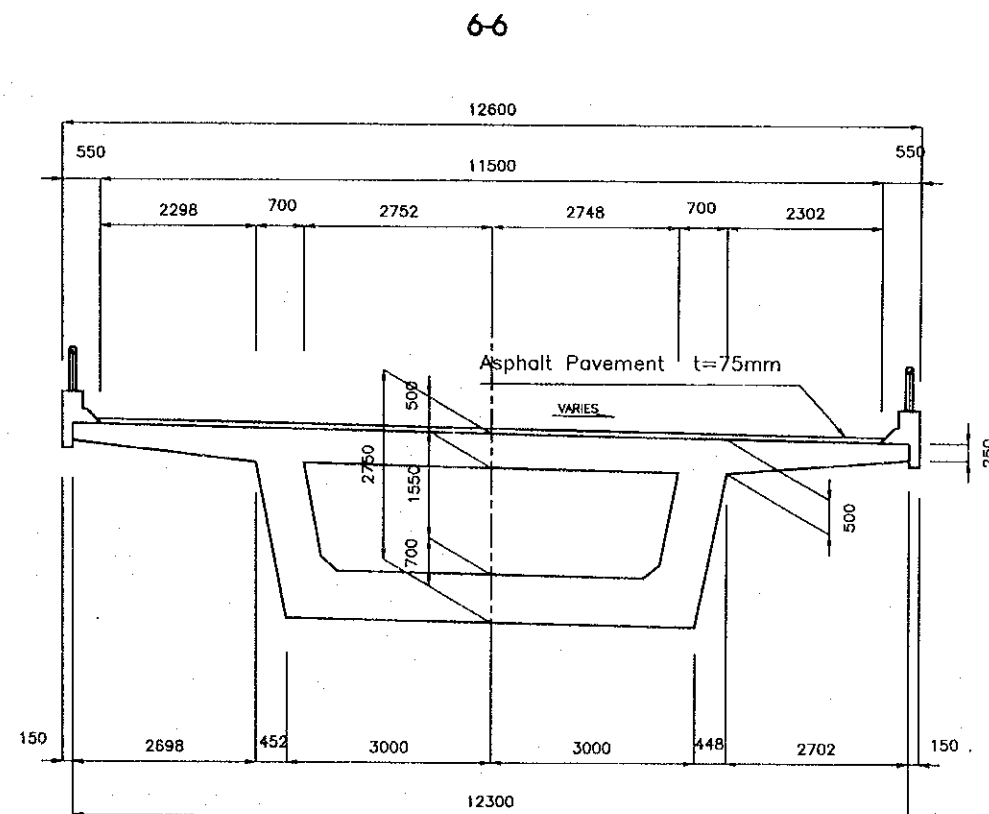
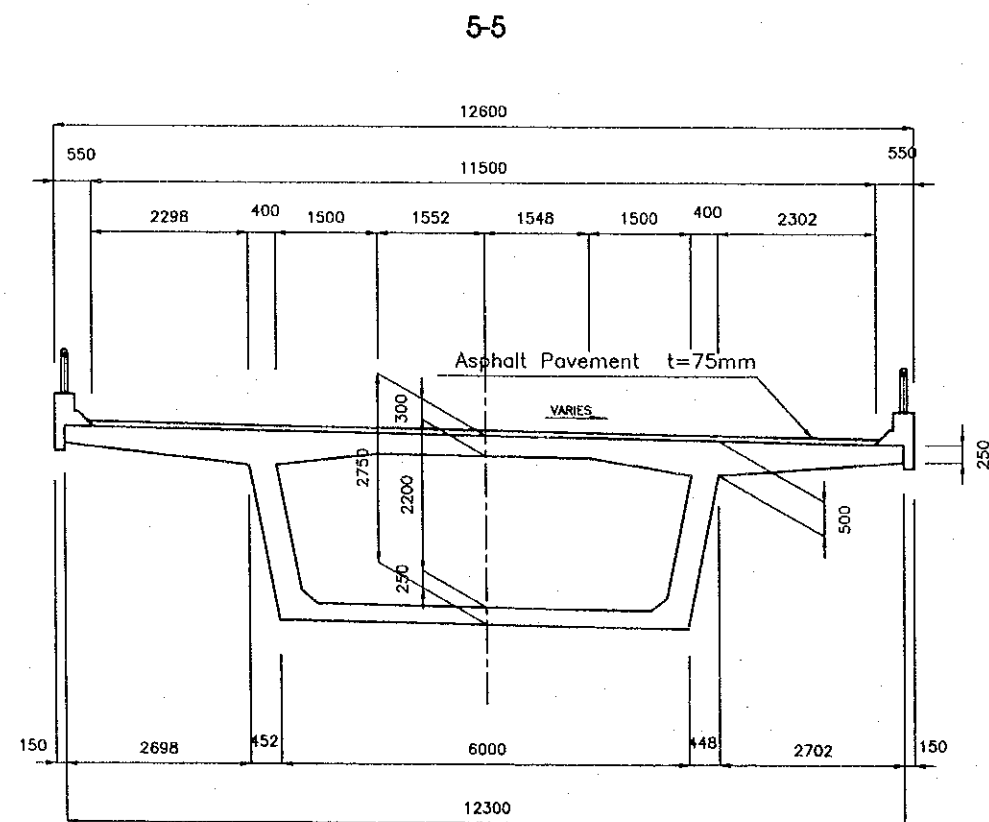
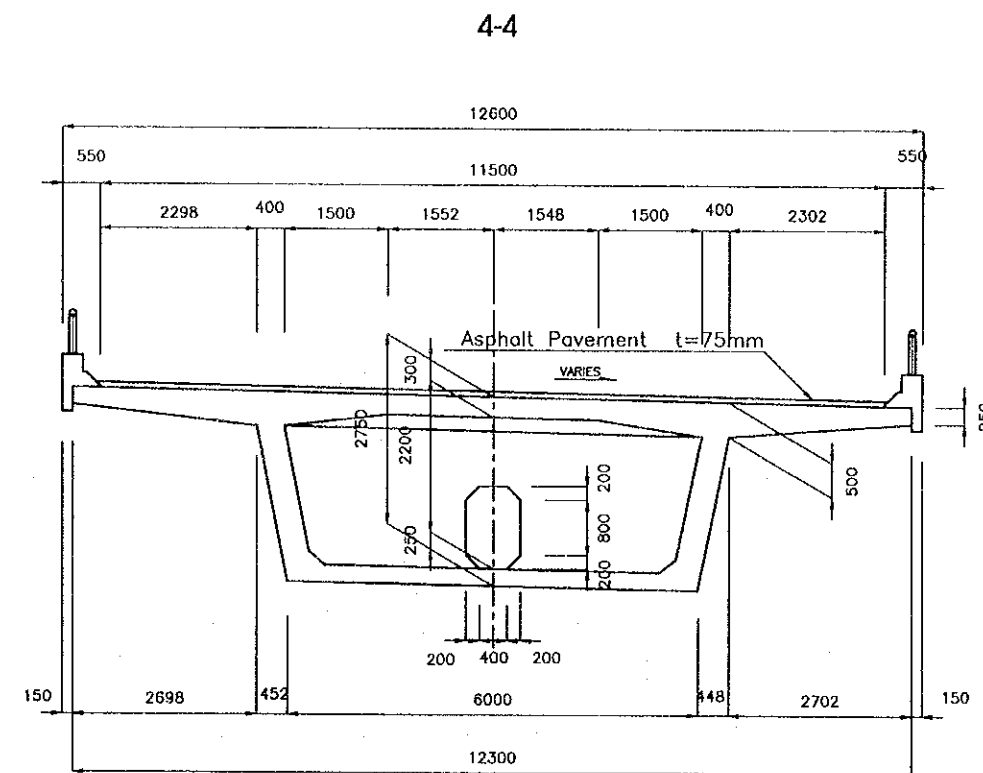
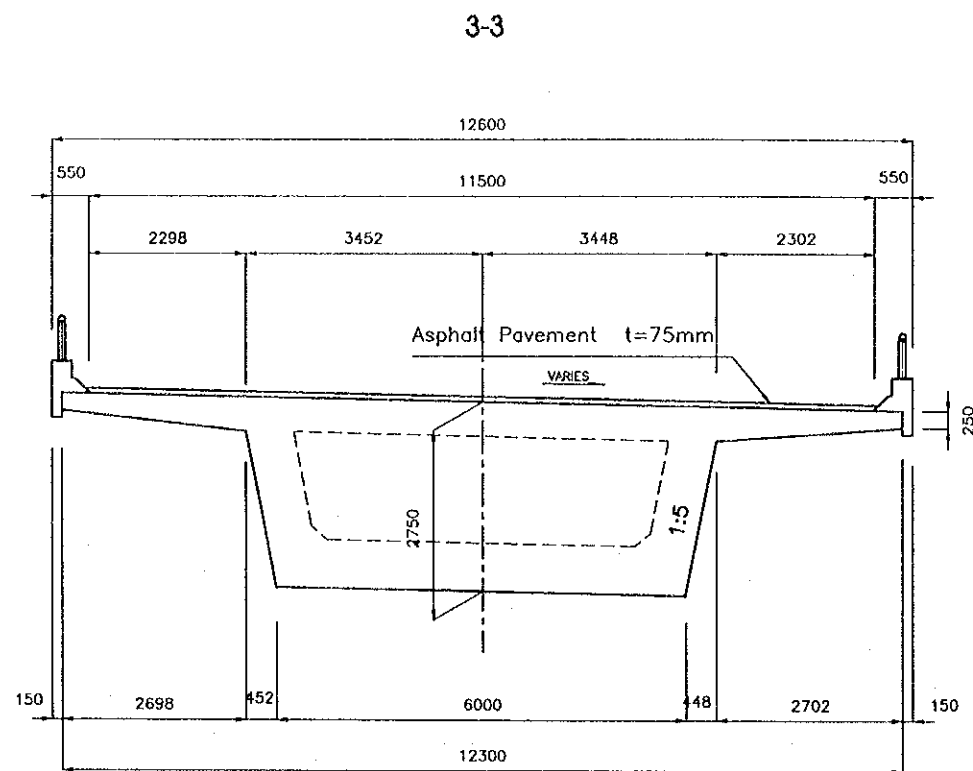




THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000. 3. 19

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-1-2a-3	
SIMPLE SPAN BRIDGE, STRUCTURAL DIMENSIONS(2/2)			

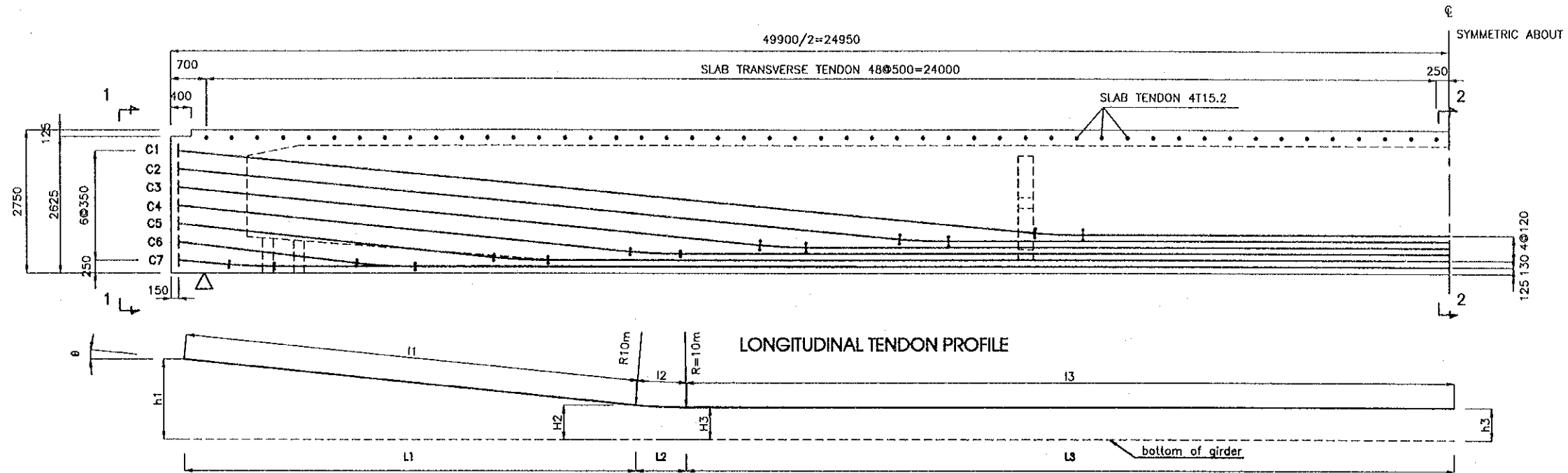
HALF OF CROSS-SECTION



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.3.14	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE AS SHOWN	DRAWING No. C-1-20-4	SHEET No.
SIMPLE SPAN BRIDGE, TENDON ARRANGEMENT (1/2)			

ELEVATION (S=1/100)

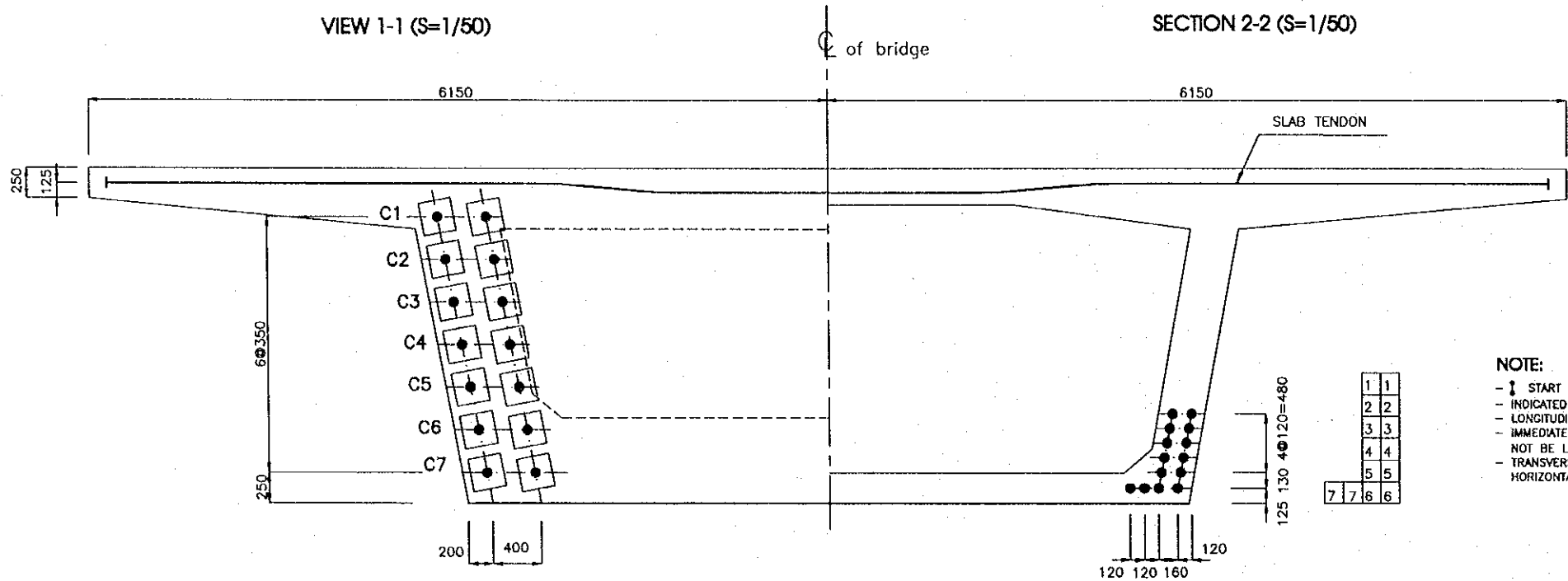


CABLE No	θ	H1 (mm)	H2 (mm)	H3 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	ℓ1 (mm)	ℓ2 (mm)	ℓ3 (mm)	2Σℓ1 (mm)
C1	5°23'	2350	789	735	18733	940	7127	16807	942	7127	50012
C2	5°27'	2000	650	615	14098	853	9749	14162	954	9749	49990
C3	5°33'	1650	532	495	11460	971	12369	11514	971	12369	49970
C4	5°44'	1300	415	375	8817	999	14984	8882	1000	14984	49952
C5	6°01'	950	300	255	6164	1049	17587	6198	1050	17587	49930
C6	6°42'	800	193	125	3478	1183	20159	3501	1185	20159	49910
C7	5°00'	250	183	125	994	872	22934	998	873	22934	49870

VIEW 1-1 (S=1/50)

SECTION 2-2 (S=1/50)

QUANTITIES OF PC STEEL



TYPE	CABLE No	LENGTH (mm)	NUMBER	TOTAL LENGTH (m)
PC CABLE 12T-15.2	C1	50012	4	200.048
	C2	49990	4	199.960
	C3	49970	4	199.880
	C4	49952	4	199.808
	C5	49930	4	199.720
	C6	49910	4	199.640
	C7	49870	4	199.480
	TOTAL		28	1398.536
				WEIGHT = 1398.5x13.212 kg/m = 18477.5 kg

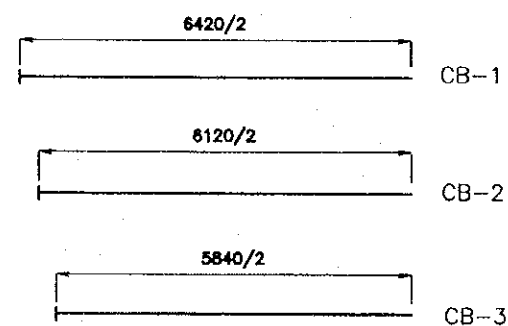
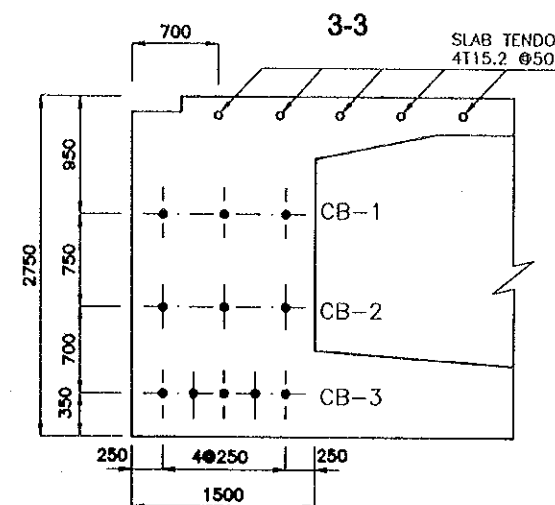
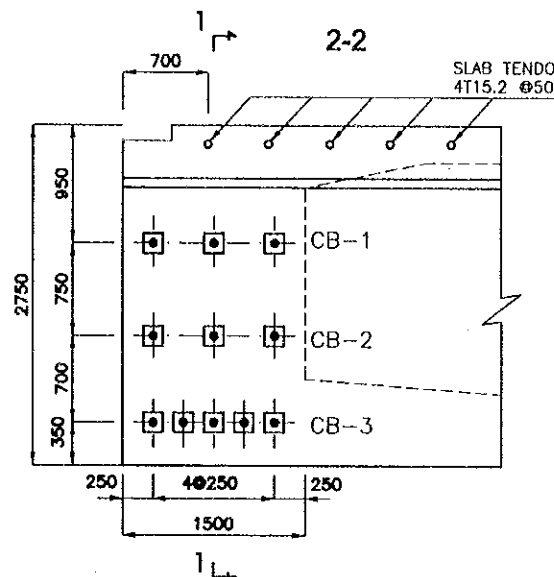
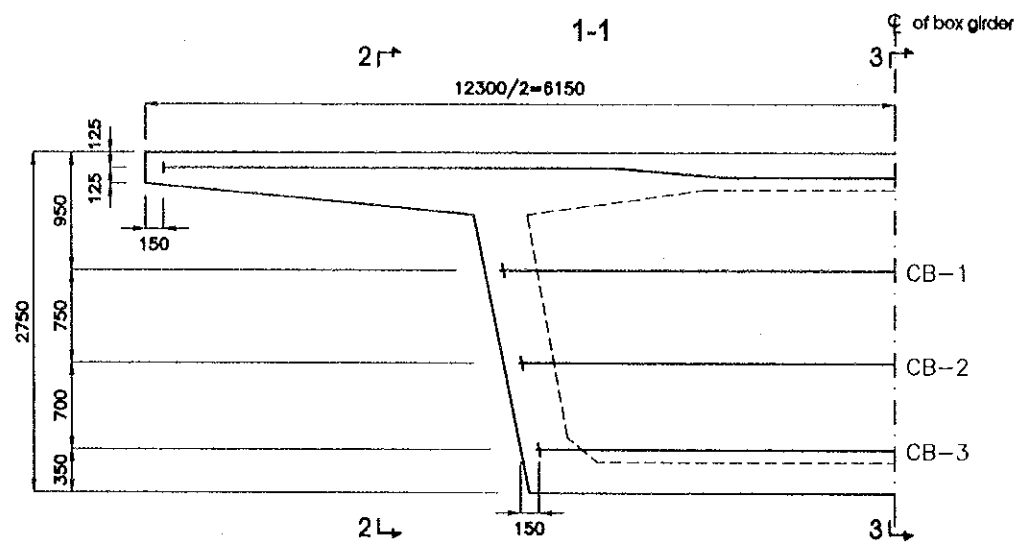
NOTE:

- START AND END POINTS OF CURVED SEGMENT OF TENDON.
- INDICATED LENGTHS DO NOT INCLUDE OPERATING ALLOWANCE.
- LONGITUDINAL PRESTRESSING TENONS SHALL BE STRESSED FROM THE BOTH SIDES SIMULTANEOUSLY.
- IMMEDIATELY AFTER PRESTRESSING, AVERAGE PRESTRESS FORCE OF LONGITUDINAL TENONS SHALL NOT BE LESS THAN 190 TF/TENSON RESPECTIVELY AT THE CENTER OF THE SPAN.
- TRANSVERSE CROSS-SECTIONS SHOW IN THIS DRAWING ARE THOSE PERPENDICULAR TO THE HORIZONTAL ROAD ALIGNMENT.

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2002. 12. 14

PACKAGE 2	SCALE AS SHOWN	DRAWING No. C-1-2a-5	SHEET No.
SIMPLE SPAN BRIDGE, TENDON ARRANGEMENT (2/2)			

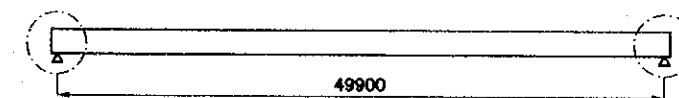
### CROSSBEAM (S=1/60)



### QUANTITIES OF PC STEEL

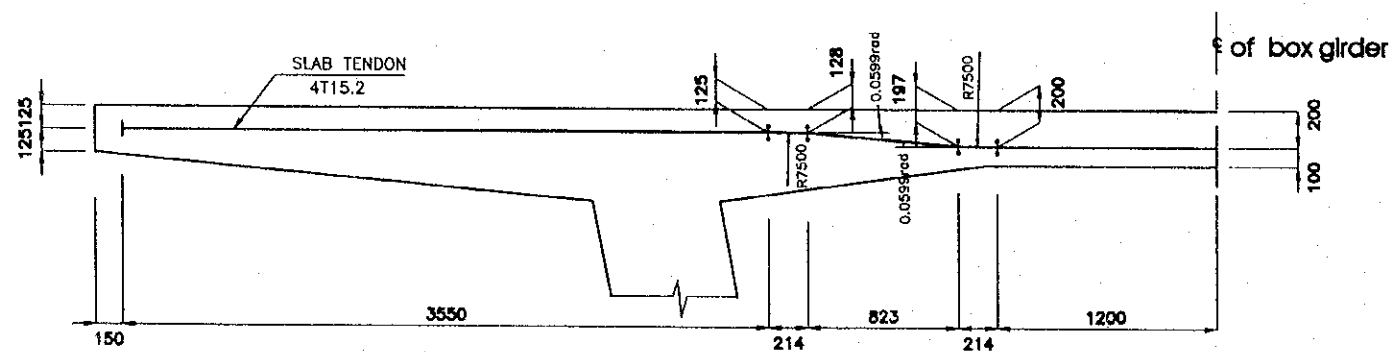
TYPE	CABLE No	LENGTH (mm)	NUMBER	TOTAL LENGTH (m)
PC CABLE 4T15.2	CB-1	6,420	6	38.52
	CB-2	6,120	6	36.72
	CB-3	5,840	10	58.4
WEIGHT = 133.64m x 4.4kgf/m = 588.016 kgf				

### KEY PLAN



### SLAB TRANSVERSE TENDON

### TENDON PROFILE (S=1/40)



### QUANTITIES OF PC STEEL

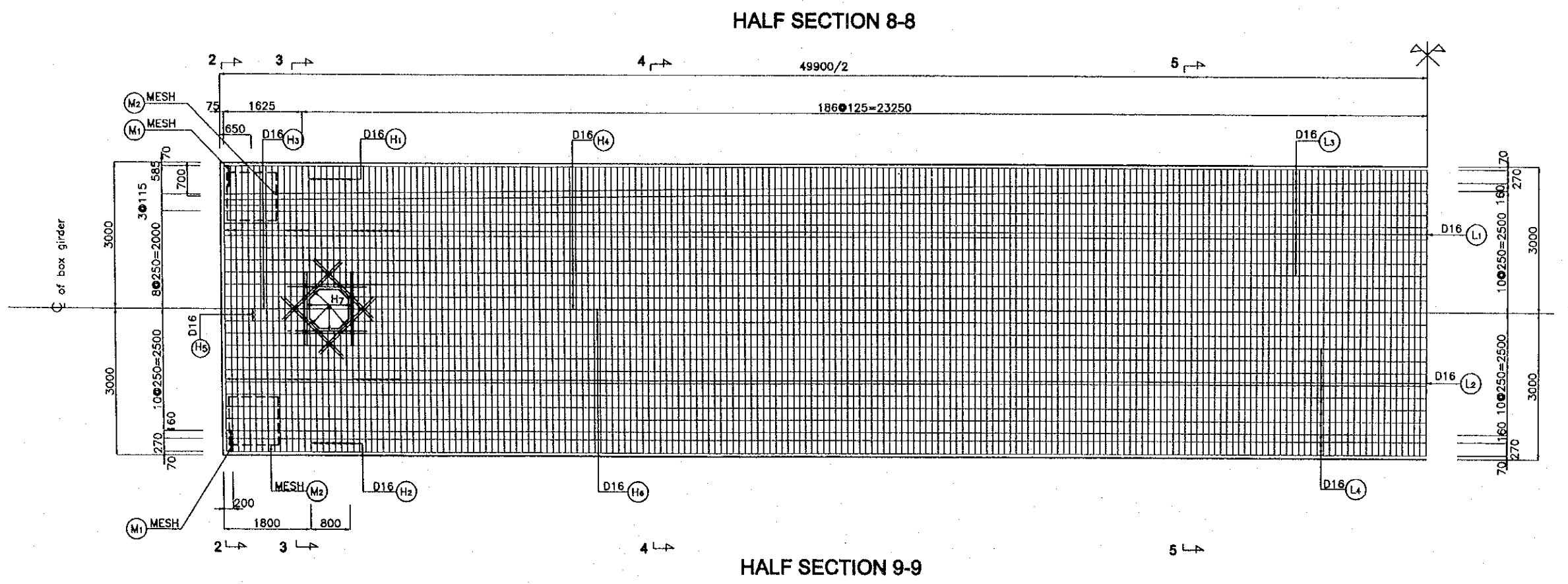
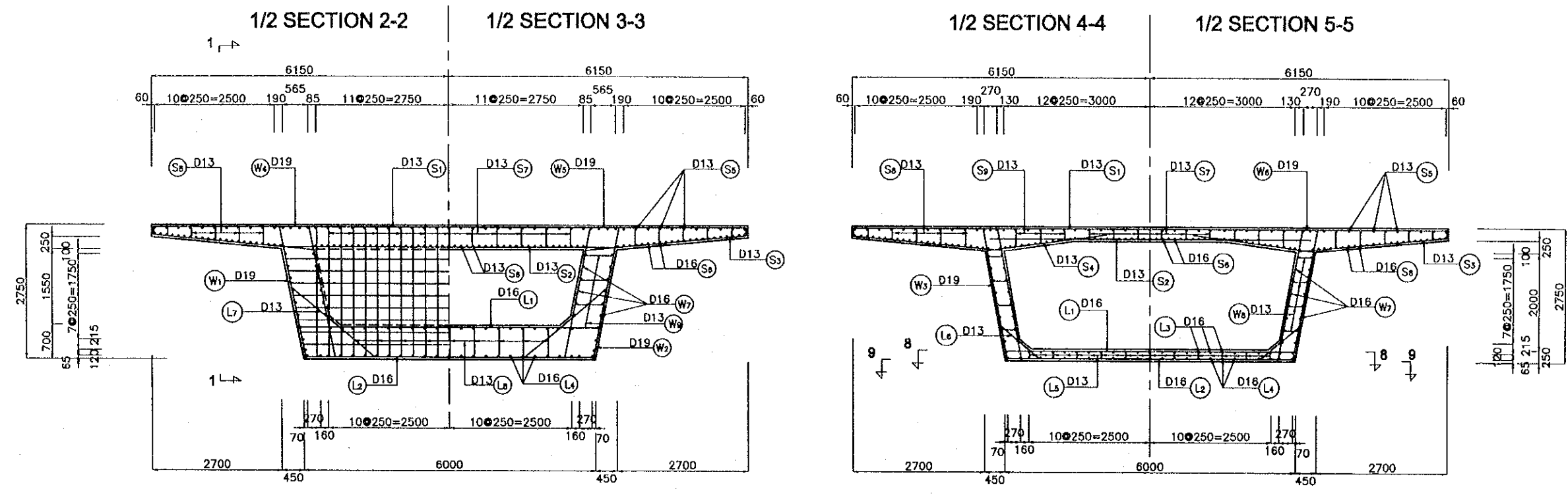
TYPE	CABLE No	LENGTH (mm)	NUMBER	TOTAL LENGTH (m)
PC CABLE 4T15.2		12006	98	1176.588
WEIGHT = 1176.588m x 4.4 kgf/m = 5176.99 kgf				

### NOTE:

- INDICATED LENGTHS DO NOT INCLUDE OPERATING ALLOWANCE.
- PRESTRESSING TENDONS IN SLAB AND CROSSBEAM SHALL BE STRESSED ALTERNATELY FROM THE RIGHT SIDE AND THE LEFT SIDE.
- IMMEDIATELY AFTER PRESTRESSING, PRESTRESS FORCE OF THE TENDONS IN SLAB AND CROSSBEAM SHALL NOT BE LESS THAN 65.0 TF/TENDON RESPECTIVELY AT THE CENTER OF THE TENDON.
- FOR ARRANGEMENT OF SLAB TENDONS, REFER TO DWG. NO.C-1-2a-4.

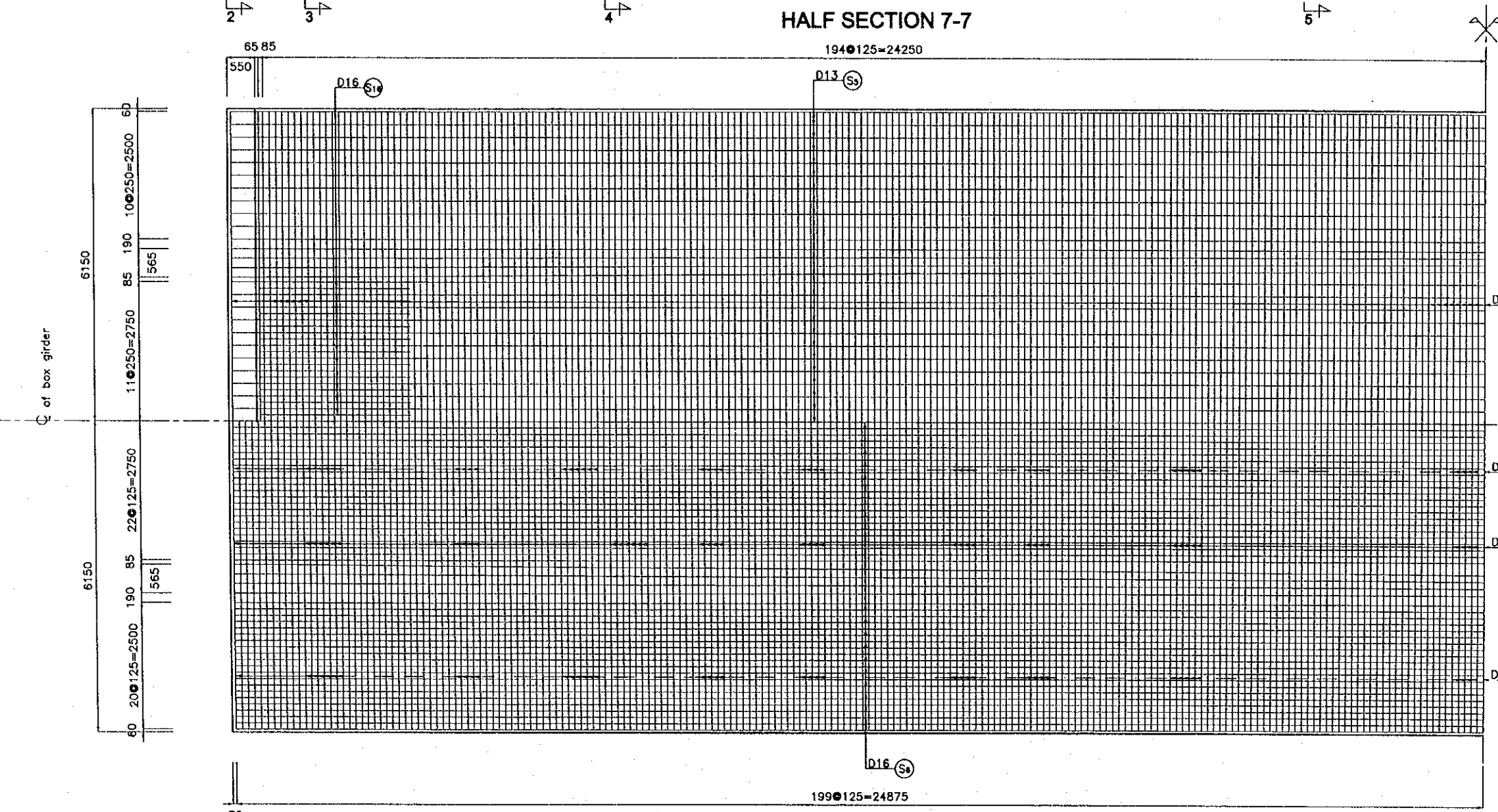
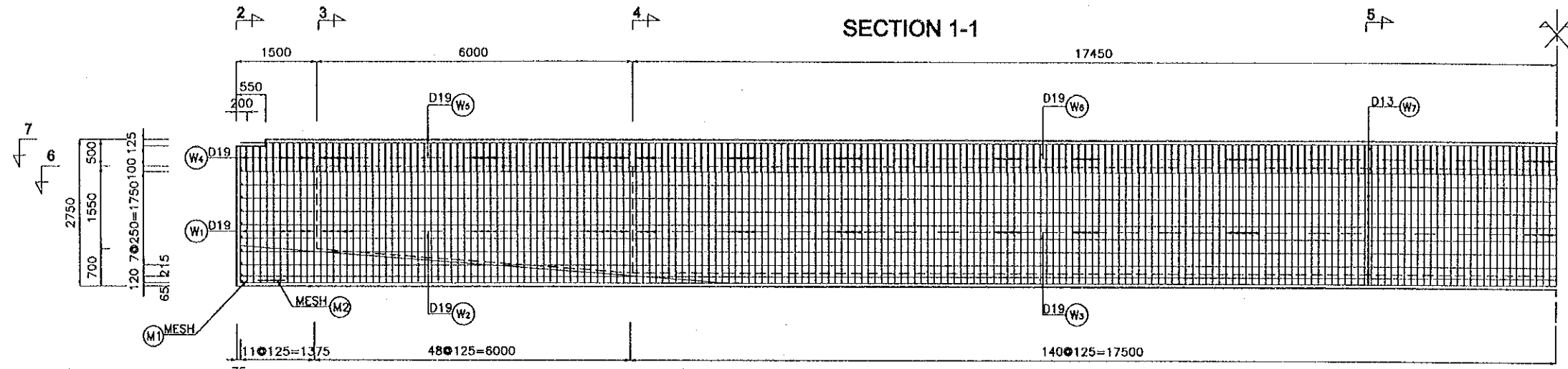
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TUANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONTRACTOR PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-1-2a-6	
SIMPLE SPAN BRIDGE, REINFORCEMENT ARRANGEMENT (1/3)			



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JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	DATE 2000.6.11
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/100	DRAWING No. C-1-2a-7	SHEET No.
SIMPLE SPAN BRIDGE, REINFORCEMENT ARRANGEMENT (2/3)			

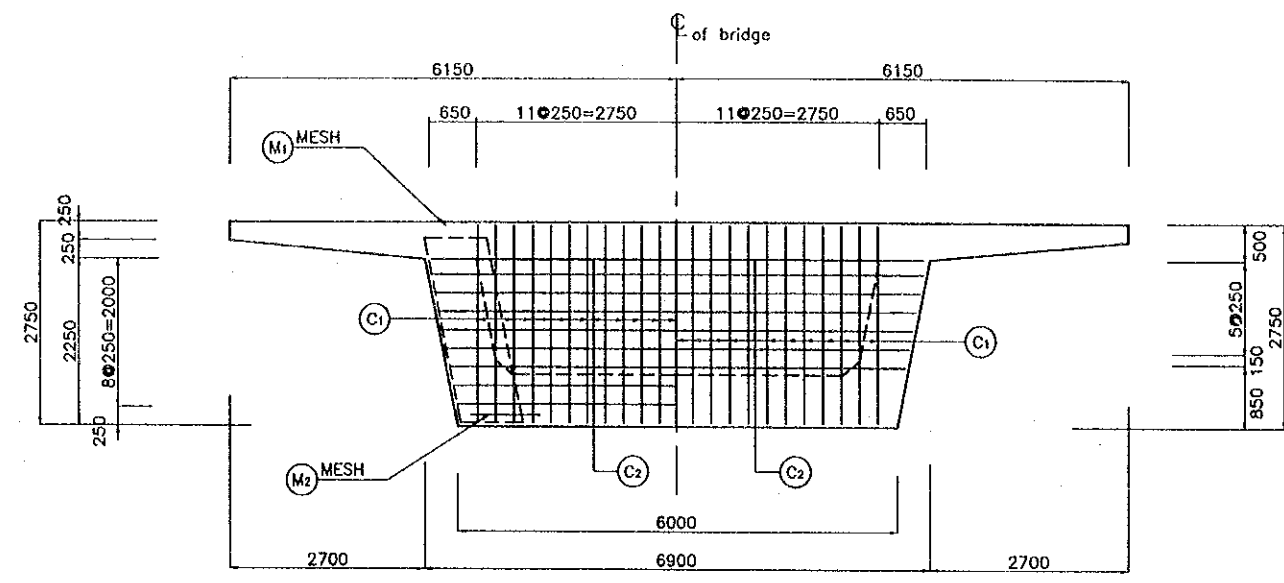


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000. 8. 17

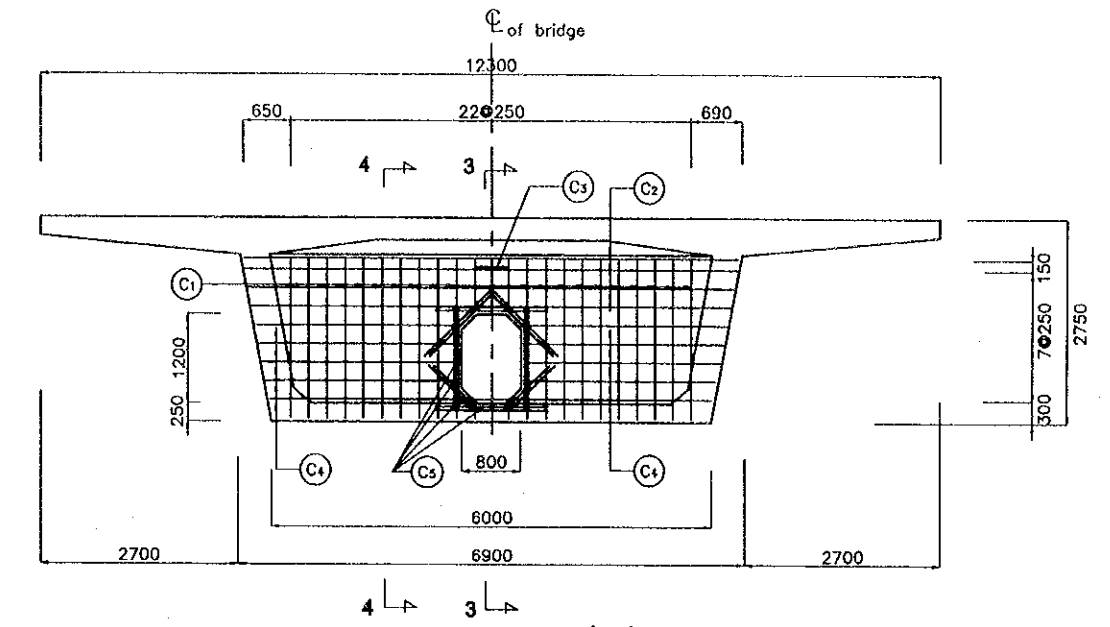
PACKAGE 2	SCALE 1/100	DRAWING No. C-1-2a-B	SHEET No.
SIMPLE SPAN BRIDGE, REINFORCEMENT ARRANGEMENT (3/3)			

1/2 SECTION 1-1

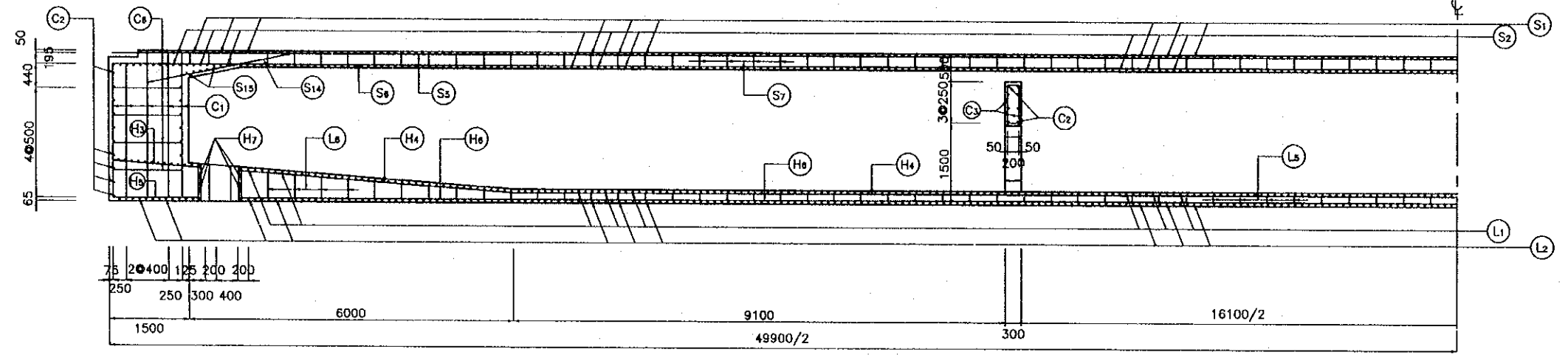
1/2 SECTION 2-2



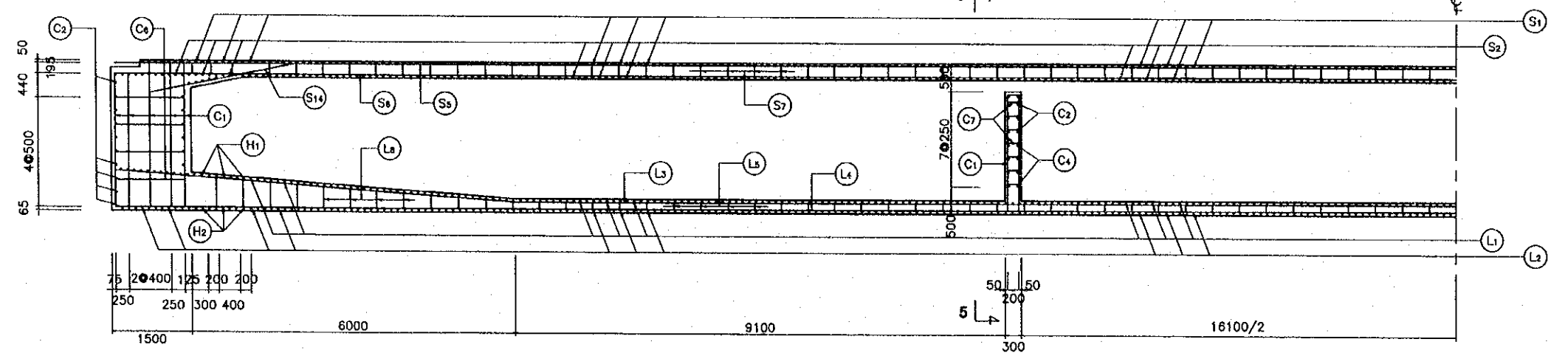
SECTION 5-5



SECTION 3-3



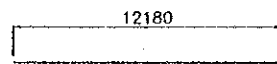
SECTION 4-4



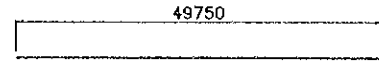


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	
COORDINATOR PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.3.17	

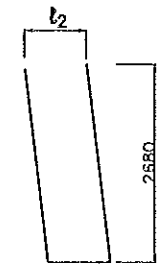
PACKAGE 2	SCALE	DRAWING No. C-1-2a-9	SHEET No.
SIMPLE SPAN BRIDGE, REBAR BENDING SCHEDULE (1/3)			



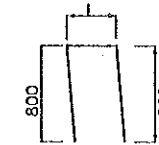
(S1) 391-D13 x 12180



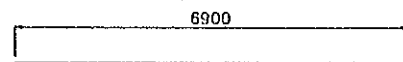
(S6) 95-D16 x 49750



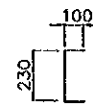
No	DIM	b <sub>2</sub>	L	N
W1	D19	630	5990	52
W2	D19	630 + 330	5840(ave)	196
W3	D19	330	5690	560



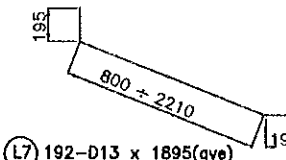
No	DIM	b <sub>2</sub>	L	N
W4	D19	630	2230	52
W5	D19	630 + 330	2080(ave)	196
W6	D19	330	1930	560



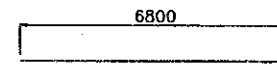
(S2) 399-D13 x 6900



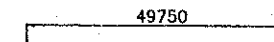
(S7) 564-D13 x 430



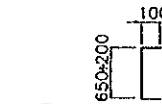
(L7) 192-D13 x 1895(ave)



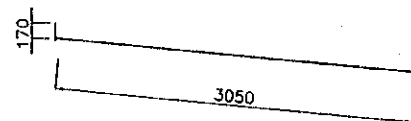
(S15) 10-D13 x 6800



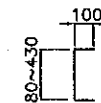
(L3) 25-D16 x 49750



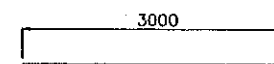
(L8) 275-D13 x 825(ave)



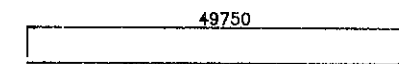
(S3) 798-D13 x 3220



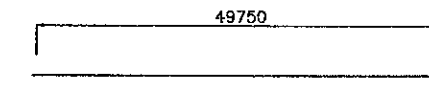
(S8) 1000-D13 x 505 (ave)



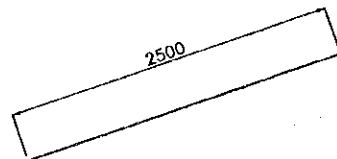
(S16) 44-D19 x 3000



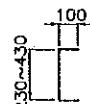
(L4) 25-D16 x 49750



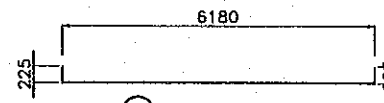
(W7) 32-D16 x 49750



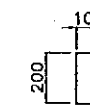
(S4) 798-D13 x 2500



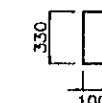
(S9) 564-D13 x 530 (ave)



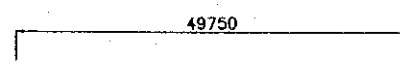
(L1) 387-D16 x 6630



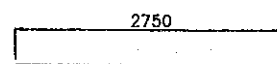
(L5) 781-D13 x 400



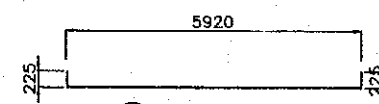
(W8) 560-D13 x 550



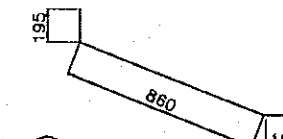
(S5) 53-D13 x 49750



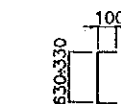
(S17) 48-D13 x 2750



(L2) 387-D16 x 6370




(L6) 560-D13 x 1250



(W9) 192-D13 x 680(ave)



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATADE	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000. 01. 17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-1-2a-11	
SIMPLE SPAN BRIDGE, REBAR BENDING SCHEDULE (3/3)			

## LIST OF REINFORCING BARS

Shape	Diameter	Length (mm)	Number	Unit Weight (kgf/m)	Weight (kgf)	Remark
S1	D13	12180	391	0.955	4548	
S2	D13	6900	399	0.955	2629	
S3	D13	3220	798	0.955	2454	
S4	D13	2500	798	0.955	1905	
S5	D13	49750	53	0.955	2518	
S6	D16	49750	95	1.560	7373	
S7	D13	430	564	0.955	232	
S8	D13	505	1000	0.955	482	AVE
S9	D13	530	564	0.955	285	AVE
S14	D13	2750	46	0.955	121	
S15	D13	6800	10	0.955	65	
S16	D19	3000	44	2.250	297	
L1	D16	6630	387	1.560	4003	
L2	D16	6370	387	1.560	3846	
L3	D16	49750	25	1.560	1940	
L4	D16	49750	25	1.560	1940	
L5	D13	400	781	0.955	298	
L6	D13	1250	560	0.955	669	
L7	D13	1895	192	0.955	347	
L8	D13	625	275	0.955	164	AVE
W1	D19	5990	52	2.250	701	
W2	D19	5840	196	2.250	2575	
W3	D19	5690	560	2.250	7169	
W4	D19	2230	52	2.250	261	
W5	D19	2080	196	2.250	917	
W6	D19	1930	560	2.250	2432	
W7	D16	49750	32	1.560	2484	
W8	D13	550	560	0.955	294	
W9	D13	680	192	0.955	125	AVE

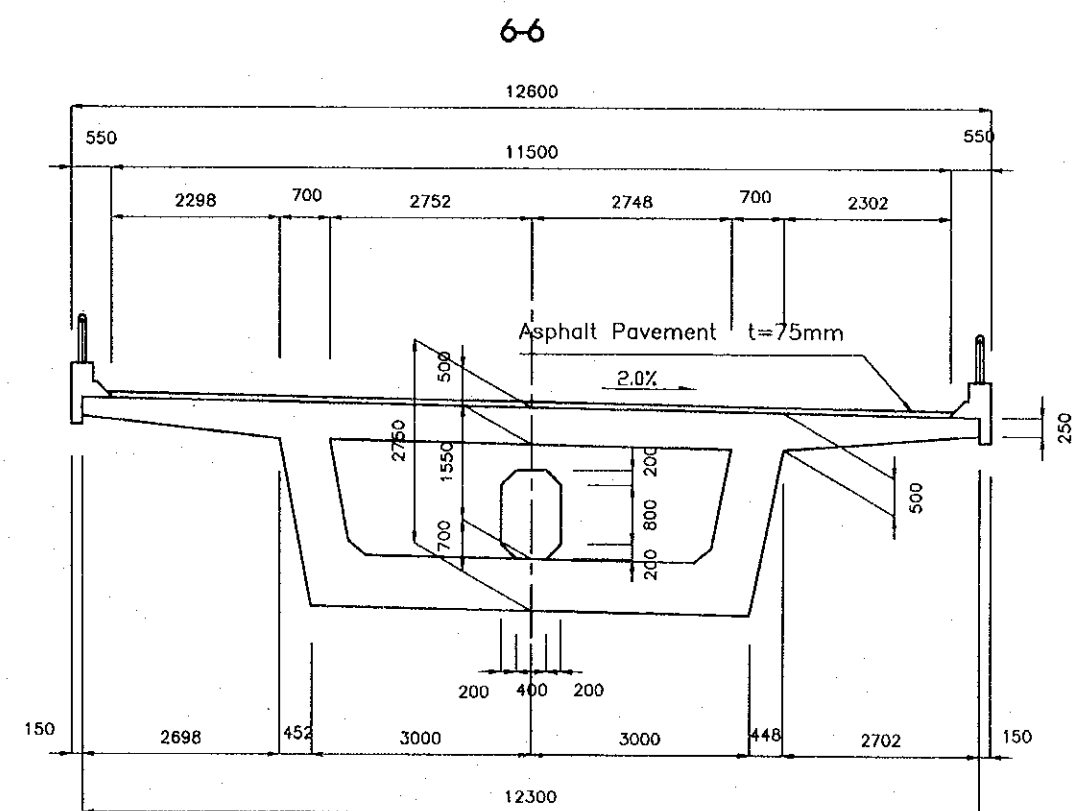
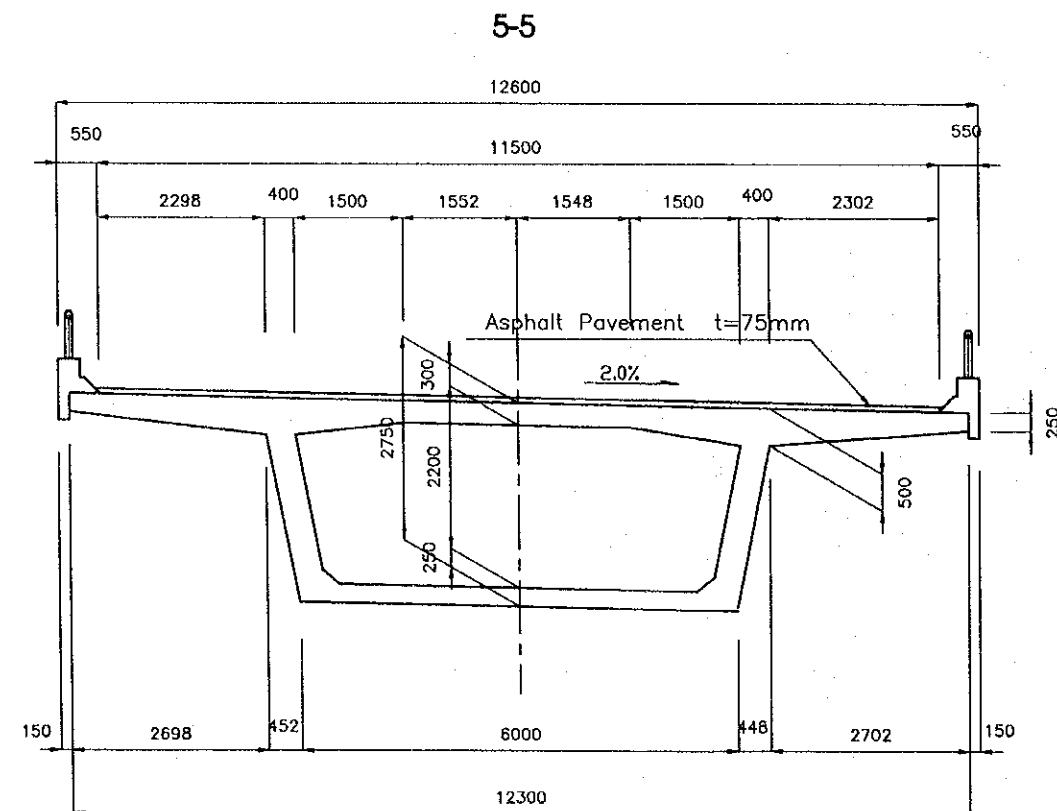
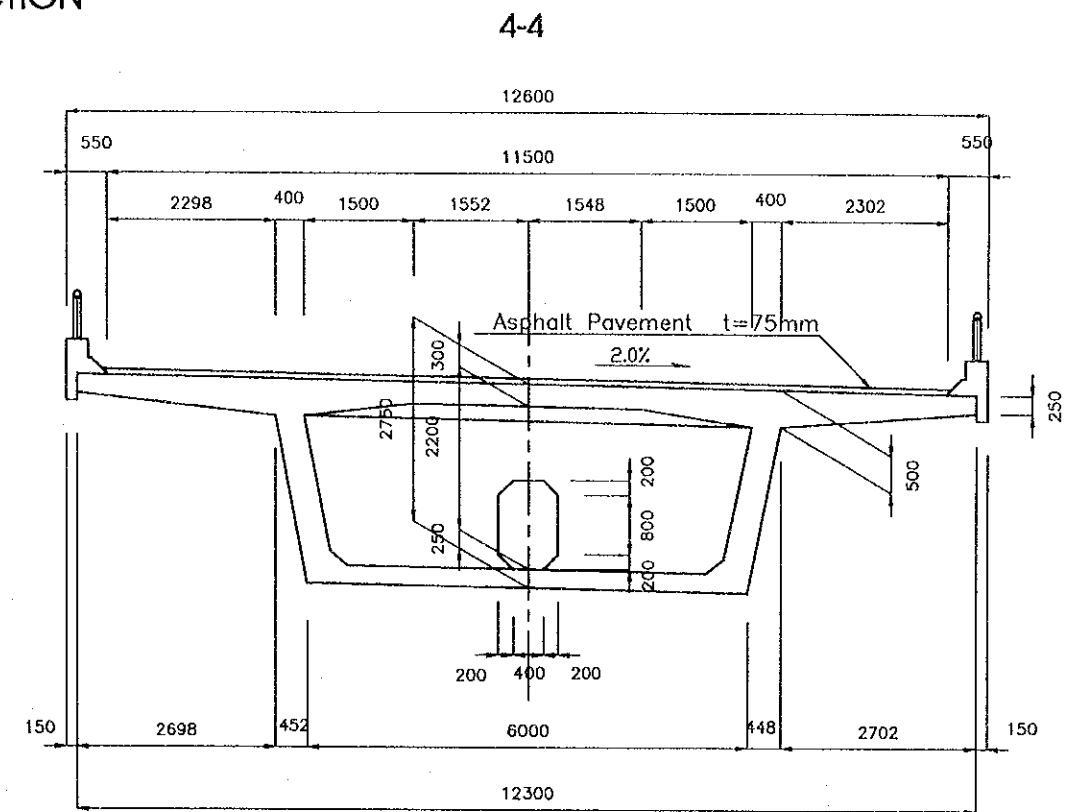
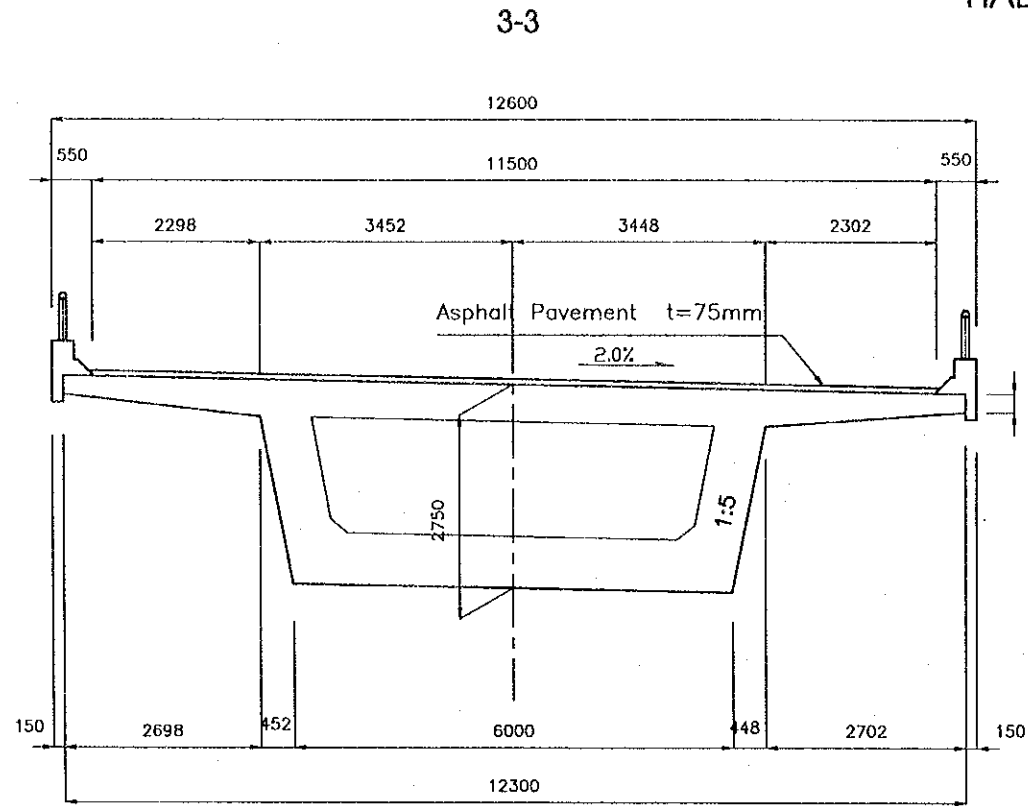
Shape	Diameter	Length	Number	Unit Weight (kgf/m)	Weight (kgf)	Remark
C1	D16	2640	310	1.560	1277	
C2	D16	6380	106	1.560	1055	AVE
C3	D16	1190	12	1.560	22	
C4	D16	2760	40	1.560	172	
C5	D16	1300	64	1.560	130	
C6	D16	1830	80	1.560	228	
C7	D16	570	80	1.560	71	
B1	D16	2493	28	1.560	109	
B2	D16	750	88	1.560	103	
B3	D16	1060	14	1.560	23	
B4	D16	1160	12	1.560	22	
B5	D16	1060	14	1.560	23	
B6	D16	1230	12	1.560	23	
H1	D16	3460	24	1.560	130	
H2	D16	3505	24	1.560	131	
H3	D16	2230	14	1.560	49	
H4	D16	45630	7	1.560	498	
H5	D16	2230	14	1.560	49	
H6	D16	45630	7	1.560	498	
H7	D13	900	128	0.955	110	
Total+5% (Lap length)					60688	kg



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THUAN TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	DATE 2000.3.14
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

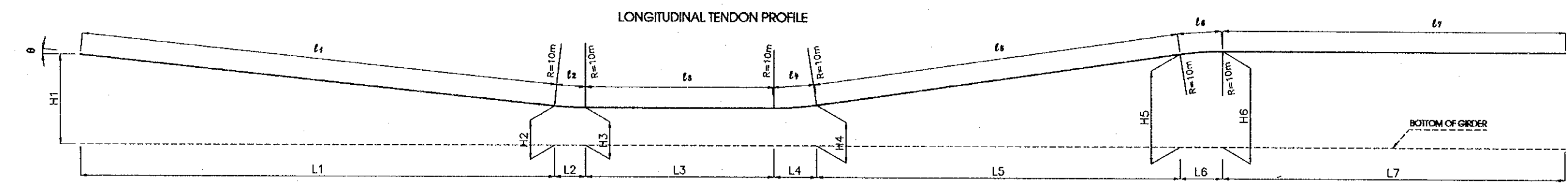
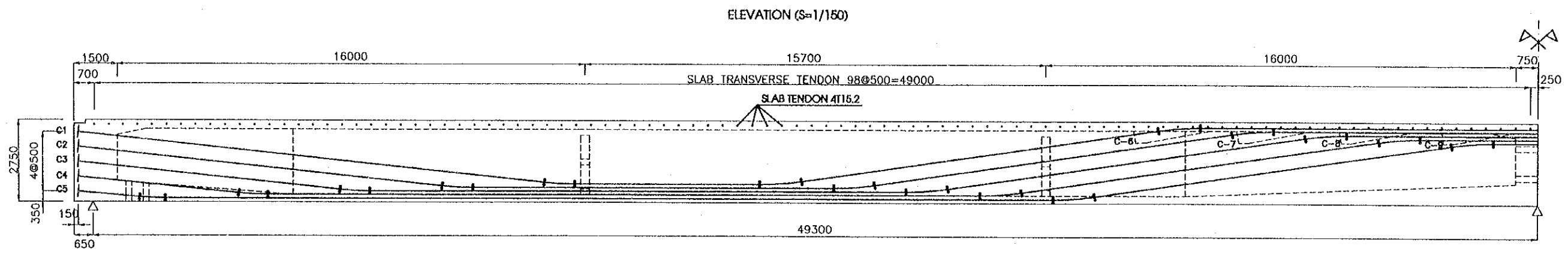
PACKAGE 2	SCALE 1/100	DRAWING No. C-1-2a-13	SHEET No.
2-SPAN BRIDGE, STRUCTURAL DIMENSIONS (2/2)			

HALF OF CROSS-SECTION



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.8.17	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

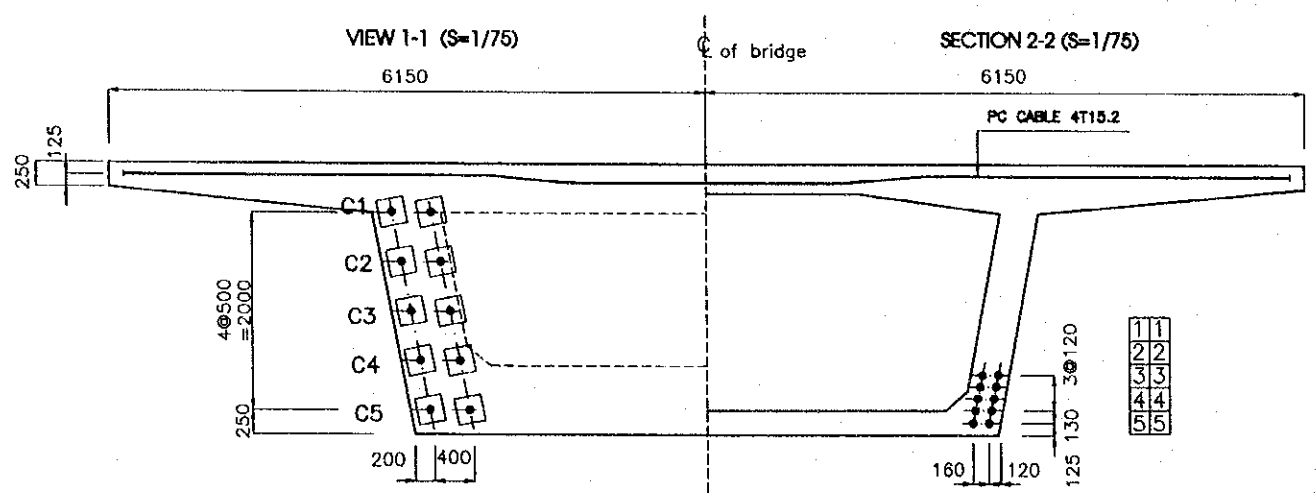
PACKAGE 2	SCALE AS SHOWN	DRAWING No. C-1-2a-14	SHEET No.
2-SPAN BRIDGE, TENDON ARRANGEMENT (1/3)			



CABLE No	$\theta$ (radian)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H6 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	$t_1$ (mm)	$t_2$ (mm)	$t_3$ (mm)	$t_4$ (mm)	$t_5$ (mm)	$t_6$ (mm)	$t_7$ (mm)	$2\sum t_i$ (mm)
C1	0.1049	2,350	670	615	715	2450	2500	15,953	1,047	6,300	1,410	12,179	1,410	11,500	16,040	1,049	6,300	1,414	12,302	1,414	11,500	100,038
C2	0.1040	1,850	549	495	595	2330	2430	12,482	1,038	12,300	1,410	12,179	1,410	9,000	12,529	1,040	12,300	1,414	12,302	1,414	9,000	99,998
C3	0.1024	1,350	427	375	475	2210	2310	8,978	1,022	18,300	1,410	12,179	1,410	6,500	9,026	1,024	18,300	1,414	12,303	1,414	6,500	99,962
C4	0.0988	850	304	255	355	2090	2190	5,514	986	24,300	1,410	12,179	1,410	4,000	5,541	987	24,300	1,414	12,302	1,414	4,000	99,916
C5	0.0876	350	163	125	225	1970	2070	2,125	875	30,300	1,418	12,163	1,418	1,500	2,133	876	30,300	1,422	12,287	1,422	1,500	99,880

QUANTITIES OF PC STEEL

TYPE	CABLE No	LENGTH (mm)	NUMBER	TOTAL LENGTH (m)
LONGITUDINAL TENDON 12T15.2	C1	100,038	4	400,152
	C2	99,998	4	399,992
	C3	99,962	4	399,848
	C4	99,916	4	399,664
	C5	99,880	4	399,520
	TOTAL		20	1999,176
		WEIGHT = 1999.18x13.212 kgf/m = 26413.1kgf		
SLAB TENDON PC CABLE 4T15.2		12,006	198	2377.2
		WEIGHT = 2377.2x4.4kgf/m = 10459.6 kgf		

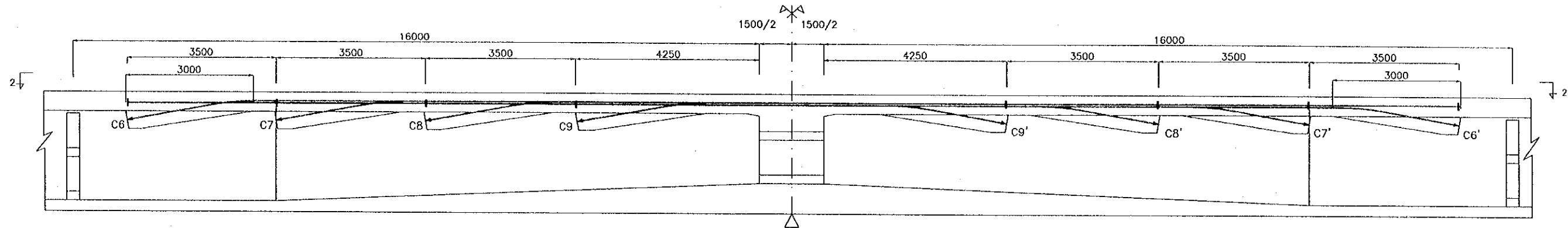


- NOTE:
- START AND END POINTS OF CURVED SEGMENT OF TENDON.
  - INDICATED LENGTHS DO NOT INCLUDE OPERATING ALLOWANCE.
  - LONGITUDINAL PRESTRESSING TENDONS C1 THROUGH C5 SHALL BE STRESSED FROM THE BOTH SIDES SIMULTANEOUSLY.
  - IMMEDIATELY AFTER PRESTRESSING, AVERAGE PRESTRESS FORCE OF LONGITUDINAL TENDONS C1 THROUGH C5 SHALL NOT BE LESS THAN 145 TF/TENDON RESPECTIVELY AT THE CENTER OF THE TENDON.
  - FOR LONGITUDINAL TENDONS C6 THROUGH C9, REFER TO DWG. NO.C-1-2a-15.
  - PRESTRESSING TENDONS IN SLAB SHALL BE STRESS ALTERNATELY FROM THE RIGHT SIDE AND THE LEFT SIDE.
  - IMMEDIATELY AFTER PRESTRESSING, PRESTRESS FORCE OF THE TENDONS IN SLAB SHALL NOT BE LESS THAN 65.0 TF/TENDON AT THE CENTER OF THE TENDON.
  - FOR SLAB TENDON PROFILE, REFER TO DWG. NO.C-1-2a-4.

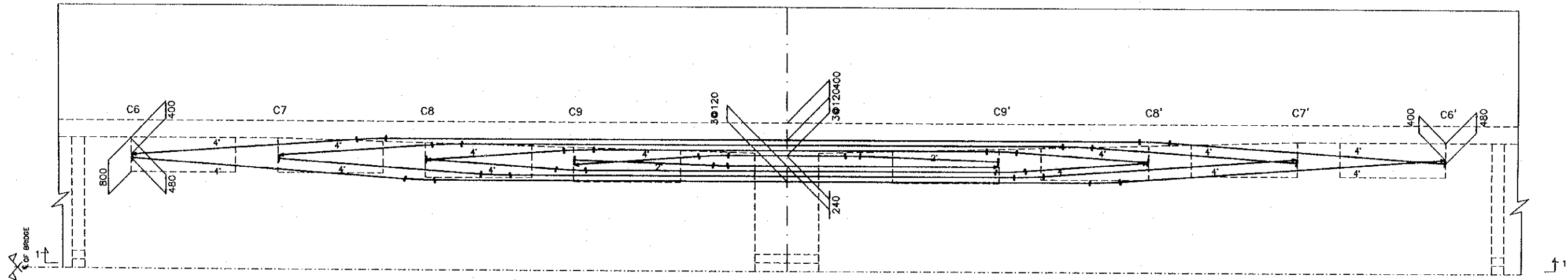
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.3.19

PACKAGE 2	SCALE 1/100	DRAWING No. C-1-2a-15	SHEET No.
2-SPAN BRIDGE, TENDON ARRANGEMENT (2/3)			

SECTION 1-1 (SCALE 1:100)

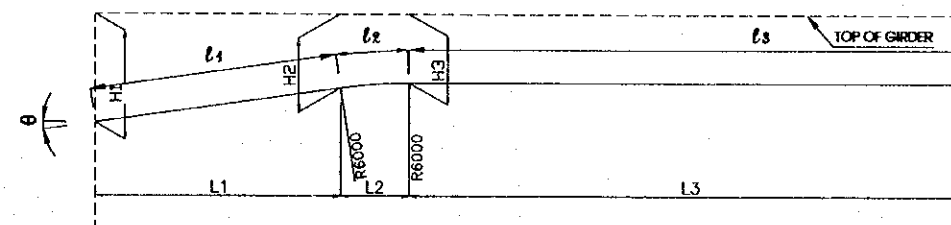


SECTION 2-2 (SCALE 1:100)



CABLE No	$\theta$ (degree)	H1 (mm)	H2 (mm)	H3 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	$l_1$ (mm)	$l_2$ (mm)	$l_3$ (mm)	$\Sigma l_i$ (mm)
C6	10°	647	291	200	2018	1042	27940	2049	1047	27940	31036
C6'	10°	647	341	250	1735	1042	28223	1782	1047	28223	31032
C7	10°	647	291	200	2018	1042	20940	2049	1047	20940	24036
C7'	10°	647	341	250	1735	1042	21223	1782	1047	21223	24032
C8	10°	647	291	200	2018	1042	13940	2049	1047	13940	17036
C8'	10°	647	341	250	1735	1042	14223	1782	1047	14223	17032
C9	10°	647	291	200	2018	1042	8940	2049	1047	8940	10036
C9'	10°	647	341	250	1735	1042	7223	1782	1047	7223	10032

NEGATIVE TENDON PROFILE

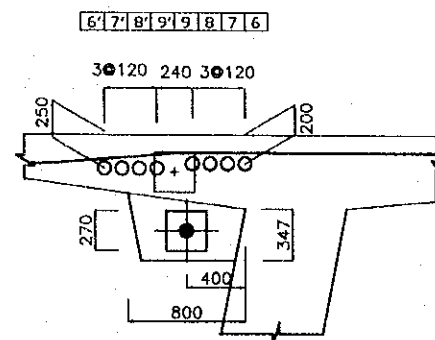


QUANTITIES OF PC STEEL

TYPE	CABLE No	LENGTH (mm)	NUMBER	TOTAL LENGTH (m)
PC CABLE	C6	31036	2	62.072
	C6'	31032	2	62.064
	C7	24036	2	48.072
	C7'	24032	2	48.064
	C8	17036	2	34.072
	C8'	17032	2	34.064
	C9	10036	2	20.072
	C9'	10032	2	20.064
	TOTAL			
WEIGHT = 328.544 x 13.212 kgf/m = 4340.723 kgf				

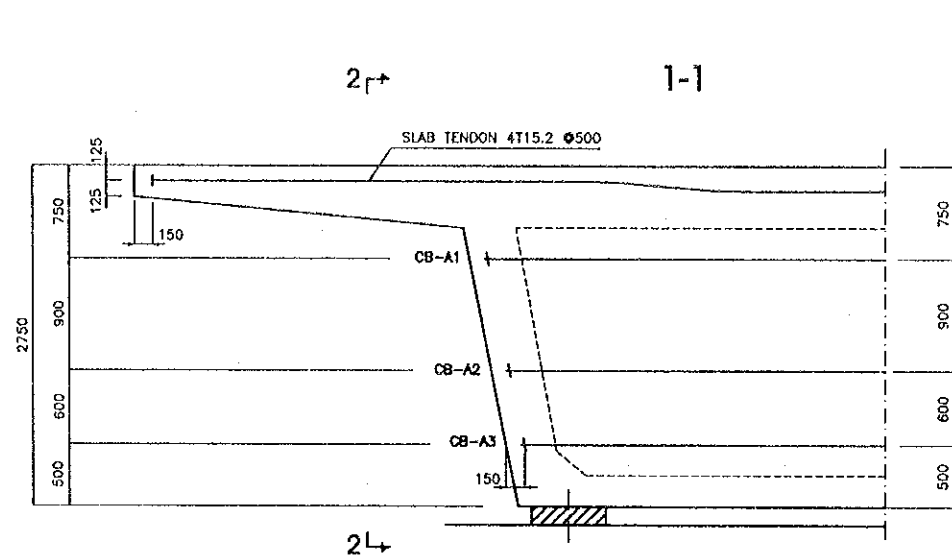
NOTE:

- START AND END POINTS OF CURVED SEGMENT OF TENDON
- PRESTRESSING END
- DEAD END
- LENGTH OF PC CABLE DOES NOT INCLUDE OPERATING ALLOWANCE
- RADIUS OF CABLE CURVE IS 10M

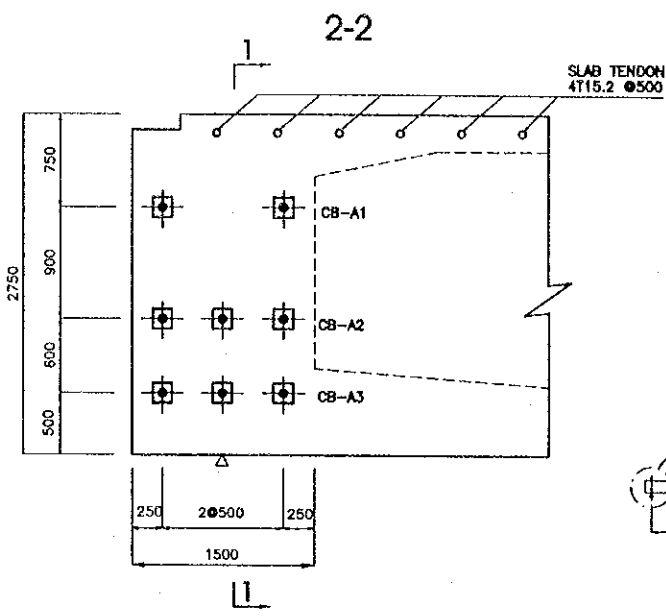


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		DESIGNED BY S. WATASE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE <i>[Signature]</i>
ORGANIZATION PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.3.19

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/60	C-1-2a-16	
2-SPAN BRIDGE, TENDON ARRANGEMENT (3/3)			



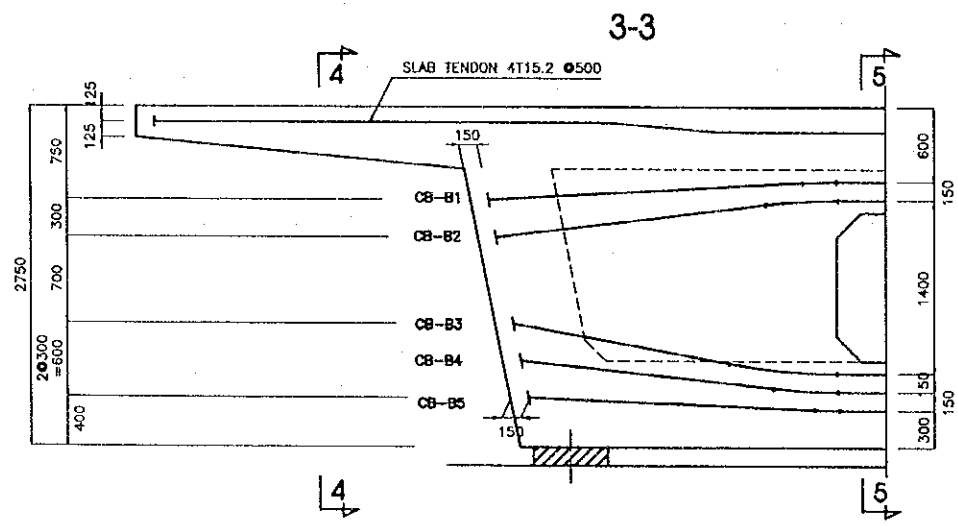
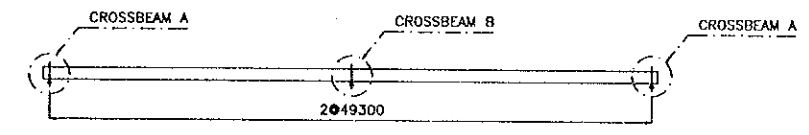
CROSSBEAM A



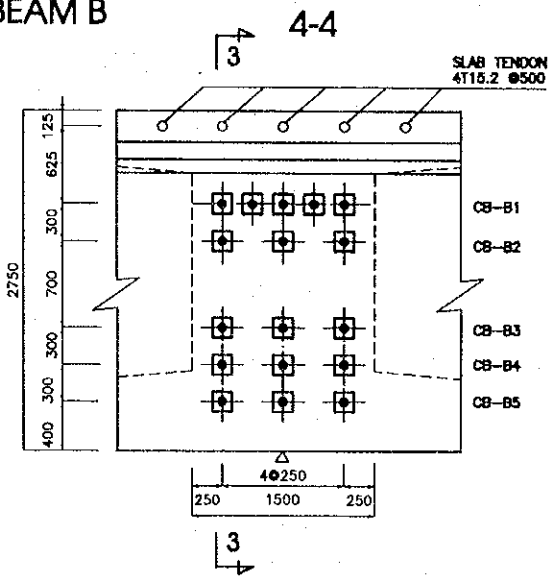
QUANTITIES OF PC STEEL

TYPE	CABLE No	LENGTH (mm)	NUMBER	TOTAL LENGTH (m)
PC CABLE 4T15.2	CB-A1	6,500	4	26,000
	CB-A2	6,140	6	36,840
	CB-A3	5,900	6	35,400
	TOTAL		16	98,240
WEIGHT = 98.24 x 4.4 kgf/m = 432.256 kgf				

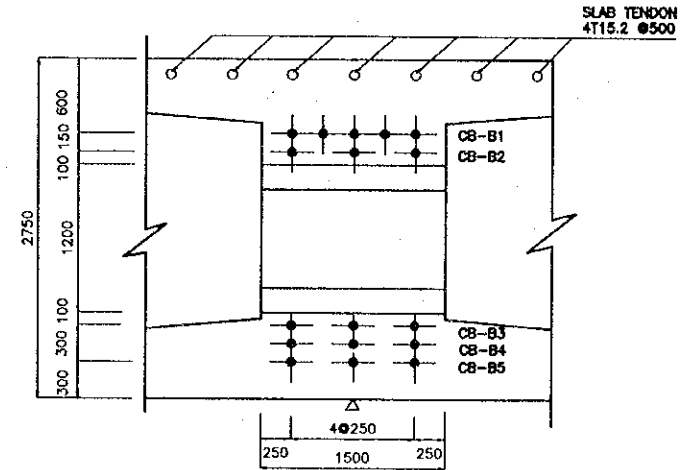
KEY PLAN



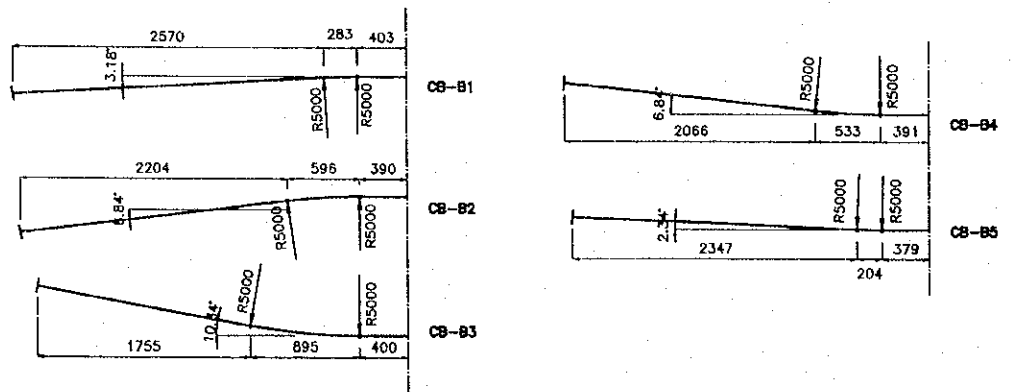
CROSSBEAM B



5-5



TENDON PROFILE



NOTE:

- INDICATED LENGTHS DO NOT INCLUDE OPERATING ALLOWANCE.
- PRESTRESSING TENDONS IN CROSSBEAM SHALL BE STRESSED ALTERNATELY FROM THE RIGHT SIDE AND THE LEFT SIDE.
- IMMEDIATELY AFTER PRESTRESSING, PRESTRESS FORCE OF THE TENDONS IN CROSSBEAM SHALL NOT BE LESS THAN 65.0 TF/TENDON AT THE CENTER OF THE TENDON.
- FOR ARRANGEMENT OF SLAB TENDONS, REFER TO DWG. NO.C-1-2a-14.

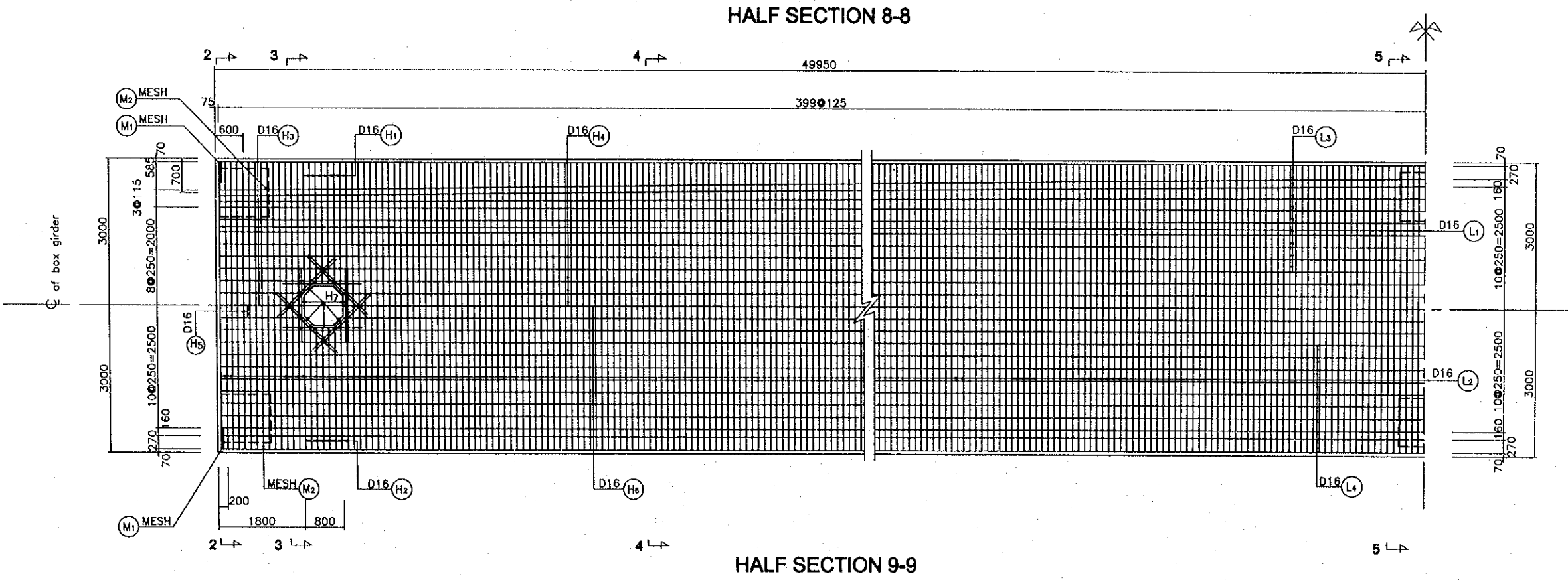
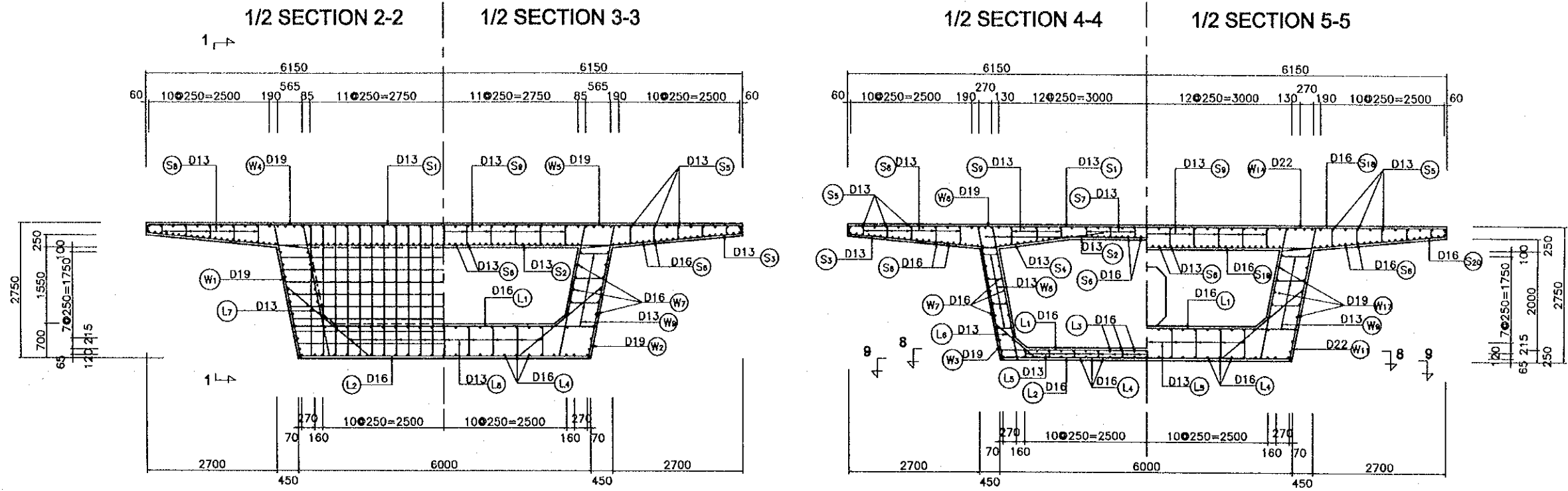
QUANTITIES OF PC STEEL

TYPE	CABLE No	LENGTH (mm)	NUMBER	TOTAL LENGTH (m)
PC CABLE 4T15.2	CB-B1	6,506	5	32,530
	CB-B2	6,414	3	19,242
	CB-B3	6,166	3	18,504
	CB-B4	6,006	3	18,018
	CB-B5	5,900	3	17,700
TOTAL			17	106,004
WEIGHT = 106.004 x 4.4 kgf/m = 466.418 kgf				



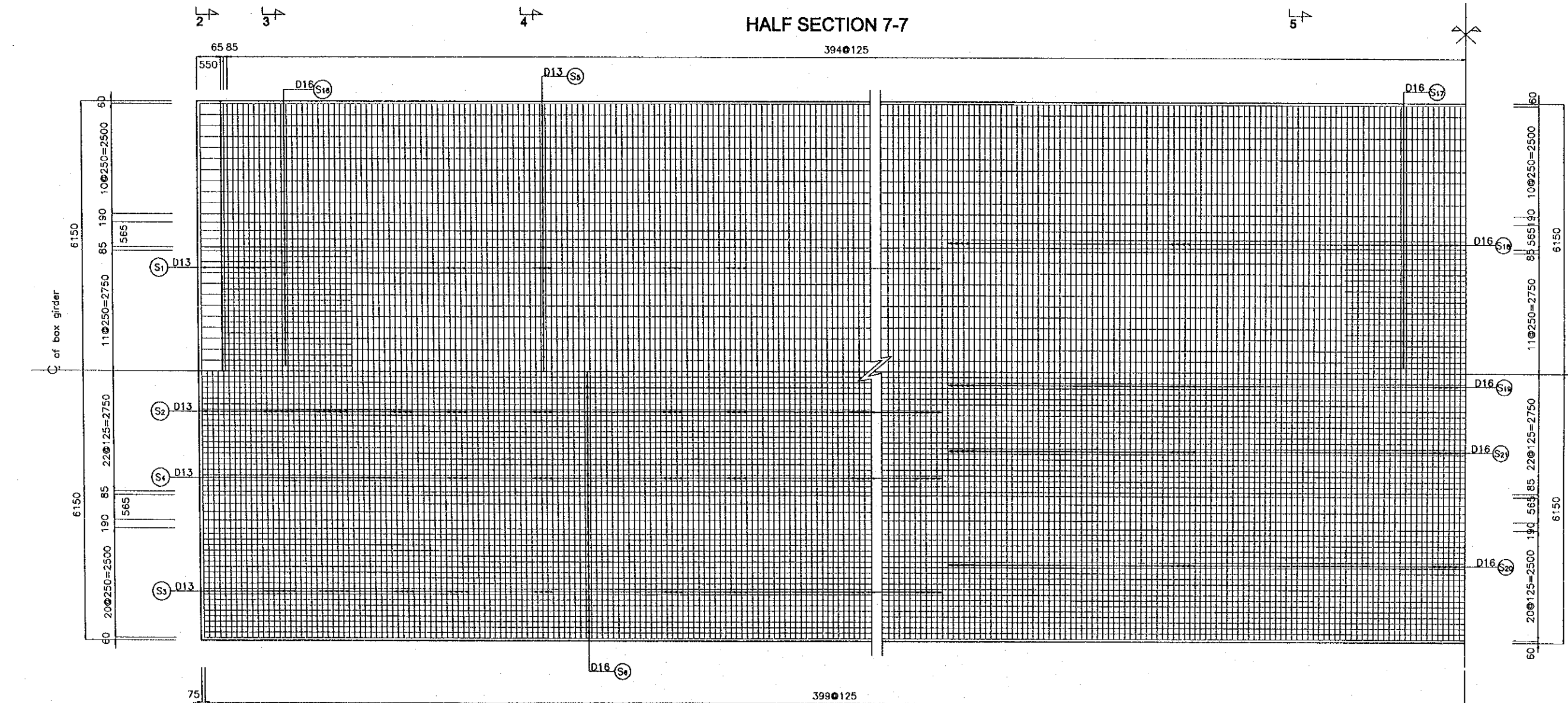
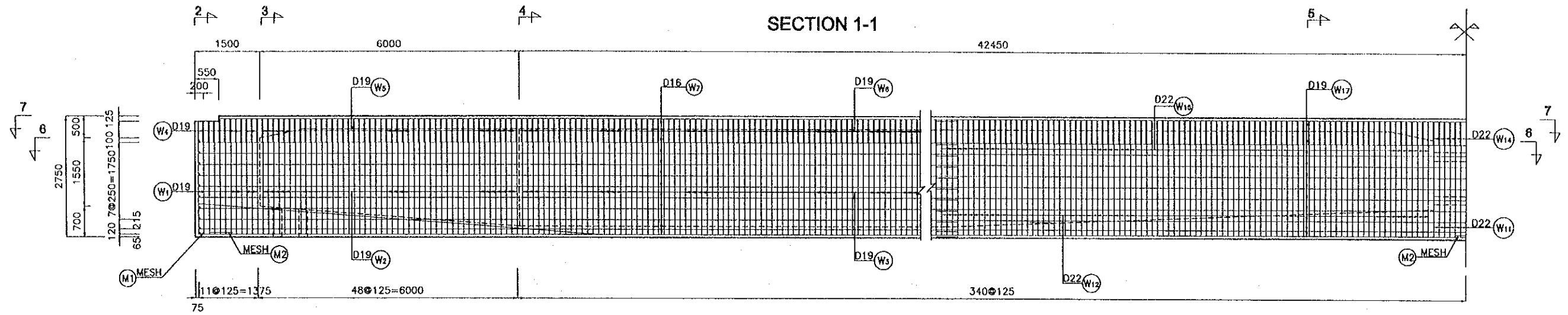
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		
PROJECT RED RIVER BRIDGE (THANH TRU BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000. 8. 17	

PACKAGE 2	SCALE 1/100	DRAWING No. C-1-2a-17	SHEET No.
2-SPAN BRIDGE, REINFORCEMENT ARRANGEMENT (1/4)			



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S.WATAGE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2002.3.14	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

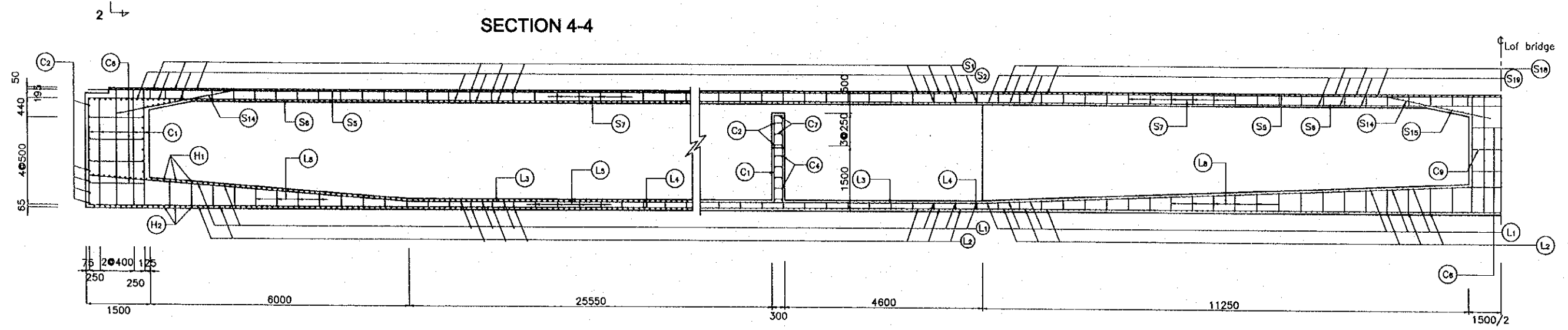
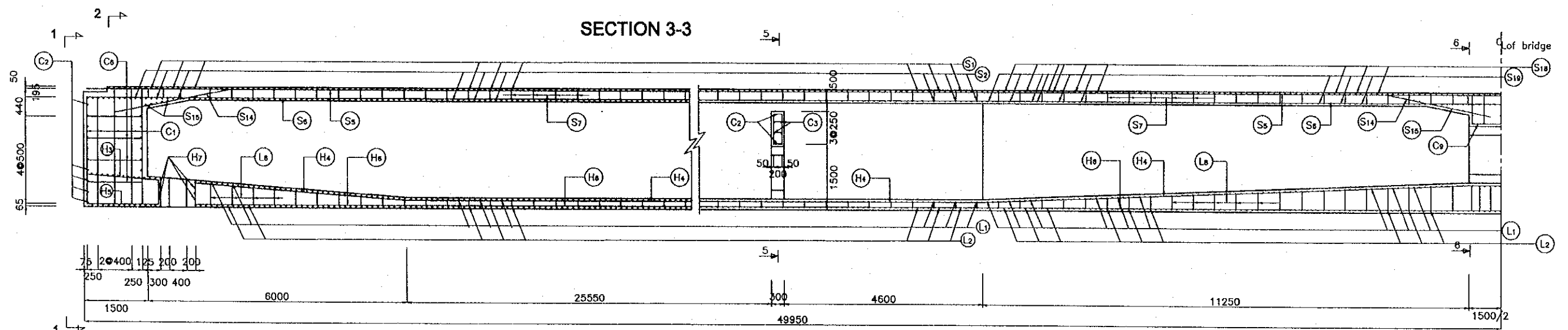
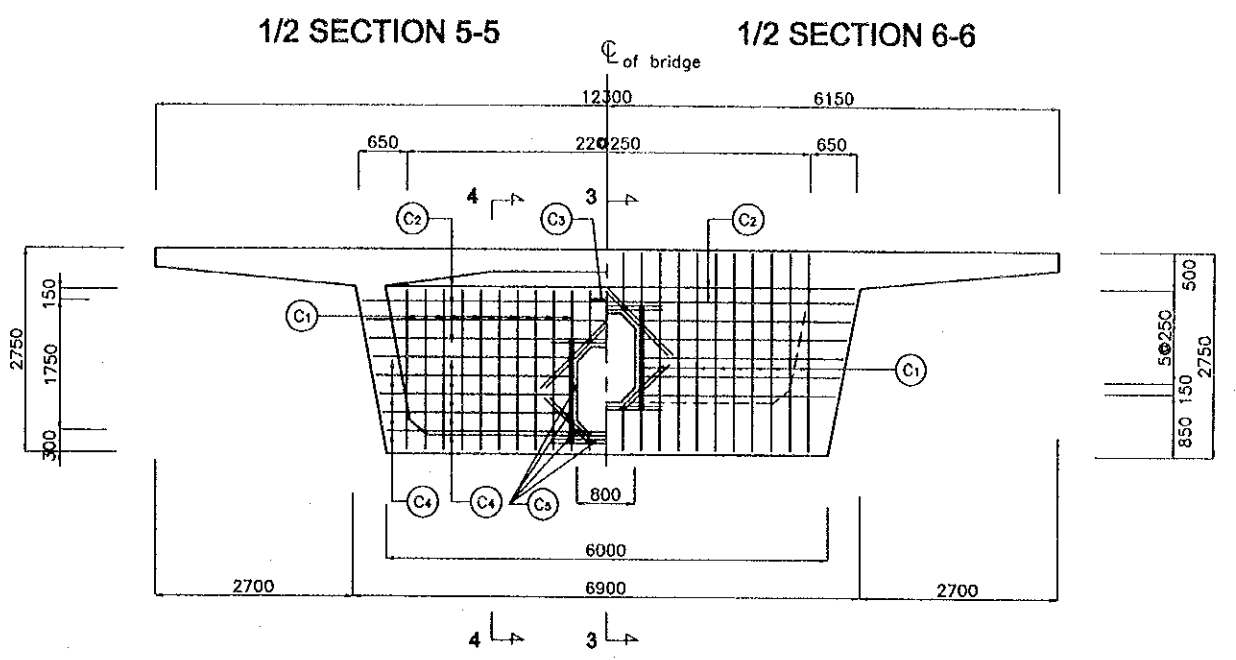
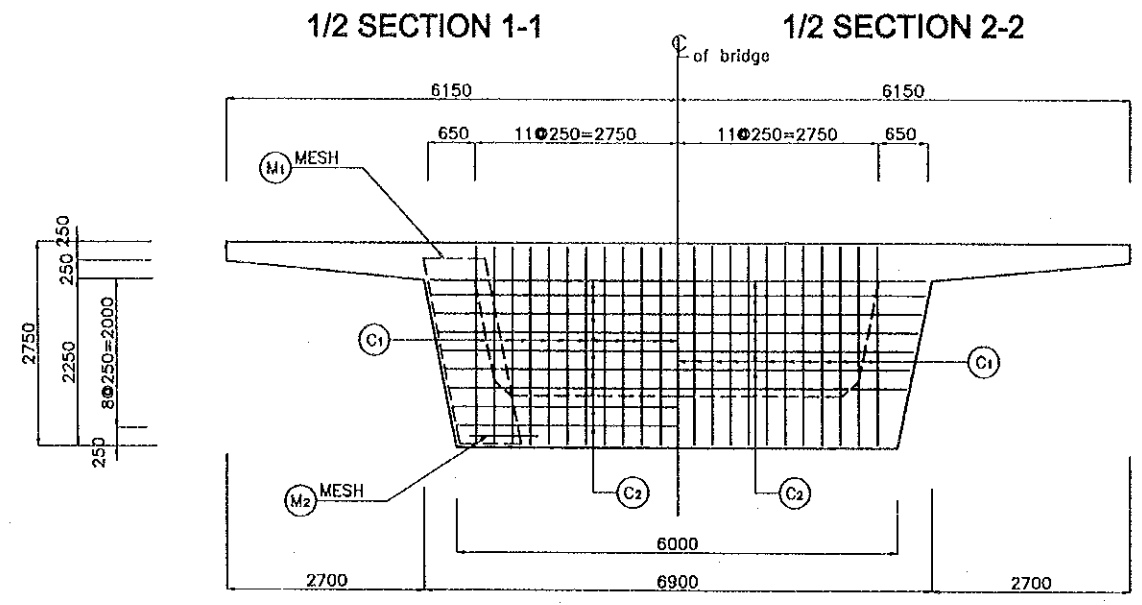
PACKAGE 2	SCALE 1/100	DRAWING No. C-1-2a-18	SHEET No.
2-SPAN BRIDGE, REINFORCEMENT ARRANGEMENT (2/4)			



HALF SECTION 6-6

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATAGE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.3.19	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

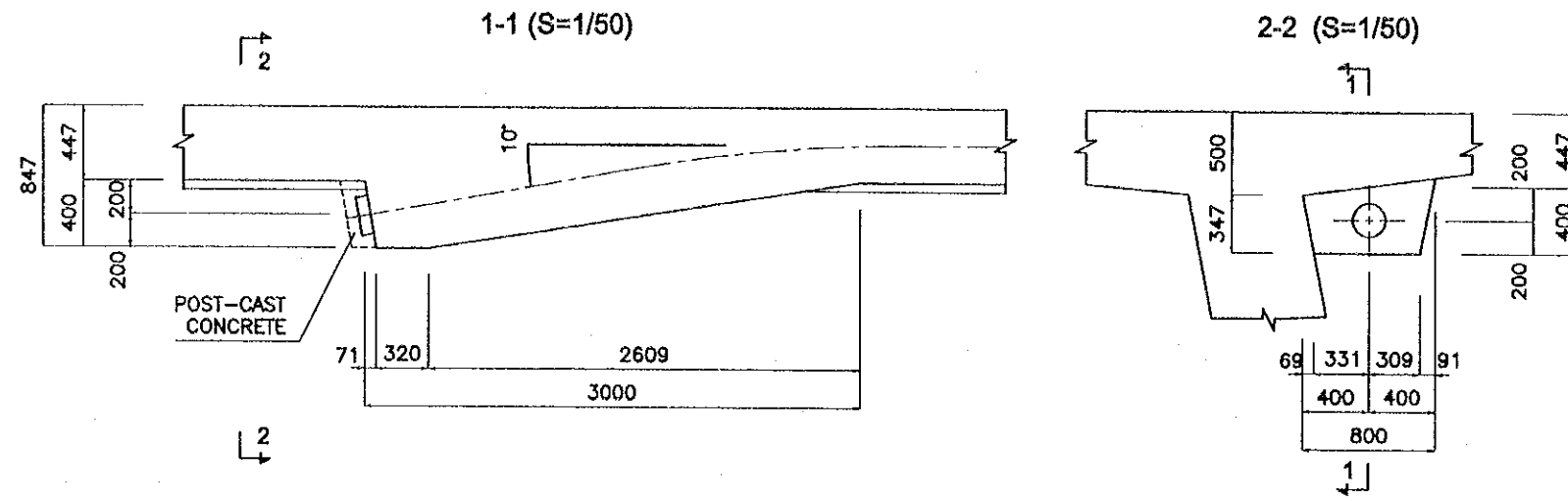
PACKAGE 2	SCALE 1/100	DRAWING No. C-1-2a-19	SHEET No.
2-SPAN BRIDGE, REINFORCEMENT ARRANGEMENT (3/4)			



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000. 3. 17

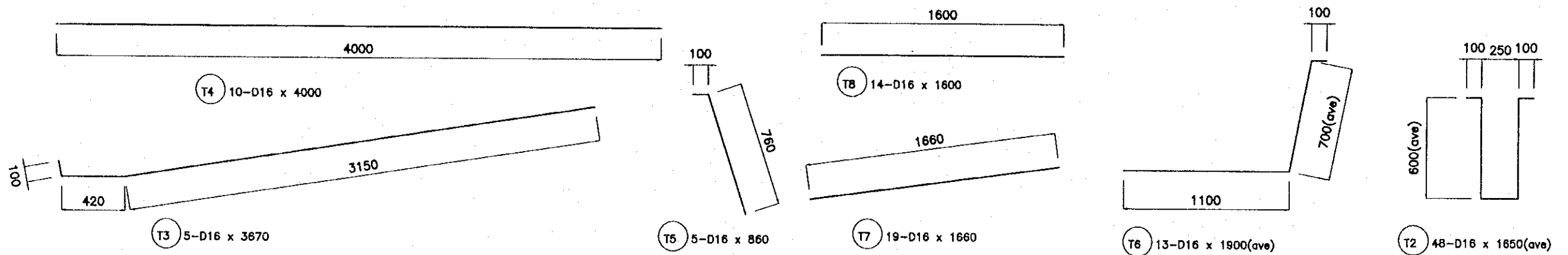
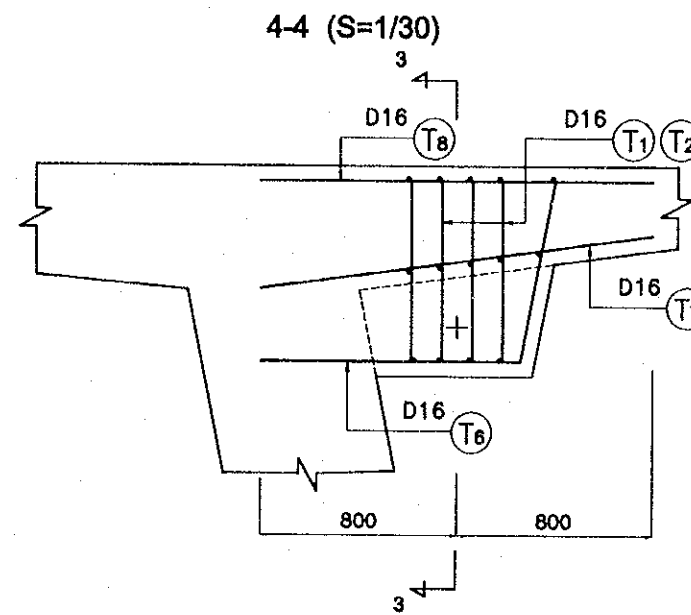
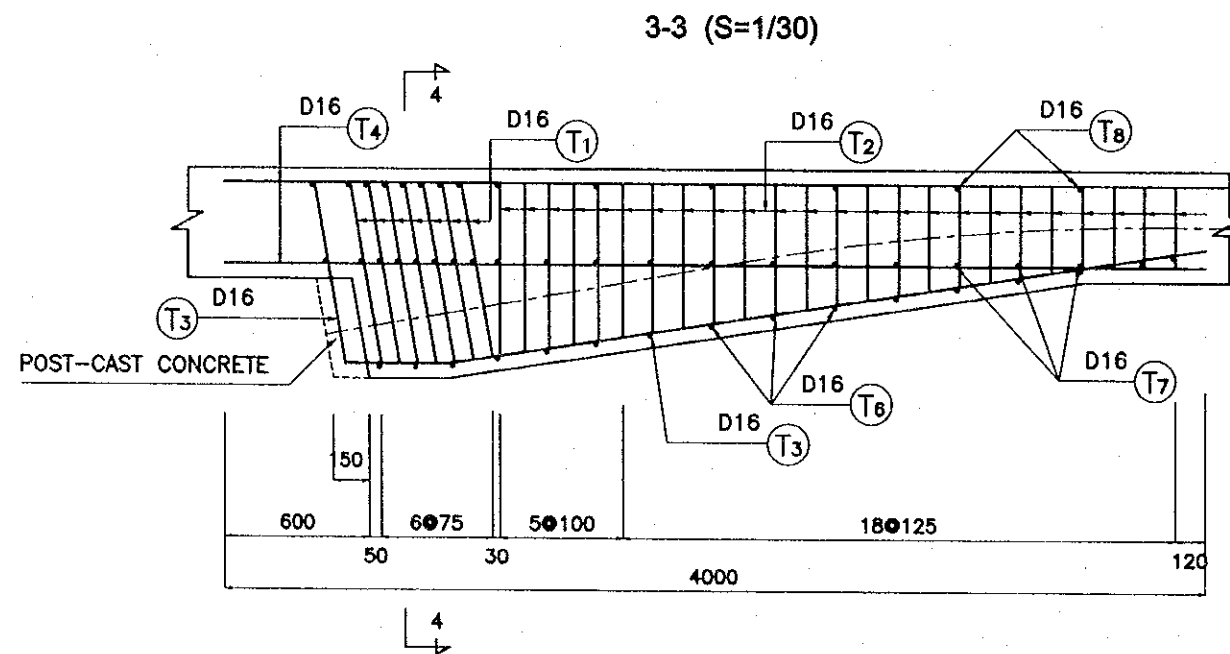
PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/50	C-1-2a-20	
2-SPAN BRIDGE, REINFORCING BAR ARRANGEMENT(4/4)			

### TENDON ANCHORAGE BLOCK



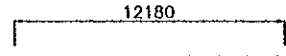
### LIST OF REINFORCING BARS

Shape	Diameter	Length (mm)	Number	Unit Weight (kgf/m)	Weight (kgf)	Remark
T1	D16	1970	14	1.56	43.0	
T2	D16	1650	48	1.56	123.0	average
T3	D16	3670	5	1.56	28.6	
T4	D16	4000	10	1.56	62.4	
T5	D16	860	5	1.56	6.7	
T6	D16	1900	13	1.56	38.7	average
T7	D16	1660	18	1.56	46.6	
T8	D16	1600	14	1.56	34.9	
Total=384.4 kgf						

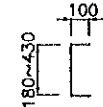


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S.WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	CONTRACTOR PACIFIC CONSULTANTS INTERNATIONAL	SIGNATURE <i>[Signature]</i>
		DATE 2000.3.14

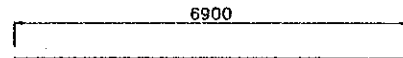
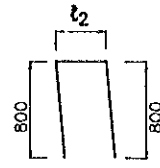
PACKAGE 2	SCALE	DRAWING No. C-1-2a-21	SHEET No.
2-SPAN BRIDGE, REBAR BENDING SCHEDULE (1/3)			



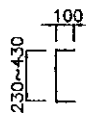
(S1) 596-D13 x 12180



(SB) 2000-D13 x 505 (ave)



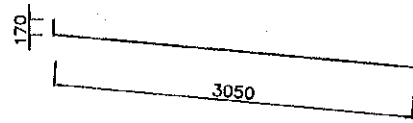
(S2) 606-D13 x 6900



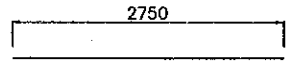
(SB) 1152-D13 x 530 (ave)

No	DIM	t <sub>2</sub>	L	N
W1	D19	630	5990	48
W2	D19	630 + 330	5940(ave)	196
W3	D19	330	5690	976
W11	D22	630	5990	24
W12	D22	630 : 330	5940(ave)	360

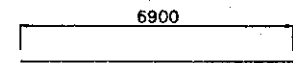
No	DIM	t <sub>2</sub>	L	N
W4	D19	630	2230	48
W5	D19	630 + 330	2080(ave)	196
W6	D19	330	1930	976
W14	D22	630	2230	24
W15	D22	630 : 330	2080(ave)	360



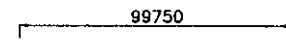
(S3) 1404-D13 x 3220



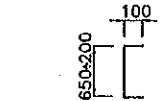
(S14) 92-D13 x 2750



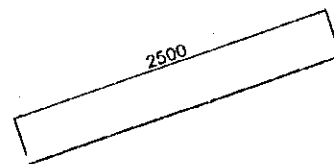
(S19) 192-D16 x 6900



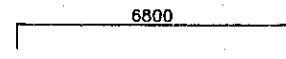
(L3) 25-D16 x 99750



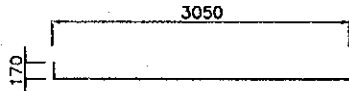
(LB) 630-D13 x 625(ave)



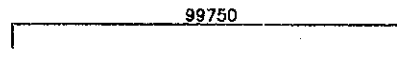
(S4) 1344-D13 x 2500



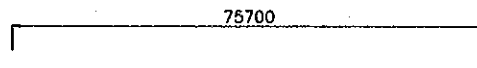
(S15) 20-D13 x 6800



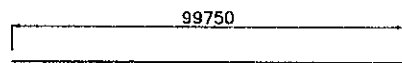
(S20) 192-D16 x 3220



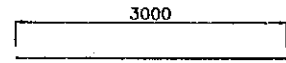
(L4) 25-D16 x 99750



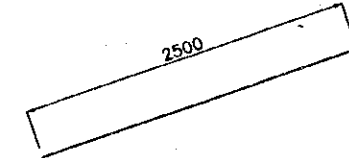
(W7) 32-D16 x 75700



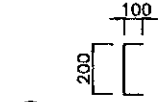
(S5) 53-D13 x 99750



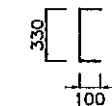
(S16) 44-D19 x 3000



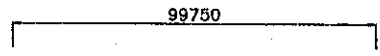
(S2) 180-D16 x 2500



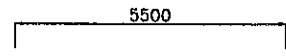
(L5) 1364-D13 x 400



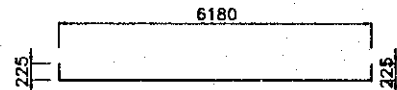
(WB) 992-D13 x 550



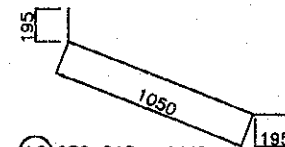
(S6) 95-D16 x 99750



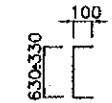
(S17) 44-D19 x 5500



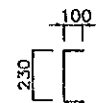
(L1) 786-D16 x 6630



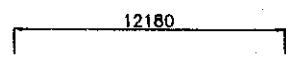
(LB) 976-D13 x 1440



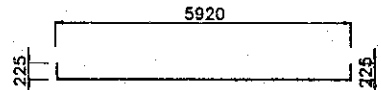
(WB) 580-D13 x 680(ave)



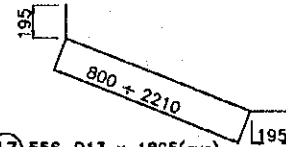
(SB) 1152-D13 x 430



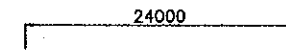
(S18) 192-D16 x 12180



(L2) 786-D16 x 6370




(LB) 556-D13 x 1895(ave)



(W1) 32-D19 x 24000



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE 	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.8.17	

PACKAGE 2	SCALE	DRAWING No. C-1-2a-23	SHEET No.
2-SPAN BRIDGE, REBAR BENDING SCHEDULE (3/3)			

## LIST OF REINFORCING BARS

Shape	Diameter	Length (mm)	Number	Unit Weight (kgf/m)	Weight (kgf)	Remark
S1	D13	12180	596	0.955	6933	
S2	D13	6900	606	0.955	3993	
S3	D13	3220	1404	0.955	4317	
S4	D13	2500	1344	0.955	3209	
S5	D13	99750	53	0.955	5049	
S6	D16	99750	95	1.560	14783	
S7	D13	430	1152	0.955	473	
S8	D13	505	2000	0.955	965	AVE
S9	D13	530	1152	0.955	583	AVE
S14	D13	2750	92	0.955	242	
S15	D13	6800	20	0.955	130	
S16	D19	3000	44	2.250	297	
S17	D19	5500	44	2.250	545	
S18	D16	12180	192	1.560	3648	
S19	D16	6900	192	1.560	2067	
S20	D16	3220	192	1.560	964	
S21	D16	2500	180	1.560	702	
L1	D16	6630	786	1.560	8129	
L2	D16	6370	786	1.560	7811	
L3	D16	99750	25	1.560	3890	
L4	D16	99750	25	1.560	3890	
L5	D13	400	1364	0.955	521	
L6	D13	1440	976	0.955	1342	
L7	D13	1895	556	0.955	1006	
L8	D13	625	630	0.955	376	AVE

Shape	Diameter	Length (mm)	Number	Unit Weight (kgf/m)	Weight (kgf)	Remark
W1	D19	5990	48	2.250	647	
W2	D19	5840	196	2.250	2575	
W3	D19	5690	976	2.250	12495	
W4	D19	2230	48	2.250	241	
W5	D19	2080	196	2.250	917	
W6	D19	1930	976	2.250	4238	
W7	D16	75700	32	1.560	3779	
W8	D13	550	992	0.955	521	
W9	D13	680	560	0.955	364	AVE
W11	D22	5990	24	3.040	437	
W12	D22	5840	360	3.040	6391	
W14	D22	2230	24	3.040	163	
W15	D22	2080	360	3.040	2276	
W17	D19	24000	32	2.250	1728	
C1	D16	2640	510	1.560	2100	
C2	D16	6380	146	1.560	1453	AVE
C3	D16	1460	42	1.560	96	
C4	D16	2760	100	1.560	431	
C5	D16	1300	224	1.560	454	
C6	D16	1830	116	1.560	331	
C7	D16	570	160	1.560	142	
B1	D16	2493	28	1.560	109	
B2	D16	750	88	1.560	103	
B3	D16	1060	14	1.560	23	
B4	D16	1160	12	1.560	22	
B5	D16	1060	28	1.560	46	
B6	D16	1230	24	1.560	46	
H1	D16	3460	24	1.560	130	
H2	D16	3505	24	1.560	131	
H3	D16	2230	14	1.560	49	
H4	D16	95550	7	1.560	1043	
H5	D16	2230	14	1.560	49	
H6	D16	95550	7	1.560	1043	
H7	D13	900	128	0.955	110	
TOTAL + 5% (LAP LENGTH)					126577 kgf	

# **C-1 THROUGHWAY**

## **C-1-2 SUPERSTRUCTURE (BOX GIRDER AND PC I GIRDER)**

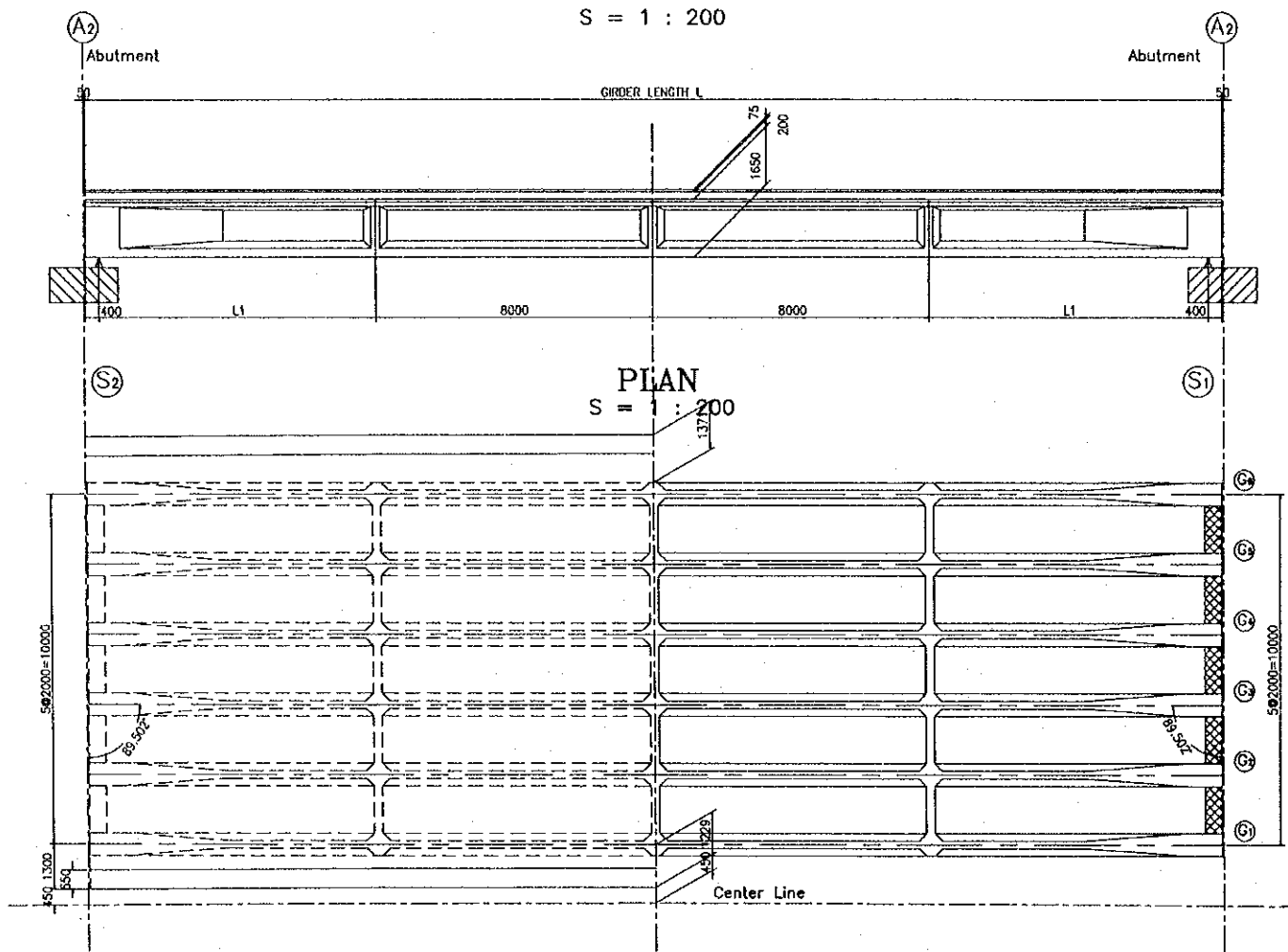
### **C-1-2b PC I GIRDER**



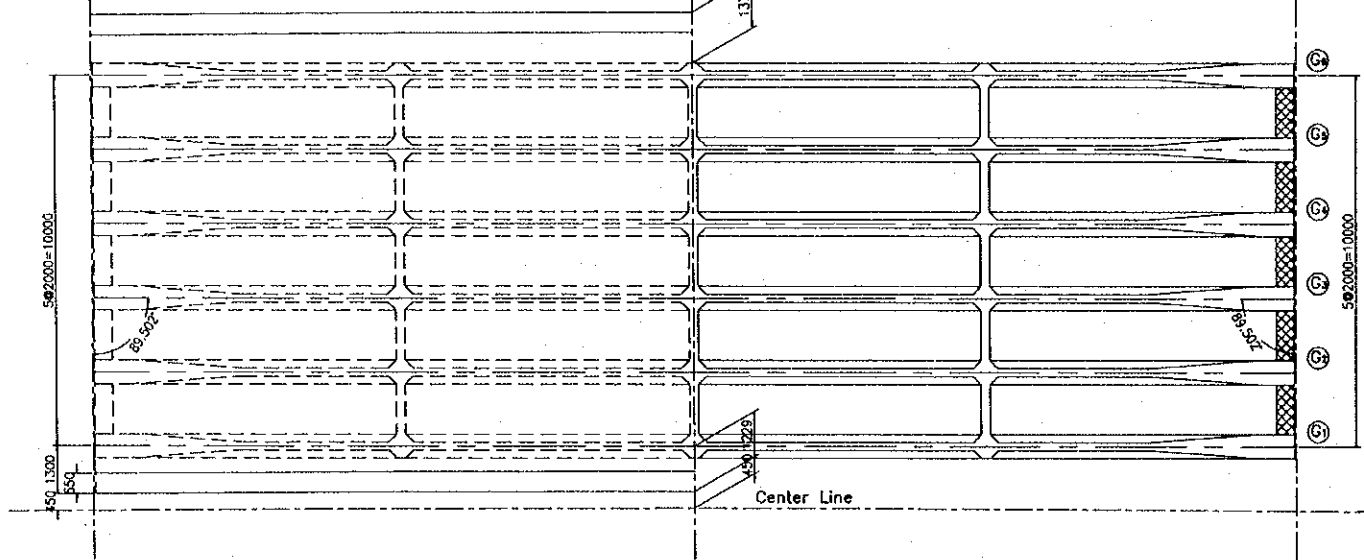
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2010.8.14	
CONTRACTOR PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE C-1-2b-1	DRAWING No. C-1-2b-1	SHEET No.
DETAIL OF GIA LAM ROAD BRIDGE			

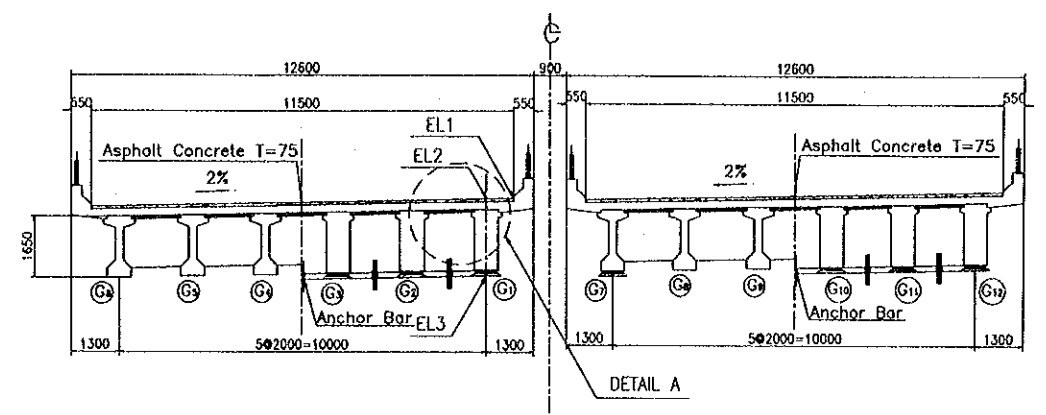
**SIDE VIEW**  
S = 1 : 200



**PLAN**  
S = 1 : 200



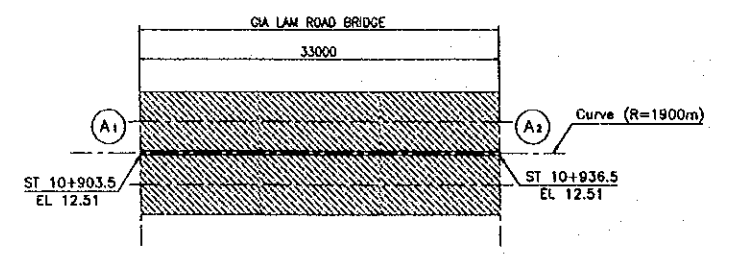
**TYPICAL CROSS SECTION**  
S = 1 : 200



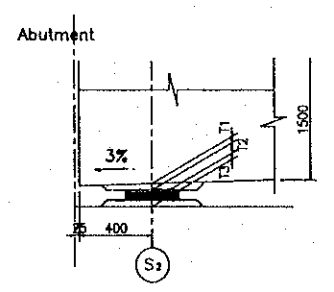
GIRDER	L	L1
G1	32930	8065
G2	32965	8082.5
G3	33000	8100
G4	33035	8117.5
G5	33069	8134.5
G6	33104	8152
G7	32870	8035
G8	32835	8017.5
G9	32800	8000
G10	32765	7982.5
G11	32731	7965.5
G12	32696	7948

	A1	A2	REMARKS
	S2	S1	
SHOES CONDITION	FIX	MOVE	
SHOES TYPE	A	B	
EL1 (m)	12.511	12.511	
EL2 (m)	12.534	12.534	
PAVEMENT (mm)	75		
SLAB (mm)	210		
GIRDER (mm)	1650		
T1 (mm)	0	0	
T2 (mm)	36	54	
T3 (mm)	38	20	
H (m)	2.009	2.009	
EL3 (m)	10.525	10.525	

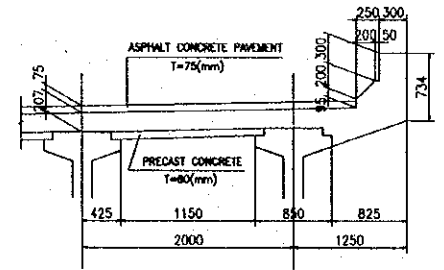
**KEY PLAN**  
S = 1:600



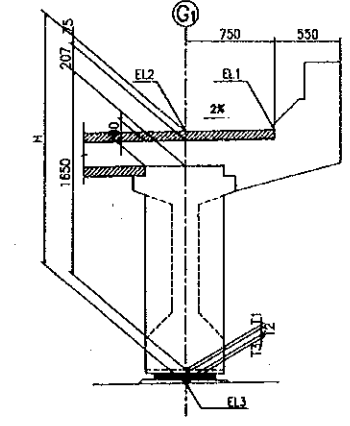
**DETAIL OF SHOES**  
S = 1:40



**DETAIL A**  
S = 1:80



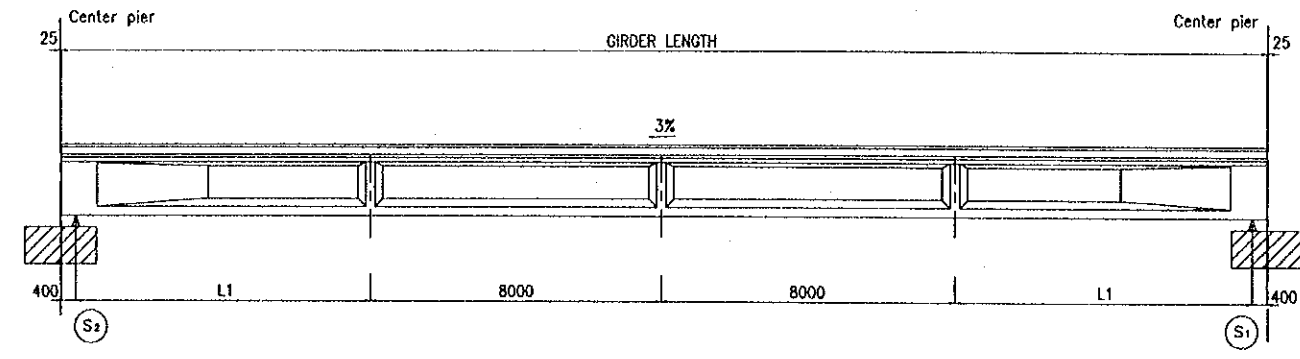
**DETAIL C**  
S = 1:60



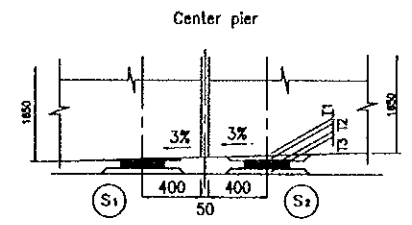
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRUNG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRU BRIDGE) CONSTRUCTION PROJECT	DATE 2000.3.19	
CONTRACTOR PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE	DRAWING No. C-1-2b-2	SHEET No.
DETAIL OF CAU BAY CANAL BRIDGE			

**SIDE VIEW**  
S = 1:200

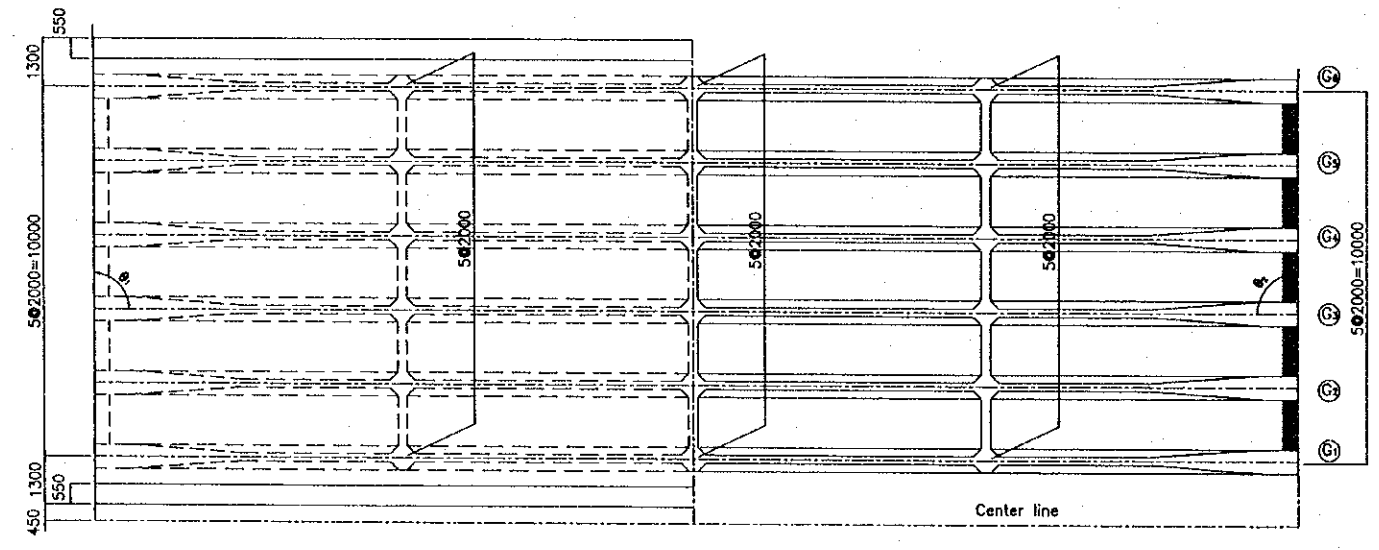


**DETAIL OF SHOES**  
S = 1:50

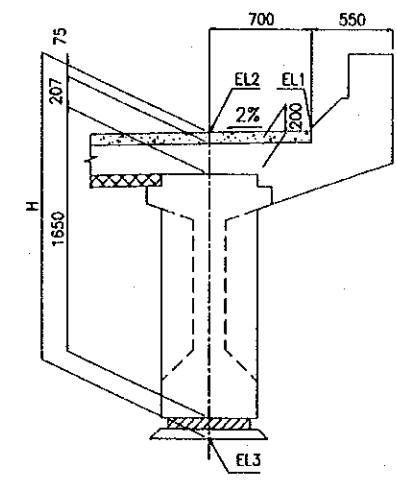


	A1L	P1 L	P2 L	P3 L		P4 L	P2 R	P3 R	REMARKS
	S2	S1	S2	S1	S2	S1	S2	S1	
SHOES CONDITION	FIX	MOVE	FIX	MOVE	FIX	MOVE	FIX	MOVE	
SHOES TYPE	A	B	A	B	A	B	A	B	
EL1 (m)	9.506	9.907	10.355	10.521	10.524	10.596	10.454	10.572	
EL2 (m)	10.885	9.678	8.791	8.877	8.878	8.870	12.060	12.258	
PAVEMENT (mm)	75								
SLAB (mm)	206	201	207	207	207	207	207	207	
GIRDER (mm)	1650								
T1 (mm)	20	20	20	20	20	20	20	20	
T2 (mm)	36	54	36	54	36	54	36	54	
T3 (mm)	30	30	30	20	39	30	30	30	
H (m)	2.017	2.030	2.018	2.026	2.027	2.036	2.018	2.036	
EL3 (m)	8.868	7.648	6.774	6.851	6.851	6.833	10.042	10.222	

**PLAN VIEW**  
S = 1:200

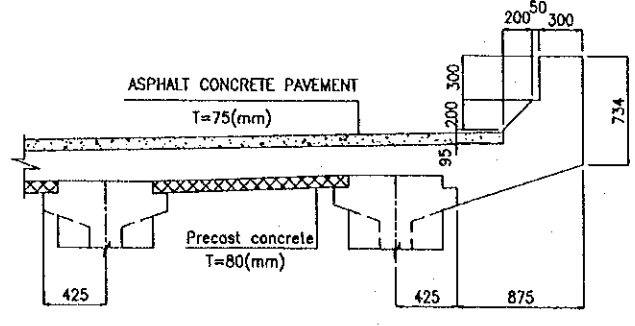


**DETAIL G1**  
S = 1:50

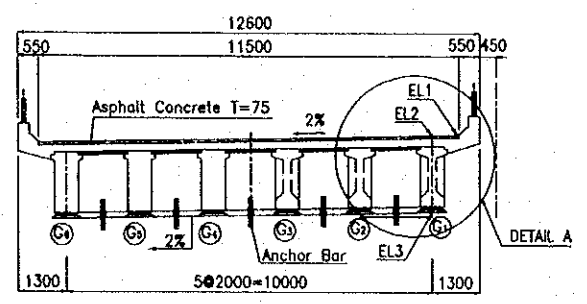


	GIRDER	A1L-P1L	P2L-P3L	P3L-P4L	P2R-P3R
L (mm)	G1	32950	32938	32932	32965
	G2	32951	32924	32911	32983
	G3	32951	32910	32891	33000
	G4	32952	32896	32870	33017
	G5	32952	32882	32850	33035
	G6	32953	32868	32829	33052
L1 (mm)	G1	8075	8069	8066	8083
	G2	8076	8062	8056	8092
	G3	8076	8055	8046	8100
	G4	8076	8048	8035	8109
	G5	8076	8041	8025	8118
	G6	8077	8034	8015	8126
θ <sub>1</sub> (degree)	G1-G6	90.2	89.49	89.44	90.14
θ <sub>2</sub> (degree)	G1-G6	89.59	89.47	89.41	90.16

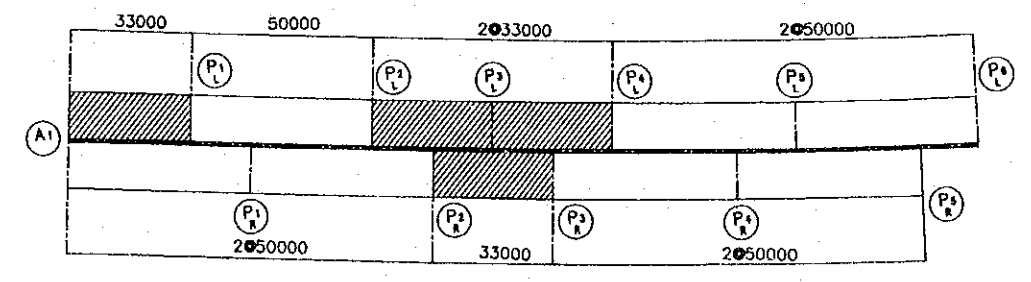
**DETAIL OF A**  
S = 1:50



**TYPICAL CROSS SECTION OF SPAN**  
S = 1:200



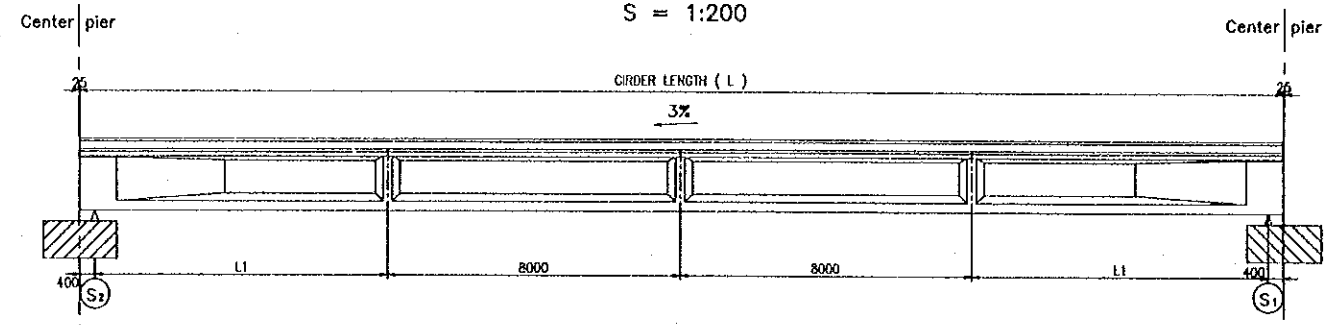
**KEY PLAN**  
S = 1:1000



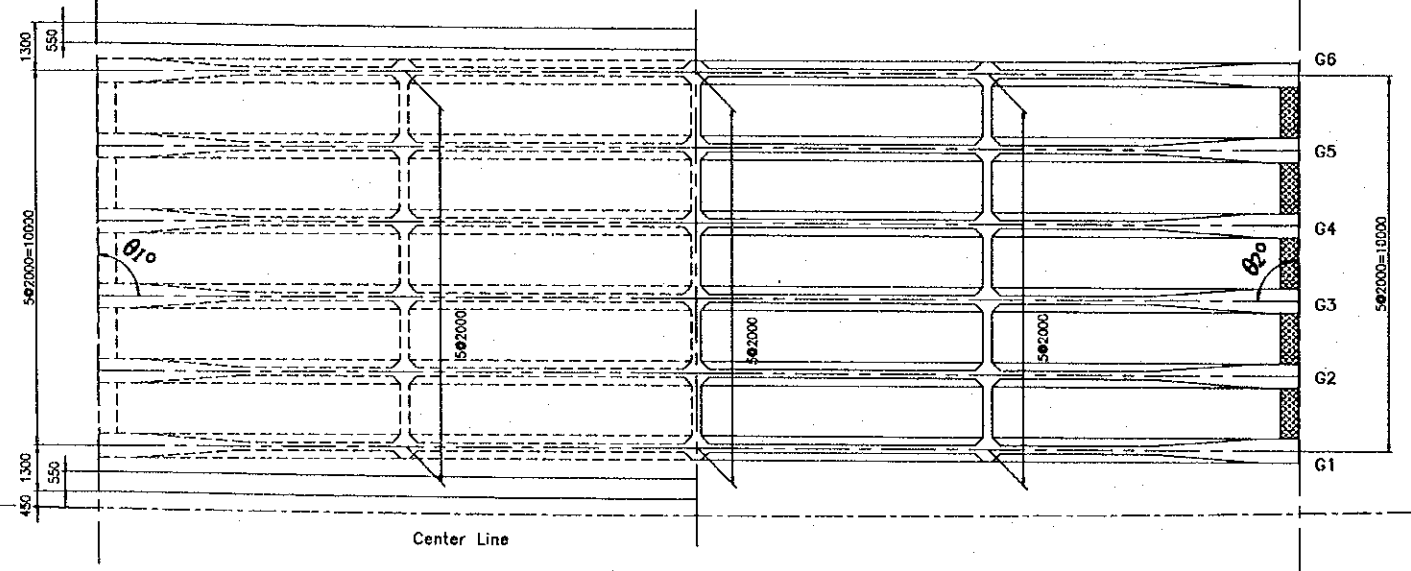
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONTRACTOR PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.8.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/200	C-1-2b-3	
DETAIL OF NH No.5 FLYOVER (1-1)			

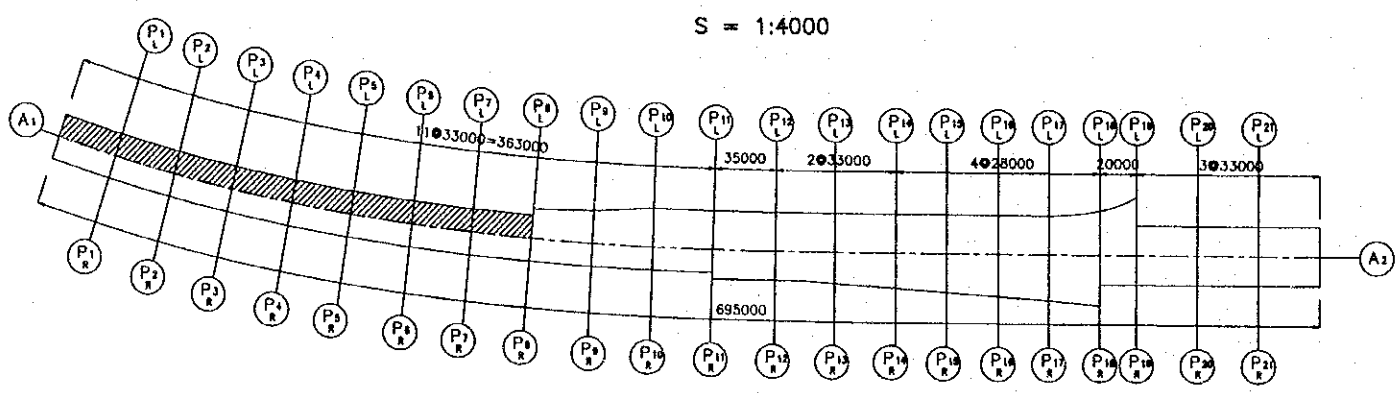
**SIDE VIEW**  
S = 1:200



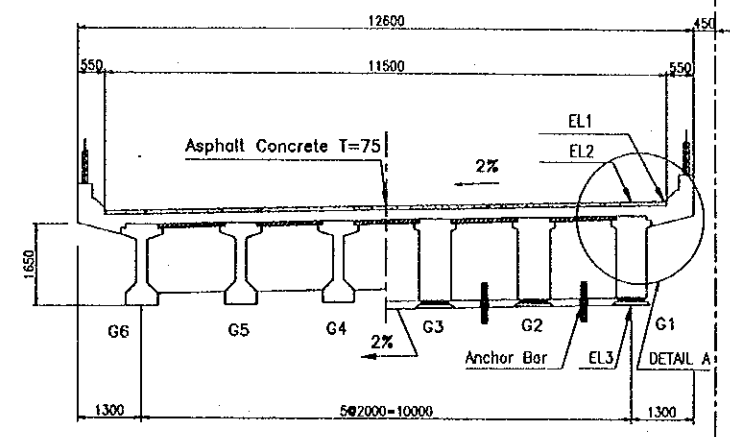
**PLAN**  
S = 1:200



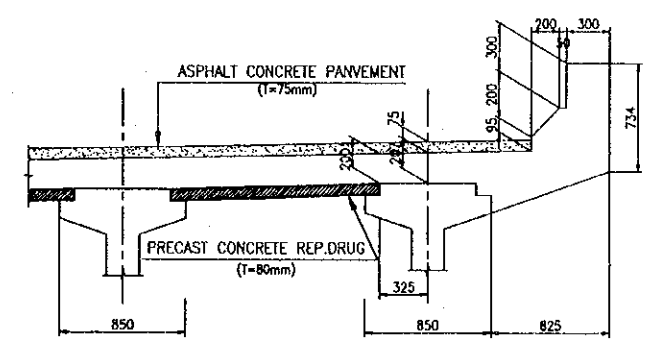
**KEY PLAN**  
S = 1:4000



**TYPICAL CROSS SECTION OF SPAN**  
S = 1:150



**DETAIL OF A**  
S=1:50



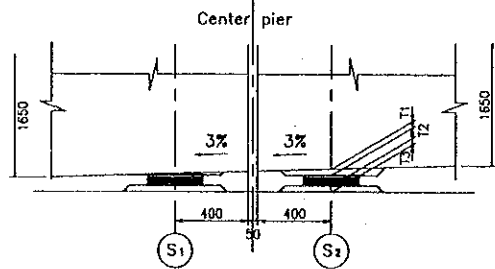
\* Note :  
L , L1 ,  $\theta_1$  ,  $\theta_2$  Dimension See Drawings Detail of National Hight No.5 Fryover (1-2)

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.3.14	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE	DRAWING No. C-1-2b-4	SHEET No.
DETAIL OF N# 5 FLYOVER (1-2)			

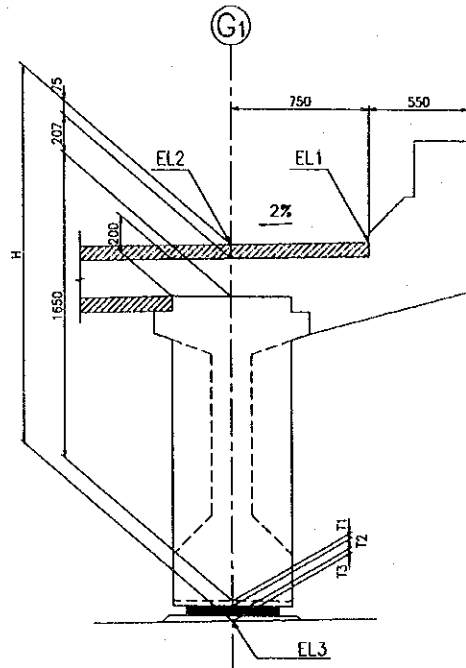
### DETAIL OF SHOES

S = 1:40



### DETAIL G1

S = 1:40

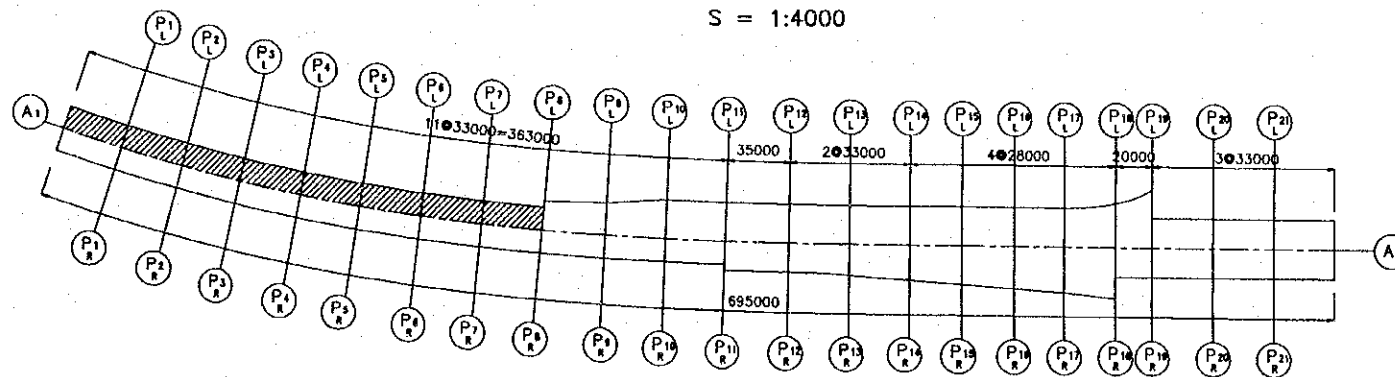


	A1		P1L		P2L		P3L		P4L		P5L		P6L		P7L		P8L		REMARKS
	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2		
STATION	11+768.5		11+801.5		11+834.5		11+867.5		11+900.5		11+933.5		11+966.5		11+999.5		12+032.5		
SHOES CONDITION	FIX	MOVE	FIX	MOVE	FIX	MOVE	FIX	MOVE	FIX	MOVE	FIX	MOVE	FIX	MOVE	FIX	MOVE	FIX	MOVE	
SHOES TYPE	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	
EL1 (m)	11.065	11.462	11.474	11.996	12.012	12.632	12.648	13.218	13.232	13.731	13.744	14.172	14.183	14.541	14.549	14.836	14.843		
EL2 (m)	11.043	11.440	11.452	11.974	11.990	12.610	12.626	13.196	13.210	13.709	13.722	14.150	14.161	14.520	14.528	14.816	14.824		
PAVEMENT (mm)	95				80	85	75												
SLAB (mm)	210												209						
GIRDER (mm)	1650																		
T1 (mm)	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20		
T2 (mm)	36	54	36	54	36	54	36	54	36	54	36	54	36	54	36	54	36		
T3 (mm)	30	20	50	20	69	20	64	20	52	20	51	20	49	20	46	20	47		
H (m)	2.041	2.049	2.061	2.049	2.045	2.039	2.055	2.029	2.043	2.029	2.042	2.028	2.039	2.028	2.036	2.028	2.037		
EL3 (m)	9.022	9.391	9.391	9.925	9.925	10.571	10.571	11.167	11.167	11.680	11.680	12.122	12.122	12.492	12.492	12.788	12.788		

		A1L ~ P1L	P1L ~ P2L	P2L ~ P3L	P3L ~ P4L	P4L ~ P5L	P5L ~ P6L	P6L ~ P7L	P7L ~ P8L	REMARKS
		L (mm)	G1	32891	32891	32891	32891	32891	32895	
	G2	32825	32825	32825	32825	32826	32833	32846	32859	
	G3	32759	32759	32759	32759	32760	32771	32791	32810	
	G4	32693	32693	32693	32693	32694	32709	32763	32762	
	G5	32627	32627	32627	32627	32629	32647	32681	32714	
	G6	32561	32561	32561	32561	32563	32586	32626	32665	
L1 (mm)	G1	8046	8046	8046	8046	8046	8048	8055	8054	
	G2	8013	8013	8013	8013	8017	8017	8032	8048	
	G3	7980	7980	7980	7980	7980	7986	7996	8005	
	G4	7947	7947	7947	7947	7947	7955	7982	7981	
	G5	7914	7914	7914	7914	7915	7924	7941	7957	
	G6	7881	7881	7881	7881	7882	7893	7913	7933	
θ1 (degree)	G1 ~ G6	89.05	89.05	89.05	89.05	89.06	89.09	89.20	89.29	
θ2 (degree)	G1 ~ G6	89.05	89.05	89.05	89.05	89.07	89.14	89.23	89.32	

### KEY PLAN

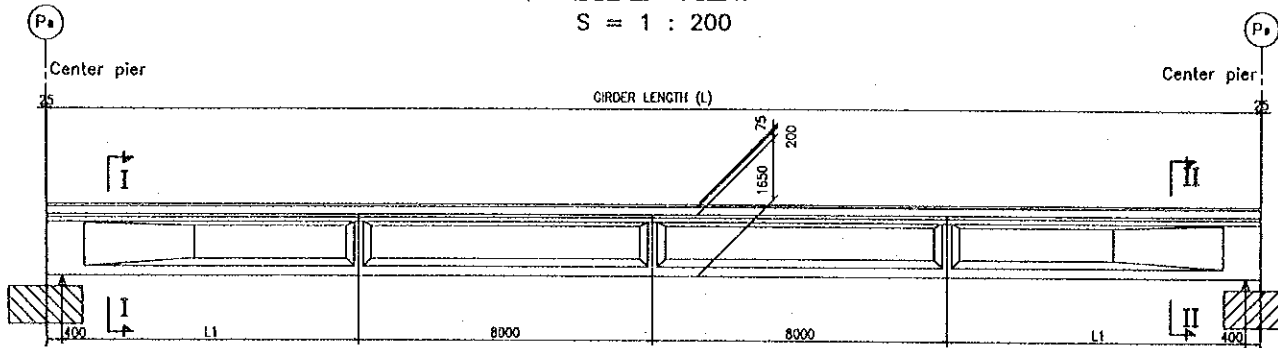
S = 1:4000



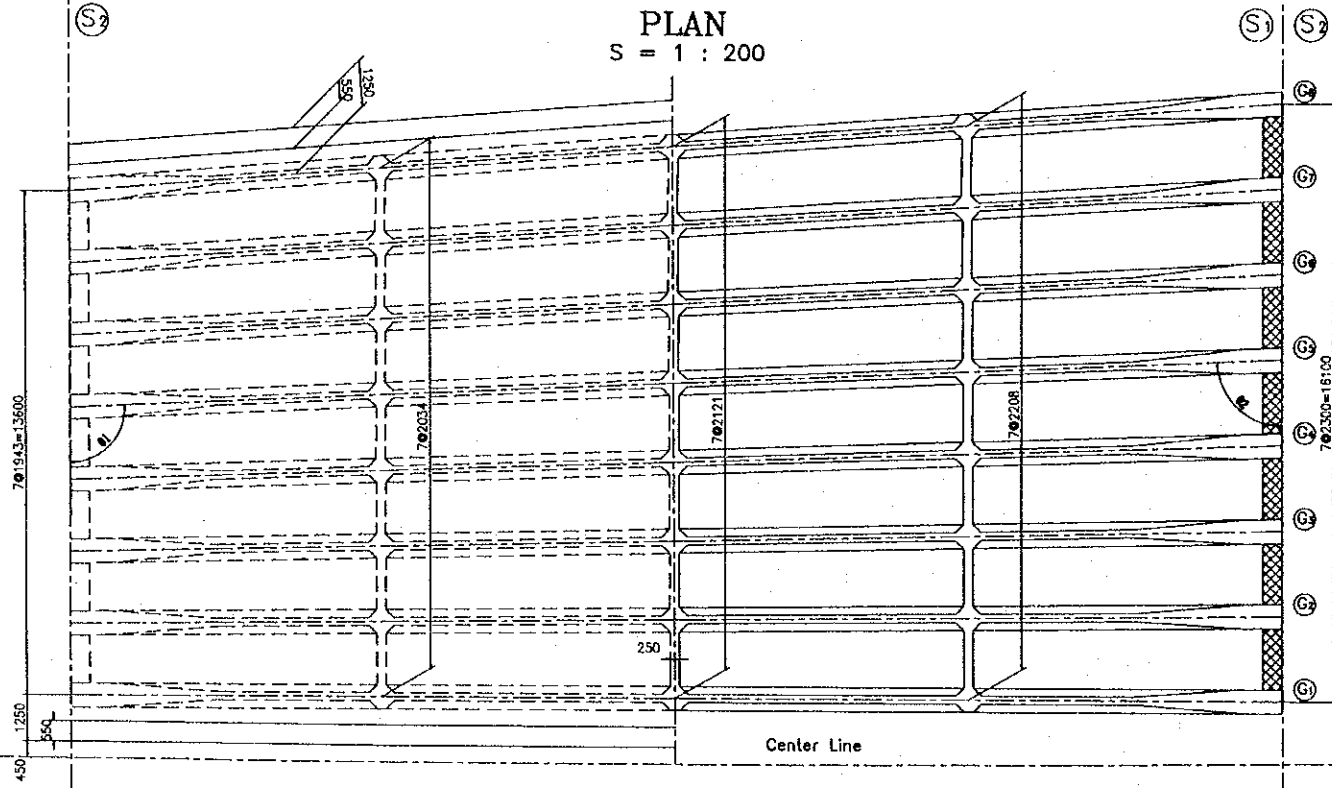
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT	DESIGNED BY NAME S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.8.14
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	

PACKAGE 2	SCALE	DRAWING No. C-1-2b-5	SHEET No.
DETAIL OF NH No.5 FLYOVER (2)			

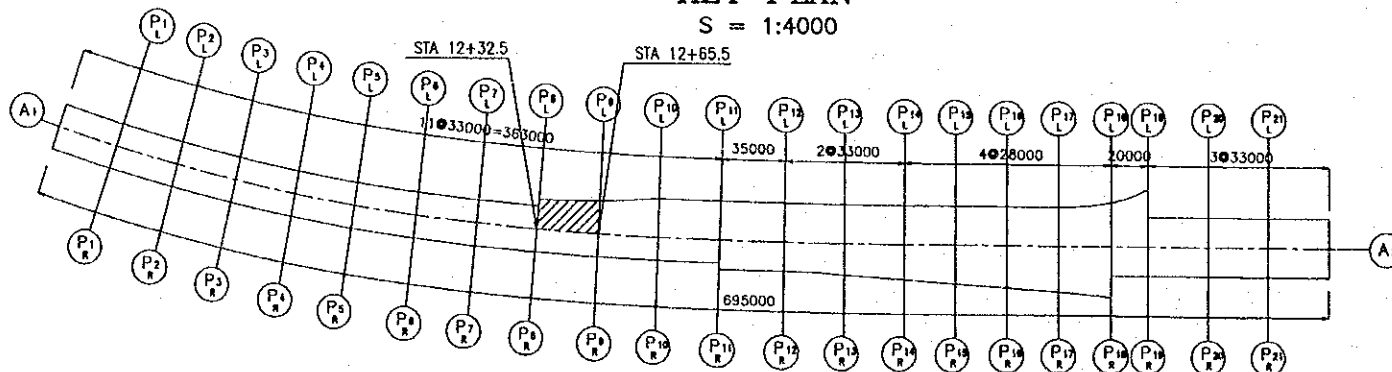
**SIDE VIEW**  
S = 1 : 200



**PLAN**  
S = 1 : 200



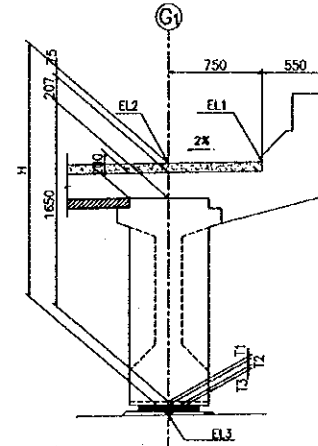
**KEY PLAN**  
S = 1:4000



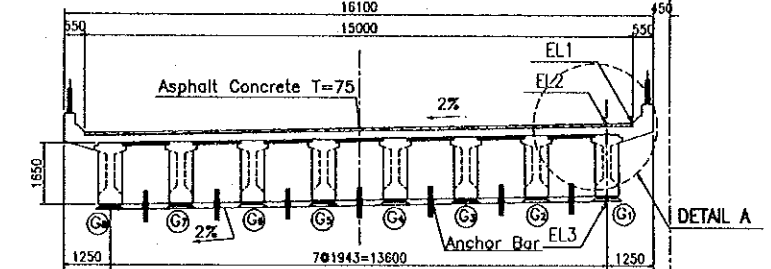
GIRDER	L (mm)	L1 (mm)	θ1	θ2
G1	32914	8057	90.611°	90.584°
G2	32871	8035.5	91.234°	89.962°
G3	32833	8016.5	91.858°	89.338°
G4	32799	7999.5	92.483°	88.713°
G5	32768	7984	93.109°	88.086°
G6	32741	7970.5	93.737°	87.459°
G7	32719	7959.5	94.365°	86.831°
G8	32700	7950	94.994°	86.201°

	P8L	P9L	REMARKS
	S2	S1	
SHOES CONDITION	FIX	MOVE	
SHOES TYPE	A	B	
EL1 (m)	14.843	15.060	
EL2 (m)	14.816	15.042	
PAVEMENT (mm)	75		
SLAB (mm)	209	208	
GIRDER (mm)	1650		
T1 (mm)	20	20	
T2 (mm)	54	54	
T3 (mm)	20	20	
H (m)	2.028	2.027	
EL3 (m)	12.788	13.015	

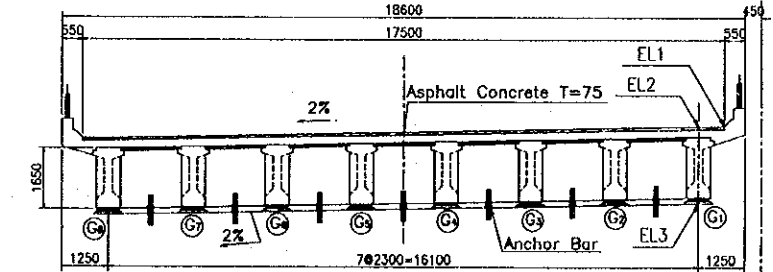
**DETAIL G1**  
S = 1:60



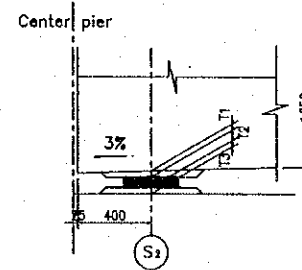
**SECTION I**  
S = 1 : 200



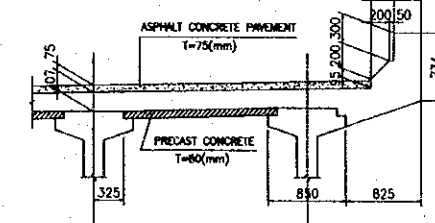
**SECTION II**  
S = 1 : 200



**DETAIL OF SHOES**  
S = 1:40

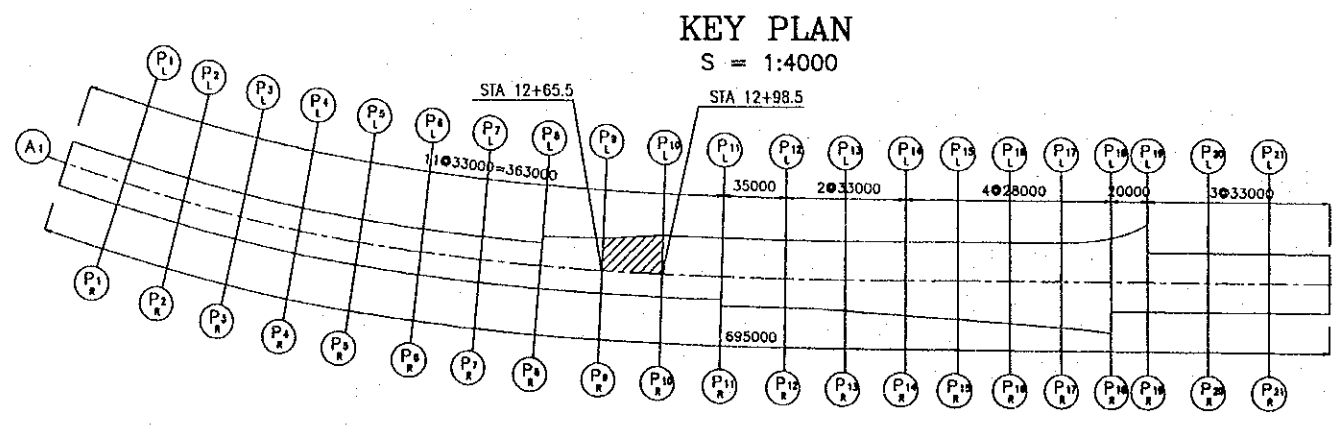
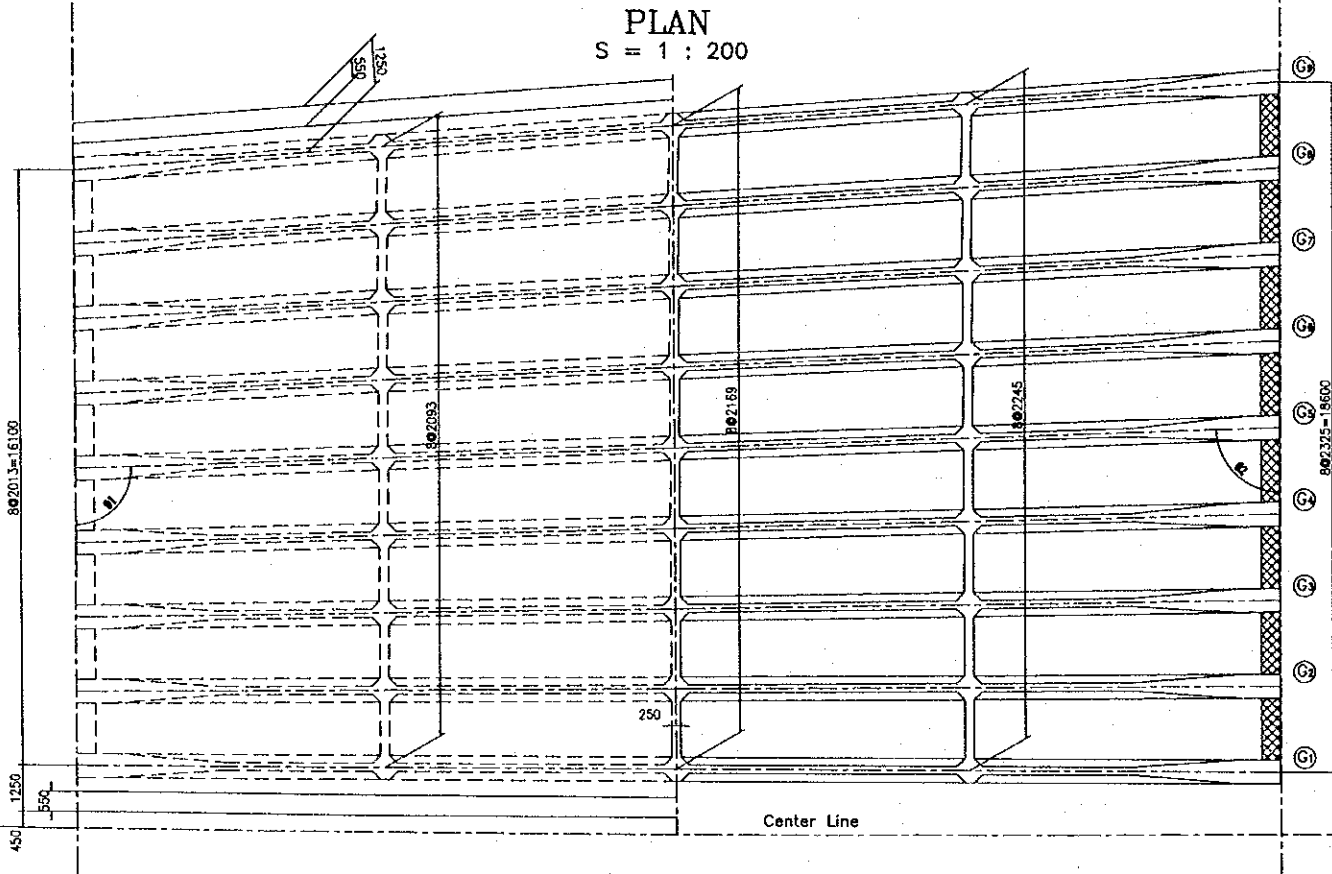
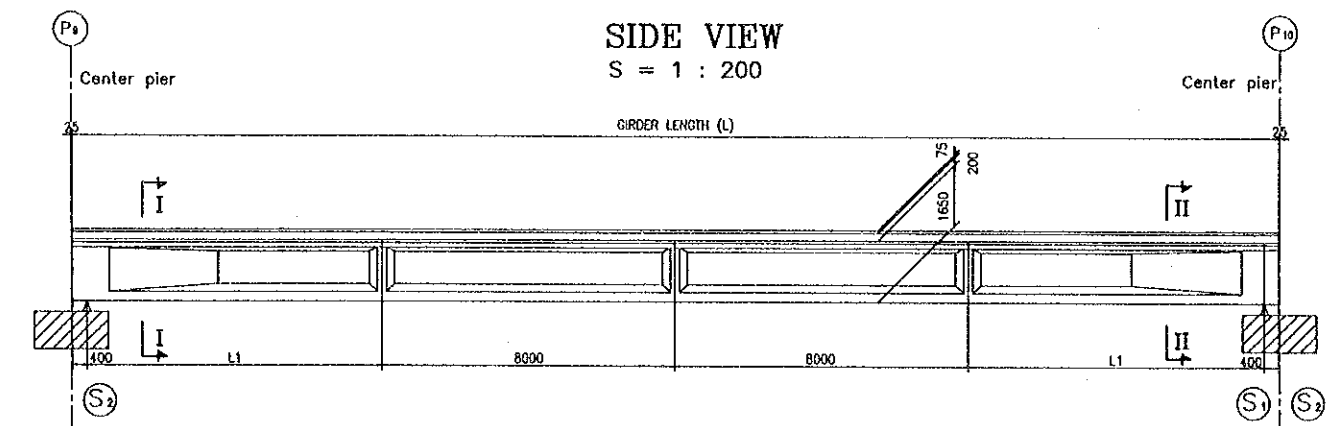


**DETAIL A**  
S = 1:80



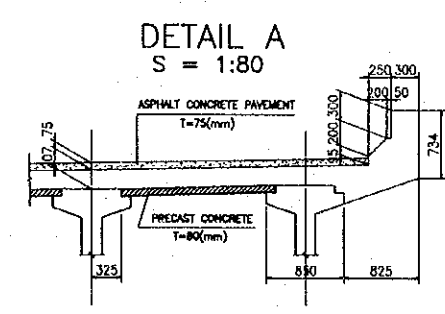
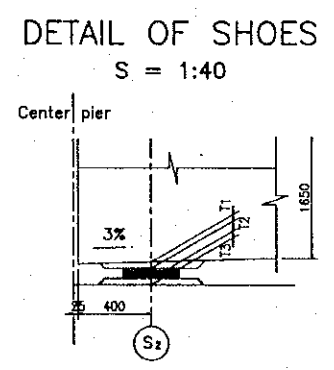
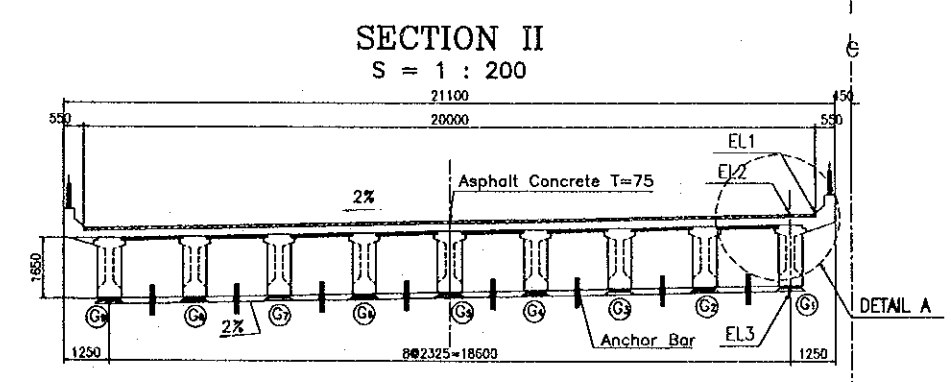
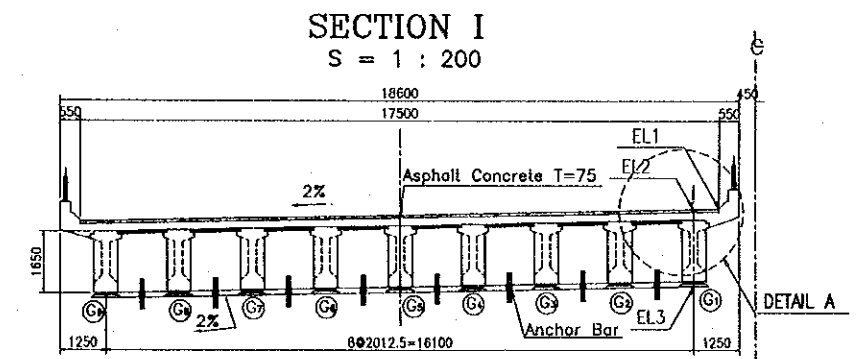
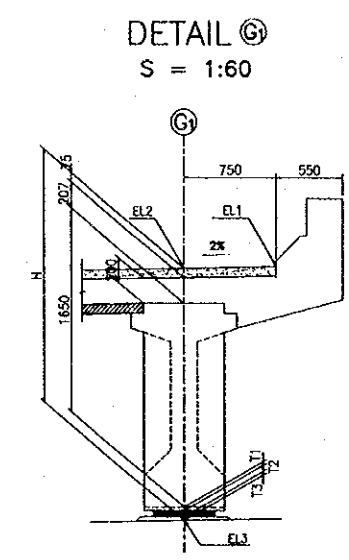
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATASE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000. 8. 14	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE	DRAWING No. C-1-2b-6	SHEET No.
DETAIL OF NH No.5 FLYOVER (3)			



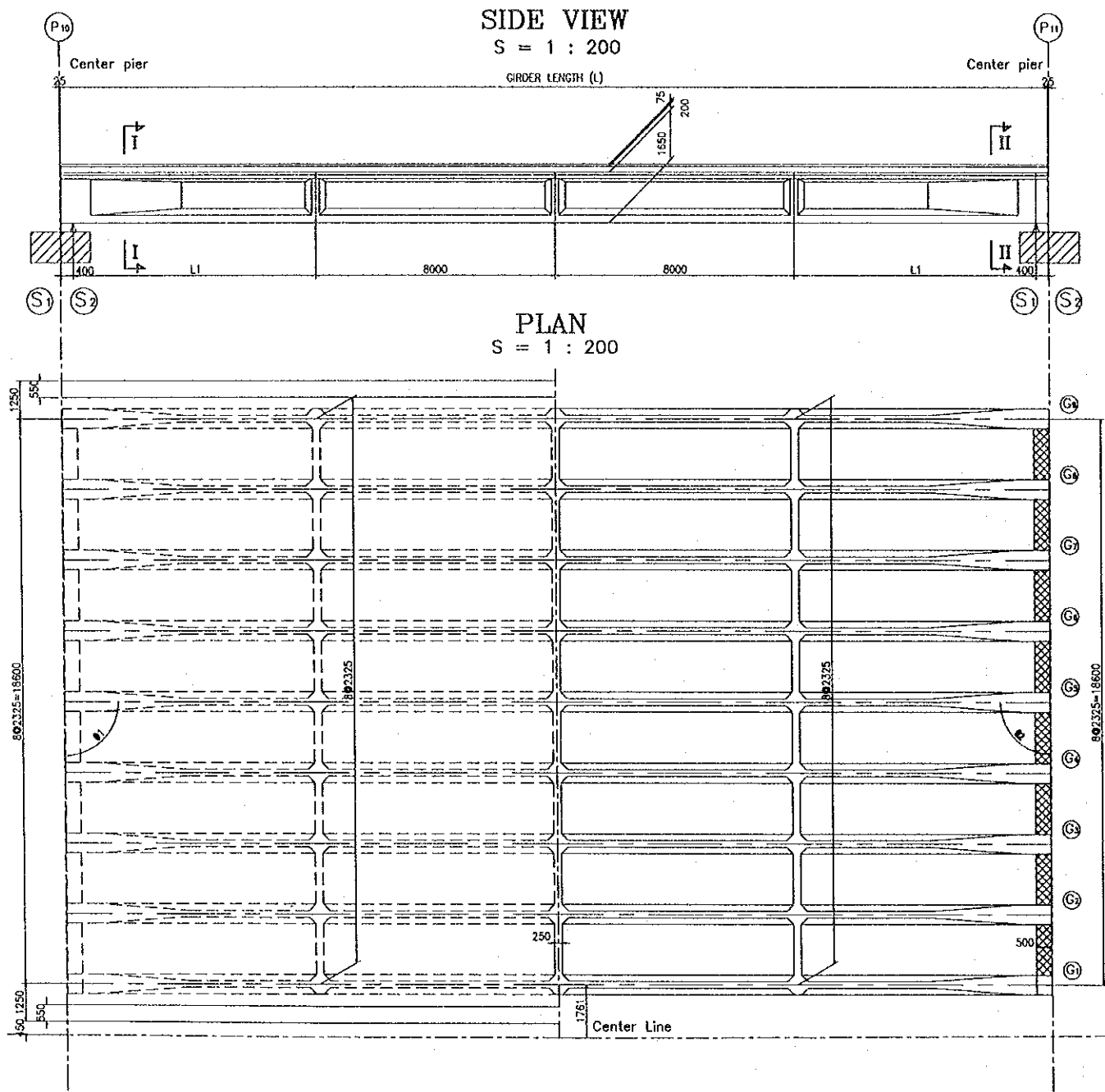
GIRDER	L (mm)	L1 (mm)	Ø1	Ø2
G1	32919	8059.5	90.517'	90.490'
G2	32883	8041.5	91.061'	89.946'
G3	32849	8024.5	91.605'	89.402'
G4	32819	8009.5	92.151'	88.856'
G5	32791	7995.5	92.698'	88.309'
G6	32766	7983	93.246'	87.761'
G7	32745	7972.5	93.794'	87.213'
G8	32726	7963	94.344'	86.664'
G9	32710	7955	94.893'	86.114'

	P9L	P10L	REMARKS
	S2	S1	
SHOES CONDITION	FIX	MOVE	
SHOES TYPE	A	B	
EL1 (m)	15.064	15.210	
EL2 (m)	15.046	15.193	
PAVEMENT (mm)	75		
SLAB (mm)	208		
GIRDER (mm)	1650		
T1 (mm)	20	20	
T2 (mm)	36	54	
T3 (mm)	42	20	
H (m)	2.031	2.027	
EL3 (m)	13.015	13.186	



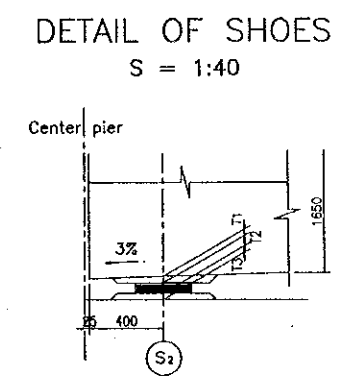
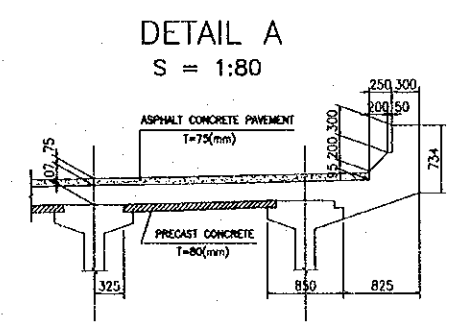
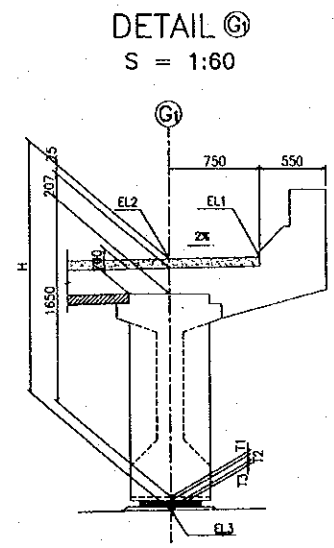
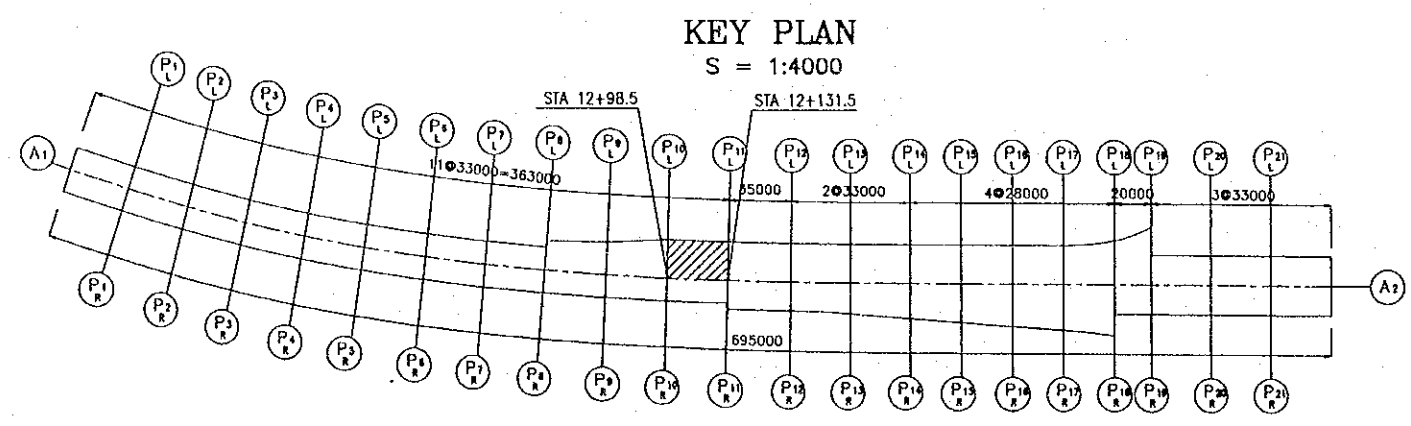
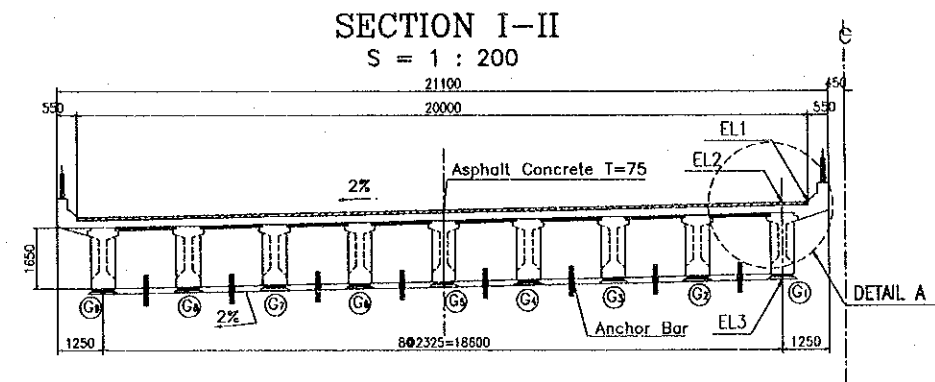
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATARE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.5.17	

PACKAGE 2	SCALE	DRAWING No. C-1-2b-7	SHEET No.
DETAIL OF NH No.5 FLYOVER (4)			



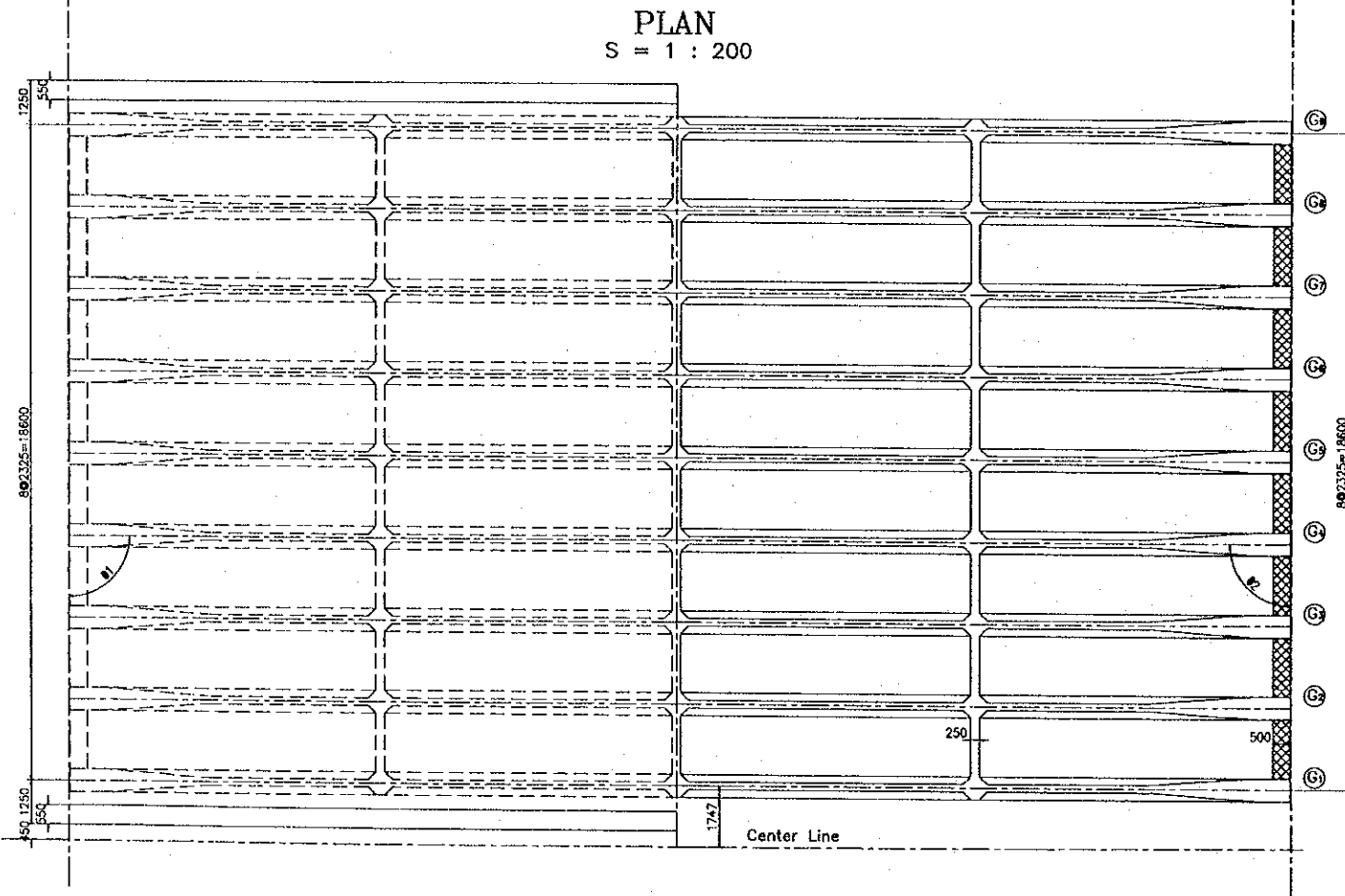
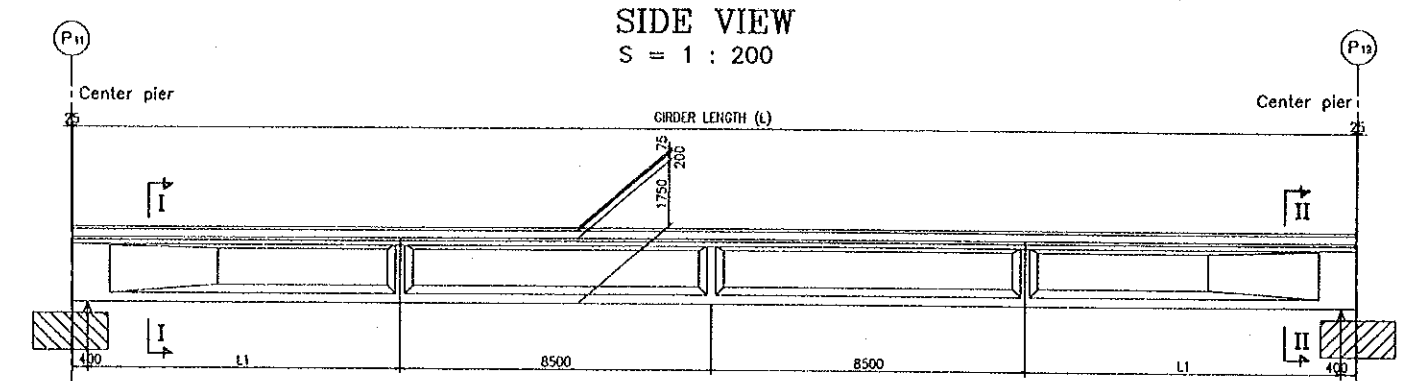
GIRDER	L (mm)	L1 (mm)	θ1	θ2
G1	32925	8062.5	90.423'	90.396'
G2	32892	8046	90.423'	90.396'
G3	32859	8029.5	90.423'	90.396'
G4	32826	8013	90.423'	90.396'
G5	32792	7996	90.423'	90.396'
G6	32759	7979.5	90.423'	90.396'
G7	32726	7963	90.423'	90.396'
G8	32693	7946.5	90.423'	90.396'
G9	32659	7929.5	90.423'	90.396'

	P10L S2	P11L S1	REMARKS
SHOES CONDITION	FIX	MOVE	
SHOES TYPE	A	B	
EL1 (m)	15.213	15.288	
EL2 (m)	15.196	15.272	
PAVEMENT (mm)	75		
SLAB (mm)	208		
GIRDER (mm)	1650		
T1 (mm)	20	20	
T2 (mm)	36	54	
T3 (mm)	41	101	
H (m)	2.030	2.108	
EL3 (m)	13.166	13.164	



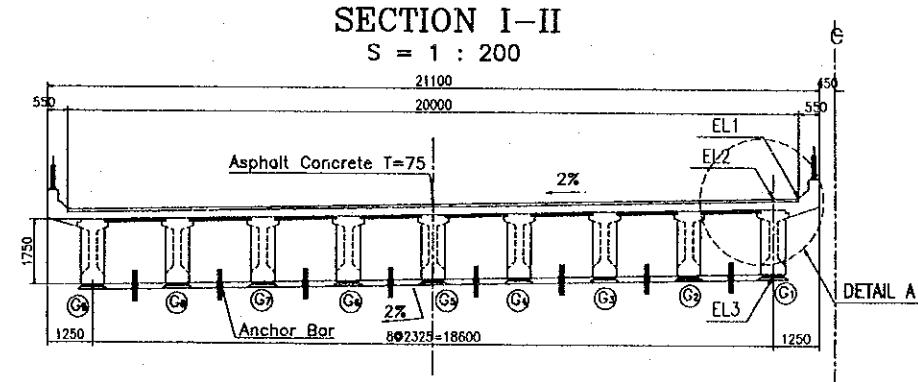
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THAI NGI LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. MATSUDA
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONTRACTOR PACIFIC CONSULTANTS INTERNATIONAL		DATE 2022. 5. 19

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-1-2b-8	
DETAIL OF NH No.5 FLYOVER (5)			

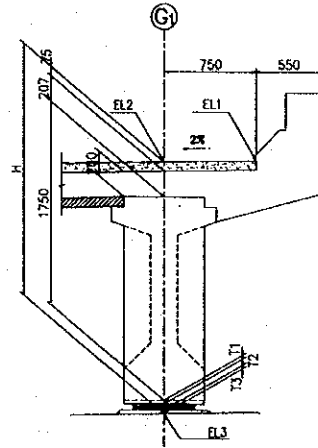


GIRDER	L (mm)	L1 (mm)	θ1 (mm)	θ2 (mm)
G1	34930	8565	90.346°	90.313°
G2	34903	8551.5	90.346°	90.313°
G3	34877	8538.5	90.346°	90.313°
G4	34850	8525	90.346°	90.313°
G5	34823	8511.5	90.346°	90.313°
G6	34796	8498	90.346°	90.313°
G7	34770	8485	90.346°	90.313°
G8	34743	8471.5	90.346°	90.313°
G9	34716	8458	90.346°	90.313°

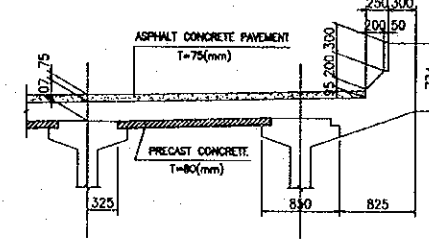
	P11L	P12L	REMARKS
	S2	S1	
SHOES CONDITION	FIX	MOVE	
SHOES TYPE	A	B	
EL1 (m)	15.289	15.291	
EL2 (m)	15.273	15.276	
PAVEMENT (mm)	75		
SLAB (mm)	208	207	
GIRDER (mm)	1750		
T1 (mm)	20	20	
T2 (mm)	36	54	
T3 (mm)	20	20	
H (m)	2.109	2.126	
EL3 (m)	13.164	13.149	



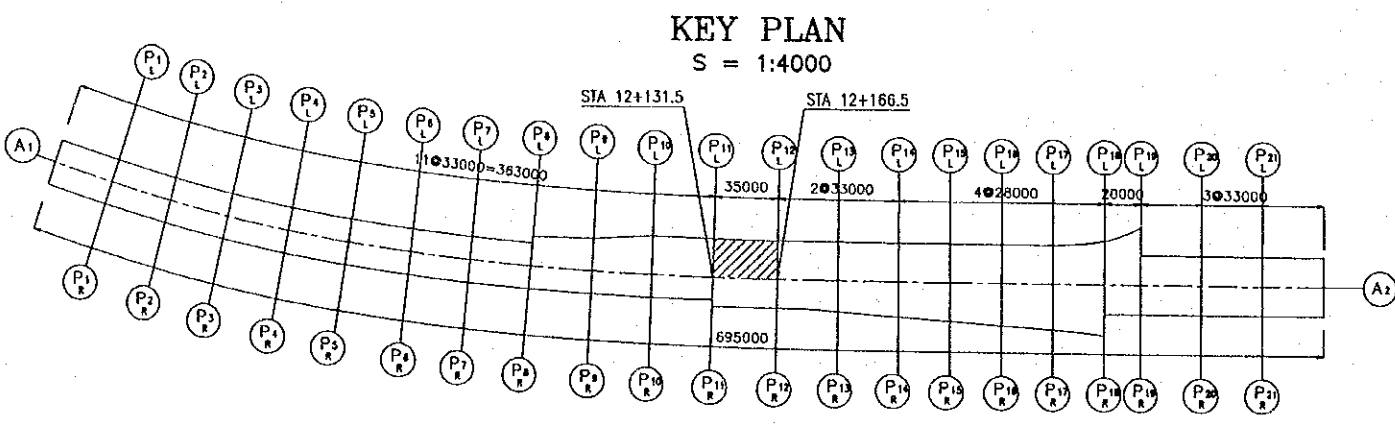
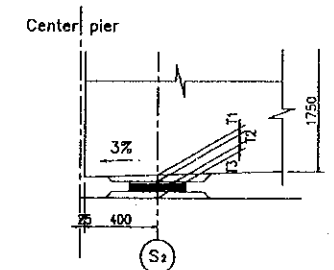
DETAIL C  
S = 1:60



DETAIL A  
S = 1:80



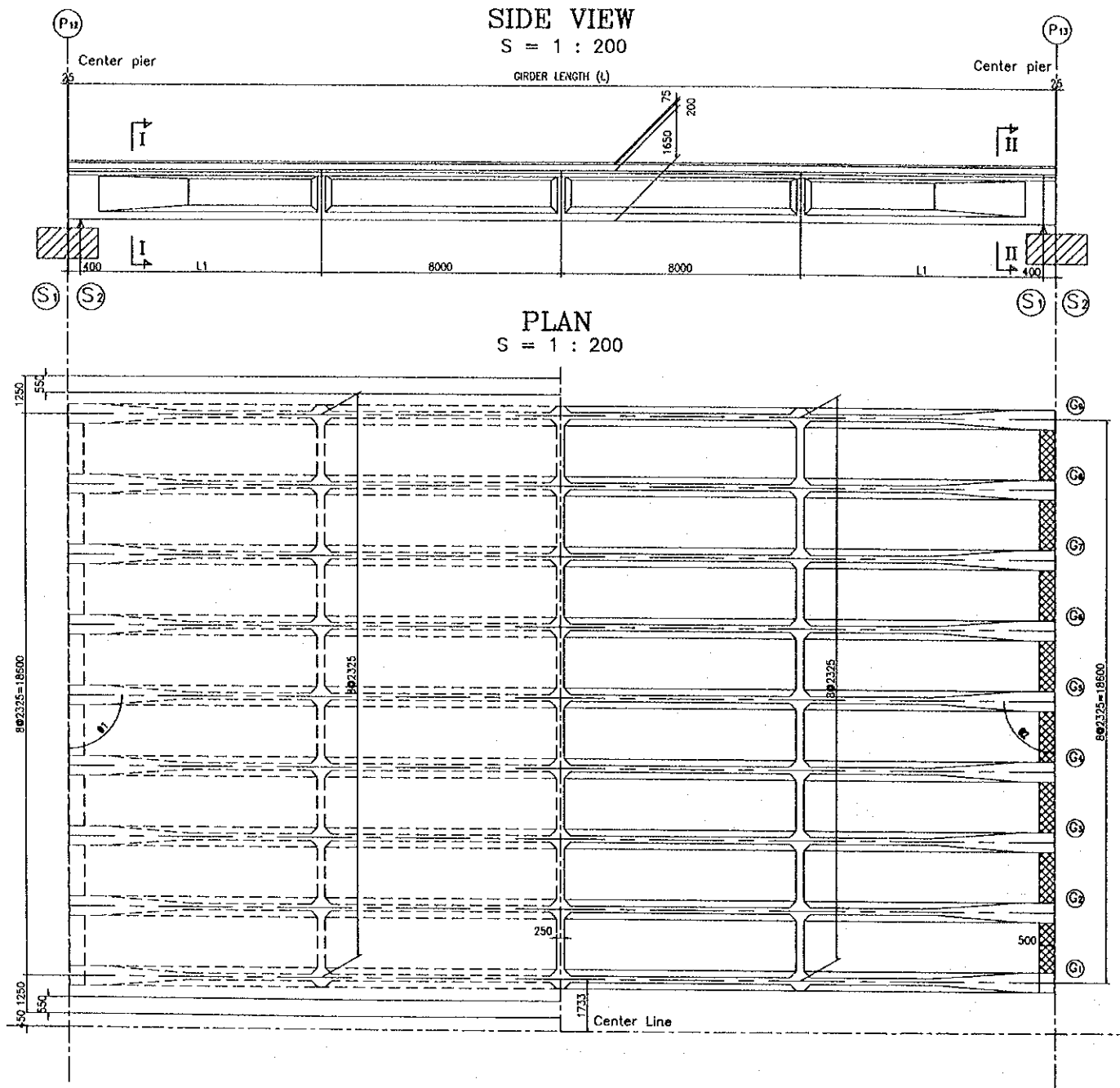
DETAIL OF SHOES  
S = 1:40





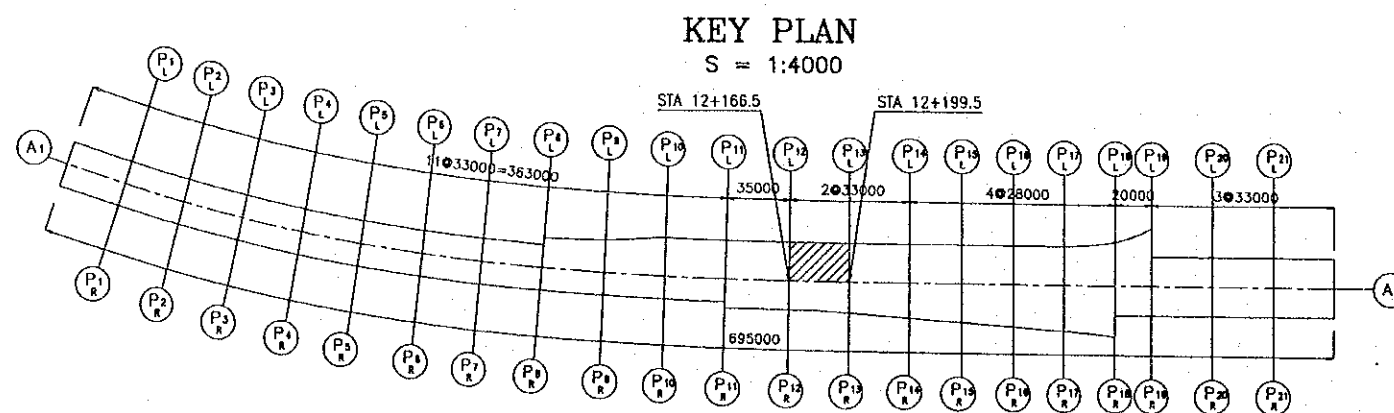
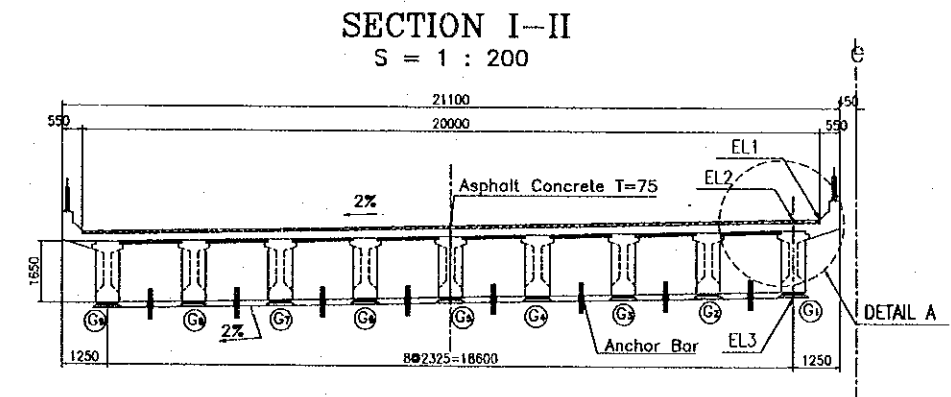
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT	DESIGNED BY S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2002.8.14

PACKAGE 2	SCALE	DRAWING No. C-1-2b-9	SHEET No.
DETAIL OF NH No.5 FLYOVER (6)			

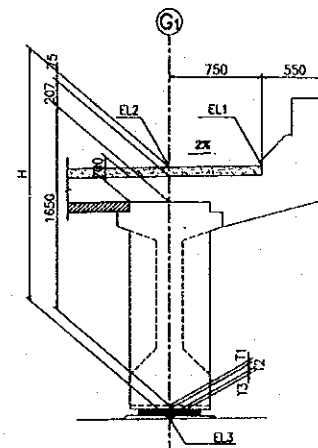


GIRDER	L (mm)	L1 (mm)	θ1	θ2
G1	32937	8068.5	90.232'	90.199'
G2	32919	8059.5	90.232'	90.199'
G3	32902	8051	90.232'	90.199'
G4	32884	8042	90.232'	90.199'
G5	32867	8033.5	90.232'	90.199'
G6	32850	8025	90.232'	90.199'
G7	32832	8016	90.232'	90.199'
G8	32815	8007.5	90.232'	90.199'
G9	32797	7998.5	90.232'	90.199'

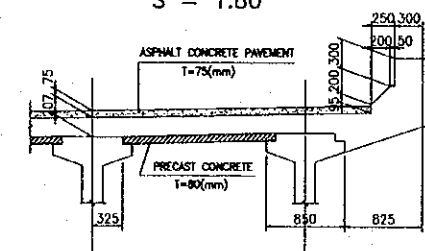
	P12 <sub>L</sub> S2	P13 <sub>L</sub> S1	REMARKS
SHOES CONDITION	FIX	MOVE	
SHOES TYPE	A	B	
EL1 (m)	15.290	15.220	
EL2 (m)	15.275	15.205	
PAVEMENT (mm)	75		
SLAB (mm)	207		
GIRDER (mm)	1650		
T1 (mm)	20	20	
T2 (mm)	36	54	
T3 (mm)	137	20	
H (m)	2.125	2.026	
EL3 (m)	13.149	13.179	



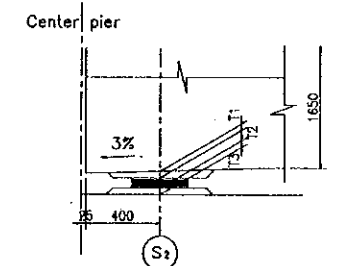
**DETAIL G**  
S = 1:60



**DETAIL A**  
S = 1:80

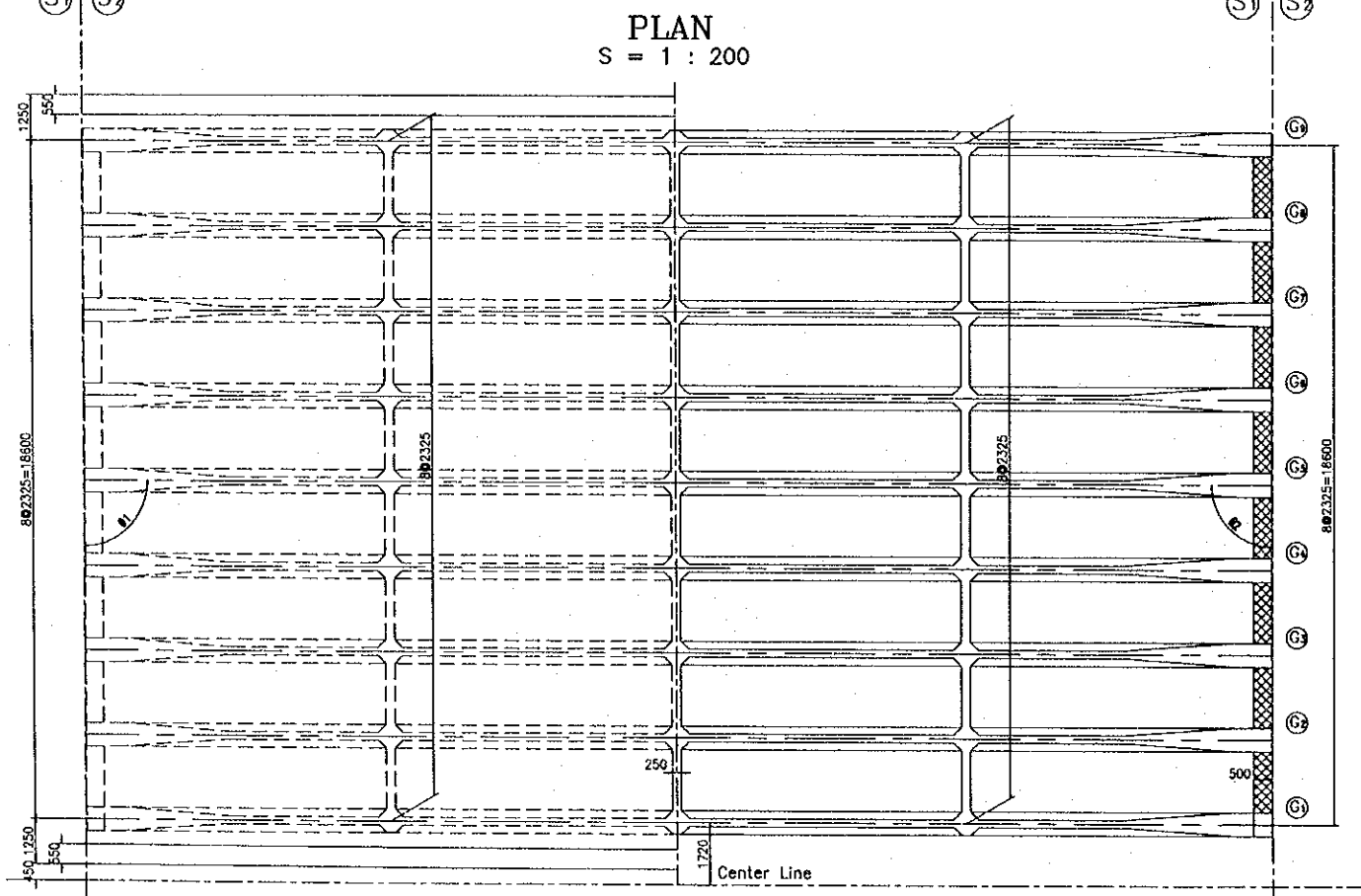
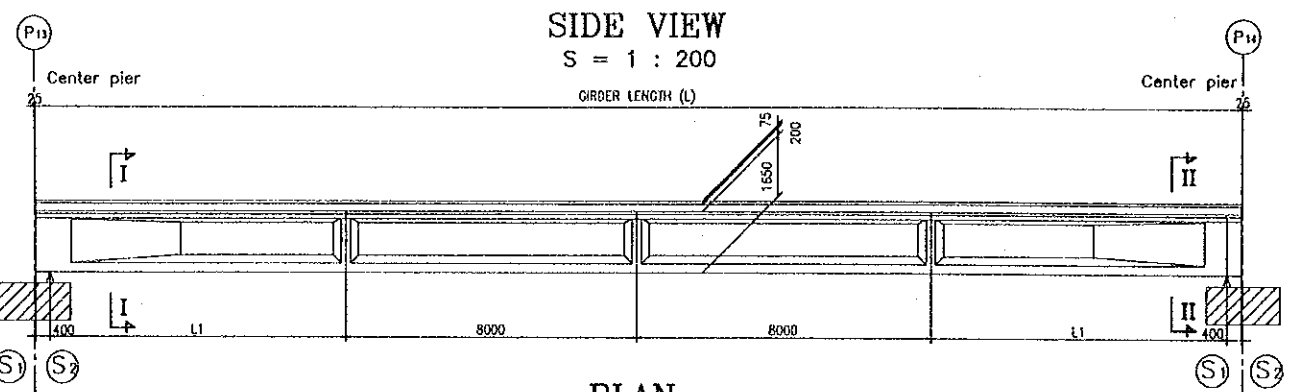


**DETAIL OF SHOES**  
S = 1:40



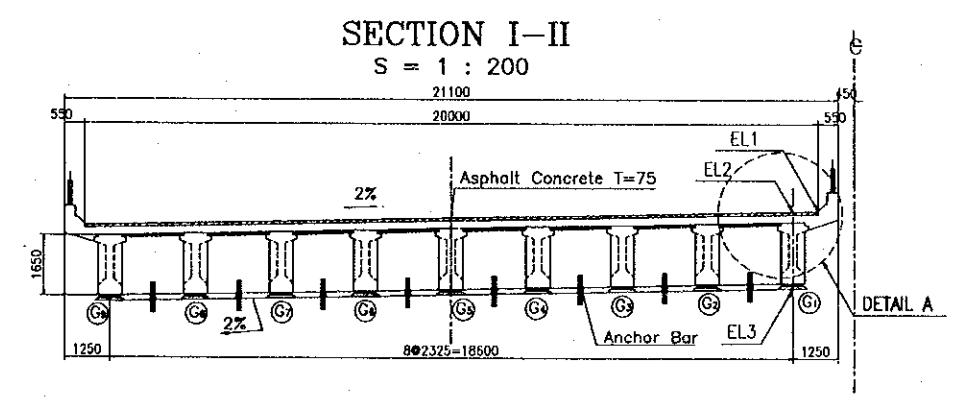
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATADA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRU BRIDGE) CONSTRUCTION PROJECT	DATE 2000. 3. 14	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE	DRAWING No. C-1-2b-10	SHEET No.
DETAIL OF NH No.5 FLYOVER (7)			

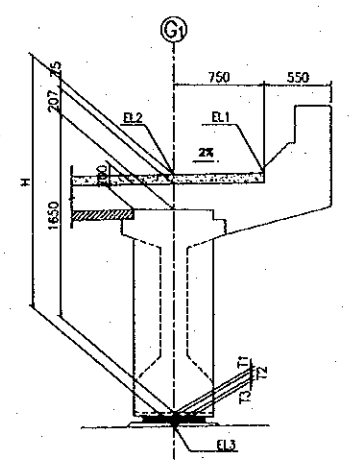


GIRDER	L (mm)	L1 (mm)	Ø1	Ø2
G1	32942	8071	90.14'	90.11'
G2	32932	8066	90.14'	90.11'
G3	32922	8061	90.14'	90.11'
G4	32912	8056	90.14'	90.11'
G5	32901	8050.5	90.14'	90.11'
G6	32891	8045.5	90.14'	90.11'
G7	32881	8040.5	90.14'	90.11'
G8	32871	8035.5	90.14'	90.11'
G9	32861	8030.5	90.14'	90.11'

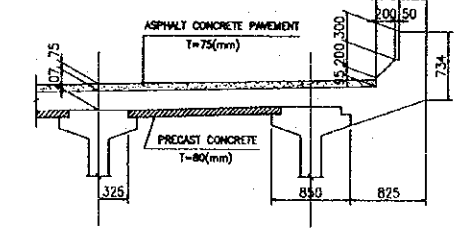
	P13 <sub>L</sub>	P14 <sub>L</sub>	REMARKS
	S2	S1	
SHOES CONDITION	FIX	MOVE	
SHOES TYPE	A	B	
EL1 (m)	15.217	15.075	
EL2 (m)	15.202	15.061	
PAVEMENT (mm)	75		
SLAB (mm)	207		
GIRDER (mm)	1650		
T1 (mm)	20	20	
T2 (mm)	36	54	
T3 (mm)	35	20	
H (m)	2.023	2.026	
EL3 (m)	13.179	13.026	



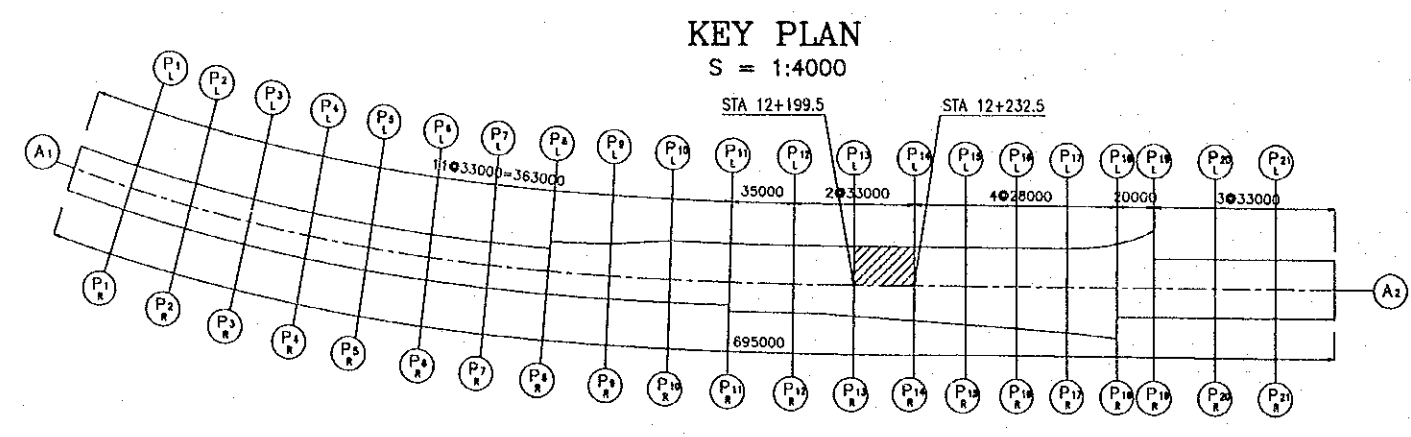
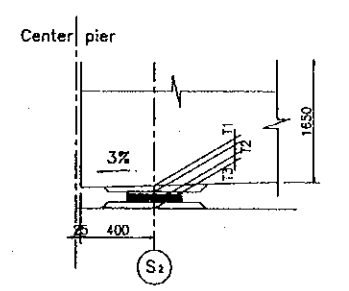
DETAIL ©  
S = 1:60



DETAIL A  
S = 1:80

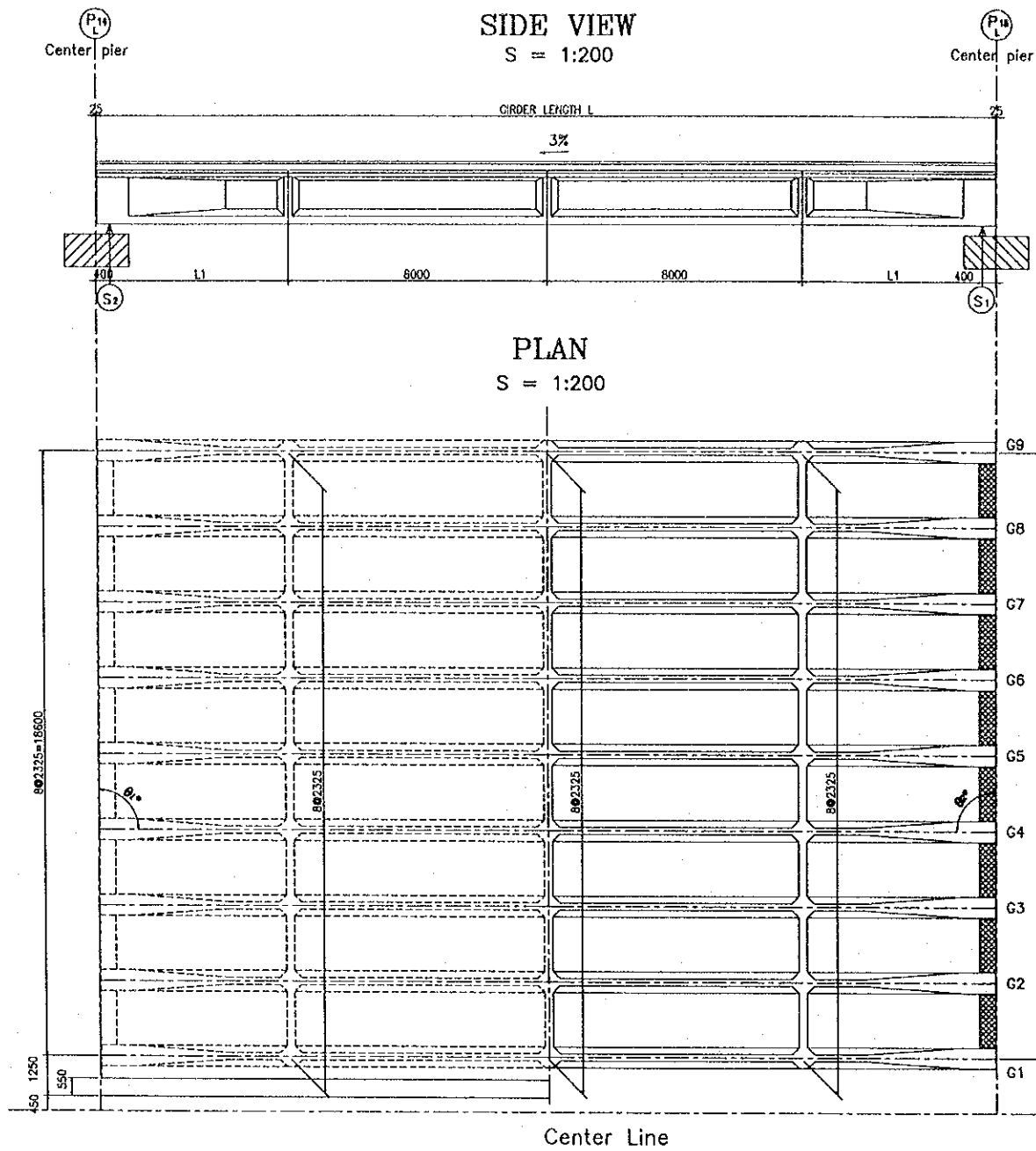


DETAIL OF SHOES  
S = 1:40

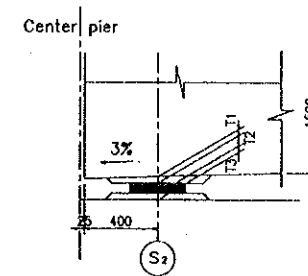


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2007.8.19	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

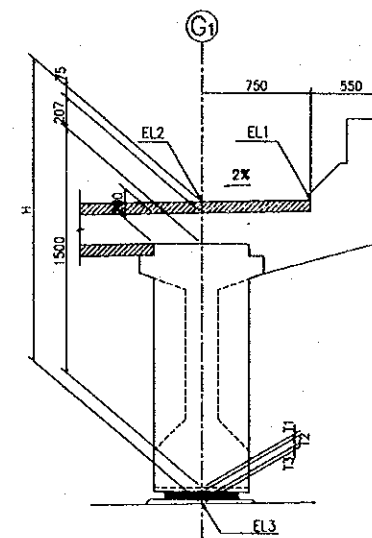
PACKAGE 2	SCALE 1/200	DRAWING No. C-1-2b-11	SHEET No.
DETAIL OF NH No.5 FLYOVER (8)			



**DETAIL OF SHOES**  
S = 1:40



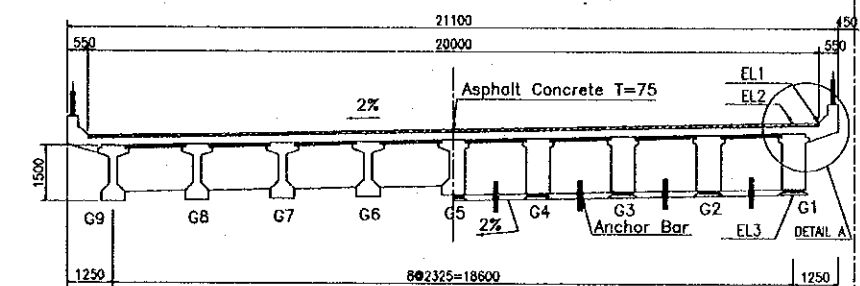
**DETAIL (C)**  
S = 1:50



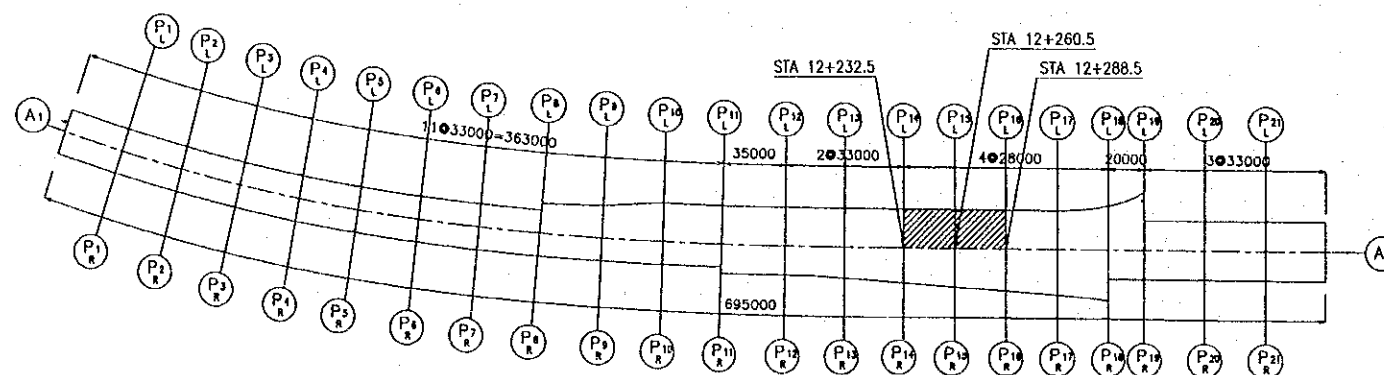
	P14L		P15L		P16L		REMARKS
	S2	S1	S2	S1	S1	S1	
SHOES CONDITION	FIX	MOVE	FIX	MOVE			
SHOES TYPE	A	C	A	C			
EL1 (m)	15.071	14.896	14.890	14.665			
EL2 (m)	15.057	14.882	14.876	14.651			
PAVEMENT (mm)	75						
SLAB (mm)	207						
GIRDER (mm)	1500						
T1 (mm)	20	20	20	20			
T2 (mm)	36	44	36	44			
T3 (mm)	184	30	32	30			
H (m)	2.022	1.876	1.870	1.876			
EL3 (m)	13.036	13.007	13.007	12.776			

GIRDER	L (mm)	L1 (mm)	θ <sub>1</sub> (degree)	θ <sub>2</sub> (degree)
G1 ~ G9	27950	5575	90.00	90.00

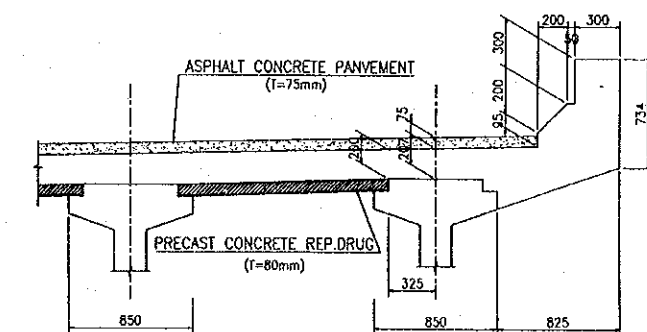
**TYPICAL CROSS SECTION OF SPAN**  
S = 1:200



**KEY PLAN**  
S = 1:4000

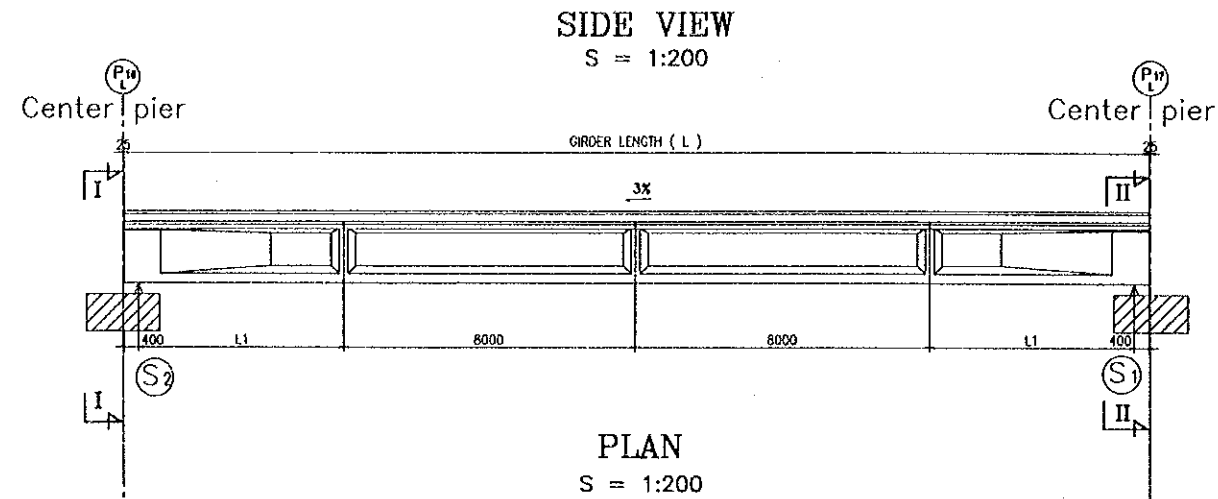


**DETAIL OF A**  
S=1:50

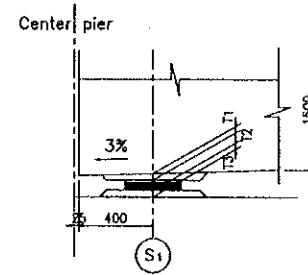


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.8.14	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

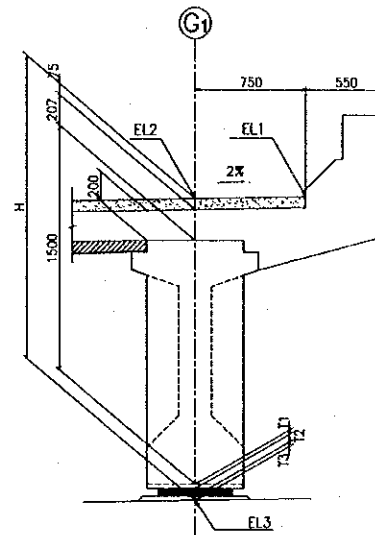
PACKAGE 2	SCALE 1/200	DRAWING No. C-1-2b-12	SHEET No.
DETAIL OF NH No.5 FLYOVER (9)			



**DETAIL OF SHOES**  
S = 1:40

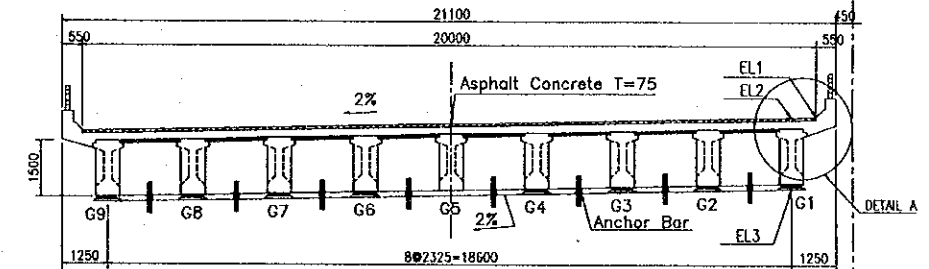


**DETAIL G1**  
S = 1:50

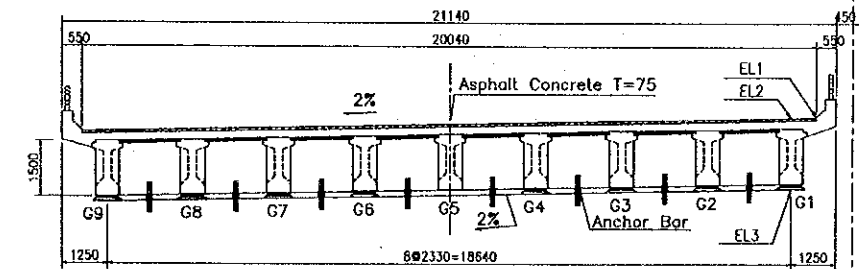


GIRDER	L (mm)	L1 (mm)	$\theta_1$ (degree)	$\theta_2$ (degree)	P17L		REMARKS
					S2	S1	
G1	27950	6325	90.00	90.00	FIX	MOVE	
G2	27950	6325	89.99	90.01	A	C	
G3	27950	6325	89.98	90.02			
G4	27950	6325	89.97	90.03			
G5	27950	6325	89.96	90.04			
G6	27950	6325	89.95	90.05			
G7	27950	6325	89.94	90.06			
G8	27950	6325	89.93	90.07			
G9	27950	6325	89.92	90.08			
SHOES CONDITION					FIX	MOVE	
SHOES TYPE					A	C	
EL1 (m)					14.657	14.381	
EL2 (m)					14.643	14.367	
PAVEMENT (mm)					75		
SLAB (mm)					207		
GIRDER (mm)					1,500		
T1 (mm)					20	20	
T2 (mm)					36	44	
T3 (mm)					30	32	
H (m)					1,868	1,878	
EL3 (m)					12.776	12.490	

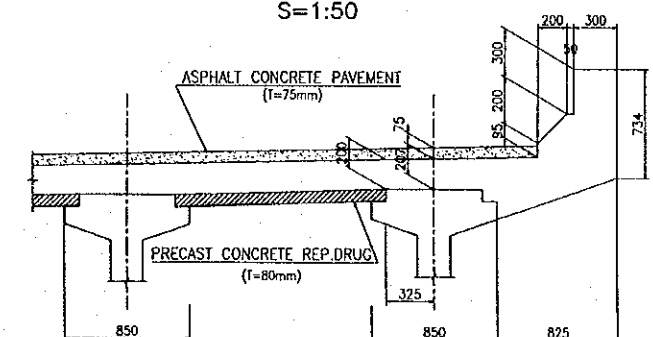
**SECTION I-I**  
S = 1:200



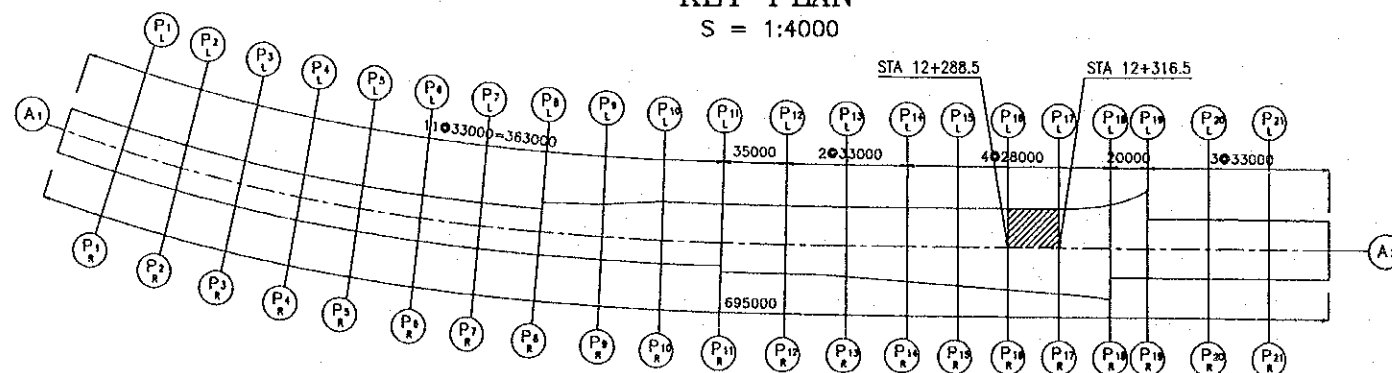
**SECTION II-II**  
S = 1:200



**DETAIL OF A**  
S=1:50

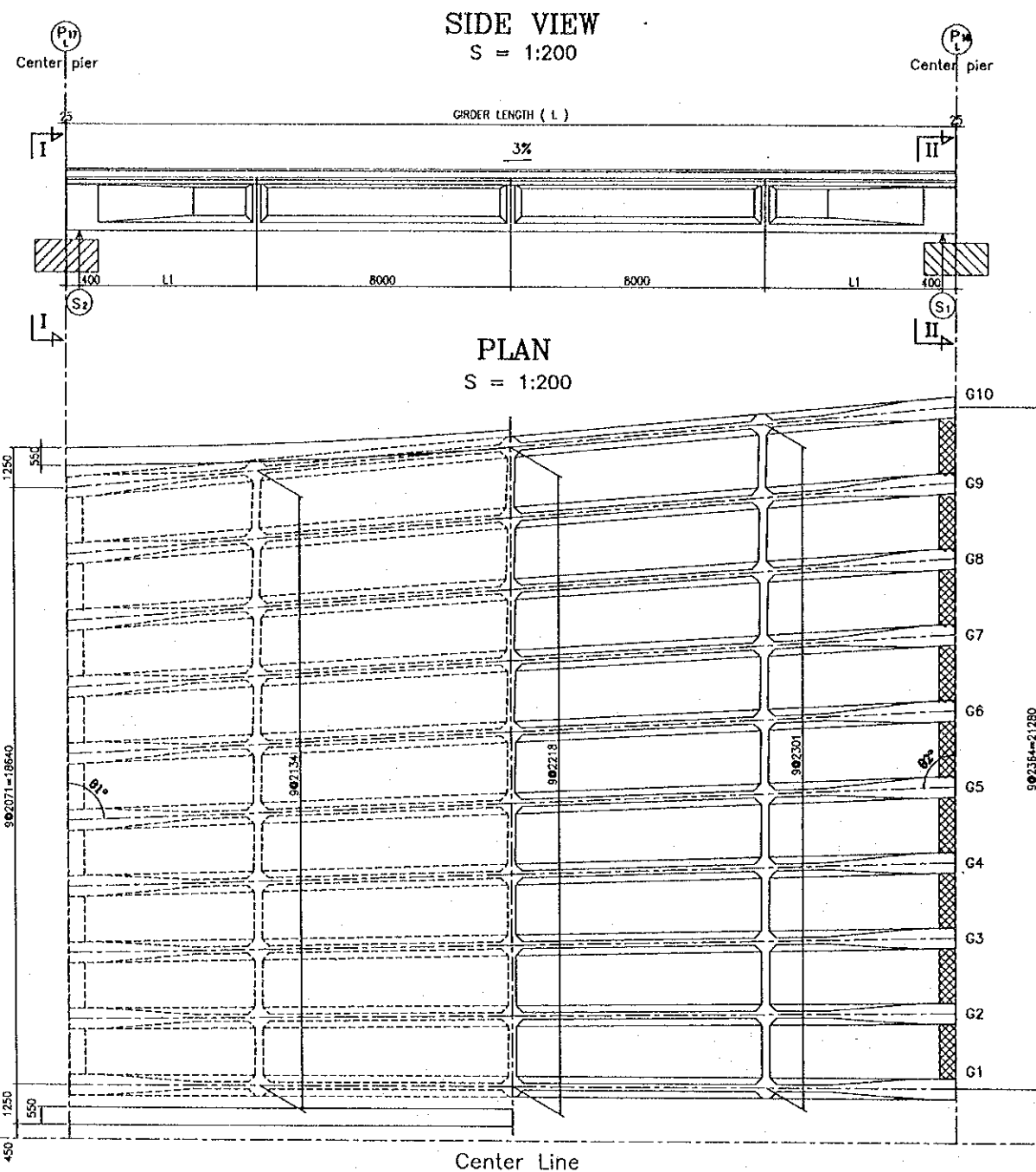


**KEY PLAN**  
S = 1:4000

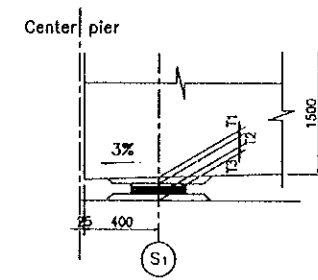


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.19

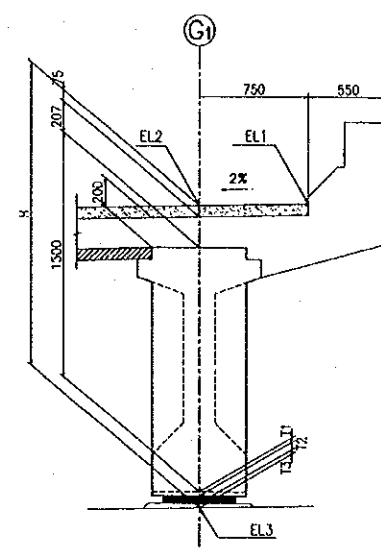
PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/200	C-1-2b-13	
DETAIL OF NH No.5 FLYOVER (10)			



**DETAIL OF SHOES**  
S = 1:40

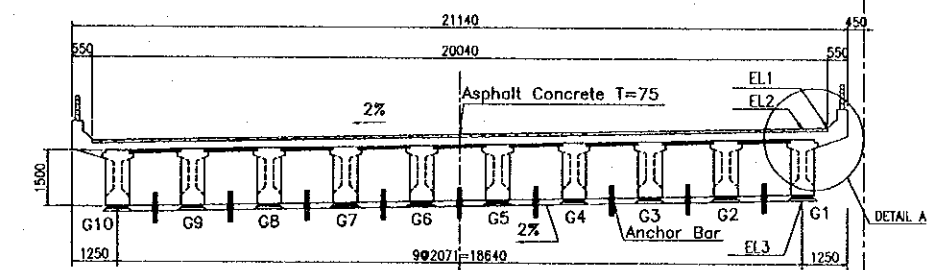


**DETAIL (G)**  
S = 1:50

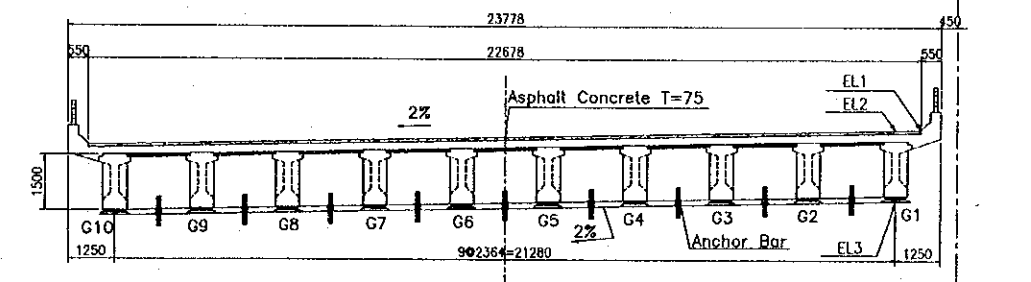


GIRDER	L (mm)	L1 (mm)	θ1 (degree)	θ2 (degree)			REMARKS
					P17L S2	P18L S1	
G1	27950	5575	90.00	90.00	FIX	MOVE	
G2	27952	5576	89.40	90.60	A	C	
G3	27956	5578	88.80	91.20			
G4	27964	5582	88.20	91.80			
G5	27975	5588	87.60	92.40			
G6	27988	5594	87.00	93.00			
G7	28005	5603	86.40	93.60			
G8	28025	5613	85.80	94.20			
G9	28048	5642	85.21	94.79			
G10	28074	5637	84.61	95.39			
SHOES CONDITION					FIX	MOVE	
SHOES TYPE					A	C	
EL1 (m)					14.371	14.044	
EL2 (m)					14.357	14.030	
PAVEMENT (mm)					75		
SLAB (mm)					207		
GIRDER (mm)					1,500		
T1 (mm)					20	20	
T2 (mm)					44	36	
T3 (mm)					32	30	
H (m)					1,878	1,868	
EL3 (m)					12.490	12.490	

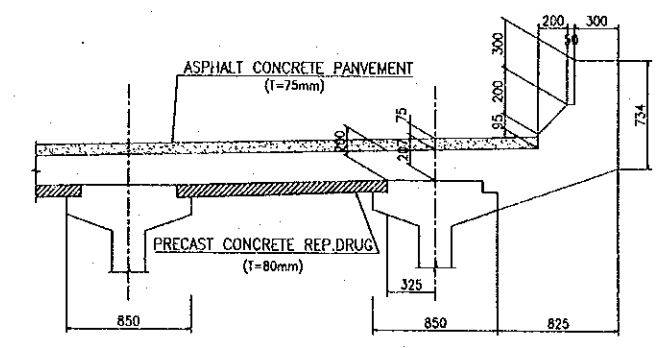
**SECTION I**  
S = 1:200



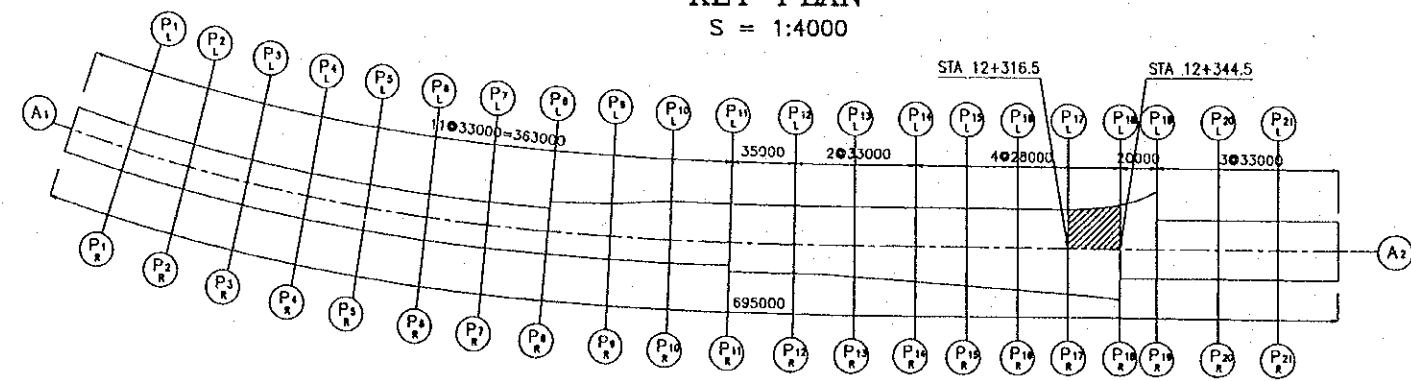
**SECTION II**  
S = 1:200



**DETAIL OF A**  
S=1:50



**KEY PLAN**  
S = 1:4000

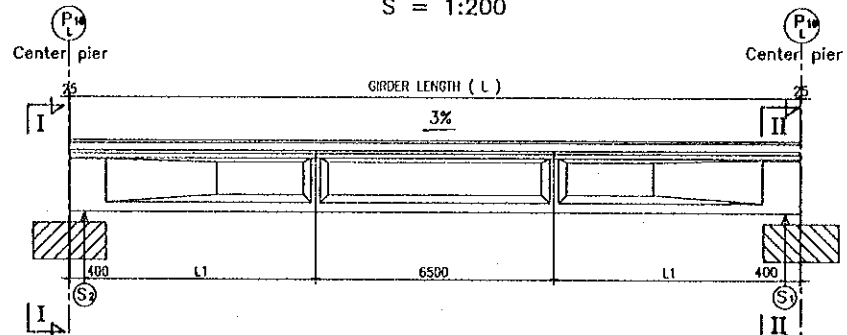


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	DESIGNED BY NAME S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE 
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.3.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/200	C-1-2b-14	
DETAIL OF NH No.5 FLYOVER (11)			

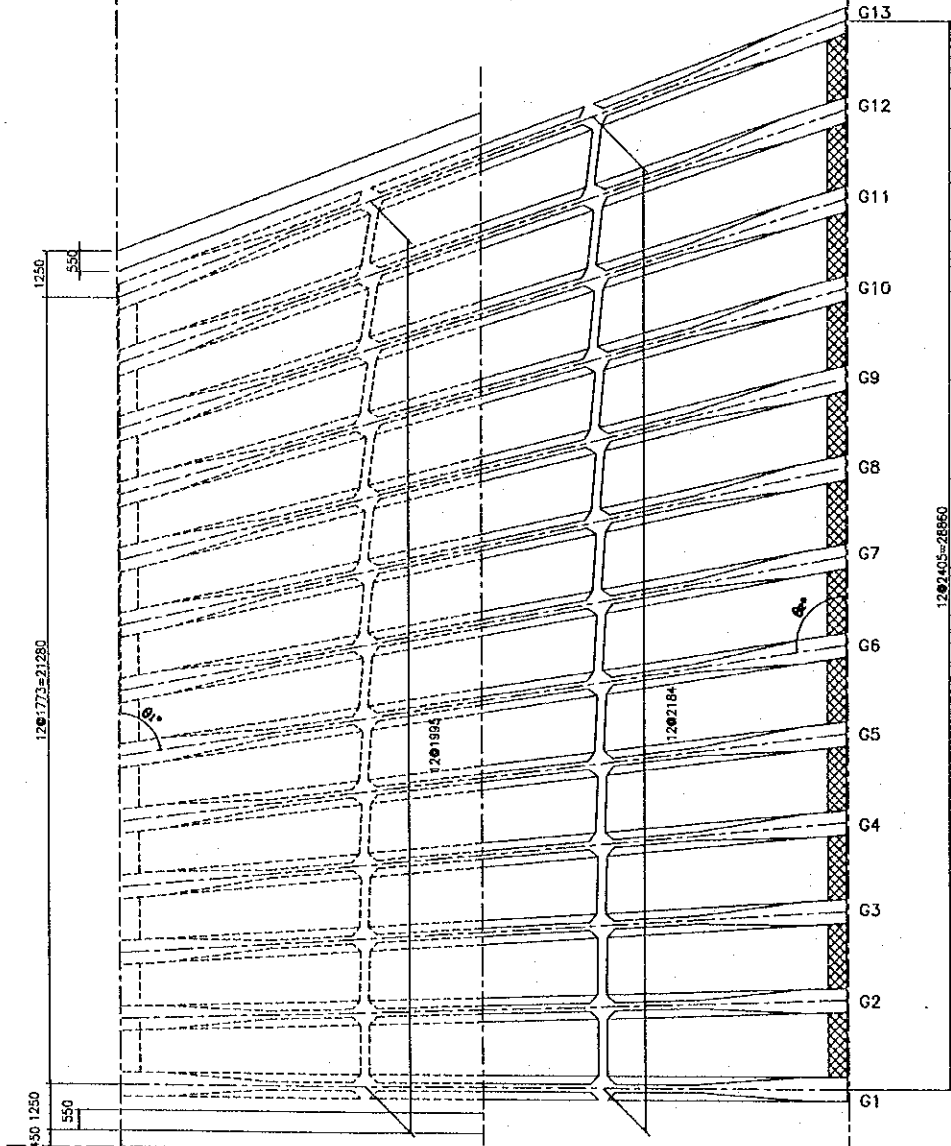
**SIDE VIEW**

S = 1:200



**PLAN**

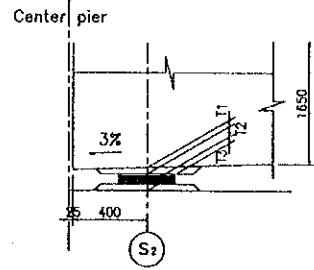
S = 1:200



Center Line

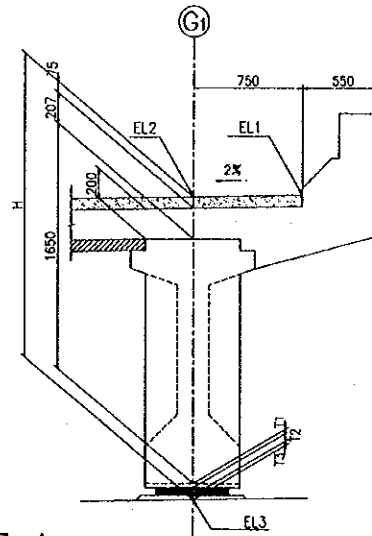
**DETAIL OF SHOES**

S = 1:40



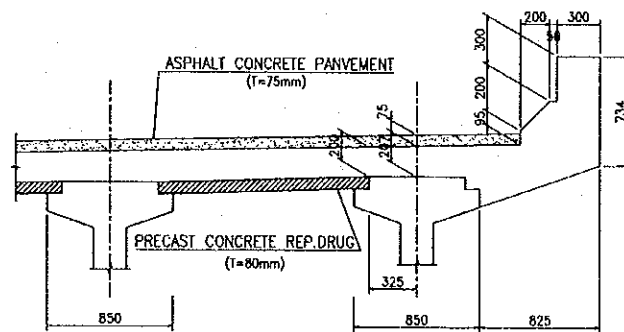
**DETAIL G1**

S = 1:50



**DETAIL OF A**

S=1:50

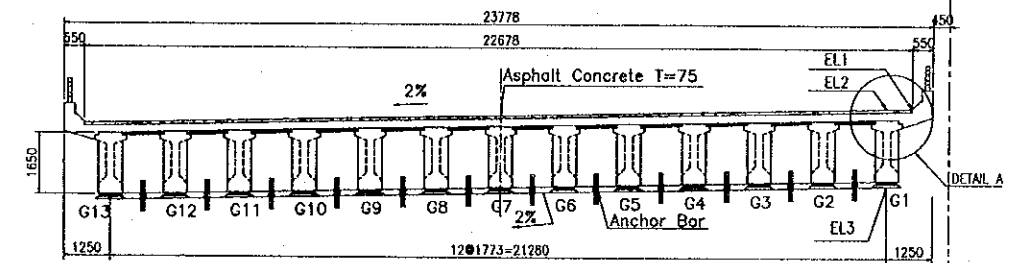


GIRDER	L (mm)	L1 (mm)	θ <sub>1</sub> (degree)	θ <sub>2</sub> (degree)
G1	19950	6325	90.00	90.00
G2	19960	6330	88.19	91.81
G3	19990	6345	86.37	93.63
G4	20040	6370	84.75	95.43
G5	20110	6405	82.78	97.22
G6	20199	6450	81.00	99.00
G7	20307	6504	79.24	100.76
G8	20435	6568	77.50	102.50
G9	20581	6641	75.78	104.22
G10	20745	6723	74.09	105.91
G11	20927	6814	72.42	107.58
G12	21127	6914	70.79	109.21
G13	21343	7022	69.19	110.81

	P18L	P19L	REMARKS
	S2	S1	
SHOES CONDITION	FIX	MOVE	
SHOES TYPE	A	B	
EL1 (m)	14.033	13.772	
EL2 (m)	14.019	13.758	
PAVEMENT (mm)	75		
SLAB (mm)	207		
GIRDER (mm)	1,650		
T1 (mm)	20	20	
T2 (mm)	36	54	
T3 (mm)	20	30	
H (m)	2,008	2,036	
EL3 (m)	12,012	11,723	

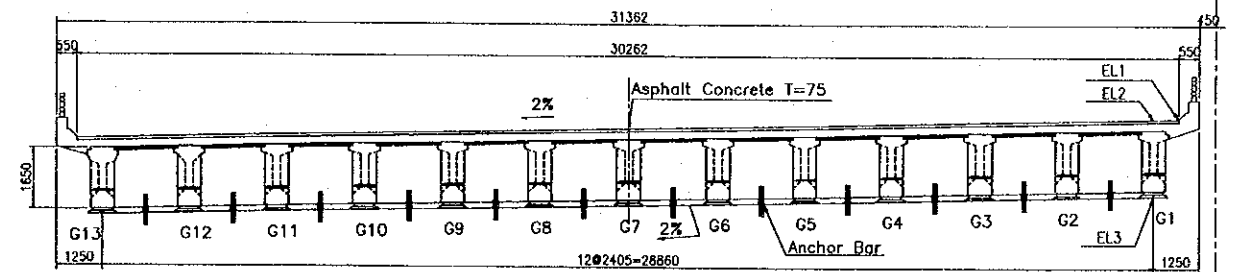
**SECTION I**

S = 1:200



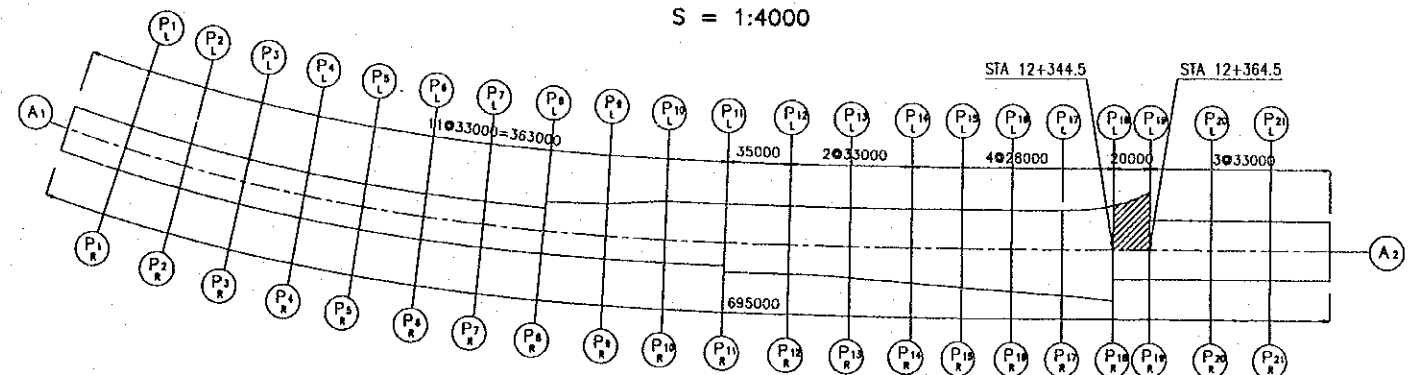
**SECTION II**

S = 1:200



**KEY PLAN**

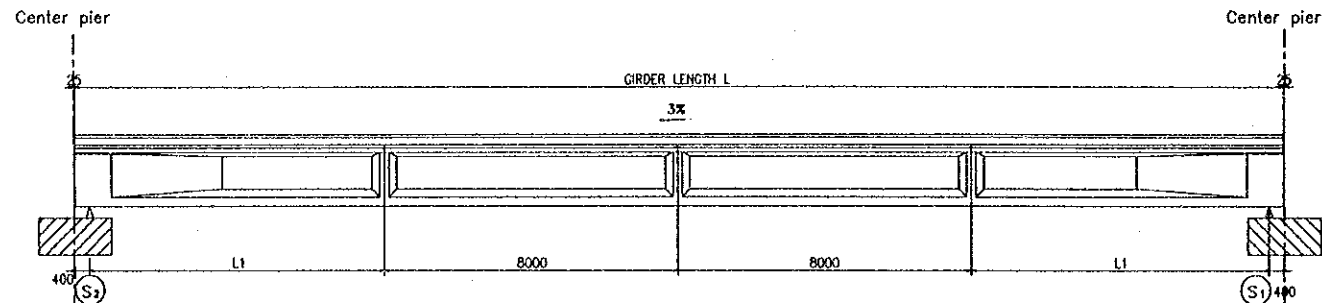
S = 1:4000



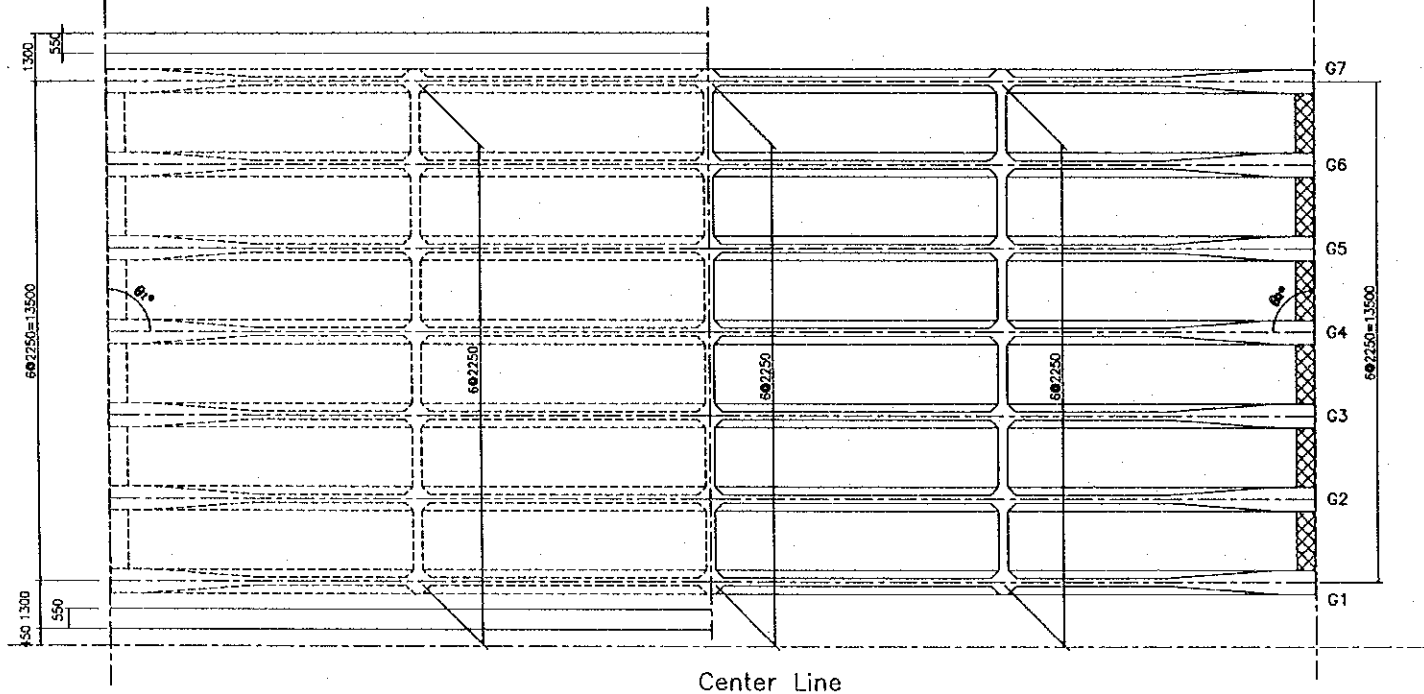
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATASE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.03.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/200	C-1-2b-15	
DETAIL OF NH No.5 FLYOVER (12)			

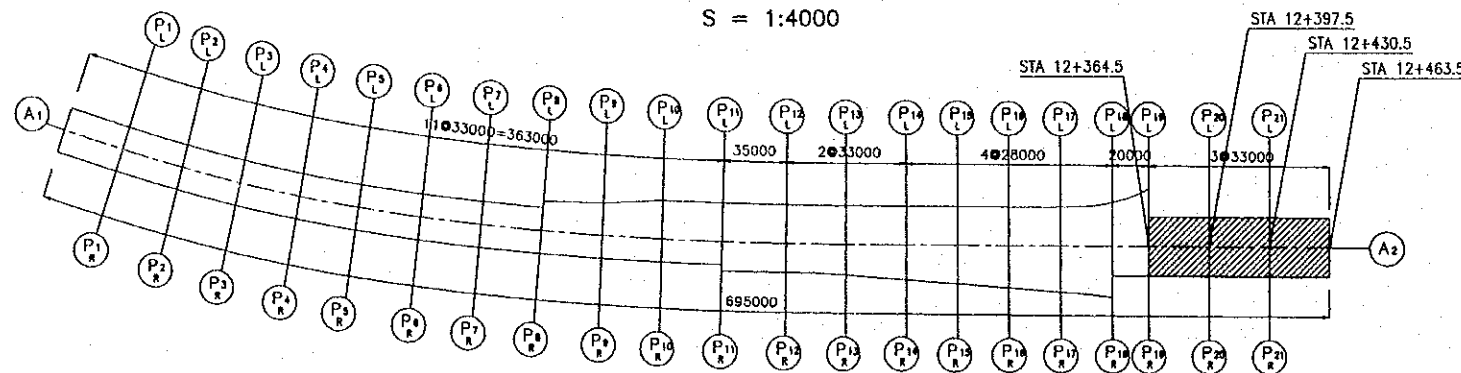
**SIDE VIEW**  
S = 1:200



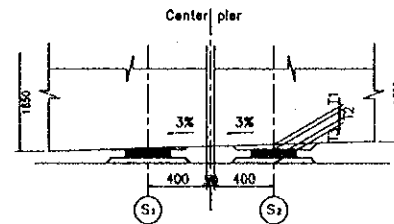
**PLAN**  
S = 1:200



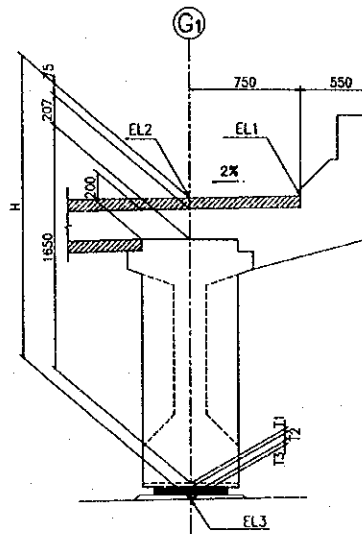
**KEY PLAN**  
S = 1:4000



**DETAIL OF SHOES**  
S = 1:50



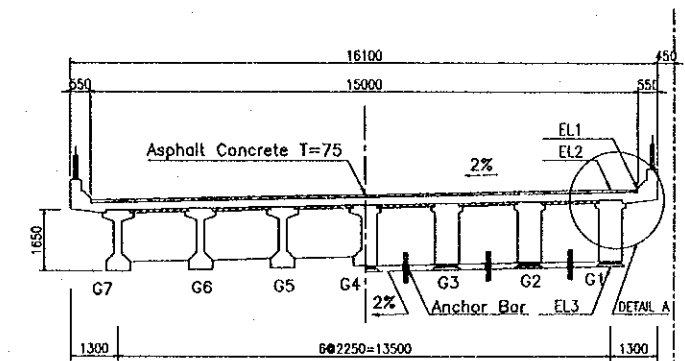
**DETAIL G1**  
S = 1:50



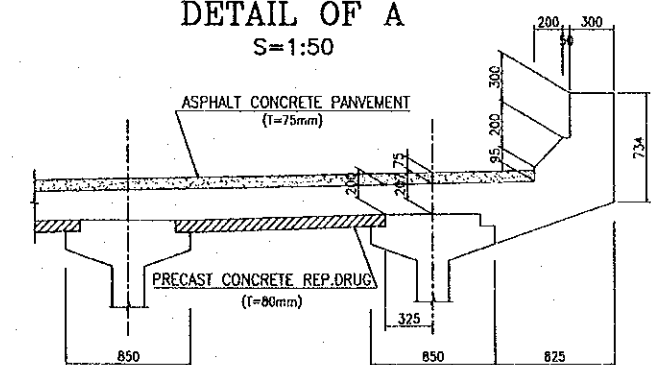
	P19		P20		P21		A2	REMARKS
	S2	S1	S2	S1	S2	S1		
SHOES CONDITION	FIX	MOVE	FIX	MOVE	FIX	MOVE		
SHOES TYPE	A	B	A	B	A	B		
EL1 (m)	13.760	13.265	13.251	12.685	12.669	12.039		
EL2 (m)	13.745	13.250	13.236	12.670	12.654	12.024		
PAVEMENT (mm)	75							
SLAB (mm)	207							
GIRDER (mm)	1,650							
T1 (mm)	20	20	20	20	20	20		
T2 (mm)	36	54	36	54	36	54		
T3 (mm)	35	30	34	30	32	30		
H (m)	2,023	2,036	2,022	2,036	2,020	2,036		
EL3 (m)	11.723	11.215	11.215	10.635	10.635	9.989		

GIRDER	L (mm)	L1 (mm)	$\theta_1$ (degree)	$\theta_2$ (degree)
G1 ~ G7	32950	8075	90.00	90.00

**TYPICAL CROSS SECTION OF SPAN**  
S = 1:200



**DETAIL OF A**  
S=1:50

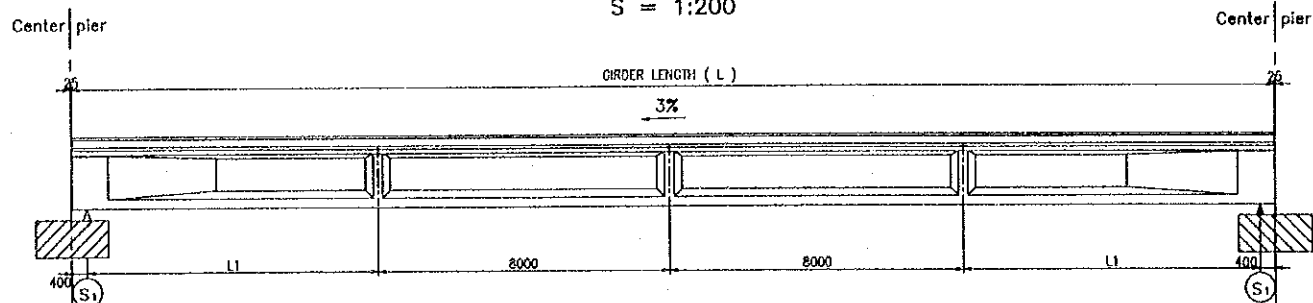


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		DESIGNED BY NAME S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE 
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.3.17

PACKAGE 2	SCALE 1/200	DRAWING No. C-1-2b-16	SHEET No.
DETAIL OF NH No.5 FLYOVER (13-1)			

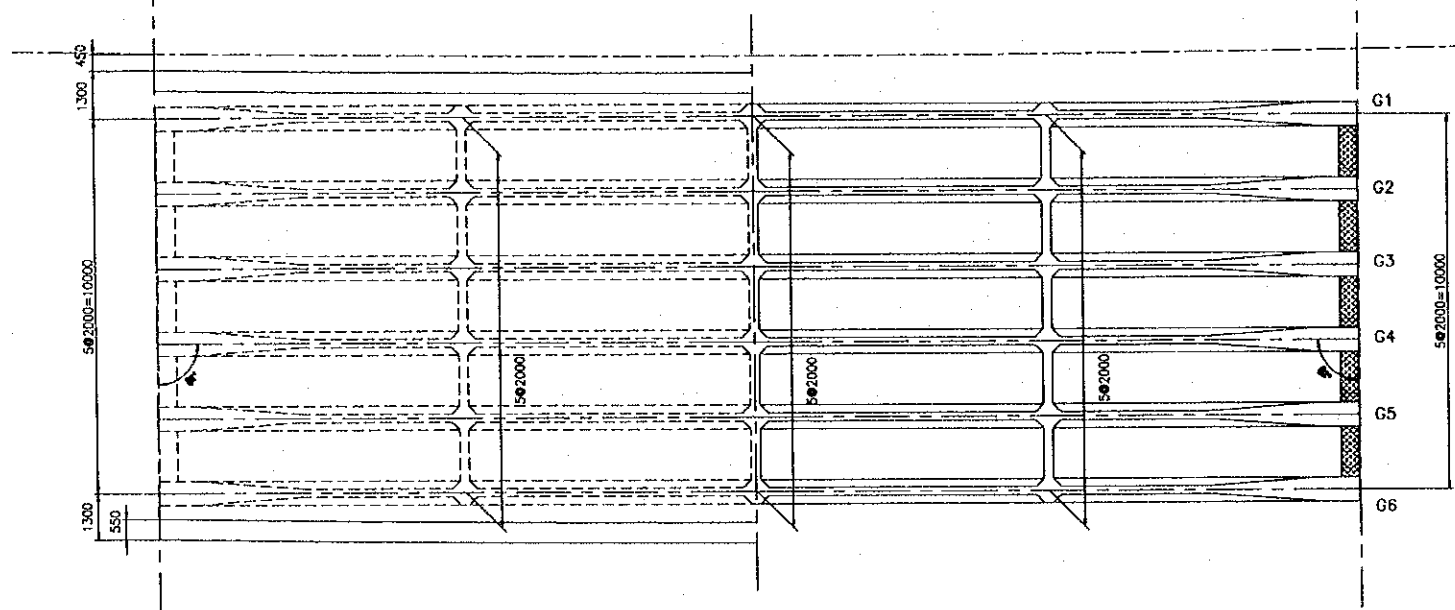
**SIDE VIEW**

S = 1:200



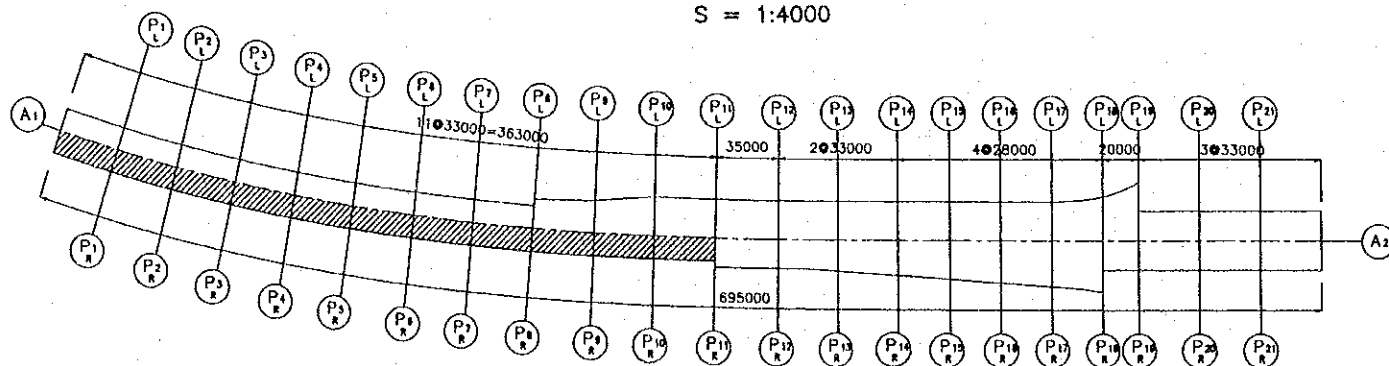
**PLAN**

S = 1:200



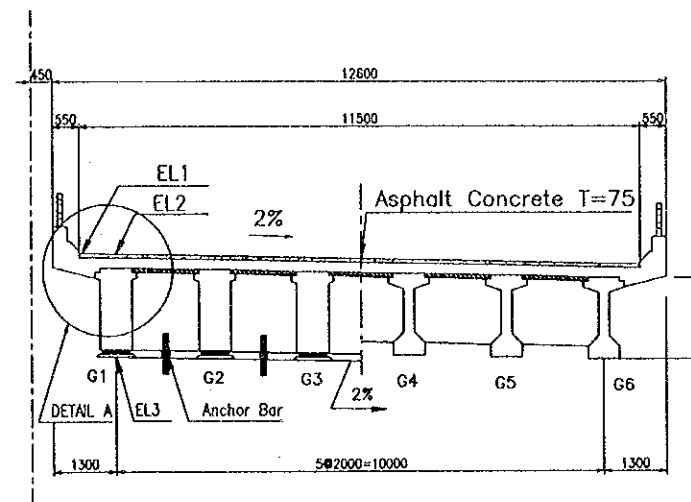
**KEY PLAN**

S = 1:4000



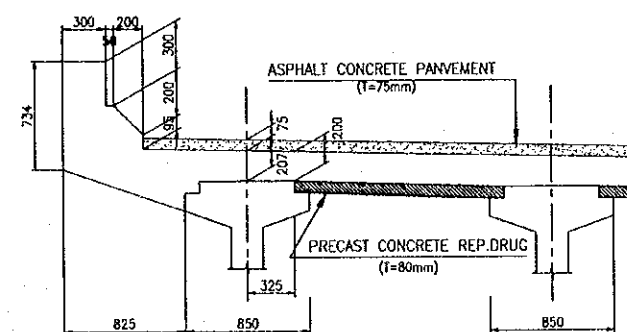
**TYPICAL CROSS SECTION OF SPAN**

S = 1:150



**DETAIL OF A**

S=1:50



\* Note :

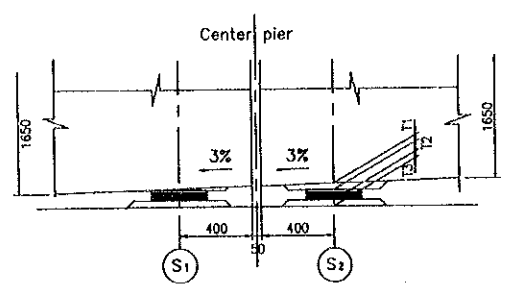
L, L1, 01, 02 Dimension See Drawings Detail of National Hight No.5 Fryover (1-2)



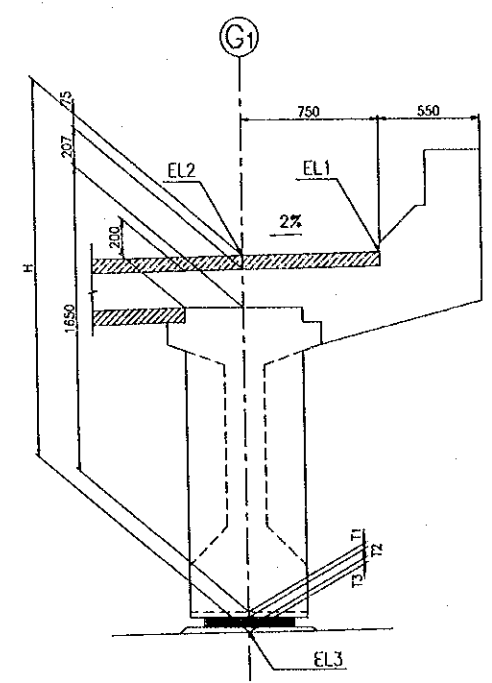
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (HANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2008.8.14

PACKAGE 2	SCALE	DRAWING No. C-1-2b-17	SHEET No.
DETAIL OF NH No.5 FLYOVER (13-2)			

DETAIL OF SHOES  
S = 1:40



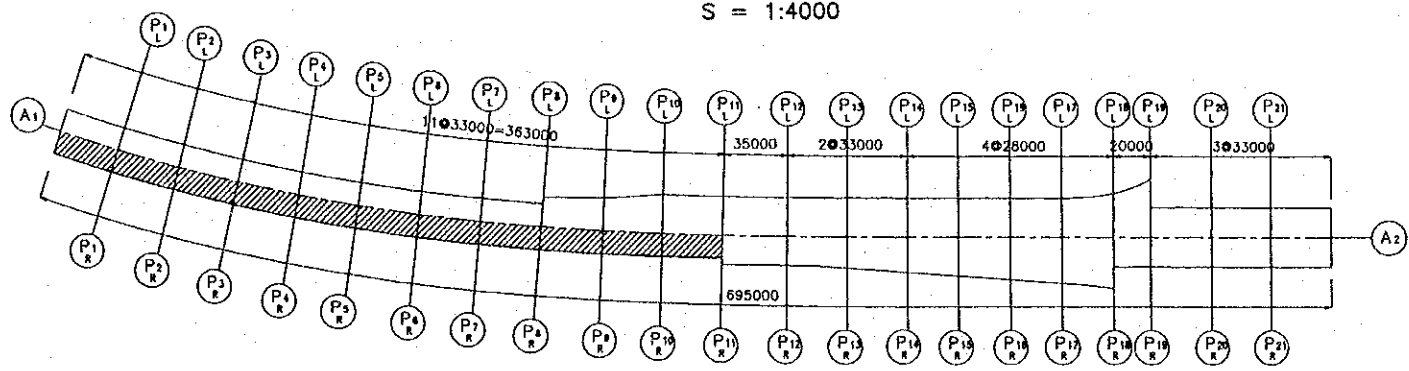
DETAIL (G)  
S = 1:40



	A1	P1 R		P2 R		P3 R		P4 R		P5 R		P6 R		P7 R		P8 R		P9 R		P10 R		P11 R		REMARKS
	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	
STATION	11+768.5	11+801.5		11+834.5		11+867.5		11+900.5		11+933.5		11+966.5		11+999.5		12+032.5		12+065.5		12+098.5		12+131.5		
SHOES CONDITION	FIX	MOVE	FIX	MOVE	FIX	MOVE	FIX	MOVE	FIX	MOVE	FIX	MOVE	FIX	MOVE	FIX	MOVE	FIX	MOVE	FIX	MOVE	FIX	MOVE	FIX	
SHOES TYPE	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	
EL1 (m)	11.065	11.462	11.474	11.996	12.012	12.632	12.648	13.218	13.232	13.731	13.744	14.172	14.183	14.541	14.549	14.836	14.843	15.060	15.064	15.210	15.213	15.288	15.289	
EL2 (m)	11.088	11.485	11.497	12.019	12.035	12.655	12.671	13.241	13.255	13.753	13.766	14.194	14.205	14.562	14.570	14.856	14.862	15.078	15.082	15.227	15.230	15.304	15.305	
PAVEMENT (mm)	95				80		85		75															
SLAB (mm)	210								209								208							
GIRDER (mm)	1650																						1,750	
T1 (mm)	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	
T2 (mm)	36	54	36	54	36	54	36	54	36	54	36	54	36	54	36	54	36	54	36	54	36	54	36	
T3 (mm)	30	20	50	20	69	20	64	20	52	20	51	20	49	20	46	20	47	20	42	20	41	101	20	
H (m)	2,041	2,049	2,061	2,049	2,065	2,039	2,055	2,029	2,043	2,029	2,042	2,028	2,039	2,028	2,036	2,028	2,037	2,027	2,031	2,027	2,030	2,108	2,109	
EL3 (m)	9.047	9.436	9.436	9.970	9.970	10.616	10.616	11.212	11.212	11.725	11.725	12.165	12.165	12.534	12.534	12.828	12.825	13.244	13.244	13.393	13.393	13.389	13.389	

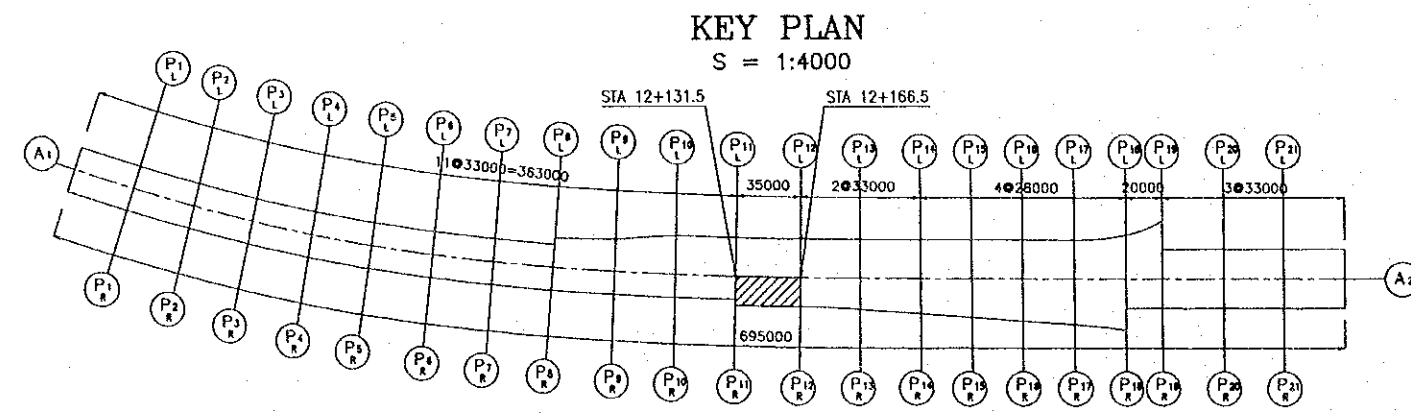
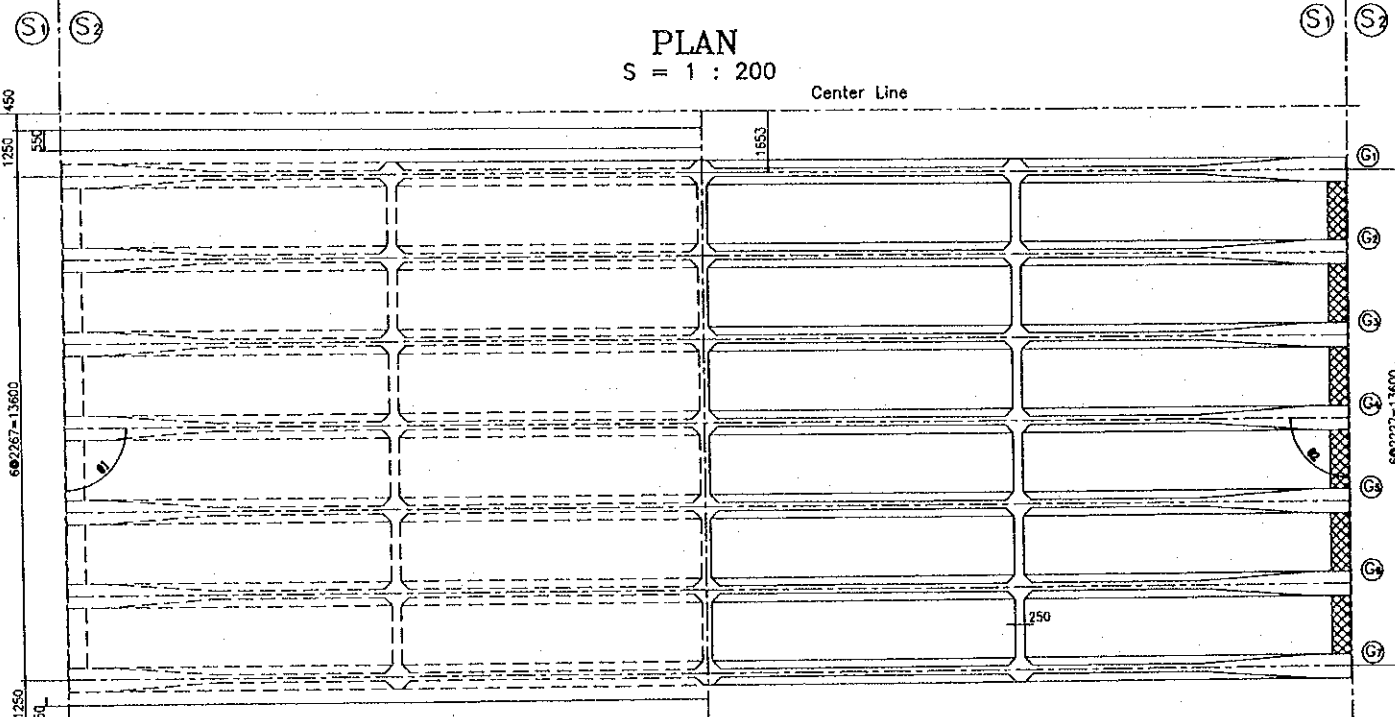
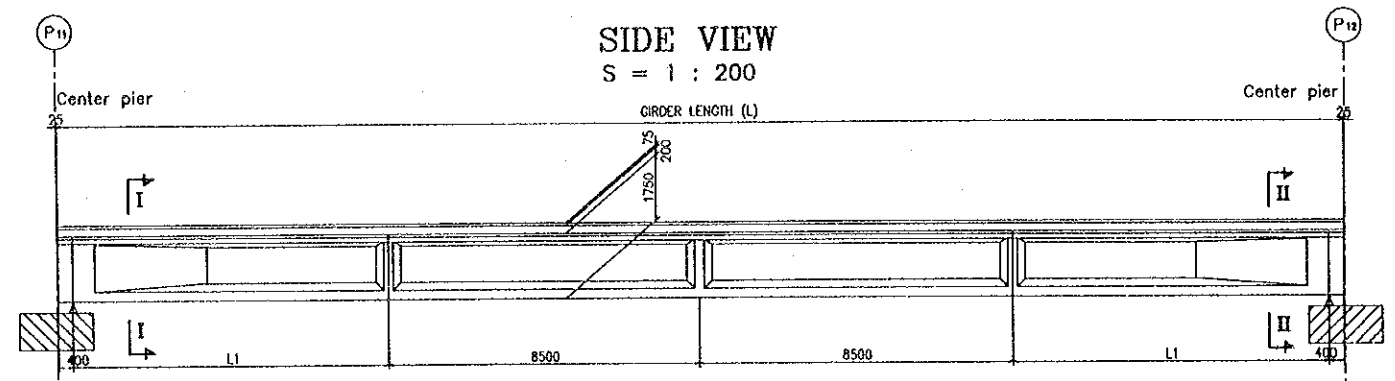
		A1R ~ P1R	P1R ~ P2R	P2R ~ P3R	P3R ~ P4R	P4R ~ P5R	P5R ~ P6R	P6R ~ P7R	P7R ~ P8R	P8R ~ P9R	P9R ~ P10R	P10R ~ P11R	REMARKS
		L (mm)	G1	33006	33006	33006	33006	33006	33003	32997	32992	32986	
	G2	33072	33072	33072	33072	33072	33065	33052	33040	33028	33016	33003	
	G3	33138	33138	33138	33138	33137	33126	33107	33088	33069	33051	33032	
	G4	33204	33204	33204	33204	33203	33188	33162	33136	33111	33086	33061	
	G5	33270	33270	33270	33270	33268	33250	33217	33185	33155	33121	33089	
	G6	33336	33336	33336	33336	33334	33312	33272	33233	33195	33156	33118	
	L1 (mm)	G1	8103	8103	8103	8103	8102	8099	8096	8093	8090	8088	
	G2	8136	8136	8136	8136	8114	8133	8126	8120	8114	8108	8102	
	G3	8169	8169	8169	8169	8169	8163	8154	8144	8135	8126	8116	
	G4	8202	8202	8202	8202	8202	8194	8181	8168	8156	8143	8131	
	G5	8235	8235	8235	8235	8233	8225	8209	8193	8178	8161	8145	
	G6	8268	8268	8268	8268	8267	8256	8236	8217	8198	8178	8159	
θ1 (degree)	G1 ~ G6	90.95	90.95	90.95	90.95	90.94	90.91	90.80	90.71	90.61	90.52	90.42	
θ2 (degree)	G1 ~ G6	90.95	90.95	90.95	90.95	90.94	90.86	90.77	90.68	90.58	90.49	90.40	

KEY PLAN  
S = 1:4000



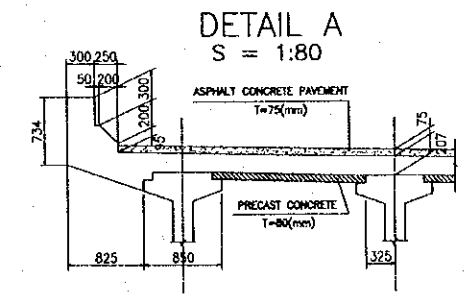
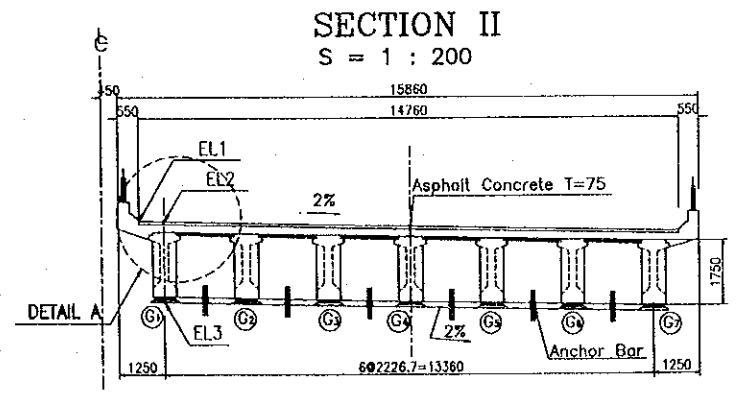
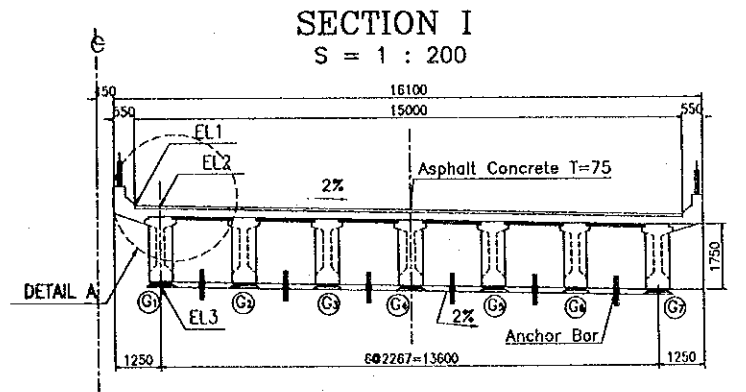
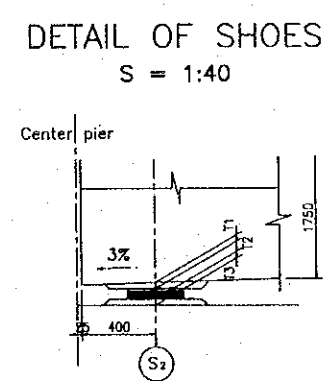
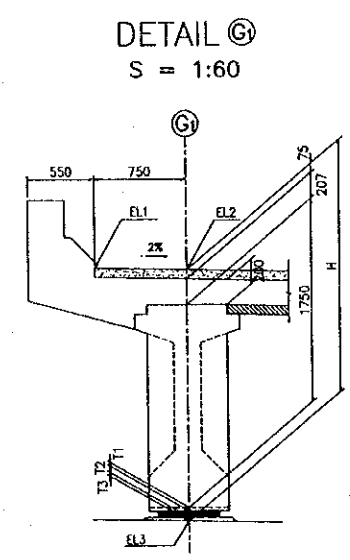
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LOAN PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		DESIGNED BY S. MATSUDA
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE 
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.3.14

PACKAGE 2	SCALE	DRAWING No. C-1-2b-1B	SHEET No.
DETAIL OF NH No.5 FLYOVER (14)			



GIRDER	L (mm)	L1 (mm)	θ1 (mm)	θ2 (mm)
G1	34969	8584.5	90.346°	90.313°
G2	34995	8597.5	90.412°	90.247°
G3	35021	8610.5	90.477°	90.182°
G4	35047	8623.5	90.542°	90.117°
G5	35073	8636.5	90.608°	90.052°
G6	35099	8649.5	90.673°	89.986°
G7	35125	8662.5	90.739°	89.921°

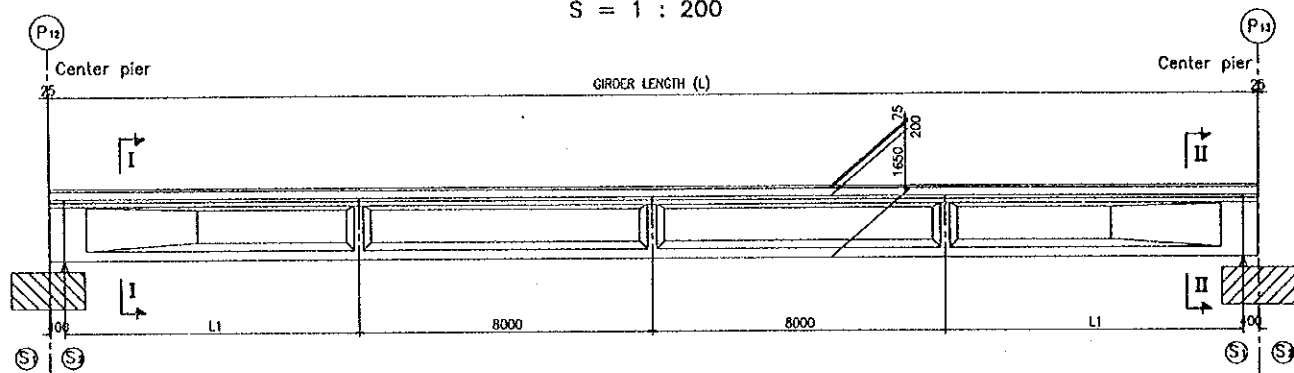
	P11R	P12R	REMARKS
SHOES CONDITION	FIX	MOVE	
SHOES TYPE	A	B	
EL1 (m)	15.289	15.291	
EL2 (m)	15.305	15.306	
PAVEMENT (mm)	75		
SLAB (mm)	208	207	
GIRDER (mm)	1750		
T1 (mm)	20	20	
T2 (mm)	36	54	
T3 (mm)	20	20	
H (m)	2.109	2.126	
EL3 (m)	13.197	13.180	



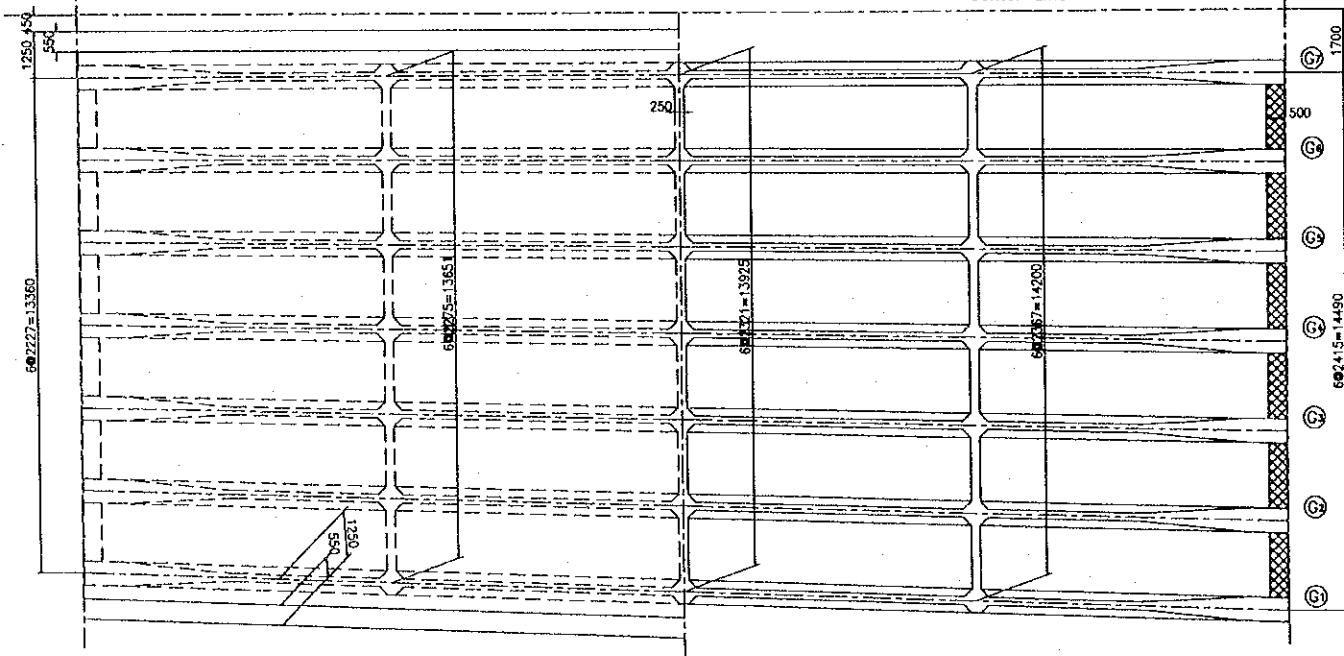
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT	DESIGNED BY S. WATASE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	NAME S. WATASE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.3.14

PACKAGE 2	SCALE C-1-2b-19	DRAWING No. C-1-2b-19	SHEET No.
DETAIL OF NH No.5 FLYOVER (15)			

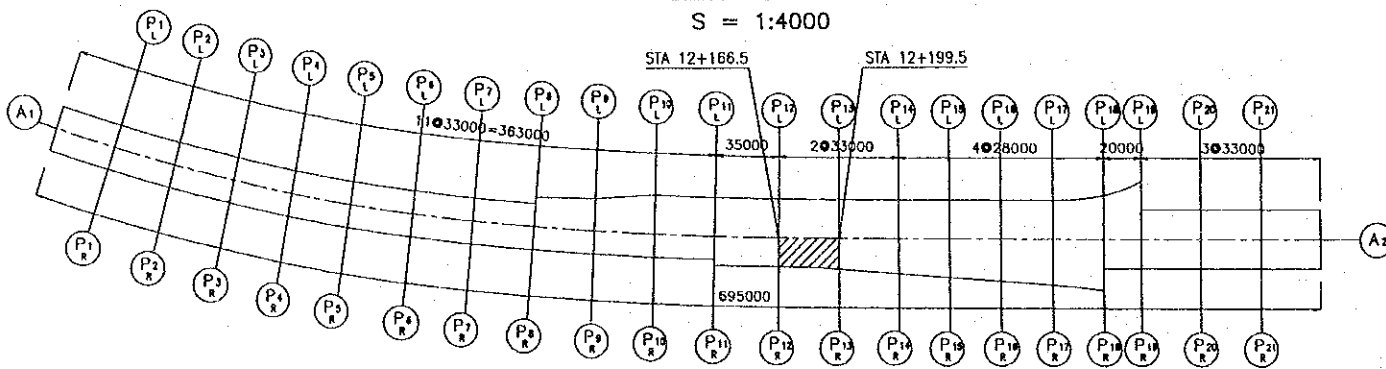
**SIDE VIEW**  
S = 1 : 200



**PLAN**  
S = 1 : 200



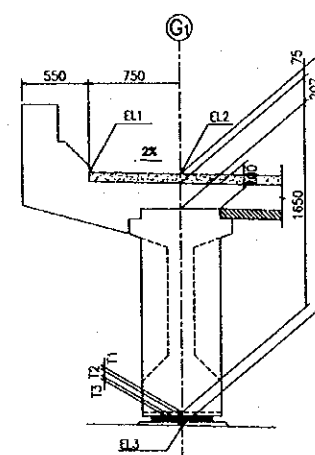
**KEY PLAN**  
S = 1:4000



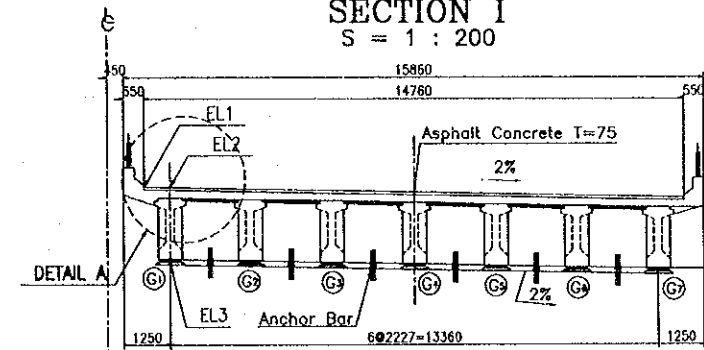
GIRDER	L (mm)	L1 (mm)	Ø1	Ø2
G1	32963	8081.5	90.232'	90.199'
G2	32981	8090.5	89.905'	90.526'
G3	33000	8100	89.588'	90.852'
G4	33020	8110	89.253'	91.178'
G5	33041	8120.5	88.927'	91.503'
G6	33063	8131.5	88.602'	91.828'
G7	33086	8134	88.278'	92.153'

	P12R	P13R	REMARKS
	S2	S1	
SHOES CONDITION	FIX	MOVE	
SHOES TYPE	A	B	
EL1 (m)	15.290	15.220	
EL2 (m)	15.305	15.235	
PAVEMENT (mm)	75		
SLAB (mm)	207		
GIRDER (mm)	1650		
T1 (mm)	20	20	
T2 (mm)	36	54	
T3 (mm)	137	20	
H (m)	2.125	2.026	
EL3 (m)	13.180	13.209	

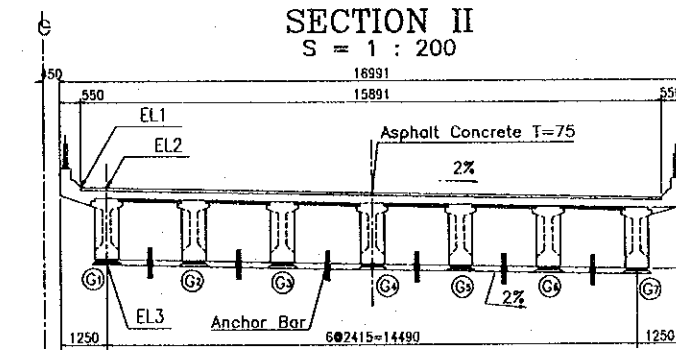
**DETAIL G1**  
S = 1:60



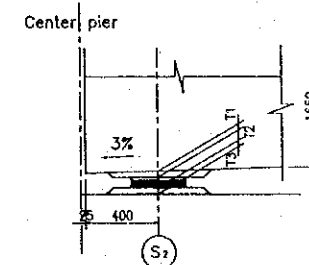
**SECTION I**  
S = 1 : 200



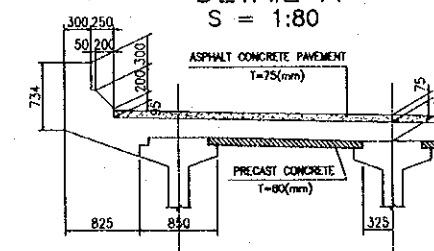
**SECTION II**  
S = 1 : 200



**DETAIL OF SHOES**  
S = 1:40

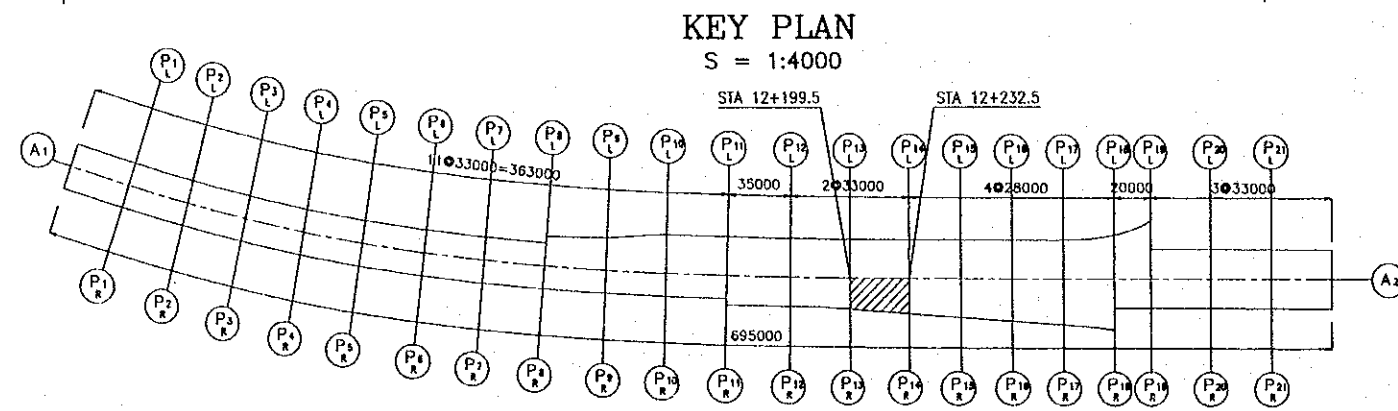
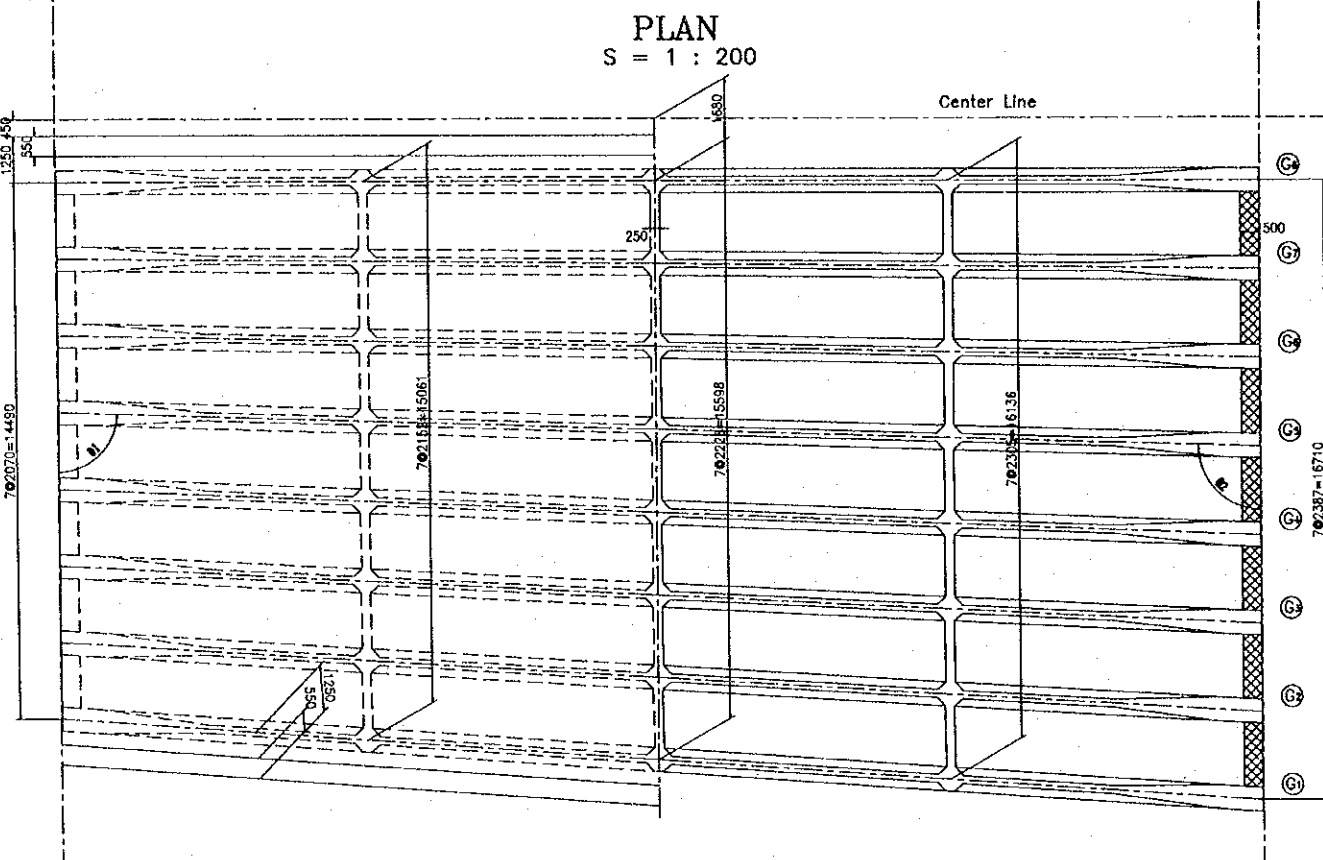
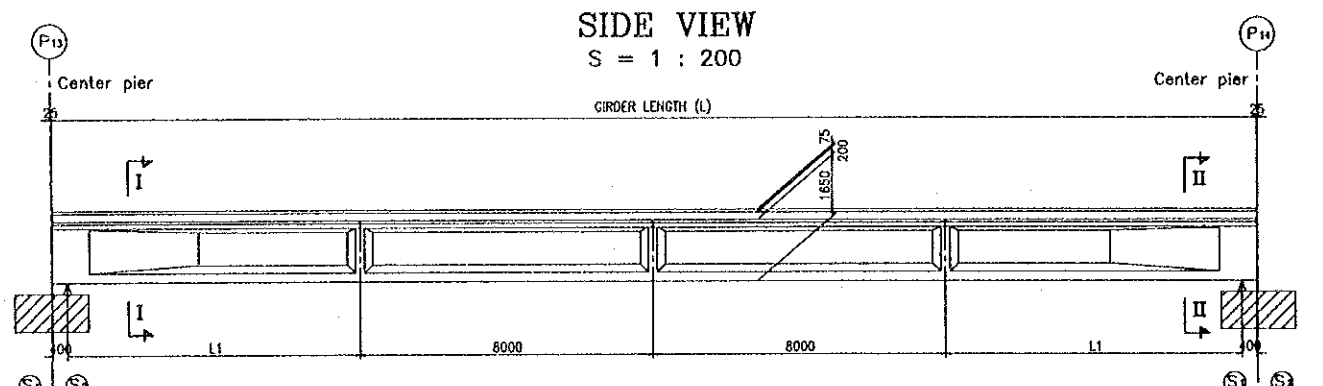


**DETAIL A**  
S = 1:80



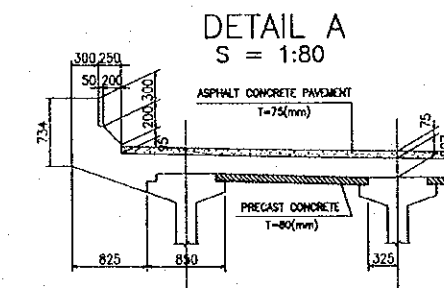
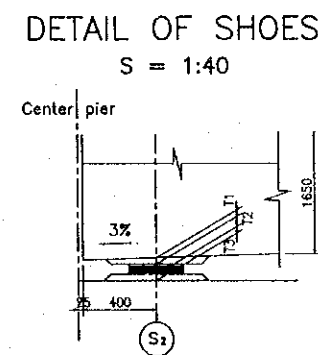
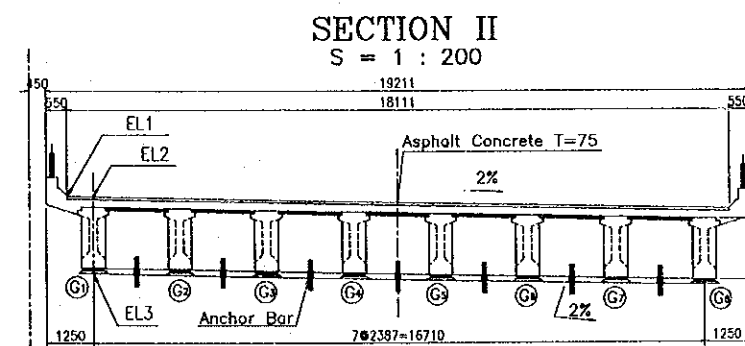
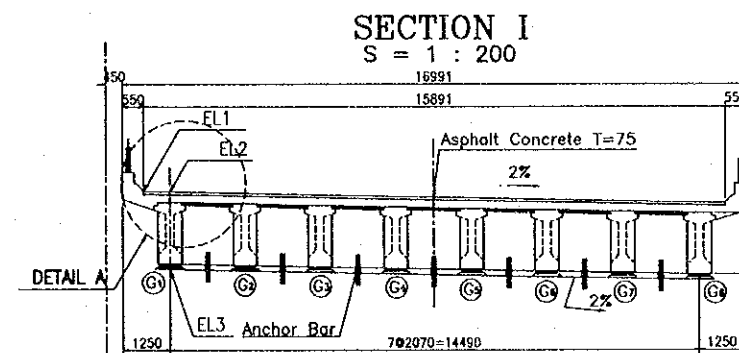
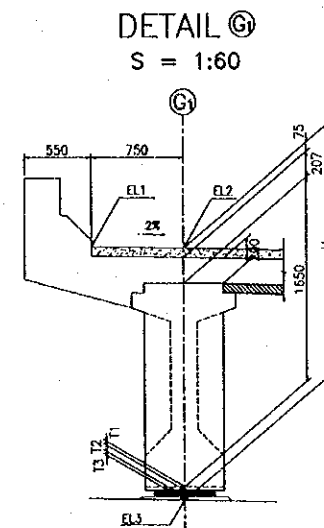
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANH LOANG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. NATAGE
JICA INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.02.17	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE C-1-2b-20	DRAWING No. C-1-2b-20	SHEET No.
DETAIL OF NH No.5 FLYOVER (18)			



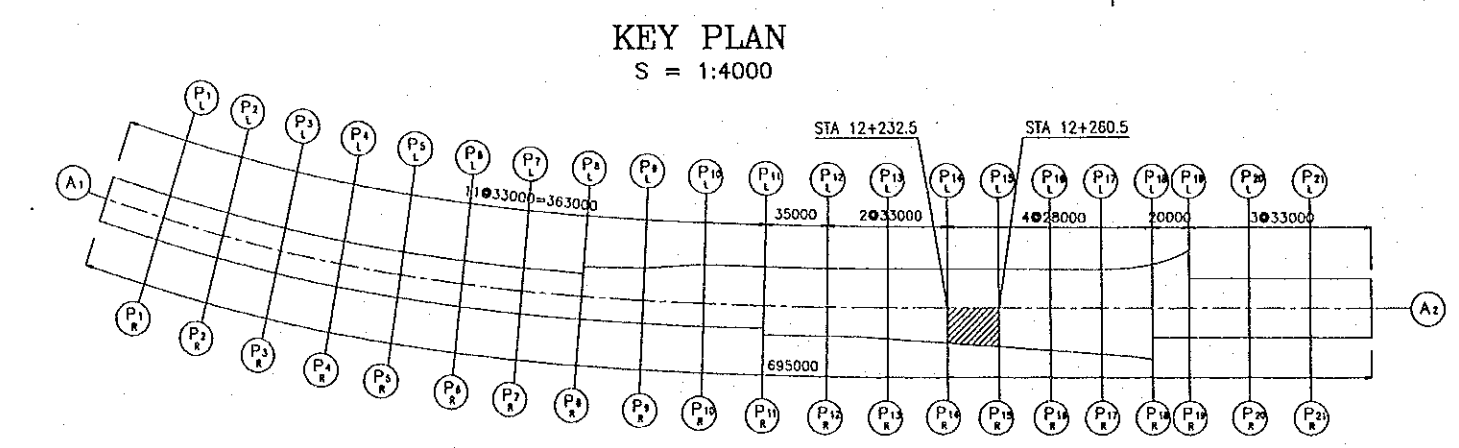
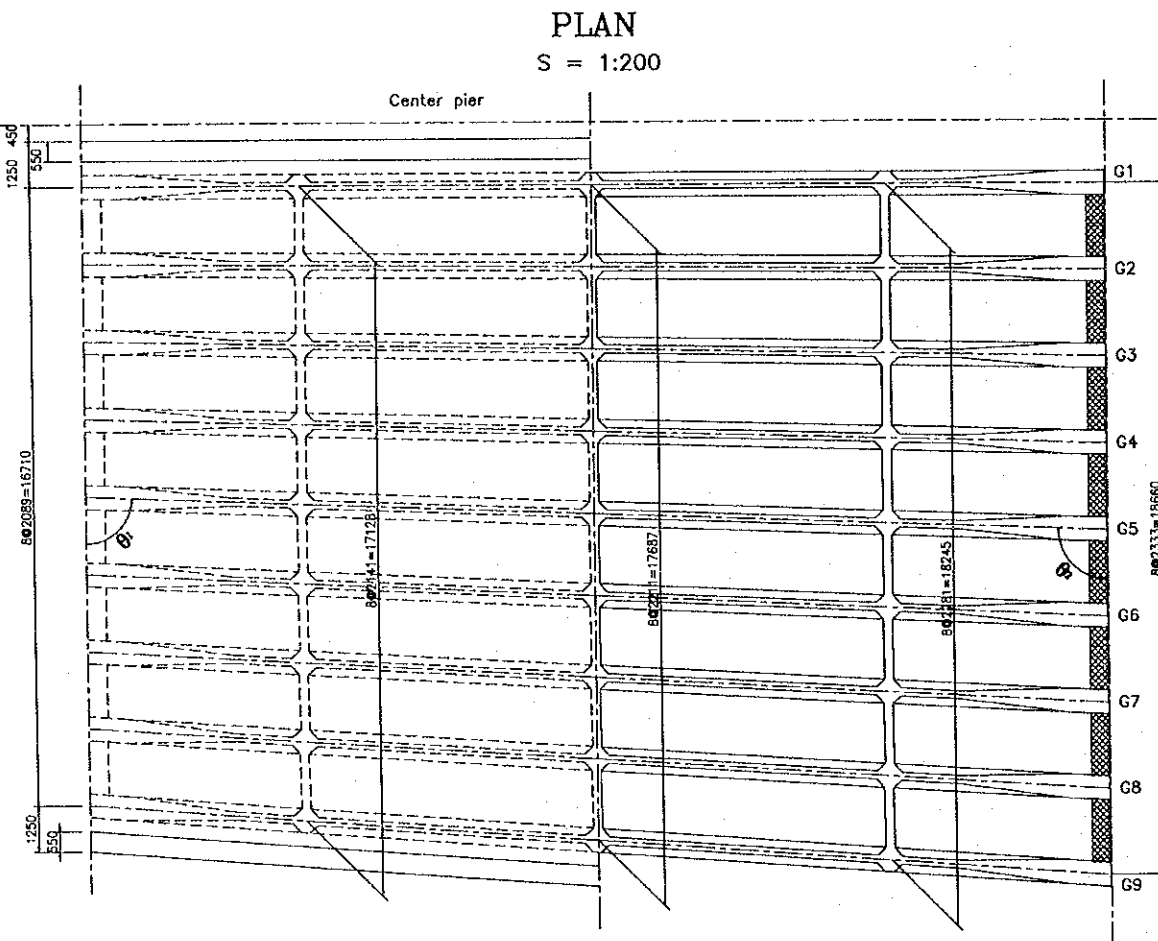
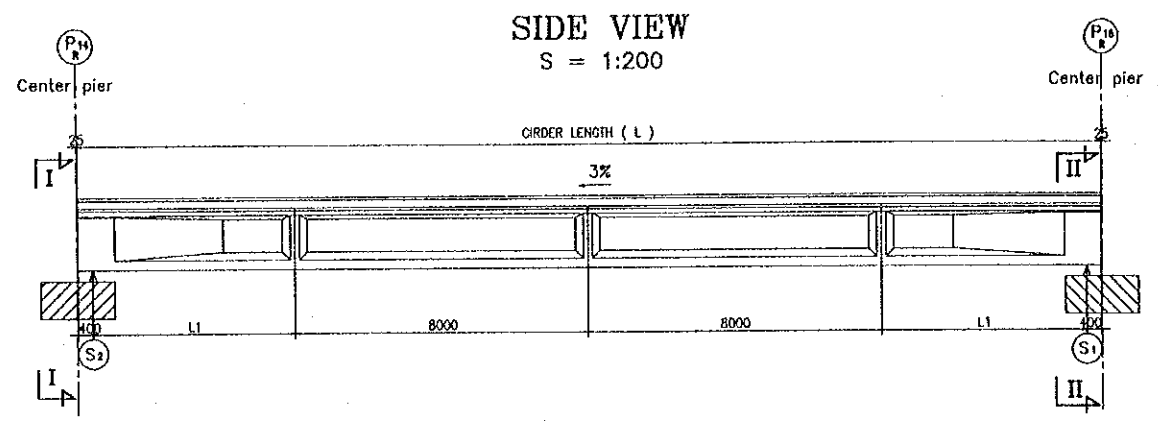
GIRDER	L (mm)	L1 (mm)	θ1	θ2
G1	32957	8078.5	90.140°	90.111°
G2	32969	8084.5	89.589°	90.662°
G3	32983	8091.5	89.039°	91.213°
G4	33000	8100	88.489°	91.763°
G5	33020	8110	87.939°	92.312°
G6	33044	8122	87.391°	92.861°
G7	33070	8135	86.843°	93.408°
G8	33100	8150	86.296°	93.955°

	P13r	P14r	REMARKS
	S2	S1	
SHOES CONDITION	FIX	MOVE	
SHOES TYPE	A	B	
EL1 (m)	15.217	15.075	
EL2 (m)	15.232	15.087	
PAVEMENT (mm)	75		
SLAB (mm)	207		
GIRDER (mm)	1650		
T1 (mm)	20	20	
T2 (mm)	36	54	
T3 (mm)	35	20	
H (m)	2.023	2.025	
EL3 (m)	13.209	13.062	

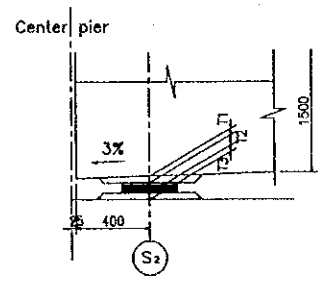


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (DANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONTRACTOR PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000. 8. 14	

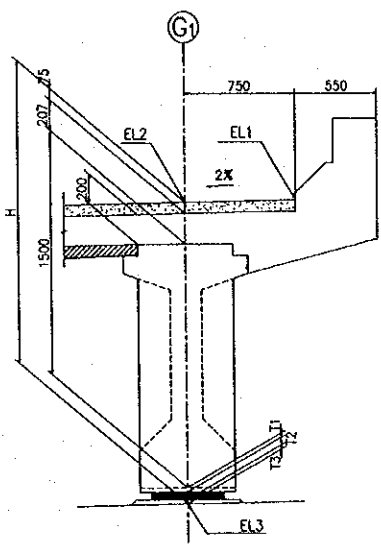
PACKAGE 2	SCALE 1/200	DRAWING No. C-1-2b-21	SHEET No.
DETAIL OF NH No.5 FLYOVER (17)			



DETAIL OF SHOES  
S = 1:40

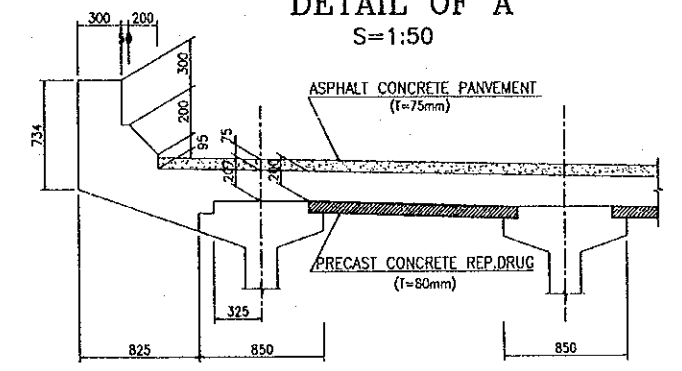


DETAIL G  
S = 1:50

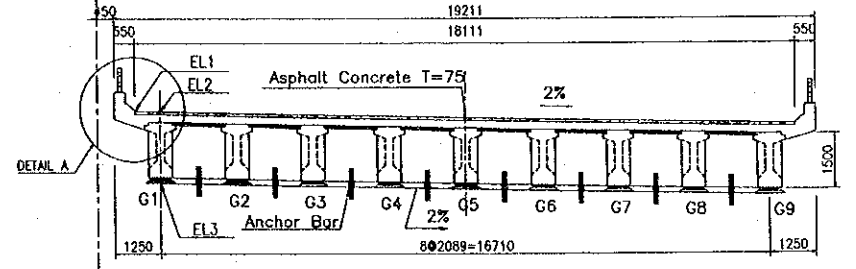


GIRDER	L (mm)	L1 (mm)	θ <sub>1</sub> (degree)	θ <sub>2</sub> (degree)			REMARKS
					P14R S2	P15R S1	
G1	27952	5576	90.02	90.02	SHOES CONDITION	FIX	MOVE
G2	27954	5577	89.52	90.52	SHOES TYPE	A	C
G3	27959	5580	89.03	91.02	EL1 (m)	15.071	14.896
G4	27967	5584	88.53	91.52	EL2 (m)	15.082	14.882
G5	27976	5588	88.03	92.02	PAVEMENT (mm)	75	
G6	27988	5594	87.53	92.52	SLAB (mm)	207	
G7	28001	5601	87.03	93.02	GIRDER (mm)	1500	
G8	28017	5609	86.53	93.52	T1 (mm)	20	20
G9	28035	5618	86.03	94.02	T2 (mm)	36	44
					T3 (mm)	184	30
					H (m)	2,020	1,876
					EL3 (m)	13.198	13.198

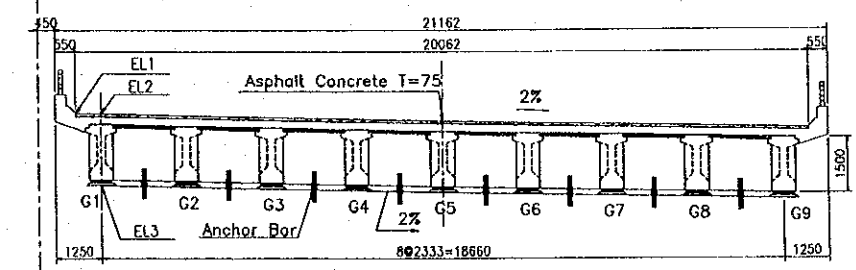
DETAIL OF A  
S = 1:50



SECTION I  
S = 1:200

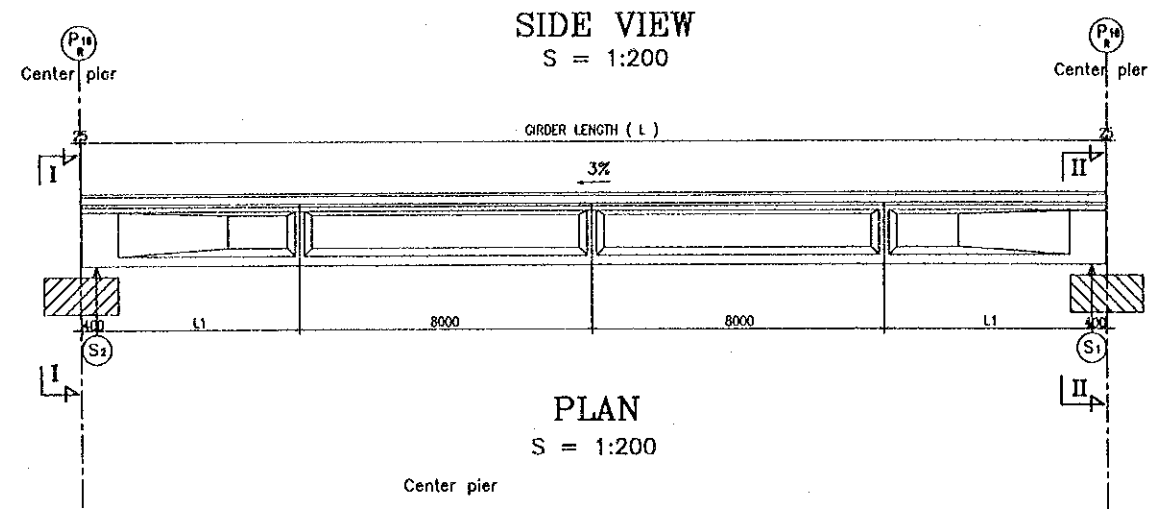


SECTION II  
S = 1:200

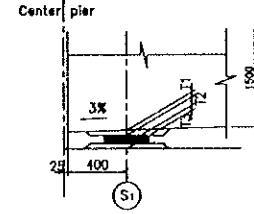


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONTRACTOR PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.3.14

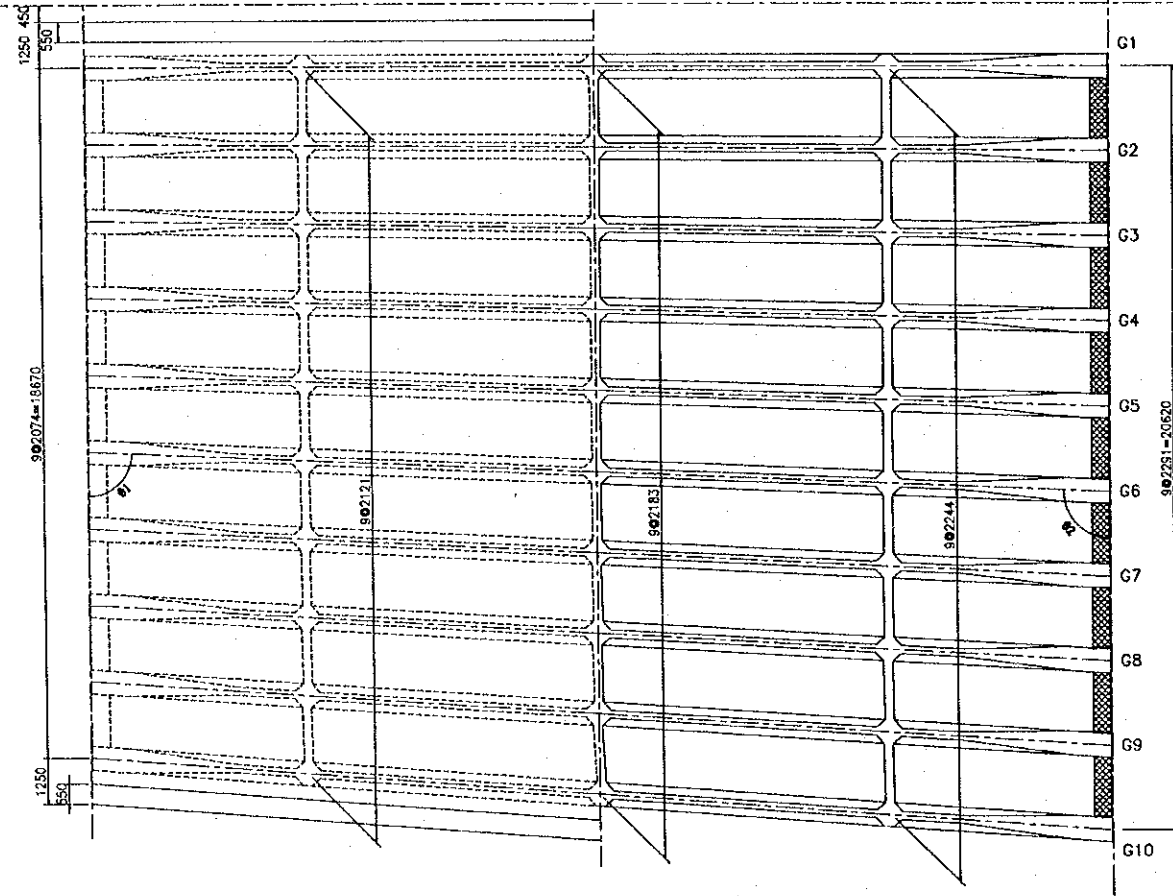
PAGE	SCALE	DRAWING No.	SHEET No.
2	1/200	C-1-2b-22	
DETAIL OF NH No.5 FLYOVER (18)			



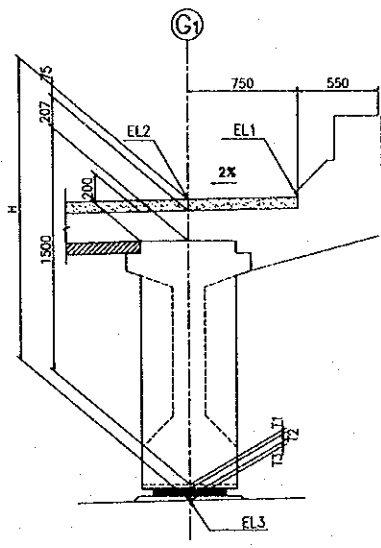
**DETAIL OF SHOES**  
S = 1:50



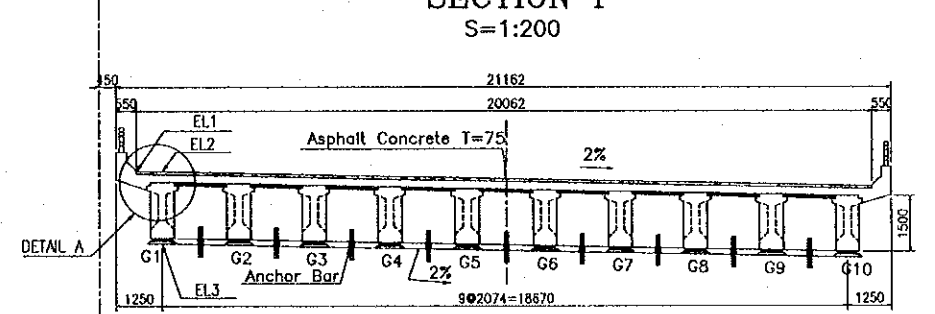
GIRDER	L (mm)	L1 (mm)	θ <sub>1</sub> (degree)	θ <sub>2</sub> (degree)	P15 <sub>R</sub>		REMARKS
					S2	S1	
G1	27950	6475	90.00	90.00	FIX	MOVE	
G2	27951	5576	89.56	90.44	A	C	
G3	27953	5577	89.11	90.89	EL1 (m)	14.890	14.665
G4	27958	5579	88.67	91.33	EL2 (m)	14.876	14.651
G5	27964	5582	88.22	91.78	PAVEMENT (mm)	75	
G6	27971	5586	87.78	92.22	SLAB (mm)	207	
G7	27980	5590	73.33	92.67	GIRDER (mm)	1,500	
G8	27991	5596	86.89	93.11	T1 (mm)	20	20
G9	28004	5602	86.45	93.55	T2 (mm)	36	44
G10	28018	5609	86.00	94.00	T3 (mm)	32	30
					H (m)	1,870	1,876
					EL3 (m)	13.198	12.967



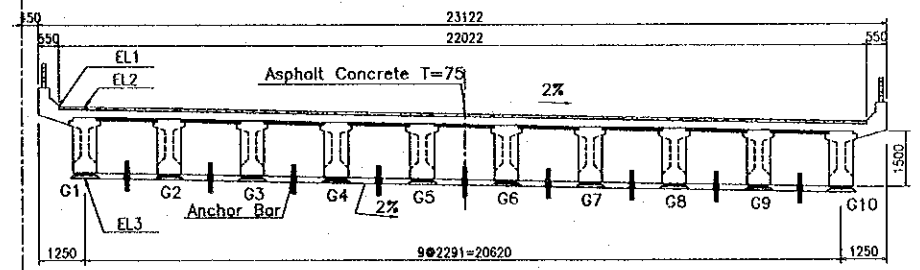
**DETAIL G<sub>1</sub>**  
S = 1:50



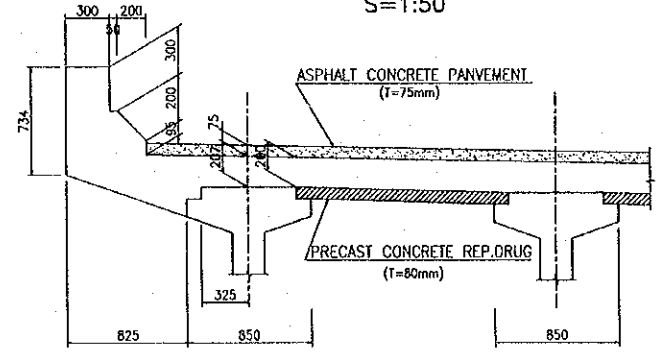
**SECTION I**  
S=1:200



**SECTION II**  
S=1:200



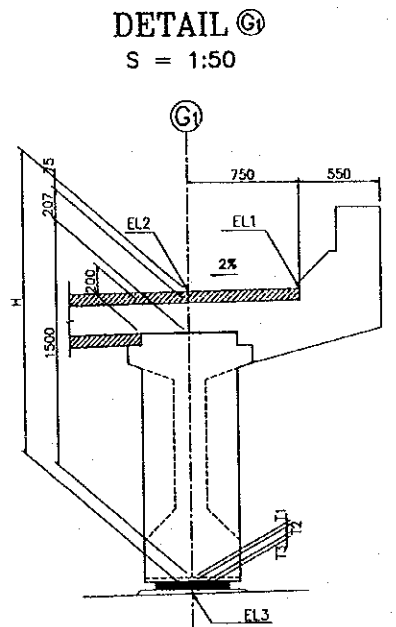
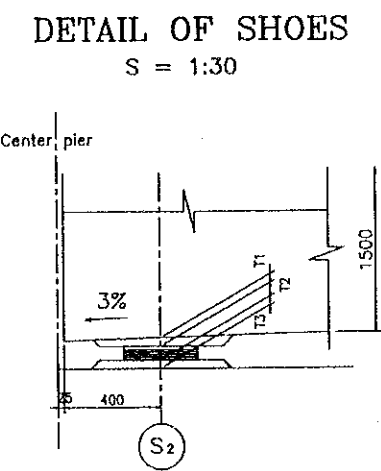
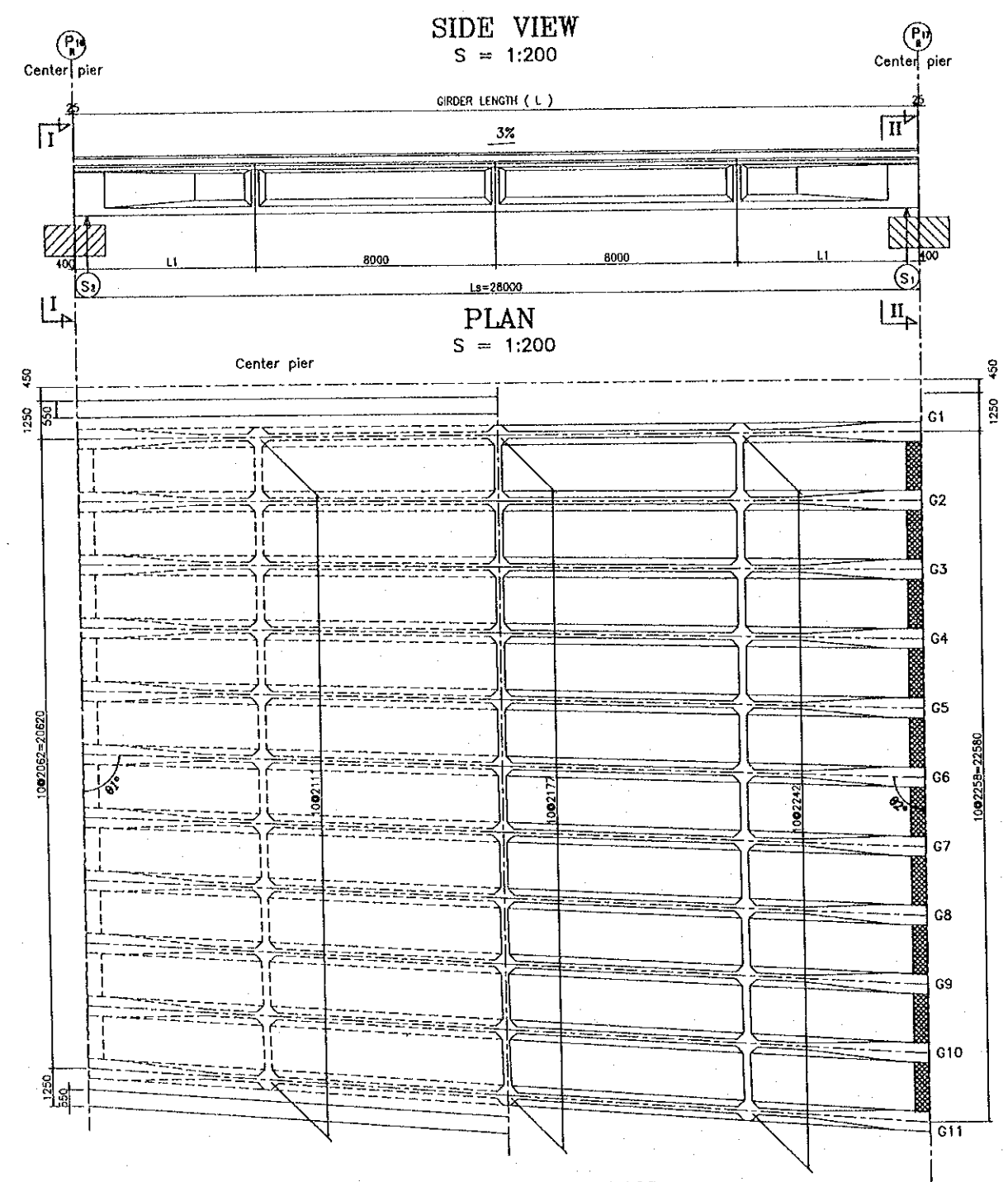
**DETAIL OF A**  
S=1:50



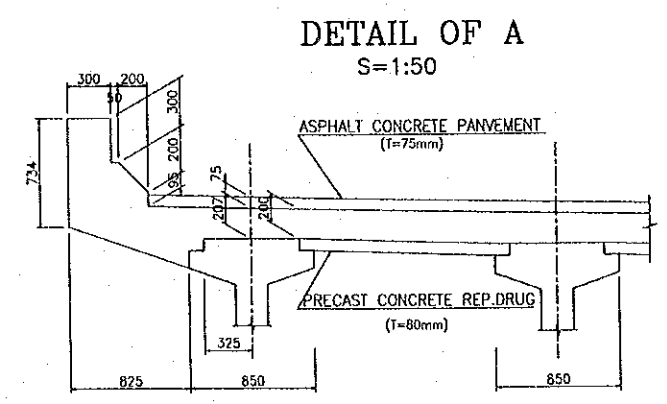
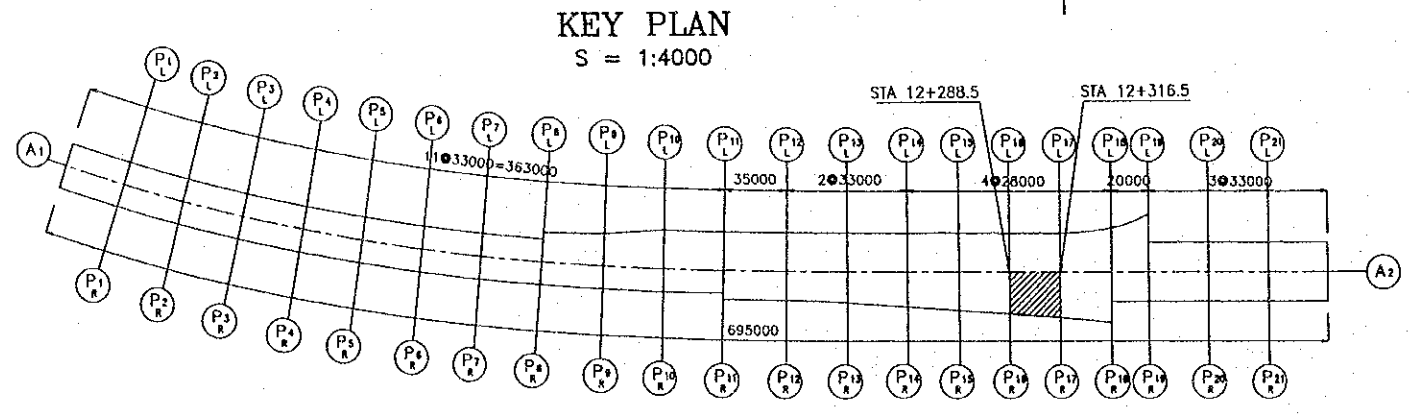
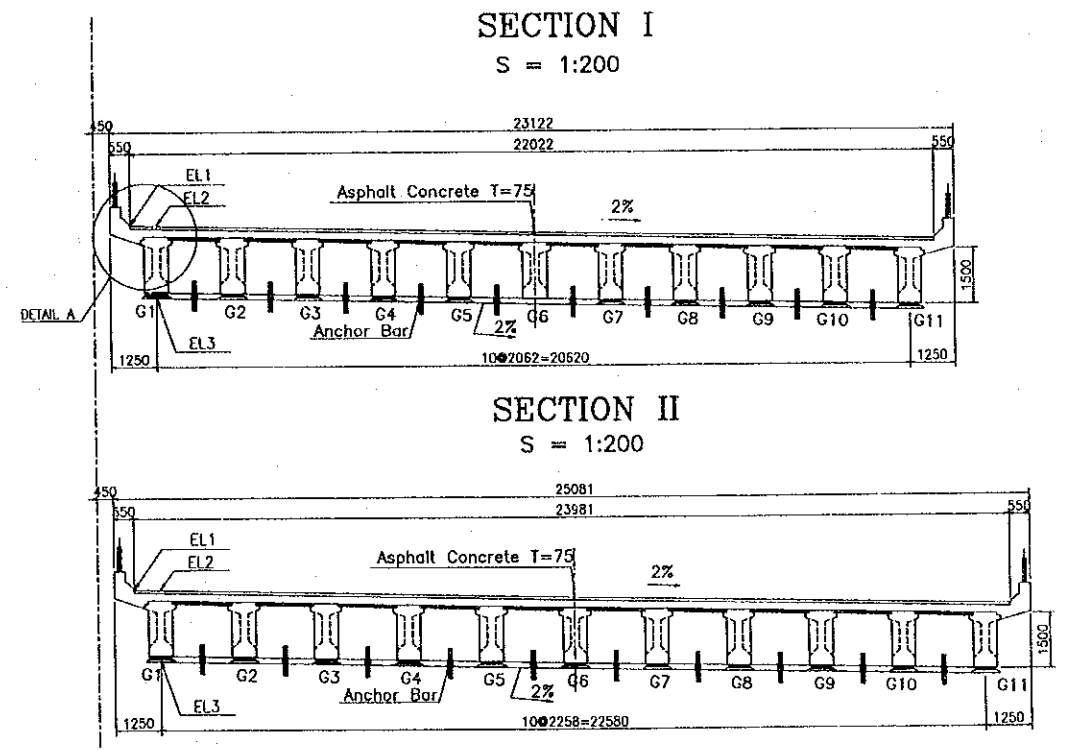
100

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATADE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	DATE 2000. 8. 14
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/200	DRAWING No. C-1-2b-23	SHEET No.
DETAIL OF NH No.5 FLYOVER (19)			



GIRDER	L (mm)	L1 (mm)	θ1 (degree)	θ2 (degree)			REMARKS
					P16 <sub>R</sub>	P17 <sub>R</sub>	
G1	27950	5575	90.00	90.00	FIX	MOVE	
G2	27951	5576	89.53	90.47			
G3	27954	5577	89.06	90.94			
G4	27958	5579	88.59	91.41			
G5	27965	5583	88.12	91.88			
G6	27973	5587	87.65	92.35			
G7	27984	5592	87.19	92.81			
G8	27996	5598	86.72	93.28			
G9	28010	5605	86.25	93.75			
G10	28026	5613	85.78	94.22			
G11	28044	5622	85.32	94.86			
SHOES CONDITION					FIX	MOVE	
SHOES TYPE					A	C	
EL1 (m)					14.657	14.381	
EL2 (m)					14.643	14.367	
PAVEMENT (mm)					75		
SLAB (mm)					207		
GIRDER (mm)					1,500		
T1 (mm)					20	20	
T2 (mm)					44	36	
T3 (mm)					30	30	
H (m)					1,684	1,676	
EL3 (m)					12,967	12,967	

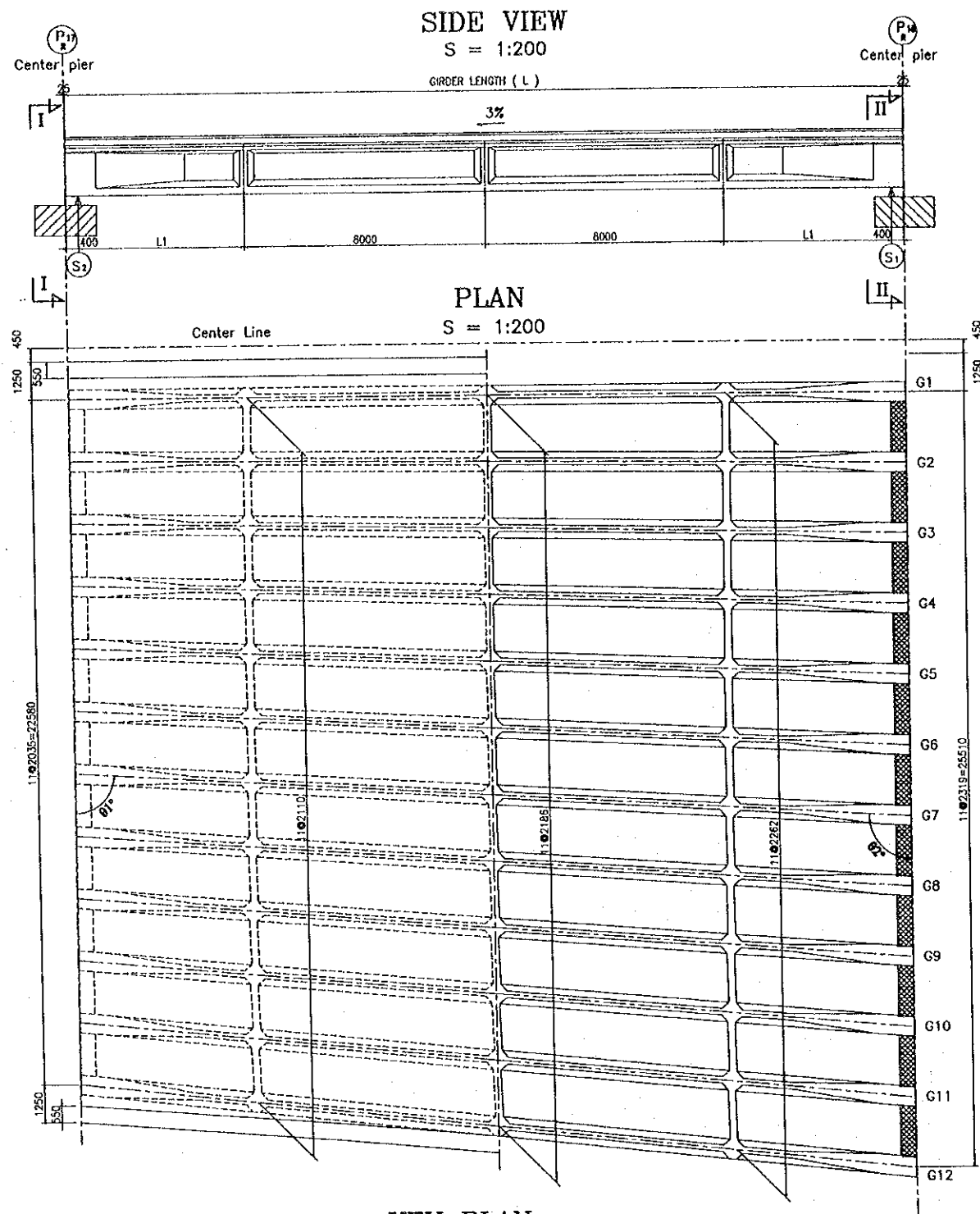


100

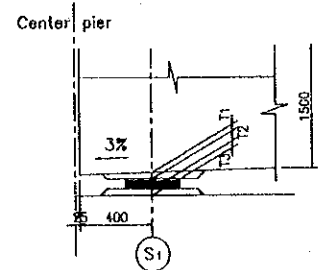


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THUNG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (DANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.2.18	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

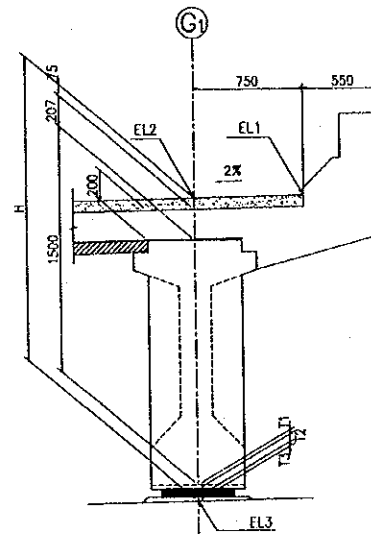
PACKAGE 2	SCALE 1/200	DRAWING No. C-1-2b-24	SHEET No.
DETAIL OF NH No.5 FLYOVER (20)			



**DETAIL OF SHOES**  
S = 1:40

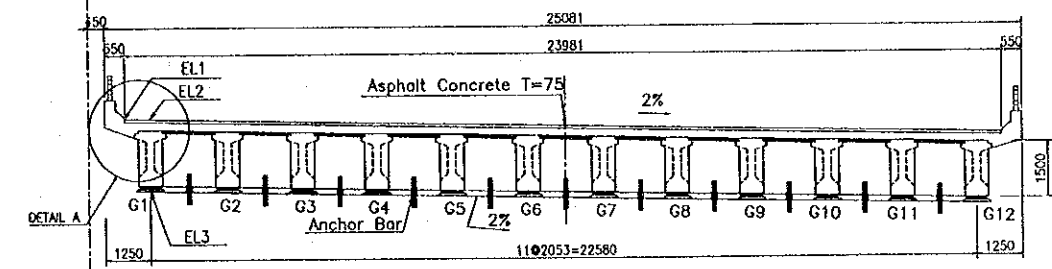


**DETAIL G1**  
S = 1:50

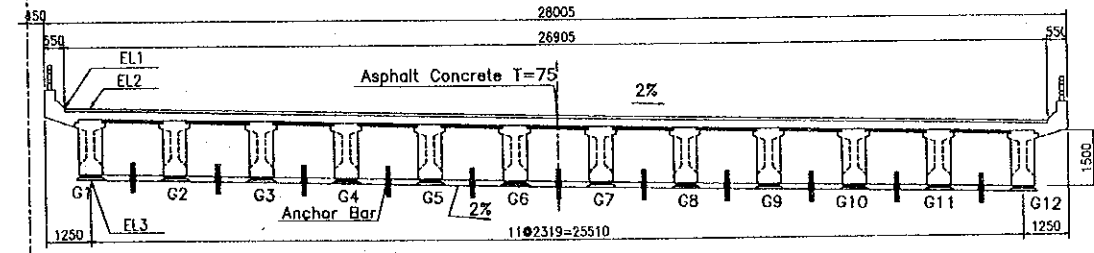


GIRDER	L (mm)	L1 (mm)	θ1 (degree)	θ2 (degree)	P17r		REMARKS
					S2	S1	
G1	27950	5575	90.00	90.00	FIX	MOVE	
G2	27951	5576	89.45	90.55			
G3	27955	5578	88.91	91.09			
G4	27961	5581	88.36	91.64			
G5	27970	5585	87.82	92.18			
G6	27982	5591	87.28	92.72			
G7	27996	5598	86.73	93.27			
G8	28012	5606	86.19	93.81			
G9	28031	5616	85.65	94.35			
G10	28052	5626	85.10	94.90			
G11	28076	5638	84.56	95.44			
G12	28103	5652	84.02	95.98			
SHOES CONDITION					FIX	MOVE	
SHOES TYPE					A	C	
EL1 (m)					14.371	14.044	
EL2 (m)					14.357	14.030	
PAVEMENT (mm)					75		
SLAB (mm)					207		
GIRDER (mm)					1,500		
T1 (mm)					20	20	
T2 (mm)					36	44	
T3 (mm)					30	173	
H (m)					1,868	2,019	
EL3 (m)					12.490	12.012	

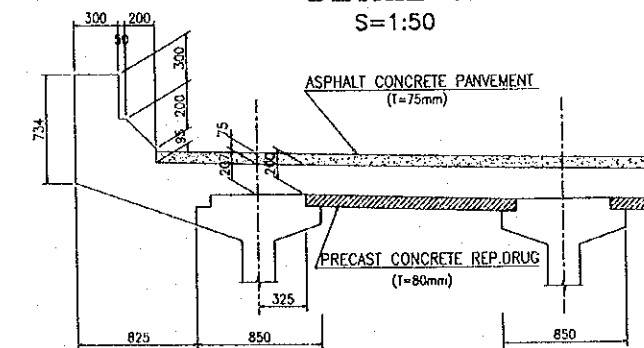
**SECTION I**  
S = 1:200



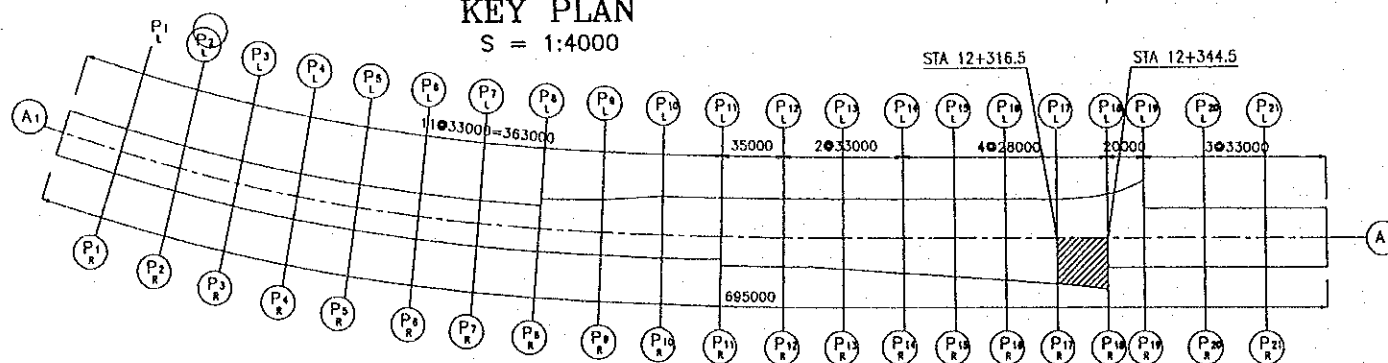
**SECTION II**  
S = 1:200



**DETAIL OF A**  
S=1:50



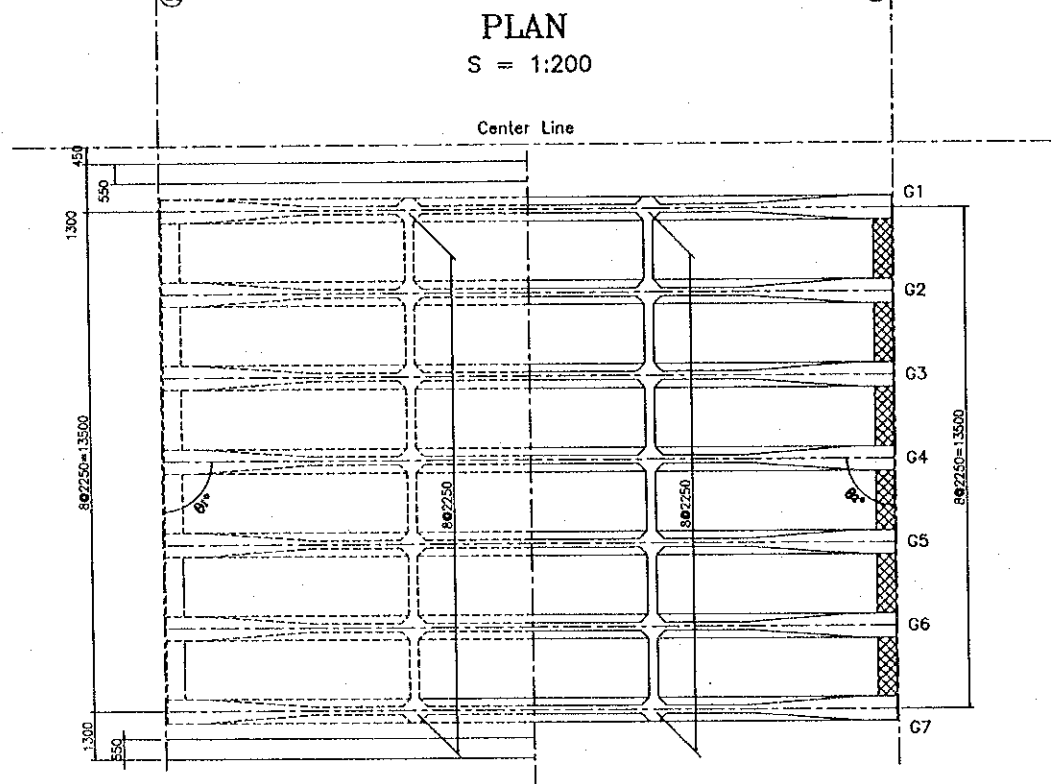
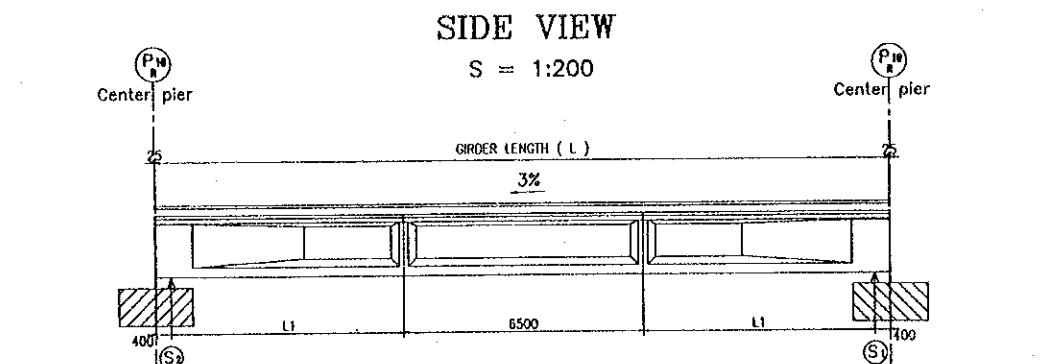
**KEY PLAN**  
S = 1:4000



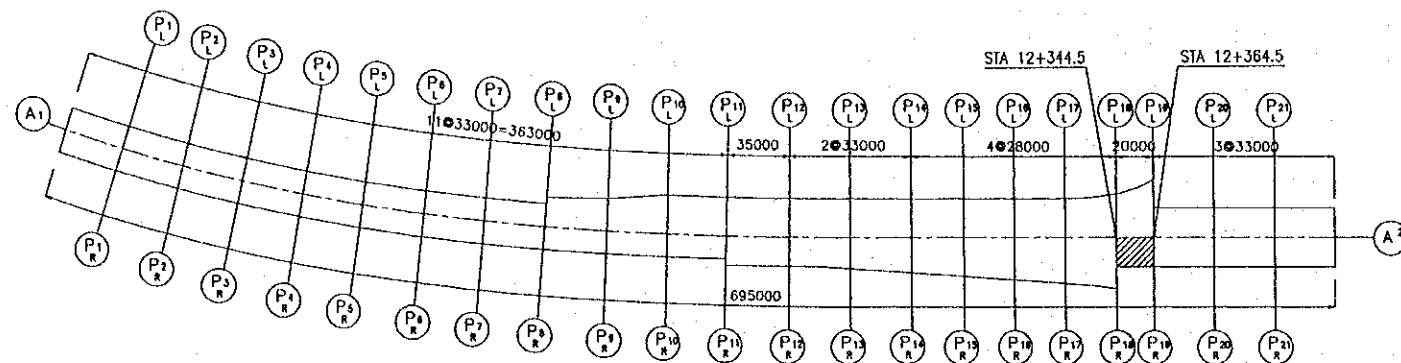


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONTRACTOR PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000. 3. 14	

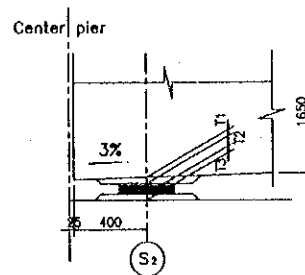
PACKAGE 2	SCALE 1/200	DRAWING No. C-1-2b-25	SHEET No.
DETAIL OF NH No.5 FLYOVER (21)			



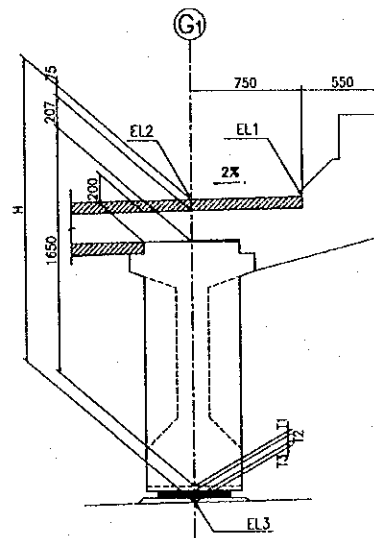
KEY PLAN  
S = 1:4000



DETAIL OF SHOES  
S = 1:40



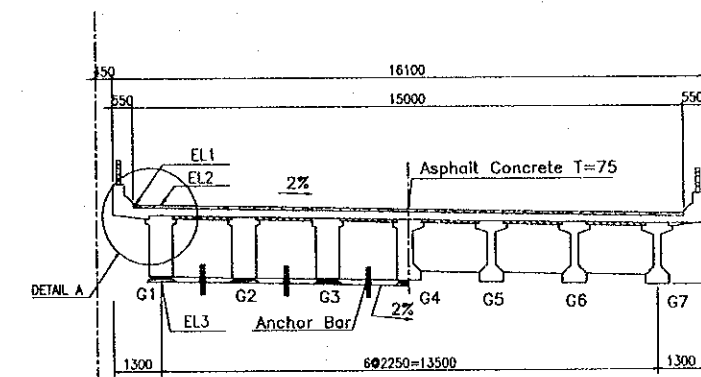
DETAIL G1  
S = 1:50



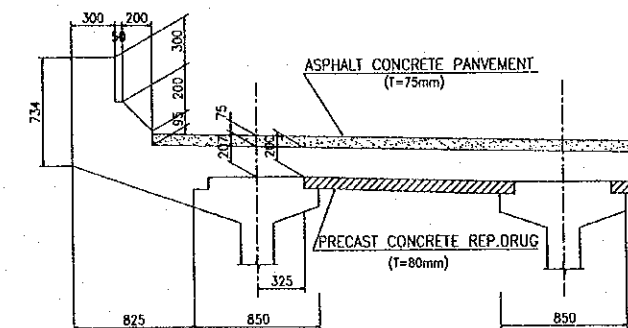
	P18R	P19R	REMARKS
	S2	S1	
SHOES CONDITION	FIX	MOVE	
SHOES TYPE	A	B	
EL1 (m)	14.033	13.772	
EL2 (m)	14.019	13.758	
PAVEMENT (mm)	75		
SLAB (mm)	207		
GIRDER (mm)	1,650		
T1 (mm)	20	20	
T2 (mm)	36	54	
T3 (mm)	20	30	
H (m)	2,008	2,036	
EL3 (m)	12.012	11.723	

GIRDER	L (mm)	L1 (mm)	θ1 (degree)	θ2 (degree)
G1 ~ G7	19950	6325	90.00	90.00

TYPICAL CROSS SECTION OF SPAN  
S = 1:200



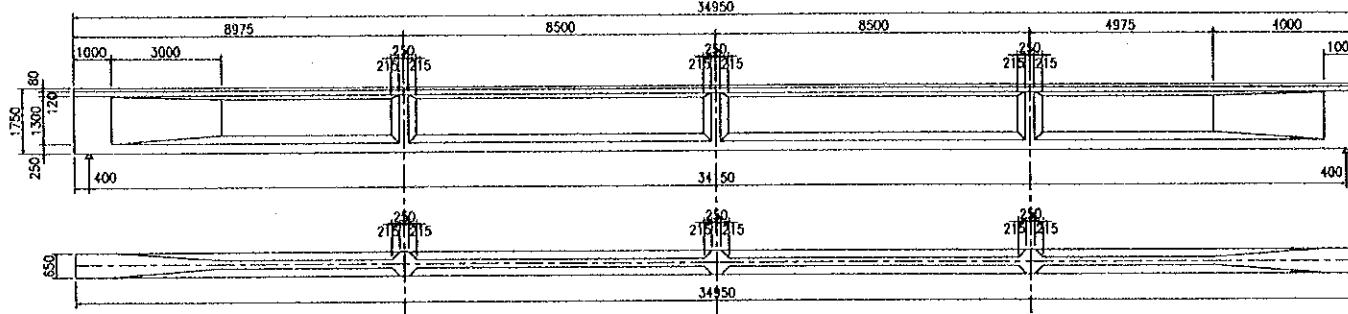
DETAIL OF A  
S=1:50



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.3.17	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

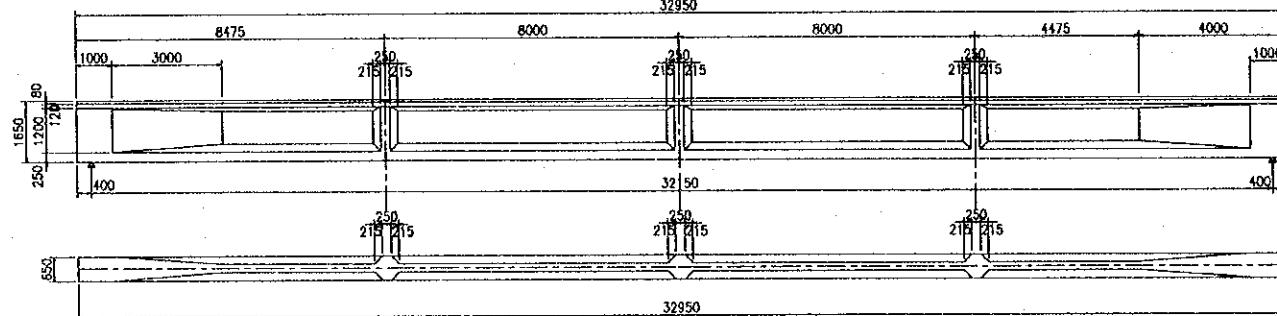
PACKAGE 2	SCALE	DRAWING No. C-1-2b-26	SHEET No.
GENERAL VIEW GIRDER			

SIDE VIEW (Lg=34.95m)  
S = 1:200



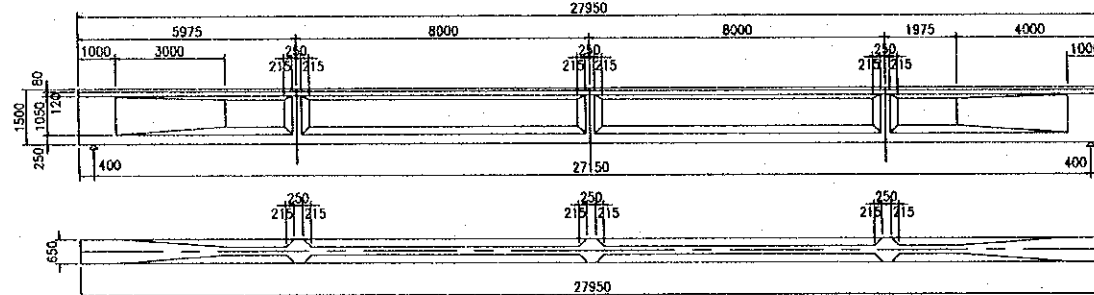
PLAN  
S = 1:200

SIDE VIEW (Lg=32.95m)  
S = 1:200



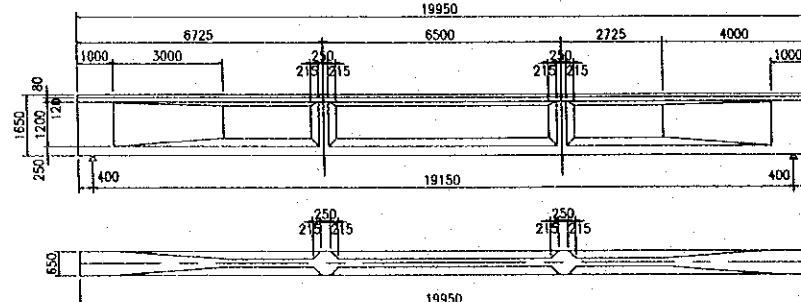
PLAN  
S = 1:200

SIDE VIEW (Lg=27.95m)  
S = 1:200



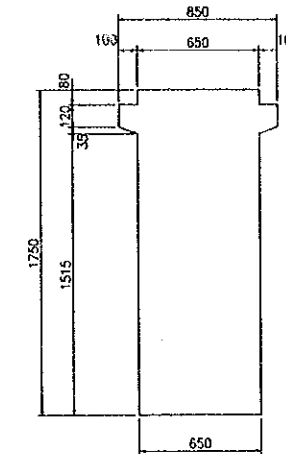
PLAN  
S = 1:200

SIDE VIEW (Lg=19.95m)  
S = 1:200

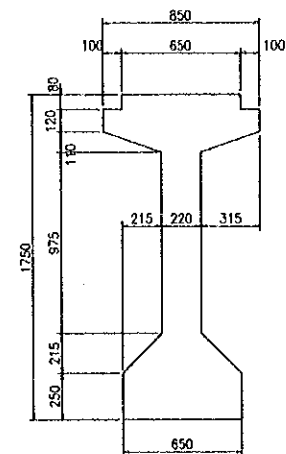


PLAN  
S = 1:200

GIRDER CROSS SECTION  
(Lg=34.95m)  
S = 1:40

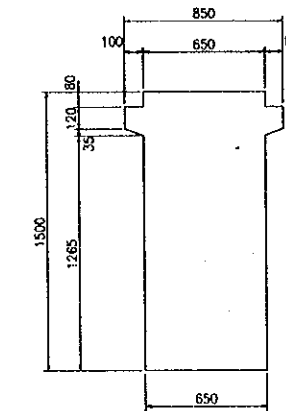


AT END

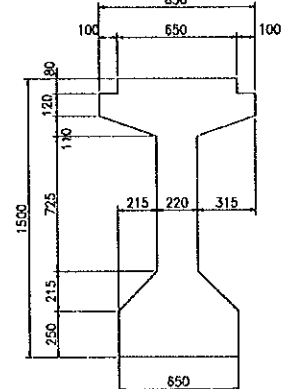


AT MIDDLE

GIRDER CROSS SECTION  
(Lg=27.95m)  
S = 1:40

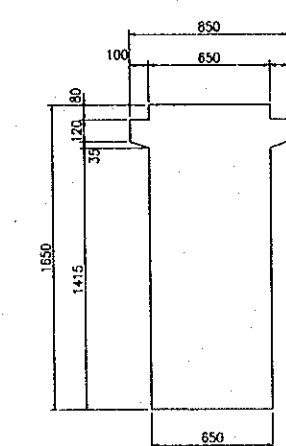


AT END

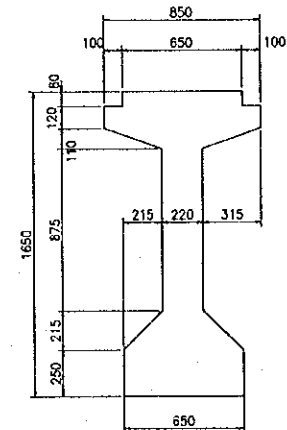


AT MIDDLE

GIRDER CROSS SECTION  
(Lg=32.95m ; Lg=19.95m)  
S = 1:40



AT END



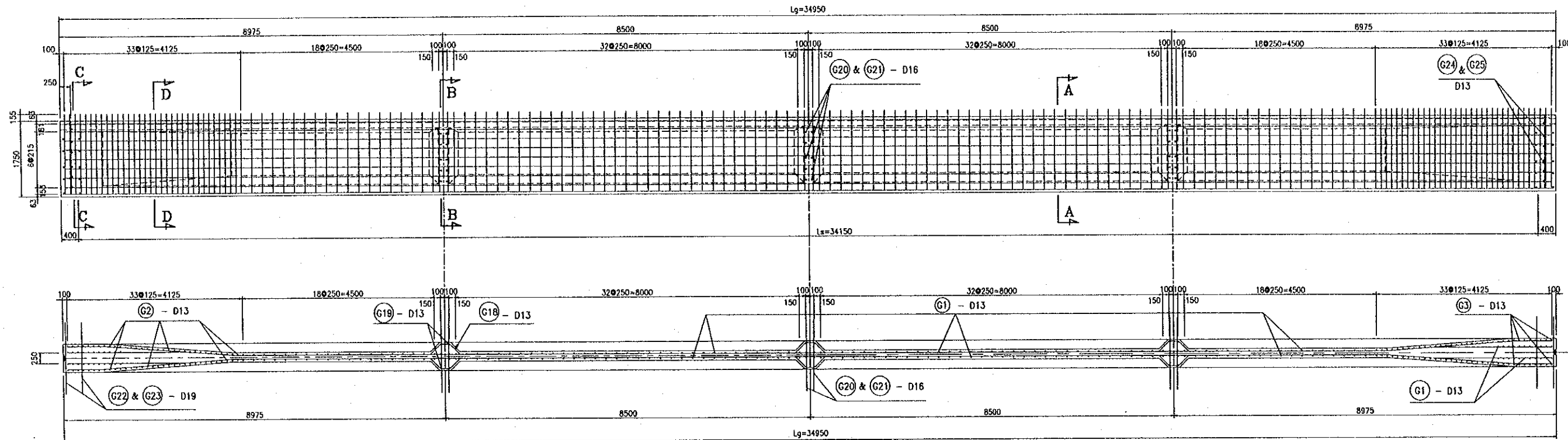
AT MIDDLE

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. MATSUDA
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	PACIFIC CONSULTANTS INTERNATIONAL	SIGNATURE <i>[Signature]</i>
CONSULTANT		DATE 2000.3.14

PACKAGE 2	SCALE	DRAWING No. C-1-2b-27	SHEET No.
RE-BAR ARRANGEMENT OF GIRDER (1)			

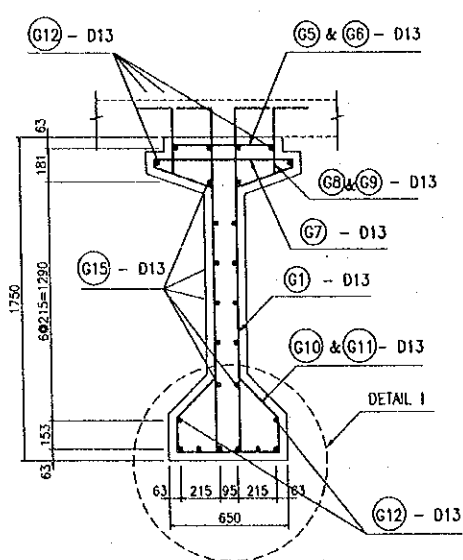
Lg = 34.950 (m)

SIDE VIEW  
S = 1 : 100

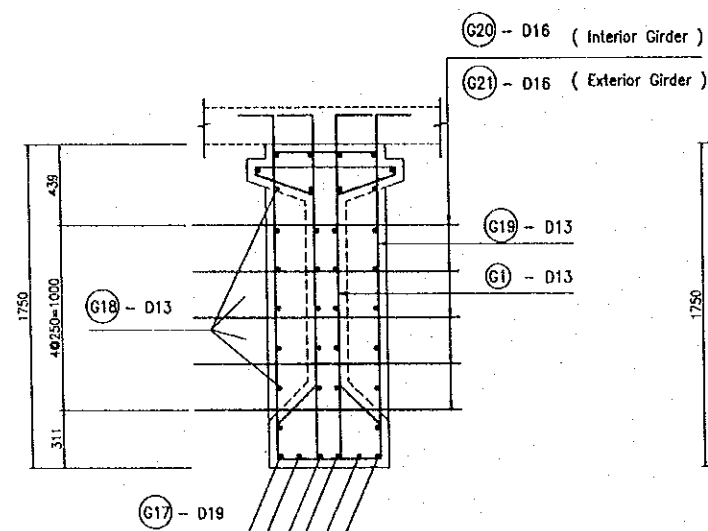


PLAN  
S = 1 : 100

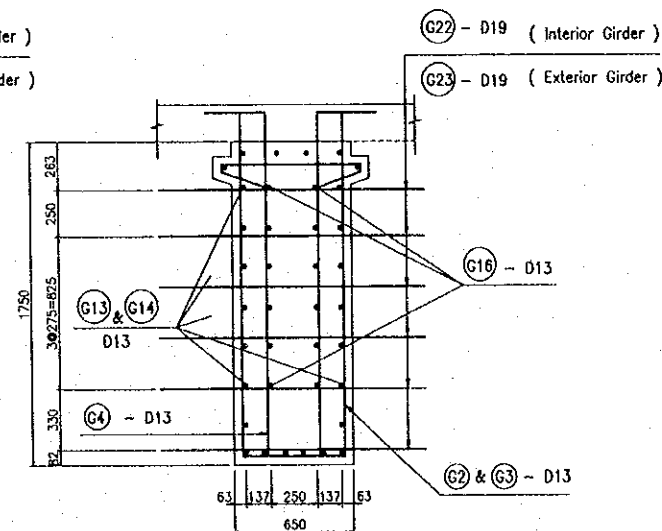
SECTION A-A  
S = 1 : 40



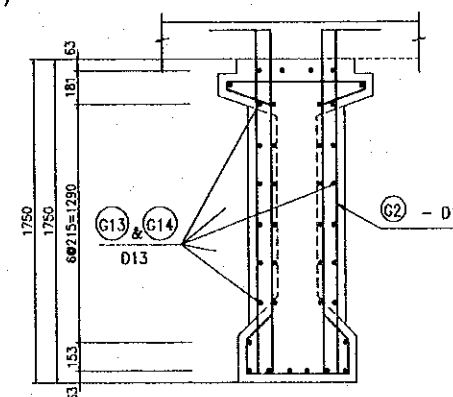
SECTION B-B  
S = 1 : 40



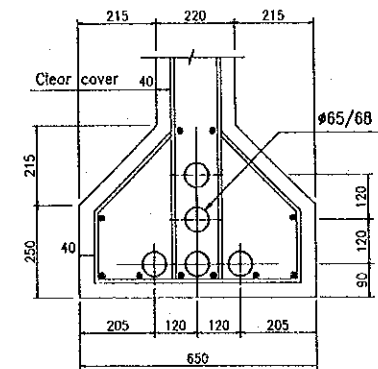
SECTION C-C  
S = 1 : 40



SECTION D-D  
S = 1 : 40



DETAIL 1  
S = 1 : 20

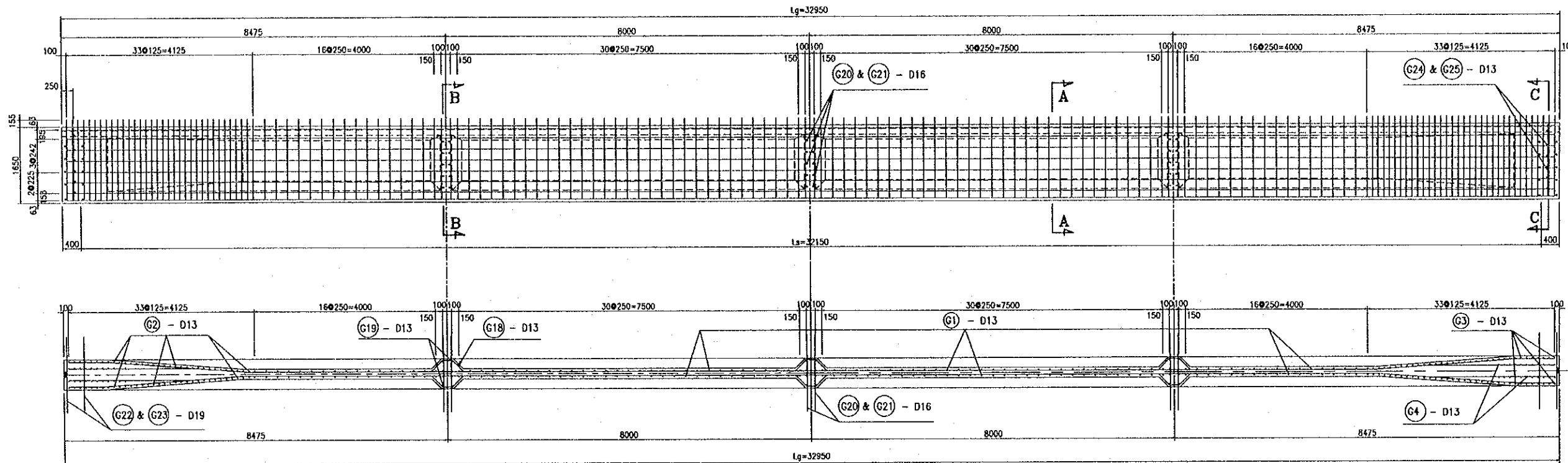


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANH LOANG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. NITABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRU BRIDGE) CONSTRUCTION PROJECT		SIGNATURE <i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.01.14

PACKAGE 2	SCALE	DRAWING No. C-1-2b-2B	SHEET No.
RE-BAR ARRANGEMENT OF GIRDER (2)			

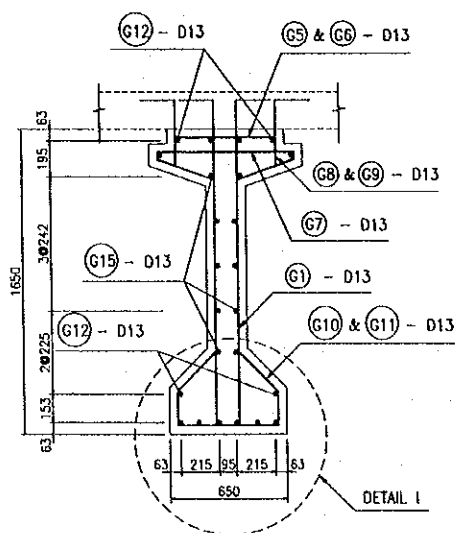
Lg = 32.950 (m)

SIDE VIEW  
S = 1 : 100

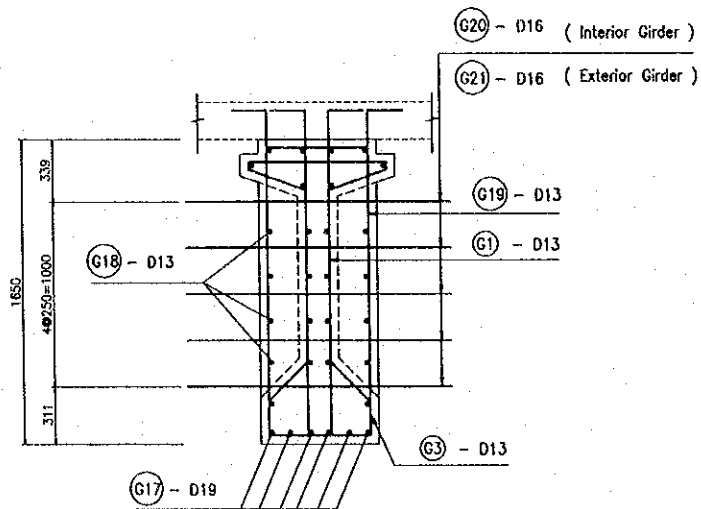


PLAN  
S = 1 : 100

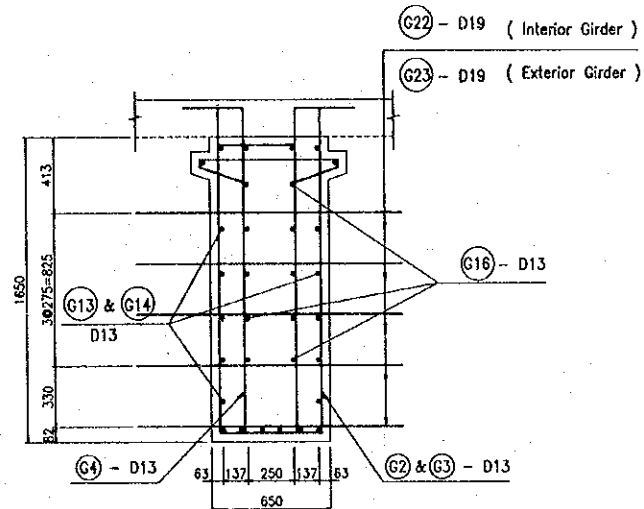
SECTION A-A  
S = 1 : 40



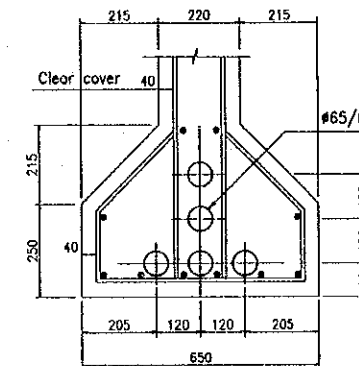
SECTION B-B  
S = 1 : 40



SECTION C-C  
S = 1 : 40



DETAIL I  
S = 1 : 20

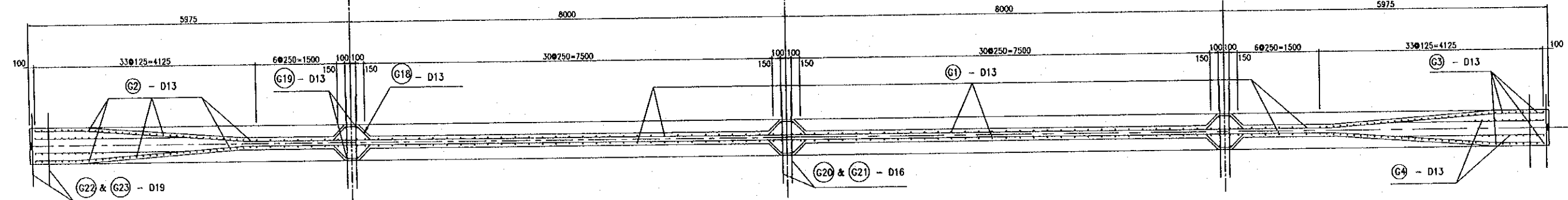
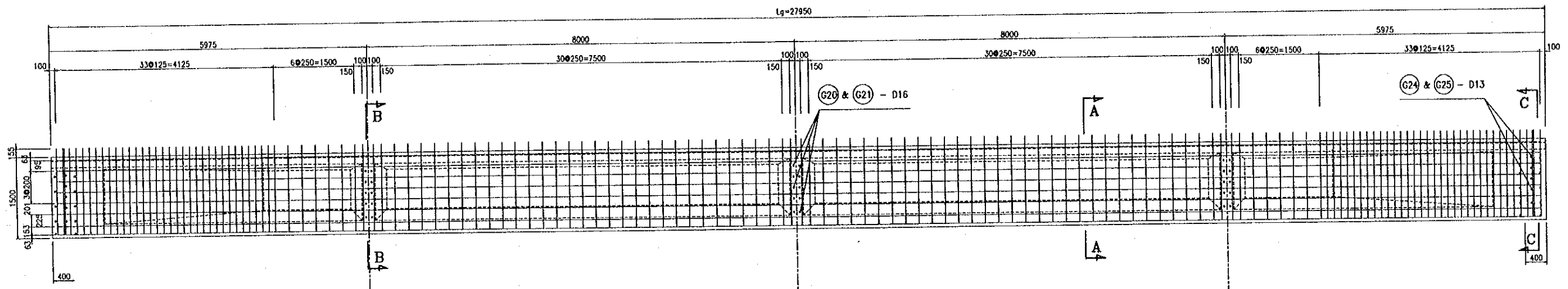


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATANA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH THE BRIDGE) CONSTRUCTION PROJECT	PACIFIC CONSULTANTS INTERNATIONAL	SIGNATURE <i>[Signature]</i>
DATE 2000.3.17		

PACKAGE 2	SCALE	DRAWING No. C-1-2b-29	SHEET No.
RE-BAR ARRANGEMENT OF GIRDER (3)			

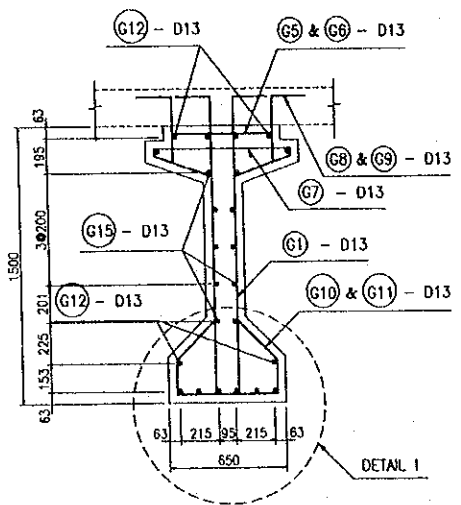
Lg = 27.950 (m)    Hg = 1.50 (m)

SIDE VIEW  
S = 1 : 80

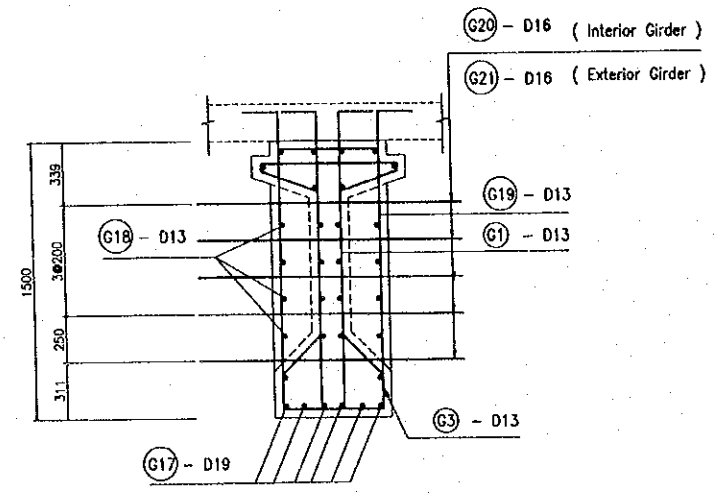


PLAN  
S = 1 : 80

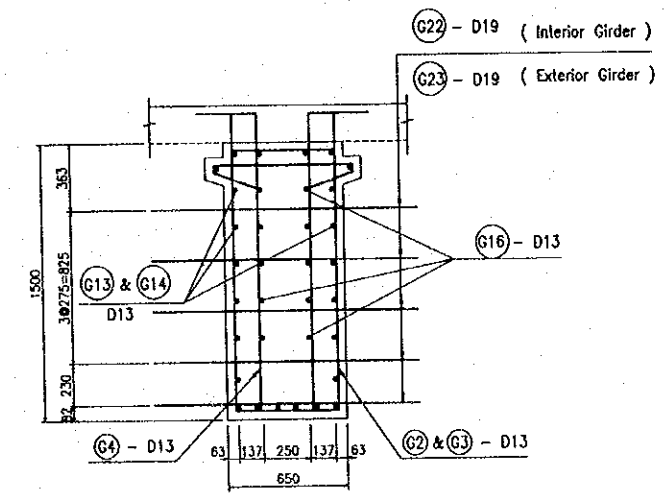
SECTION A-A  
S = 1 : 40



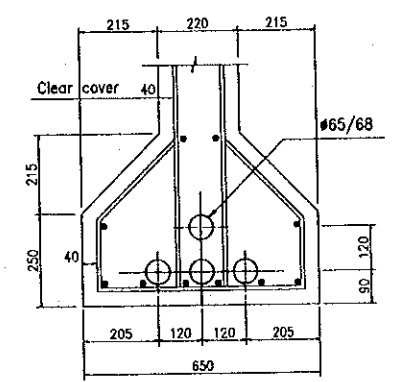
SECTION B-B  
S = 1 : 40



SECTION C-C  
S = 1 : 40



DETAIL 1  
S = 1 : 20



CIT

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT	DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	NAME S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRU BRIDGE) CONSTRUCTION PROJECT	SIGNATURE 
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.3.19

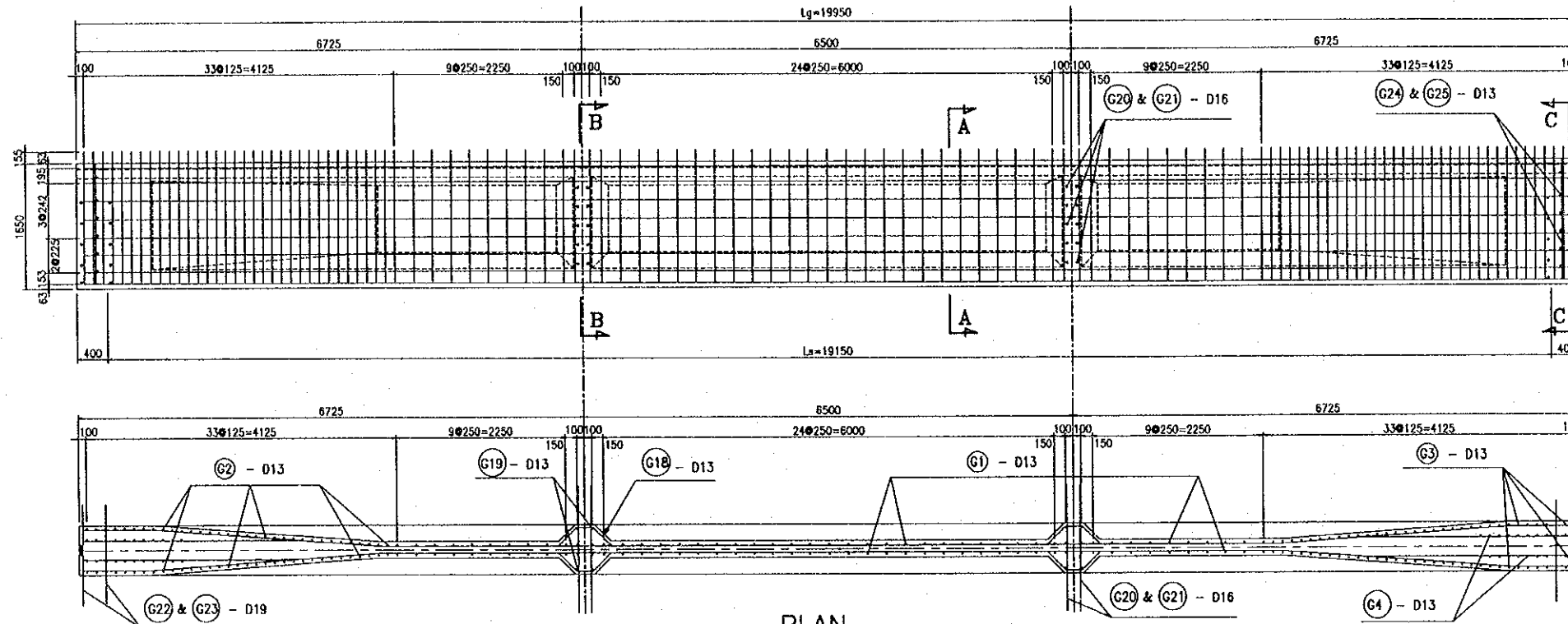
PACKAGE 2	SCALE	DRAWING No. C-1-2b-30	SHEET No.
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RE-BAR ARRANGEMENT OF GIRDER (4)

Lg = 19.950(m)

SIDE VIEW

S = 1 : 80

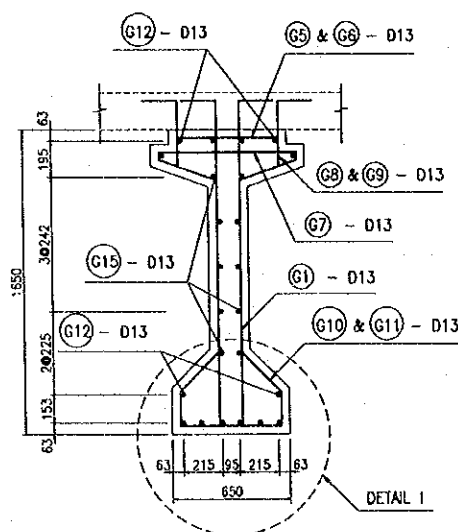


PLAN

S = 1 : 80

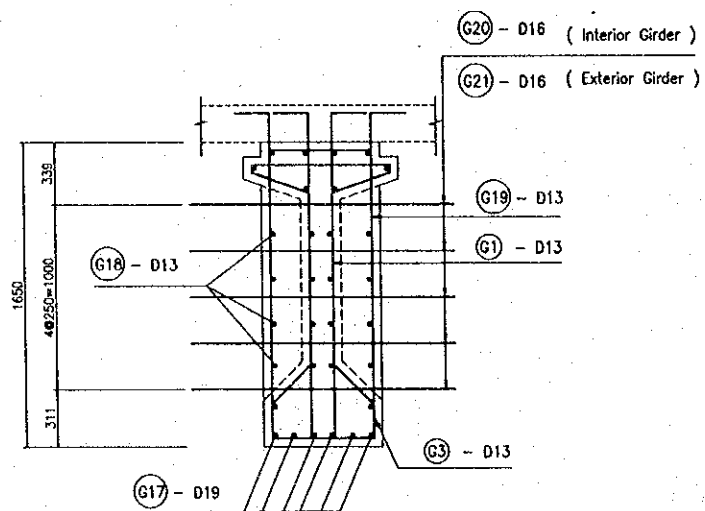
SECTION A-A

S = 1 : 40



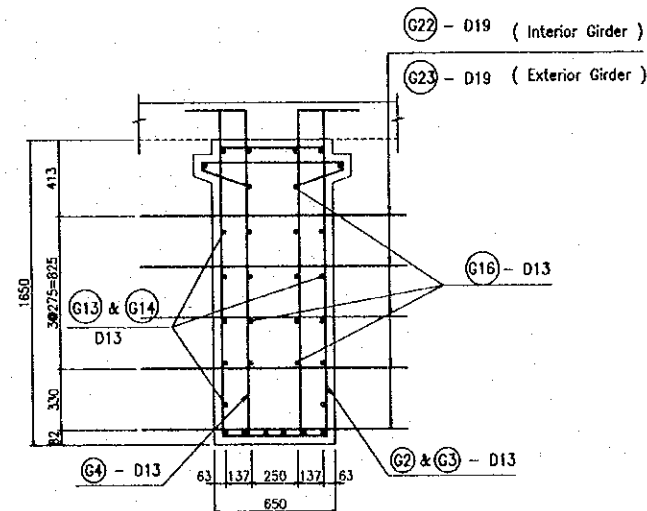
SECTION B-B

S = 1 : 40



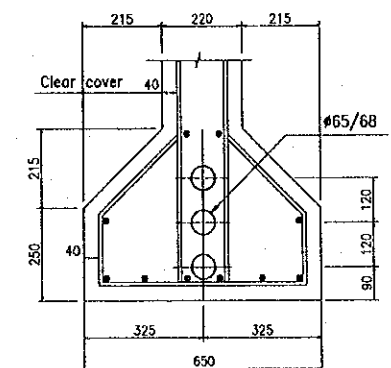
SECTION C-C

S = 1 : 40



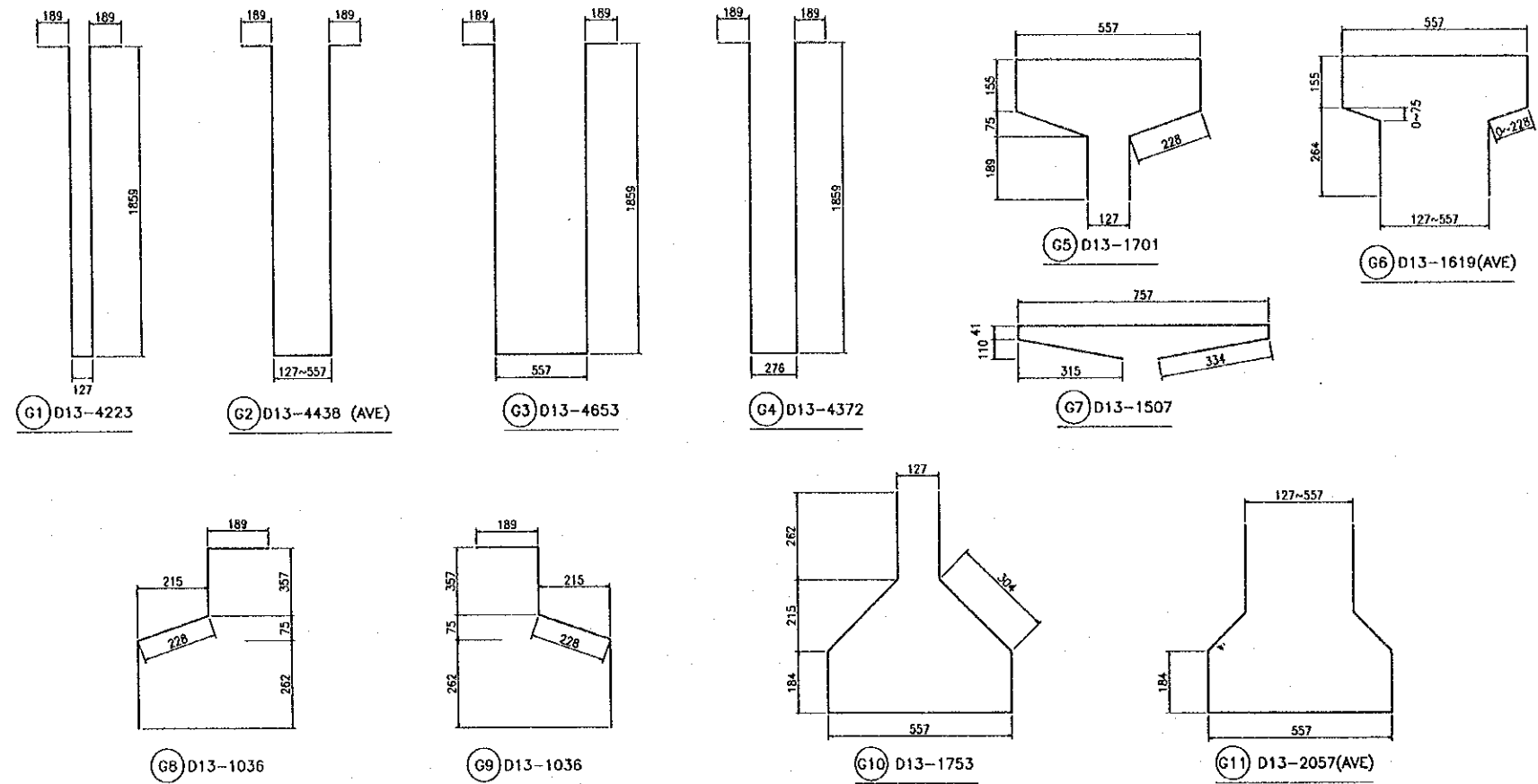
DETAIL I

S = 1 : 20



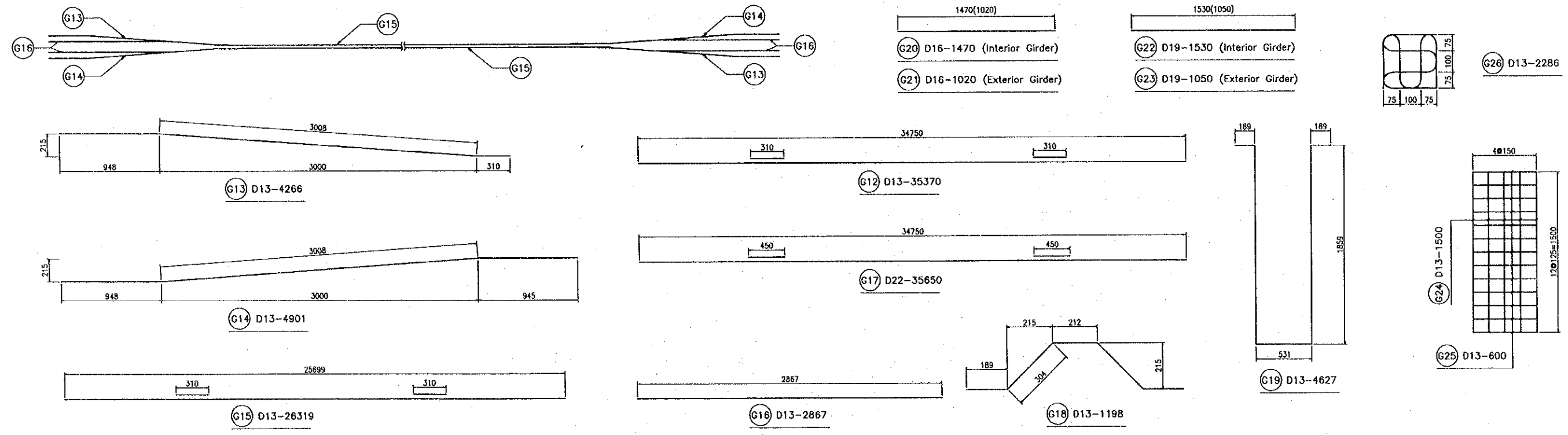
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. MATSUE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	
RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONSULTANT: PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.01.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-1--2b-31	
RE-BAR BENDING SCHEDULE OF GIRDER (1)			



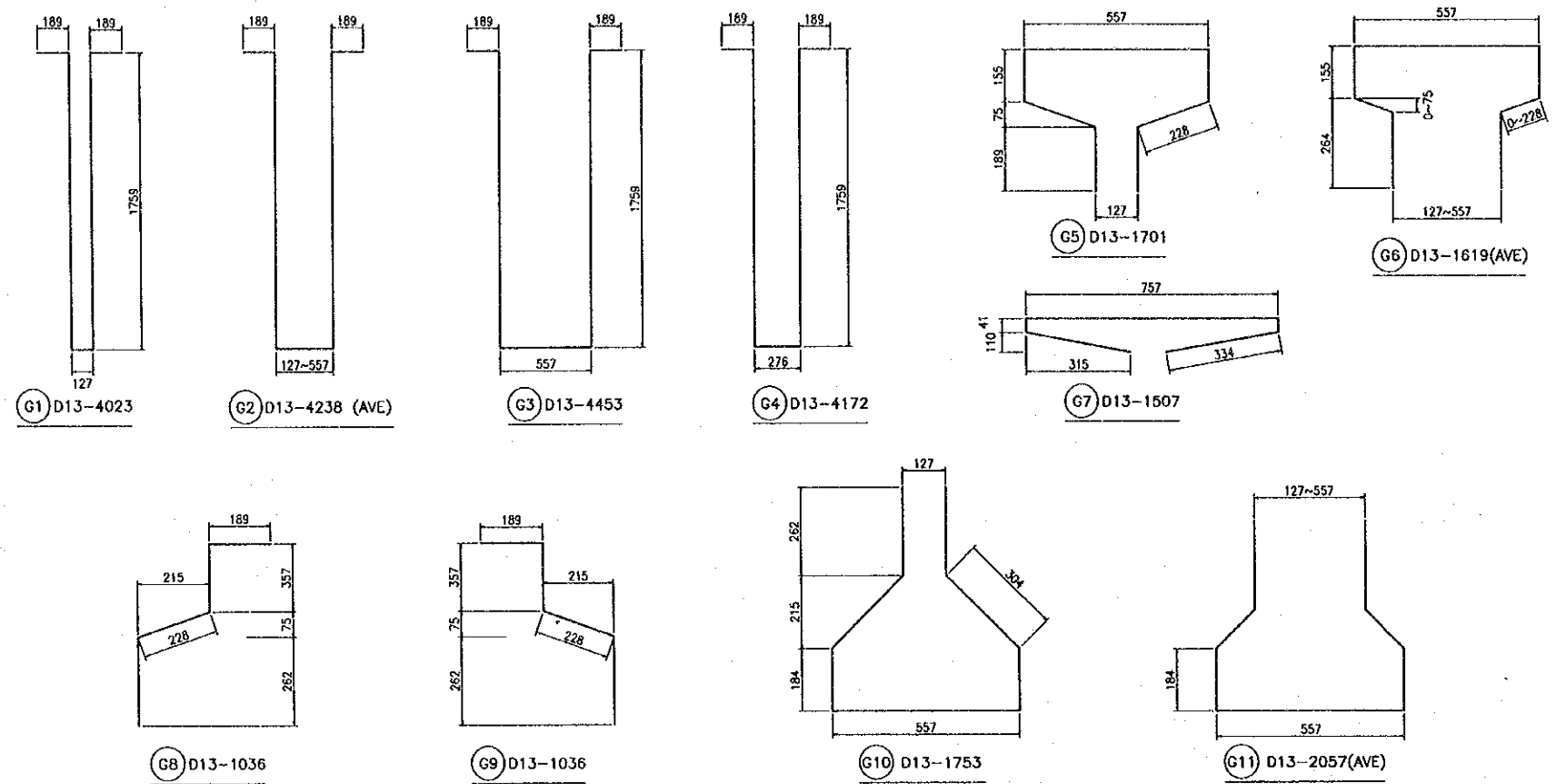
BAR LIST						
REIN No	DIA (mm)	LENGTH (mm)	NUMBER	UNIT WEIGHT (kg/m)	WEIGHT (kg)	REMARKS
G1	D13	4223	112	0.995	470.6	
G2	D13	4438	48	0.995	212	AVERAGE
G3	D13	4653	16	0.995	74.1	
G4	D13	4372	22	0.995	95.7	
G5	D13	1701	112	0.995	189.6	
G6	D13	1619	48	0.995	77.3	AVERAGE
G7	D13	1507	176	0.995	263.9	
G8	D13	1036	154	0.995	158.7	
G9	D13	1036	154	0.995	158.7	
G10	D13	2057	112	0.995	229.2	
G11	D13	1753	48	0.995	83.7	AVERAGE
G12	D13	35370	8	0.995	281.5	
G13	D13	4266	12	0.995	50.9	
G14	D13	4901	12	0.995	58.5	
G15	D13	26319	12	0.995	314.2	
G16	D13	2867	24	0.995	68.5	
G17	D22	35650	6	3.040	650.3	
G18	D13	1198	30	0.995	35.8	
G19	D13	4627	6	0.995	27.6	
G20	D16	1470	30	1.560	68.8	INTERIOR GIRDER
G21	D16	1020	30	1.560	47.7	EXTERIOR GIRDER
G22	D19	1530	24	2.250	82.6	INTERIOR GIRDER
G23	D19	1050	24	2.250	56.7	EXTERIOR GIRDER
G24	D13	1500	10	0.995	14.9	
G25	D13	600	26	0.995	15.5	
G26	D13	2286	10	0.995	22.7	
TOTAL			3705.3		(3684.2)	
D13			2903.6		(2903.6)	
D16			68.8		(47.7)	
D19			82.6		(82.6)	
D22			650.3		(650.3)	

THE VALUE OF INSIDE ( ) ARE FOR EXTERIOR GIRDER

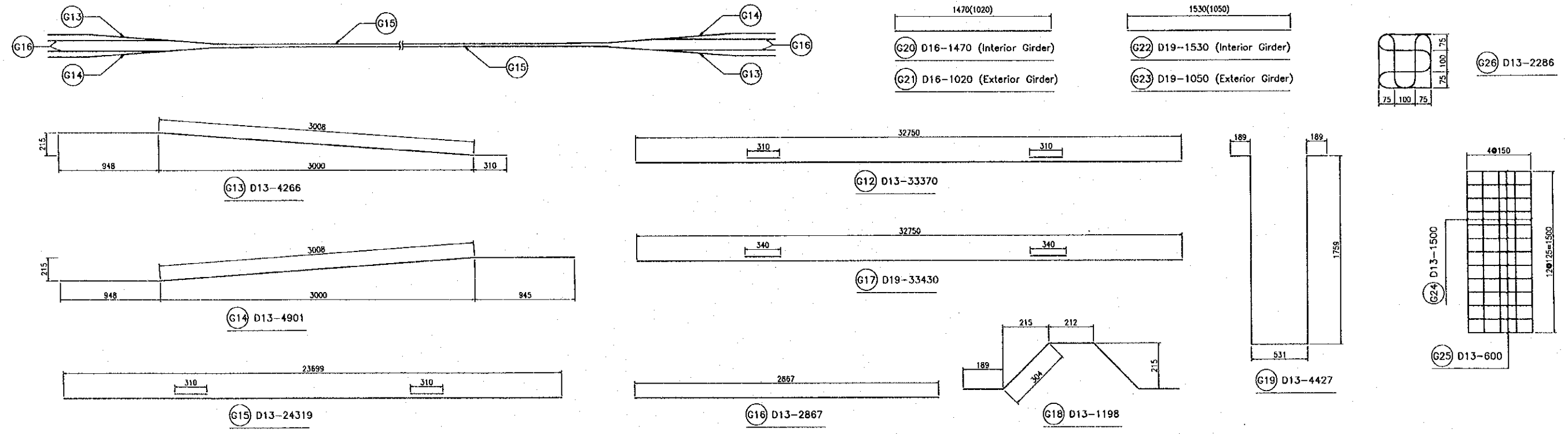


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANH LOANG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATANE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATANE
RED RIVER BRIDGE (THANH TRU BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.8.18

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-1-2h-32	
RE-BAR BENDING SCHEDULE OF GIRDER (2)			



BAR LIST						
REIN No	DIA (mm)	LENGTH (mm)	NUMBER	UNIT WEIGHT (kg/m)	WEIGHT (kg)	REMARKS
G1	D13	4023	104	0.995	416.3	
G2	D13	4238	48	0.995	202.4	AVERAGE
G3	D13	4453	16	0.995	70.9	
G4	D13	4172	22	0.995	91.3	
G5	D13	1701	104	0.995	176	
G6	D13	1619	48	0.995	77.3	AVERAGE
G7	D13	1507	168	0.995	251.9	
G8	D13	1036	146	0.995	150.5	
G9	D13	1036	146	0.995	150.5	
G10	D13	2057	104	0.995	212.9	
G11	D13	1753	48	0.995	83.7	AVERAGE
G12	D13	33370	8	0.995	265.6	
G13	D13	4266	10	0.995	42.4	
G14	D13	4901	10	0.995	48.8	
G15	D13	24319	10	0.995	242	
G16	D13	2867	20	0.995	57.1	
G17	D19	33430	6	2.250	451.3	
G18	D13	1198	24	0.995	28.6	
G19	D13	4427	6	0.995	26.4	
G20	D16	1470	30	1.560	68.8	INTERIOR GIRDER
G21	D16	1020	30	1.560	47.7	EXTERIOR GIRDER
G22	D19	1530	20	2.250	68.9	INTERIOR GIRDER
G23	D19	1050	20	2.250	47.3	EXTERIOR GIRDER
G24	D13	1500	10	0.995	14.9	
G25	D13	600	26	0.995	15.5	
G26	D13	2286	10	0.995	22.7	
TOTAL			3236.7		(3194.0)	
D13			2647.7		(2647.7)	
D16			68.8		(47.7)	
D19			520.2		(490.6)	
THE VALUE OF INSIDE ( ) ARE FOR EXTERIOR GIRDER						



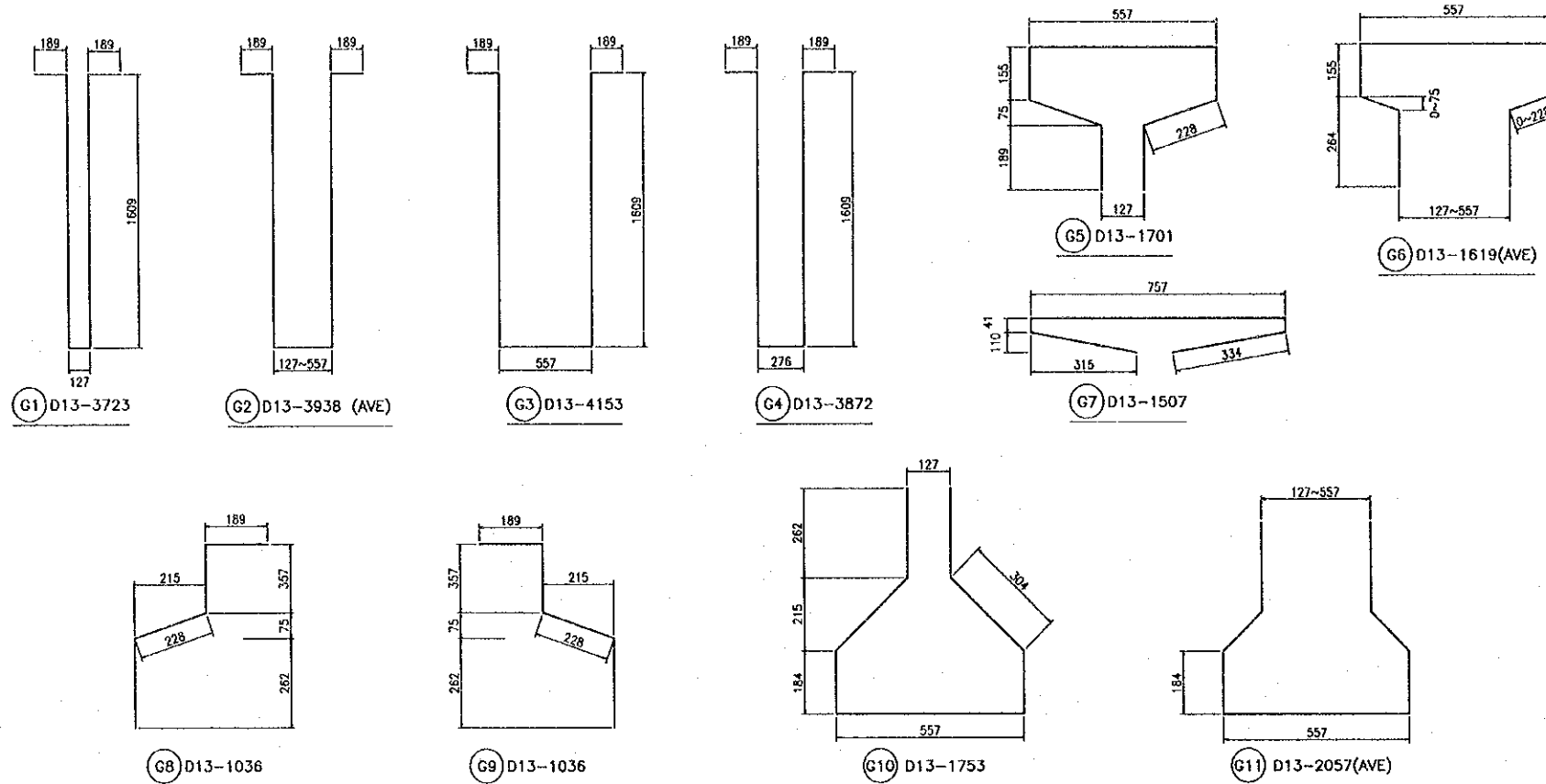
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THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE

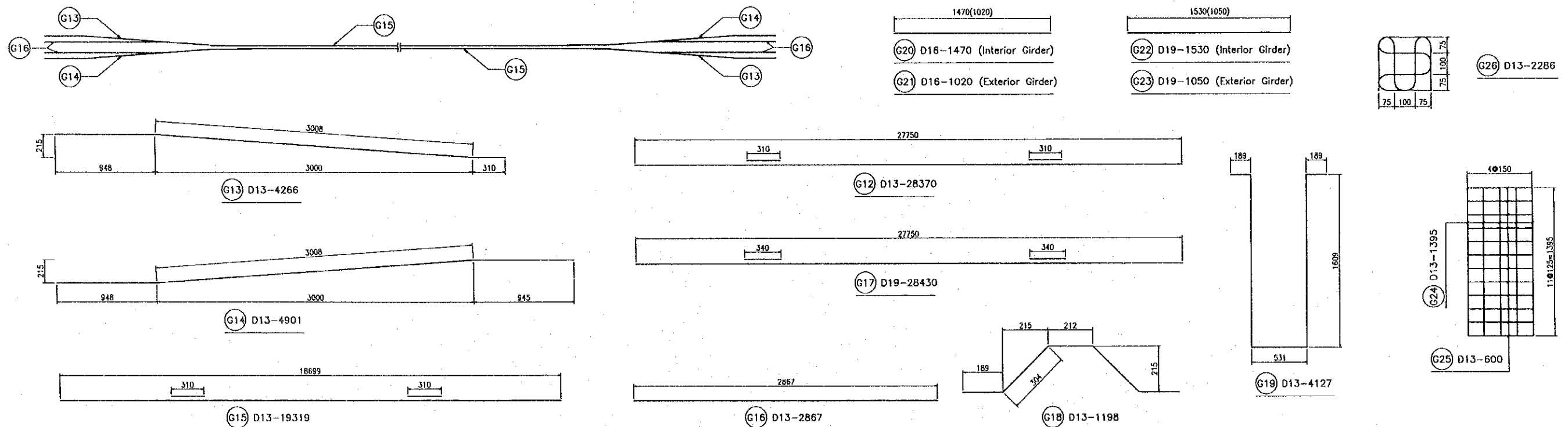
PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-1-2b-33	
RE-BAR BENDING SCHEDULE OF GIRDER (3)			

( H = 1.50 m )



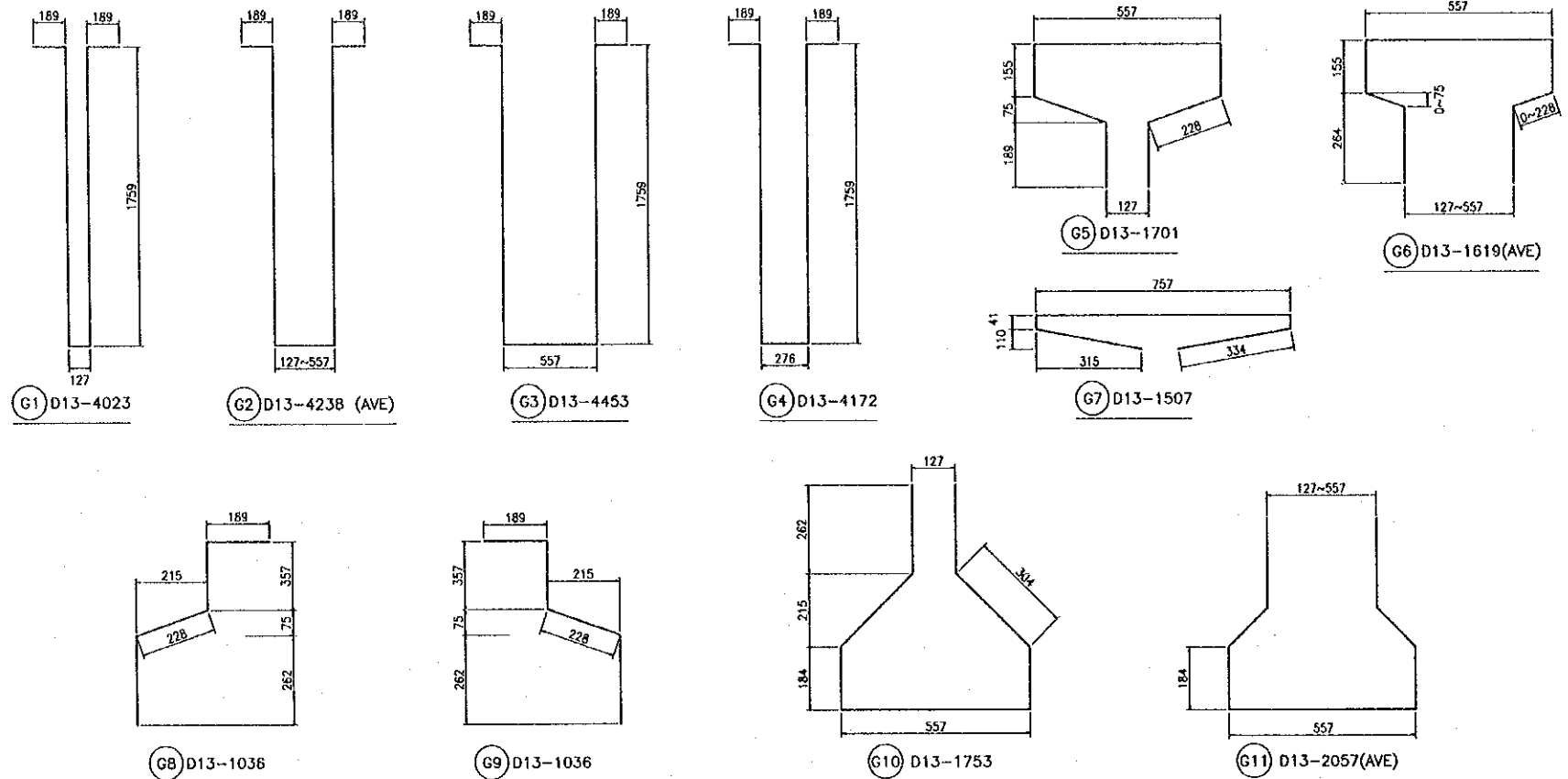
REIN No	DIA (mm)	LENGTH (mm)	NUMBER	UNIT WEIGHT (kg/m)	WEIGHT (kg)	REMARKS
G1	D13	3723	84	0.995	311.2	
G2	D13	3938	48	0.995	188.1	AVERAGE
G3	D13	4153	16	0.995	66.1	
G4	D13	3872	22	0.995	84.8	
G5	D13	1701	84	0.995	142.2	
G6	D13	1619	48	0.995	77.3	AVERAGE
G7	D13	1507	148	0.995	221.9	
G8	D13	1036	126	0.995	129.9	
G9	D13	1036	126	0.995	129.9	
G10	D13	2057	84	0.995	171.9	
G11	D13	1753	48	0.995	83.7	AVERAGE
G12	D13	28370	8	0.995	225.8	
G13	D13	4266	10	0.995	42.4	
G14	D13	4901	10	0.995	48.8	
G15	D13	19319	10	0.995	192.2	
G16	D13	2867	20	0.995	57.1	
G17	D19	28430	6	2.250	383.8	
G18	D13	1198	24	0.995	28.6	
G19	D13	4127	6	0.995	24.6	
G20	D16	1470	30	1.560	68.8	INTERIOR GIRDER
G21	D16	1020	30	1.560	47.7	EXTERIOR GIRDER
G22	D19	1530	20	2.250	68.9	INTERIOR GIRDER
G23	D19	1050	20	2.250	47.3	EXTERIOR GIRDER
G24	D13	1500	10	0.995	13.7	
G25	D13	600	24	0.995	14.3	
G26	D13	2286	8	0.995	18.2	
TOTAL				2794.2	(2751.5)	
D13				2272.7	(2272.7)	
D16				68.8	(47.7)	
D19				452.7	(431.1)	

THE VALUE OF INSIDE ( ) ARE FOR EXTERIOR GIRDER



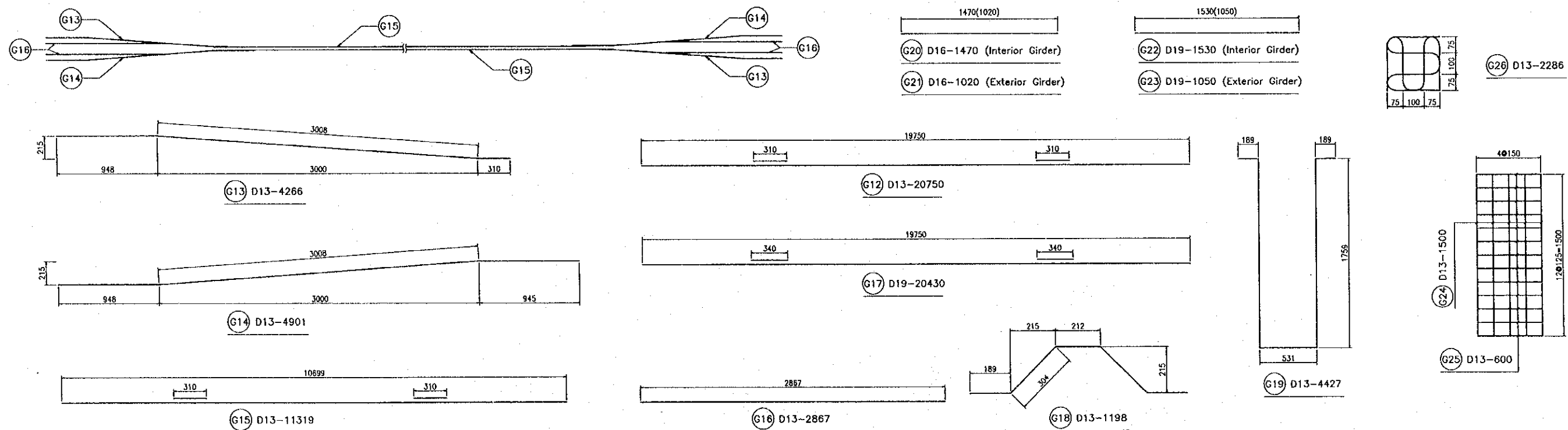
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATADE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.3.18	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE	DRAWING No. C-1-2b-34	SHEET No.
RE-BAR BENDING SCHEDULE OF GIRDER (4)			



BAR LIST						
REIN No	DIA (mm)	LENGTH (mm)	NUMBER	UNIT WEIGHT (kg/m)	WEIGHT (kg)	REMARKS
G1	D13	4023	51	0.995	204.1	
G2	D13	4238	48	0.995	202.4	AVERAGE
G3	D13	4453	16	0.995	70.9	
G4	D13	4172	22	0.995	91.3	
G5	D13	1701	51	0.995	86.3	
G6	D13	1619	48	0.995	77.3	AVERAGE
G7	D13	1507	115	0.995	172.4	
G8	D13	1036	93	0.995	95.9	
G9	D13	1036	93	0.995	95.9	
G10	D13	2057	51	0.995	104.4	
G11	D13	1753	48	0.995	83.7	AVERAGE
G12	D13	20370	8	0.995	162.1	
G13	D13	4266	10	0.995	42.4	
G14	D13	4901	10	0.995	48.8	
G15	D13	11319	10	0.995	112.6	
G16	D13	2867	20	0.995	57.1	
G17	D19	20430	6	2.250	275.8	
G18	D13	1198	16	0.995	19.1	
G19	D13	4427	4	0.995	17.6	
G20	D16	1470	20	1.560	45.9	INTERIOR GIRDER
G21	D16	1020	20	1.560	31.8	INTERIOR GIRDER
G22	D19	1530	20	2.250	68.9	INTERIOR GIRDER
G23	D19	1050	20	2.250	47.3	EXTERIOR GIRDER
G24	D13	1500	10	0.995	14.9	
G25	D13	600	26	0.995	15.5	
G26	D13	2286	6	0.995	13.6	
TOTAL			2178.9		(2143.2)	
D13			1788.3		(1788.3)	
D16			46.9		(31.8)	
D19			344.7		(323.1)	

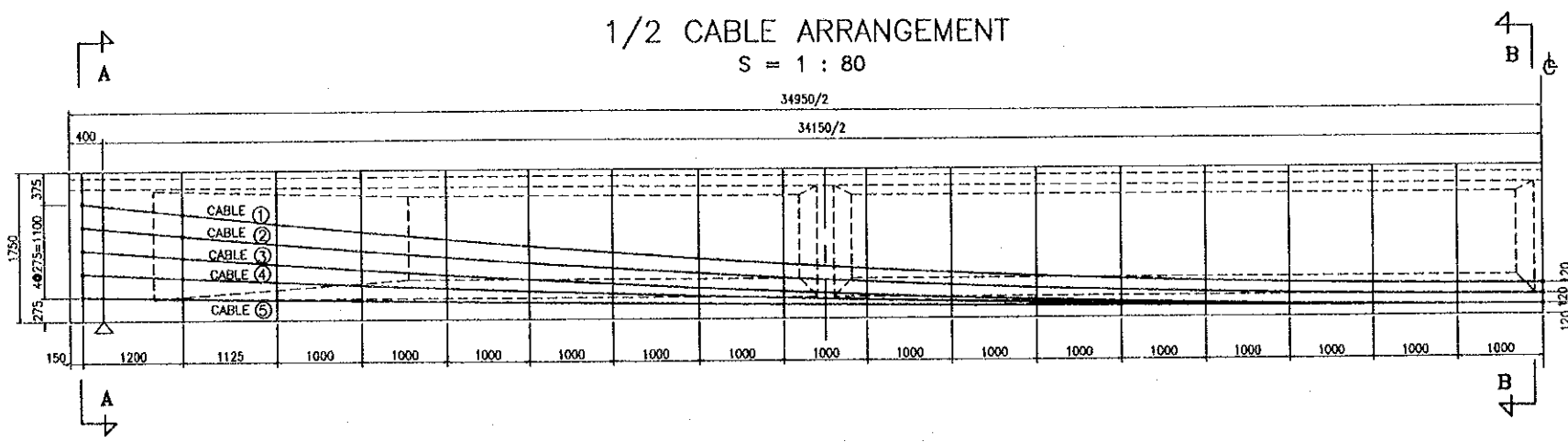
THE VALUE OF INSIDE ( ) ARE FOR EXTERIOR GIRDER



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH THIEU BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	DATE 2000. 02. 17
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE	DRAWING No. C-1-2b-35	SHEET No.
PC CABLE ARRANGEMENT OF GIRDER (1)			

Lg = 34.950 (m)

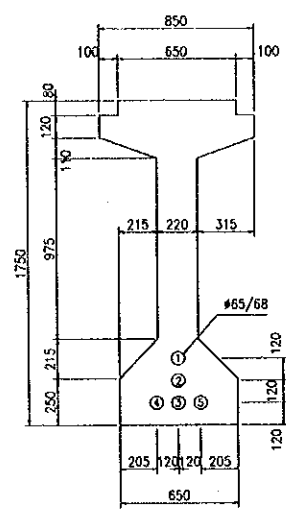


POSITION OF CABLE CENTER FROM GIRDER BOTTOM

L	17325	16125	15000	14000	13000	12000	11000	10000	9000	8000	7000	6000	5000	4000	3000	2000	1000	000
CABLE ①	1375	1244	1127	1028	936	851	773	701	636	578	527	483	445	415	391	374	363	360
CABLE ②	1100	989	890	806	728	656	590	529	474	425	382	344	312	286	266	252	243	240
CABLE ③	825	734	653	585	521	461	407	357	312	272	236	205	179	158	141	129	122	120
CABLE ④	550	493	444	402	363	327	294	264	237	212	191	172	156	143	133	126	121	120
CABLE ⑤	275	255	237	222	208	195	183	172	162	153	145	139	133	128	125	122	121	120

GIRDER CROSS SECTION

S = 1 : 40

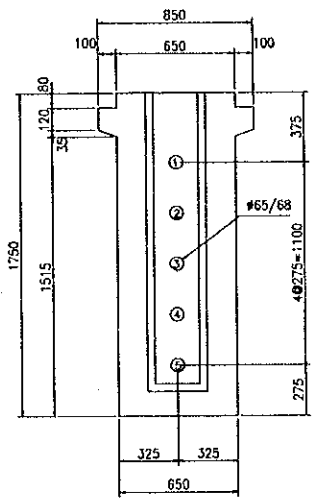
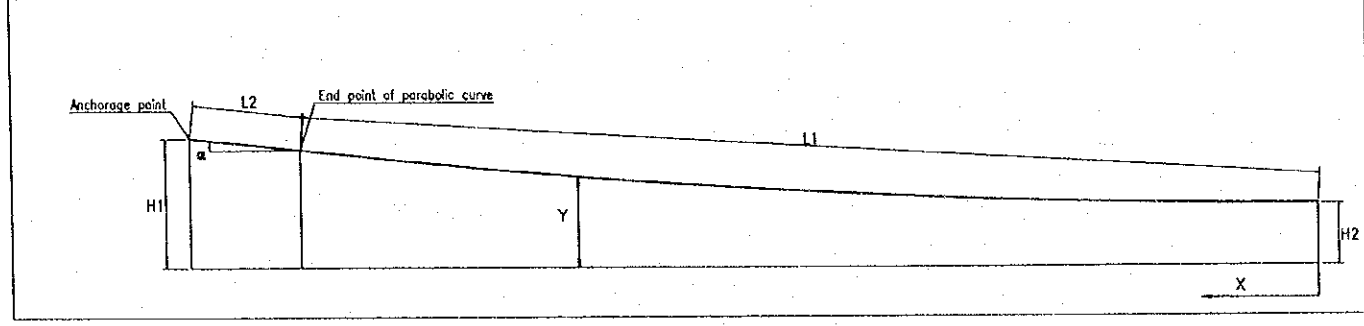


AT MIDDLE

CABLE LENGTH AND ELEVATION

PC CABLE 12S 12.7B ( UNIT : m )							
CABLE No	H1	H2	$\alpha$	Y	L1	L2	$2 \times \Sigma L$
①	1.375	0.360	6.26200	$0.00341 \cdot X^2 + H2$	16.132	1.207	34.678
②	1.100	0.240	5.31169	$0.00289 \cdot X^2 + H2$	16.123	1.205	34.656
③	0.825	0.120	4.35844	$0.00237 \cdot X^2 + H2$	16.116	1.203	34.638
④	0.550	0.120	2.66156	$0.00144 \cdot X^2 + H2$	16.106	1.201	34.614
⑤	0.275	0.120	0.96000	$0.00052 \cdot X^2 + H2$	16.101	1.200	34.602
$\Sigma = 173.188$							

WEIGHT 173.188 m x 9.288 kg/m = 1608.57kg

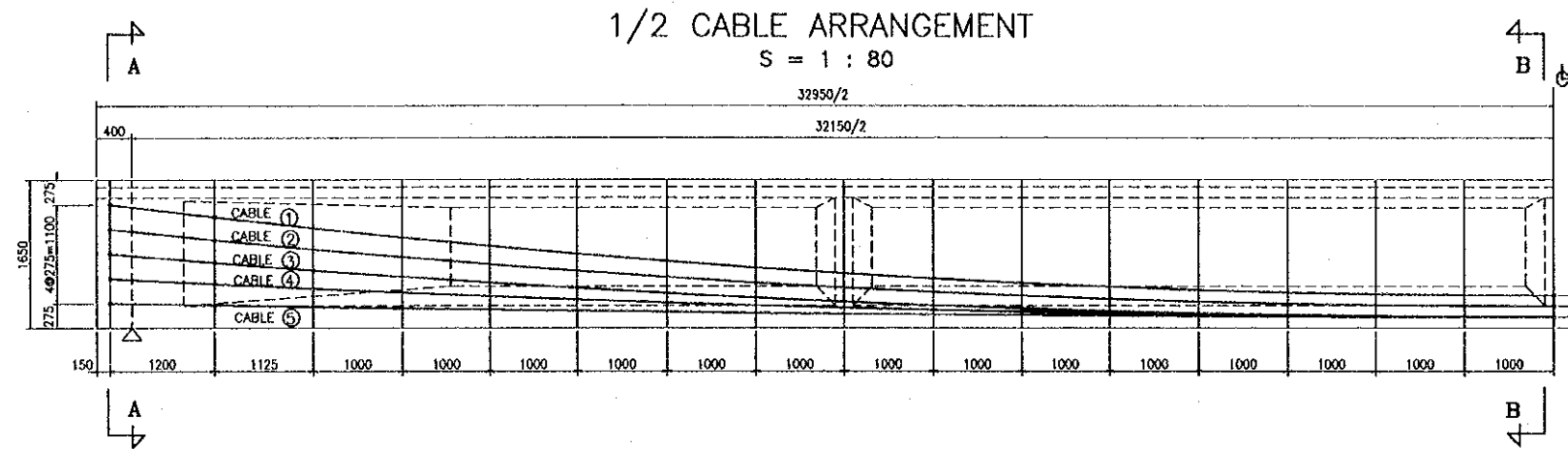


AT END

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT	DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	NAME S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2.000.3.14

PACKAGE 2	SCALE	DRAWING No. C-1-2b-36	SHEET No.
PC CABLE ARRANGEMENT OF GIRDER (2)			

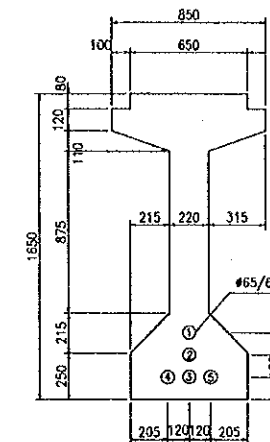
Lg = 32.950 (m)



POSITION OF CABLE CENTER FROM GIRDER BOTTOM

L	16325	15125	14000	13000	12000	11000	10000	9000	8000	7000	6000	5000	4000	3000	2000	1000	000
CABLE ①	1375	1236	1113	1009	913	825	744	671	606	548	498	456	421	395	375	364	360
CABLE ②	1100	981	877	789	708	633	565	503	448	399	357	321	292	269	253	243	240
CABLE ③	825	729	643	571	504	443	387	336	291	251	216	187	163	144	131	123	120
CABLE ④	550	492	439	395	355	317	283	252	224	200	179	161	146	135	127	122	120
CABLE ⑤	275	255	236	220	205	191	179	168	158	149	141	135	129	125	122	121	120

GIRDER CROSS SECTION

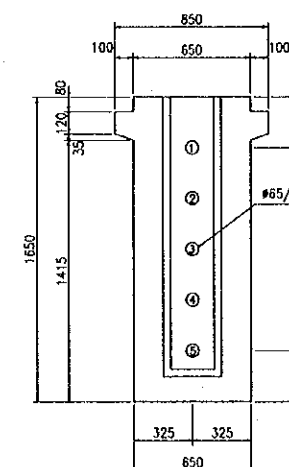
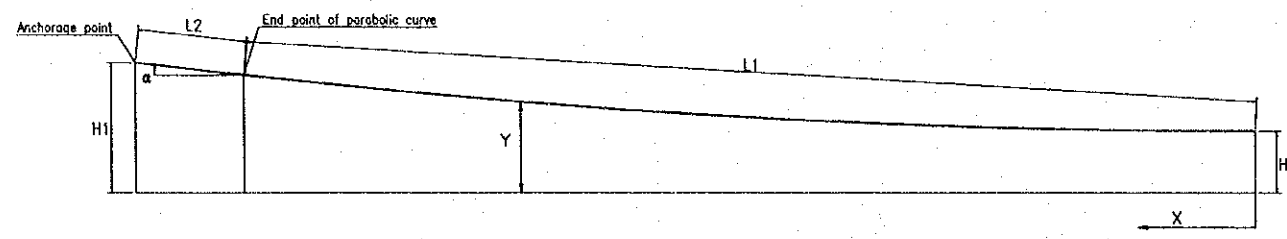


SECTION B-B  
S = 1 : 40

CABLE LENGTH AND ELEVATION

PC CABLE 12S 12.7B ( UNIT : m )							
CABLE No	H1	H2	$\alpha$	Y	L1	L2	$2 \times \Sigma L$
①	1.375	0.360	6.61674	$0.00384 \cdot X^2 + H2$	15.134	1.208	32.684
②	1.100	0.240	5.61333	$0.00325 \cdot X^2 + H2$	15.124	1.206	32.660
③	0.825	0.120	4.60645	$0.00267 \cdot X^2 + H2$	15.116	1.204	32.640
④	0.550	0.120	2.81341	$0.00163 \cdot X^2 + H2$	15.106	1.201	32.614
⑤	0.275	0.120	1.01485	$0.00059 \cdot X^2 + H2$	15.101	1.200	32.602
$\Sigma = 163.200$							

WEIGHT 163.200 m x 9.288 kg/m = 1515.802 kg

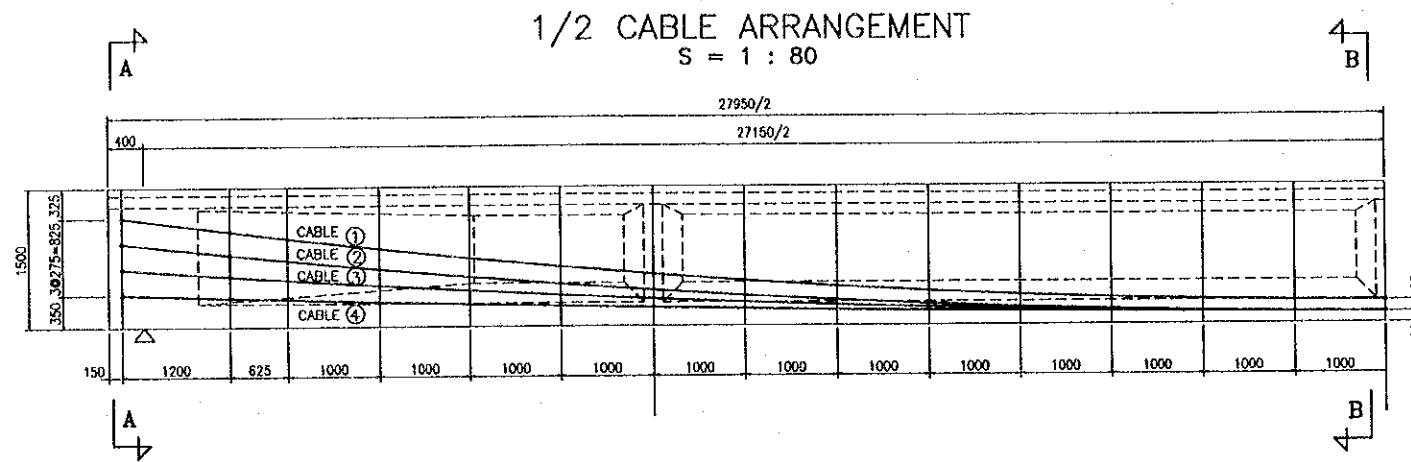


SECTION A-A  
S = 1 : 40

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2002. 4. 17	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE	DRAWING No. C-1-2b-37	SHEET No.
PC CABLE ARRANGEMENT OF GIRDER (3)			

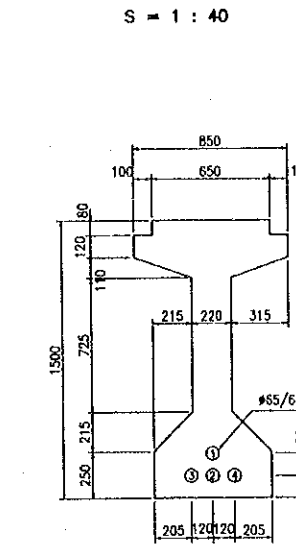
Lg = 27.950 (m) H=1.500(m)



POSITION OF CABLE CENTER FROM GIRDER BOTTOM

L	13825	12625	12000	11000	10000	9000	8000	7000	6000	5000	4000	3000	2000	1000	000
CABLE ①	1175	1026	950	837	733	639	556	482	417	363	319	284	260	245	240
CABLE ②	900	775	712	617	531	453	383	321	268	223	186	157	136	124	120
CABLE ③	625	544	503	442	386	335	290	250	216	187	163	144	131	123	120
CABLE ④	350	313	294	266	241	218	197	179	164	150	139	131	125	121	120

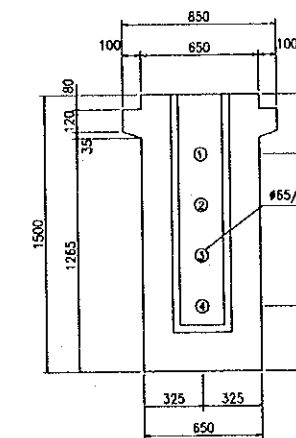
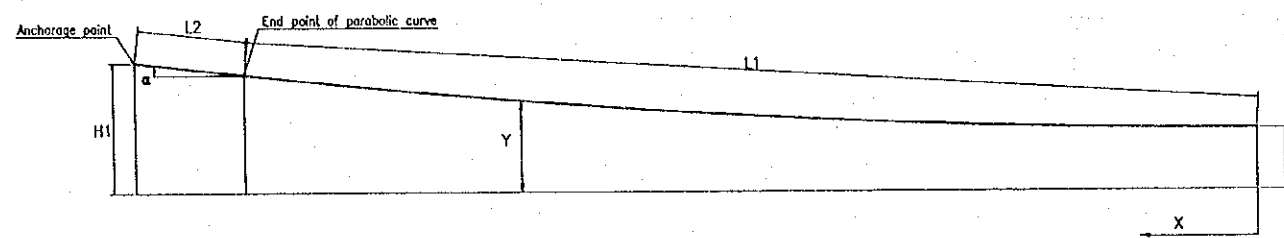
TYPICAL CROSS SECTION



SECTION B-B

CABLE LENGTH AND ELEVATION

PC CABLE 12S 12.7B ( UNIT : m )							
CABLE No	H1	H2	$\alpha$	Y	L1	L2	$2 \times \Sigma L$
①	1.175	0.240	7.09451	$0.00493 * X^2 + H2$	12.658	1.209	27.734
②	0.900	0.120	5.92761	$0.00411 * X^2 + H2$	12.648	1.206	27.708
③	0.625	0.120	3.84571	$0.00266 * X^2 + H2$	12.635	1.203	27.676
④	0.350	0.120	1.75360	$0.00121 * X^2 + H2$	12.627	1.201	27.656
$\Sigma = 110.774$							
WEIGHT 110.774 m x 9.288 kg/m = 1028.87 kg							

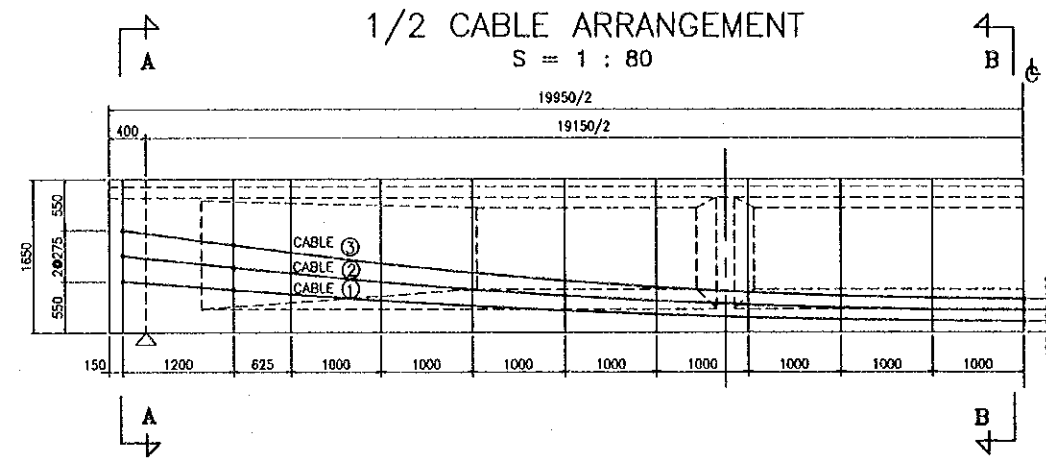


SECTION A-A

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANH LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT	DESIGNED BY S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2008.8.19
CONTRACTOR PACIFIC CONSULTANTS INTERNATIONAL	

PACKAGE 2	SCALE	DRAWING No. C-1-2b-38	SHEET No.
PC CABLE ARRANGEMENT OF GIRDER (4)			

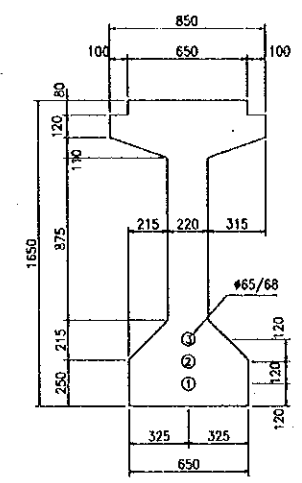
Lg = 19.950 (m)



POSITION OF CABLE CENTER FROM GIRDER BOTTOM

L	9825	8625	8000	7000	6000	5000	4000	3000	2000	1000	000
CABLE ①	550	457	411	343	284	234	193	161	138	125	120
CABLE ②	825	697	636	543	462	395	339	296	265	246	240
CABLE ③	1100	938	860	743	642	556	485	430	391	368	360

TYPICAL CROSS SECTION

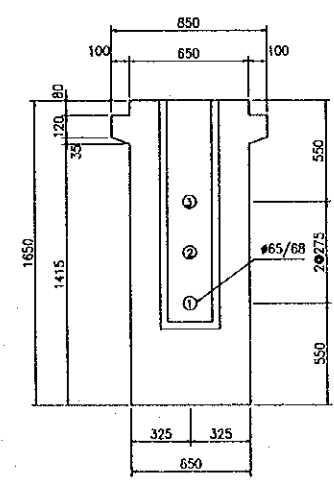
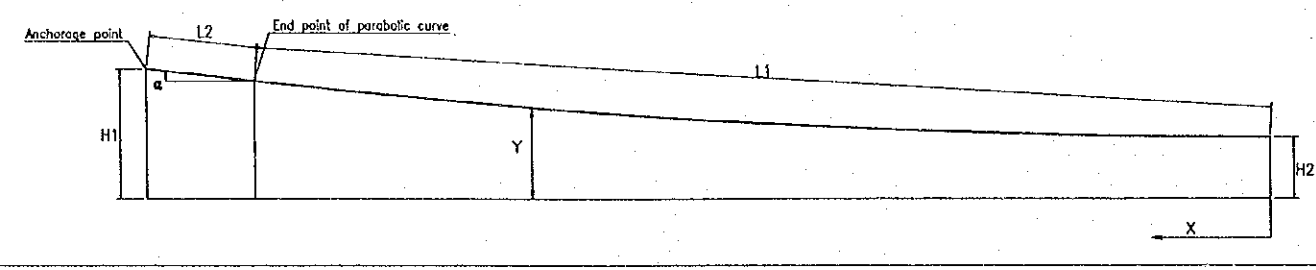


SECTION B-B  
S = 1 : 40

CABLE LENGTH AND ELEVATION

PC CABLE 12S 12.7B ( UNIT : m )							
CABLE No	H1	H2	$\alpha$	Y	L1	L2	$2 \times \Sigma L$
①	0.550	0.120	4.47039	$0.00455 \cdot X^2 + H2$	8.609	1.204	19.626
②	0.825	0.240	6.07136	$0.00618 \cdot X^2 + H2$	8.616	1.207	19.646
③	1.100	0.360	7.66287	$0.00782 \cdot X^2 + H2$	8.626	1.211	19.674
$\Sigma = 58.946$							

WEIGHT 58.946 m x 9.288 kg/m = 547.49 kg



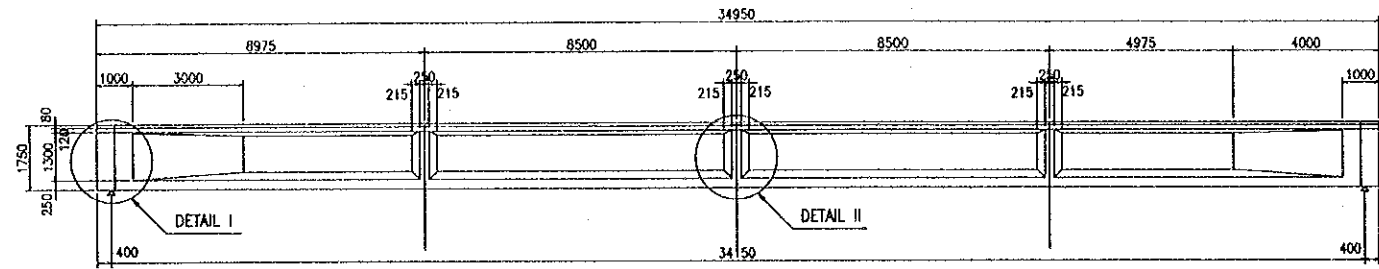
SECTION A-A  
S = 1 : 40

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.8.14

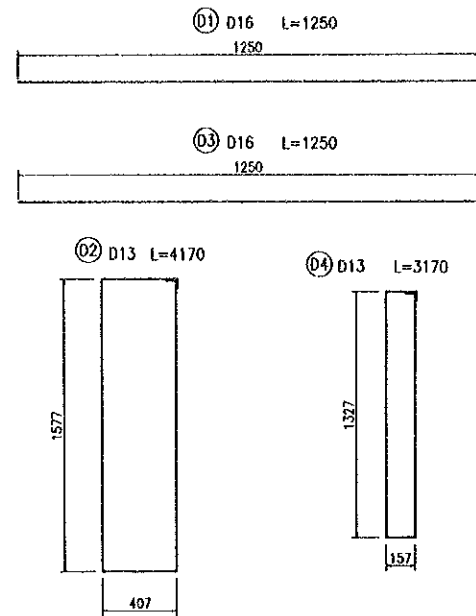
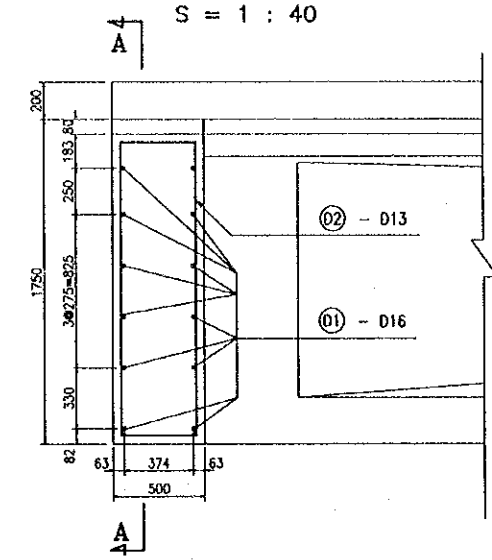
PACKAGE 2	SCALE	DRAWING No. C--1-2b-39	SHEET No.
RE-BAR ARRANGEMENT OF DIAPHRAGM (1)			

Lg = 34.950 (m)      W = 21.1 (m)

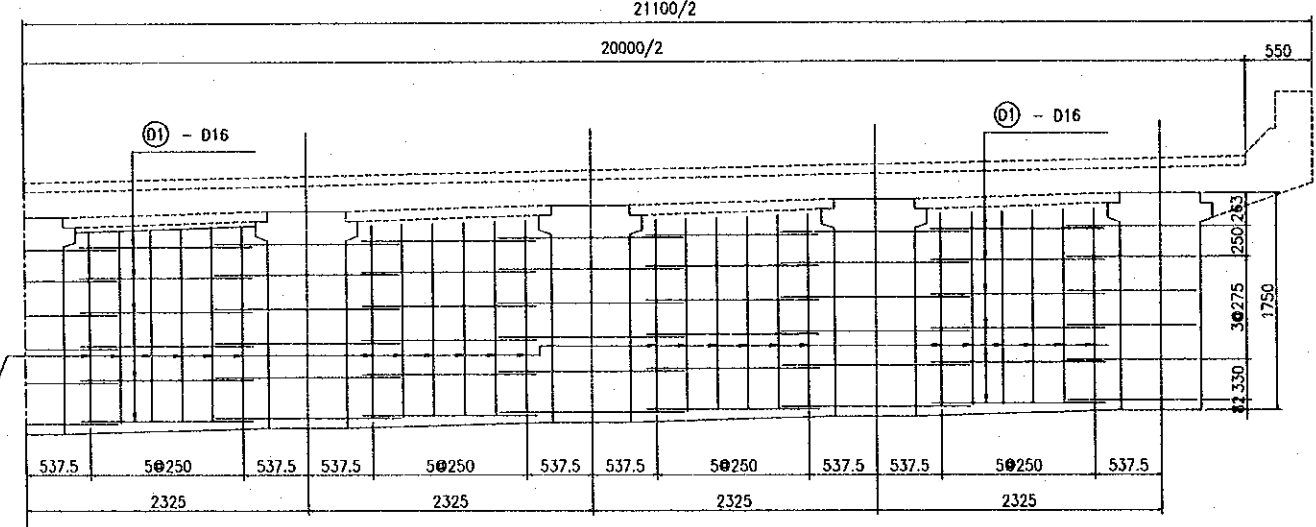
SIDE VIEW  
S = 1 : 200



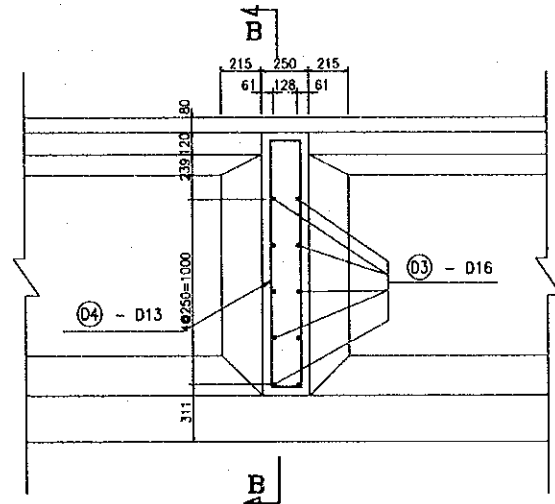
DETAIL I  
S = 1 : 40



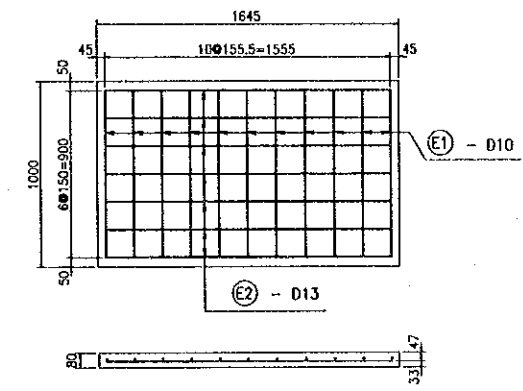
SECTION A-A  
S = 1 : 60



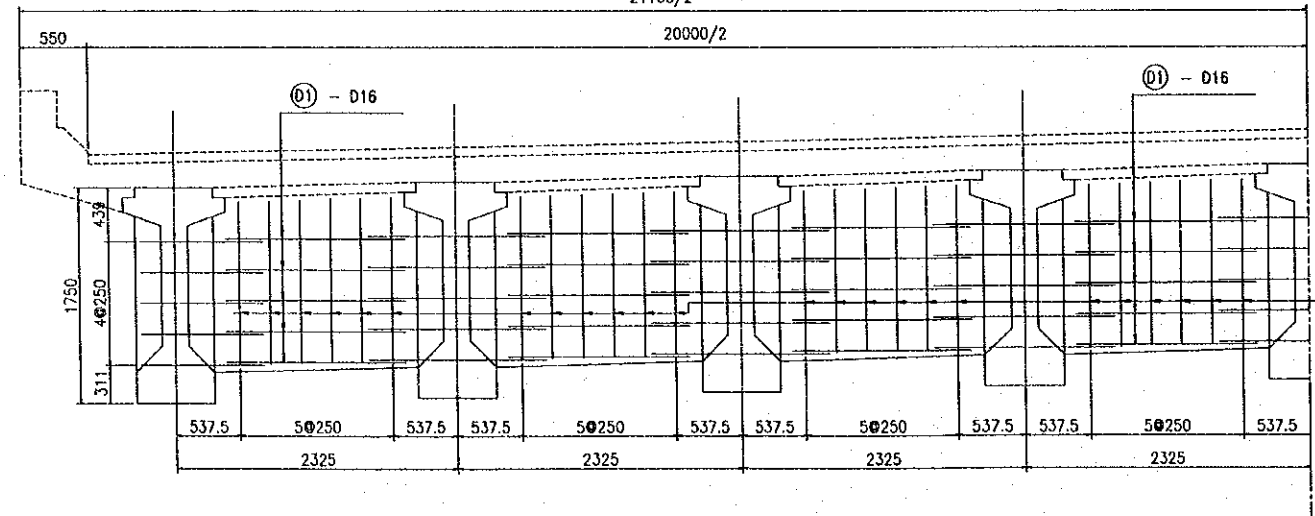
DETAIL II  
S = 1 : 40



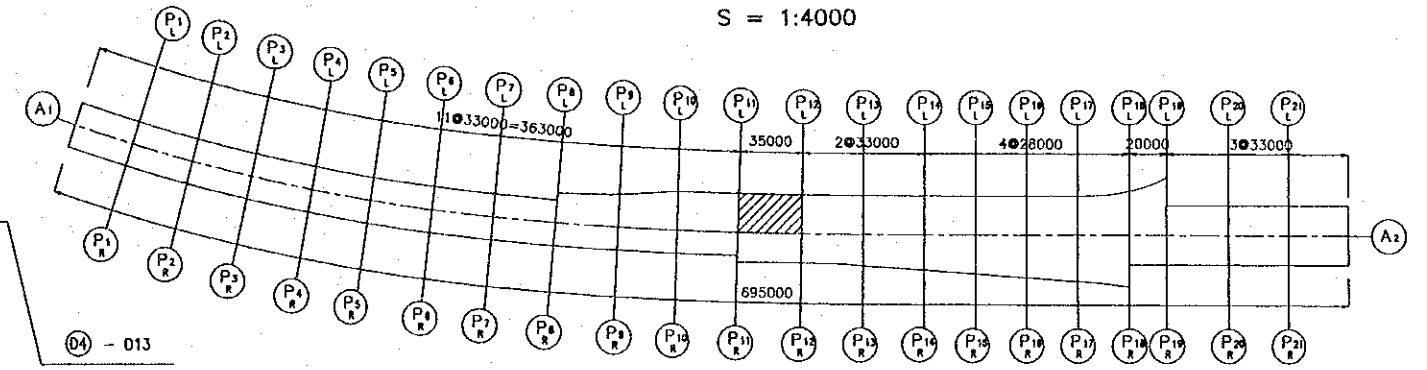
DETAIL OF PRECAST PLATE  
S = 1 : 40



SECTION B-B  
S = 1 : 60



KEY PLAN  
S = 1 : 4000

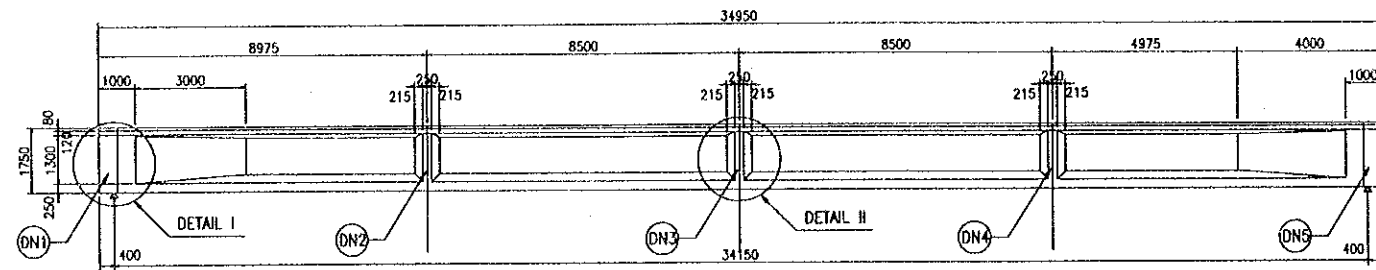


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S.WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.8.17

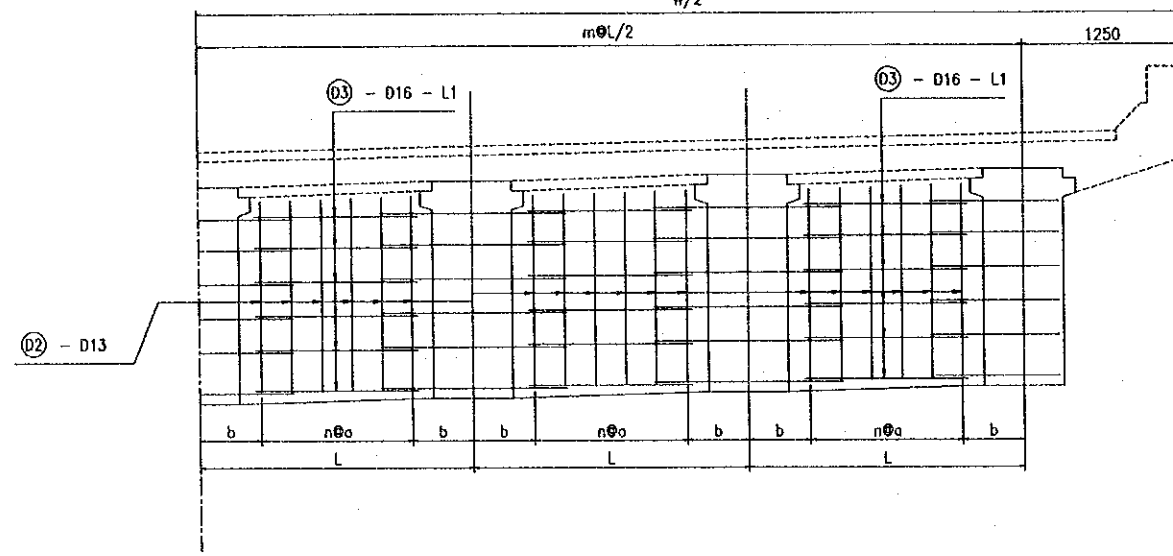
PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-1-2b-40	
RE-BAR ARRANGEMENT OF DIAPHRAGM (2)			

$L_s = 35.000$  (m)     $H_g = 1.750$  (m)    (SPAN P11R-P12R)

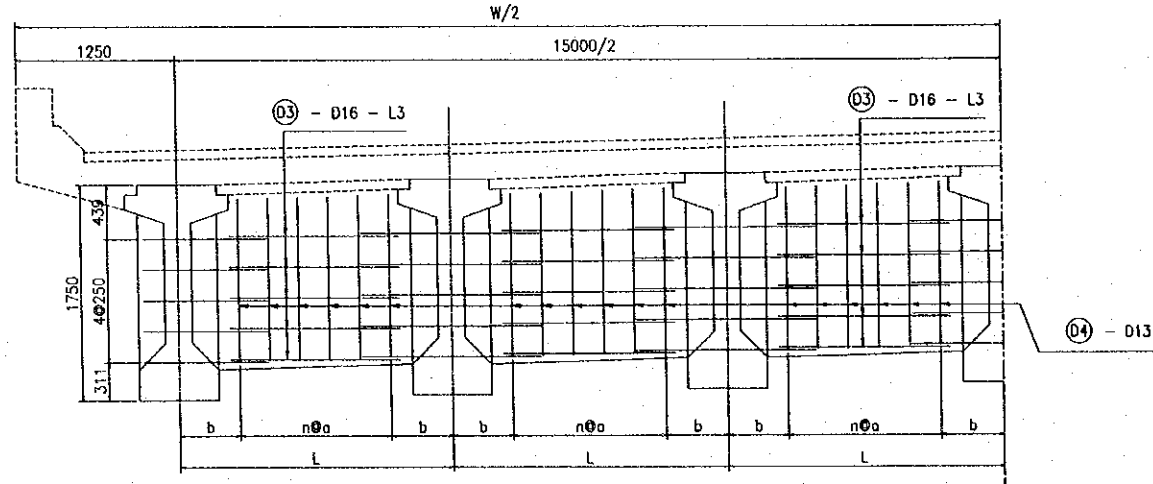
SIDE VIEW  
S = 1 : 200



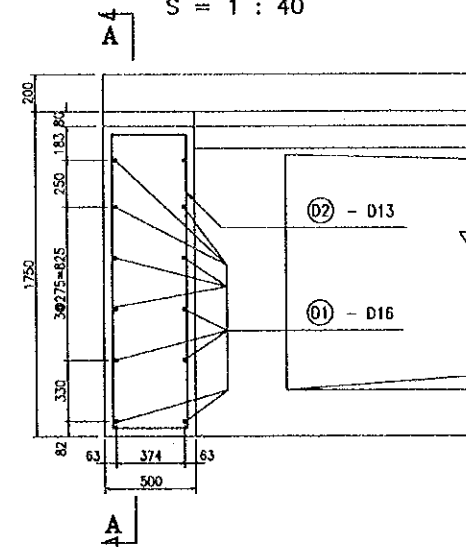
SECTION A-A  
S = 1 : 60  
W/2



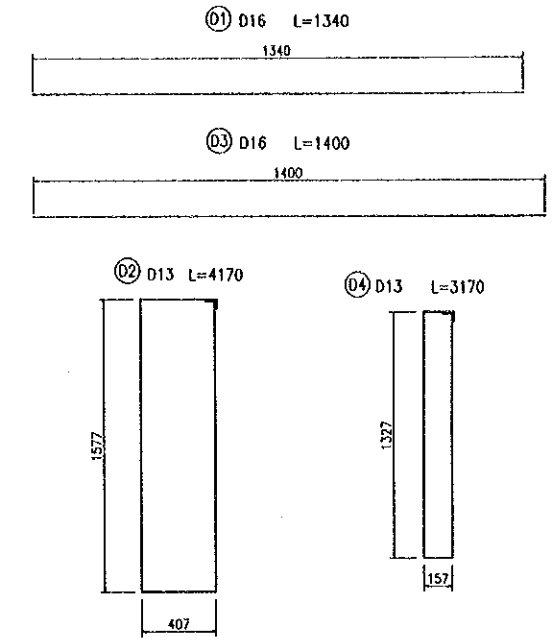
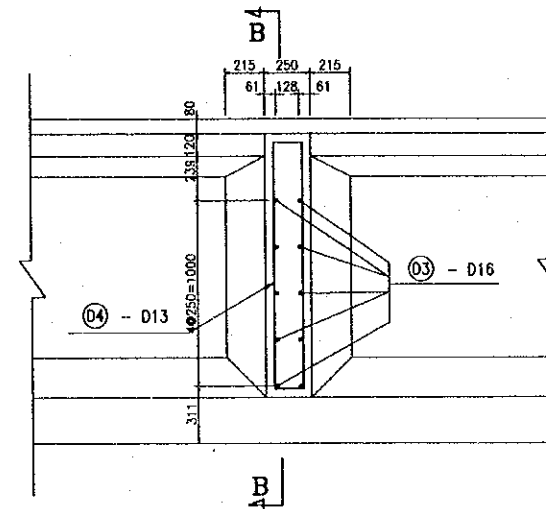
SECTION B-B  
S = 1 : 60  
W/2



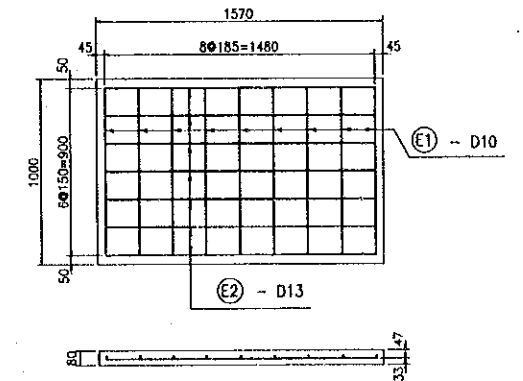
DETAIL I  
S = 1 : 40



DETAIL II  
S = 1 : 40



DETAIL OF PRECAST PLATE  
S = 1 : 40



	SPAN (P11R - P12R)				
	DN1	DN2	DN3	DN4	DN5
W	16100	16036	15982	15928	15860
m	6	6	6	6	6
L	2267	2256	2247	2238	2227
n	5	5	5	5	5
a	250	250	250	250	250
b	508.5	503	498.5	494	488.5
L1	1517	1506	1497	1488	1477
L3	16100	16100	16100	16100	16100



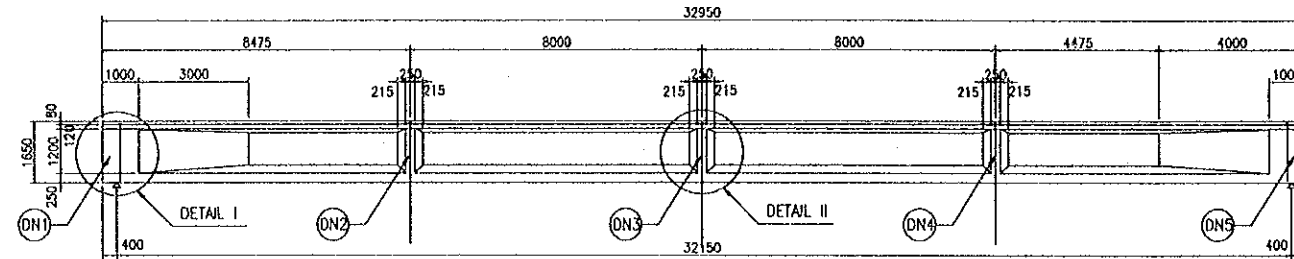


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE
PROJECT RED RIVER BRIDGE (THANH TRU BRIDGE) CONSTRUCTION PROJECT	DATE 2000.3.14	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

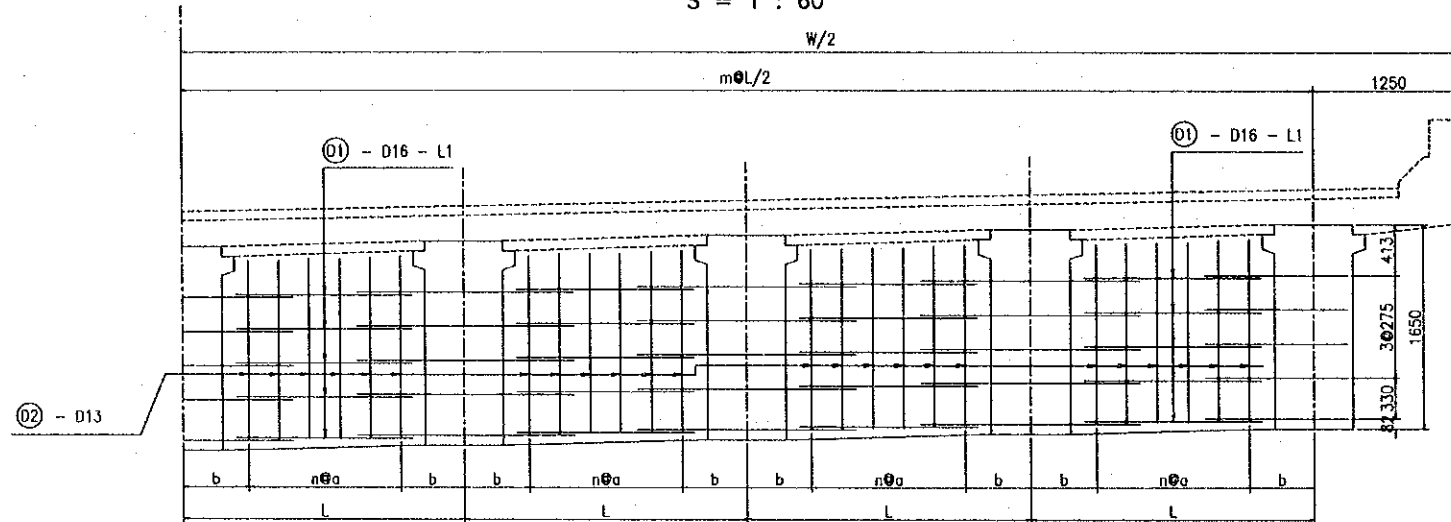
PACKAGE 2	SCALE C-1-2b-42	DRAWING No. C-1-2b-42	SHEET No.
RE-BAR ARRANGEMENT OF DIAPHRAGM (4-1)			

Ls = 33.000 (m)      W=21.1~16.1(m)

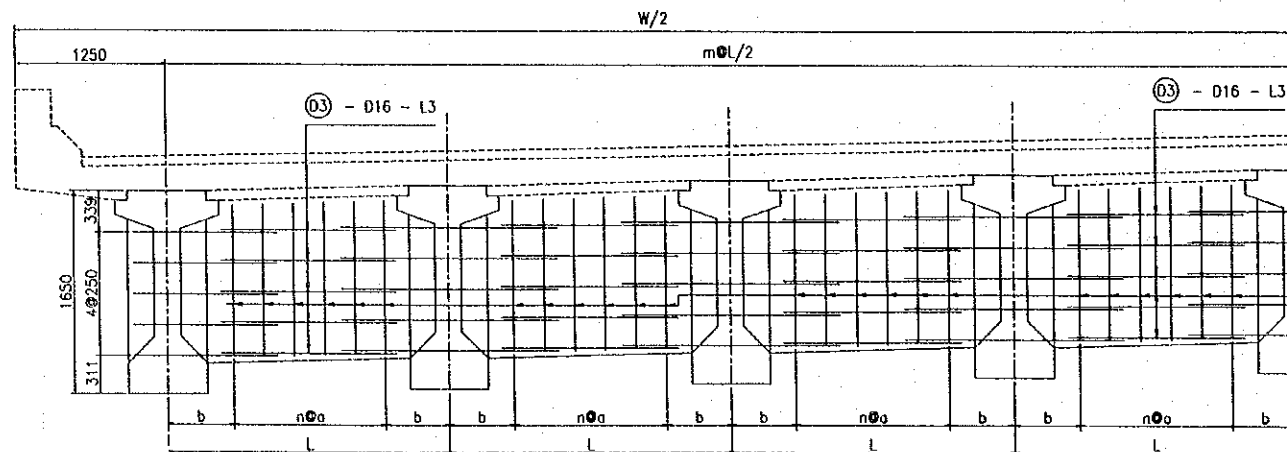
SIDE VIEW  
S = 1 : 200



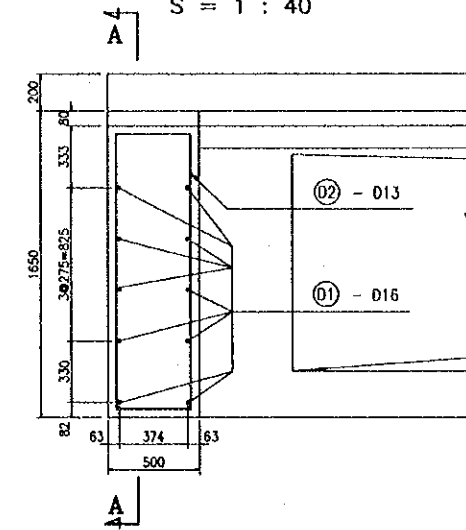
SECTION A-A  
S = 1 : 60



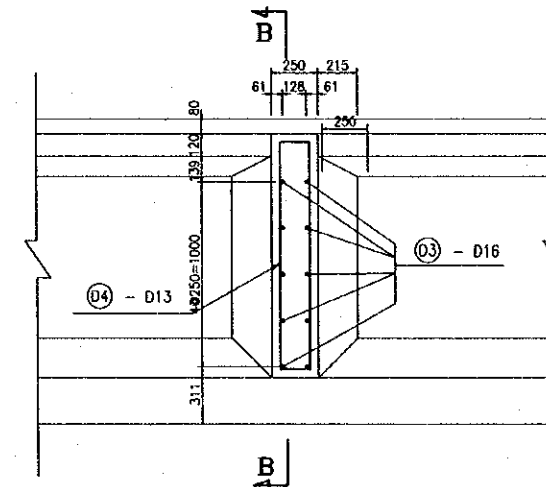
SECTION B-B  
S = 1 : 60



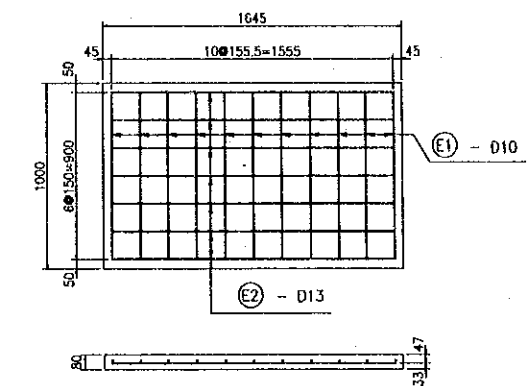
DETAIL I  
S = 1 : 40



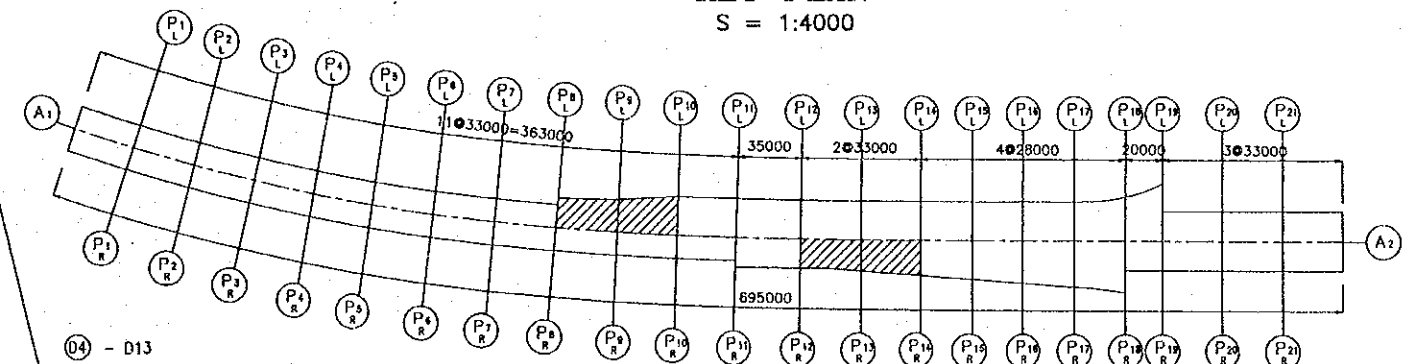
DETAIL II  
S = 1 : 40



DETAIL OF PRECAST PLATE  
S = 1 : 40



KEY PLAN  
S = 1:4000



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		DATE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		2000.0.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-1-2b-43	

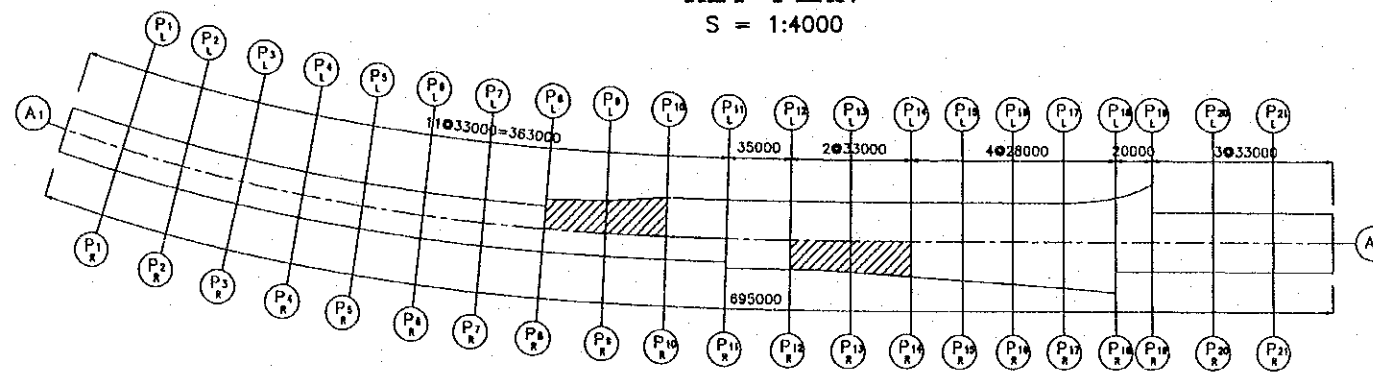
RE-BAR ARRANGEMENT OF DIAPHRAGM (4-2)

Ls = 33.000 (m)      W=21.1~16.1(m)

	SPAN (P <sub>8L</sub> - P <sub>9L</sub> )					SPAN (P <sub>9R</sub> - P <sub>10R</sub> )					SPAN (P <sub>12R</sub> - P <sub>13R</sub> )					SPAN (P <sub>13R</sub> - P <sub>14R</sub> )				
	DN1	DN2	DN3	DN4	DN5	DN1	DN2	DN3	DN4	DN5	DN1	DN2	DN3	DN4	DN5	DN1	DN2	DN3	DN4	DN5
W	16100	16738	17347	17956	18600	18600	19236	19844	20460	21100	15860	16150	16426	16696	16990	16990	17564	18096	18635	19209
m	7	7	7	7	7	8	8	8	8	8	6	6	6	6	6	7	7	7	7	7
L	1943	2034	2121	2208	2300	2013	2092	2168	2245	2325	2227	2275	2321	2366	2415	2070	2152	2228	2305	2387
n	4	4	5	5	5	4	4	5	5	5	5	5	5	6	6	4	5	5	5	6
a	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	443.5
b	471.5	517	435.5	479	525	506.5	546	459	497.5	537.5	488.5	512.5	535.5	433	457.5	535	451	489	527.5	DN1
L1	1193	1284	1371	1458	1550	1263	1342	1418	1495	1575	1477	1525	1571	1616	1665	1320	1402	1478	1555	1637
L2	1193	1284	1371	1458	1550	1263	1342	1418	1495	1575	1477	1525	1571	1616	1665	1320	1402	1478	1555	1637

KEY PLAN

S = 1:4000

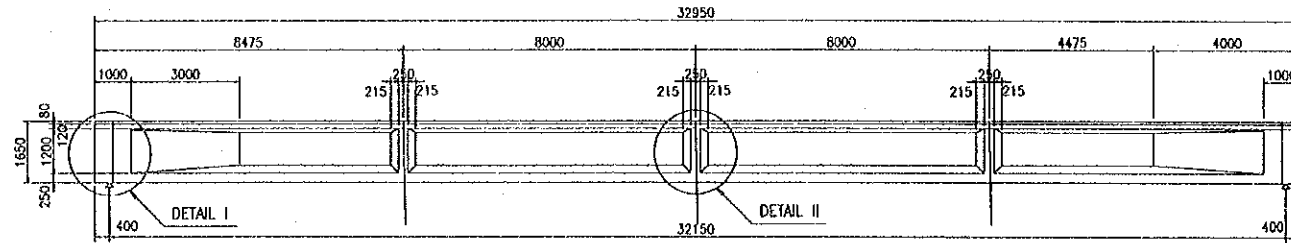




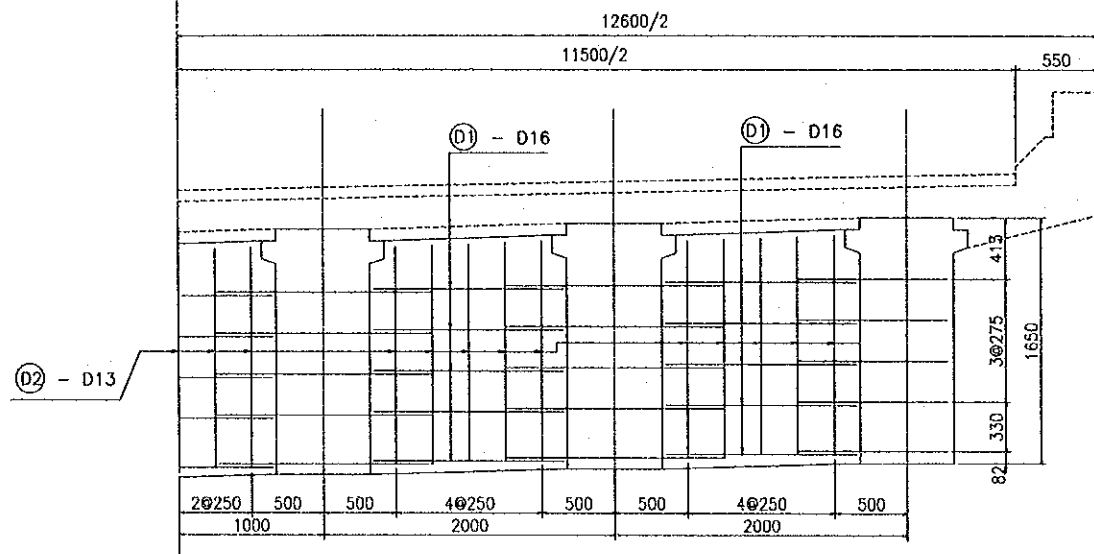
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATARE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (HANG THI BRIDGE) CONSTRUCTION PROJECT		DATE 2000.11.19
CONSULTANT FACED CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE C-1-2b-45	DRAWING No. C-1-2b-45	SHEET No.
RE-BAR ARRANGEMENT OF DIAPHRAGM (8)			

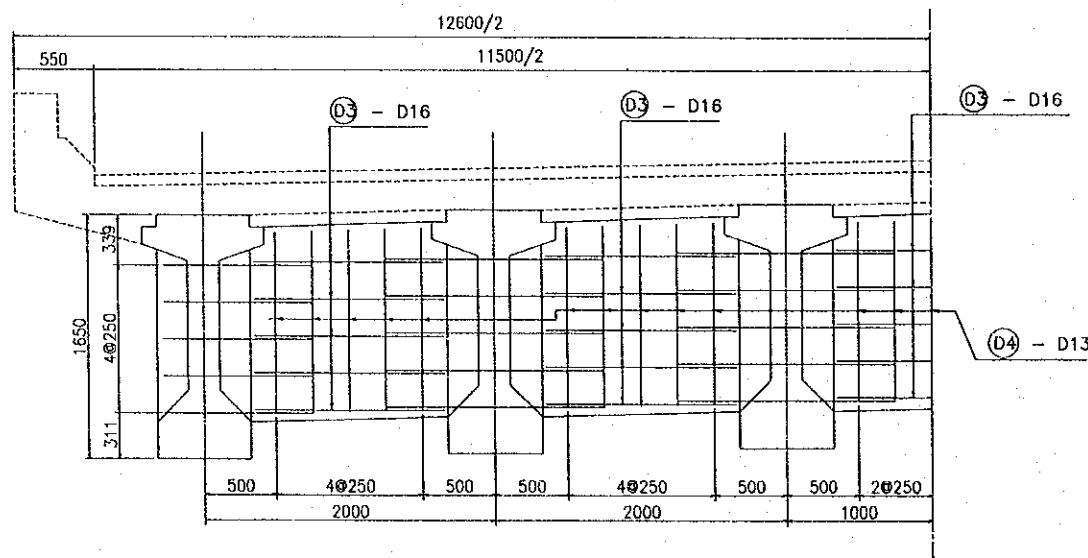
SIDE VIEW  $L_g = 32.950 \text{ (m)}$   $W = 12.6 \text{ (m)}$   
 $S = 1 : 200$



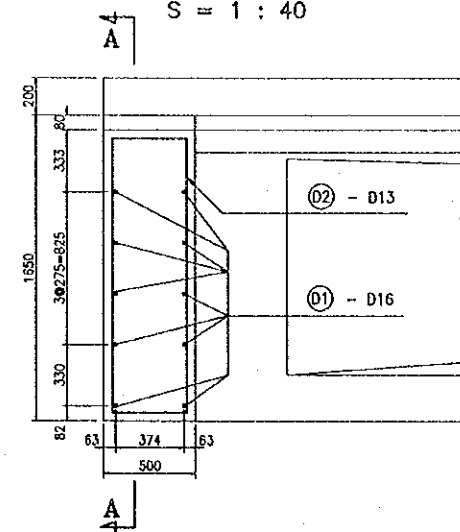
SECTION A-A  
 $S = 1 : 50$



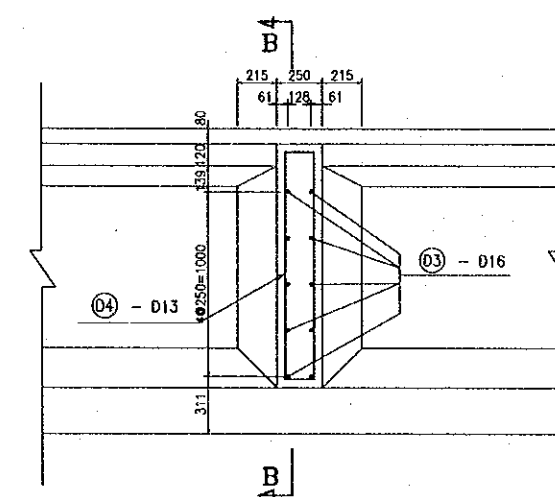
SECTION B-B  
 $S = 1 : 50$



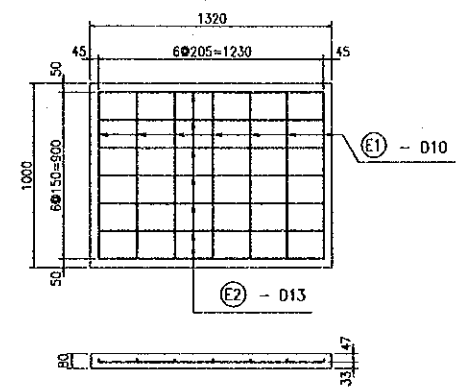
DETAIL I  
 $S = 1 : 40$



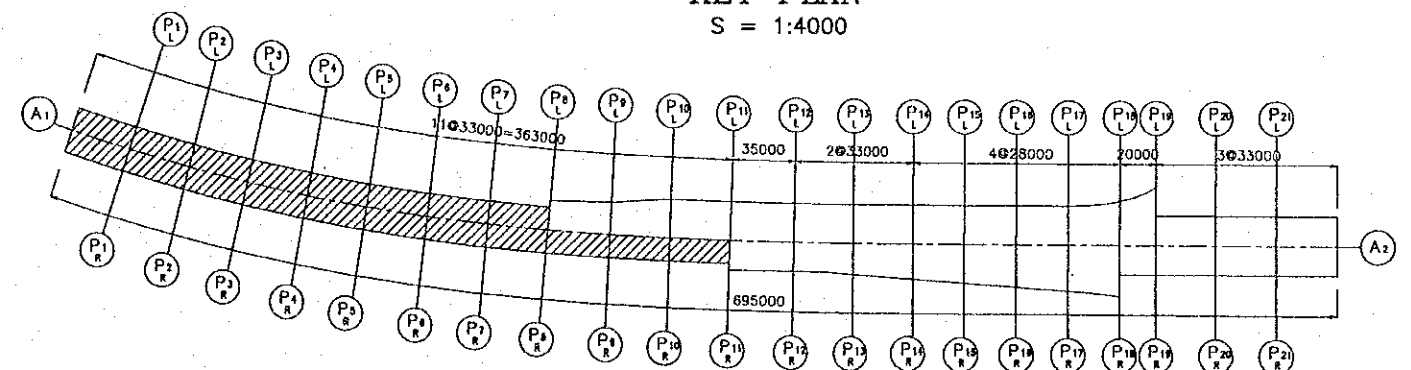
DETAIL II  
 $S = 1 : 40$



DETAIL OF PRECAST PLATE  
 $S = 1 : 40$



KEY PLAN  
 $S = 1 : 4000$

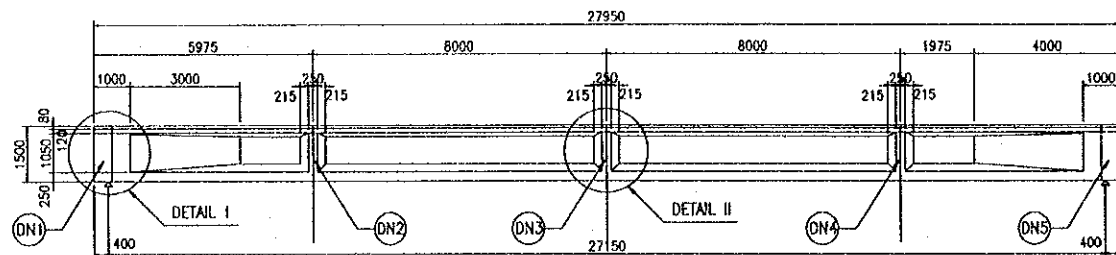


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. MATSUDA
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	DATE 2.22.2002
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

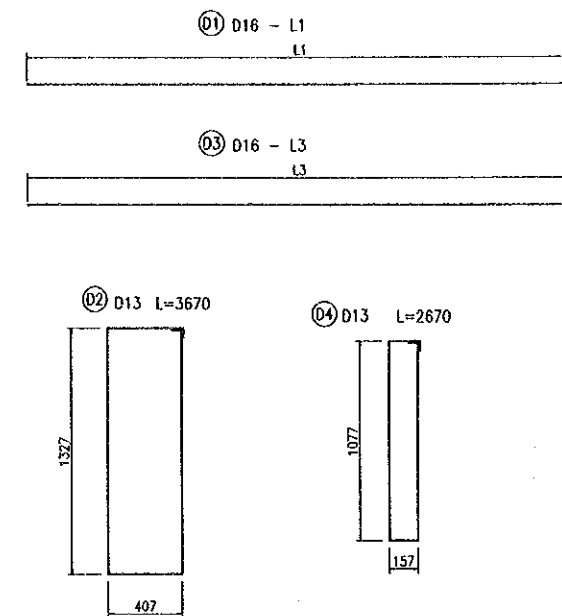
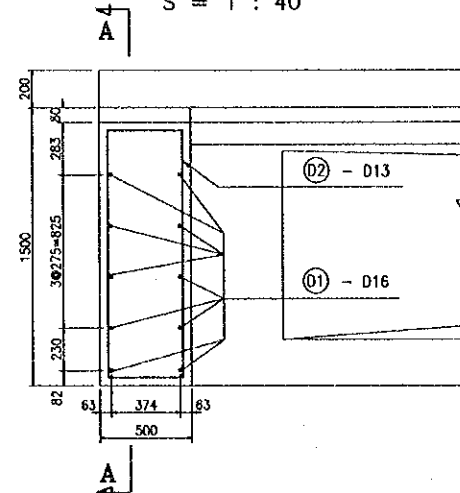
PACKAGE 2	SCALE C-1-2b-46	DRAWING No. C-1-2b-46	SHEET No.
REE-BAR ARRANGEMENT OF DIAPHRAGM (7-1)			

Ls = 28.000 (m)      W=28.1~19.2(m)

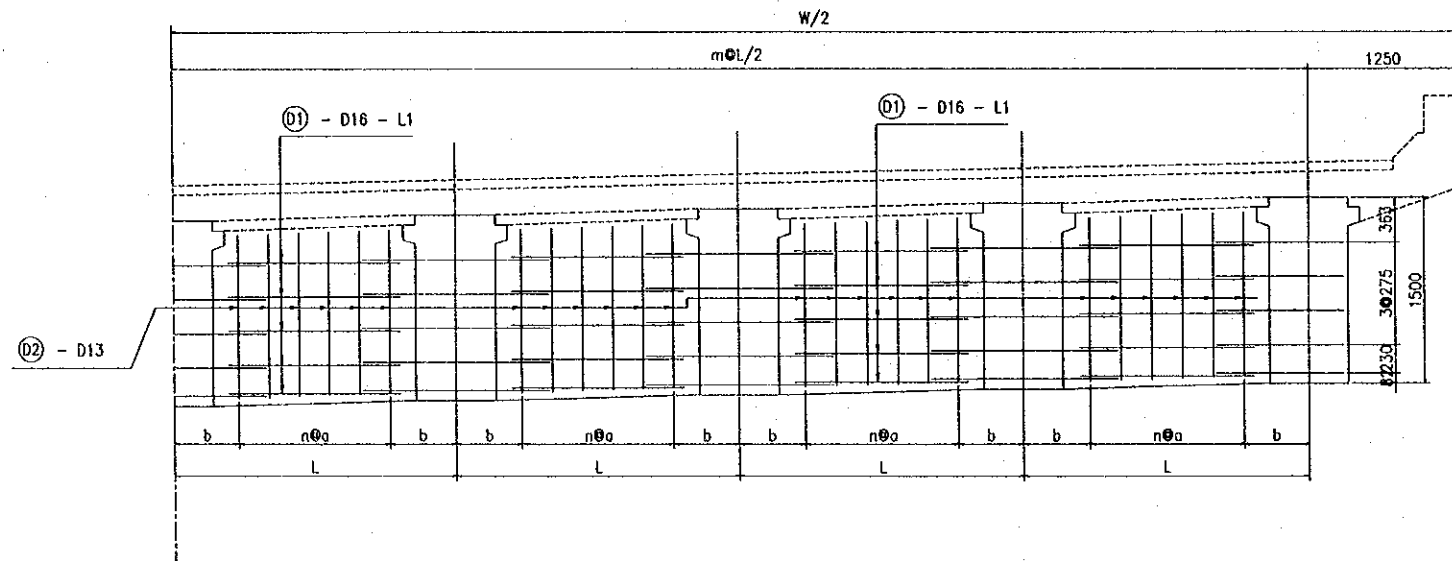
SIDE VIEW  
S = 1 : 200



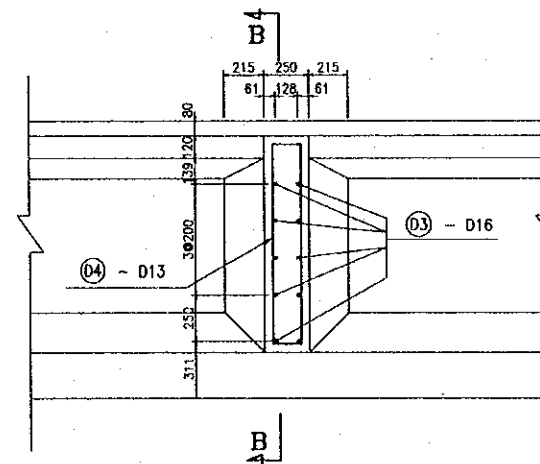
DETAIL I  
S = 1 : 40



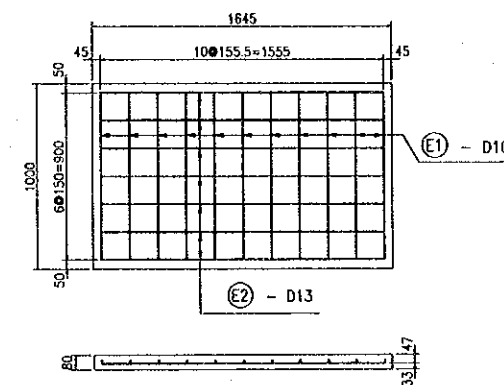
SECTION A-A  
S = 1 : 60



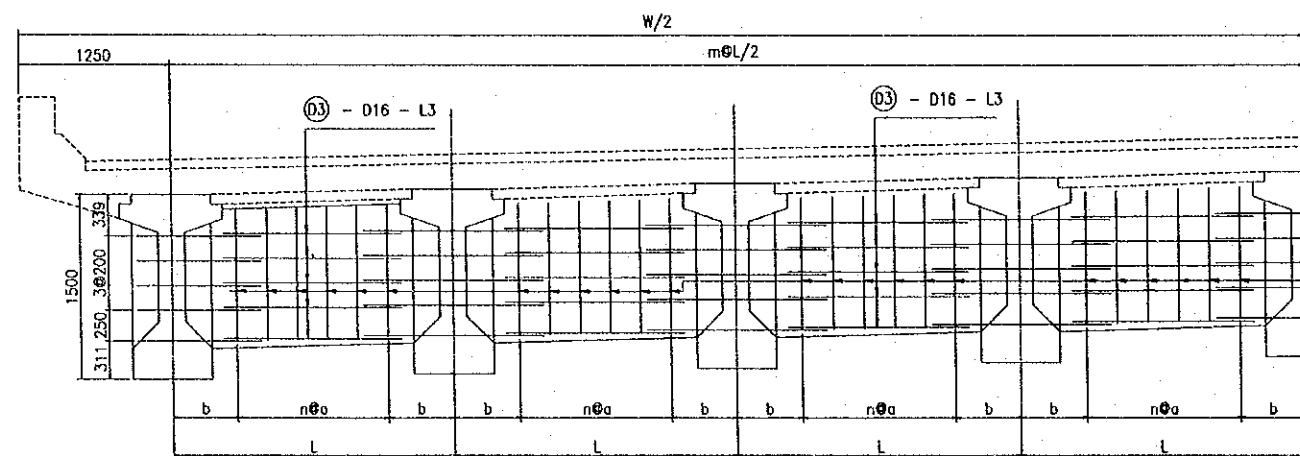
DETAIL II  
S = 1 : 40



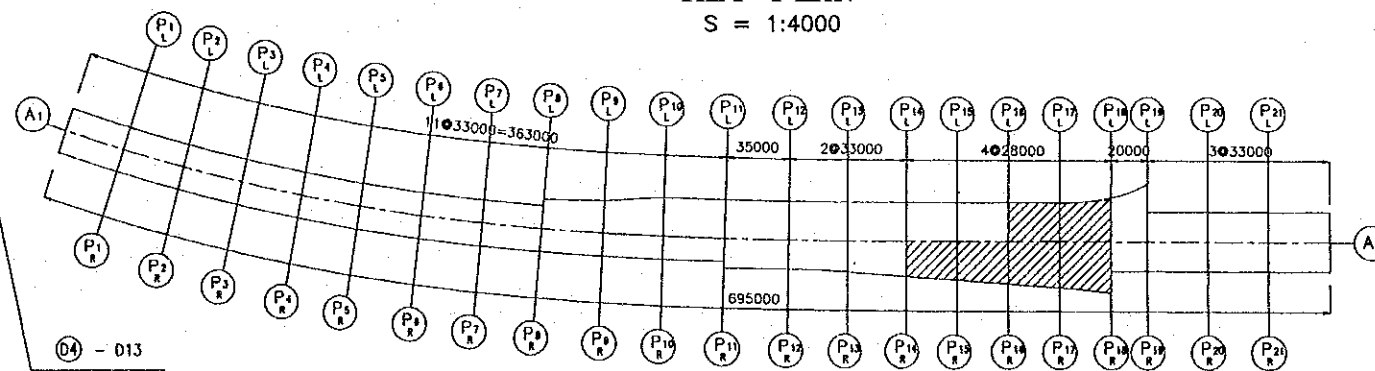
DETAIL OF PRECAST PLATE  
S = 1 : 40



SECTION B-B  
S = 1 : 60



KEY PLAN  
S = 1:4000



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
COMMISSIONER PACIFIC CONSULTANTS INTERNATIONAL		DATE

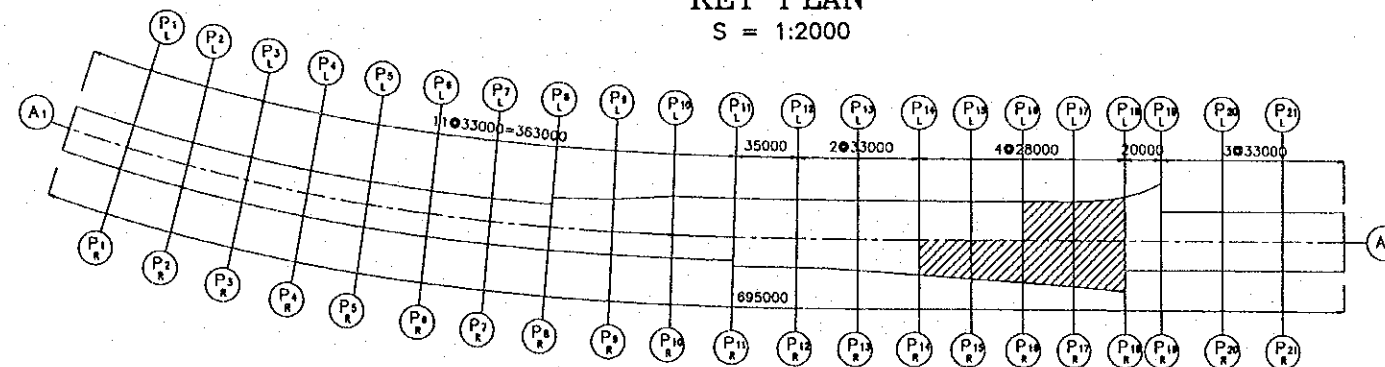
PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-1-2b-47	
RE-BAR ARRANGEMENT OF DIAPHRAGM (7-2)			

LS = 28.000 (m)      W=21.1~19.2(m)

	SPAN (P <sub>16R</sub> - P <sub>17R</sub> )					SPAN (P <sub>17R</sub> - P <sub>18R</sub> )				
	DN1	DN2	DN3	DN4	DN5	DN1	DN2	DN3	DN4	DN5
W	21100	21108	21116	21132	21140	21140	21706	20203	23209	23778
m	8	8	8	8	8	9	9	9	9	9
L	2325	2326	2327	2329	2330	2071	2134	2217	2301	2364
n	5	5	5	5	5	4	5	5	5	6
a	250	250	250	250	250	250	250	250	250	250
b	537.5	538	538.5	539.5	540	535.5	442	483.5	525.5	432
L1	1575	1576	1577	1579	1580	1321	1384	1467	1551	1614
L2	1575	1576	1577	1579	1580	1321	1384	1467	1551	1614

	SPAN (P <sub>14R</sub> - P <sub>15R</sub> )					SPAN (P <sub>15R</sub> - P <sub>16R</sub> )					SPAN (P <sub>16R</sub> - P <sub>17R</sub> )					SPAN (P <sub>17R</sub> - P <sub>18R</sub> )				
	DN1	DN2	DN3	DN4	DN5	DN1	DN2	DN3	DN4	DN5	DN1	DN2	DN3	DN4	DN5	DN1	DN2	DN3	DN4	DN5
W	19211	19628	20188	20740	21162	21162	21580	22138	22696	23122	23122	23610	24260	24920	25081	25081	25710	26546	27371	28005
m	8	8	8	8	8	9	9	9	9	9	10	10	10	10	10	11	11	11	11	11
L	2089	2141	2211	2280	2333	2074	2120	2182	2244	2291	2062	2111	2176	2242	2258	2053	2110	2186	2261	2319
n	4	5	5	5	5	4	5	5	5	5	4	5	5	5	5	4	5	5	5	5
a	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250
b	544.5	445.5	480.5	515	541.5	537	435	466	497	520.5	531	430.5	463	496	504	526.5	430	468	505.5	534.5
L1	1339	1391	1461	1530	1583	1324	1370	1432	1494	1541	1312	1361	1426	1492	1508	1303	1360	1436	1511	1569
L2	1339	1391	1461	1530	1583	1324	1370	1432	1494	1541	1312	1361	1426	1492	1508	1303	1360	1436	1511	1569

KEY PLAN  
S = 1:2000







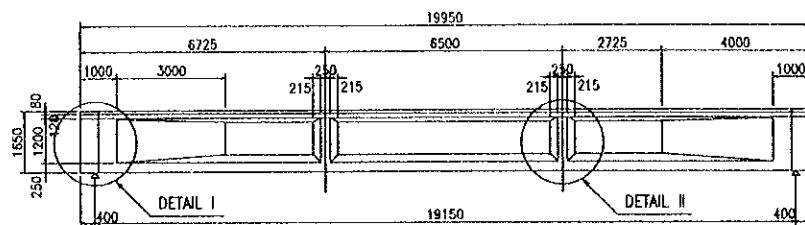


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT	DESIGNED BY NAME S. WATASE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SIGNATURE 
PROJECT RED RIVER BRIDGE (THANH TRU BRIDGE) CONSTRUCTION PROJECT	DATE 2000.3.14
CONTRACTOR PACIFIC CONSULTANTS INTERNATIONAL	

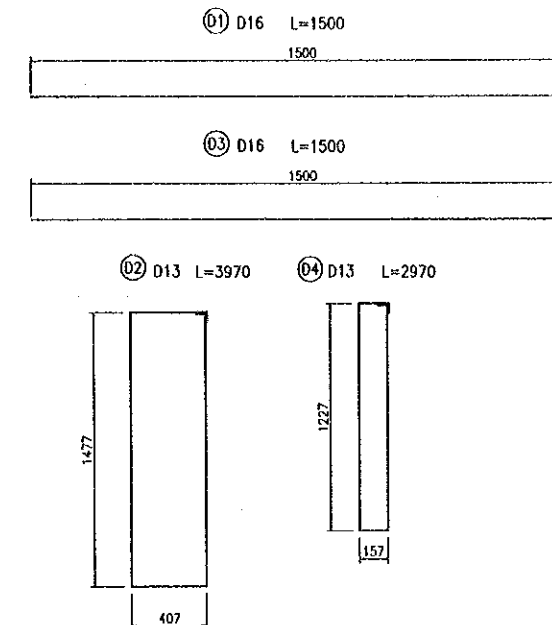
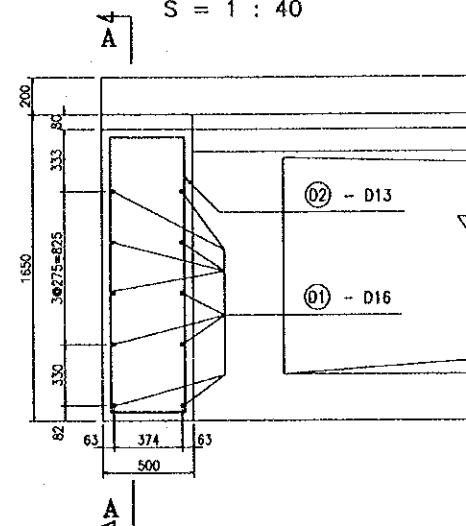
PACKAGE 2	SCALE	DRAWING No. C-1-2b-50	SHEET No.
RE-BAR ARRANGEMENT OF DIAPHRAGM (10)			

Lg = 32.950 (m)      W = 16.1 (m)

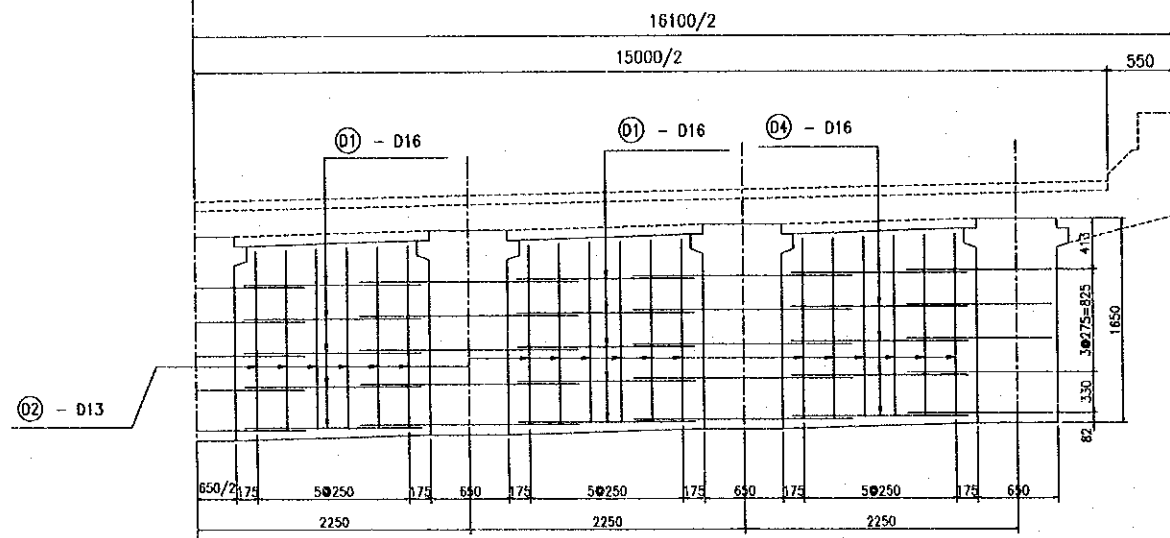
SIDE VIEW  
S = 1 : 200



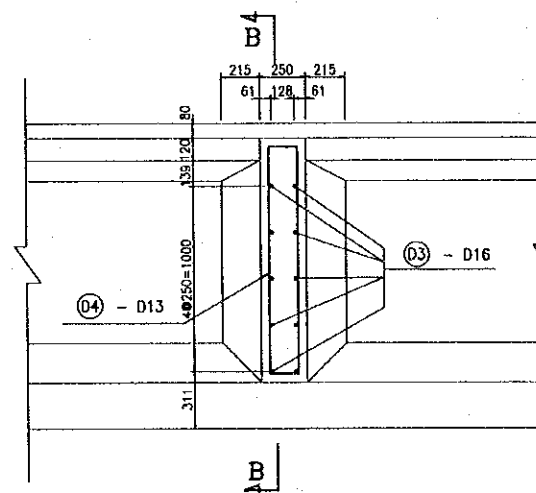
DETAIL I  
S = 1 : 40



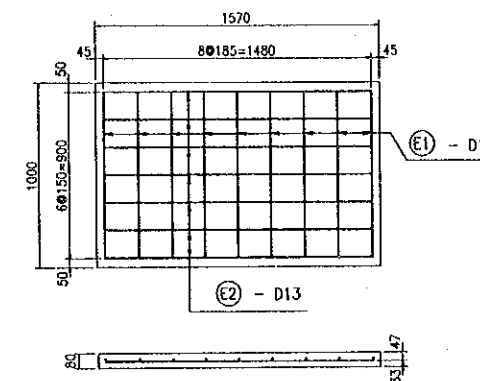
SECTION A-A  
S = 1 : 60



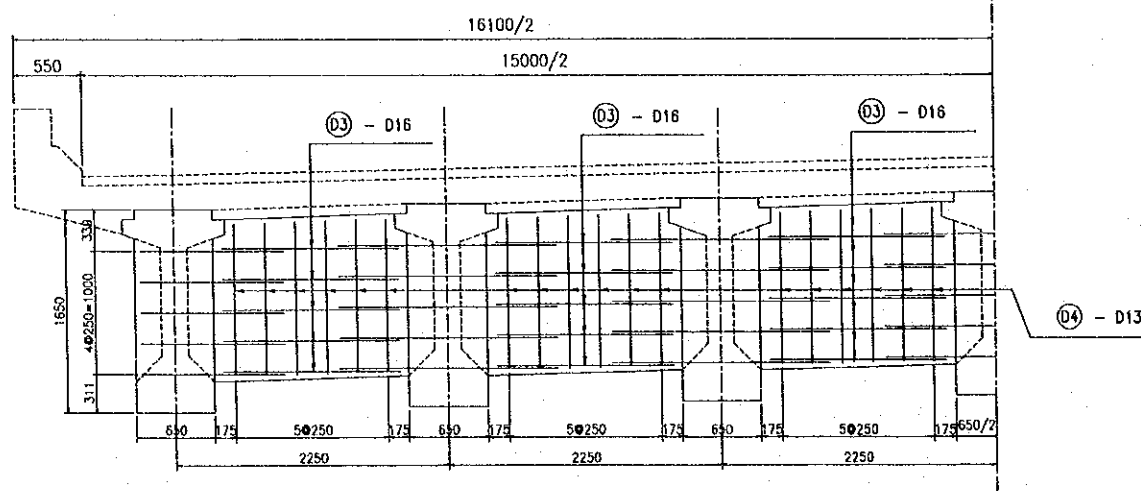
DETAIL II  
S = 1 : 40



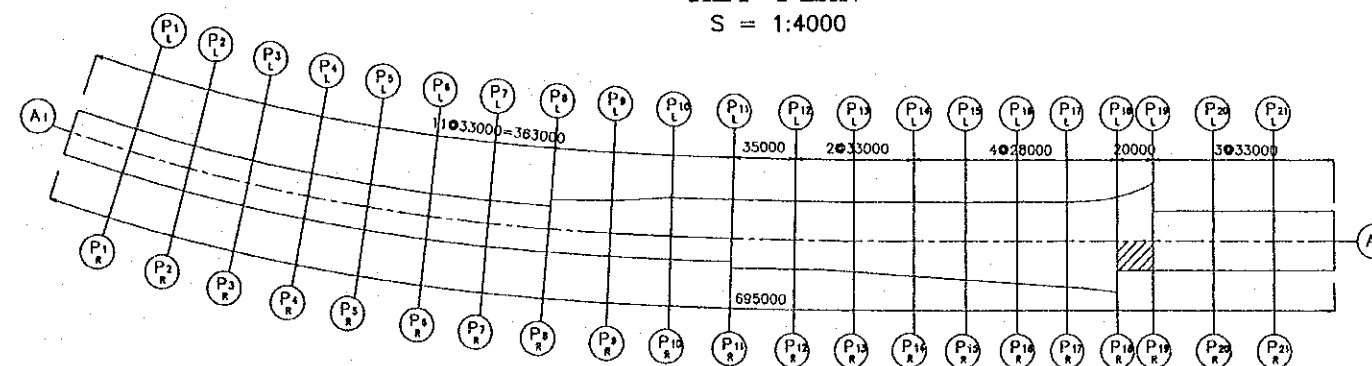
DETAIL OF PRECAST PLATE  
S = 1 : 40



SECTION B-B  
S = 1 : 60



KEY PLAN  
S = 1:4000



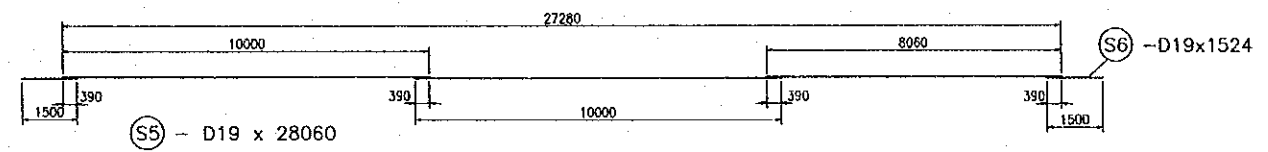
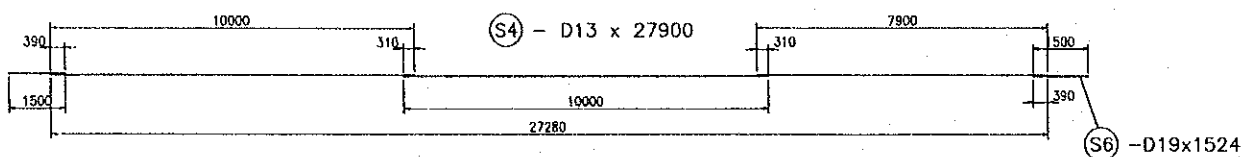
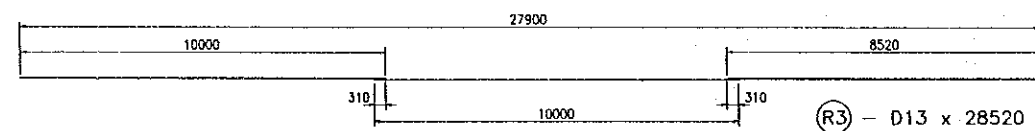
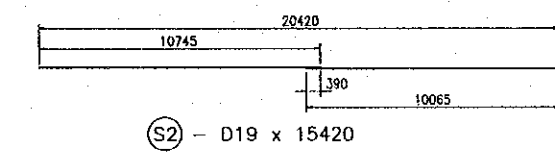
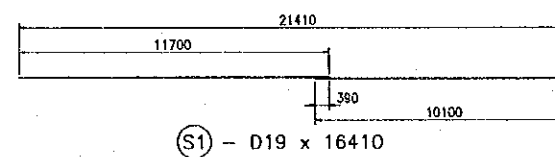
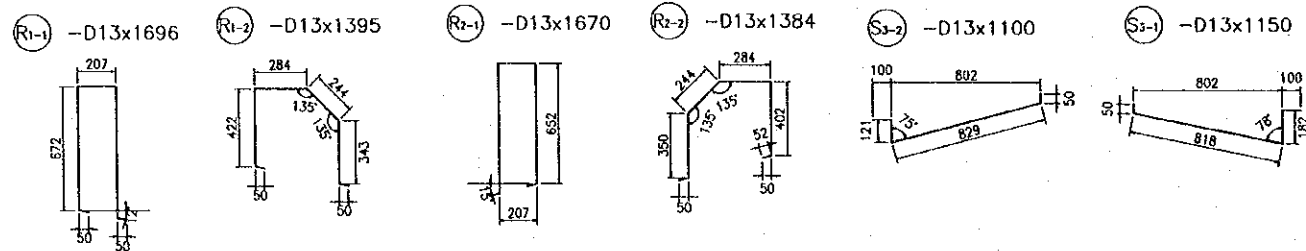
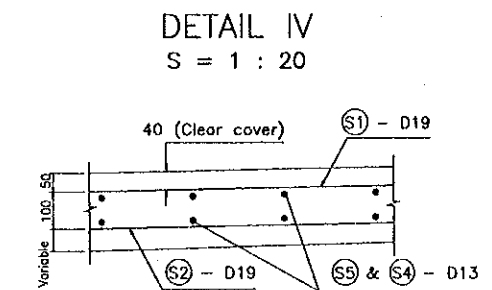
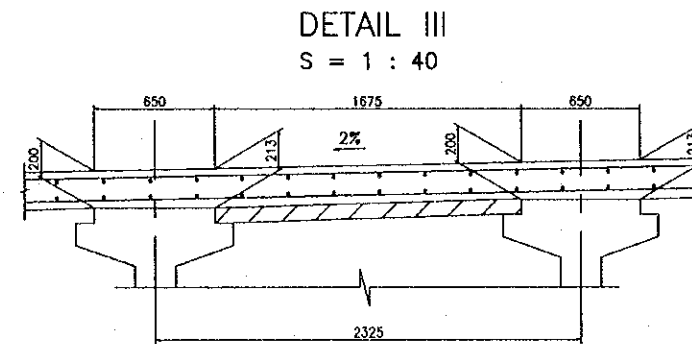
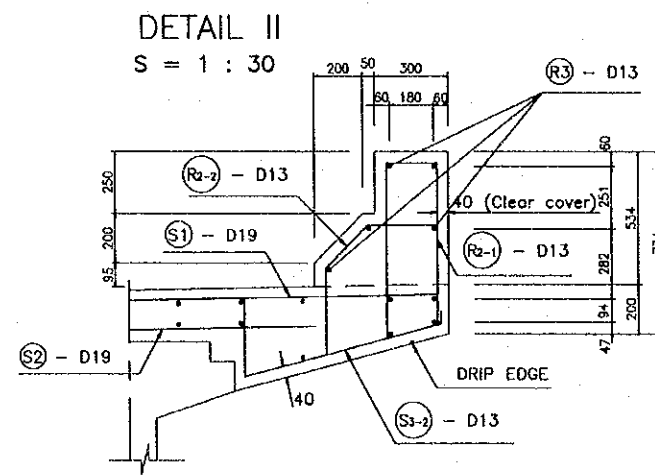
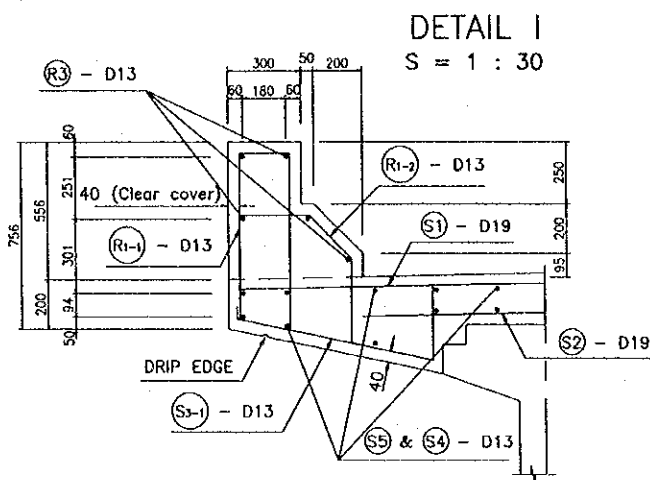
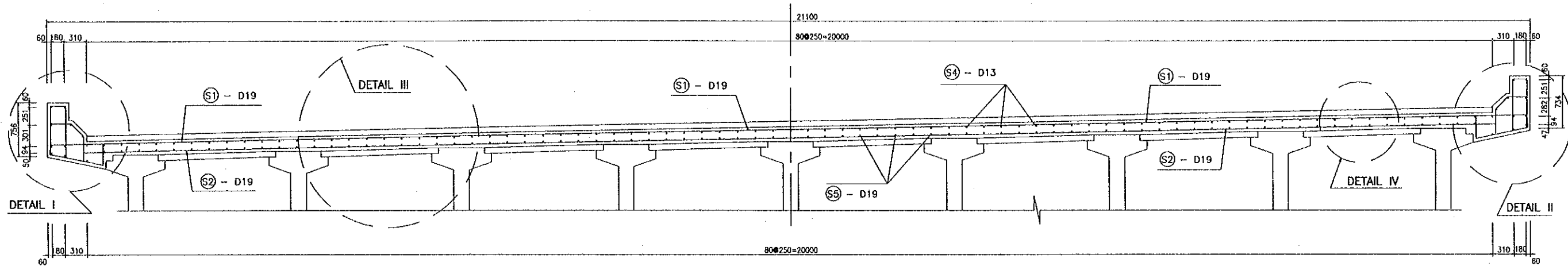




THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRU BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
COMMISSIONER PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000. 8. 14	

PACKAGE 2	SCALE	DRAWING No. C-1-2b-53	SHEET No.
RE-BAR ARRANGEMENT OF DECK SLAB (1-3)			

(L=28m W=21.100 m)  
CROSS SECTION OF DECK SLAB  
S = 1 : 60

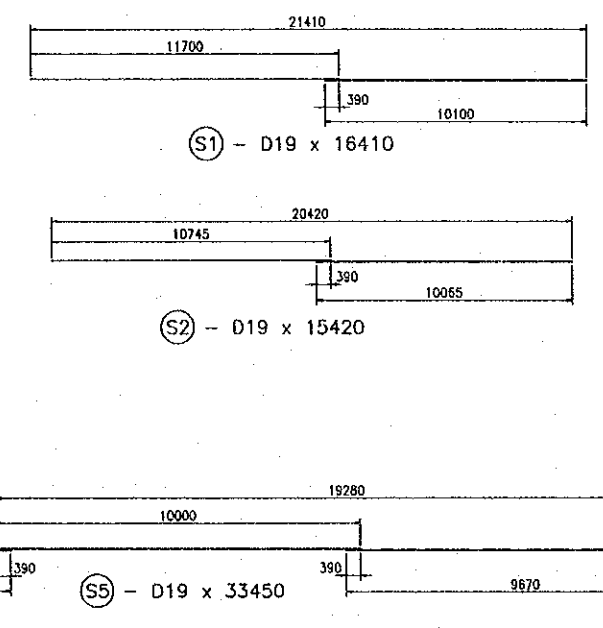
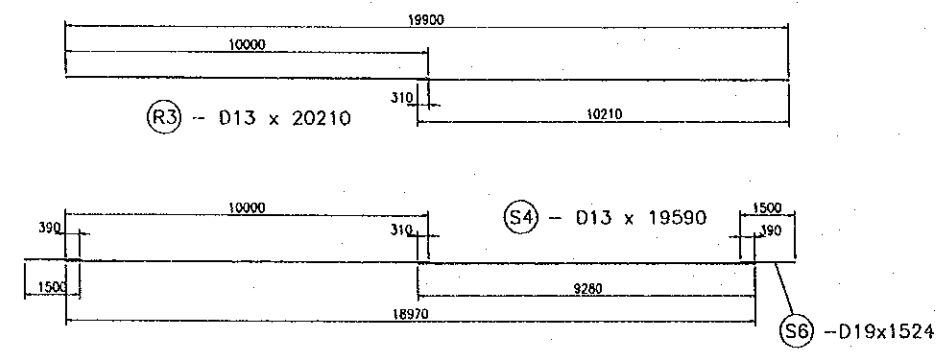
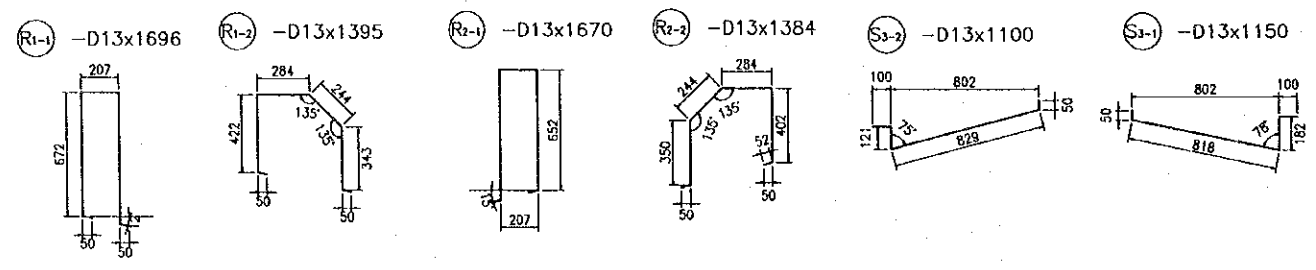
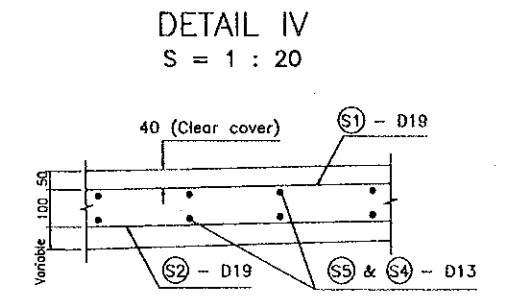
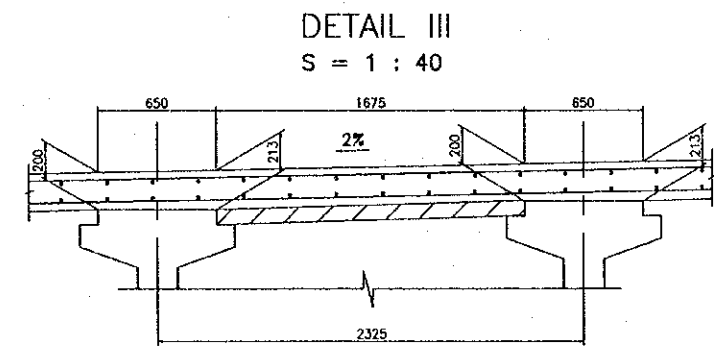
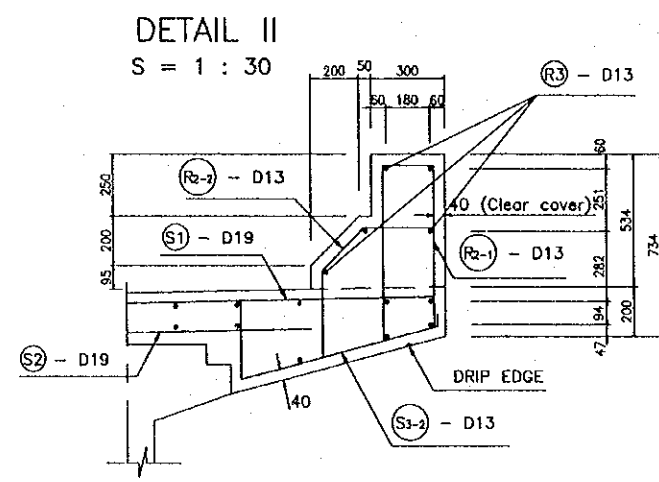
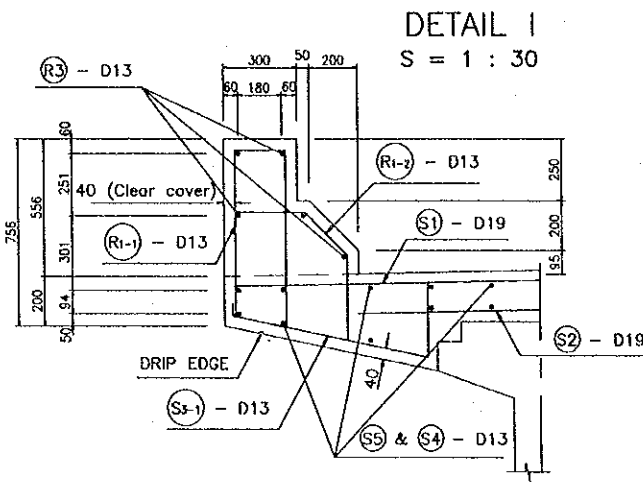
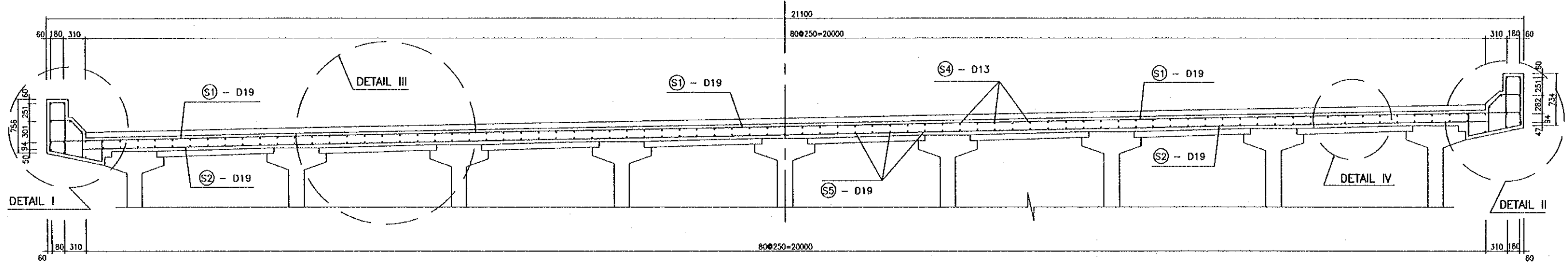


BAR LIST OF DECK SLAB						
REIN No	DIA (mm)	LENGTH (mm)	NUMBER	UNIT WEIGHT (kg/m)	WEIGHT (kg)	REMARKS
S1	19	21800	223	2.25	10938.2	
S2	19	20810	223	2.25	10441.4	
S3-1	13	1150	223	0.995	255.2	
S3-2	13	1100	223	0.995	244.1	
S4	13	27900	85	0.995	2359.6	
S5	19	28060	85	2.25	5366.5	
S6	19	1524	320	2.25	1097.3	
SUB TOTAL (FOR 1 SPAN)					30702.3	
					D13	2858.9
					D19	27843.4
BAR LIST OF CURB						
R1-1	13	1696	223	0.995	376.3	
R1-2	13	1395	223	0.995	309.5	
R2-1	13	1670	223	0.995	370.5	
R2-2	13	1384	223	0.995	307.1	
R3	13	28520	10	0.995	283.8	
SUB TOTAL (FOR 1 SPAN)					1647.2	
					D13	1647.2

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUI
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. MATSUI
PROJECT RED RIVER BRIDGE (THANH THIEU BRIDGE) CONSTRUCTION PROJECT		SIGNATURE 
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000. 3. 14

PACKAGE 2	SCALE C-1-2b-54	DRAWING No. C-1-2b-54	SHEET No.
RE-IBAR ARRANGEMENT OF DECK SLAB (1-4)			

(L=20m W=21.100 m)  
CROSS SECTION OF DECK SLAB  
S = 1 : 60

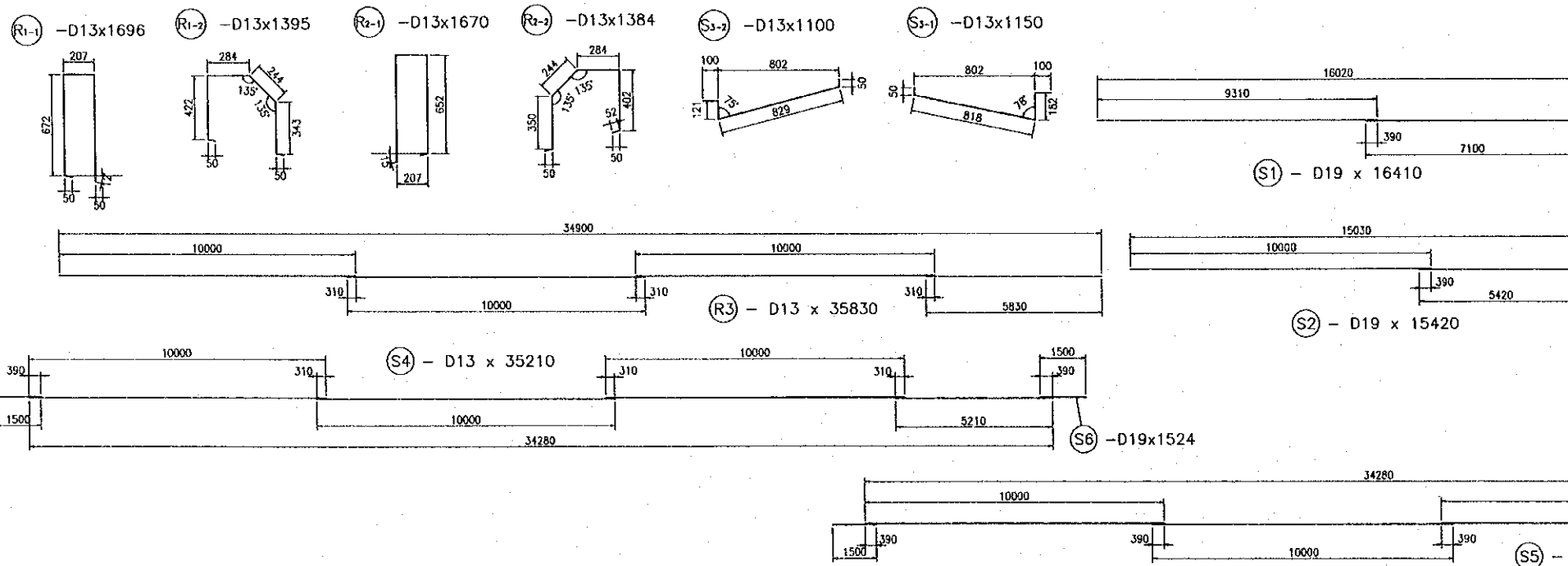
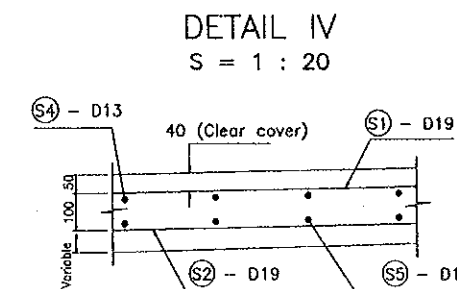
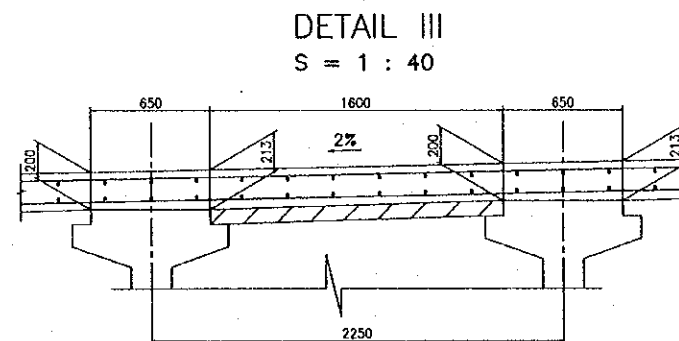
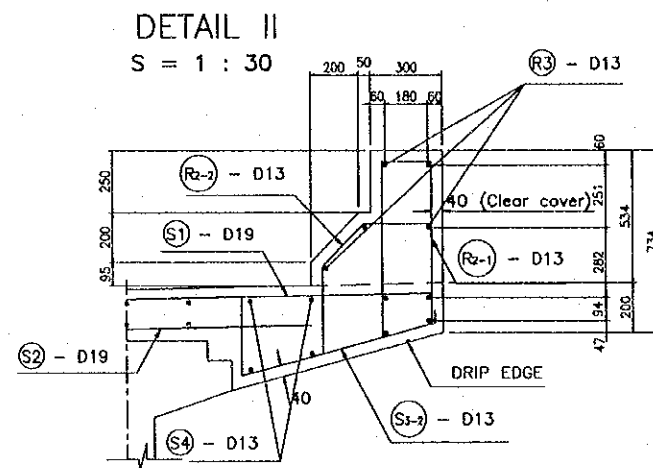
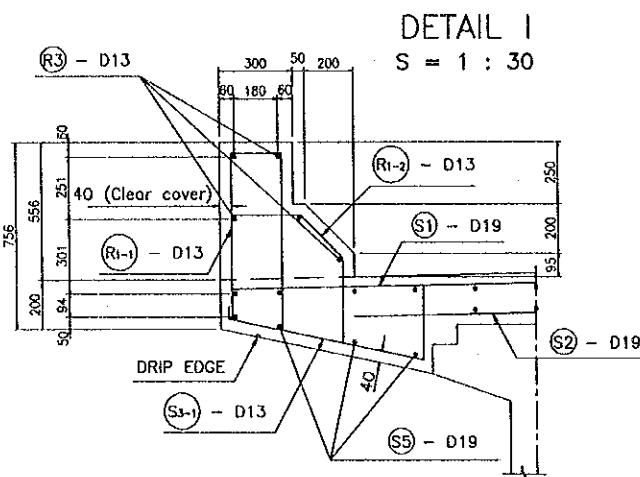
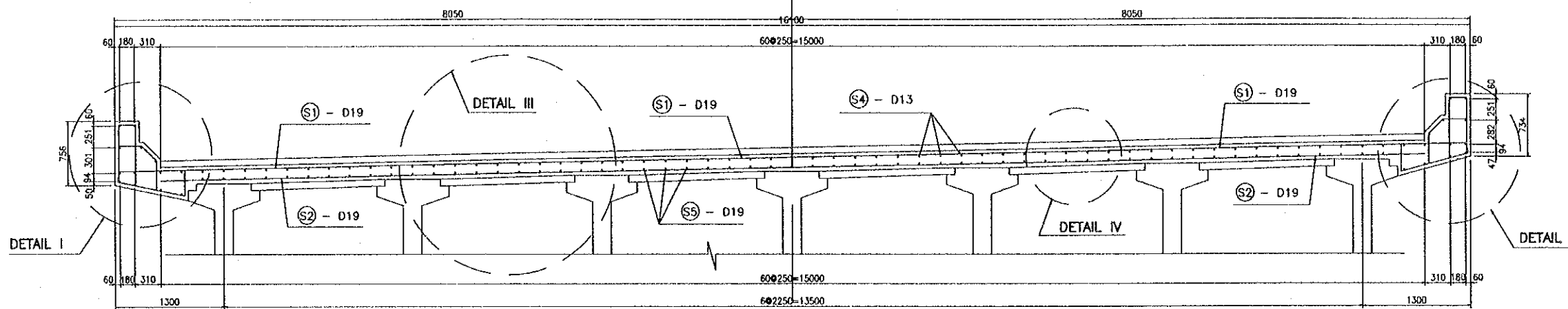


BAR LIST OF DECK SLAB						
REIN No	DIA (mm)	LENGTH (mm)	NUMBER	UNIT WEIGHT (kg/m)	WEIGHT (kg)	REMARKS
S1	19	21800	159	2.25	7799	
S2	19	20810	159	2.25	7444.8	
S3-1	13	1150	159	0.995	181.9	
S3-2	13	1100	159	0.995	174	
S4	13	19590	85	0.995	1656.8	
S5	19	19670	85	2.25	3761.9	
S6	19	1524	320	2.25	1097.3	
SUB TOTAL (FOR 1 SPAN)					22115.7	
D13					2012.7	
D19					20103	
BAR LIST OF CURB						
R1-1	13	1696	159	0.995	268.3	
R1-2	13	1395	159	0.995	220.7	
R2-1	13	1670	159	0.995	264.2	
R2-2	13	1384	159	0.995	219	
R3	13	20210	10	0.995	201.1	
SUB TOTAL (FOR 1 SPAN)					1173.3	
D13					1173.3	

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.03.17	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE C-1-2b-55	DRAWING No. C-1-2b-55	SHEET No.
RE-BAR ARRANGEMENT OF DECK SLAB (1-5)			

(L=35m W=16.100 m)  
CROSS SECTION OF DECK SLAB  
S = 1 : 60

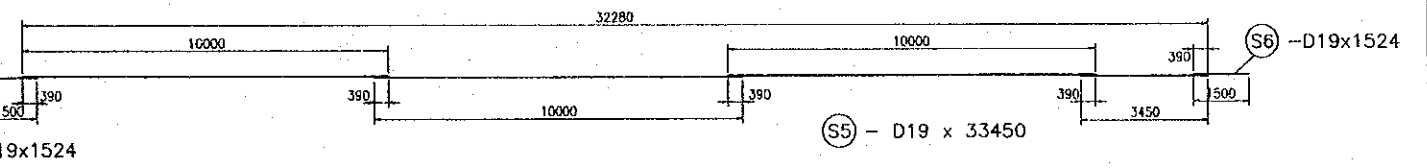
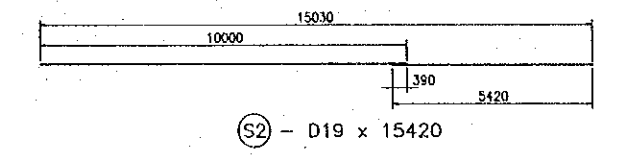
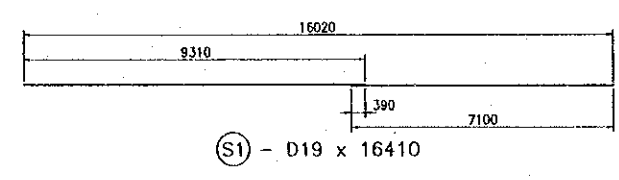
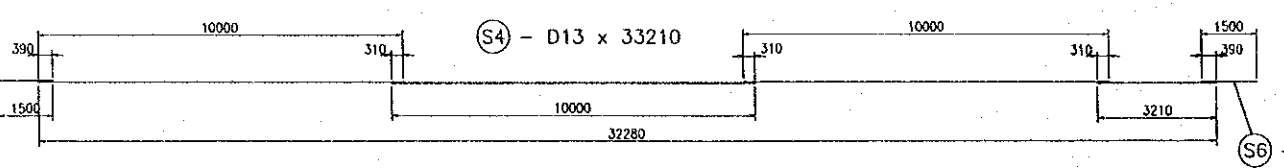
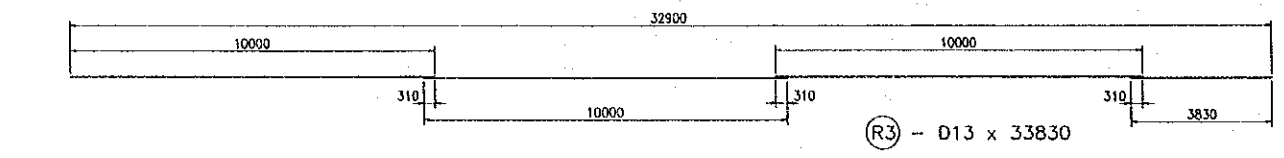
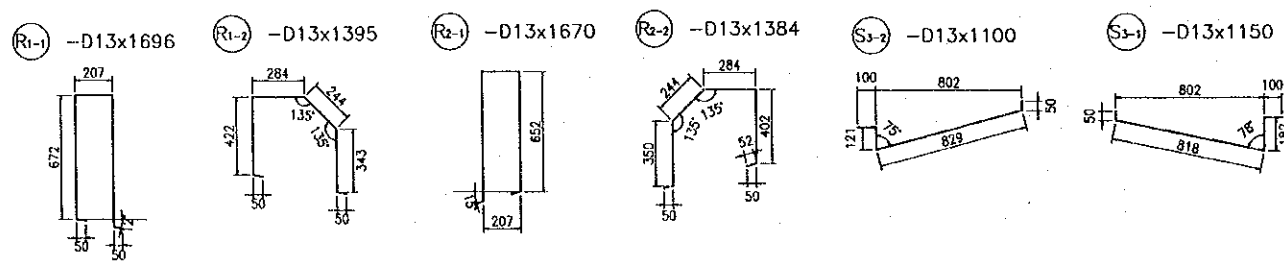
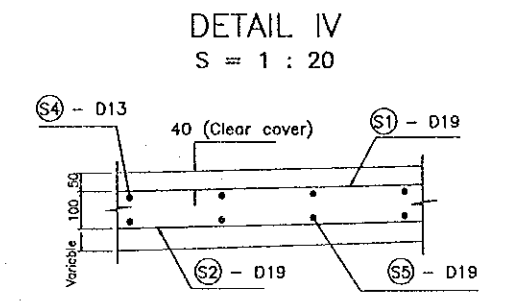
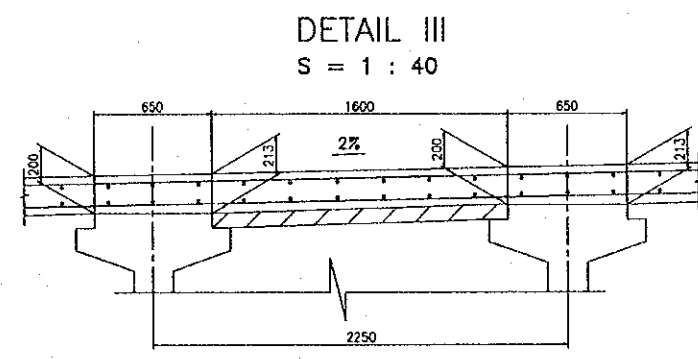
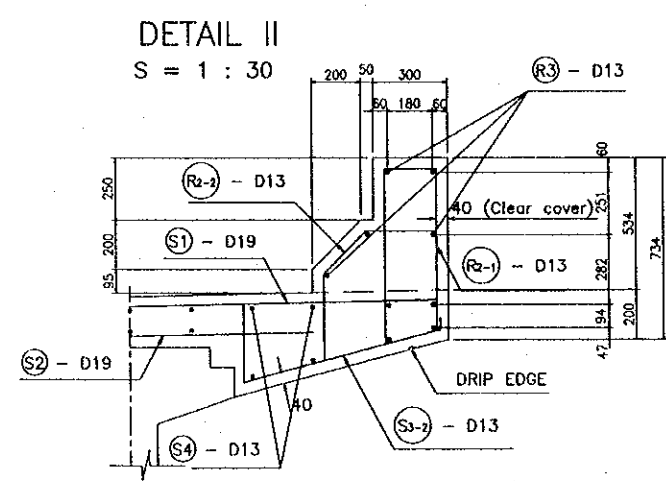
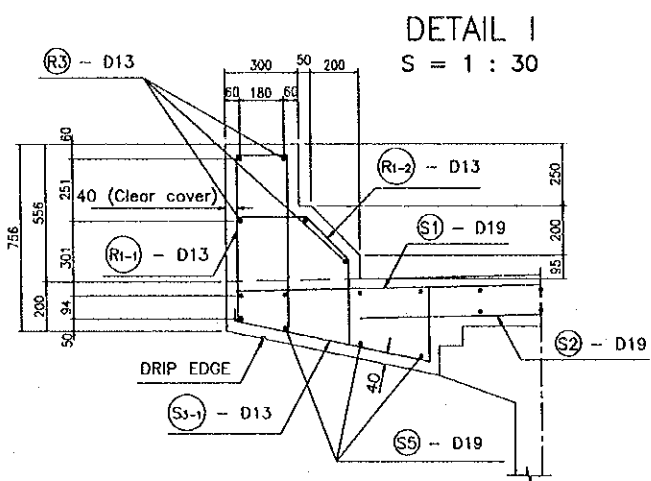
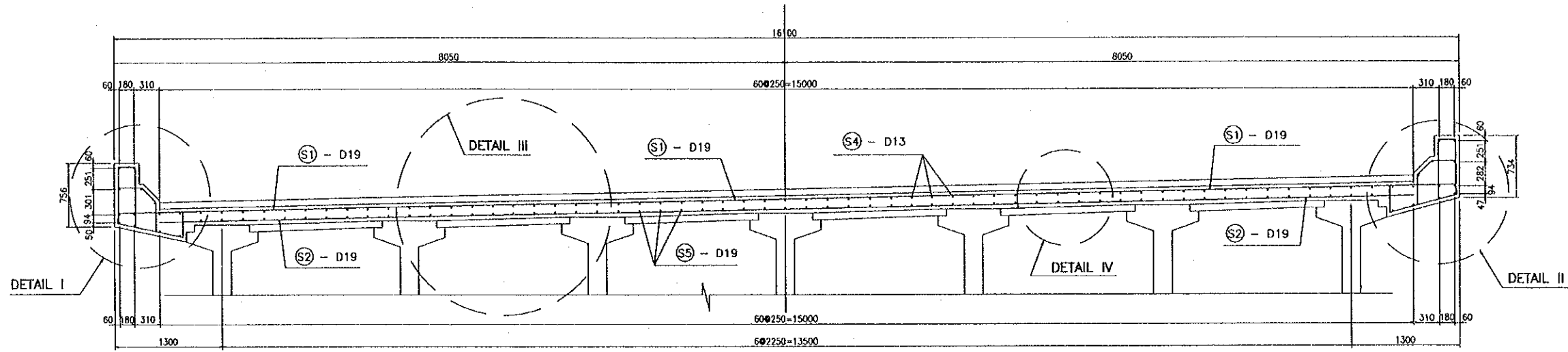


BAR LIST OF DECK SLAB						
REIN No	DIA (mm)	LENGTH (mm)	NUMBER	UNIT WEIGHT (kg/m)	WEIGHT (kg)	REMARKS
S1	19	16410	279	2.25	10301.4	
S2	19	15420	279	2.25	9680	
S3-1	13	1150	279	0.995	319.2	
S3-2	13	1100	279	0.995	305.4	
S4	13	35210	85	0.995	2977.9	
S5	19	35450	85	2.25	6779.8	
S6	19	1524	320	2.25	1097.3	
SUB TOTAL (FOR 1 SPAN)					31461	
					D13	3602.5
					D19	27858.5
BAR LIST OF CURB						
REIN No	DIA (mm)	LENGTH (mm)	NUMBER	UNIT WEIGHT (kg/m)	WEIGHT (kg)	REMARKS
R1-1	13	1696	279	0.995	470.8	
R1-2	13	1395	279	0.995	387.3	
R2-1	13	1670	279	0.995	463.6	
R2-2	13	1384	279	0.995	384.2	
R3	13	35830	10	0.995	358.5	
SUB TOTAL (FOR 1 SPAN)					2062.4	
					D13	2062.4

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY NAME: S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE:
PROJECT: RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE: 2000.9.14	
CONSULTANT: PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE C-1-2b-56	DRAWING No. C-1-2b-56	SHEET No.
RE-BAR ARRANGEMENT OF DECK SLAB (1-0)			

(L=33m W=16.100 m)  
CROSS SECTION OF DECK SLAB  
S = 1 : 60



BAR LIST OF DECK SLAB						
REIN No	DIA (mm)	LENGTH (mm)	NUMBER	UNIT WEIGHT (kg/m)	WEIGHT (kg)	REMARKS
S1	19	16410	263	2.25	9710.6	
S2	19	15420	263	2.25	9124.8	
S3-1	13	1150	263	0.995	300.9	
S3-2	13	1100	263	0.995	287.9	
S4	13	33210	65	0.995	2147.9	
S5	19	33450	65	2.25	4892.1	
S6	19	1524	242	2.25	829.8	
SUB TOTAL (FOR 1 SPAN)					27294	
					D13	2736.7
					D19	24557.3
BAR LIST OF CURB						
R1-1	13	1696	263	0.995	443.8	
R1-2	13	1395	263	0.995	365	
R2-1	13	1670	263	0.995	437	
R2-2	13	1384	263	0.995	362.2	
R3	13	33830	10	0.995	336.6	
SUB TOTAL (FOR 1 SPAN)					1944.7	
					D13	1944.7

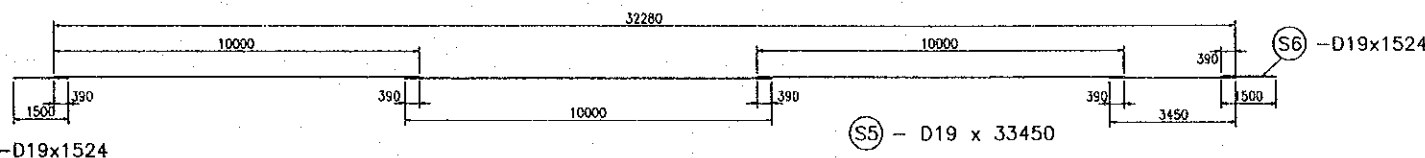
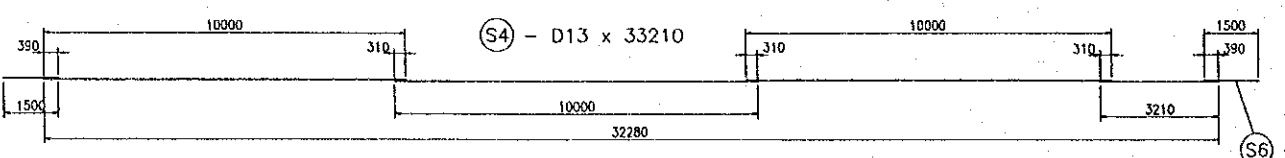
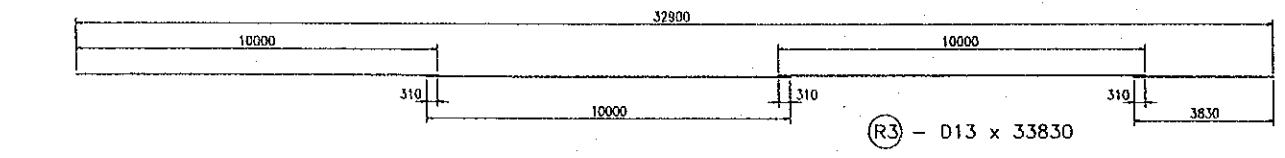
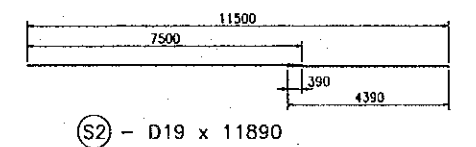
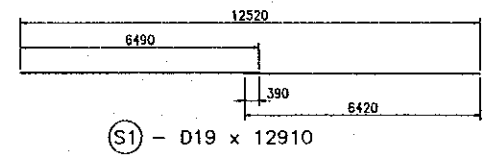
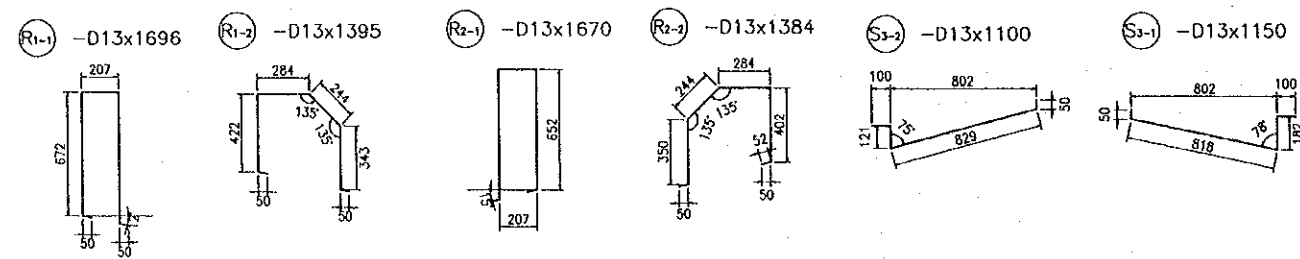
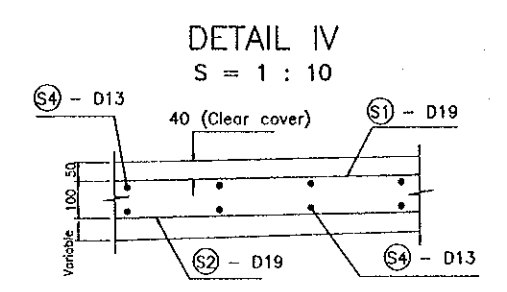
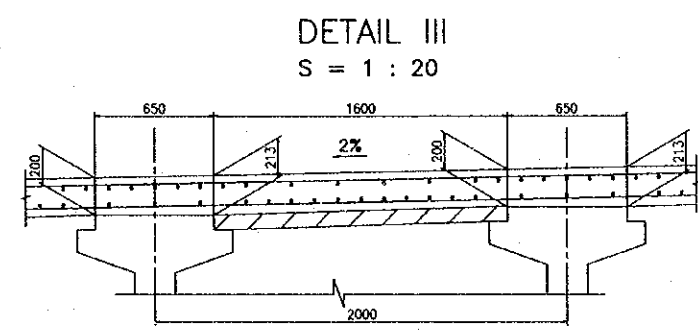
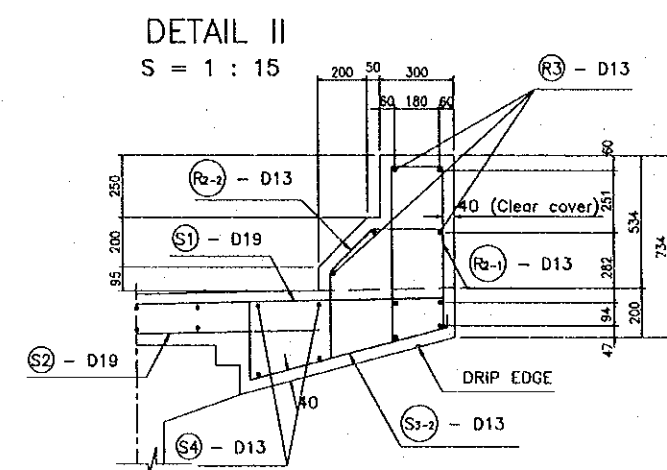
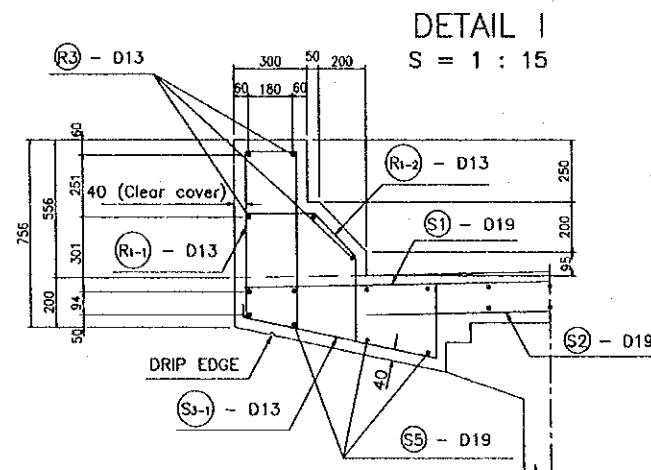
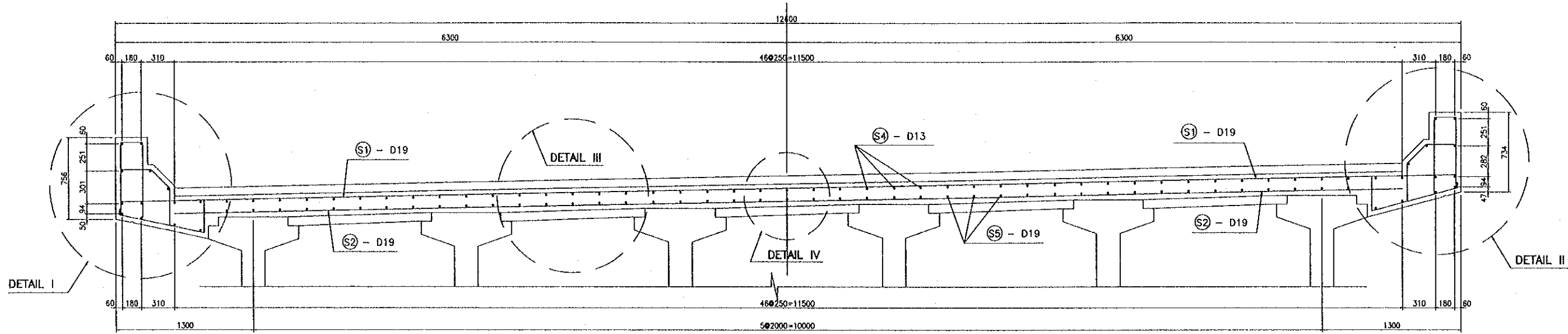




THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANH LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		DATE 2000.5.12
CONTRACTOR PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE C-1-2b-5B	DRAWING No. C-1-2b-5B	SHEET No.
RE-BAR ARRANGEMENT OF DECK SLAB (1-B)			

(L=33m W=12.600 m)  
CROSS SECTION OF DECK SLAB  
S = 1 : 20



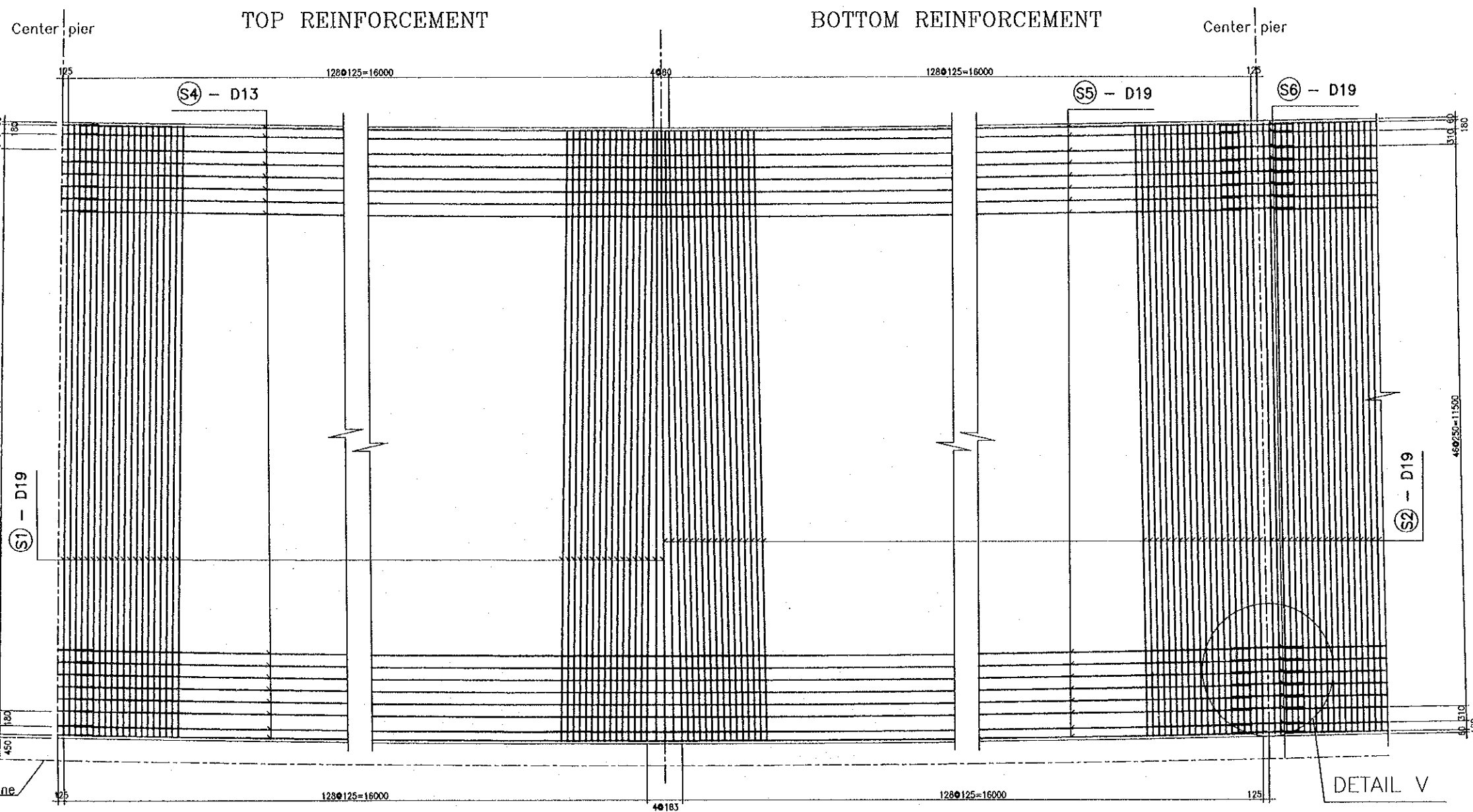
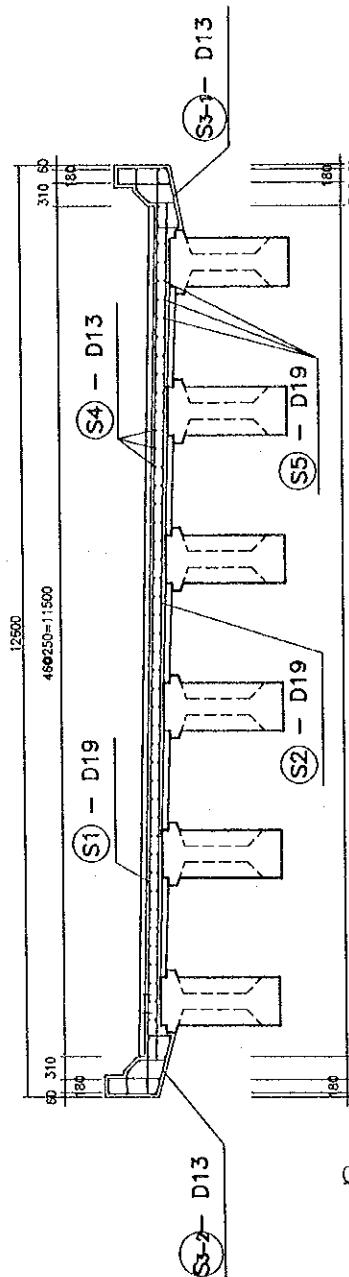
BAR LIST OF DECK SLAB						
REIN No	DIA (mm)	LENGTH (mm)	NUMBER	UNIT WEIGHT (kg/m)	WEIGHT (kg)	REMARKS
S1	19	12910	263	2.25	7639.5	
S2	19	11890	263	2.25	7035.9	
S3-1	13	1150	263	0.995	300.9	
S3-2	13	1100	263	0.995	287.9	
S4	13	33210	51	0.995	1685.2	
S5	19	33450	51	2.25	3838.4	
S6	19	1524	186	2.25	637.8	
SUB TOTAL (FOR 1 SPAN)					21425.6	
					D13	2274
					D19	19151.6
BAR LIST OF CURB						
REIN No	DIA (mm)	LENGTH (mm)	NUMBER	UNIT WEIGHT (kg/m)	WEIGHT (kg)	REMARKS
R1-1	13	1696	263	0.995	443.8	
R1-2	13	1395	263	0.995	365	
R2-1	13	1670	263	0.995	437	
R2-2	13	1384	263	0.995	362.2	
R3	13	33830	10	0.995	336.6	
SUB TOTAL (FOR 1 SPAN)					1944.7	
					D13	1944.7



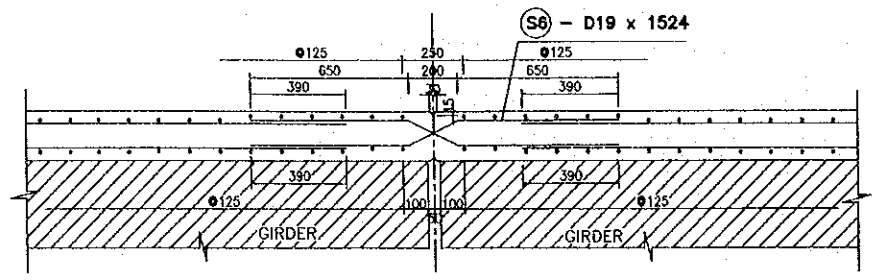
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.11.1

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-1-2b-60	
RE-BAR ARRANGEMENT OF DECK SLAB (2-2)			

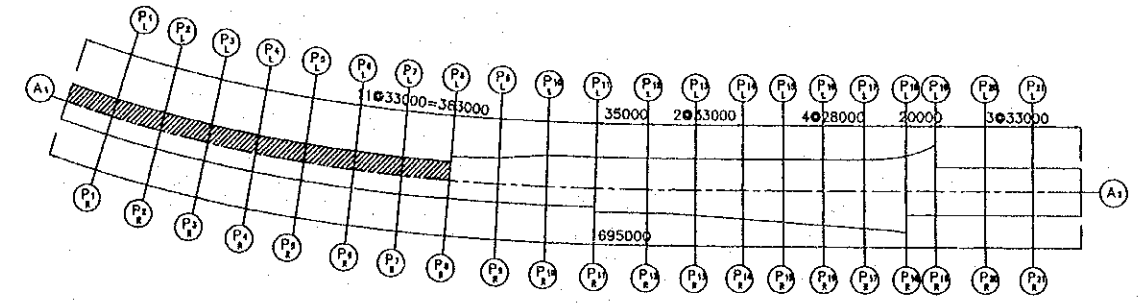
TYPICAL CROSS SECTION



DETAIL V  
S = 1:30

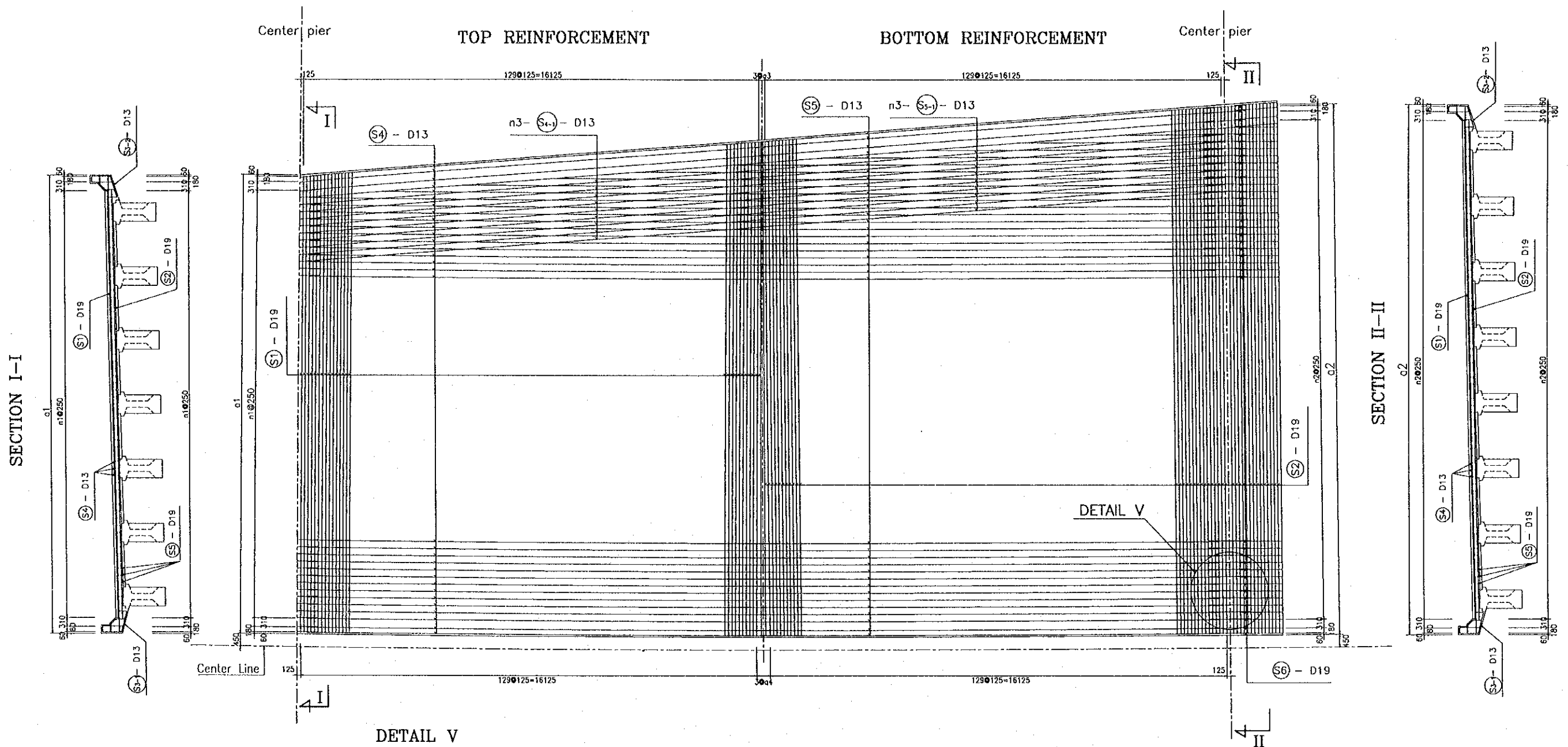


KEY PLAN  
S = 1:5000

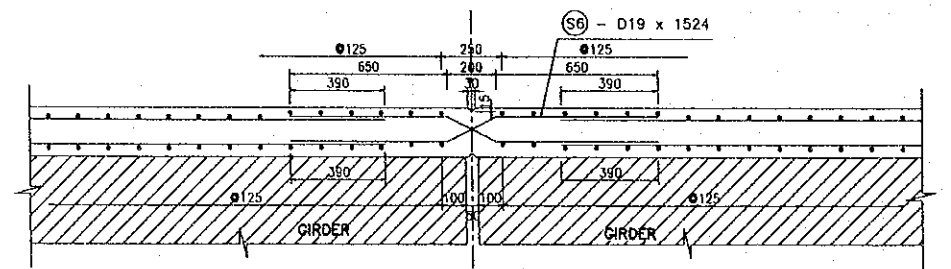


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THUNG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000. 3. 14

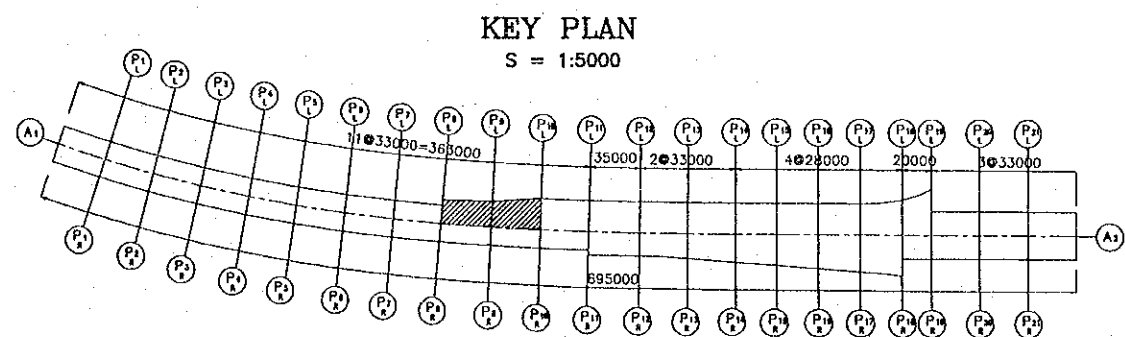
PACKAGE 2	SCALE 1/150	DRAWING No. C-1-2b-61	SHEET No.
RE-BAR ARRANGEMENT OF DECK SLAB (2-3)			



DETAIL V  
S = 1:30



Span No.	a1 (mm)	a2 (mm)	a3 (mm)	a4 (mm)	n1	n2	n3
P8L-P9L	16100	18600	75	164	60	70	9
P9L-P10L	18600	21100	85	164	70	80	9

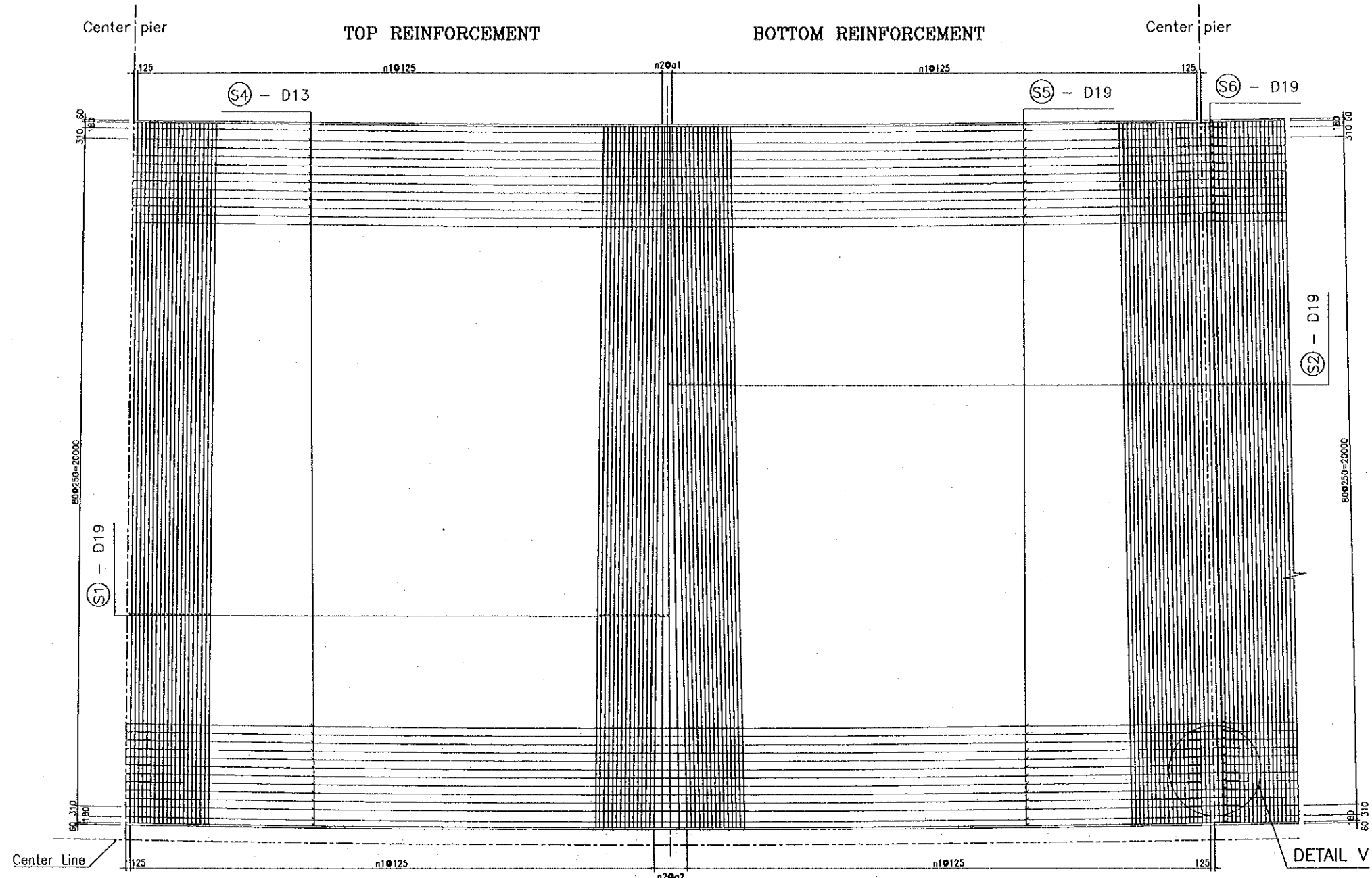
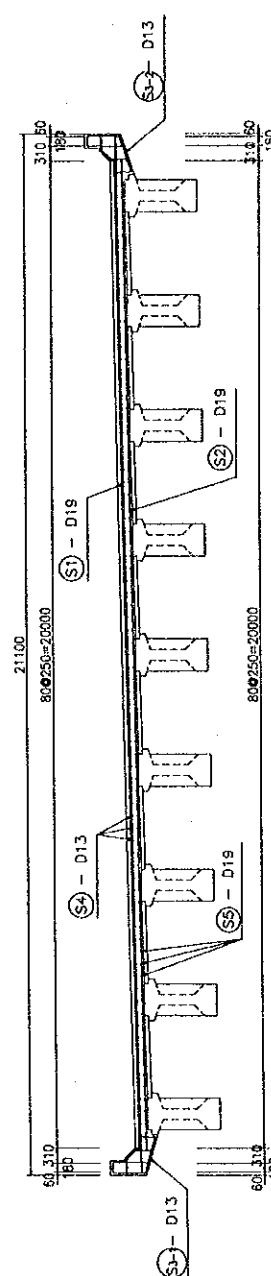


KEY PLAN  
S = 1:5000

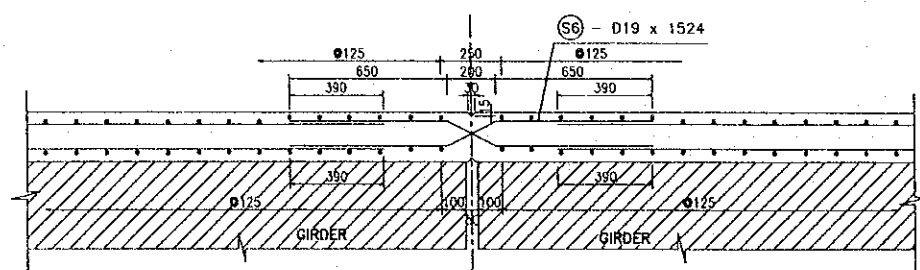
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM HUANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WITABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (HUANH THIEU BRIDGE) CONSTRUCTION PROJECT		DATE 2000. 8. 17
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	

PACKAGE 2	SCALE 1/150	DRAWING No. C-1-2b-62	SHEET No.
RE-BAR ARRANGEMENT OF DECK SLAB (2-4)			

TYPICAL CROSS SECTION

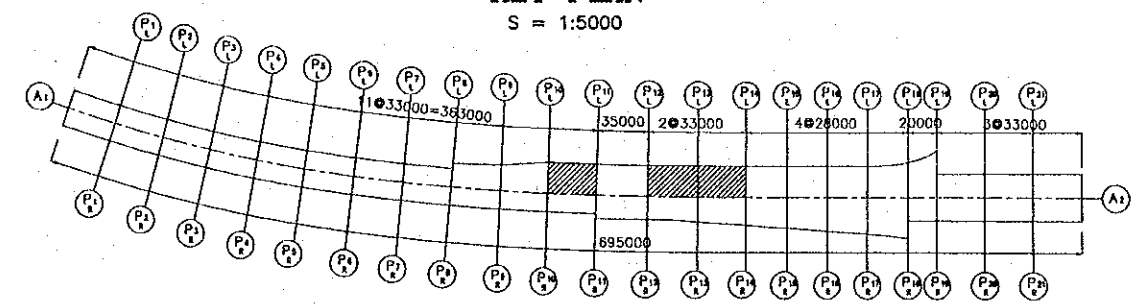


DETAIL V  
S = 1:30



SPAN	a1 (mm)	a2 (mm)	n1	n2
P10L-P11L	64	165	3	3
P12L-P13L	84	124	4	4
P13L-P14L	101	125	4	4

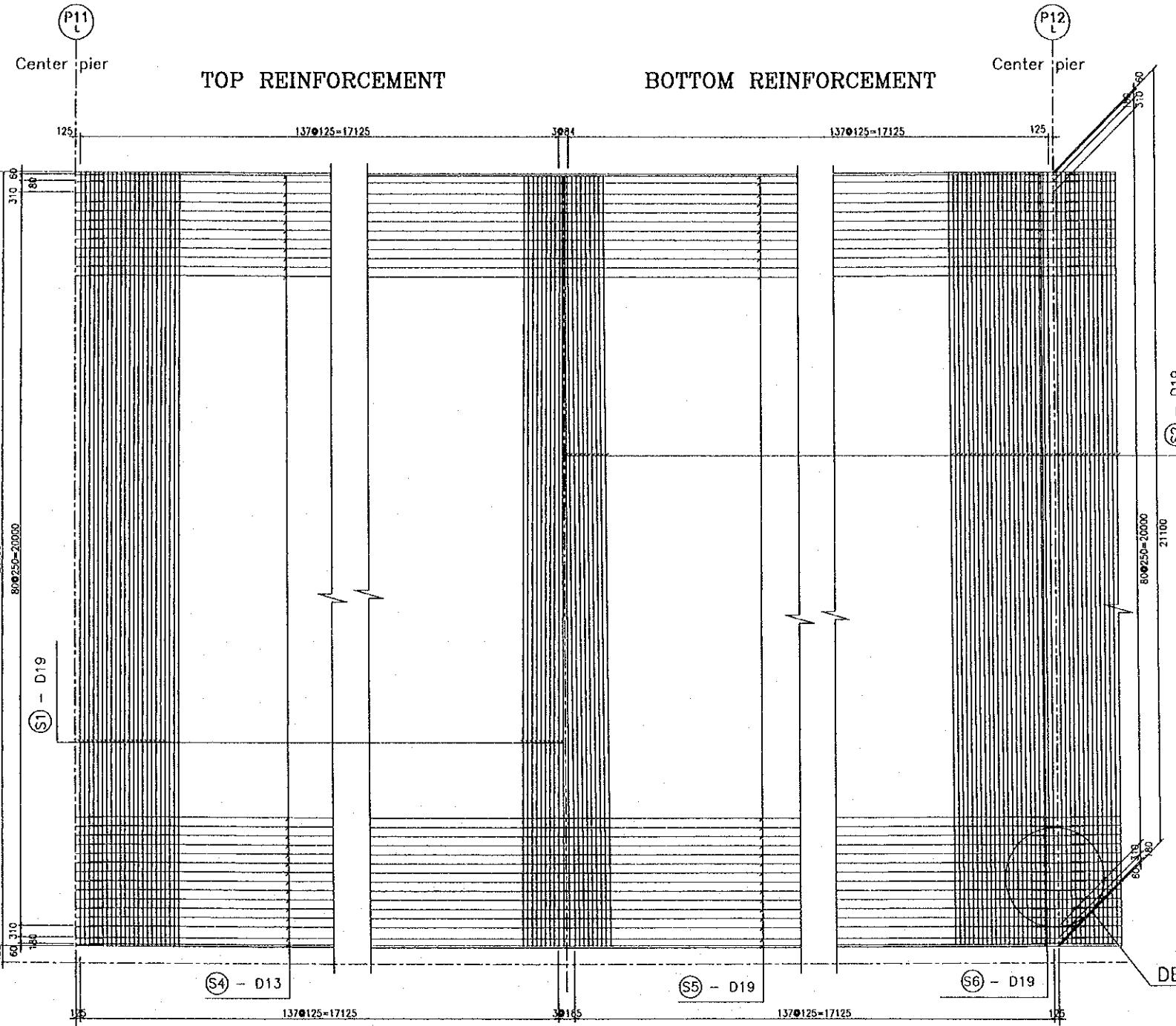
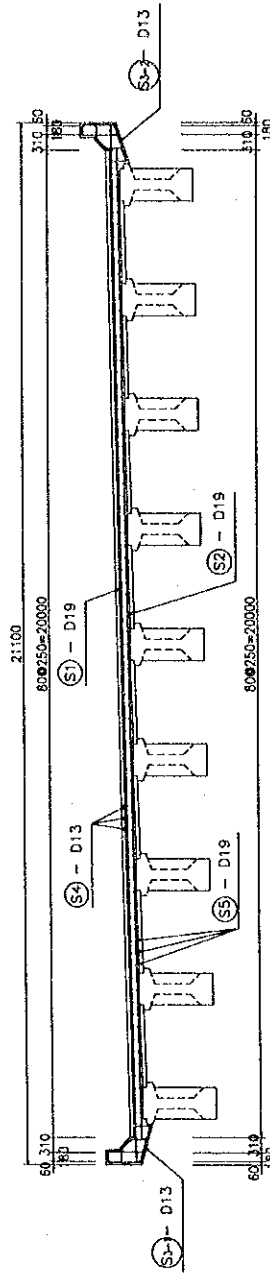
KEY PLAN  
S = 1:5000



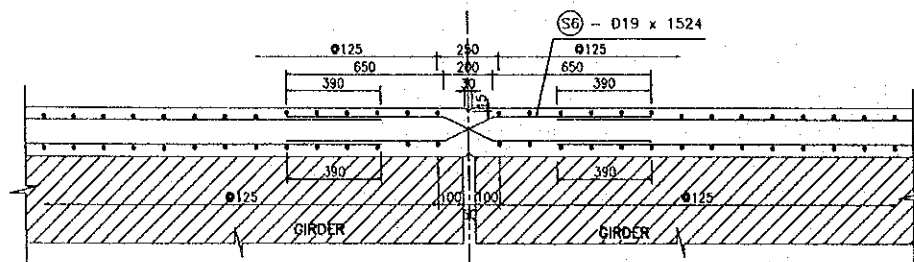
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRU BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000. 3. 17	

PACKAGE 2	SCALE 1/150	DRAWING No. C-1-2b-63	SHEET No.
RE-BAR ARRANGEMENT OF DECK SLAB (2-5)			

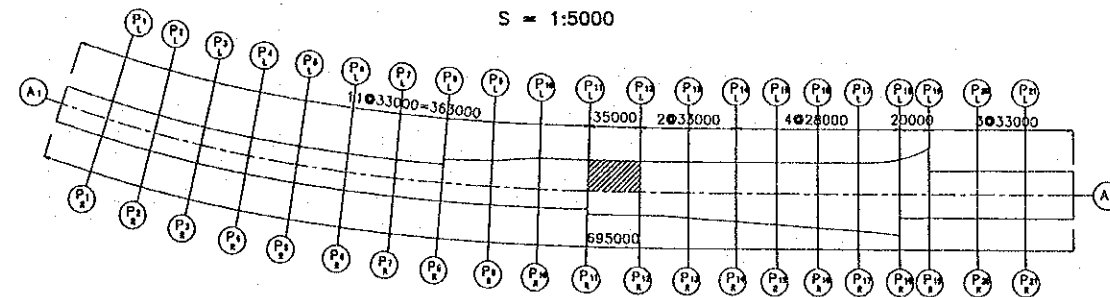
TYPICAL CROSS SECTION



DETAIL V  
S = 1:30



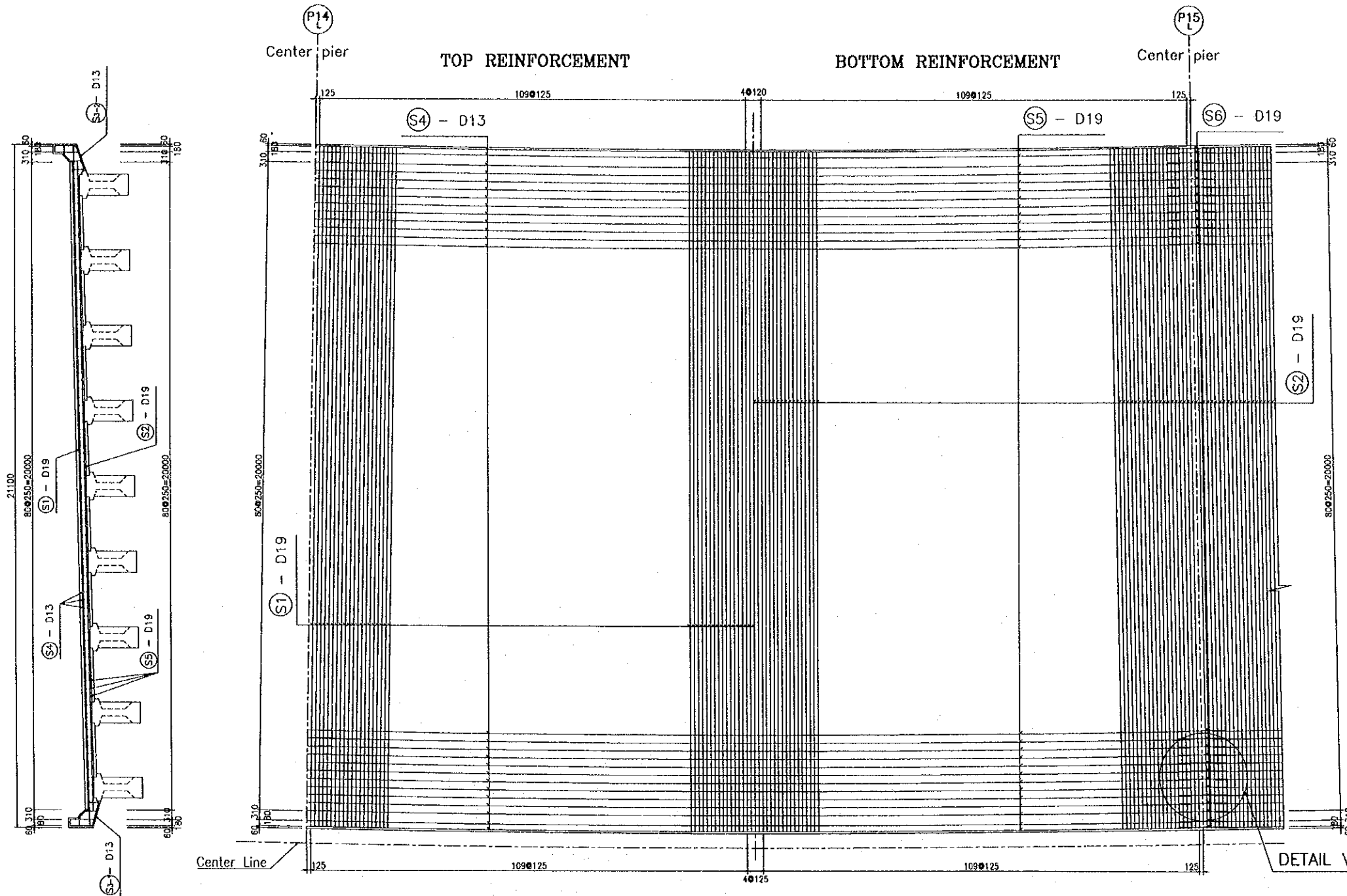
KEY PLAN  
S = 1:5000



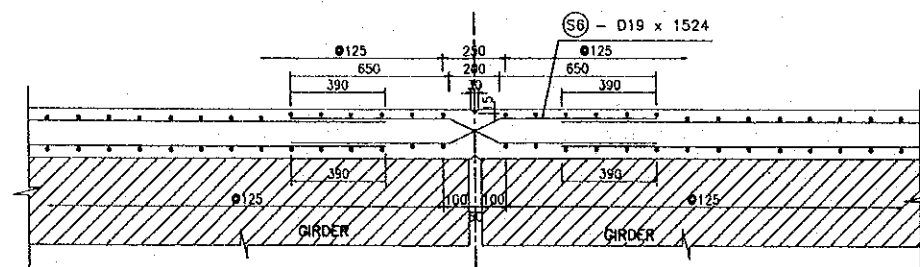
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.12.14	

PACKAGE 2	SCALE 1/150	DRAWING No. C-1-2b-64	SHEET No.
RE-BAR ARRANGEMENT OF DECK SLAB (2-6)			

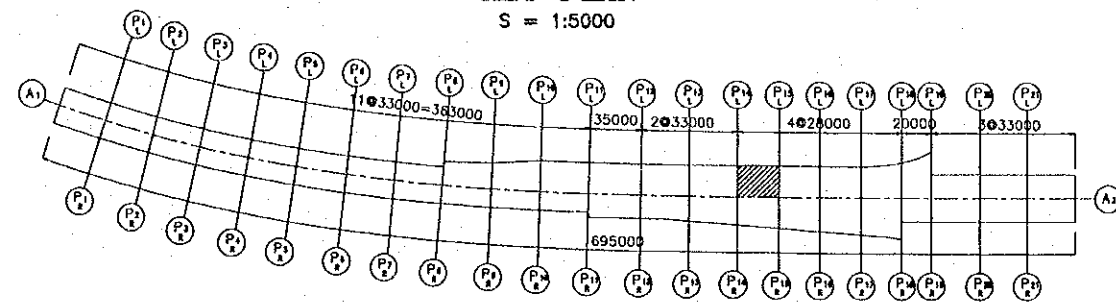
TYPICAL CROSS SECTION



**DETAIL V**  
S = 1:30



**KEY PLAN**  
S = 1:5000

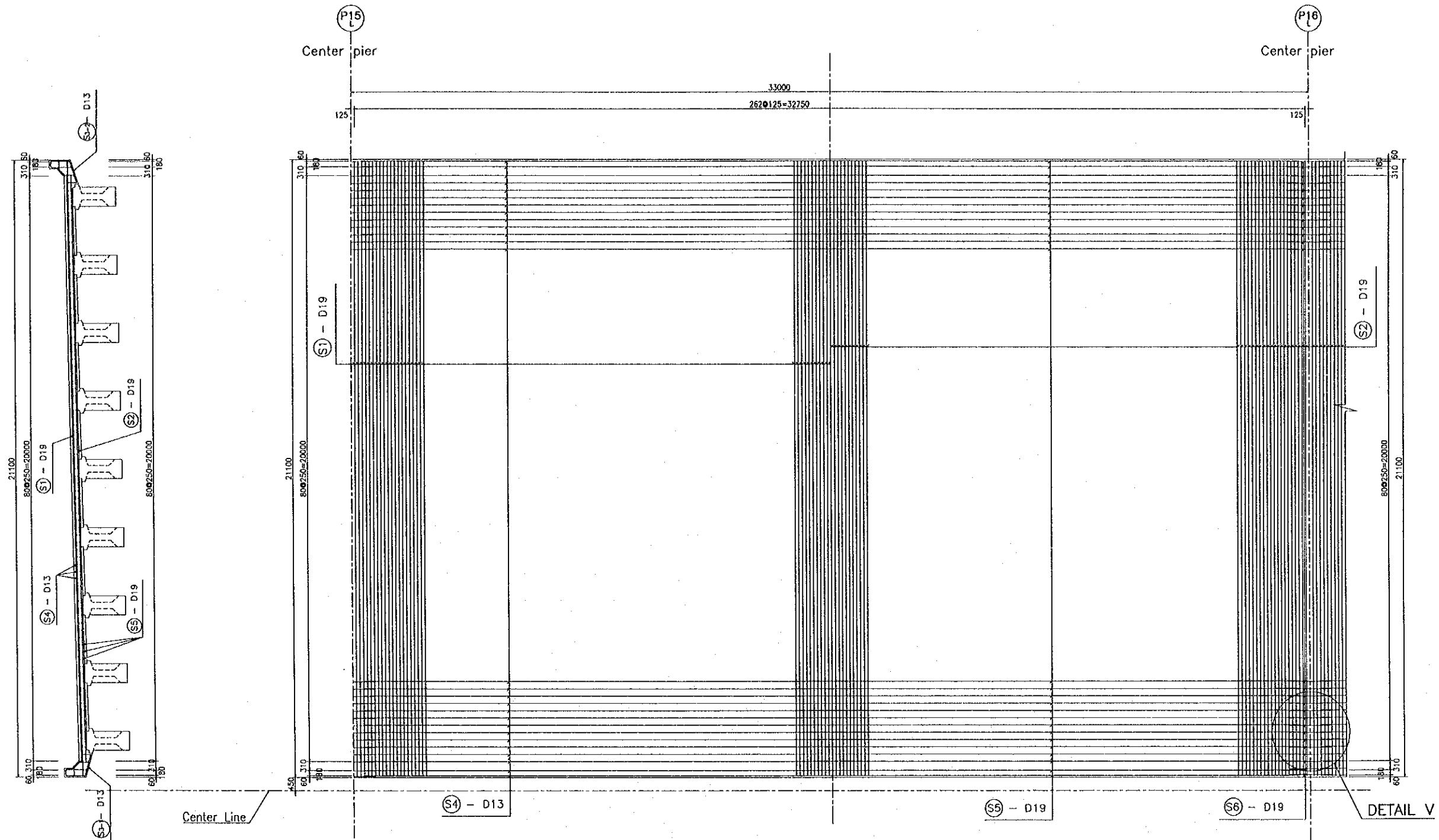




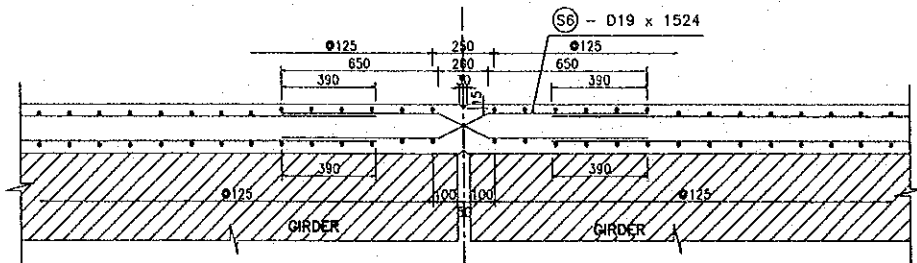
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRU BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.01.19	

PACKAGE 2	SCALE 1/150	DRAWING No. C-1-2b-65	SHEET No.
RE-BAR ARRANGEMENT OF DECK SLAB (2-7)			

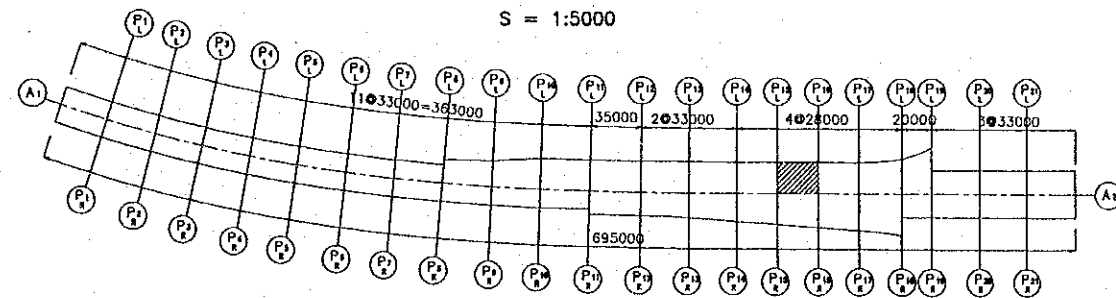
TYPICAL CROSS SECTION



DETAIL V  
S = 1:30

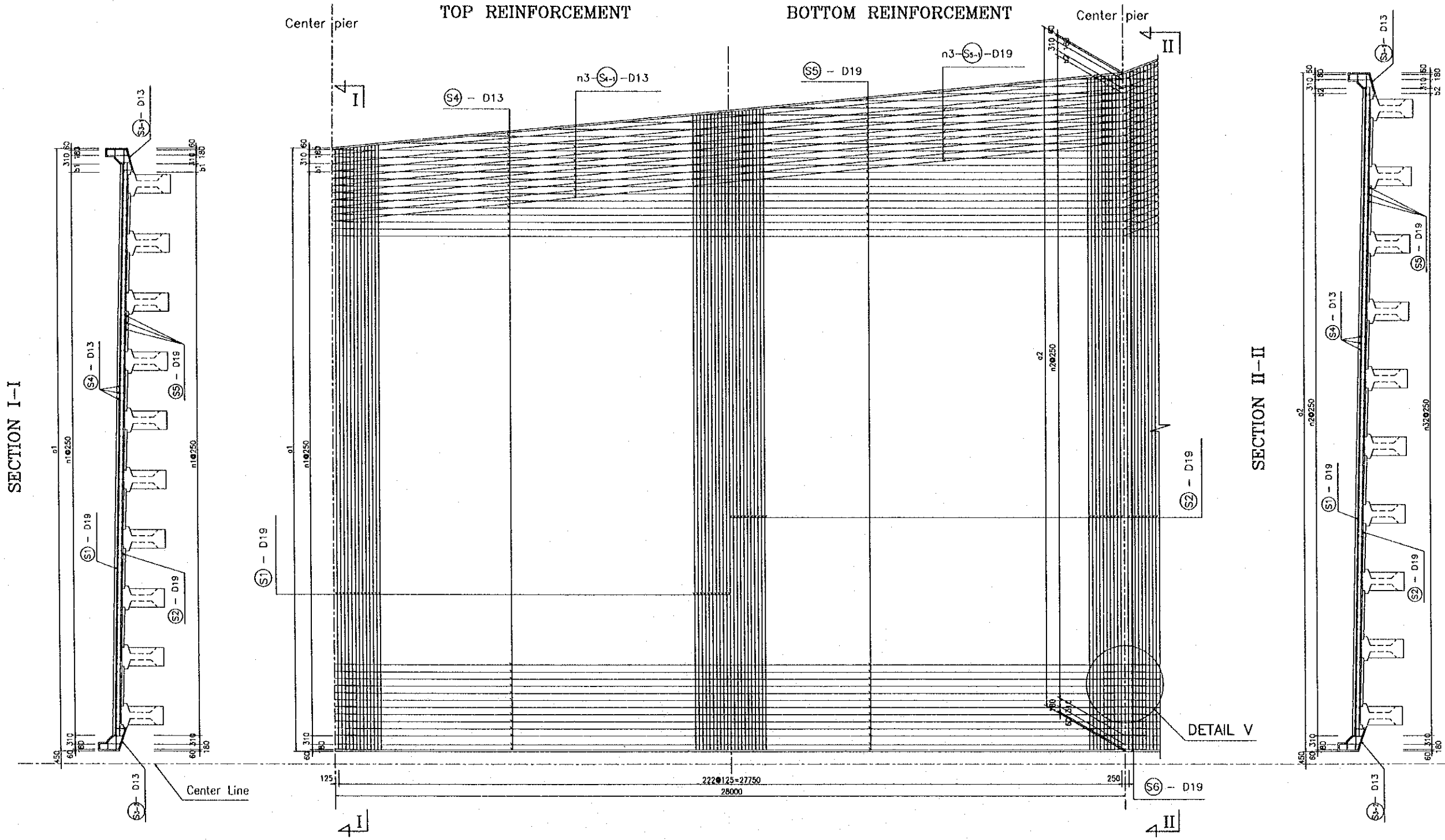


KEY PLAN  
S = 1:5000

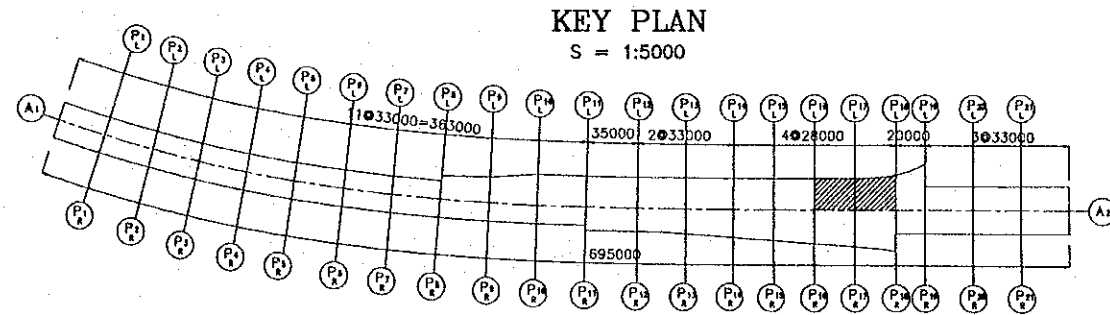
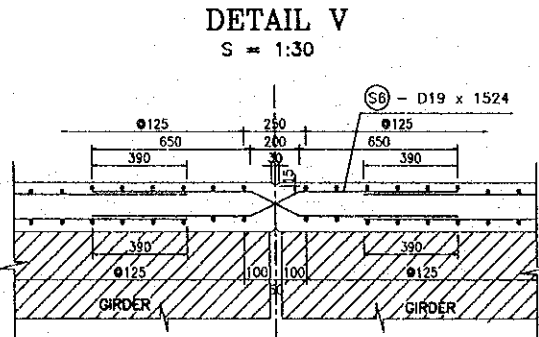


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATASE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	DATE 2000.3.17
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/150	DRAWING No. C-1-2b-66	SHEET No.
RE-BAR ARRANGEMENT OF DECK SLAB (2-8)			



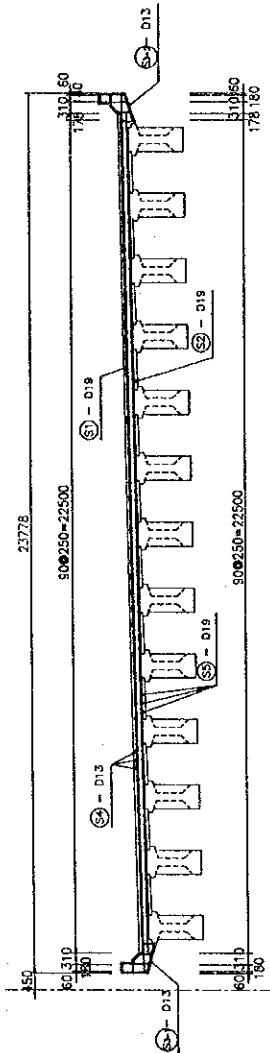
Span No.	a1 (mm)	a2 (mm)	b1 (mm)	b2 (mm)	n1	n2	n3
P16L-P17L	21100	21140	0	290	80	79	0
P17L-P18L	21140	23778	290	178	79	90	12



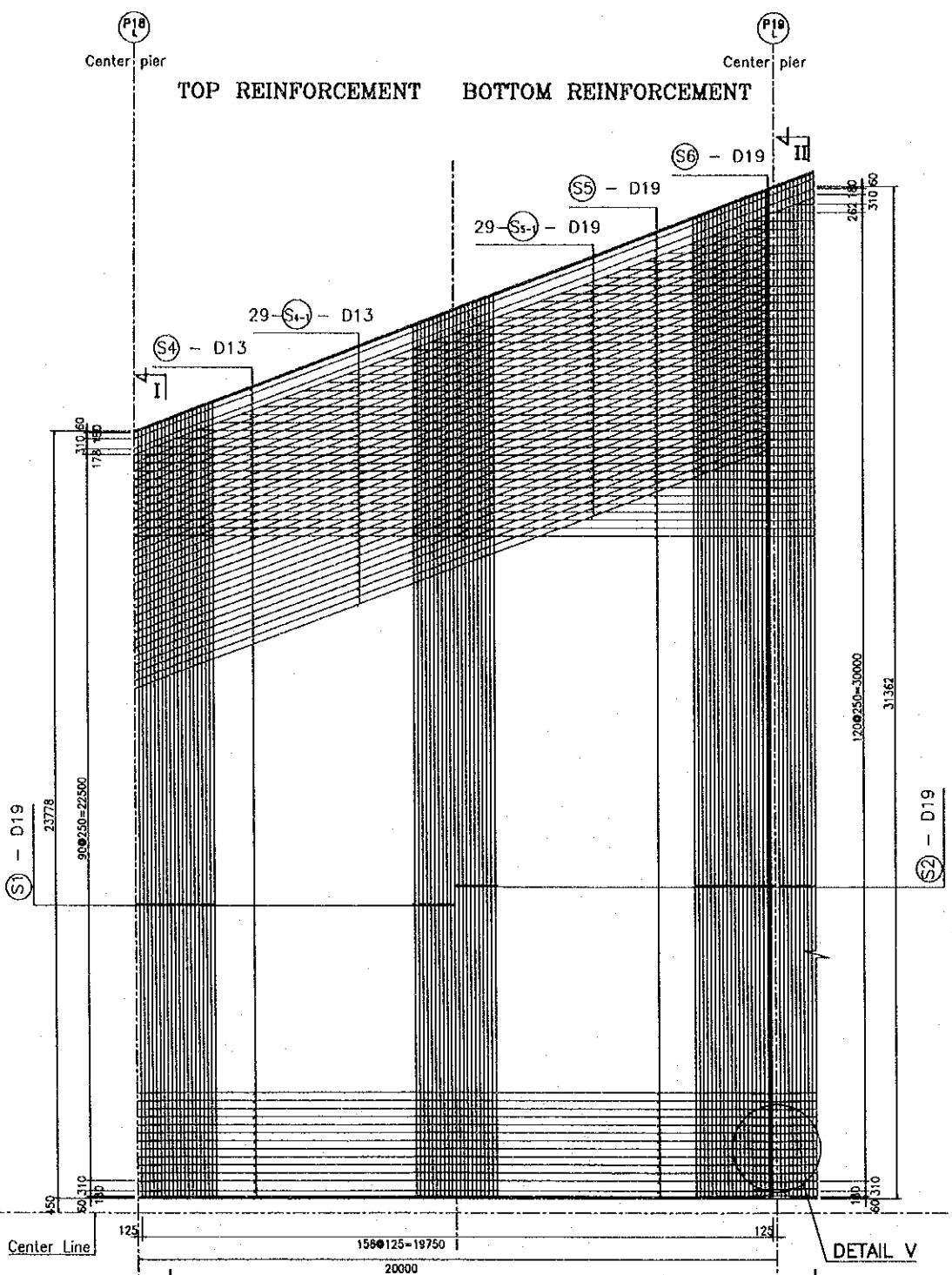
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATARE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.3.14

PACKAGE 2	SCALE 1/200	DRAWING No. C-1-2b-67	SHEET No.
RE-BAR ARRANGEMENT OF DECK SLAB (2-9)			

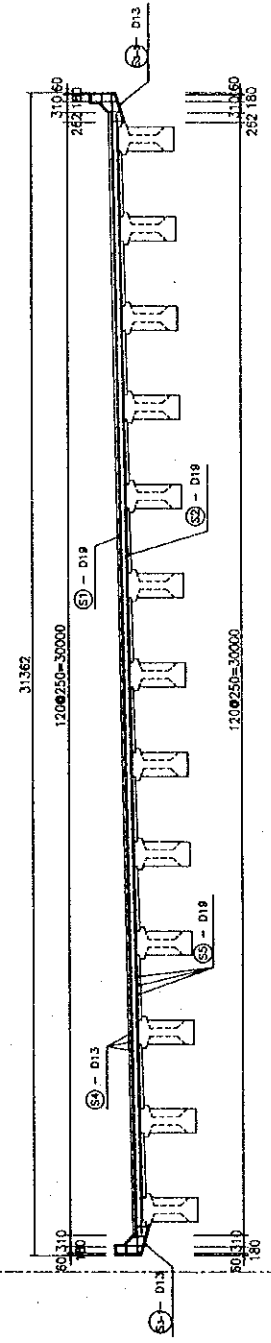
SECTION I-I



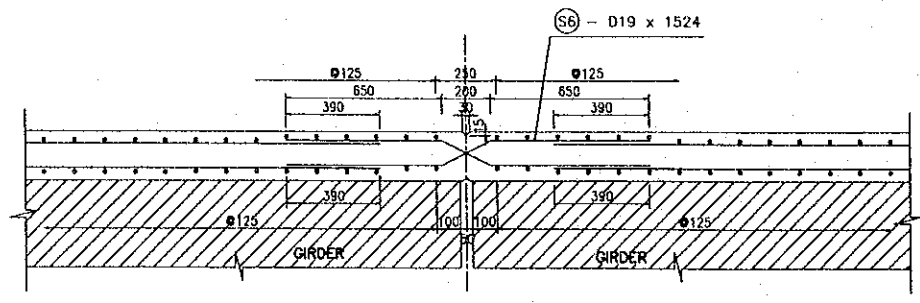
TOP REINFORCEMENT BOTTOM REINFORCEMENT



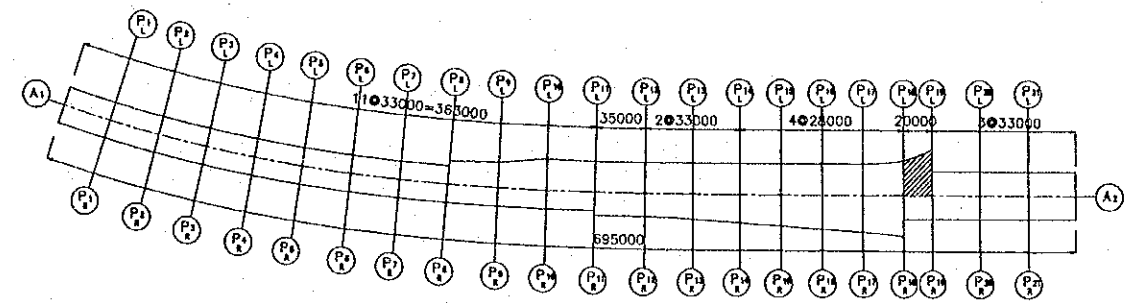
SECTION II-II



DETAIL V  
S = 1:30



KEY PLAN  
S = 1:5000

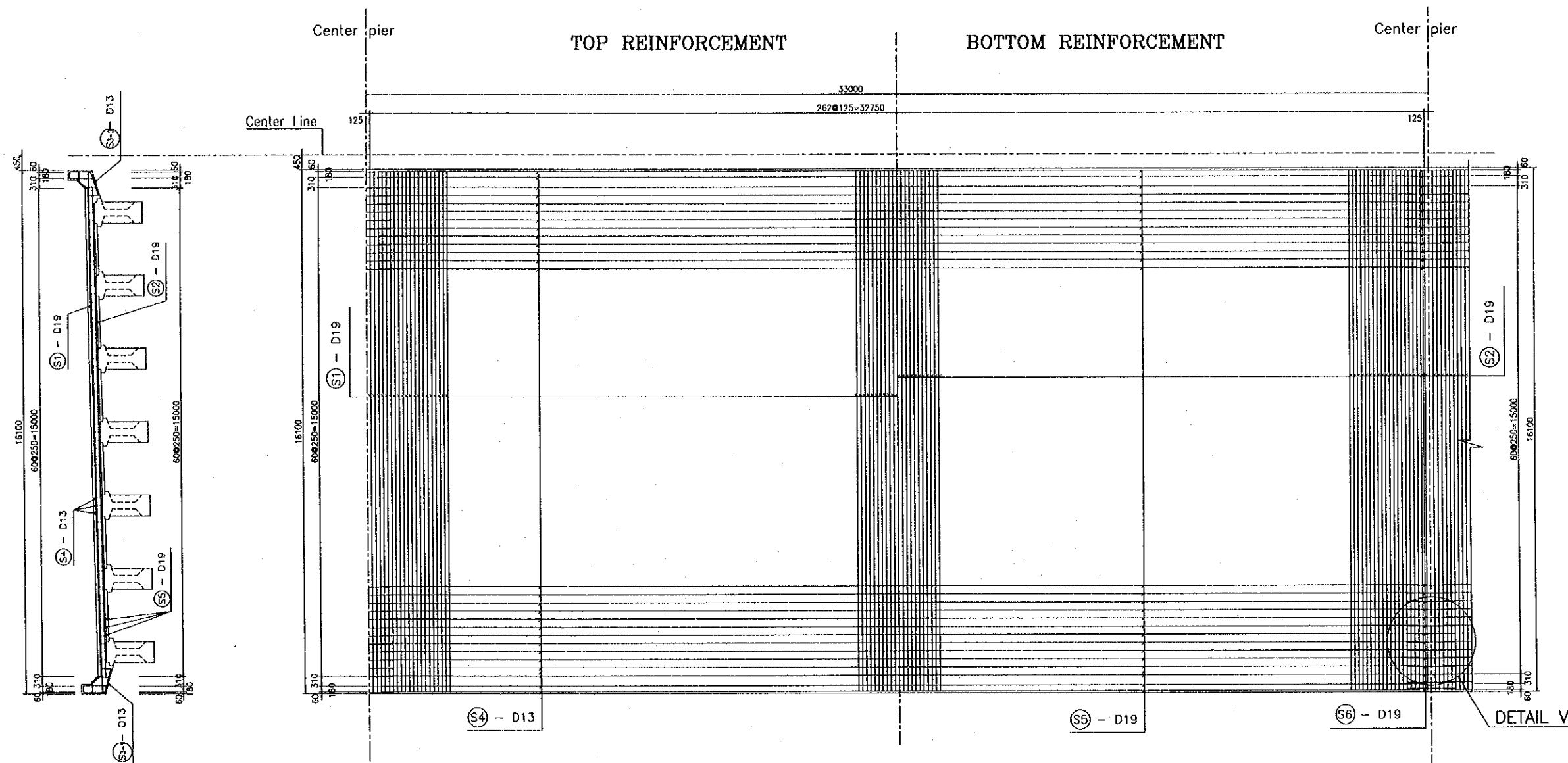


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATADA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATADA
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE 
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000. 3. 17

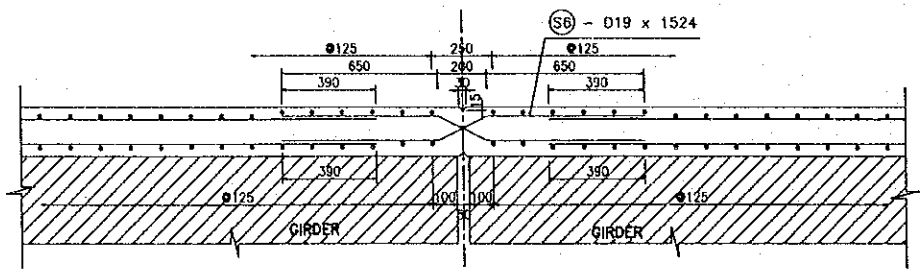
PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/150	C-1-2b-68	

RE-BAR ARRANGEMENT OF DECK SLAB (2-10)

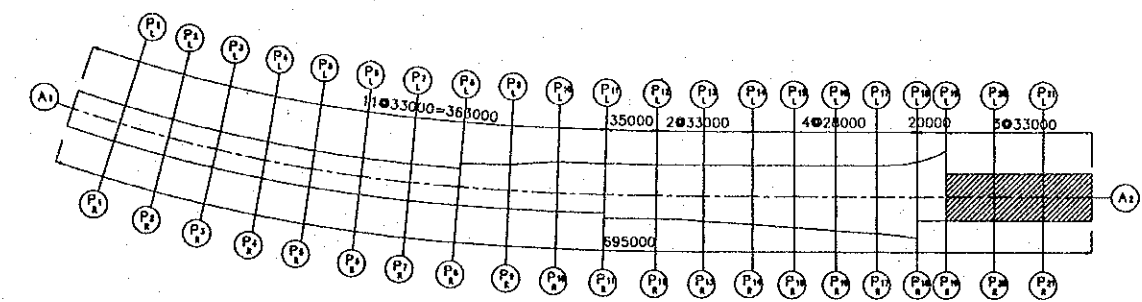
TYPICAL CROSS SECTION



DETAIL V  
S = 1:30



KEY PLAN  
S = 1:5000

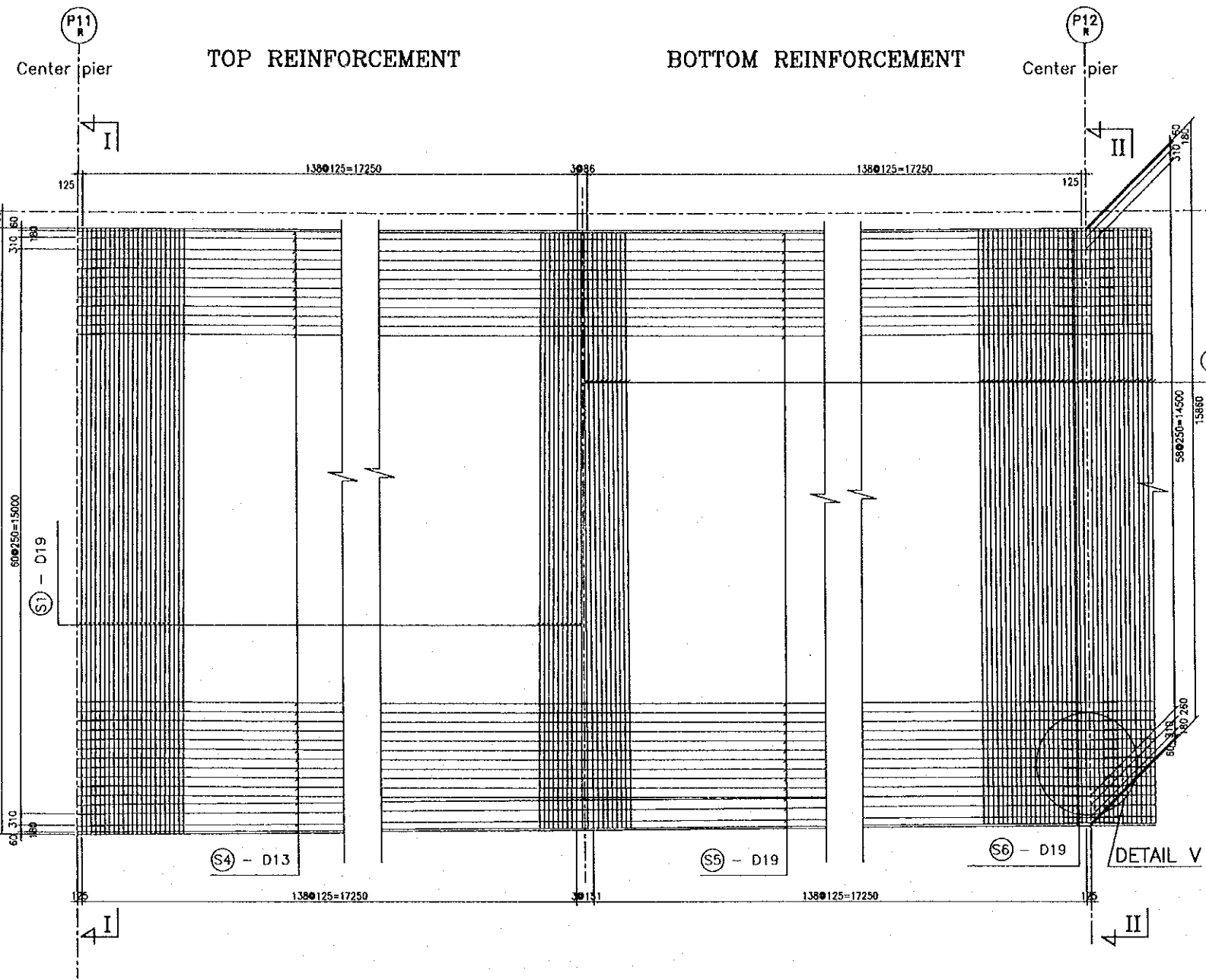
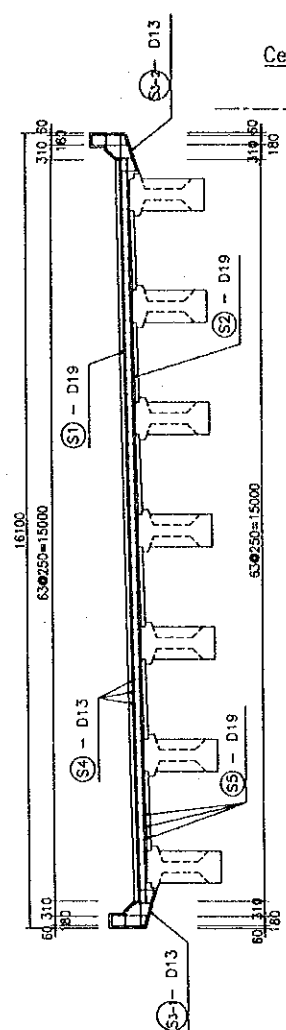




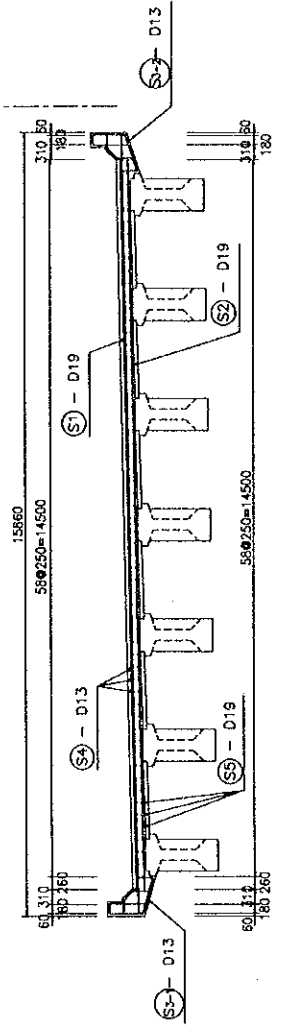
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY NAME S. WATASE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000. 3. 14	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/150	DRAWING No. C-1-2b-70	SHEET No.
RE-BAR ARRANGEMENT OF DECK SLAB (2-12)			

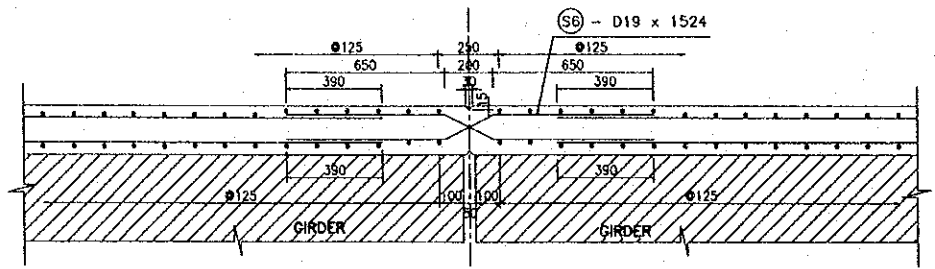
SECTION I-I



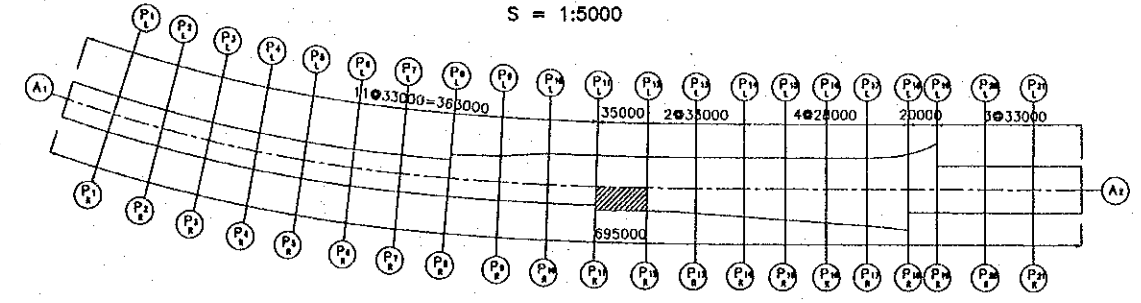
SECTION II-II



DETAIL V  
S = 1:30

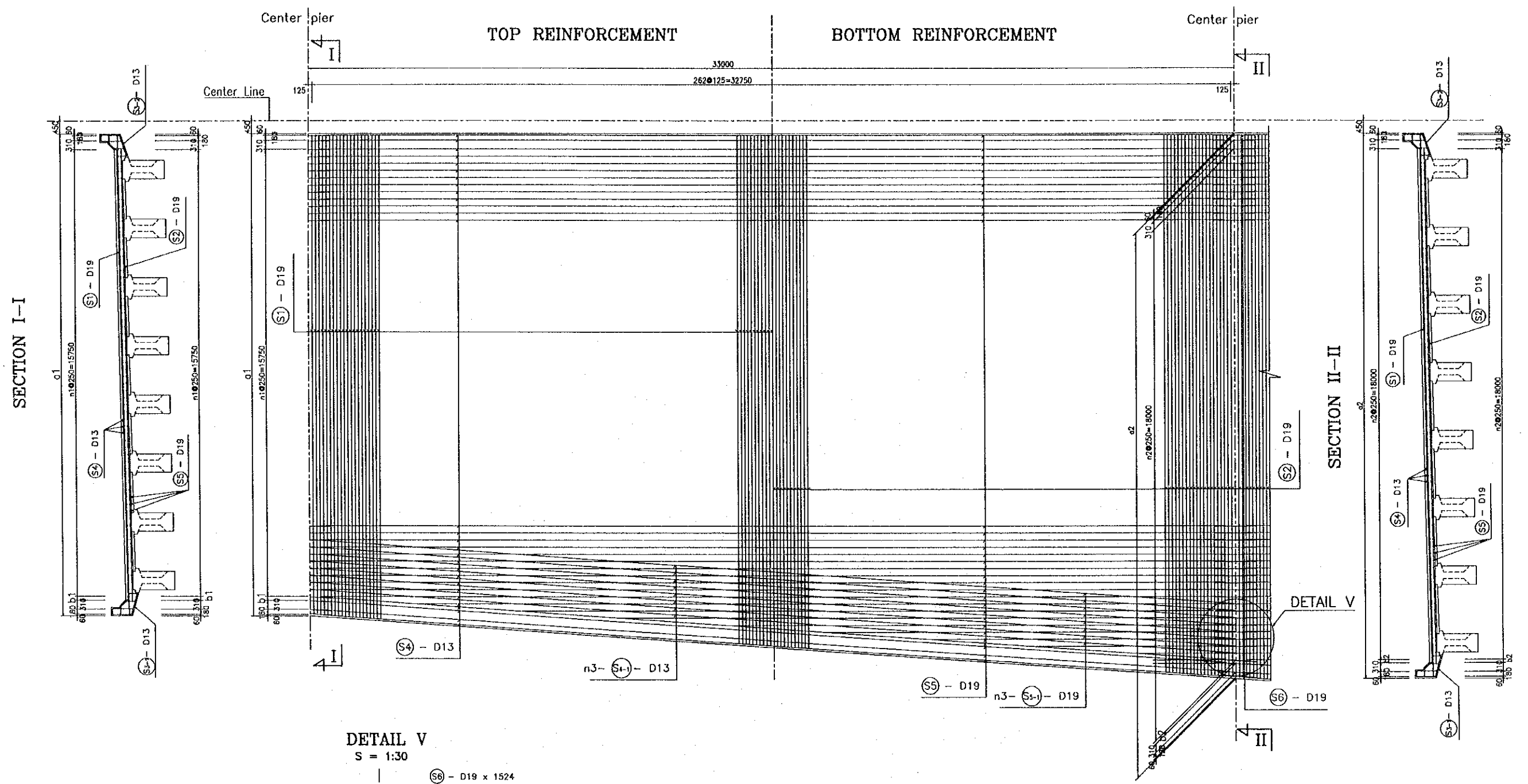


KEY PLAN  
S = 1:5000

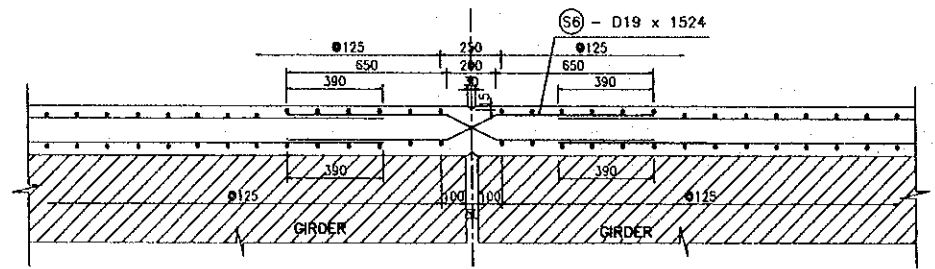


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TUANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
RED RIVER BRIDGE (HUANH THI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.3.17

PACKAGE 2	SCALE 1/150	DRAWING No. C-1-2b-71	SHEET No.
RE-BAR ARRANGEMENT OF DECK SLAB (2-13)			

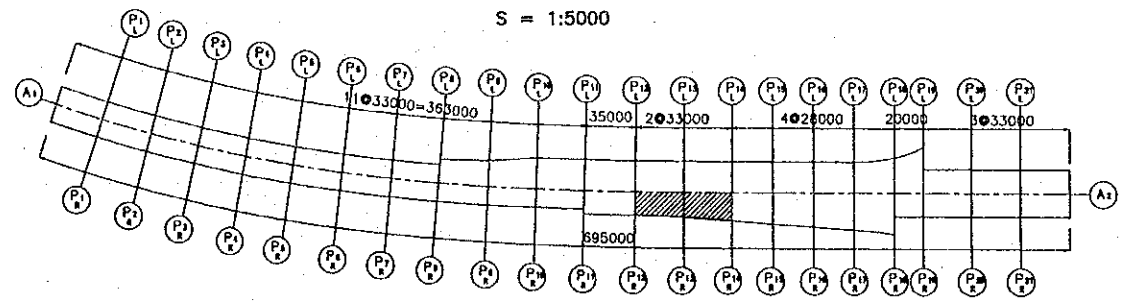


DETAIL V  
S = 1:30



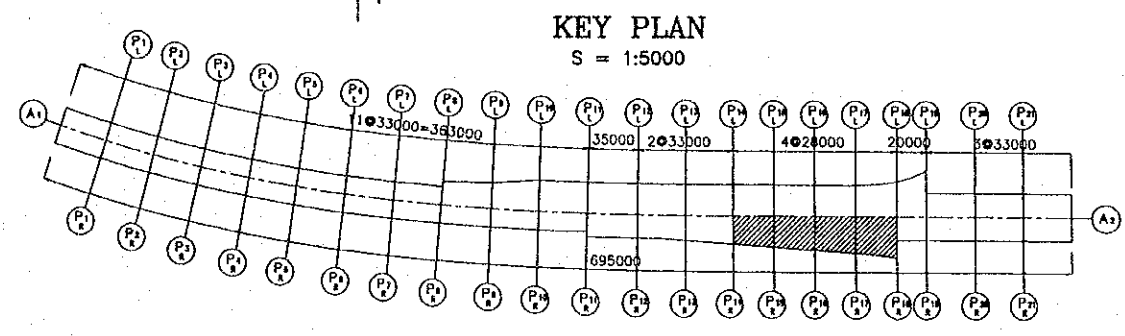
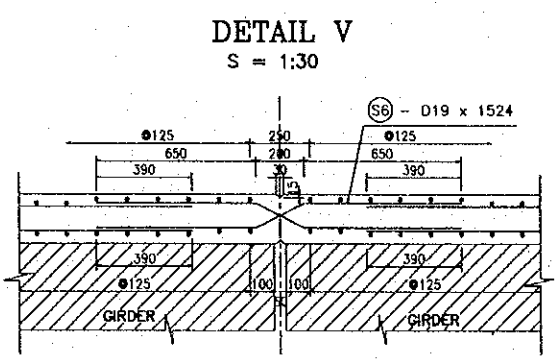
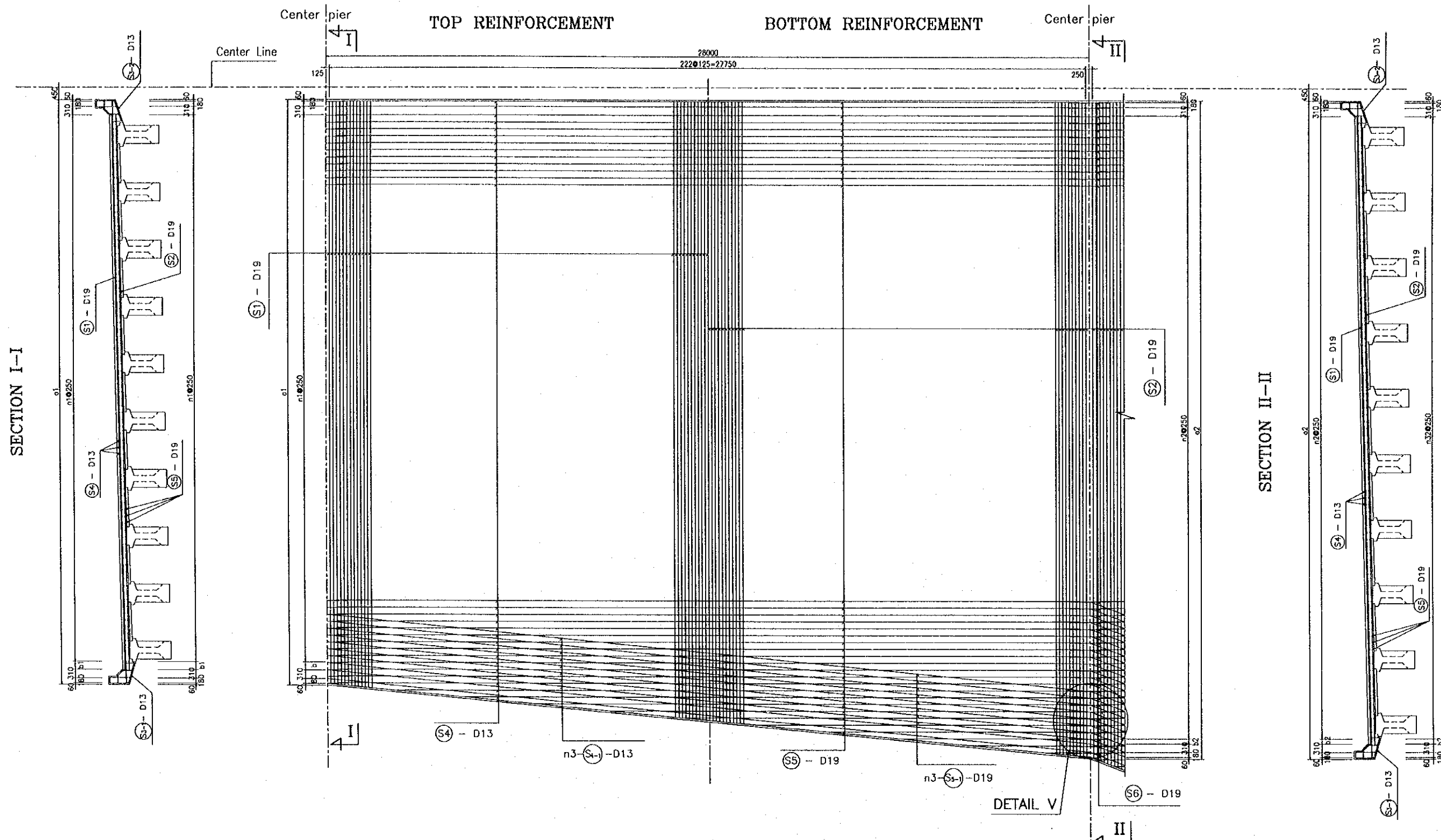
	a1 (mm)	a2 (mm)	b1 (mm)	b2 (mm)	n1	n2	n3
P12R-P13R	15860	16991	260	141	58	63	8
P13R-P14R	16991	19211	141	111	63	72	8

KEY PLAN  
S = 1:5000



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM HUNG LUNG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT: RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT: PACIFIC CONSULTANTS INTERNATIONAL		DATE: 2000. 3. 17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/150	C-1-2b-72	
RE-BAR ARRANGEMENT OF DECK SLAB (2-14)			



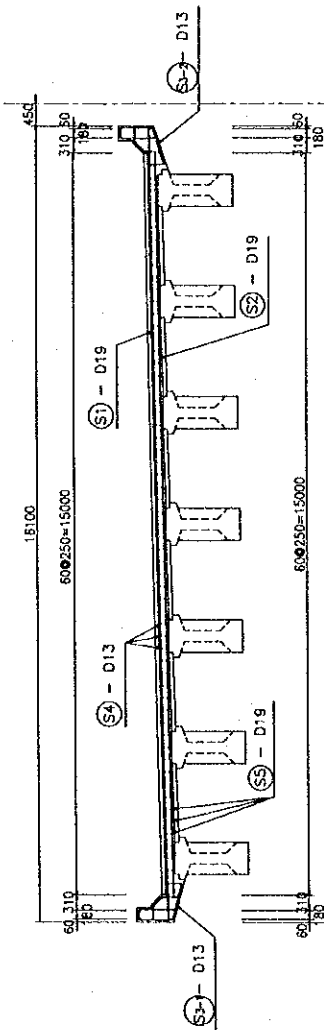
Span No.	a1 (mm)	a2 (mm)	b1 (mm)	b2 (mm)	n1	n2	n3
P14R-P15R	19211	21162	111	312	72	79	8
P15R-P16R	21162	23122	312	272	79	87	9
P16R-P17R	23122	25081	272	231	87	95	9
P17R-P18R	25081	28005	231	155	95	107	13



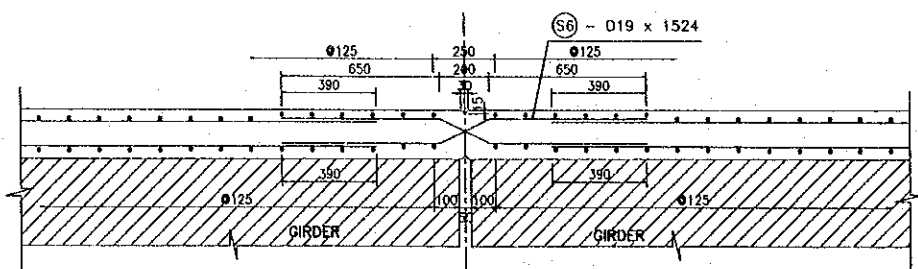
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.14

PACKAGE 2	SCALE 1/150	DRAWING No. C-1-2b-73	SHEET No.
RE-BAR ARRANGEMENT OF DECK SLAB (2-15)			

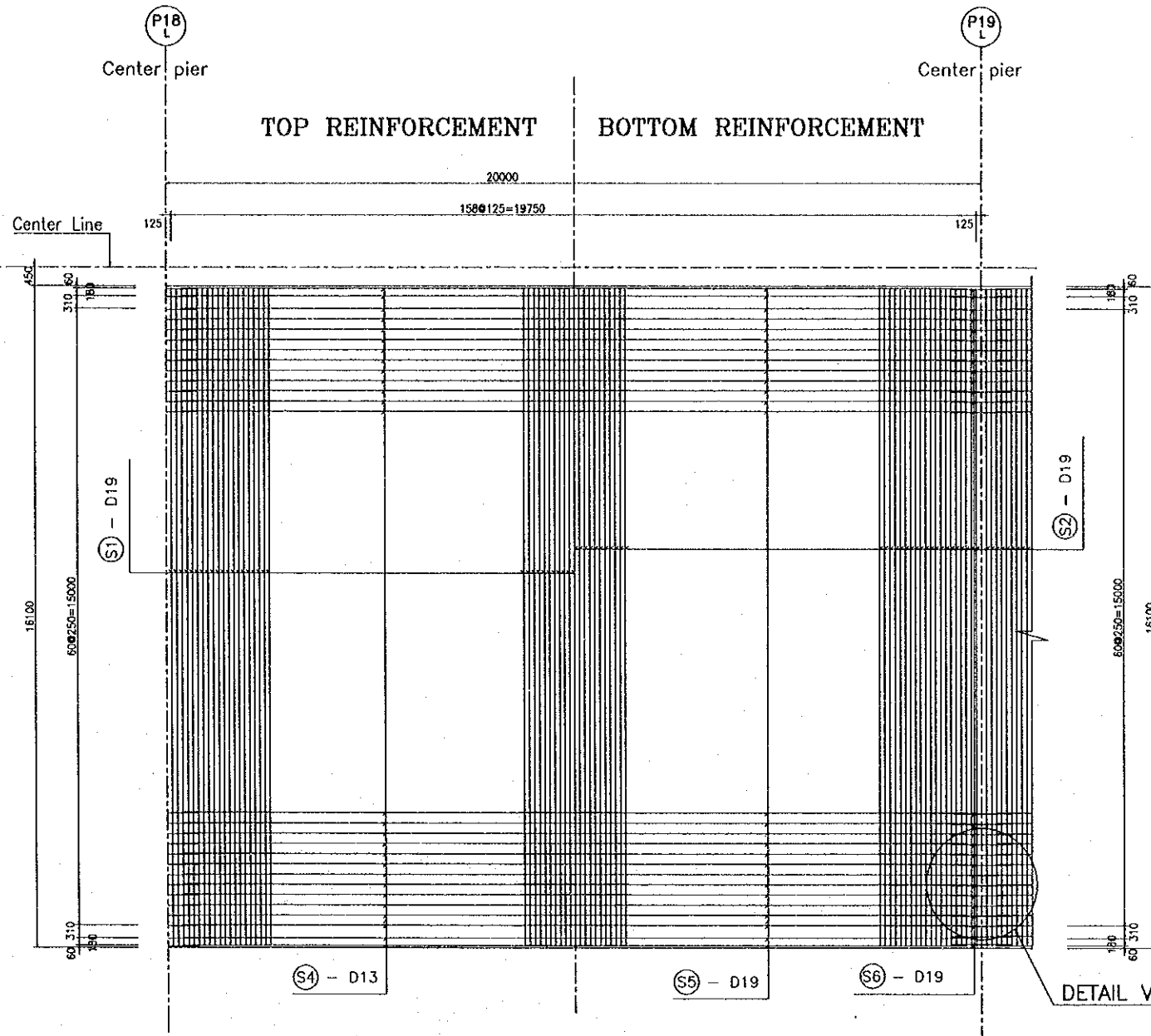
TYPICAL CROSS SECTION



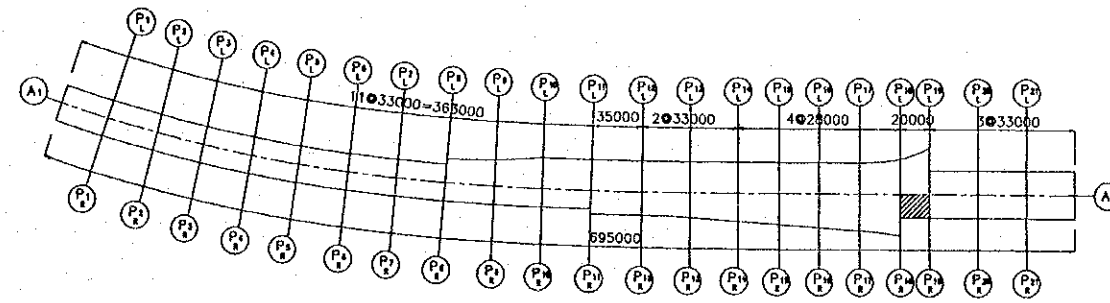
DETAIL V  
S = 1:30



TOP REINFORCEMENT      BOTTOM REINFORCEMENT



KEY PLAN  
S = 1:5000



# **C-1 THROUGHWAY**

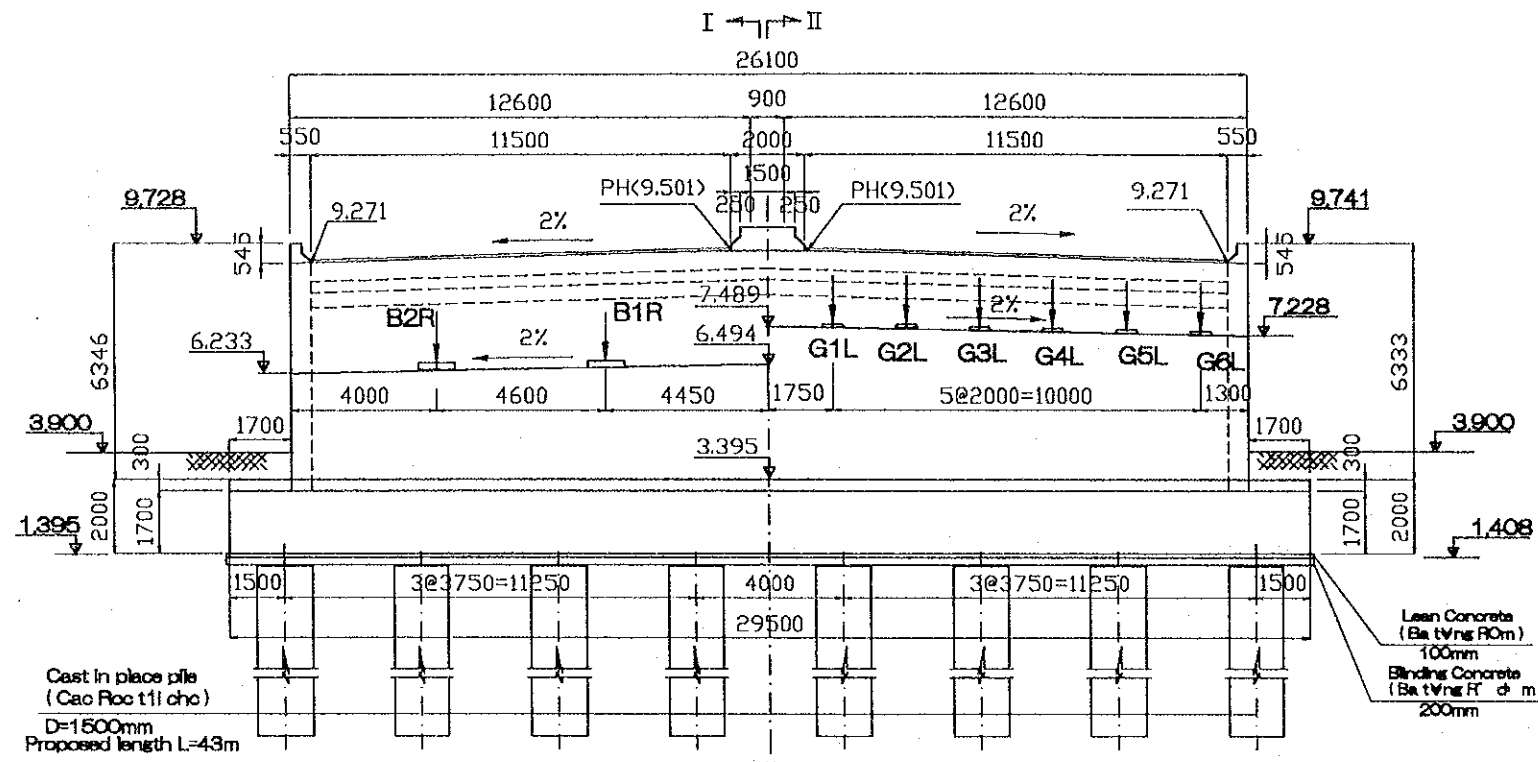
## **C-1-3 SUBSTRUCTURE**

### **C-1-3a CAU BAY CANAL BRIDGE**

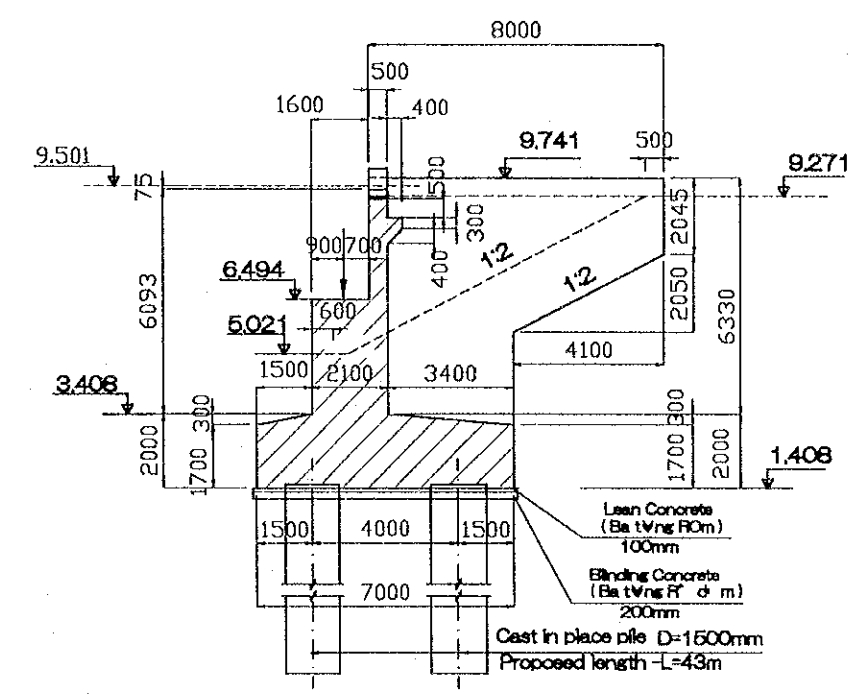
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATARE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
RED RIVER BRIDGE (THAM TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
PACIFIC CONSULTANTS INTERNATIONAL		DATE 2/2002, b.1

PACKAGE 2	SCALE 1:200	DRAWING No. C-1-3a-1	SHEET No.
DETAIL OF ABUTMENT-A1			

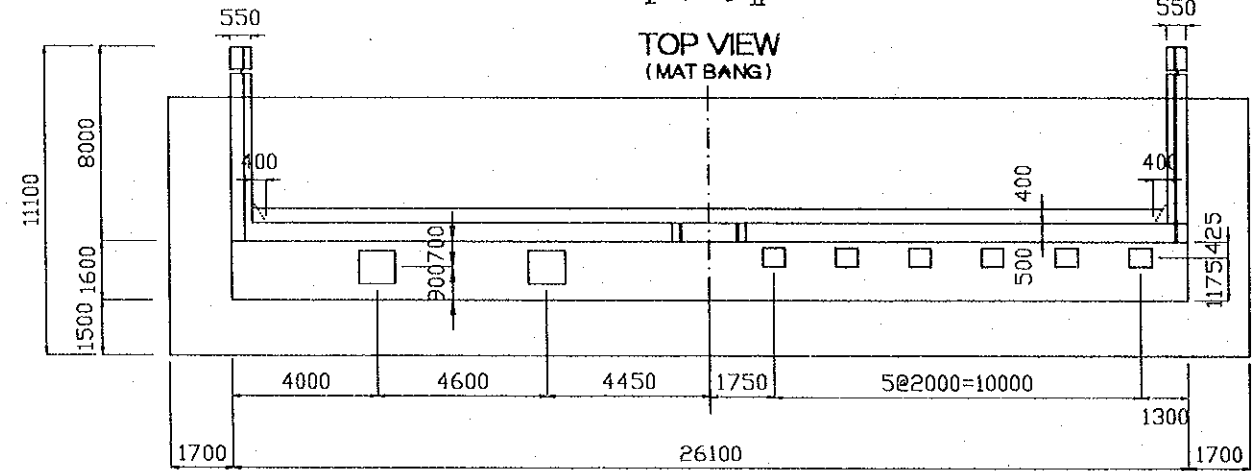
FRONT VIEW



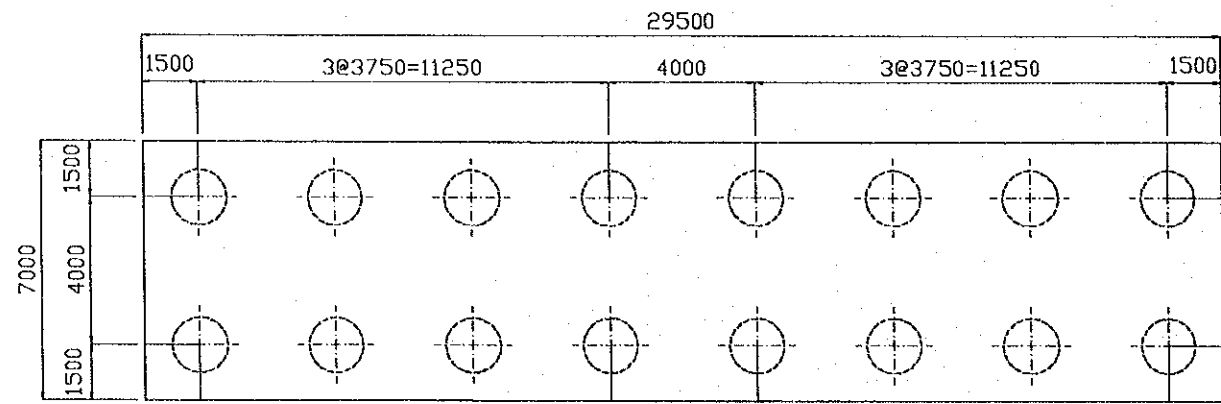
I-I



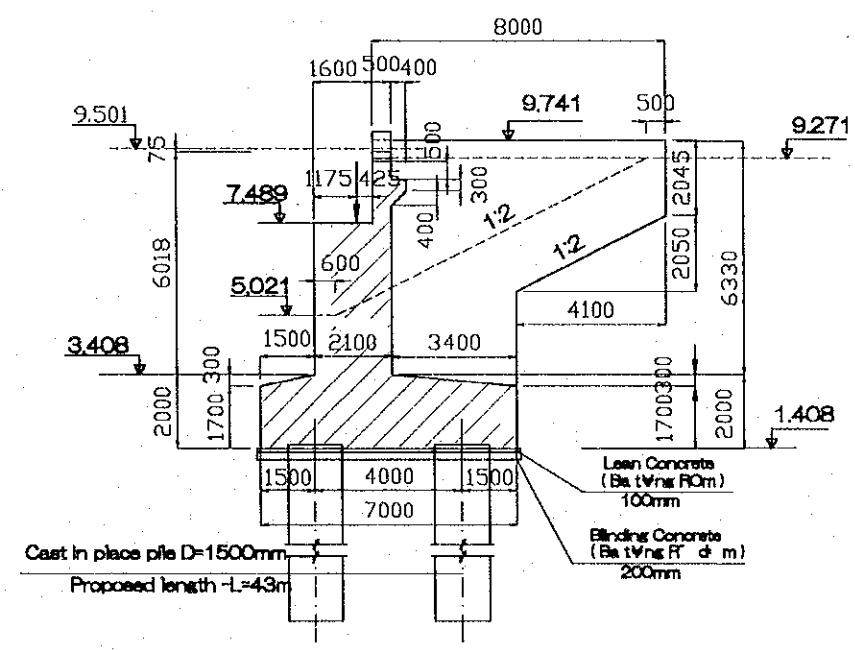
TOP VIEW (MAT BANG)



PILE ARRANGEMENT



II-II



DEPTH OF SUPERSTRUCTURE (MM)

	P.C. Girder	P.C. Box Girder
Pavement	75	75
Slab	207	0.0
Girder	1650	2750
Haunch	14	22
Bearing	66	150
Mortar	30	30
Sub Total	2032	3027

TOP MORTAR ELEVATION (M)

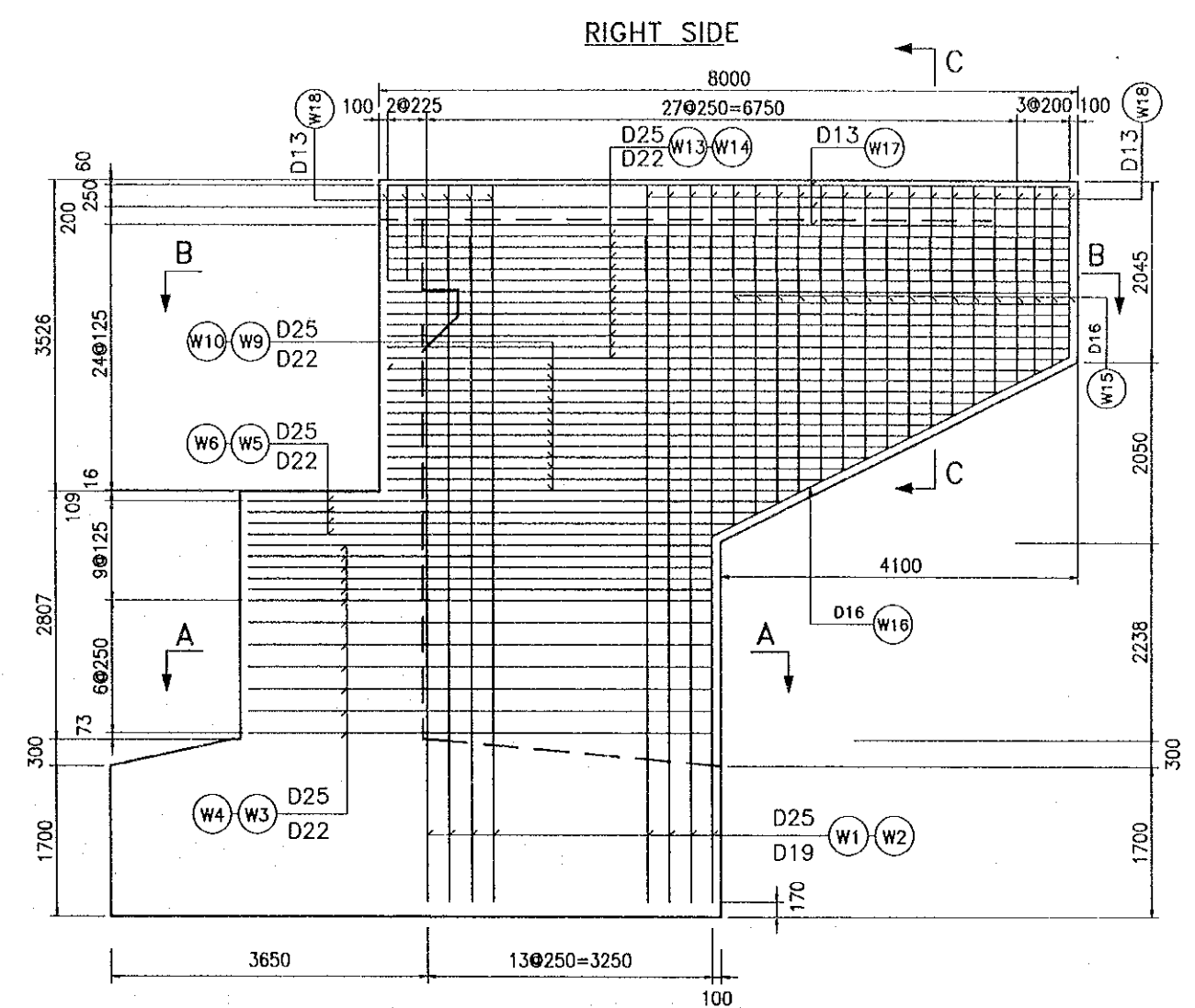
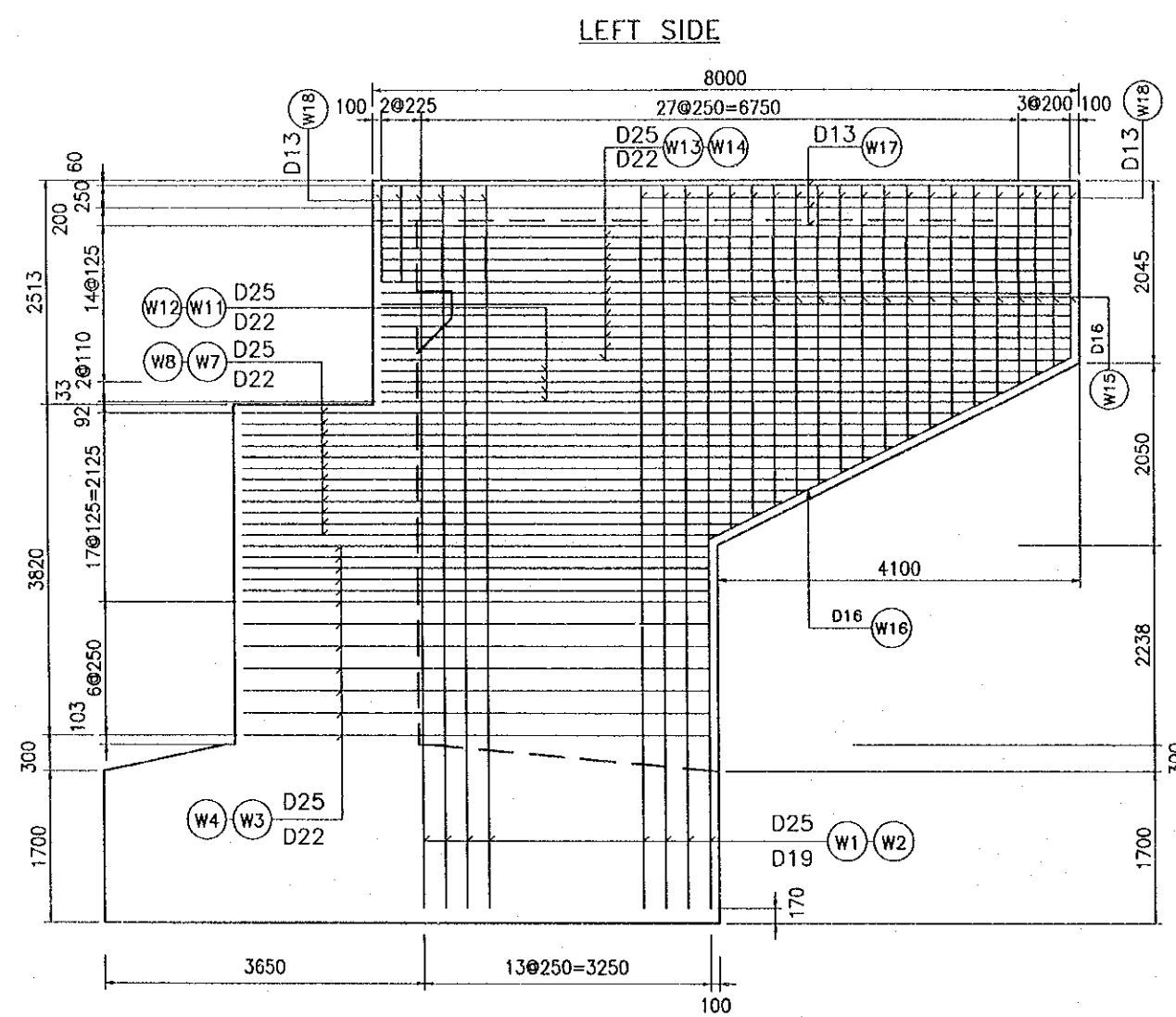
P.C.	Bearing seat	G1L	G2L	G3L	G4L	G5L	G6L
I. Girder	Elevation	7.484	7.444	7.404	7.364	7.324	7.284
P.C.	Bearing seat	B1R		B2R			
Box Girder	Elevation	6.435		6.343			



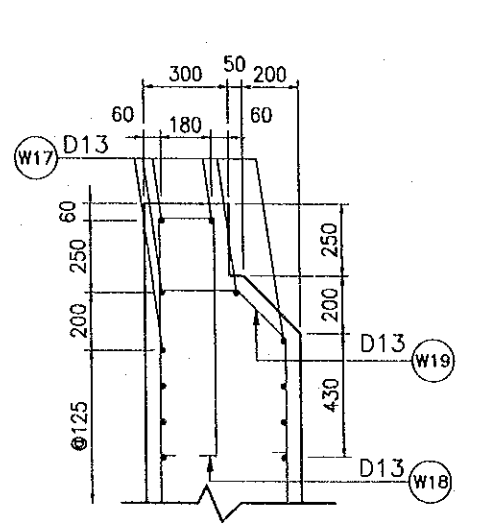


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. NAYABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000. 9. 17

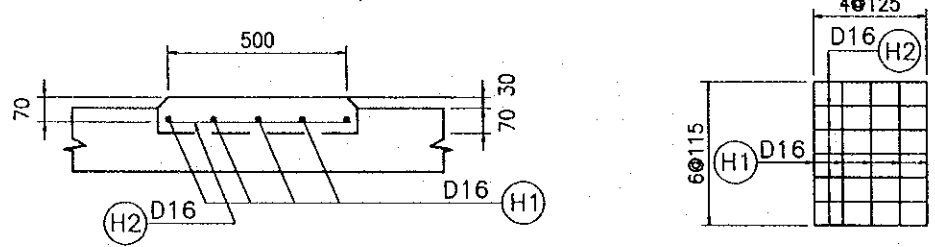
PACKAGE 2	SCALE 1:75	DRAWING No. C-1-3a-4	SHEET No.
BAR ARRANGEMENT OF A1 (3)			



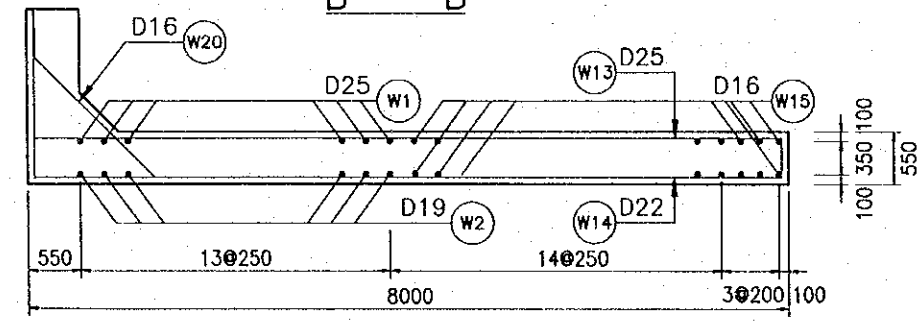
**C - C**  
Scale: 1/25



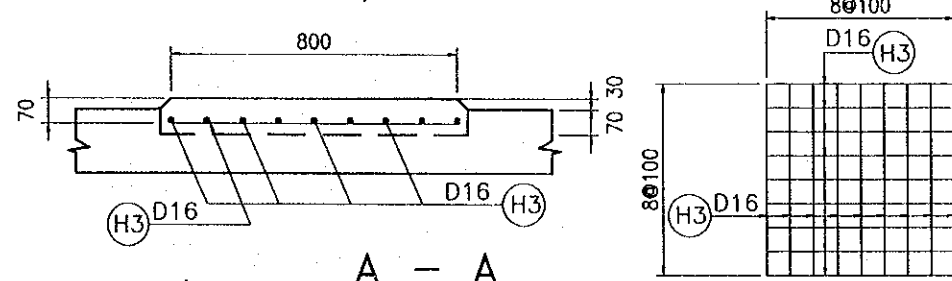
**BAR ARRANGEMENT OF BEARING SEAT**  
Scale: 1/20



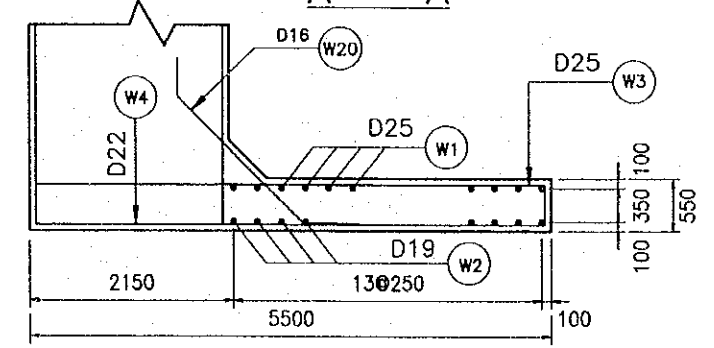
**B - B**



**BAR ARRANGEMENT OF BEARING SEAT**  
Scale: 1/20



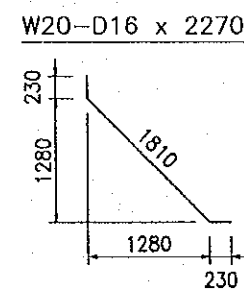
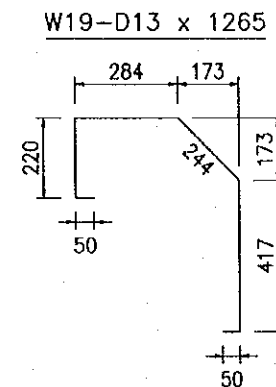
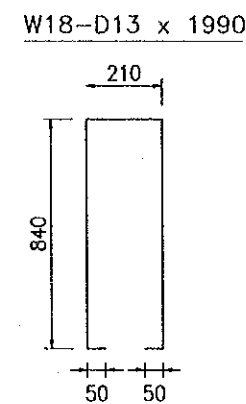
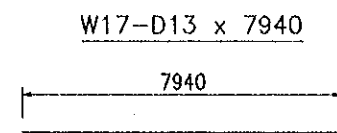
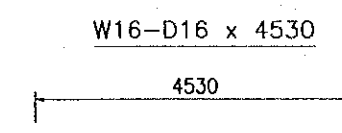
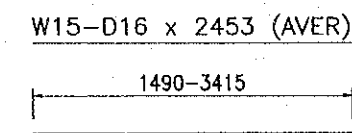
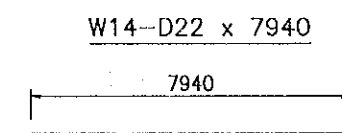
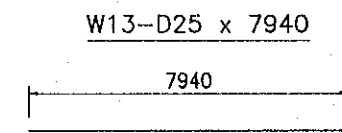
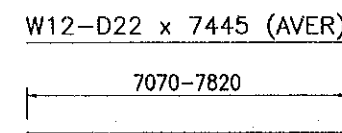
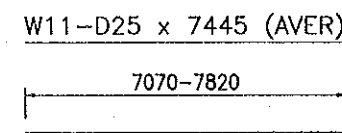
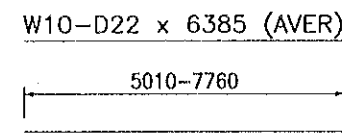
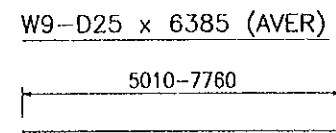
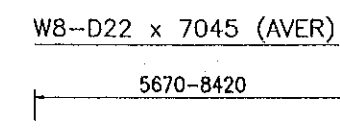
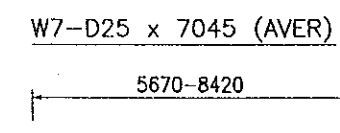
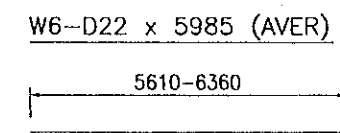
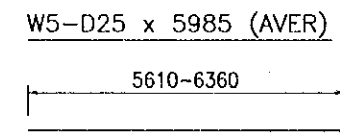
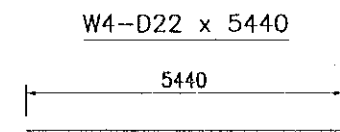
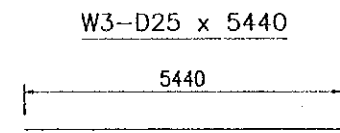
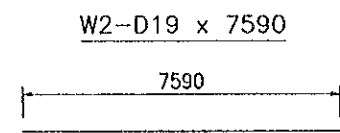
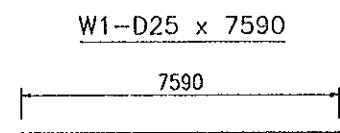
**A - A**



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY NAME S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.3.17	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE	DRAWING No. C-1-3a-5	SHEET No.
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BAR ARRANGMENT OF A1 (4)

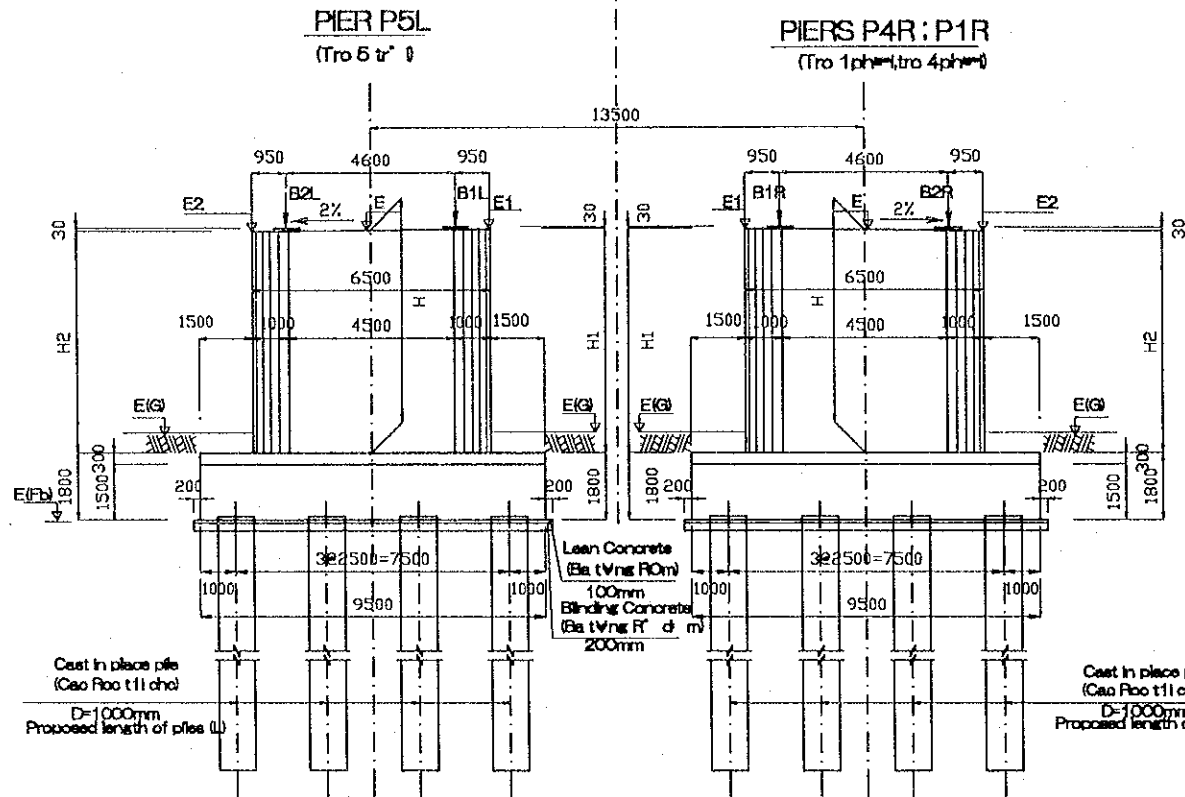


Detaile	Bars	Dia (mm)	Length (mm)	No' s	Unit Weight (Kg/m)	Weight (Kg)	Remarks	
BALLAST WALL	B1	D16	26650	8	1.56	332.59		
	B2	D13	2060	101	0.995	207.02		
	B3	D13	730	294	0.995	213.55		
	B4	D19	2640	105	2.25	623.70		
	B5	D19	3650	105	2.25	862.31		
	B6	D16	13295	4	1.56	82.96		
	B7	D16	2640	53	1.56	218.28		
	B8	D16	3650	53	1.56	301.78		
	B9	D16	26650	16	1.56	665.18		
STEM	S1	D16	2230	241	1.56	838.39		
	S2	D16	13295	7	1.56	145.18		
	S3	D16	13295	4	1.56	82.96		
	S4	D16	26650	11	1.56	457.31		
	S5	D16	26650	11	1.56	457.31		
	S6	D19	6035	53	2.25	719.67		
	S7	D19	6035	105	2.25	1425.77		
	S8	D19	5020	53	2.25	598.64		
	S9	D19	5020	105	2.25	1185.98		
	H1	D16	710	30	1.56	33.23		
	H2	D16	510	42	1.56	33.42		
H3	D16	820	36	1.56	46.05			
FOOTING	F1	D16	31270	27	1.56	1317.09	AVER	
	F2	D16	32550	27	1.56	1371.01		
	F3	D19	4180	119	2.25	1119.20		
	F4	D19	4890	237	2.25	2607.59		
	F5	D19	1750	480	2.25	1890.00	AVER	
	F6	D19	6940	8	2.25	124.92		
	F7	D19	30220	8	2.25	543.96		
	F8	D19	6840	119	2.25	1831.41		
	F9	D19	6060	237	2.25	3231.5		
WING WALL	W1	D25	7590	28	3.98	845.83		
	W2	D19	7590	28	2.25	478.17		
	W3	D25	5440	24	3.98	519.63		
	W4	D22	5440	24	3.04	396.90		
	W5	D25	5985	4	3.98	95.28	AVER	
	W6	D22	5985	4	3.04	72.78	AVER	
	W7	D25	7045	12	3.98	336.47	AVER	
	W8	D22	7045	12	3.04	257.00	AVER	
	W9	D25	6385	12	3.98	304.95	AVER	
	W10	D22	6385	12	3.04	232.92	AVER	
	W11	D25	7445	4	3.98	118.52	AVER	
W12	D22	7445	4	3.04	90.53	AVER		
W13	D25	7940	24	3.98	758.43			
W14	D22	7940	24	3.04	579.30			
W15	D16	2453	68	1.56	260.21	AVER		
W16	D16	4530	4	1.56	28.27			
W17	D13	7940	12	0.995	94.80			
W18	D13	1990	66	0.995	130.68			
W19	D13	1265	66	0.995	83.07	AVER		
W20	D16	2270	70	1.56	247.88			
SUMMARY	TOTAL						29499.60	
	D13 : 729.13			D22 : 1629.44				
	D16 : 6919.11			D25 : 2979.11				
	D19 : 17242.81							

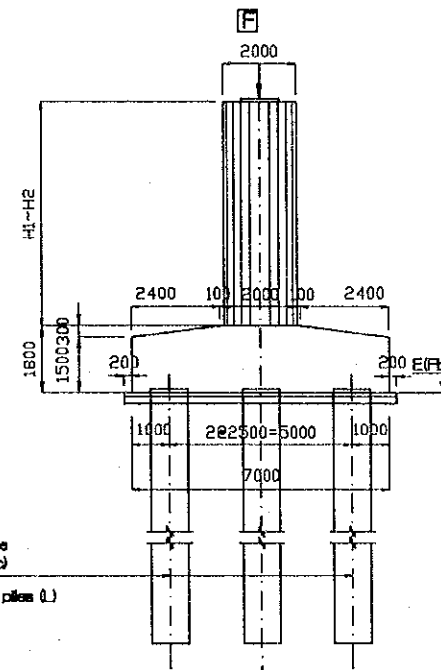
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM DIANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT	DESIGNED BY NAME SIGNATURE DATE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	2/2006
PROJECT RED RIVER BRIDGE (HANG TRU BRIDGE) CONSTRUCTION PROJECT	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	

PAGE	SCALE	DRAWING No.	SHEET No.
2	1/200	C-1-3d-6	
DETAIL OF P1R, P4R, P5L			

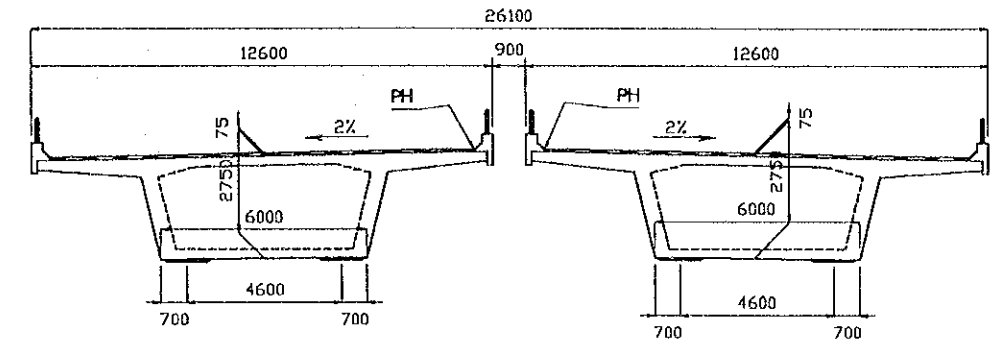
LONGITUDINAL OF BRIDGE  
(Theo bao CCU)



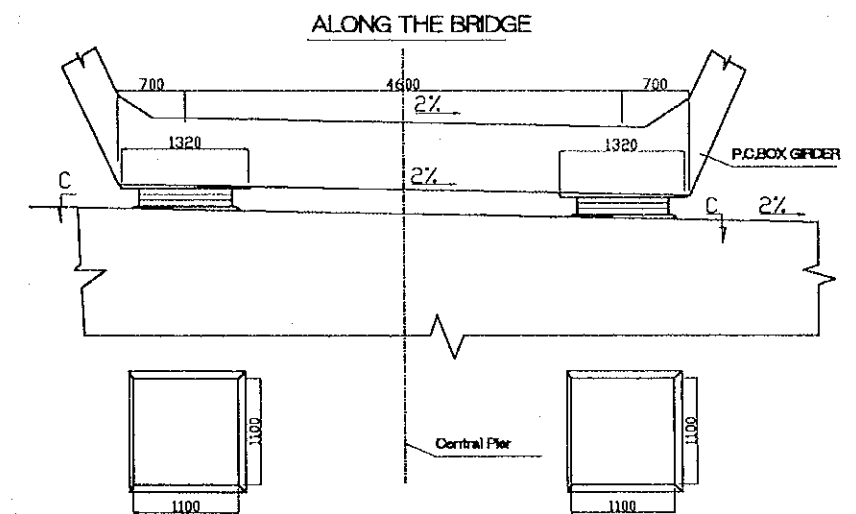
SIDE VIEW  
(MAT B41N)



CROSS SECTION OF SUPERSTRUCTURE  
(C?T NGANG KOT CEU NH?P)

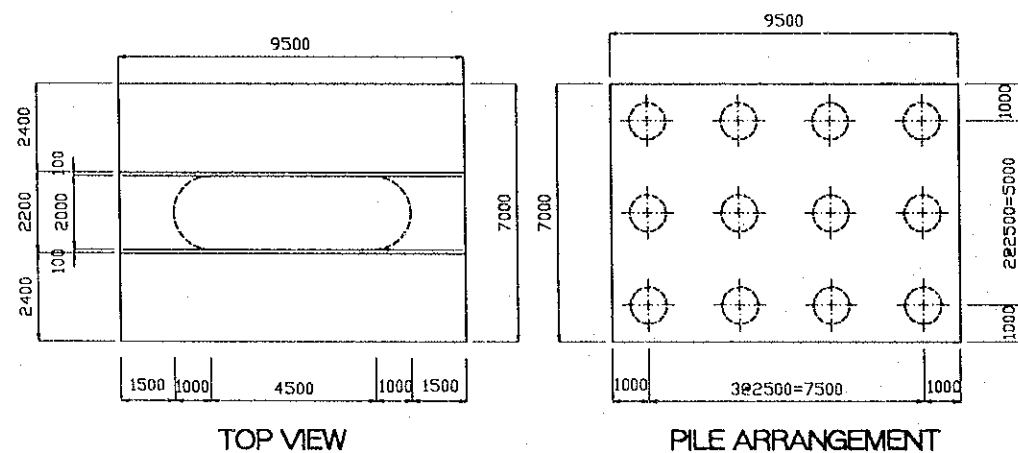


BEARING SEAT DETAIL OF P.C BOX GIRDER  
(SC=1/75)



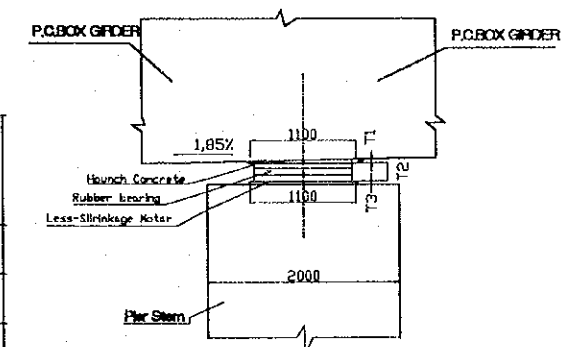
DEPTH OF SUPERSTRUCTURE (MM)

Pavement	75
Box Girder	2750
Haunch	15
Bearing	195
Mortar	30
Sub Total	3065



DIMENSIONS, ELEVATIONS AND PROPOSED LENGTHS OF PIER

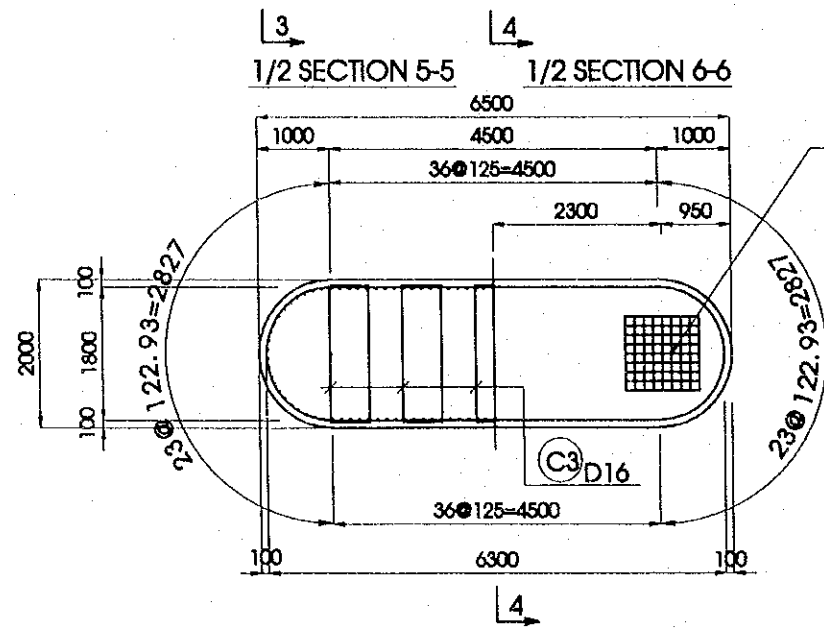
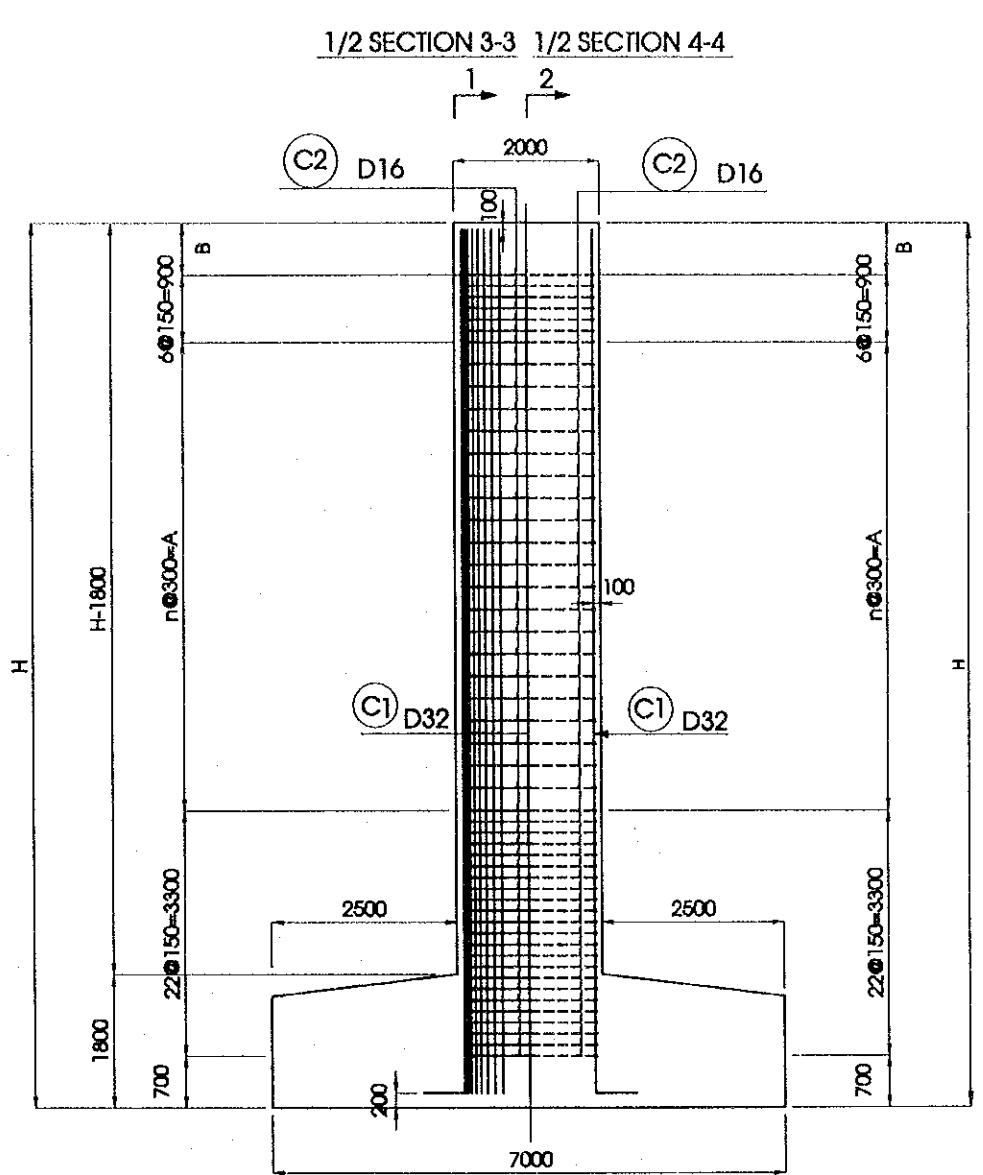
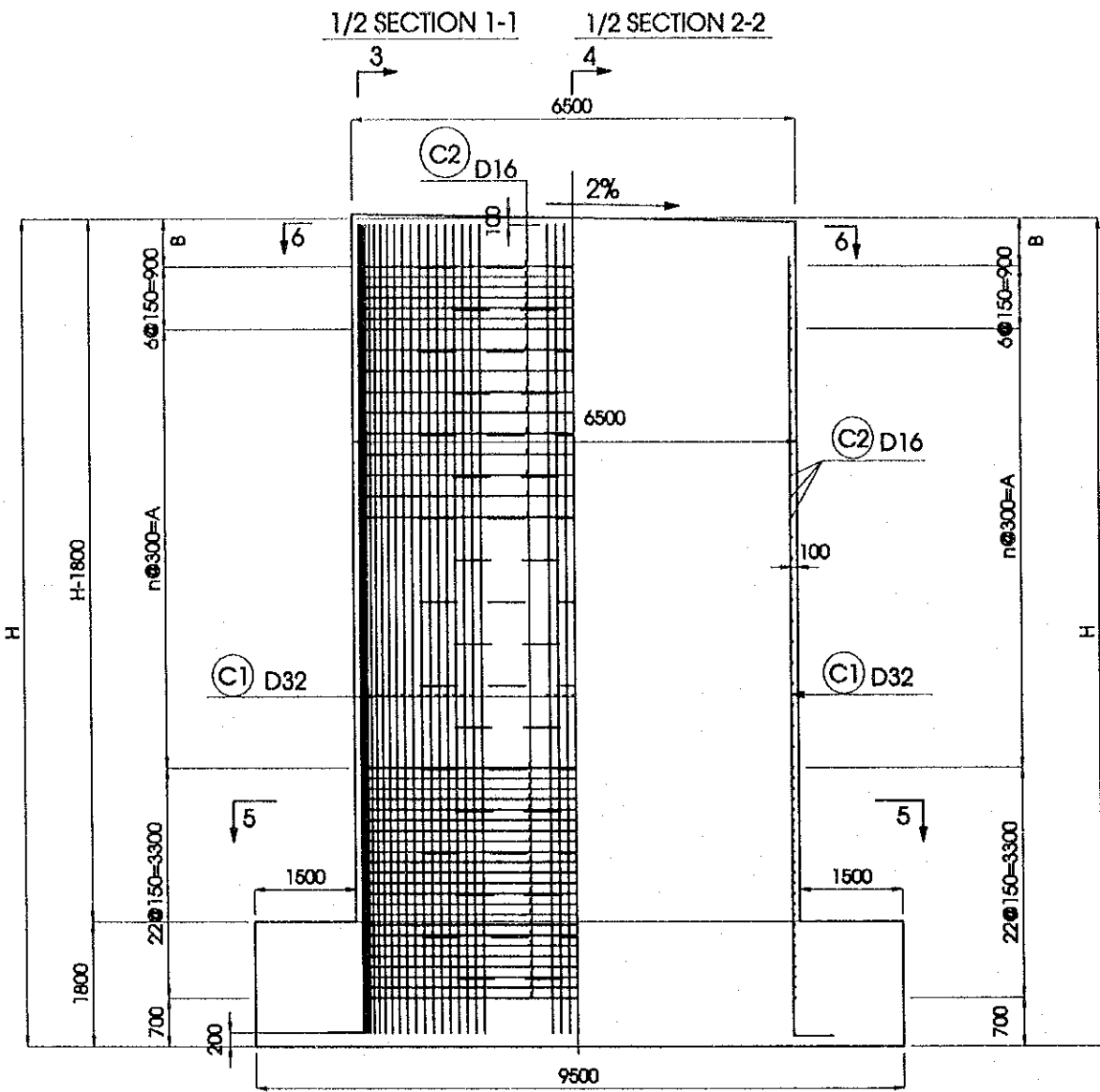
Piers	Height dimensions (mm)				Elevation of Top stem (m)				Elevation at Bearing seat (m)				Ground Elevation $E_g$ (m)	Footing bottom Elevation $E_{F2}$ (m)	Proposed length of piles L (m)
	$H_2$	H	$H_1$	PH	$E_1$	E	$E_2$	B1R	B2R	B1L	B2L				
P1R	3235	3300	3365	10.086	6.971	6.906	6.841	6.982	6.890			4.11	1.806	42	
P4R	5935	8000	8065	10.6	7.485	7.42	7.355	7.496	7.404			2.0	-0.38	38	
P5L	6035	6100	6165	10.6	7.485	7.42	7.355			7.496	7.404	3.15	-0.48	38	



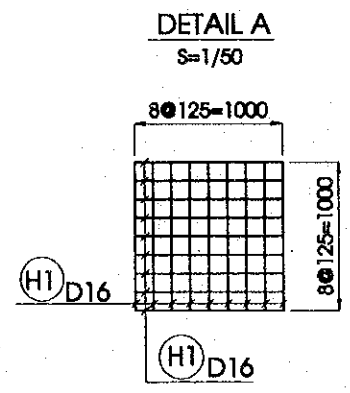


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM HANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (HUANH TRI BRIDGE) CONSTRUCTION PROJECT		DATE 2000. 3. 17
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/100	DRAWING No. C-1-3a-7	SHEET No.
BAR ARRANGMENT OF P1R, P4R, P5L (1)			



DETAIL A



1 2

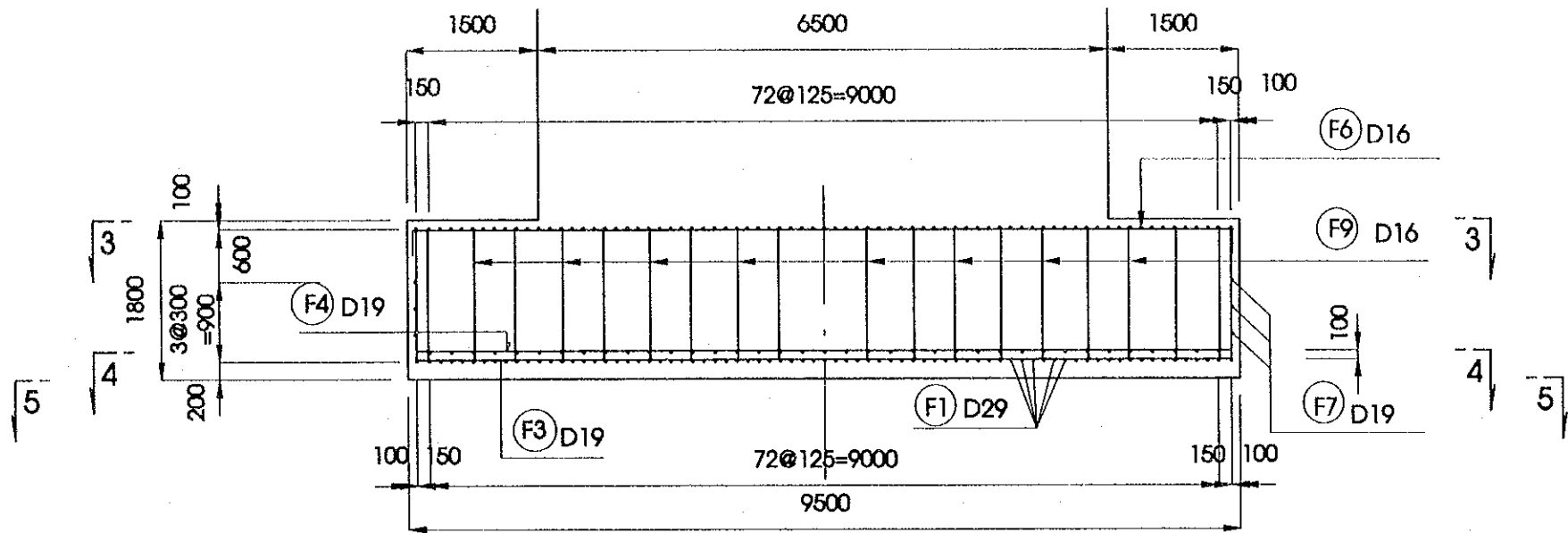
DIMENSION OF PIERS

ITEMS	H(m)	A(mm)	B(mm)	n
PIER				
P1R	5.10	0	200	0
P4R	7.80	2700	200	9
P5L	7.80	2700	200	9

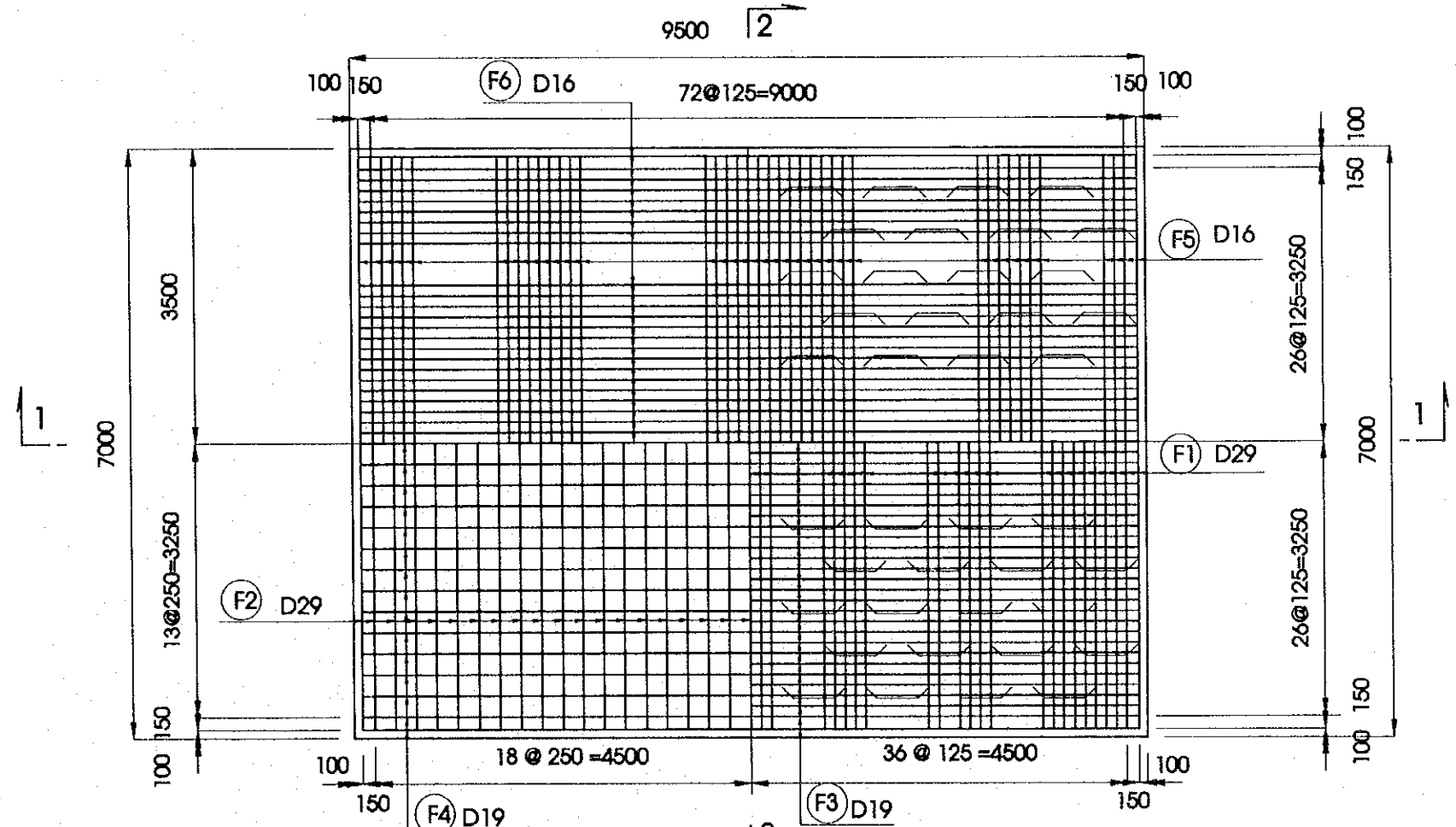
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATASE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	DATE 2000.3.14
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/100	DRAWING No. C-1-3a-B	SHEET No.
BAR ARRANGEMENT OF P1R, P4R, P5L (2)			

1/2 SECTION 1-1



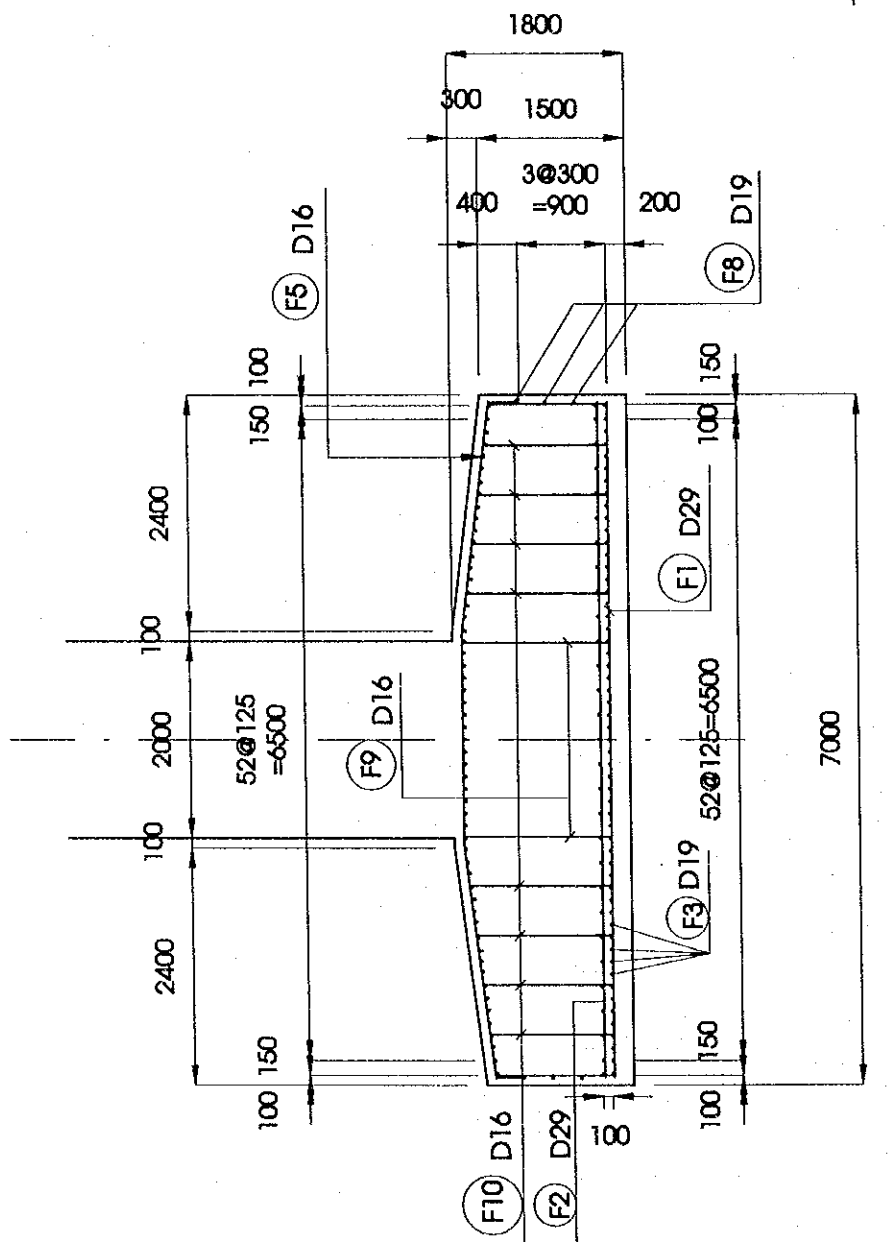
1/2 SECTION 3-3



1/4 SECTION 4-4

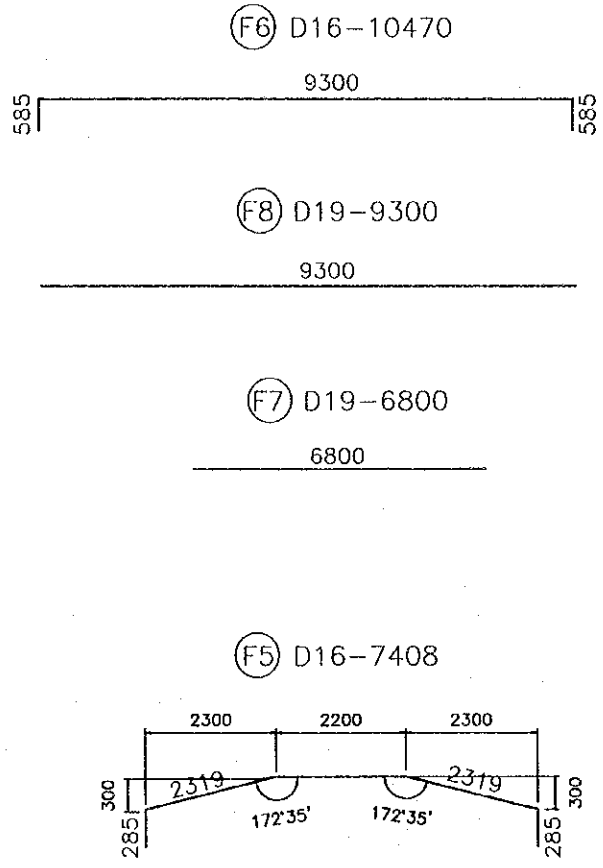
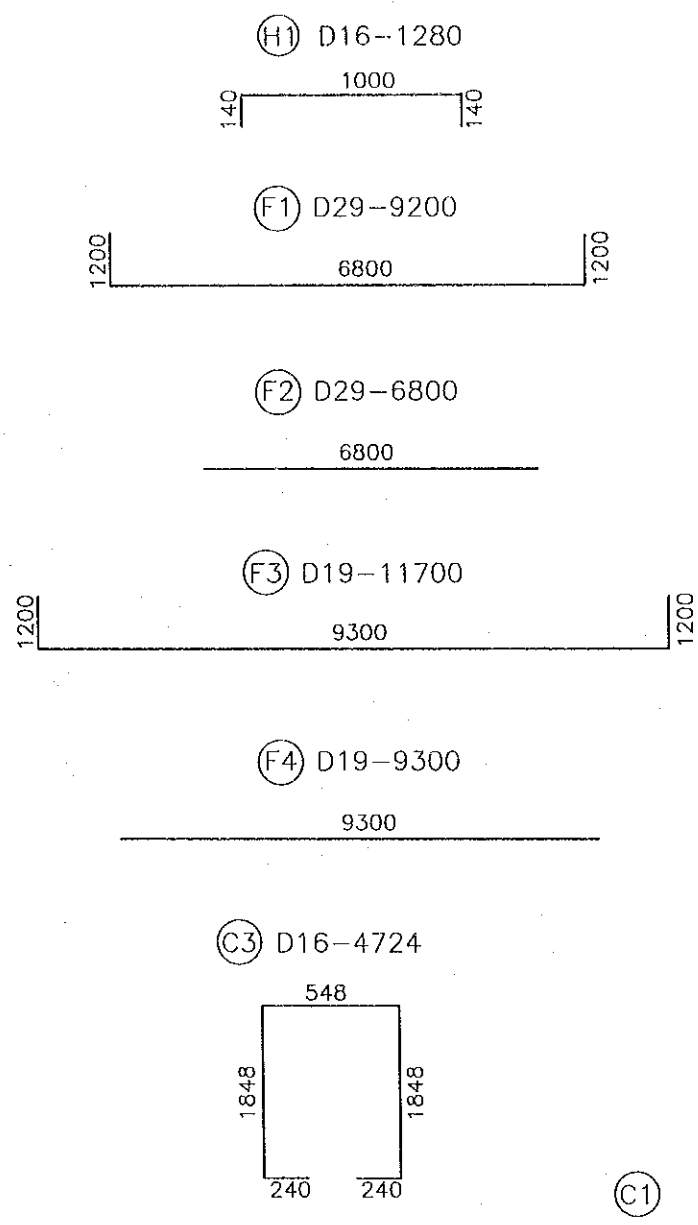
1/4 SECTION 5-5

1/2 SECTION 2-2



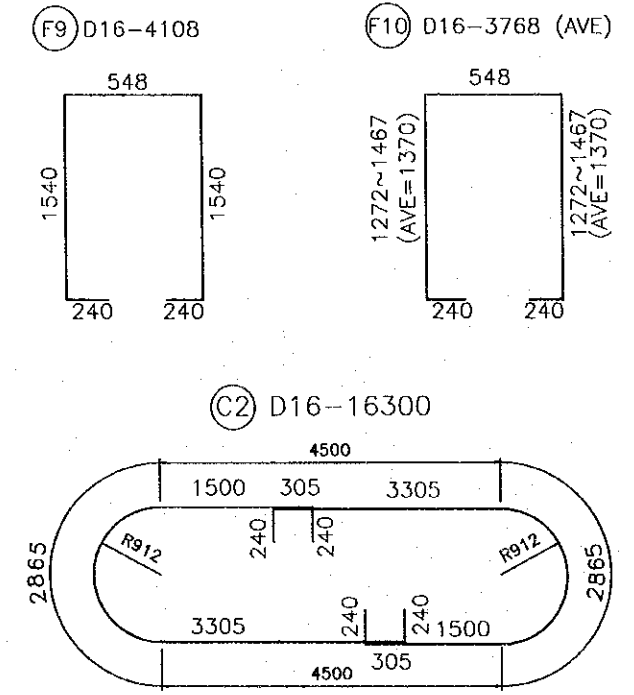
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THUNG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.8.14	

PACKAGE 2	SCALE	DRAWING No. C-1-3a-9	SHEET No.
BAR ARRANGMENT OF P1R, P2R, P5L (3)			



**DIMENSIONS OF BAR C1**

Items	Diameter (mm)	A (mm)	L (mm)	Total (mm)
P1R	D32	480	4800	5280
P4R	D32	480	7500	7980
P5L	D32	480	7500	7980



**REINFORCING BAR QUANTITIES FOR PIER P1R**

DETAILS	SYMBOL	SHAPE	DIA (mm)	LENGTHS (mm)	NUMBER (unit)	UNITWEIGHT (Kg/m)	WEIGHT (Kg)
STEM	H1	[Shape]	D16	1280	36	1.56	71.88
	C1	[Shape]	D32	5280	120	6.23	3947.33
	C2	[Shape]	D16	16300	29	1.56	737.41
	C3	[Shape]	D16	4724	72	1.56	530.60
FOOTING	F1	[Shape]	D29	9200	75	5.04	3477.60
	F2	[Shape]	D29	6800	39	5.04	1336.61
	F3	[Shape]	D16	11700	55	1.56	1003.86
	F4	[Shape]	D19	9300	29	2.25	606.83
	F5	[Shape]	D19	7480	39	2.25	656.37
	F6	[Shape]	D16	10470	29	1.56	473.66
	F7	[Shape]	D19	6800	6	2.25	91.80
	F8	[Shape]	D19	9300	6	2.25	125.55
	F9	[Shape]	D16	4180	16	1.56	104.33
	F10	( AVER ) [Shape]	D16	3768	64	1.56	376.20
TOTAL							13540.03
SUMMARY			D16 =				3297.95
			D19 =				1480.55
			D29 =				4814.21
			D32 =				3947.33

**REINFORCING BAR QUANTITIES FOR PIER P5L, P4R**

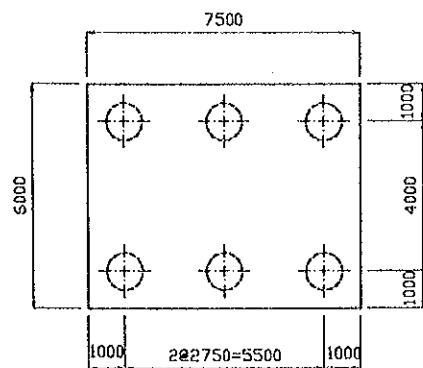
DETAILS	SYMBOL	SHAPE	DIA (mm)	LENGTHS (mm)	NUMBER (unit)	UNITWEIGHT (Kg/m)	WEIGHT (Kg)
STEM	H1	[Shape]	D16	1280	36	1.56	71.88
	C1	[Shape]	D32	7980	120	6.23	5965.85
	C2	[Shape]	D16	16300	29	1.56	737.41
	C3	[Shape]	D16	4724	72	1.56	530.60
FOOTING	F1	[Shape]	D29	9200	75	5.04	3477.60
	F2	[Shape]	D29	6800	39	5.04	1336.61
	F3	[Shape]	D16	11700	55	1.56	1003.86
	F4	[Shape]	D19	9300	29	2.25	606.83
	F5	[Shape]	D19	7480	39	2.25	656.37
	F6	[Shape]	D16	10470	29	1.56	473.66
	F7	[Shape]	D19	6800	6	2.25	91.80
	F8	[Shape]	D19	9300	6	2.25	125.55
	F9	[Shape]	D16	4180	16	1.56	104.33
	F10	( AVER ) [Shape]	D16	3768	64	1.56	376.20
TOTAL							15558.55
SUMMARY			D16 =				3297.95
			D19 =				1480.55
			D29 =				4814.21
			D32 =				5965.85



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TUANG LICH PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATASE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT: RED RIVER BRIDGE (TUANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT: PACIFIC CONSULTANTS INTERNATIONAL		DATE: 2000.6.1

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/200	C-1-3a-11	
DETAILS OF PIERS P1L, P4L, P3R (2)			

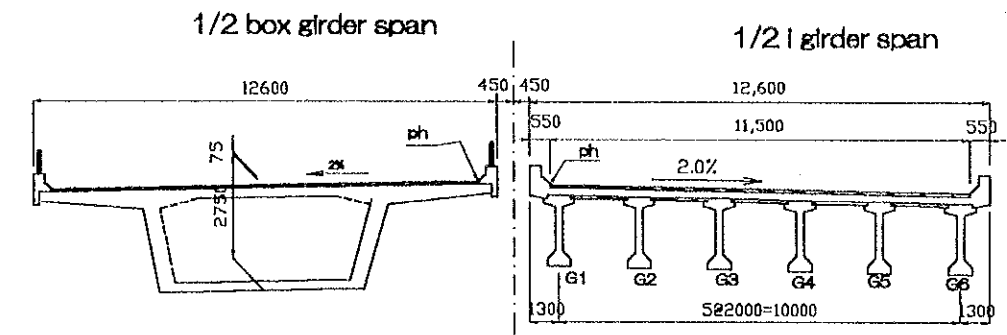
PILE ARRANGEMENT



SUPERSTRUCTURE DEPTHS (MM)

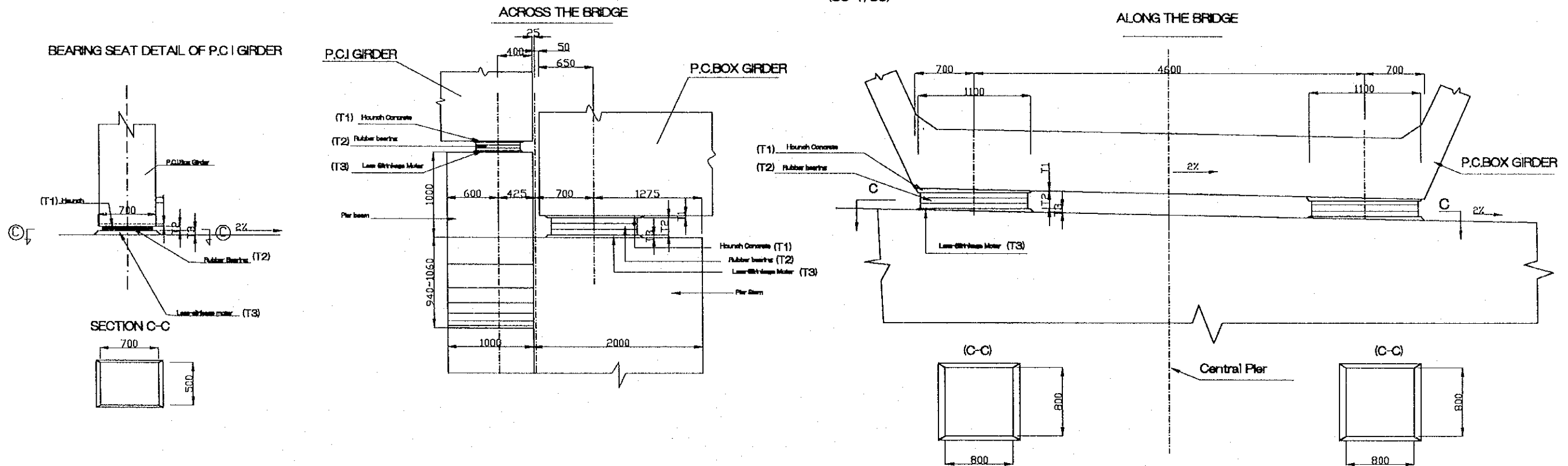
	PCI GIRDER			PC BOX GIRDER		
	P1L	P4L	P3R	P1L	P4L	P3R
Pavement	75	75	75	75	75	75
Slab	206	207	207	0	0	0
Girder	1650	1650	1650	2750	2750	2750
Houruh T1	34	34	34	17	22	22
Bearing T2	36	36	36	165	150	150
Mortar T3	30	30	30	30	30	30
SUB TOTAL	2031	2032	2032	3037	3027	3027

CROSS SECTION OF SUPERSTRUCTURE



BEARING SEAT DETAIL OF P.C BOX GIRDER

(SC=1/50)



DIMENTION, ELEVATIONS AND PROPOSED LENGHTS OF PIER

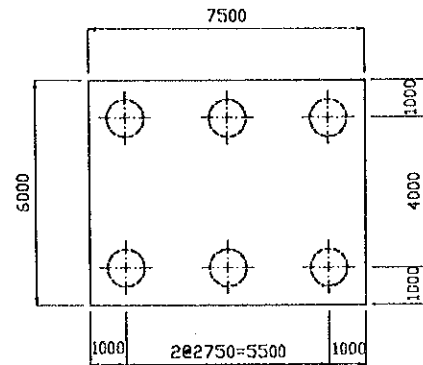
Piers	Height dimensions (mm)						PH	Top beam Eib (stem Eib) Elevation (m)			Top mortar Elevation (mm)						Ground Elevation E <sub>g</sub> (m)	Footing bottom Elevation E <sub>Fb</sub> (m)	Proposed length of piles L (m)	
	H <sub>2</sub>	H	H <sub>1</sub>	H <sub>5</sub>	H <sub>4</sub>	H <sub>3</sub>		E <sub>1b</sub> (E <sub>1s</sub> )	E <sub>2b</sub> (E <sub>2s</sub> )	E <sub>3b</sub> (E <sub>3s</sub> )	PC Girders									
											G1L (G1R)	G2L (G2R)	G3L (G3R)	G4L (G4R)	G5L (G5R)	G6L (G6R)				PC Box girders
P1L	2335	2400	2465	3050	3124	3189	7.891	7.766	7.641	7.896	7.859	7.816	7.776	7.736	7.696	6.566	6.474	2.60	1.566	43
P4L	2335	2400	2465	4335	4400	4465	8.574	8.449	8.324	8.579	8.539	8.499	8.459	8.419	8.379	7.530	7.438	4.40	2.249	43
P3R	2335	2400	2465	3340	3405	3470	8.55	8.425	8.300	8.555	8.515	8.475	8.435	8.395	8.355	7.506	7.414	4.40	2.225	43



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANH LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT	DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	NAME S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRU BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.6.1

PACKAGE 2	SCALE 1/200	DRAWING No. C-1-3a-13	SHEET No.
DETAIL OF PIER P2L, P2R (2)			

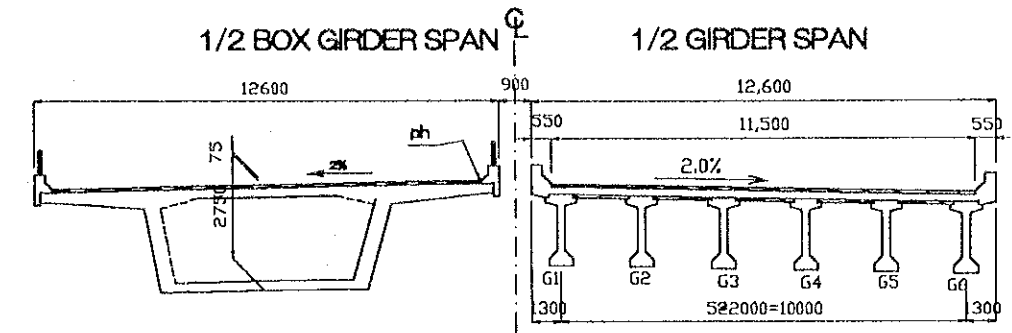
PILE ARRANGEMENT



SUPERSTRUCTURE DEPTH WITH (MM)

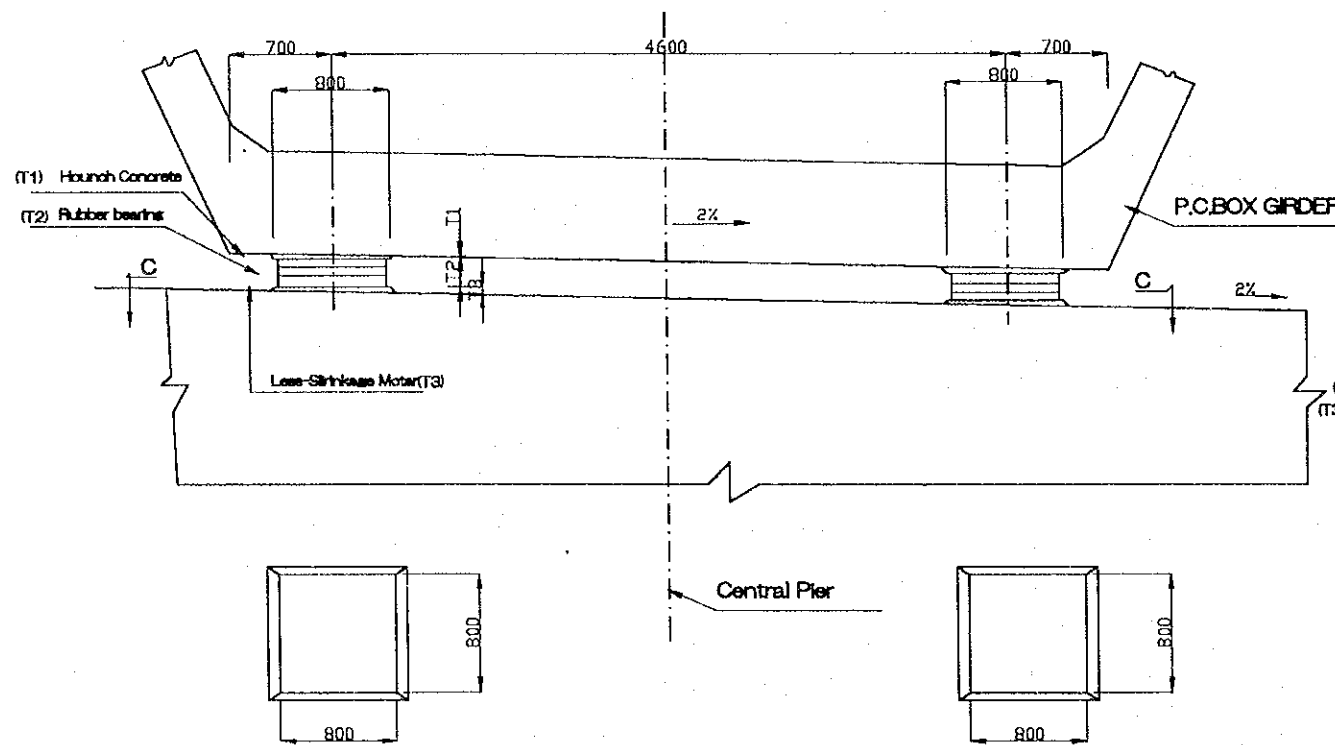
	PCI GIRDER	PC BOX GIRDER	
		P2L	P2R
Pavement	75	75	75
Slab	207	0	0
Girder	1650	2750	2750
Haunch T1	14	62	22
Bearing T2	56	145	150
Mortar T3	30	50	30
SUB TOTAL	2032	3082	3027

CROSS SECTION OF SUPERSTRUCTURE

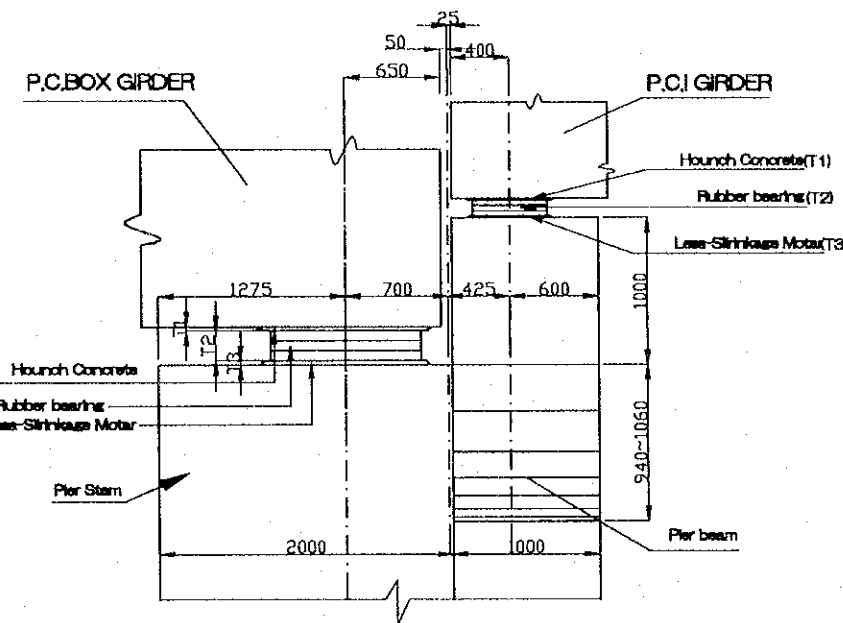


BEARING SEAT DETAIL OF P.C BOX GIRDER  
(SC=1/50)

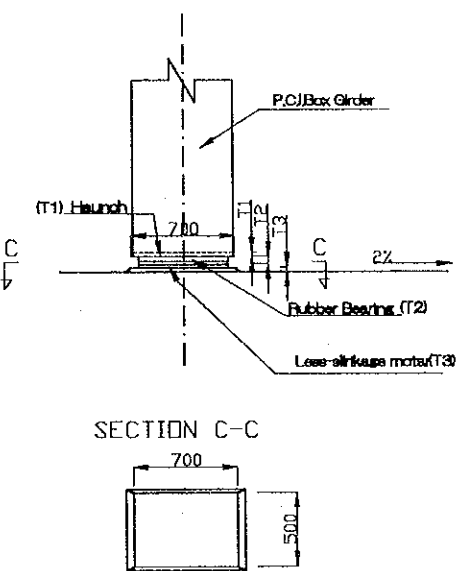
ALONG THE BRIDGE



ACROSS THE BRIDGE



BEARING SEAT DETAIL OF P.C I GIRDER  
ALONG THE BRIDGE

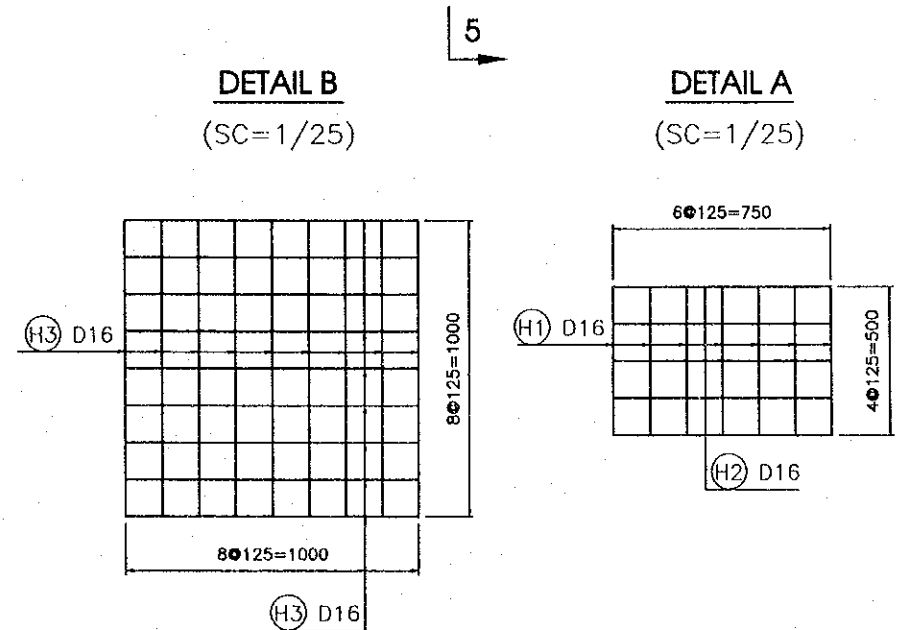
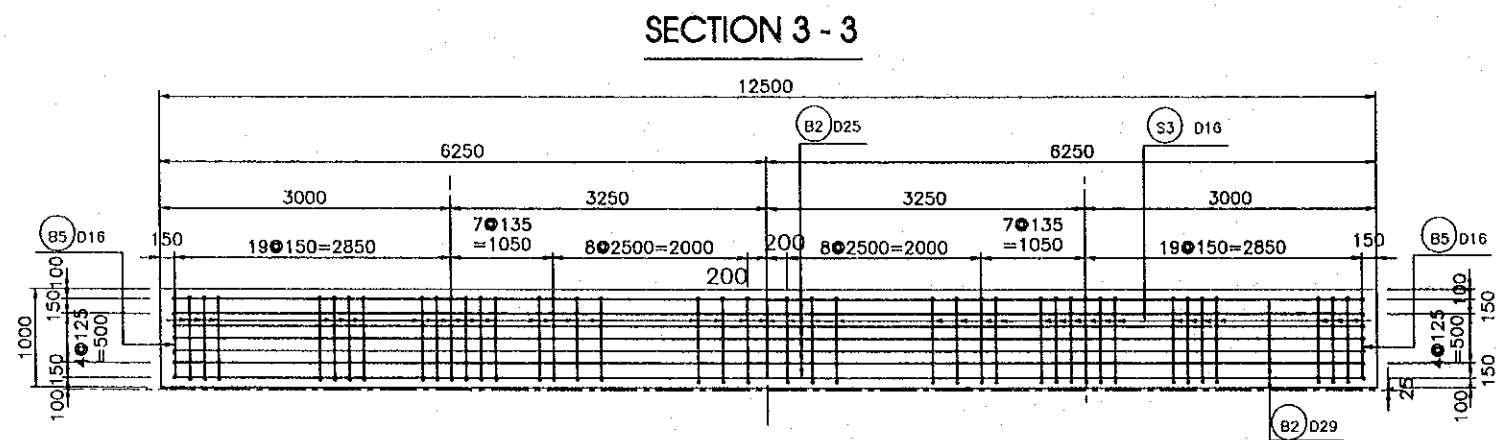
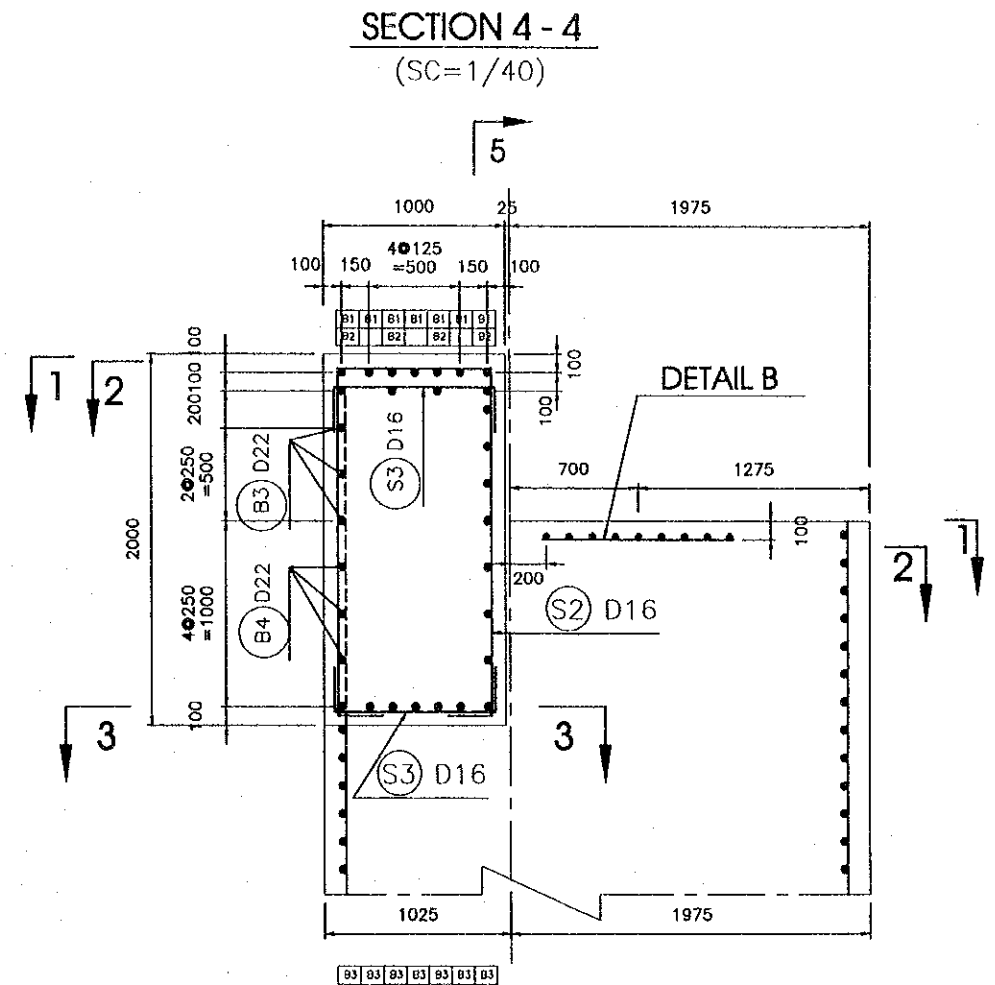
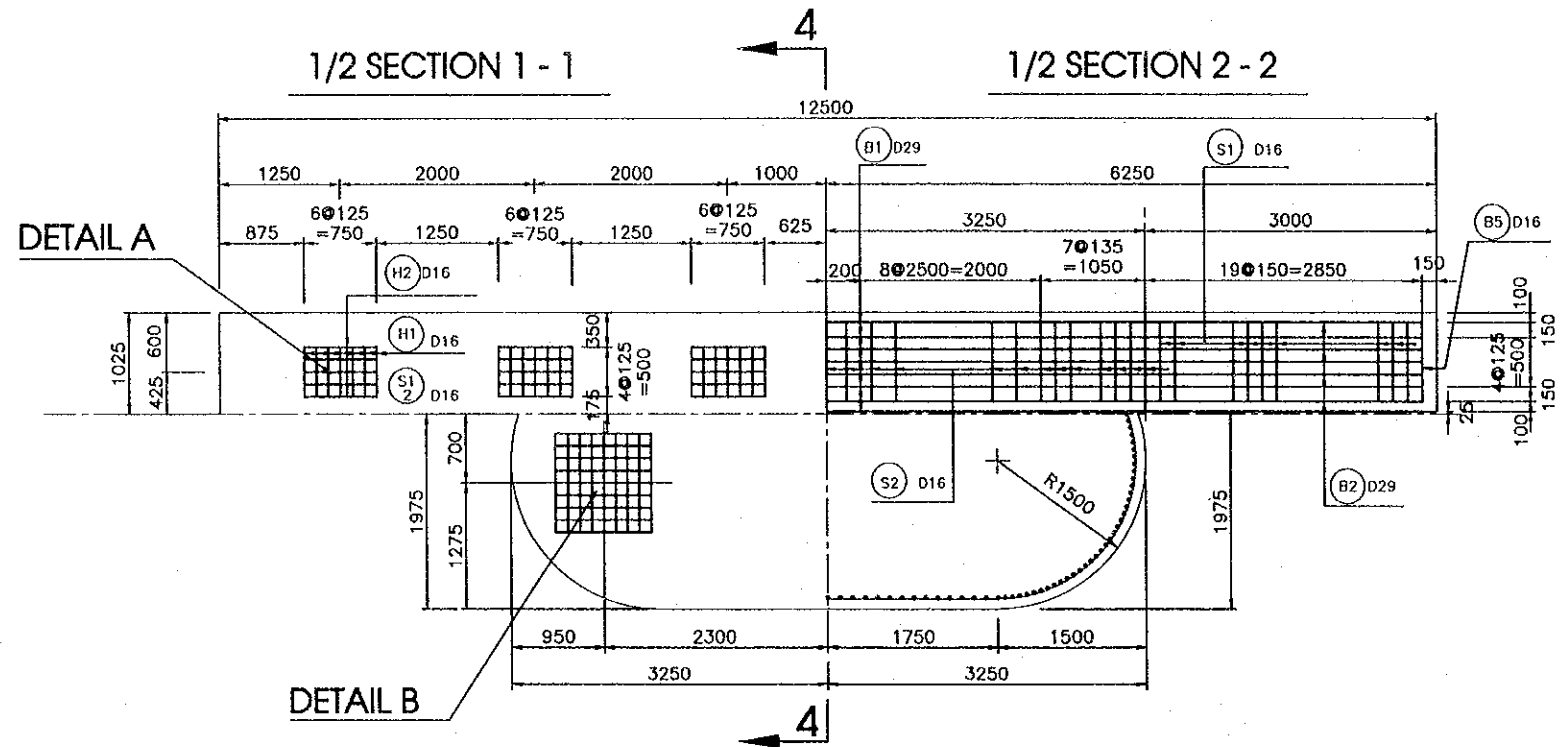


DIMENTION, ELEVATIONS AND PROPOSED LENGHTS OF PIER

Piers	Height dimensions (mm)						PH	Top beam Eib (stem Eis) Elevation (m)			Top mortar Elevation (mm)						Ground Elevation E <sub>G</sub> (m)	Footing bottom Elevation E <sub>Fb</sub> (m)	Proposed length of piles L (m)		
	H <sub>2</sub>	H	H <sub>1</sub>	H <sub>5</sub>	H <sub>4</sub>	H <sub>3</sub>		E <sub>1b</sub> (E <sub>1a</sub> )	E <sub>b</sub> (E <sub>a</sub> )	E <sub>2b</sub> (E <sub>2a</sub> )	P.C.I Girders			PC Box girders							
											G1L (G1R)	G2L (G2R)	G3L (G3R)	G4L (G4R)	G5L (G5R)	G6L (G6R)				B1L (B1R)	B2L (B2R)
P2L	2335	2400	2465	3285	3350	3415	10.352	8.33 7.220	8.205 7.165	8.08 7.090	8.335 (G1R)	8.295 (G2R)	8.255 (G3R)	8.215 (G4R)	8.175 (G5R)	8.135 (G6R)	7.251 (B1R)	7.159 (B2R)	4.45	2.005	43
P2R	2335	2400	2465	3340	3405	4470	10.452	8.43 7.375	8.305 7.310	8.18 7.245	8.435 (G1R)	8.395 (G2R)	8.355 (G3R)	8.315 (G4R)	8.275 (G5R)	8.235 (G6R)	7.386 (B1R)	7.294 (B2R)	4.4	2.105	43

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
PROJECT RED RIVER BRIDGE (HUANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE <i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 5/2000, 3.19

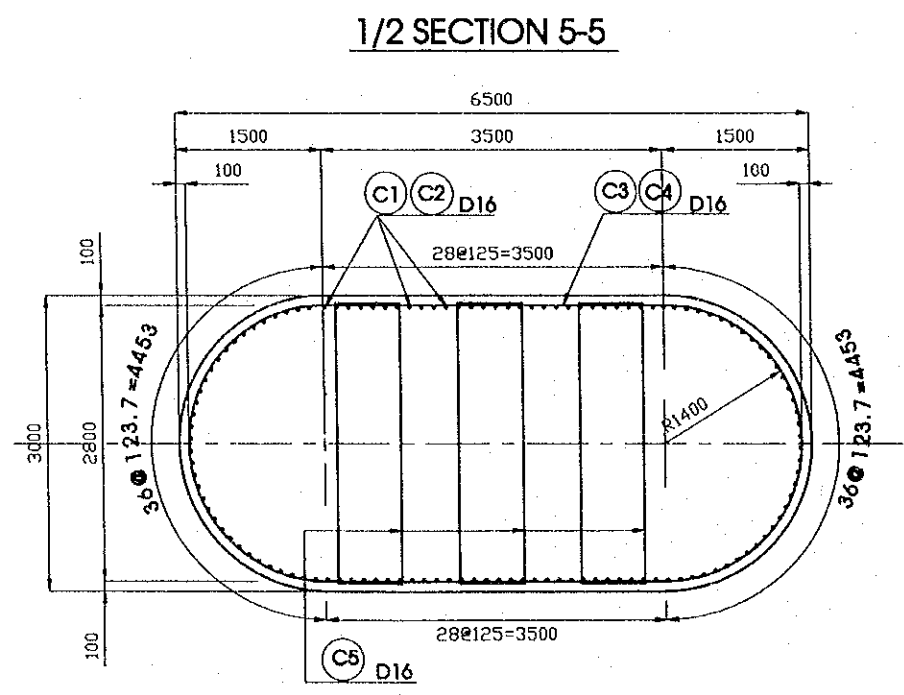
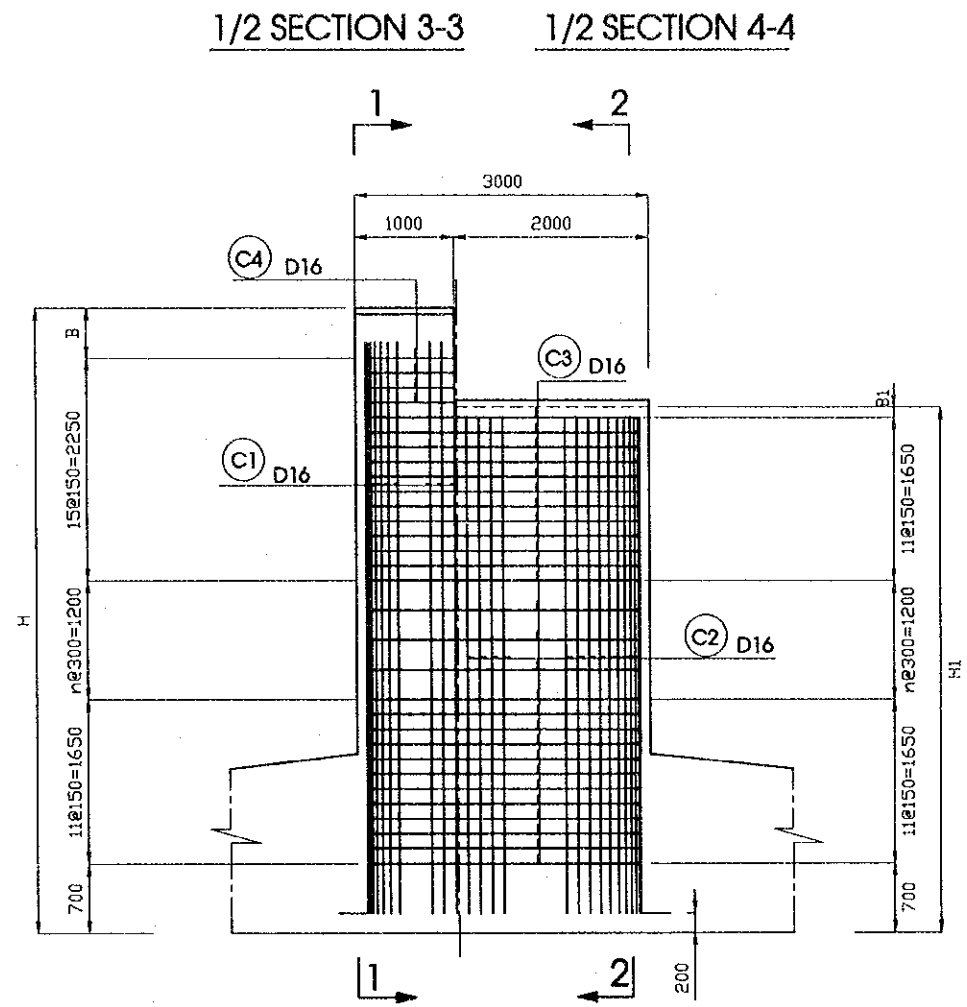
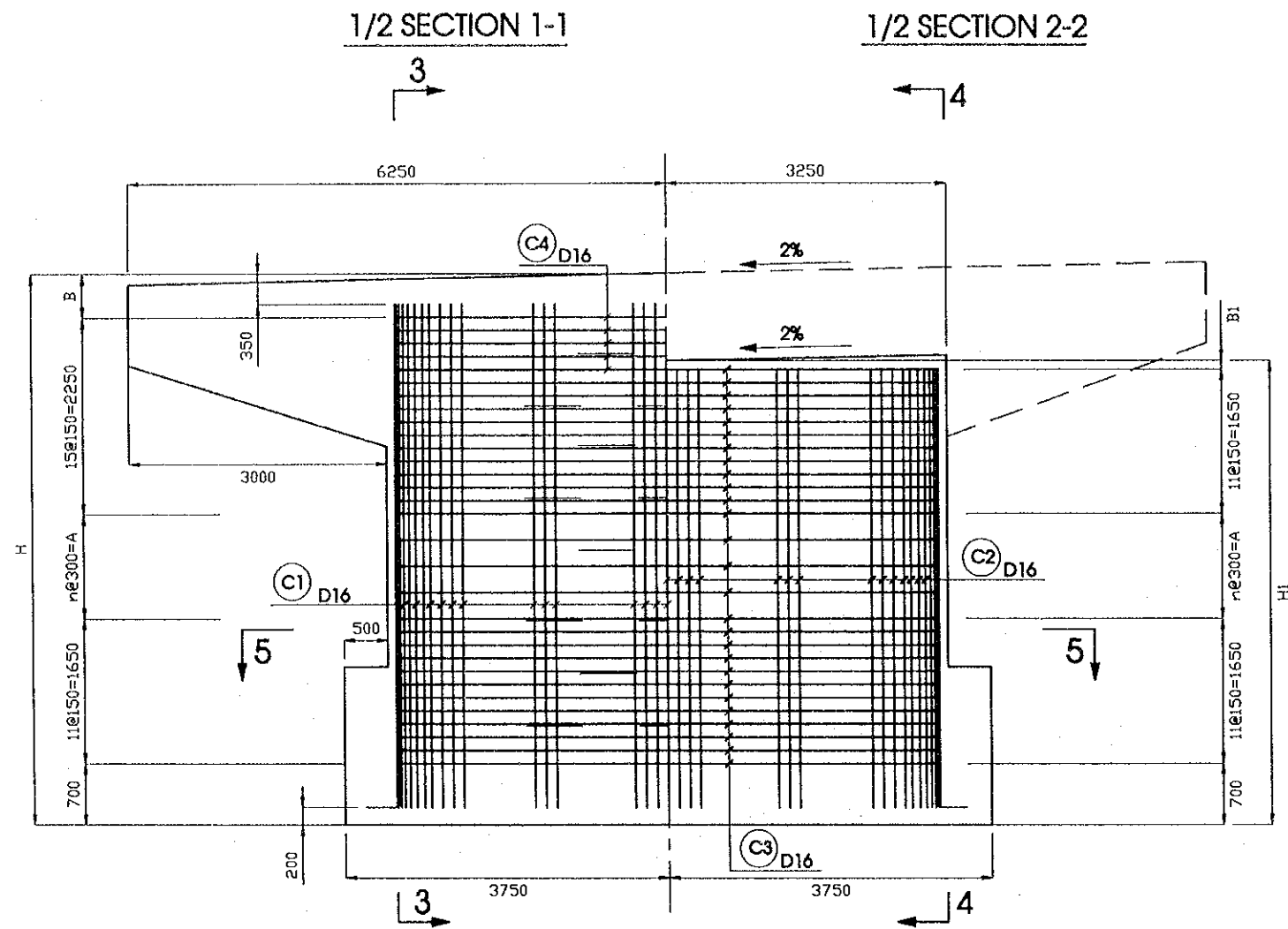
PACKAGE 2	SCALE 1/75	DRAWING No. C-1-3a-14	SHEET No.
BAR ARRANGMENT OF P1L, P2L, P4L, P2R, P3R (1)			





THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT: RED RIVER BRIDGE (HANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT: PACIFIC CONSULTANTS INTERNATIONAL	DATE: 2000. 8. 14	

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/75	C-1-3a-15	
BAR ARRANGMENT OF P1L, P2L, P4L, P2R, P3R (2)			



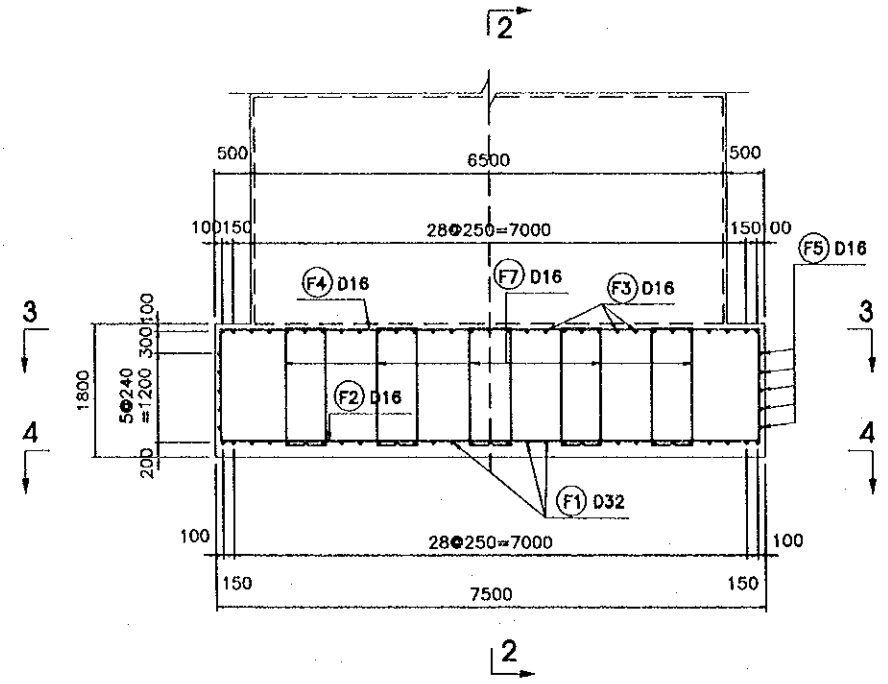
**DIMENSION OF PIERS**

ITEM SHAPE	H (mm)	H1 (mm)	A (mm)	B (mm)	B1 (mm)	n
P1L	7550	6550	2400	550	150	8
P2L	6090	5090	900	590	190	3
P4L	6350	5350	1200	550	150	4
P2R	6190	5190	900	690	290	3
P4R	6320	5320	1200	520	120	4

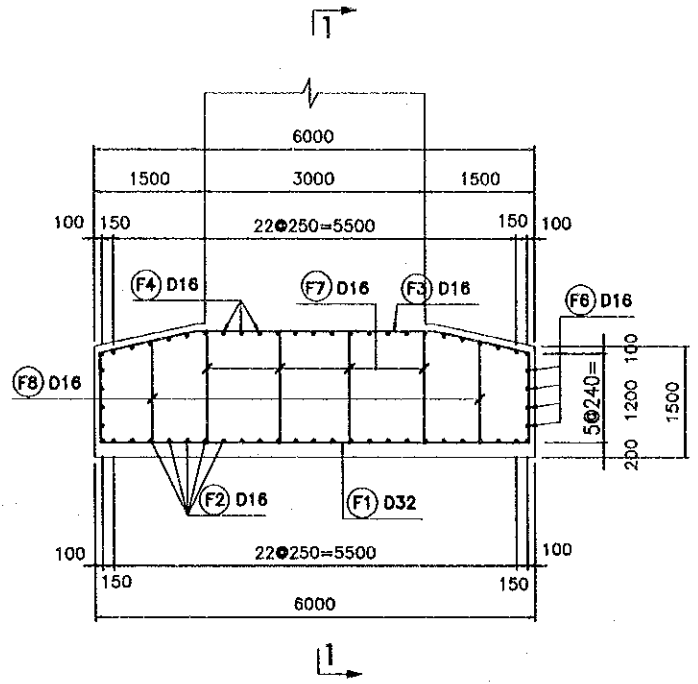
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATADE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATADE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000. 3. 17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-1-3a-16	
BAR ARRANGMENT OF P1L, P2L, P4L, P2R, P3R (3)			

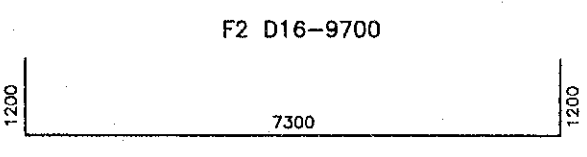
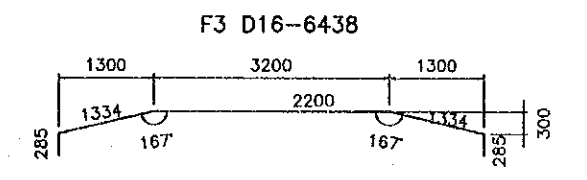
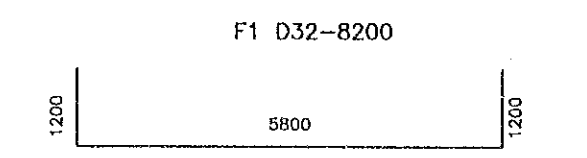
SECTION 1-1



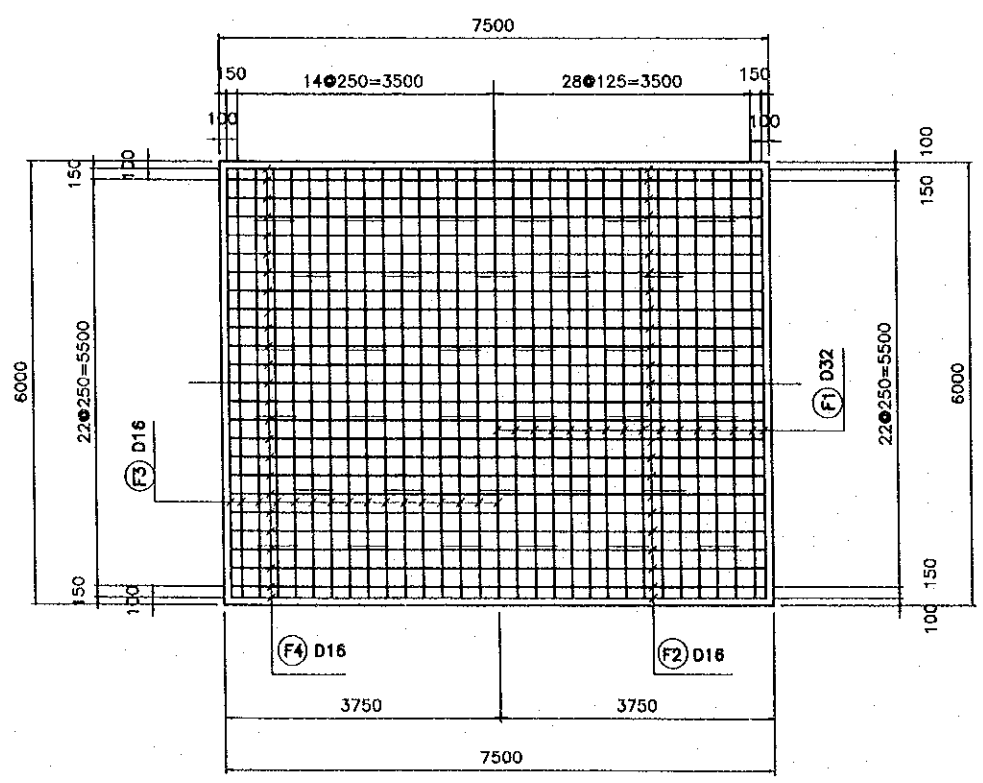
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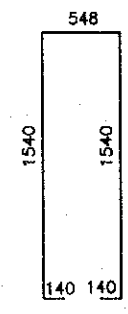
LIST OF REINFORCING BARS FOR FOOTING



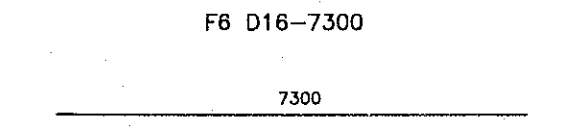
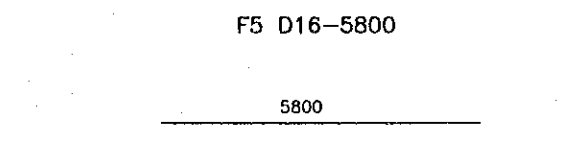
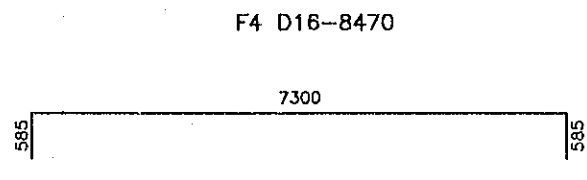
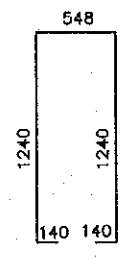
1/2 SECTION 3-3    1/2 SECTION 4-4



F7 D16-3908  
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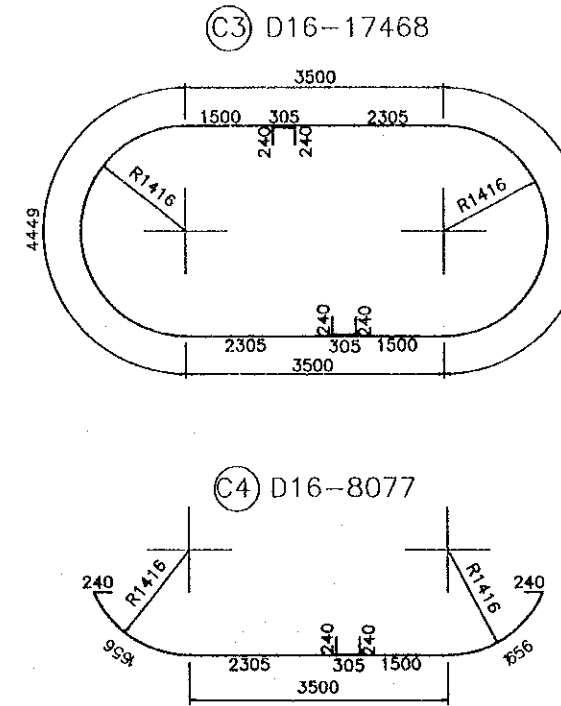
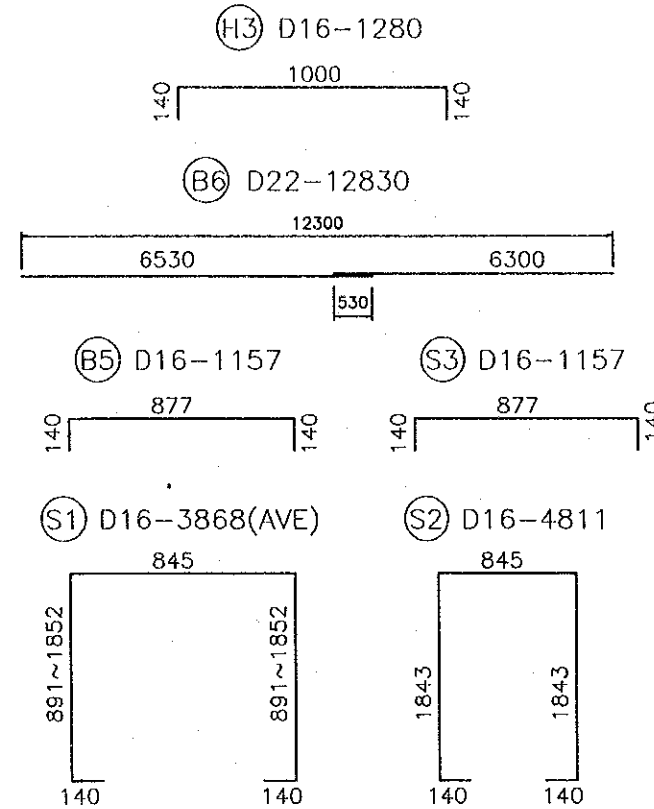
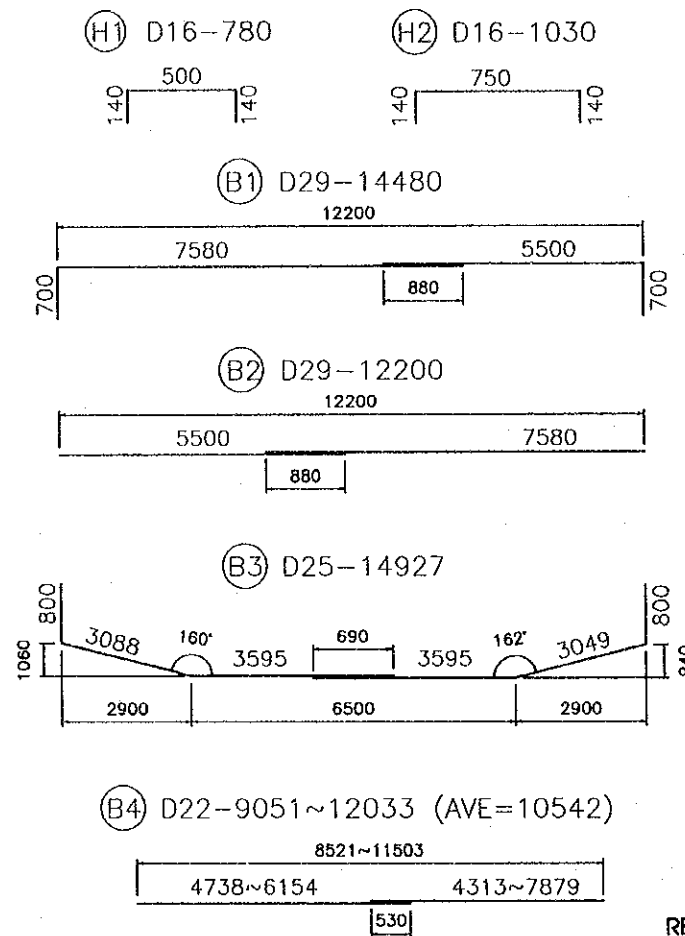


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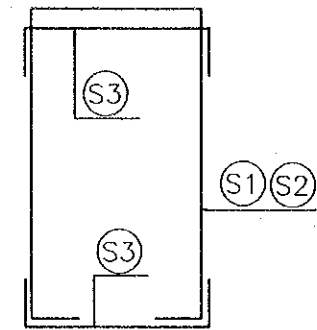


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT	DESIGNED BY NAME S. WATAGE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SIGNATURE 
PROJECT RED RIVER BRIDGE (HUANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000. 3. 14
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	

PACKAGE 2	SCALE	DRAWING No. C-1-3a-17	SHEET No.
BAR ARRANGMENT OF P1L, P2L, P4L, P2R, P3R (4)			

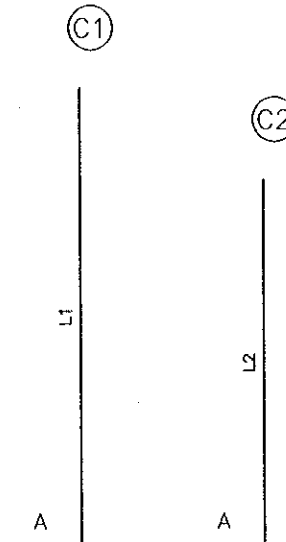
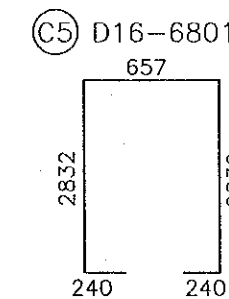


REINFORCING BAR STIRRUP



REINFORCING BAR QUANTITIES FOR PIER P1L, P2L, P4L, P2R, P3R

DETAILS	SYMBOL	SHAPE	DIA (mm)	UNITWEIGHT (Kg/m)	P1L		P2L		P4L		P2R		P3R			
					LENGTHS (mm)	NUMBER (unit)	WEIGHT (Kg)	LENGTHS (mm)	NUMBER (unit)	WEIGHT (Kg)	LENGTHS (mm)	NUMBER (unit)	WEIGHT (Kg)	LENGTHS (mm)	NUMBER (unit)	WEIGHT (Kg)
CAP BEAM	H1		D16	1.56	780	84	102.21	780	84	102.21	780	84	102.21	780	84	102.21
	H2		D16	1.56	1030	60	96.41	1030	60	96.41	1030	60	96.41	1030	60	96.41
	H3		D16	1.56	1280	36	71.88	1280	36	71.88	1280	36	71.88	1280	36	71.88
	B1		D29	5.04	14480	7	510.85	14480	7	510.85	14480	7	510.85	14480	7	510.85
	B2		D29	5.04	12200	4	245.95	12200	4	245.95	12200	4	245.95	12200	4	245.95
	B3		D25	3.98	14927	7	415.87	14927	7	415.87	14927	7	415.87	14927	7	415.87
	B4		D22	3.04	10542	6	192.29	10542	6	192.29	10542	6	192.29	10542	6	192.29
	B5		D16	1.56	1157	14	25.27	1157	14	25.27	1157	14	25.27	1157	14	25.27
	B6		D22	3.04	12830	6	234.02	12830	6	234.02	12830	6	234.02	12830	6	234.02
	S1		D16	1.56	4811	38	285.20	4811	38	285.20	4811	38	285.20	4811	38	285.20
STEM	S2		D16	1.56	3868	33	199.12	3868	33	199.12	3868	33	199.12	3868	33	199.12
	S3		D16	1.56	1157	71	128.15	1157	71	128.15	1157	71	128.15	1157	71	128.15
	C1		D16	1.56	7240	26	293.65	5780	26	234.44	6040	26	238.49	6010	26	243.77
	C2		D16	1.56	6440	101	1014.69	4940	101	778.35	5240	101	778.35	5240	101	825.61
	C3		D16	1.56	17468	31	844.75	17468	27	735.75	17468	26	708.50	17468	27	735.75
	C4		D16	1.56	8077	5	63.00	8077	5	63.00	8077	5	63.00	8077	5	63.00
	C5		D16	1.56	6801	23	244.02	6801	20	212.19	6801	20	212.19	6801	20	212.19
	F1		D32	6.23	8200	31	1583.67	8200	31	1583.67	8200	31	1583.67	8200	31	1583.67
	F2		D16	1.56	9700	25	378.30	9700	25	378.30	9700	25	378.30	9700	25	378.30
	F3		D16	1.56	6438	25	251.08	6438	25	251.08	6438	25	251.08	6438	25	251.08
FOOTING	F4		D16	1.56	8470	31	409.61	8470	31	409.61	8470	31	409.61	8470	31	409.61
	F5		D16	1.56	5800	8	72.38	5800	8	72.38	5800	8	72.38	5800	8	72.38
	F6		D16	1.56	7300	8	91.10	7300	8	91.10	7300	8	91.10	7300	8	91.10
	F7		D16	1.56	3908	22	134.12	3908	22	134.12	3908	22	134.12	3908	22	134.12
	F8		D16	1.56	3308	11	56.77	3308	11	56.77	3308	11	56.77	3308	11	56.77
	TOTAL						7480.37		7480.37		7565.79		7484.79		7564.58	
	SUMMARY	D16 =					4761.72		4298.09		4383.15		4302.14		4381.93	
		D22 =					426.31		426.31		426.31		426.31		426.31	
D25 =						415.87		415.87		415.87		415.87		415.87		
D29 =						756.81		756.81		756.81		756.81		756.81		
D32 =						1583.67		1583.67		1583.67		1583.67		1583.67		



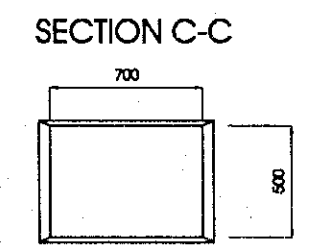
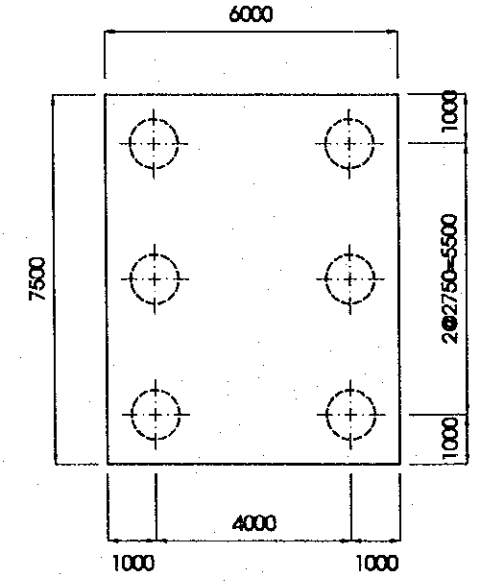
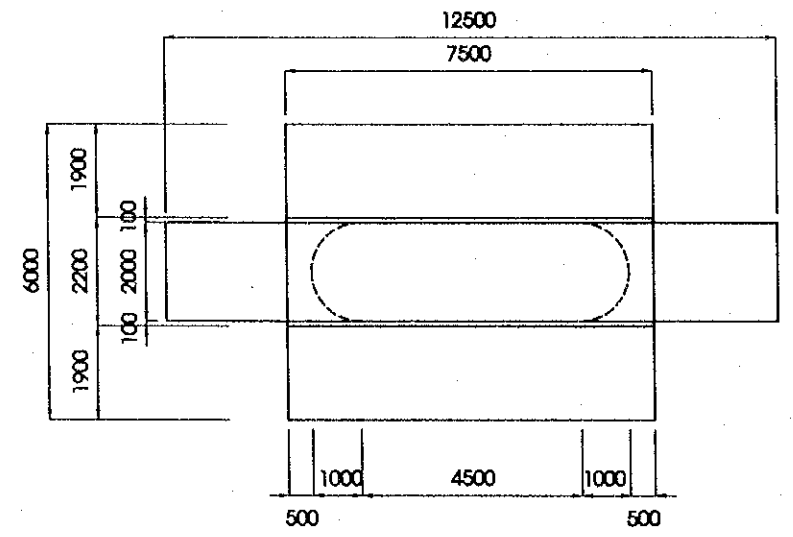
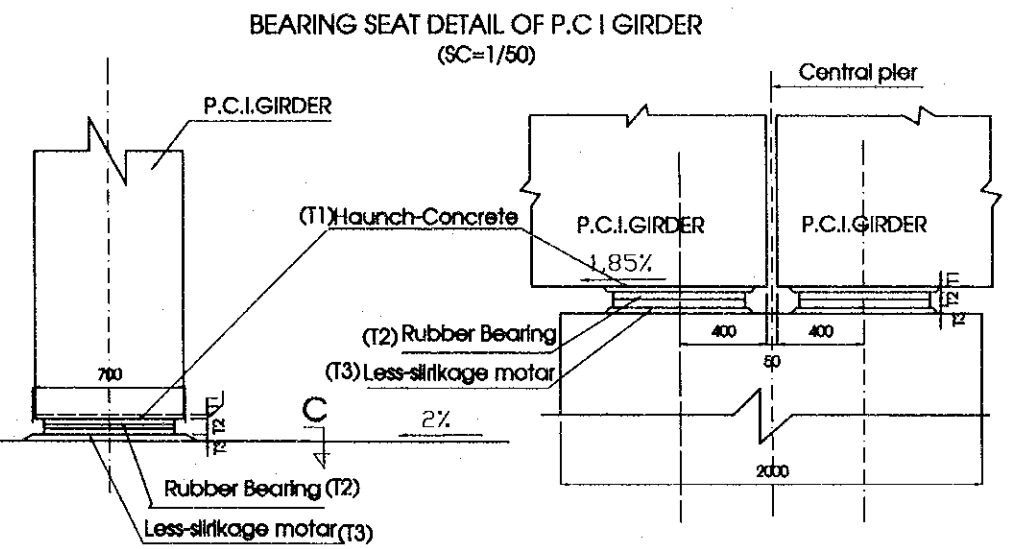
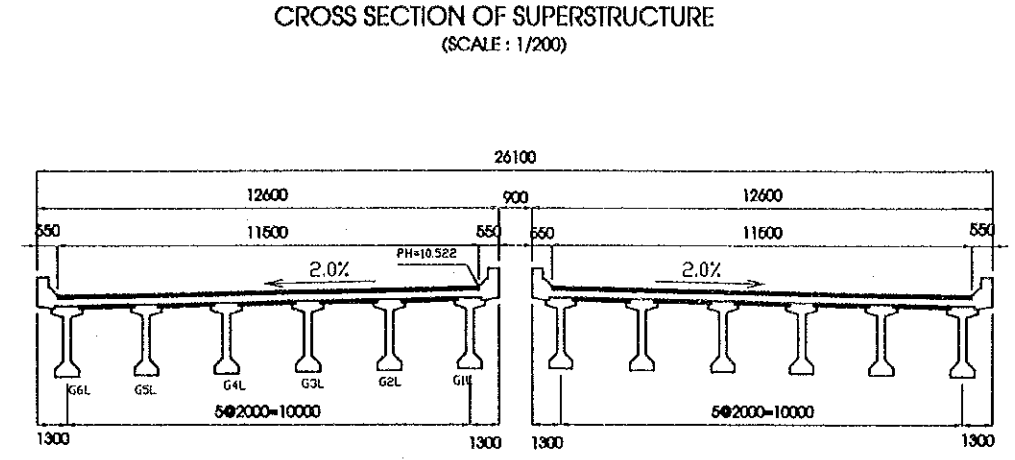
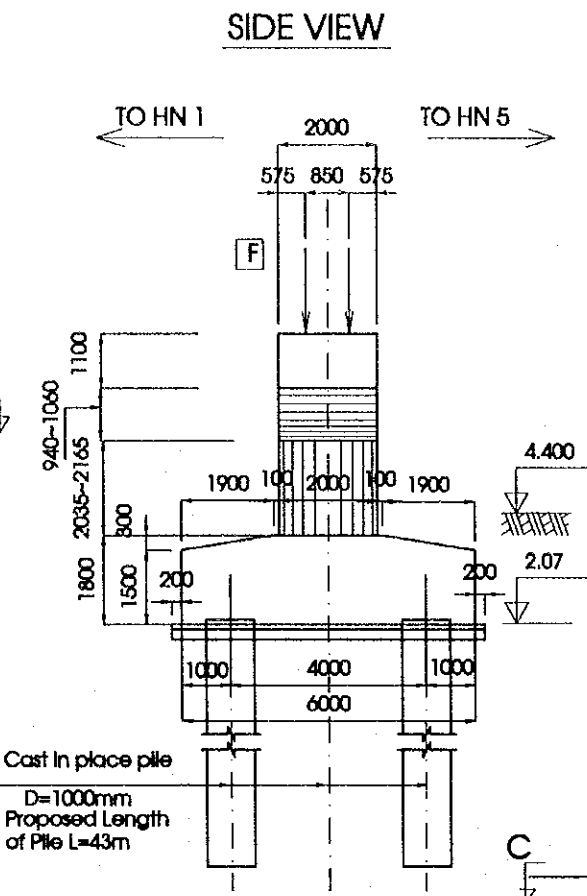
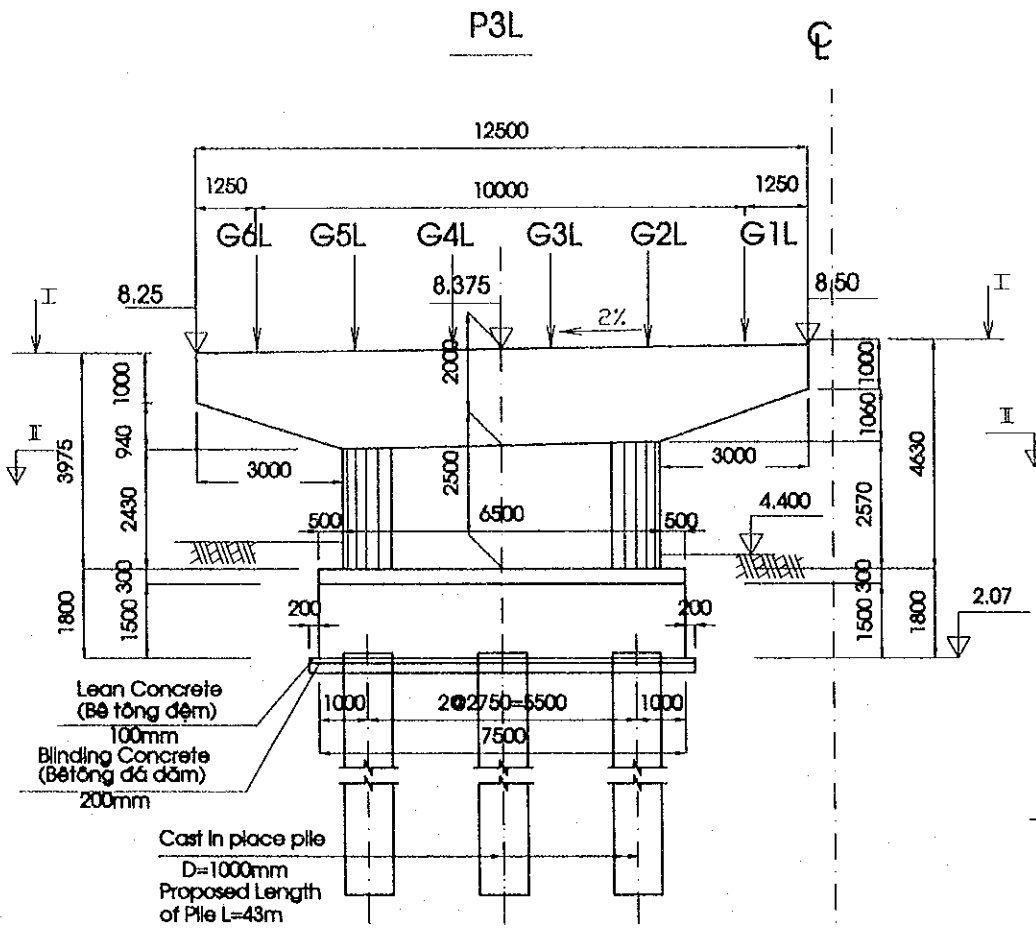
DIMENSIONS OF BAR C1; C2

Items	Diameter (mm)	A (mm)	C1		C2	
			L1(mm)	Total (m)	L1(mm)	Total (m)
P1L	D16	240	7000	7240	6200	6440
P2L	D16	240	5540	5780	4700	4940
P4L	D16	240	5800	6040	5000	5240
P2R	D16	240	5640	5880	4700	4940
P3R	D16	240	5770	6010	5000	5240

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.3.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-1-3a-18	

DETAIL OF PIER P3L



**DEPTH OF SUPERSTRUCTURE(MM)**

Pavement	75
Slab	207
Girder	1650
Haunch (T1)	34(14)
Bearing (T2)	36(56)
Mortar (T3)	30
Sub Total	2032

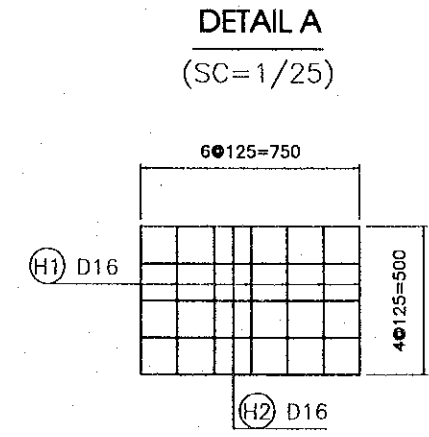
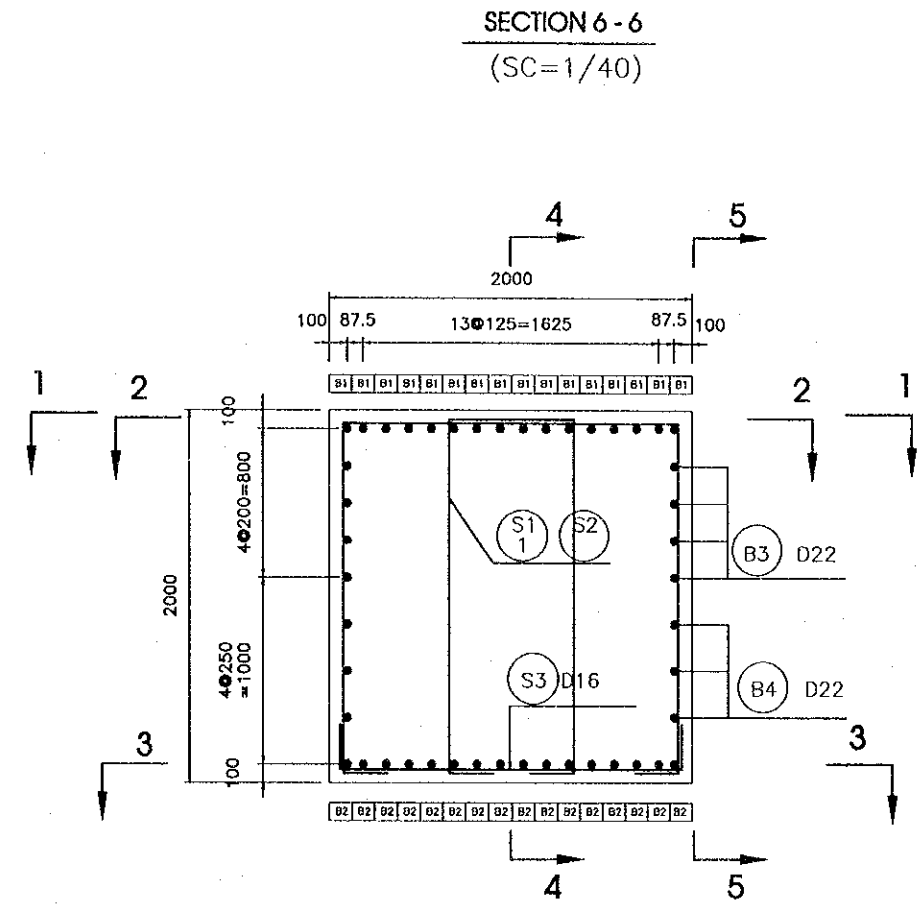
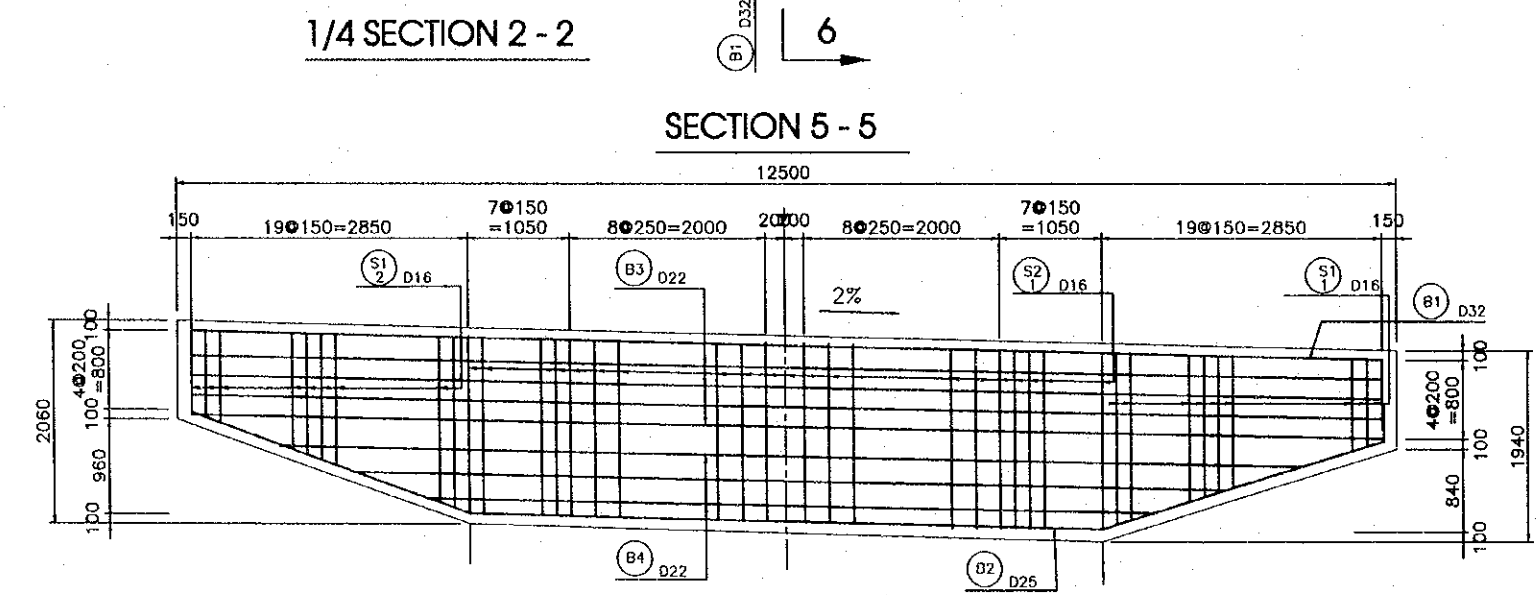
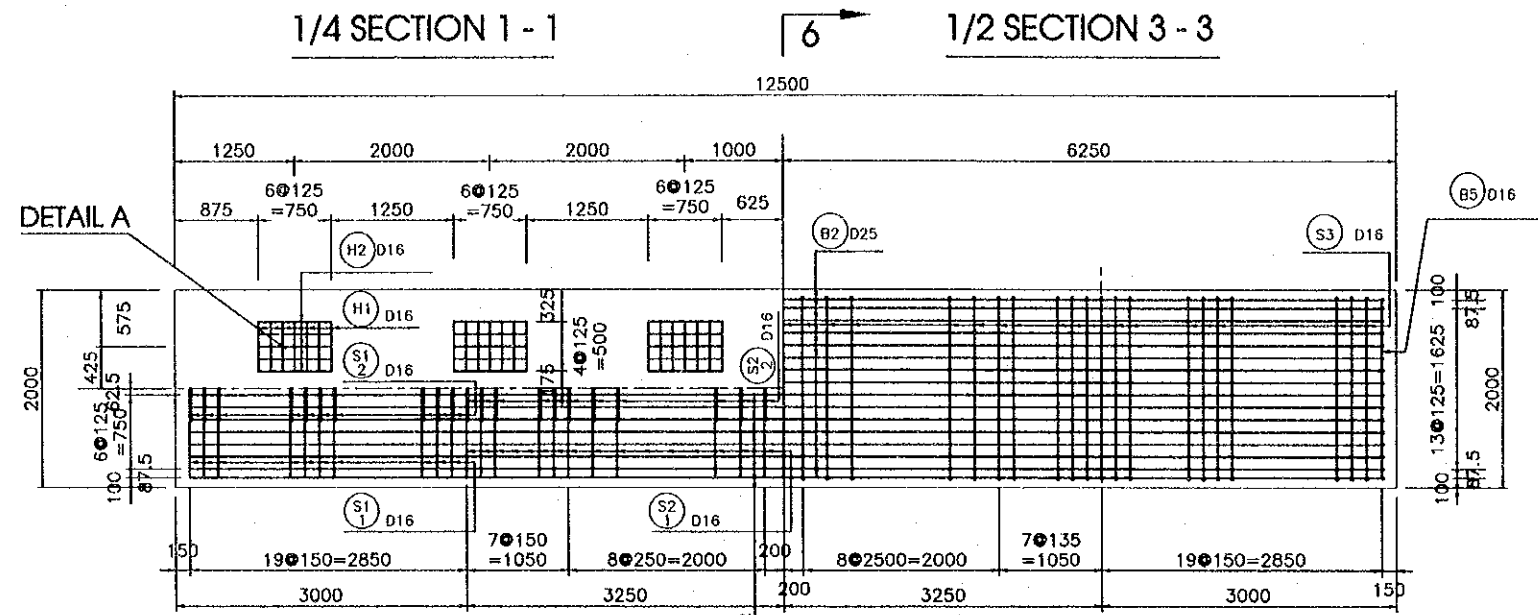
**TOP MOTAR ELEVATION (M)**

Bearing seat	G1L	G2L	G3L	G4L	G5L	G6L
Elevation	8.505	8.465	8.425	8.385	8.345	8.305

**PILE ARRANGEMENT**

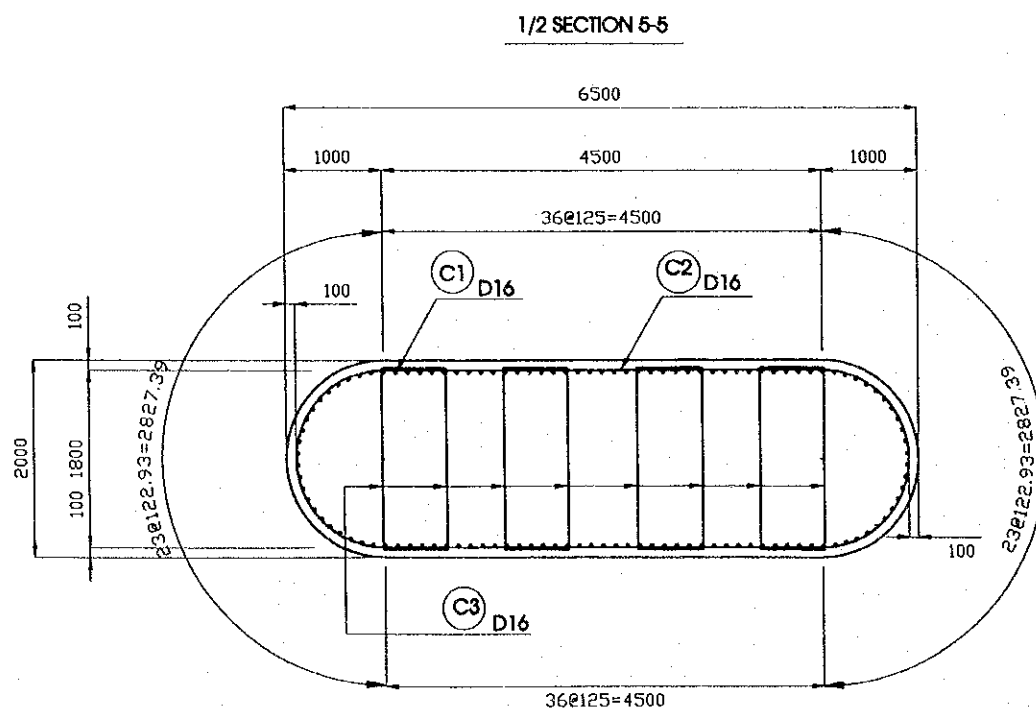
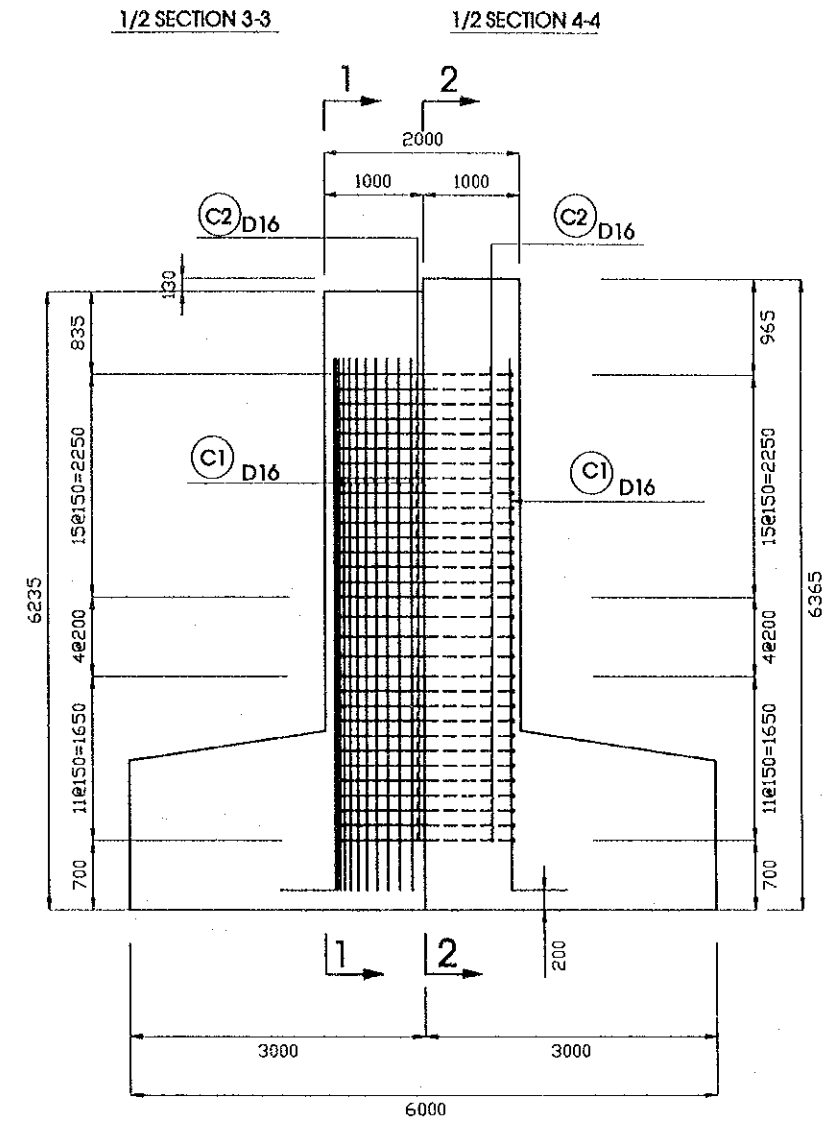
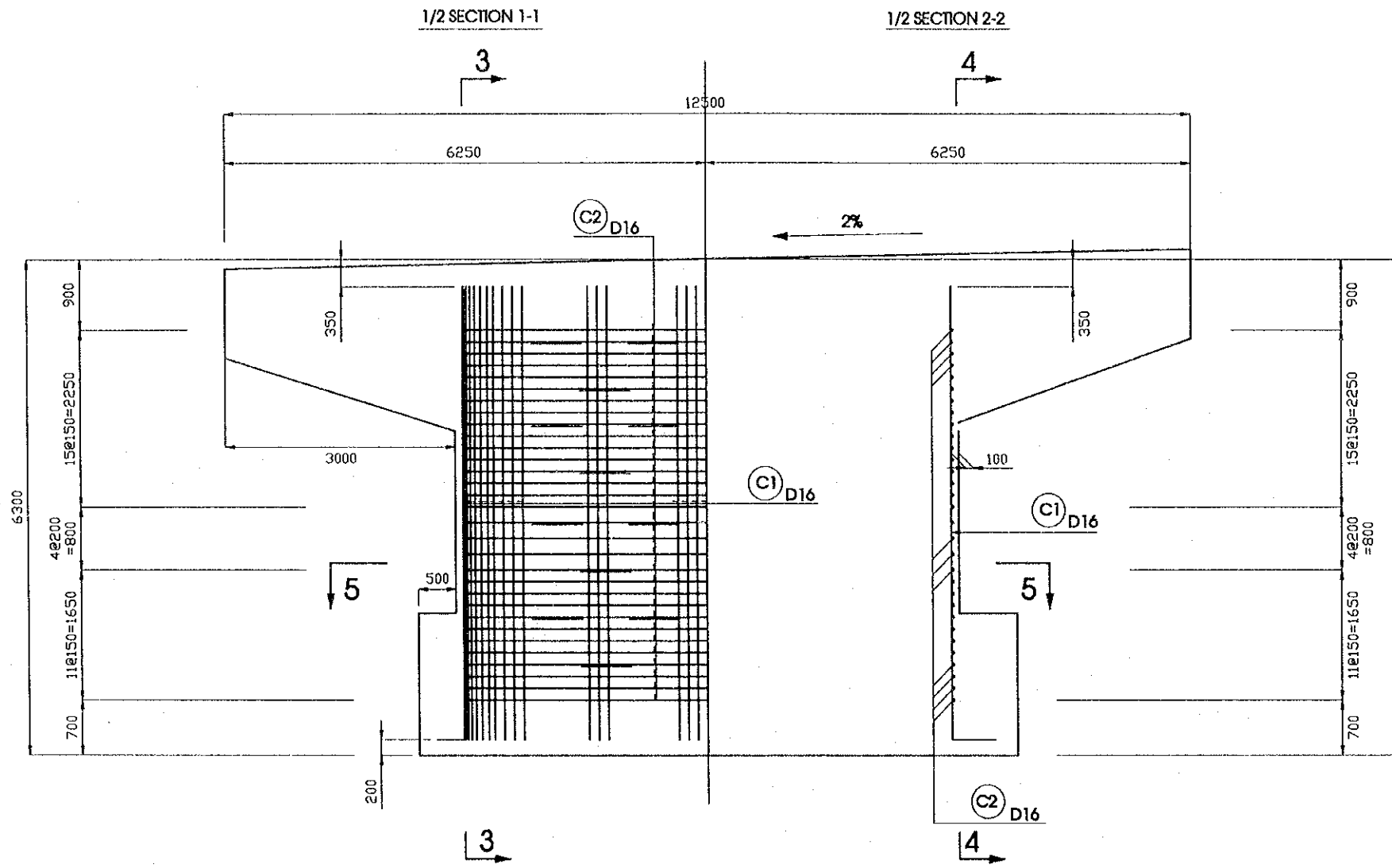
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S.WAYASE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONTRACTOR PACIFIC CONSULTANTS INTERNATIONAL		DATE	2002.10.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/75	C-1-3a-19	
BAR ARRANGEMENT OF P.3L (1)			



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TUANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATASE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE
PROJECT RED RIVER BRIDGE (TUANH TRI BRIDGE) CONSTRUCTION PROJECT		DATE 2000. 2. 17
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

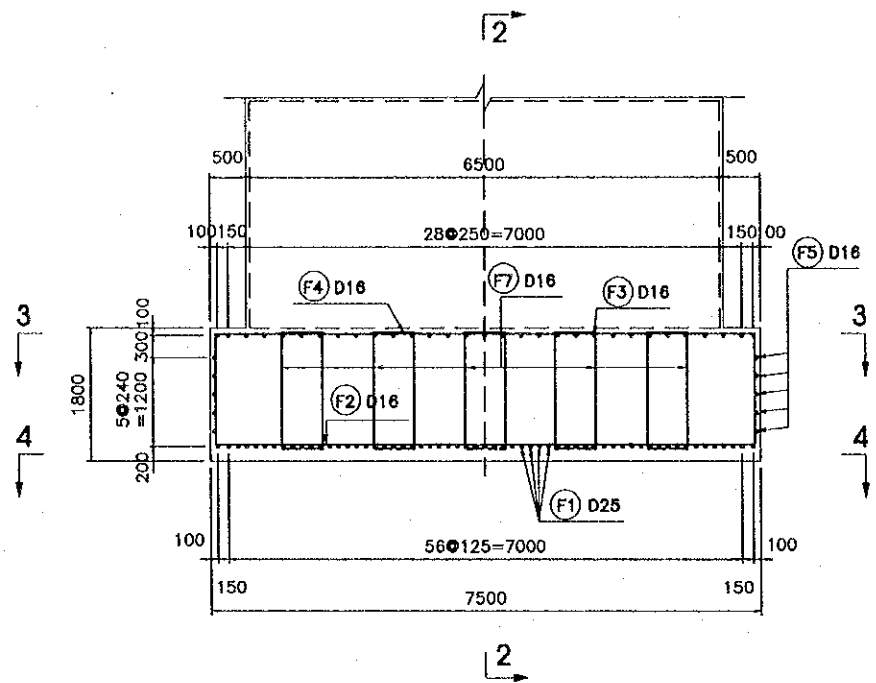
PACKAGE 2	SCALE 1/75	DRAWING No. C-1-3a-20	SHEET No.
BAR ARRANGEMENT OF P.3L (2)			



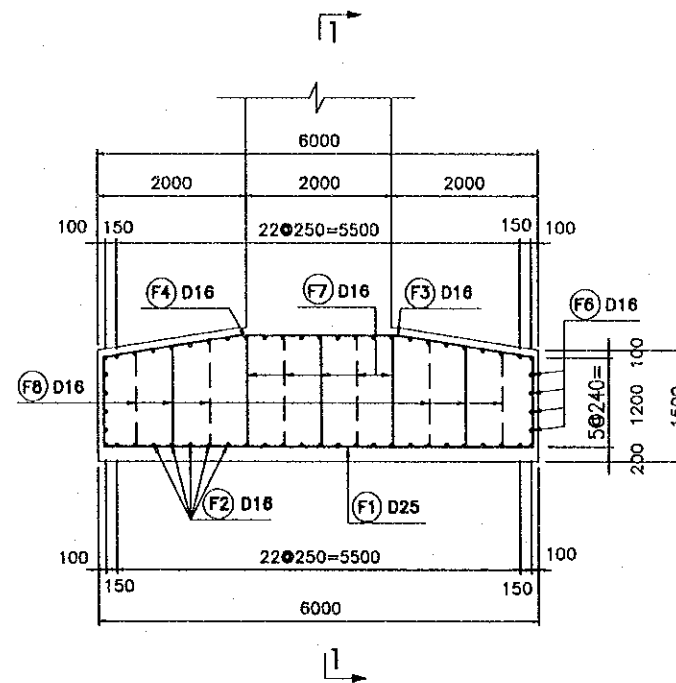
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (NAMH THU BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	DATE 2000.3.19
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/100	DRAWING No. C-1-3a-21	SHEET No.
BAR ARRANGEMENT OF P.3L (3)			

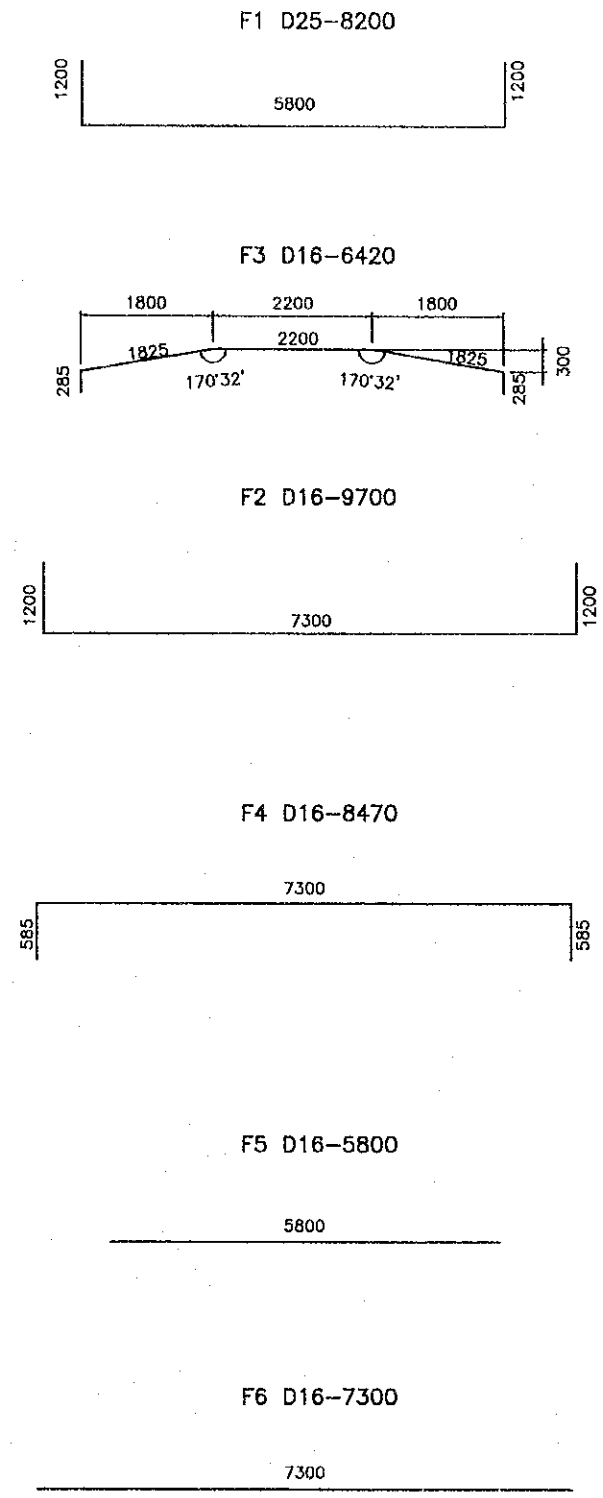
SECTION 1 - 1



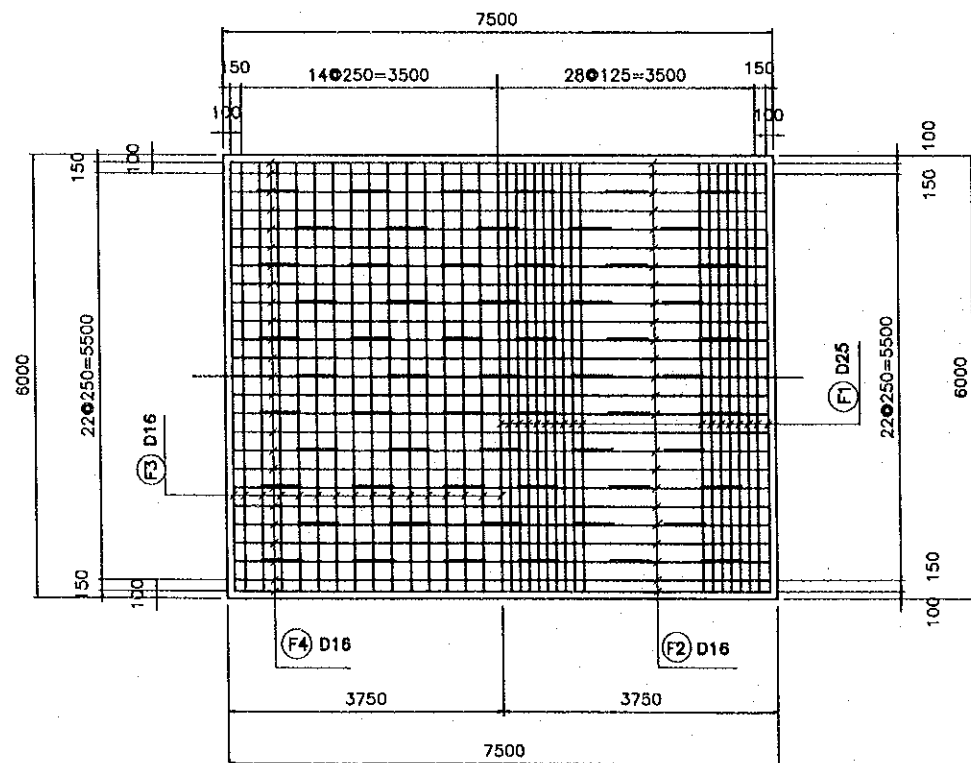
SECTION 2 - 2



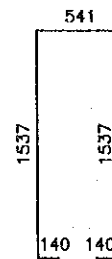
LIST OF REINFORCING BARS FOR FOOTING



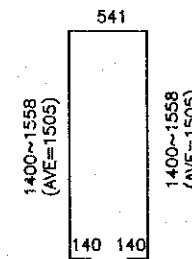
1/2 SECTION 3-3    1/2 SECTION 4-4



F7 D16-3895  
SCALE= 1:50

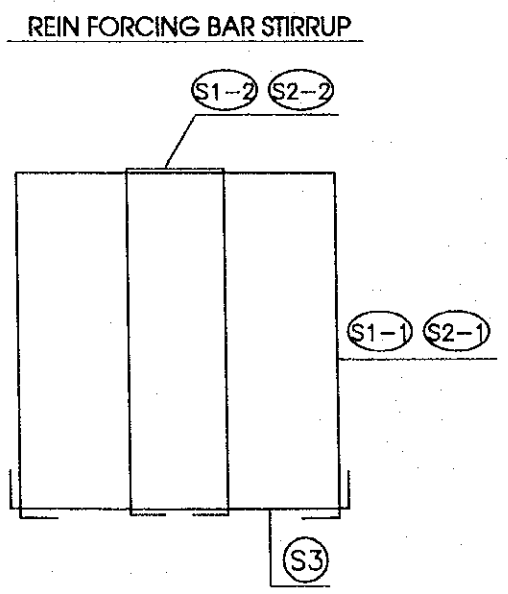
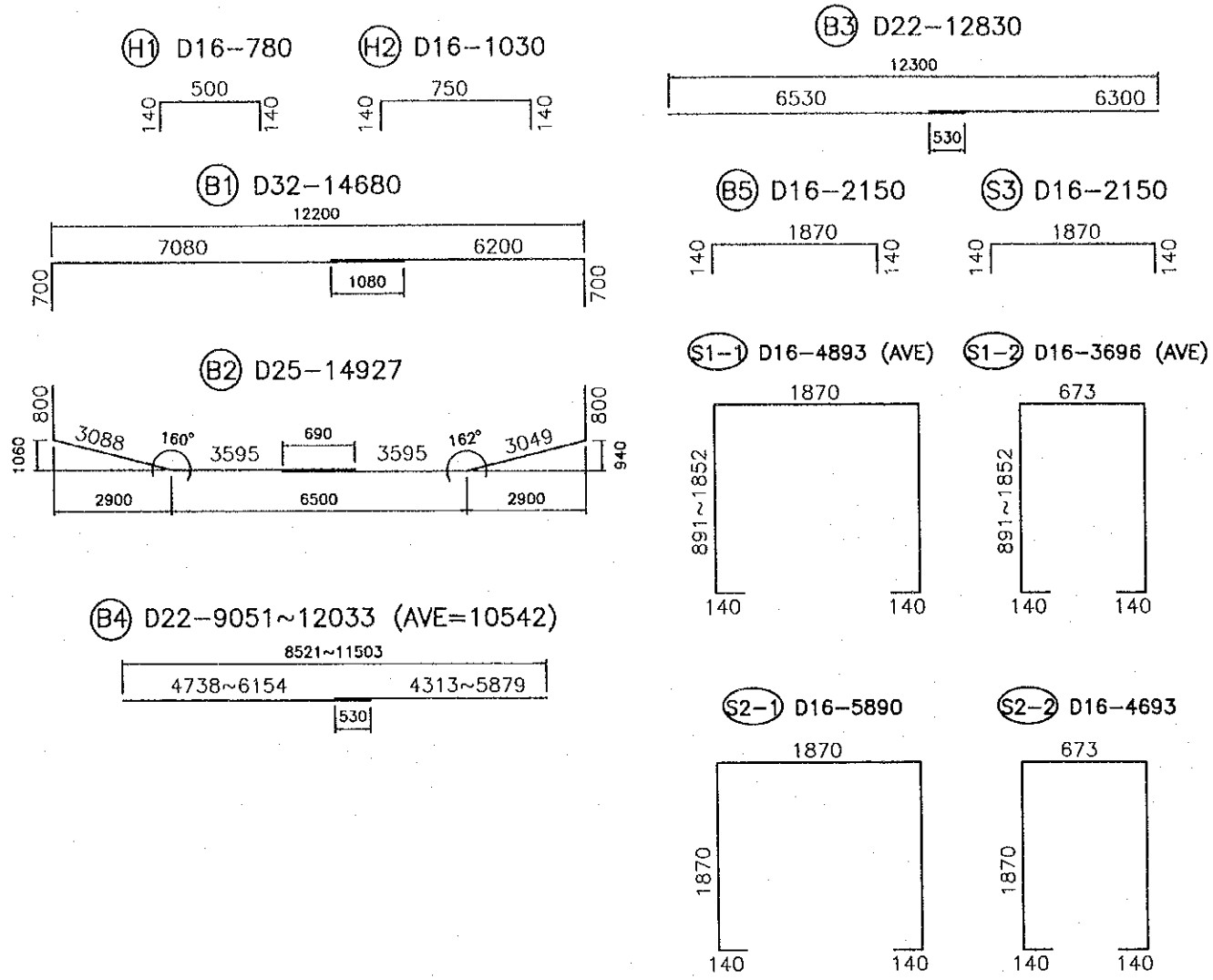


F8 D16-3831(AVE)  
SCALE= 1:50



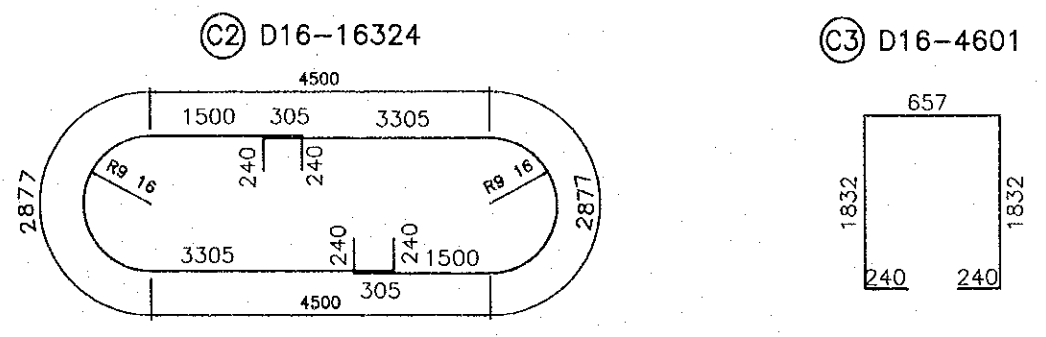
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000. 8. 14

PACKAGE 2	SCALE	DRAWING No. C-1-3a-22	SHEET No.
BAR ARRANGEMENT FOR P.3L (4)			



**REIN FORCING BAR QUANTITIES FOR PIER P3L**

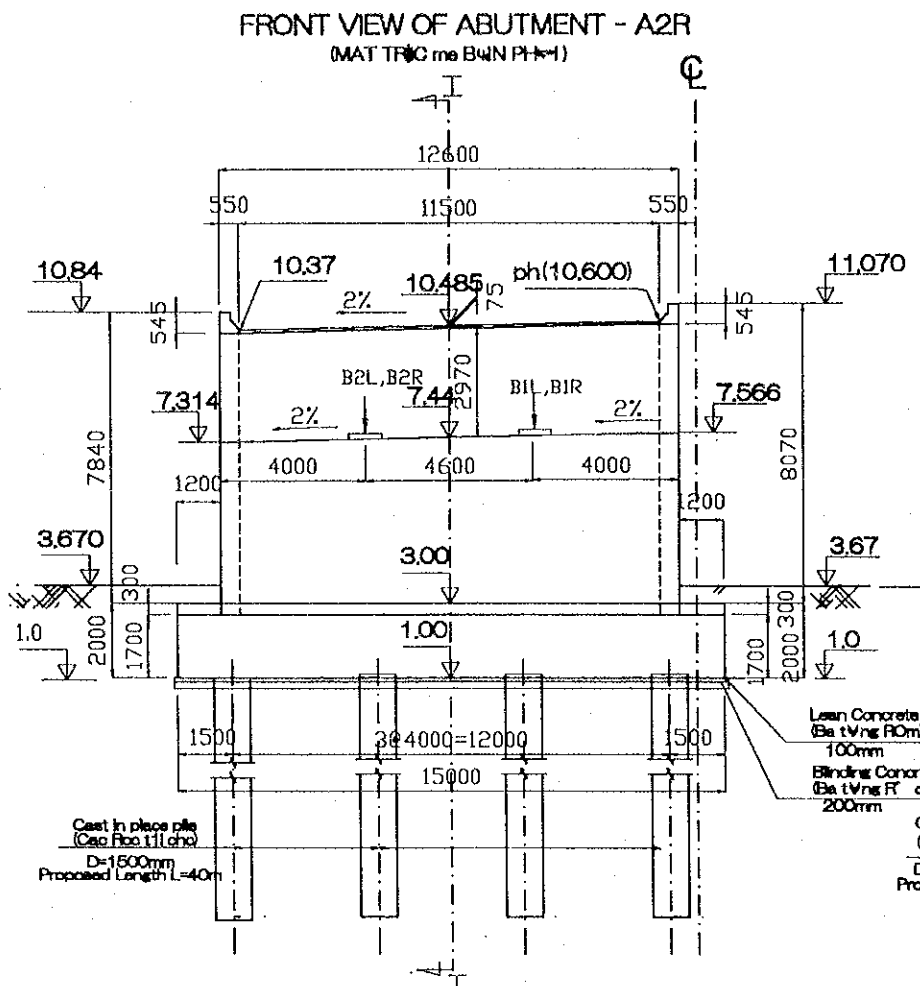
DETAILS	SYMBOL	SHAPE	DIA (mm)	LENGTHS (mm)	NUMBER (unit)	UNITWEIGHT (Kg/m)	WEIGHT ( Kg )	
CAP BEAM	H1	[Shape]	D16	780	84	1.56	102.21	
	H2	[Shape]	D16	1030	60	1.56	96.41	
	B1	[Shape]	D32	14680	16	6.23	1463.30	
	B2	[Shape]	D25	14927	16	3.98	950.55	
	B3	[Shape]	D22	12830	8	3.04	312.03	
	B4	AVE	[Shape]	D22	10542	6	3.04	192.29
	B5	[Shape]	D16	2150	14	1.56	46.96	
	S1-1	AVE	[Shape]	D16	4893	38	1.56	290.06
	S1-2	AVE	[Shape]	D16	3696	38	1.56	219.10
	S2-1	[Shape]	D16	5890	33	1.56	303.22	
	S2-2	[Shape]	D16	4693	33	1.56	241.60	
	S3	[Shape]	D16	2150	71	1.56	238.13	
	STEM	C1	[Shape]	D16	5590	120	1.56	1046.45
		C2	[Shape]	D16	16324	31	1.56	789.43
C3		[Shape]	D16	4601	28	1.56	200.97	
FOOTING	F1	[Shape]	D25	8200	59	3.98	1925.52	
	F2	[Shape]	D16	9700	25	1.56	378.30	
	F3	[Shape]	D16	6420	31	1.56	310.47	
	F4	[Shape]	D16	8470	25	1.56	330.33	
	F5	[Shape]	D16	5800	8	1.56	72.38	
	F6	[Shape]	D16	7300	8	1.56	91.10	
	F7	[Shape]	D16	3895	36	1.56	218.74	
	F8	AVE	[Shape]	D16	3831	30	1.56	179.29
TOTAL							9998.84	
SUMMARY	D16 =						5155.15	
	D22 =						504.31	
	D25 =						2876.08	
	D32 =						1463.30	



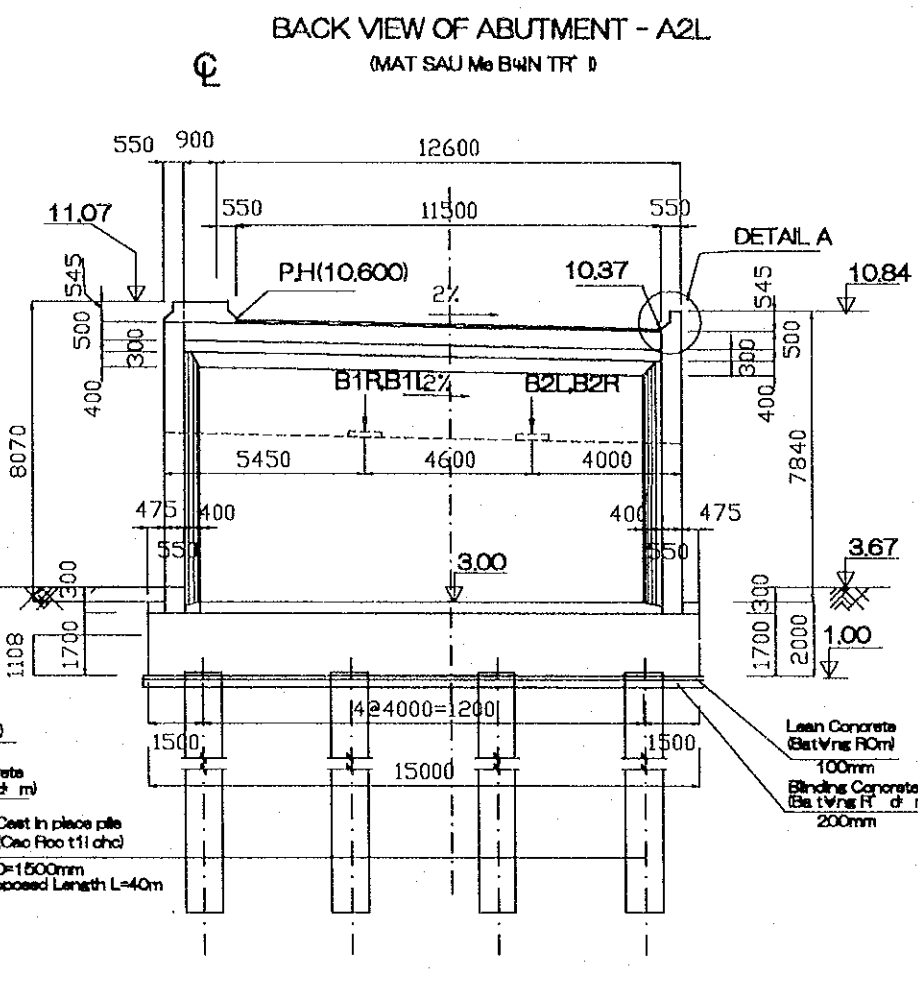
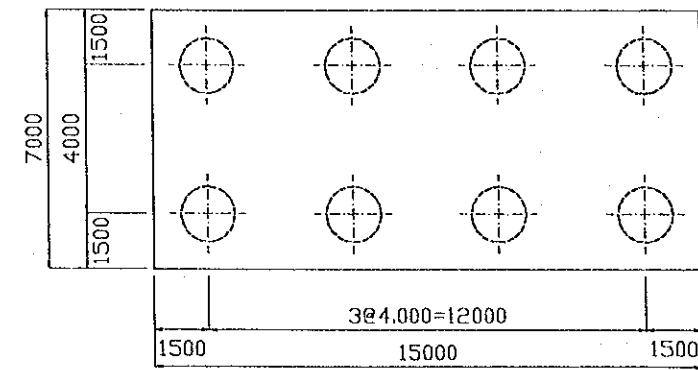


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANG LOANG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT	DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRU BRIDGE) CONSTRUCTION PROJECT	DATE 2000.6.1
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	

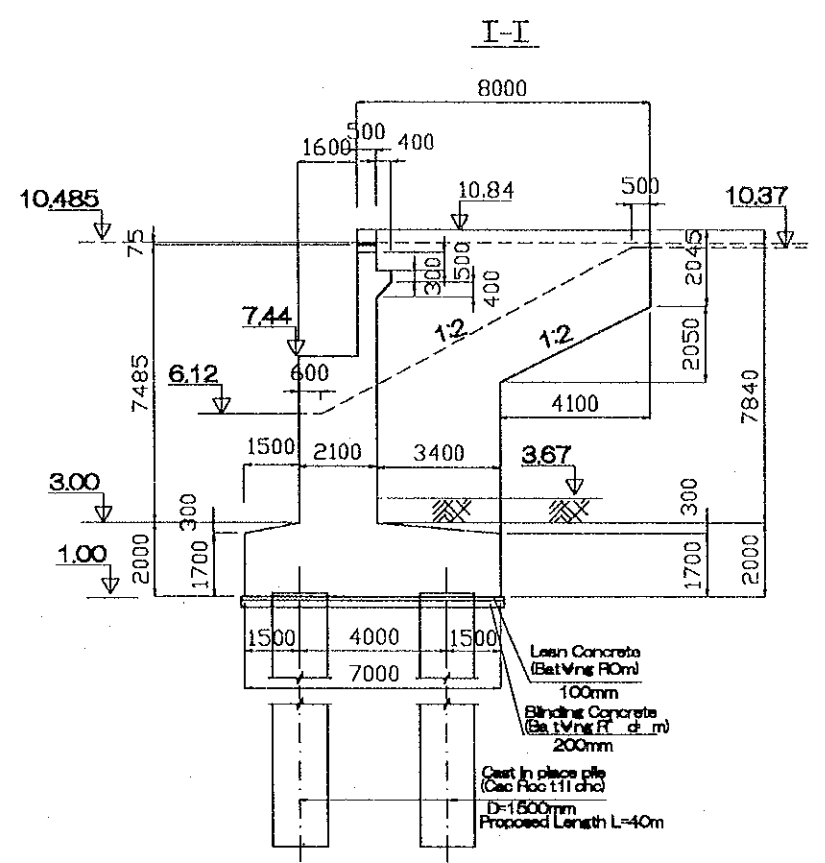
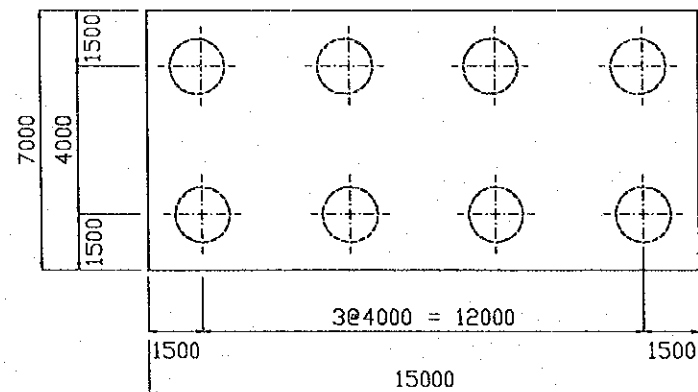
PACKAGE 2	SCALE 1/200	DRAWING No. C-1-3a-23	SHEET No.
DETAIL OF ABUTMENTS A2 (1)			



PILE ARRANGEMENT OF A2R  
(MAT BANG Be TRY CaC)



PILE ARRANGEMENT OF A2L  
(MAT BANG Be TRY CaC)



DEPTH OF SUPERSTRUCTURE (MM)

	P.C.Box Girder
Pavement	75
Girder	2750
Haunch	22
Bearing	150
Motar	30
Sub Total	3027

ELEVATION OF TOP MOTAR (M)

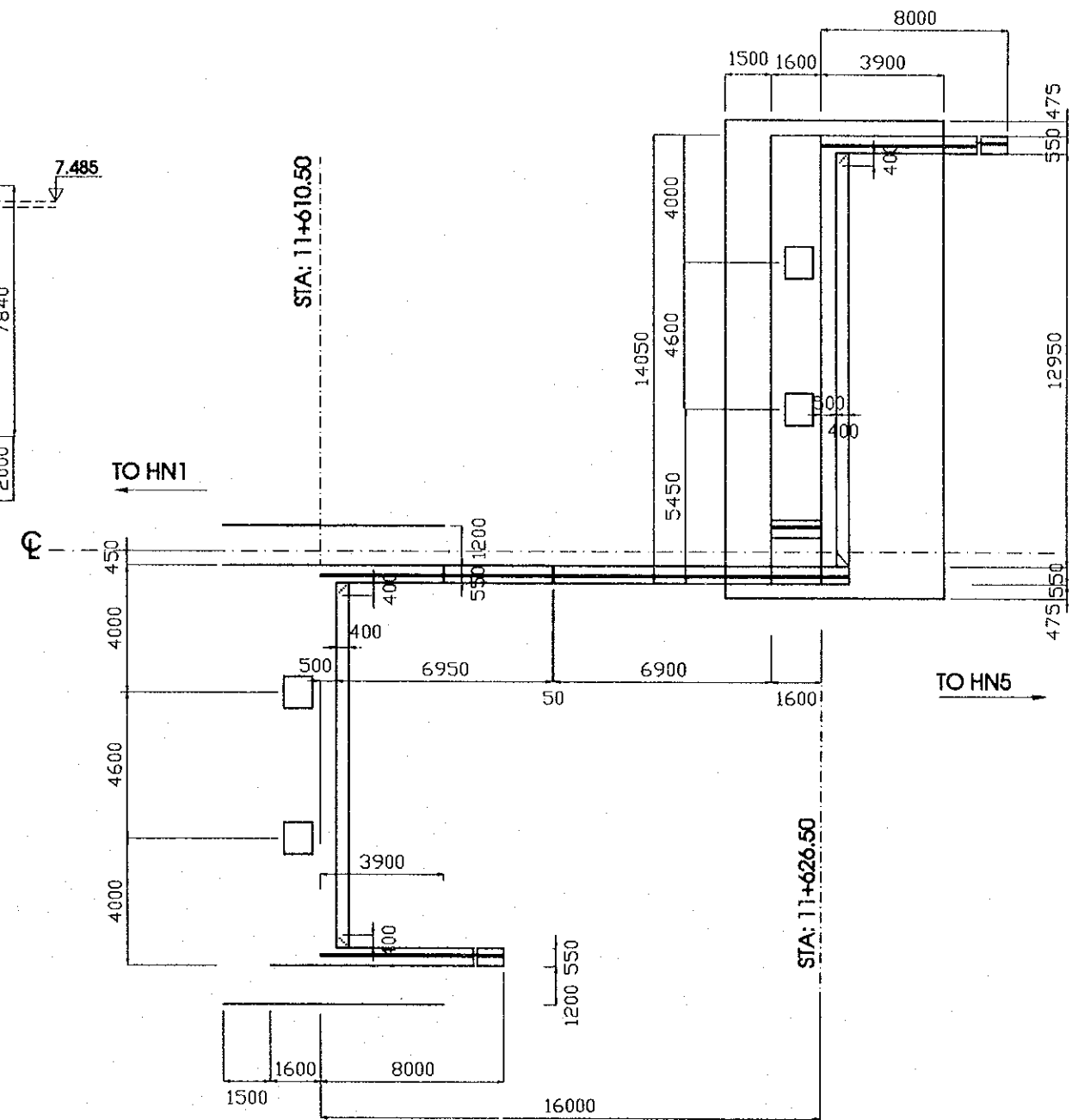
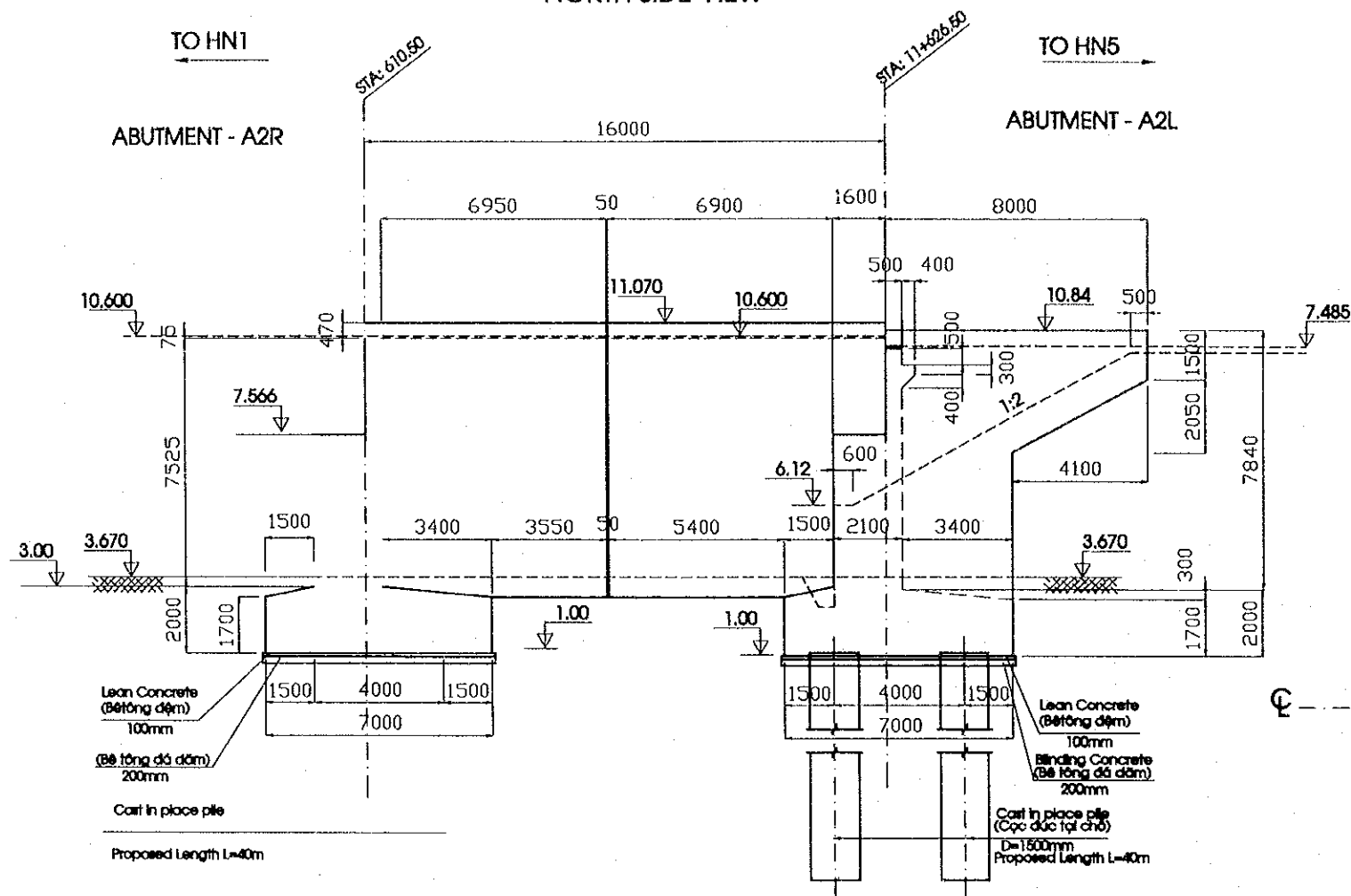
	B1L:B1R	B2L:B2R
Bearing seat		
Elevation	7.534	7.442

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/200	C-1-3a-24	
DETAIL OF ABUTMENT A2 (2)			

NORTH SIDE VIEW

TOP VIEW OF A2L

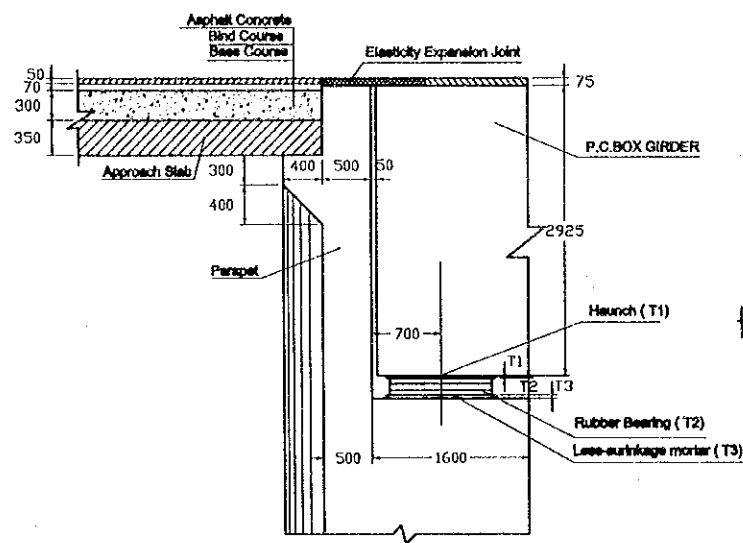


TOP VIEW OF A2R  
(MẶT BẰNG A2R)

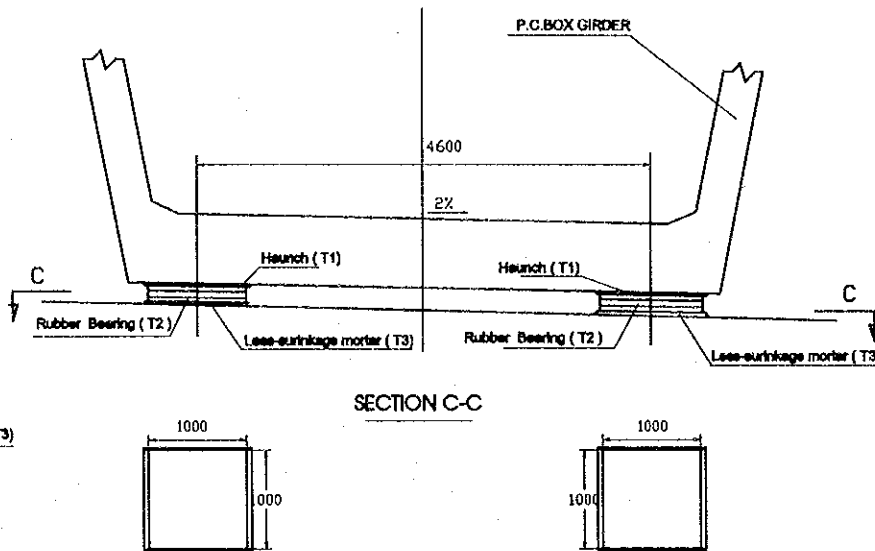
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM VIANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. NATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. NATABE
PROJECT: RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONSULTANT: PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000. 3. 14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/75	C-1-3a-25	
OTHER DETAILS OF ABUTMENT A1, A2			

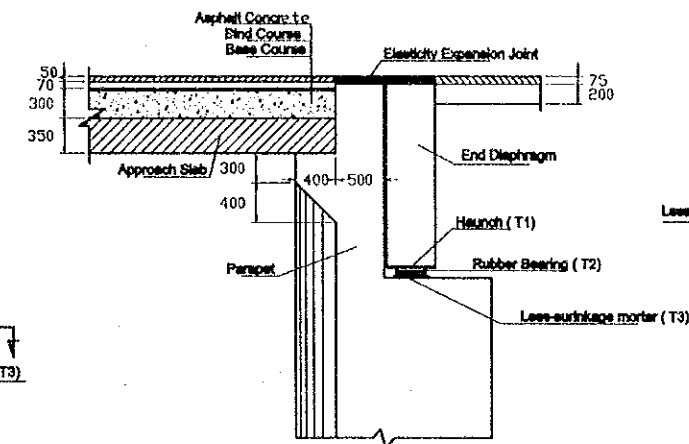
DETAIL OF PARAPET



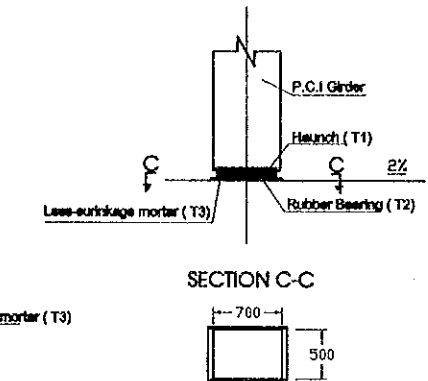
BEARING SEAT DETAIL OF P.C BOX GIRDER



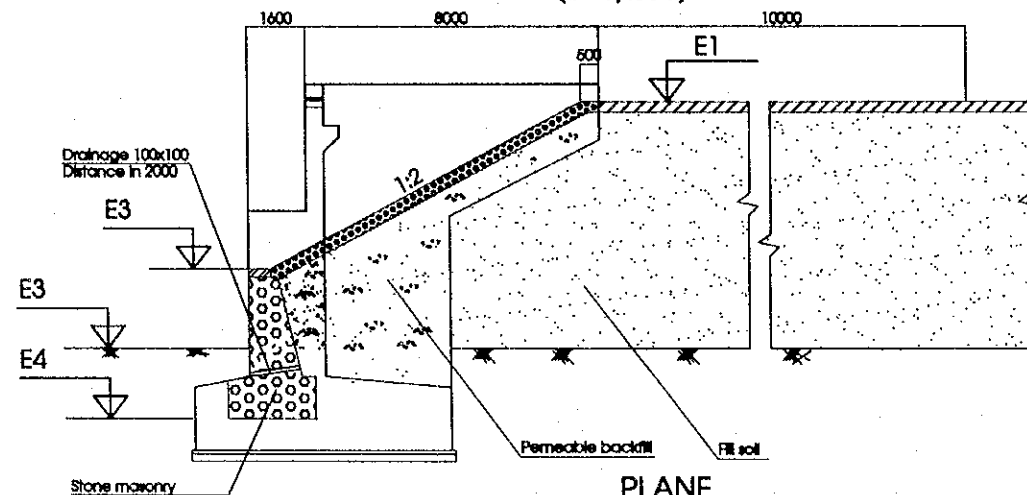
DETAIL OF PARAPET



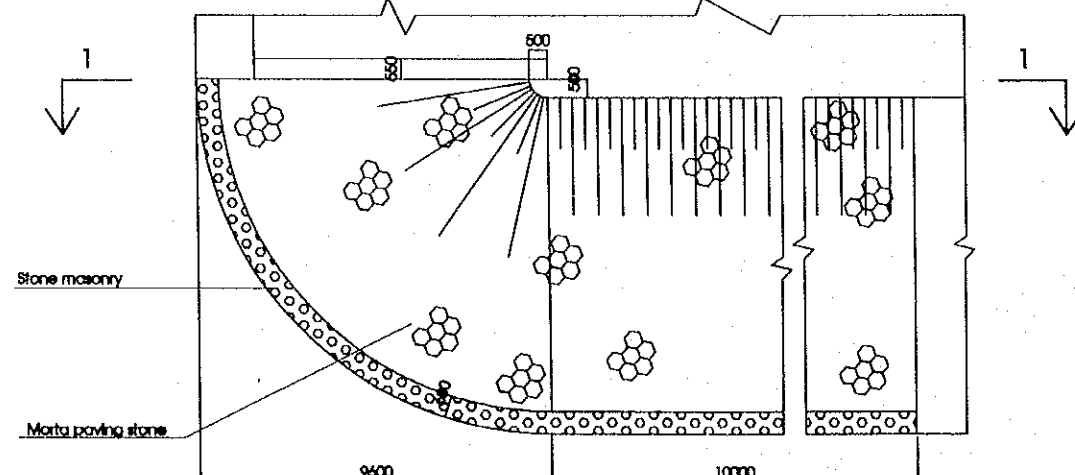
BEARING SEAT DETAIL OF P.C I GIRDER



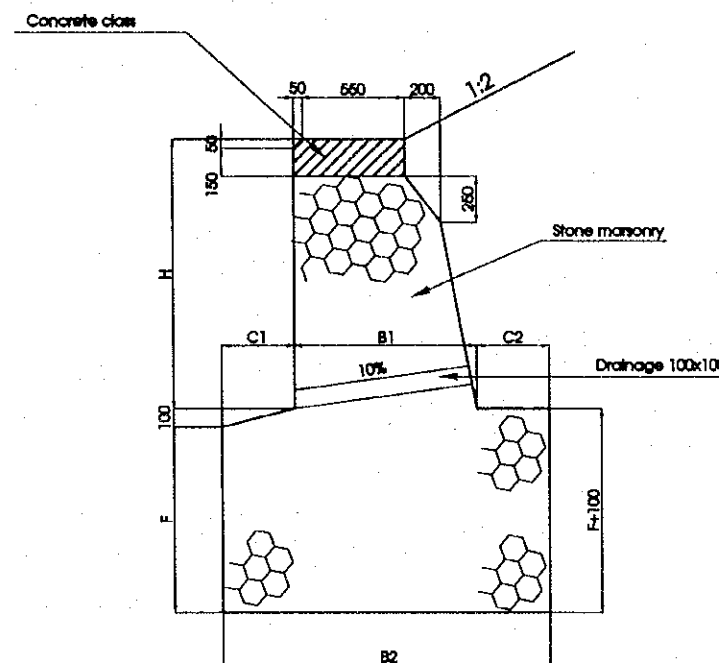
SECTION 1-1  
(S=1/200)



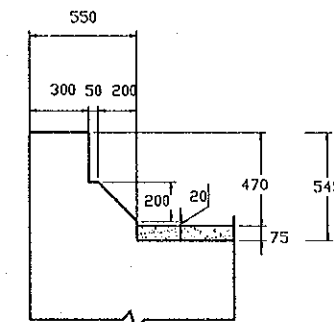
PLANE  
(S=1/200)



RETAINING WALL DETAIL  
(SCALE 1/40)



DETAIL OF CURB  
(S= 1/37.5)



RETAINING WALL QUANTITIES

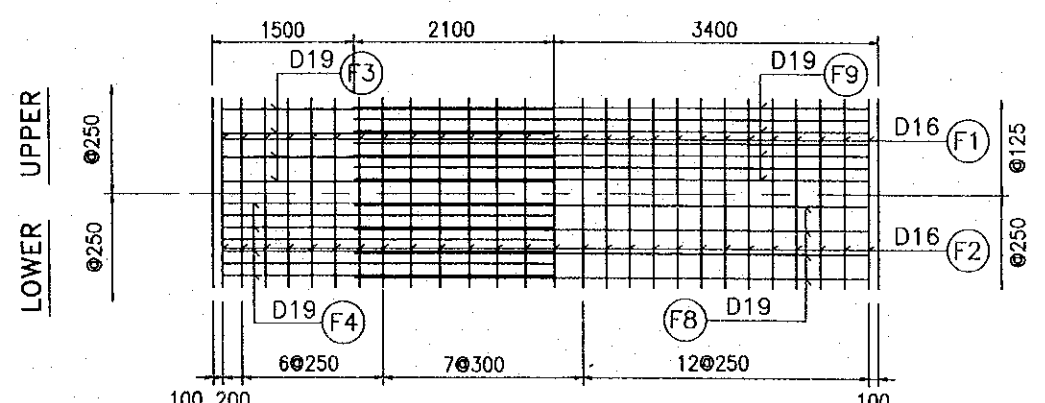
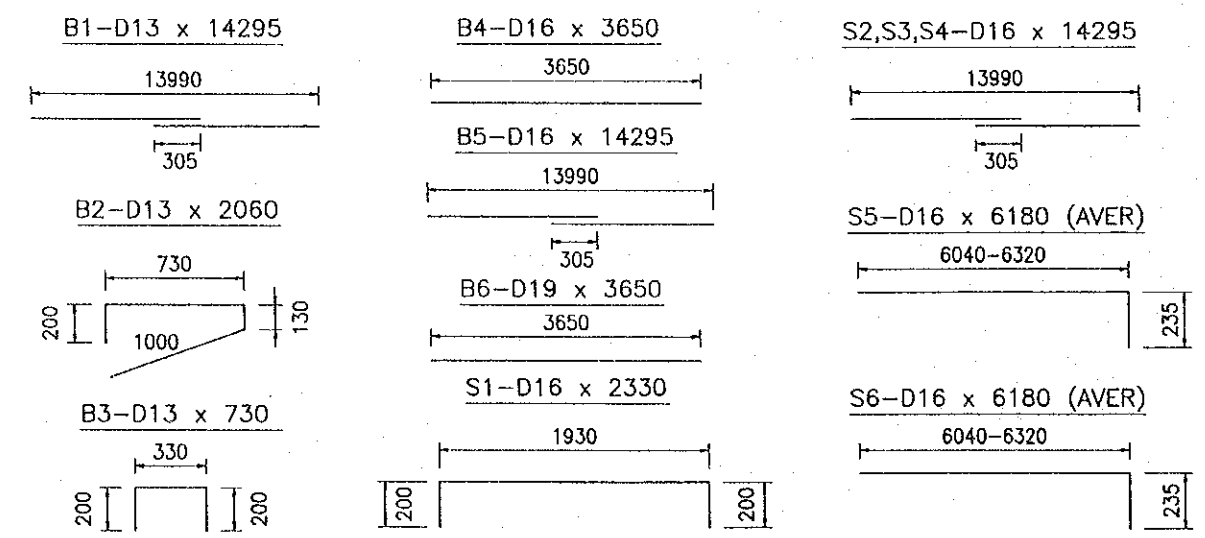
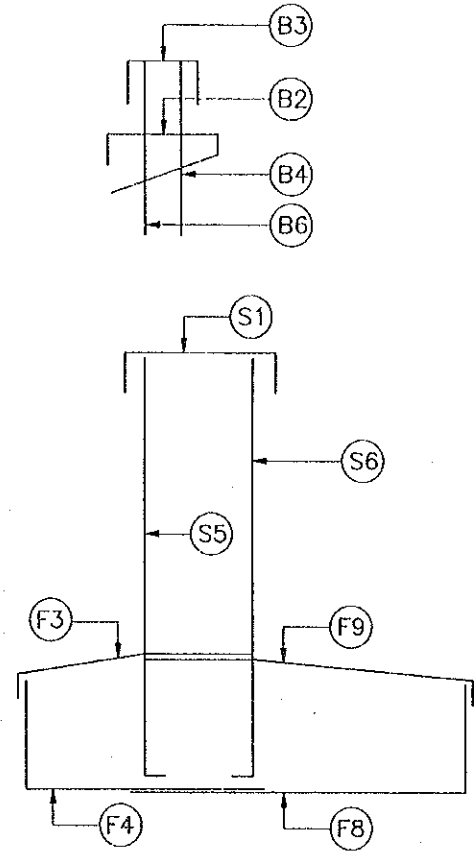
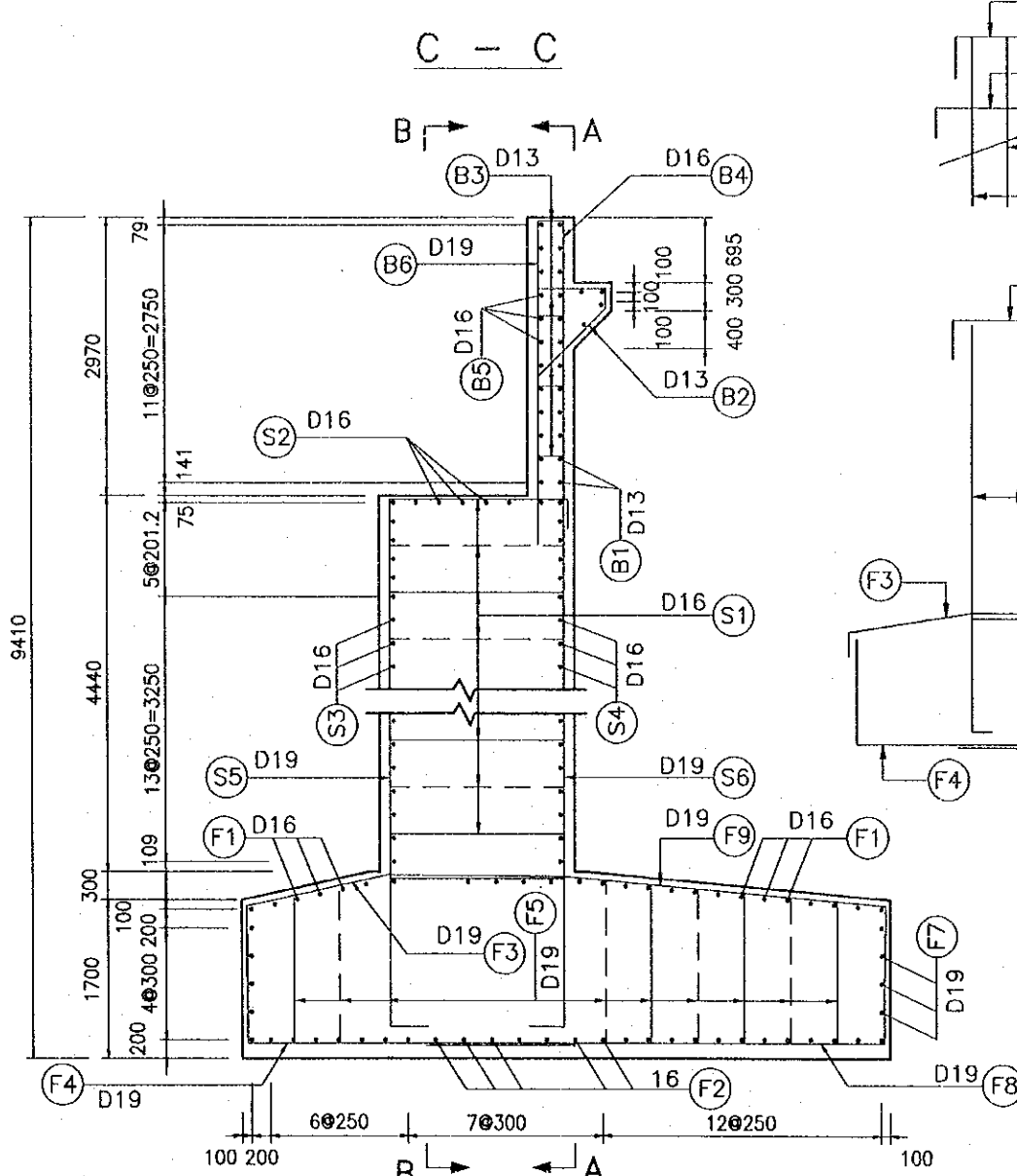
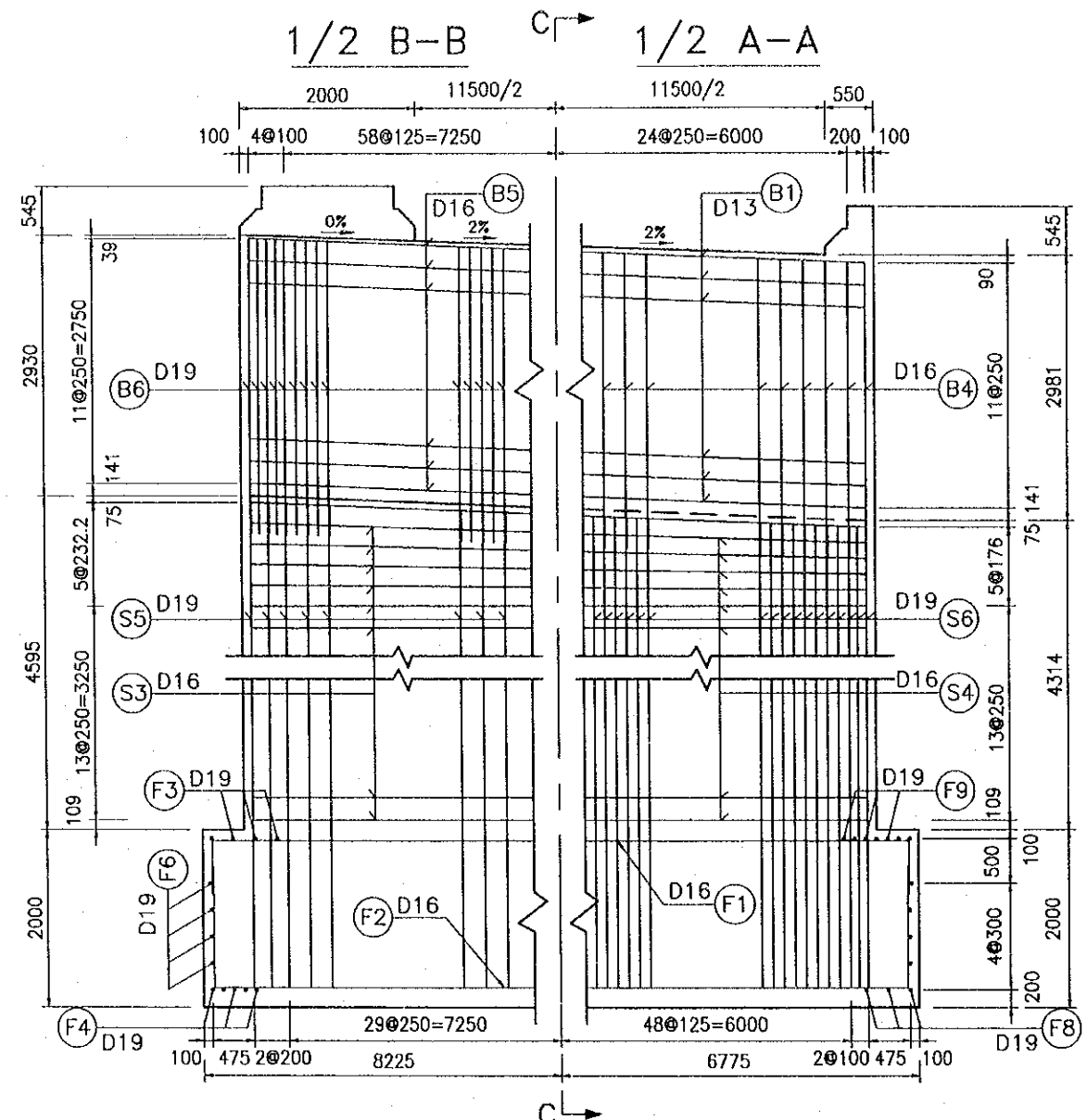
ABUTMENT	Quantities(m <sup>3</sup> )		
	Con.class F	Mor.Pav.stone	Stone masonry
A1L,A1R	6.0	97.3	172
A2L,A2R	6.0	97.3	292

ELEVATION AND DIMENSION OF RETAINING WALL

ABUTMENT	ELEVATION(M)				DIMENSION OF RETAINING WALL(M)					
	E1	E2	E3	E4	H	B1	B2	C1	C2	F
A1L,A1R	9.258	6.008	3.9	2.298	1610	1000	1800	400	400	1000
A2L,A2R	10.37	6.12	3.67	1.900	3120	1200	2250	400	650	1100

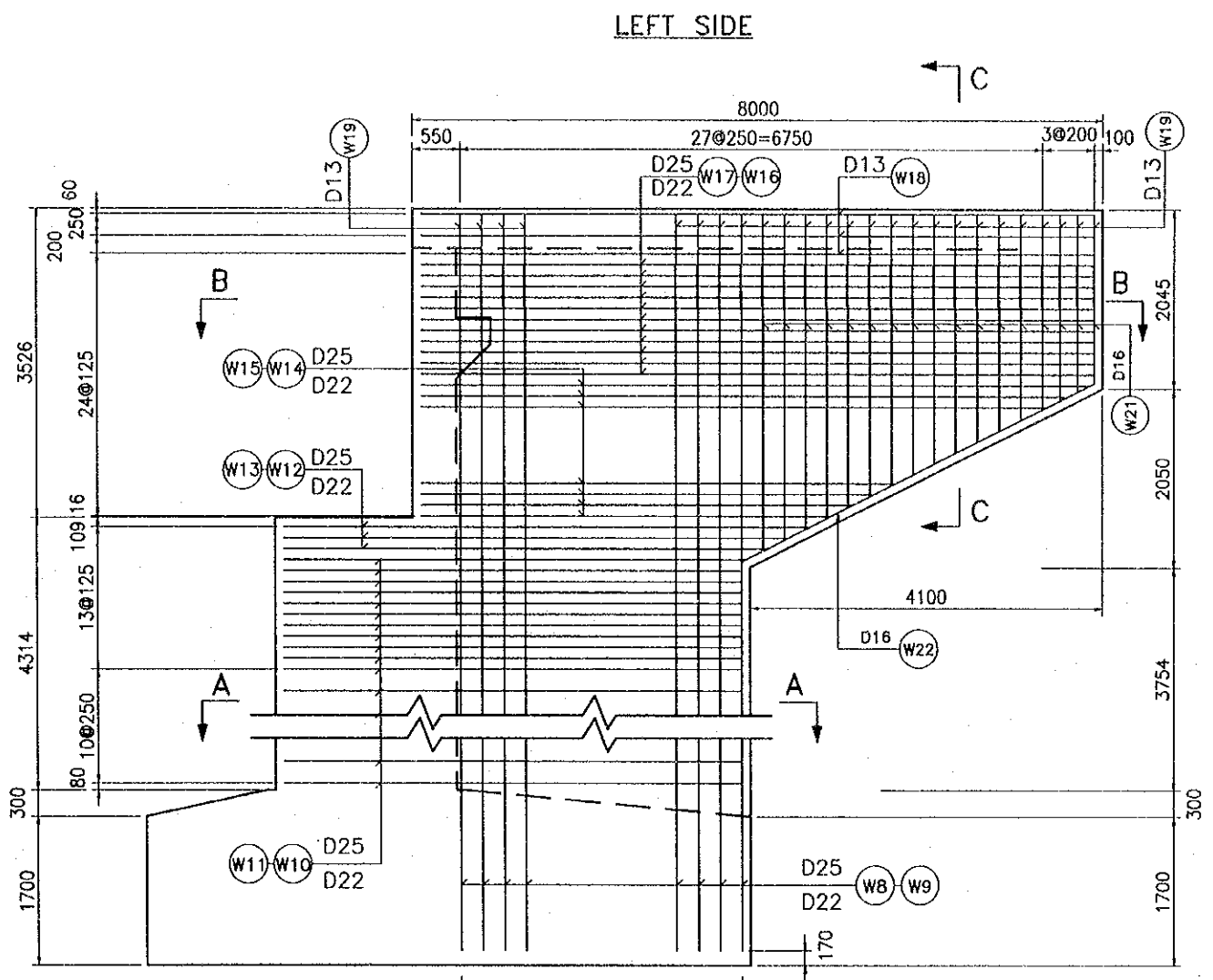
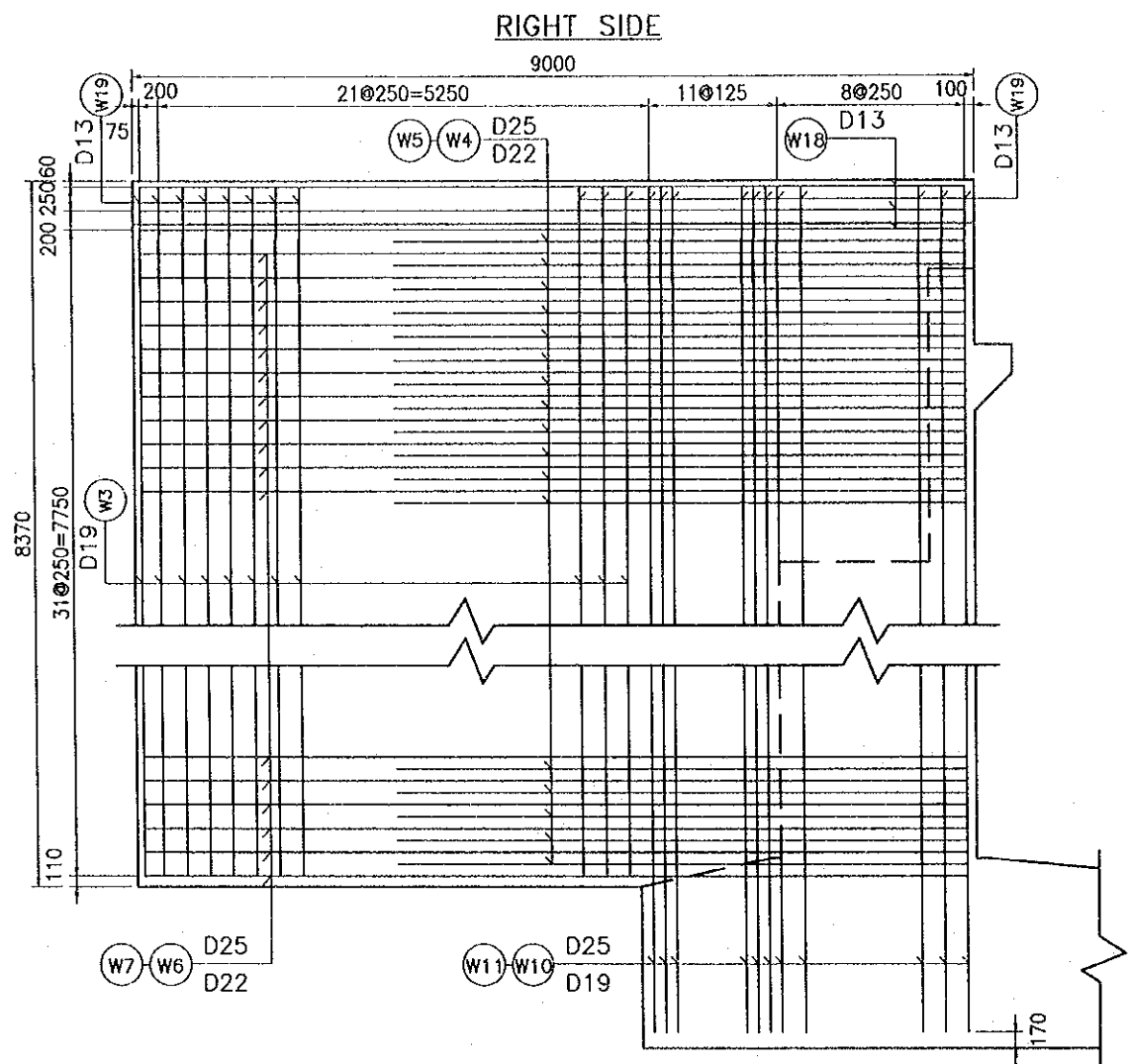
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.3.16	

PACKAGE 2	SCALE 1:75	DRAWING No. C-1-3a-26	SHEET No.
BAR ARRANGMENT OF ABUTMENT A2(1)			

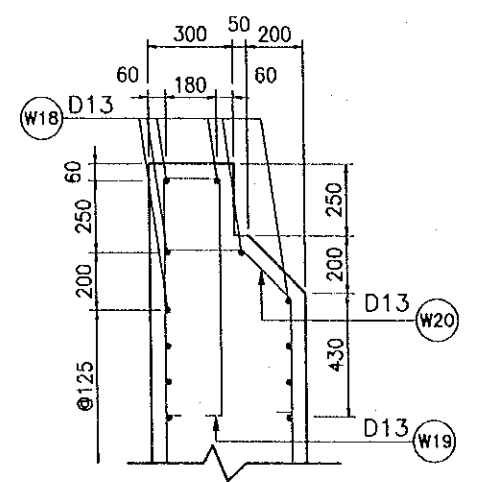


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (NHANH TRI BRIDGE) CONSTRUCTION PROJECT		DATE 2000.3.14
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

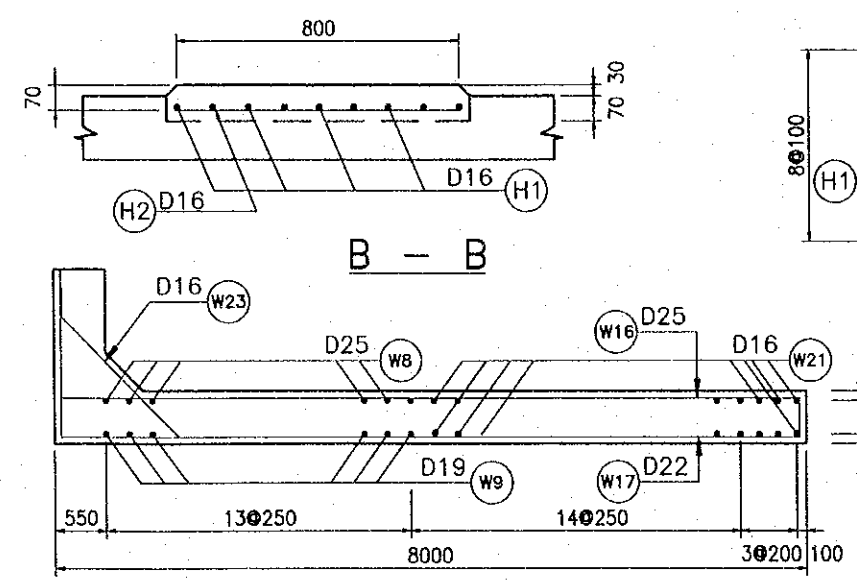
PACKAGE 2	SCALE 1:75	DRAWING No. C-1-2a-27	SHEET No.
BAR ARRANGEMENT OF ABUTMENT A2 (2)			



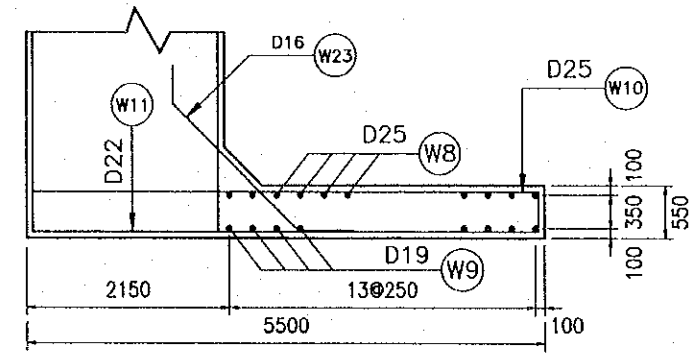
C - C  
Scale: 1/25



BAR ARRANGEMENT OF BEARING SEAT  
Scale: 1/20



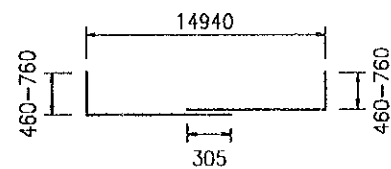
A - A



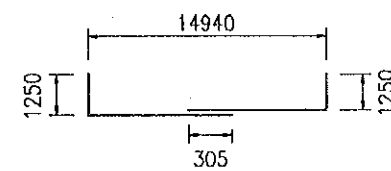
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE 	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.6.1	

PACKAGE 2	SCALE	DRAWING No. C-1-3a-2B	SHEET No.
BAR ARRANGEMENT OF ABUTMENT A2 (3)			

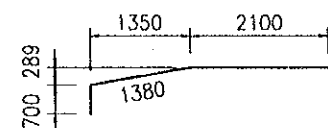
F1-D16 x 16465 (AVER)



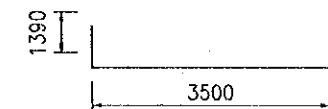
F2-D16 x 17745



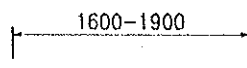
F3-D19 x 4180



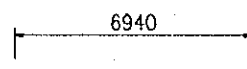
F4-D19 x 4890



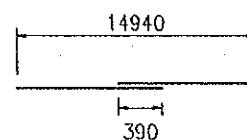
F5-D19 x 1750 (AVER)



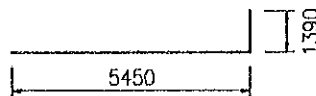
F6-D19 x 6940



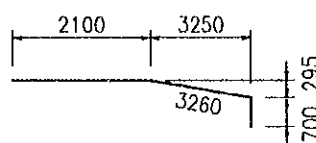
F7-D19 x 15330



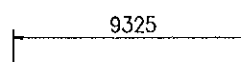
F8-D19 x 6840



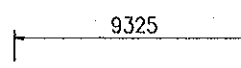
F9-D19 x 6060



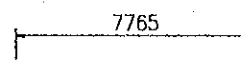
W1-D25 x 9325



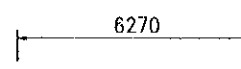
W2-D19 x 9325



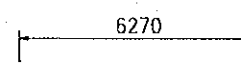
W3-D19 x 7765



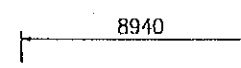
W4-D25 x 6270



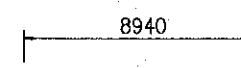
W5-D22 x 6270



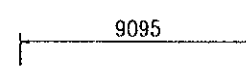
W6-D25 x 8940



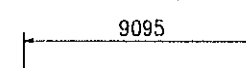
W7-D22 x 8940



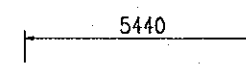
W8-D25 x 9095



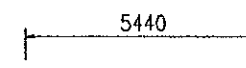
W9-D22 x 9095



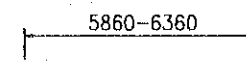
W10-D25 x 5440



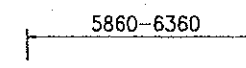
W11-D22 x 5440



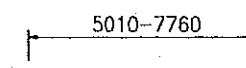
W12-D25 x 6110 (AVER)



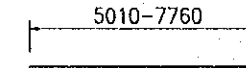
W13-D22 x 6110 (AVER)



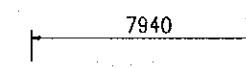
W14-D25 x 6385 (AVER)



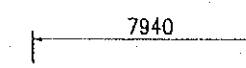
W15-D22 x 6385 (AVER)



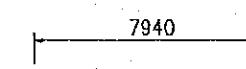
W16-D25 x 7940



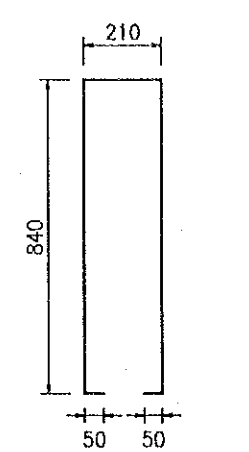
W17-D22 x 7940



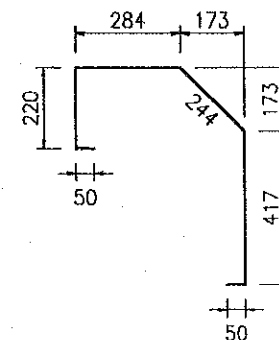
W18-D13 x 7940



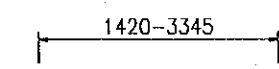
W19-D13 x 1990



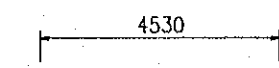
W20-D13 x 1265



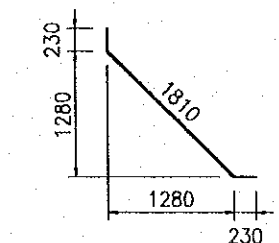
W21-D16 x 2383 (AVER)



W22-D16 x 4530



W23-D16 x 2270



Detail	Bars	Dia (mm)	Length (mm)	No' s	Unit Weight (Kg/m)	Weight (Kg)	Remarks	
BALLAST	B1	D13	14295	16	0.995	227.58		
	B2	D13	2060	57	0.995	116.83		
	B3	D13	730	57	0.995	41.40		
	B4	D16	3650	57	1.56	324.56		
	B5	D16	14295	12	1.56	267.60		
	B6	D19	3650	113	2.25	928.01		
STEM	S1	D16	2330	289	1.56	1050.46		
	S2	D16	14295	8	1.56	178.40		
	S3	D16	14295	18	1.56	401.40		
	S4	D16	14295	18	1.56	401.40		
	S5	D19	6180	57	2.25	792.59	AVER	
	S6	D19	6180	113	2.25	1571.27	AVER	
	H1	D16	820	18	1.56	23.03		
	H2	D16	820	18	1.56	23.03		
FOOTING	F1	D16	16465	27	1.56	693.51	AVER	
	F2	D16	17745	27	1.56	747.42		
	F3	D19	4180	65	2.25	611.33		
	F4	D19	4890	129	2.25	1419.32		
	F5	D19	1750	264	2.25	1039.50	AVER	
	F6	D19	6940	8	2.25	124.92		
	F7	D19	15330	8	2.25	275.94		
	F8	D19	6840	65	2.25	1000.35		
	F9	D19	6060	129	2.25	1758.92		
WING WALL	W1	D25	9325	20	3.98	742.27		
	W2	D19	9325	20	2.25	419.63		
	W3	D19	7765	42	2.25	733.79		
	W4	D25	6270	31	3.98	773.59		
	W5	D22	6270	31	3.04	590.88		
	W6	D25	8940	31	3.98	1103.02		
	W7	D22	8940	31	3.04	842.51		
	W8	D25	9095	14	3.98	506.77		
	W9	D19	9095	14	2.25	286.49		
	W10	D25	5440	21	3.98	454.68		
	W11	D22	5440	21	3.04	347.29		
	W12	D25	6110	3	3.98	72.95	AVER	
	W13	D22	6110	3	3.04	55.72	AVER	
	W14	D25	6385	12	3.98	304.95	AVER	
	W15	D22	6385	12	3.04	232.92	AVER	
	W16	D25	7940	12	3.98	379.21		
	W17	D22	7940	12	3.04	289.65		
	W18	D13	7940	12	0.995	94.80		
	W19	D13	1990	73	0.995	144.54		
	W20	D13	1265	73	0.995	91.88		
	W21	D16	2383	34	1.56	126.39	AVER	
	W22	D16	4530	2	1.56	14.13		
	W23	D16	2270	78	1.56	276.21		
SUMMARY	TOTAL						22903.05	
	D13 : 717.04			D22 : 2358.98				
	D16 : 4527.54			D25 : 4337.44				
	D19 : 10962.05							







THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT	DESIGNED BY NAME S.WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SIGNATURE 
PROJECT RED RIVER BRIDGE (HUANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000. 3. 17
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	

PACKAGE 2	SCALE C-1-3a-31	DRAWING No. C-1-3a-31	SHEET No.
BAR ARRANGMENT OF CAST-IN-PLACE CONCRETE PILE. D=100CM, D=150CM			

### PARAMETERS OF PIER PILES (D=1000 MM)

PIER NAME	PILES		Pile Dimensions ( mm )				Dimension of N1 ( mm )						Unit Weight ( Kg/m )	Spacer number		Dimension of hoop ( mm )				
	Diameter ( mm )	Number	Lp	A	B	C	Diameter ( mm )	Lrc	a	D	E ( 3 x E )	F		Total	n	n <sub>1</sub>	d <sub>1</sub> ( mm )	d <sub>2</sub> ( mm )	L <sub>1</sub> ( mm )	L <sub>2</sub> ( mm )
P1L	1000	6	41 000	22 000	36 000	1 400	D29	42 000	880	10 420	3 x 11700	.0 0	45 520	5.04	44	12	745	649	2645	2569
P2L	1000	6	43 000	24 000	36 000	3 400	D29	44 000	880	9 880	3 x 11700	2 540	47 520	5.04	48	12	745	649	2645	2569
P3L	1000	6	43 000	24 000	36 000	3 400	D22	44 000	530	7 530	3 x 11700	3 490	46 120	3.04	48	12	738	642	2623	2547
P4L	1000	6	40 000	21 000	33 000	3 400	D29	41 000	880	9 880	2 x 11700	10 360	55 340	5.04	42	11	745	649	2645	2569
P5L	1000	12	38 000	19 000	33 000	1 400	D32	39 000	1 080	10 080	2 x 11700	8 760	53 940	6.23	38	11	748	646	2655	2569
P1R	1000	12	42 000	23 000	36 000	2 400	D32	43 000	1 080	10 080	3 x 11700	2 140	47 320	6.23	46	12	748	646	2655	2569
P2R	1000	6	43 000	24 000	36 000	3 400	D29	44 000	880	9 880	3 x 11700	2 540	47 520	5.04	48	12	745	649	2645	2569
P3R	1000	6	40 000	21 000	33 000	3 400	D29	41 000	880	9 880	2 x 11700	10 360	55 340	5.04	42	11	745	649	2645	2569
P4R	1000	12	38 000	19 000	33 000	1 400	D32	39 000	1 080	10 080	2 x 11700	8 760	53 940	6.23	38	11	748	646	2655	2559

### REINFORCING BAR QUANTITIES OF PIER PILES (D=1000 MM)

SYMBOL	SHAPE	P1L				P2L, P2R				P4L, P3R				P1R				P3L				P4R, P5L			
		Diameter ( mm )	Length ( m )	Number	Weight ( Kg )	Diameter ( mm )	Length ( m )	Number	Weight ( Kg )	Diameter ( mm )	Length ( m )	Number	Weight ( Kg )	Diameter ( mm )	Length ( m )	Number	Weight ( Kg )	Diameter ( mm )	Length ( m )	Number	Weight ( Kg )	Diameter ( mm )	Length ( m )	Number	Weight ( Kg )
N1 <sub>1</sub>	—	D29	10.420	120	6302.0	D29	9.880	120	5 975.4	D29	9.880	120	5 975.4	D32	10.080	240	15 071.6	D22	7.530	120	2746.9	D32	10.080	240	15 071.6
N1 <sub>2</sub>	—	D29	11.700	180	10614.2	D29	11.700	180	10 614.2	D29	11.700	180	10 614.2	D32	11.700	360	26 240.8	D22	11.700	180	6402.2	D32	11.700	240	17 493.8
N1 <sub>3</sub>	—	D29	0	0	0.0	D29	2.540	60	768.1	D29	10.360	60	3 132.9	D32	2.140	120	1 599.9	D22	3.490	60	636.6	D32	8.760	120	6 549
N2	○	D16	2.645	756	3120.0	D16	2.645	780	3 219.0	D16	2.645	744	3 070.5	D16	2.655	1536	6 361.8	D16	2.623	780	3192.3	D16	2.655	1440	5 964.2
N3	○	D22	2.569	84	656.0	D22	2.569	84	656.0	D22	2.569	78	609.1	D22	2.560	168	1 307.4	D22	2.547	84	650.4	D22	2.560	156	1 214.1
N4	—	D16	0.55	60	51.5	D16	0.550	60	51.5	D16	0.55	60	51.5	D16	0.55	120	103.0	D16	0.55	60	51.5	D16	0.55	120	103.0
S <sub>1</sub>	—	D13	0.67	336	224.4	D13	0.670	336	224.4	D13	0.67	312	208.4	D13	0.67	672	448.9	D13	0.67	336	224.4	D13	0.67	624	416.8
Total		20 968.2				21 508.7				23 662				51 133.3				13 904.3				46 812.5			
TOTAL		Σ D13~D22 4 051.9				Σ D13~D22 8 301.9				Σ D13~D22 7 879.0				Σ D13~D22 8 221.1				Σ D13~D22 4 118.6				Σ D13~D22 15 396.1			
		Σ D29~D32 16 916.3				Σ D29~D32 34 715.5				Σ D29~D32 39 445.1				Σ D29~D32 42 912.2				Σ D29~D32 9 785.8				Σ D29~D32 78 228.9			
For one Pier		20 968.2				43 017.4				47 324.0				51 133.3				13 904.3				93 624.9			

### REINFORCING BAR QUANTITIES OF ABUTMENT PILES (D=1500 MM)

SYMBOL	SHAPE	A1				A2L, A2R			
		Diameter ( mm )	Length ( m )	Number	Weight ( Kg )	Diameter ( mm )	Length ( m )	Number	Weight ( Kg )
N1 <sub>1</sub>	—	D32	13.580	384	32 487.7	D32	13.580	192	16 243.9
N1 <sub>2</sub>	—	D32	11.700	384	27 990.1	D32	11.700	192	13 995.1
N1 <sub>3</sub>	—	D32	10.760	192	12 870.7	D32	10.760	96	6 435.3
N2	○	D16	4.226	2096	13 818.0	D16	4.226	1 048	6 909.0
N3	○	D22	4.130	224	2 812.4	D22	4.130	112	1 406.2
N4	—	D16	0.994	224	347.3	D16	0.994	112	173.7
S <sub>1</sub>	—	D13	0.67	896	598.5	D13	0.67	448	299.3
TOTAL		90 924.8				45 462.4			
TOTAL		Σ D13~D22 17 576.2				Σ D13~D22 17 576.2			
		Σ D29~D32 73 348.5				Σ D29~D32 73 348.5			
For one Abutment		90 924.8				90 924.8			

### PARAMETERS OF ABUTMENT PILES (D=1500 MM)

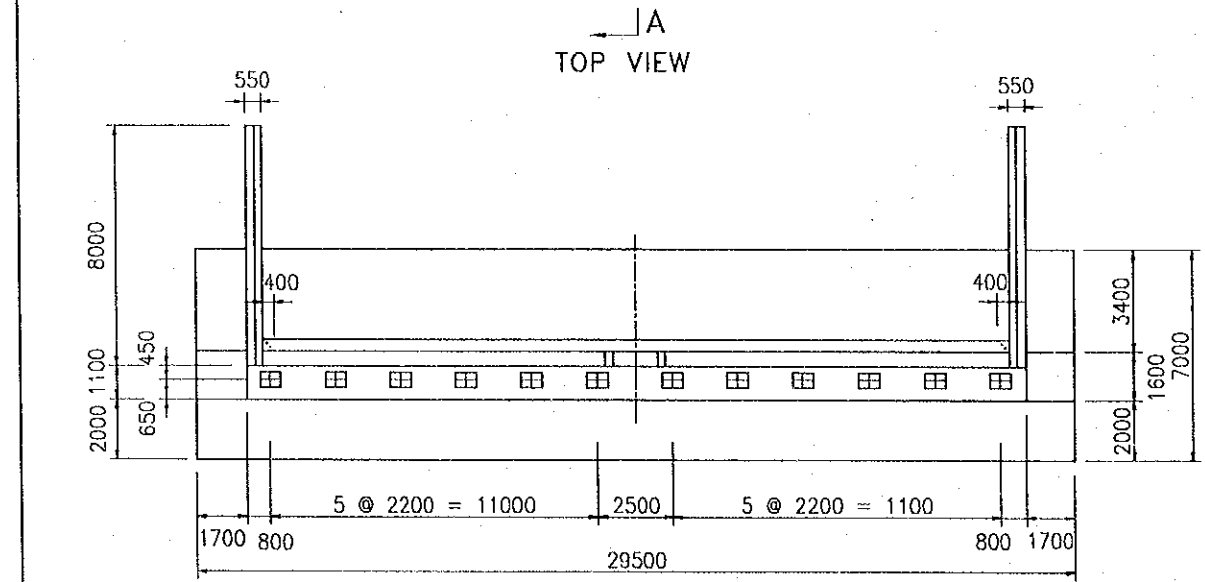
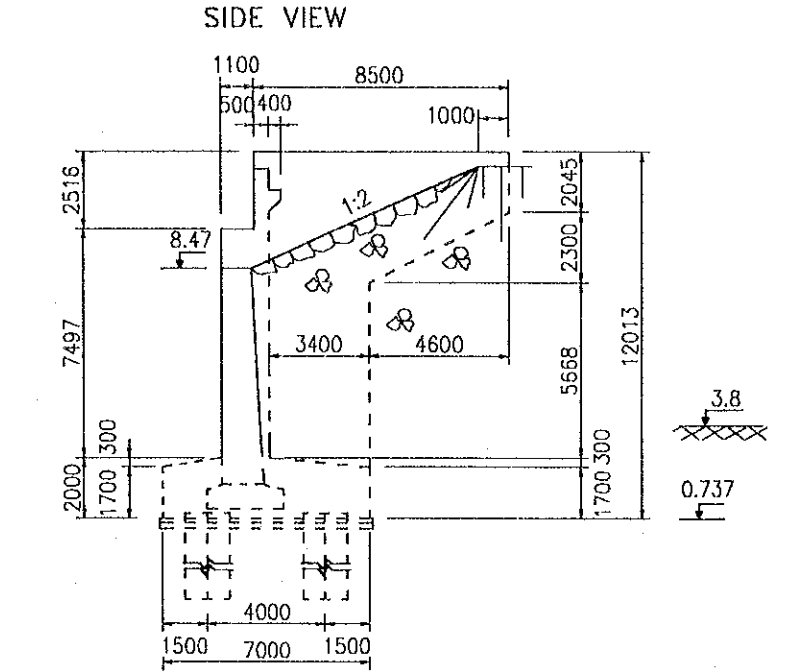
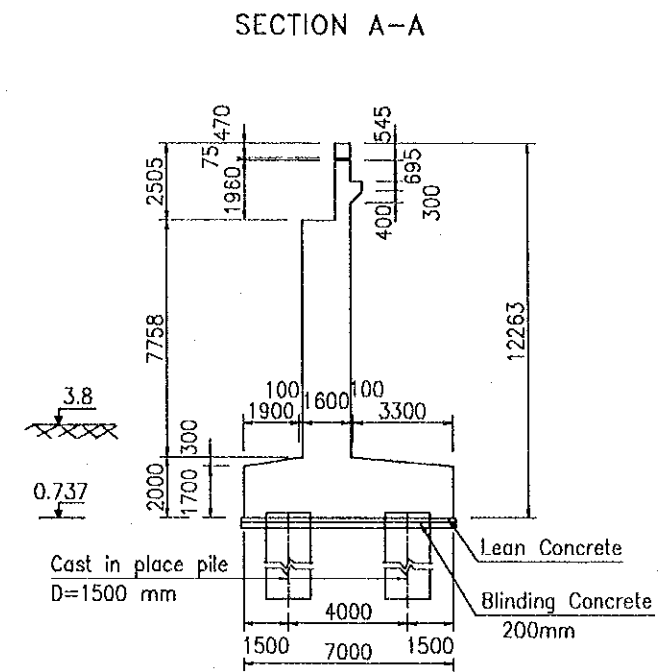
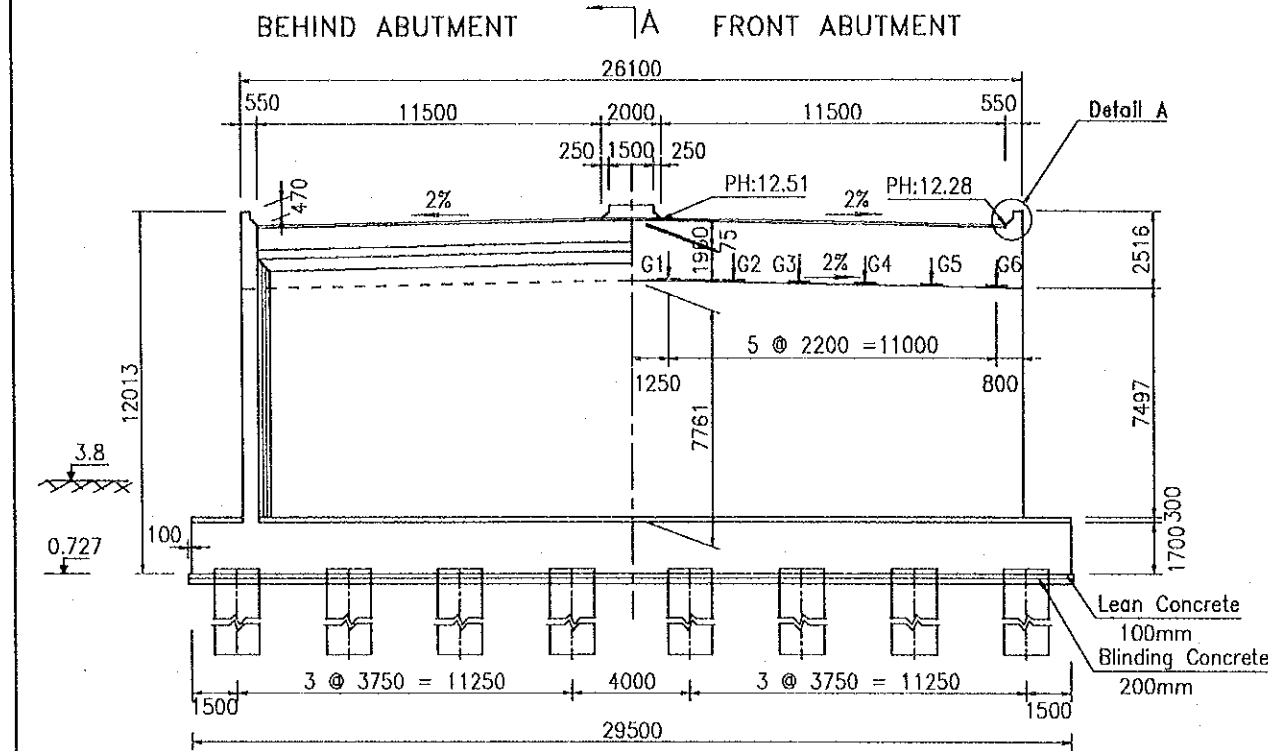
Abutment Name	PILES		Pile Dimensions ( mm )				Dimension of N1 ( mm )						Unit Weight ( Kg/m )	Spacer number	
	Diameter ( mm )	Number	Lp	A	B	C	Diameter	Lrc	D	E ( 2x E )	F	Total		n	n <sub>1</sub>
A1	1500	16	43 000	24 500	36 000	3 850	D32	44 500	13 580	2x11700	10 760	47 740	6.23	49	12
A2L, A2R	1500	16	43 000	24 500	36 000	3 850	D32	44 500	13 580	2x11700	10 760	47 740	6.23	49	12

101

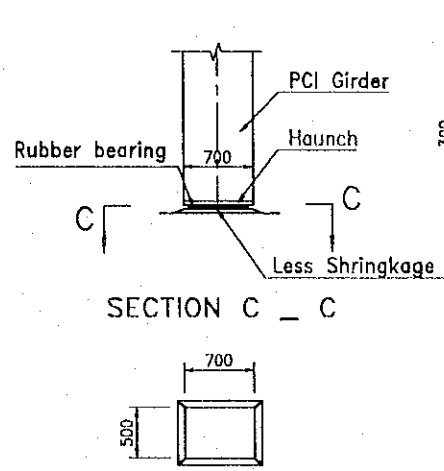
# **C-1 THROUGHWAY**

## **C-1-3 SUBSTRUCTURE**

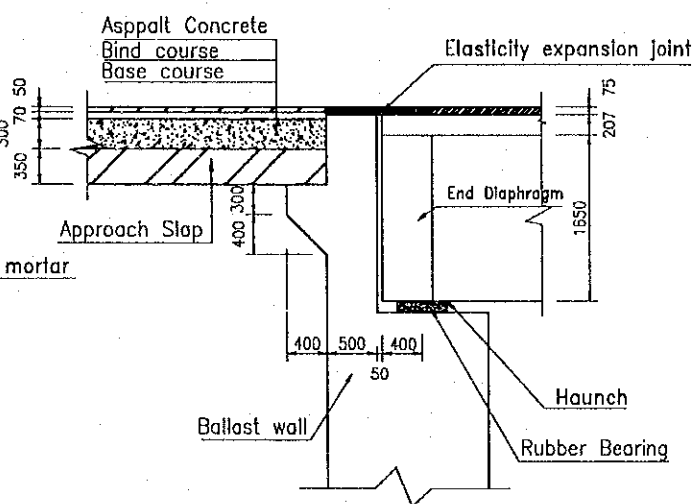
### **C-1-3b GIA LAM ROAD BRIDGE**



GIRDER BEARING SEAT DETAIL (sc:1/75)



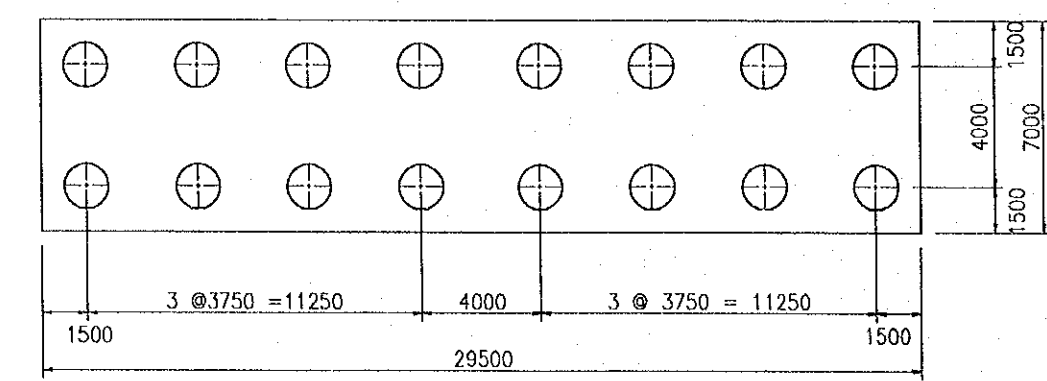
DETAIL OF BALLAST WALL (sc:1/75)



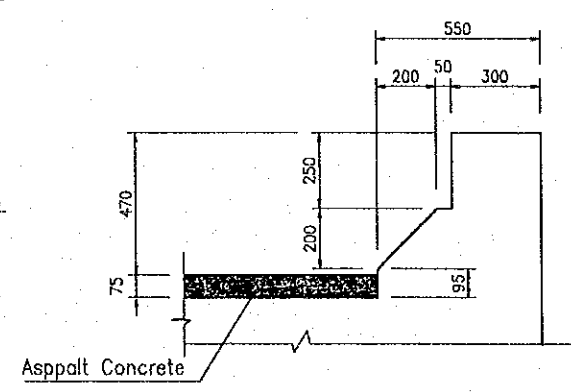
DEPTH OF SUPERSTRUCTURE

Abutment	A1	A2
Condition	F	M
Pavement	75	75
Slap	210	210
Girder	1650	1650
Haunch	34	14
Bearing	36	56
Mortar	30	30
Total	2035	2035

PILE ARRANGEMENT



DETAIL A (sc:1/25)



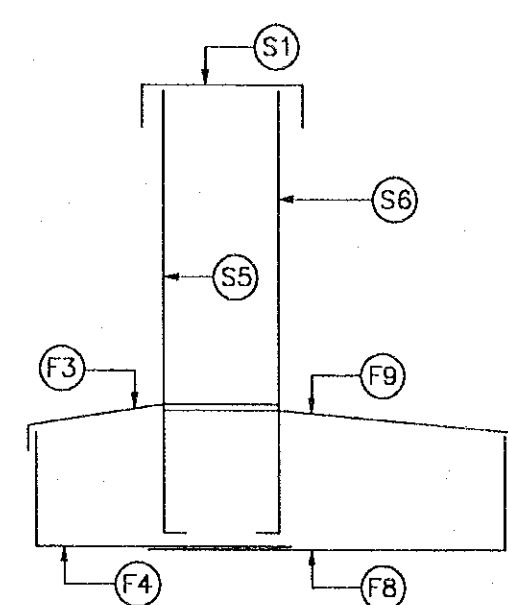
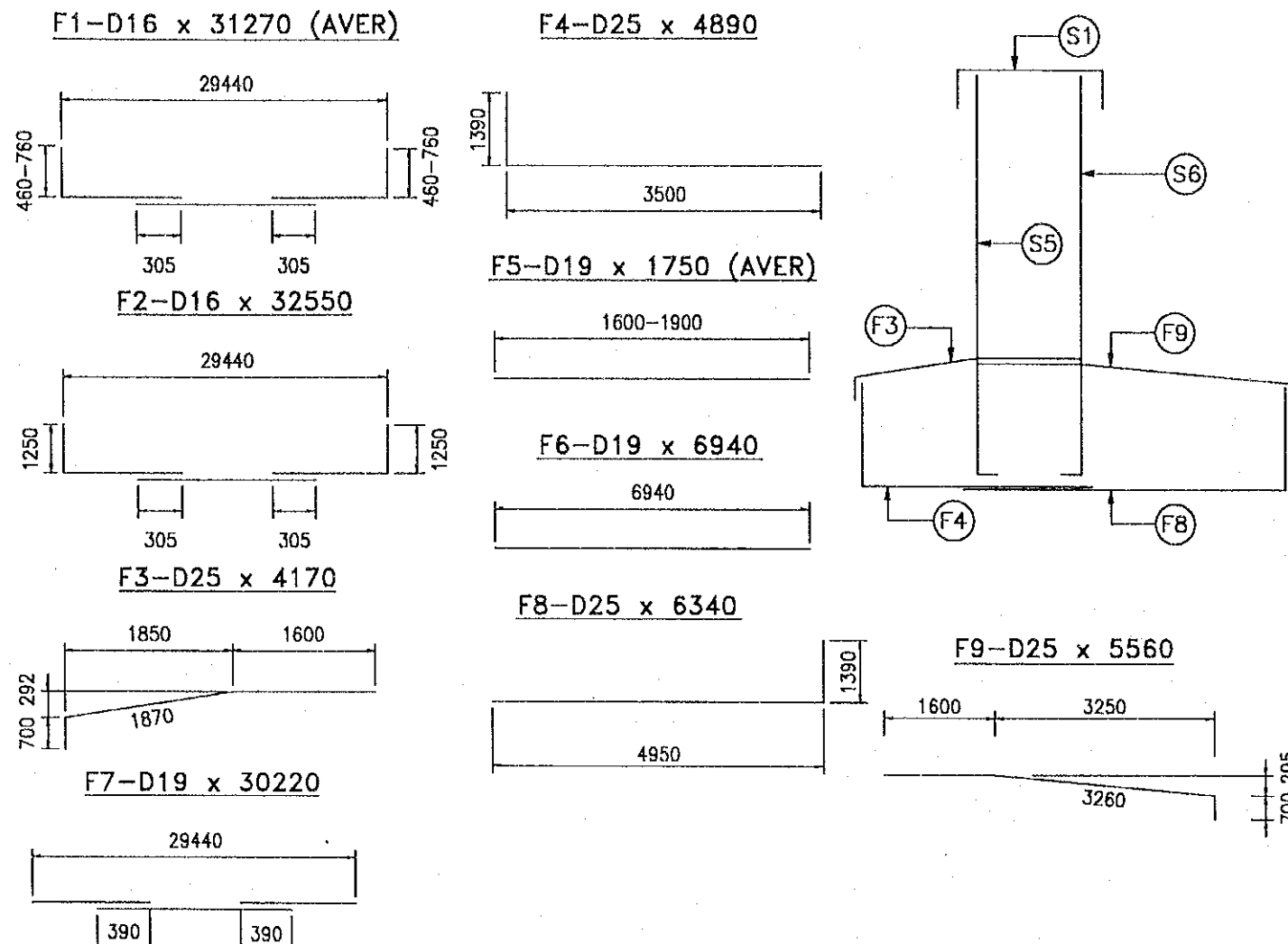
ELEVATION OF TOP BEARING SEAT

BEARING	G1	G2	G3	G4	G5	G6
ABUTMENT A1	10.500	10.456	10.412	10.368	10.324	10.280
ABUTMENT A2	10.500	10.456	10.412	10.368	10.324	10.280

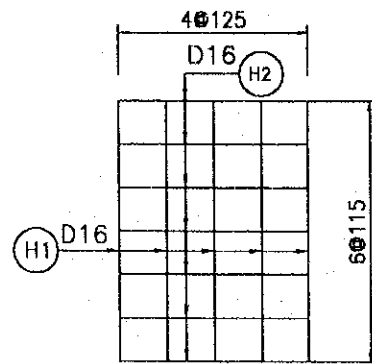
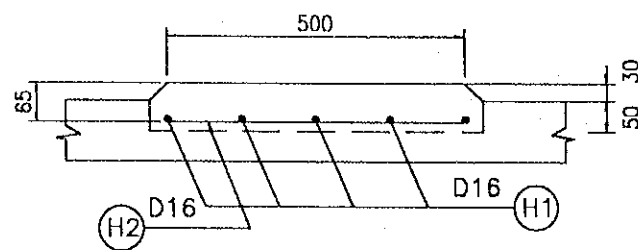


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TUANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. NATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE
PROJECT: RED RIVER BRIDGE (THANH THI BRIDGE) CONSTRUCTION PROJECT		DATE: 2000.6.1
CONSULTANT: PACIFIC CONSULTANTS INTERNATIONAL		

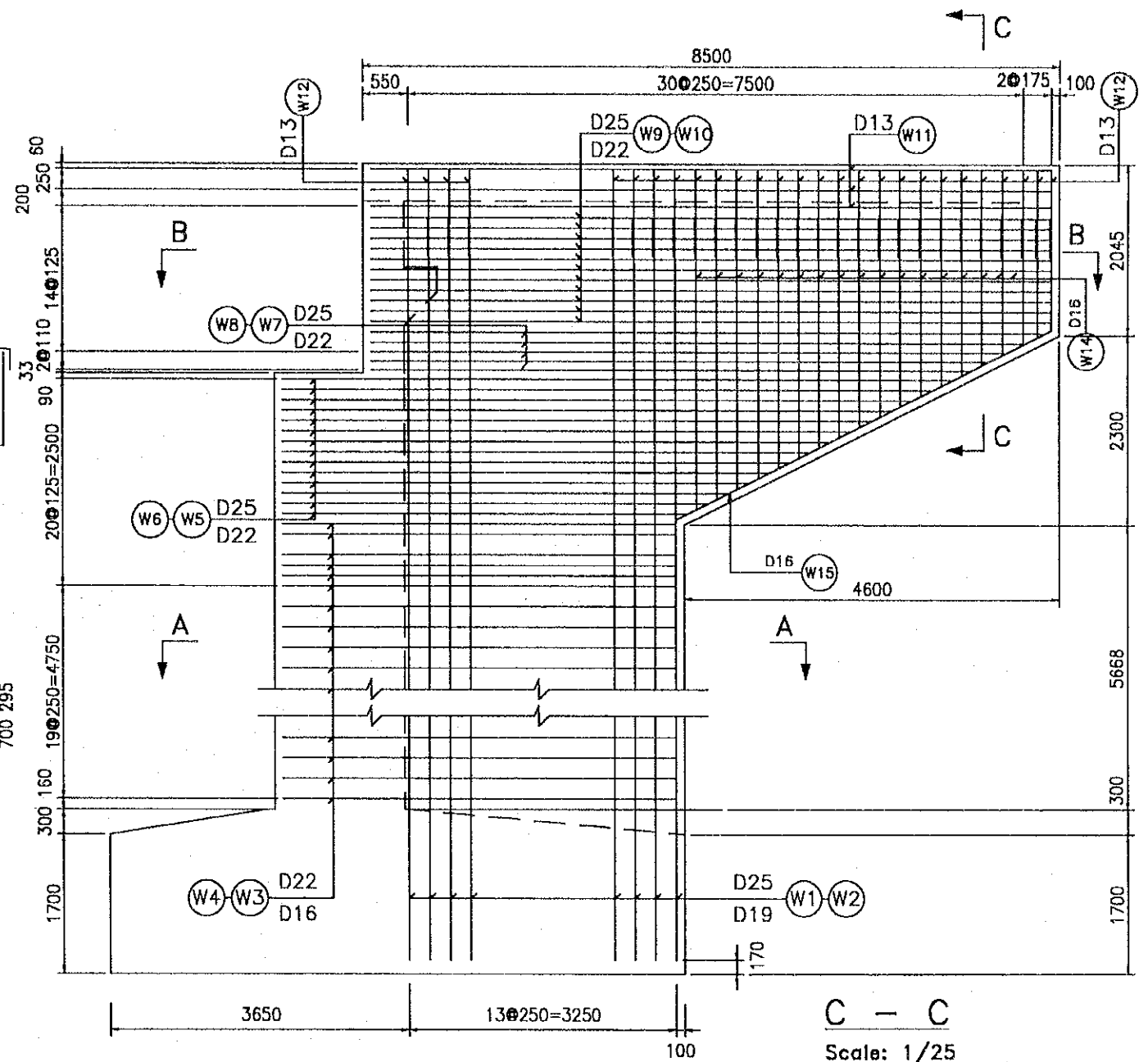
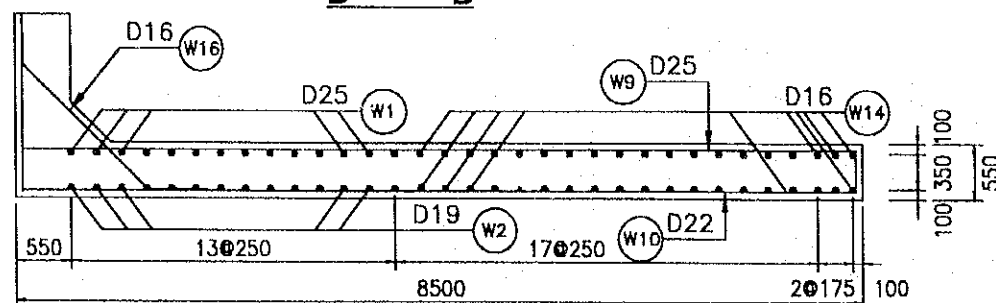
PACKAGE 2	SCALE 1:75	DRAWING No. C-1-3b-3	SHEET No.
BAR ARRANGEMENT OF ABUTMENT A1, A2 (2)			



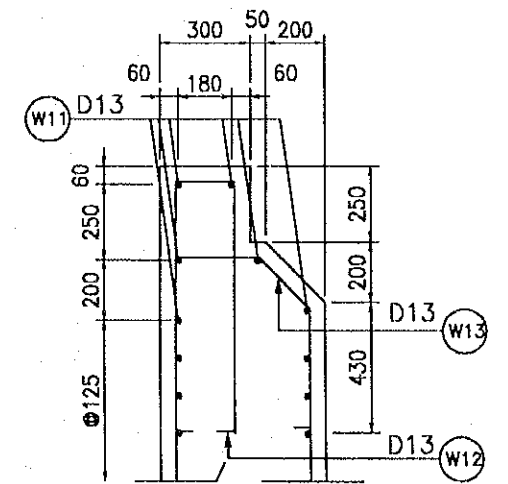
BAR ARRANGEMENT OF BEARING SEAT  
Scale: 1/25



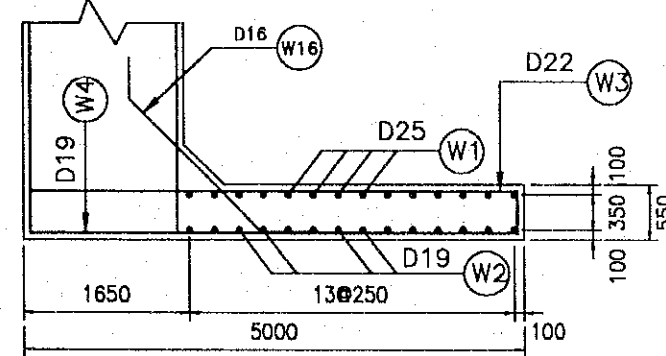
B - B



C - C  
Scale: 1/25

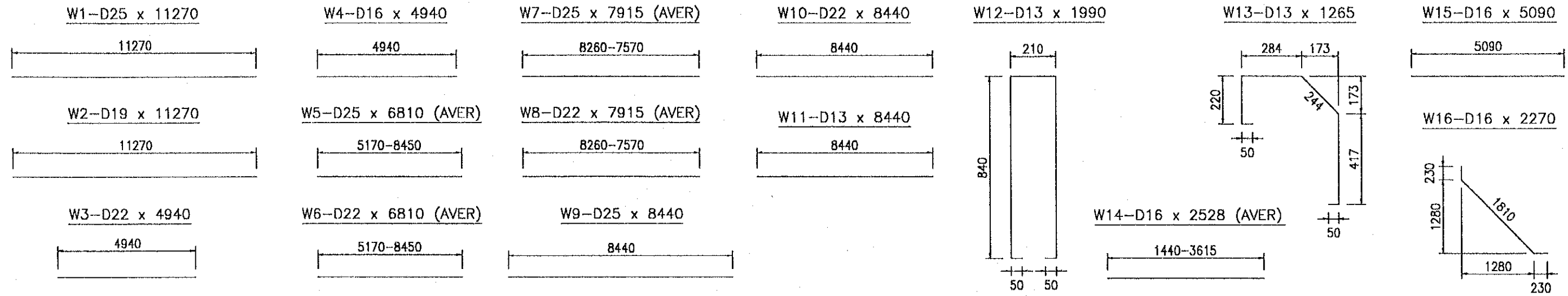


A - A



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THUONG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THUAN TRU BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2006/11

PACKAGE 2	SCALE	DRAWING No. C-1-3b-4	SHEET No.
BAR ARRANGEMENT OF ABUTMENT A1, A2 (3)			



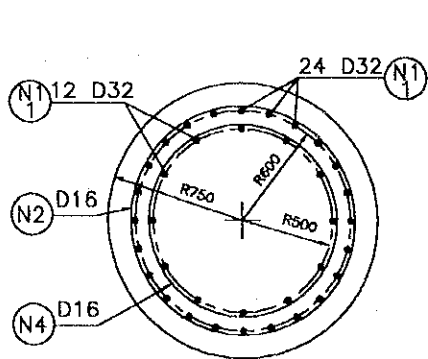
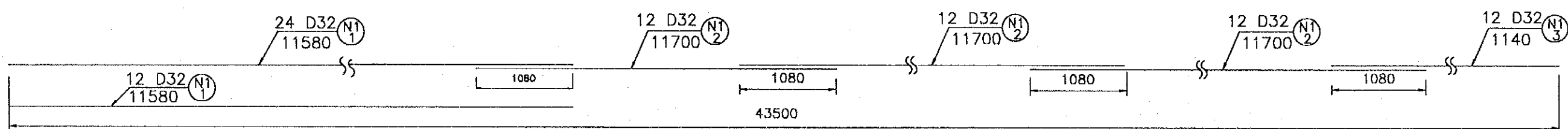
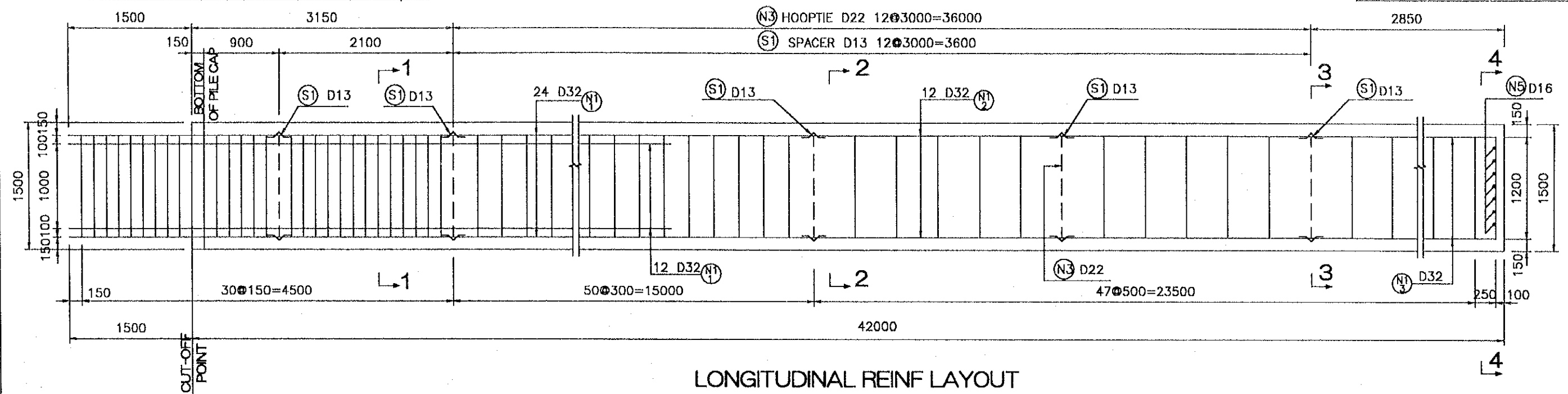
Detail	Bars	Shape	Dia (mm)	Length (mm)	No' s	Unit Weight (Kg/m)	Weight (Kg)	Remarks
BALAST WALL	B1		D13	26650	12	0.995	318.2	
	B2		D13	2060	104	0.995	213.17	
	B3		D13	730	105	0.995	76.26	
	B4		D16	2630	105	1.56	430.79	
	B5		D16	26650	8	1.56	332.59	
	B6		D19	2630	209	2.25	1236.76	
STEM	S1		D16	1830	714	1.56	2038.33	
	S2		D16	26650	6	1.56	249.44	
	S3		D16	26650	30	1.56	1247.22	
	S4		D16	26650	30	1.56	1247.22	
	S5		D32	9970	105	6.23	6521.88	
	S6		D32	9970	209	6.23	12981.64	
	H1		D16	710	60	1.56	66.46	
	H2		D16	520	84	1.56	68.14	
FOOTING	F1		D16	31270	27	1.56	1317.1	AVER
	F2		D16	32550	27	1.56	1371.01	
	F3		D25	4170	118	3.98	1958.40	
	F4		D25	4890	236	3.98	4593.08	
	F5		D19	1750	540	2.25	2126.25	AVER
	F6		D19	6940	8	2.25	124.92	
	F7		D19	30220	8	2.25	543.96	
	F8		D25	6340	118	3.98	2977.52	
	F9		D25	5560	236	3.98	5222.40	

Detail	Bars	Shape	Dia (mm)	Length (mm)	No' s	Unit Weight (Kg/m)	Weight (Kg)	Remarks	
WING WALL	W1		D25	11270	28	3.98	1255.93		
	W2		D19	11270	28	2.25	710.01		
	W3		D22	4940	52	3.04	780.92		
	W4		D16	4940	52	1.56	400.73		
	W5		D25	6810	28	3.98	758.91	AVER	
	W6		D22	6810	28	3.04	579.67	AVER	
	W7		D25	7915	8	3.98	252.01	AVER	
	W8		D22	7915	8	3.04	192.49	AVER	
	W9		D25	8440	24	3.98	806.19		
	W10		D22	8440	24	3.04	615.78		
	W11		D13	8440	12	0.995	100.77		
	W12		D13	1990	66	0.995	130.68		
	W13		D13	1265	66	0.995	83.07		
	W14		D16	2528	76	1.56	299.72	AVER	
	W15		D16	5090	4	1.56	31.76		
	W16		D16	2270	114	1.56	403.70		
SUMMARY	TOTAL							54665.07	
	D13 : 922.17					D22 : 2168.86			
	D16 : 9504.2					D25 : 17824.43			
	D19 : 4741.90					D32 : 19503.51			

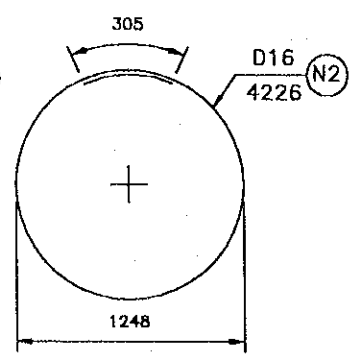
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANH LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2.07.2006

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1:50	C-1-3b-5	

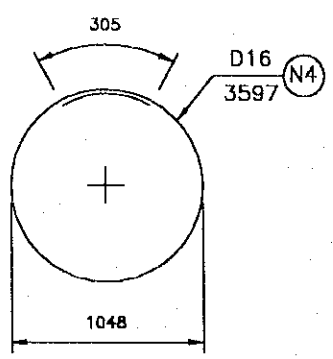
BAR ARRANGEMENT OF CAST-IN-PLACE CONCRETE PILE  
D=160CM



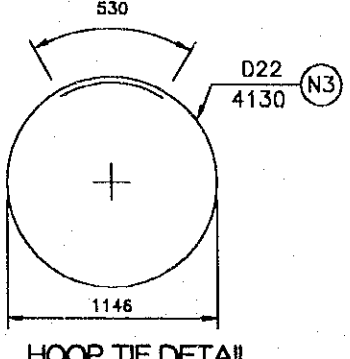
SECTION 1-1



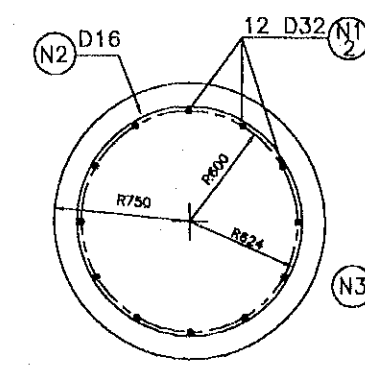
TYPICAL TIE 1



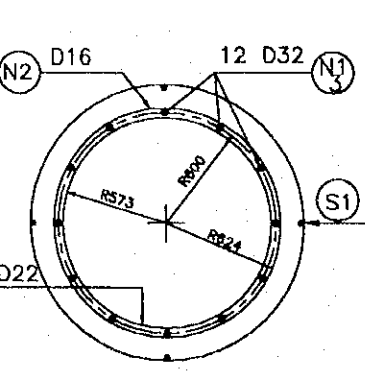
TYPICAL TIE 2



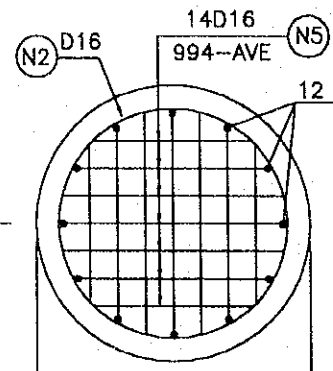
HOOP TIE DETAIL



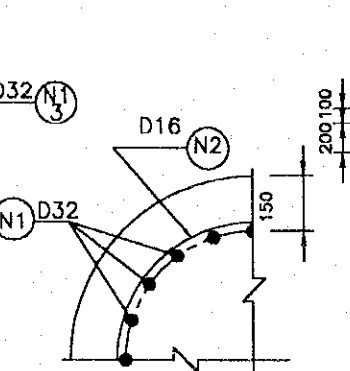
SECTION 2-2



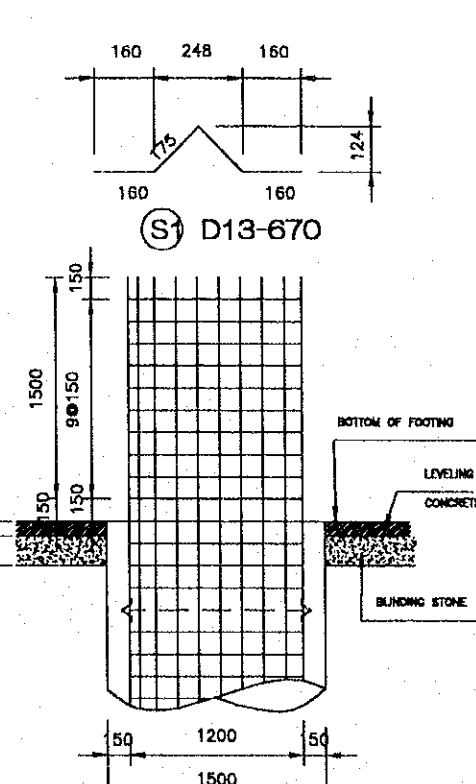
SECTION 3-3



SECTION 4-4



DETAIL OF COVERING



DETAIL OF CONCRETE PIER

REINFORCING BAR QUANTITY OF ABUTMENT PILES

Bar	Symbol	Dia (mm)	Length (m)	Number	Unit Weight (Kg/m)	Weight (Kg)
N <sub>1</sub>	—	D32	11.58	768	6.23	55 406.13
N <sub>1</sub> <sub>2</sub>	—	D32	11.70	384	6.23	27 990.14
N <sub>1</sub> <sub>3</sub>	—	D32	1.14	384	6.23	2 727.24
N <sub>2</sub>	○	D16	4.23	4128	1.56	27 214.09
N <sub>3</sub>	○	D22	4.13	448	3.04	5 624.73
N <sub>4</sub>	○	D16	3.60	4128	1.56	23 163.53
N <sub>5</sub>	—	D16	0.99	448	1.56	694.69
S <sub>1</sub>	∧	D13	0.87	1792	0.997	1 197.04
Total						144 017.59
FOR 2 ABUTMENTS		D13~D22				115 788.1
		D29~D32				172 247.0
Total						288 035.2

**C-1 THROUGHWAY**

**C-1-3 SUBSTRUCTURE**

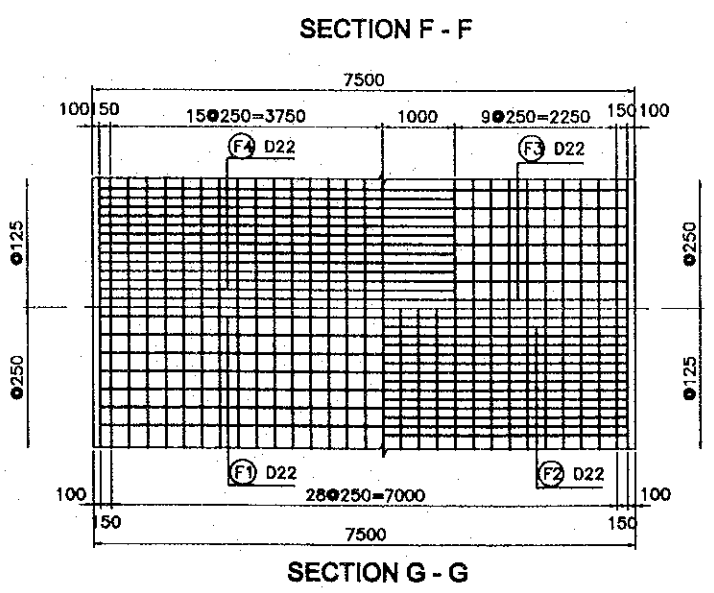
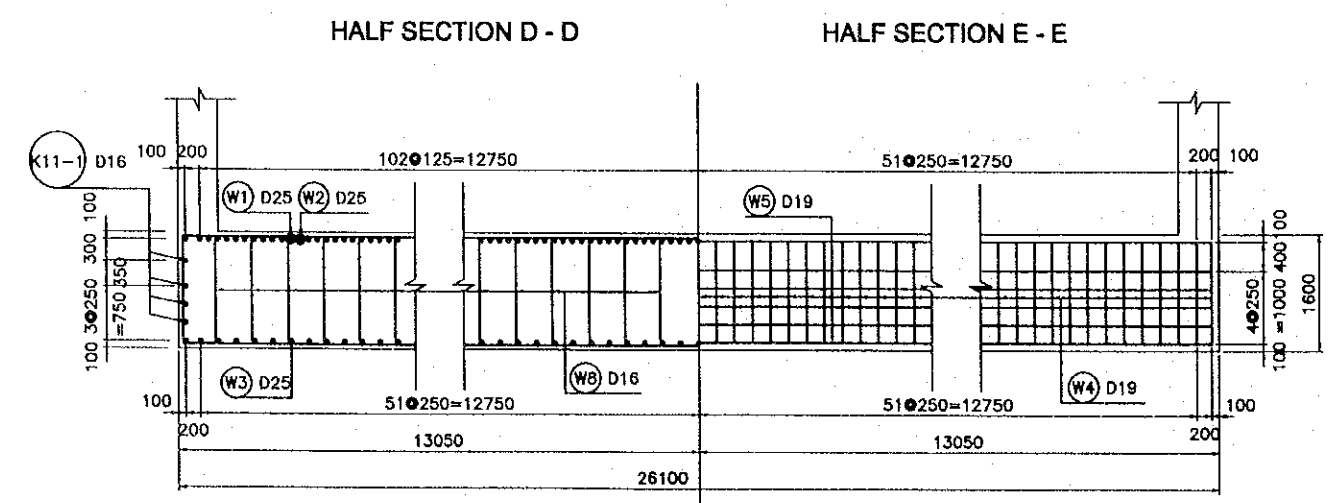
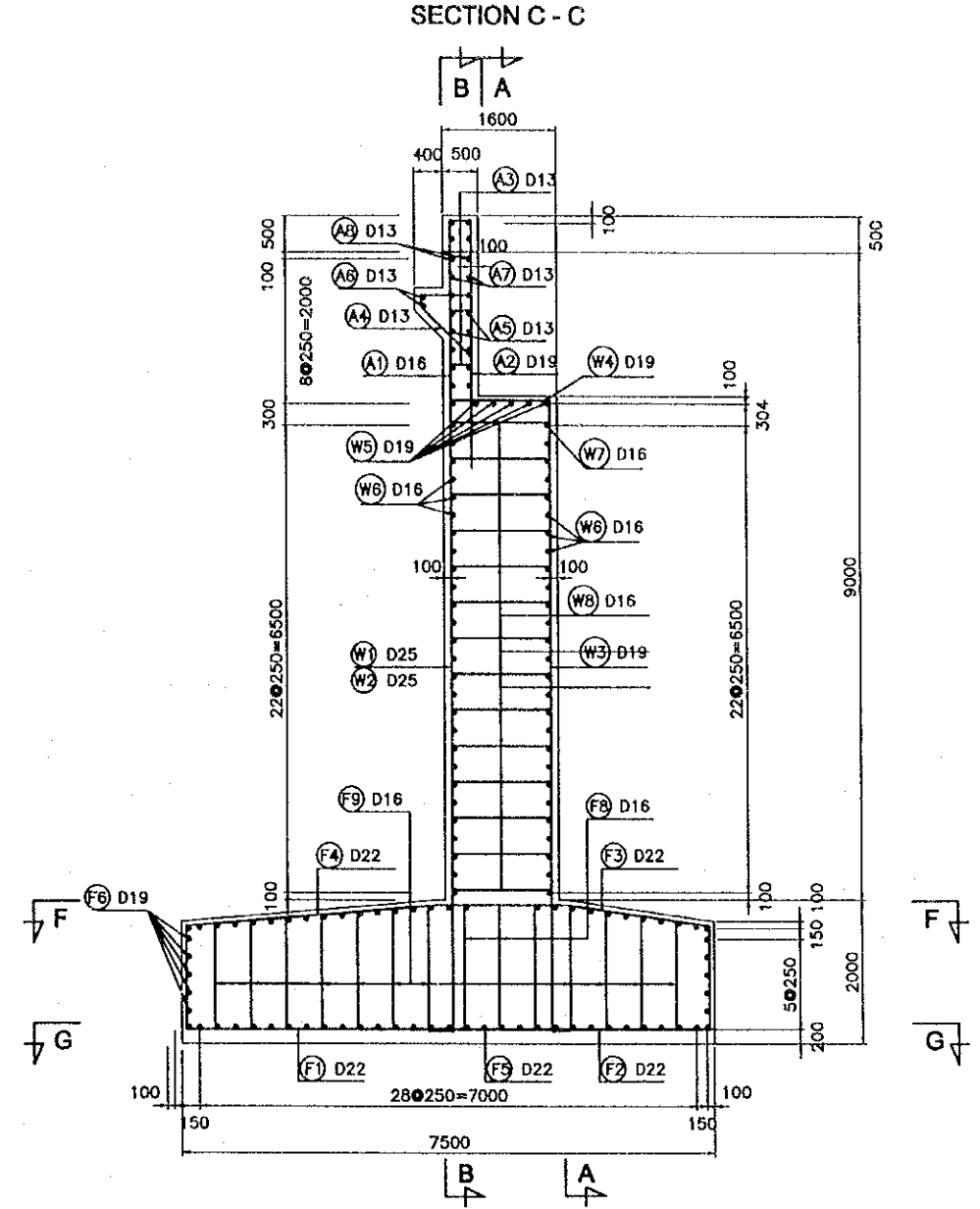
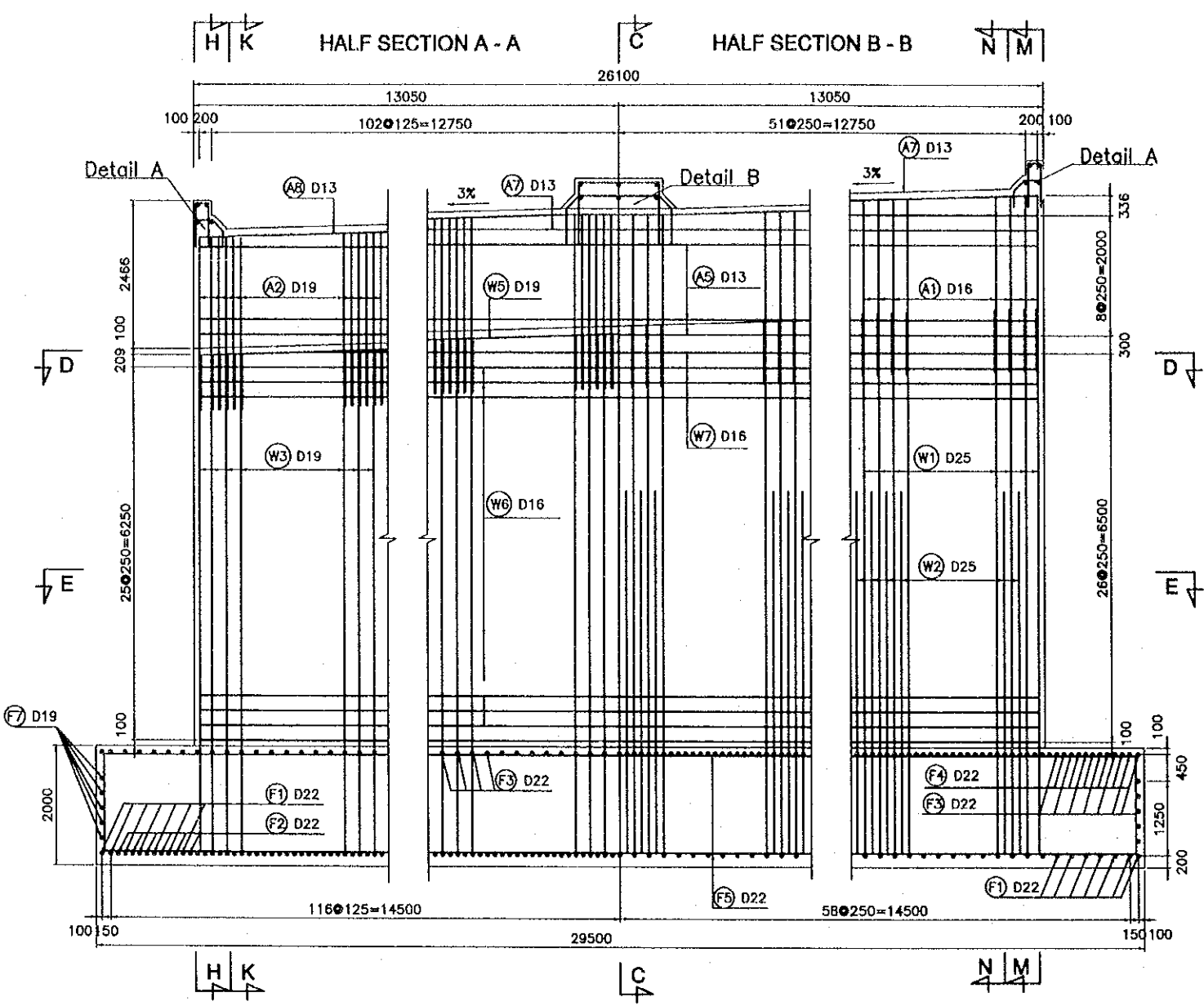
**C-1-3c NH NO.5 FLYOVER**





THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATADA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.3.17	

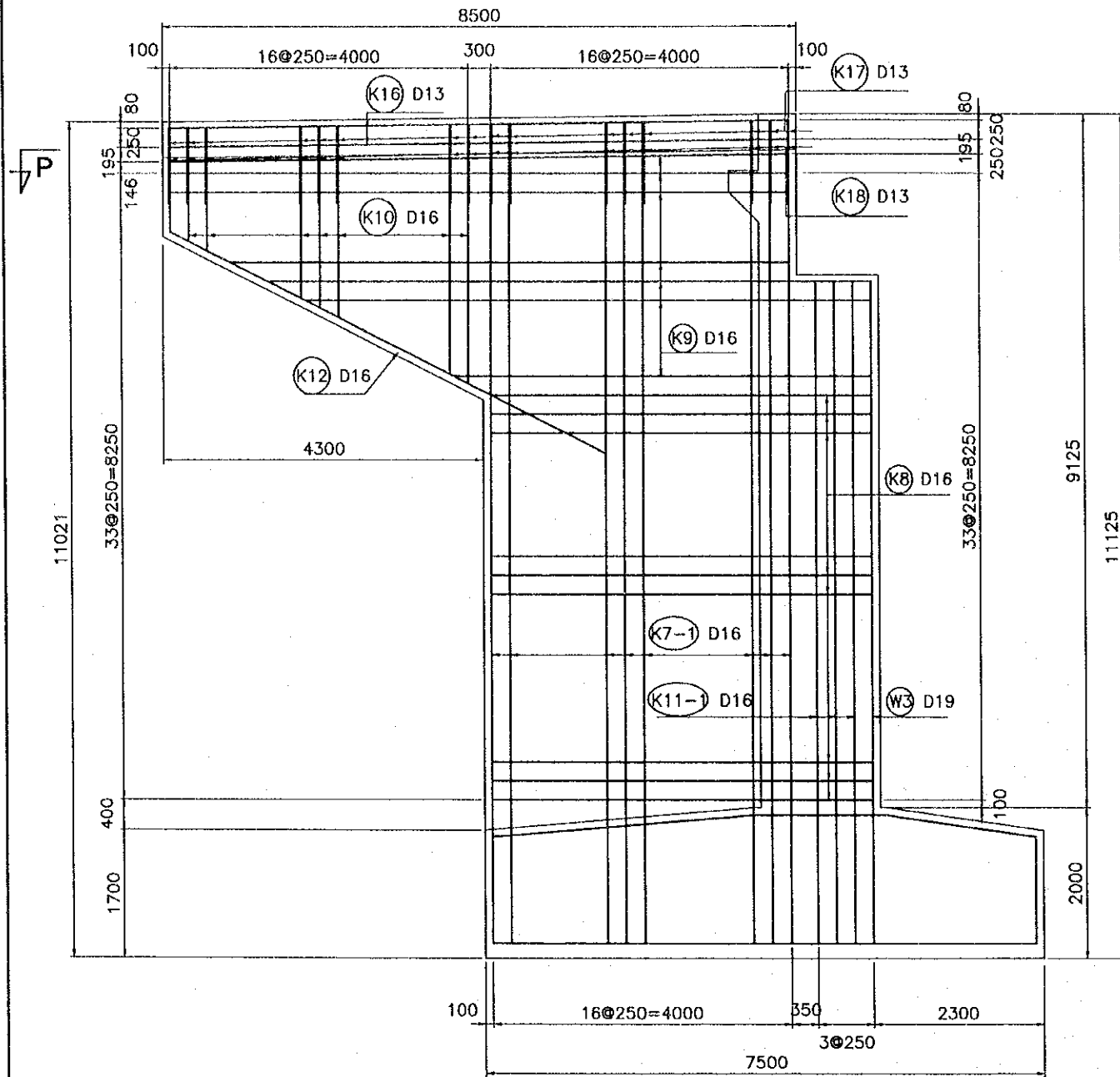
PACKAGE 2	SCALE 1/100	DRAWING No. C-1-3C-2	SHEET No.
NATIONAL HIGHWAY No.5 - FLYOVER BAR ARRANGMENT FOR ABUTMENT A1(1)			



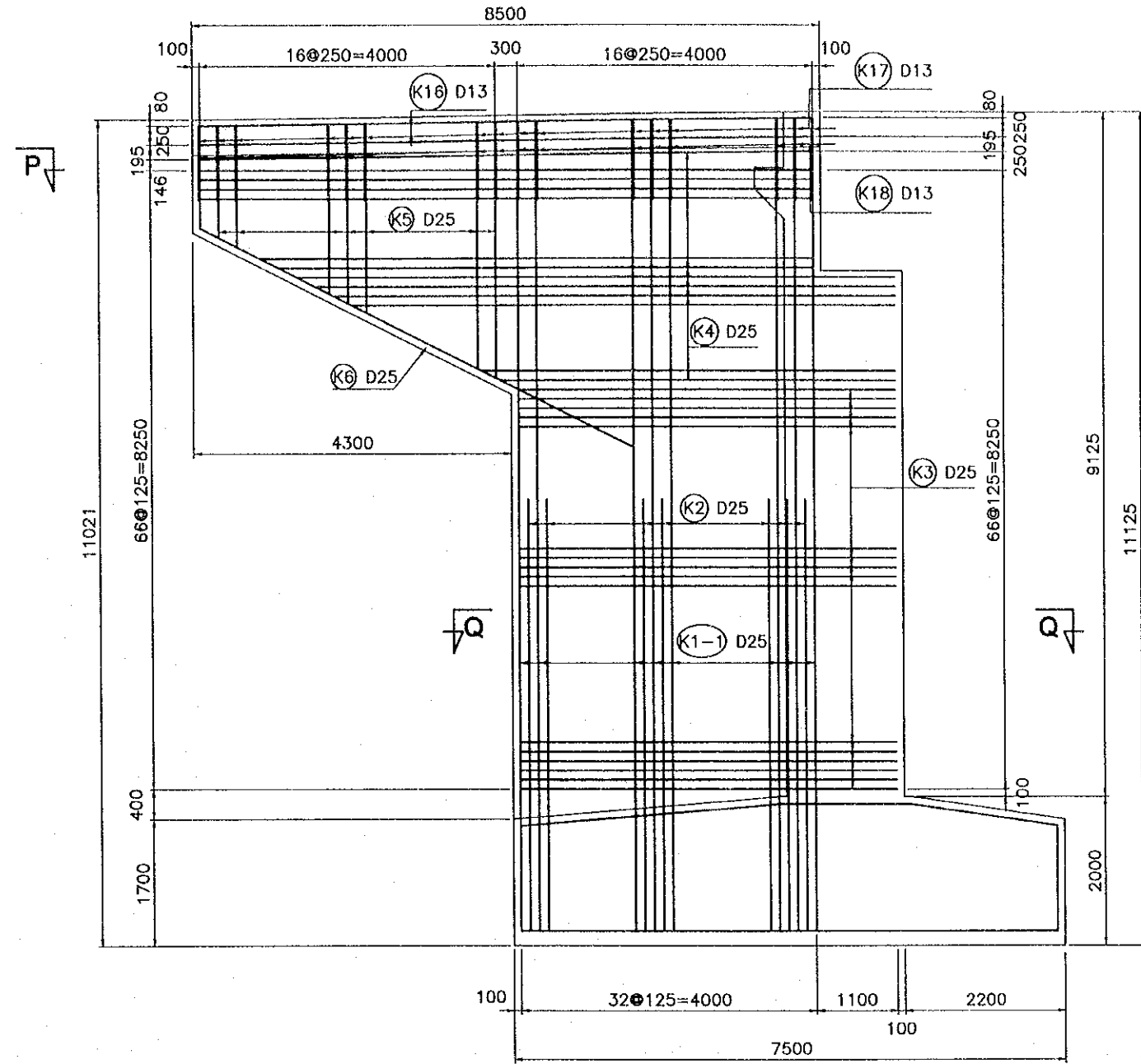
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT	RED RIVER BRIDGE (HANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-1-3C-3	
NATIONAL HIGHWAY No.5 - FLYOVER BAR ARRANGMENT FOR ABUTMENT A1 (2)			

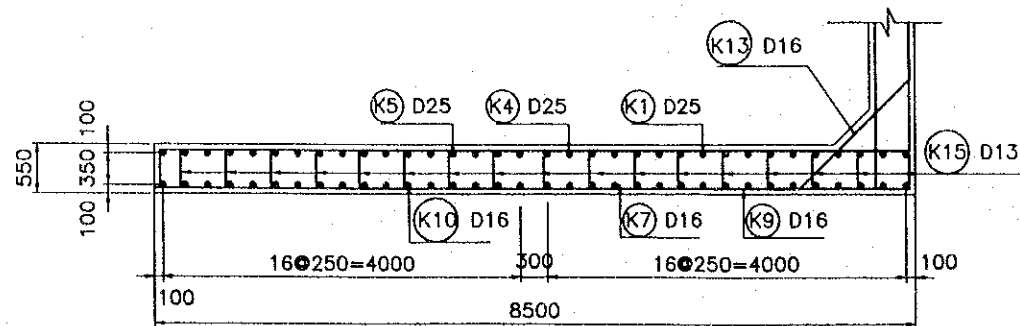
SECTION H - H



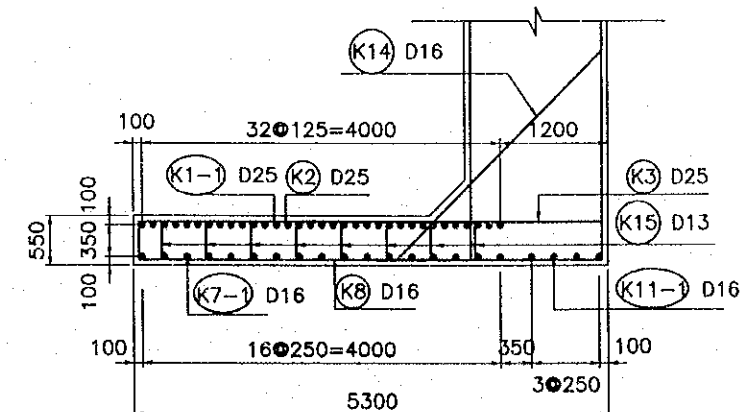
SECTION K - K



SECTION P - P



SECTION Q - Q



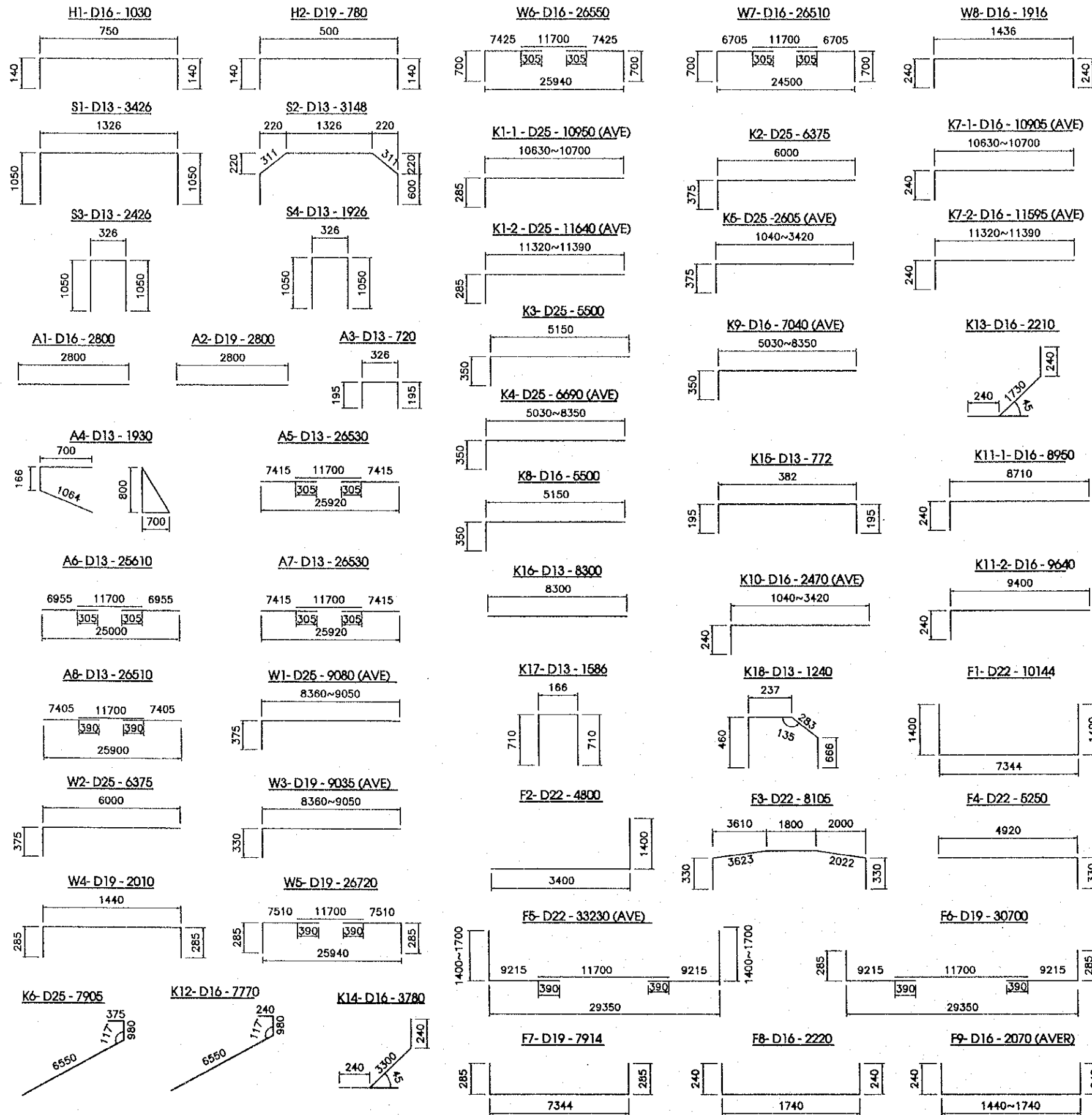


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2002. 8. 14.	

PACKAGE 2	SCALE	DRAWING No. C-1-3C-5	SHEET No.
NATIONAL HIGHWAY No.5 - FLYOVER BAR ARRANGEMENT OF ABUTMENT A1 (4)			

### LIST OF REINFORCING BARS

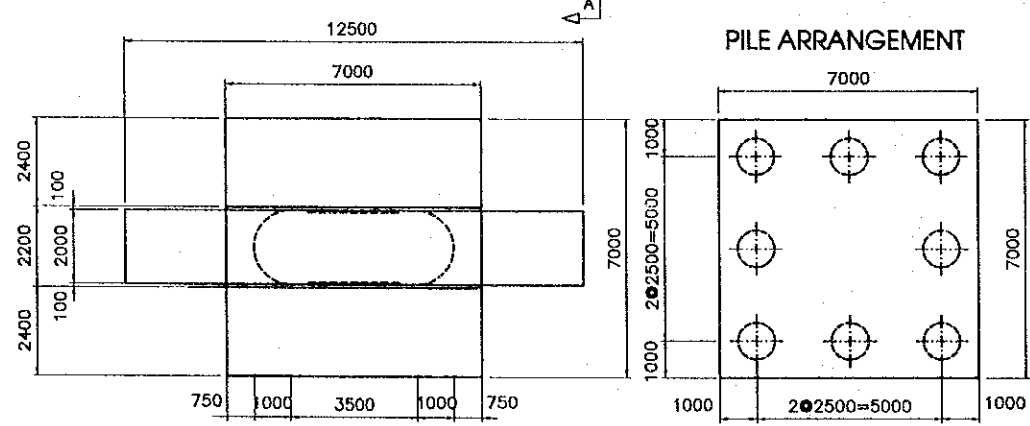
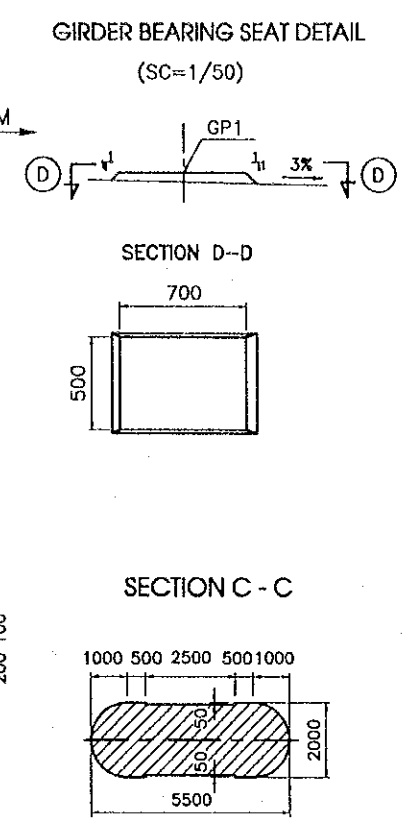
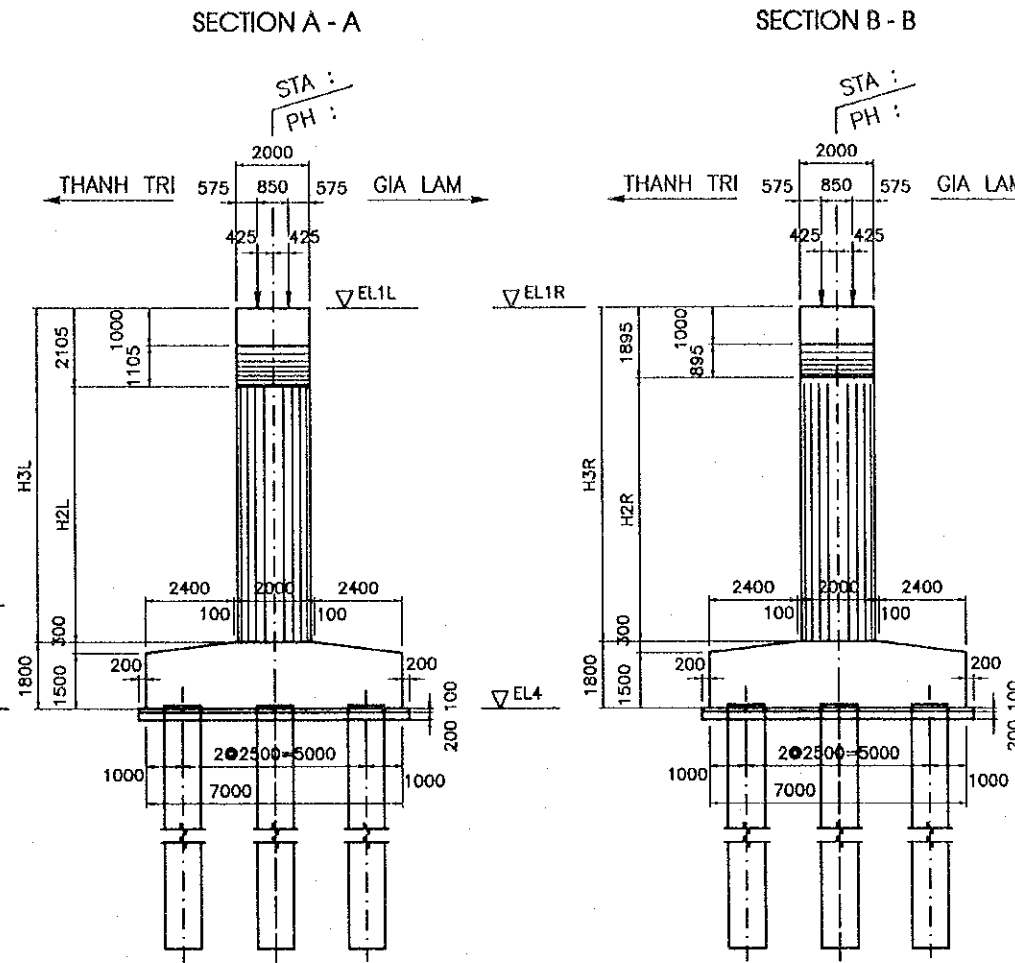
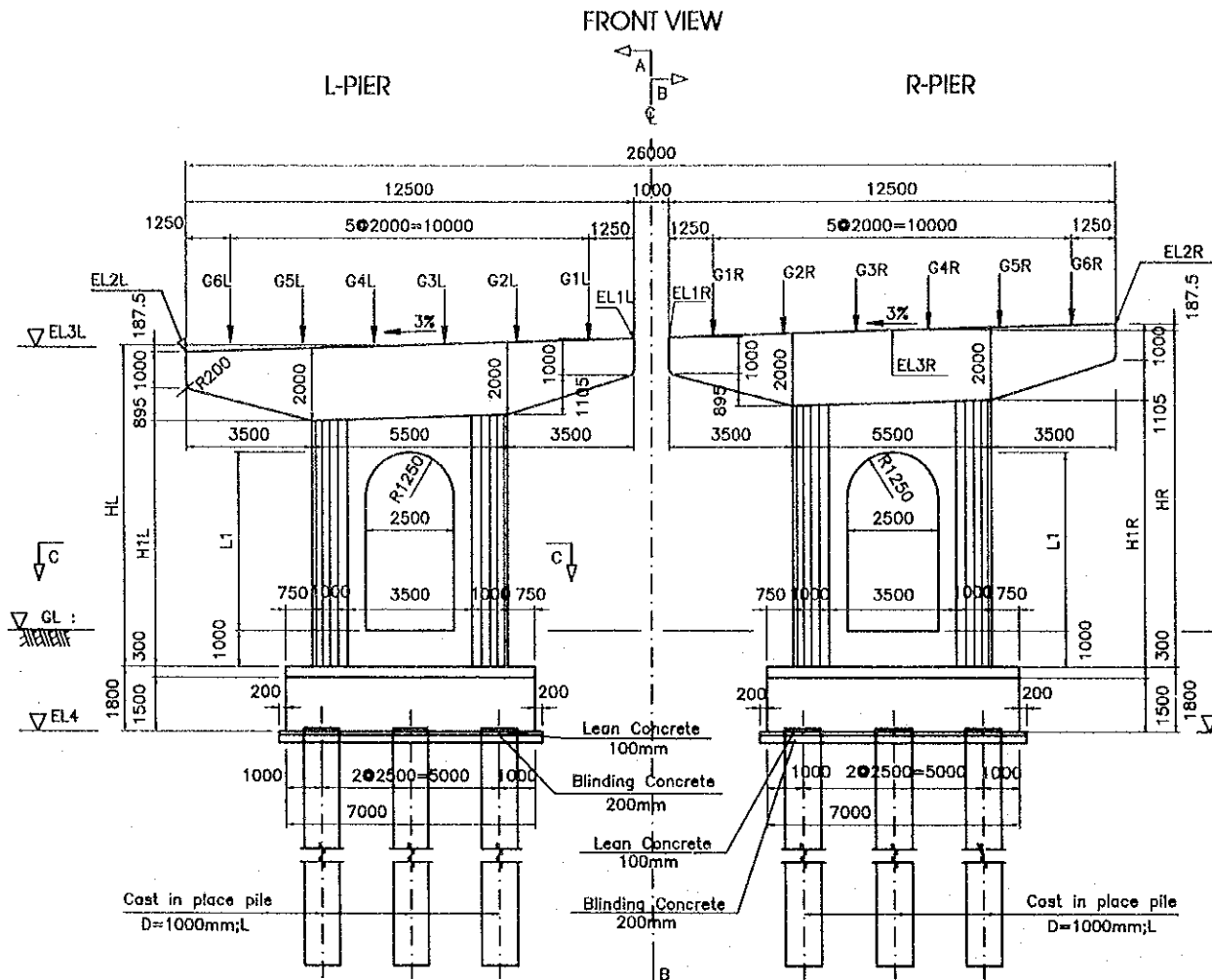
### QUANTITY REINFORCEMENT FOR ABUTMENT A1



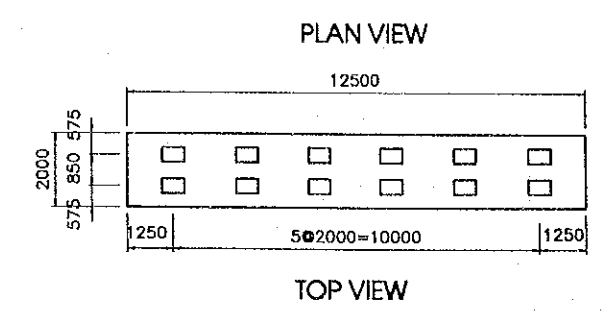
TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
H1		D16	1030	60	1.560	96.41
H2		D16	780	84	1.560	102.21
S1		D13	3426	2	0.995	6.82
S2		D13	3148	2	0.995	6.82
S3		D13	2426	5	0.995	12.07
S4		D13	1926	5	0.995	9.58
A1		D16	2800	133	1.560	580.94
A2		D19	2800	263	2.250	1656.90
A3		D13	720	399	0.995	285.84
A4		D13	1930	129	0.995	247.73
A5		D13	26530	13	0.995	343.17
A6		D13	25610	2	0.995	50.96
A7		D13	26530	2	0.995	52.79
A8		D13	26510	2	0.995	52.75
W1	AVE	D25	9080	105	3.980	3794.53
W2		D25	6375	102	3.980	2588.00
W3	AVE	D19	9035	105	2.250	2134.52
W4		D19	2010	105	2.250	474.86
W5		D19	26720	5	2.250	300.60
W6		D16	26550	55	1.560	2277.99
W7		D16	26510	1	1.560	41.36
W8		D16	1916	380	1.560	1076.03
K1-1	AVE	D25	10950	17	3.980	740.88
K1-2	AVE	D25	11640	17	3.980	787.56
K2		D25	6375	32	3.980	811.92
K3		D25	5500	92	3.980	2013.88
K4	AVE	D25	6690	50	3.980	1331.31
K5	AVE	D25	2605	34	3.980	352.51
K6		D25	7905	2	3.980	62.92
K7-1	AVE	D16	10905	17	1.560	289.20
K7-2	AVE	D16	11595	17	1.560	307.50
K8		D16	5500	46	1.560	394.68
K9	AVE	D16	7040	25	1.560	274.56
K10	AVE	D16	2470	34	1.560	131.01
K11-1		D16	8950	3	1.560	41.89
K11-2		D16	9640	3	1.560	45.12
K12		D16	7770	2	1.560	24.24
K13		D16	2210	10	1.560	34.48
K14		D16	3780	58	1.560	342.01
K15		D13	772	300	0.995	230.44
K16		D13	8300	8	0.995	66.07
K17		D13	1586	68	0.995	107.31
K18		D13	1240	68	0.995	83.90
F1		D22	10144	119	3.040	3669.69
F2		D22	4800	116	3.040	1692.67
F3		D22	8105	119	3.040	2932.06
F4		D22	5250	116	3.040	1851.36
F5	AVE	D22	33230	59	3.040	5960.13
F6		D19	30700	10	2.250	690.75
F7		D19	7914	10	2.250	178.07
F8		D16	2220	117	1.560	612.99
F9	AVE	D16	2070	649	1.560	2095.75
TOTAL ABUTMENT A1						
		D25		12483.51	Kg	
		D22		16105.92	Kg	
		D19		5435.70	Kg	
		D16		8768.35	Kg	
		D13		1555.70	Kg	

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JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.3.11

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/200	C-1-3C-6	
NH No.5 FLYOVER - DETAIL OF PIERS P1,P2,P3,P4			



Item	STA(m)	PH(m)	GL(m)	EL4(m)	L(m)	LEFT PIER							RIGHT PIER							L1(m)
						EL1L(m)	EL2L(m)	EL3L(m)	HL(m)	H1L(m)	H2L(m)	H3L(m)	EL1R(m)	EL2R(m)	EL3R(m)	HR(m)	H1R(m)	H2R(m)	H3R(m)	
P1	11+801.500	11.468	3.490	0.241	40	9.429	9.054	9.241	7.200	5.118	5.283	7.388	9.459	9.834	9.646	7.605	5.688	5.523	7.418	3.00
P2	11+834.500	12.004	3.485	0.776	40	9.963	9.588	9.776	7.200	5.118	5.283	7.388	9.993	10.368	10.181	7.606	5.688	5.523	7.418	3.00
P3	11+867.500	12.641	2.860	0.411	40	10.599	10.224	10.411	8.200	6.118	6.283	8.388	10.629	11.004	10.816	8.605	6.688	6.523	8.418	4.00
P4	11+900.500	13.227	2.890	-0.002	40	11.185	10.810	10.998	9.200	7.117	7.282	9.387	11.216	11.590	11.403	9.605	7.687	7.522	9.417	5.00



ELEVATION OF TOP BEARING SEAT GP1

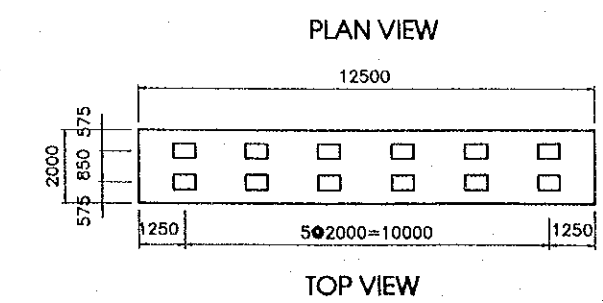
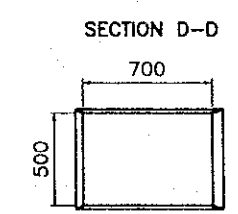
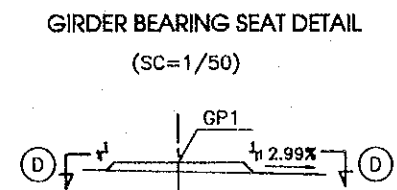
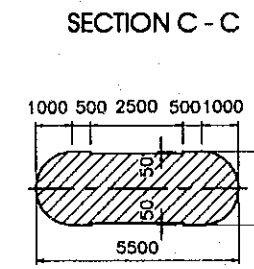
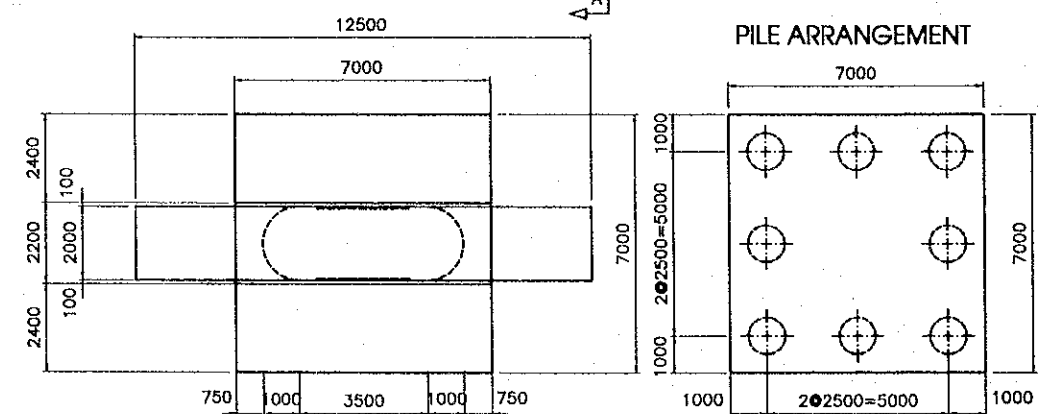
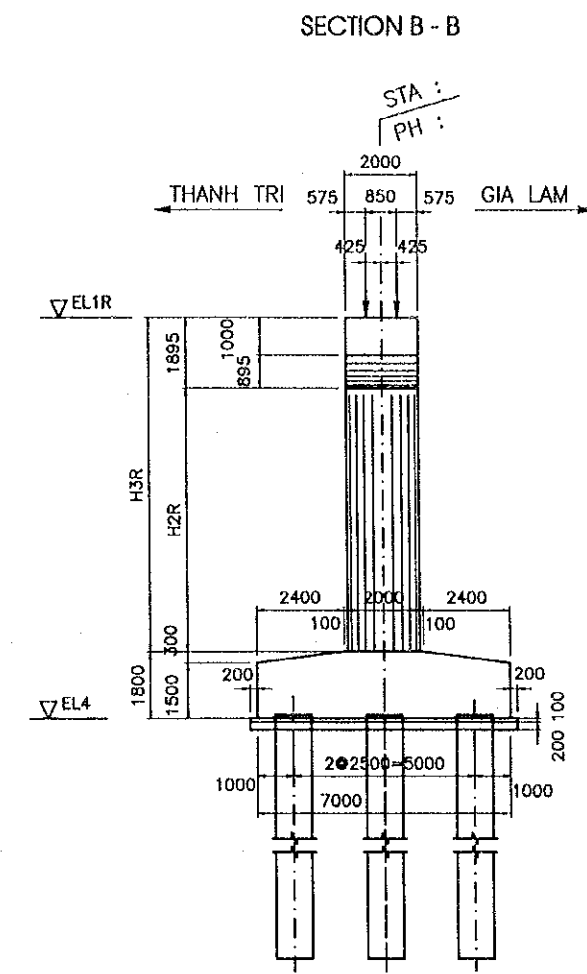
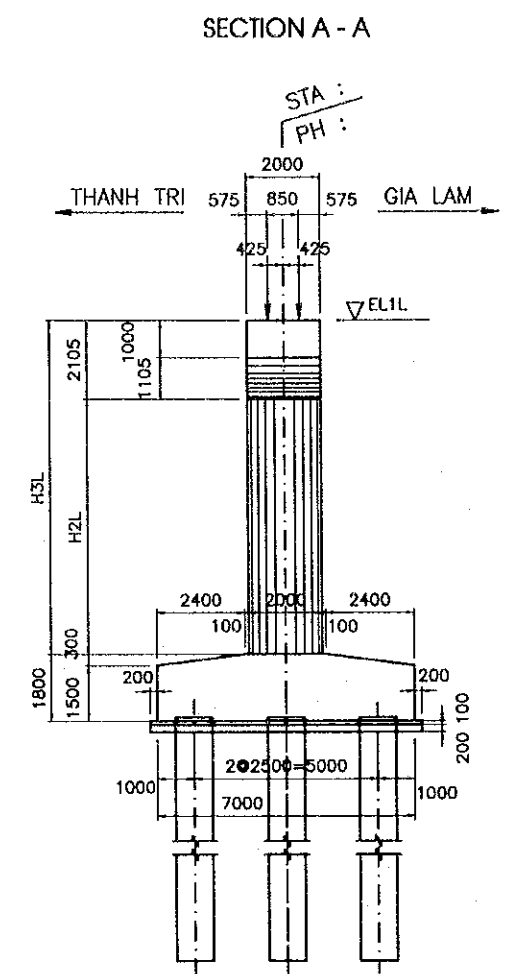
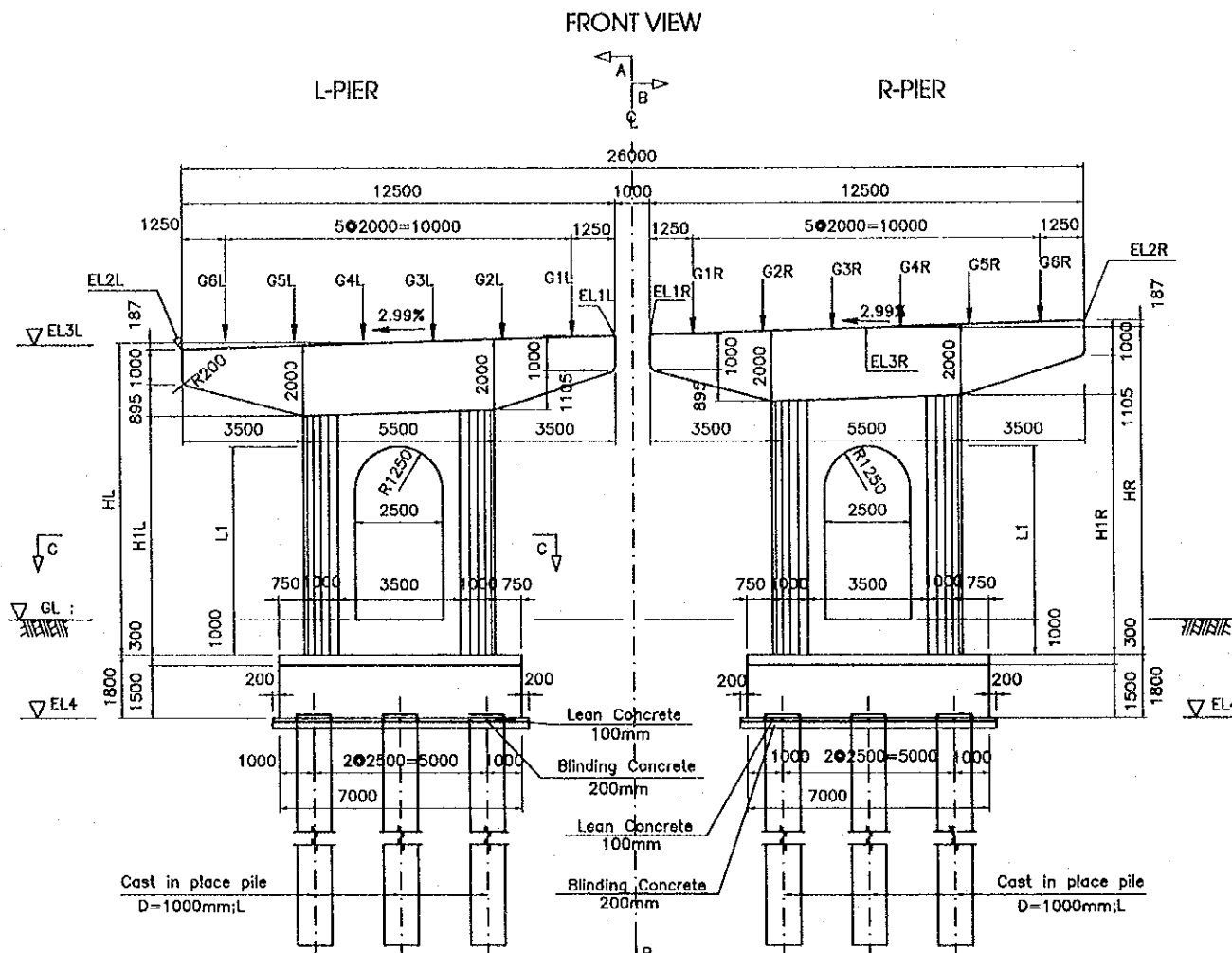
Bearing seat		LEFT PIER						RIGHT PIER						
		G1L	G2L	G3L	G4L	G5L	G6L	G1R	G2R	G3R	G4R	G5R	G6R	
Pier P1	THANH TRI SIDE	Elevation(m)	9.411	9.351	9.291	9.231	9.171	9.111	9.516	9.576	9.636	9.696	9.756	9.816
	GIA LAM SIDE	Elevation(m)	9.431	9.371	9.311	9.251	9.191	9.131	9.536	9.596	9.656	9.716	9.776	9.836
Pier P2	THANH TRI SIDE	Elevation(m)	9.946	9.886	9.826	9.766	9.706	9.646	10.051	10.111	10.171	10.231	10.291	10.351
	GIA LAM SIDE	Elevation(m)	9.966	9.906	9.846	9.786	9.726	9.666	10.071	10.131	10.191	10.251	10.311	10.371
Pier P3	THANH TRI SIDE	Elevation(m)	10.581	10.521	10.461	10.401	10.341	10.281	10.686	10.746	10.806	10.866	10.926	10.986
	GIA LAM SIDE	Elevation(m)	10.601	10.541	10.481	10.421	10.361	10.301	10.706	10.766	10.826	10.886	10.946	11.006
Pier P4	THANH TRI SIDE	Elevation(m)	11.168	11.108	11.048	10.988	10.928	10.868	11.273	11.333	11.393	11.453	11.513	11.573
	GIA LAM SIDE	Elevation(m)	11.188	11.128	11.068	11.008	10.948	10.888	11.293	11.353	11.413	11.473	11.533	11.593

DEPTH OF SUPERSTRUCTURE

THANH TRI SIDE		GIA LAM SIDE		
Component	Depth(mm)	Component	Depth(mm)	
AC layer	75	AC layer	75	
Slab	210	Slab	210	
Girder	1850	Girder	1850	
Mortar1	Pier P1	8	Pier P1	20
	Pier P2	8	Pier P2	23
	Pier P3	8	Pier P3	24
	Pier P4	8	Pier P4	22
Shoe(M)	58	Shoe(F)	36	
Mortar2	20	Mortar2	40	
Total	Pier P1	2019	Pier P1	2031
	Pier P2	2019	Pier P2	2034
	Pier P3	2019	Pier P3	2035
	Pier P4	2019	Pier P4	2033

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JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
PACIFIC CONSULTANTS INTERNATIONAL		DATE

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/200	C-1-3C-7	
NH No.5 FLYOVER - DETAIL OF PIER P5			



Bearing seat	LEFT PIER						RIGHT PIER					
	G1L	G2L	G3L	G4L	G5L	G6L	G1R	G2R	G3R	G4R	G5R	G6R
THANH TRI SIDE	11.882	11.622	11.562	11.503	11.443	11.383	11.787	11.846	11.906	11.966	12.026	12.086
GIA LAM SIDE	11.702	11.642	11.582	11.523	11.463	11.403	11.807	11.866	11.926	11.986	12.046	12.106

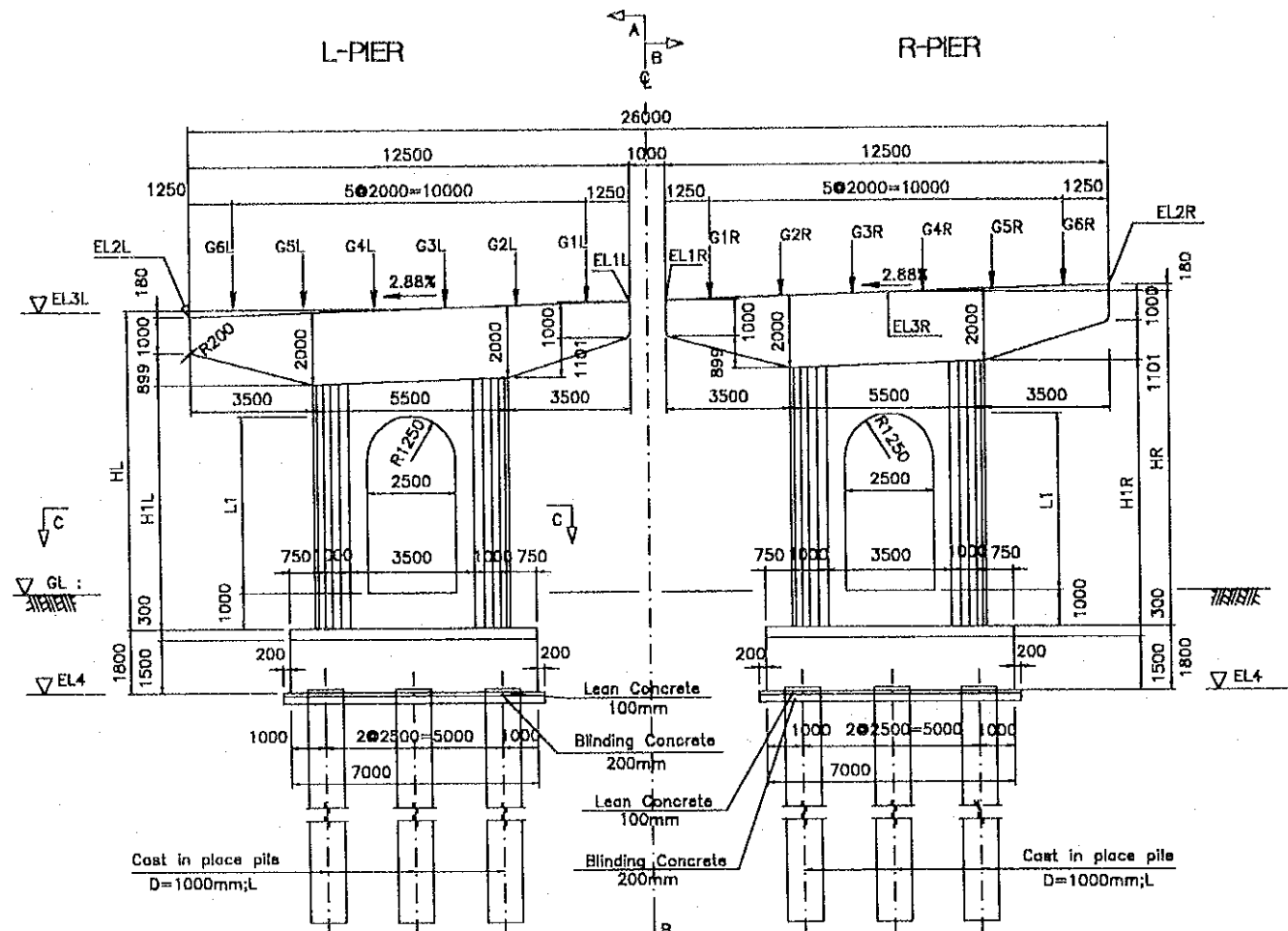
THANH TRI SIDE		GIA LAM SIDE	
Component	Depth(mm)	Component	Depth(mm)
AC layer	75	AC layer	75
Slab	210	Slab	210
Girder	1650	Girder	1650
Motar1	8	Motar1	20
Shoe(M)	56	Shoe(F)	36
Motar2	20	Motar2	40
Total	2019	Total	2031

Items	STA(m)	PH(m)	GL(m)	EL4(m)	L(m)	LEFT PIER						RIGHT PIER						L1(m)		
						EL1L(m)	EL2L(m)	EL3L(m)	HL(m)	H1L(m)	H2L(m)	H3L(m)	EL1R(m)	EL2R(m)	EL3R(m)	HR(m)	H1R(m)		H2R(m)	H3R(m)
P5	11+933.5	13.74	2.924	0.513	40	11.699	11.326	11.513	9.200	7.117	7.282	9.386	11.729	12.103	11.916	9.603	7.685	7.521	9.416	5.50

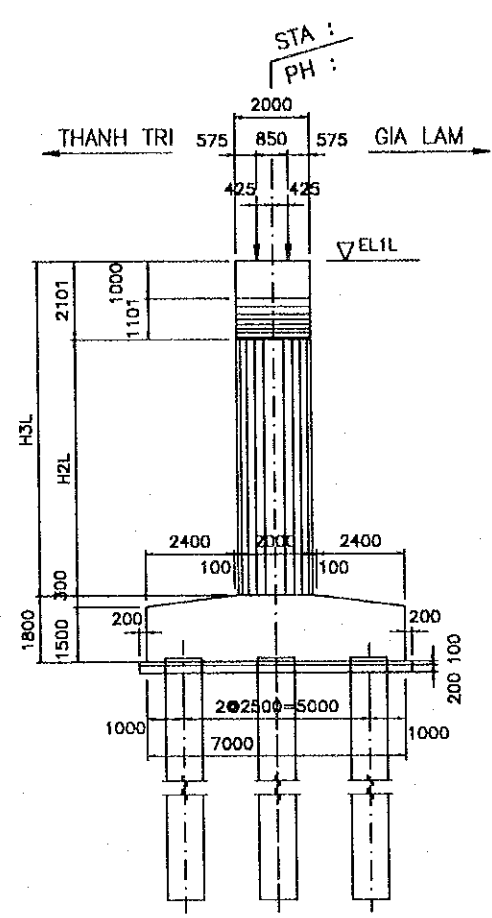
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANH LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.6.1

PACKAGE 2	SCALE 1/200	DRAWING No. C-1-3C-8	SHEET No.
NH No.5 FLYOVER - DETAIL OF PIER P8			

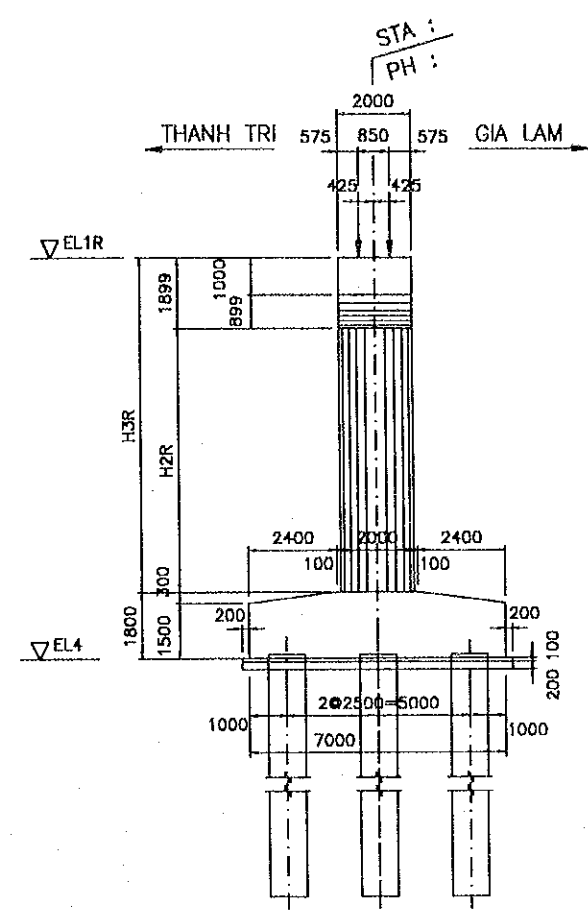
FRONT VIEW



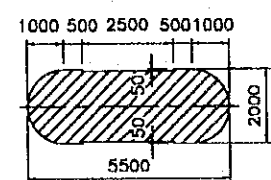
SECTION A - A



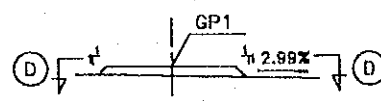
SECTION B - B



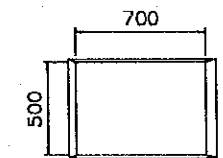
SECTION C - C



GIRDER BEARING SEAT DETAIL



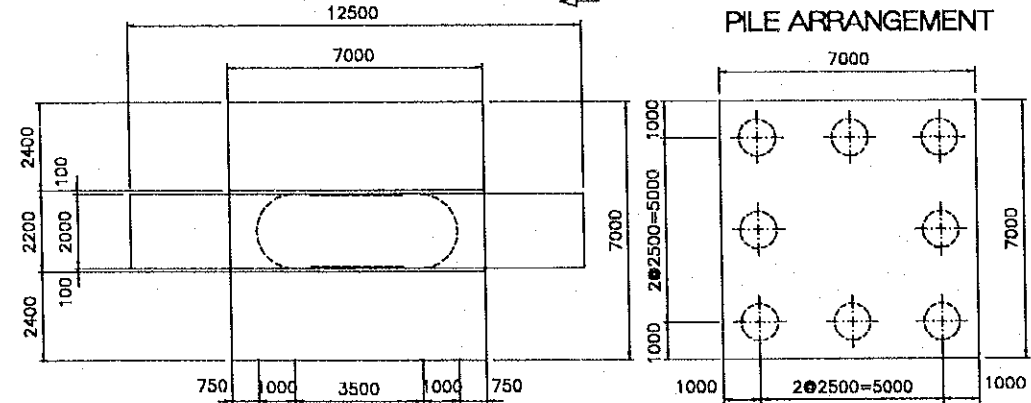
SECTION D - D



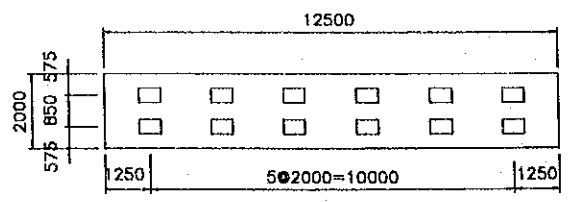
DEPTH OF SUPERSTRUCTURE

THANH TRI SIDE		GIA LAM SIDE	
Component	Depth(mm)	Component	Depth(mm)
AC layer	75	AC layer	75
Slab	209	Slab	209
Grider	1650	Grider	1650
Motor1	8	Motor1	18
Shoe(M)	56	Shoe(F)	36
Motor2	20	Motor2	40
Total	2018	Total	2028

PILE ARRANGEMENT



PLAN VIEW



TOP VIEW

Bearing seat	Left pier						Right pier					
	G1L	G2L	G3L	G4L	G5L	G6L	G1R	G2R	G3R	G4R	G5R	G6R
THANH TRI SIDE	12.125	12.067	12.010	11.952	11.895	11.837	12.226	12.283	12.341	12.399	12.456	12.514
GIA LAM SIDE	12.145	12.087	12.030	11.972	11.915	11.857	12.246	12.303	12.361	12.419	12.476	12.534

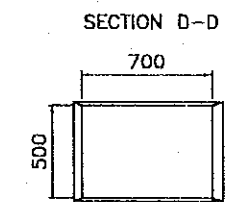
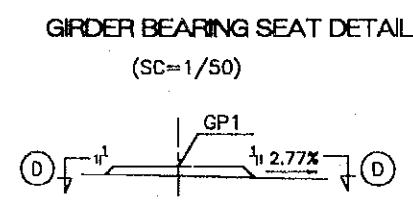
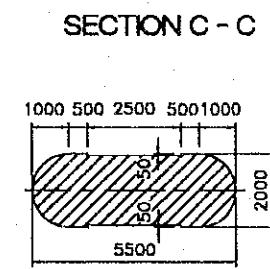
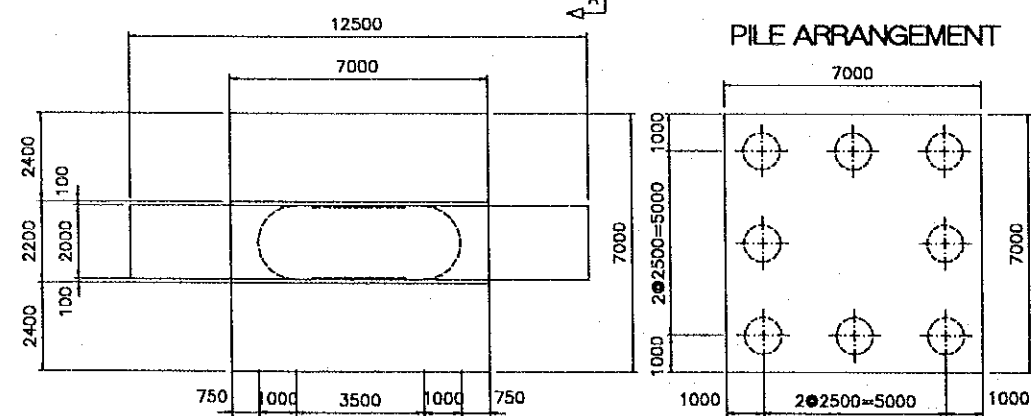
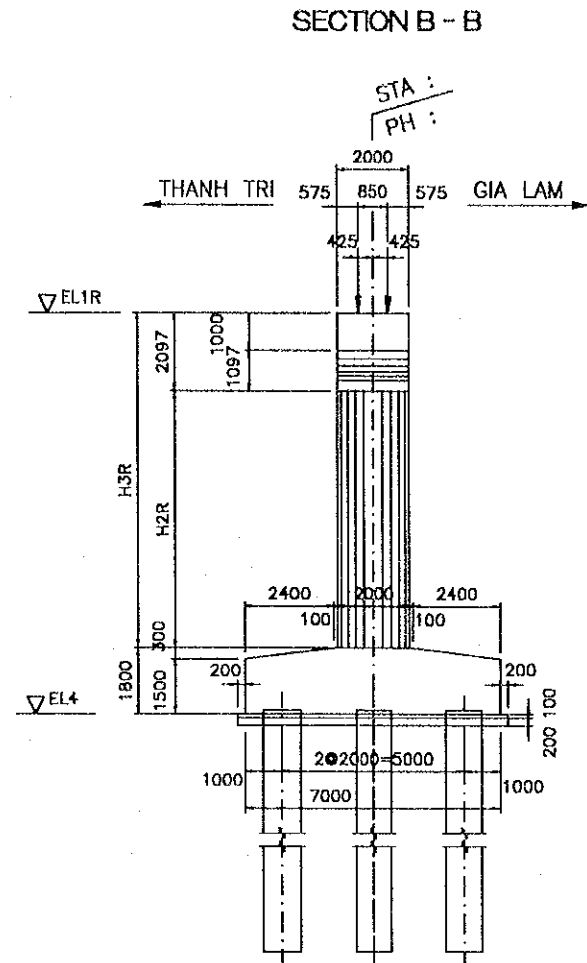
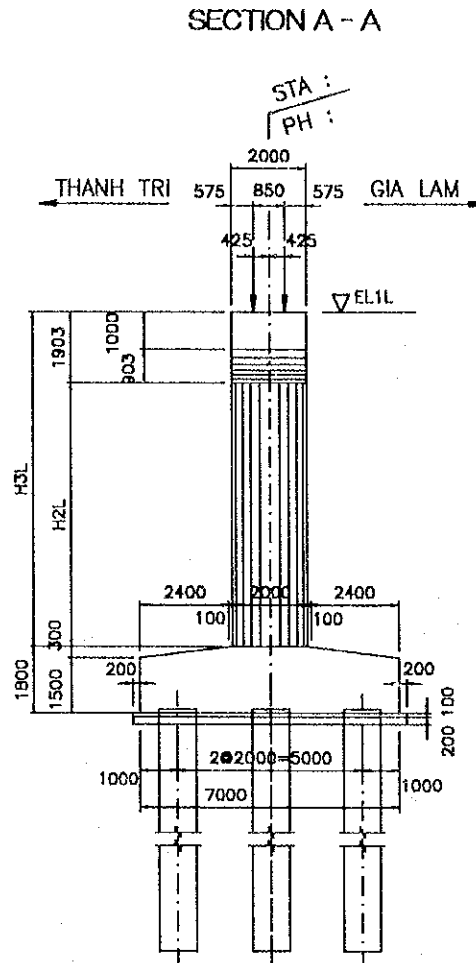
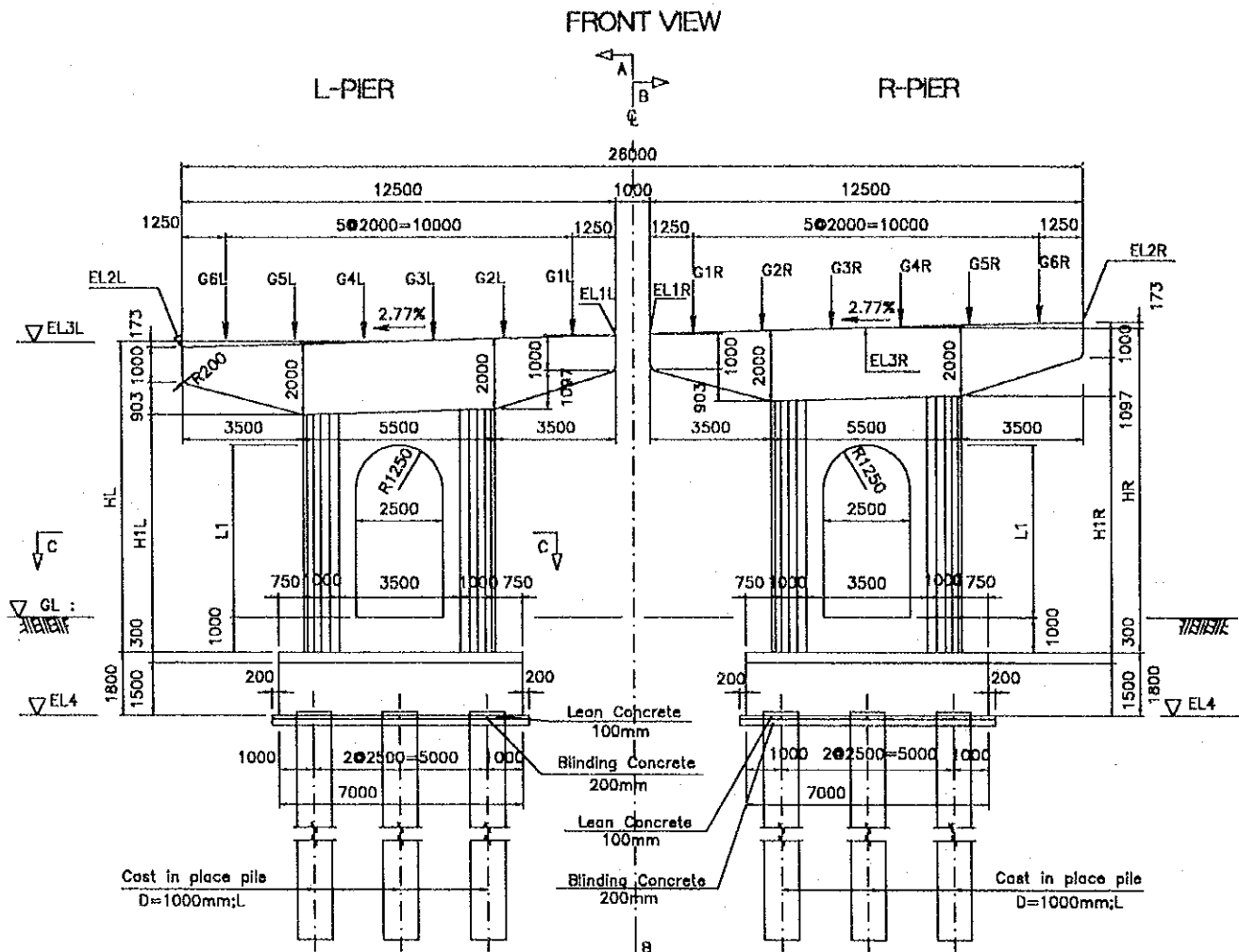
DIMENSIONS OF PIERS

Items	STA(m)	PH(m)	GL(m)	EL4(m)	L(m)	Left pier						Right pier						L1(m)		
						EL1L(m)	EL2L(m)	EL3L(m)	HL(m)	H1L(m)	H2L(m)	H3L(m)	EL1R(m)	EL2R(m)	EL3R(m)	HR(m)	H1R(m)		H2R(m)	H3R(m)
P8	11+966.5	14.179	2.906	-0.039	40	12.141	11.781	11.961	10.20	8.121	8.279	10.38	12.170	12.530	12.350	10.589	8.668	8.510	10.409	6.00



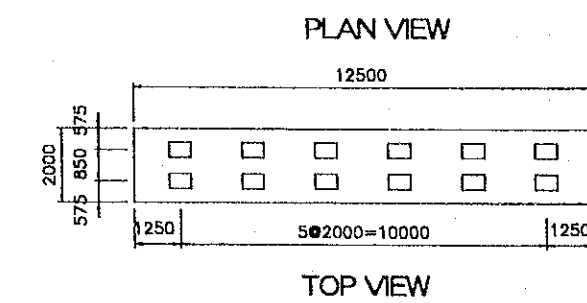
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
PACIFIC CONSULTANTS INTERNATIONAL		DATE 2006.6.1

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/200	C-1-3C-9	
NH No.5 FLYOVER - DETAIL OF PIER P7			



DEPTH OF SUPERSTRUCTURE

THANH TRI SIDE		GIA LAM SIDE	
Component	Depth(mm)	Component	Depth(mm)
AC layer	75	AC layer	75
Slab	209	Slab	209
Girder	1650	Girder	1650
Motor1	8	Motor1	16
Shoe(M)	56	Shoe(F)	36
Motor2	20	Motor2	40
Total	2018	Total	2026



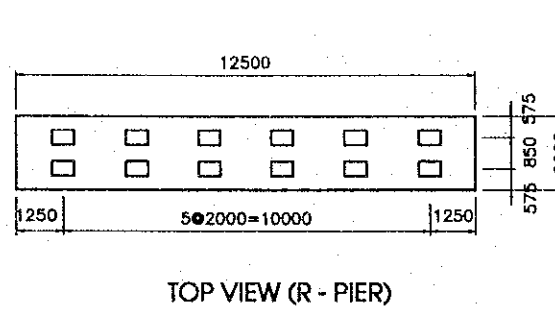
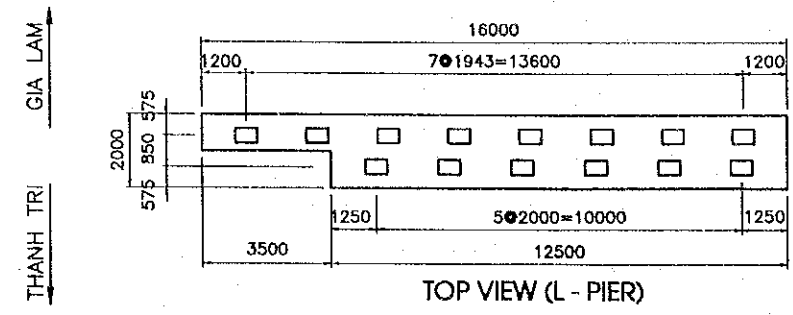
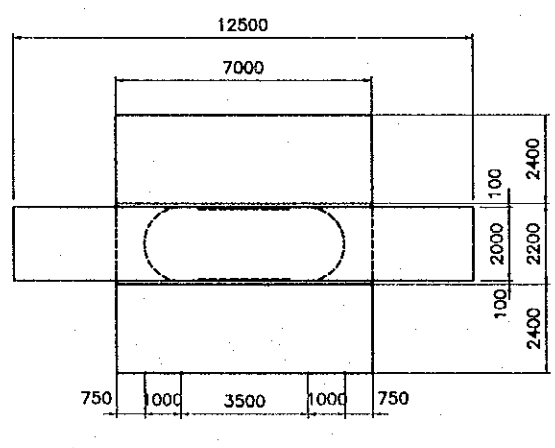
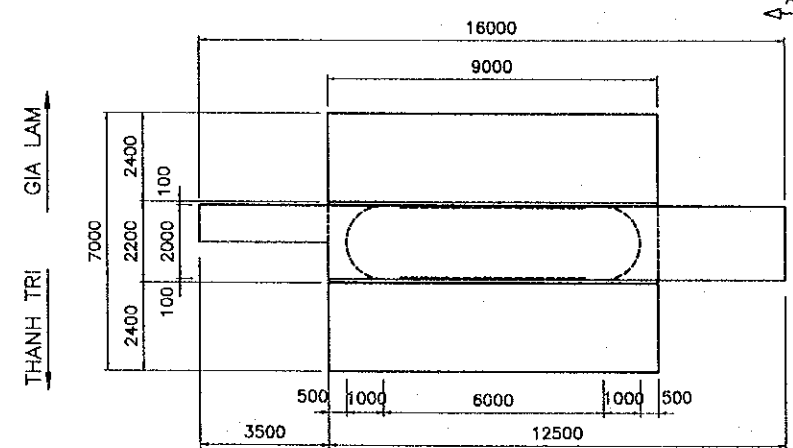
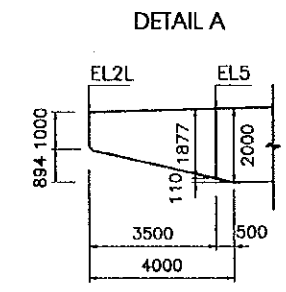
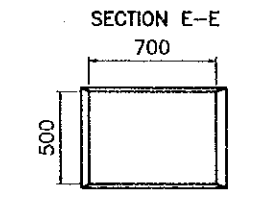
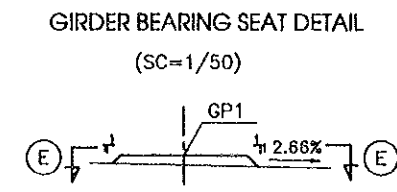
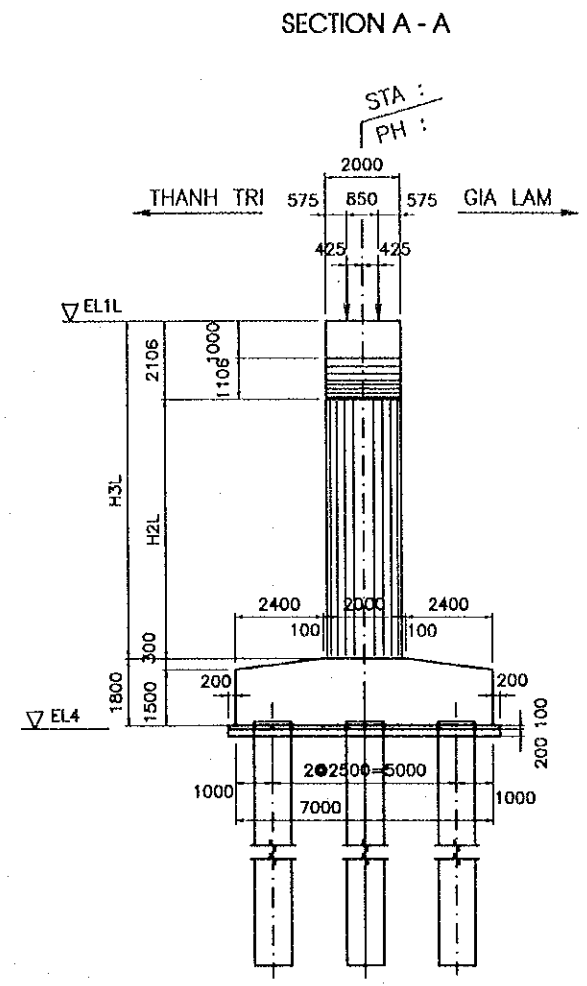
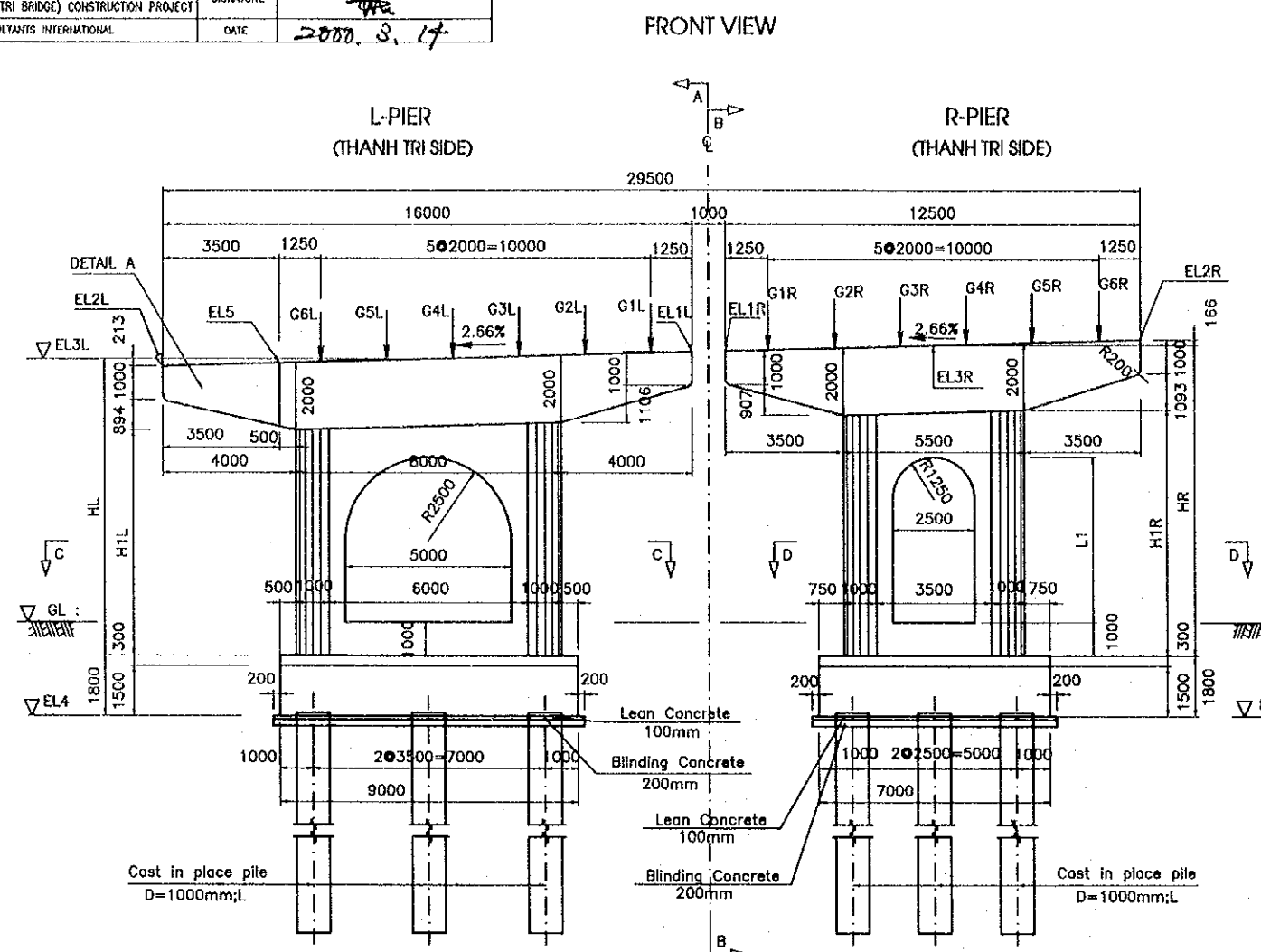
Bearing seat	Left pier						Right pier					
	G1L	G2L	G3L	G4L	G5L	G6L	G1R	G2R	G3R	G4R	G5R	G6R
THANH TRI SIDE	12.495	12.439	12.384	12.329	12.273	12.218	12.592	12.647	12.703	12.758	12.813	12.869
GIA LAM SIDE	12.515	12.459	12.404	12.349	12.293	12.238	12.612	12.667	12.723	12.778	12.833	12.889

DIMENSIONS OF PIERS

Items	STA(m)	PH(m)	GL(m)	EL4(m)	L(m)	Left pier						Right pier						L1(m)		
						EL1L(m)	EL2L(m)	EL3L(m)	HL(m)	H1L(m)	H2L(m)	H3L(m)	EL1R(m)	EL2R(m)	EL3R(m)	HR(m)	H1R(m)		H2R(m)	H3R(m)
P7	11+999.5	14.546	3.077	0.336	40	12.508	12.163	12.336	10.200	8.124	8.470	10.373	12.537	12.883	12.710	10.574	8.650	8.304	10.401	6.50

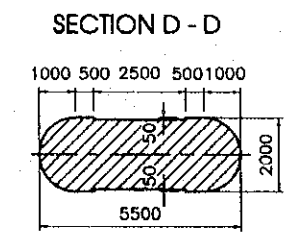
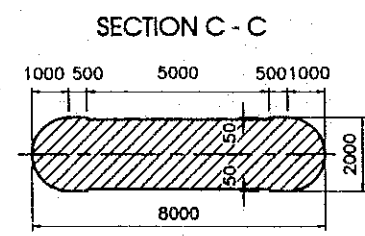
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. MATSUDA
PROJECT: RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONSULTANT: PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.3.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/200	C-1-3C-10	
NH No.5 FLYOVER - DETAIL OF PIER P8(1)			



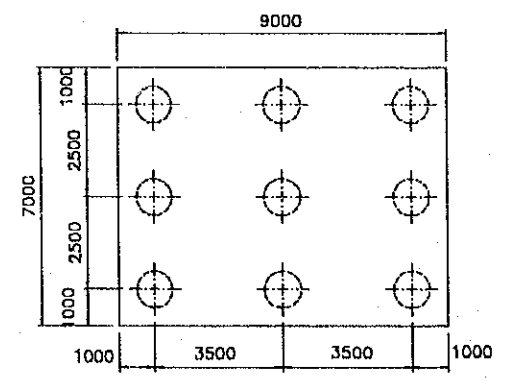
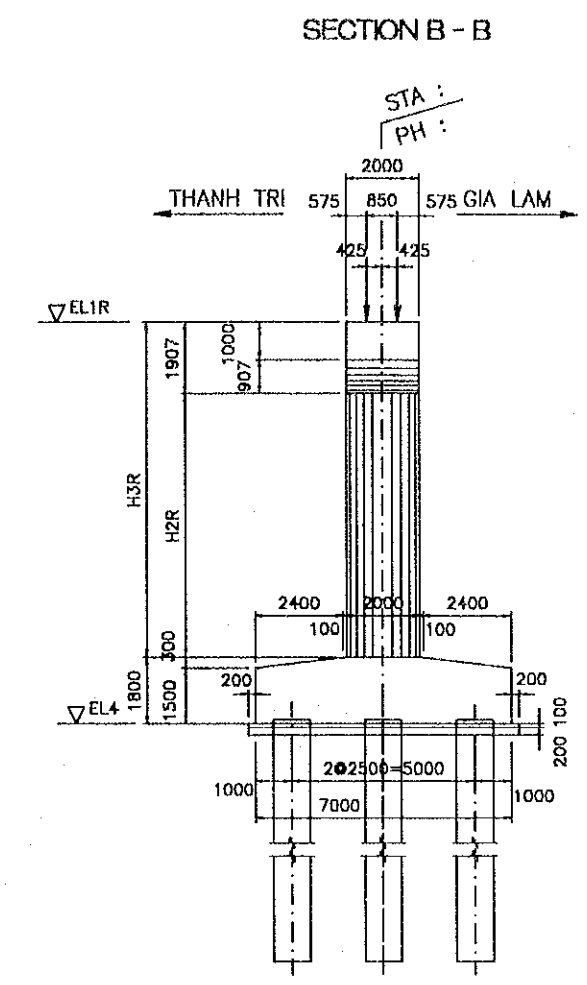
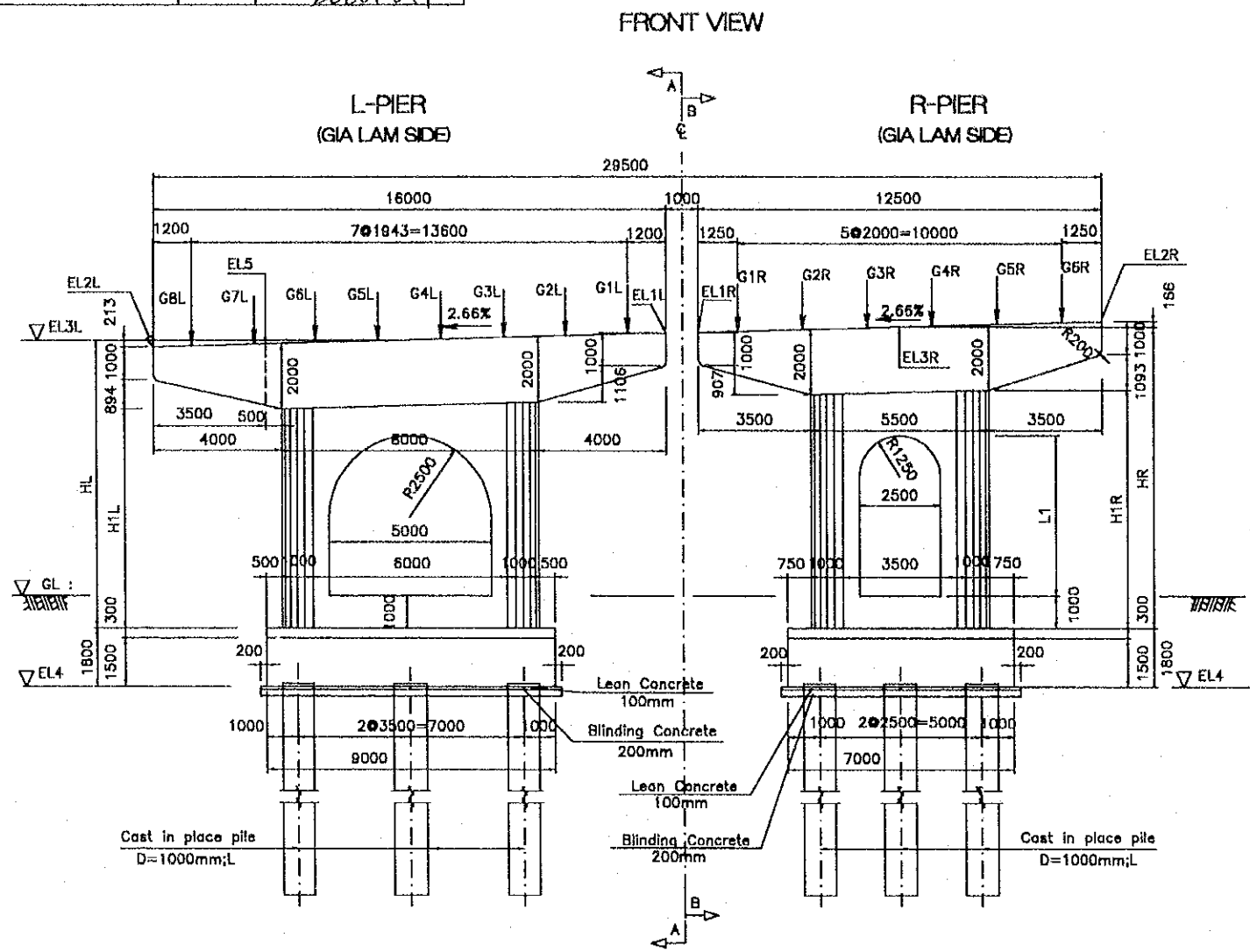
DEPTH OF SUPERSTRUCTURE

THANH TRI SIDE		GIA LAM SIDE	
Component	Depth(mm)	Component	Depth(mm)
AC layer	75	AC layer	75
Slab	209	Slab	209
Girder	1650	Girder	1650
Motor1	8	Motor1	15
Shoe(M)	56	Shoe(F)	36
Motor2	20	Motor2	40
Total	2018	Total	2025

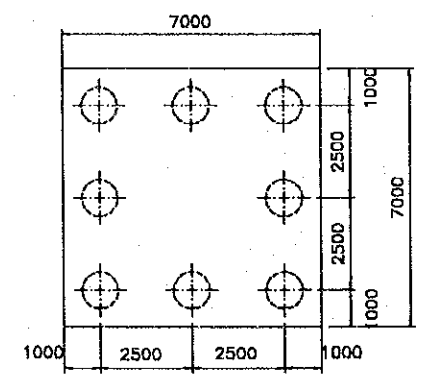


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		DATE 2000.6.1
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/200	C-1-3C-11	
NH No.5 FLYOVER - DETAIL OF PIER P8 (2)			



PILE ARRANGEMENT (L-PIER)



PILE ARRANGEMENT (R-PIER)

ELEVATION OF TOP BEARING SEAT GP1

Bearing seat	Left pier							
	G1L	G2L	G3L	G4L	G5L	G6L	G7L	G8L
THANH TRI SIDE	12.792	12.738	12.685	12.632	12.579	12.526	-	-
GIA LAM SIDE	12.813	12.761	12.710	12.658	12.606	12.554	12.503	12.451

Bearing seat	Right pier					
	G1R	G2R	G3R	G4R	G5R	G6R
THANH TRI SIDE	12.885	12.938	12.991	13.045	13.098	13.151
GIA LAM SIDE	12.905	12.958	13.011	13.065	13.118	13.171

DIMENSIONS OF PIERS

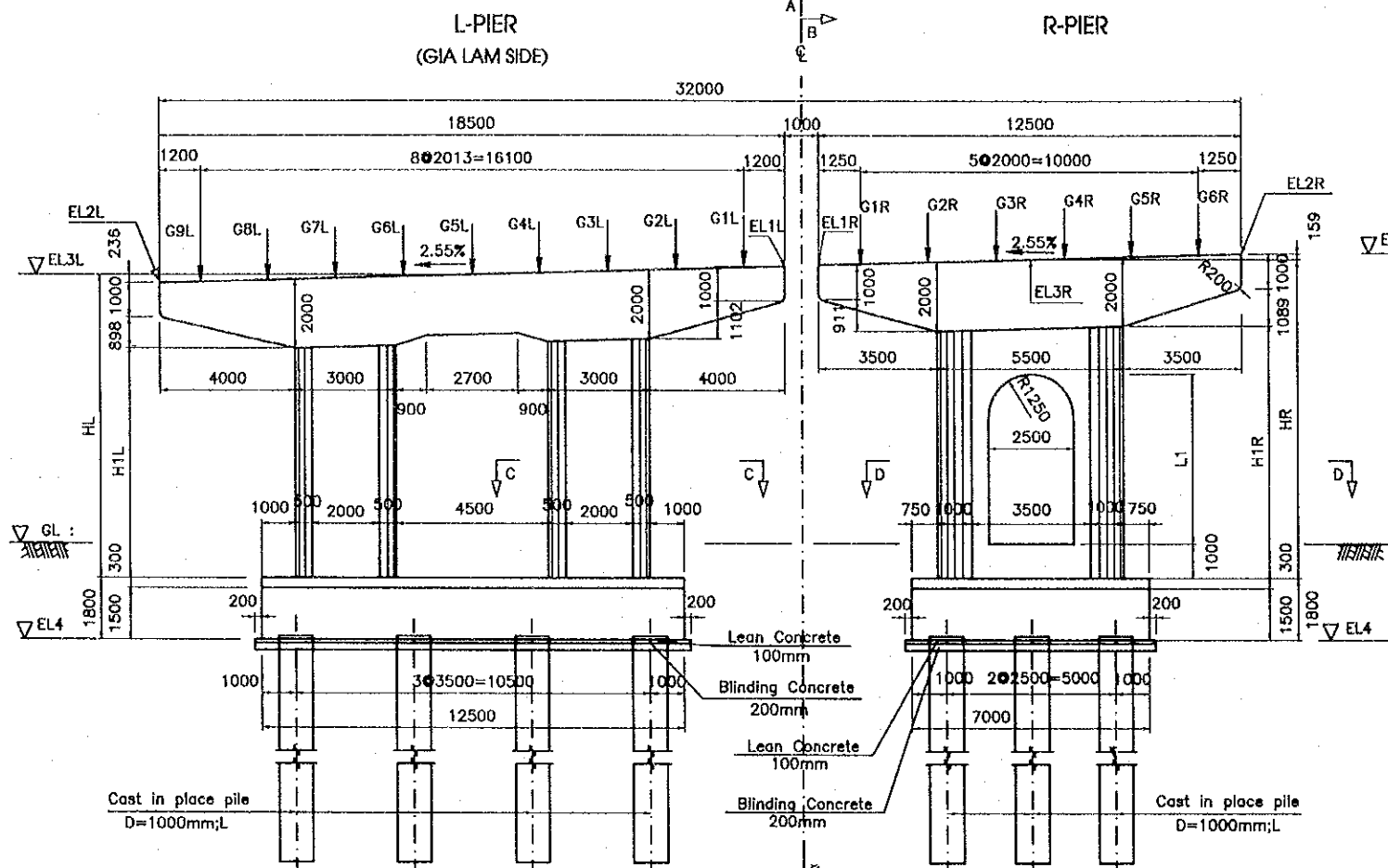
Pier	Sta(m)	PH(m)	GL(m)	EL4(m)	EL5(m)	L(m)	Left pier						Right pier						L1(m)		
							EL1L(m)	EL2L(m)	EL3L(m)	HL(m)	H1L(m)	H2L(m)	H3L(m)	EL1R(m)	EL2R(m)	EL3R(m)	HR(m)	H1R(m)		H2R(m)	H3R(m)
P8	12+032.500	14.841	3.092	0.593	12.473	40	12.806	12.380	12.593	10.20	8.094	8.307	10.413	12.833	13.165	12.999	10.606	8.679	8.533	10.440	6.00

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT: RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT: PACIFIC CONSULTANTS INTERNATIONAL		DATE: 2000.3.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/200	C-1-3C-12	

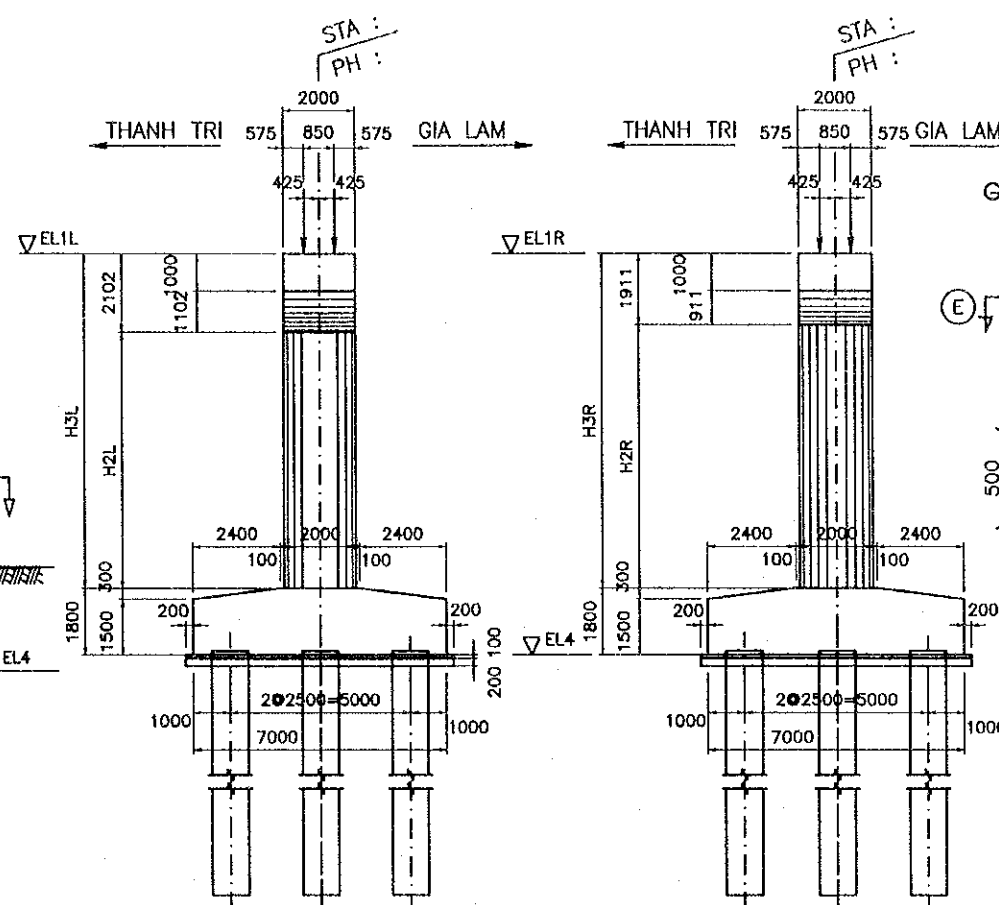
NH No.5 FLYOVER - DETAIL OF PIER P9

FRONT VIEW

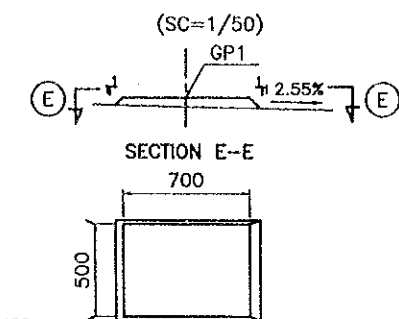


SECTION A - A

SECTION B - B



GIRDER BEARING SEAT DETAIL



ELEVATION OF TOP BEARING SEAT GP1

Bearing seat	LEFT PIER								RIGHT PIER						
	G1L	G2L	G3L	G4L	G5L	G6L	G7L	G8L	G9L	G1R	G2R	G3R	G4R	G5R	G6R
THANH TRI SIDE	13.020	12.961	12.903	12.844	12.785	12.727	12.668	12.609	-	13.108	13.159	13.210	13.261	13.312	13.363
GIA LAM SIDE	13.040	12.988	12.937	12.886	12.834	12.783	12.732	12.680	12.629	13.128	13.179	13.230	13.281	13.332	13.383

DIMENSIONS OF PIERS

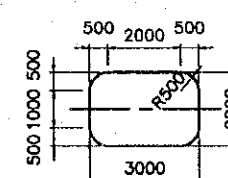
Items	STA(m)	PH(m)	GL(m)	EL4(m)	L(m)	LEFT PIER						
						EL1L(m)	EL2L(m)	EL3L(m)	HL(m)	H1L(m)	H2L(m)	H3L(m)
P9	12+065.500	15.063	3.094	-0.205	40	13.030	12.559	12.795	11.20	9.066	9.333	11.435

Items	RIGHT PIER							L1(m)
	EL1R(m)	EL2R(m)	EL3R(m)	HR(m)	H1R(m)	H2R(m)	H3R(m)	
P9	13.056	13.375	13.215	11.620	9.690	9.550	11.461	7.50

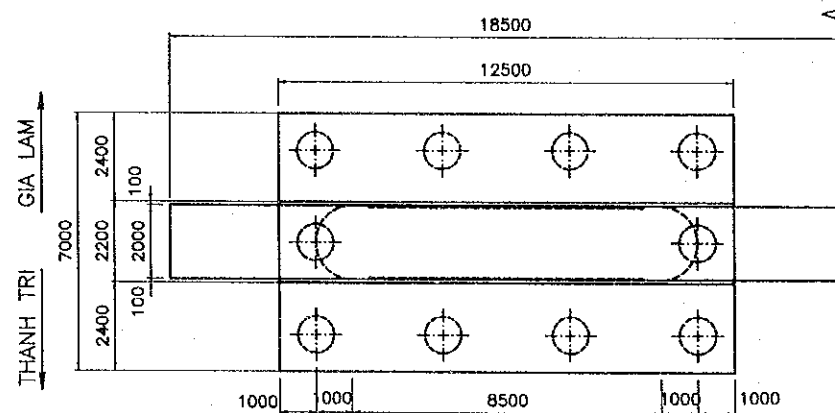
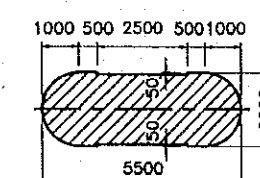
DEPTH OF SUPERSTRUCTURE

THANH TRI SIDE		GIA LAM SIDE	
Component	Depth(mm)	Component	Depth(mm)
AC layer	75	AC layer	75
Slab	208	Slab	208
Girder	1650	Girder	1650
Motor1	8	Motor1	13
Shoe(M)	56	Shoe(F)	36
Motor2	20	Motor2	40
Total	2017	Total	2022

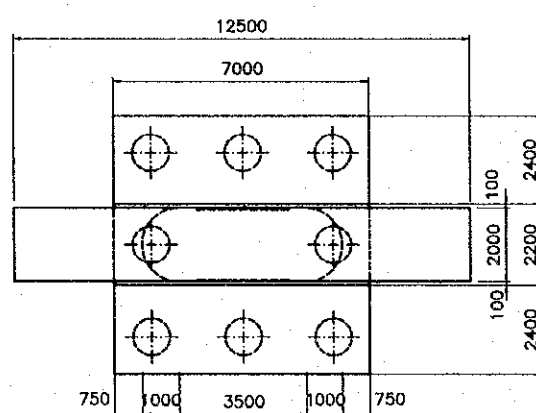
SECTION C - C



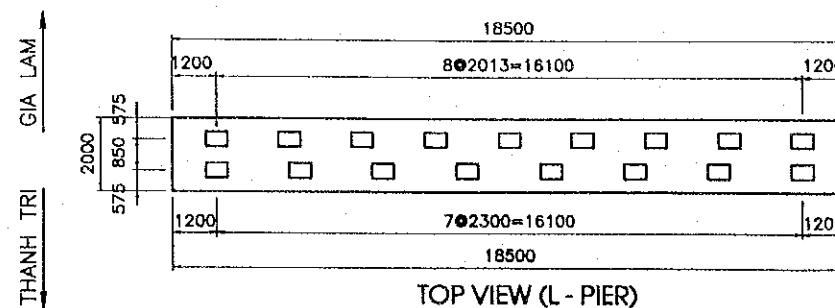
SECTION D - D



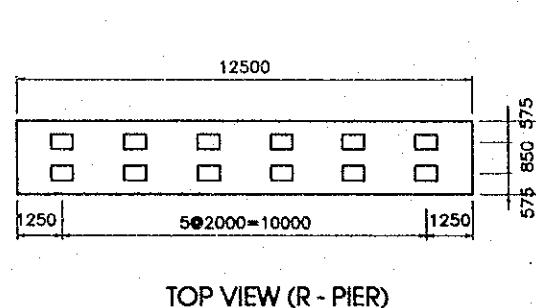
PLAN VIEW (L-PIER)



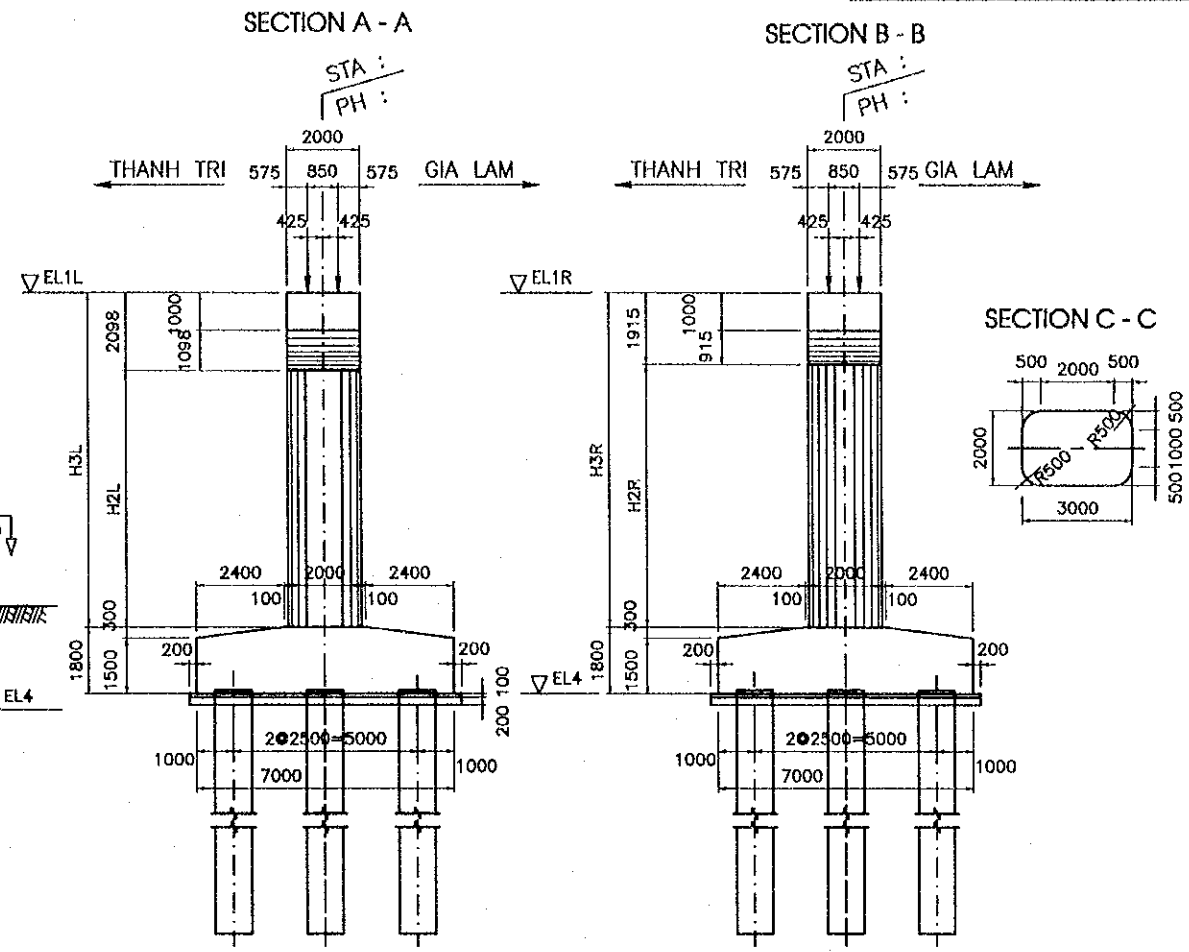
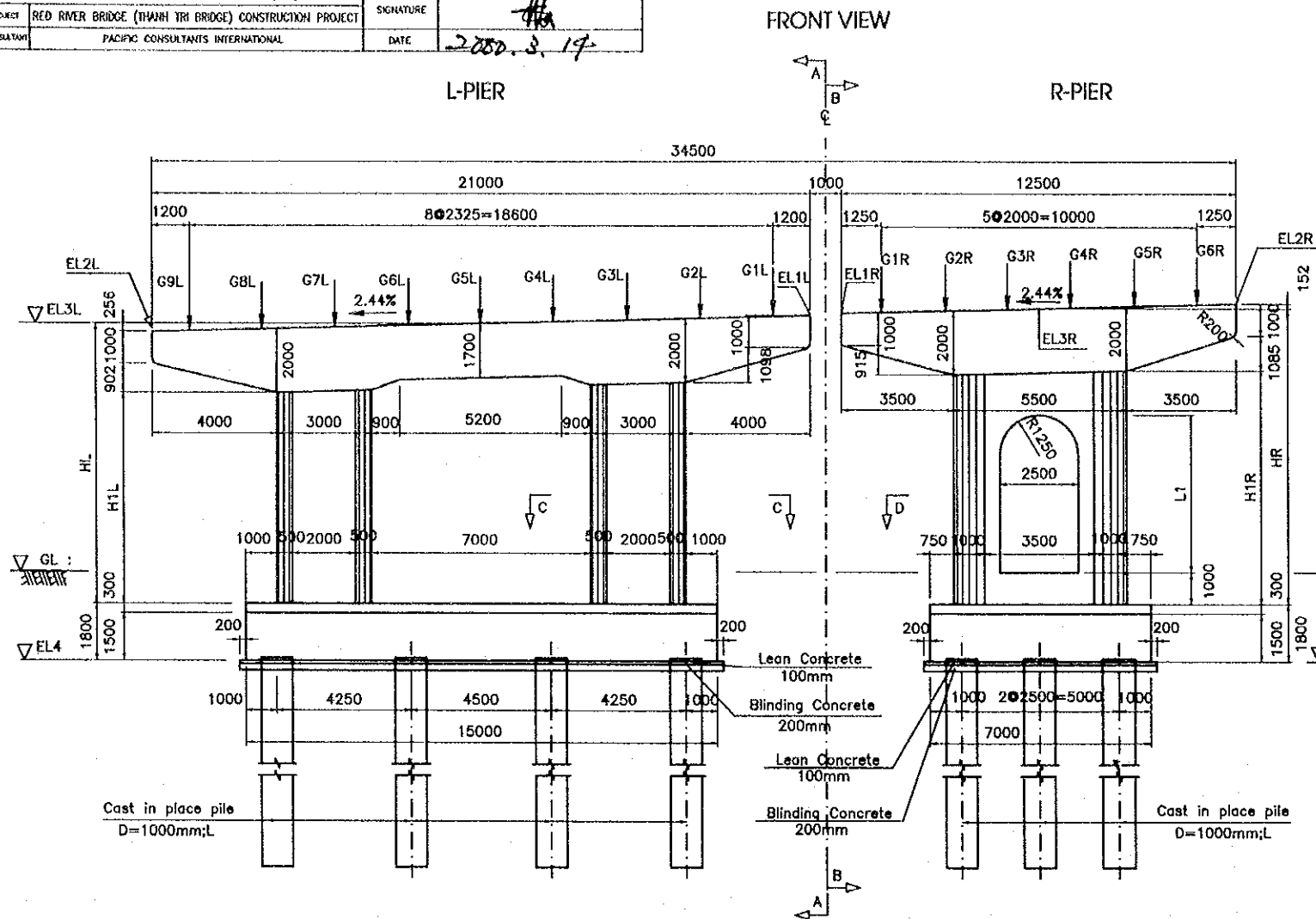
PLAN VIEW (R-PIER)



TOP VIEW (L-PIER)



TOP VIEW (R-PIER)



ELEVATION OF TOP BEARING SEAT GP1

Bearing seat	LEFT PIER								RIGHT PIER						
	G1L	G2L	G3L	G4L	G5L	G6L	G7L	G8L	G9L	G1R	G2R	G3R	G4R	G5R	G6R
THANH TRI SIDE	13.172	13.115	13.058	13.001	12.945	12.888	12.831	12.774	12.718	13.256	13.305	13.353	13.402	13.451	13.500
GIA LAM SIDE	13.192	13.135	13.078	13.021	12.965	12.908	12.851	12.794	12.738	13.276	13.325	13.373	13.422	13.471	13.520

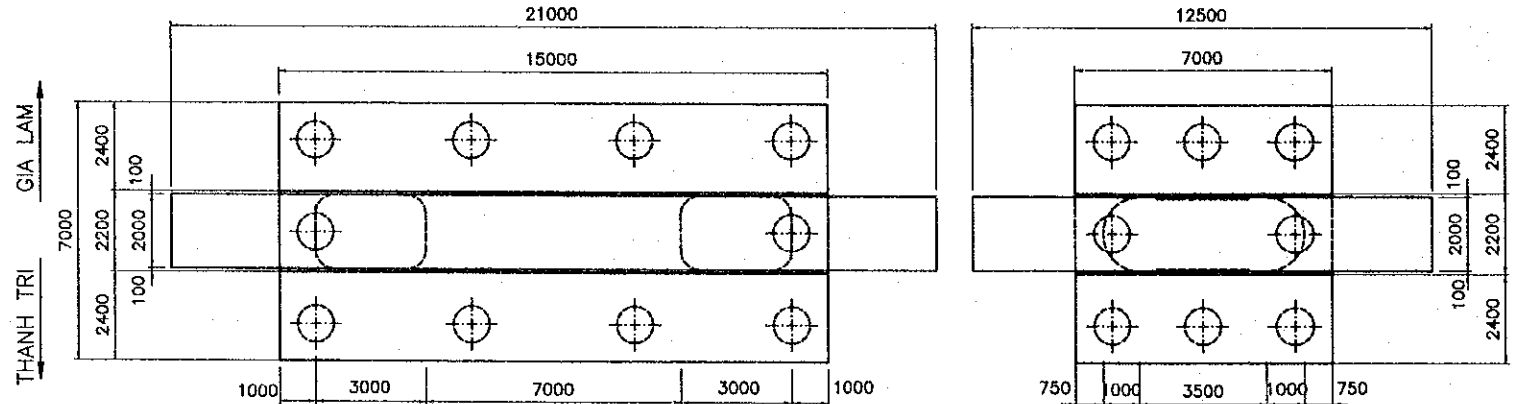
DIMENSIONS OF PIERS

Items	STA(m)	PH(m)	GL(m)	EL4(m)	L(m)	LEFT PIER							
						EL1L(m)	EL2L(m)	EL3L(m)	HL(m)	H1L(m)	H2L(m)	H3L(m)	
Pier	P10	12+098.500	15.212	2.888	-0.075	37	13.181	12.668	12.925	11.20	9.041	9.358	11.456

Items	RIGHT PIER							L1(m)	
	EL1R(m)	EL2R(m)	EL3R(m)	HR(m)	H1R(m)	H2R(m)	H3R(m)		
Pier	P10	13.206	13.510	13.358	11.633	9.700	9.566	11.480	7.50

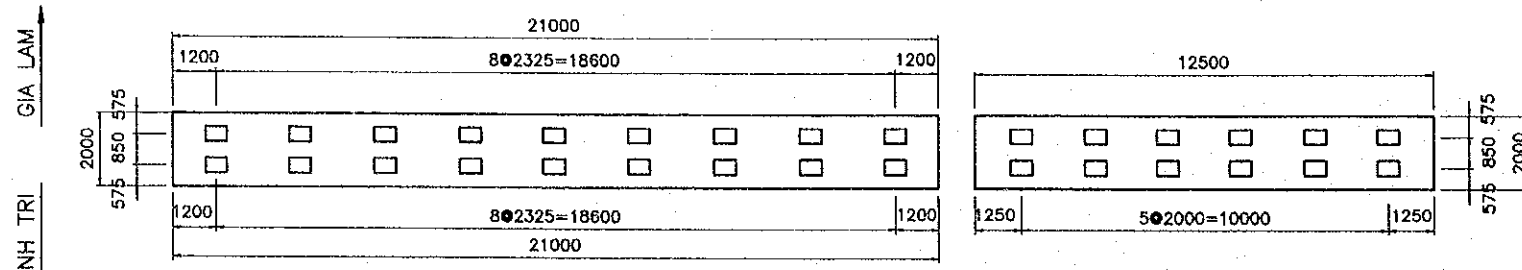
DEPTH OF SUPERSTRUCTURE

THANH TRI SIDE		GIA LAM SIDE	
Component	Depth(mm)	Component	Depth(mm)
AC layer	75	AC layer	75
Slab	208	Slab	208
Girder	1650	Girder	1650
Mortar1	8	Mortar1	11
Shoe(M)	55	Shoe(F)	36
Mortar2	20	Mortar2	40
Total	2017	Total	2020



PLAN VIEW (L-PIER)

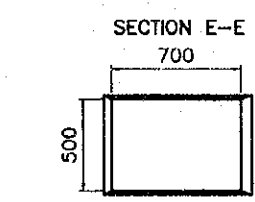
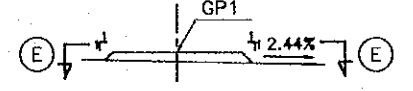
PLAN VIEW (R-PIER)



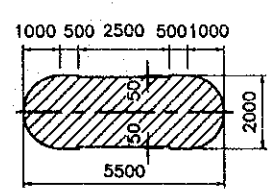
TOP VIEW (L-PIER)

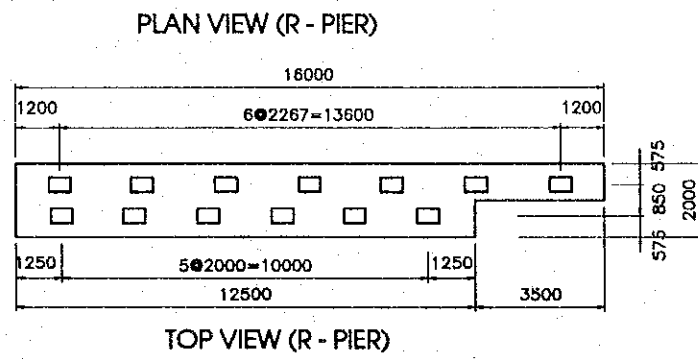
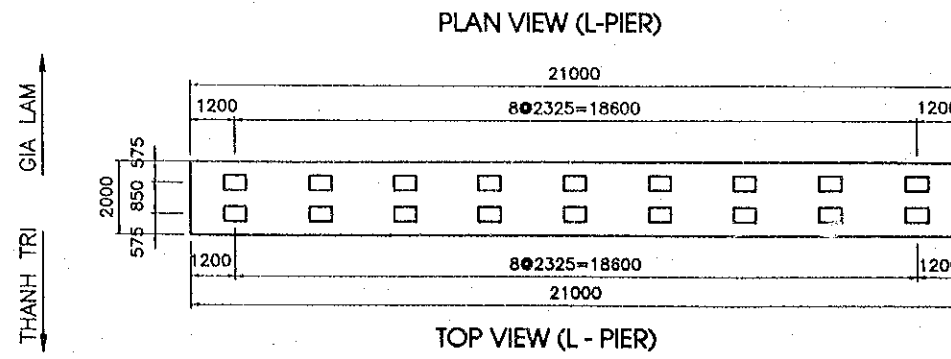
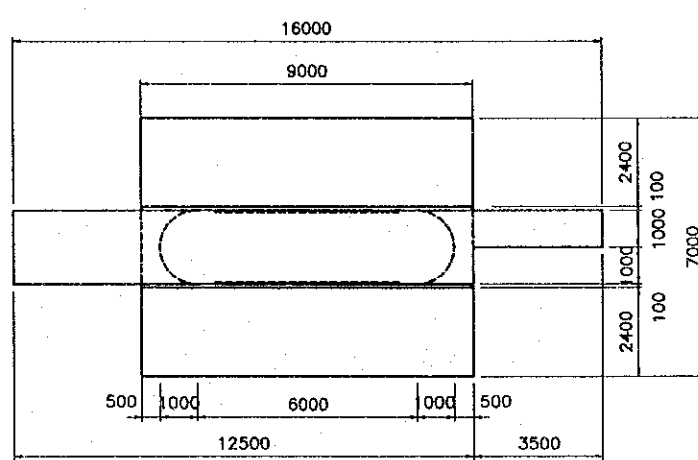
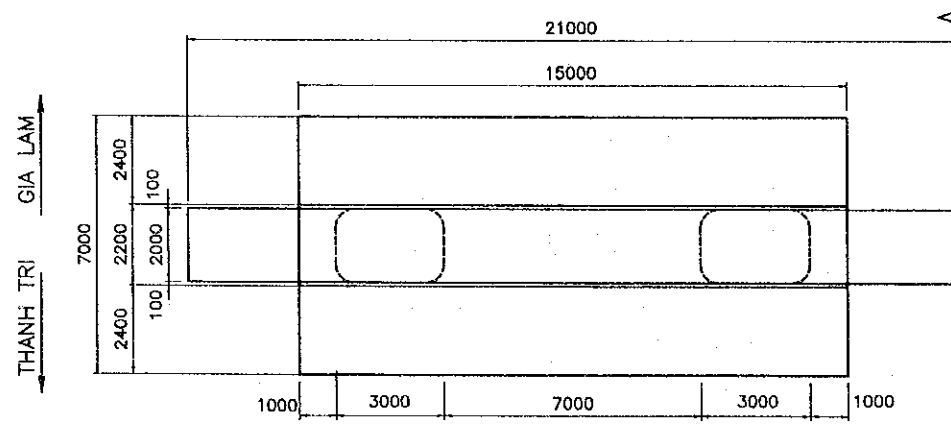
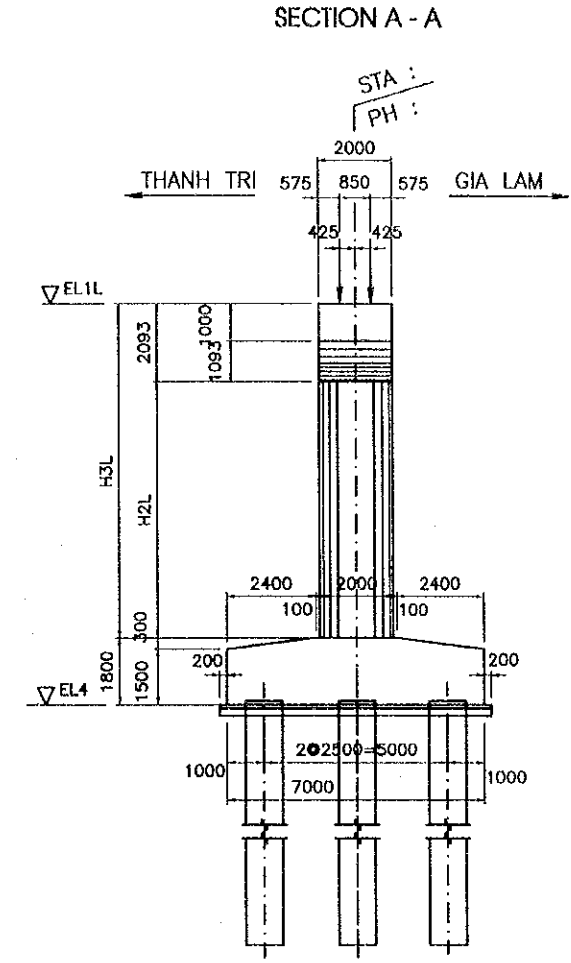
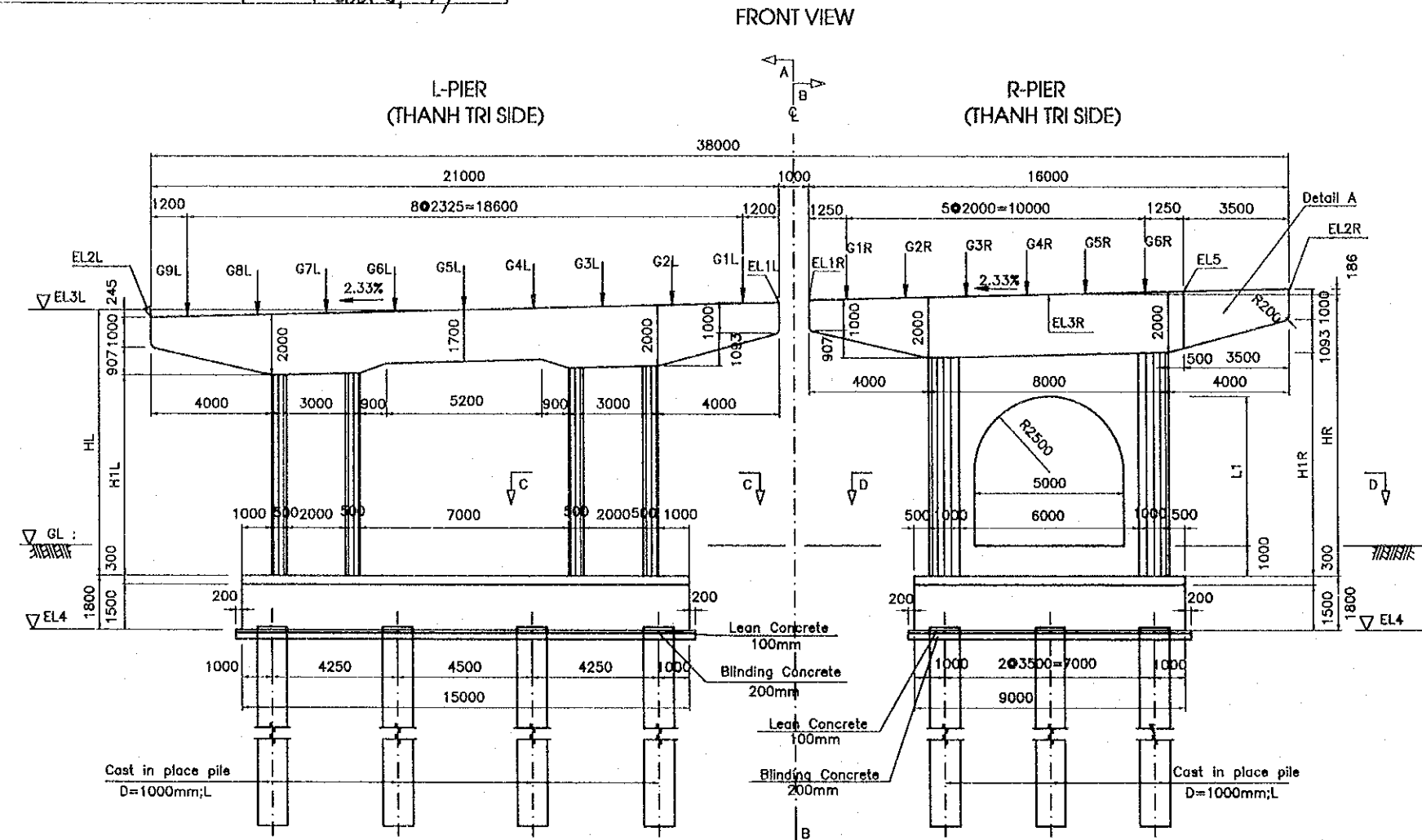
TOP VIEW (R-PIER)

GIRDER BEARING SEAT DETAIL (SC=1/50)



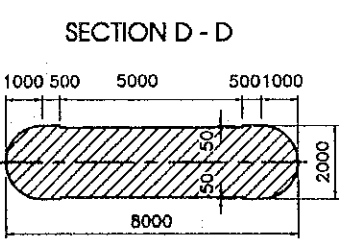
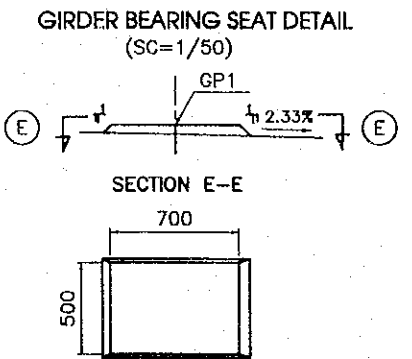
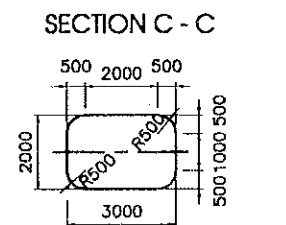
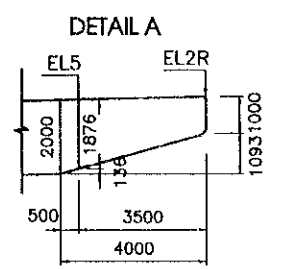
SECTION D-D





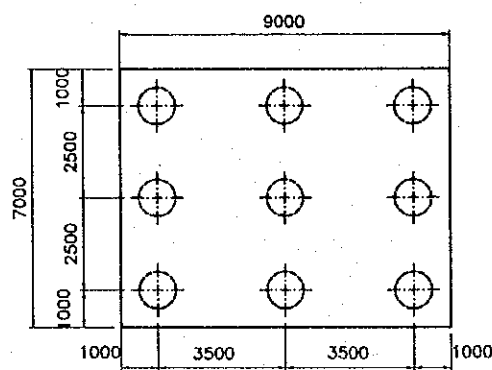
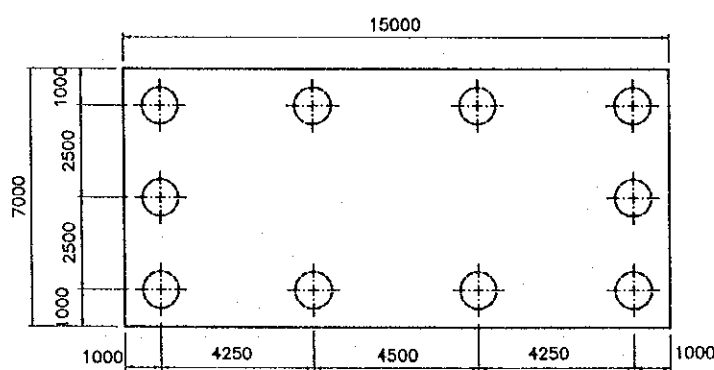
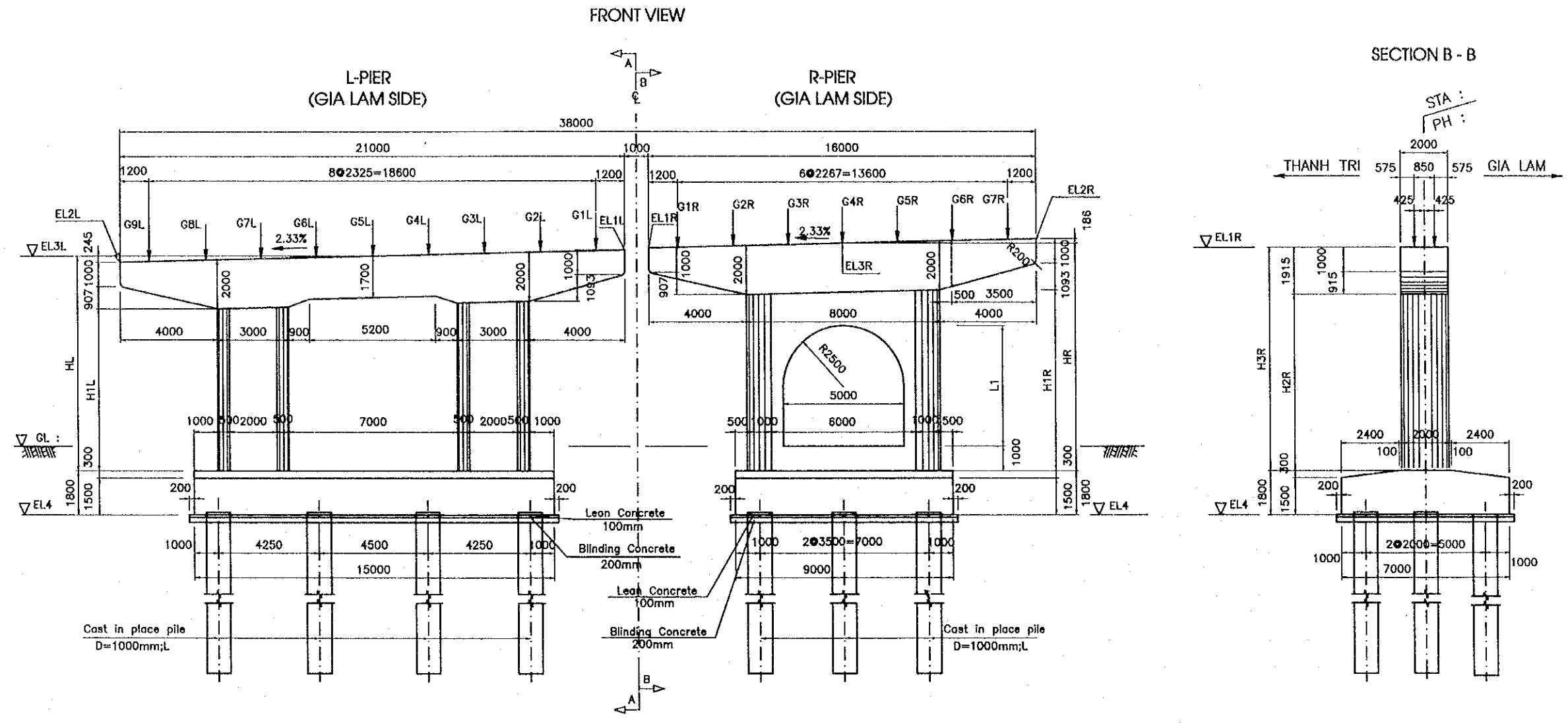
DEPTH OF SUPERSTRUCTURE

THANH TRI SIDE		GIA LAM SIDE	
Component	Depth(mm)	Component	Depth(mm)
AC layer	75	AC layer	75
Slab	208	Slab	208
Girder	1650	Girder	1750
Motor1	8	Motor1	10
Shoe(M)	56	Shoe(F)	36
Motor2	120	Motor2	40
<b>Total</b>	<b>2117</b>	<b>Total</b>	<b>2119</b>



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE <i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.3.17

PACKAGE 2	SCALE 1/200	DRAWING No. C-1-3C-15	SHEET No.
NH No.5 FLYOVER - DETAIL OF PIER P11 (2)			



PILE ARRANGEMENT (L-PIER)

PILE ARRANGEMENT (R-PIER)

DIMENSIONS OF PIER

ELEVATION OF TOP BEARING SEAT GP1

Bearing seat	LEFT PIER								
	G1L	G2L	G3L	G4L	G5L	G6L	G7L	G8L	G9L
THANH TRI SIDE	13.261	13.197	13.143	13.089	13.035	12.981	12.926	12.872	12.818
GIA LAM SIDE	13.171	13.117	13.063	13.009	12.955	12.901	12.846	12.792	12.738

Bearing seat	RIGHT PIER						
	G1R	G2R	G3R	G4R	G5R	G6R	G7R
THANH TRI SIDE	13.332	13.378	13.425	13.472	13.518	13.565	-
GIA LAM SIDE	13.261	13.303	13.356	13.409	13.462	13.515	13.568

Items Pier	STA(m)	PH(m)	GL(m)	ELA(m)	EL5(m)	L(m)	LEFT PIER							RIGHT PIER							L1(m)
							EL1L(m)	EL2L(m)	EL3L(m)	HL(m)	H1L(m)	H2L(m)	H3L(m)	EL1R(m)	EL2R(m)	EL3R(m)	HR(m)	H1R(m)	H2R(m)	H3R(m)	
							P11	12+131.500	15.289	2.972	-0.085	13.474	37	13.189	12.670	12.915	11.20	9.048	9.351	11.444	

213

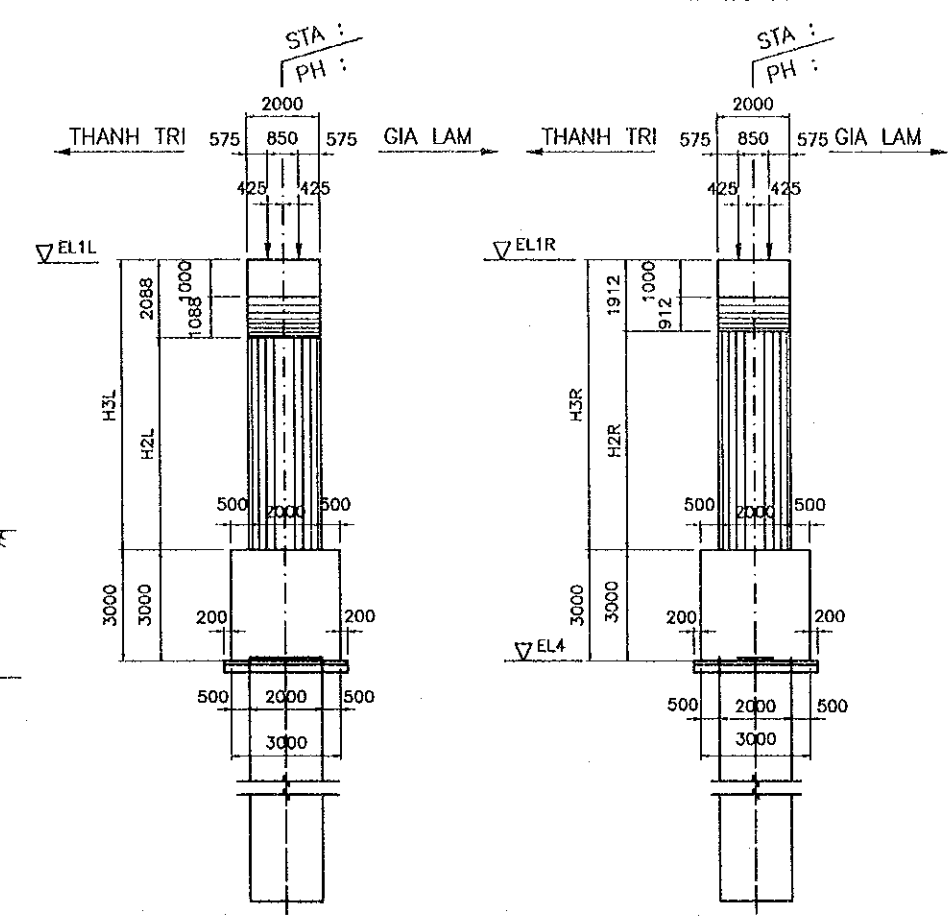
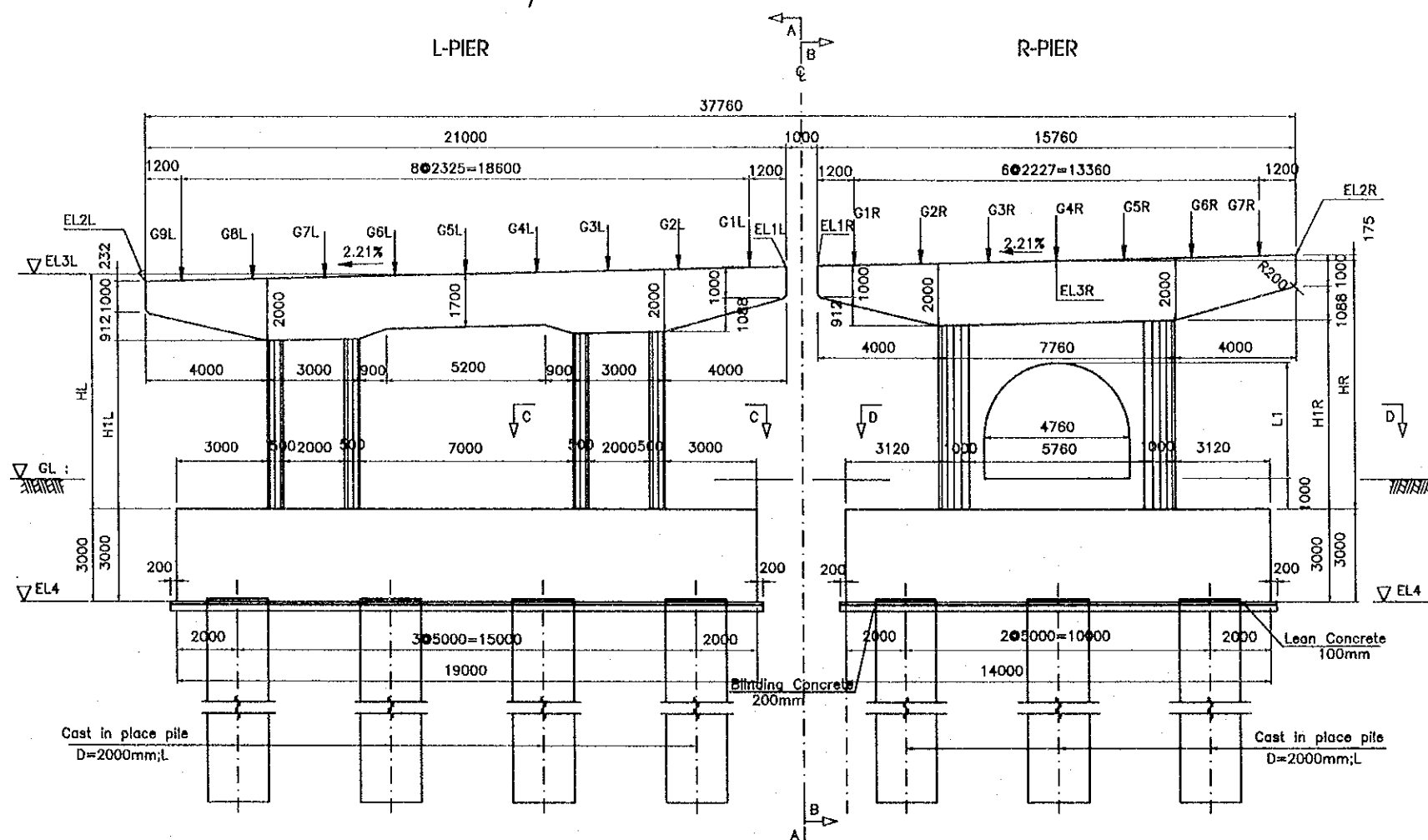
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANU LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		DATE 2002.3.14
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/200	C-1-3C-16	
NH No.5 FLYOVER -- DETAIL OF PIER P12			

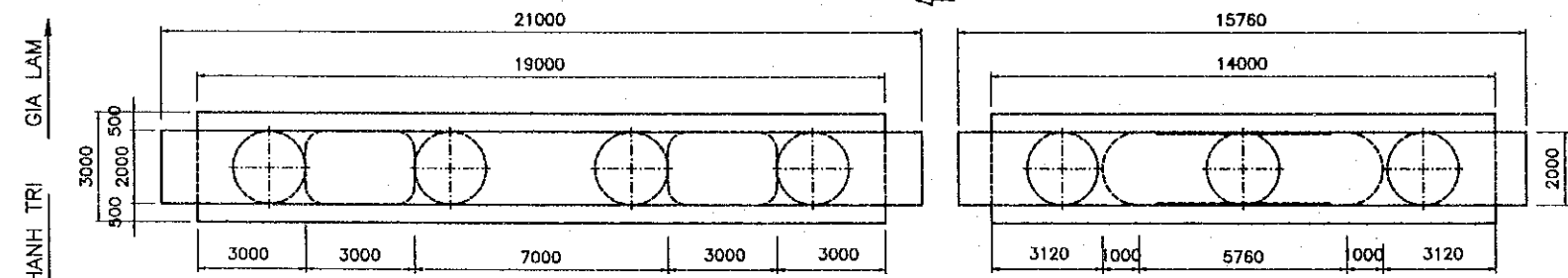
FRONT VIEW

SECTION A - A

SECTION B - B

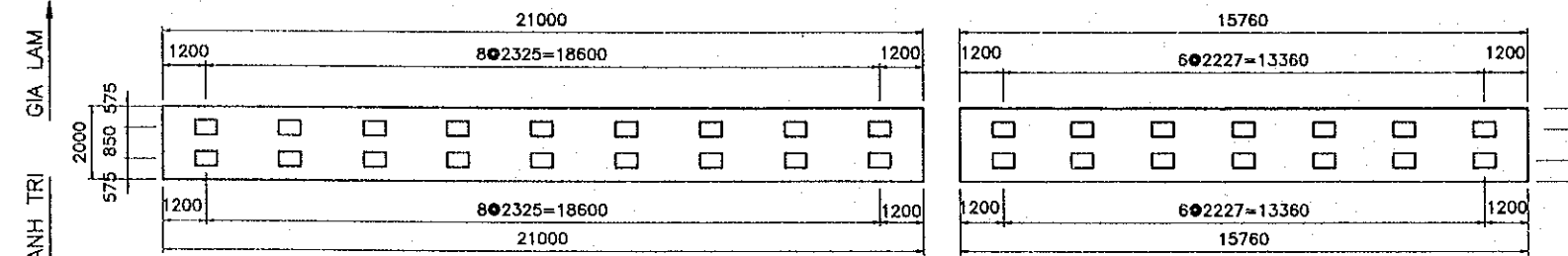


ELEVATION OF TOP BEARING SEAT GP1



PLAN VIEW (L-PIER)

PLAN VIEW (R-PIER)



TOP VIEW (L-PIER)

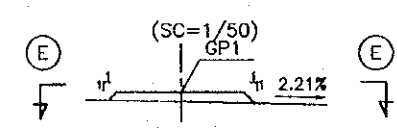
TOP VIEW (R-PIER)

DIMENSIONS OF PIERS

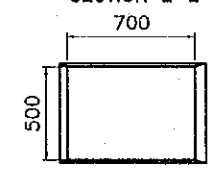
Items	STA(m)	PH(m)	GL(m)	EL4(m)	L(m)	LEFT PIER									RIGHT PIER				L1(m)	
						EL1L(m)	EL2L(m)	EL3L(m)	HL(m)	H1L(m)	H2L(m)	H3L(m)	EL1R(m)	EL2R(m)	EL3R(m)	HR(m)	H1R(m)	H2R(m)		H3R(m)
P12	12+166.500	15.291	5.609	0.932	37	13.164	12.700	12.932	9.000	6.856	7.144	9.232	13.186	13.535	13.360	9.428	7.514	7.343	9.254	5.50

Bearing seat	LEFT PIER									RIGHT PIER						
	G1L	G2L	G3L	G4L	G5L	G6L	G7L	G8L	G9L	G1R	G2R	G3R	G4R	G5R	G6R	G7R
THANH TRI SIDE	13.158	13.106	13.055	13.003	12.952	12.901	12.849	12.798	12.747	13.233	13.282	13.331	13.380	13.430	13.479	13.528
GIA LAM SIDE	13.218	13.166	13.115	13.063	13.012	12.961	12.909	12.858	12.807	13.293	13.342	13.391	13.440	13.490	13.539	13.588

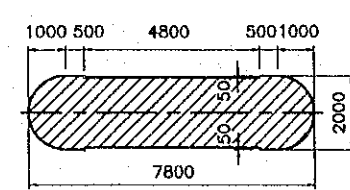
GIRDER BEARING SEAT DETAIL



SECTION E-E



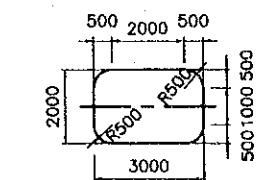
SECTION D - D



DEPTH OF SUPERSTRUCTURE

THANH TRI SIDE		GIA LAM SIDE	
Component	Depth(mm)	Component	Depth(mm)
AC layer	75	AC layer	75
Slab	207	Slab	207
Girder	1750	Girder	1650
Mortar1	8	Mortar1	67
Shoe(M)	56	Shoe(F)	36
Mortar2	20	Mortar2	80
Total	2116	Total	2115

SECTION C - C

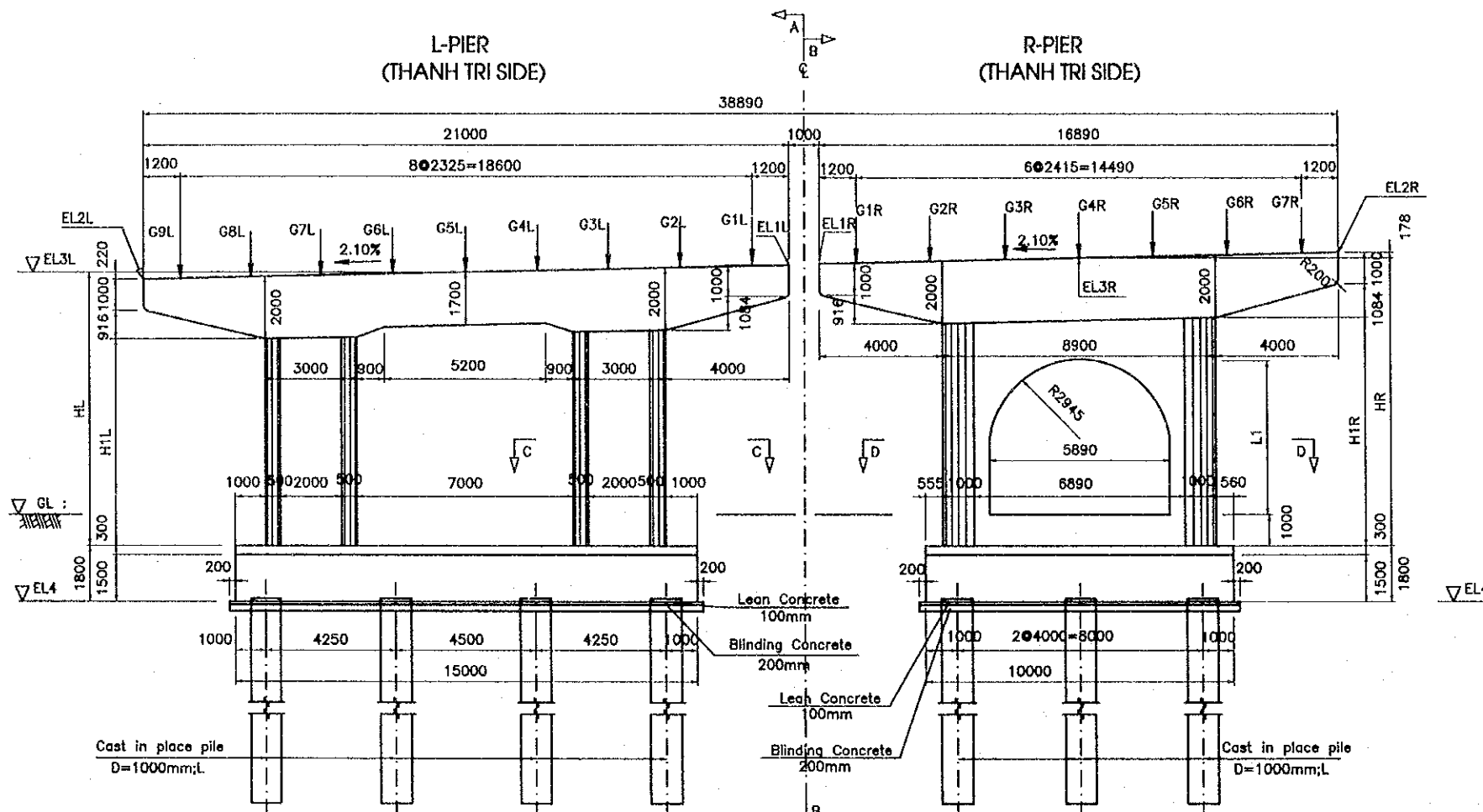




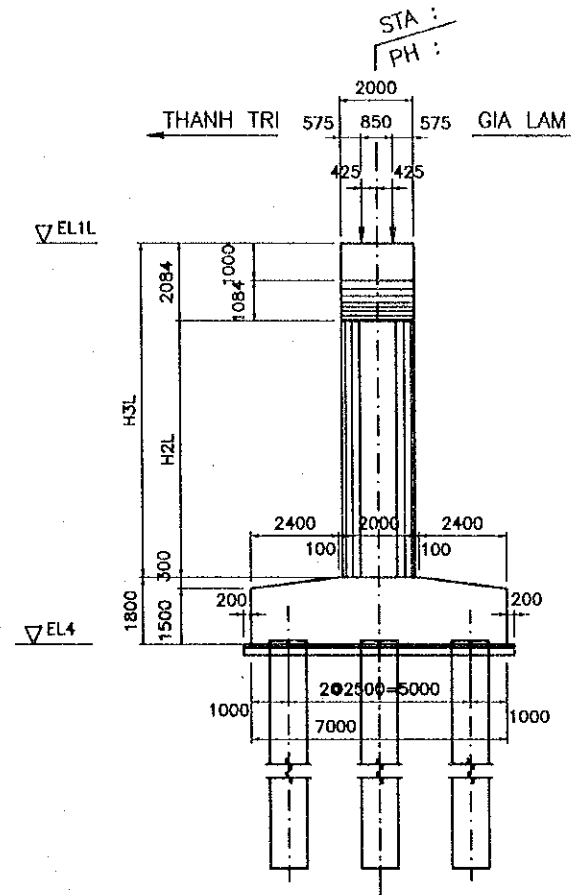
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.3.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/200	C-1-3C-17	
NH No.5 FLYOVER - DETAIL OF PIER 13 (1)			

FRONT VIEW



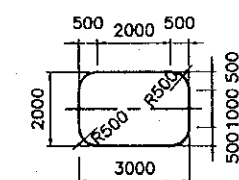
SECTION A - A



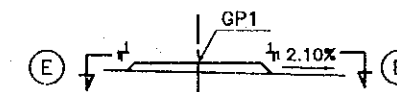
DEPTH OF SUPERSTRUCTURE

THANH TRI SIDE		GIA LAM SIDE	
Component	Depth(mm)	Component	Depth(mm)
AC layer	75	AC layer	75
Slab	207	Slab	207
Girder	1650	Girder	1650
Motor1	11	Motor1	8
Shoe(M)	56	Shoe(F)	36
Motor2	20	Motor2	40
<b>Total</b>	<b>2019</b>	<b>Total</b>	<b>2016</b>

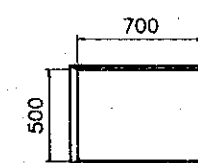
SECTION C - C



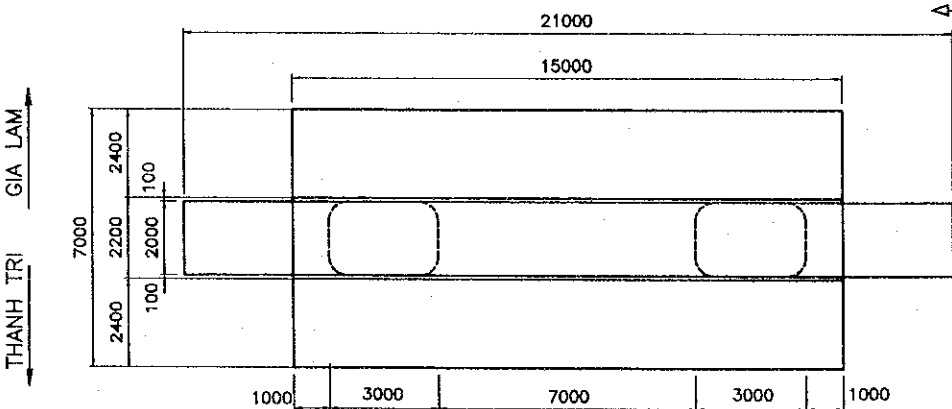
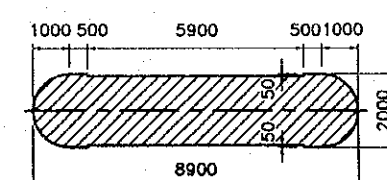
GIRDER BEARING SEAT DETAIL (SC=1/50)



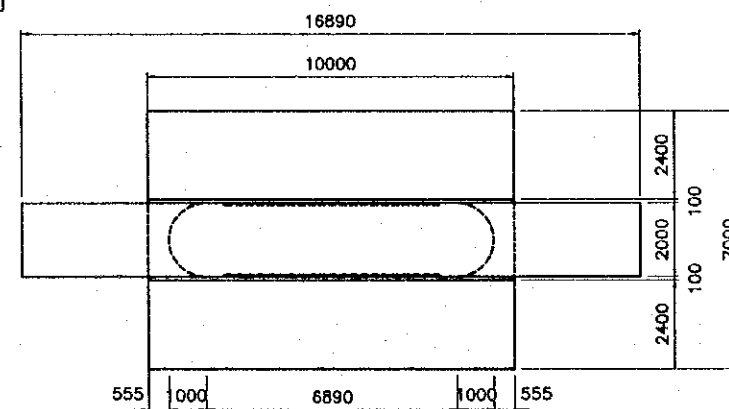
SECTION E - E



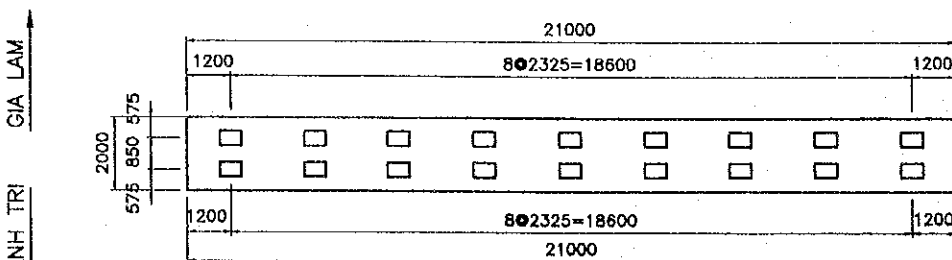
SECTION D - D



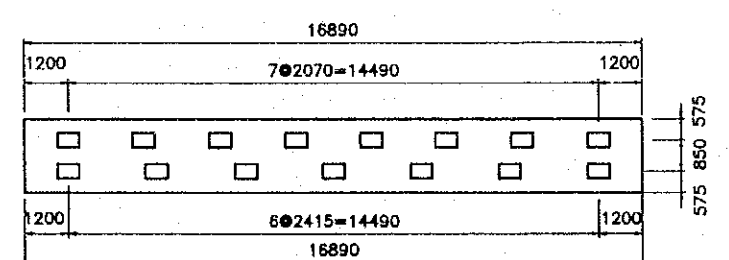
PLAN VIEW (L-PIER)



PLAN VIEW (R - PIER)



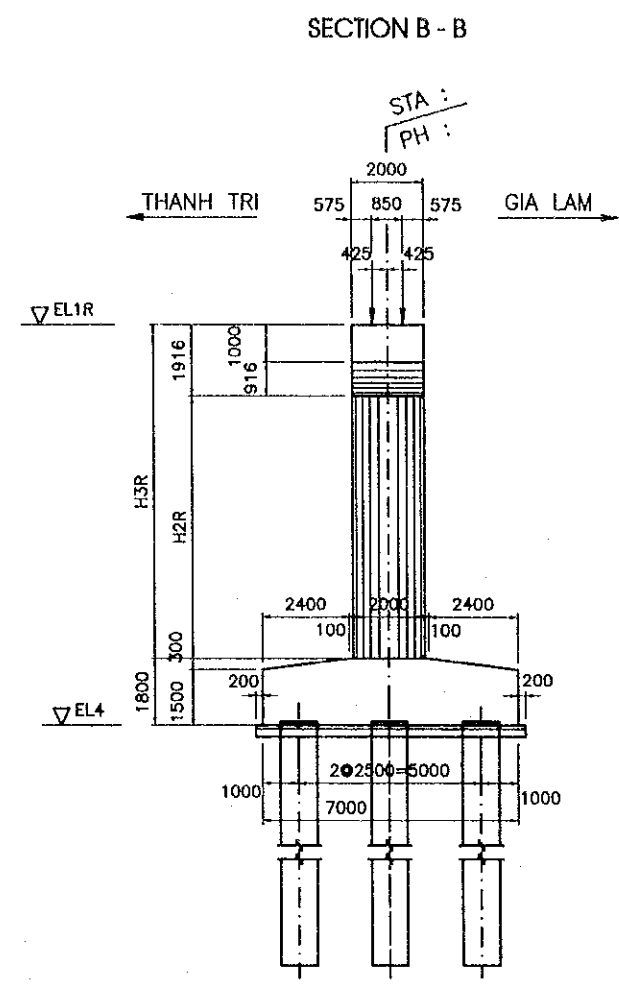
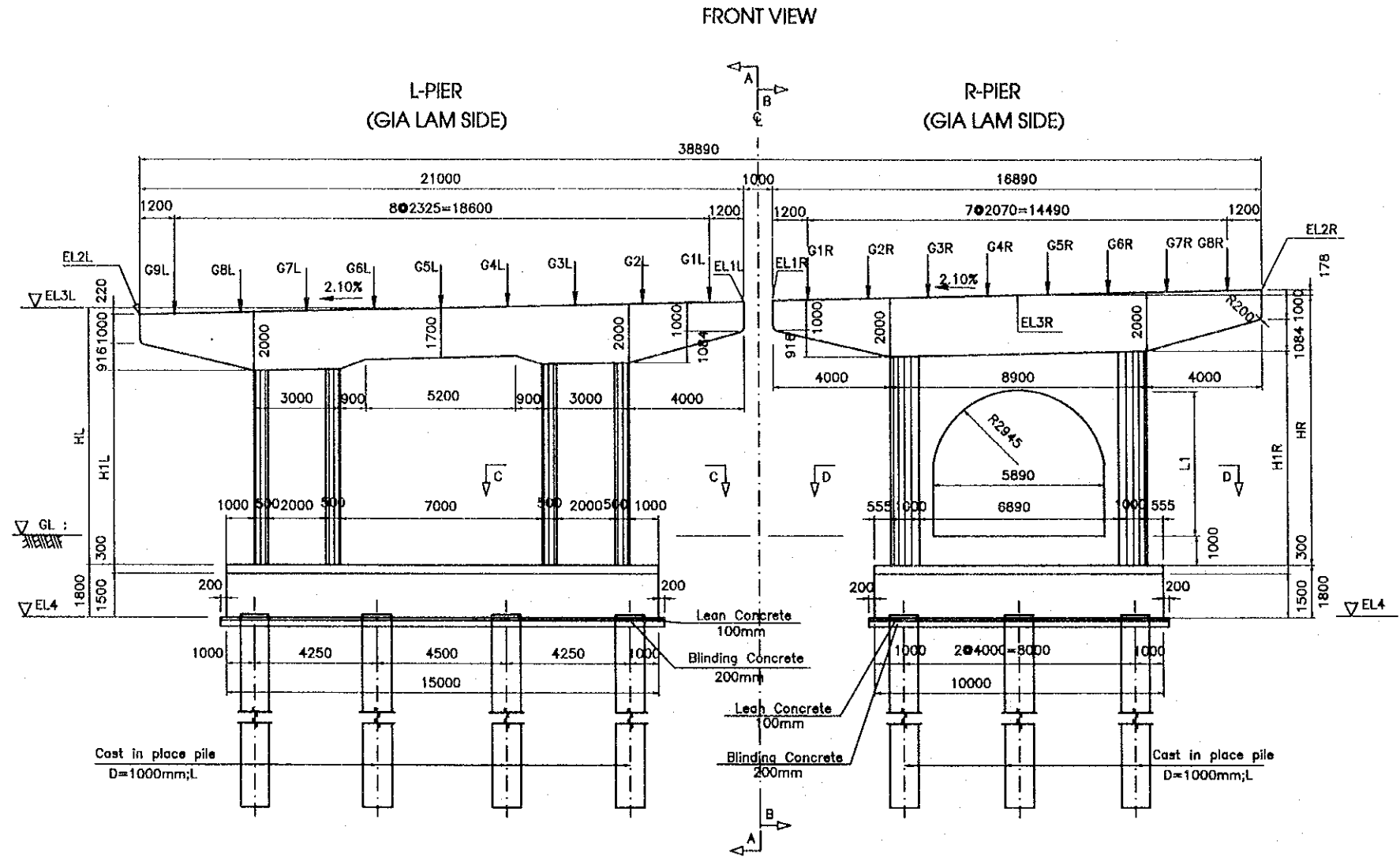
TOP VIEW (L - PIER)



TOP VIEW (R - PIER)

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000. 3. 17

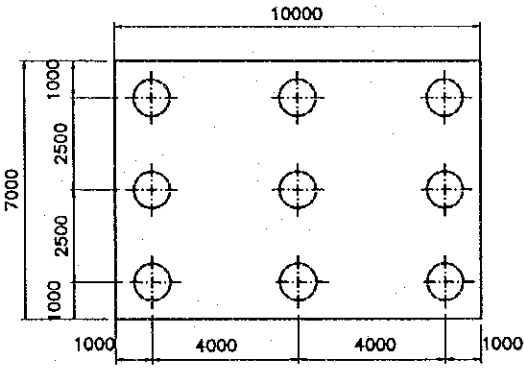
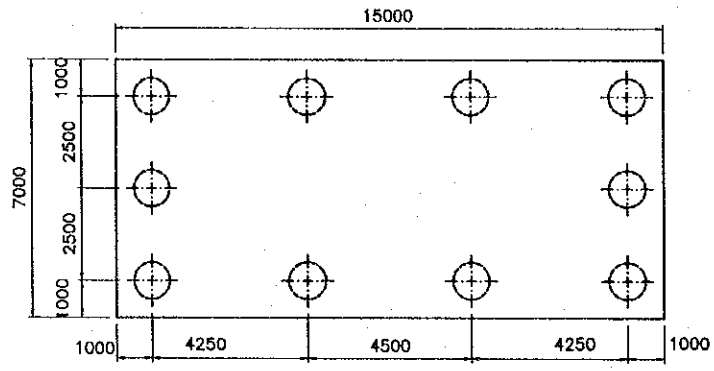
PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/200	C-1-3C-18	
NH No.5 FLYOVER - DETAIL PIER P13 (2)			



ELEVATION OF TOP BEARING SEAT GP1

Bearing seat	LEFT PIER								
	G1L	G2L	G3L	G4L	G5L	G6L	G7L	G8L	G9L
THANH TRI SIDE	13.185	13.137	13.068	13.039	12.990	12.941	12.892	12.844	12.795
GIA LAM SIDE	13.205	13.157	13.108	13.069	13.010	12.961	12.912	12.864	12.815

Bearing seat	RIGHT PIER							
	G1R	G2R	G3R	G4R	G5R	G6R	G7R	G8R
THANH TRI SIDE	13.257	13.308	13.358	13.409	13.460	13.510	13.561	-
GIA LAM SIDE	13.277	13.320	13.364	13.407	13.451	13.494	13.538	13.581



PILE ARRANGEMENT (L-PIER)

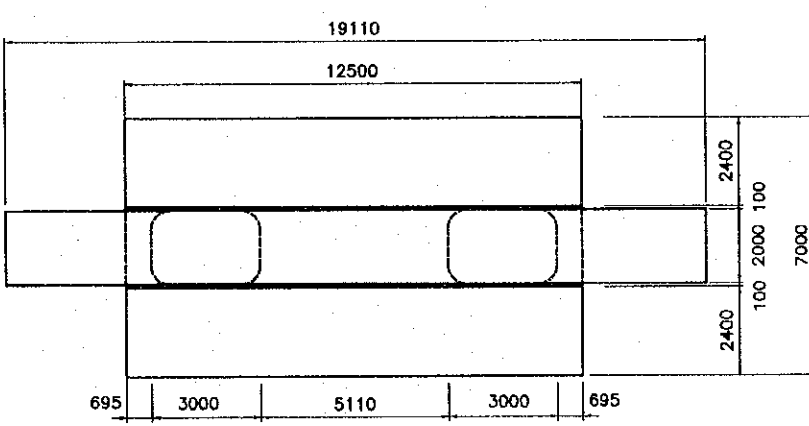
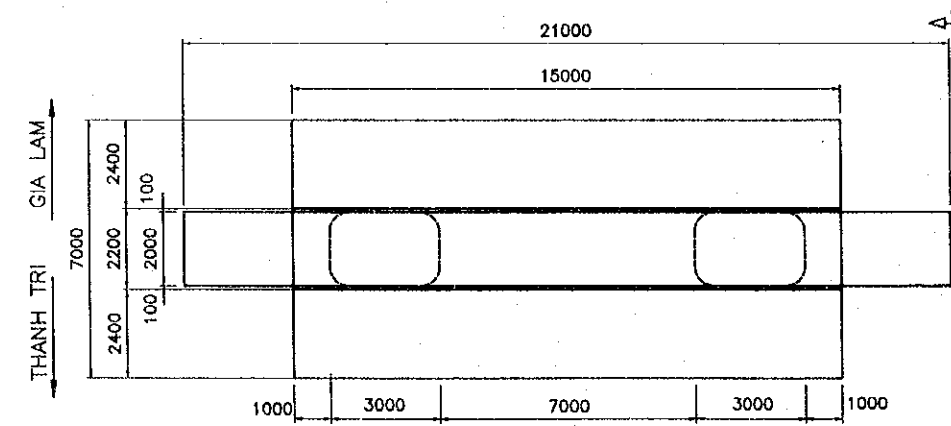
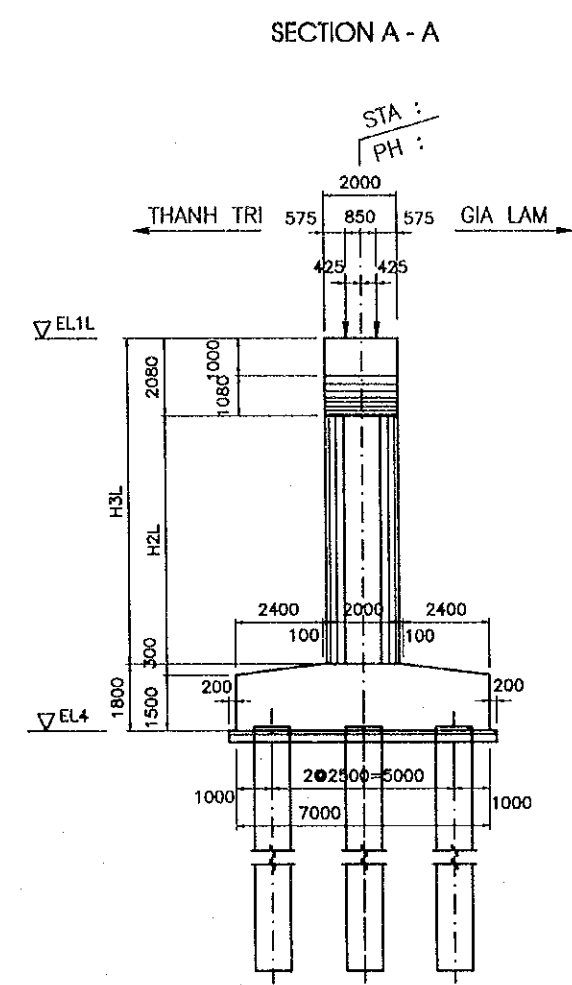
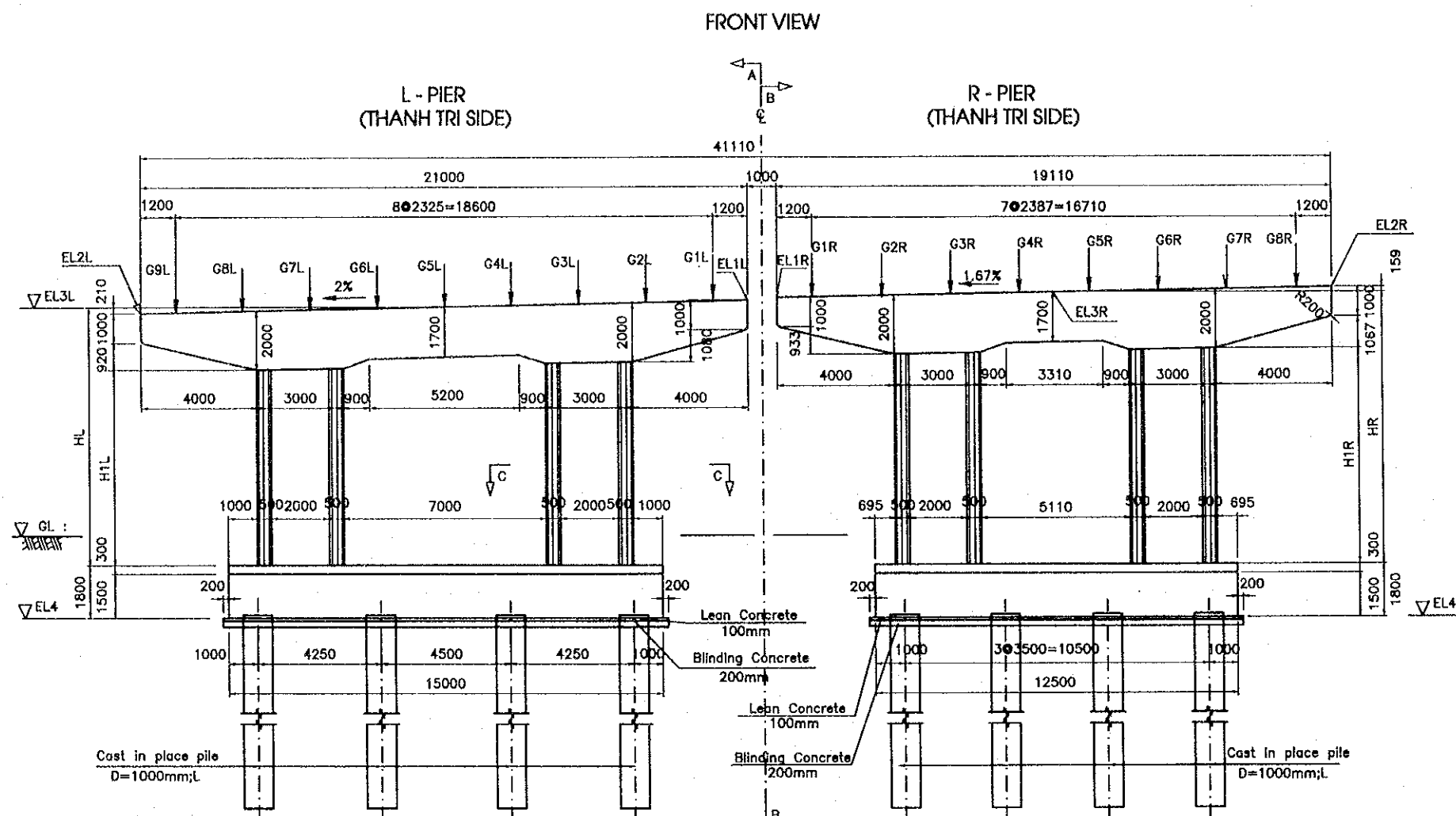
PILE ARRANGEMENT (R - PIER)

DIMENSIONS OF PIER

Items	STA(m)	PH(m)	GL(m)	EL4(m)	L(m)	LEFT PIER							RIGHT PIER							L1(m)
						EL1L(m)	EL2L(m)	EL3L(m)	HL(m)	H1L(m)	H2L(m)	H3L(m)	EL1R(m)	EL2R(m)	EL3R(m)	HR(m)	H1R(m)	H2R(m)	H3R(m)	
P13	12+199.500	15.219	5.239	2.970	37	13.191	12.750	12.970	8.200	6.064	6.337	8.421	13.212	13.566	13.389	8.619	6.712	6.526	8.442	4.50

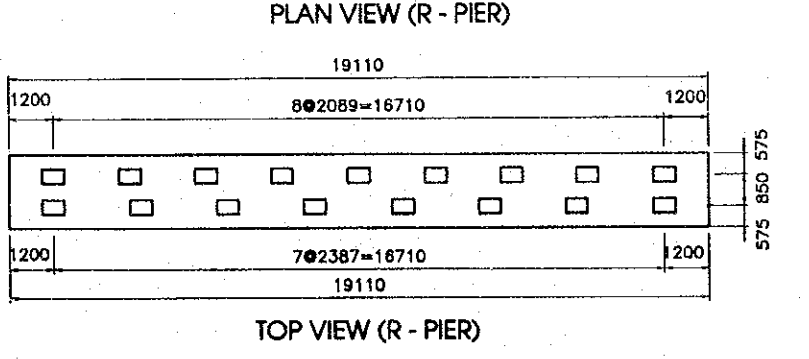
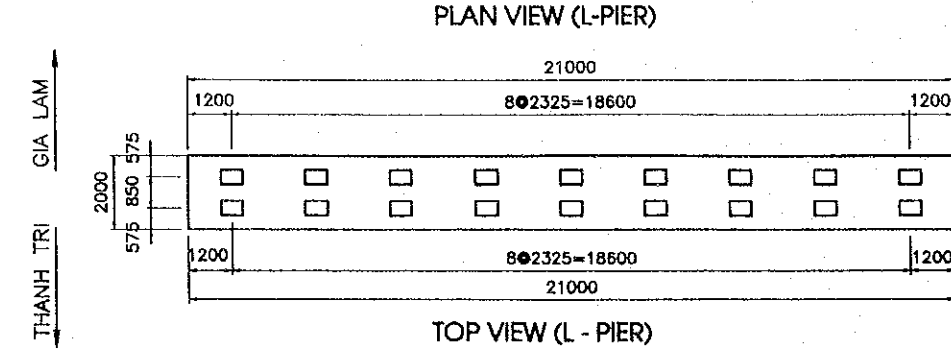
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THUHO LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.3.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/200	C-1-3C-19	
NH No.5 FLYOVER - DETAIL OF PIER P14 (1)			

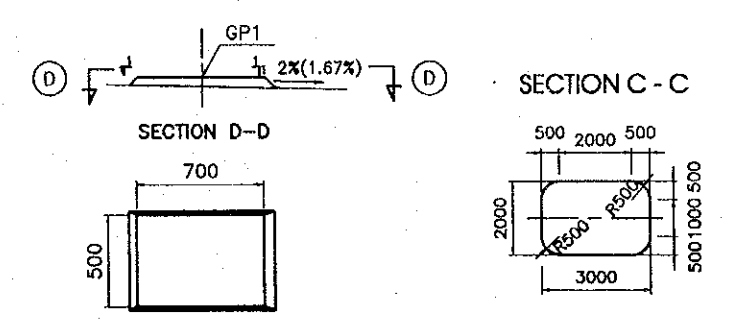


DEPTH OF SUPERSTRUCTURE

THANH TRI SIDE		GIA LAM SIDE	
Component	Depth(mm)	Component	Depth(mm)
AC layer	75	AC layer	75
Slab	207	Slab	207
Girder	1650	Girder	1500
Mortar1	8	Mortar1	53
Shoe(M)	56	Shoe(F)	36
Mortar2	20	Mortar2	140
<b>Total</b>	<b>2016</b>	<b>Total</b>	<b>2011</b>

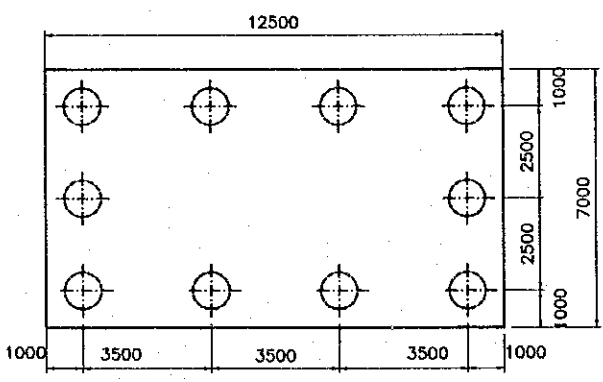
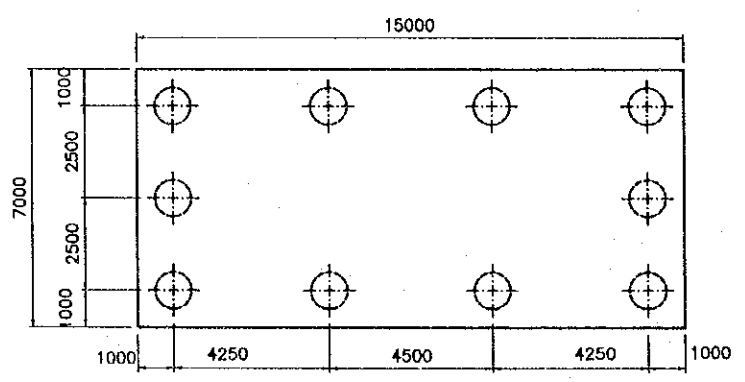
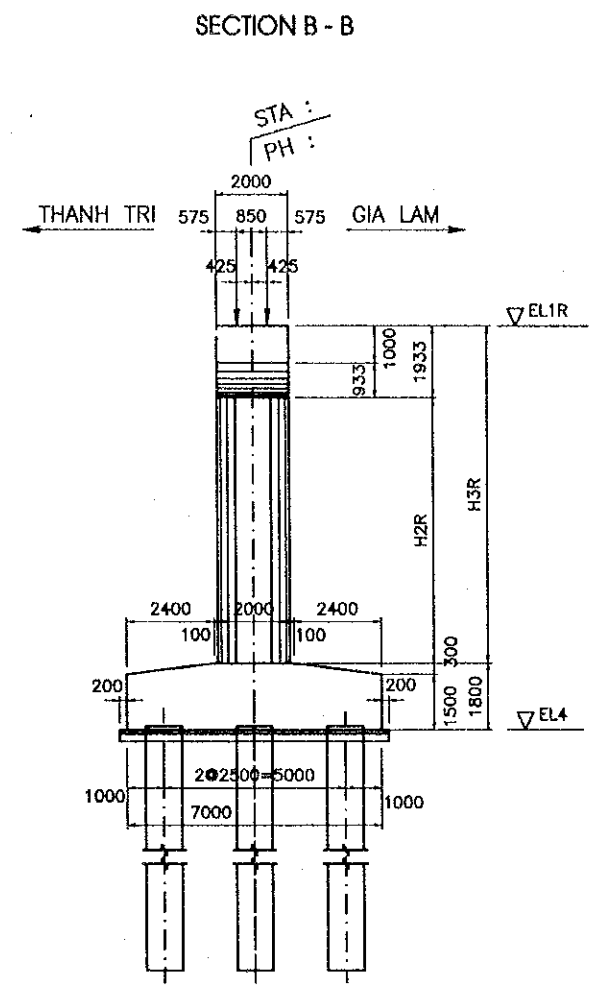
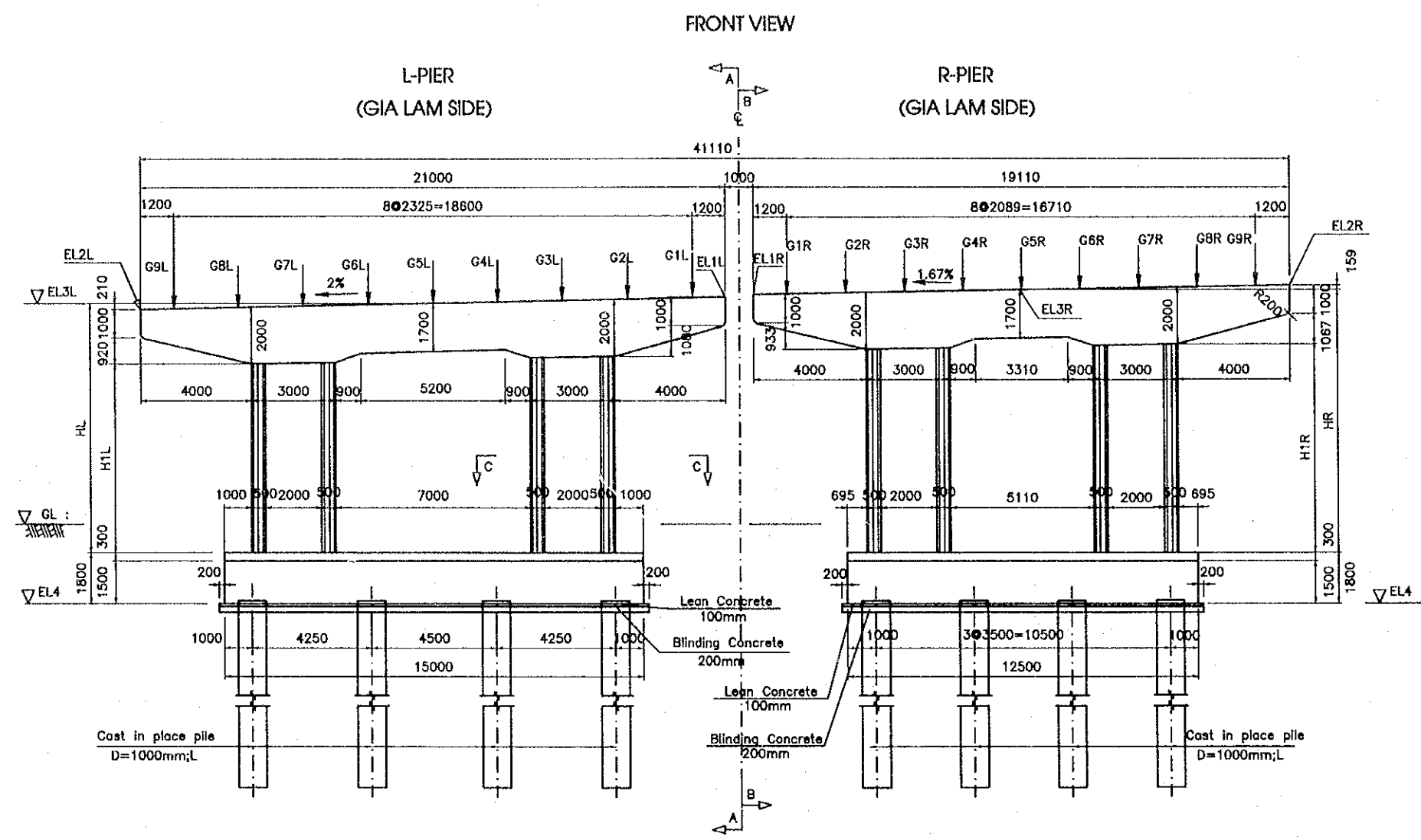


GIRDER BEARING SEAT DETAIL (SC=1/50)



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2.000. 2. 19

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/200	C-1-3C-20	
NH No.5 FLYOVER - DETAIL OF PIER P14 (2)			



PILE ARRANGEMENT (L - PIER)

PILE ARRANGEMENT (R - PIER)

DIMENSIONS OF PIER

Items	STA(m)	PH(m)	GL(m)	EL4(m)	L(m)	LEFT PIER				RIGHT PIER									
						EL1L(m)	EL2L(m)	EL3L(m)	HL(m)	H1L(m)	H2L(m)	H3L(m)	EL1R(m)	EL2R(m)	EL3R(m)	HR(m)	H1R(m)	H2R(m)	H3R(m)
P14	12+232.500	15.074	4.938	1.84	37	13.050	12.630	12.840	9.200	7.070	7.330	9.410	13.068	13.387	13.228	9.588	7.681	7.495	9.428

ELEVATION OF TOP BEARING SEAT GP1

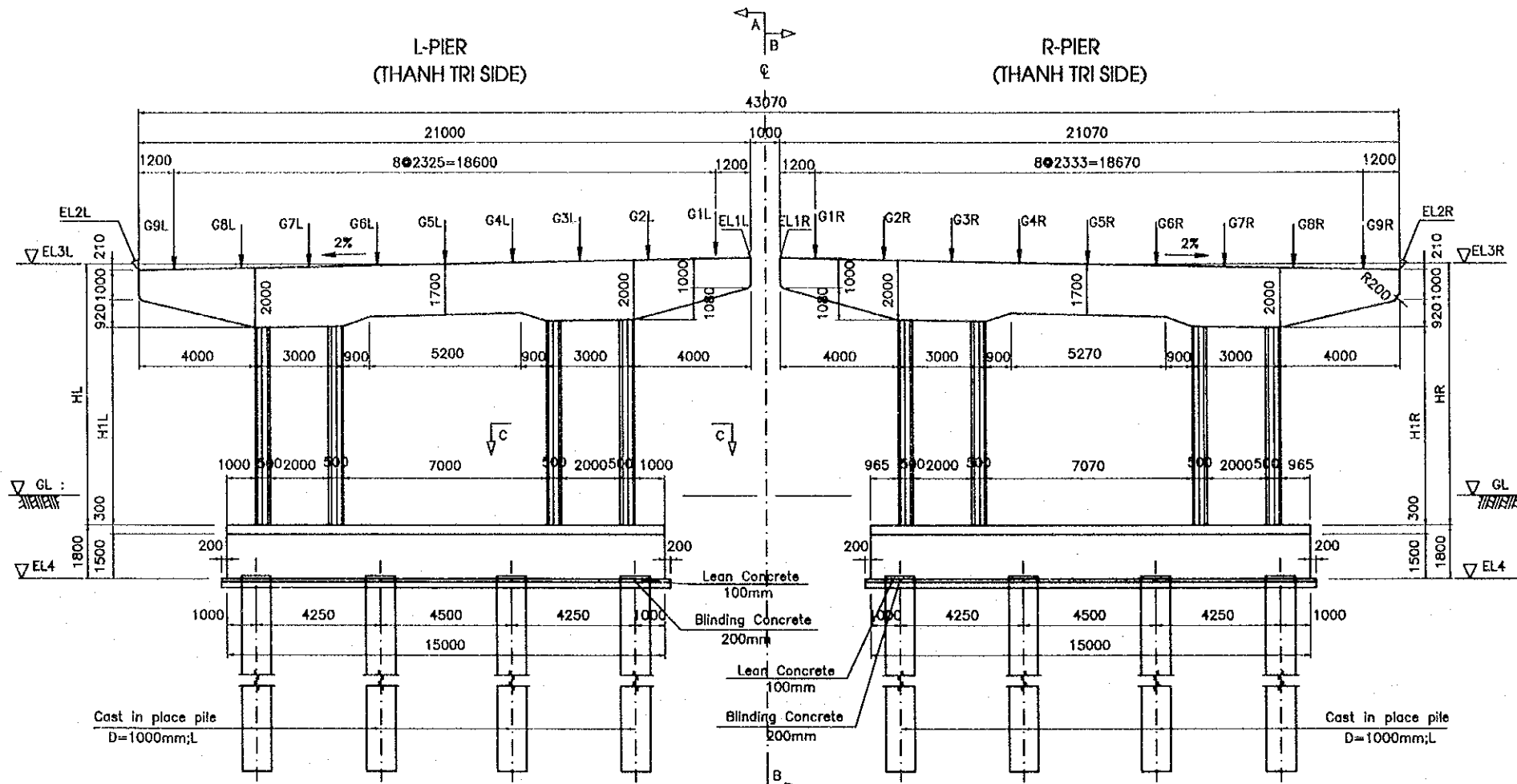
Bearing seat	LEFT PIER								
	G1L	G2L	G3L	G4L	G5L	G6L	G7L	G8L	G9L
THANH TRI SIDE	13.046	12.999	12.953	12.906	12.860	12.813	12.767	12.720	12.674
GIA LAM SIDE	13.166	13.119	13.073	13.026	12.980	12.933	12.887	12.840	12.794

Bearing seat	RIGHT PIER								
	G1R	G2R	G3R	G4R	G5R	G6R	G7R	G8R	G9R
THANH TRI SIDE	13.108	13.148	13.188	13.228	13.268	13.308	13.347	13.387	-
GIA LAM SIDE	13.228	13.263	13.298	13.333	13.368	13.403	13.438	13.472	13.507

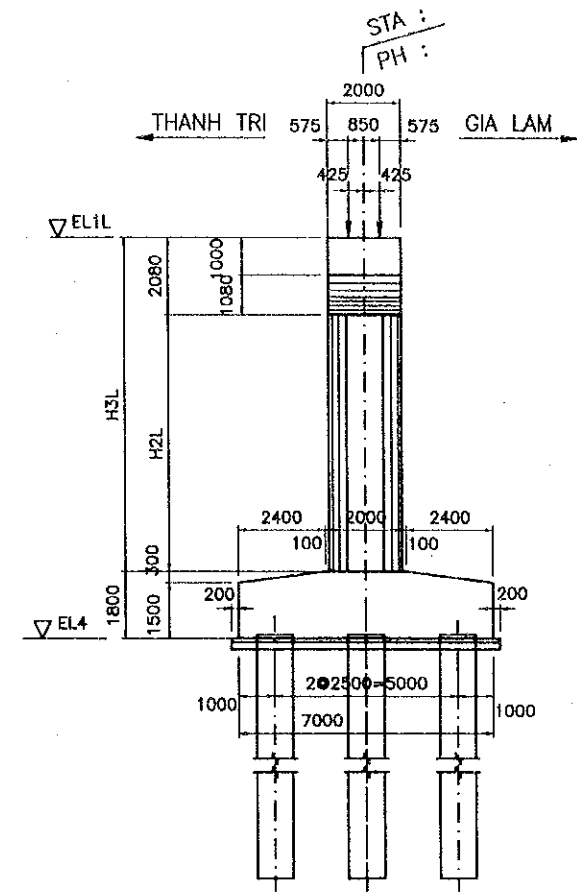
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.3.17

PACKAGE 2	SCALE 1/200	DRAWING No. C-1-3C-21	SHEET No.
NH No.5 FLYOVER - DETAIL OF PIER P15 (1)			

FRONT VIEW



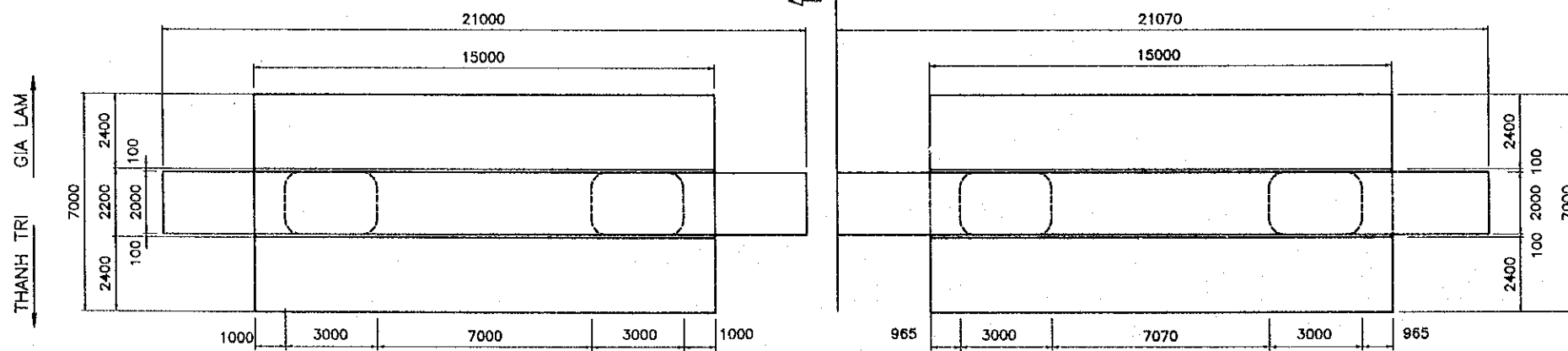
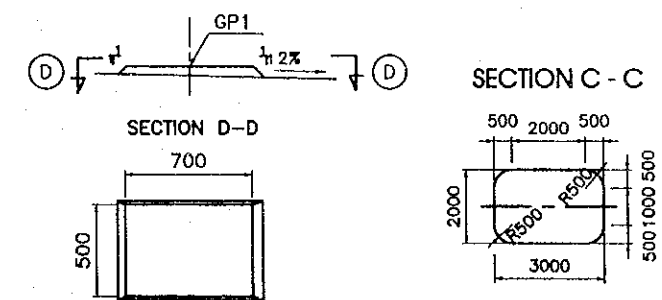
SECTION A - A



DEPTH OF SUPERSTRUCTURE

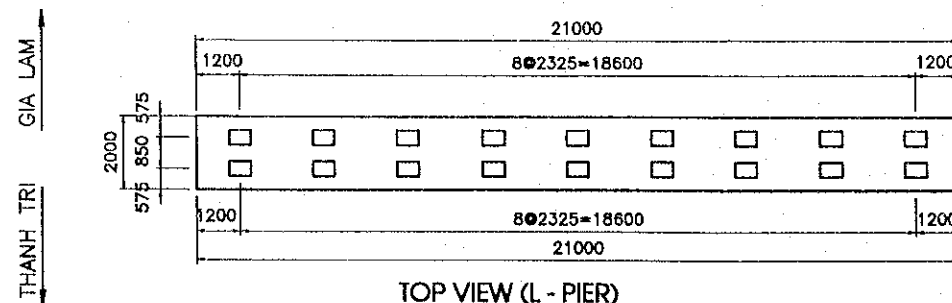
THANH TRI SIDE		GIA LAM SIDE	
Component	Depth(mm)	Component	Depth(mm)
AC layer	75	AC layer	75
Slab	207	Slab	207
Grider	1500	Grider	1500
Motor1	14	Motor1	8
Shoe(M)	56	Shoe(F)	36
Motor2	20	Motor2	40
Total	1872	Total	1866

GIRDER BEARING SEAT DETAIL  
(SC=1/50)

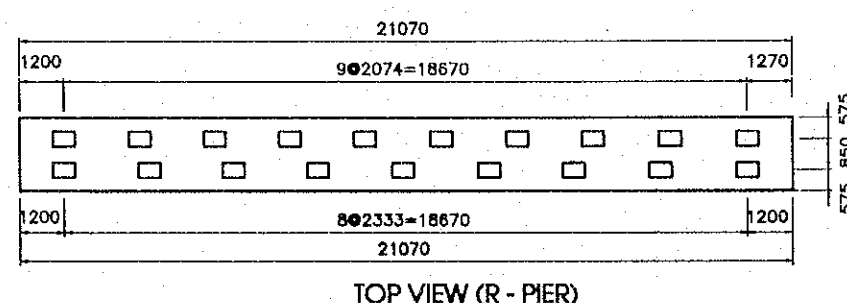


PLAN VIEW (L-PIER)

PLAN VIEW (R - PIER)



TOP VIEW (L - PIER)



TOP VIEW (R - PIER)

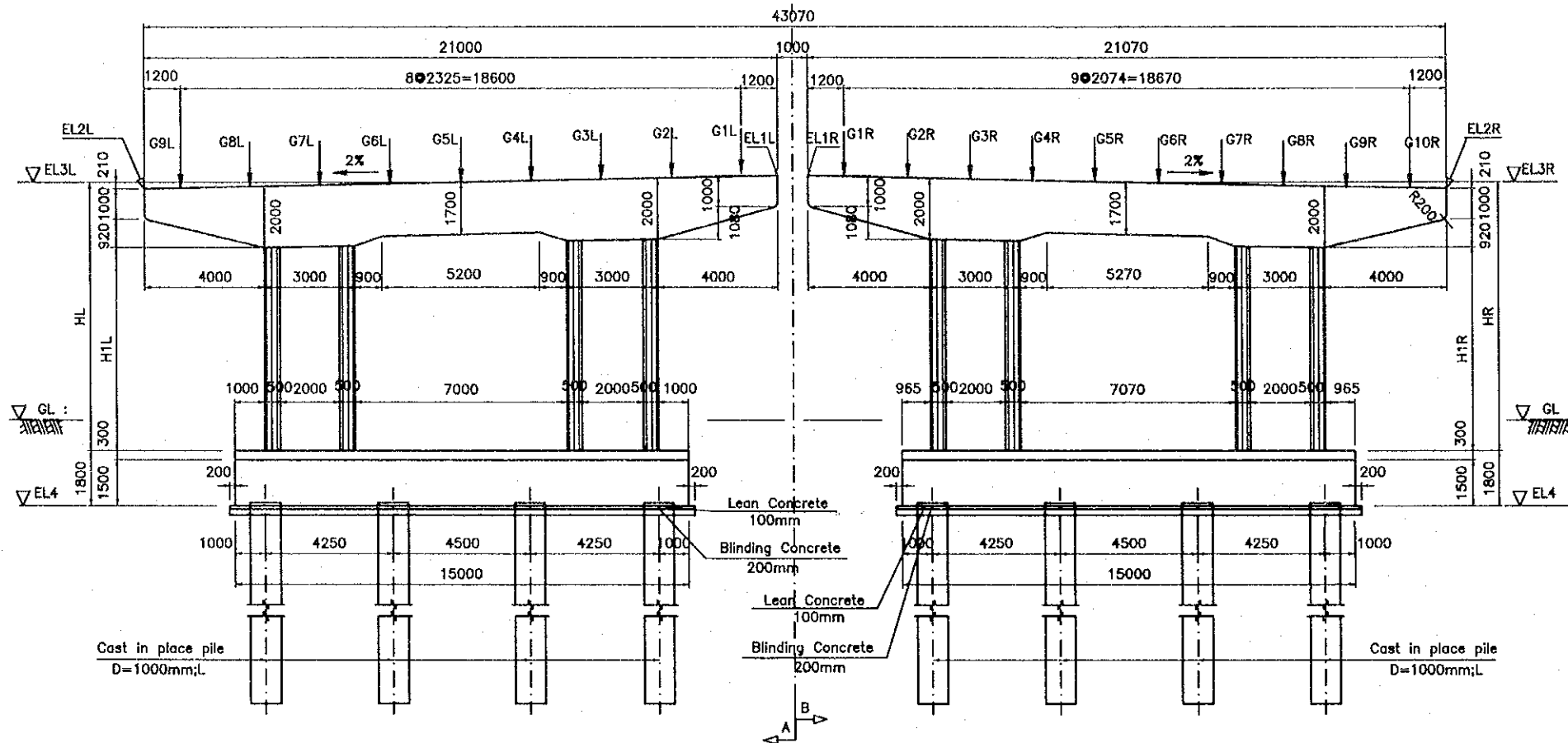
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE <i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.3.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/200	C-1-3C-22	
NH No.5 FLYOVER - DETAIL OF PIER P15 (2)			

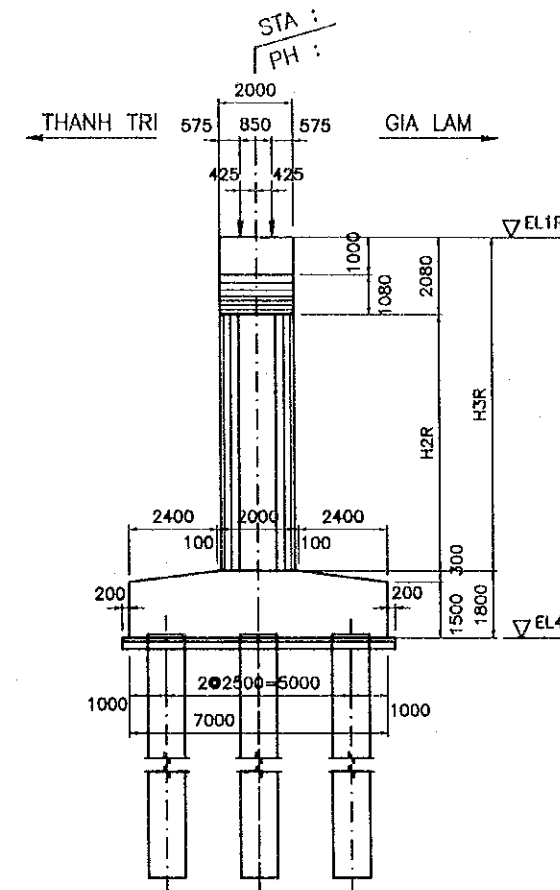
FRONT VIEW

L-PIER  
(GIA LAM SIDE)

R-PIER  
(GIA LAM SIDE)



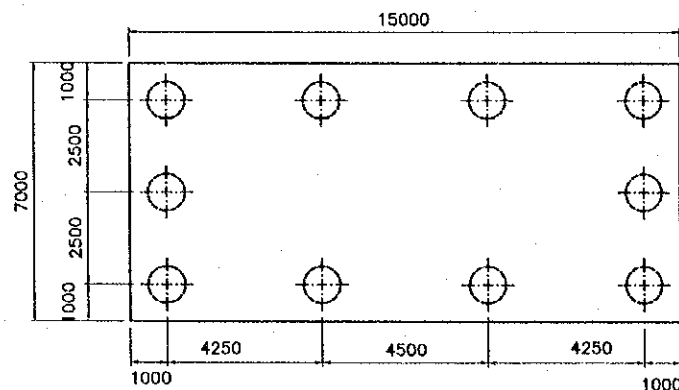
SECTION B - B



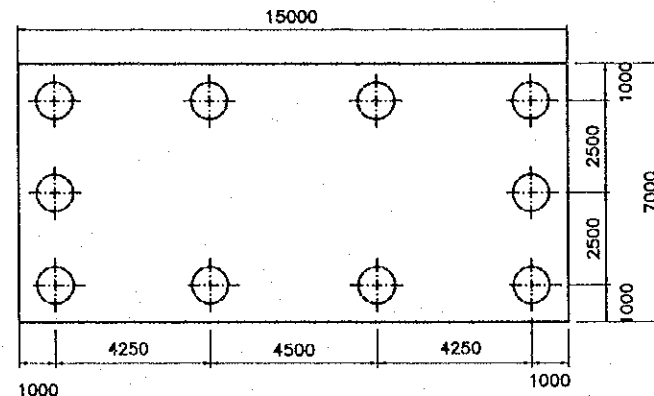
ELEVATION OF TOP BEARING SEAT GP1

Bearing seat	LEFT PIER								
	G1L	G2L	G3L	G4L	G5L	G6L	G7L	G8L	G9L
THANH TRI SIDE	13.010	12.964	12.917	12.871	12.824	12.778	12.731	12.685	12.638
GIA LAM SIDE	13.030	12.984	12.937	12.891	12.844	12.798	12.751	12.705	12.658

Bearing seat	RIGHT PIER									
	G1R	G2R	G3R	G4R	G5R	G6R	G7R	G8R	G9R	G10R
THANH TRI SIDE	13.010	12.964	12.917	12.870	12.824	12.777	12.731	12.684	12.637	-
GIA LAM SIDE	13.030	12.989	12.948	12.906	12.865	12.823	12.782	12.740	12.699	12.657



PILE ARRANGEMENT (L-PIER)



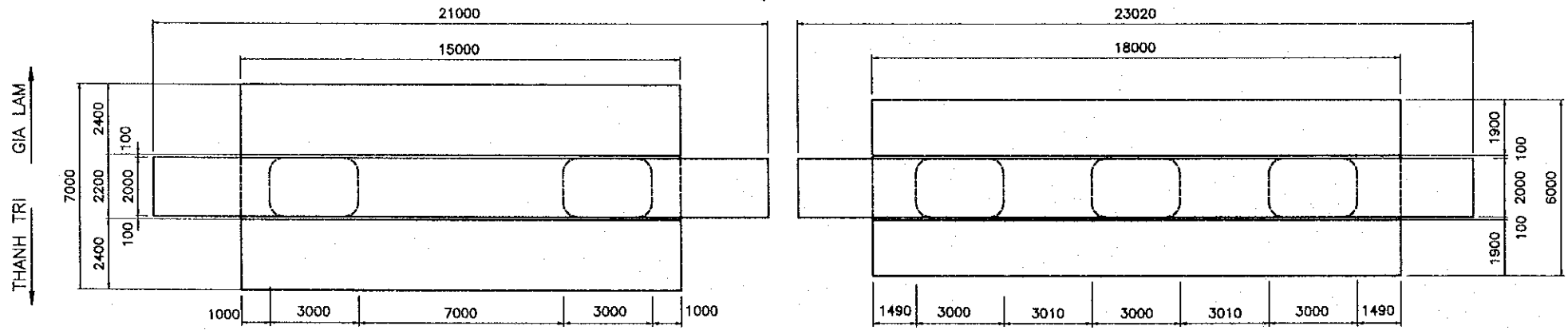
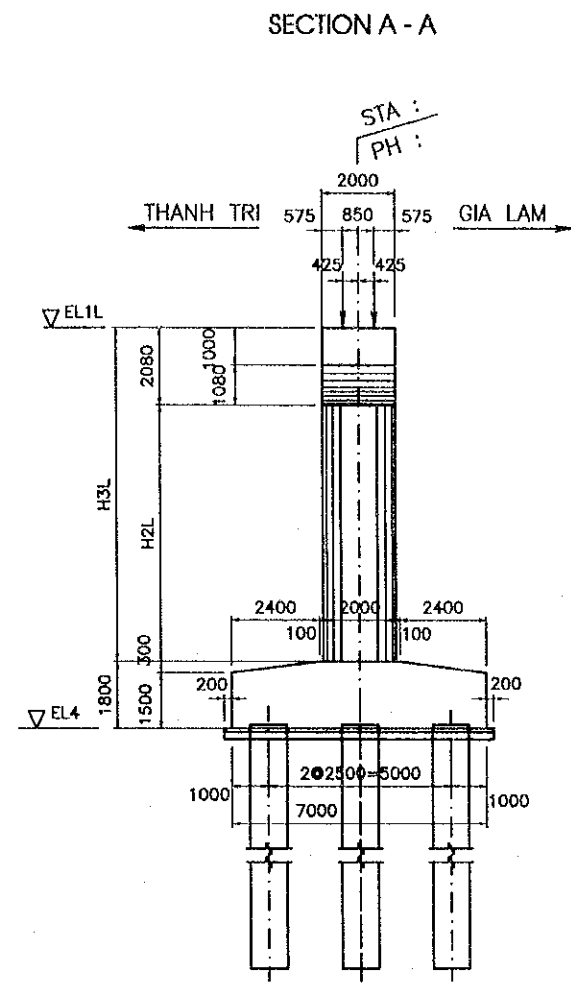
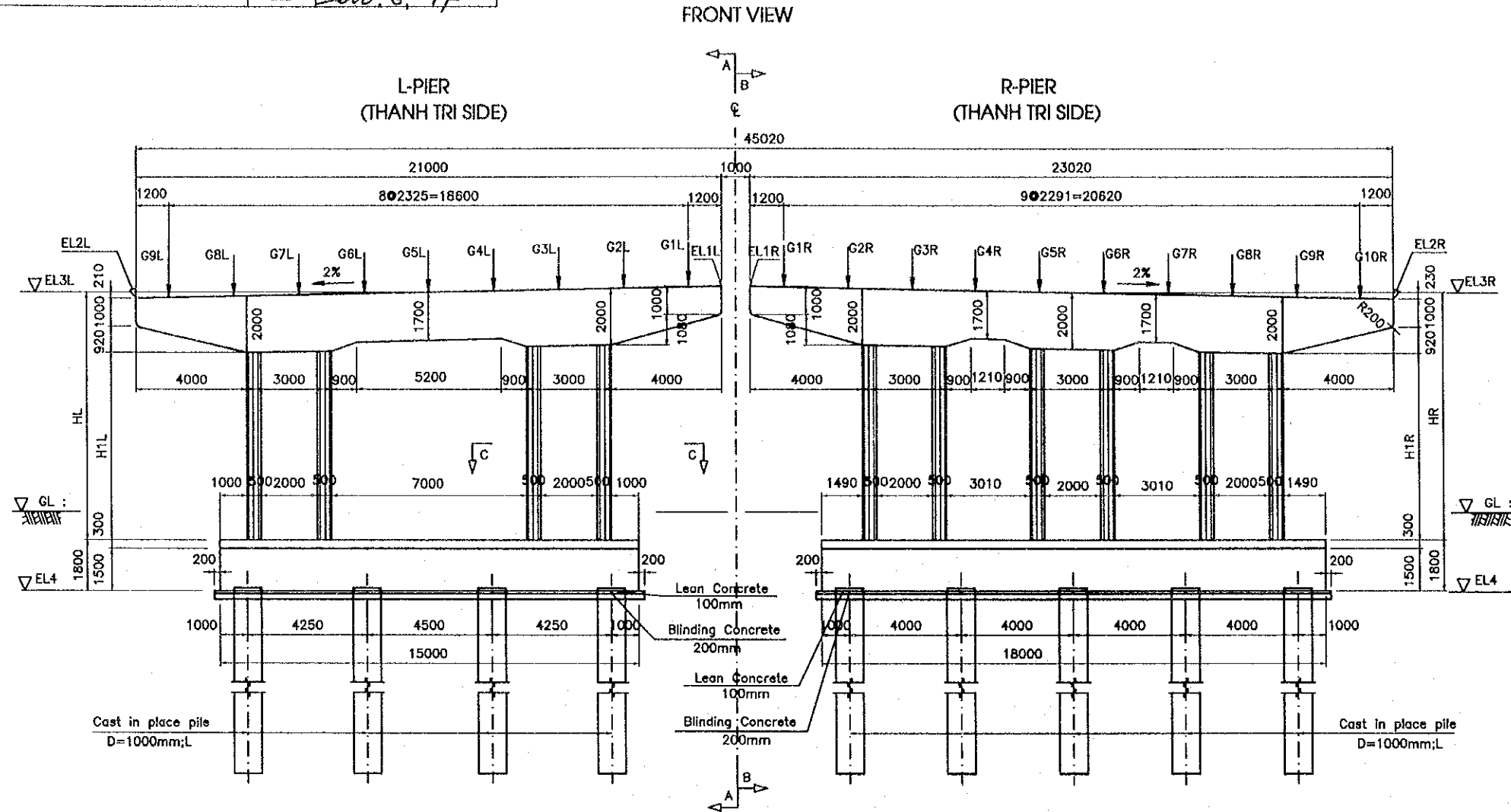
PILE ARRANGEMENT (R-PIER)

DIMENSIONS OF PIER

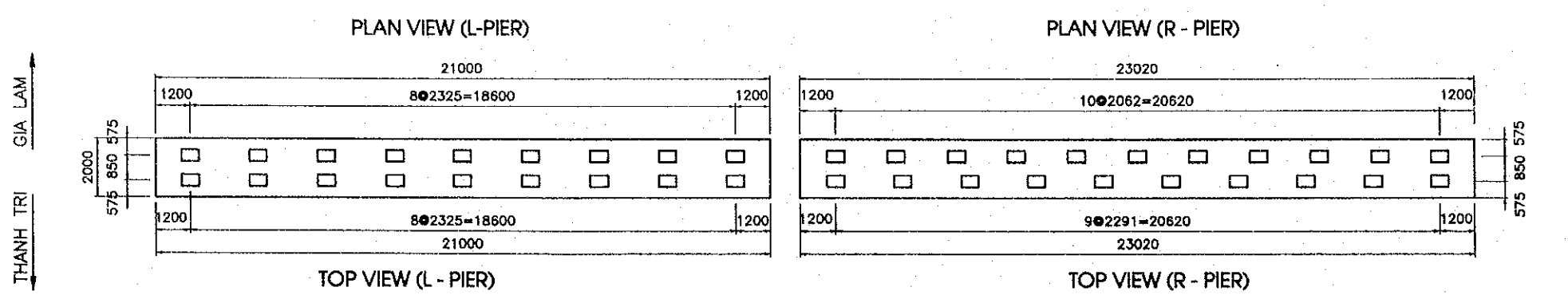
Items	STA(m)	PH(m)	GL(m)	EL4(m)	L(m)	LEFT PIER				RIGHT PIER									
						EL1L(m)	EL2L(m)	EL3L(m)	HL(m)	H1L(m)	H2L(m)	H3L(m)	EL1R(m)	EL2R(m)	EL3R(m)	HR(m)	H1R(m)	H2R(m)	H3R(m)
P15	12+260.500	14.894	3.823	0.804	37	13.014	12.994	12.904	10.20	8.070	8.330	10.410	13.014	12.993	12.804	10.199	8.069	8.330	10.410

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	DATE 2000. 3. 17
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

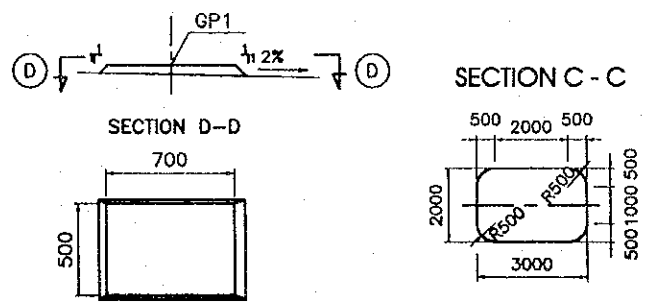
PACKAGE 2	SCALE 1/200	DRAWING No. C-1-3C-23	SHEET No. 1
NH No.5 FLYOVER - DETAIL OF PIER P18 (1)			



THANH TRI SIDE		GIA LAM SIDE	
Component	Depth(mm)	Component	Depth(mm)
AC layer	75	AC layer	75
Slab	207	Slab	207
Girder	1500	Girder	1500
Motor1	16	Motor1	8
Shoe(M)	56	Shoe(F)	36
Motor2	20	Motor2	40
<b>Total</b>	<b>1874</b>	<b>Total</b>	<b>1866</b>



GIRDER BEARING SEAT DETAIL (SC=1/50)



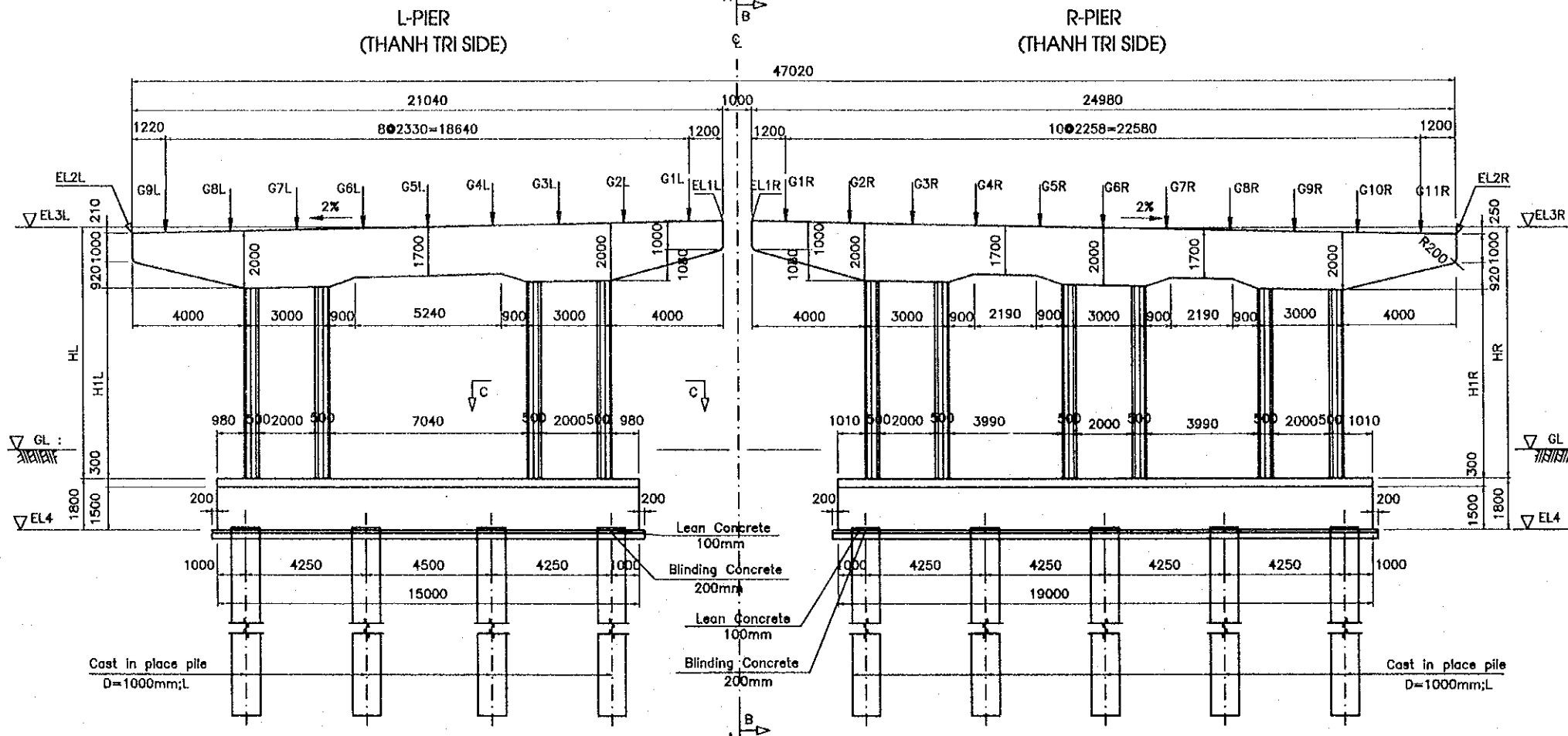




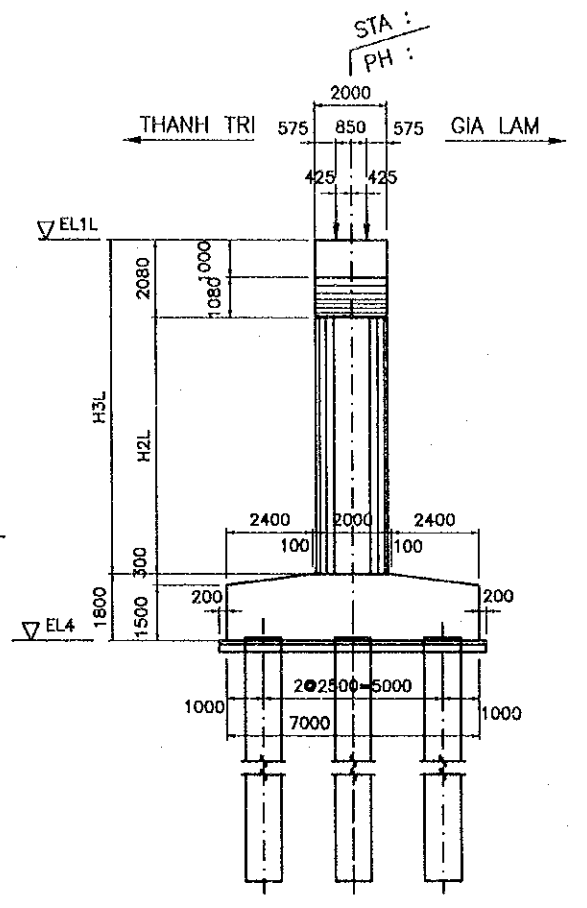
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S.WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S.WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.03.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/200	C-1-3C-25	
NH No.5 FLYOVER - DETAIL OF PIER P17 (1)			

FRONT VIEW

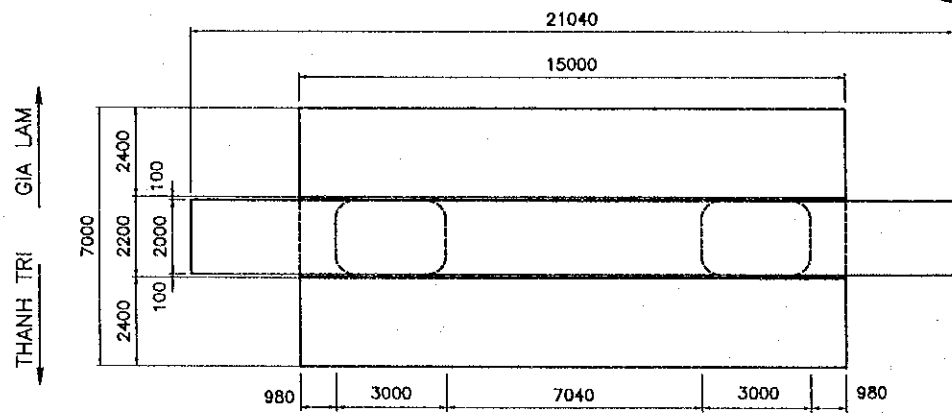


SECTION A - A

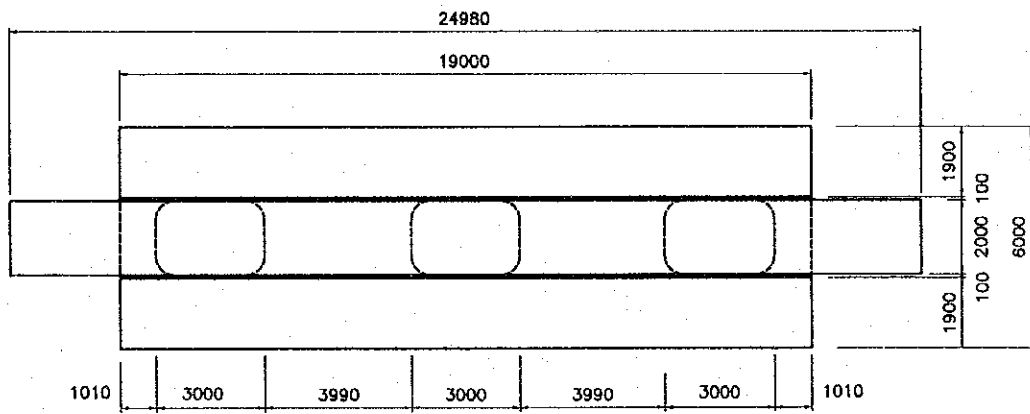


DEPTH OF SUPERSTRUCTURE

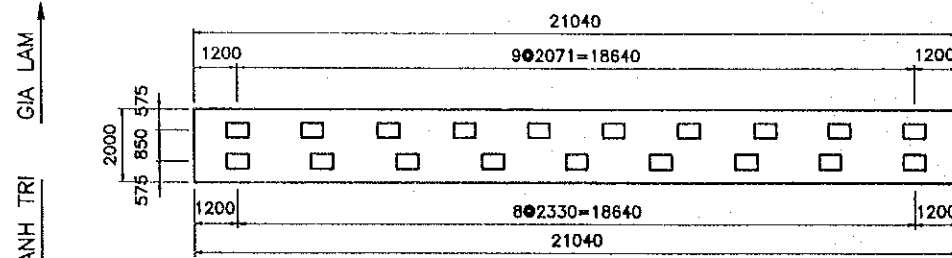
THANH TRI SIDE		GIA LAM SIDE	
Component	Depth(mm)	Component	Depth(mm)
AC layer	75	AC layer	75
Slab	207	Slab	207
Grider	1500	Grider	1500
Motor1	17	Motor1	8
Shoe(M)	56	Shoe(F)	36
Motor2	20	Motor2	40
<b>Total</b>	<b>1875</b>	<b>Total</b>	<b>1866</b>



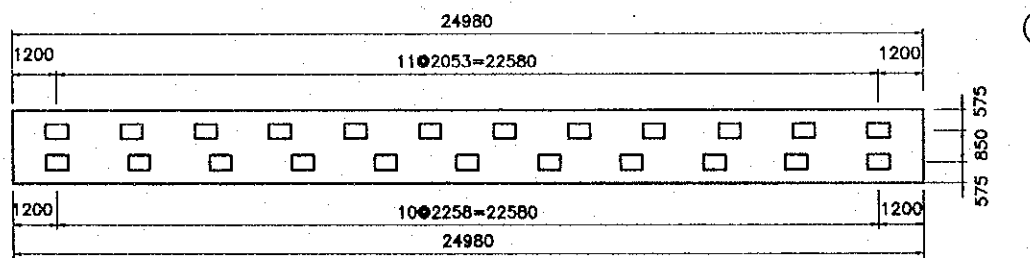
PLAN VIEW (L-PIER)



PLAN VIEW (R-PIER)

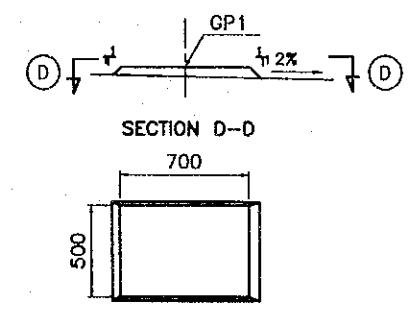


TOP VIEW (L-PIER)

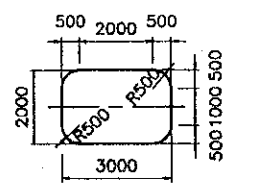


TOP VIEW (R-PIER)

GIRDER BEARING SEAT DETAIL (SC=1/50)



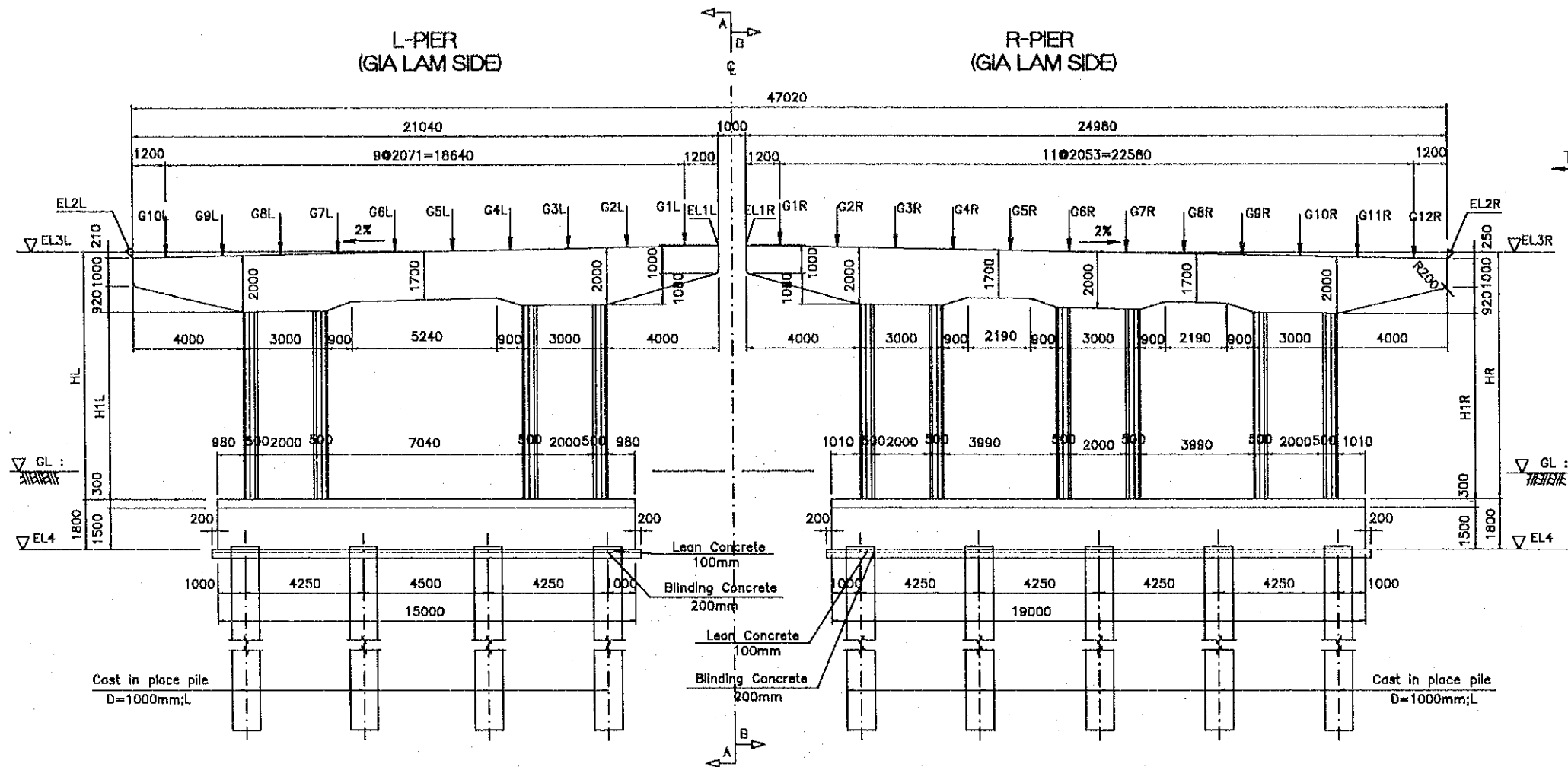
SECTION C - C



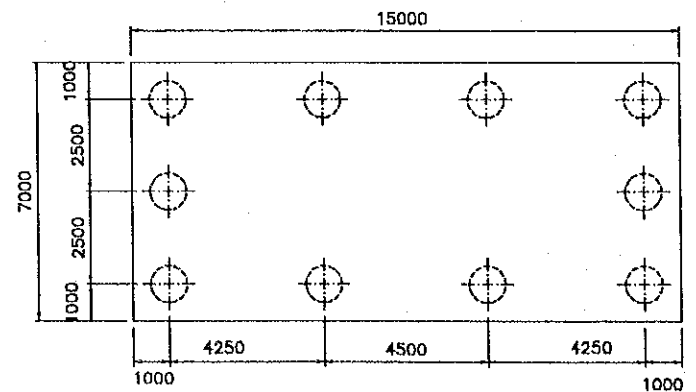
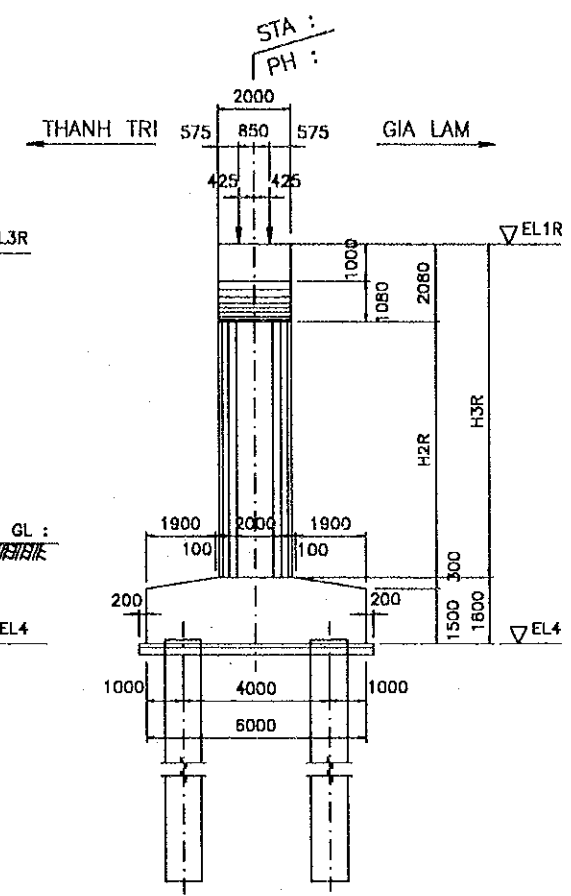
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. MATSUDA
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.6.1

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/200	C-1-3C-26	
NH No.5 FLYOVER - DETAIL OF PIER P17 (2)			

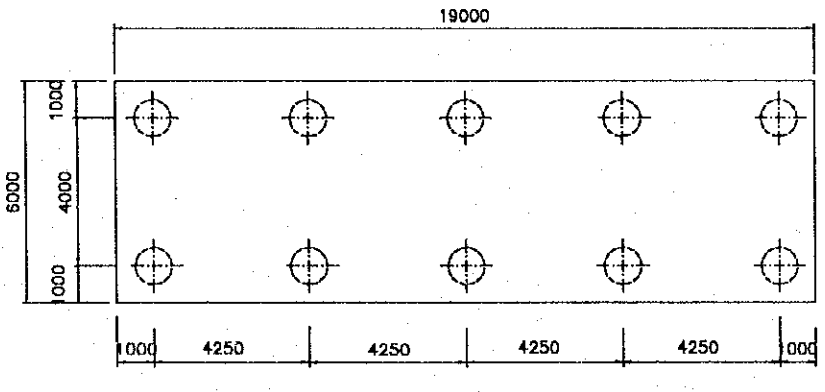
FRONT VIEW



SECTION B - B



PILE ARRANGEMENT (L-PIER)



PILE ARRANGEMENT (R-PIER)

DIMENSIONS OF PIERS

Items Pier	STA(m)	PH(m)	GL(m)	EL4(m)	L(m)	Left pier								Right pier							
						EL1L(m)	EL2L(m)	EL3L(m)	HL(m)	H1L(m)	H2L(m)	H3L(m)	EL1R(m)	EL2R(m)	EL3R(m)	HR(m)	H1R(m)	H2R(m)	H3R(m)		
P17	12+316.500	14.378	4.274	1.287	40	12.497	12.076	12.287	9.200	7.069	7.330	9.410	12.497	11.997	12.247	9.160	6.990	7.330	9.410		

ELEVATION OF TOP BEARING SEAT GP1

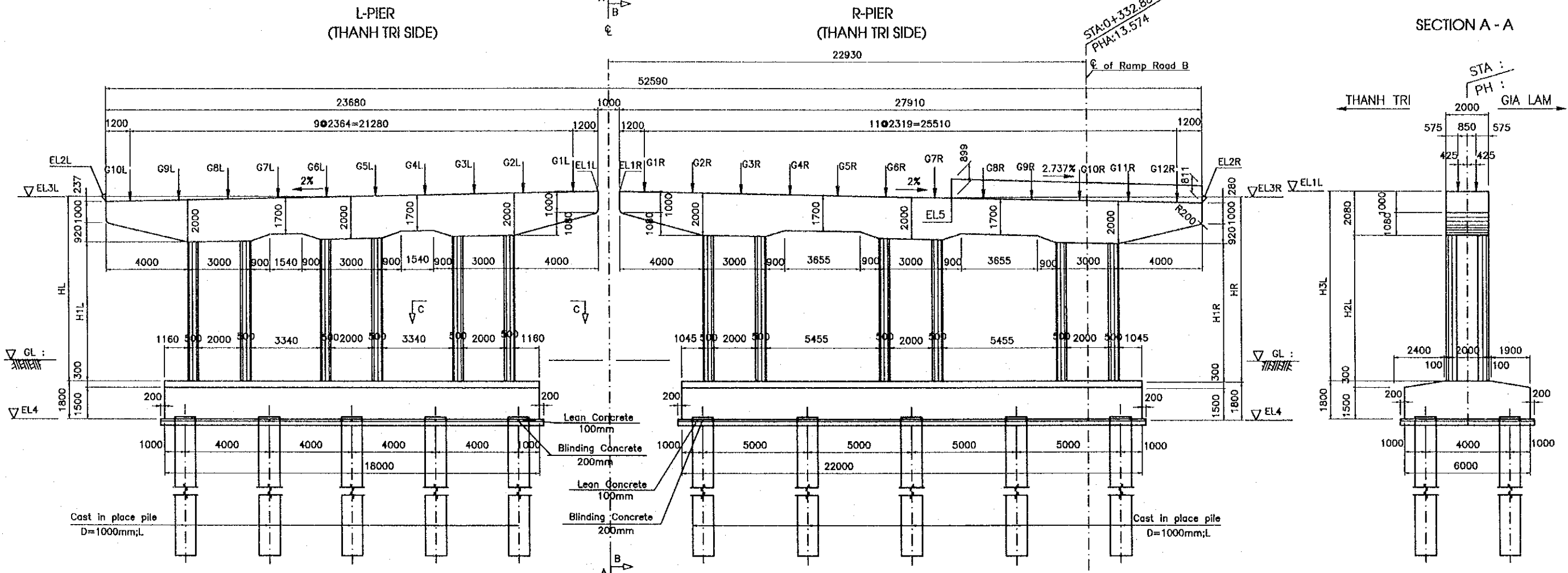
Bearing seat	Left pier									
	G1L	G2L	G3L	G4L	G5L	G6L	G7L	G8L	G9L	G10L
THANH TRI SIDE	12.493	12.446	12.400	12.353	12.307	12.260	12.213	12.167	12.120	-
GIA LAM SIDE	12.513	12.471	12.430	12.389	12.347	12.306	12.264	12.223	12.182	12.140

Bearing seat	Right pier											
	G1R	G2R	G3R	G4R	G5R	G6R	G7R	G8R	G9R	G10R	G11R	G12R
THANH TRI SIDE	12.493	12.448	12.403	12.357	12.312	12.267	12.222	12.177	12.132	12.086	12.041	-
GIA LAM SIDE	12.513	12.472	12.431	12.390	12.349	12.308	12.267	12.225	12.184	12.143	12.102	12.061

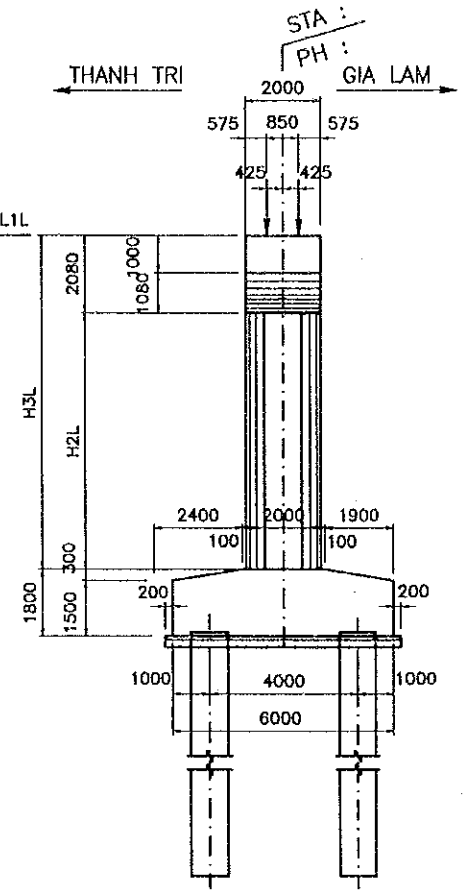
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000. 03. 17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/200	C-1-3C-27	
NH No.5 FLYOVER - DETAIL OF PIER P18 (1)			

FRONT VIEW



SECTION A - A



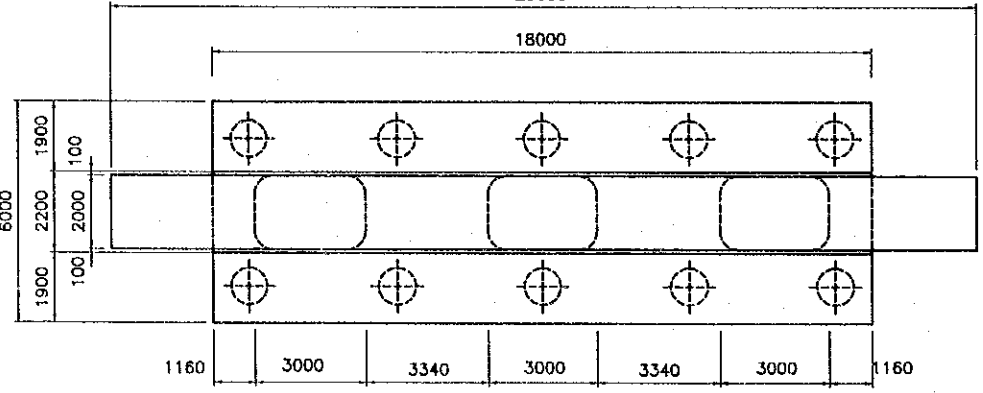
DEPTH OF SUPERSTRUCTURE FOR MAIN NH NO.5.

THANH TRI SIDE		GIA LAM SIDE	
Component	Depth(mm)	Component	Depth(mm)
AC layer	75	AC layer	75
Slab	207	Slab	207
Grider	1500	Grider	1650
Motor1	49	Motor1	8
Shoe(M)	56	Shoe(F)	36
Motor2	140	Motor2	40
Total	2027	Total	2016

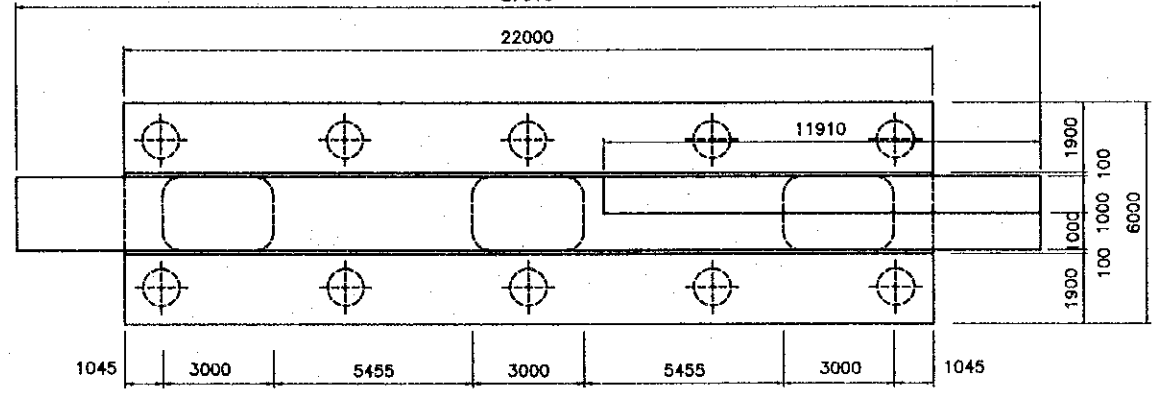
DEPTH OF SUPERSTRUCTURE FOR RAMP B

Component	Depth(mm)
AC layer	75
Slab	1000
Motor1	20
Shoe(M)	30
Motor2	30
Total	1155

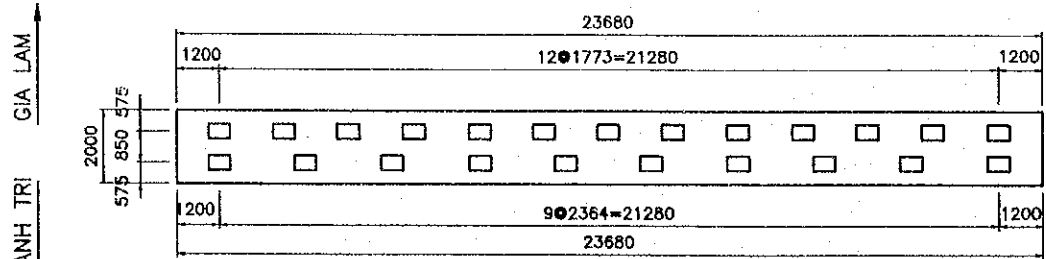
PLAN VIEW (L-PIER)



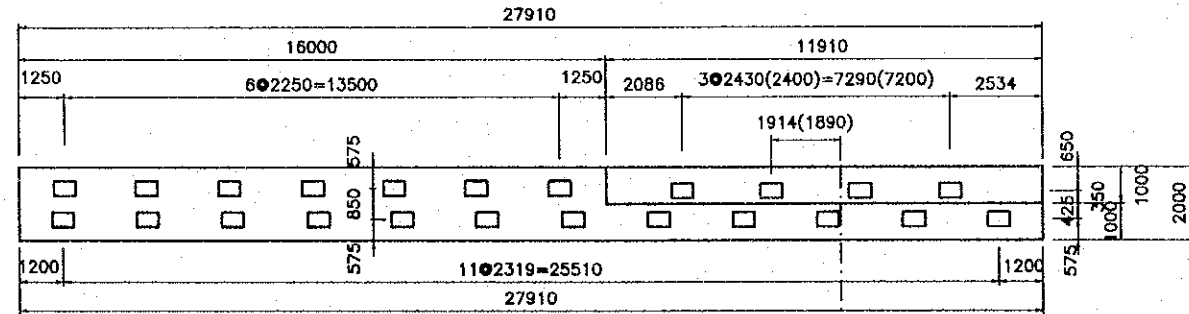
PLAN VIEW (R - PIER)



TOP VIEW (L - PIER)

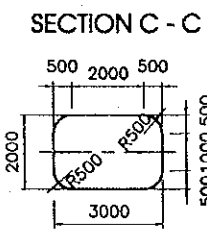
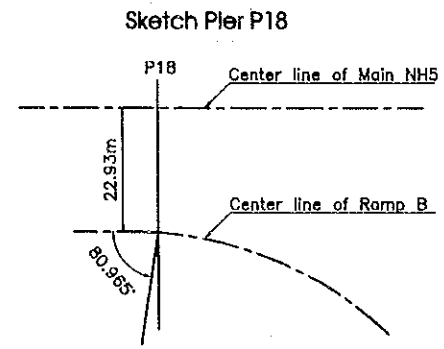
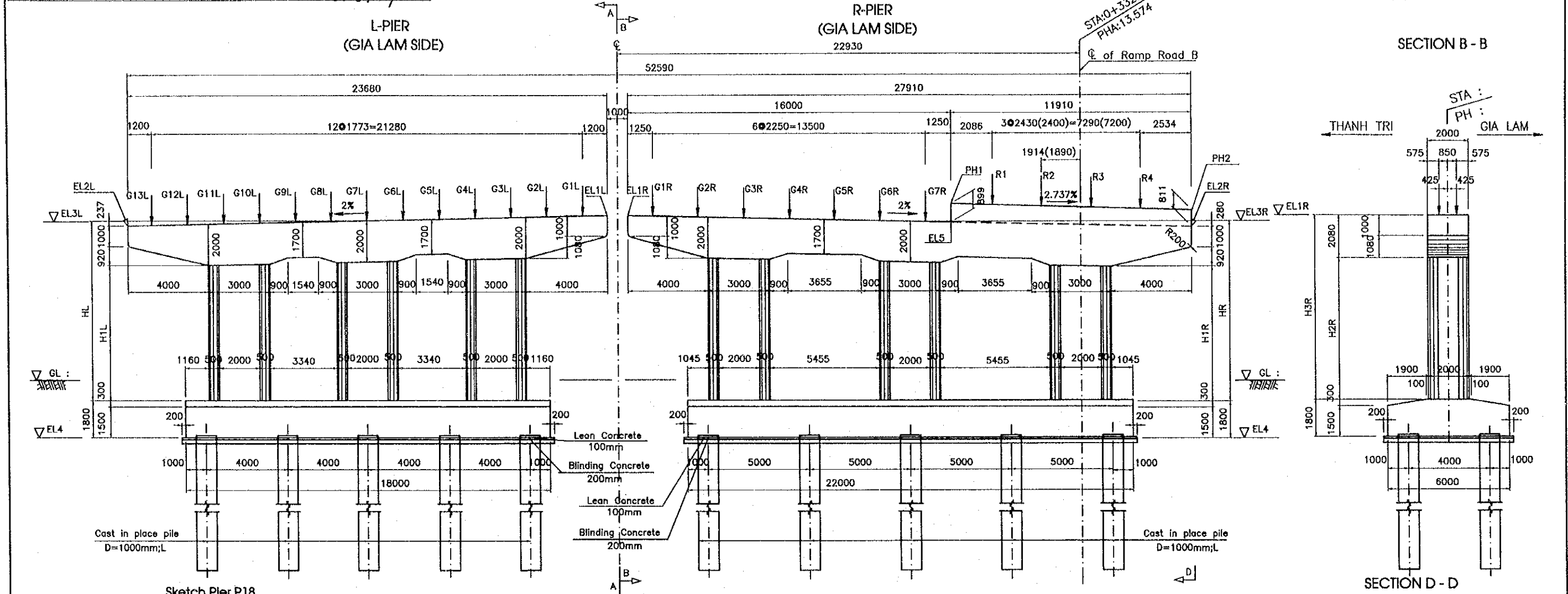


TOP VIEW (R - PIER)



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000. 03. 17

PACKAGE 2	SCALE 1/200	DRAWING No. C-1-3C-28	SHEET No.
NH No.5 FLYOVER - DETAIL OF PIER P18 (2)			



ELEVATION OF TOP BEARING SEAT GP1 FOR RAMP B

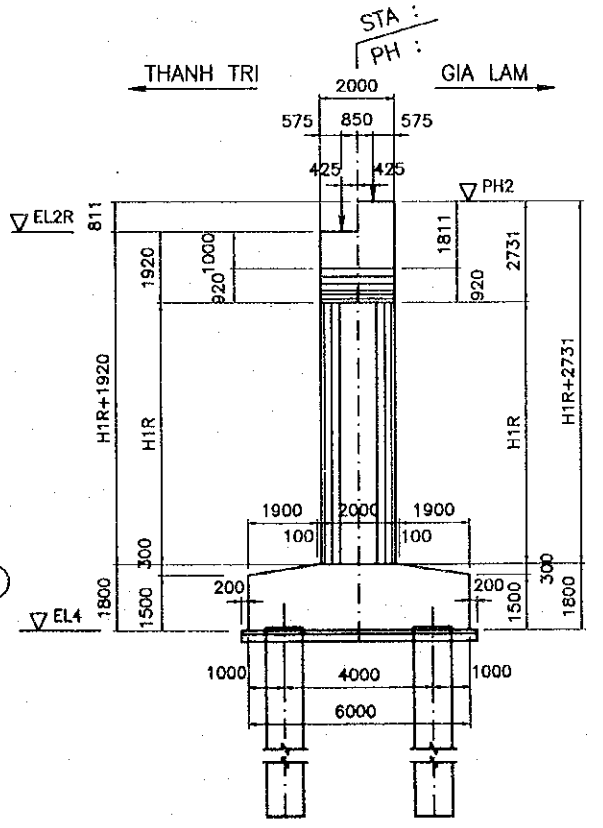
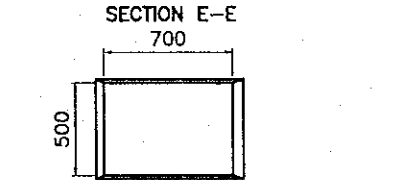
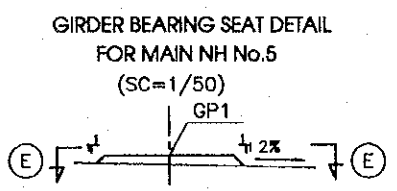
Bearing seat	R1	R2	R3	R4
ELEVATION (M)	12.531	12.464	12.398	12.331

ELEVATION OF TOP BEARING SEAT GP1 FOR MAIN NH NO.5

Bearing seat	LEFT PIER												RIGHT PIER												
	G1L	G2L	G3L	G4L	G5L	G6L	G7L	G8L	G9L	G10L	G11L	G12L	G13L	G1R	G2R	G3R	G4R	G5R	G6R	G7R	G8R	G9R	G10R	G11R	G12R
THANH TRI SIDE	12.125	12.078	12.031	11.983	11.936	11.889	11.841	11.794	11.747	11.700	-	-	-	12.125	12.079	12.032	11.986	11.940	11.893	11.847	11.801	11.754	11.708	11.661	11.615
GIA LAM SIDE	12.025	11.990	11.954	11.919	11.883	11.848	11.812	11.777	11.741	11.706	11.671	11.635	11.600	12.024	11.979	11.934	11.889	11.844	11.799	11.754	-	-	-	-	-

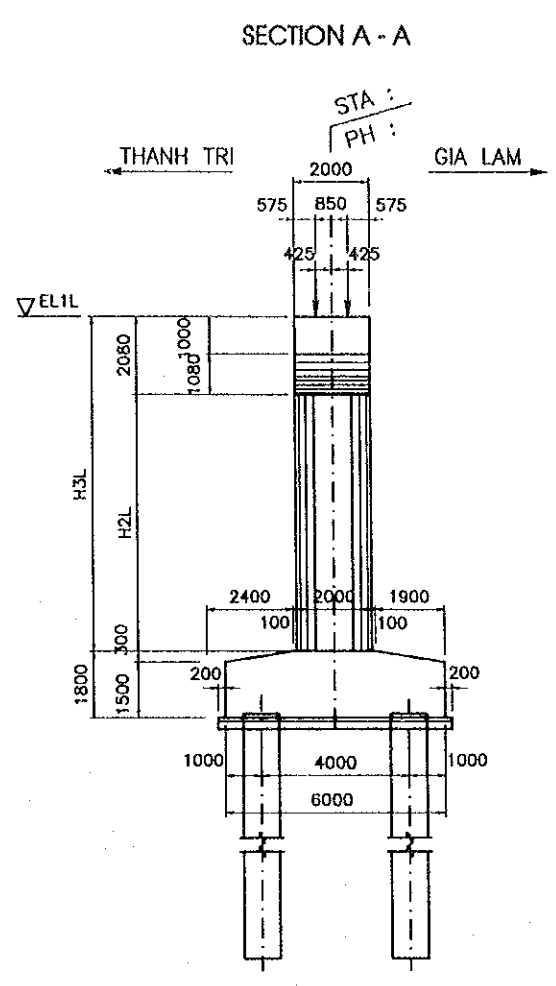
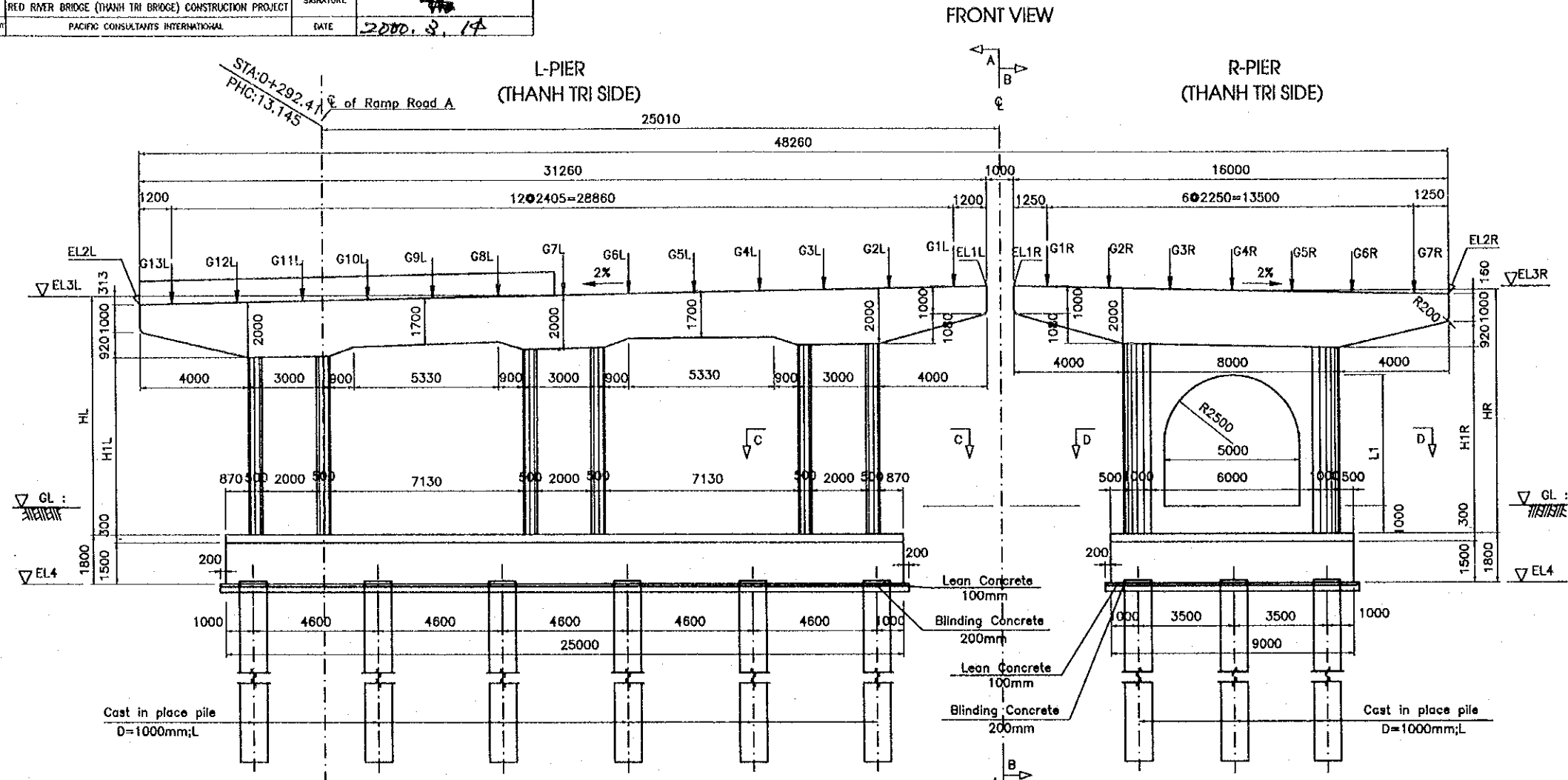
DIMENSIONS OF PIERS

Item Pier	STA(m)	PH(m)	GL(m)	EL4(m)	EL5(m)	L(m)	LEFT PIER						RIGHT PIER						PH1 (m)	PH2 (m)		
							EL1L(m)	EL2L(m)	EL3L(m)	HL(m)	H1L(m)	H2L(m)	H3L(m)	EL1R(m)	EL2R(m)	EL3R(m)	HR(m)	H1R(m)			H2R(m)	H3R(m)
P18	12+344.500	14.041	4.110	0.772	11.689	40	12.009	11.536	11.772	9.200	7.044	7.357	9.437	12.009	11.451	11.730	9.158	9.959	7.357	9.437	12.588	12.262



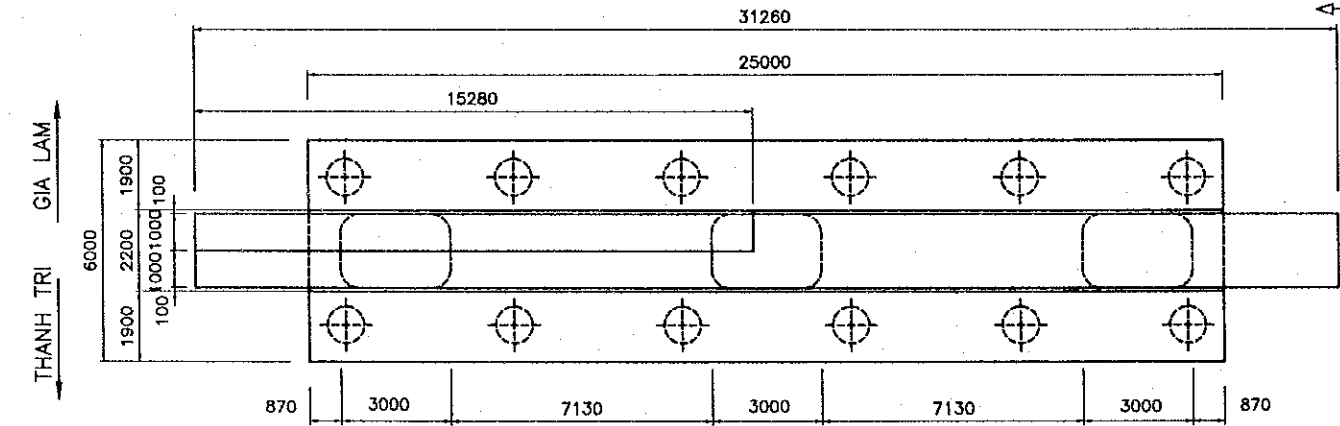
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANH LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT: RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		DATE: 2000. 3. 14
CONSULTANT: PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/200	DRAWING No. C-1-3C-29	SHEET No.
NH No.5 FLYOVER - DETAIL OF PIER P19			

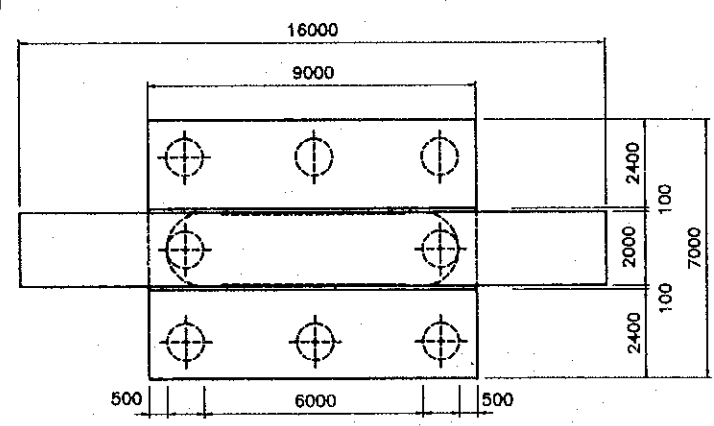


DEPTH OF SUPERSTRUCTURE FOR MAIN NH NO.5

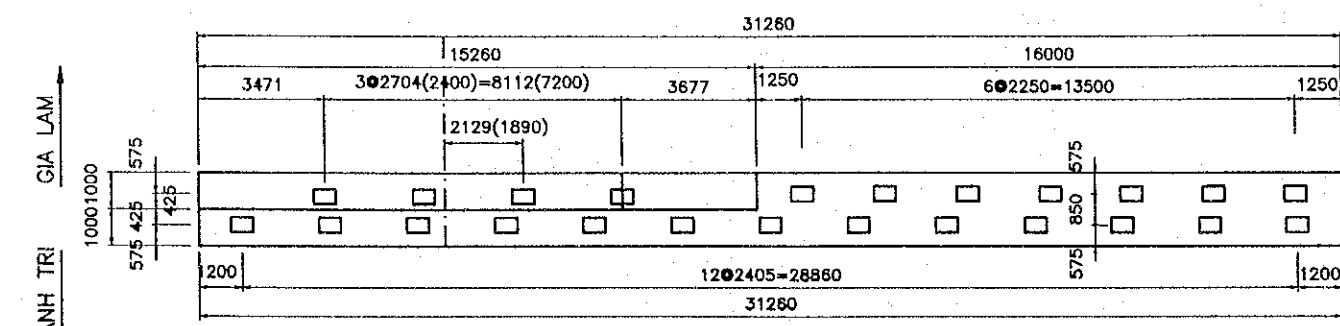
THANH TRI SIDE		GIA LAM SIDE	
Component	Depth(mm)	Component	Depth(mm)
AC layer	75	AC layer	75
Slab	207	Slab	207
Grider	1650	Grider	1650
Motar1	20	Motar1	8
Shoe(M)	56	Shoe(F)	36
Motar2	20	Motar2	40
<b>Total</b>	<b>2028</b>	<b>Total</b>	<b>2016</b>



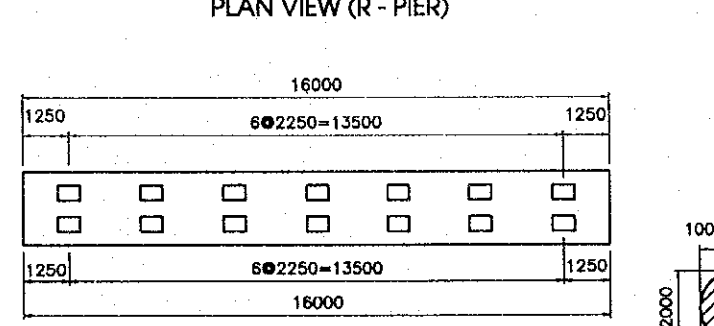
PLAN VIEW (L-PIER)



PLAN VIEW (R-PIER)

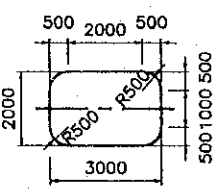


TOP VIEW (L-PIER)



TOP VIEW (R-PIER)

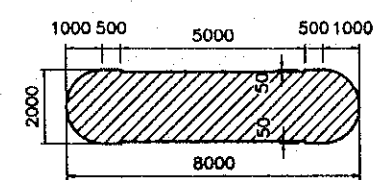
SECTION C - C



DEPTH OF SUPERSTRUCTURE FOR RAMP A

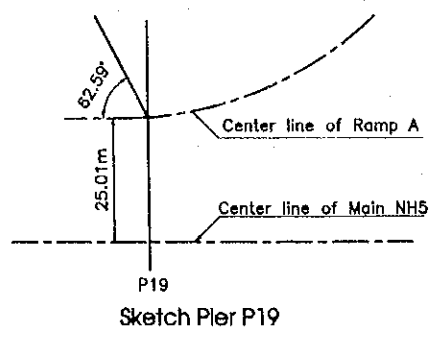
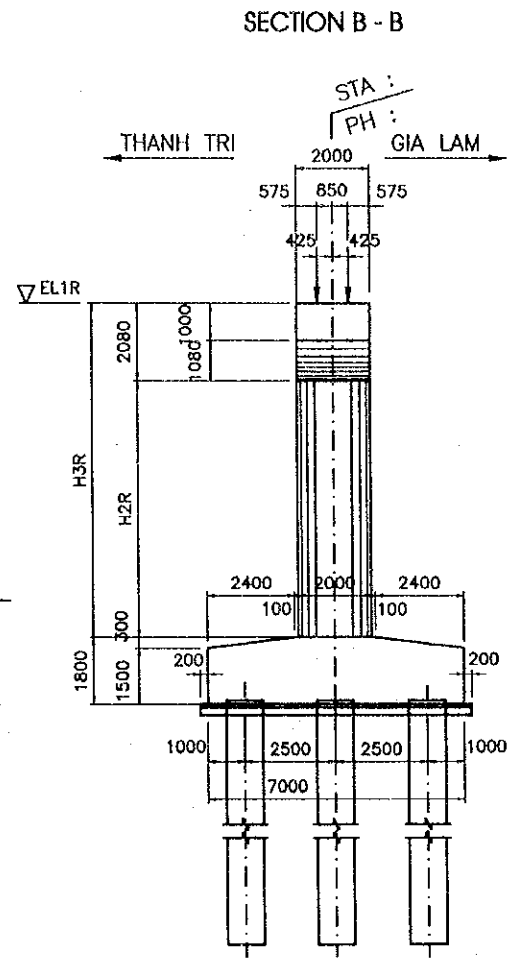
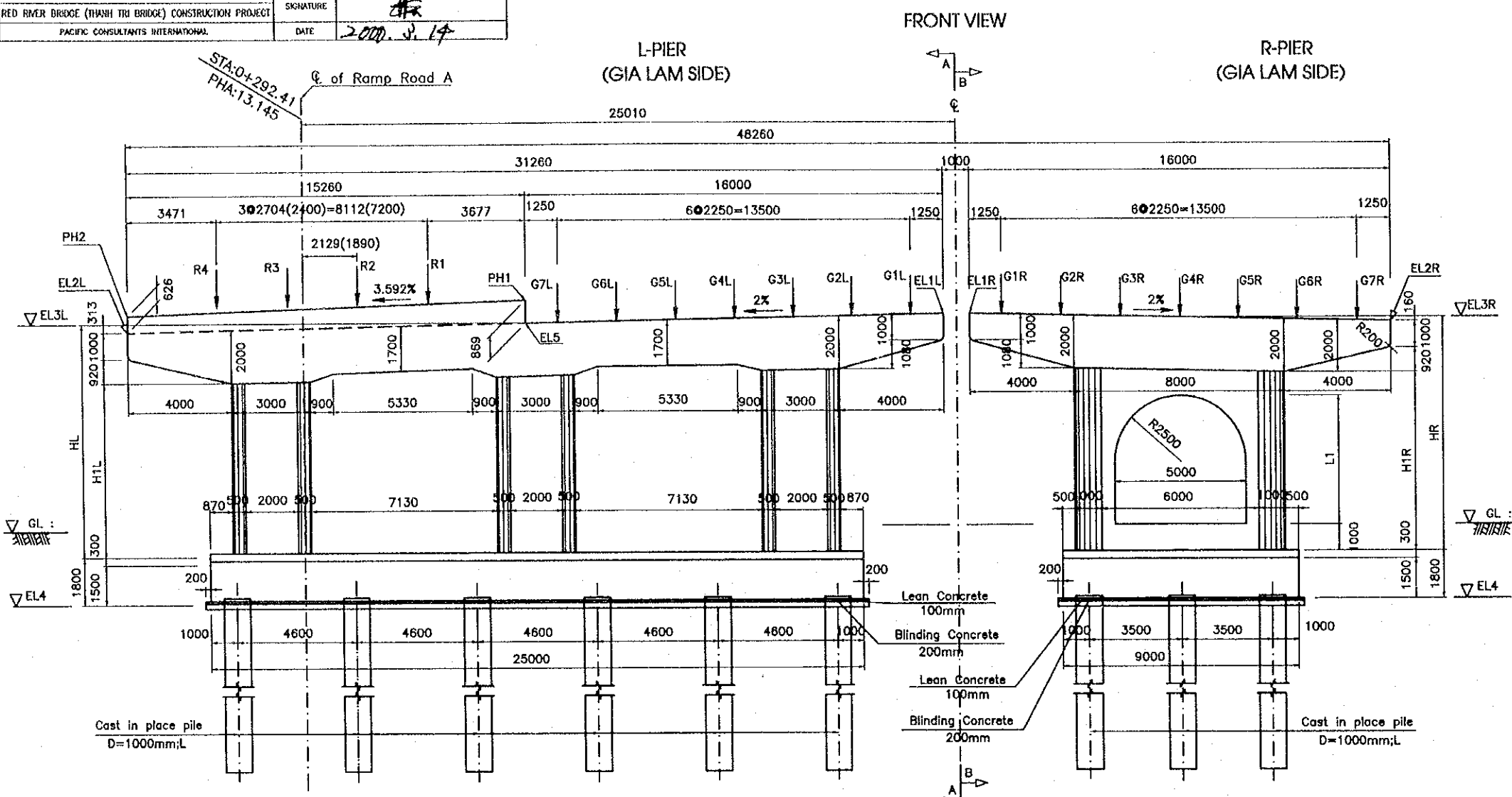
Component	Depth(mm)
AC layer	75
Slab	1000
Motar1	20
Shoe(M)	30
Motar2	30
<b>Total</b>	<b>1155</b>

SECTION D - D



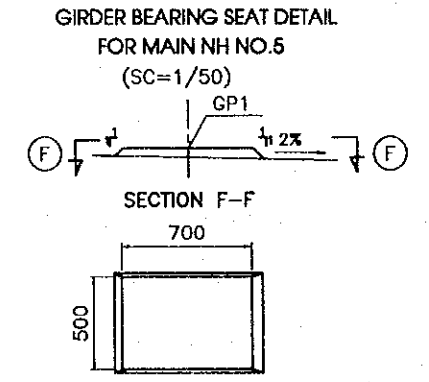
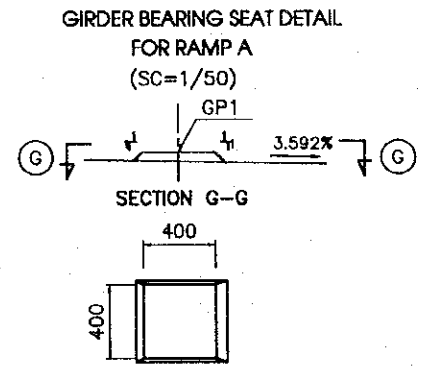
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. SATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.3.14	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/200	DRAWING No. C-1-3C-30	SHEET No.
NH No.5 FLYOVER - DETAIL OF PIER P19 (2)			



ELEVATION OF TOP BEARING SEAT GP1 FOR RAMP A

Bearing seat	R1	R2	R3	R4
ELEVATION (M)	12.162	12.054	11.957	11.860



ELEVATION OF TOP BEARING SEAT GP1 FOR MAIN NH NO.5

Bearing seat	LEFT PIER													RIGHT PIER						
	G1L	G2L	G3L	G4L	G5L	G6L	G7L	G8L	G9L	G10L	G11L	G12L	G13L	G1R	G2R	G3R	G4R	G5R	G6R	G7R
THANH TRI SIDE	11.731	11.683	11.635	11.587	11.539	11.491	11.443	11.395	11.347	11.299	11.250	11.202	11.154	11.730	11.685	11.640	11.595	11.550	11.505	11.460
GIA LAM SIDE	11.750	11.705	11.660	11.615	11.570	11.525	11.480	-	-	-	-	-	-	11.750	11.705	11.660	11.615	11.570	11.525	11.480

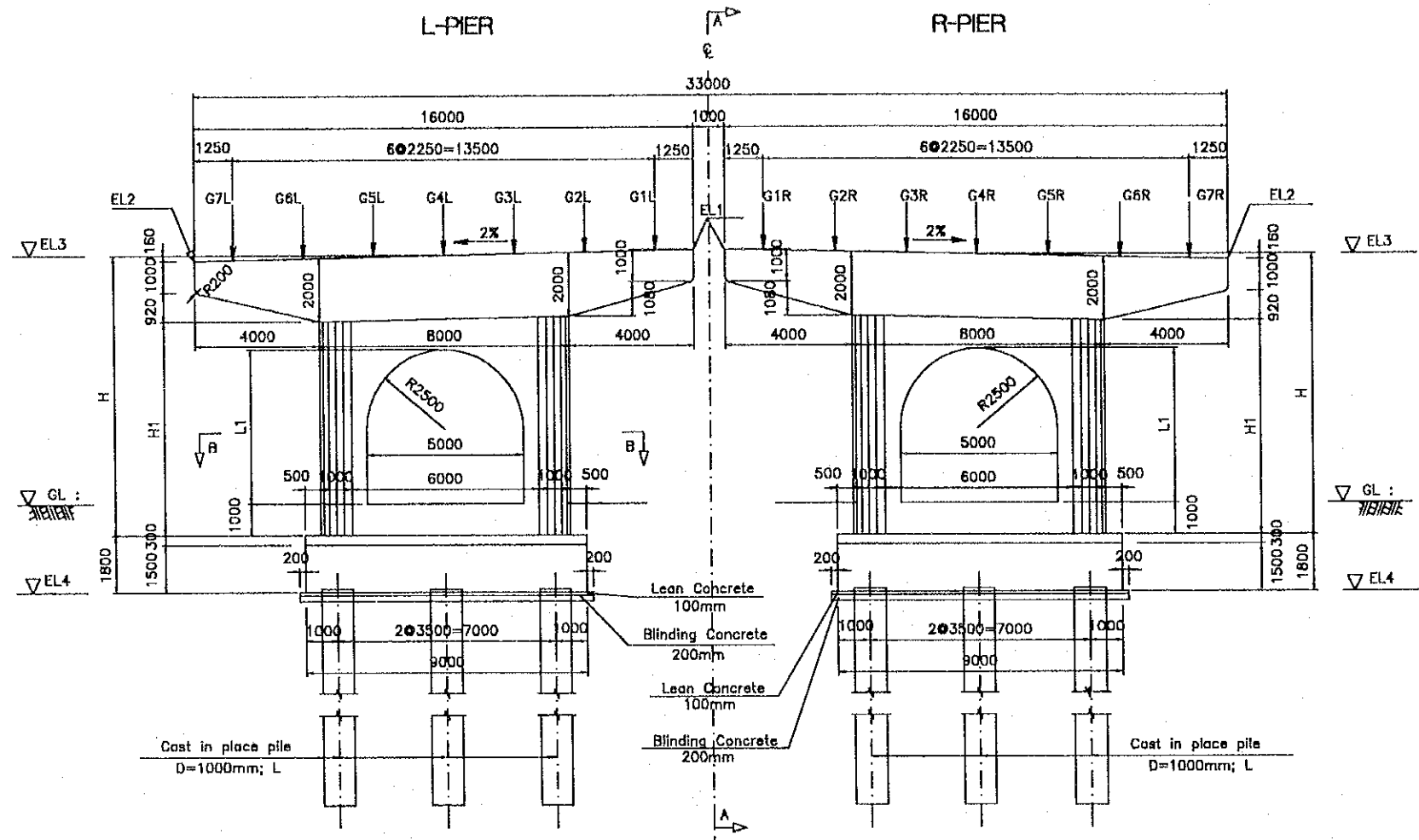
DIMENSIONS OF PIERS

Item Pier	STA(m)	PH(m)	GL(m)	EL4(m)	EL5(m)	L(m)	LEFT PIER							RIGHT PIER							PH1 (m)	PH2 (m)	L1 (m)
							EL1L(m)	EL2L(m)	EL3L(m)	HL(m)	H1L(m)	H2L(m)	H3L(m)	EL1R(m)	EL2R(m)	EL3R(m)	HR(m)	H1R(m)	H2R(m)	H3R(m)			
P19	12+364.500	13.768	4.000	1.423	11.415	40	11.735	11.110	11.423	8.200	5.967	6.432	8.512	11.735	11.415	11.675	8.352	6.272	6.432	8.512	12.284	11.736	4.50

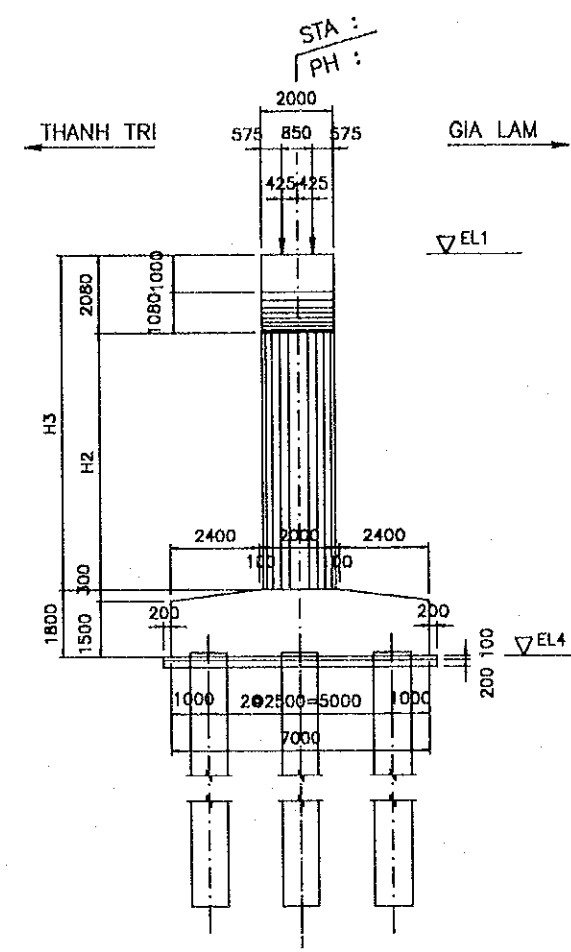
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT	DESIGNED BY NAME S. MATASE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.6.1
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	

PACKAGE 2	SCALE 1/200	DRAWING No. C-1-3C-31	SHEET No.
NH No.5 FLYOVER -- DETAIL OF PIERS P20,P21			

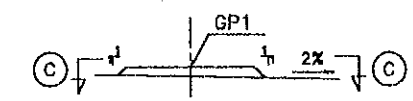
FRONT VIEW



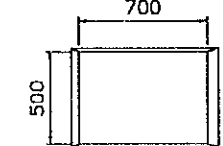
SECTION A-A



GIRDER BEARING SEAT DETAIL  
(SC=1/50)



SECTION C-C



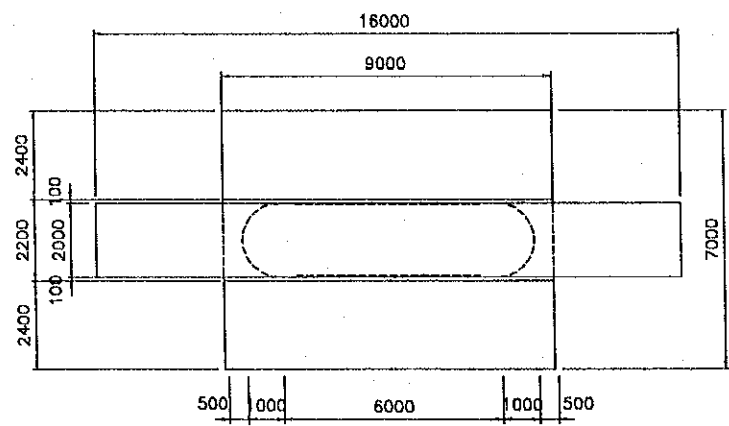
DEPTH OF SUPERSTRUCTURE

THANH TRI SIDE		GIA LAM SIDE	
Component	Depth(mm)	Component	Depth(mm)
AC layer	75	AC layer	75
Slab	207	Slab	207
Girder	1650	Girder	1650
Motar1	22(24)	Motar1	8
Shoe(M)	56	Shoe(F)	36
Motar2	20	Motar2	40
Total	2030(2032)	Total	2016

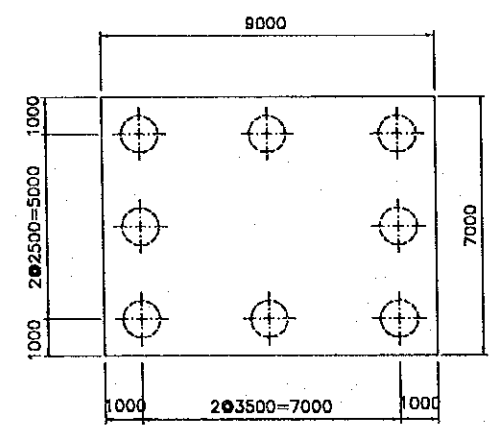
Note: Number in (...) use Pier P21.

DIMENSIONS OF PIERS

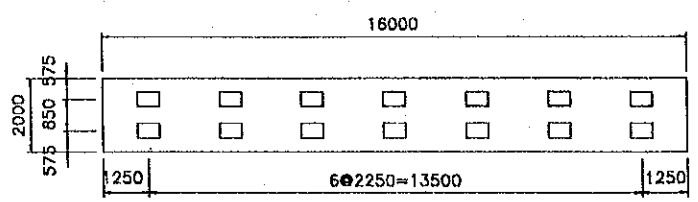
Items	STA(m)	PH(m)	EL1(m)	EL2(m)	EL3(m)	EL4(m)	GL(m)	H(m)	H1(m)	H2(m)	H3(m)	L(m)	L1(m)
P20	12+397.5	13.260	11.225	10.905	11.065	0.065	3.411	9.20	7.12	7.28	9.36	40	5.0
P21	12+430.5	12.690	10.643	10.323	10.483	0.483	3.632	8.20	6.12	6.28	8.36	40	4.0



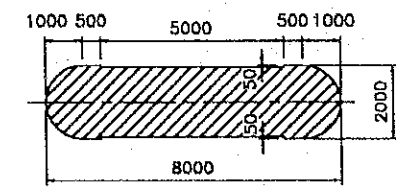
PLAN VIEW



PILE ARRANGEMENT



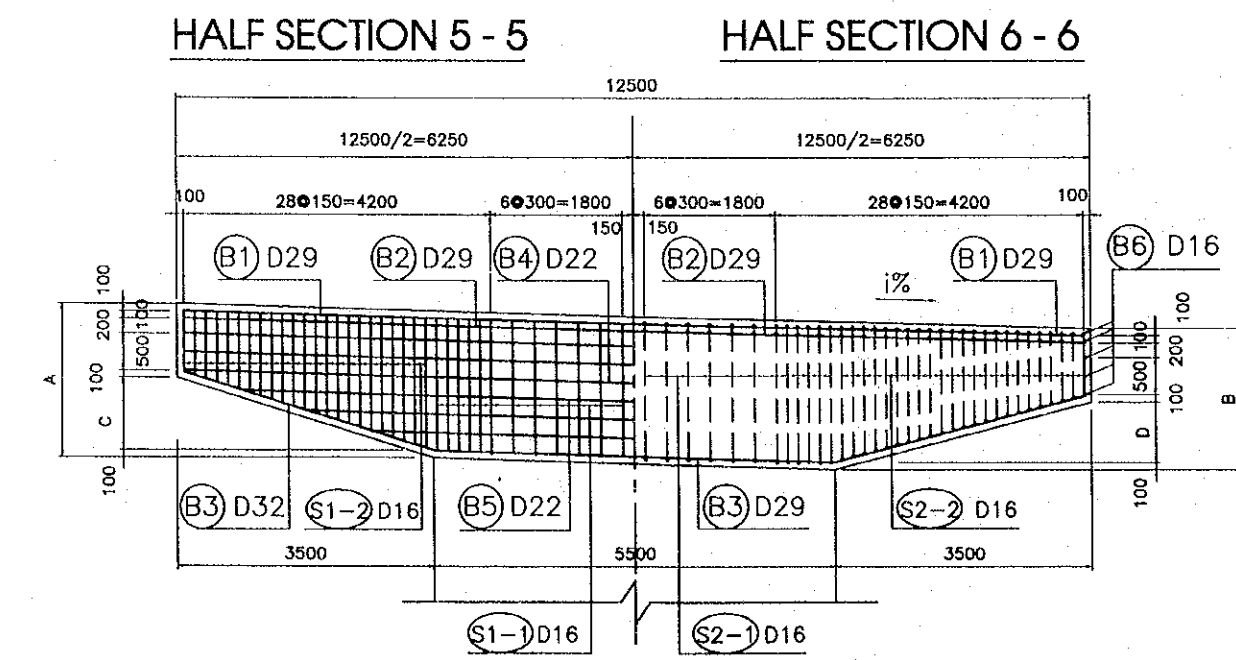
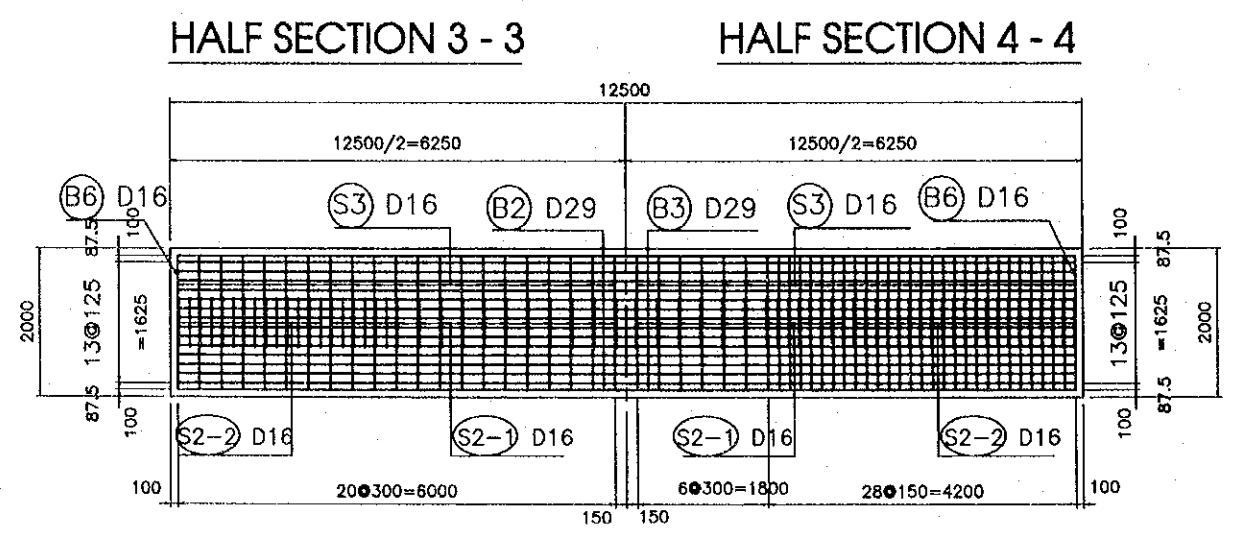
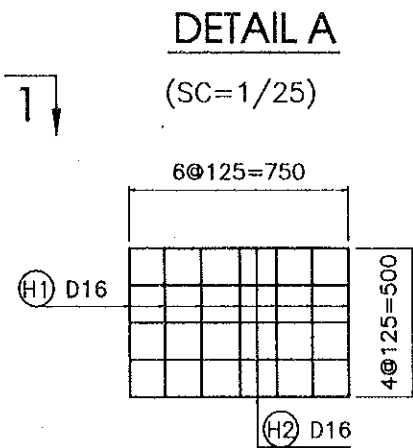
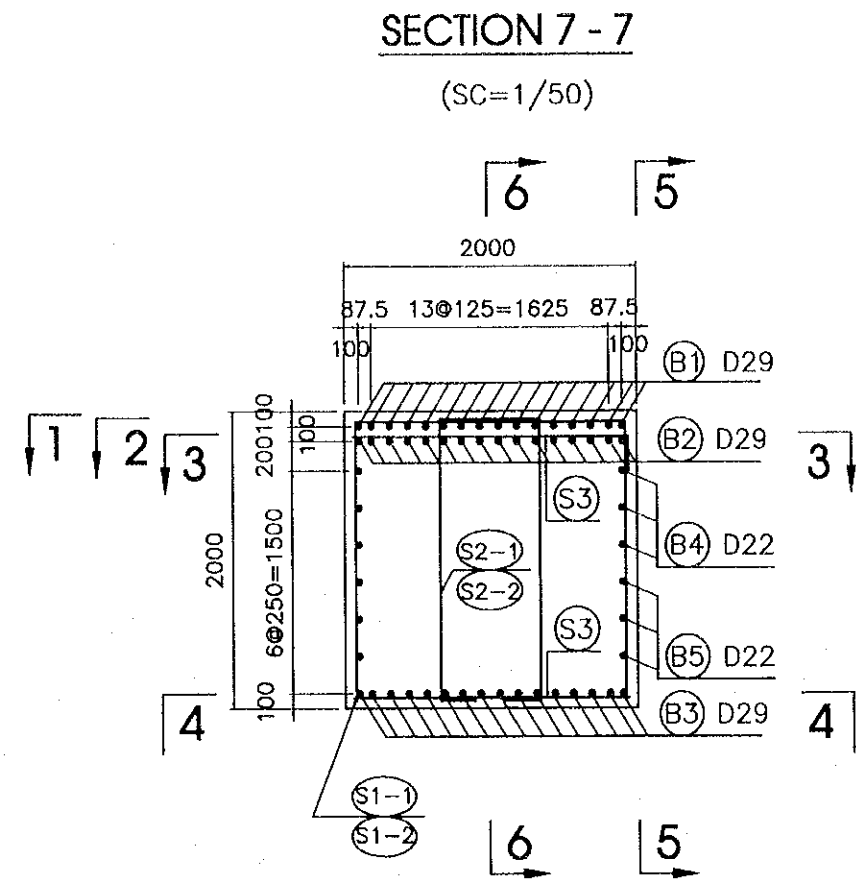
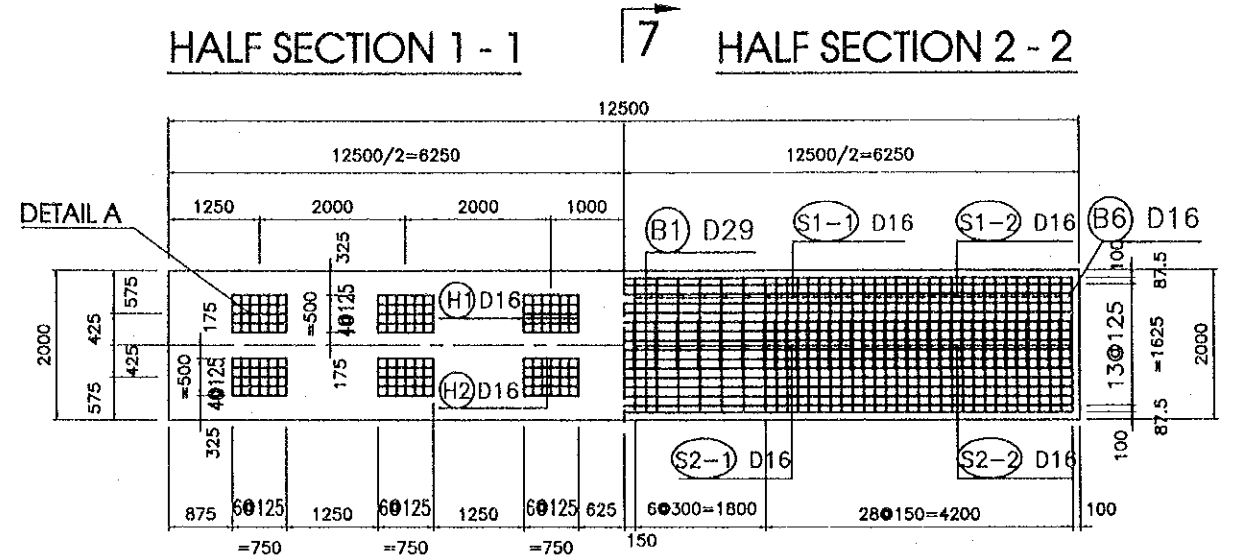
TOP VIEW



SECTION B - B

ELEVATION OF TOP BEARING SEAT GP1

Pier	Side	Bearing seat	Elevation(m)	G1L;G1R	G2L;G2R	G3L;G3R	G4L;G4R	G5L;G5R	G6L;G6R	G7L;G7R
				Pier P20	THANH TRI SIDE	11.220	11.175	11.130	11.085	11.040
Pier P20	GIA LAM SIDE	11.240	11.195	11.150	11.105	11.060	11.015	10.970		
Pier P21	THANH TRI SIDE	10.638	10.593	10.548	10.503	10.458	10.413	10.368		
Pier P21	GIA LAM SIDE	10.658	10.613	10.568	10.523	10.478	10.433	10.388		



DIMENSIONS OF PIERS

PIER	A(mm)	B(mm)	C(mm)	D(mm)	i %
P1L	2105	1895	1005	795	3
P1R	2105	1895	1005	795	3
P2L	2105	1895	1005	795	3
P2R	2105	1895	1005	795	3
P3L	2105	1895	1005	795	3
P3R	2105	1895	1005	795	3
P4L	2105	1895	1005	795	3
P4R	2105	1895	1005	795	3
P5L	2105	1895	1005	795	2.99

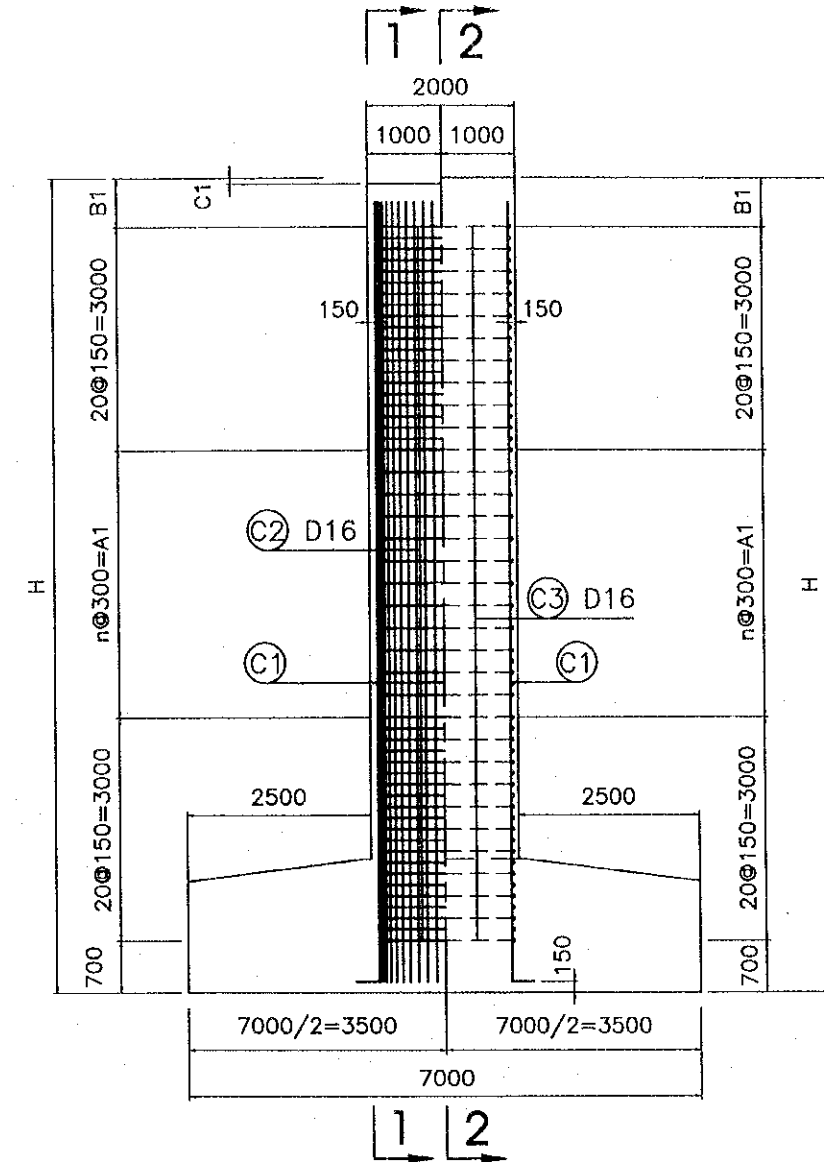
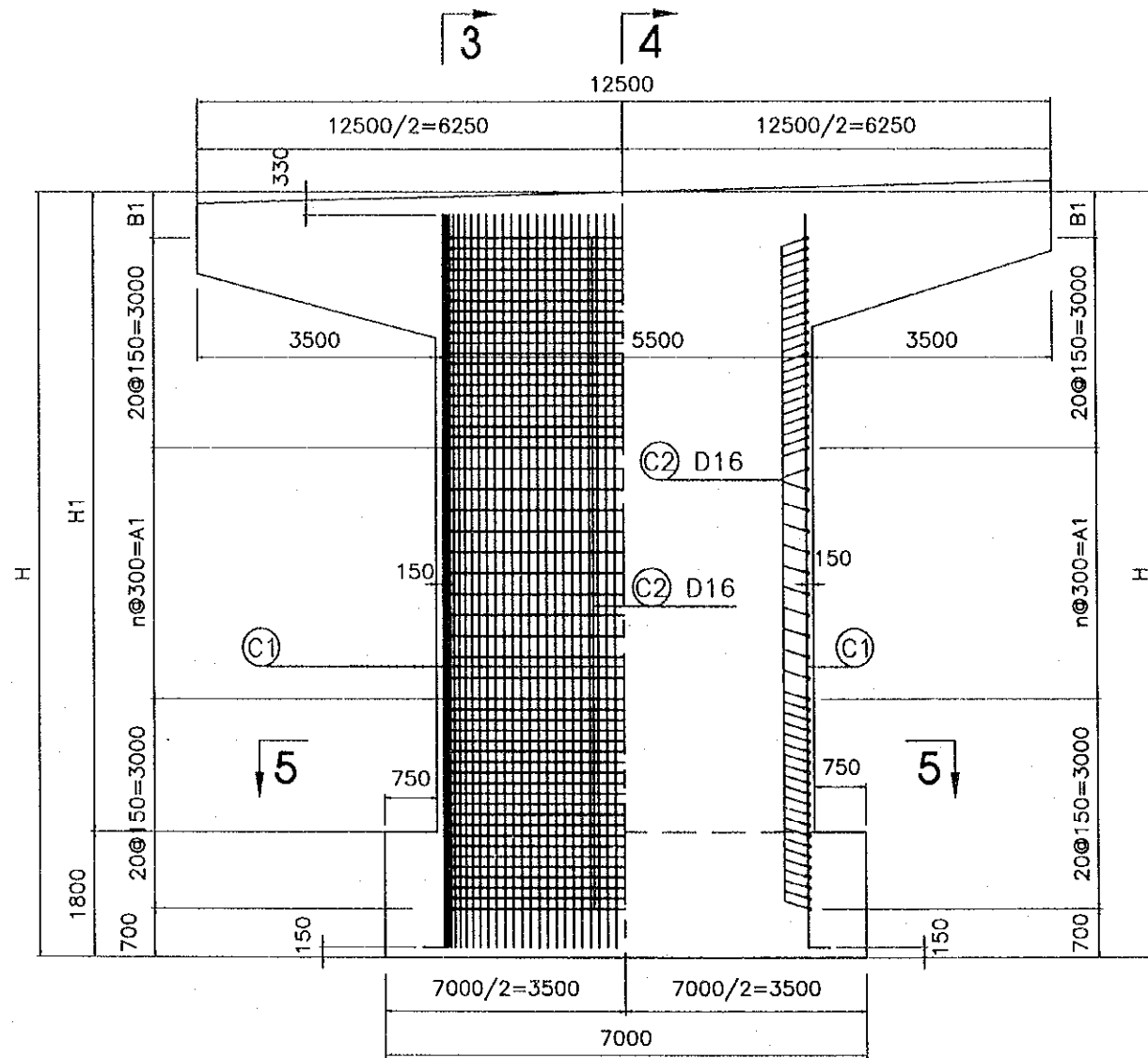
PIER	A(mm)	B(mm)	C(mm)	D(mm)	i %
P5R	2105	1895	1005	795	2.99
P6L	2101	1899	1001	799	2.88
P6R	2101	1899	1001	799	2.88
P7L	2097	1903	997	803	2.77
P7R	2097	1903	997	803	2.77
P8R	2093	1907	993	807	2.66
P9R	2089	1911	989	811	2.55
P10R	2085	1915	989	815	2.44



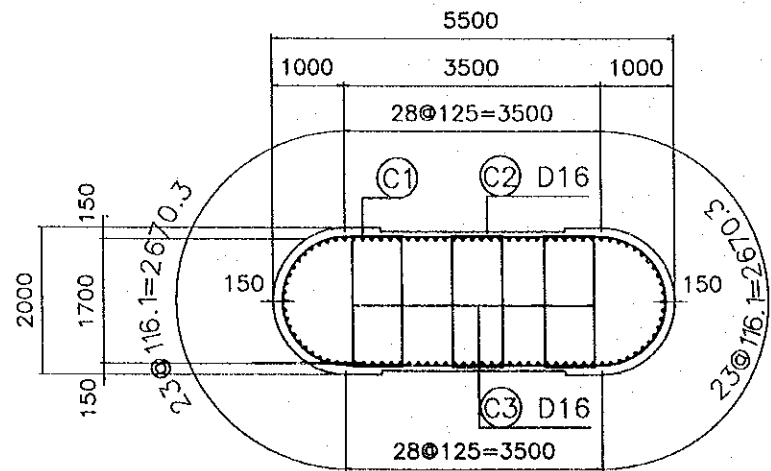
HALF SECTION 1 - 1

HALF SECTION 2 - 2

HALF SECTION 3 - 3 HALF SECTION 4 - 4



SECTION 5 - 5



DIMENSIONS OF PIERS

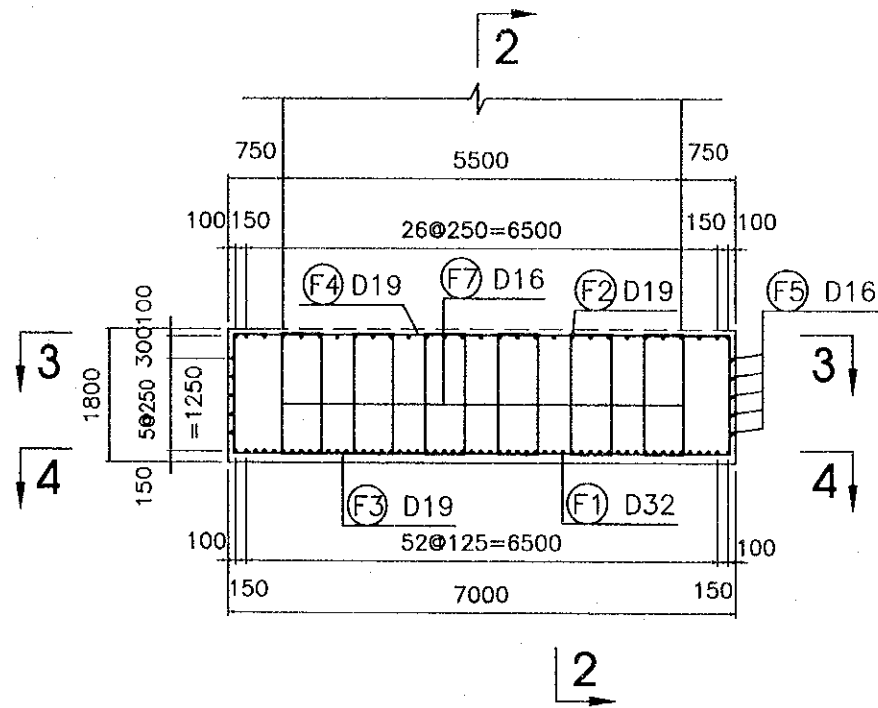
ITEMS	H(m)	H1(m)	A1(mm)	B1(mm)	C1(mm)	n
PIER P1L	9000	7200	1800	500	83	6
PIER P1R	9405	7605	2100	605	83	7
PIER P2L	9000	7200	1800	500	83	6
PIER P2R	9405	7605	2100	605	83	7
PIER P3L	10000	8200	2700	600	83	9
PIER P3R	10405	8605	3300	405	83	11
PIER P4L	11000	9200	3900	400	83	13
PIER P4R	11405	9605	4200	505	83	14
PIER P5L	11000	9200	3900	400	82	13

ITEMS	H(m)	H1(m)	A1(mm)	B1(mm)	C1(mm)	n
PIER P5R	11403	9603	4200	503	82	14
PIER P6L	12000	10200	4800	500	79	16
PIER P6R	12389	10589	5100	589	79	17
PIER P7L	12000	10200	4800	500	76	16
PIER P7R	12374	10574	5100	574	76	17
PIER P8R	12406	10606	5100	606	73	17
PIER P9R	13420	11620	6300	420	70	21
PIER P10R	13433	11633	6300	433	67	21

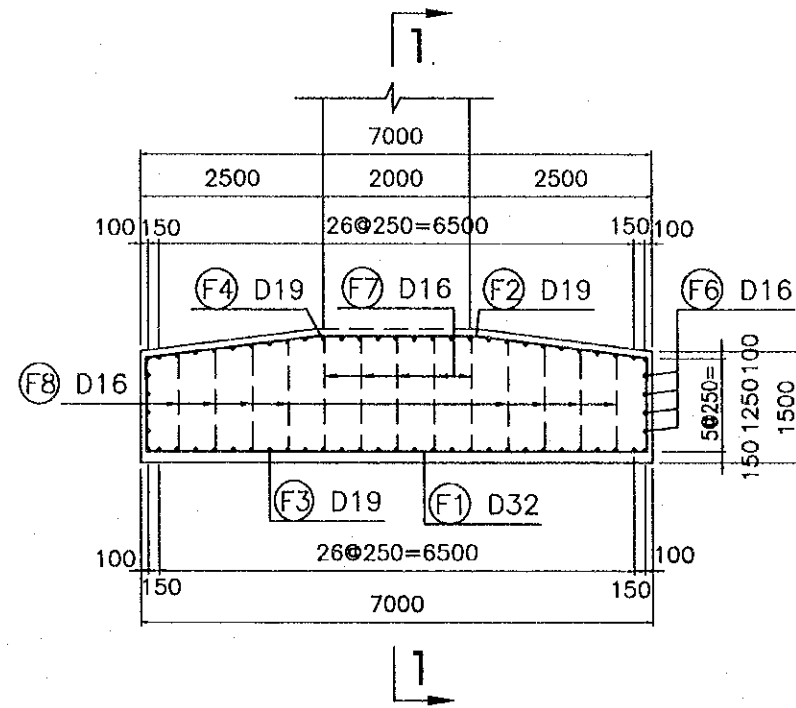
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT RED RIVER BRIDGE (TUANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2002.3.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-1-3c-34	
NH No.5 - FLYOVER BAR ARRANGEMENT FOR PIERS P1,P2,P3,P4,P5,P6,P7,P8,P9,P10R (3)			

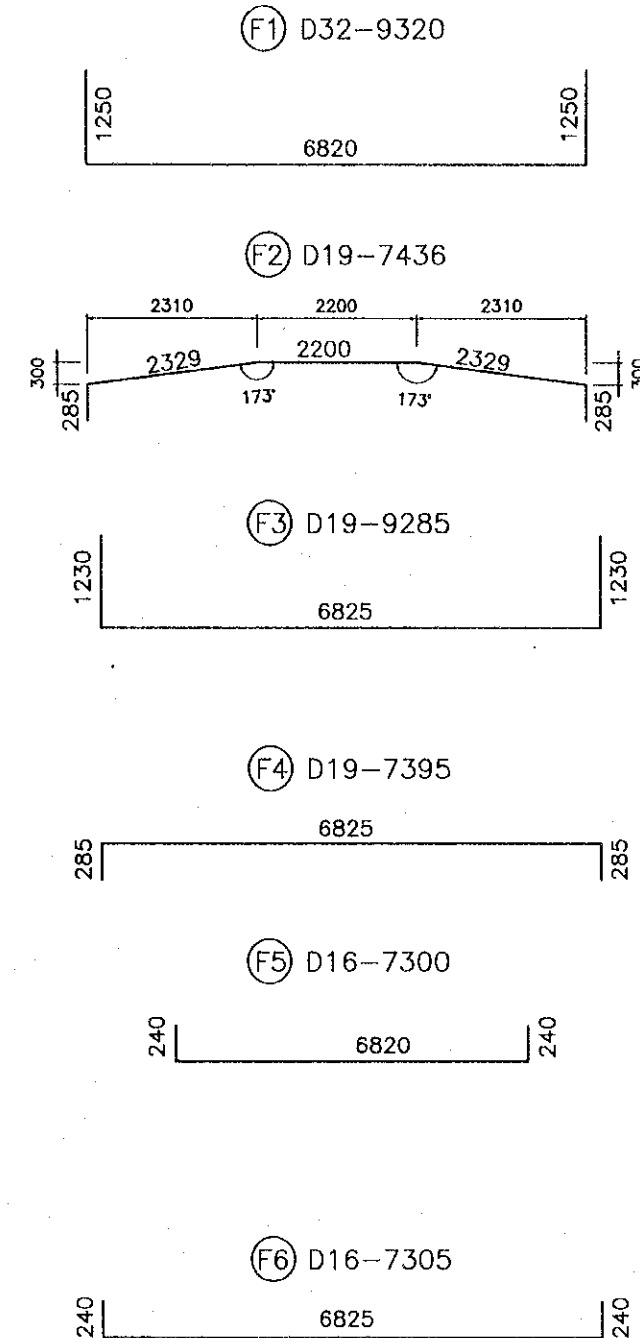
SECTION 1 - 1



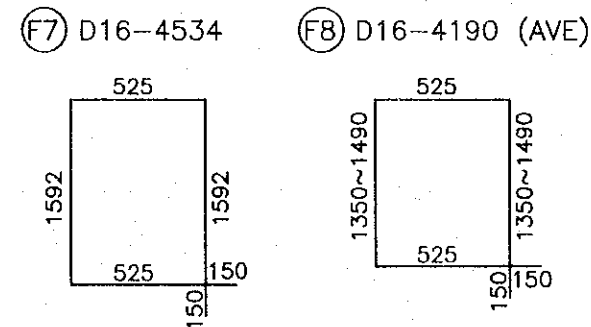
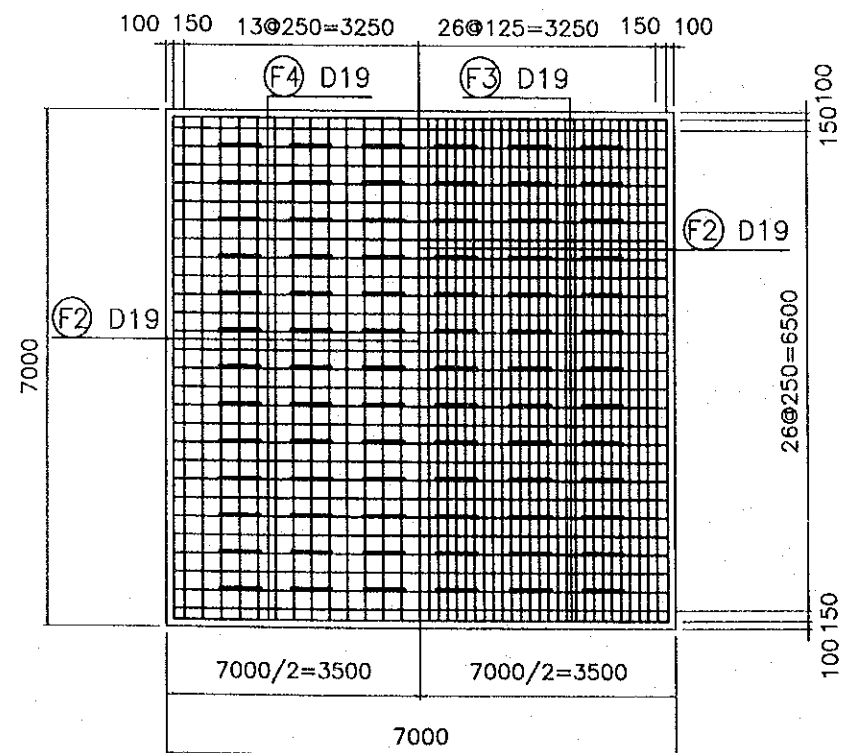
SECTION 2 - 2



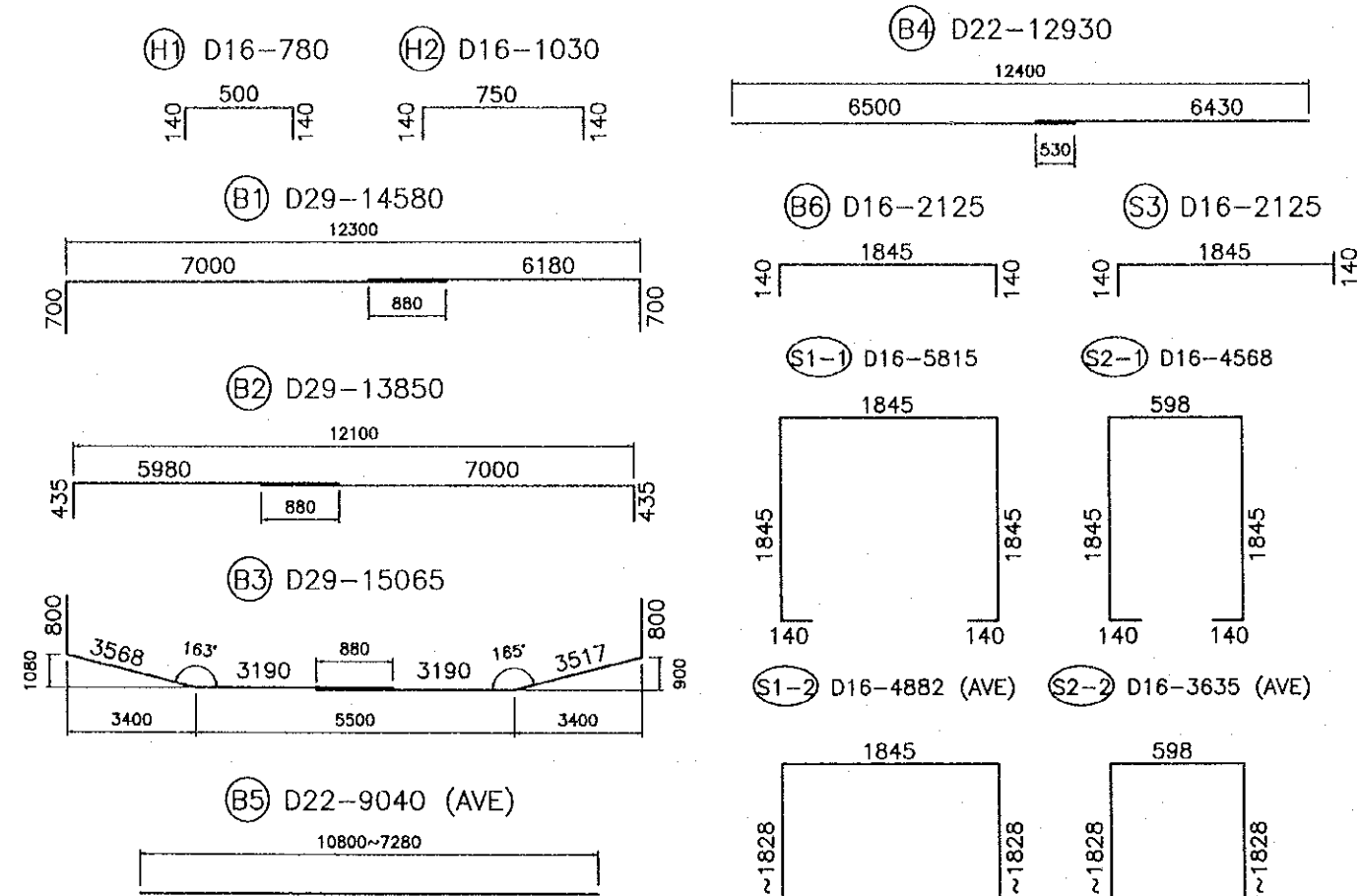
LIST OF REINFORCING BARS FOR FOOTING



HALF SECTION 3 - 3 HALF SECTION 4 - 4

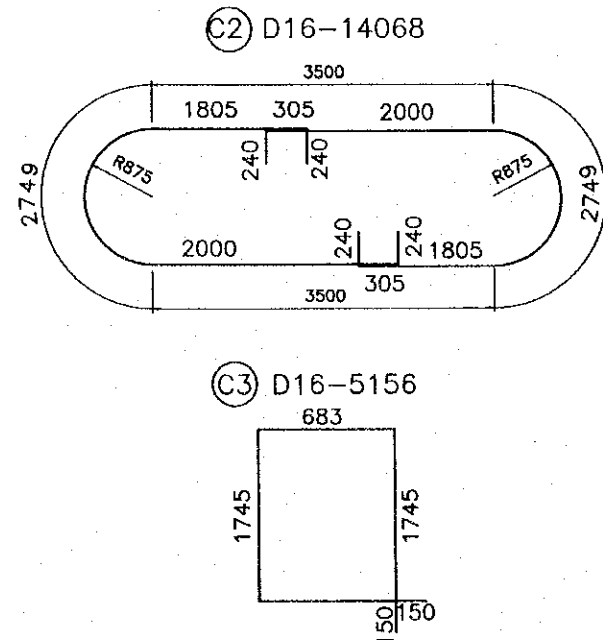


LIST OF REINFORCING BARS FOR BEAM AND COLUMN



DIMENSIONS OF BAR C1

Items Piers	Diameter (mm)	A (mm)	B (mm)	C (mm)	E (mm)	L (mm)	Total (mm)
P1L	D25	375	8520	-	-	8520	8895
P1R	D25	375	8520	-	-	8925	9300
P2L	D25	375	9520	-	-	8520	8895
P2R	D25	375	8925	-	-	9520	9300
P3L	D25	375	9520	-	-	9520	9895
P3R	D25	375	9925	-	-	9925	10300
P4L	D29	435	10520	-	-	10520	10955
P4R	D29	435	10925	-	-	10925	11360
P5L	D29	435	10520	-	-	10520	10955
P5R	D29	435	10923	-	-	10923	11358
P6L	D29	435	9000	3400	880	11520	12835
P6R	D29	435	9000	3789	880	11909	13224
P7L	D29	435	9000	3400	880	11520	12835
P6R	D29	435	9000	3774	880	11894	13209
P8R	D29	435	9000	3806	880	11926	13241
P9R	D29	435	9000	4820	880	12940	14255
P10R	D29	435	9000	4833	880	12953	14268



QUANTITY REINFORCEMENT FOR PIER P1L

DETAILS	TYPE	SHAPE	DIAMETER		LENGTH	NUMBER	UNIT WEIGHT		WEIGHT	
			mm	mm			kg/m	kg		
PIER CAP	H1	[Shape]	D16	780	780	84	1.560	102.21		
	H2	[Shape]	D16	1030	1030	60	1.560	96.41		
	B1	[Shape]	D29	14580	14580	16	5.040	1175.73		
	B2	[Shape]	D29	13850	13850	16	5.040	1116.86		
	B3	[Shape]	D29	15065	15065	16	5.040	1214.84		
	B4	[Shape]	D22	12930	12930	6	3.040	235.84		
	B5	AVE	[Shape]	D22	9040	9040	6	3.040	164.89	
	B6	[Shape]	D16	2125	2125	10	1.560	33.15		
	S1-1	[Shape]	D16	5815	5815	24	1.560	217.71		
	S1-2	AVE	[Shape]	D16	4882	4882	44	1.560	335.10	
	S2-1	[Shape]	D16	4568	4568	24	1.560	171.03		
	S2-2	AVE	[Shape]	D16	3635	3635	44	1.560	249.51	
S3	[Shape]	D16	2125	2125	136	1.560	450.84			
COLUMN	C1	[Shape]	D25	8895	8895	100	3.980	3540.21		
	C2	[Shape]	D16	14068	14068	47	1.560	1031.47		
	C3	[Shape]	D16	5156	5156	81	1.560	651.51		
FOOTING	F1	[Shape]	D32	9320	9320	55	6.230	3193.50		
	F2	[Shape]	D19	7436	7436	29	2.250	485.20		
	F3	[Shape]	D19	9285	9285	29	2.250	605.85		
	F4	[Shape]	D19	7395	7395	29	2.250	482.52		
	F5	[Shape]	D16	7300	7300	10	1.560	113.88		
	F6	[Shape]	D16	7305	7305	8	1.560	91.17		
	F7	[Shape]	D16	4534	4534	30	1.560	212.19		
	F8	AVE	[Shape]	D16	4190	4190	48	1.560	313.75	
SUMMARY	TOTAL PIER P1L								16285.36	
			D32			3193.50	Kg			
			D29			3507.44	Kg			
			D25			3540.21	Kg			
			D22			400.73	Kg			
			D19			1573.57	Kg			
		D16			4069.92	Kg				

QUANTITY REINFORCEMENT FOR PIER P1R

DETAILS	TYPE	SHAPE	DIAMETER		LENGTH	NUMBER	UNIT WEIGHT		WEIGHT	
			mm	mm			kg/m	kg		
PIER CAP	H1	[Shape]	D16	780	780	84	1.560	102.21		
	H2	[Shape]	D16	1030	1030	60	1.560	96.41		
	B1	[Shape]	D29	14580	14580	16	5.040	1175.73		
	B2	[Shape]	D29	13850	13850	16	5.040	1116.86		
	B3	[Shape]	D29	15065	15065	16	5.040	1214.84		
	B4	[Shape]	D22	12930	12930	6	3.040	235.84		
	B5	AVE	[Shape]	D22	9040	9040	6	3.040	164.89	
	B6	[Shape]	D16	2125	2125	10	1.560	33.15		
	S1-1	[Shape]	D16	5815	5815	24	1.560	217.71		
	S1-2	AVE	[Shape]	D16	4882	4882	44	1.560	335.10	
	S2-1	[Shape]	D16	4568	4568	24	1.560	171.03		
	S2-2	AVE	[Shape]	D16	3635	3635	44	1.560	249.51	
S3	[Shape]	D16	2125	2125	136	1.560	450.84			
COLUMN	C1	[Shape]	D25	8930	8930	100	3.980	3701.40		
	C2	[Shape]	D16	14068	14068	48	1.560	1053.41		
	C3	[Shape]	D16	5156	5156	84	1.560	675.64		
FOOTING	F1	[Shape]	D32	9320	9320	55	6.230	3193.50		
	F2	[Shape]	D19	7436	7436	29	2.250	485.20		
	F3	[Shape]	D19	9285	9285	29	2.250	605.85		
	F4	[Shape]	D19	7395	7395	29	2.250	482.52		
	F5	[Shape]	D16	7300	7300	10	1.560	113.88		
	F6	[Shape]	D16	7305	7305	8	1.560	91.17		
	F7	[Shape]	D16	4534	4534	30	1.560	212.19		
	F8	AVE	[Shape]	D16	4190	4190	48	1.560	313.75	
SUMMARY	TOTAL PIER P1R								16492.63	
			D32			3193.50	Kg			
			D29			3507.44	Kg			
			D25			3701.40	Kg			
			D22			400.73	Kg			
			D19			1573.57	Kg			
		D16			4115.99	Kg				

QUANTITY REINFORCEMENT FOR PIER P2L

DETAILS	TYPE	SHAPE	DIAMETER		LENGTH	NUMBER	UNIT WEIGHT		WEIGHT
			mm	mm			kg/m	kg	
PIER CAP	H1		D16	780	780	84	1.560	102.21	
	H2		D16	1030	1030	60	1.560	96.41	
	B1		D29	14580	14580	16	5.040	1175.73	
	B2		D29	13850	13850	16	5.040	1116.86	
	B3		D29	15065	15065	16	5.040	1214.84	
	B4		D22	12930	12930	6	3.040	235.84	
	B5	AVE	D22	9040	9040	6	3.040	164.89	
	B6		D16	2125	2125	10	1.560	33.15	
	S1-1		D16	5815	5815	24	1.560	217.71	
	S1-2	AVE	D16	4882	4882	44	1.560	335.10	
	S2-1		D16	4568	4568	24	1.560	171.03	
	S2-2	AVE	D16	3635	3635	44	1.560	249.51	
	S3		D16	2125	2125	136	1.560	450.84	
	C1		D25	8895	8895	100	3.980	3540.21	
C2		D16	14068	14068	47	1.560	1031.47		
C3		D16	5156	5156	81	1.560	651.51		
FOOTING	F1		D32	9320	9320	55	6.230	3193.50	
	F2		D19	7436	7436	29	2.250	485.20	
	F3		D19	9285	9285	29	2.250	605.85	
	F4		D19	7395	7395	29	2.250	482.52	
	F5		D16	7300	7300	10	1.560	113.88	
	F6		D16	7305	7305	8	1.560	91.17	
	F7		D16	4534	4534	30	1.560	212.19	
	F8	AVE	D16	4190	4190	48	1.560	313.75	
SUMMARY	TOTAL PIER P2L							16285.36	
			D32			3193.50	Kg		
			D29			3507.44	Kg		
			D25			3540.21	Kg		
			D22			400.73	Kg		
			D19			1573.57	Kg		
		D16			4069.92	Kg			

QUANTITY REINFORCEMENT FOR PIER P3L

DETAILS	TYPE	SHAPE	DIAMETER		LENGTH	NUMBER	UNIT WEIGHT		WEIGHT
			mm	mm			kg/m	kg	
PIER CAP	H1		D16	780	780	84	1.560	102.21	
	H2		D16	1030	1030	60	1.560	96.41	
	B1		D29	14580	14580	16	5.040	1175.73	
	B2		D29	13850	13850	16	5.040	1116.86	
	B3		D29	15065	15065	16	5.040	1214.84	
	B4		D22	12930	12930	6	3.040	235.84	
	B5	AVE	D22	9040	9040	6	3.040	164.89	
	B6		D16	2125	2125	10	1.560	33.15	
	S1-1		D16	5815	5815	24	1.560	217.71	
	S1-2	AVE	D16	4882	4882	44	1.560	335.10	
	S2-1		D16	4568	4568	24	1.560	171.03	
	S2-2	AVE	D16	3635	3635	44	1.560	249.51	
	S3		D16	2125	2125	136	1.560	450.84	
	C1		D25	9895	9895	100	3.980	3938.21	
C2		D16	14068	14068	50	1.560	1097.30		
C3		D16	5156	5156	90	1.560	723.90		
FOOTING	F1		D32	9320	9320	55	6.230	3193.50	
	F2		D19	7436	7436	29	2.250	485.20	
	F3		D19	9285	9285	29	2.250	605.85	
	F4		D19	7395	7395	29	2.250	482.52	
	F5		D16	7300	7300	10	1.560	113.88	
	F6		D16	7305	7305	8	1.560	91.17	
	F7		D16	4534	4534	30	1.560	212.19	
	F8	AVE	D16	4190	4190	48	1.560	313.75	
SUMMARY	TOTAL PIER P3L							16821.59	
			D32			3193.50	Kg		
			D29			3507.44	Kg		
			D25			3540.21	Kg		
			D22			400.73	Kg		
			D19			1573.57	Kg		
		D16			4208.15	Kg			

QUANTITY REINFORCEMENT FOR PIER P2R

DETAILS	TYPE	SHAPE	DIAMETER		LENGTH	NUMBER	UNIT WEIGHT		WEIGHT
			mm	mm			kg/m	kg	
PIER CAP	H1		D16	780	780	84	1.560	102.21	
	H2		D16	1030	1030	60	1.560	96.41	
	B1		D29	14580	14580	16	5.040	1175.73	
	B2		D29	13850	13850	16	5.040	1116.86	
	B3		D29	15065	15065	16	5.040	1214.84	
	B4		D22	12930	12930	6	3.040	235.84	
	B5	AVE	D22	9040	9040	6	3.040	164.89	
	B6		D16	2125	2125	10	1.560	33.15	
	S1-1		D16	5815	5815	24	1.560	217.71	
	S1-2	AVE	D16	4882	4882	44	1.560	335.10	
	S2-1		D16	4568	4568	24	1.560	171.03	
	S2-2	AVE	D16	3635	3635	44	1.560	249.51	
	S3		D16	2125	2125	136	1.560	450.84	
	C1		D25	9300	9300	100	3.980	3701.40	
C2		D16	14068	14068	48	1.560	1053.41		
C3		D16	5156	5156	84	1.560	675.64		
FOOTING	F1		D32	9320	9320	55	6.230	3193.50	
	F2		D19	7436	7436	29	2.250	485.20	
	F3		D19	9285	9285	29	2.250	605.85	
	F4		D19	7395	7395	29	2.250	482.52	
	F5		D16	7300	7300	10	1.560	113.88	
	F6		D16	7305	7305	8	1.560	91.17	
	F7		D16	4534	4534	30	1.560	212.19	
	F8	AVE	D16	4190	4190	48	1.560	313.75	
SUMMARY	TOTAL PIER P2R							16492.63	
			D32			3193.50	Kg		
			D29			3507.44	Kg		
			D25			3701.40	Kg		
			D22			400.73	Kg		
			D19			1573.57	Kg		
		D16			4115.99	Kg			

QUANTITY REINFORCEMENT FOR PIER P3R

DETAILS	TYPE	SHAPE	DIAMETER		LENGTH	NUMBER	UNIT WEIGHT		WEIGHT
			mm	mm			kg/m	kg	
PIER CAP	H1		D16	780	780	84	1.560	102.21	
	H2		D16	1030	1030	60	1.560	96.41	
	B1		D29	14580	14580	16	5.040	1175.73	
	B2		D29	13850	13850	16	5.040	1116.86	
	B3		D29	15065	15065	16	5.040	1214.84	
	B4		D22	12930	12930	6	3.040	235.84	
	B5	AVE	D22	9040	9040	6	3.040	164.89	
	B6		D16	2125	2125	10	1.560	33.15	
	S1-1		D16	5815	5815	24	1.560	217.71	
	S1-2	AVE	D16	4882	4882	44	1.560	335.10	
	S2-1		D16	4568	4568	24	1.560	171.03	
	S2-2	AVE	D16	3635	3635	44	1.560	249.51	
	S3		D16	2125	2125	136	1.560	450.84	
	C1		D25	10300	10300	100	3.980	4099.40	
C2		D16	14068	14068	52	1.560	1141.20		
C3		D16	5156	5156	96	1.560	772.16		
FOOTING	F1		D32	9320	9320	55	6.230	3193.50	
	F2		D19	7436	7436	29	2.250	485.20	
	F3		D19	9285	9285	29	2.250	605.85	
	F4		D19	7395	7395	29	2.250	482.52	
	F5		D16	7300	7300	10	1.560	113.88	
	F6		D16	7305	7305	8	1.560	91.17	
	F7		D16	4534	4534	30	1.560	212.19	
	F8	AVE	D16	4190	4190	48	1.560	313.75	
SUMMARY	TOTAL PIER P3R							17074.94	
			D32			3193.50	Kg		
			D29			3507.44	Kg		
			D25			3540.21	Kg		
			D22			400.73	Kg		
			D19			1573.57	Kg		
		D16			4300.30	Kg			

QUANTITY REINFORCEMENT FOR PIER P4L

DETAILS	TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT	
			mm	mm		kg/m	kg	
PIER CAP	H1		D16	780	84	1.560	102.21	
	H2		D16	1030	60	1.560	96.41	
	B1		D29	14580	16	5.040	1175.73	
	B2		D29	13850	16	5.040	1116.86	
	B3		D29	15065	16	5.040	1214.84	
	B4		D22	12930	6	3.040	235.84	
	B5	AVE		D22	9040	6	3.040	164.89
	B6		D16	2125	10	1.560	33.15	
	S1-1		D16	5815	24	1.560	217.71	
	S1-2	AVE		D16	4882	44	1.560	335.10
	S2-1		D16	4568	24	1.560	171.03	
	S2-2	AVE		D16	3635	44	1.560	249.51
	S3		D16	2125	136	1.560	450.84	
	COLUMN	C1		D29	10955	100	5.040	5521.32
C2			D16	14068	54	1.560	1185.09	
C3			D16	5156	102	1.560	820.42	
FOOTING	F1		D32	9320	55	6.230	3193.50	
	F2		D19	7436	29	2.250	485.20	
	F3		D19	9285	29	2.250	605.85	
	F4		D19	7395	29	2.250	482.52	
	F5		D16	7300	10	1.560	113.88	
	F6		D16	7305	8	1.560	91.17	
	F7		D16	4534	30	1.560	212.19	
	F8	AVE		D16	4190	48	1.560	313.75
SUMMARY	TOTAL PIER P4L						18589.01	
			D32		3193.50	Kg		
			D29		9028.76	Kg		
			D22		400.73	Kg		
			D19		1573.57	Kg		
		D16		4392.45	Kg			

QUANTITY REINFORCEMENT FOR PIER P5L

DETAILS	TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT	
			mm	mm		kg/m	kg	
PIER CAP	H1		D16	780	84	1.560	102.21	
	H2		D16	1030	60	1.560	96.41	
	B1		D29	14580	16	5.040	1175.73	
	B2		D29	13850	16	5.040	1116.86	
	B3		D29	15065	16	5.040	1214.84	
	B4		D22	12930	6	3.040	235.84	
	B5	AVE		D22	9040	6	3.040	164.89
	B6		D16	2125	10	1.560	33.15	
	S1-1		D16	5815	24	1.560	217.71	
	S1-2	AVE		D16	4882	44	1.560	335.10
	S2-1		D16	4568	24	1.560	171.03	
	S2-2	AVE		D16	3635	44	1.560	249.51
	S3		D16	2125	136	1.560	450.84	
	COLUMN	C1		D29	10955	100	5.040	5521.32
C2			D16	14068	54	1.560	1185.09	
C3			D16	5156	102	1.560	820.42	
FOOTING	F1		D32	9320	55	6.230	3193.50	
	F2		D19	7436	29	2.250	485.20	
	F3		D19	9285	29	2.250	605.85	
	F4		D19	7395	29	2.250	482.52	
	F5		D16	7300	10	1.560	113.88	
	F6		D16	7305	8	1.560	91.17	
	F7		D16	4534	30	1.560	212.19	
	F8	AVE		D16	4190	48	1.560	313.75
SUMMARY	TOTAL PIER P5L						18589.01	
			D32		3193.50	Kg		
			D29		9028.76	Kg		
			D22		400.73	Kg		
			D19		1573.57	Kg		
		D16		4392.45	Kg			

QUANTITY REINFORCEMENT FOR PIER P4R

DETAILS	TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT	
			mm	mm		kg/m	kg	
PIER CAP	H1		D16	780	84	1.560	102.21	
	H2		D16	1030	60	1.560	96.41	
	B1		D29	14580	16	5.040	1175.73	
	B2		D29	13850	16	5.040	1116.86	
	B3		D29	15065	16	5.040	1214.84	
	B4		D22	12930	6	3.040	235.84	
	B5	AVE		D22	9040	6	3.040	164.89
	B6		D16	2125	10	1.560	33.15	
	S1-1		D16	5815	24	1.560	217.71	
	S1-2	AVE		D16	4882	44	1.560	335.10
	S2-1		D16	4568	24	1.560	171.03	
	S2-2	AVE		D16	3635	44	1.560	249.51
	S3		D16	2125	136	1.560	450.84	
	COLUMN	C1		D29	11360	100	5.040	5725.44
C2			D16	14068	55	1.560	1207.03	
C3			D16	5156	105	1.560	844.55	
FOOTING	F1		D32	9320	55	6.230	3193.50	
	F2		D19	7436	29	2.250	485.20	
	F3		D19	9285	29	2.250	605.85	
	F4		D19	7395	29	2.250	482.52	
	F5		D16	7300	10	1.560	113.88	
	F6		D16	7305	8	1.560	91.17	
	F7		D16	4534	30	1.560	212.19	
	F8	AVE		D16	4190	48	1.560	313.75
SUMMARY	TOTAL PIER P4R						18839.20	
			D32		3193.50	Kg		
			D29		9232.88	Kg		
			D22		400.73	Kg		
			D19		1573.57	Kg		
		D16		4438.53	Kg			

QUANTITY REINFORCEMENT FOR PIER P5R

DETAILS	TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT	
			mm	mm		kg/m	kg	
PIER CAP	H1		D16	780	84	1.560	102.21	
	H2		D16	1030	60	1.560	96.41	
	B1		D29	14580	16	5.040	1175.73	
	B2		D29	13850	16	5.040	1116.86	
	B3		D29	15065	16	5.040	1214.84	
	B4		D22	12930	6	3.040	235.84	
	B5	AVE		D22	9040	6	3.040	164.89
	B6		D16	2125	10	1.560	33.15	
	S1-1		D16	5815	24	1.560	217.71	
	S1-2	AVE		D16	4882	44	1.560	335.10
	S2-1		D16	4568	24	1.560	171.03	
	S2-2	AVE		D16	3635	44	1.560	249.51
	S3		D16	2125	136	1.560	450.84	
	COLUMN	C1		D29	11358	100	5.040	5724.43
C2			D16	14068	55	1.560	1207.03	
C3			D16	5156	105	1.560	844.55	
FOOTING	F1		D32	9320	55	6.230	3193.50	
	F2		D19	7436	29	2.250	485.20	
	F3		D19	9285	29	2.250	605.85	
	F4		D19	7395	29	2.250	482.52	
	F5		D16	7300	10	1.560	113.88	
	F6		D16	7305	8	1.560	91.17	
	F7		D16	4534	30	1.560	212.19	
	F8	AVE		D16	4190	48	1.560	313.75
SUMMARY	TOTAL PIER P5R						18838.20	
			D32		3193.50	Kg		
			D29		9231.87	Kg		
			D22		400.73	Kg		
			D19		1573.57	Kg		
		D16		4438.53	Kg			

QUANTITY REINFORCEMENT FOR PIER P6L

DETAILS	TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
			mm	mm		kg/m	kg
PIER CAP	H1		D16	780	84	1.560	102.21
	H2		D16	1030	60	1.560	96.41
	B1		D29	14580	16	5.040	1175.73
	B2		D29	13850	16	5.040	1116.86
	B3		D29	15065	16	5.040	1214.84
	B4		D22	12930	6	3.040	235.84
	B5	AVE	D22	9040	6	3.040	164.89
	B6		D16	2125	10	1.560	33.15
	S1-1		D16	5815	24	1.560	217.71
	S1-2	AVE	D16	4882	44	1.560	335.10
	S2-1		D16	4568	24	1.560	171.03
	S2-2	AVE	D16	3635	44	1.560	249.51
	S3		D16	2125	136	1.560	450.84
	COLUMN	C1		D29	12835	100	5.040
C2			D16	14068	57	1.560	1250.93
C3			D16	5156	111	1.560	892.81
FOOTING	F1		D32	9320	55	6.230	3193.50
	F2		D19	7436	29	2.250	485.20
	F3		D19	9285	29	2.250	605.85
	F4		D19	7395	29	2.250	482.52
	F5		D16	7300	10	1.560	113.88
	F6		D16	7305	8	1.560	91.17
	F7		D16	4534	30	1.560	212.19
	F8	AVE	D16	4190	48	1.560	313.75
SUMMARY	TOTAL PIER P6L						19674.76
			D32		3193.50	Kg	
			D29		9976.28	Kg	
			D22		400.73	Kg	
			D19		1573.57	Kg	
		D16		4530.68	Kg		

QUANTITY REINFORCEMENT FOR PIER P7L

DETAILS	TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
			mm	mm		kg/m	kg
PIER CAP	H1		D16	780	84	1.560	102.21
	H2		D16	1030	60	1.560	96.41
	B1		D29	14580	16	5.040	1175.73
	B2		D29	13850	16	5.040	1116.86
	B3		D29	15065	16	5.040	1214.84
	B4		D22	12930	6	3.040	235.84
	B5	AVE	D22	9040	6	3.040	164.89
	B6		D16	2125	10	1.560	33.15
	S1-1		D16	5815	24	1.560	217.71
	S1-2	AVE	D16	4882	44	1.560	335.10
	S2-1		D16	4568	24	1.560	171.03
	S2-2	AVE	D16	3635	44	1.560	249.51
	S3		D16	2125	136	1.560	450.84
	COLUMN	C1		D29	12835	100	5.040
C2			D16	14068	57	1.560	1250.93
C3			D16	5156	111	1.560	892.81
FOOTING	F1		D32	9320	55	6.230	3193.50
	F2		D19	7436	29	2.250	485.20
	F3		D19	9285	29	2.250	605.85
	F4		D19	7395	29	2.250	482.52
	F5		D16	7300	10	1.560	113.88
	F6		D16	7305	8	1.560	91.17
	F7		D16	4534	30	1.560	212.19
	F8	AVE	D16	4190	48	1.560	313.75
SUMMARY	TOTAL PIER P7L						19674.76
			D32		3193.50	Kg	
			D29		9976.28	Kg	
			D22		400.73	Kg	
			D19		1573.57	Kg	
		D16		4530.68	Kg		

QUANTITY REINFORCEMENT FOR PIER P6R

DETAILS	TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
			mm	mm		kg/m	kg
PIER CAP	H1		D16	780	84	1.560	102.21
	H2		D16	1030	60	1.560	96.41
	B1		D29	14580	16	5.040	1175.73
	B2		D29	13850	16	5.040	1116.86
	B3		D29	15065	16	5.040	1214.84
	B4		D22	12930	6	3.040	235.84
	B5	AVE	D22	9040	6	3.040	164.89
	B6		D16	2125	10	1.560	33.15
	S1-1		D16	5815	24	1.560	217.71
	S1-2	AVE	D16	4882	44	1.560	335.10
	S2-1		D16	4568	24	1.560	171.03
	S2-2	AVE	D16	3635	44	1.560	249.51
	S3		D16	2125	136	1.560	450.84
	COLUMN	C1		D29	13224	100	5.040
C2			D16	14068	58	1.560	1272.87
C3			D16	5156	114	1.560	916.94
FOOTING	F1		D32	9320	55	6.230	3193.50
	F2		D19	7436	29	2.250	485.20
	F3		D19	9285	29	2.250	605.85
	F4		D19	7395	29	2.250	482.52
	F5		D16	7300	10	1.560	113.88
	F6		D16	7305	8	1.560	91.17
	F7		D16	4534	30	1.560	212.19
	F8	AVE	D16	4190	48	1.560	313.75
SUMMARY	TOTAL PIER P6R						19916.89
			D32		3193.50	Kg	
			D29		10172.33	Kg	
			D22		400.73	Kg	
			D19		1573.57	Kg	
		D16		4576.76	Kg		

QUANTITY REINFORCEMENT FOR PIER P7R

DETAILS	TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
			mm	mm		kg/m	kg
PIER CAP	H1		D16	780	84	1.560	102.21
	H2		D16	1030	60	1.560	96.41
	B1		D29	14580	16	5.040	1175.73
	B2		D29	13850	16	5.040	1116.86
	B3		D29	15065	16	5.040	1214.84
	B4		D22	12930	6	3.040	235.84
	B5	AVE	D22	9040	6	3.040	164.89
	B6		D16	2125	10	1.560	33.15
	S1-1		D16	5815	24	1.560	217.71
	S1-2	AVE	D16	4882	44	1.560	335.10
	S2-1		D16	4568	24	1.560	171.03
	S2-2	AVE	D16	3635	44	1.560	249.51
	S3		D16	2125	136	1.560	450.84
	COLUMN	C1		D29	13209	100	5.040
C2			D16	14068	58	1.560	1272.87
C3			D16	5156	114	1.560	916.94
FOOTING	F1		D32	9320	55	6.230	3193.50
	F2		D19	7436	29	2.250	485.20
	F3		D19	9285	29	2.250	605.85
	F4		D19	7395	29	2.250	482.52
	F5		D16	7300	10	1.560	113.88
	F6		D16	7305	8	1.560	91.17
	F7		D16	4534	30	1.560	212.19
	F8	AVE	D16	4190	48	1.560	313.75
SUMMARY	TOTAL PIER P7R						19909.33
			D32		3193.50	Kg	
			D29		10184.77	Kg	
			D22		400.73	Kg	
			D19		1573.57	Kg	
		D16		4576.76	Kg		



QUANTITY REINFORCEMENT FOR PIER P8R

DETAILS	TYPE	SHAPE	DIAMETER		LENGTH	NUMBER	UNIT WEIGHT		WEIGHT	
			mm	mm			kg/m	kg		
PIER CAP	H1		D16	780	84	1,560	102.21			
	H2		D16	1030	60	1,560	96.41			
	B1		D29	14580	16	5,040	1175.73			
	B2		D29	13850	16	5,040	1116.86			
	B3		D29	15065	16	5,040	1214.84			
	B4		D22	12930	6	3,040	235.84			
	B5	AVE		D22	9040	6	3,040	164.89		
	B6		D16	2125	10	1,560	33.15			
	S1-1		D16	5815	24	1,560	217.71			
	S1-2	AVE		D16	4882	44	1,560	335.10		
	S2-1		D16	4568	24	1,560	171.03			
	S2-2	AVE		D16	3635	44	1,560	249.51		
	S3		D16	2125	136	1,560	450.84			
	COLUMN	C1		D29	13241	100	5,040	6673.46		
C2			D16	14068	58	1,560	1272.87			
C3			D16	5156	114	1,560	916.94			
FOOTING	F1		D32	9320	55	6,230	3193.50			
	F2		D19	7436	29	2,250	485.20			
	F3		D19	9285	29	2,250	605.85			
	F4		D19	7395	29	2,250	482.52			
	F5		D16	7300	10	1,560	113.88			
	F6		D16	7305	8	1,560	91.17			
	F7		D16	4534	30	1,560	212.19			
	F8	AVE		D16	4190	48	1,560	313.75		
SUMMARY	TOTAL PIER P8R		D32		3193.50	Kg			19925.46	
			D29		10180.90	Kg				
			D22		400.73	Kg				
			D19		1573.57	Kg				
			D16		4576.76	Kg				

QUANTITY REINFORCEMENT FOR PIER P10R

DETAILS	TYPE	SHAPE	DIAMETER		LENGTH	NUMBER	UNIT WEIGHT		WEIGHT	
			mm	mm			kg/m	kg		
PIER CAP	H1		D16	780	84	1,560	102.21			
	H2		D16	1030	60	1,560	96.41			
	B1		D29	14580	16	5,040	1175.73			
	B2		D29	13850	16	5,040	1116.86			
	B3		D29	15065	16	5,040	1214.84			
	B4		D22	12930	6	3,040	235.84			
	B5	AVE		D22	9040	6	3,040	164.89		
	B6		D16	2125	10	1,560	33.15			
	S1-1		D16	5815	24	1,560	217.71			
	S1-2	AVE		D16	4882	44	1,560	335.10		
	S2-1		D16	4568	24	1,560	171.03			
	S2-2	AVE		D16	3635	44	1,560	249.51		
	S3		D16	2125	136	1,560	450.84			
	COLUMN	C1		D29	14268	100	5,040	7191.07		
C2			D16	14068	62	1,560	1360.66			
C3			D16	5156	126	1,560	1013.46			
FOOTING	F1		D32	9320	55	6,230	3193.50			
	F2		D19	7436	29	2,250	485.20			
	F3		D19	9285	29	2,250	605.85			
	F4		D19	7395	29	2,250	482.52			
	F5		D16	7300	10	1,560	113.88			
	F6		D16	7305	8	1,560	91.17			
	F7		D16	4534	30	1,560	212.19			
	F8	AVE		D16	4190	48	1,560	313.75		
SUMMARY	TOTAL PIER P10R		D32		3193.50	Kg			20627.37	
			D29		10698.51	Kg				
			D22		400.73	Kg				
			D19		1573.57	Kg				
			D16		4761.06	Kg				

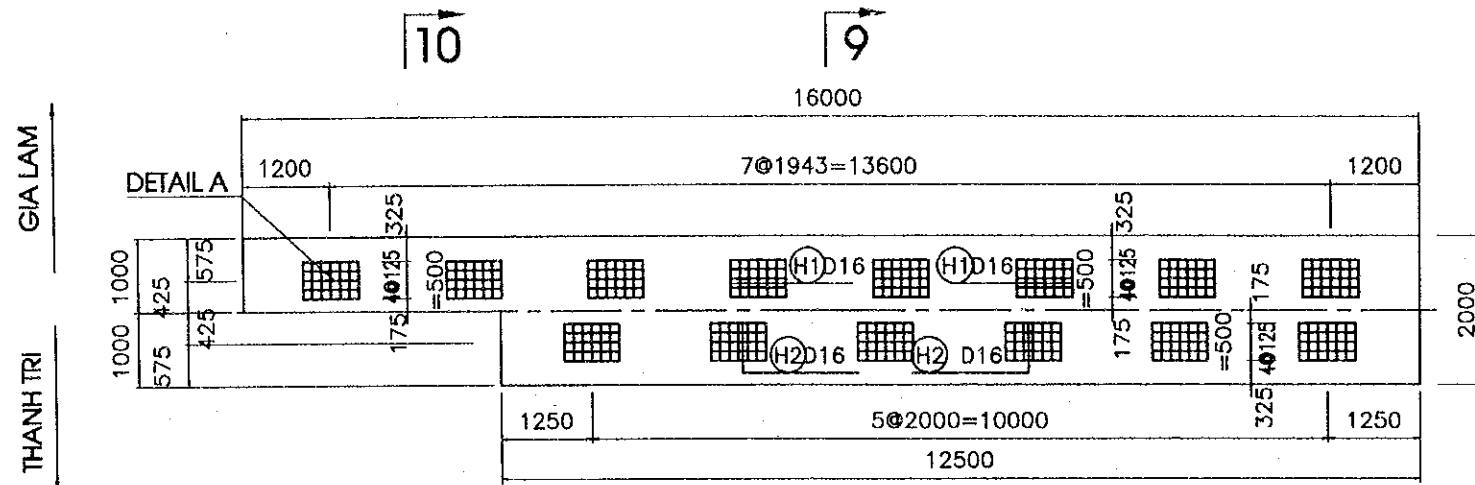
QUANTITY REINFORCEMENT FOR PIER P9R

DETAILS	TYPE	SHAPE	DIAMETER		LENGTH	NUMBER	UNIT WEIGHT		WEIGHT	
			mm	mm			kg/m	kg		
PIER CAP	H1		D16	780	84	1,560	102.21			
	H2		D16	1030	60	1,560	96.41			
	B1		D29	14580	16	5,040	1175.73			
	B2		D29	13850	16	5,040	1116.86			
	B3		D29	15065	16	5,040	1214.84			
	B4		D22	12930	6	3,040	235.84			
	B5	AVE		D22	9040	6	3,040	164.89		
	B6		D16	2125	10	1,560	33.15			
	S1-1		D16	5815	24	1,560	217.71			
	S1-2	AVE		D16	4882	44	1,560	335.10		
	S2-1		D16	4568	24	1,560	171.03			
	S2-2	AVE		D16	3635	44	1,560	249.51		
	S3		D16	2125	136	1,560	450.84			
	COLUMN	C1		D29	14255	100	5,040	7184.52		
C2			D16	14068	62	1,560	1360.66			
C3			D16	5156	126	1,560	1013.46			
FOOTING	F1		D32	9320	55	6,230	3193.50			
	F2		D19	7436	29	2,250	485.20			
	F3		D19	9285	29	2,250	605.85			
	F4		D19	7395	29	2,250	482.52			
	F5		D16	7300	10	1,560	113.88			
	F6		D16	7305	8	1,560	91.17			
	F7		D16	4534	30	1,560	212.19			
	F8	AVE		D16	4190	48	1,560	313.75		
SUMMARY	TOTAL PIER P9R		D32		3193.50	Kg			20620.82	
			D29		10691.96	Kg				
			D22		400.73	Kg				
			D19		1573.57	Kg				
			D16		4761.06	Kg				

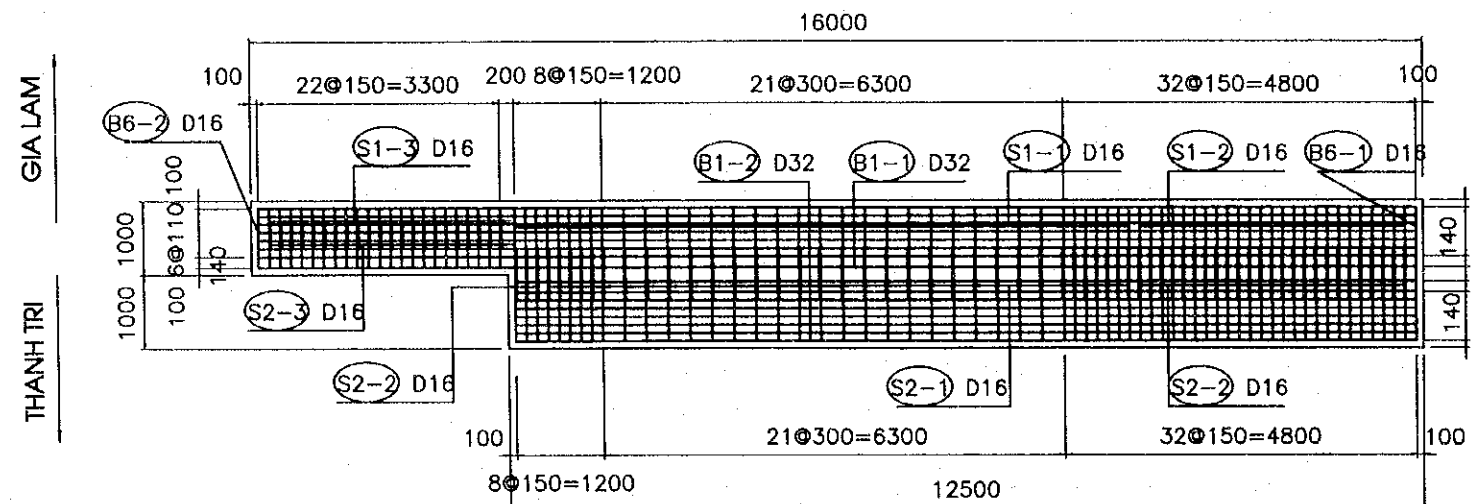
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	DATE 2000. 3. 14
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/100	DRAWING No. C-1-3c-40	SHEET No.
NH No.5 - FLYOVER BAR ARRANGEMENT FOR PIER P8L (1)			

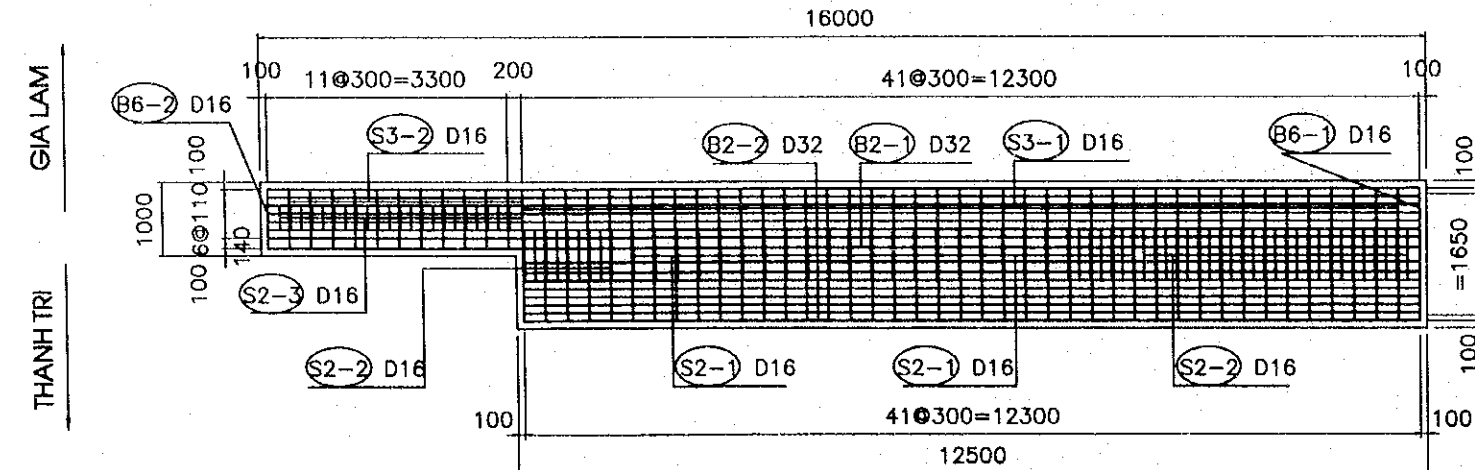
SECTION 1 - 1



SECTION 2 - 2

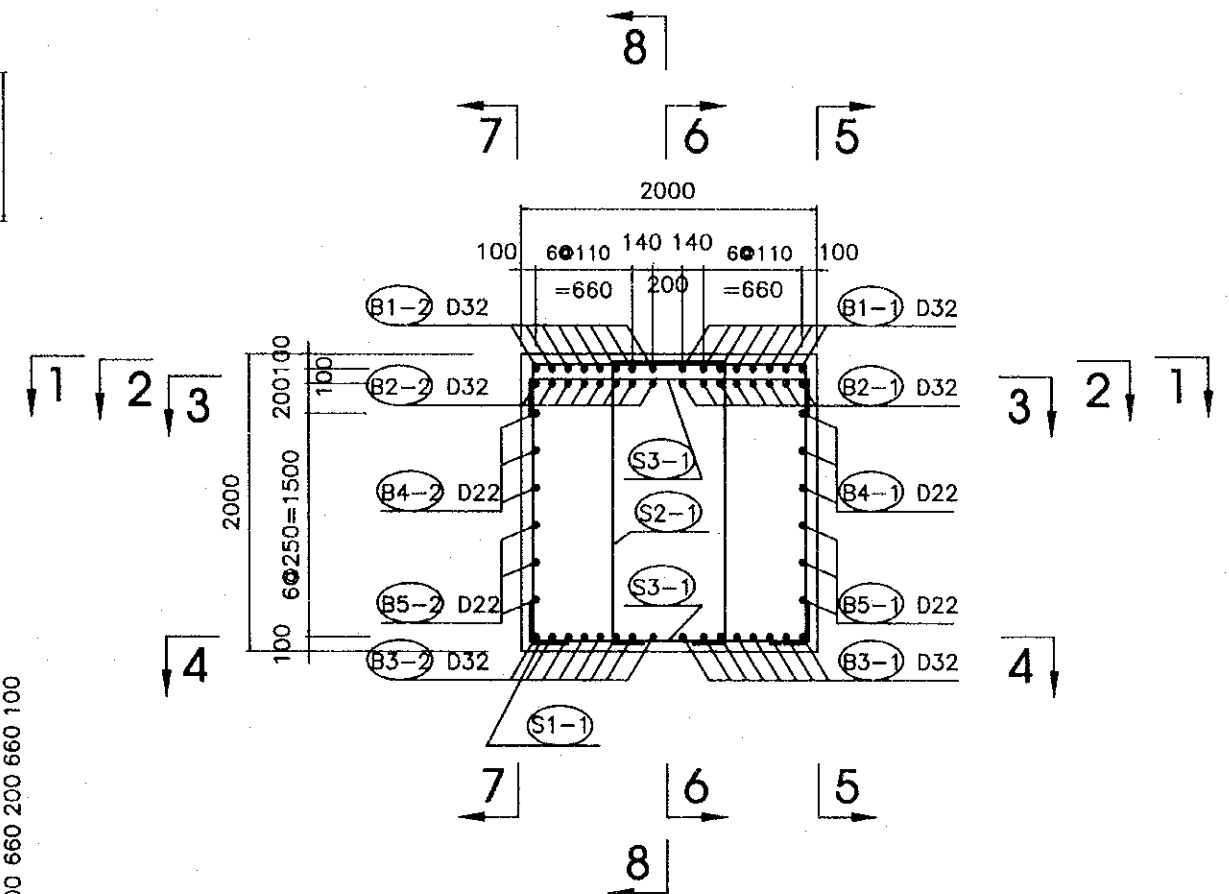


SECTION 3 - 3



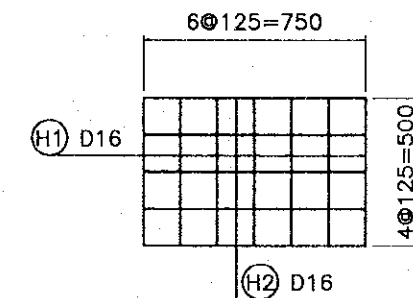
SECTION 9 - 9

(SC=1/50)



DETAIL A

(SC=1/25)





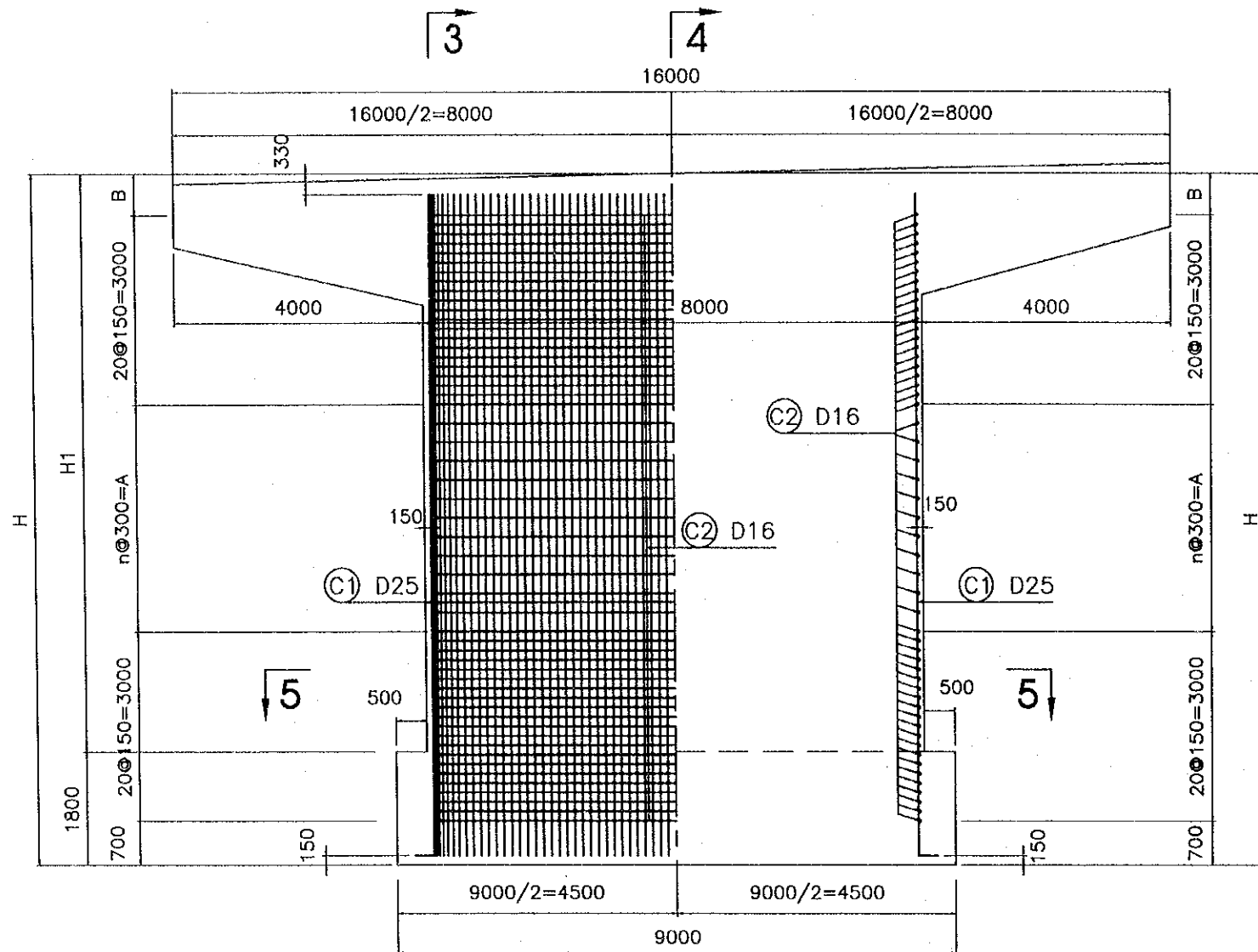


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000. 3. 14

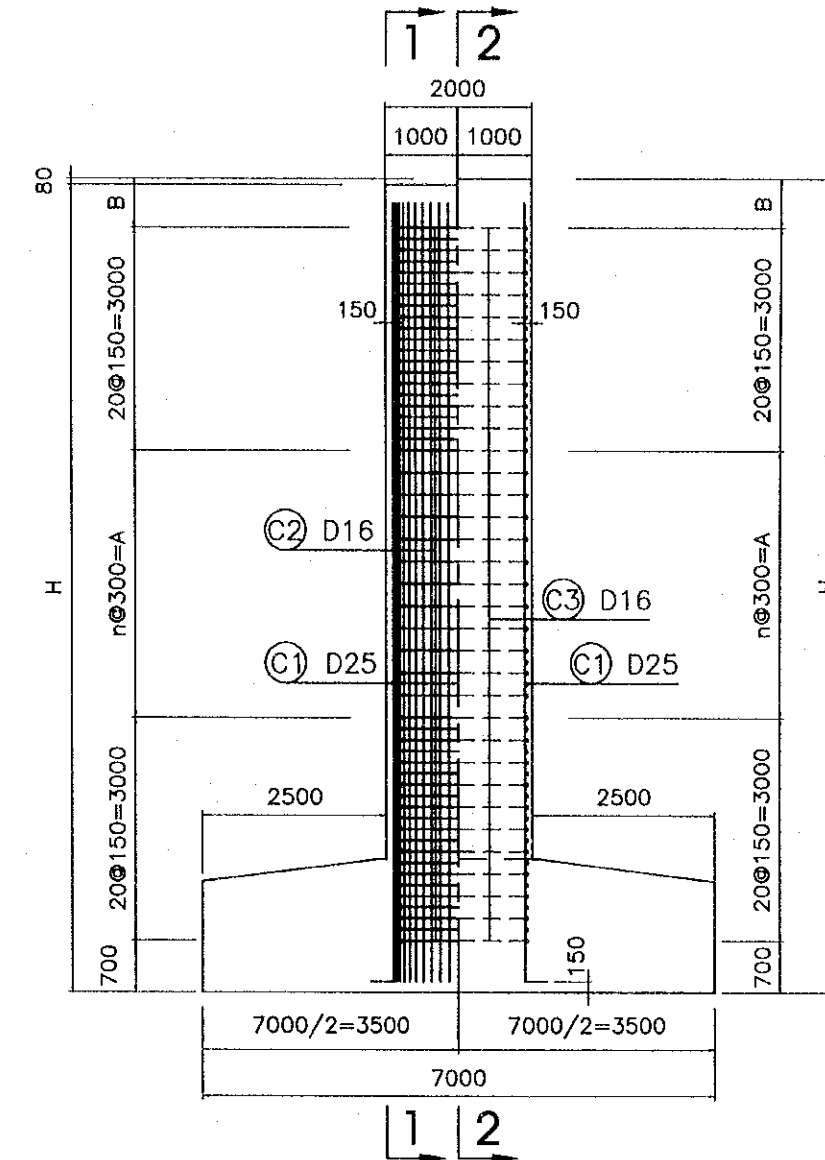
PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-1-3c-42	
NH No.5 - FLYOVER BAR ARRANGEMENT FOR PIER PBL (3)			

HALF SECTION 1 - 1

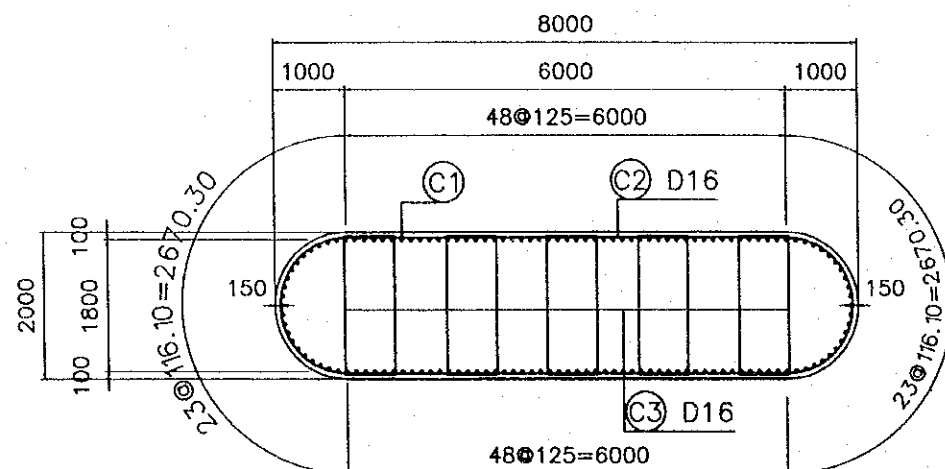
HALF SECTION 2 - 2



HALF SECTION 3 - 3 HALF SECTION 4 - 4



SECTION 5 - 5



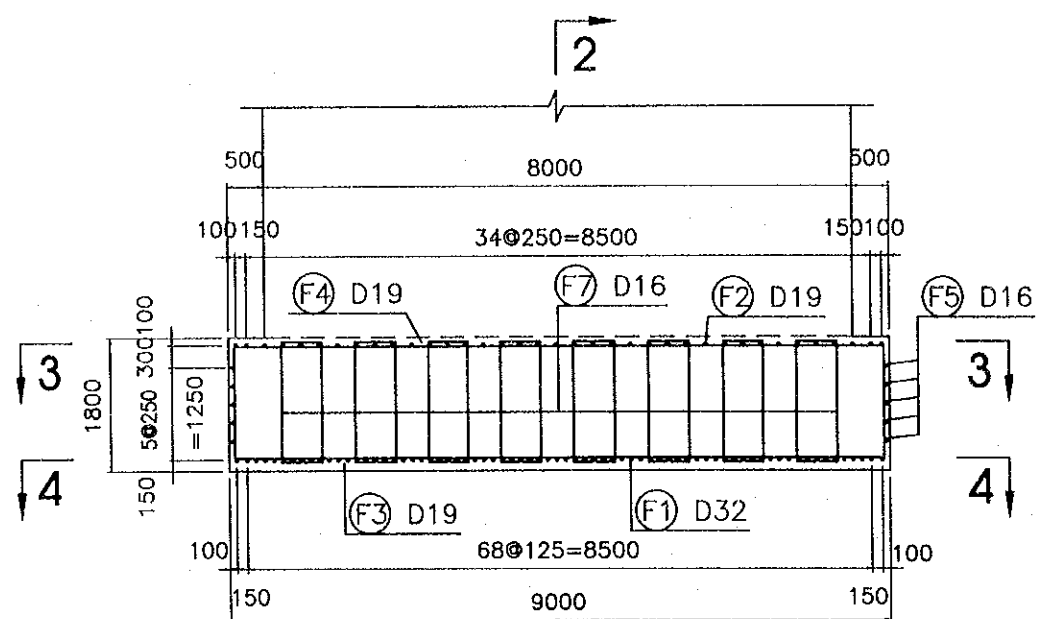
DIMENSION OF PIER

ITEMS	H(mm)	H1(mm)	A(mm)	B(mm)	n
PIER	12000	10200	4800	500	16
PBL					16

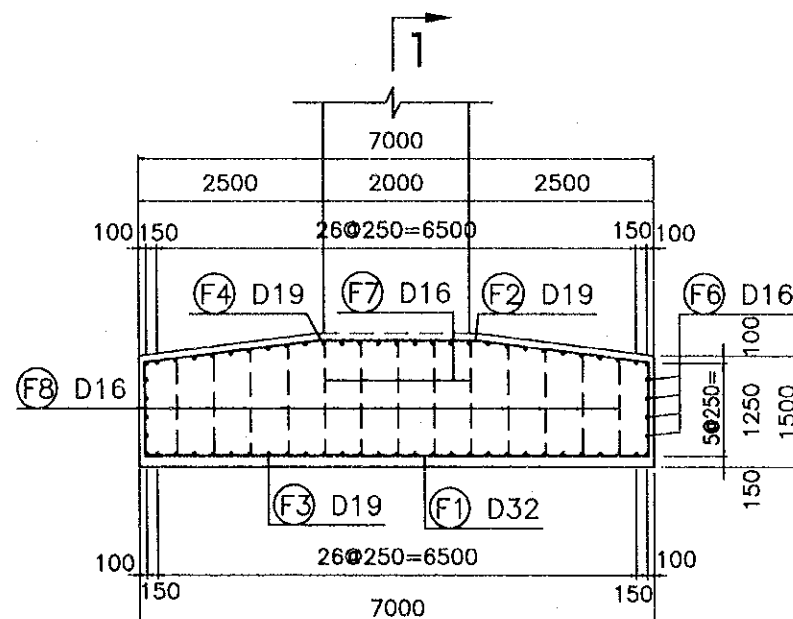
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATASE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONTRACTOR PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000. 03. 17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-1-3c-43	
NH No.5 - FLYOVER BAR ARRANGEMENT FOR PIER PBL (4)			

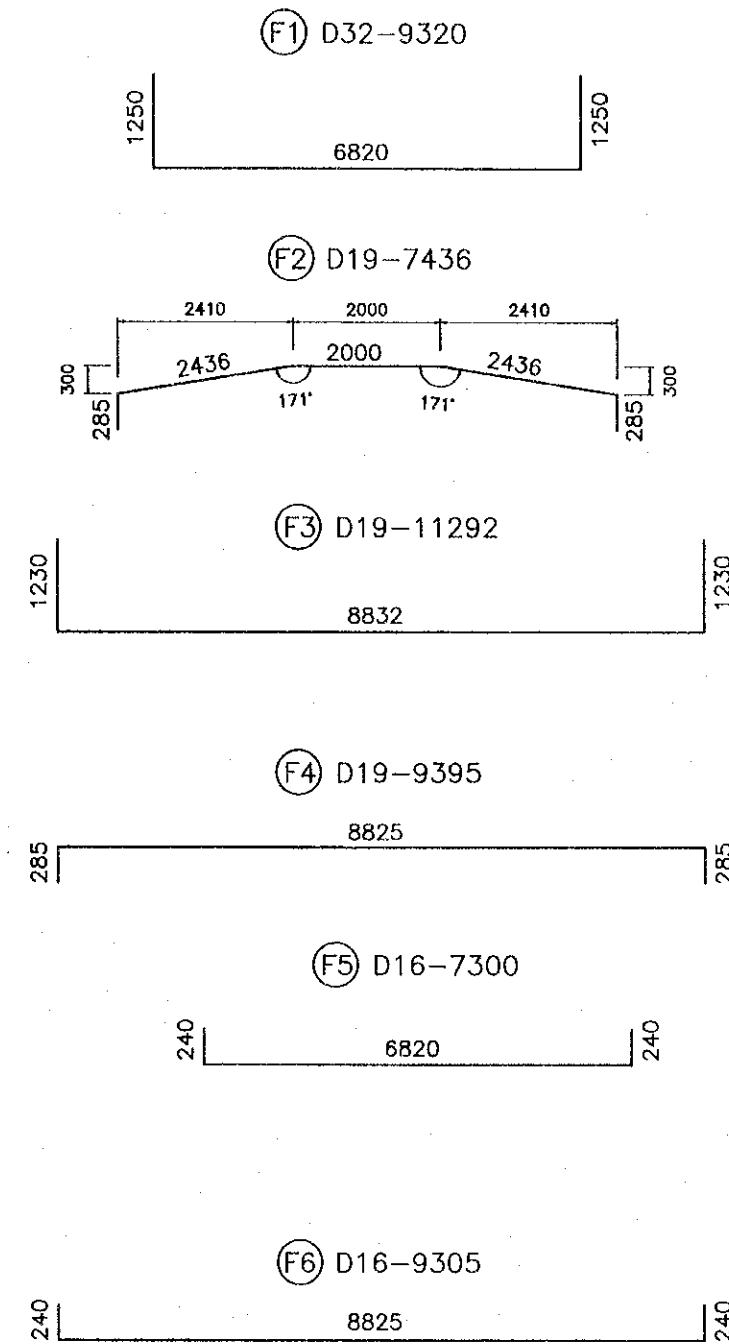
### SECTION 1 - 1



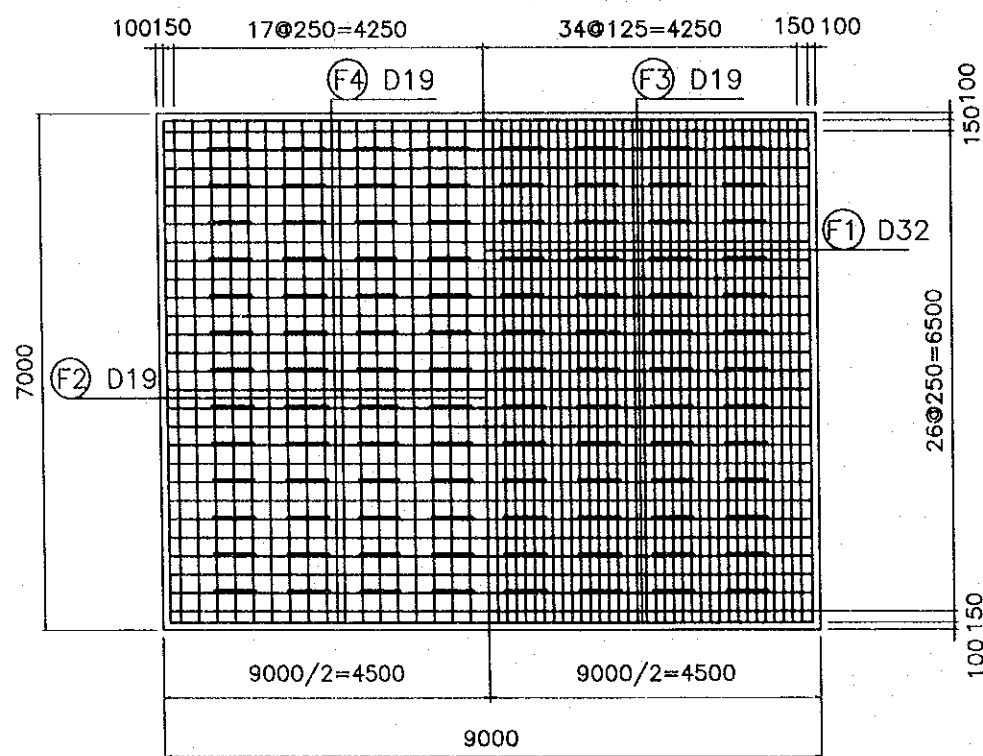
### SECTION 2 - 2



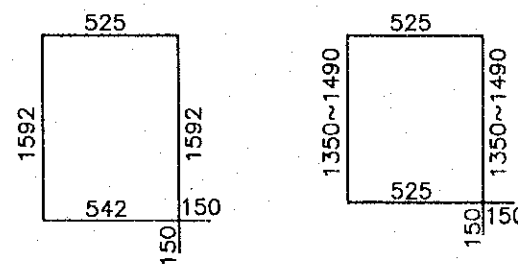
### LIST OF REINFORCING BARS FOR FOOTING



### HALF SECTION 3 - 3 HALF SECTION 4 - 4



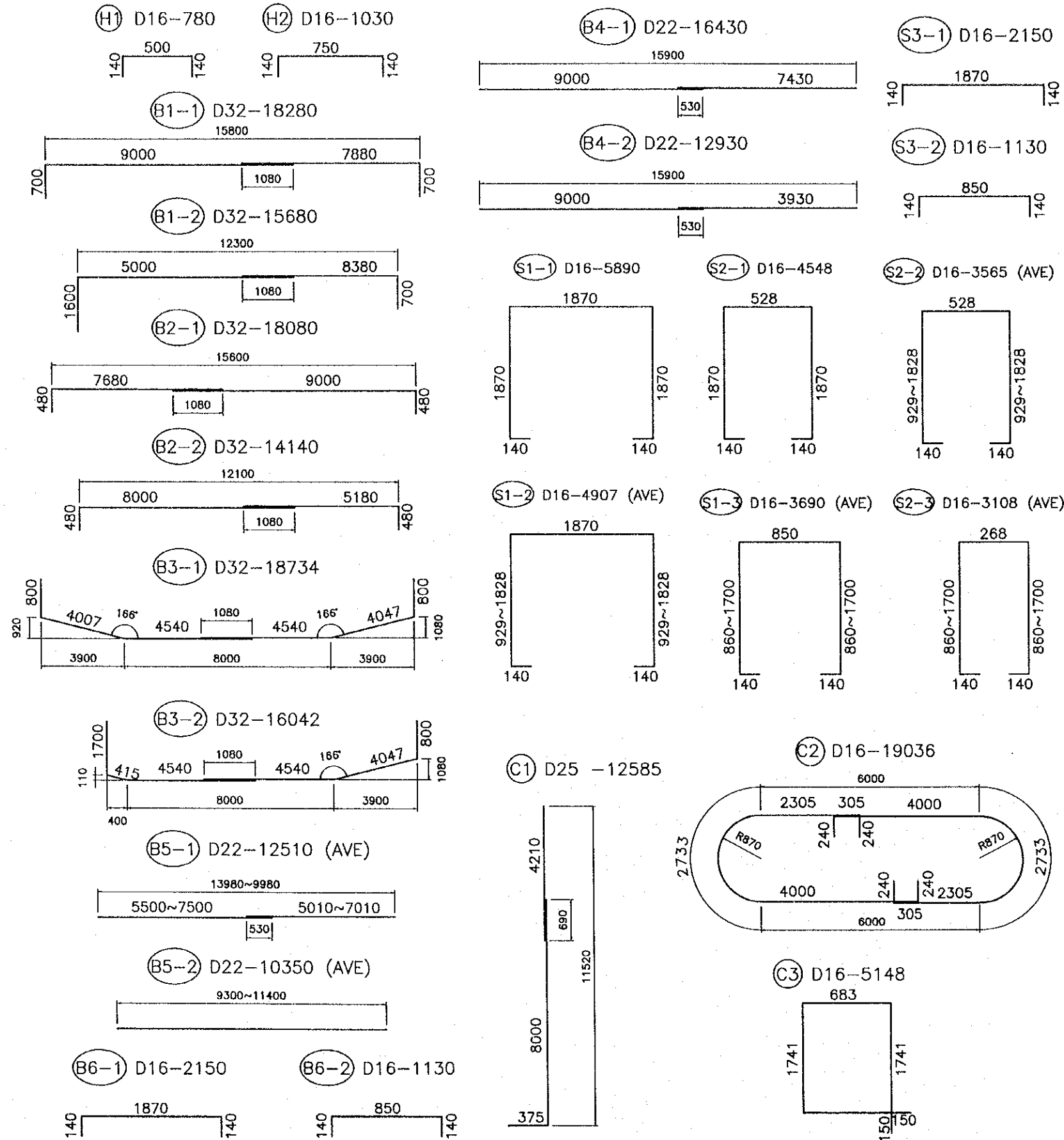
(F7) D16-4534      (F8) D16-4190 (AVE)



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATARE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE <i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.03.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-1-3c-44	
NH No.5 - FLYOVER BAR ARRANGEMENT FOR PIER P8L (5)			

LIST OF REINFORCING BARS FOR BEAM AND COLUMN

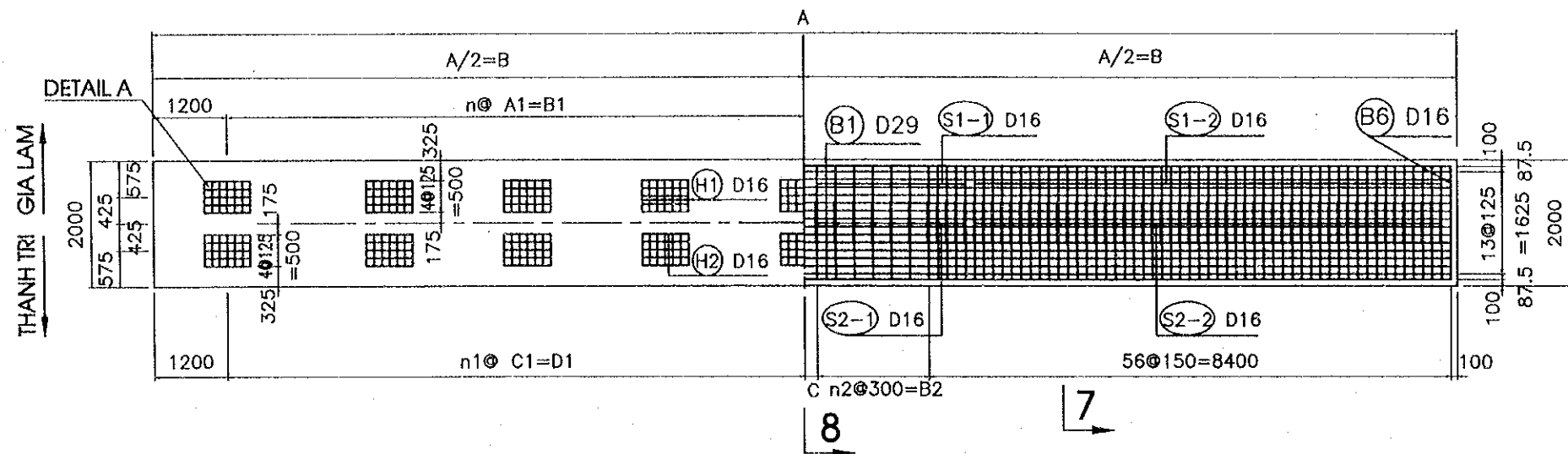


QUANTITY REINFORCEMENT FOR PIER P8L

DETAILS	TYPE	SHAPE	DIAMETER		LENGTH	NUMBER	UNIT WEIGHT		WEIGHT
			mm	mm			kg/m	kg	
PIER CAP	H1	[Diagram]	D16	780	780	98	1.560	119.25	
	H2	[Diagram]	D16	1030	1030	70	1.560	112.48	
	B1-1	[Diagram]	D32	18280	18280	8	6.230	911.08	
	B1-2	[Diagram]	D32	15680	15680	8	6.230	781.49	
	B2-1	[Diagram]	D32	18080	18080	8	6.230	901.11	
	B2-2	[Diagram]	D32	14140	14140	8	6.230	704.74	
	B3-1	[Diagram]	D32	18734	18734	8	6.230	933.70	
	B3-2	[Diagram]	D32	16042	16042	8	6.230	799.53	
	B4-1	[Diagram]	D22	16430	16430	3	3.040	149.84	
	B4-2	[Diagram]	D22	12930	12930	3	3.040	117.92	
	B5-1 AVE	[Diagram]	D22	12510	12510	3	3.040	114.09	
	B5-2 AVE	[Diagram]	D22	10350	10350	3	3.040	94.39	
	B6-1	[Diagram]	D16	2150	2150	5	1.560	16.77	
	B6-2	[Diagram]	D16	1130	1130	5	1.560	8.81	
	S1-1	[Diagram]	D16	5890	5890	34	1.560	312.41	
	S1-2 AVE	[Diagram]	D16	4907	4907	28	1.560	214.34	
	S1-3 AVE	[Diagram]	D16	3690	3690	22	1.560	126.64	
	S2-1	[Diagram]	D16	4548	4548	34	1.560	241.23	
	S2-2 AVE	[Diagram]	D16	3565	3565	28	1.560	155.72	
	S2-3 AVE	[Diagram]	D16	3108	3108	22	1.560	106.67	
	S3-1	[Diagram]	D16	2150	2150	104	1.560	348.82	
	S3-2	[Diagram]	D16	1130	1130	34	1.560	59.94	
	COLUMN	C1	[Diagram]	D25	12835	12835	140	3.980	7151.66
		C2	[Diagram]	D16	19036	19036	57	1.560	1692.68
C3		[Diagram]	D16	5148	5148	185	1.560	1485.71	
FOOTING	F1	[Diagram]	D32	9320	9320	71	6.230	4122.52	
	F2	[Diagram]	D19	7436	7436	37	2.250	619.05	
	F3	[Diagram]	D19	11292	11292	29	2.250	736.80	
	F4	[Diagram]	D19	9395	9395	29	2.250	613.02	
	F5	[Diagram]	D16	7300	7300	10	1.560	113.88	
	F6	[Diagram]	D16	9305	9305	8	1.560	116.13	
	F7	[Diagram]	D16	4534	4534	40	1.560	282.92	
	F8	[Diagram]	D16	4190	4190	48	1.560	313.75	
SUMMARY	TOTAL PIER P8L					9154.16	Kg	24579.07	
			D32						
			D25			7175.66	Kg		
			D22			476.25	Kg		
		D19			1968.87	Kg			
		D16			5828.12	Kg			

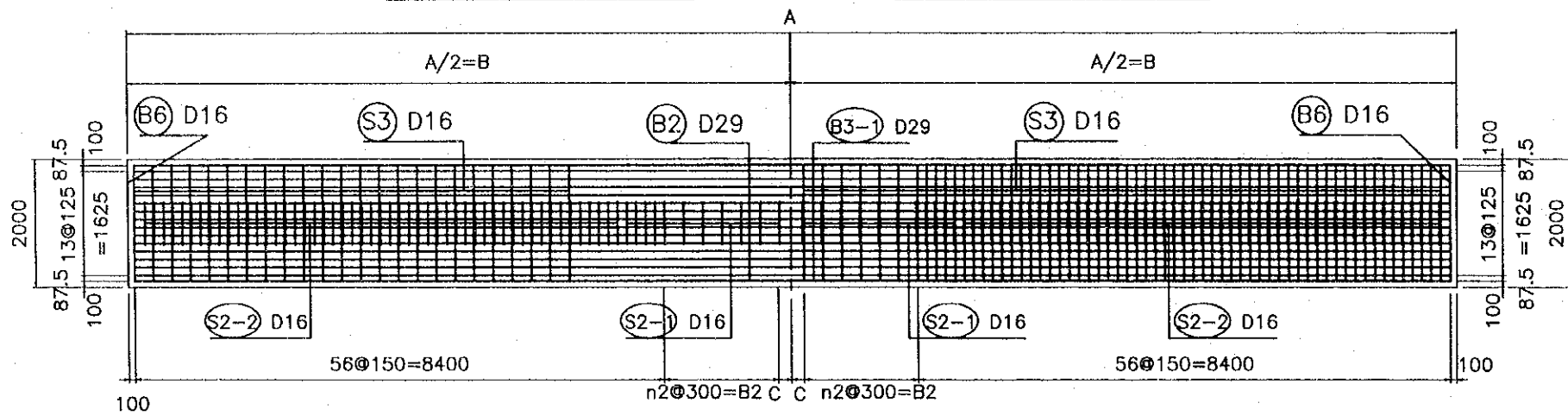
HALF SECTION 1 - 1

HALF SECTION 2 - 2



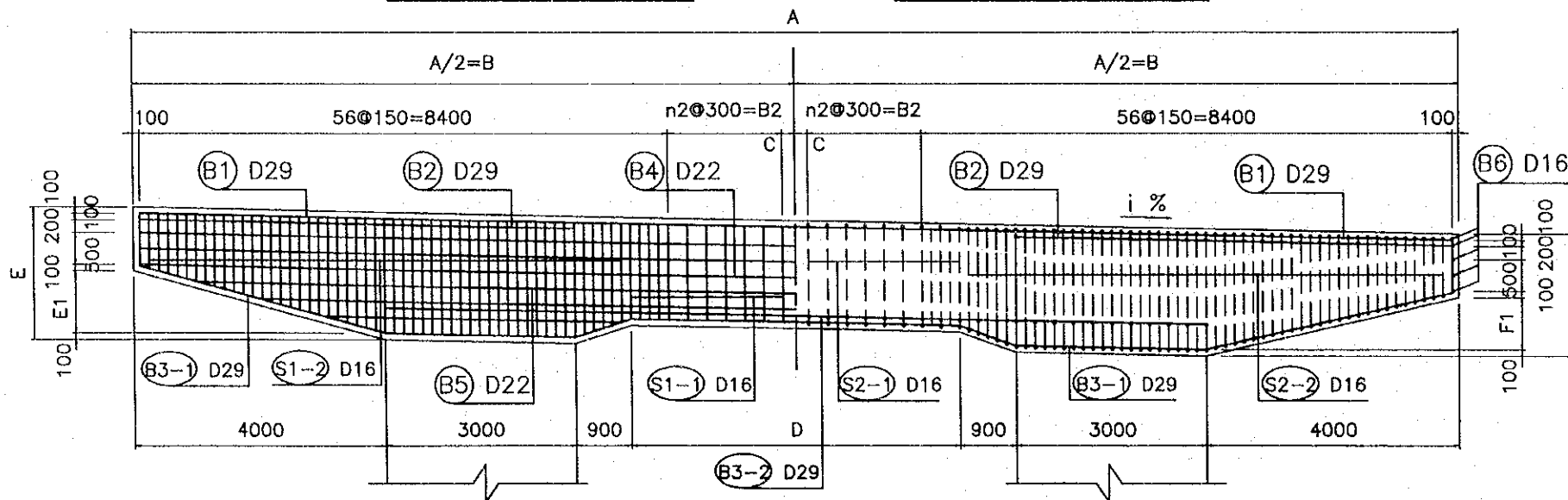
HALF SECTION 3 - 3

HALF SECTION 4 - 4



HALF SECTION 5 - 5

HALF SECTION 6 - 6

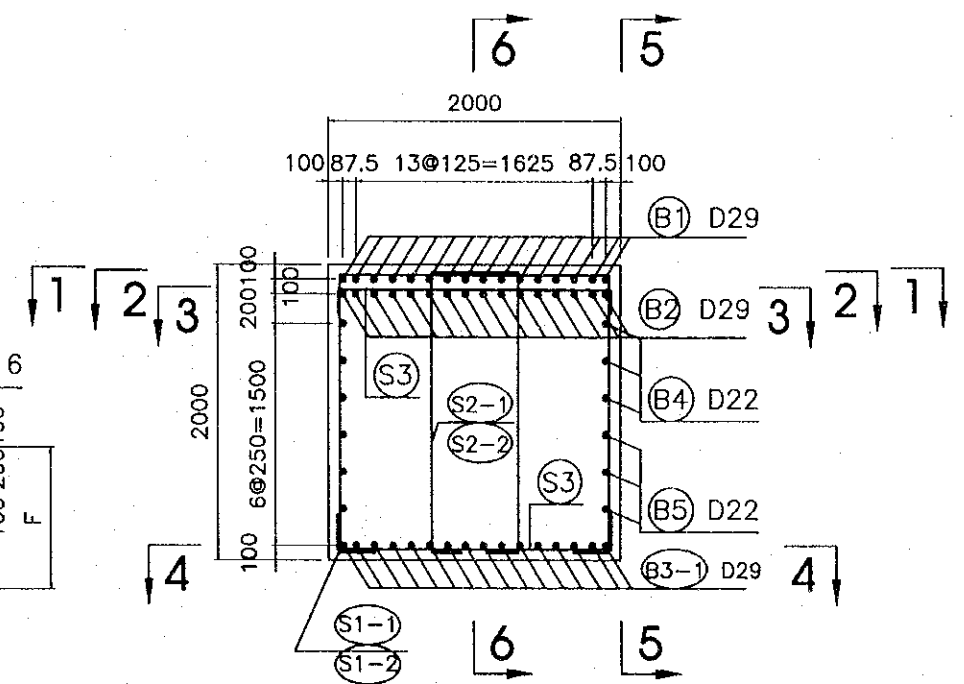


DIMENSIONS OF PIERS

Pier Items	P9L	P10R
A(mm)	18500	19110
B(mm)	9250	9555
C(mm)	150	155
D(mm)	2700	3310
n	8	8
A1(mm)	2013	2089
B1(mm)	16100	16710
n1	7	7
C1(mm)	2300	2387
D1(mm)	16100	16710
n2	2	3
B2(mm)	600	900
E(mm)	2102	2067
E1(mm)	1002	967
F(mm)	1911	1933
F1(mm)	811	833
i(%)	2.55	1.67

SECTION 7 - 7

(SC=1/50)



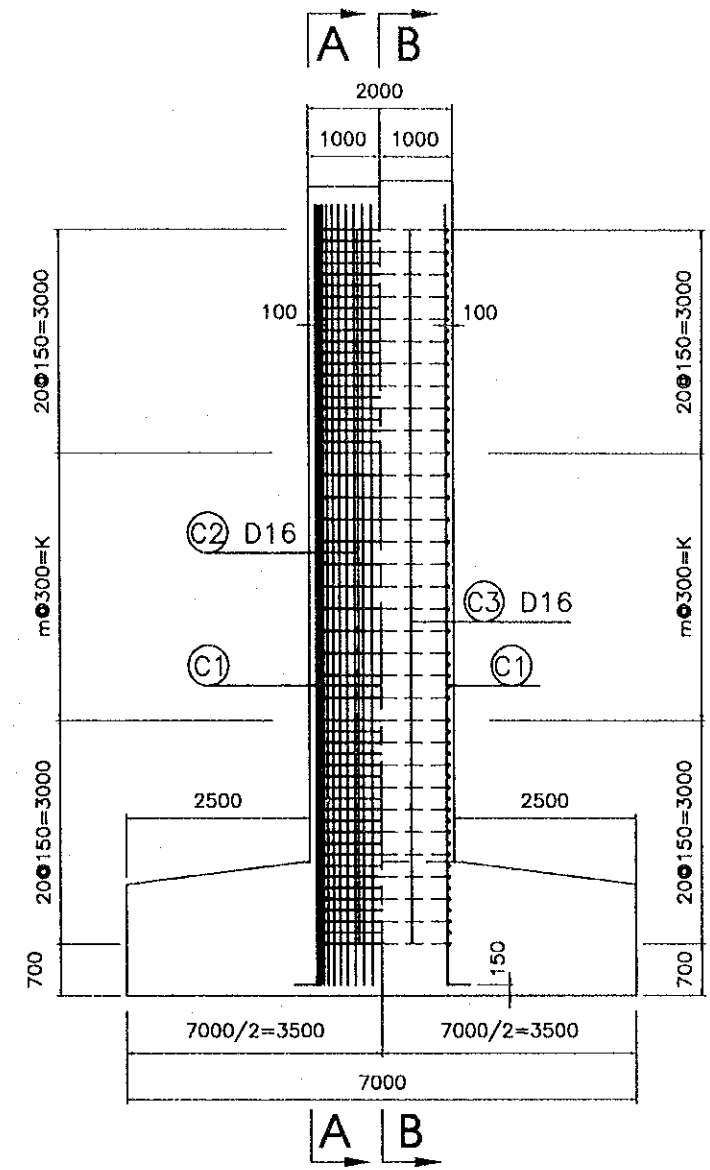
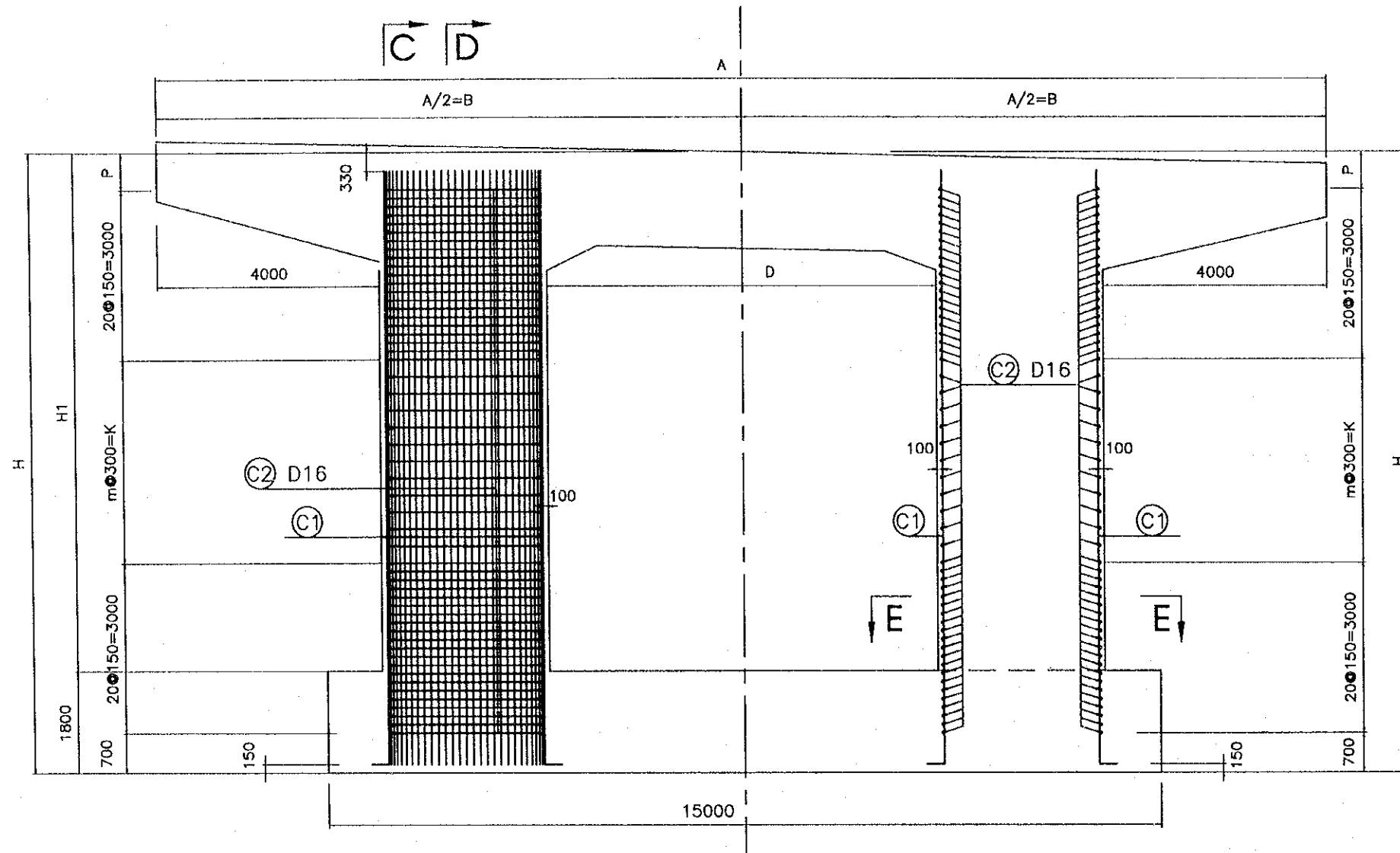
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANH LOANG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S.WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE <i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.8.19

PACKAGE 2	SCALE 1/100	DRAWING No. C-1-3c-46	SHEET No.
NH No.5 - FLYOVER BAR ARRANGEMENT OF PIERS P9L,P14R (2)			

### HALF SECTION A - A

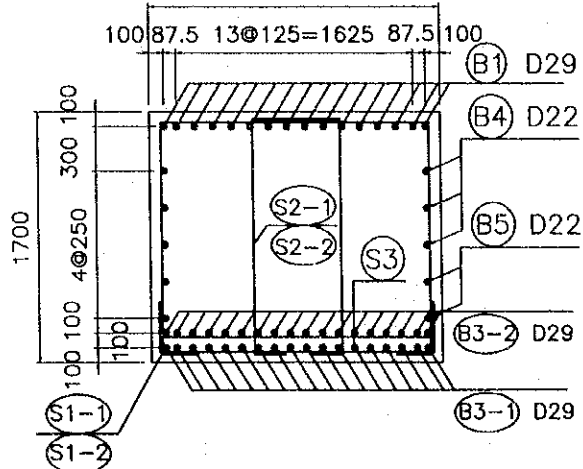
### HALF SECTION B - B

### HALF SECTION C - C HALF SECTION D - D



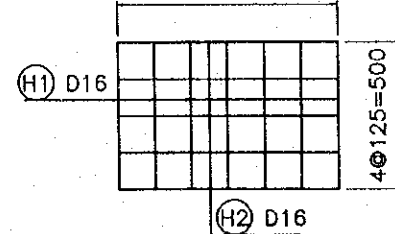
### SECTION 8 - 8

(SC=1/50)  
2000

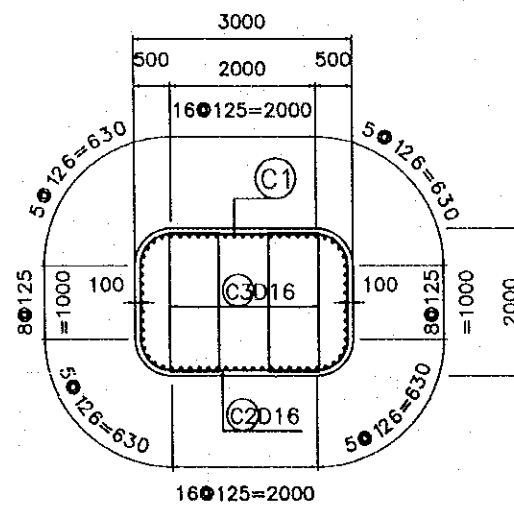


### DETAIL A

(SC=1/25)  
6φ125=750



### SECTION E - E



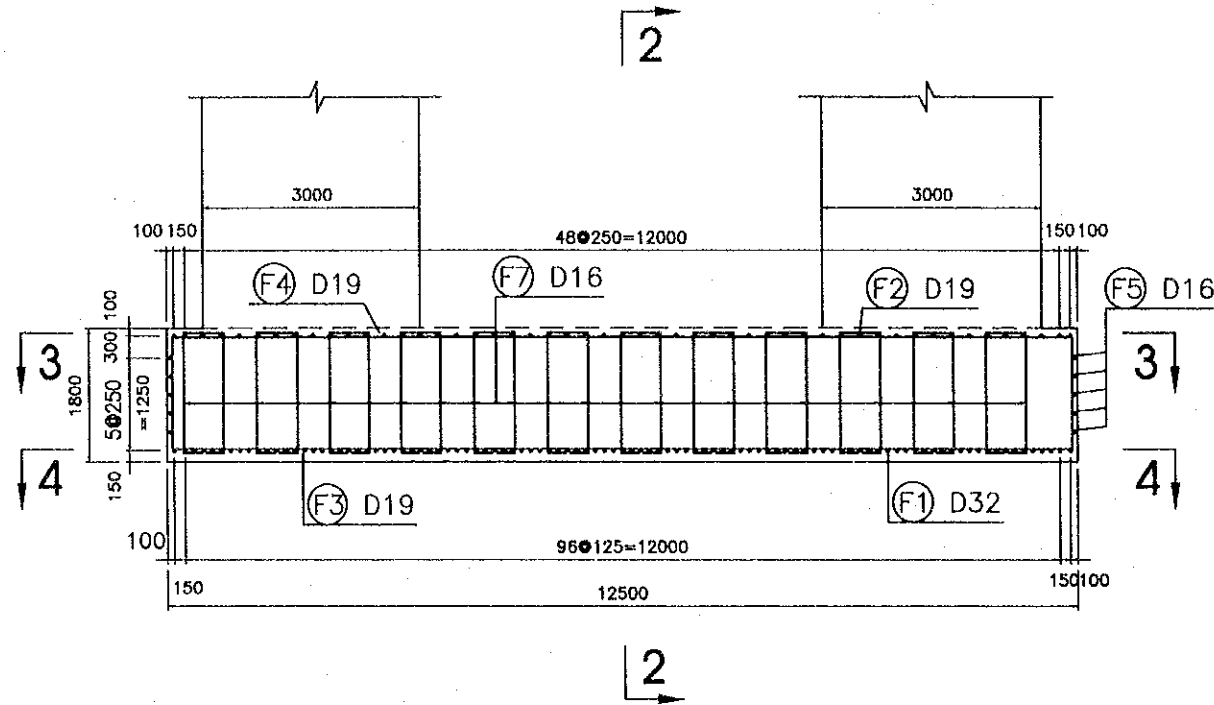
### DIMENSIONS OF PIERS

Pier Items	P9L	P14R
A(mm)	18500	19110
B(mm)	9250	9555
D(mm)	2700	3310
H(mm)	13000	11388
H1(mm)	11200	9588
m	19	14
K(mm)	5700	4200
P(mm)	600	488

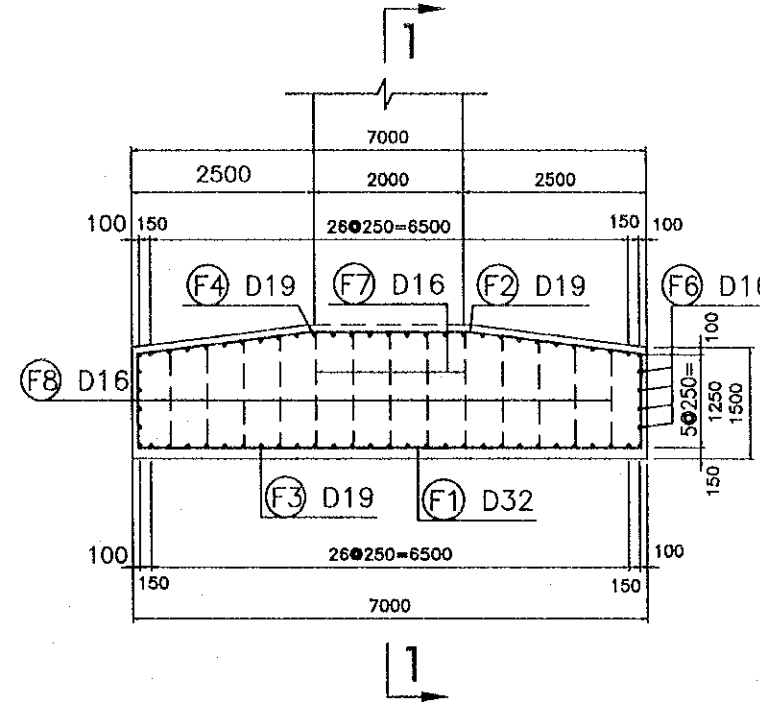
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY NAME S. WATAGE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.3.17	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/100	DRAWING No. C-1-3c-47	SHEET No.
NH No.5 - FLYOVER BAR ARRANGEMENT FOR PIERS P9L,P14R (3)			

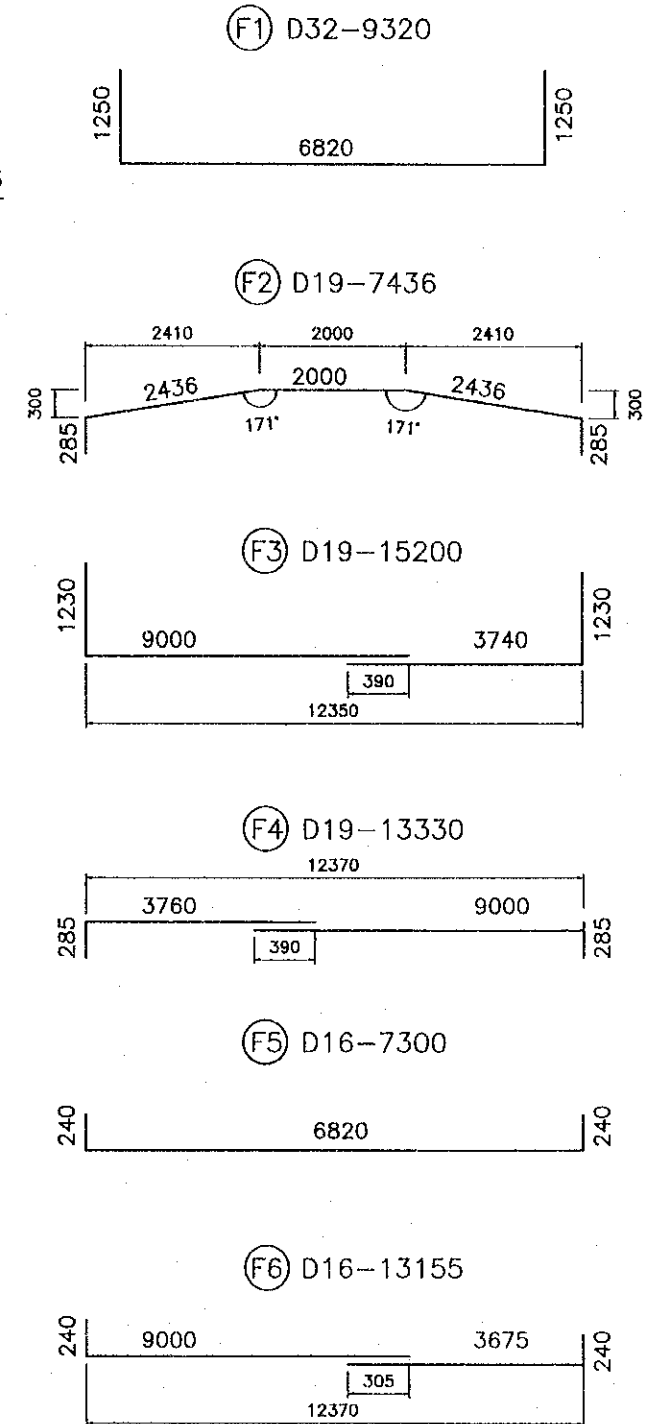
SECTION 1 - 1



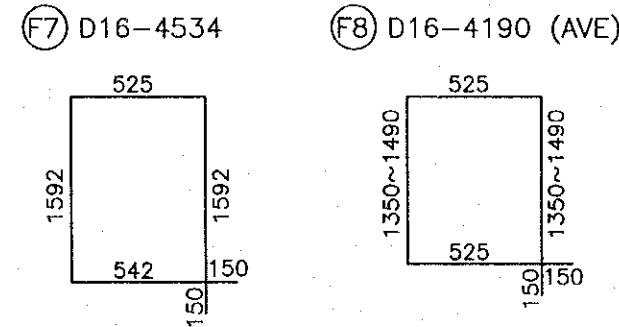
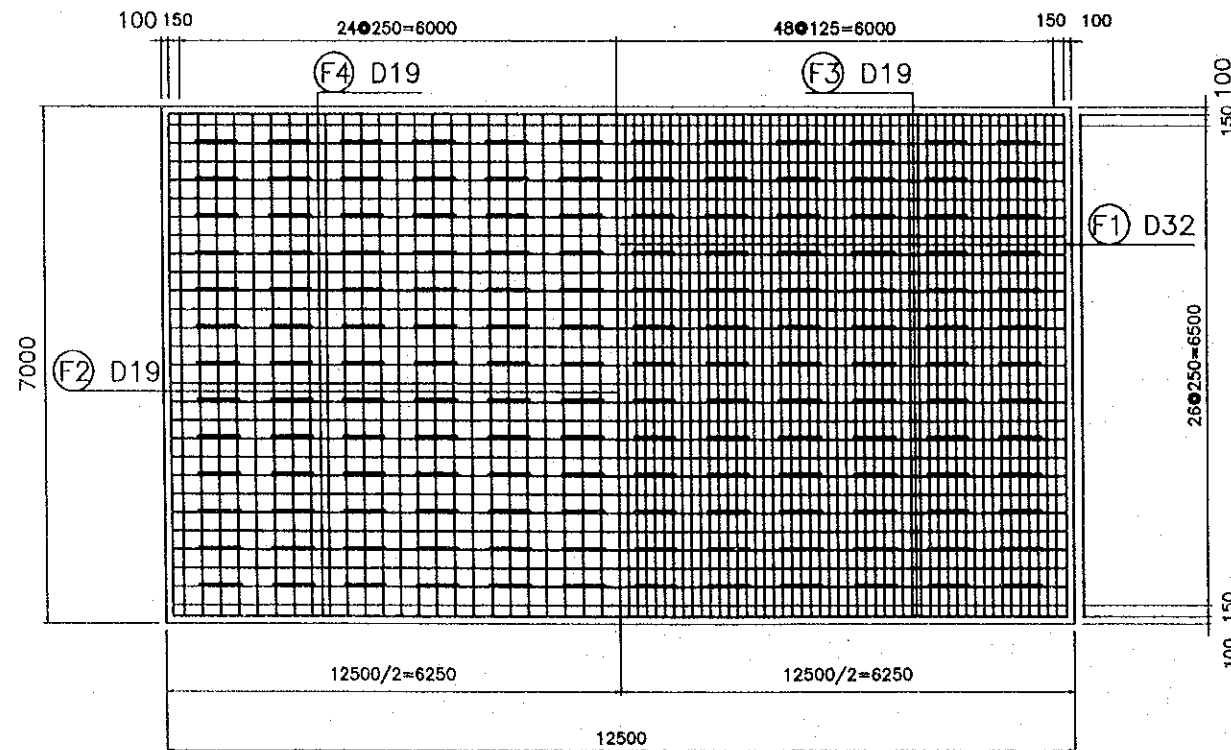
SECTION 2 - 2



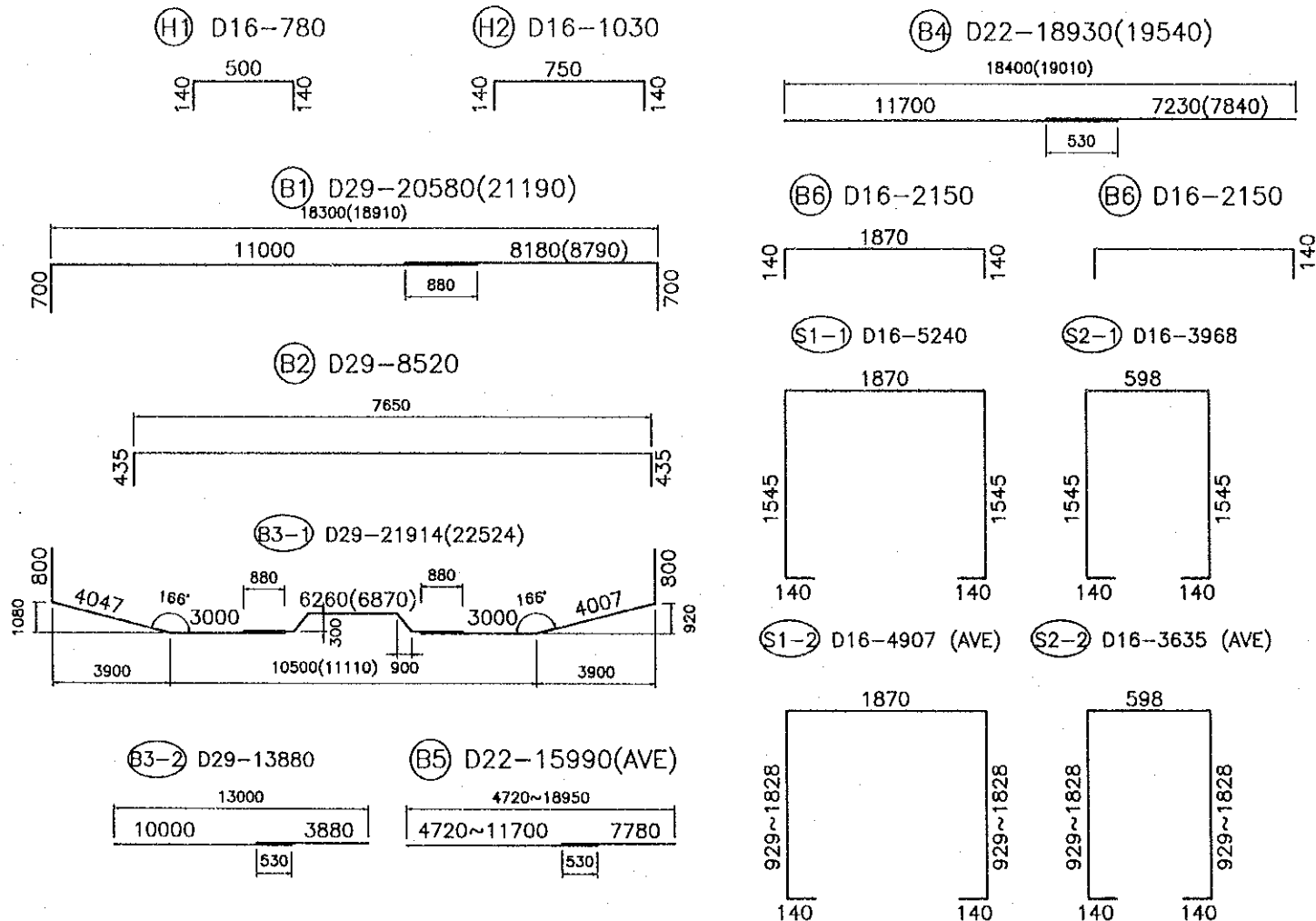
LIST OF REINFORCING BARS FOR FOOTING



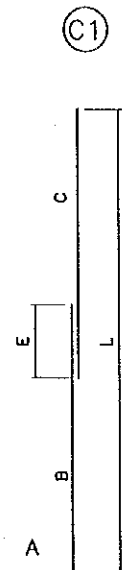
HALF SECTION 3 - 3 HALF SECTION 4 - 4



LIST OF REINFORCING BARS FOR BEAM AND COLUMN

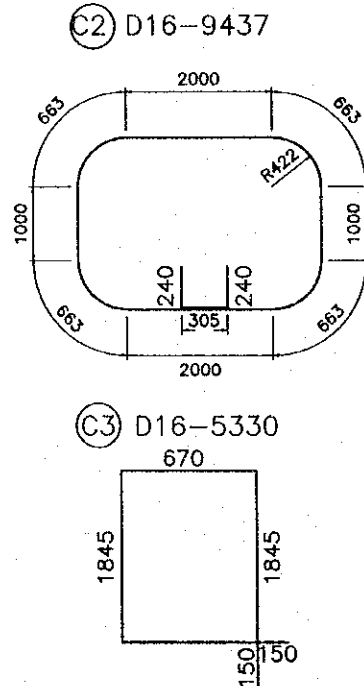


Note: Number in (...) use pier P14R.



DIMENSIONS OF BAR C1

Items	D (mm)	A (mm)	B (mm)	C (mm)	E (mm)	L (mm)	Total (mm)
P9L	D29	435	8000	5400	880	12520	13835
P14R	D25	375	10908	-	-	10908	11283



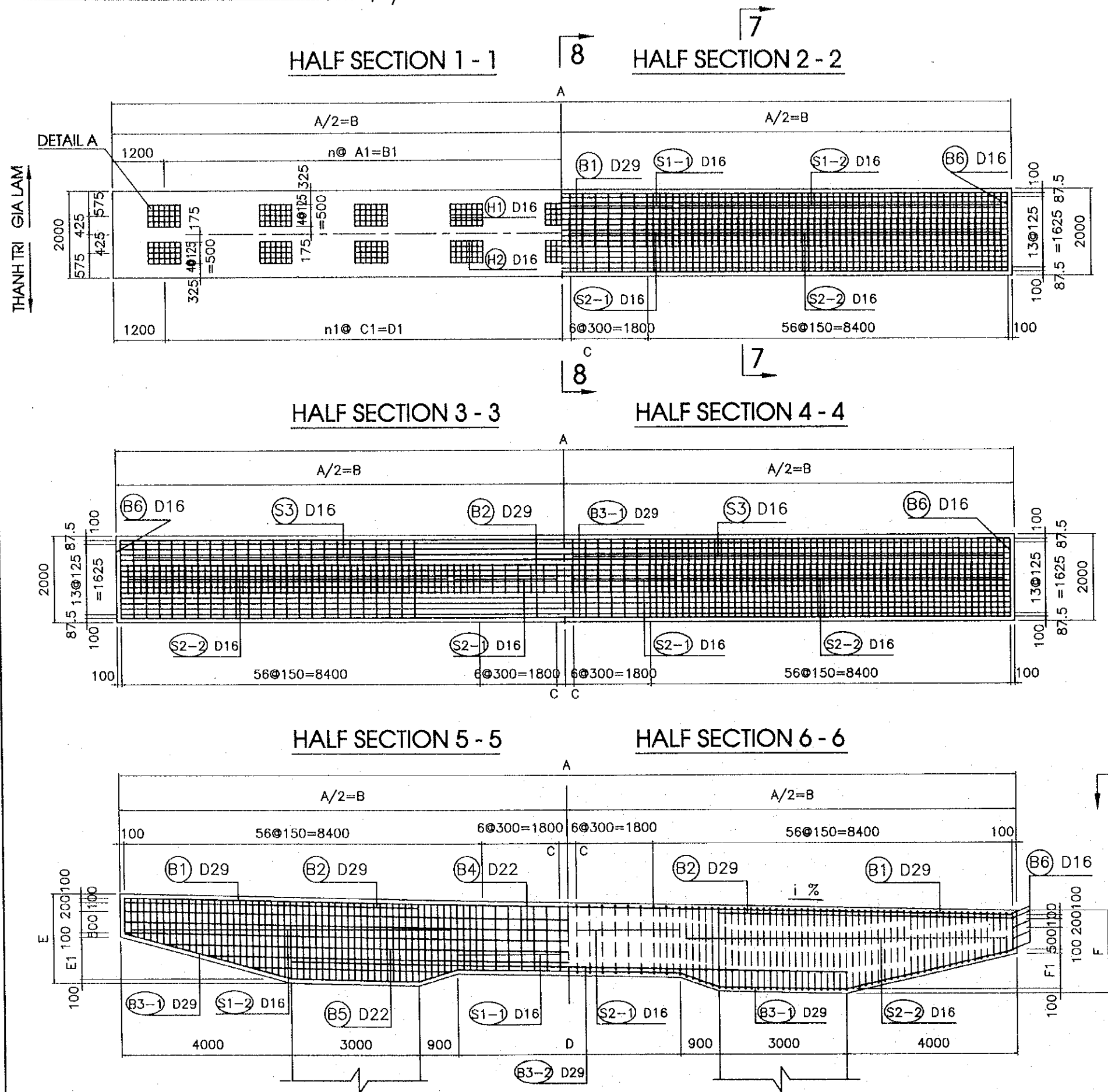
QUANTITY REINFORCEMENT FOR PIER P9L

DETAILS	TYPE	SHAPE	DIAMETER		LENGTH	NUMBER	UNIT WEIGHT		WEIGHT
			mm	mm			kg/m	kg	
PIER CAP	H1		D16	780	780	119	1.560	144.80	
	H2		D16	1030	1030	85	1.560	136.58	
	B1		D29	20580	20580	16	5.040	1659.57	
	B2		D29	8520	8520	32	5.040	1374.11	
	B3-1		D29	21914	21914	16	5.040	1767.14	
	B3-2		D29	13880	13880	16	5.040	1119.28	
	B4		D22	18930	18930	6	3.040	345.28	
	B5	AVE	D22	15990	15990	8	3.040	388.88	
	B6		D16	2150	2150	10	1.560	33.54	
	S1-1		D16	5240	5240	16	1.560	130.79	
	S1-2	AVE	D16	4907	4907	104	1.560	796.11	
	S2-1		D16	3968	3968	16	1.560	99.04	
	S2-2	AVE	D16	3635	3635	104	1.560	589.74	
	S3		D16	2150	2150	218	1.560	731.17	
COLUMN	C1		D29	13835	13835	136	5.040	9483.06	
	C2		D16	9437	9437	120	1.560	9483.06	
	C3		D16	5330	5330	160	1.560	1766.61	
FOOTING	F1		D32	9320	9320	99	6.230	1330.37	
	F2		D19	7436	7436	99	2.250	1656.37	
	F3		D19	15200	15200	29	2.250	991.80	
	F4		D19	13330	13330	29	2.250	869.78	
	F5		D16	7300	7300	10	1.560	113.88	
	F6		D16	13155	13155	8	1.560	164.17	
	F7		D16	4534	4534	70	1.560	495.11	
	F8	AVE	D16	4190	4190	112	1.560	732.08	
SUMMARY	TOTAL PIER P9L								32667.57
			D32			5748.30	Kg		
			D29			15403.17	Kg		
			D22			734.16	Kg		
			D19			3517.95	Kg		
		D16			7263.99	Kg			

QUANTITY REINFORCEMENT FOR PIER P14R

DETAILS	TYPE	SHAPE	DIAMETER		LENGTH	NUMBER	UNIT WEIGHT		WEIGHT
			mm	mm			kg/m	kg	
PIER CAP	H1		D16	780	780	119	1.560	144.80	
	H2		D16	1030	1030	85	1.560	136.58	
	B1		D29	21190	21190	16	5.040	1708.76	
	B2		D29	8520	8520	32	5.040	1374.11	
	B3-1		D29	22524	22524	16	5.040	1816.34	
	B3-2		D29	13880	13880	16	5.040	1119.28	
	B4		D22	19540	19540	6	3.040	356.41	
	B5	AVE	D22	15990	15990	8	3.040	388.88	
	B6		D16	2150	2150	10	1.560	33.54	
	S1-1		D16	5240	5240	18	1.560	147.14	
	S1-2	AVE	D16	4907	4907	104	1.560	196.11	
	S2-1		D16	3968	3968	18	1.560	111.42	
	S2-2	AVE	D16	3635	3635	104	1.560	589.74	
	S3		D16	2150	2150	218	1.560	731.17	
COLUMN	C1		D25	11283	11283	136	3.980	6107.26	
	C2		D16	9437	9437	110	1.560	1619.39	
	C3		D16	5330	5330	140	1.560	1164.07	
FOOTING	F1		D32	9320	9320	99	6.230	5748.30	
	F2		D19	7436	7436	99	2.250	1656.37	
	F3		D19	15200	15200	29	2.250	991.80	
	F4		D19	13330	13330	29	2.250	869.78	
	F5		D16	7300	7300	10	1.560	113.88	
	F6		D16	13155	13155	8	1.560	164.17	
	F7		D16	4534	4534	70	1.560	495.11	
	F8	AVE	D16	4190	4190	112	1.560	732.08	
SUMMARY	TOTAL PIER P14R								29116.49
			D32			5748.30	Kg		
			D29			6018.49	Kg		
			D25			6107.26	Kg		
			D22			745.29	Kg		
		D19			3517.95	Kg			
		D16			6979.21	Kg			



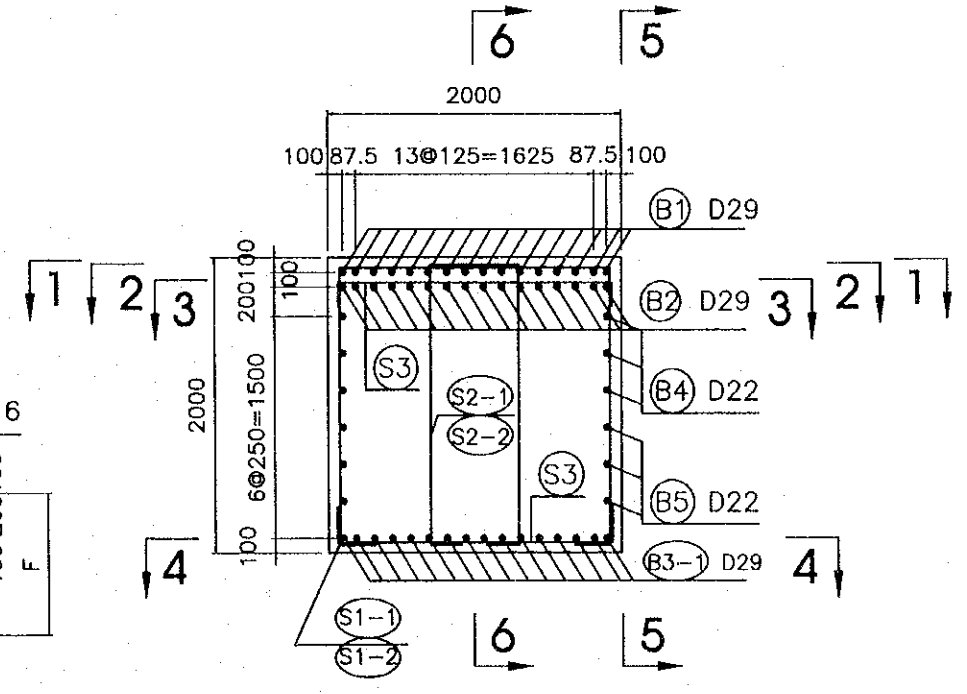


DIMENSIONS OF PIERS

Pier Items	P10L	P11L	P13L	P14L	P15L	P15R	P16L	P17L
A(mm)	21000	21000	21000	21000	21000	21070	21000	21040
B(mm)	10500	10500	10500	10500	10500	10535	10500	10520
C(mm)	200	200	200	200	200	235	200	220
D(mm)	5200	5200	5200	5200	5200	5270	5200	5240
n	8	8	8	8	8	9	8	9
A1(mm)	2325	2325	2325	2325	2325	2074	2325	2071
B1(mm)	18600	18600	18600	18600	18600	18670	18600	18640
n1	8	8	8	8	8	8	8	8
C1(mm)	2325	2325	2325	2325	2325	2333	2325	2330
D1(mm)	18600	18600	18600	18600	18600	18670	18600	18640
E(mm)	2098	2098	2084	2080	2080	2080	2080	2080
E1(mm)	998	993	984	980	980	980	980	980
F(mm)	1902	1907	1916	1920	1920	1920	1920	1920
F1(mm)	802	807	816	820	820	820	820	820
i(%)	2.44	2.33	2.10	2.00	2.00	2.00	2.00	2.00

SECTION 7 - 7

(SC=1/50)



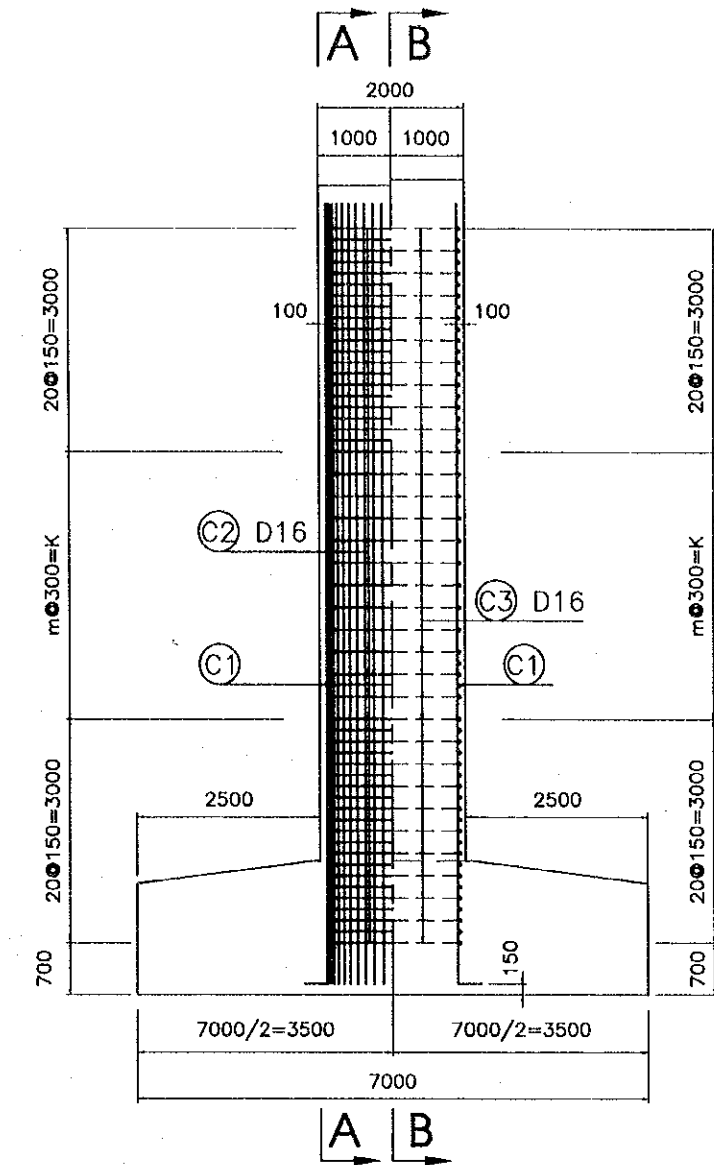
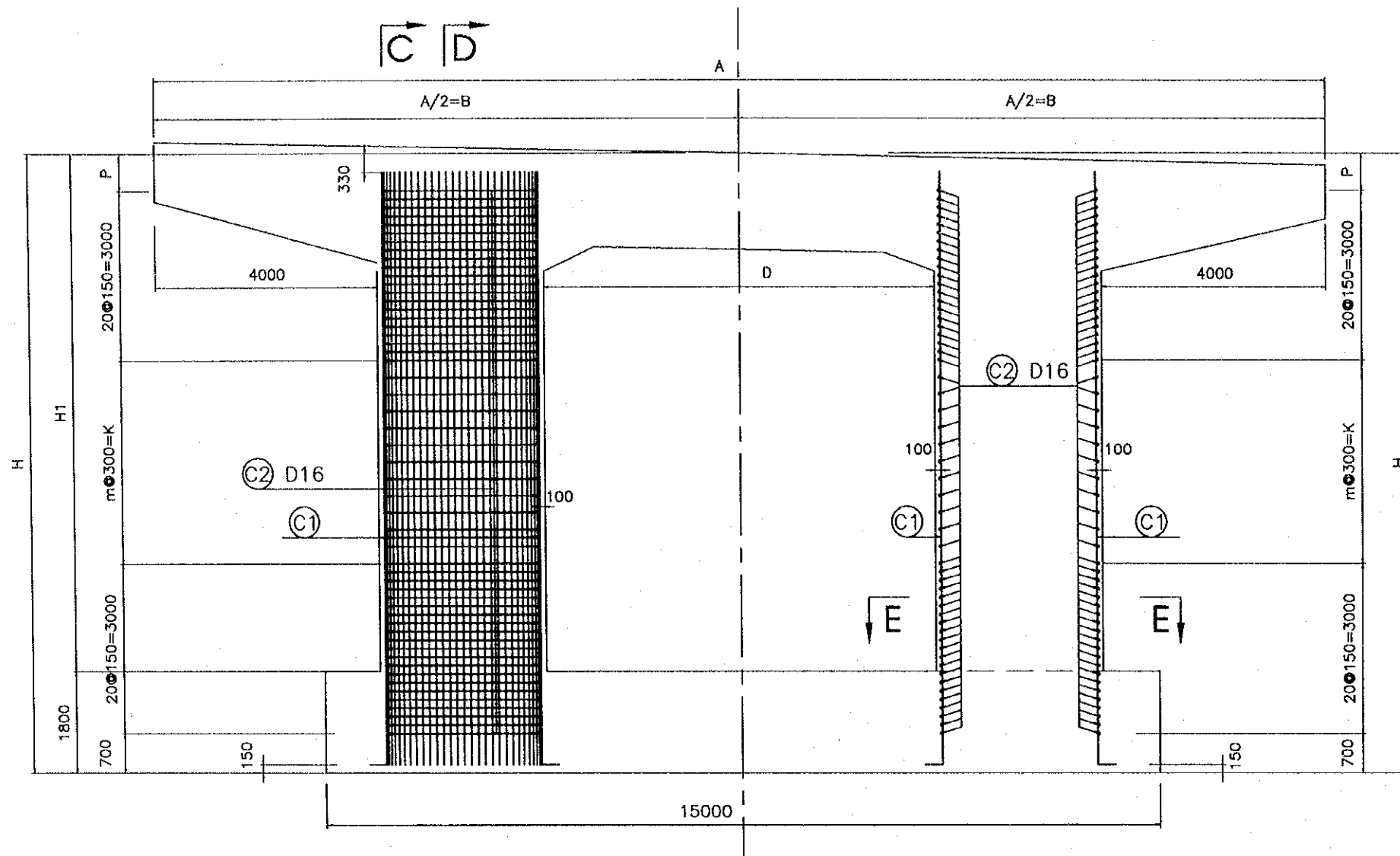
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANH LOUO PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.03.17

PACKAGE 2	SCALE 1/100	DRAWING No. C-1-3c-50	SHEET No.
NH No.5 - FLYOVER BAR ARRANGEMENT FOR PIER P10L,P11L,P13L,P14L,P15L,P15R,P16L,P17L (2)			

HALF SECTION A - A

HALF SECTION B - B

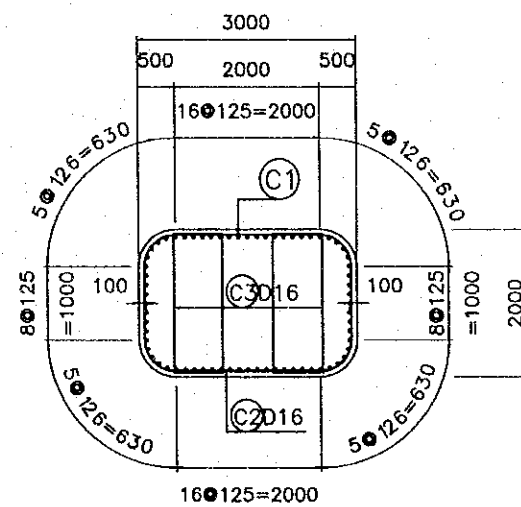
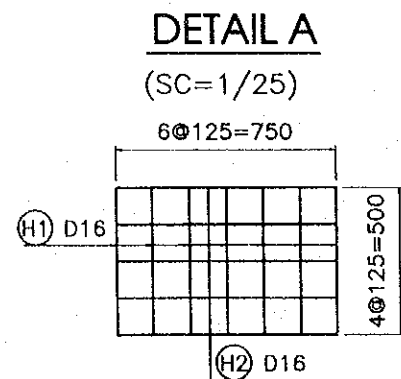
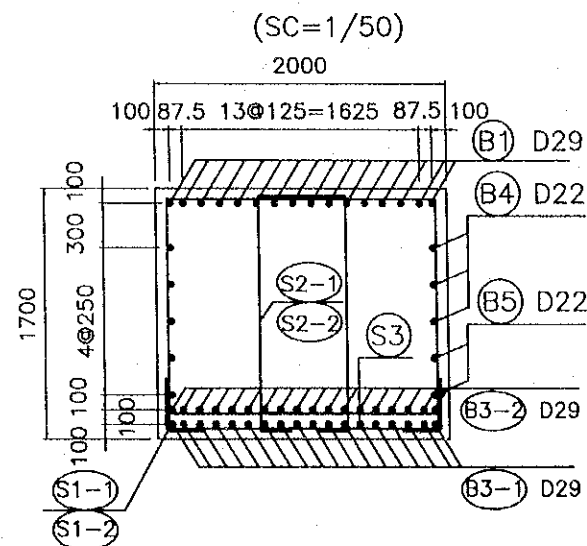
HALF SECTION C - C HALF SECTION D - D



SECTION 8 - 8

SECTION E - E

DIMENSIONS OF PIERS

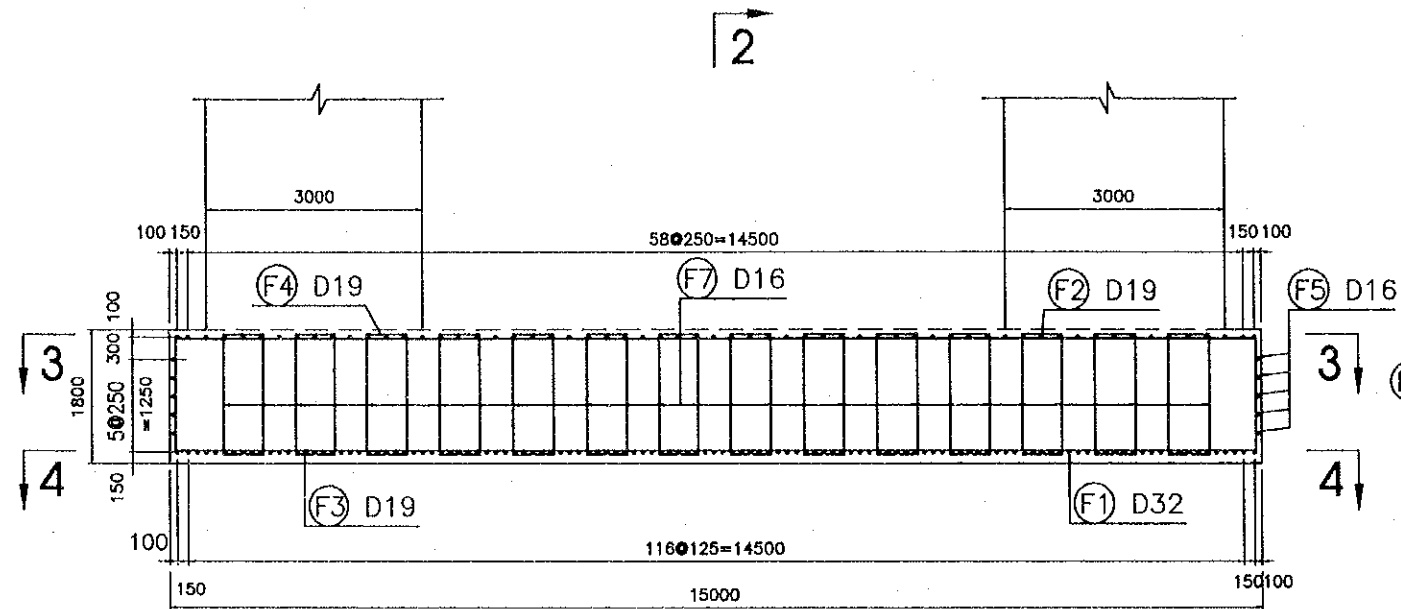


Pier Items	P10L	P11L	P13L	P14L	P15L	P15R	P16L	P17L
A(mm)	21000	21000	21000	21000	21000	21070	21000	21040
B(mm)	10500	10500	10500	10500	10500	10535	10500	10520
D(mm)	5200	5200	5200	5200	5200	5270	5200	5240
H(mm)	13000	13000	10000	11000	12000	11999	11000	11000
H1(mm)	11200	11200	8200	9200	10200	10199	9200	9200
m	19	19	9	13	16	16	13	13
K(mm)	5700	5700	2700	3900	4800	4800	3900	3900
P(mm)	600	600	600	400	500	499	400	400

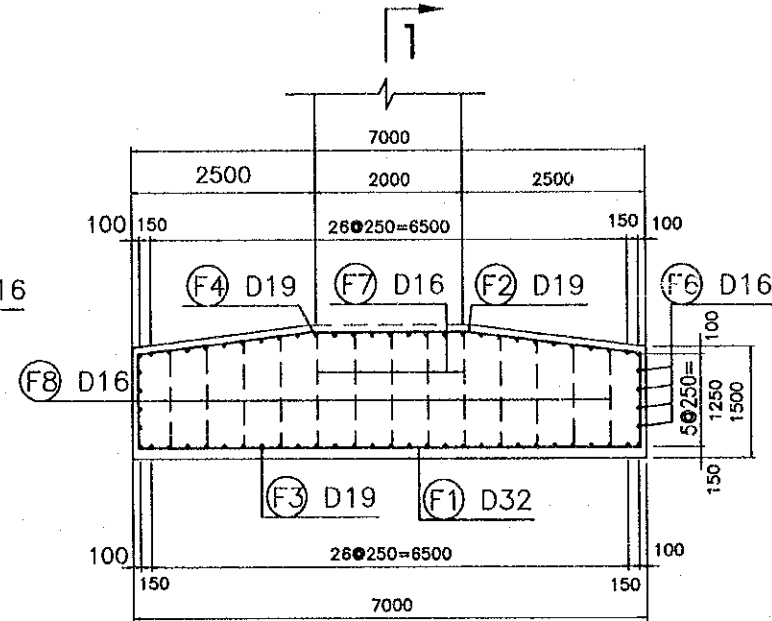
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANH LOANG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
COMPLETER PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.12

PACKAGE 2	SCALE 1/100	DRAWING No. C-1-3c-51	SHEET No.
NH No.5 -- FLYOVER BAR ARRANGEMENT FOR PIERS P10L,P11L,P13L,P14L,P15L,P15R,P16L,P17L (3)			

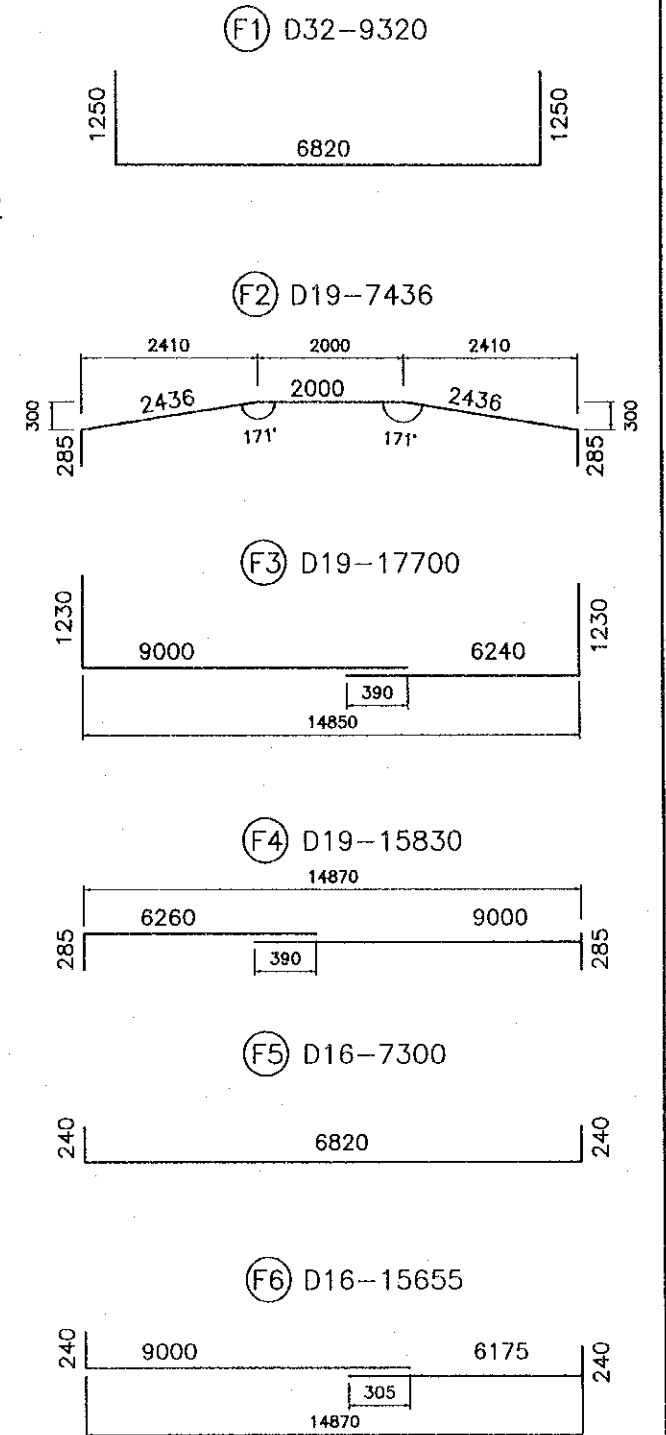
### SECTION 1 - 1



### SECTION 2 - 2

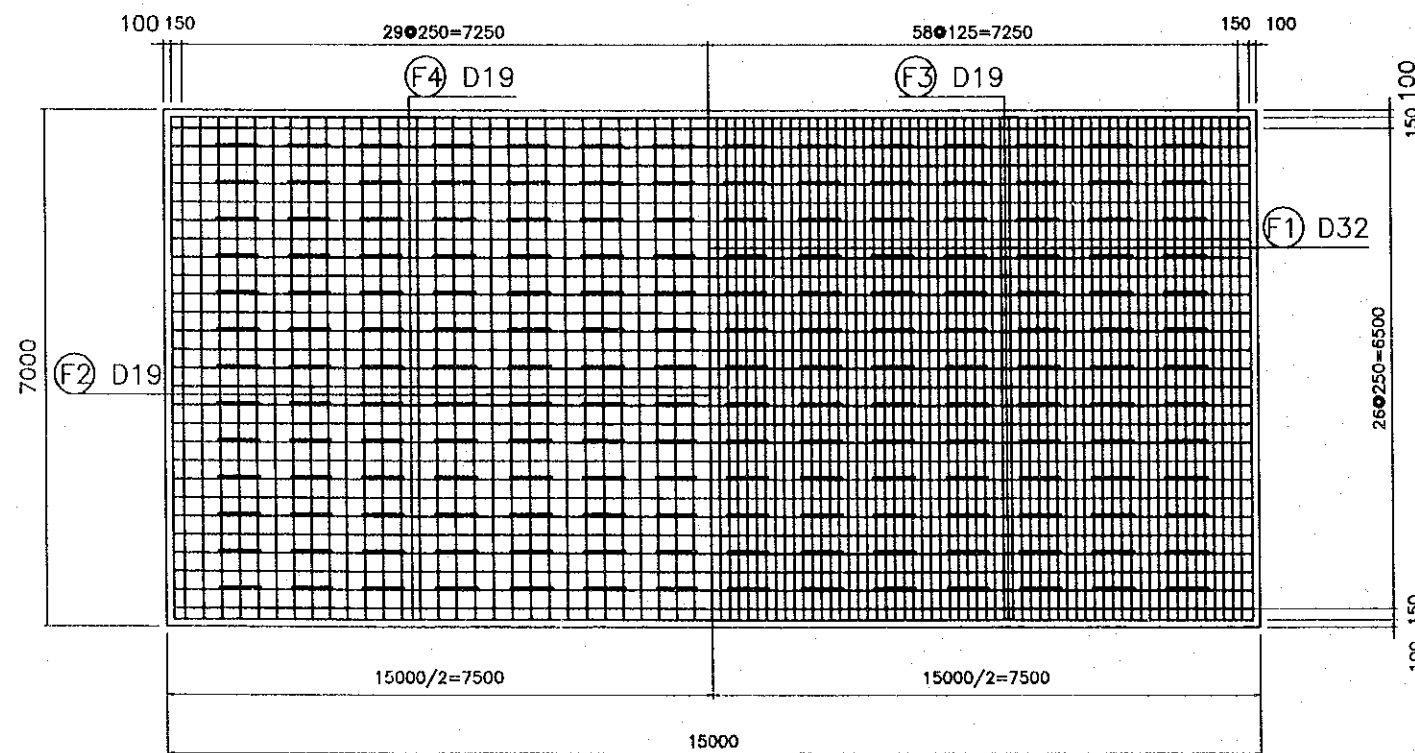


### LIST OF REINFORCING BARS FOR FOOTING

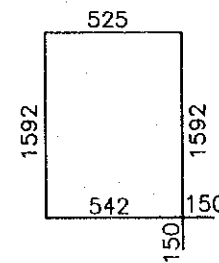


### HALF SECTION 3 - 3

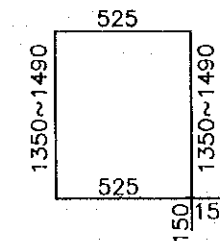
### HALF SECTION 4 - 4



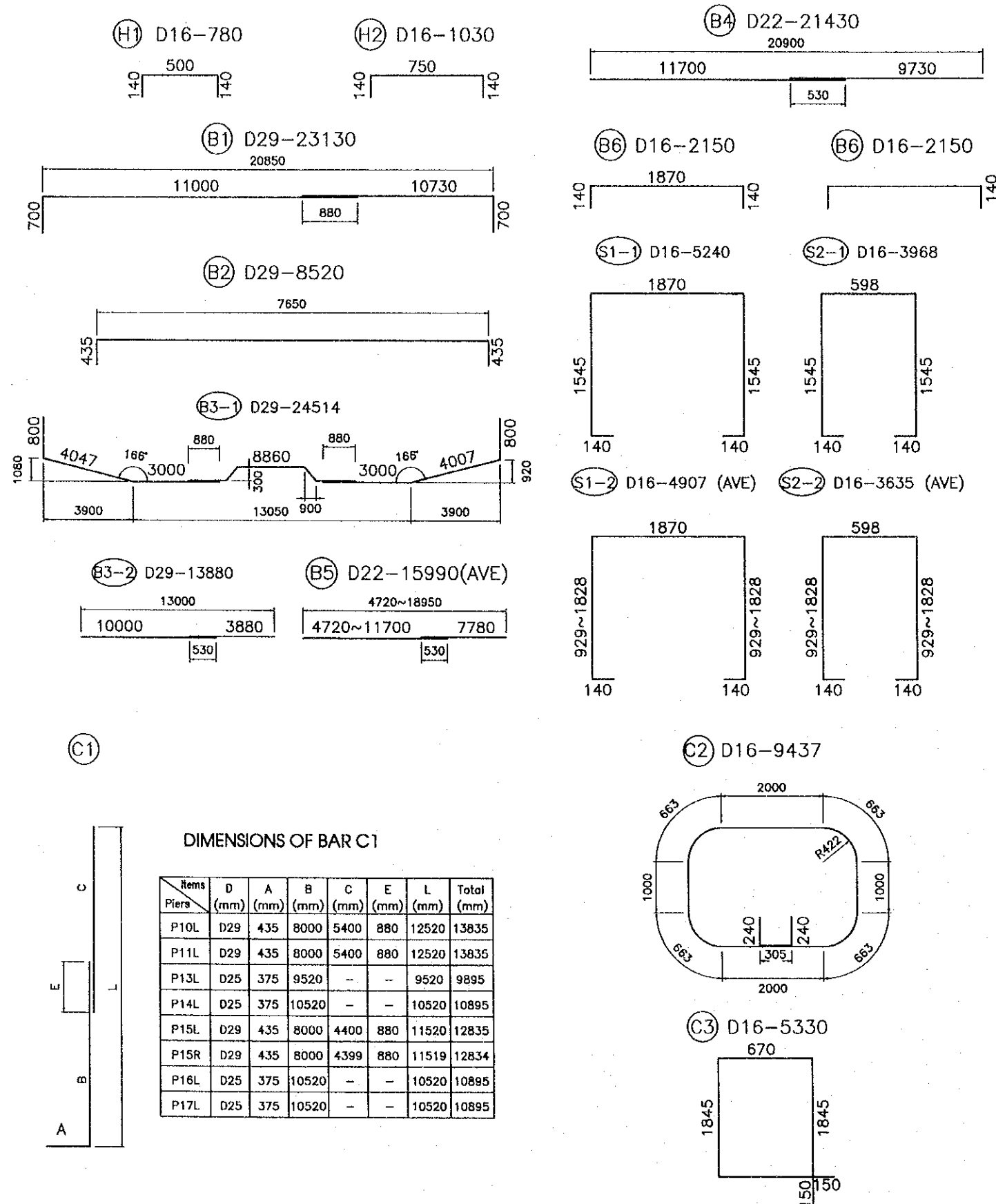
(F7) D16-4534



(F8) D16-4190 (AVE)



LIST OF REINFORCING BARS FOR BEAM AND COLUMN



QUANTITY REINFORCEMENT FOR PIER P10L

DETAILS	TYPE	SHAPE	DIAMETER mm	LENGTH mm	NUMBER	UNIT WEIGHT kg/m	WEIGHT kg	
PIER CAP	H1	[Shape]	D16	780	126	1.560	153.32	
	H2	[Shape]	D16	1030	90	1.560	144.61	
	B1	[Shape]	D29	23130	16	5.040	1865.20	
	B2	[Shape]	D29	8520	32	5.040	1374.11	
	B3-1	[Shape]	D29	24514	16	5.040	1976.81	
	B3-2	[Shape]	D29	13880	16	5.040	1119.28	
	B4	[Shape]	D22	21430	6	3.040	390.88	
	B5	AVE	[Shape]	D22	15990	8	3.040	388.88
	B6	[Shape]	D16	2150	10	1.560	33.54	
	S1-1	[Shape]	D16	5240	22	1.560	179.11	
	S1-2	AVE	[Shape]	D16	4907	104	1.560	196.11
	S2-1	[Shape]	D16	3968	22	1.560	136.18	
	S2-2	AVE	[Shape]	D16	3635	104	1.560	589.74
	S3	[Shape]	D16	2150	218	1.560	731.17	
	COLUMN	C1	[Shape]	D29	13835	136	5.040	9483.06
		C2	[Shape]	D16	9437	120	1.560	1766.61
		C3	[Shape]	D16	5330	160	1.560	1330.37
	FOOTING	F1	[Shape]	D32	9320	119	6.230	6909.57
F2		[Shape]	D19	7436	119	2.250	1990.99	
F3		[Shape]	D19	17700	29	2.250	1154.93	
F4		[Shape]	D19	15830	29	2.250	1032.91	
F5		[Shape]	D16	7300	10	1.560	113.88	
F6		[Shape]	D16	15655	8	1.560	195.37	
F7		[Shape]	D16	4534	70	1.560	495.11	
F8		AVE	[Shape]	D16	4190	112	1.560	732.08
SUMMARY	TOTAL PIER P10L		D32		6909.57	Kg	35084.54	
			D29		15818.46	Kg		
			D22		779.76	Kg		
			D19		4178.82	Kg		
			D16		7397.93	Kg		

QUANTITY REINFORCEMENT FOR PIER P11L

DETAILS	TYPE	SHAPE	DIAMETER mm	LENGTH mm	NUMBER	UNIT WEIGHT kg/m	WEIGHT kg	
PIER CAP	H1	[Shape]	D16	780	126	1.560	153.32	
	H2	[Shape]	D16	1030	90	1.560	144.61	
	B1	[Shape]	D29	23130	16	5.040	1865.20	
	B2	[Shape]	D29	8520	32	5.040	1374.11	
	B3-1	[Shape]	D29	24514	16	5.040	1976.81	
	B3-2	[Shape]	D29	13880	16	5.040	1119.28	
	B4	[Shape]	D22	21430	6	3.040	390.88	
	B5	AVE	[Shape]	D22	15990	8	3.040	388.88
	B6	[Shape]	D16	2150	10	1.560	33.54	
	S1-1	[Shape]	D16	5240	22	1.560	179.11	
	S1-2	AVE	[Shape]	D16	4907	104	1.560	196.11
	S2-1	[Shape]	D16	3968	22	1.560	136.18	
	S2-2	AVE	[Shape]	D16	3635	104	1.560	589.74
	S3	[Shape]	D16	2150	218	1.560	731.17	
	COLUMN	C1	[Shape]	D29	13835	136	5.040	9483.06
		C2	[Shape]	D16	9437	120	1.560	1766.61
		C3	[Shape]	D16	5330	140	1.560	1330.37
	FOOTING	F1	[Shape]	D32	9320	119	6.230	6909.57
F2		[Shape]	D19	7436	119	2.250	1990.99	
F3		[Shape]	D19	17700	29	2.250	1154.93	
F4		[Shape]	D19	15830	29	2.250	1032.91	
F5		[Shape]	D16	7300	10	1.560	113.88	
F6		[Shape]	D16	15655	8	1.560	195.37	
F7		[Shape]	D16	4534	70	1.560	495.11	
F8		AVE	[Shape]	D16	4190	112	1.560	732.08
SUMMARY	TOTAL PIER P11L		D32		6909.57	Kg	35084.54	
			D29		15818.46	Kg		
			D22		779.76	Kg		
			D19		4178.82	Kg		
			D16		7397.93	Kg		

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.03.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-1-Jc-53	
NH No.5 - FLYOVER BAR ARRANGEMENT FOR PIERS P10L,P11L,P13L,P14L,P15L,P15R,P16L,P17L (5)			

### QUANTITY REINFORCEMENT FOR PIER P13L

DETAILS	TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT	
			mm	mm		kg/m	kg	
PIER CAP	H1		D16	780	126	1.560	153.32	
	H2		D16	1030	90	1.560	144.61	
	B1		D29	23130	16	5.040	1865.20	
	B2		D29	8520	32	5.040	1374.11	
	B3-1		D29	24514	16	5.040	1976.81	
	B3-2		D29	13880	16	5.040	1119.28	
	B4		D22	21430	6	3.040	390.88	
	B5	AVE	D22	15990	8	3.040	388.88	
	B6		D16	2150	10	1.560	33.54	
	S1-1		D16	5240	22	1.560	179.11	
	S1-2	AVE	D16	4907	104	1.560	196.11	
	S2-1		D16	3968	22	1.560	136.18	
	S2-2	AVE	D16	3635	104	1.560	589.74	
	S3		D16	2150	218	1.560	731.17	
	COLUMN	C1		D25	9895	136	3.980	5355.97
		C2		D16	9437	110	1.560	1472.17
C3			D16	5330	120	1.560	997.78	
FOOTING	F1		D32	9320	119	6.230	6909.57	
	F2		D19	7436	119	2.250	1990.99	
	F3		D19	17700	29	2.250	1154.93	
	F4		D19	15830	29	2.250	1032.91	
	F5		D16	7300	10	1.560	113.88	
	F6		D16	15655	8	1.560	195.37	
	F7		D16	4534	70	1.560	495.11	
	F8	AVE	D16	4190	112	1.560	732.08	
SUMMARY	TOTAL PIER P13L						30330.42	
			D32		6909.57	Kg		
			D29		6335.40	Kg		
			D25		5355.97	Kg		
			D22		779.76	Kg		
			D19		4178.82	Kg		
		D16		6770.91	Kg			

### QUANTITY REINFORCEMENT FOR PIER P15L

DETAILS	TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT	
			mm	mm		kg/m	kg	
PIER CAP	H1		D16	780	126	1.560	153.32	
	H2		D16	1030	90	1.560	144.61	
	B1		D29	23130	16	5.040	1865.20	
	B2		D29	8520	32	5.040	1374.11	
	B3-1		D29	24514	16	5.040	1976.81	
	B3-2		D29	13880	16	5.040	1119.28	
	B4		D22	21430	6	3.040	390.88	
	B5	AVE	D22	15990	8	3.040	388.88	
	B6		D16	2150	10	1.560	33.54	
	S1-1		D16	5240	22	1.560	179.11	
	S1-2	AVE	D16	4907	104	1.560	196.11	
	S2-1		D16	3968	22	1.560	136.18	
	S2-2	AVE	D16	3635	104	1.560	589.74	
	S3		D16	2150	218	1.560	731.17	
	COLUMN	C1		D29	12835	136	5.040	8797.62
		C2		D16	9437	114	1.560	1678.28
C3			D16	5330	148	1.560	1230.59	
FOOTING	F1		D32	9320	119	6.230	6909.57	
	F2		D19	7436	119	2.250	1990.99	
	F3		D19	17700	29	2.250	1154.93	
	F4		D19	15830	29	2.250	1032.91	
	F5		D16	7300	10	1.560	113.88	
	F6		D16	15655	8	1.560	195.37	
	F7		D16	4534	70	1.560	495.11	
	F8	AVE	D16	4190	112	1.560	732.08	
SUMMARY	TOTAL PIER P15L						34211.00	
			D32		6909.57	Kg		
			D29		15133.03	Kg		
			D22		779.76	Kg		
			D19		4178.82	Kg		
			D16		7209.82	Kg		

### QUANTITY REINFORCEMENT FOR PIER P14L

DETAILS	TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT	
			mm	mm		kg/m	kg	
PIER CAP	H1		D16	780	126	1.560	153.32	
	H2		D16	1030	90	1.560	144.61	
	B1		D29	23130	16	5.040	1865.20	
	B2		D29	8520	32	5.040	1374.11	
	B3-1		D29	24514	16	5.040	1976.81	
	B3-2		D29	13880	16	5.040	1119.28	
	B4		D22	21430	6	3.040	390.88	
	B5	AVE	D22	15990	8	3.040	388.88	
	B6		D16	2150	10	1.560	33.54	
	S1-1		D16	5240	22	1.560	179.11	
	S1-2	AVE	D16	4907	104	1.560	196.11	
	S2-1		D16	3968	22	1.560	136.18	
	S2-2	AVE	D16	3635	104	1.560	589.74	
	S3		D16	2150	218	1.560	731.17	
	COLUMN	C1		D25	10895	136	3.980	5897.25
		C2		D16	9437	108	1.560	1589.95
C3			D16	5330	136	1.560	1130.81	
FOOTING	F1		D32	9320	119	6.230	6909.57	
	F2		D19	7436	119	2.250	1990.99	
	F3		D19	17700	29	2.250	1154.93	
	F4		D19	15830	29	2.250	1032.91	
	F5		D16	7300	10	1.560	113.88	
	F6		D16	15655	8	1.560	195.37	
	F7		D16	4534	70	1.560	495.11	
	F8	AVE	D16	4190	112	1.560	732.08	
SUMMARY	TOTAL PIER P14L						31122.51	
			D32		6909.57	Kg		
			D29		6335.40	Kg		
			D25		5897.25	Kg		
			D22		779.76	Kg		
			D19		4178.82	Kg		
		D16		7021.72	Kg			

### QUANTITY REINFORCEMENT FOR PIER P15R

DETAILS	TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT	
			mm	mm		kg/m	kg	
PIER CAP	H1		D16	780	133	1.560	161.83	
	H2		D16	1030	95	1.560	152.65	
	B1		D29	23130	16	5.040	1865.20	
	B2		D29	8520	32	5.040	1374.11	
	B3-1		D29	24514	16	5.040	1976.81	
	B3-2		D29	13880	16	5.040	1119.28	
	B4		D22	21430	6	3.040	390.88	
	B5	AVE	D22	15990	8	3.040	388.88	
	B6		D16	2150	10	1.560	33.54	
	S1-1		D16	5240	22	1.560	179.11	
	S1-2	AVE	D16	4907	104	1.560	196.11	
	S2-1		D16	3968	22	1.560	136.18	
	S2-2	AVE	D16	3635	104	1.560	589.74	
	S3		D16	2150	218	1.560	731.17	
	COLUMN	C1		D29	12834	136	5.040	8796.94
		C2		D16	9437	114	1.560	1678.28
C3			D16	5330	148	1.560	1230.59	
FOOTING	F1		D32	9320	119	6.230	6909.57	
	F2		D19	7436	119	2.250	1990.99	
	F3		D19	17700	29	2.250	1154.93	
	F4		D19	15830	29	2.250	1032.91	
	F5		D16	7300	10	1.560	113.88	
	F6		D16	15655	8	1.560	195.37	
	F7		D16	4534	70	1.560	495.11	
	F8	AVE	D16	4190	112	1.560	732.08	
SUMMARY	TOTAL PIER P15R						34226.86	
			D32		6909.57	Kg		
			D29		15132.34	Kg		
			D22		779.76	Kg		
			D19		4178.82	Kg		
			D16		7226.38	Kg		

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S.WATABE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000. 3. 14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-1-3c-54	
NH No.5 - FLYOVER BAR ARRANGEMENT FOR PIERS P10L,P11L,P13L,P14L,P15L,P15R,P16L,P17L (6)			

### QUANTITY REINFORCEMENT FOR PIER P16L

DETAILS	TYPE	SHAPE	DIAMETER		LENGTH	NUMBER	UNIT WEIGHT		WEIGHT
			mm	mm			kg/m	kg	
PIER CAP	H1		D16		780	126	1.560	153.32	
	H2		D16		1030	90	1.560	144.61	
	B1		D29		23130	16	5.040	1865.20	
	B2		D29		8520	32	5.040	1374.11	
	B3-1		D29		24514	16	5.040	1976.81	
	B3-2		D29		13880	16	5.040	1119.28	
	B4		D22		21430	6	3.040	390.88	
	B5 AVE		D22		15990	8	3.040	388.88	
	B6		D16		2150	10	1.560	33.54	
	S1-1		D16		5240	22	1.560	179.11	
	S1-2 AVE		D16		4907	104	1.560	196.11	
	S2-1		D16		3968	22	1.560	136.18	
	S2-2 AVE		D16		3635	104	1.560	589.74	
	S3		D16		2150	218	1.560	731.17	
COLUMN	C1		D25		10895	136	3.980	5897.25	
	C2		D16		9437	108	1.560	1589.95	
	C3		D16		5330	136	1.560	1130.81	
FOOTING	F1		D32		9320	119	6.230	6909.57	
	F2		D19		7436	119	2.250	1990.99	
	F3		D19		17700	29	2.250	1154.93	
	F4		D19		15830	29	2.250	1032.91	
	F5		D16		7300	10	1.560	113.88	
	F6		D16		15655	8	1.560	195.37	
	F7		D16		4534	70	1.560	495.11	
	F8 AVE		D16		4190	112	1.560	732.08	
SUMMARY	TOTAL PIER P16L							31122.51	
			D32			6909.57	Kg		
			D29			6335.40	Kg		
			D25			5897.25	Kg		
			D22			779.76	Kg		
			D19			4178.82	Kg		
		D16			7021.72	Kg			

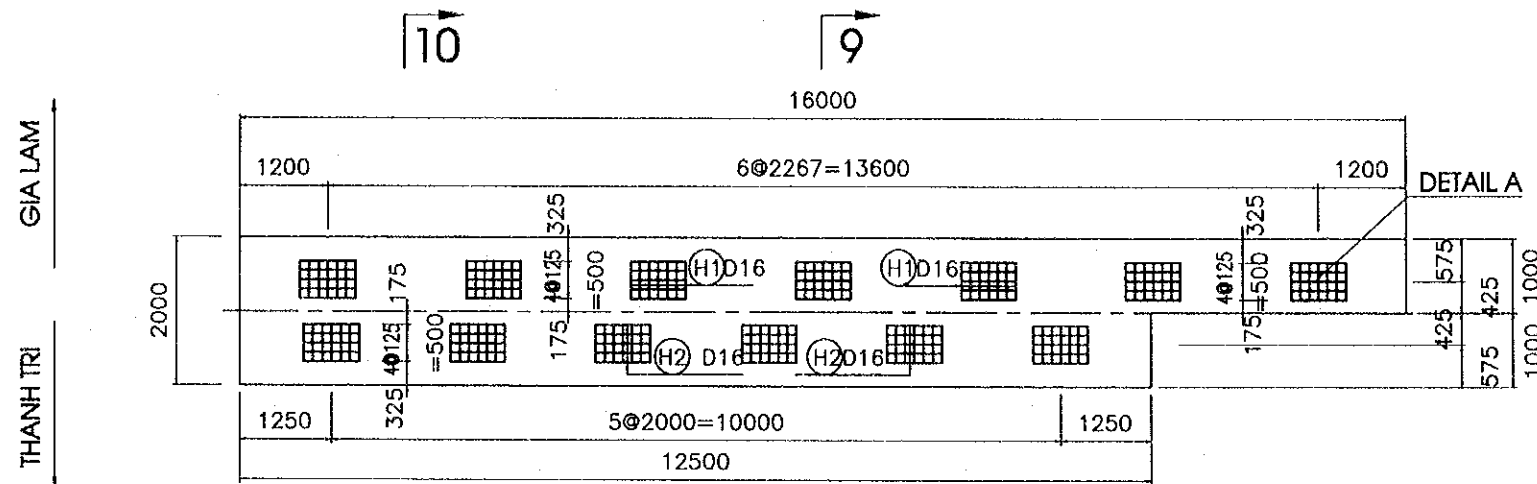
### QUANTITY REINFORCEMENT FOR PIER P17L

DETAILS	TYPE	SHAPE	DIAMETER		LENGTH	NUMBER	UNIT WEIGHT		WEIGHT
			mm	mm			kg/m	kg	
PIER CAP	H1		D16		780	133	1.560	161.83	
	H2		D16		1030	95	1.560	152.65	
	B1		D29		23130	16	5.040	1865.20	
	B2		D29		8520	32	5.040	1374.11	
	B3-1		D29		24514	16	5.040	1976.81	
	B3-2		D29		13880	16	5.040	1119.28	
	B4		D22		21430	6	3.040	390.88	
	B5 AVE		D22		15990	8	3.040	388.88	
	B6		D16		2150	10	1.560	33.54	
	S1-1		D16		5240	22	1.560	179.11	
	S1-2 AVE		D16		4907	104	1.560	196.11	
	S2-1		D16		3968	22	1.560	136.18	
	S2-2 AVE		D16		3635	104	1.560	589.74	
	S3		D16		2150	218	1.560	731.17	
COLUMN	C1		D25		10895	136	3.980	5897.25	
	C2		D16		9437	108	1.560	1589.95	
	C3		D16		5330	136	1.560	1130.81	
FOOTING	F1		D32		9320	119	6.230	6909.57	
	F2		D19		7436	119	2.250	1990.99	
	F3		D19		17700	29	2.250	1154.93	
	F4		D19		15830	29	2.250	1032.91	
	F5		D16		7300	10	1.560	113.88	
	F6		D16		15655	8	1.560	195.37	
	F7		D16		4534	70	1.560	495.11	
	F8 AVE		D16		4190	112	1.560	732.08	
SUMMARY	TOTAL PIER P17L							31139.06	
			D32			6909.57	Kg		
			D29			6335.40	Kg		
			D25			5897.25	Kg		
			D22			779.76	Kg		
			D19			4178.82	Kg		
		D16			7038.27	Kg			

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANH LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	PACIFIC CONSULTANTS INTERNATIONAL	SIGNATURE <i>[Signature]</i>
CONSULTANT		DATE 2000.03.17

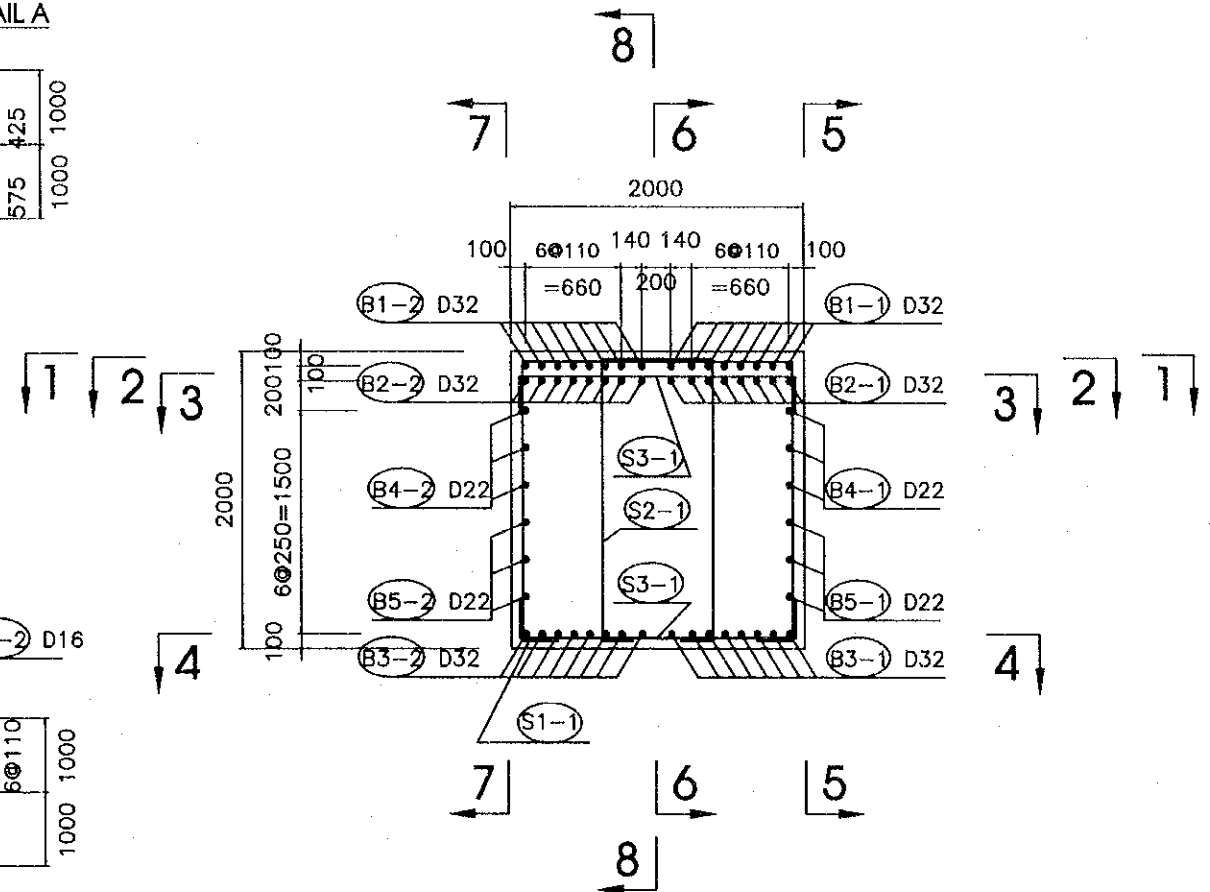
PACKAGE 2	SCALE 1/100	DRAWING No. C-1-3c-55	SHEET No.
NH No.5 - FLYOVER BAR ARRANGEMENT FOR PIER P11R (1)			

**SECTION 1 - 1**

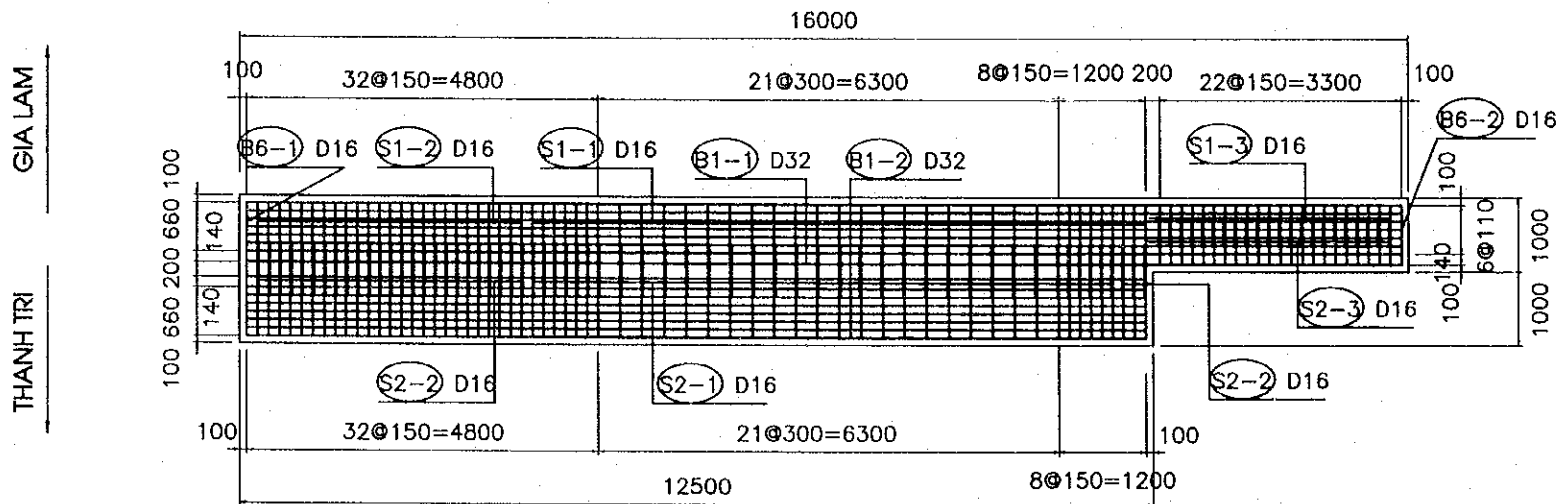


**SECTION 9 - 9**

(SC=1/50)

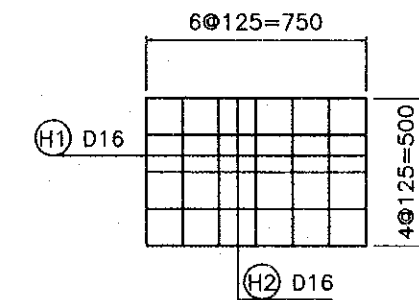


**SECTION 2 - 2**

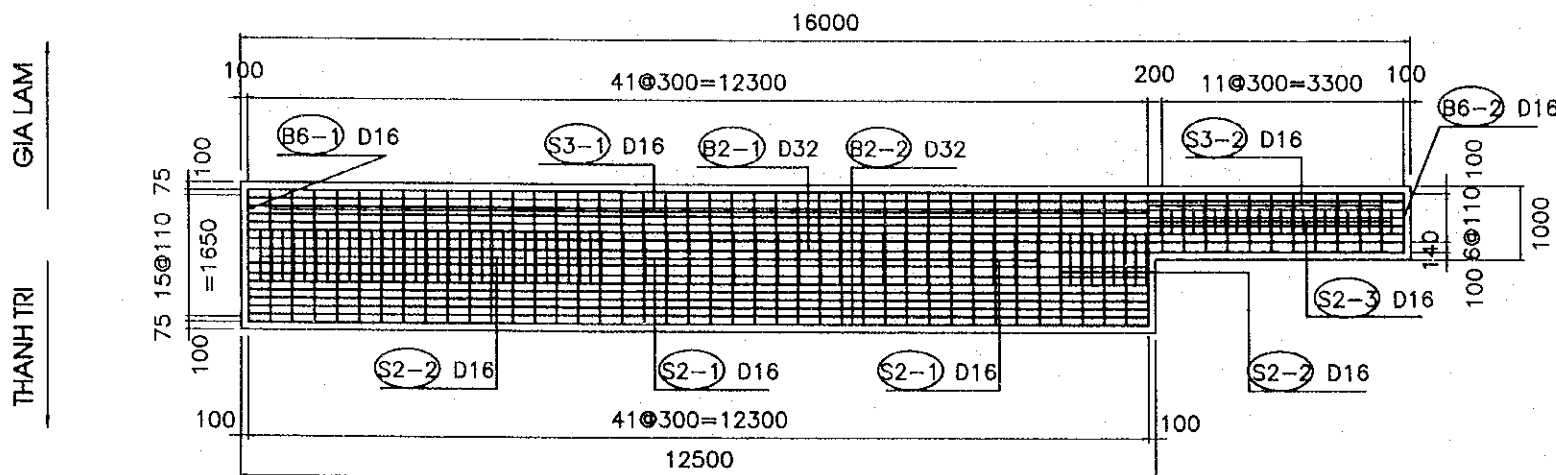


**DETAIL A**

(SC=1/25)



**SECTION 3 - 3**

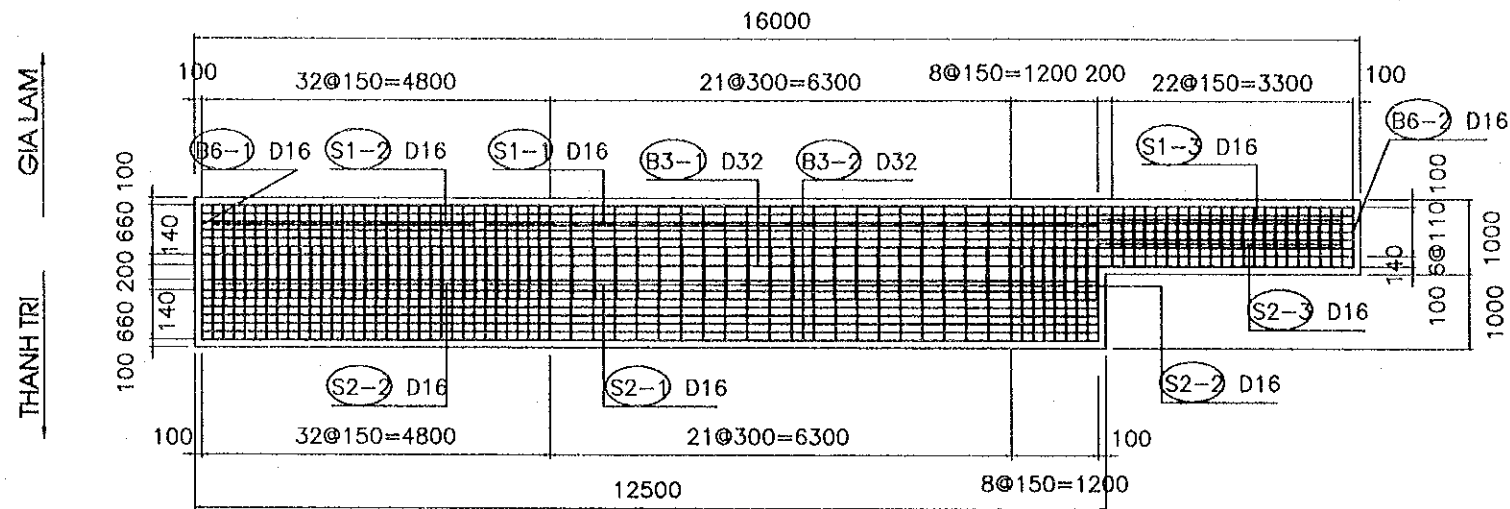




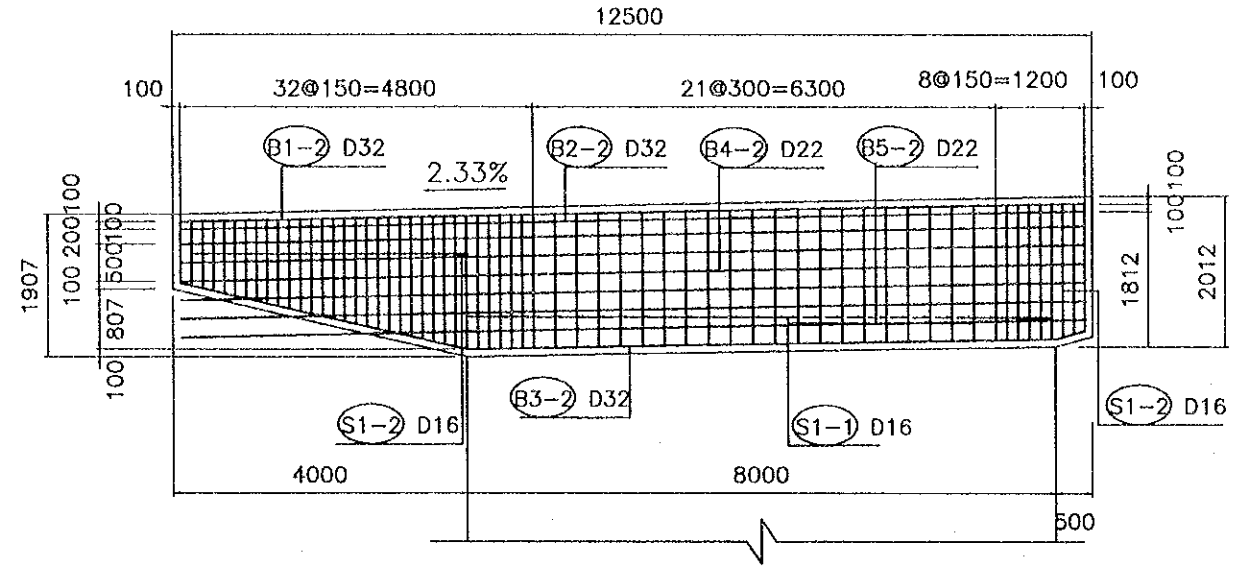
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATADE
PROJECT: RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	
CONSULTANT: PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000. 03. 17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-1-3c-56	
NH No.5 - FLYOVER BAR ARRANGEMENT FOR PIER P11R (2)			

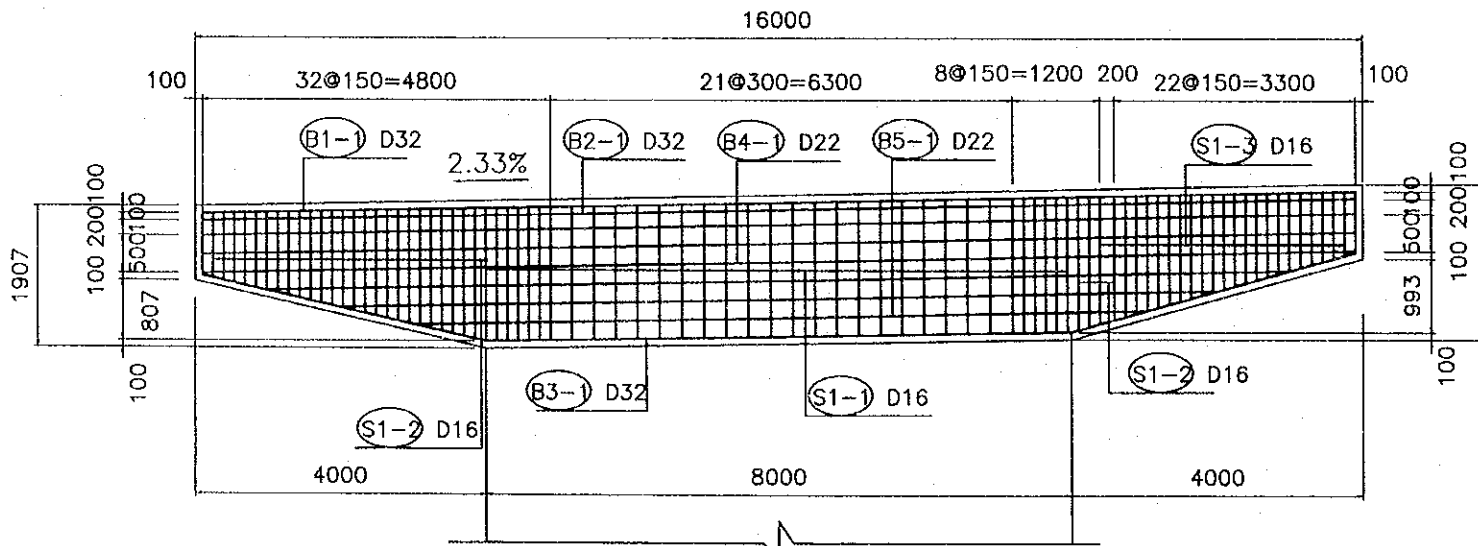
**SECTION 4 - 4**



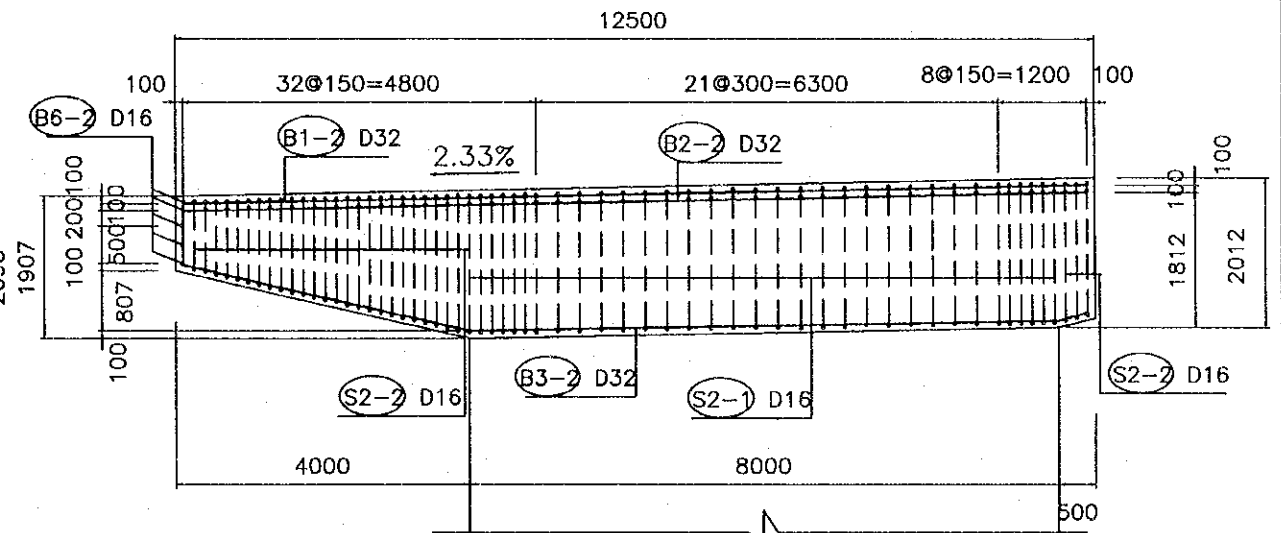
**SECTION 7 - 7**



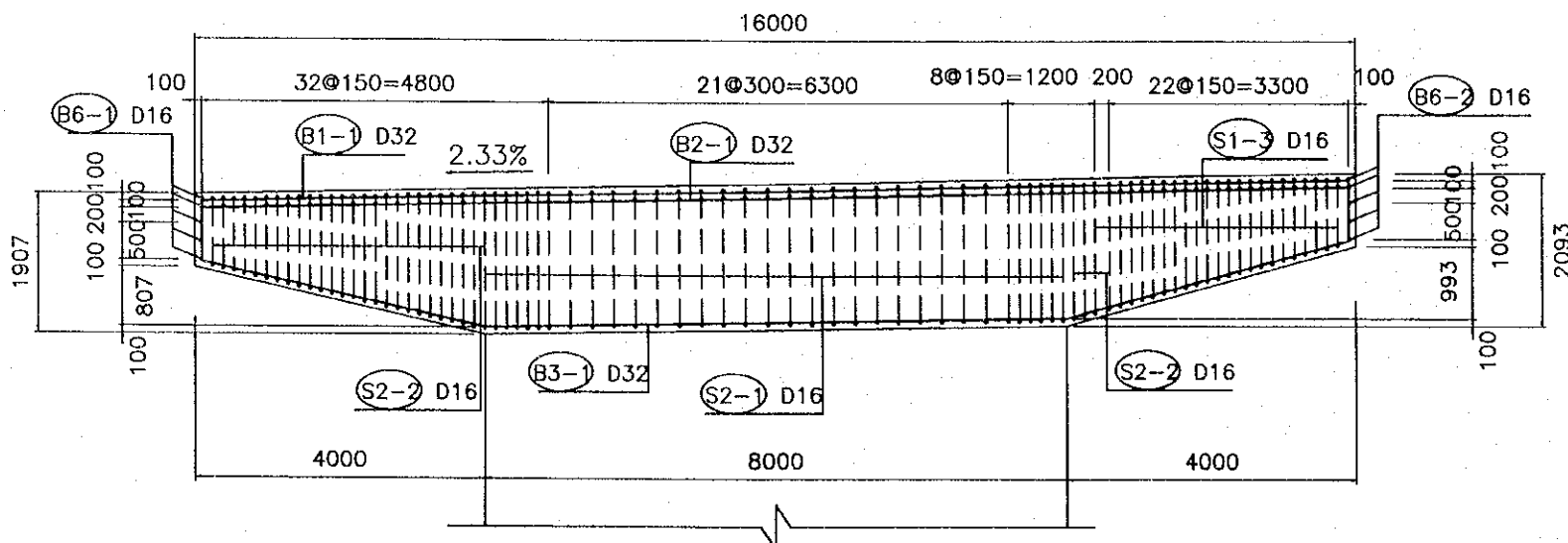
**SECTION 5 - 5**



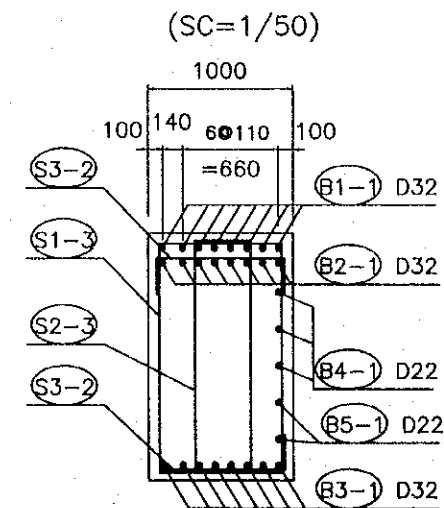
**SECTION 8 - 8**



**SECTION 6 - 6**



**SECTION 10-10**





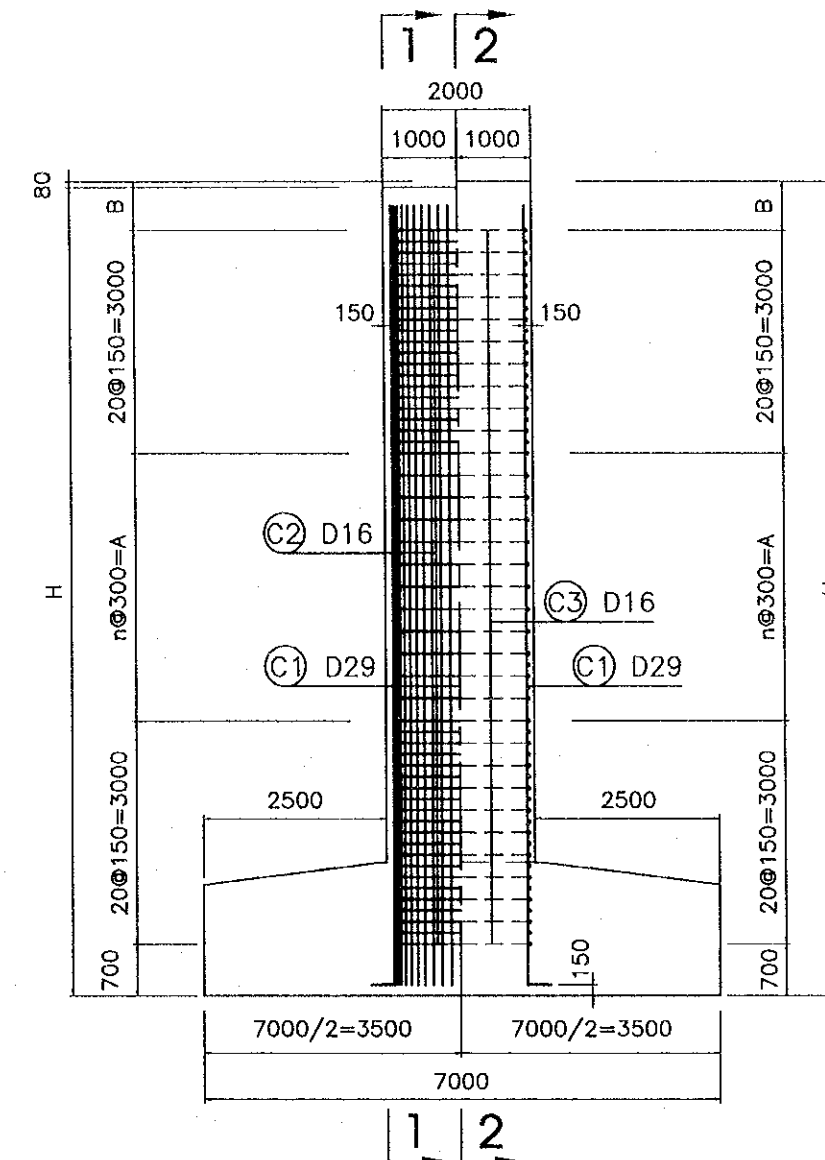
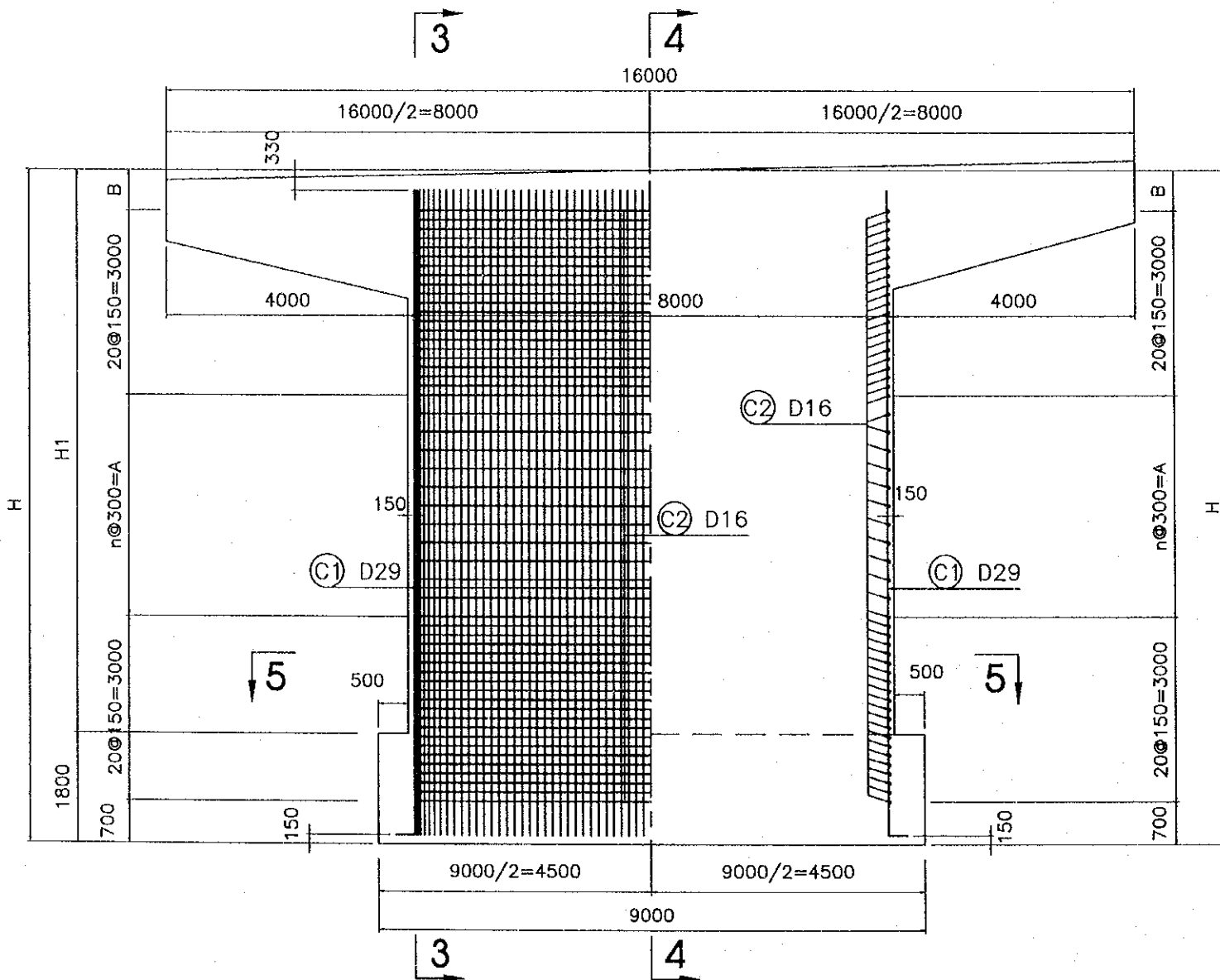
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S.WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.8.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-1-3c-57	
NH No.5 - FLYOVER BAR ARRANGEMENT FOR PIER P11R (3)			

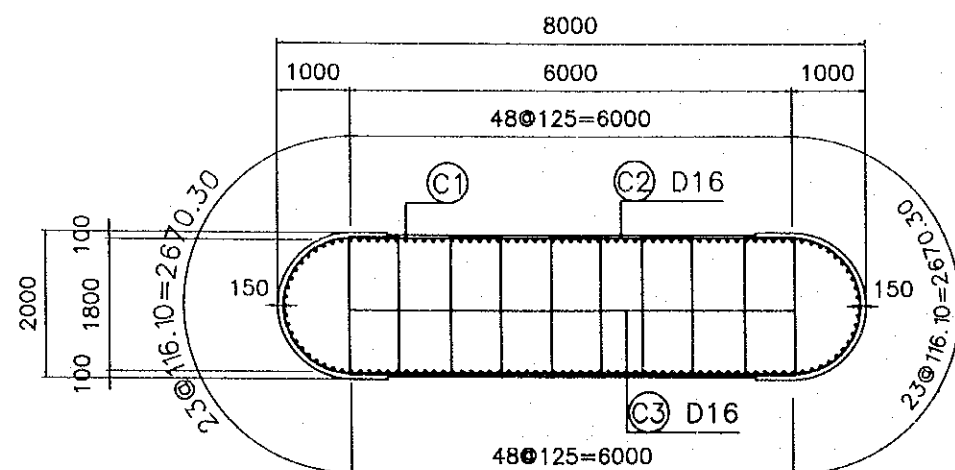
HALF SECTION 1 - 1

HALF SECTION 2 - 2

HALF SECTION 3 - 3 HALF SECTION 4 - 4



SECTION 5 - 5



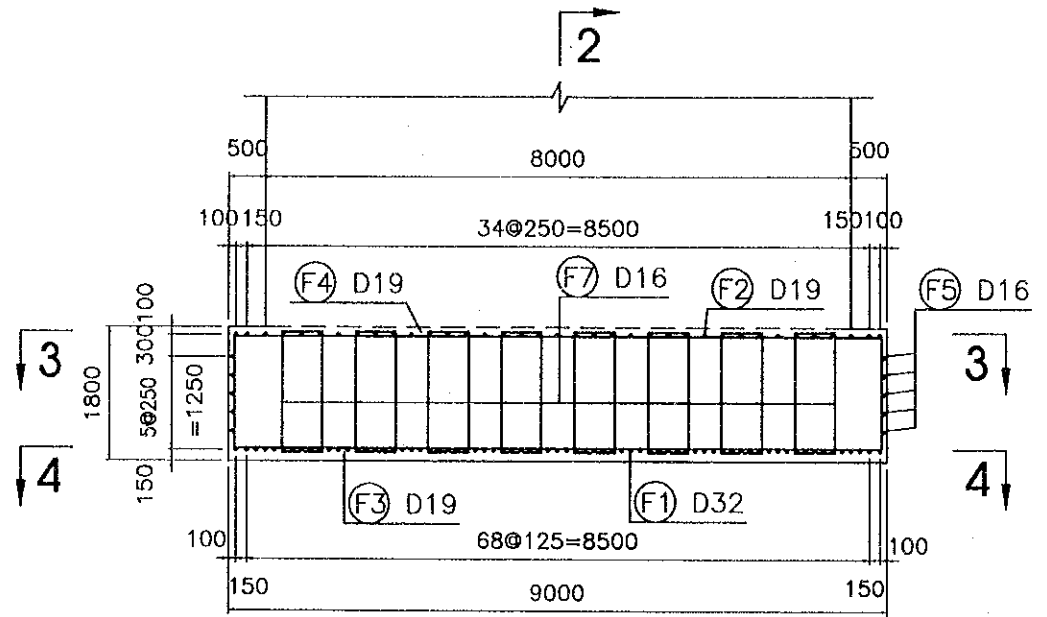
DIMENSION OF PIER

ITEMS	H(mm)	H1(mm)	A(mm)	B(mm)	n
PIER	13454	11654	6300	454	21

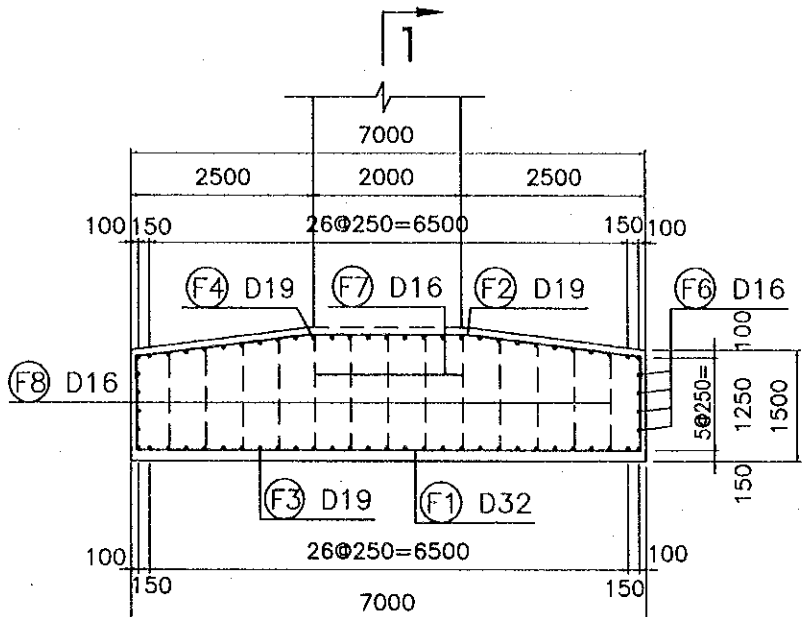
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000. 3. 17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-1-3c-58	
NH No.5 - FLYOVER BAR ARRANGEMENT FOR PIER P11R (4)			

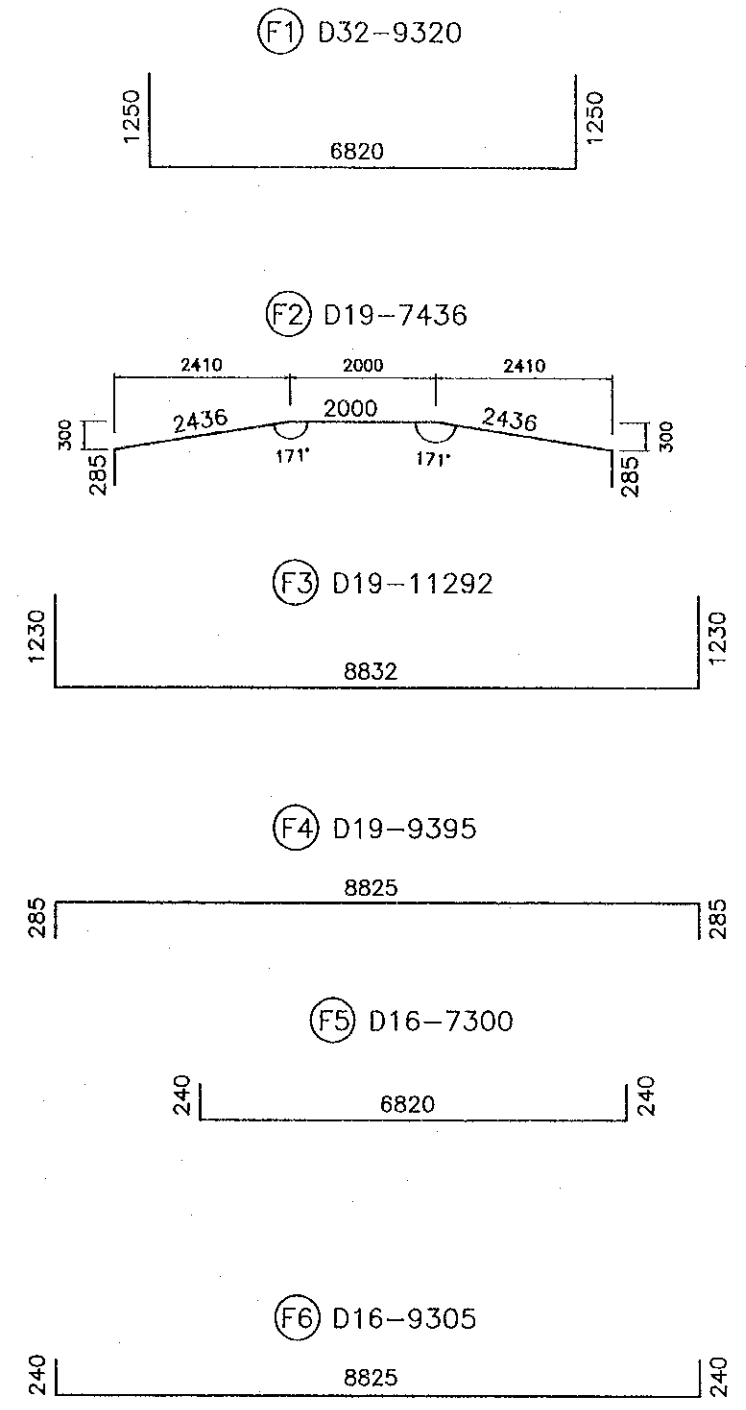
SECTION 1 - 1



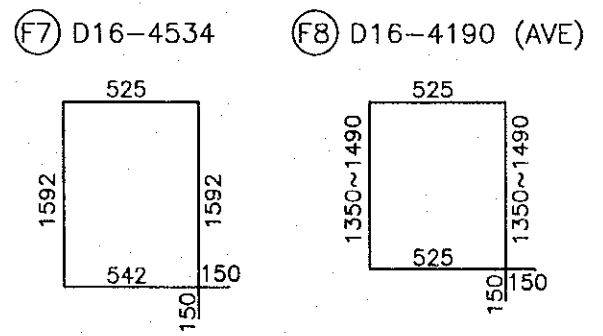
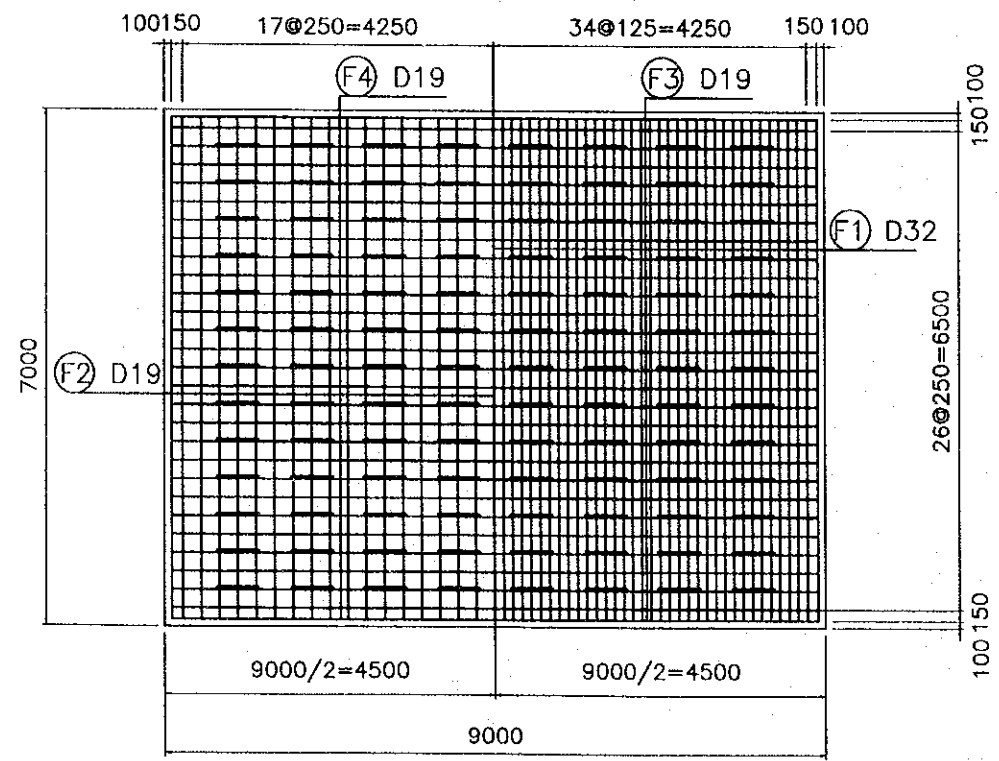
SECTION 2 - 2



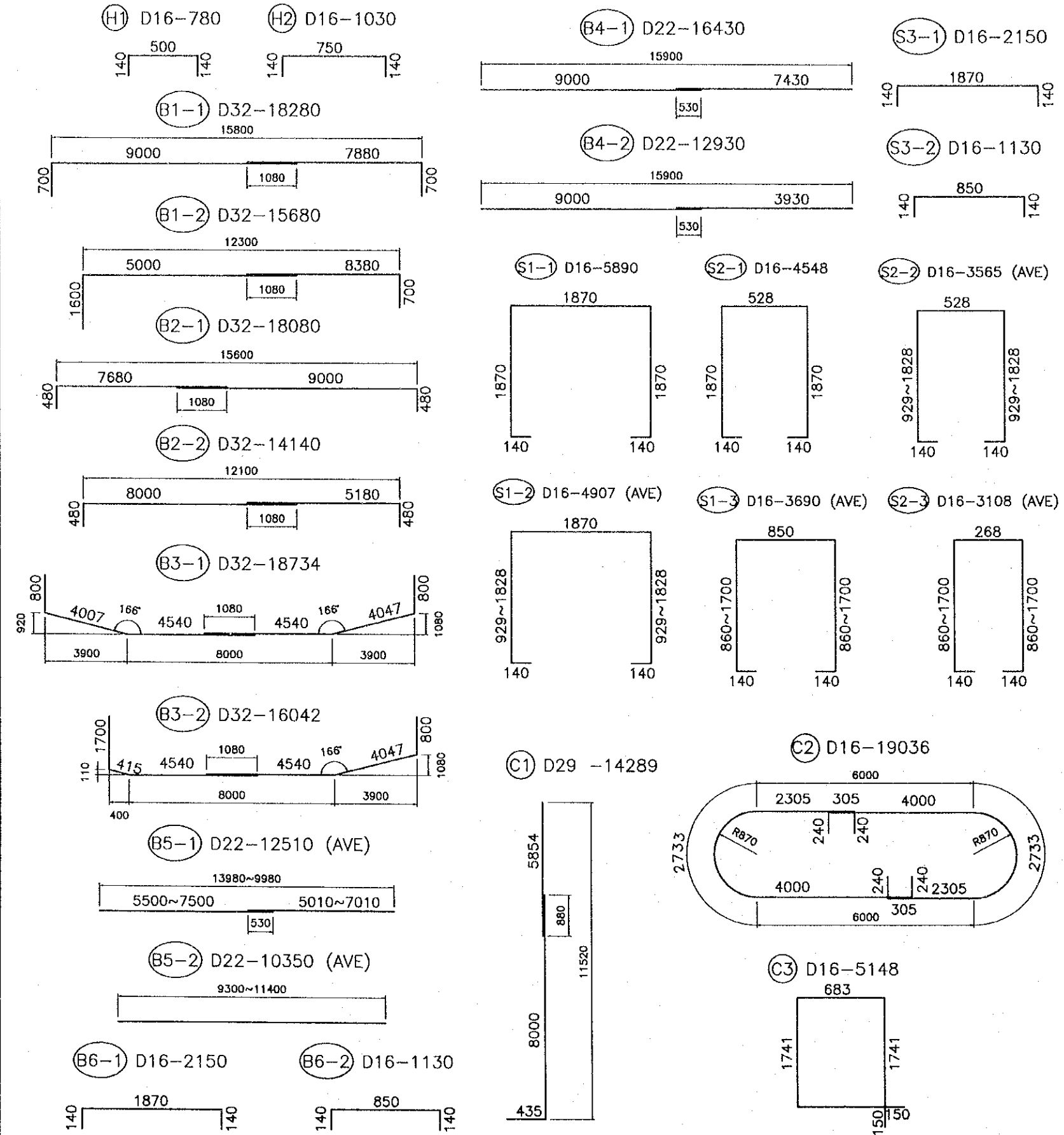
LIST OF REINFORCING BARS FOR FOOTING



HALF SECTION 3 - 3 HALF SECTION 4 - 4



LIST OF REINFORCING BARS FOR BEAM AND COLUMN

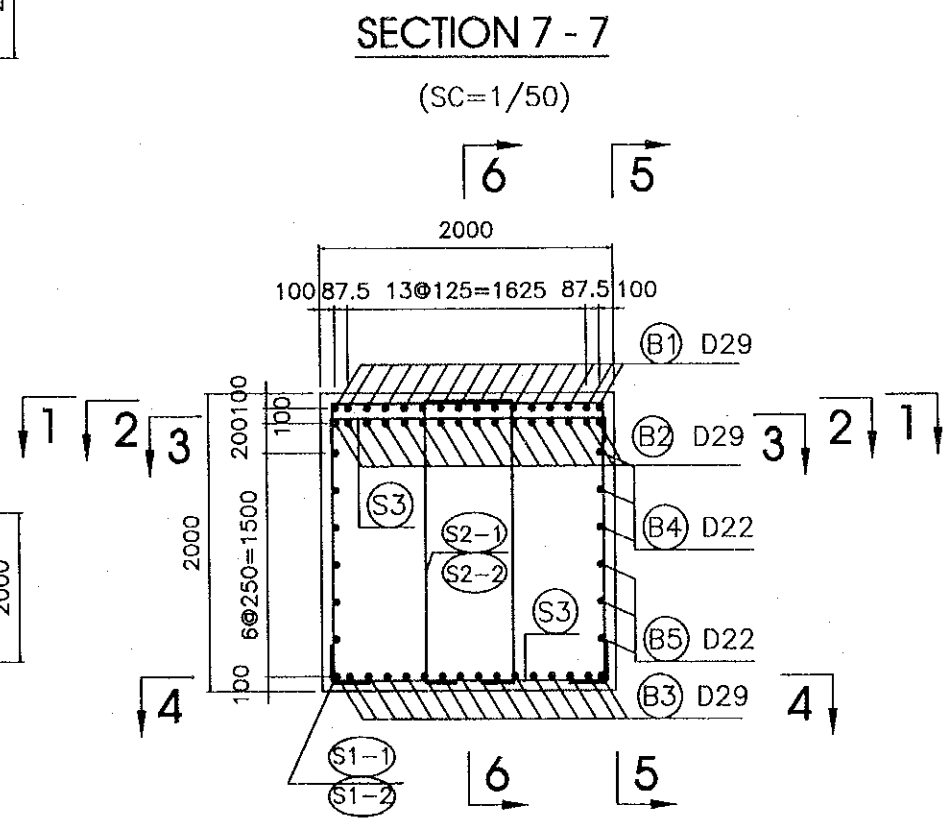
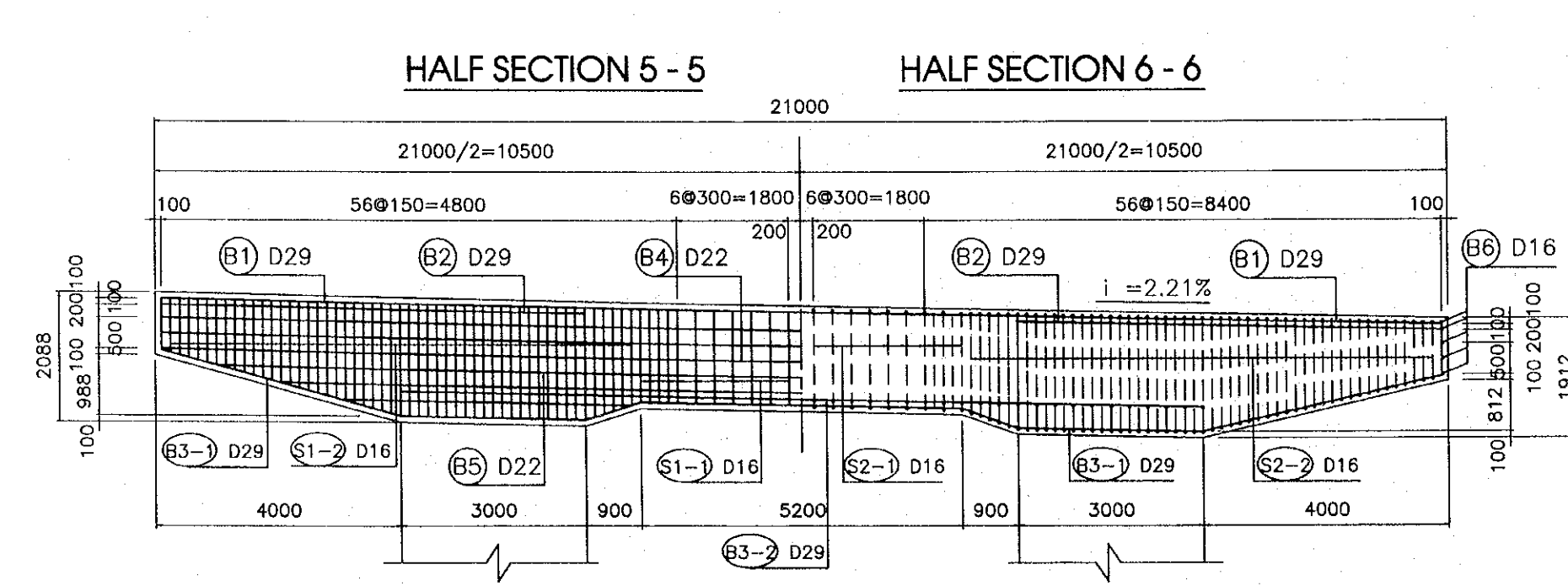
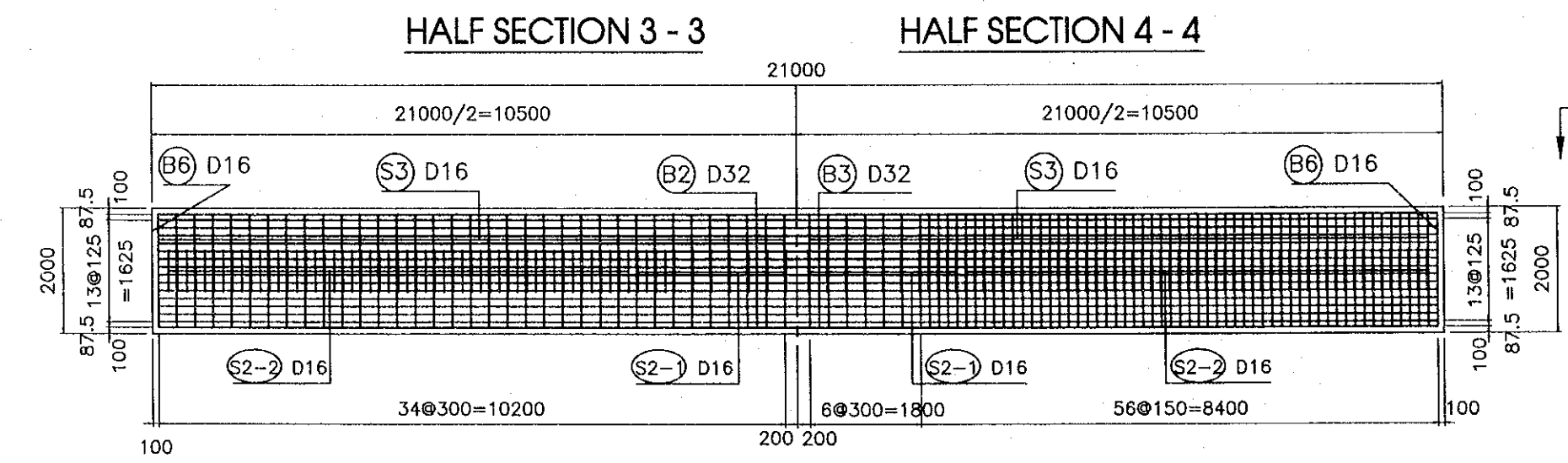
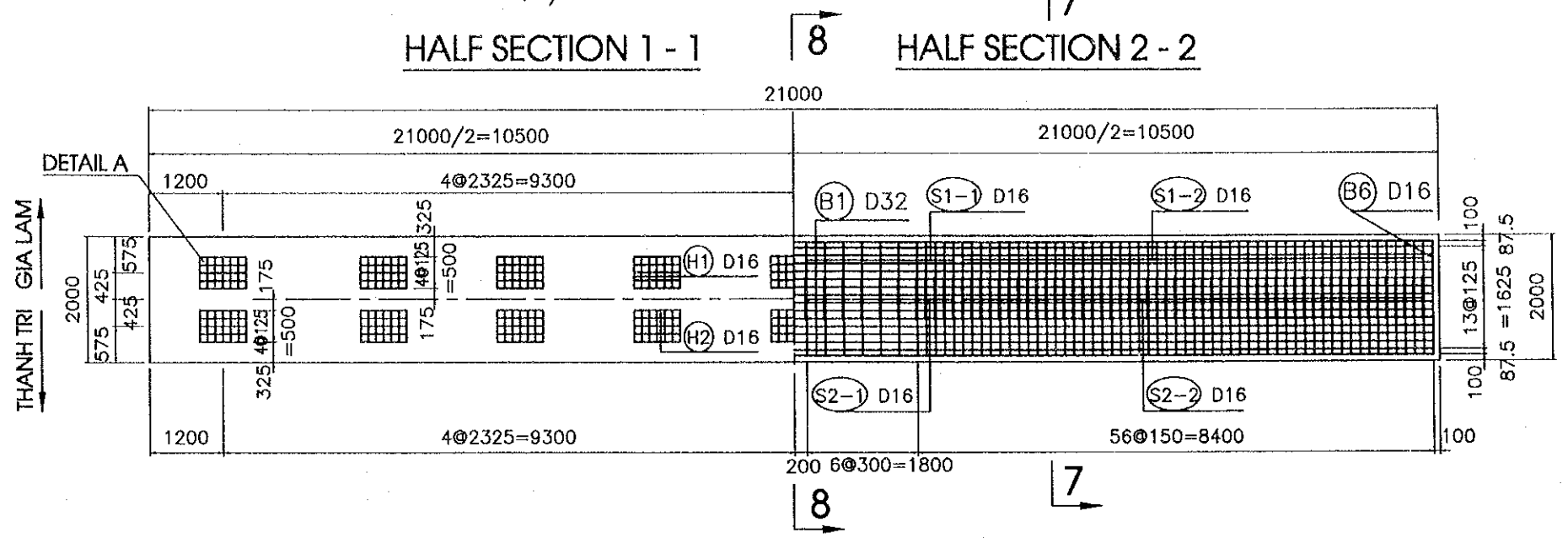


QUANTITY REINFORCEMENT FOR PIER P11R

DETAILS	TYPE	SHAPE	DIAMETER		LENGTH	NUMBER	UNIT WEIGHT		WEIGHT
			mm	mm			kg/m	kg	
PIER CAP	H1		D16	780	98	1,560	119.25		
	H2		D16	1030	70	1,560	112.48		
	B1-1		D32	18280	8	6,230	911.08		
	B1-2		D32	15680	8	6,230	781.49		
	B2-1		D32	18080	8	6,230	901.11		
	B2-2		D32	14140	8	6,230	704.74		
	B3-1		D32	18734	8	6,230	933.70		
	B3-2		D32	16042	8	6,230	799.53		
	B4-1		D22	16430	3	3,040	149.84		
	B4-2		D22	12930	3	3,040	117.92		
	B5-1 AVE		D22	12510	3	3,040	114.09		
	B5-2 AVE		D22	10350	3	3,040	94.39		
	B6-1		D16	2150	5	1,560	16.77		
	B6-2		D16	1130	5	1,560	8.81		
	S1-1		D16	5890	34	1,560	312.41		
	S1-2 AVE		D16	4907	28	1,560	214.34		
	S1-3 AVE		D16	3690	22	1,560	126.64		
	S2-1		D16	4548	34	1,560	241.23		
	S2-2 AVE		D16	3565	28	1,560	155.72		
	S2-3 AVE		D16	3108	22	1,560	106.67		
	S3-1		D16	2150	104	1,560	348.82		
	S3-2		D16	1130	34	1,560	59.94		
	COLUMN	C1		D29	14289	140	5,040	10082.32	
		C2		D16	19036	62	1,560	1841.16	
		C3		D16	5148	210	1,560	1686.48	
	FOOTING	F1		D32	9320	71	6,230	4122.52	
		F2		D19	7436	37	2,250	619.05	
		F3		D19	11292	29	2,250	736.80	
F4			D19	9395	29	2,250	613.02		
F5			D16	7300	10	1,560	113.88		
F6			D16	9305	8	1,560	116.13		
F7			D16	4534	40	1,560	282.92		
F8 AVE			D16	4190	48	1,560	313.75		
SUMMARY	TOTAL PIER P11R							27858.98	
			D32		9154.16		Kg		
			D29		10082.32		Kg		
			D22		476.25		Kg		
			D19		1968.87		Kg		
		D16		6177.38		Kg			

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE <i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.03.14

PACKAGE 2	SCALE 1/100	DRAWING No. C-1-3c-60	SHEET No.
NH No.5 - FLYOVER BAR ARRANGEMENT OF PIER P12L (1)			



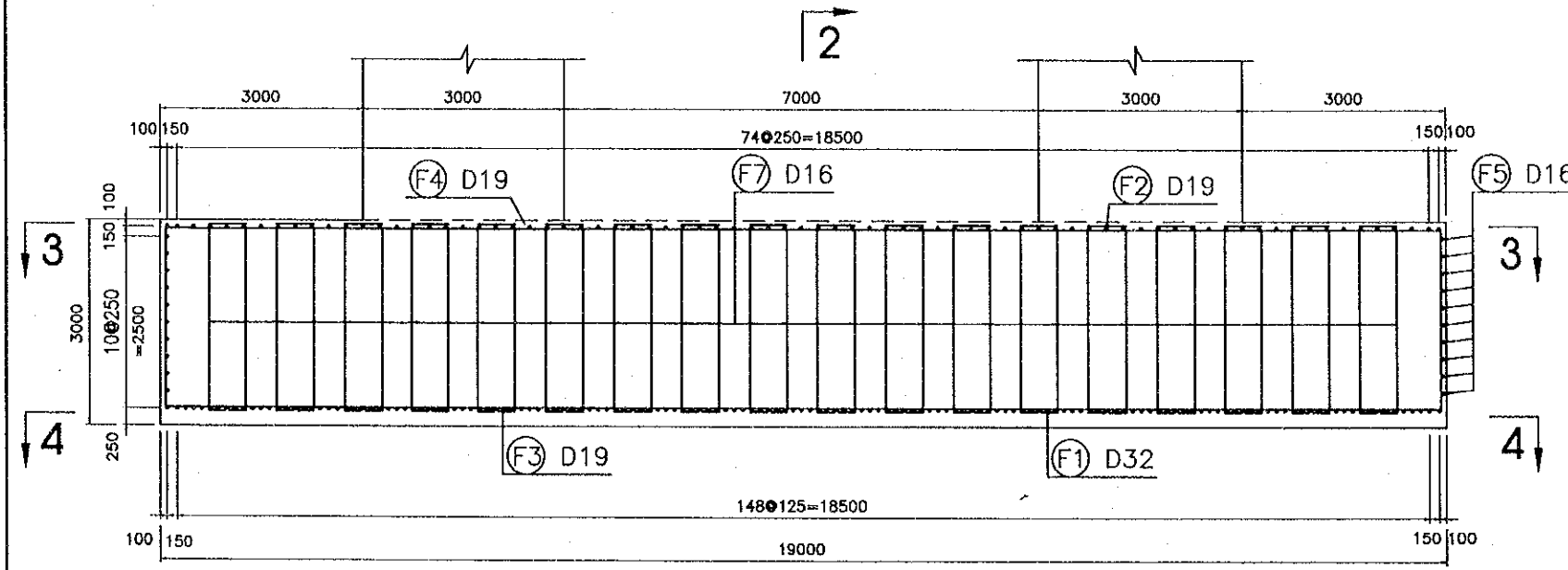
002



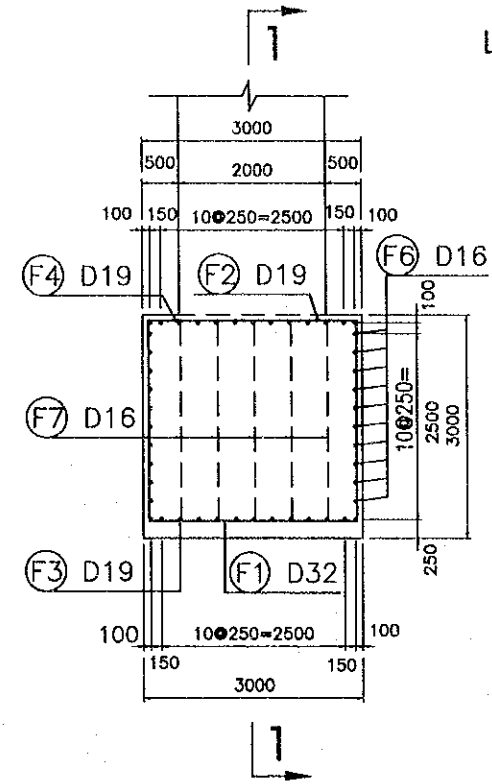
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
PACIFIC CONSULTANTS INTERNATIONAL		DATE
		S. WATAGE
		2000. 3. 14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-1-3c-62	
NH No.5 - FLYOVER			
BAR ARRANGEMENT FOR PIERS P12L (3)			

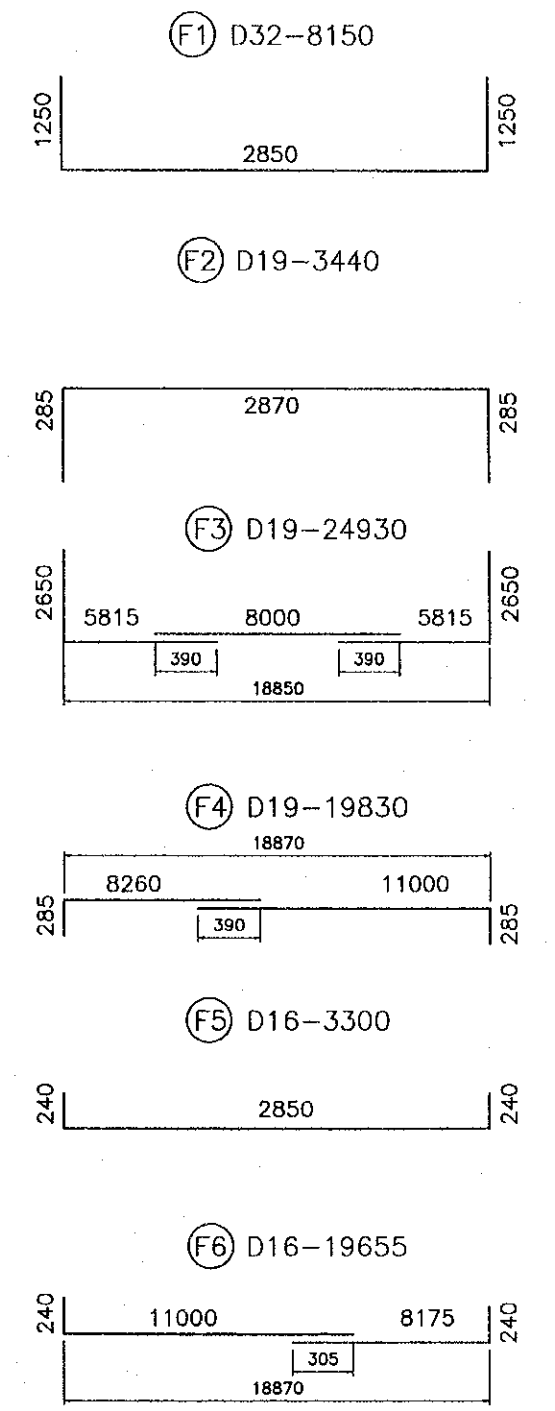
SECTION 1 - 1



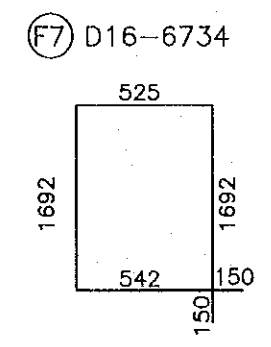
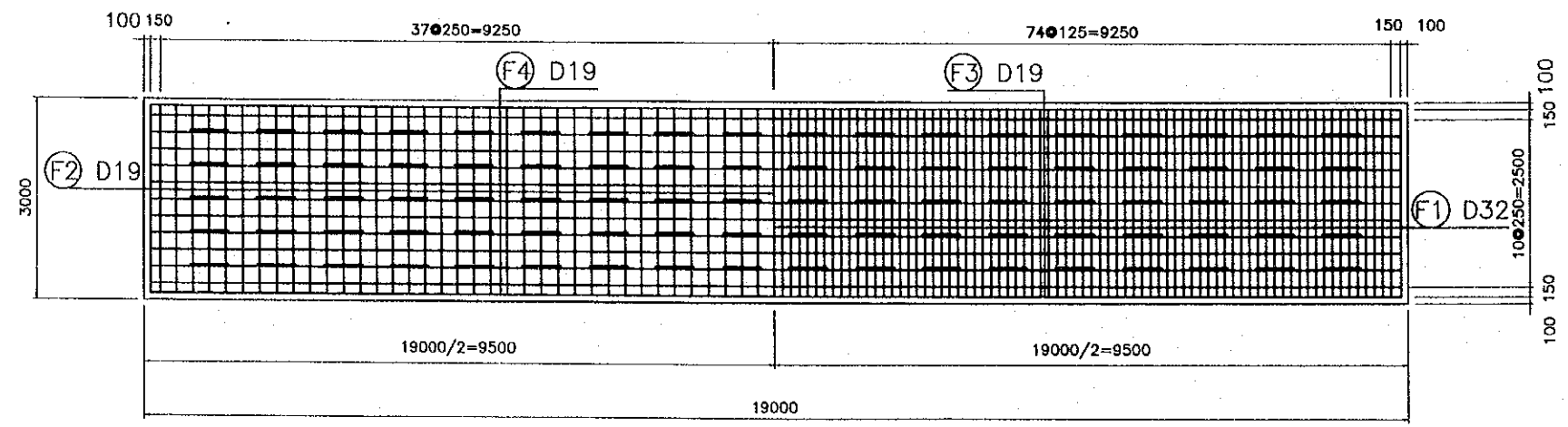
SECTION 2 - 2



LIST OF REINFORCING BARS FOR FOOTING



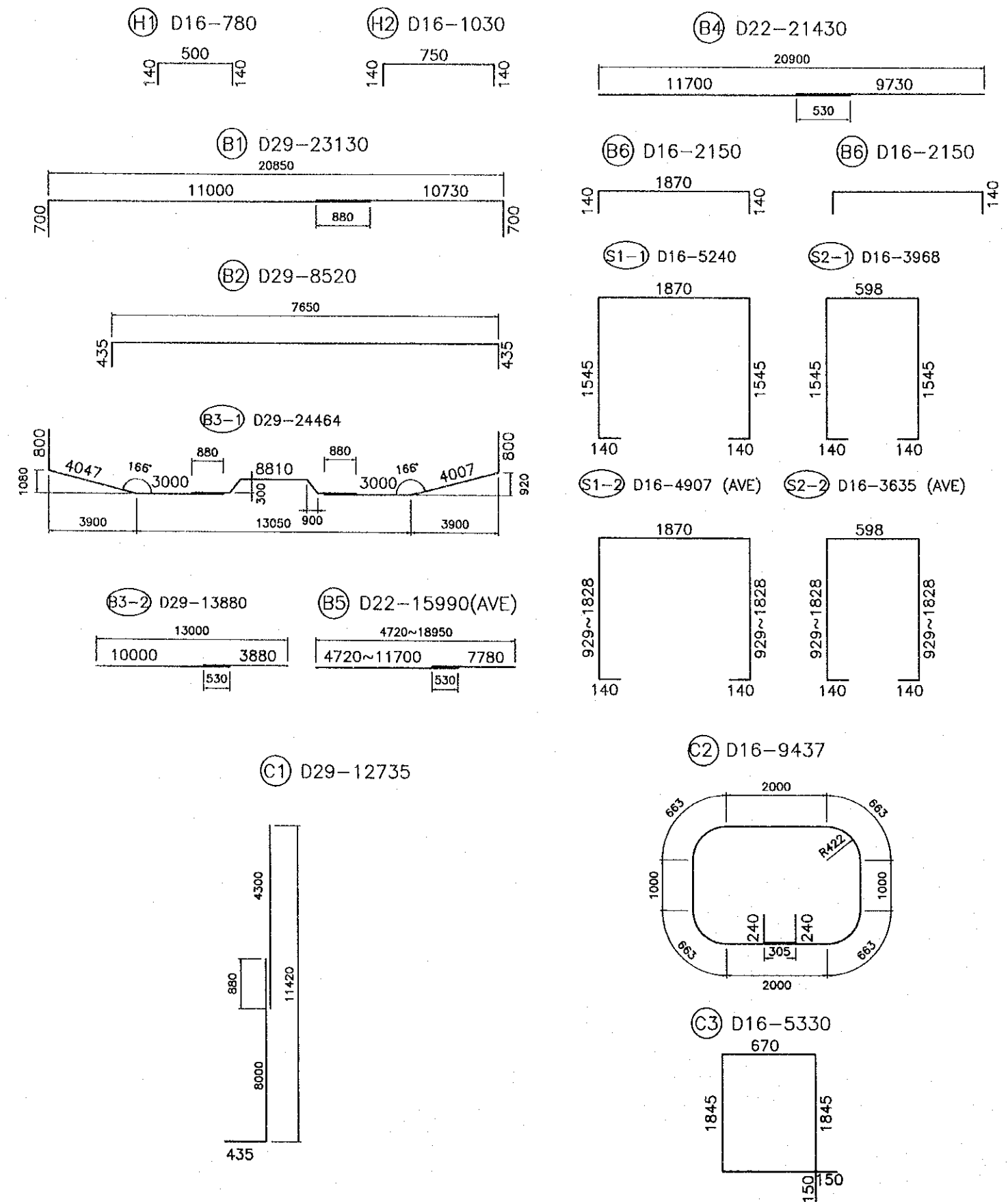
HALF SECTION 3 - 3 HALF SECTION 4 - 4



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANH LOUO PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	PACIFIC CONSULTANTS INTERNATIONAL	SIGNATURE 
		DATE 2000.3.18

PACKAGE 2	SCALE	DRAWING No. C-1-3c-63	SHEET No.
NH No.5 - FLYOVER BAR ARRANGEMENT FOR PIERS P12L (4)			

LIST OF REINFORCING BARS FOR BEAM AND COLUMN



QUANTITY REINFORCEMENT FOR PIER P12L

DETAILS	TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT	
			mm	mm		kg/m	kg	
PIER CAP	H1		D16	780	126	1.560	153.32	
	H2		D16	1030	90	1.560	144.61	
	B1		D29	23130	16	5.040	1865.20	
	B2		D29	8520	32	5.040	1374.11	
	B3-1		D29	24464	16	5.040	1972.78	
	B3-2		D29	13880	16	5.040	1119.28	
	B4		D22	21430	6	3.040	390.88	
	B5	AVE	D22	15990	8	3.040	388.88	
	B6		D16	2150	10	1.560	33.54	
	S1-1		D16	5240	22	1.560	179.11	
	S1-2	AVE	D16	4907	104	1.560	196.11	
	S2-1		D16	3968	16	1.560	136.18	
	S2-2	AVE	D16	3635	104	1.560	589.74	
	S3		D16	2150	218	1.560	731.17	
COLUMN	C1		D29	12735	136	5.040	8729.08	
	C2		D16	9437	120	1.560	1766.61	
	C3		D16	5330	148	1.560	1230.59	
	FOOTING	F1		D32	8150	151	6.230	7666.95
		F2		D19	3440	151	2.250	1168.74
		F3		D19	24930	13	2.250	729.20
		F4		D19	19830	13	2.250	580.03
F5			D16	3330	18	1.560	93.51	
F6			D16	19655	18	1.560	551.91	
F7			D16	6743	176	1.560	1851.36	
TOTAL PIER P12L							34243.61	
SUMMARY			D32		7666.95	Kg		
			D29		15060.45	Kg		
			D22		779.76	Kg		
			D19		2477.97	Kg		
		D16		8258.49	Kg			



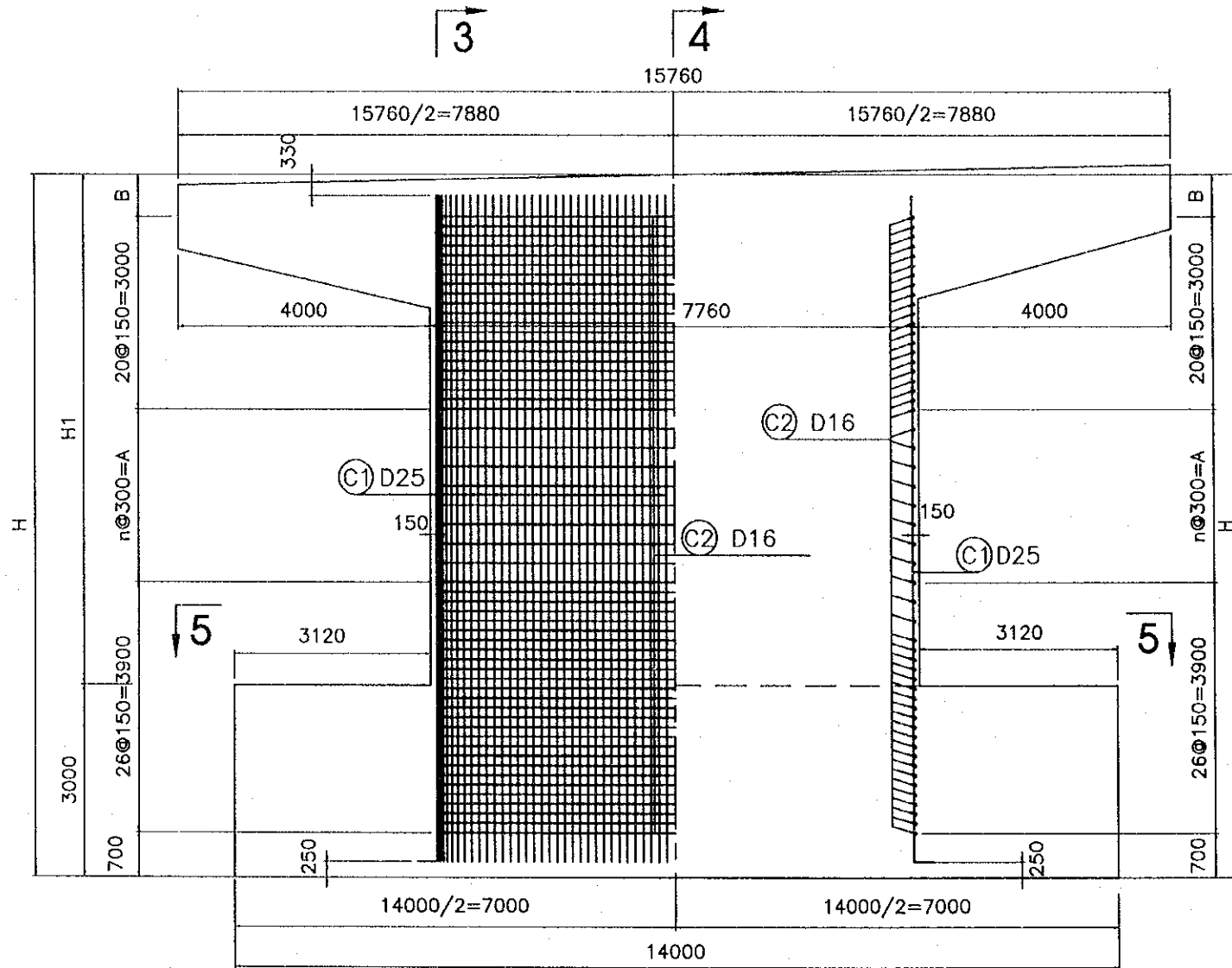


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.14

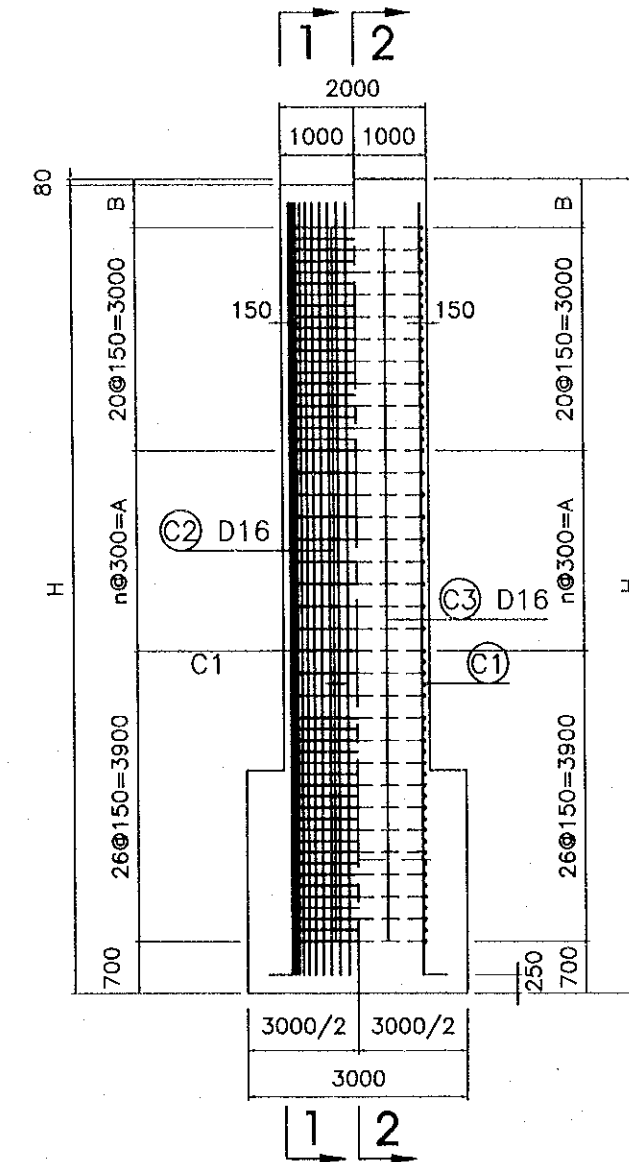
PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-1-3c-65	
NH No.5 - FLYOVER BAR ARRANGEMENT FOR PIER P12R (2)			

HALF SECTION 1 - 1

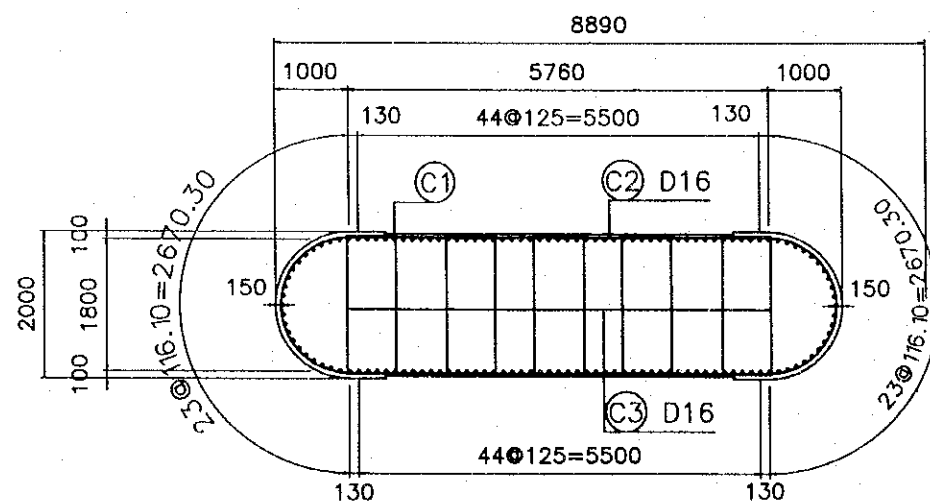
HALF SECTION 2 - 2



HALF SECTION 3 - 3 HALF SECTION 4 - 4



SECTION 5 - 5



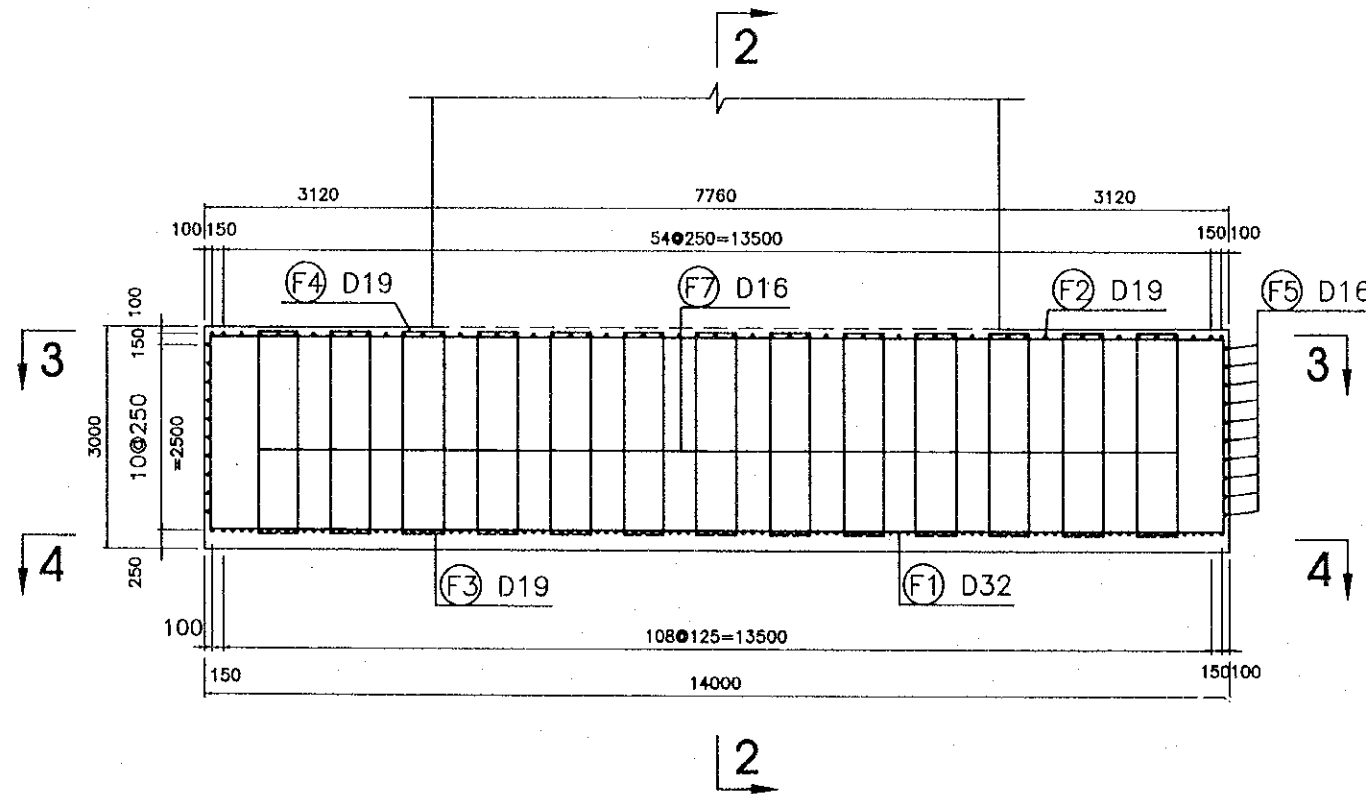
DIMENSION OF PIER

ITEMS	H(mm)	H1(mm)	A(mm)	B(mm)	n
PIER	12428	9428	4200	628	14

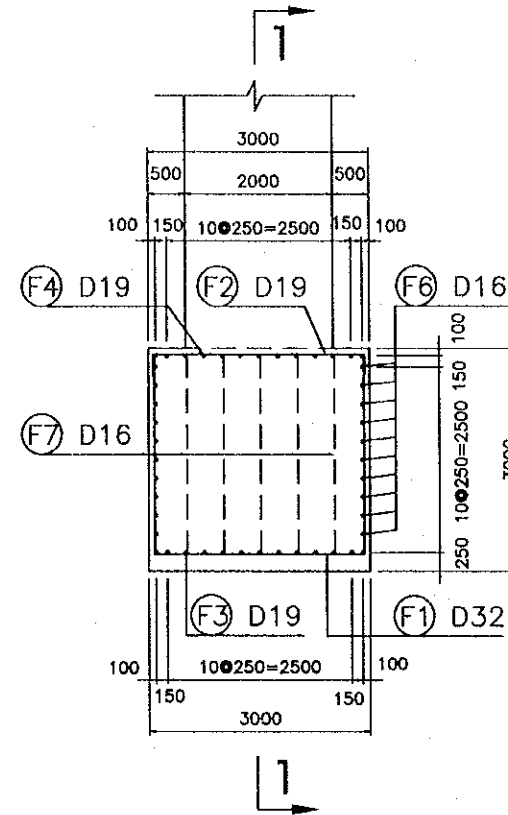
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE <i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.03.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-1-3c-66	
NH No.5 - FLYOVER BAR ARRANGEMENT FOR PIER P12R (3)			

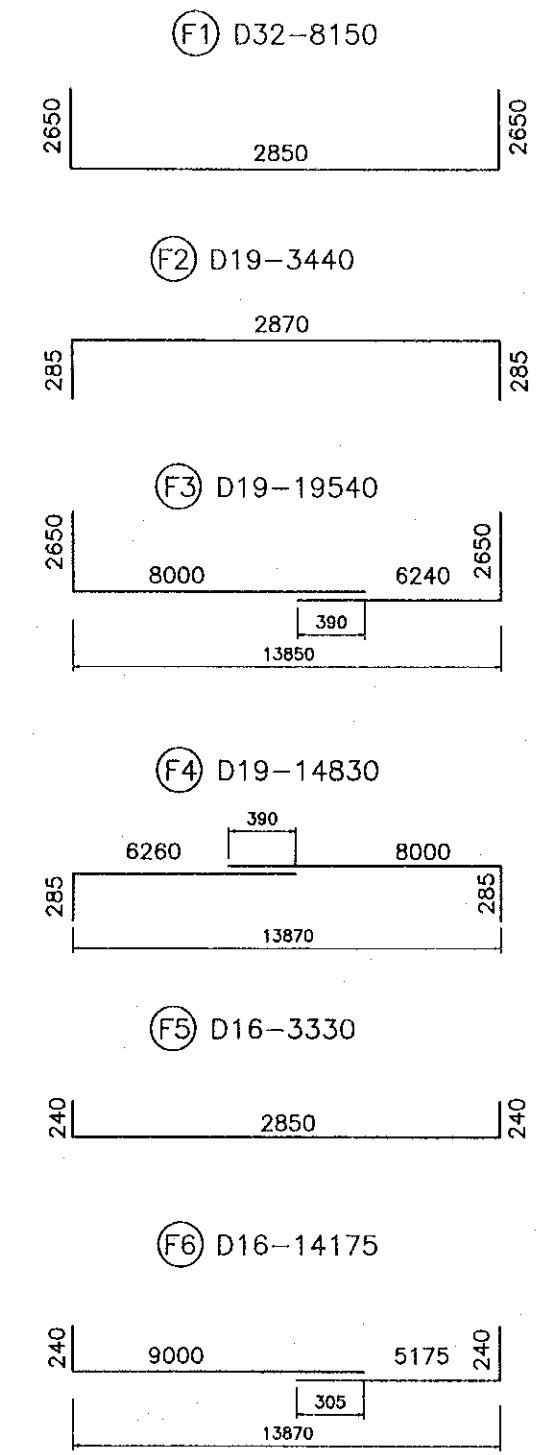
SECTION 1 - 1



SECTION 2 - 2

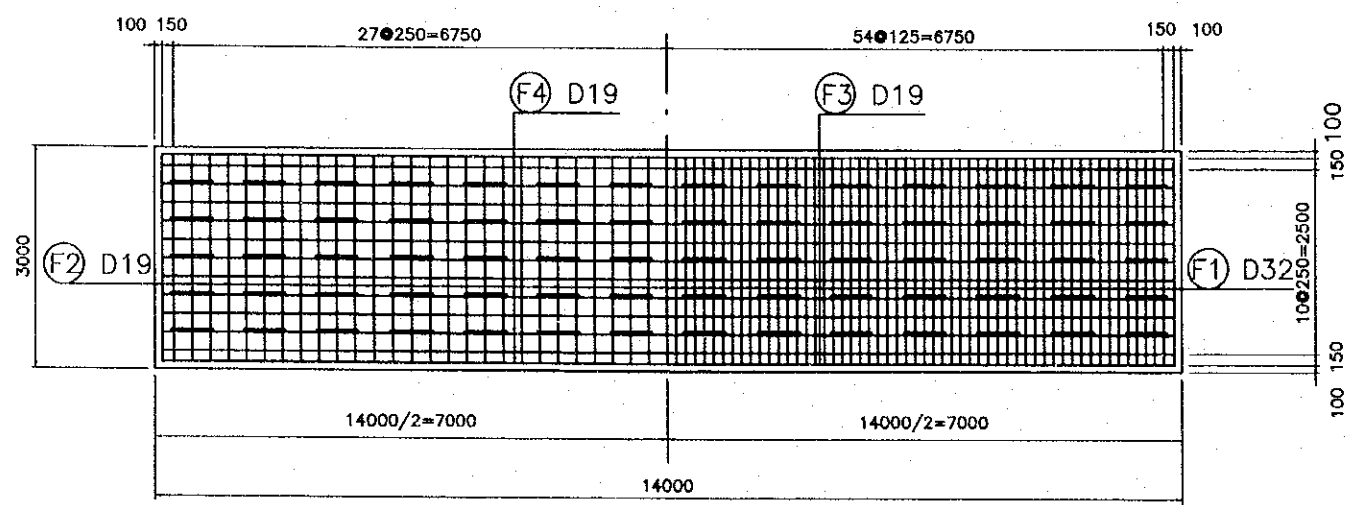


LIST OF REINFORCING BARS FOR FOOTING



HALF SECTION 3 - 3

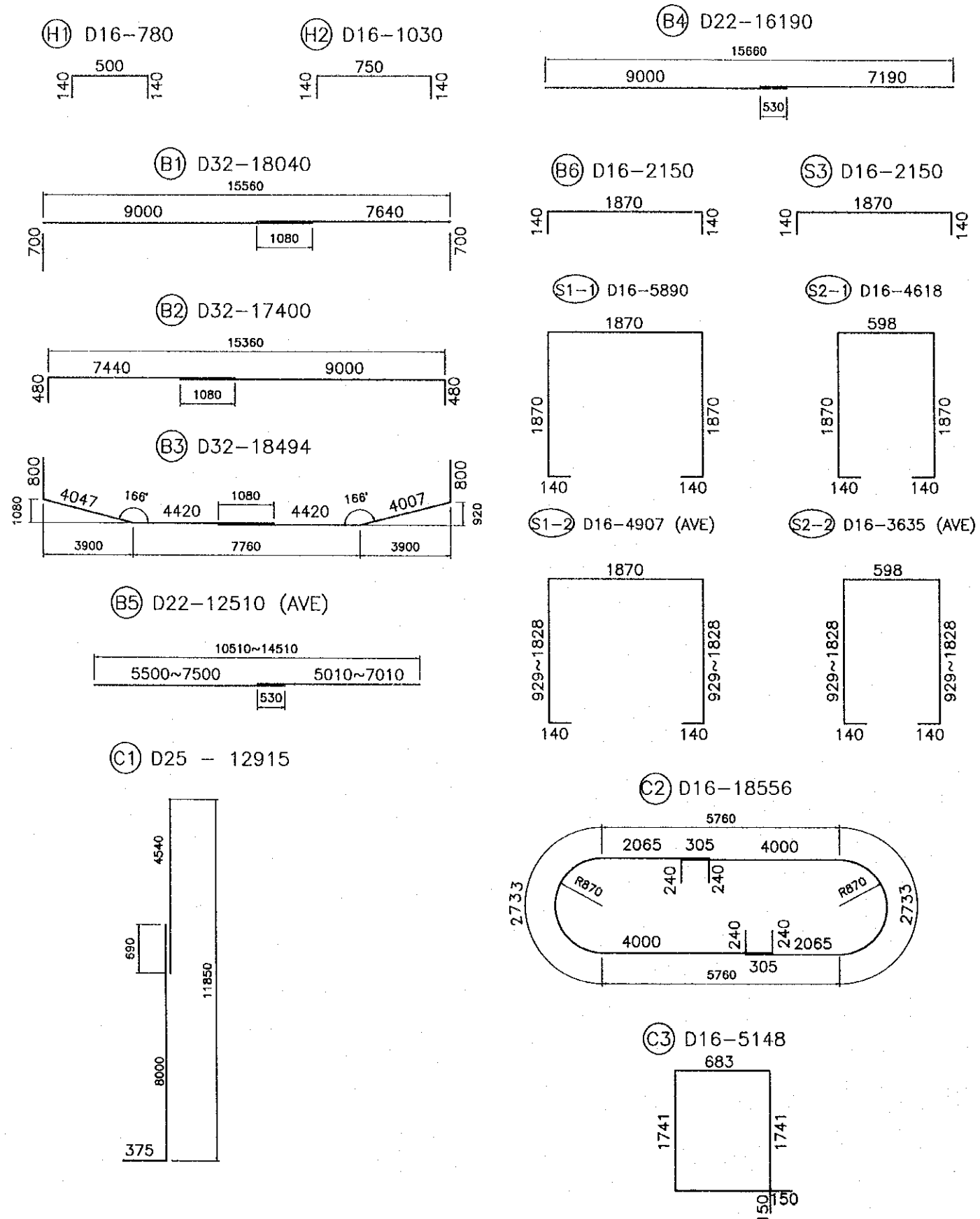
HALF SECTION 4 - 4



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000. 3. 17

PACKAGE 2	SCALE	DRAWING No. C-1-3c-67	SHEET No.
NH No.5 - FLYOVER BAR ARRANGEMENT FOR PIER P12R (4)			

LIST OF REINFORCING BARS FOR BEAM AND COLUMN

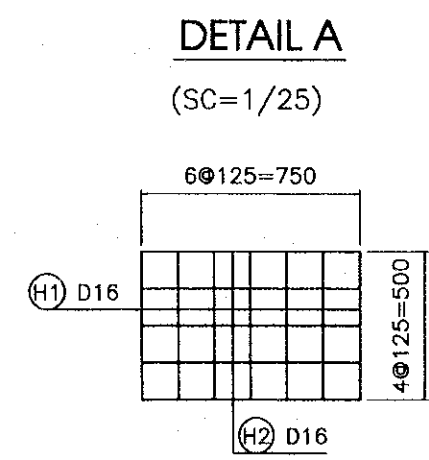
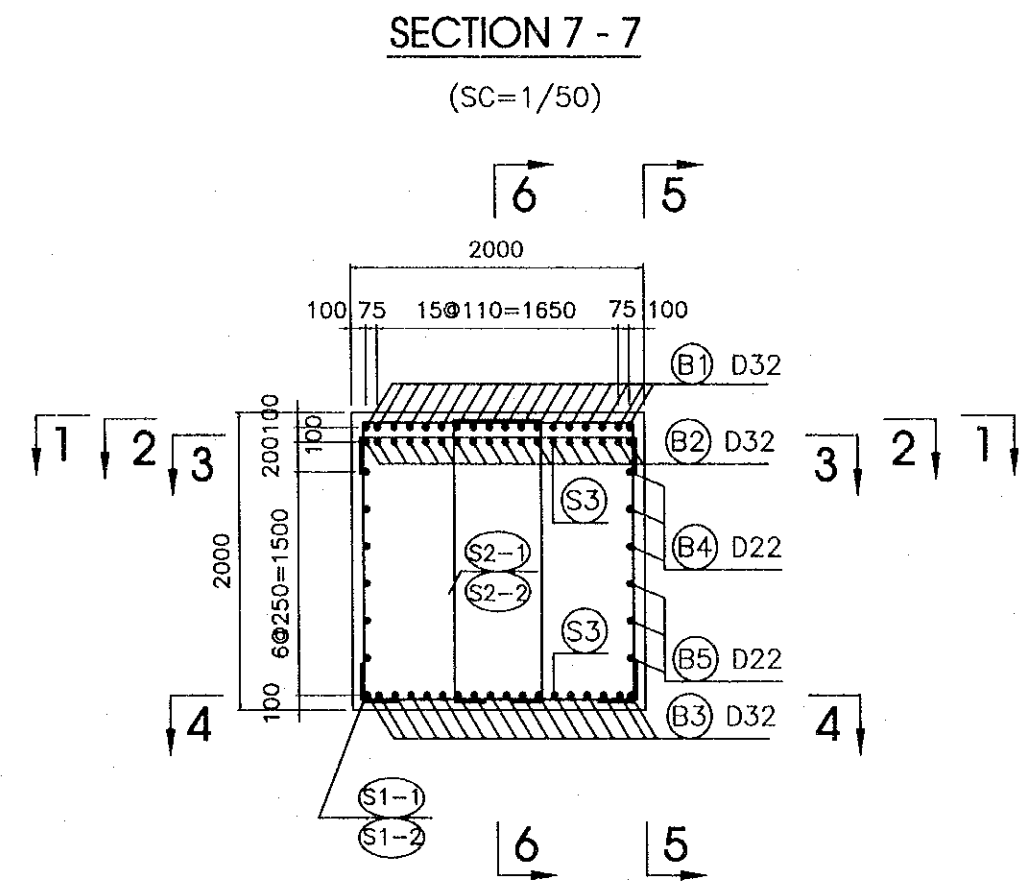
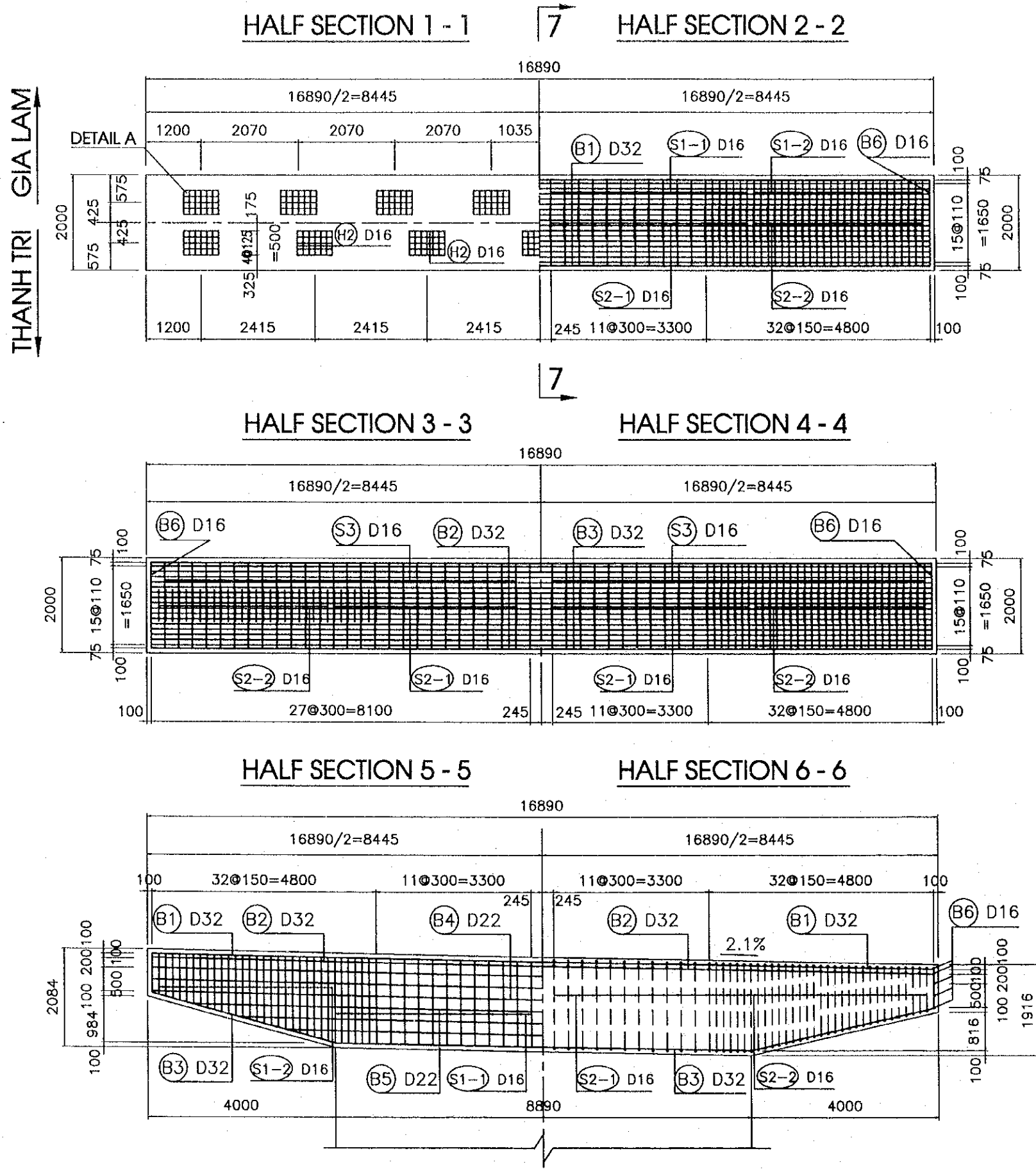


QUANTITY REINFORCEMENT FOR PIER P12R

DETAILS	TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
			mm	mm		kg/m	kg
PIER CAP	H1	[Diagram]	D16	780	98	1.560	119.25
	H2	[Diagram]	D16	1030	70	1.560	112.48
	B1	[Diagram]	D32	18040	18	6.230	2023.01
	B2	[Diagram]	D32	17400	18	6.230	1951.24
	B3	[Diagram]	D32	18494	18	6.230	2073.92
	B4	[Diagram]	D22	16190	6	3.040	295.31
	B5	AVE	D22	12510	6	3.040	228.18
	B6	[Diagram]	D16	2150	10	1.560	33.54
	S1-1	[Diagram]	D16	5890	32	1.560	294.03
	S1-2	AVE	D16	4907	50	1.560	382.75
	S2-1	[Diagram]	D16	4618	32	1.560	230.53
	S2-2	AVE	D16	3635	50	1.560	283.53
	S3	[Diagram]	D16	2150	134	1.560	449.44
COLUMN	C1	[Diagram]	D25	12915	136	3.980	6990.63
	C2	[Diagram]	D16	18556	61	1.560	1765.79
	C3	[Diagram]	D16	5148	190	1.560	1525.87
FOOTING	F1	[Diagram]	D32	8150	111	6.230	5635.97
	F2	[Diagram]	D19	3440	57	2.250	441.18
	F3	[Diagram]	D19	19540	13	2.250	571.55
	F4	[Diagram]	D19	14830	13	2.250	433.78
	F5	[Diagram]	D16	3300	18	1.560	92.66
	F6	[Diagram]	D16	14175	18	1.560	398.03
	F7	[Diagram]	D16	6734	130	1.560	1365.66
SUMMARY	TOTAL PIER P12R						27698.29
			D32		11684.13	Kg	
			D25		6990.63	Kg	
			D22		523.49	Kg	
		D19		1446.50	Kg		
		D16		7053.54	Kg		

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.03.14

PACKAGE 2	SCALE 1/100	DRAWING No. C-1-3c-6B	SHEET No.
NH No.5 - FLYOVER BAR ARRANGEMENT FOR PIER P13R (1)			



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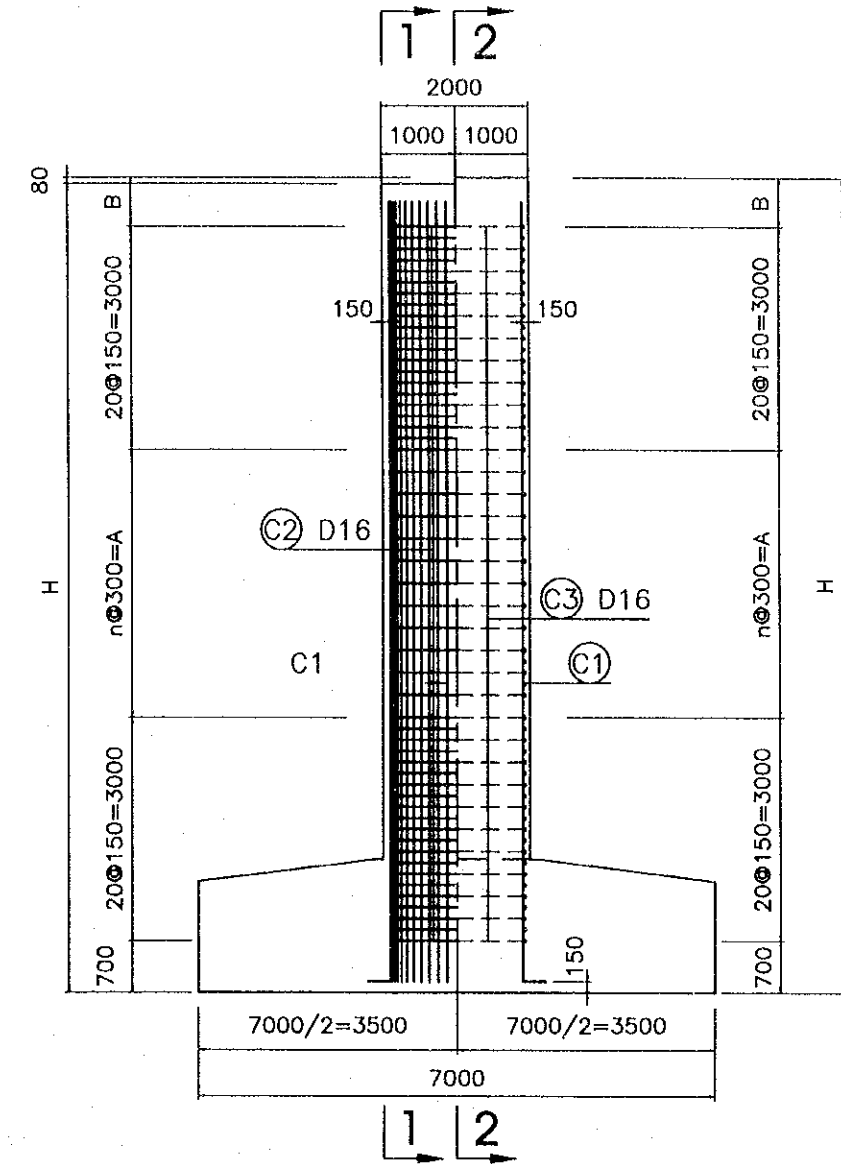
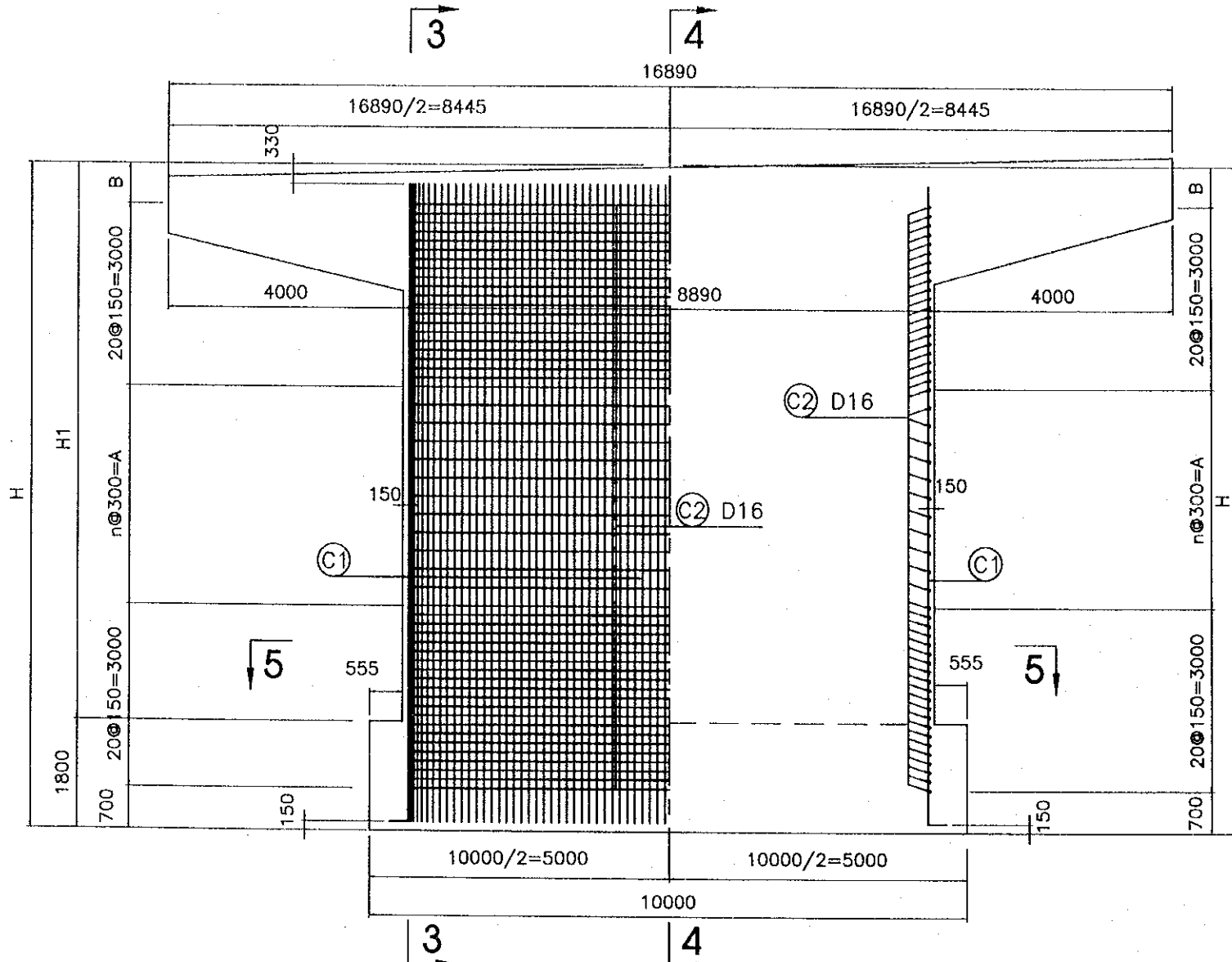
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.3.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-1-3c-69	
NH No.5 - FLYOVER BAR ARRANGEMENT FOR PIER P13R (2)			

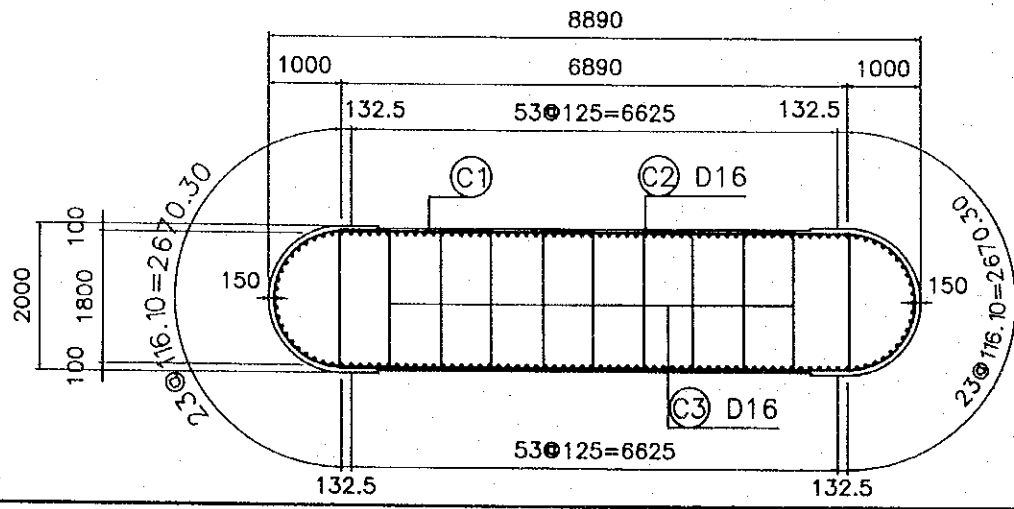
HALF SECTION 1 - 1

HALF SECTION 2 - 2

HALF SECTION 3 - 3 HALF SECTION 4 - 4



SECTION 5 - 5



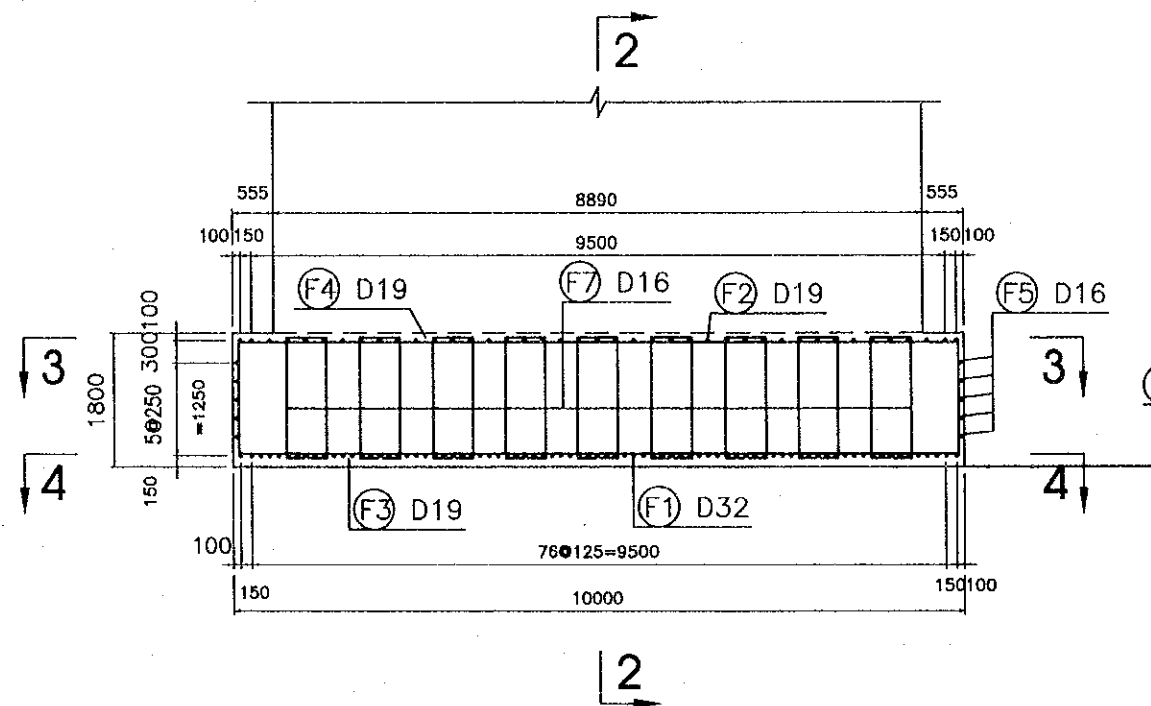
DIMENSION OF PIER

ITEMS	H(mm)	H1(mm)	A(mm)	B(mm)	n
PIER	10419	8619	3300	419	11

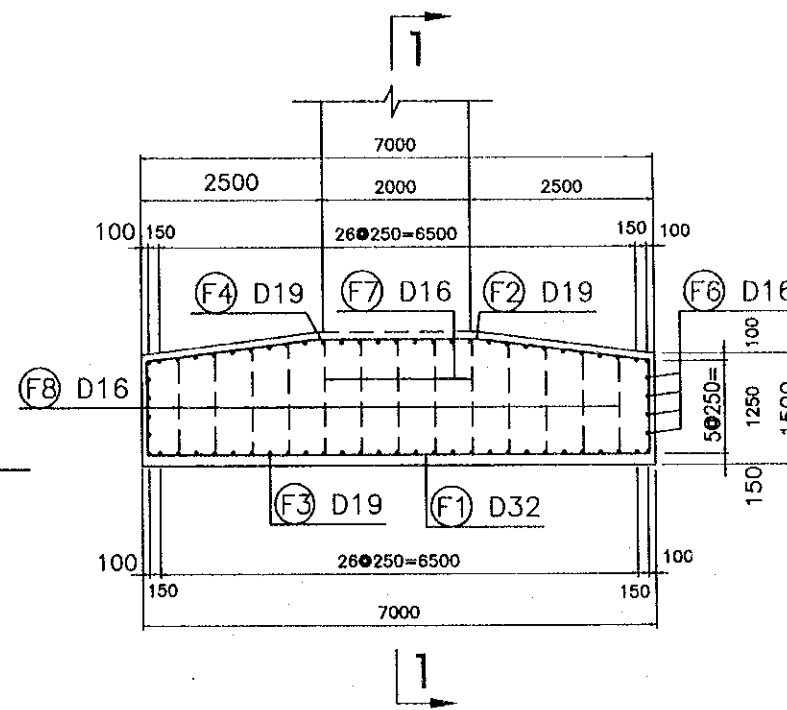
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UMT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE <i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.3.17

PACKAGE 2	SCALE 1/100	DRAWING No. C-1-3c-70	SHEET No.
NH No.5 - FLYOVER BAR ARRANGEMENT FOR PIER P13R (3)			

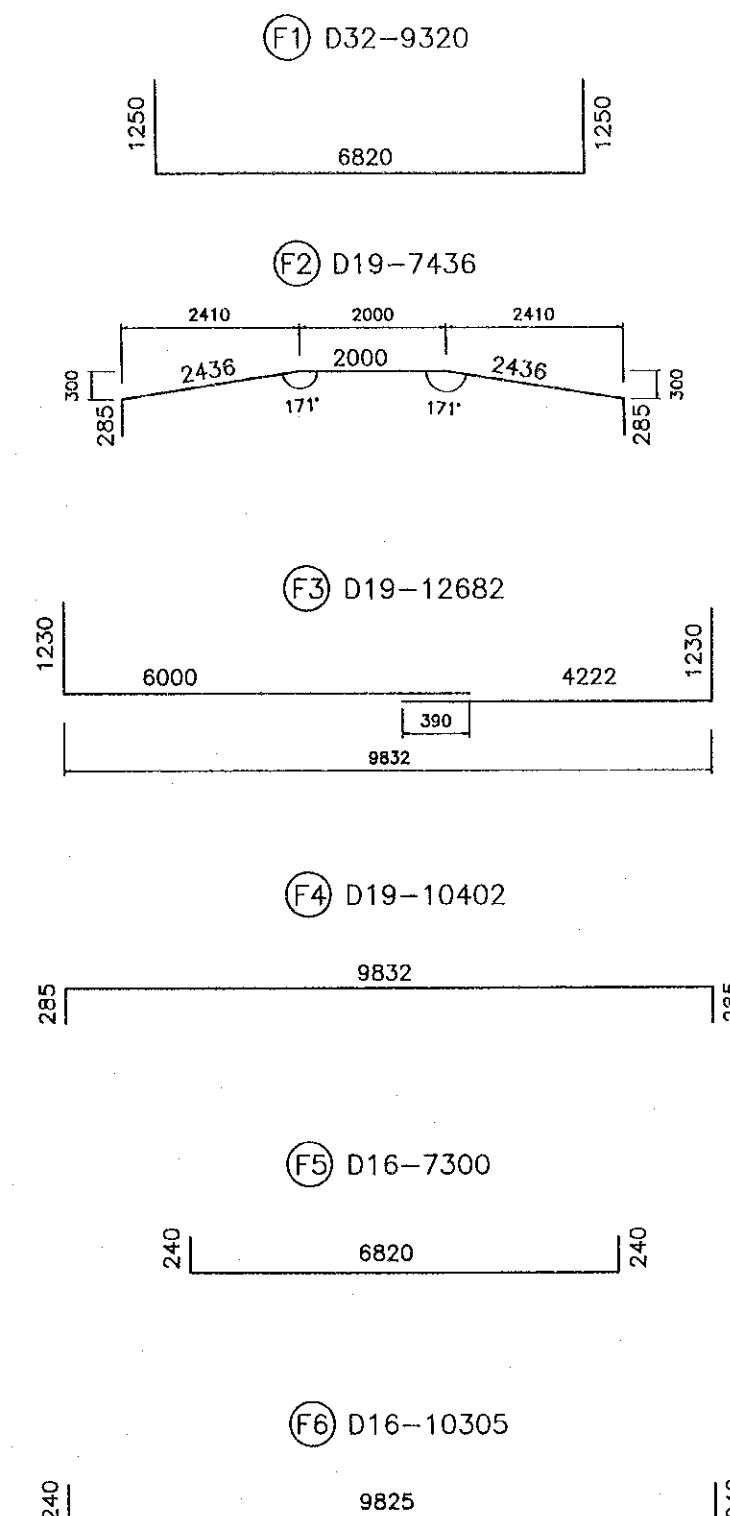
SECTION 1 - 1



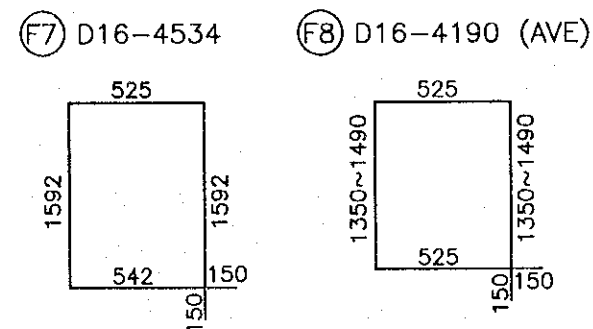
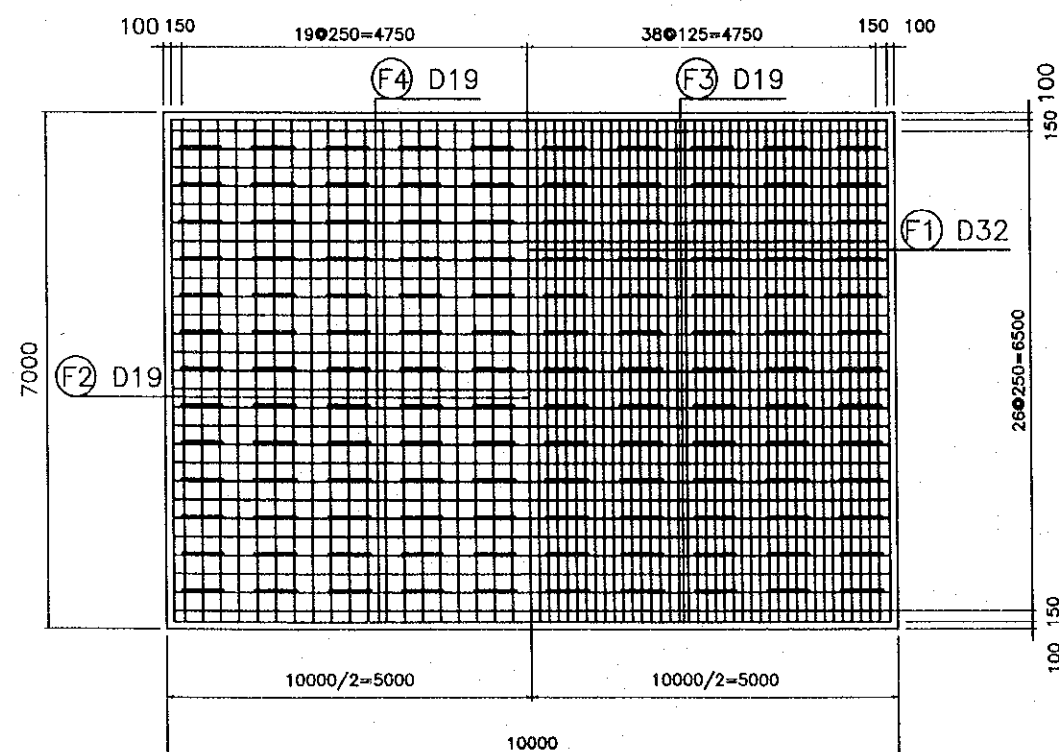
SECTION 2 - 2



LIST OF REINFORCING BARS FOR FOOTING



HALF SECTION 3 - 3 HALF SECTION 4 - 4

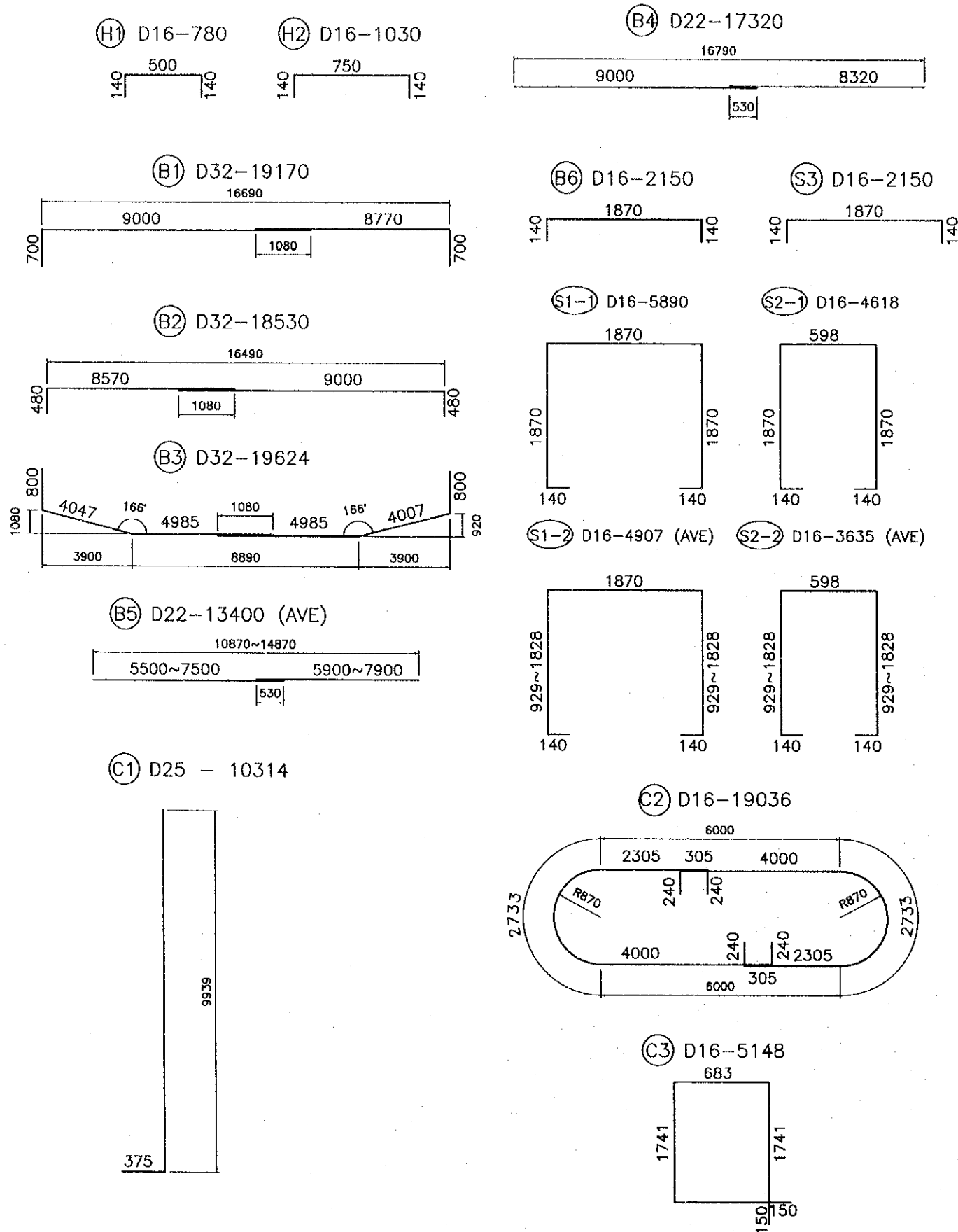


992

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	
DATE 2000.3.17		

PACKAGE 2	SCALE	DRAWING No. C-1-3c-71	SHEET No.
NH No.5 - FLYOVER BAR ARRANGEMENT FOR PIER P13R (4)			

LIST OF REINFORCING BARS FOR BEAM AND COLUMN



QUANTITY REINFORCEMENT FOR PIER P13R

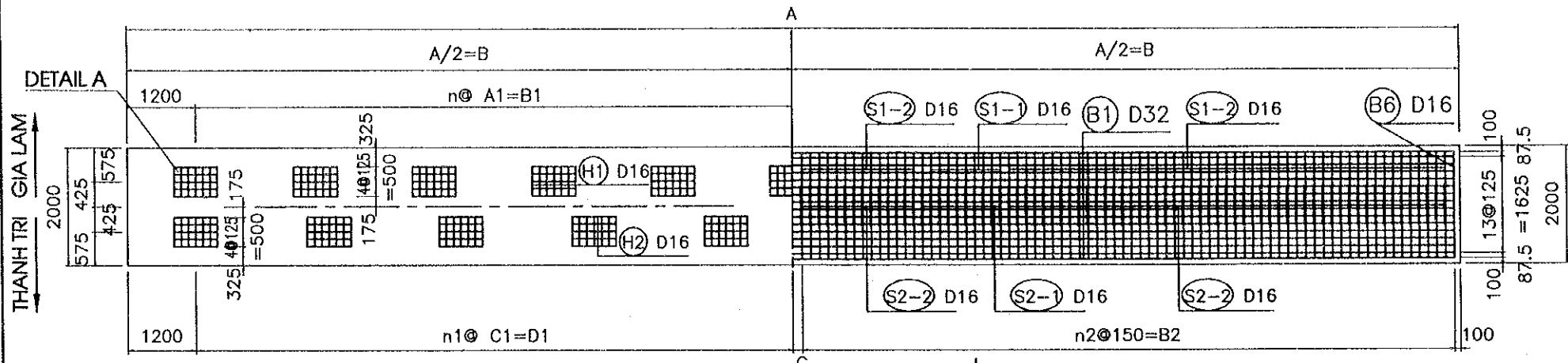
DETAILS	TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT	
			mm	mm		kg/m	kg	
PIER CAP	H1	[Shape]	D16	780	105	1.560	127.76	
	H2	[Shape]	D16	1030	75	1.560	120.51	
	B1	[Shape]	D32	19170	18	6.230	2149.72	
	B2	[Shape]	D32	18530	18	6.230	2077.95	
	B3	[Shape]	D32	19624	18	6.230	2200.64	
	B4	[Shape]	D22	17320	6	3.040	315.92	
	B5	AVE	[Shape]	D22	13400	6	3.040	244.42
	B6	[Shape]	D16	2150	10	1.560	33.54	
	S1-1	[Shape]	D16	5890	38	1.560	349.16	
	S1-2	AVE	[Shape]	D16	4907	50	1.560	382.75
	S2-1	[Shape]	D16	4618	38	1.560	273.76	
	S2-2	AVE	[Shape]	D16	3635	50	1.560	283.53
	S3	[Shape]	D16	2150	146	1.560	489.68	
COLUMN	C1	[Shape]	D25	10314	154	3.980	6321.66	
	C2	[Shape]	D16	19036	52	1.560	1544.20	
	C3	[Shape]	D16	5148	160	1.560	1284.94	
FOOTING	F1	[Shape]	D32	9320	79	6.230	4587.02	
	F2	[Shape]	D19	7436	41	2.250	685.97	
	F3	[Shape]	D19	12682	29	2.250	827.50	
	F4	[Shape]	D19	10402	29	2.250	678.73	
	F5	[Shape]	D16	7300	10	1.560	113.88	
	F6	[Shape]	D16	10305	8	1.560	128.61	
	F7	[Shape]	D16	4534	45	1.560	318.29	
	F8	AVE	[Shape]	D16	4190	72	1.560	470.62
SUMMARY	TOTAL PIER P13R						26010.75	
			D32		11015.34	Kg		
			D25		6321.66	Kg		
			D22		560.33	Kg		
			D19		2192.20	Kg		
		D16		5921.22	Kg			

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANH LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT	DESIGNED BY S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SIGNATURE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.3.14
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	

PACKAGE 2	SCALE 1/100	DRAWING No. C-1-3c-72	SHEET No.
NH No.5 - FLYOVER BAR ARRANGEMENT OF PIERS P16R,P17R,P18L (1)			

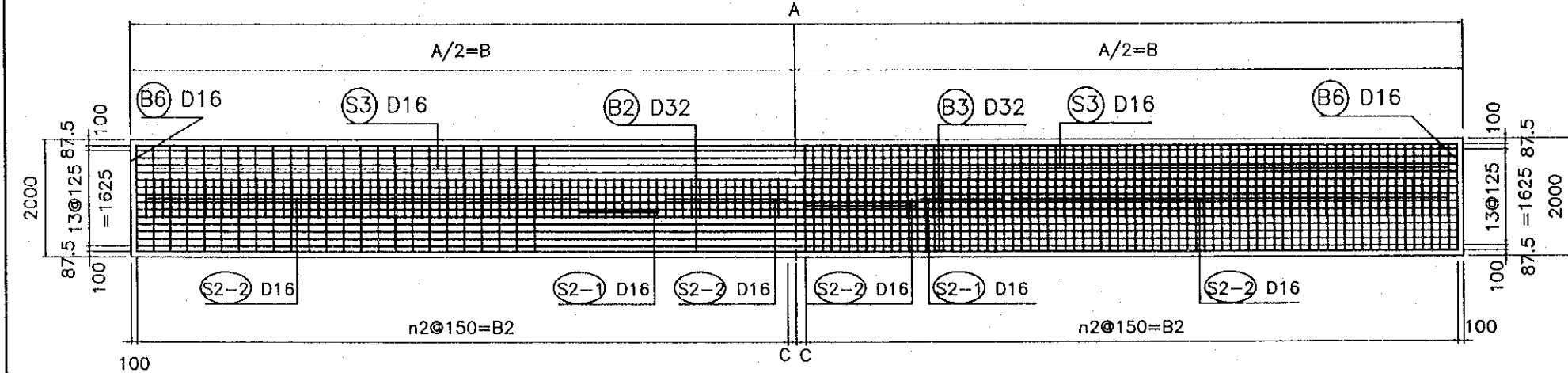
HALF SECTION 1 - 1

HALF SECTION 2 - 2



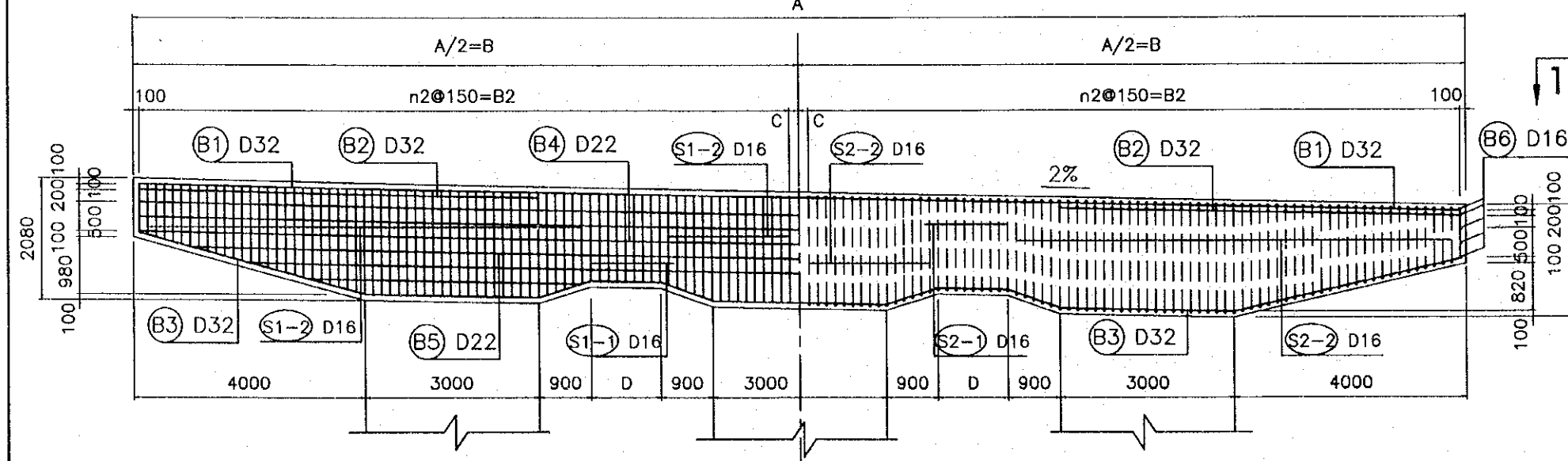
HALF SECTION 3 - 3

HALF SECTION 4 - 4



HALF SECTION 5 - 5

HALF SECTION 6 - 6

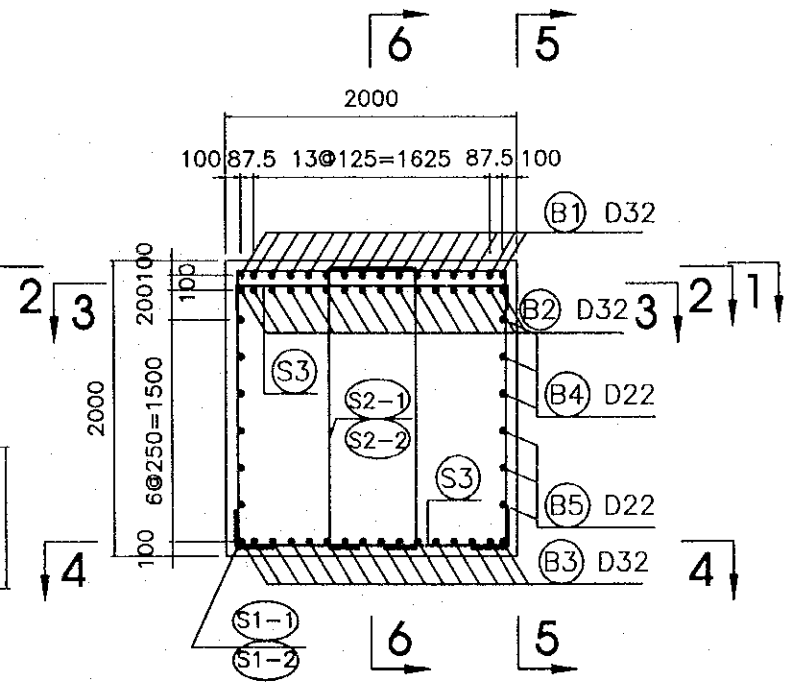


DIMENSIONS OF PIERS

Pier Items	P16R	P17R	P18L
A(mm)	23020	24980	23680
B(mm)	11510	12490	11840
C(mm)	160	240	190
D(mm)	1210	2190	1540
n	10	11	12
A1(mm)	2062	2053	1773
B1(mm)	20620	22580	21280
n1	9	10	9
C1(mm)	2291	2258	2364
D1(mm)	20620	22580	21280
n2	75	81	77
B2(mm)	11250	12150	11550

SECTION 7 - 7

(SC=1/50)





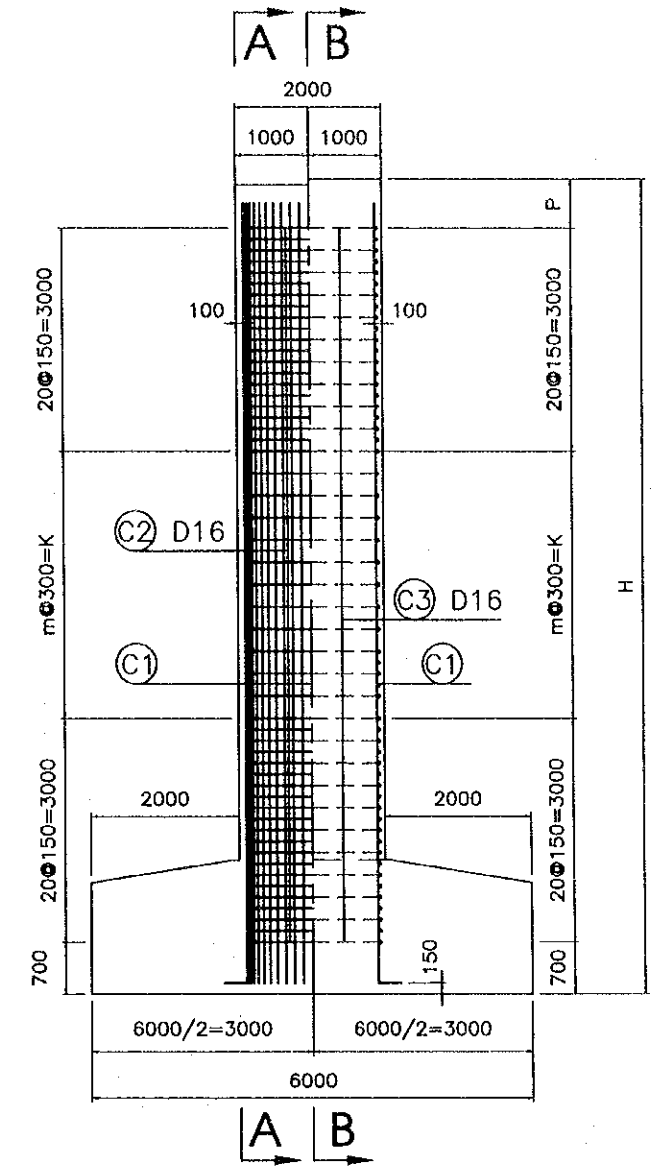
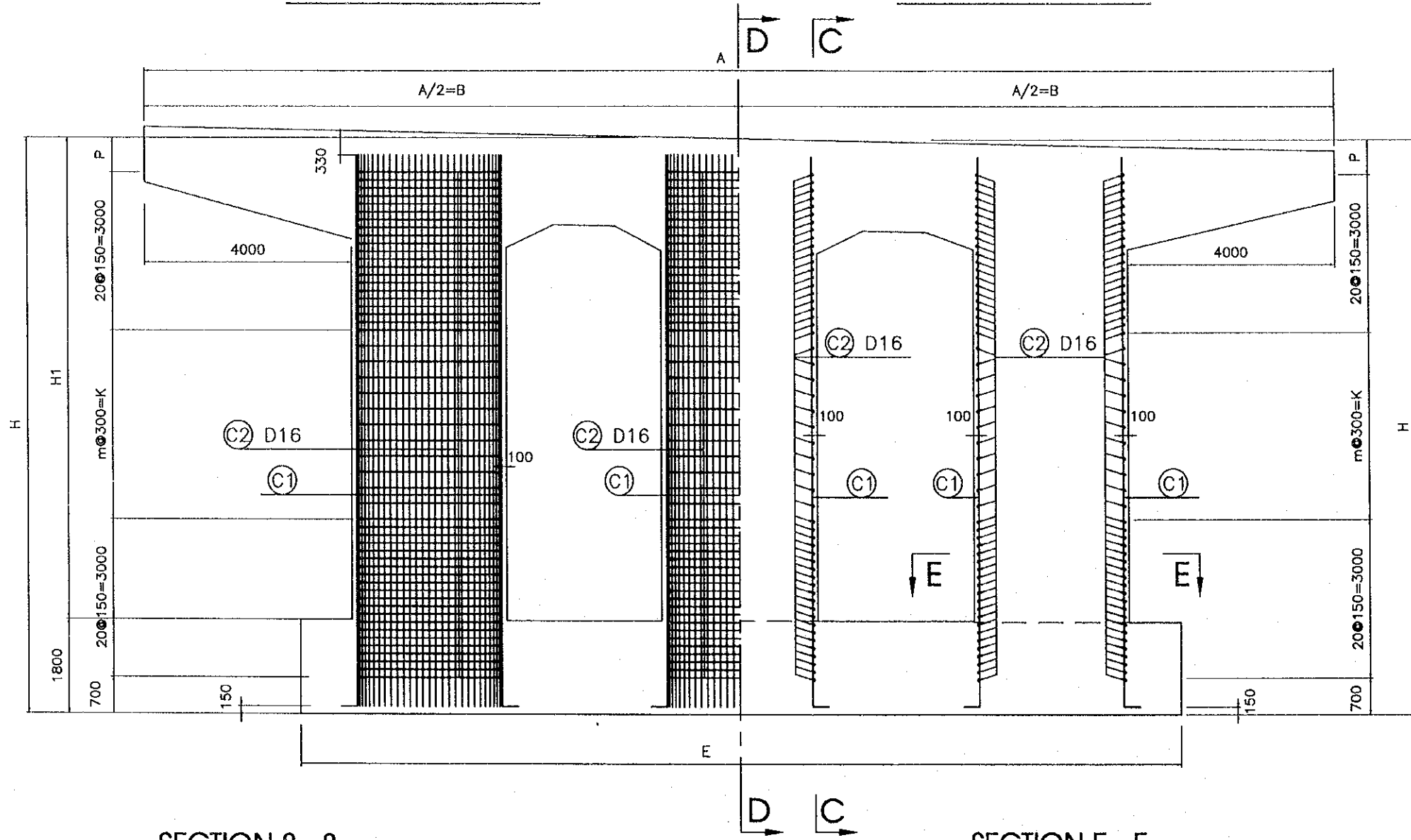
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE <i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.3.17

PACKAGE 2	SCALE 1/100	DRAWING No. C-1-3c-73	SHEET No.
NH No.5 - FLYOVER BAR ARRANGEMENT FOR PIERS P16R, P17R, P18L (2)			

HALF SECTION A - A

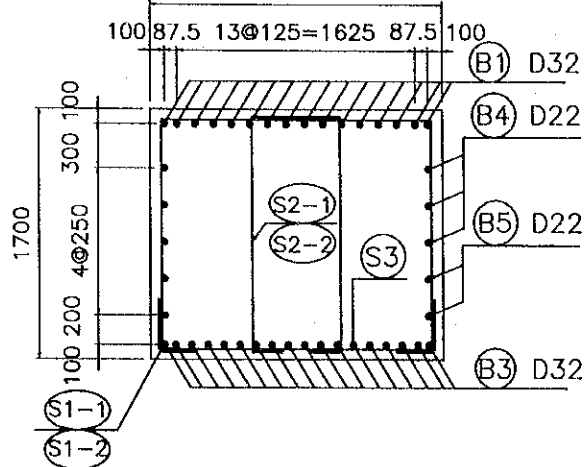
HALF SECTION B - B

HALF SECTION C - C HALF SECTION D - D



SECTION 8 - 8

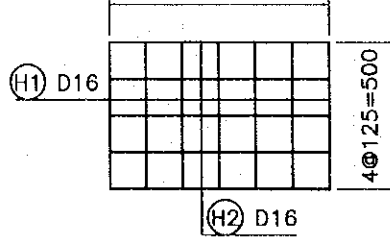
(SC=1/50)  
2000



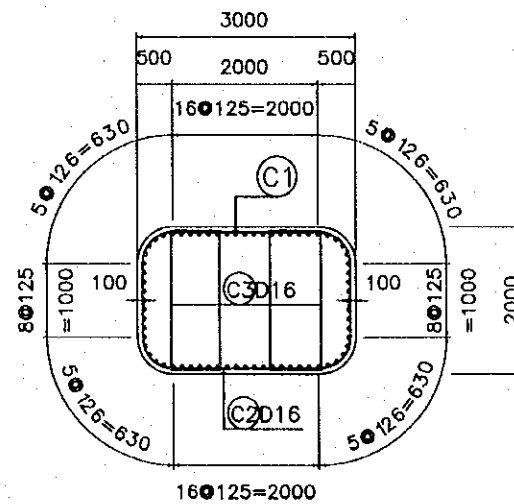
DETAIL A

(SC=1/25)

6@125=750



SECTION E - E

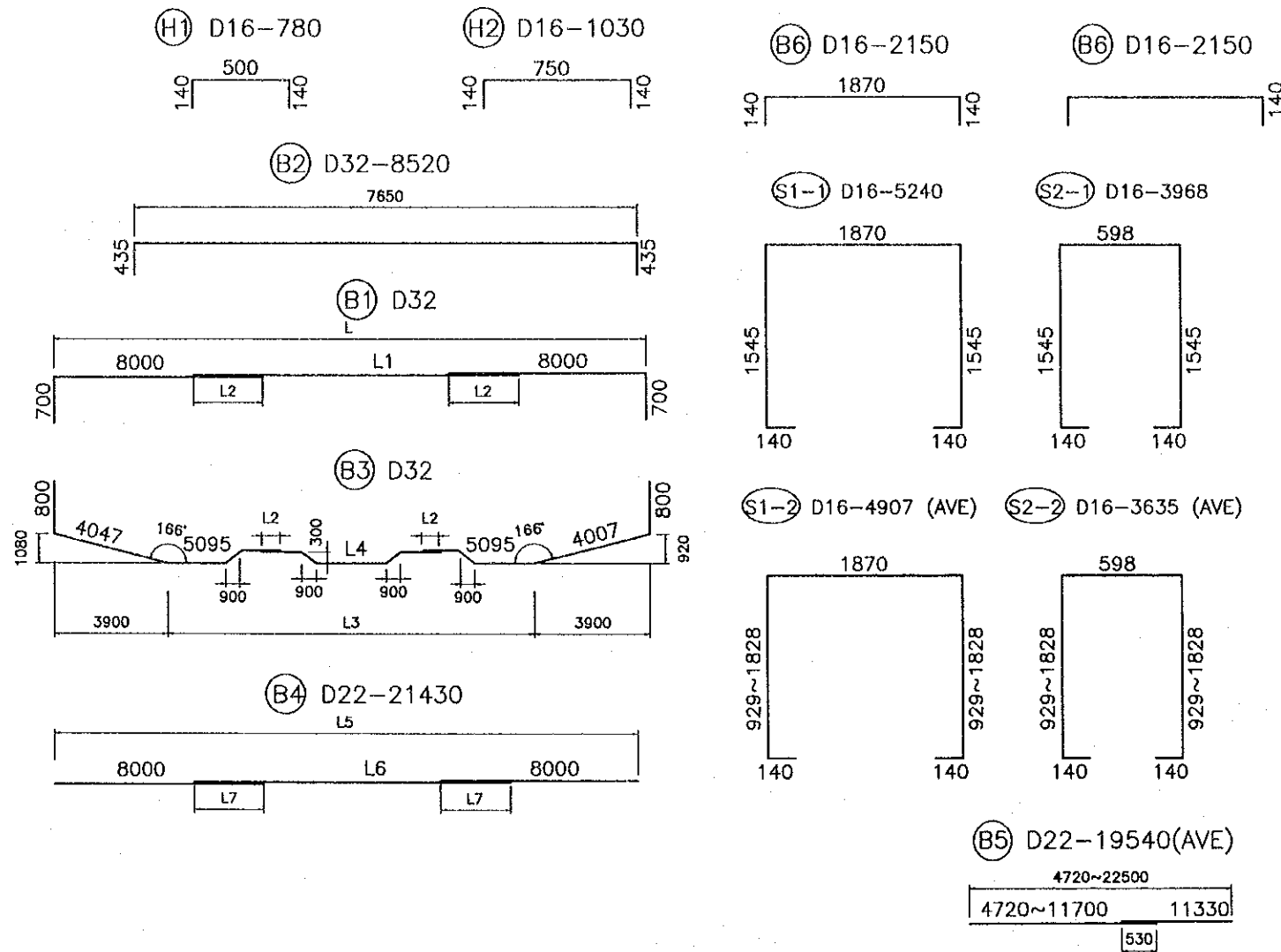


DIMENSIONS OF PIERS

Pier Items	P16R	P17R	P18L
A(mm)	23020	24980	23680
B(mm)	11510	12490	11840
E(mm)	18000	19000	18000
H(mm)	10980	10960	11000
H1(mm)	9180	9160	9200
m	12	12	12
K(mm)	3600	3600	3600
P(mm)	680	660	700



LIST OF REINFORCING BARS FOR BEAM AND COLUMN



DIMENSIONS OF BARS B1,B3,B4

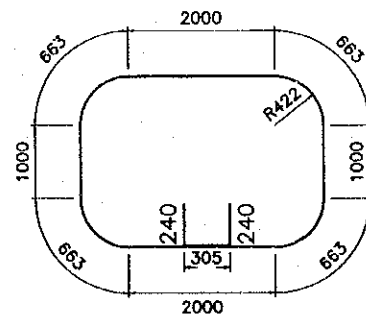
Items Pier	L(mm)	L1(mm)	L2(mm)	L3(mm)	L4(mm)	L5(mm)	L6(mm)	L7(mm)	B1(mm)	B3(mm)	B4(mm)
P16R	22820	8980	1080	15020	7190	22875	9035	530	26380	27034	25035
P17R	24780	10940	1080	16980	9150	24835	10995	530	28340	28994	26995
P18L	23480	9640	1080	15680	7850	23535	9695	530	27040	27694	25695

C1

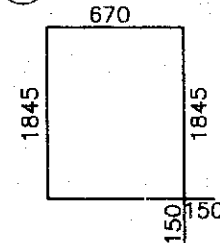
DIMENSIONS OF BAR C1

Items Piers	D (mm)	A (mm)	L (mm)	Total (mm)
P16R	D25	375	10500	10875
P17R	D25	375	10480	10855
P18L	D25	375	10520	10895

C2 D16-9437



C3 D16-5330



QUANTITY REINFORCEMENT FOR PIER P16R

DETAILS	TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
			mm	mm		kg/m	kg
PIER CAP	H1		D16	780	147	1.560	178.87
	H2		D16	1030	105	1.560	168.71
	B1		D32	26380	16	6.230	2629.56
	B2		D32	8520	32	6.230	1698.55
	B3		D32	27034	16	6.230	2694.75
	B4		D22	25035	6	3.040	456.64
	B5	AVE	D22	19540	10	3.040	594.02
	B6		D16	2150	10	1.560	33.54
	S1-1		D16	5240	20	1.560	163.49
	S1-2	AVE	D16	4907	110	1.560	842.04
	S2-1		D16	3968	20	1.560	123.80
	S2-2	AVE	D16	3635	110	1.560	623.77
	S3		D16	2150	198	1.560	664.09
	COLUMN	C1		D25	10875	204	3.980
C2			D16	9437	159	1.560	2340.75
C3			D16	5330	198	1.560	1646.33
FOOTING	F1		D32	8320	143	6.230	7412.20
	F2		D19	6436	143	2.250	2070.78
	F3		D19	20650	25	2.250	1161.56
	F4		D19	18810	25	2.250	1058.06
	F5		D16	6300	10	1.560	98.28
	F6		D16	18635	8	1.560	232.56
	F7		D16	4534	95	1.560	671.94
	F8	AVE	D16	4190	114	1.560	745.15
SUMMARY	TOTAL PIER P16R						37139.08
			D32		14435.06	Kg	
			D25		8829.63	Kg	
			D22		1050.65	Kg	
			D19		4290.41	Kg	
		D16		8533.33	Kg		

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-1-3c-76	
NH No.5 - FLYOVER			
BAR ARRANGEMENT FOR PIERS P16R,P17R,P18L (5)			

QUANTITY REINFORCEMENT FOR PIER P17R

DETAILS	TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT	
			mm	mm		kg/m	kg	
PIER CAP	H1		D16	780	161	1.560	195.90	
	H2		D16	1030	115	1.560	184.78	
	B1		D32	28340	16	6.230	2824.93	
	B2		D32	8520	32	6.230	1698.55	
	B3		D32	28994	16	6.230	2890.12	
	B4		D22	26995	6	3.040	492.39	
	B5	AVE		D22	19540	10	3.040	594.02
	B6		D16	2150	10	1.560	33.54	
	S1-1		D16	5240	20	1.560	163.49	
	S1-2	AVE		D16	4907	122	1.560	933.90
	S2-1		D16	3968	20	1.560	123.80	
	S2-2	AVE		D16	3635	122	1.560	691.81
	S3		D16	2150	210	1.560	664.09	
	COLUMN	C1		D25	10855	204	3.980	8813.39
C2			D16	9437	159	1.560	2340.75	
C3			D16	5330	198	1.560	1646.33	
FOOTING	F1		D32	8320	151	6.230	7826.87	
	F2		D19	6436	151	2.250	2186.63	
	F3		D19	21650	25	2.250	1217.81	
	F4		D19	19810	25	2.250	1114.31	
	F5		D16	6300	10	1.560	98.28	
	F6		D16	19635	8	1.560	245.04	
	F7		D16	4534	100	1.560	707.30	
	F8	AVE		D16	4190	120	1.560	784.37
SUMMARY	TOTAL PIER P17R						28512.68	
			D32		15240.47	Kg		
			D25		8813.39	Kg		
			D22		1086.40	Kg		
			D19		4518.76	Kg		
		D16		8853.65	Kg			

QUANTITY REINFORCEMENT FOR PIER P18L

DETAILS	TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT	
			mm	mm		kg/m	kg	
PIER CAP	H1		D16	780	161	1.560	195.90	
	H2		D16	1030	115	1.560	184.78	
	B1		D32	27040	16	6.230	2695.35	
	B2		D32	8520	32	6.230	1698.55	
	B3		D32	24694	16	6.230	2760.54	
	B4		D22	25695	6	3.040	468.68	
	B5	AVE		D22	19540	10	3.040	594.02
	B6		D16	2150	10	1.560	33.54	
	S1-1		D16	5240	20	1.560	163.49	
	S1-2	AVE		D16	4907	114	1.560	872.66
	S2-1		D16	3968	20	1.560	123.80	
	S2-2	AVE		D16	3635	114	1.560	646.45
	S3		D16	2150	198	1.560	664.09	
	COLUMN	C1		D25	10895	204	3.980	8845.87
C2			D16	9437	159	1.560	2340.75	
C3			D16	5330	198	1.560	1646.33	
FOOTING	F1		D32	8320	143	6.230	7412.20	
	F2		D19	6436	143	2.250	2070.78	
	F3		D19	20650	25	2.250	1161.56	
	F4		D19	18810	25	2.250	1058.06	
	F5		D16	6300	10	1.560	98.28	
	F6		D16	18635	8	1.560	232.56	
	F7		D16	4534	95	1.560	671.94	
	F8	AVE		D16	4190	114	1.560	745.15
SUMMARY	TOTAL PIER P18L						37385.34	
			D32		14566.64	Kg		
			D25		8845.87	Kg		
			D22		1062.69	Kg		
			D19		4290.41	Kg		
		D16		8619.73	Kg			

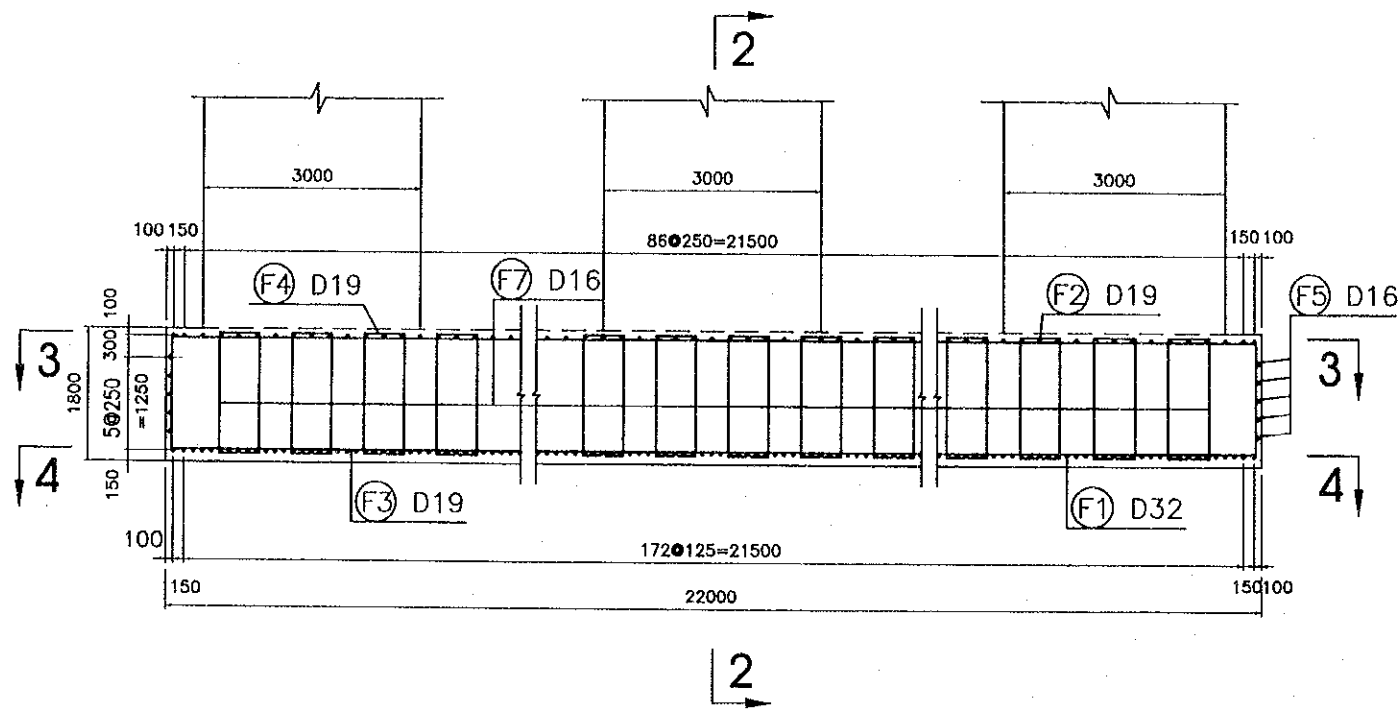




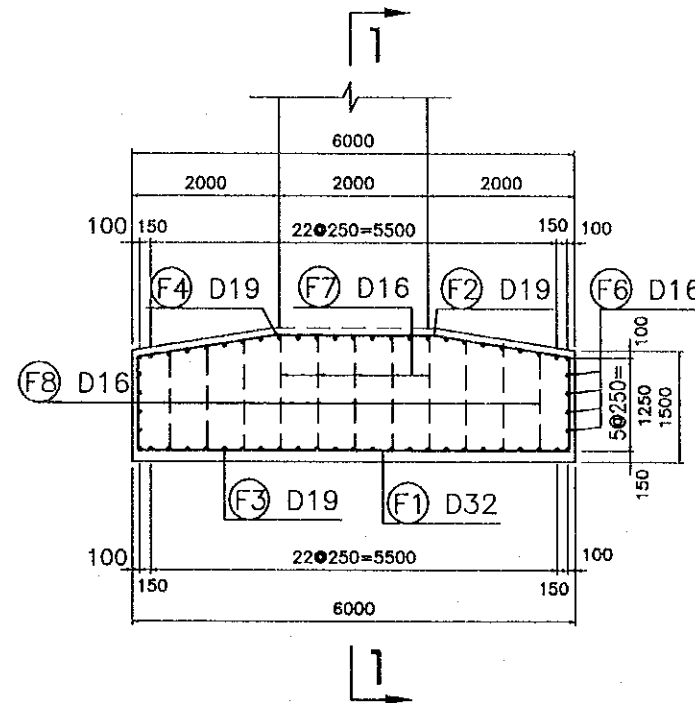
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATADE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	
PROJECT	RED RIVER BRIDGE (DIANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.19

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-1-3c-79	
NH No.5 - FLYOVER BAR ARRANGEMENT FOR PIER P1BR (3)			

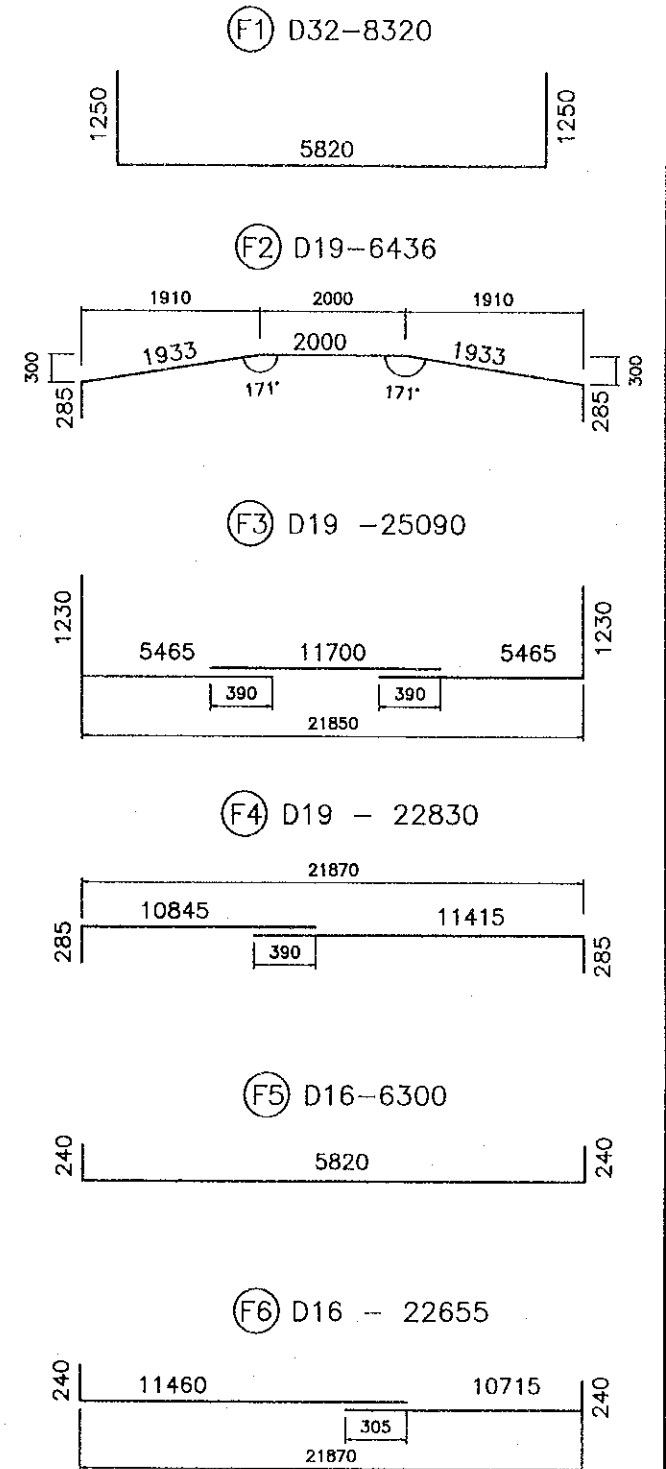
SECTION 1 - 1



SECTION 2 - 2

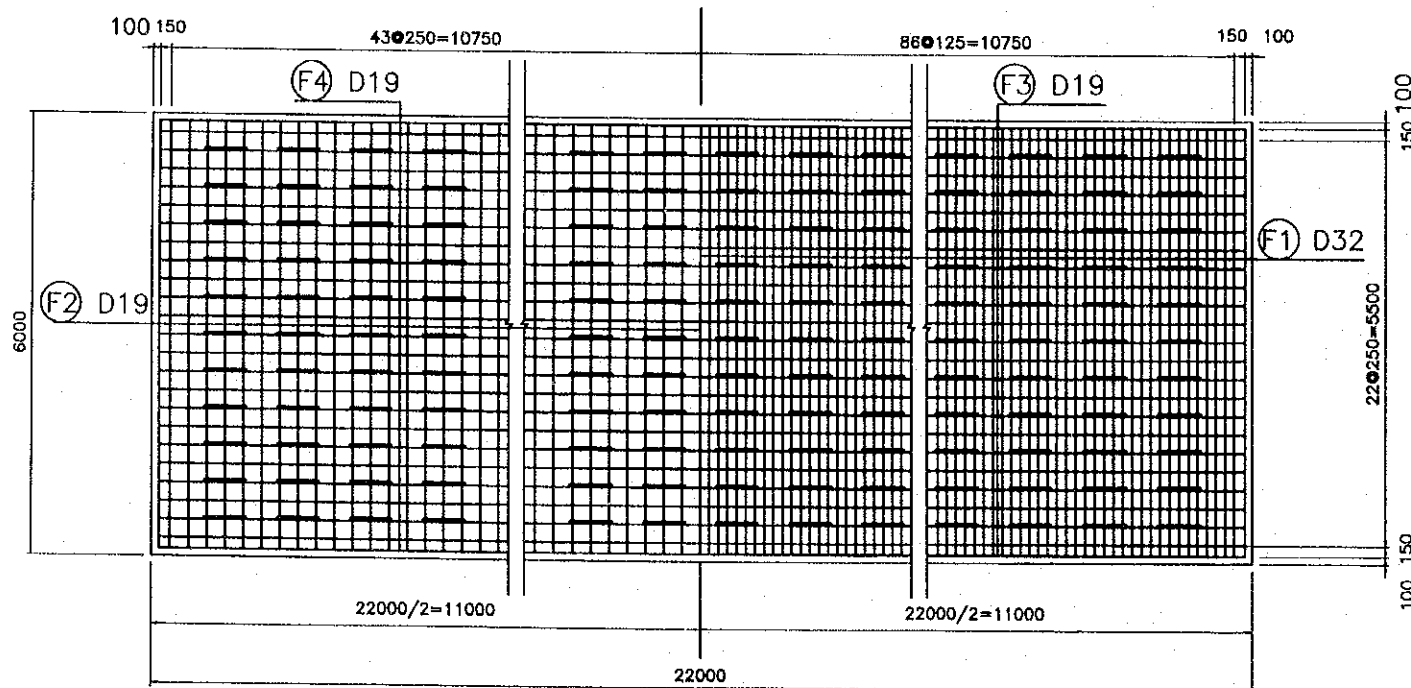


LIST OF REINFORCING BARS FOR FOOTING

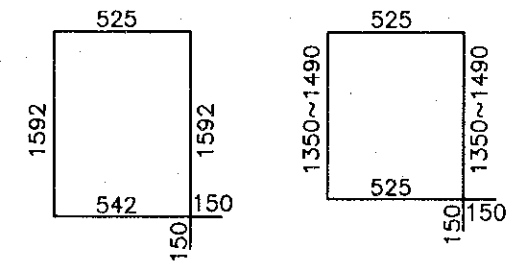


HALF SECTION 3 - 3

HALF SECTION 4 - 4



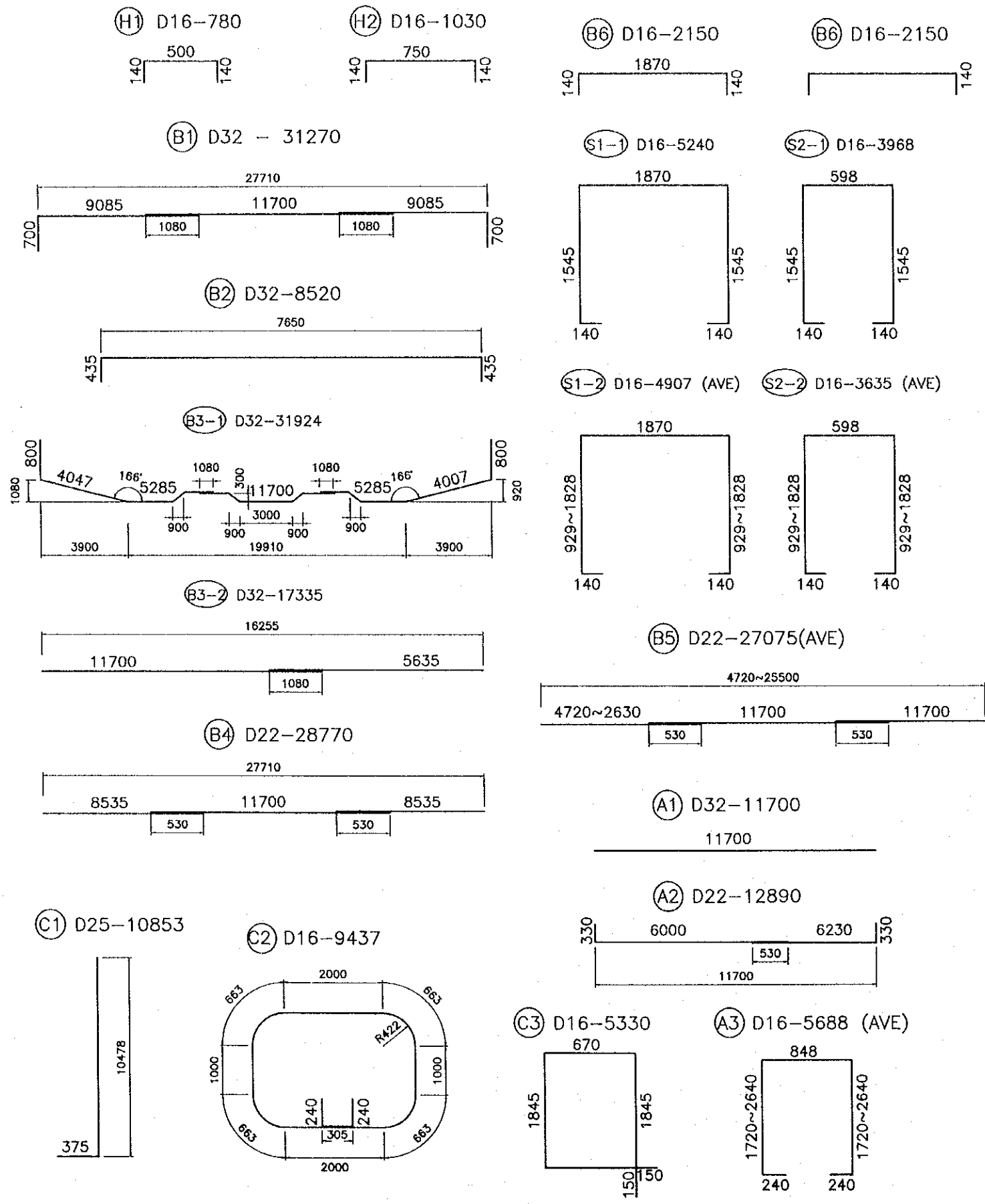
F7 D16-4534 F8 D16-4190(AVE)



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		DESIGNED BY S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.3.17	

PACKAGE 2	SCALE C-1-3c-80	DRAWING No. C-1-3c-80	SHEET No.
NH No.5 - FLYOVER BAR ARRANGEMENT FOR PIER P18R (4)			

LIST OF REINFORCING BARS FOR BEAM AND COLUMN



QUANTITY REINFORCEMENT FOR PIER P18R

DETAILS	TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
			mm	mm		kg/m	kg
PIER CAP	H1		D16	780	173	1.560	210.51
	H2		D16	1030	95	1.560	152.65
	A1		D32	11700	8	6.230	583.13
	A2		D22	12890	4	3.040	156.74
	A3	AVE	D16	5688	79	1.560	700.99
	B1		D32	31270	16	6.230	3116.99
	B2		D32	8520	32	6.230	1698.55
	B3-1		D32	31924	16	6.230	3182.18
	B3-2		D32	17335	16	6.230	1727.95
	B4		D22	28770	6	3.040	524.76
	B5	AVE	D22	27075	10	3.040	823.08
	B6		D16	2150	10	1.560	33.54
	S1-1		D16	5240	50	1.560	408.72
	S1-2	AVE	D16	4907	134	1.560	1025.76
	S2-1		D16	3968	50	1.560	309.50
	S2-2	AVE	D16	3635	134	1.560	759.86
	S3		D16	2150	364	1.560	1220.86
	COLUMN	C1		D25	10853	204	3.980
C2			D16	9437	159	1.560	2340.75
C3			D16	5330	198	1.560	1646.33
FOOTING	F1		D32	8320	175	6.230	9070.88
	F2		D19	6436	175	2.250	2534.18
	F3		D19	25090	25	2.250	1411.31
	F4		D19	22830	25	2.250	1284.19
	F5		D16	6300	10	1.560	98.28
	F6		D16	22655	8	1.560	282.73
	F7		D16	4534	115	1.560	813.40
	F8	AVE	D16	4190	138	1.560	902.02
SUMMARY	TOTAL PIER P18R						45831.62
		D32			19379.69	Kg	
		D25			8811.77	Kg	
		D22			1504.59	Kg	
		D19			5229.68	Kg	
	D16			10905.90	Kg		





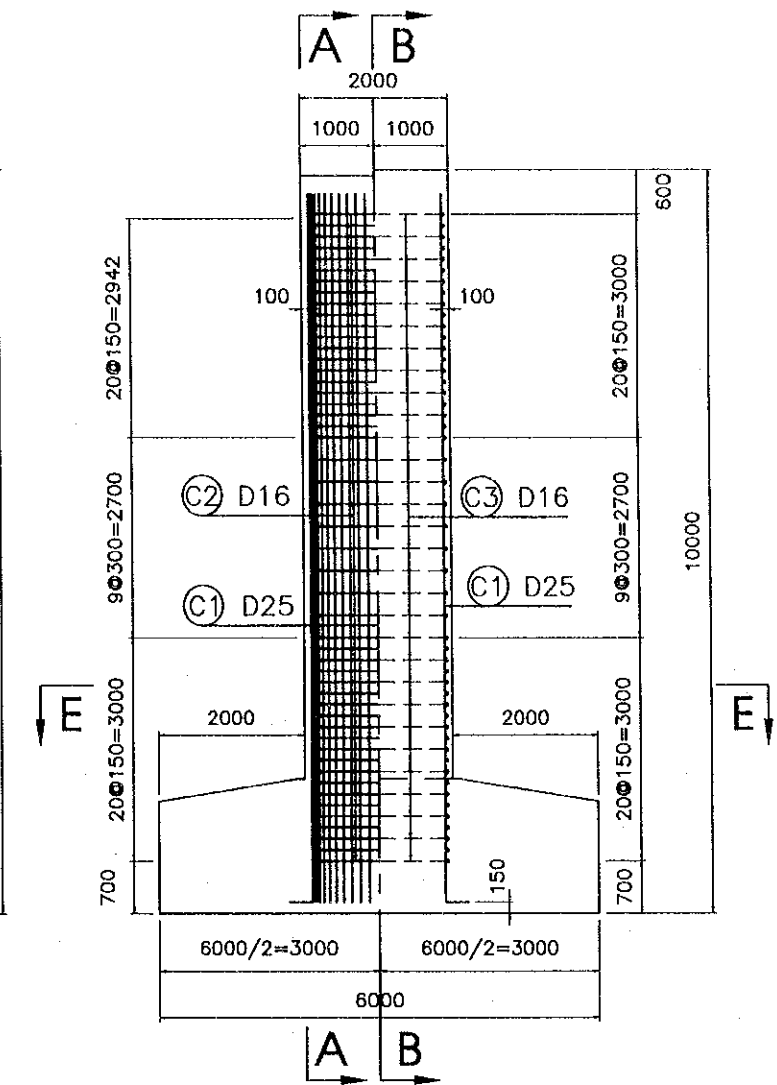
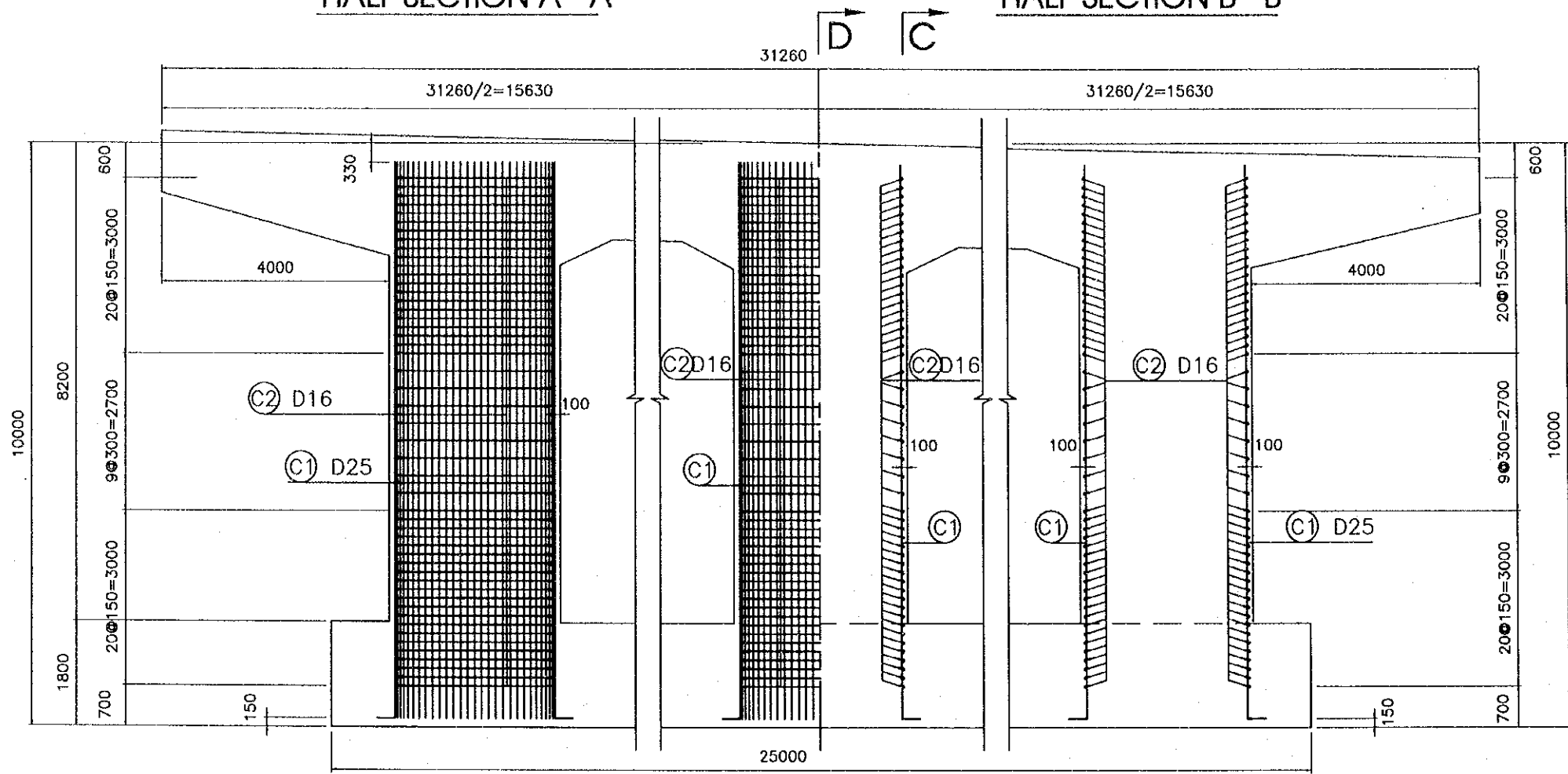
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	DATE 2000.3.14
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/100	DRAWING No. C-1-3c-82	SHEET No.
NH No.5 ~ FLYOVER BAR ARRANGEMENT FOR PIER P19L (2)			

HALF SECTION A - A

HALF SECTION B - B

HALF SECTION C - C HALF SECTION D - D

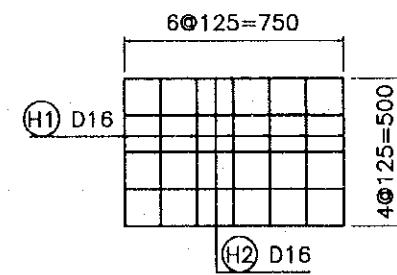
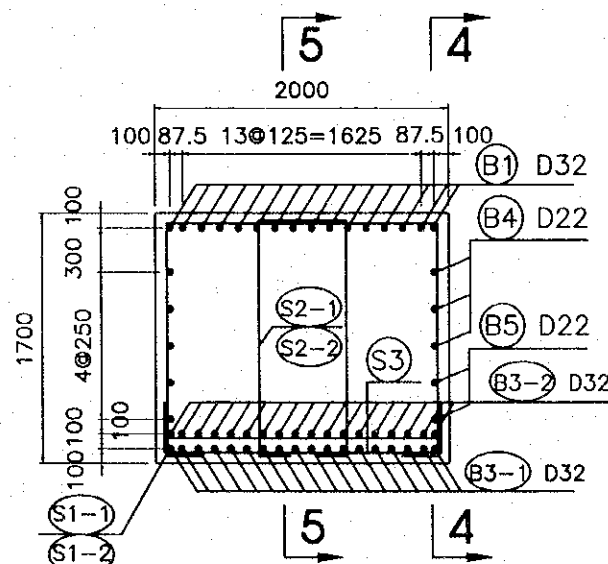
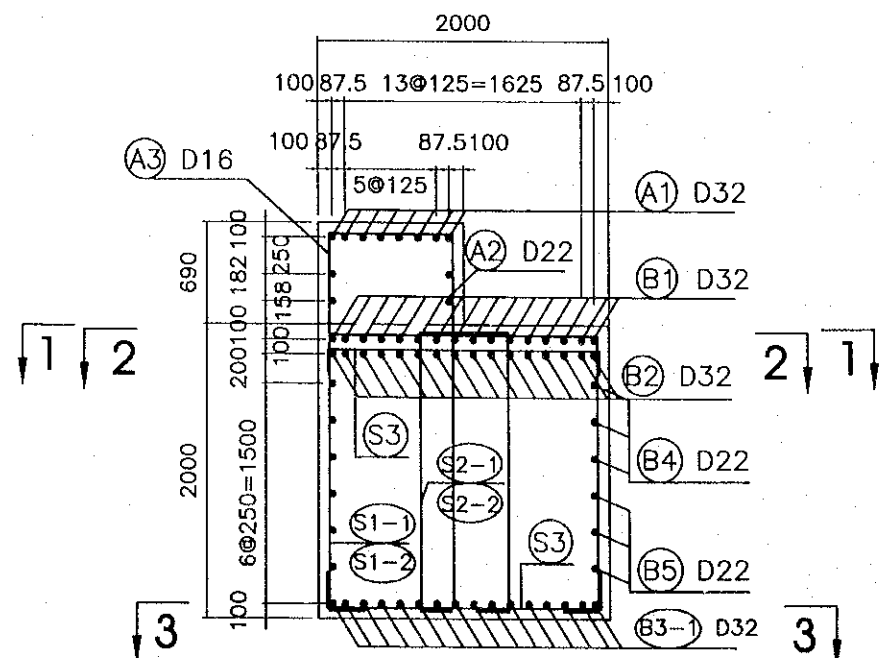


SECTION 6 - 6  
(SC=1/50)

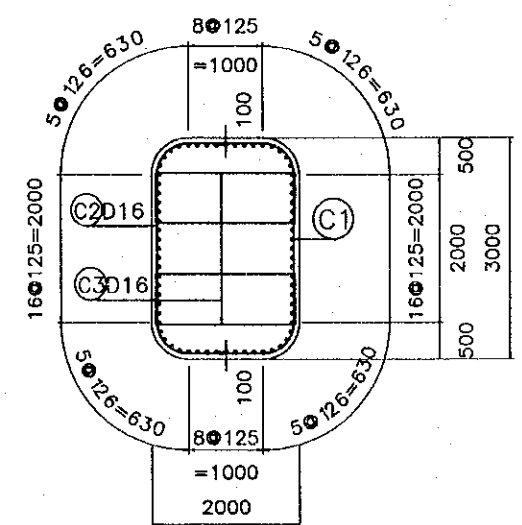
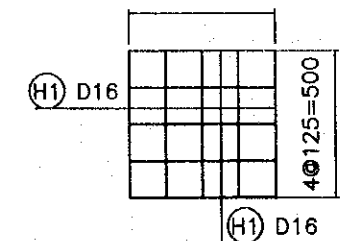
SECTION 7 - 7  
(SC=1/50)

DETAIL A  
(SC=1/25)

SECTION E - E



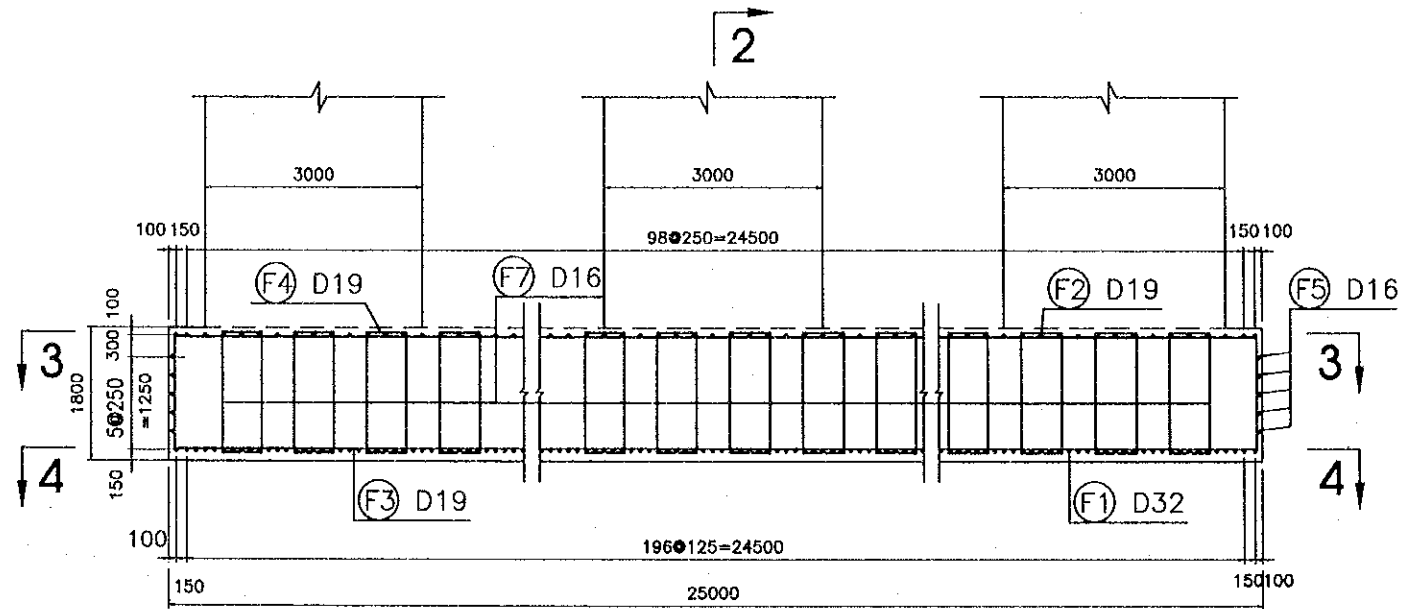
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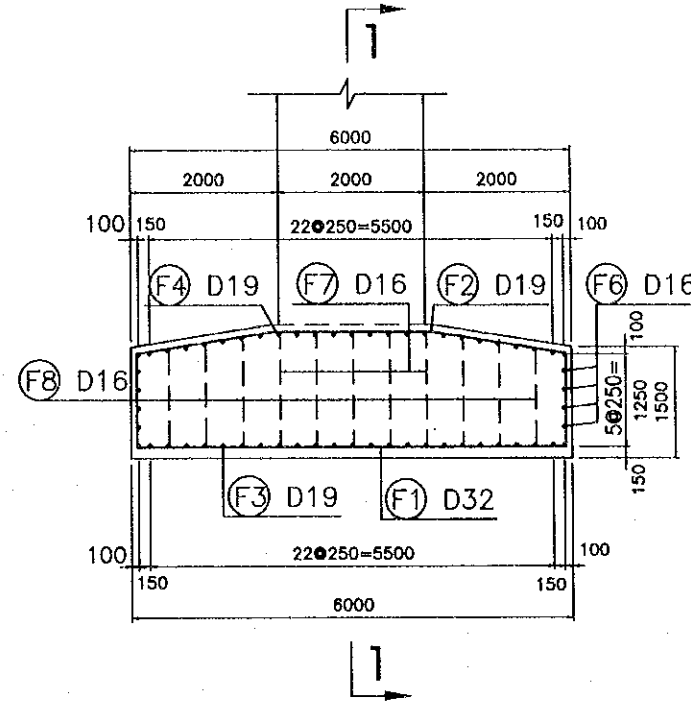
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE <i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.3.14

PACKAGE 2	SCALE 1/100	DRAWING No. C-1-3c-83	SHEET No.
NH No.5 - FLYOVER BAR ARRANGEMENT FOR PIER P19L (3)			

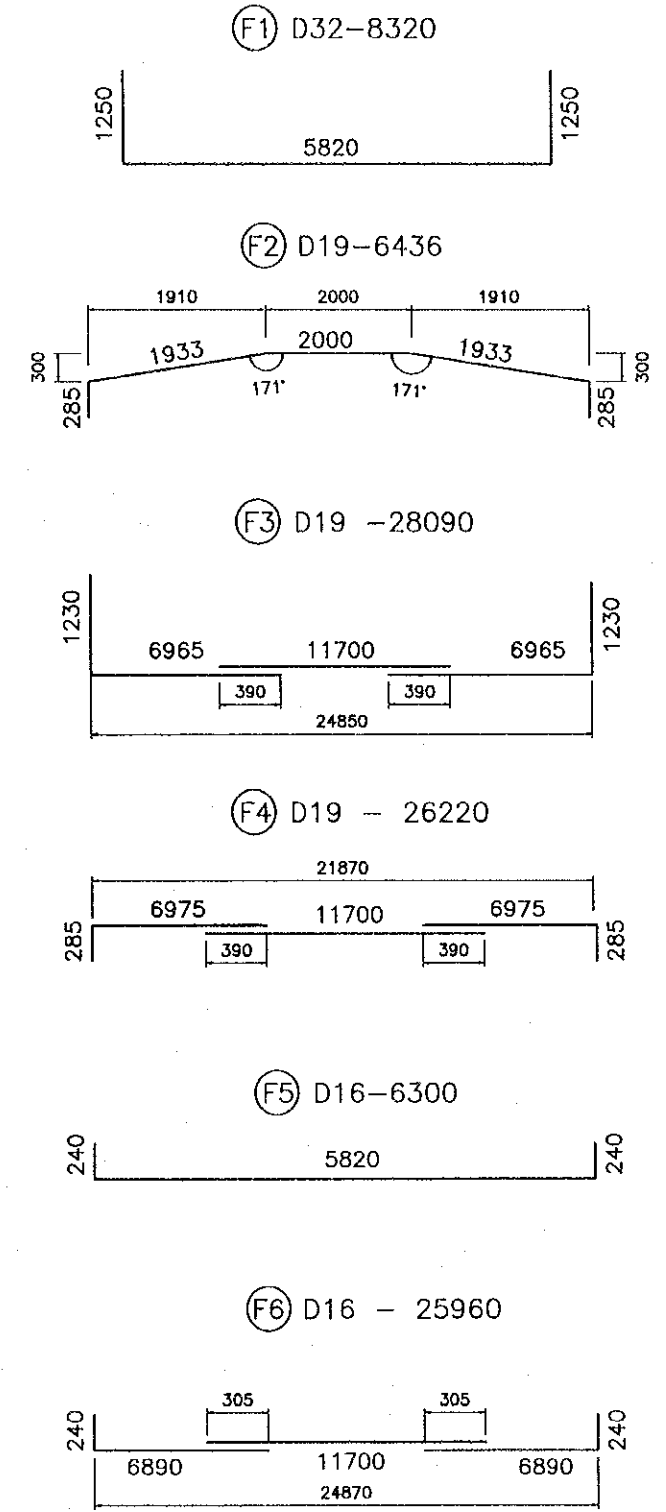
SECTION 1 - 1



SECTION 2 - 2

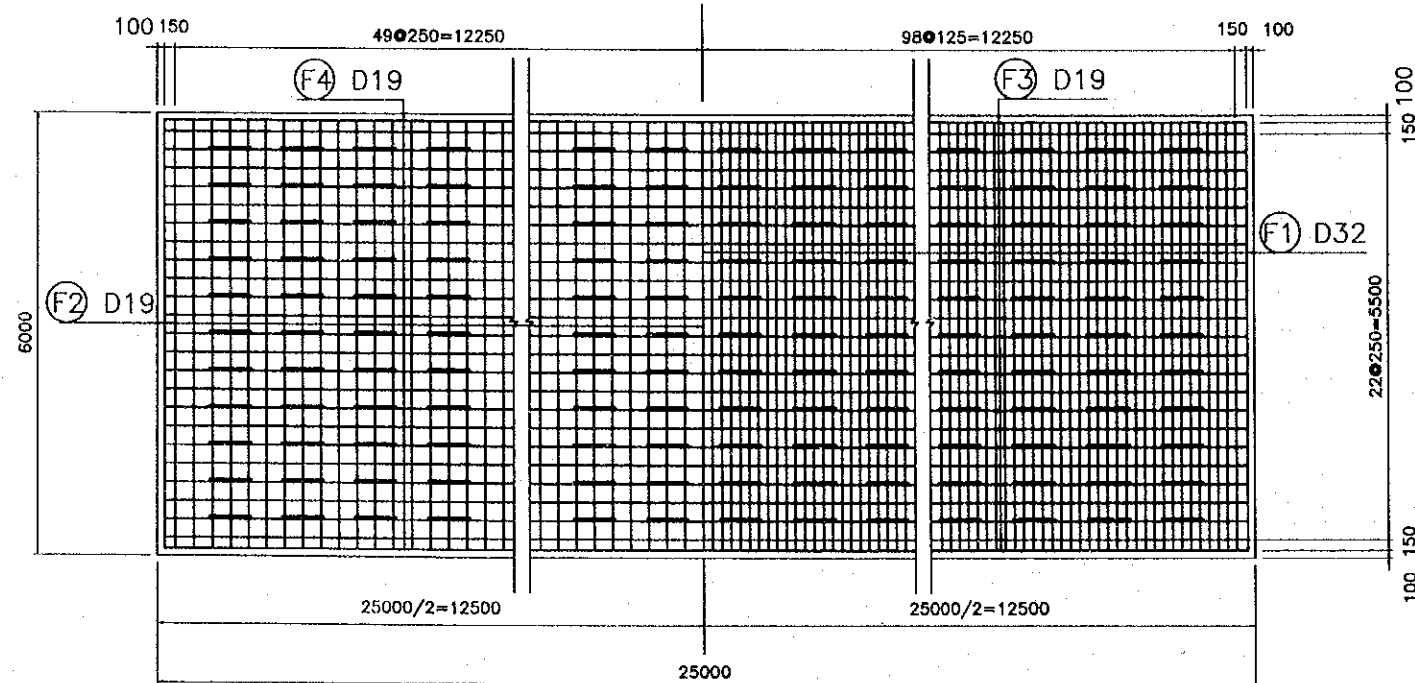


LIST OF REINFORCING BARS FOR FOOTING

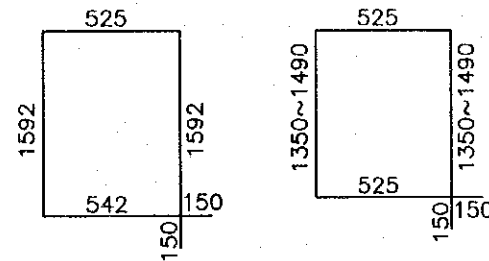


HALF SECTION 3 - 3

HALF SECTION 4 - 4



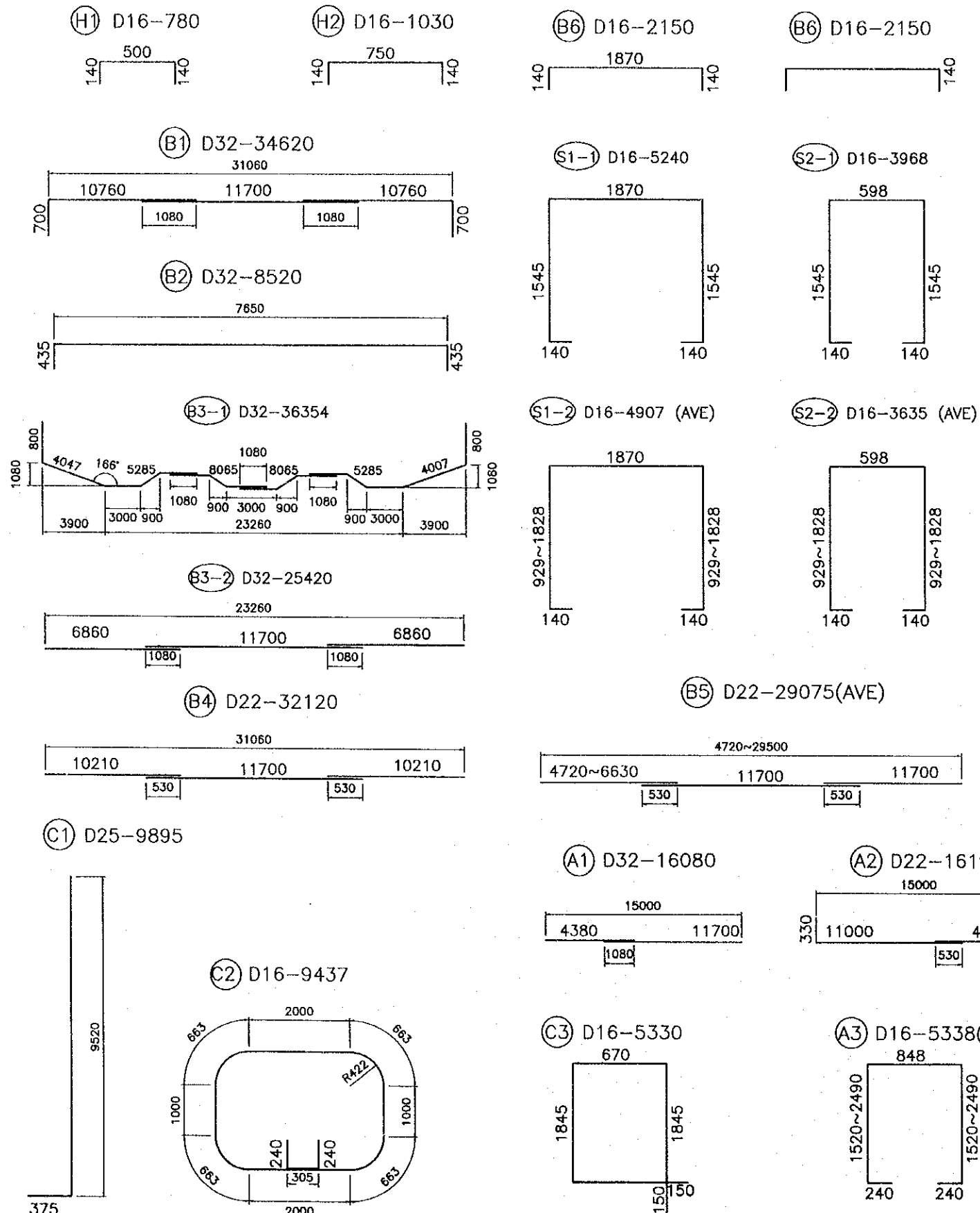
F7 D16-4534 F8 D16-4190(AVE)



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATABE
RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE <i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.03.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-1-3c-B4	
NH No.5 - FLYOVER BAR ARRANGEMENT FOR PIERS P19L (4)			

LIST OF REINFORCING BARS FOR BEAM AND COLUMN

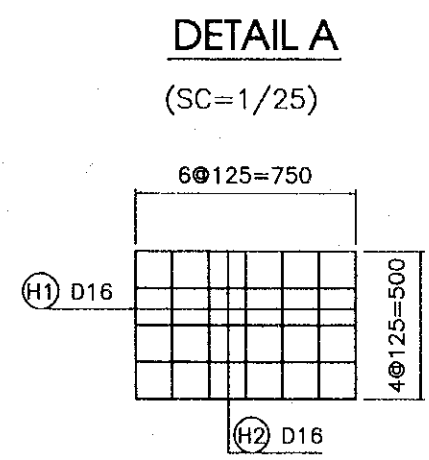
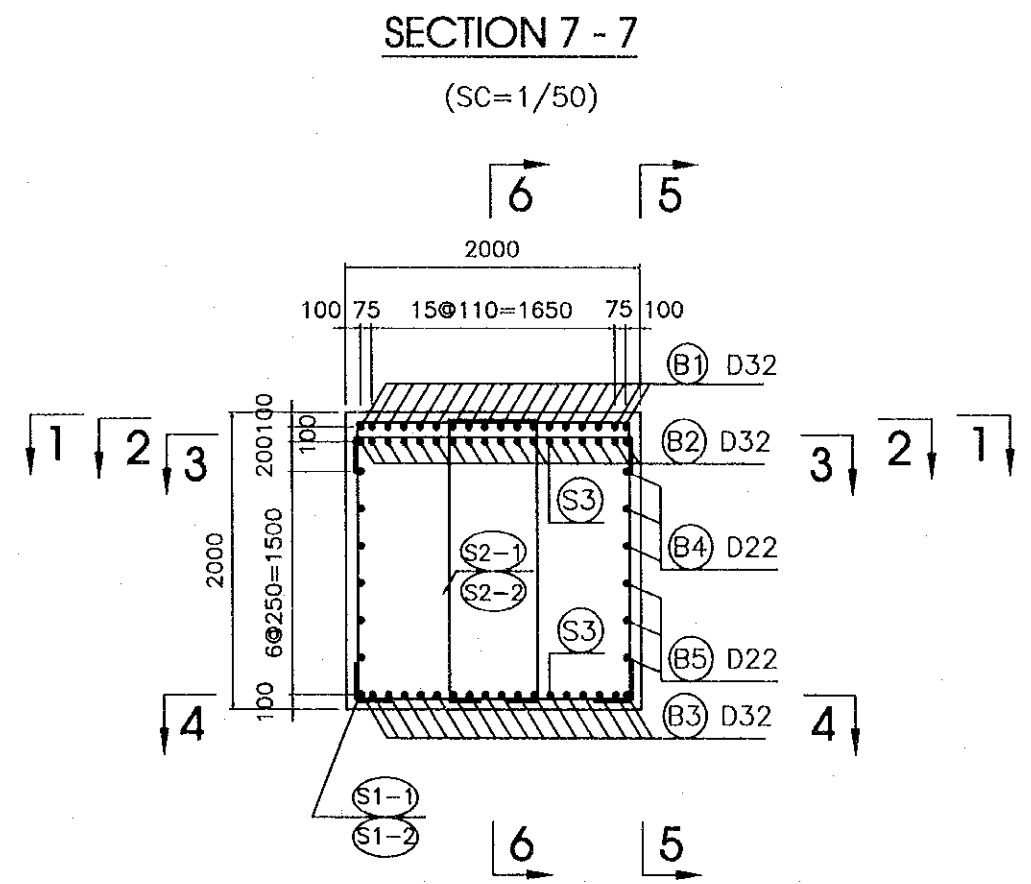
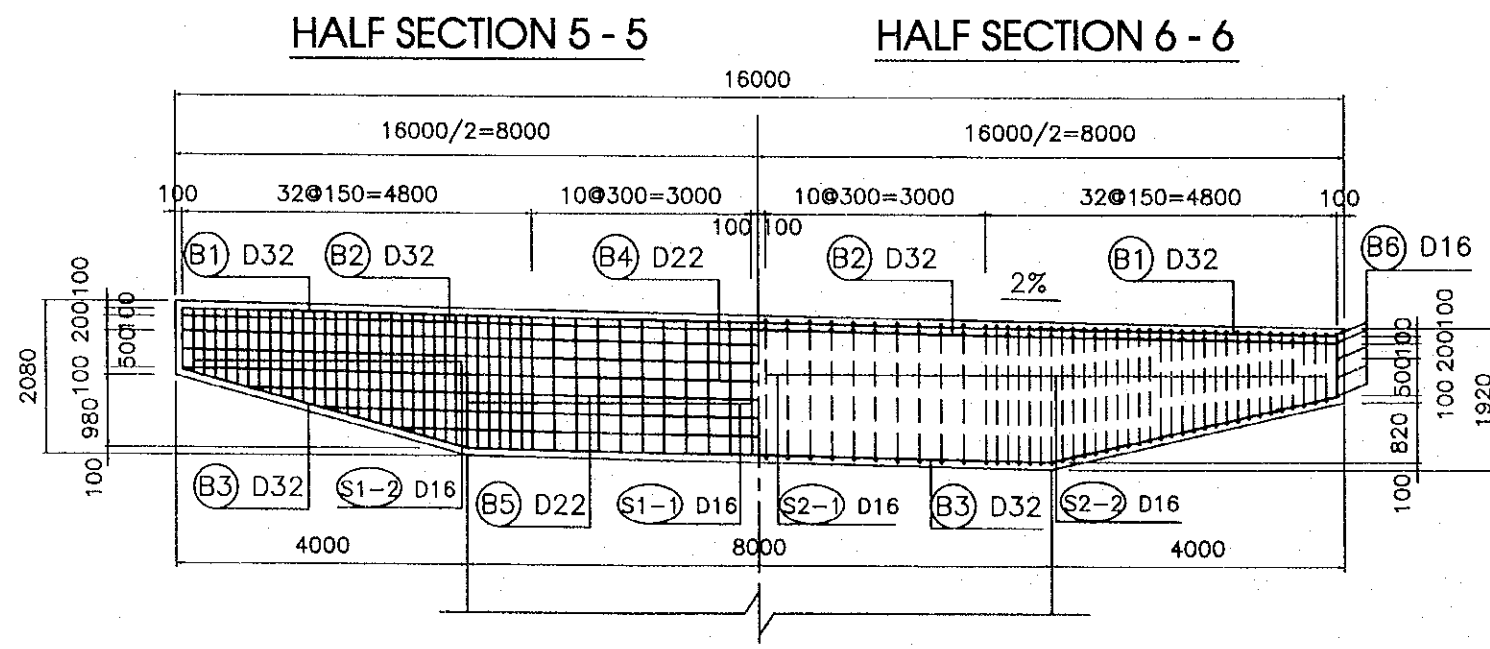
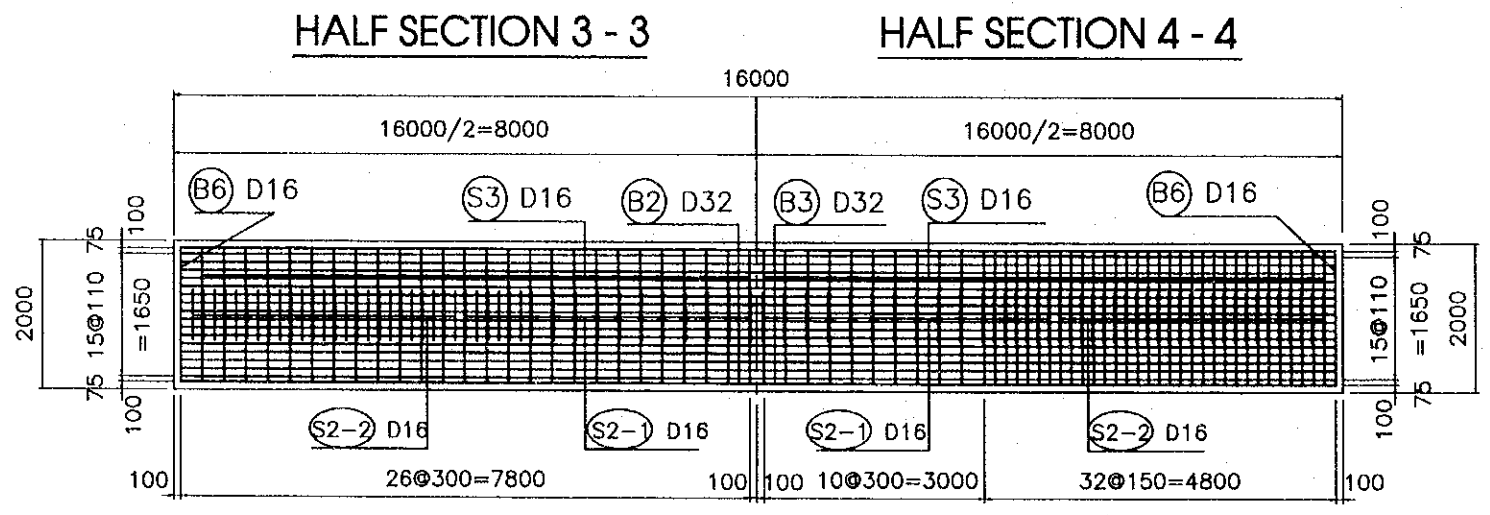
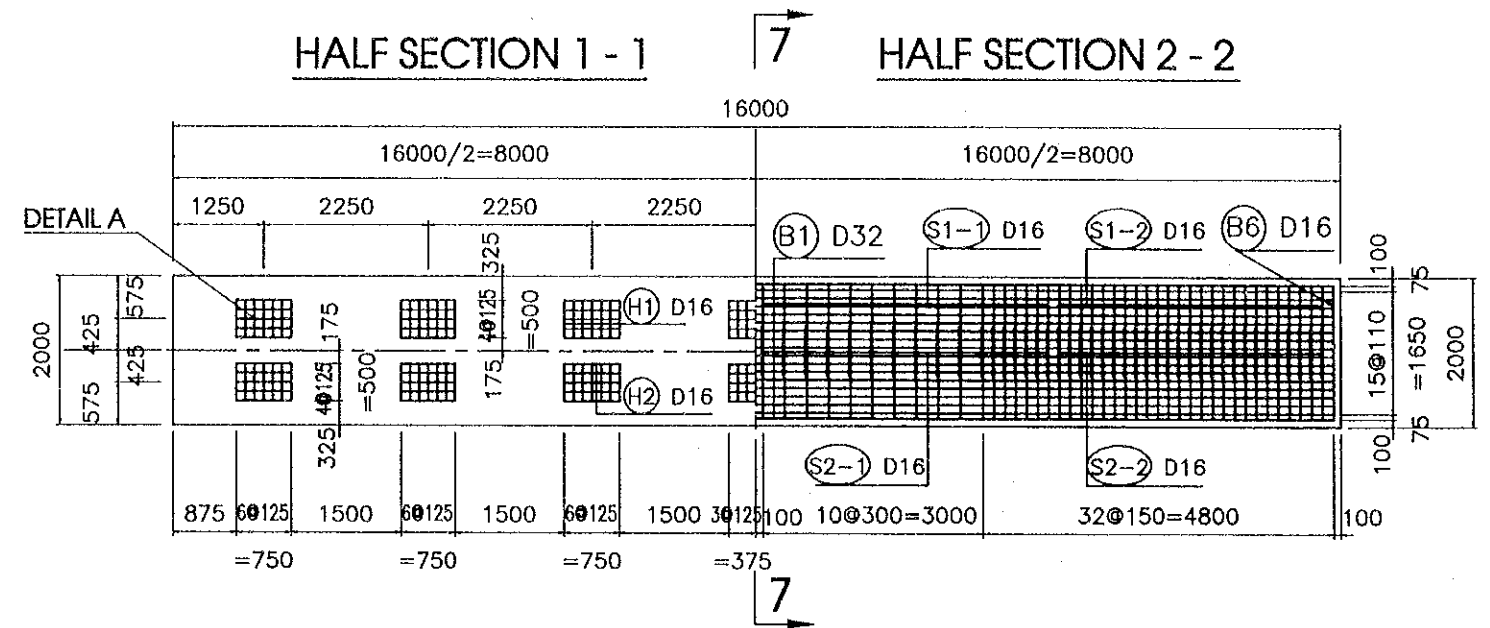


QUANTITY REINFORCEMENT FOR PIER P19L

DETAILS	TYPE	SHAPE	DIAMETER		LENGTH	NUMBER	UNIT WEIGHT		WEIGHT
			mm	mm			kg/m	kg	
PIER CAP	H1	[Shape]	D16	780	780	180	1.560	219.02	
	H2	[Shape]	D16	1030	1030	100	1.560	160.68	
	A1	[Shape]	D32	16080	16080	8	6.230	801.43	
	A2	[Shape]	D22	16190	16190	4	3.040	196.87	
	A3	[Shape]	D16	5338	5338	101	1.560	841.06	
	B1	[Shape]	D32	34620	34620	16	6.230	3450.92	
	B2	[Shape]	D32	8520	8520	32	6.230	1698.55	
	B3-1	[Shape]	D32	36354	36354	16	6.230	3623.77	
	B3-2	[Shape]	D32	25420	25420	16	6.230	2533.87	
	B4	[Shape]	D22	32120	32120	6	3.040	585.87	
	B5	AVE	[Shape]	D22	29075	29075	10	3.040	883.88
	B6	[Shape]	D16	2150	2150	10	1.560	33.54	
	S1-1	[Shape]	D16	5240	5240	70	1.560	572.21	
	S1-2	AVE	[Shape]	D16	4907	4907	134	1.560	1025.76
	S2-1	[Shape]	D16	3968	3968	70	1.560	433.30	
	S2-2	AVE	[Shape]	D16	3635	3635	134	1.560	759.86
	S3	[Shape]	D16	2150	2150	408	1.560	1368.43	
	COLUMN	C1	[Shape]	D25	9895	9895	204	3.980	8033.95
C2		[Shape]	D16	9437	9437	150	1.560	2208.26	
C3		[Shape]	D16	5330	5330	180	1.560	1496.66	
FOOTING	F1	[Shape]	D32	8320	8320	199	6.230	10314.89	
	F2	[Shape]	D19	6436	6436	199	2.250	2881.72	
	F3	[Shape]	D19	28090	28090	25	2.250	1580.06	
	F4	[Shape]	D19	26220	26220	25	1.560	1474.88	
	F5	[Shape]	D16	6300	6300	10	1.560	98.28	
	F6	[Shape]	D16	25960	25960	8	1.560	323.98	
	F7	[Shape]	D16	4534	4534	130	1.560	919.50	
	F8	AVE	[Shape]	D16	4190	4190	156	1.560	1019.68
SUMMARY	TOTAL PIER P19L			D32		22423.41		Kg	49540.86
				D29		0.00		Kg	
				D25		8033.95		Kg	
				D22		1666.62		Kg	
				D19		5936.66		Kg	
			D16		11480.22		Kg		

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-1-3c-85	
NH No.5 - FLYOVER			
BAR ARRANGEMENT FOR PIERS P19R,P20,P21 (1)			



0.32

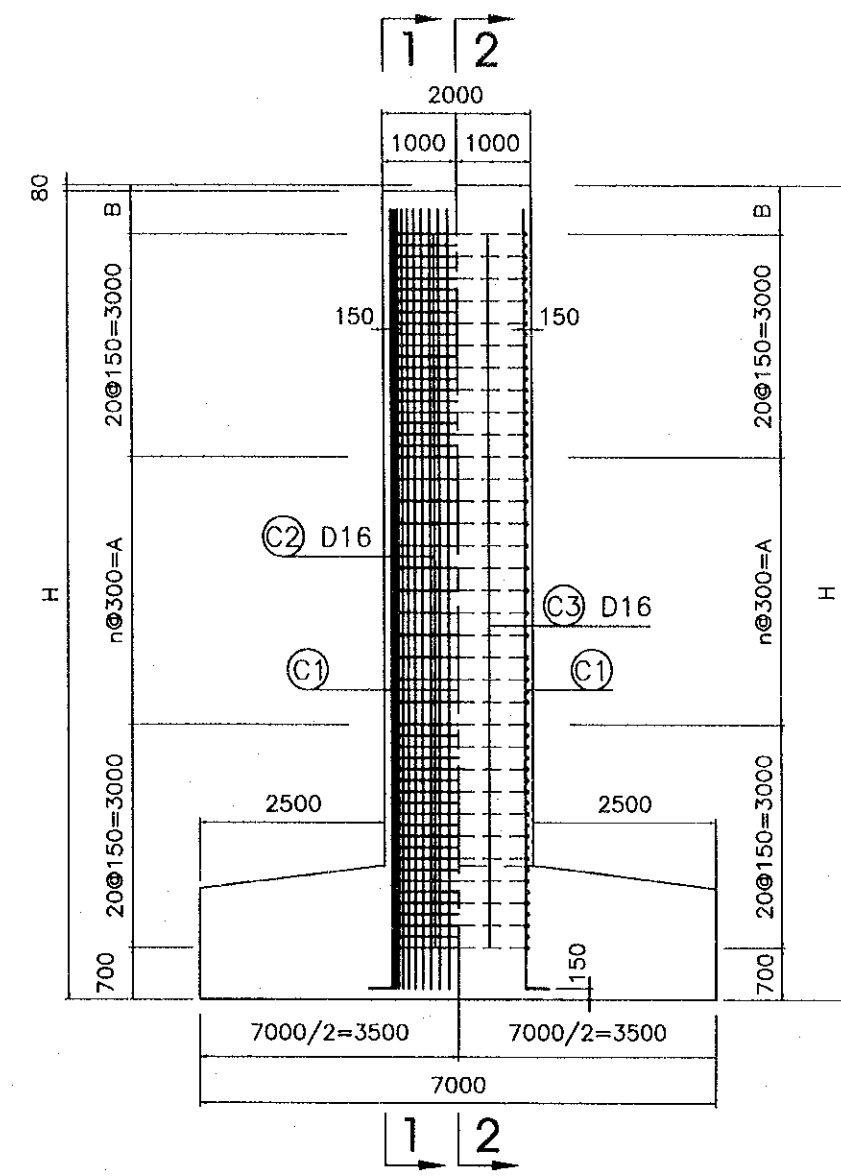
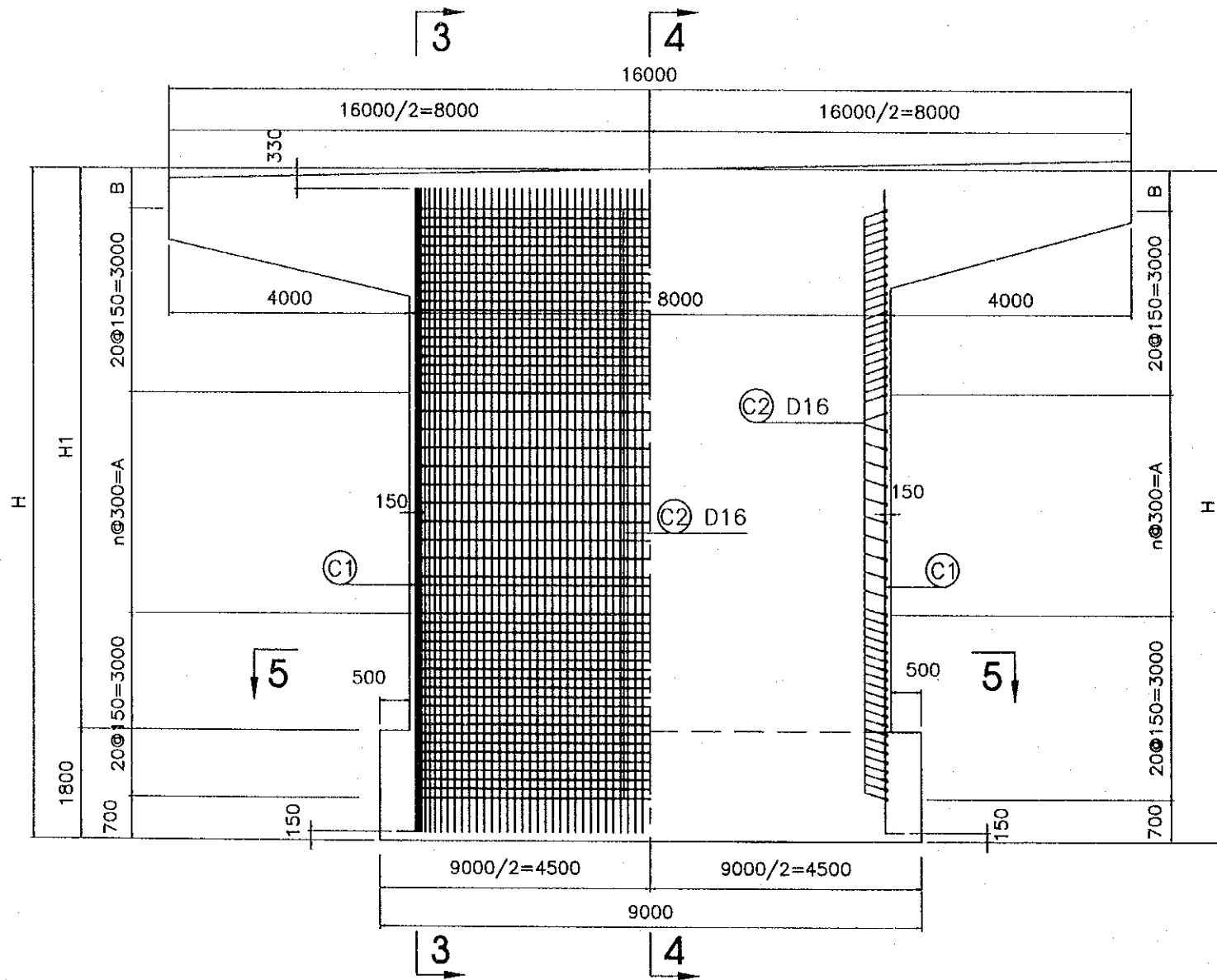
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (TIANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	DATE 2000.3.17
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/100	DRAWING No. C-1-3c-B6	SHEET No.
NH No.5 - FLYOVER BAR ARRANGEMENT FOR PIERS P19R,P20,P21 (2)			

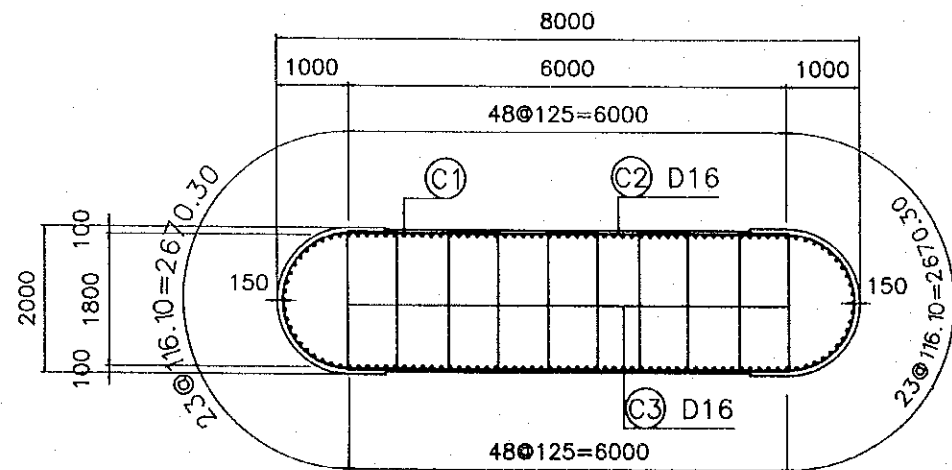
HALF SECTION 1 - 1

HALF SECTION 2 - 2

HALF SECTION 3 - 3 HALF SECTION 4 - 4



SECTION 5 - 5



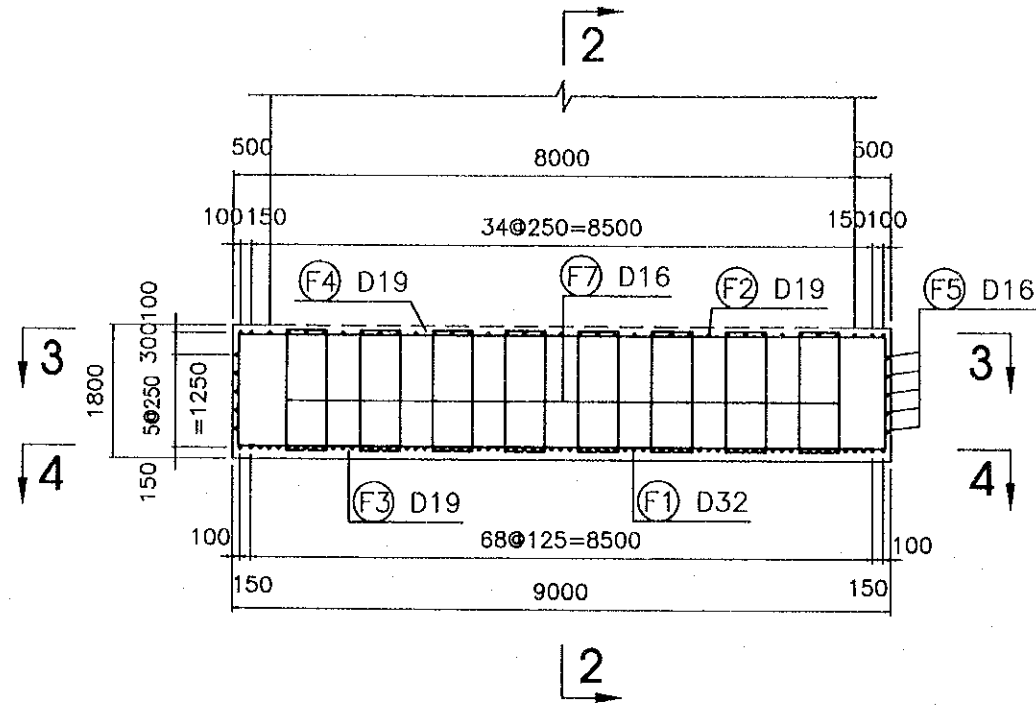
DIMENSION OF PIERS

ITEMS PIER	H(mm)	H1(mm)	A(mm)	B(mm)	n
P19R	10152	8352	3000	452	10
P20L	11000	9200	3900	400	13
P20R	11000	9200	3900	400	13
P21L	11000	8200	2700	600	9
P21R	11000	8200	2700	600	9

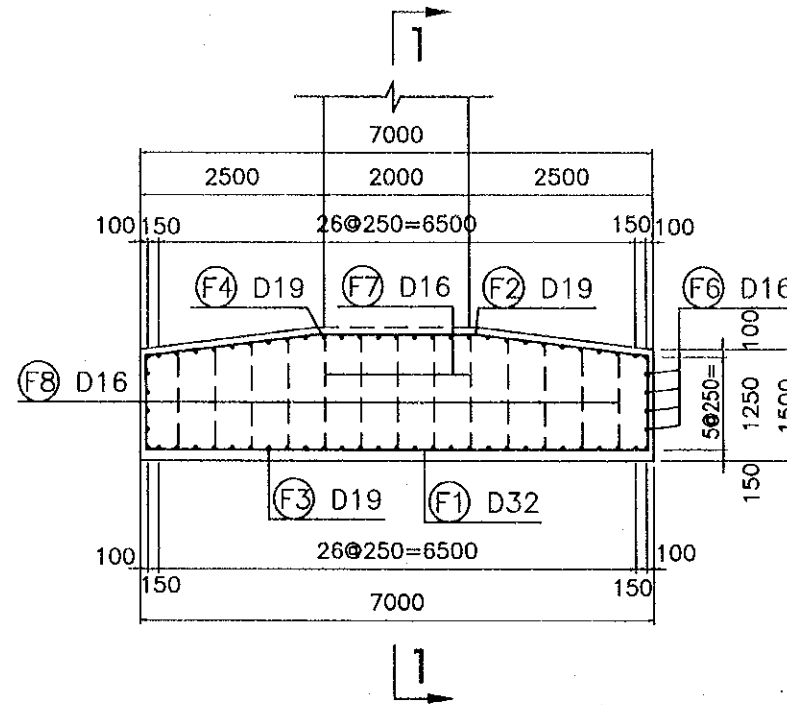
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONTRACTOR	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000. 03. 17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-1-3c-87	
NH No.5 - FLYOVER BAR ARRANGEMENT FOR PIERS P19R,P20,P21 (3)			

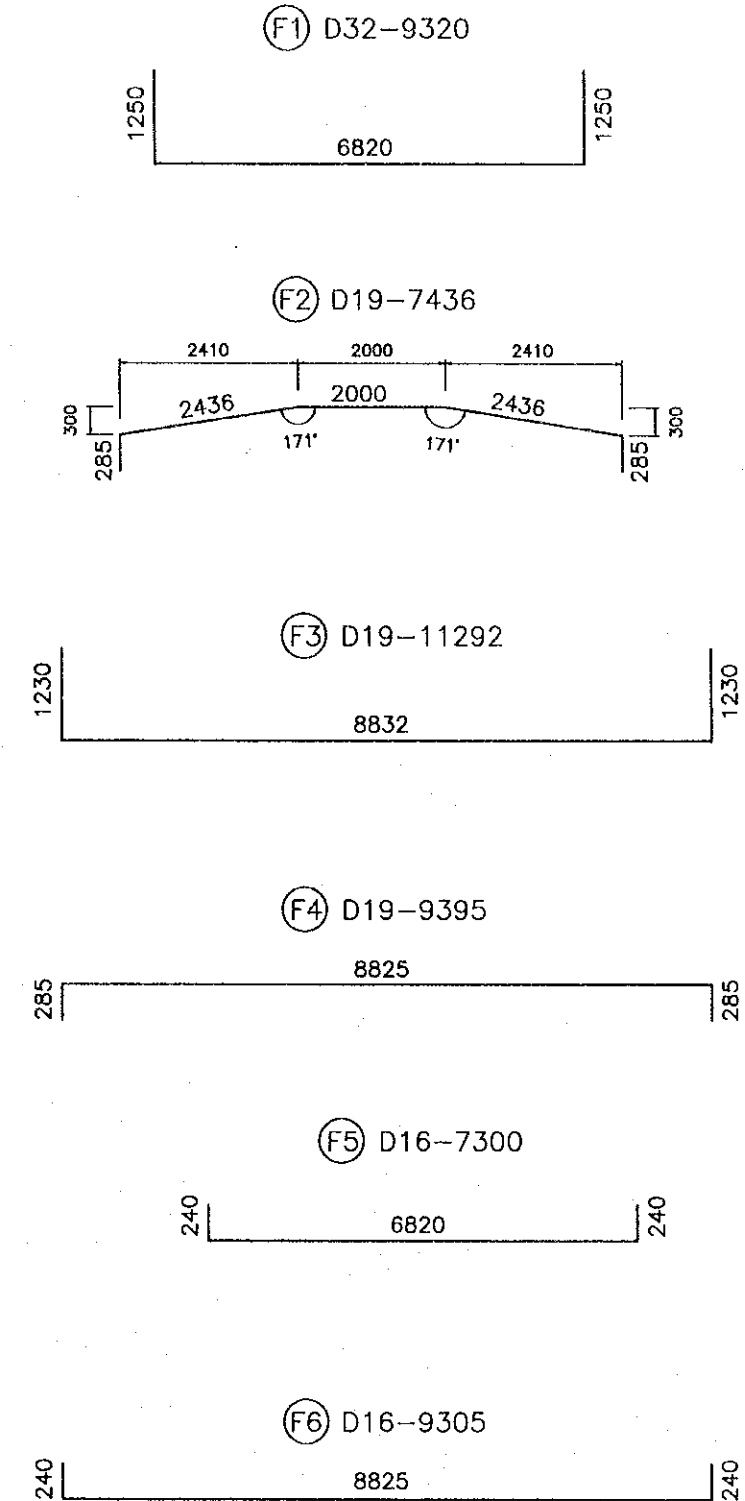
### SECTION 1 - 1



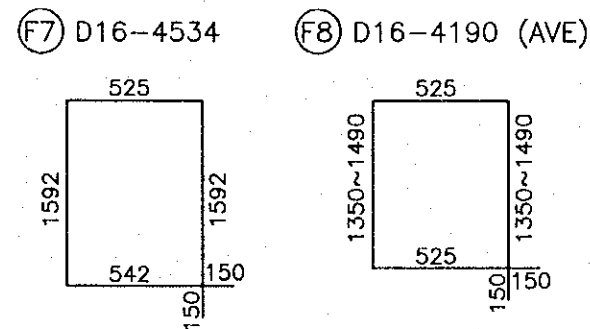
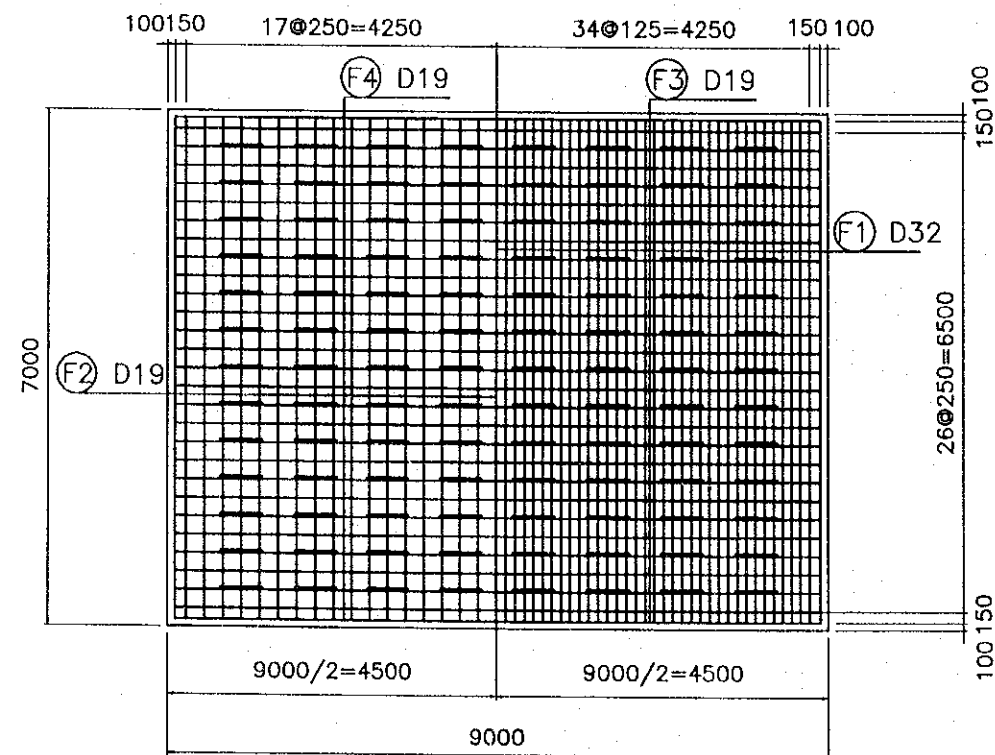
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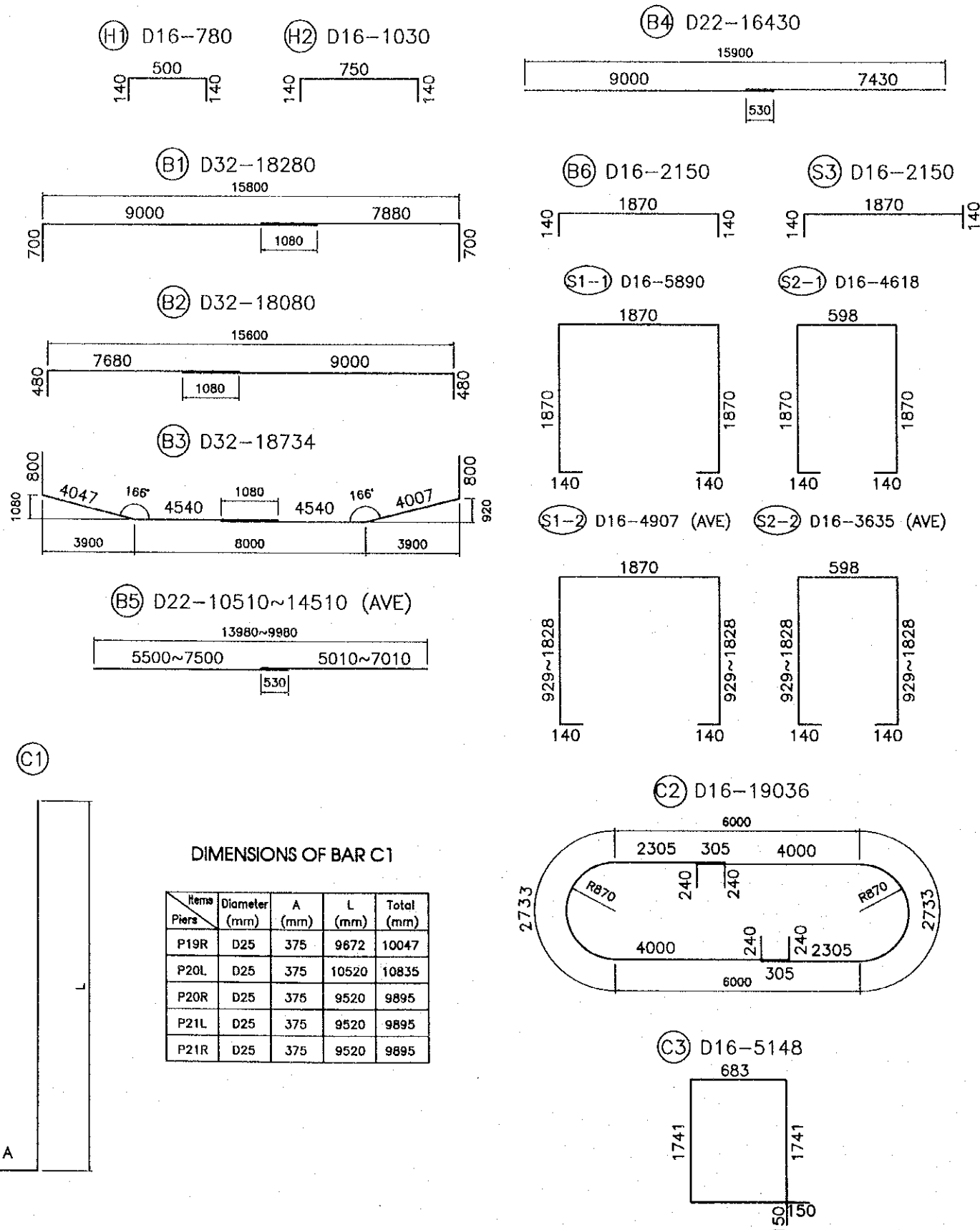
### LIST OF REINFORCING BARS FOR FOOTING



### HALF SECTION 3 - 3 HALF SECTION 4 - 4



LIST OF REINFORCING BARS FOR BEAM AND COLUMN



QUANTITY REINFORCEMENT FOR PIER P19R

DETAILS	TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
			mm	mm		kg/m	kg
PIER CAP	H1	[Diagram]	D16	780	98	1.560	119.25
	H2	[Diagram]	D16	1030	70	1.560	112.48
	B1	[Diagram]	D32	18280	18	6.230	2049.92
	B2	[Diagram]	D32	18080	18	6.230	2027.49
	B3	[Diagram]	D32	18734	18	6.230	2100.83
	B4	[Diagram]	D22	16430	6	3.040	299.68
	B5	AVE	D22	12510	6	3.040	228.18
	B6	[Diagram]	D16	2150	10	1.560	33.54
	S1-1	[Diagram]	D16	5890	34	1.560	312.41
	S1-2	AVE	D16	4907	50	1.560	382.75
	S2-1	[Diagram]	D16	4618	34	1.560	244.94
	S2-2	AVE	D16	3635	50	1.560	283.53
	S3	[Diagram]	D16	2150	138	1.560	462.85
	COLUMN	C1	[Diagram]	D25	10047	140	3.980
C2		[Diagram]	D16	19036	51	1.560	1514.50
C3		[Diagram]	D16	5148	155	1.560	1244.79
FOOTING	F1	[Diagram]	D32	9320	71	6.230	4122.52
	F2	[Diagram]	D19	7436	37	2.250	619.05
	F3	[Diagram]	D19	11292	29	2.250	736.80
	F4	[Diagram]	D19	9395	29	2.250	613.02
	F5	[Diagram]	D16	7300	10	1.560	113.88
	F6	[Diagram]	D16	9305	8	1.560	116.13
	F7	[Diagram]	D16	4534	40	1.560	282.92
	F8	AVE	D16	4190	48	1.560	313.75
SUMMARY	TOTAL PIER P19R						
			D32		10300.76	Kg	
			D25		5598.19	Kg	
			D19		527.87	Kg	
			D16		1968.87	Kg	



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT: RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	
CONSULTANT: PACIFIC CONSULTANTS INTERNATIONAL		DATE	2002.3.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-1-3c-89	
NH No.5 - FLYOVER BAR ARRANGEMENT FOR PIERS P19R,P20,P21 (5)			

QUANTITY REINFORCEMENT FOR PIER P20L

DETAILS	TYPE	SHAPE	DIAMETER mm	LENGTH mm	NUMBER	UNIT WEIGHT kg/m	WEIGHT kg	
PIER CAP	H1		D16	780	98	1.560	119.25	
	H2		D16	1030	70	1.560	112.48	
	B1		D32	18280	18	6.230	2049.92	
	B2		D32	18080	18	6.230	2027.49	
	B3		D32	18734	18	6.230	2100.83	
	B4		D22	16430	6	3.040	299.68	
	B5	AVE	D22	12510	6	3.040	228.18	
	B6		D16	2150	10	1.560	33.54	
	S1-1		D16	5890	34	1.560	312.41	
	S1-2	AVE	D16	4907	50	1.560	382.75	
	S2-1		D16	4618	34	1.560	244.94	
	S2-2	AVE	D16	3635	50	1.560	283.53	
	S3		D16	2150	138	1.560	462.85	
	COLUMN	C1		D25	10895	140	3.980	6070.69
		C2		D16	19036	55	1.560	1633.29
		C3		D16	5148	165	1.560	1325.10
FOOTING	F1		D32	9320	71	6.230	4122.52	
	F2		D19	7436	37	2.250	619.05	
	F3		D19	11292	29	2.250	736.80	
	F4		D19	9395	29	2.250	613.02	
	F5		D16	7300	10	1.560	113.88	
	F6		D16	9305	8	1.560	116.13	
	F7		D16	4534	40	1.560	282.92	
	F8	AVE	D16	4190	48	1.560	313.75	
SUMMARY	TOTAL PIER P20L						24604.98	
			D32		10300.76	Kg		
			D25		6070.69	Kg		
			D22		527.87	Kg		
			D19		1968.87	Kg		
		D16		5736.79	Kg			

QUANTITY REINFORCEMENT FOR PIER P21L

DETAILS	TYPE	SHAPE	DIAMETER mm	LENGTH mm	NUMBER	UNIT WEIGHT kg/m	WEIGHT kg	
PIER CAP	H1		D16	780	98	1.560	119.25	
	H2		D16	1030	70	1.560	112.48	
	B1		D32	18280	18	6.230	2049.92	
	B2		D32	18080	18	6.230	2027.49	
	B3		D32	18734	18	6.230	2100.83	
	B4		D22	16430	6	3.040	299.68	
	B5	AVE	D22	12510	6	3.040	228.18	
	B6		D16	2150	10	1.560	33.54	
	S1-1		D16	5890	34	1.560	312.41	
	S1-2	AVE	D16	4907	50	1.560	382.75	
	S2-1		D16	4618	34	1.560	244.94	
	S2-2	AVE	D16	3635	50	1.560	283.53	
	S3		D16	2150	138	1.560	462.85	
	COLUMN	C1		D25	9895	140	3.980	5513.49
		C2		D16	19036	51	1.560	1514.50
		C3		D16	5148	145	1.560	1164.48
FOOTING	F1		D32	9320	71	6.230	4122.52	
	F2		D19	7436	37	2.250	619.05	
	F3		D19	11292	29	2.250	736.80	
	F4		D19	9395	29	2.250	613.02	
	F5		D16	7300	10	1.560	113.88	
	F6		D16	9305	8	1.560	116.13	
	F7		D16	4534	40	1.560	282.92	
	F8	AVE	D16	4190	48	1.560	313.75	
SUMMARY	TOTAL PIER P21L						23768.38	
			D32		10300.76	Kg		
			D25		5513.49	Kg		
			D22		527.87	Kg		
			D19		1968.87	Kg		
		D16		5457.39	Kg			

QUANTITY REINFORCEMENT FOR PIER P20R

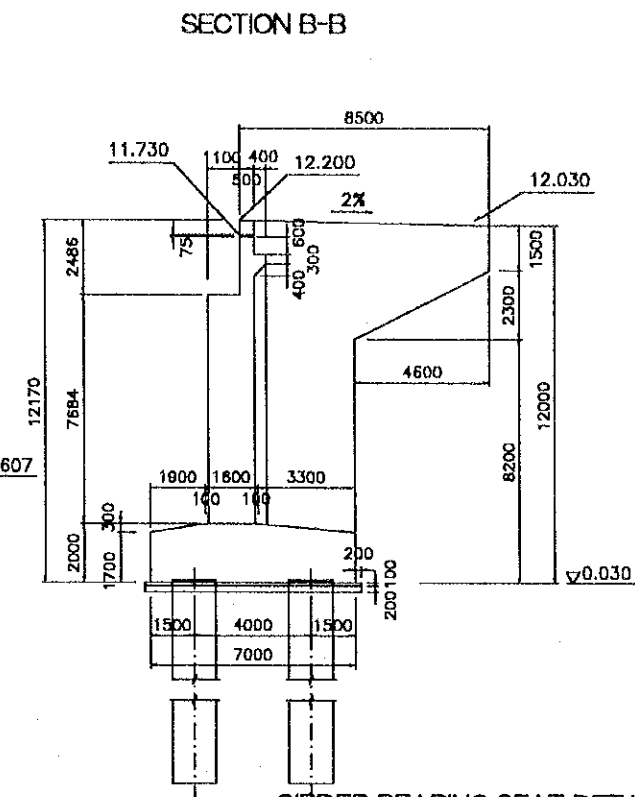
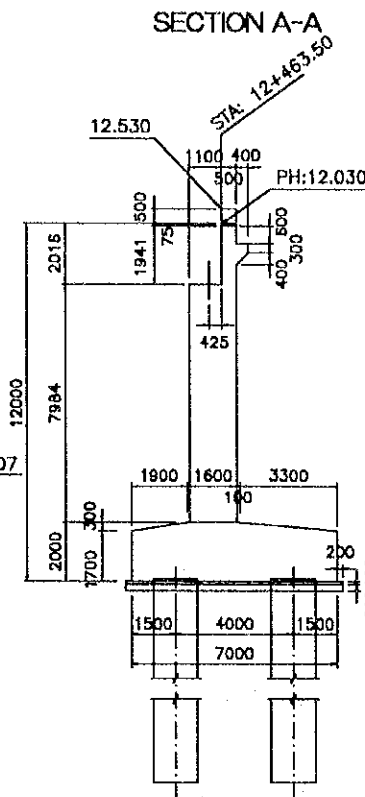
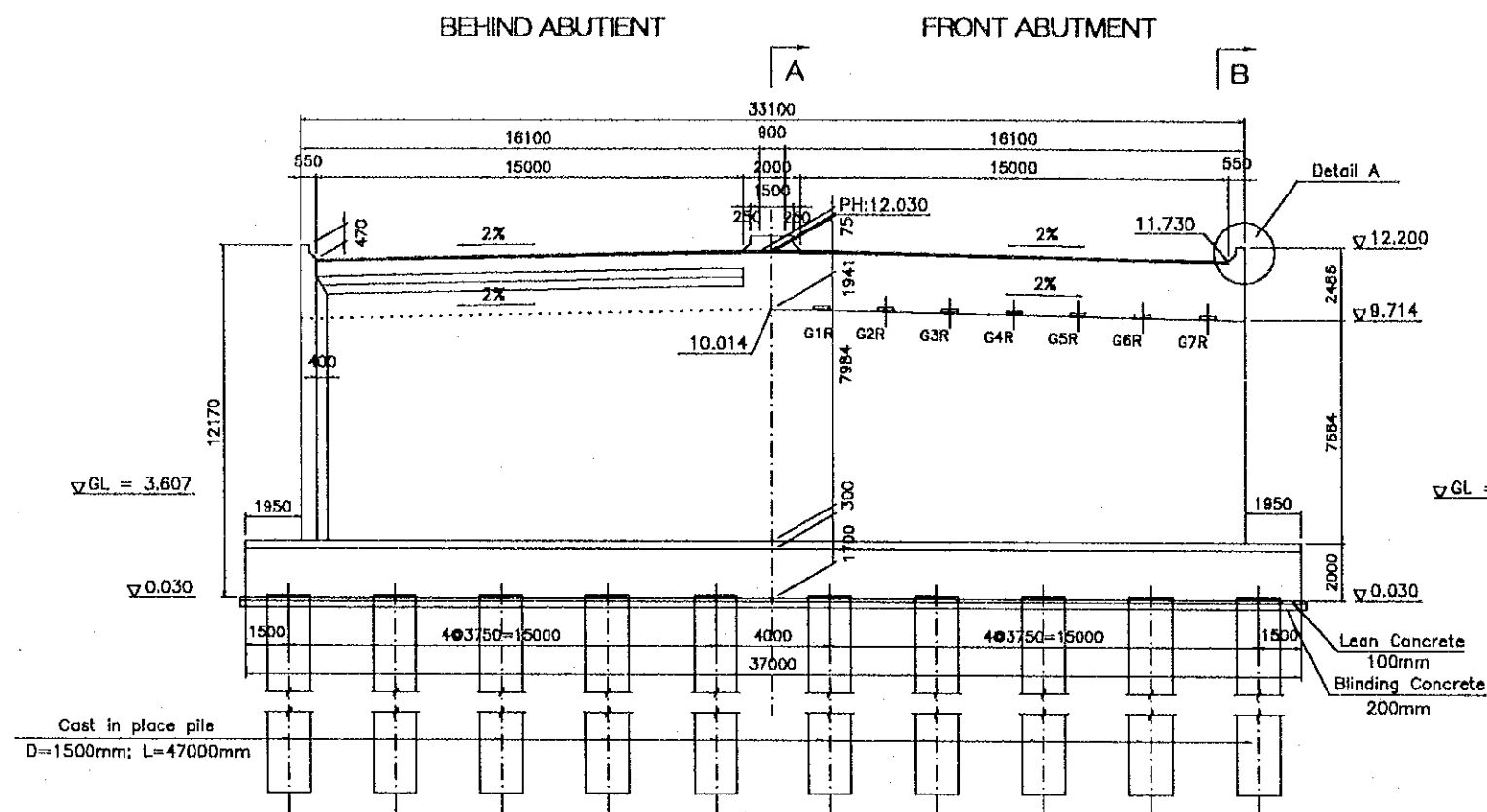
DETAILS	TYPE	SHAPE	DIAMETER mm	LENGTH mm	NUMBER	UNIT WEIGHT kg/m	WEIGHT kg	
PIER CAP	H1		D16	780	98	1.560	119.25	
	H2		D16	1030	70	1.560	112.48	
	B1		D32	18280	18	6.230	2049.92	
	B2		D32	18080	18	6.230	2027.49	
	B3		D32	18734	18	6.230	2100.83	
	B4		D22	16430	6	3.040	299.68	
	B5	AVE	D22	12510	6	3.040	228.18	
	B6		D16	2150	10	1.560	33.54	
	S1-1		D16	5890	34	1.560	312.41	
	S1-2	AVE	D16	4907	50	1.560	382.75	
	S2-1		D16	4618	34	1.560	244.94	
	S2-2	AVE	D16	3635	50	1.560	283.53	
	S3		D16	2150	138	1.560	462.85	
	COLUMN	C1		D25	10895	140	3.980	6070.69
		C2		D16	19036	55	1.560	1633.29
		C3		D16	5148	165	1.560	1325.10
FOOTING	F1		D32	9320	71	6.230	4122.52	
	F2		D19	7436	37	2.250	619.05	
	F3		D19	11292	29	2.250	736.80	
	F4		D19	9395	29	2.250	613.02	
	F5		D16	7300	10	1.560	113.88	
	F6		D16	9305	8	1.560	116.13	
	F7		D16	4534	40	1.560	282.92	
	F8	AVE	D16	4190	48	1.560	313.75	
SUMMARY	TOTAL PIER P20R						24604.98	
			D32		10300.76	Kg		
			D25		6070.69	Kg		
			D22		527.87	Kg		
			D19		1968.87	Kg		
		D16		5736.79	Kg			

QUANTITY REINFORCEMENT FOR PIER P21R

DETAILS	TYPE	SHAPE	DIAMETER mm	LENGTH mm	NUMBER	UNIT WEIGHT kg/m	WEIGHT kg	
PIER CAP	H1		D16	780	98	1.560	119.25	
	H2		D16	1030	70	1.560	112.48	
	B1		D32	18280	18	6.230	2049.92	
	B2		D32	18080	18	6.230	2027.49	
	B3		D32	18734	18	6.230	2100.83	
	B4		D22	16430	6	3.040	299.68	
	B5	AVE	D22	12510	6	3.040	228.18	
	B6		D16	2150	10	1.560	33.54	
	S1-1		D16	5890	34	1.560	312.41	
	S1-2	AVE	D16	4907	50	1.560	382.75	
	S2-1		D16	4618	34	1.560	244.94	
	S2-2	AVE	D16	3635	50	1.560	283.53	
	S3		D16	2150	138	1.560	462.85	
	COLUMN	C1		D25	9895	140	3.980	5513.49
		C2		D16	19036	51	1.560	1514.50
		C3		D16	5148	145	1.560	1164.48
FOOTING	F1		D32	9320	71	6.230	4122.52	
	F2		D19	7436	37	2.250	619.05	
	F3		D19	11292	29	2.250	736.80	
	F4		D19	9395	29	2.250	613.02	
	F5		D16	7300	10	1.560	113.88	
	F6		D16	9305	8	1.560	116.13	
	F7		D16	4534	40	1.560	282.92	
	F8	AVE	D16	4190	48	1.560	313.75	
SUMMARY	TOTAL PIER P21R						23768.38	
			D32		10300.76	Kg		
			D25		5513.49	Kg		
			D22		527.87	Kg		
			D19		1968.87	Kg		
		D16		5457.39	Kg			

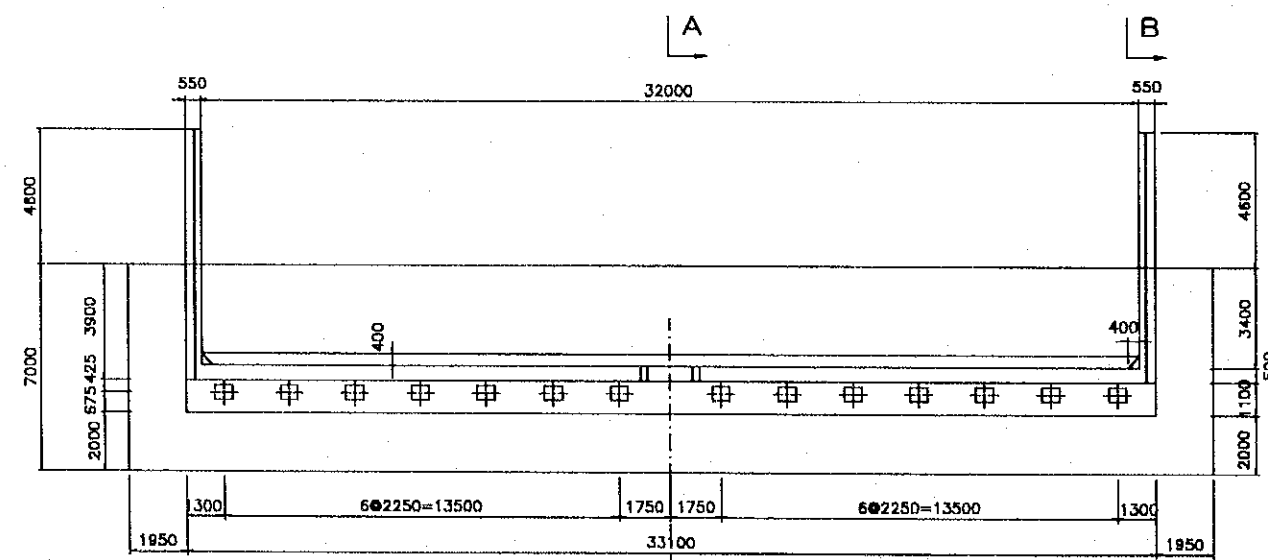
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.6.1

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/250	C-1-3c-90	
NH No.5 FLYOVER - DETAIL OF ABUTMENT A2			

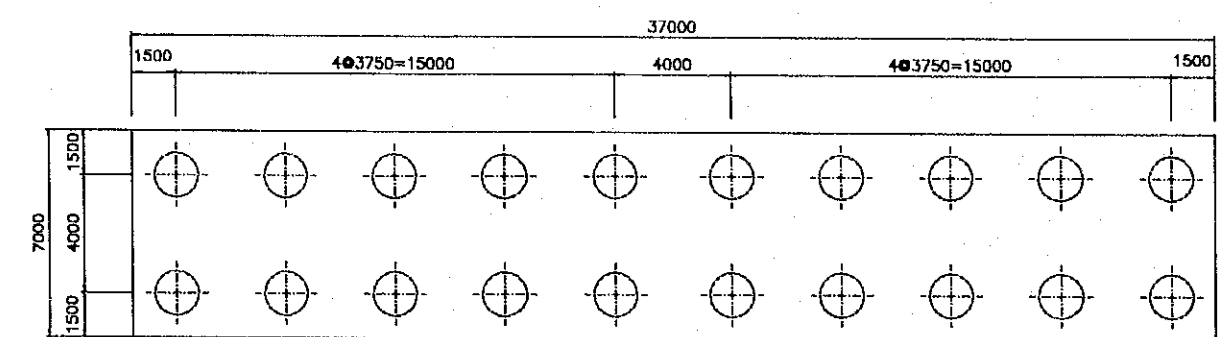


DETAIL OF BALLAST WALL (SC=1/75)

GIRDER BEARING SEAT DETAIL (SC=1/50)



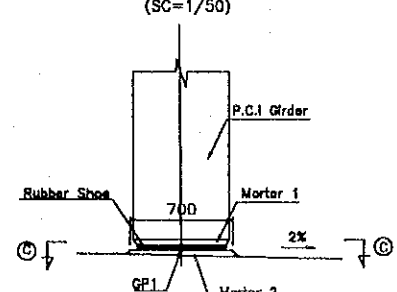
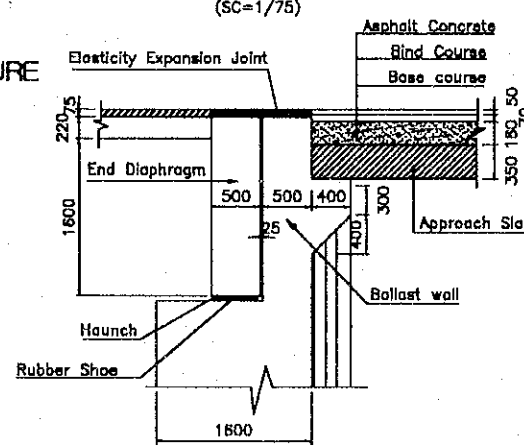
TOP VIEW



PILE ARRANGEMENT

DEPTH OF SUPERSTRUCTURE

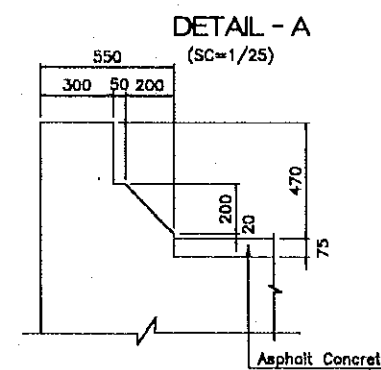
Component	Depth(mm)
AC Layer	75
Slab	207
Girder	1650
Mortar 1	8
Shoe M	58
Mortar 2	20
Total	2016



SECTION C-C

ELEVATION OF TOP BEARING SEAT GP1

Left seat	G1L	G2L	G3L	G4L	G5L	G6L	G7L
Elevation(m)	10.019	9.974	9.929	9.884	9.839	9.794	9.749
Right seat	G1R	G2R	G3R	G4R	G5R	G6R	G7R
Elevation(m)	10.019	9.974	9.929	9.884	9.839	9.794	9.749



DETAIL - A (SC=1/25)

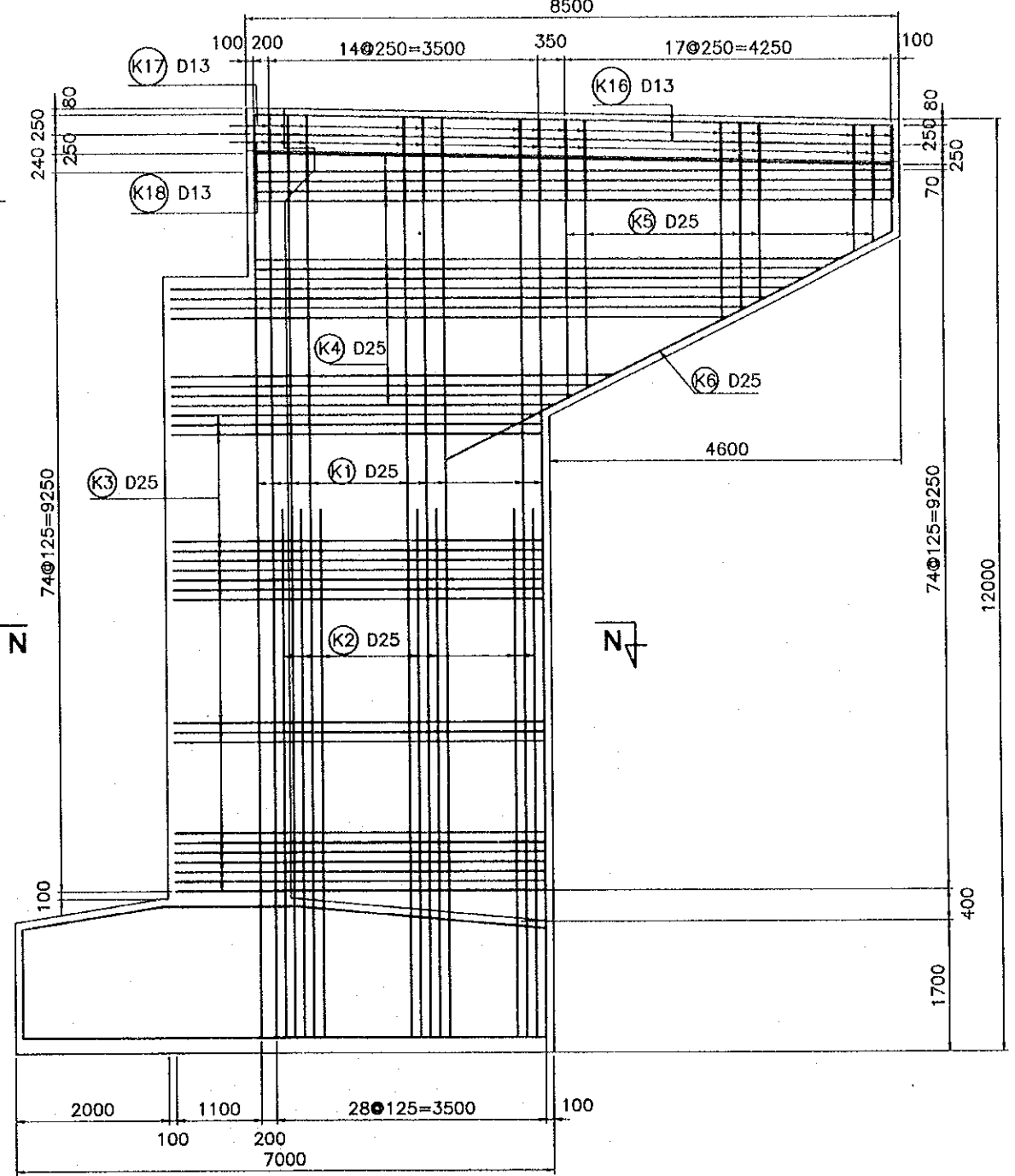
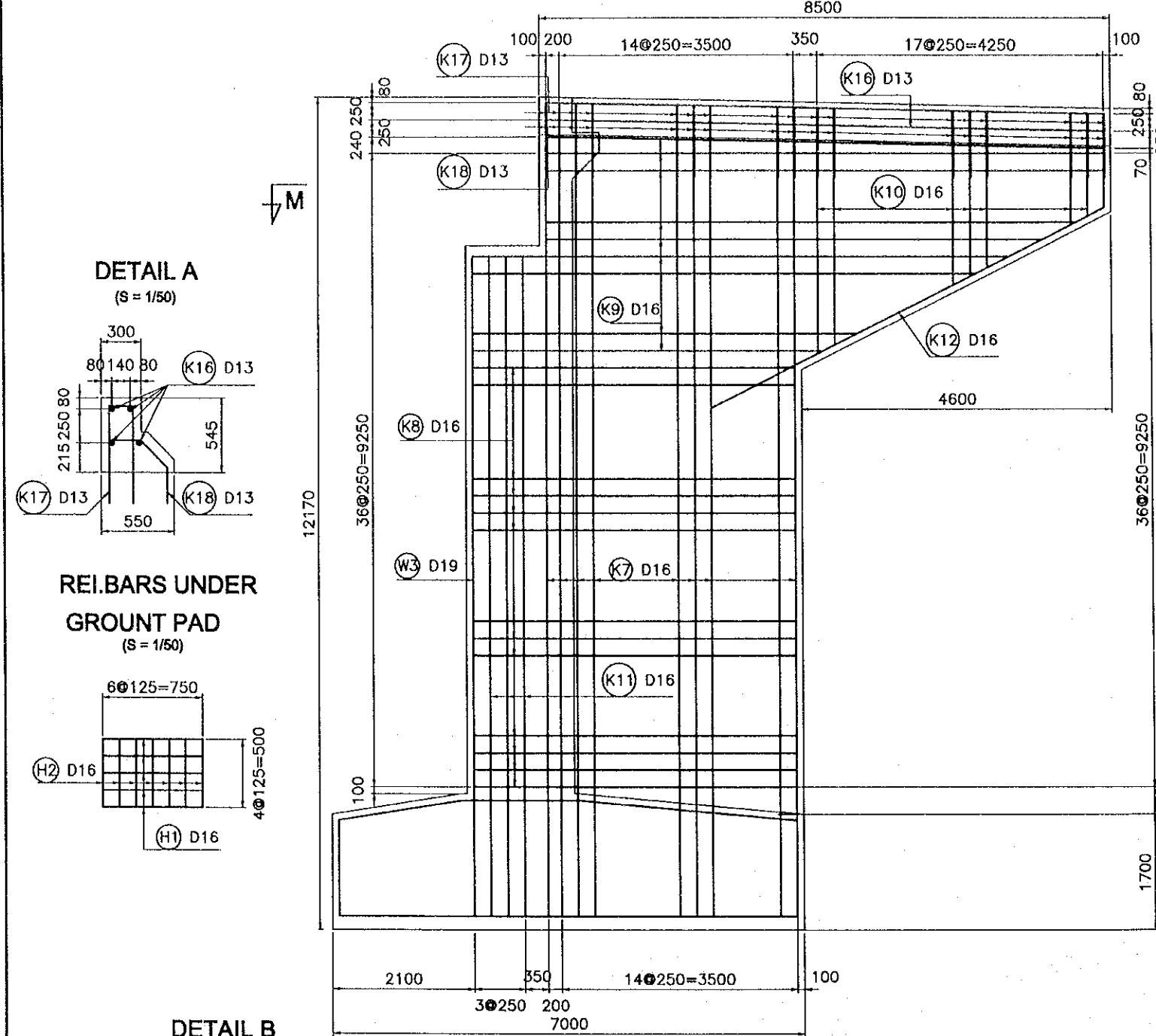


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT	DESIGNED BY S. WATASE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.3.14

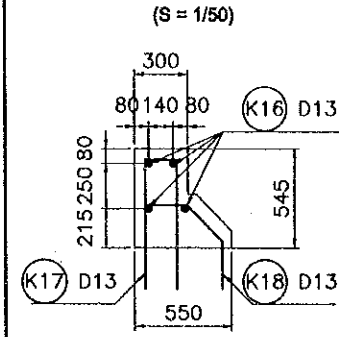
PACKAGE 2	SCALE 1/100	DRAWING No. C-1-3c-92	SHEET No.
H1 No.5 - FLYOVER BAR ARRANGEMENT FOR ABUTMENT A2 (2)			

SECTION H - H

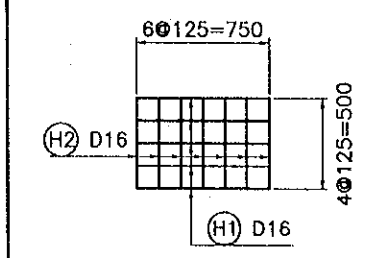
SECTION K - K



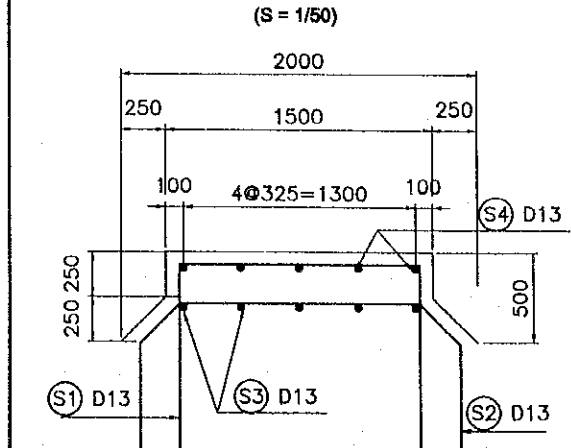
DETAIL A



REI.BARS UNDER GROUT PAD

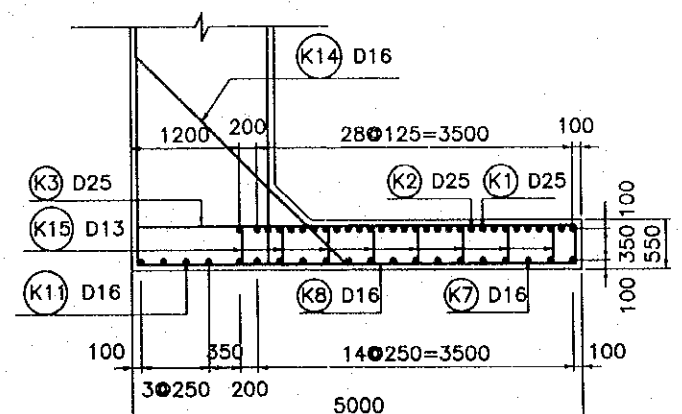
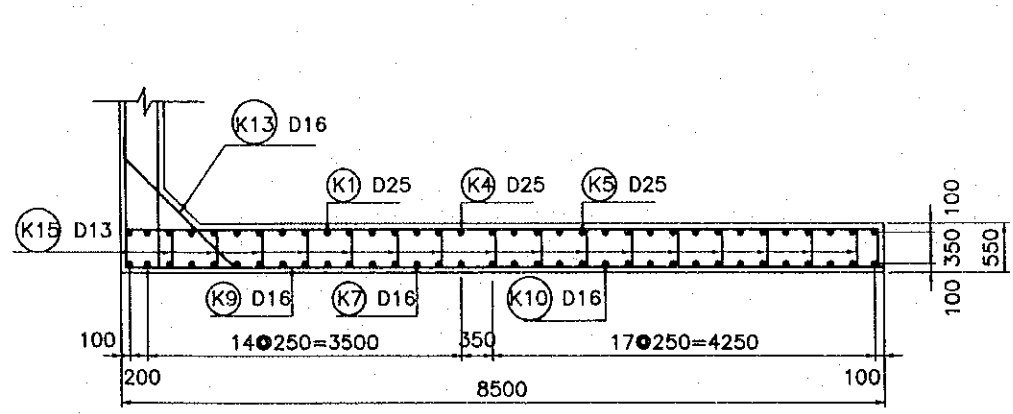


DETAIL B



SECTION M - M

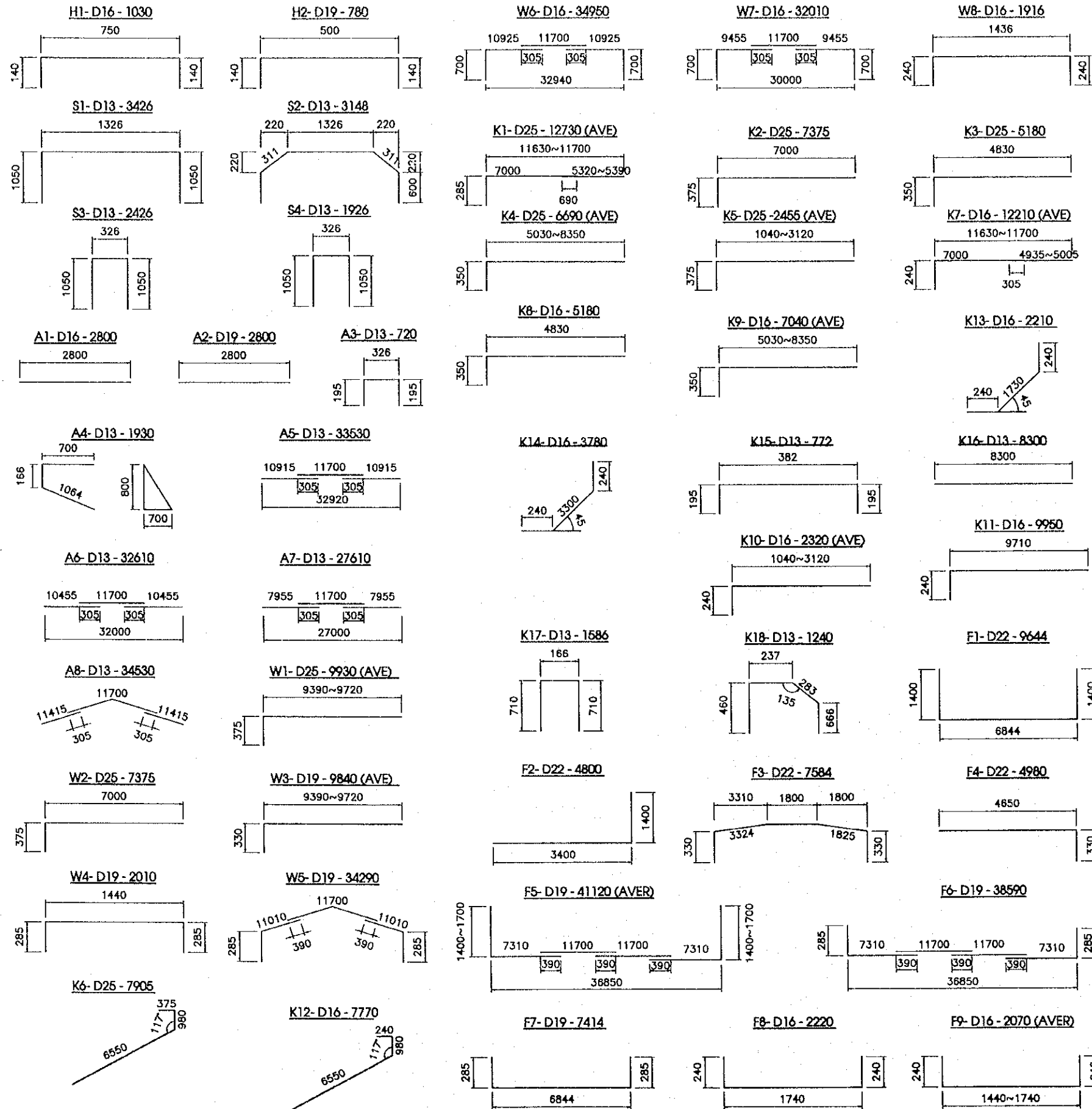
SECTION N - N



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT RED RIVER BRIDGE (NHAN TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.03.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-1-3c-93	
NH No.5 - FLYOVER BAR ARRANGEMENT FOR ABUTMENT A2 (3)			

LIST OF REINFORCING BARS

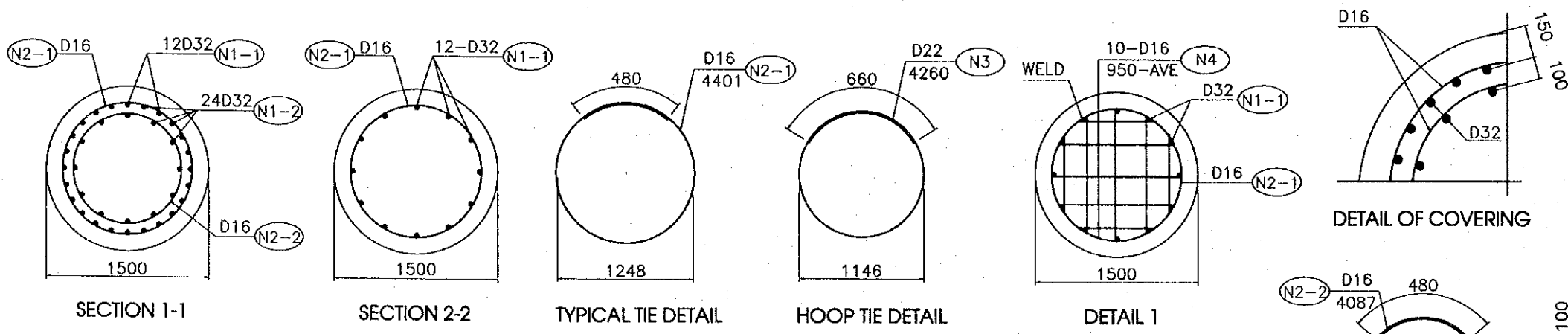
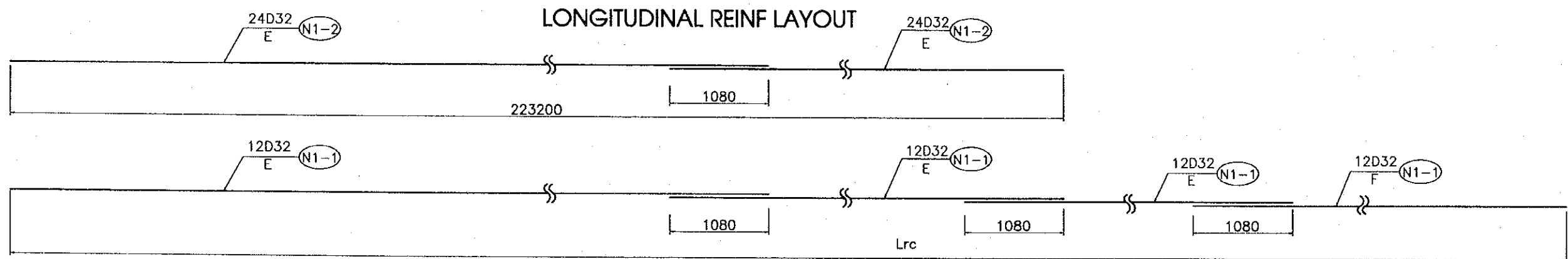
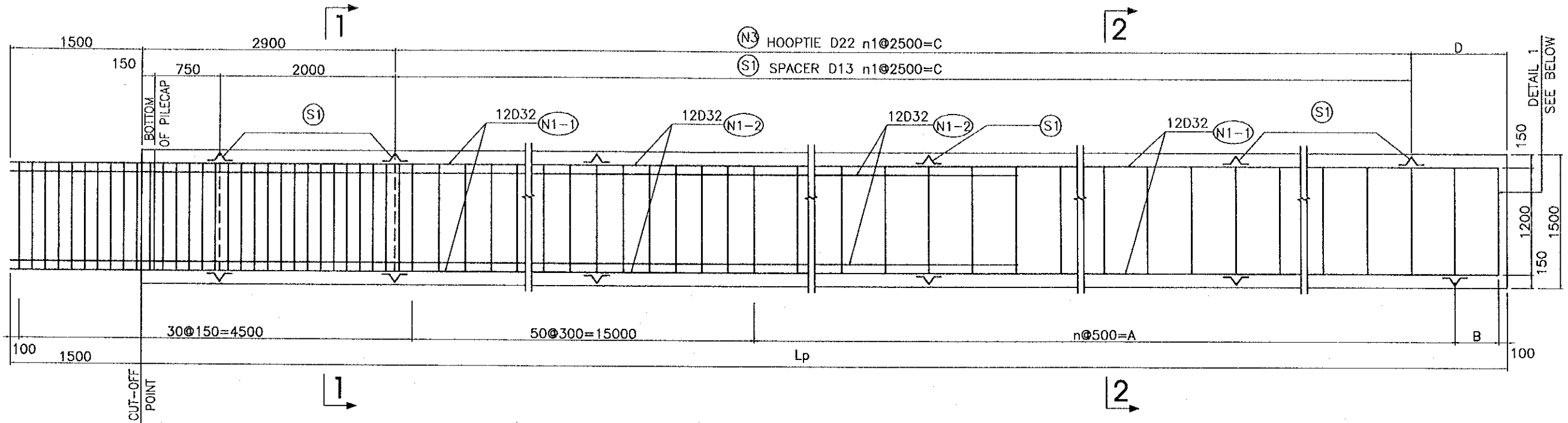


QUANTITY REINFORCEMENT FOR ABUTMENT A2

TYPE	SHAPE	DIAMETER		LENGTH	NUMBER	UNIT WEIGHT		WEIGHT	
		mm	mm			kg/m	kg		
H1		D16	1030	70	1.560	112.48			
H2		D16	780	98	1.560	119.25			
S1		D13	3426	2	0.995	6.82			
S2		D13	3148	2	0.995	6.82			
S3		D13	2426	5	0.995	12.07			
S4		D13	1926	5	0.995	9.58			
A1		D16	2800	133	1.560	580.94			
A2		D19	2800	263	2.250	1656.90			
A3		D13	720	399	0.995	285.84			
A4		D13	1930	129	0.995	247.73			
A5		D13	33530	13	0.995	433.71			
A6		D13	32610	2	0.995	64.89			
A7		D13	27610	2	0.995	54.94			
A8		D13	34530	2	0.995	68.71			
W1	AVE	D25	9930	133	3.980	5256.35			
W2		D25	7375	130	3.980	3815.83			
W3	AVE	D19	9840	133	2.250	2944.62			
W4		D19	2010	133	2.250	601.49			
W5		D19	34290	5	2.250	385.76			
W6		D16	34950	65	1.560	3543.93			
W7		D16	32010	1	1.560	49.94			
W8		D16	1916	526	1.560	1572.19			
K1	AVE	D25	12730	32	3.980	1621.29			
K2		D25	7375	26	3.980	763.17			
K3		D25	5180	100	3.980	2061.64			
K4	AVE	D25	6690	52	3.980	1384.56			
K5	AVE	D25	2320	34	3.980	313.94			
K6		D25	7905	2	3.980	62.92			
K7	AVE	D16	12210	32	1.560	609.52			
K8		D16	5180	50	1.560	404.04			
K9	AVE	D16	7040	26	1.560	285.54			
K10	AVE	D16	2320	34	1.560	123.05			
K11		D16	9950	6	1.560	93.13			
K12		D16	7770	2	1.560	24.24			
K13		D16	2210	10	1.560	34.48			
K14		D16	3780	68	1.560	400.98			
K15		D13	772	333	0.995	255.79			
K16		D13	8300	8	0.995	66.07			
K17		D13	1586	68	0.995	107.31			
K18		D13	1240	68	0.995	83.90			
F1		D22	9644	149	3.040	4368.35			
F2		D22	4800	146	3.040	2130.43			
F3		D22	7584	149	3.040	3435.25			
F4		D22	4980	146	3.040	2210.32			
F5	AVE	D22	41120	52	3.040	6500.25			
F6		D19	38590	10	2.250	868.28			
F7		D19	7414	10	2.250	166.82			
F8		D16	2220	148	1.560	512.55			
F9	AVE	D16	2070	333	1.560	1075.32			
TOTAL ABUTMENT A2									
		D25			15279.70	Kg			
		D22			18644.60	Kg			
		D19			6623.87	Kg			
		D16			9541.59	Kg			
		D13			1703.63	Kg			

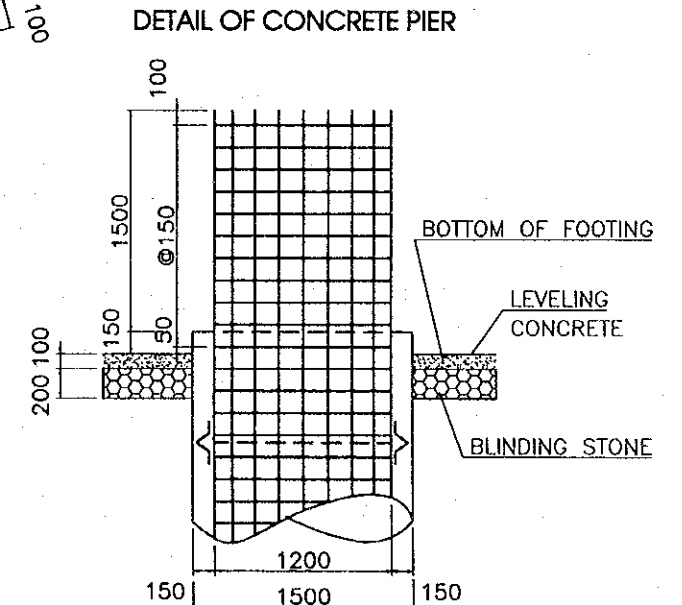
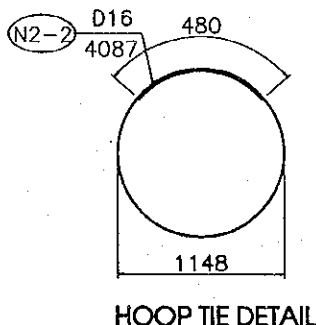
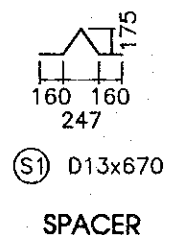
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM VIANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	DATE 2000. 3. 14.
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		


PACKAGE 2	SCALE 1/50	DRAWING No. C-1-3c-94	SHEET No.
NH No.5 - FLYOVER DETAIL OF D=150CM CAST-IN-PLACE CONCRETE PILE(1)			



DIMENSIONS OF PILE

Pile	Dimensions of pile						Dimensions of bar N1				N1-2 Total(mm)	
	Lp(mm)	A(mm)	B(mm)	C(mm)	D(mm)	n	n1	Lrc(mm)	E(mm)	F(mm)		Total(mm)
A1	40000	21500	300	35000	2600	43	14	41400	11700	9540	44640	23400
A2	40000	21500	300	35000	2600	43	14	41400	11700	9540	44640	23400



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JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-1-3c-95	
NH No.5 - FLYOVER			
DETAIL OF D=150CM CAST-IN-PLACE CONCRETE PILE(2)			

QUANTITY MATERIAL OF PILE FOR ABUTMENT A1 (PER 1 PILE)

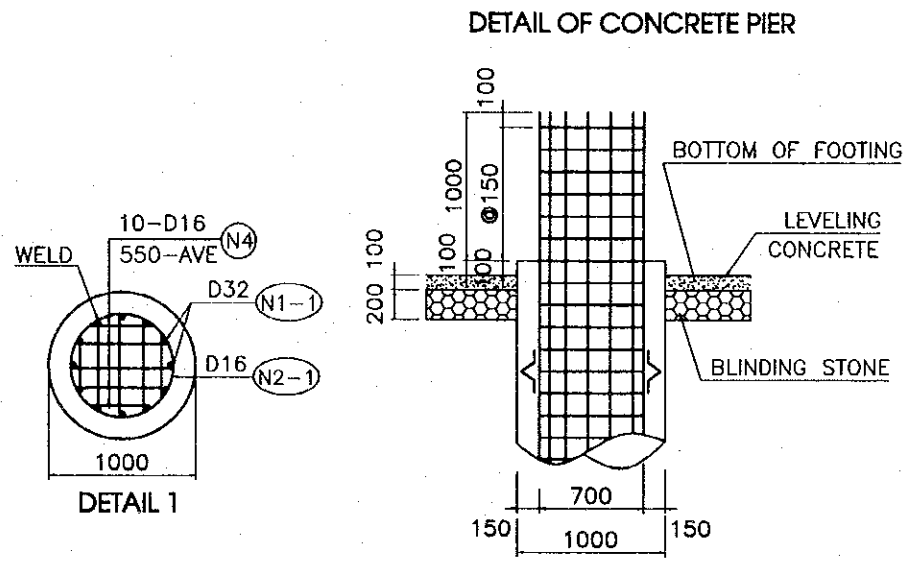
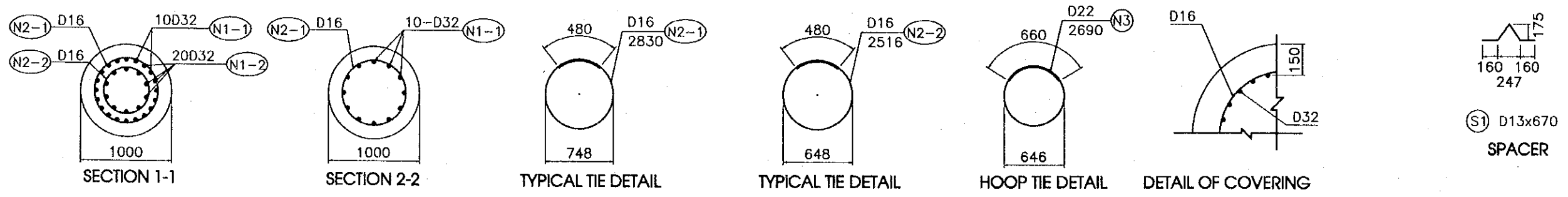
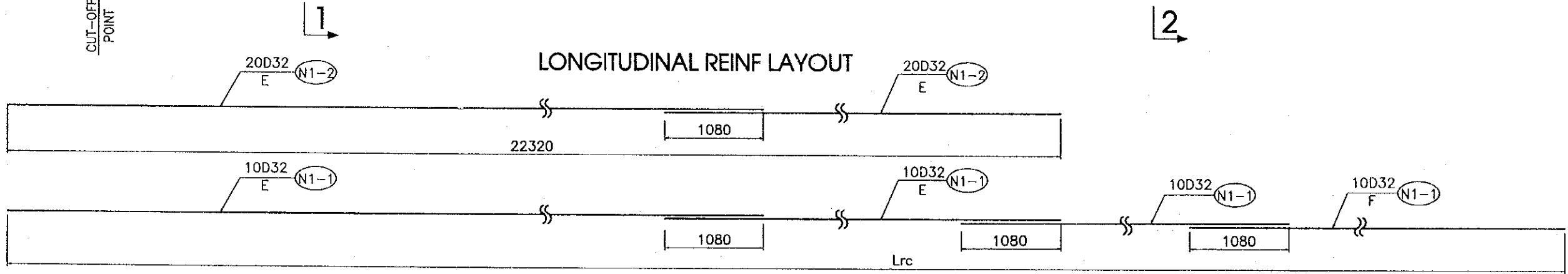
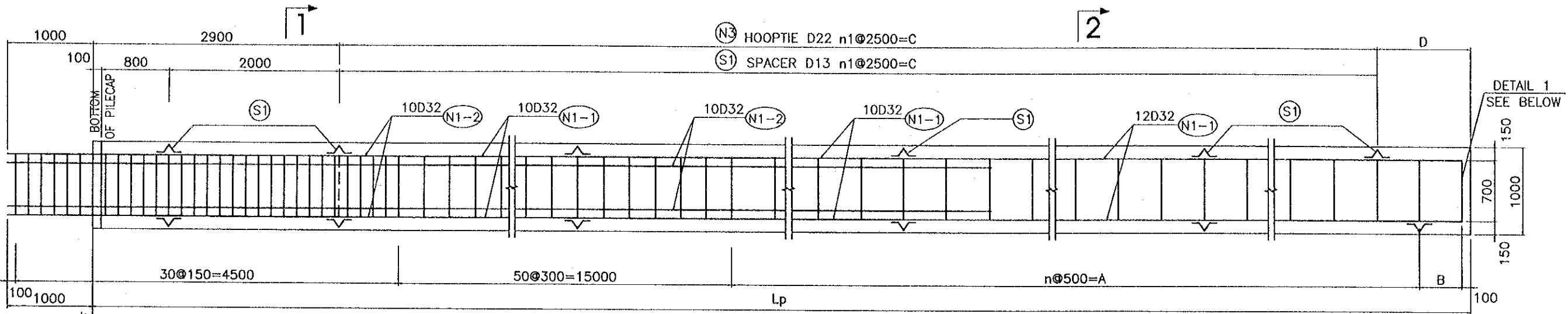
TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44640	12	6.230	3337.29
N1-2	—————	D32	23400	24	6.230	3498.77
N2-1	○	D16	4401	124	1.560	851.33
N2-2	○	D16	4087	89	1.560	567.44
N3	○	D22	4260	16	3.040	207.21
N4	AVE —————	D16	950	10	1.560	14.82
S1	∧	D13	670	64	0.995	42.67
Total abutment A1						8519.51
					6836.05	Kg
					207.21	Kg
					1433.59	Kg
					42.67	Kg
Concrete Volume (m3)						70.69

QUANTITY MATERIAL OF PILE FOR ABUTMENT A2 (PER 1 PILE)


TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44640	12	6.230	3337.29
N1-2	—————	D32	23400	24	6.230	3498.77
N2-1	○	D16	4401	124	1.560	851.33
N2-2	○	D16	4087	89	1.560	567.44
N3	○	D22	4260	16	3.040	207.21
N4	AVE —————	D16	950	10	1.560	14.82
S1	∧	D13	670	64	0.995	42.67
Total abutment A2						8519.51
					6836.05	Kg
					207.21	Kg
					1433.59	Kg
					42.67	Kg
Concrete Volume (m3)						70.69

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATABE
PROJECT RED RIVER BRIDGE (TIWARI TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE <i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.03.14

PACKAGE 2	SCALE 1/50	DRAWING No. C-1-3c-96	SHEET No.
NH No.5 - FLYOVER DETAIL OF D=150CM CAST-IN-PLACE CONCRETE PILE(1)			





THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT	RED RIVER BRIDGE (DANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000, 3, 16

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-1-3c-97	
NH No.5 - FLYOVER			
DETAIL OF D=100CM CAST-IN-PLACE CONCRETE PILE(2)			

### DIMENSIONS OF PILE

PILE	DIMENSIONS OF PILE							DIMENSIONS OF BAR N1-1				N1-2
	Lp(mm)	A(mm)	B(mm)	C(mm)	D(mm)	n	n1	Lrc(mm)	E(mm)	F(mm)	Total(mm)	Total(mm)
P1L	40000	21000	300	35000	2100	42	14	40900	11700	9040	44140	23400
P1R	40000	21000	300	35000	2100	42	14	40900	11700	9040	44140	23400
P2L	40000	21000	300	35000	2100	42	14	40900	11700	9040	44140	23400
P2R	40000	21000	300	35000	2100	42	14	40900	11700	9040	44140	23400
P3L	40000	21000	300	35000	2100	42	14	40900	11700	9040	44140	23400
P3R	40000	21000	300	35000	2100	42	14	40900	11700	9040	44140	23400
P4L	40000	21000	300	35000	2100	42	14	40900	11700	9040	44140	23400
P4R	40000	21000	300	35000	2100	42	14	40900	11700	9040	44140	23400
P5L	40000	21000	300	35000	2100	42	14	40900	11700	9040	44140	23400
P5R	40000	21000	300	35000	2100	42	14	40900	11700	9040	44140	23400
P6L	40000	21000	300	35000	2100	42	14	40900	11700	9040	44140	23400
P6R	40000	21000	300	35000	2100	42	14	40900	11700	9040	44140	23400
P7L	40000	21000	300	35000	2100	42	14	40900	11700	9040	44140	23400
P7R	40000	21000	300	35000	2100	42	14	40900	11700	9040	44140	23400
P8L	40000	21000	300	35000	2100	42	14	40900	11700	9040	44140	23400
P8R	40000	21000	300	35000	2100	42	14	40900	11700	9040	44140	23400
P9L	40000	21000	300	35000	2100	42	14	40900	11700	9040	44140	23400
P9R	40000	21000	300	35000	2100	42	14	40900	11700	9040	44140	23400
P10L	37000	18000	300	32500	1600	36	13	37900	11700	6040	41140	23400
P10R	37000	18000	300	32500	1600	36	13	37900	11700	6040	41140	23400

### DIMENSIONS OF PILE

PILE	DIMENSIONS OF PILE							DIMENSIONS OF BAR N1-1				N1-2
	Lp(mm)	A(mm)	B(mm)	C(mm)	D(mm)	n	n1	Lrc(mm)	E(mm)	F(mm)	Total(mm)	Total(mm)
P11L	37000	18000	300	32500	1600	36	13	37900	35100	6040	41140	23400
P11R	37000	18000	300	32500	1600	36	13	37900	35100	6040	41140	23400
P13L	37000	18000	300	32500	1600	36	13	37900	35100	6040	41140	23400
P13R	37000	18000	300	32500	1600	36	13	37900	35100	6040	41140	23400
P14L	37000	18000	300	32500	1600	36	13	37900	35100	6040	41140	23400
P14R	37000	18000	300	32500	1600	36	13	37900	35100	6040	41140	23400
P15L	37000	18000	300	32500	1600	36	13	37900	35100	6040	41140	23400
P15R	37000	18000	300	32500	1600	36	13	37900	35100	6040	41140	23400
P16L	37000	18000	300	32500	1600	36	13	37900	35100	6040	41140	23400
P16R	37000	18000	300	32500	1600	36	13	37900	35100	6040	41140	23400
P17L	40000	21000	300	35000	2100	42	14	40900	35100	9040	44140	23400
P17R	40000	21000	300	35000	2100	42	14	40900	35100	9040	44140	23400
P18L	40000	21000	300	35000	2100	42	14	40900	35100	9040	44140	23400
P18R	40000	21000	300	35000	2100	42	14	40900	35100	9040	44140	23400
P19L	40000	21000	300	35000	2100	42	14	40900	35100	9040	44140	23400
P19R	40000	21000	300	35000	2100	42	14	40900	35100	9040	44140	23400
P20L	40000	21000	300	35000	2100	42	14	40900	35100	9040	44140	23400
P20R	40000	21000	300	35000	2100	42	14	40900	35100	9040	44140	23400
P21L	40000	21000	300	35000	2100	42	14	40900	35100	9040	44140	23400
P21R	40000	21000	300	35000	2100	42	14	40900	35100	9040	44140	23400

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S.WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S.WATABE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-1-3c-98	
NH No.5 - FLYOVER			
DETAIL OF D=100CM CAST-IN-PLACE CONCRETE PILE(S)			

QUANTITY MATERIAL OF PILE FOR PIER P1L (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44140	10	6.230	2749.92
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	124	1.560	547.44
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	16	3.040	130.84
N4	AVE —————	D16	550	10	1.560	8.58
S1	∧	D13	670	64	0.995	42.67
Total pier P1L						6744.41
					D32	5665.56 Kg
					D22	130.84 Kg
					D16	905.34 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42

QUANTITY MATERIAL OF PILE FOR PIER P2R (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44140	10	6.230	2749.92
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	124	1.560	547.44
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	16	3.040	130.84
N4	AVE —————	D16	550	10	1.560	8.58
S1	∧	D13	670	64	0.995	42.67
Total pier P2R						6744.41
					D32	5665.56 Kg
					D22	130.84 Kg
					D16	905.34 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42

QUANTITY MATERIAL OF PILE FOR PIER P1R (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44140	10	6.230	2749.92
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	124	1.560	547.44
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	16	3.040	130.84
N4	AVE —————	D16	550	10	1.560	8.58
S1	∧	D13	670	64	0.995	42.67
Total pier P1R						6744.41
					D32	5665.56 Kg
					D22	130.84 Kg
					D16	905.34 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42

QUANTITY MATERIAL OF PILE FOR PIER P3L (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44140	10	6.230	2749.92
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	124	1.560	547.44
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	16	3.040	130.84
N4	AVE —————	D16	550	10	1.560	8.58
S1	∧	D13	670	64	0.995	42.67
Total pier P3L						6744.41
					D32	5665.56 Kg
					D22	130.84 Kg
					D16	905.34 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42

QUANTITY MATERIAL OF PILE FOR PIER P2L (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44140	10	6.230	2749.92
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	124	1.560	547.44
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	16	3.040	130.84
N4	AVE —————	D16	550	10	1.560	8.58
S1	∧	D13	670	64	0.995	42.67
Total pier P2L						6744.41
					D32	5665.56 Kg
					D22	130.84 Kg
					D16	905.34 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42

QUANTITY MATERIAL OF PILE FOR PIER P3R (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44140	10	6.230	2749.92
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	124	1.560	547.44
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	16	3.040	130.84
N4	AVE —————	D16	550	10	1.560	8.58
S1	∧	D13	670	64	0.995	42.67
Total pier P3R						6744.41
					D32	5665.56 Kg
					D22	130.84 Kg
					D16	905.34 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S.WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE 
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.3.27

PACKAGE 2	SCALE	DRAWING No. C-1-3c-99	SHEET No.
NH No.5 - FLYOVER DETAIL OF D=100CM CAST-IN-PLACE CONCRETE PILE(4)			

QUANTITY MATERIAL OF PILE FOR PIER P4L (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44140	10	6.230	2749.92
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	124	1.560	547.44
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	16	3.040	130.84
N4	AVE —————	D16	550	10	1.560	8.58
S1	∧	D13	670	64	0.995	42.67
Total pier P4L						6744.41
					D32	5665.56 Kg
					D22	130.84 Kg
					D16	905.34 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42

QUANTITY MATERIAL OF PILE FOR PIER P5R (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44140	10	6.230	2749.92
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	124	1.560	547.44
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	16	3.040	130.84
N4	AVE —————	D16	550	10	1.560	8.58
S1	∧	D13	670	64	0.995	42.67
Total pier P5R						6744.41
					D32	5665.56 Kg
					D22	130.84 Kg
					D16	905.34 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42

QUANTITY MATERIAL OF PILE FOR PIER P4R (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44140	10	6.230	2749.92
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	124	1.560	547.44
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	16	3.040	130.84
N4	AVE —————	D16	550	10	1.560	8.58
S1	∧	D13	670	64	0.995	42.67
Total pier P4R						6744.41
					D32	5665.56 Kg
					D22	130.84 Kg
					D16	905.34 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42

QUANTITY MATERIAL OF PILE FOR PIER P6L (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44140	10	6.230	2749.92
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	124	1.560	547.44
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	16	3.040	130.84
N4	AVE —————	D16	550	10	1.560	8.58
S1	∧	D13	670	64	0.995	42.67
Total pier P6L						6744.41
					D32	5665.56 Kg
					D22	130.84 Kg
					D16	905.34 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42

QUANTITY MATERIAL OF PILE FOR PIER P5L (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44140	10	6.230	2749.92
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	124	1.560	547.44
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	16	3.040	130.84
N4	AVE —————	D16	550	10	1.560	8.58
S1	∧	D13	670	64	0.995	42.67
Total pier P5L						6744.41
					D32	5665.56 Kg
					D22	130.84 Kg
					D16	905.34 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42

QUANTITY MATERIAL OF PILE FOR PIER P6R (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44140	10	6.230	2749.92
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	124	1.560	547.44
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	16	3.040	130.84
N4	AVE —————	D16	550	10	1.560	8.58
S1	∧	D13	670	64	0.995	42.67
Total pier P6R						6744.41
					D32	5665.56 Kg
					D22	130.84 Kg
					D16	905.34 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S.WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S.WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.3.19

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-1-3c-100	
NH No.5 - FLYOVER			
DETAIL OF D=100CM CAST-IN-PLACE CONCRETE PILE(S)			

QUANTITY MATERIAL OF PILE FOR PIER P7L (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44140	10	6.230	2749.92
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	124	1.560	547.44
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	16	3.040	130.84
N4	AVE —————	D16	550	10	1.560	8.58
S1	∧	D13	670	64	0.995	42.67
Total pier P7L						6744.41
					D32	5665.56 Kg
					D22	130.84 Kg
					D16	905.34 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42

QUANTITY MATERIAL OF PILE FOR PIER P8R (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44140	10	6.230	2749.92
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	124	1.560	547.44
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	16	3.040	130.84
N4	AVE —————	D16	550	10	1.560	8.58
S1	∧	D13	670	64	0.995	42.67
Total pier P8R						6744.41
					D32	5665.56 Kg
					D22	130.84 Kg
					D16	905.34 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42

QUANTITY MATERIAL OF PILE FOR PIER P7R (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44140	10	6.230	2749.92
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	124	1.560	547.44
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	16	3.040	130.84
N4	AVE —————	D16	550	10	1.560	8.58
S1	∧	D13	670	64	0.995	42.67
Total pier P7R						6744.41
					D32	5665.56 Kg
					D22	130.84 Kg
					D16	905.34 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42

QUANTITY MATERIAL OF PILE FOR PIER P9L (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44140	10	6.230	2749.92
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	124	1.560	547.44
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	16	3.040	130.84
N4	AVE —————	D16	550	10	1.560	8.58
S1	∧	D13	670	64	0.995	42.67
Total pier P9L						6744.41
					D32	5665.56 Kg
					D22	130.84 Kg
					D16	905.34 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42

QUANTITY MATERIAL OF PILE FOR PIER P8L (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44140	10	6.230	2749.92
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	124	1.560	547.44
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	16	3.040	130.84
N4	AVE —————	D16	550	10	1.560	8.58
S1	∧	D13	670	64	0.995	42.67
Total pier P8L						6744.41
					D32	5665.56 Kg
					D22	130.84 Kg
					D16	905.34 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42

QUANTITY MATERIAL OF PILE FOR PIER P9R (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44140	10	6.230	2749.92
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	124	1.560	547.44
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	16	3.040	130.84
N4	AVE —————	D16	550	10	1.560	8.58
S1	∧	D13	670	64	0.995	42.67
Total pier P9R						6744.41
					D32	5665.56 Kg
					D22	130.84 Kg
					D16	905.34 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THAI HO LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	PACIFIC CONSULTANTS INTERNATIONAL	SIGNATURE 
CONSULTANT		DATE 2000.03.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-1-3c-101	
NH No.5 - FLYOVER DETAIL OF D=100CM CAST-IN-PLACE CONCRETE PILE(6)			

QUANTITY MATERIAL OF PILE FOR PIER P10L (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	41140	10	6.230	2563.02
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	118	1.560	520.95
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	15	3.040	122.66
N4	AVE ———	D16	550	10	1.560	8.58
S1	∧	D13	670	60	0.995	40.00
Total pier P10L						6520.17
					D32	5478.66 Kg
					D22	122.66 Kg
					D16	878.85 Kg
					D13	40.00 Kg
Concrete Volume (m3)						29.06

QUANTITY MATERIAL OF PILE FOR PIER P11L (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	41140	10	6.230	2563.02
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	118	1.560	520.95
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	15	3.040	122.66
N4	AVE ———	D16	550	10	1.560	8.58
S1	∧	D13	670	60	0.995	40.00
Total pier P11L						6520.17
					D32	5478.66 Kg
					D22	122.66 Kg
					D16	878.85 Kg
					D13	40.00 Kg
Concrete Volume (m3)						29.06

QUANTITY MATERIAL OF PILE FOR PIER P10R (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	41140	10	6.230	2563.02
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	118	1.560	520.95
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	15	3.040	122.66
N4	AVE ———	D16	550	10	1.560	8.58
S1	∧	D13	670	60	0.995	40.00
Total pier P10R						6520.17
					D32	5478.66 Kg
					D22	122.66 Kg
					D16	878.85 Kg
					D13	40.00 Kg
Concrete Volume (m3)						29.06

QUANTITY MATERIAL OF PILE FOR PIER P11R (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	41140	10	6.230	2563.02
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	118	1.560	520.95
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	15	3.040	122.66
N4	AVE ———	D16	550	10	1.560	8.58
S1	∧	D13	670	60	0.995	40.00
Total pier P11R						6520.17
					D32	5478.66 Kg
					D22	122.66 Kg
					D16	878.85 Kg
					D13	40.00 Kg
Concrete Volume (m3)						29.06

QUANTITY MATERIAL OF PILE FOR PIER P13L (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	41140	10	6.230	2563.02
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	118	1.560	520.95
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	15	3.040	122.66
N4	AVE —————	D16	550	10	1.560	8.58
S1	∧	D13	670	60	0.995	40.00
Total pier P13L						6520.17
					D32	5478.66 Kg
					D22	122.66 Kg
					D16	878.85 Kg
					D13	40.00 Kg
Concrete Volume (m3)						29.06

QUANTITY MATERIAL OF PILE FOR PIER P14R (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	41140	10	6.230	2563.02
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	118	1.560	520.95
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	15	3.040	122.66
N4	AVE —————	D16	550	10	1.560	8.58
S1	∧	D13	670	60	0.995	40.00
Total pier P14R						6520.17
					D32	5478.66 Kg
					D22	122.66 Kg
					D16	878.85 Kg
					D13	40.00 Kg
Concrete Volume (m3)						29.06

QUANTITY MATERIAL OF PILE FOR PIER P13R (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	41140	10	6.230	2563.02
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	118	1.560	520.95
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	15	3.040	122.66
N4	AVE —————	D16	550	10	1.560	8.58
S1	∧	D13	670	60	0.995	40.00
Total pier P13R						6520.17
					D32	5478.66 Kg
					D22	122.66 Kg
					D16	878.85 Kg
					D13	40.00 Kg
Concrete Volume (m3)						29.06

QUANTITY MATERIAL OF PILE FOR PIER P15L (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	41140	10	6.230	2563.02
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	118	1.560	520.95
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	15	3.040	122.66
N4	AVE —————	D16	550	10	1.560	8.58
S1	∧	D13	670	60	0.995	40.00
Total pier P15L						6520.17
					D32	5478.66 Kg
					D22	122.66 Kg
					D16	878.85 Kg
					D13	40.00 Kg
Concrete Volume (m3)						29.06

QUANTITY MATERIAL OF PILE FOR PIER P14L (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	41140	10	6.230	2563.02
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	118	1.560	520.95
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	15	3.040	122.66
N4	AVE —————	D16	550	10	1.560	8.58
S1	∧	D13	670	60	0.995	40.00
Total pier P14L						6520.17
					D32	5478.66 Kg
					D22	122.66 Kg
					D16	878.85 Kg
					D13	40.00 Kg
Concrete Volume (m3)						29.06

QUANTITY MATERIAL OF PILE FOR PIER P15R (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	41140	10	6.230	2563.02
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	118	1.560	520.95
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	15	3.040	122.66
N4	AVE —————	D16	550	10	1.560	8.58
S1	∧	D13	670	60	0.995	40.00
Total pier P15R						6520.17
					D32	5478.66 Kg
					D22	122.66 Kg
					D16	878.85 Kg
					D13	40.00 Kg
Concrete Volume (m3)						29.06

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2002.03.19

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-1-3c-103	
NH No.5 - FLYOVER			
DETAIL OF D=100CM CAST-IN-PLACE CONCRETE PILE(8)			

QUANTITY MATERIAL OF PILE FOR PIER P16L (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	41140	10	6.230	2563.02
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	118	1.560	520.95
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	15	3.040	122.66
N4	AVE ———	D16	550	10	1.560	8.58
S1	∧	D13	670	60	0.995	40.00
Total pier P16L						6520.17
					D32	5478.66 Kg
					D22	122.66 Kg
					D16	878.85 Kg
					D13	40.00 Kg
Concrete Volume (m3)						29.06

QUANTITY MATERIAL OF PILE FOR PIER P17R (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44140	10	6.230	2749.92
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	124	1.560	547.44
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	16	3.040	130.84
N4	AVE ———	D16	550	10	1.560	8.58
S1	∧	D13	670	64	0.995	42.67
Total pier P17R						6744.41
					D32	5665.56 Kg
					D22	130.84 Kg
					D16	905.34 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42

QUANTITY MATERIAL OF PILE FOR PIER P16R (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	41140	10	6.230	2563.02
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	118	1.560	520.95
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	15	3.040	122.66
N4	AVE ———	D16	550	10	1.560	8.58
S1	∧	D13	670	60	0.995	40.00
Total pier P16R						6520.17
					D32	5478.66 Kg
					D22	122.66 Kg
					D16	878.85 Kg
					D13	40.00 Kg
Concrete Volume (m3)						29.06

QUANTITY MATERIAL OF PILE FOR PIER P18L (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44140	10	6.230	2749.92
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	124	1.560	547.44
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	16	3.040	130.84
N4	AVE ———	D16	550	10	1.560	8.58
S1	∧	D13	670	64	0.995	42.67
Total pier P18L						6744.41
					D32	5665.56 Kg
					D22	130.84 Kg
					D16	905.34 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42

QUANTITY MATERIAL OF PILE FOR PIER P17L (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44140	10	6.230	2749.92
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	124	1.560	547.44
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	16	3.040	130.84
N4	AVE ———	D16	550	10	1.560	8.58
S1	∧	D13	670	64	0.995	42.67
Total pier P17L						6744.41
					D32	5665.56 Kg
					D22	130.84 Kg
					D16	905.34 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42

QUANTITY MATERIAL OF PILE FOR PIER P18R (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44140	10	6.230	2749.92
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	124	1.560	547.44
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	16	3.040	130.84
N4	AVE ———	D16	550	10	1.560	8.58
S1	∧	D13	670	64	0.995	42.67
Total pier P18R						6744.41
					D32	5665.56 Kg
					D22	130.84 Kg
					D16	905.34 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42

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THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TUANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S.WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S.WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.3.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-1-3c-104	
NH No.5 - FLYOVER DETAIL OF D=100CM CAST-IN-PLACE CONCRETE PILE(9)			

QUANTITY MATERIAL OF PILE FOR PIER P19L (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44140	10	6.230	2749.92
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	124	1.560	547.44
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	16	3.040	130.84
N4	AVE ———	D16	550	10	1.560	8.58
S1	∧	D13	670	64	0.995	42.67
Total pier P19L						6744.41
					D32	5665.56 Kg
					D22	130.84 Kg
					D16	905.34 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42

QUANTITY MATERIAL OF PILE FOR PIER P20R (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44140	10	6.230	2749.92
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	124	1.560	547.44
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	16	3.040	130.84
N4	AVE ———	D16	550	10	1.560	8.58
S1	∧	D13	670	64	0.995	42.67
Total pier P20R						6744.41
					D32	5665.56 Kg
					D22	130.84 Kg
					D16	905.34 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42

QUANTITY MATERIAL OF PILE FOR PIER P19R (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44140	10	6.230	2749.92
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	124	1.560	547.44
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	16	3.040	130.84
N4	AVE ———	D16	550	10	1.560	8.58
S1	∧	D13	670	64	0.995	42.67
Total pier P19R						6744.41
					D32	5665.56 Kg
					D22	130.84 Kg
					D16	905.34 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42

QUANTITY MATERIAL OF PILE FOR PIER P21L (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44140	10	6.230	2749.92
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	124	1.560	547.44
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	16	3.040	130.84
N4	AVE ———	D16	550	10	1.560	8.58
S1	∧	D13	670	64	0.995	42.67
Total pier P21L						6744.41
					D32	5665.56 Kg
					D22	130.84 Kg
					D16	905.34 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42

QUANTITY MATERIAL OF PILE FOR PIER P20L (PER 1 PILE)


TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44140	10	6.230	2749.92
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	124	1.560	547.44
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	16	3.040	130.84
N4	AVE ———	D16	550	10	1.560	8.58
S1	∧	D13	670	64	0.995	42.67
Total pier P20L						6744.41
					D32	5665.56 Kg
					D22	130.84 Kg
					D16	905.34 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42

QUANTITY MATERIAL OF PILE FOR PIER P21R (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44140	10	6.230	2749.92
N1-2	—————	D32	23400	20	6.230	2915.64
N2-1	○	D16	2830	124	1.560	547.44
N2-2	○	D16	2516	89	1.560	349.32
N3	○	D22	2690	16	3.040	130.84
N4	AVE ———	D16	550	10	1.560	8.58
S1	∧	D13	670	64	0.995	42.67
Total pier P21R						6744.41
					D32	5665.56 Kg
					D22	130.84 Kg
					D16	905.34 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42





THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.19

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-1-3c-106	
NH No.5 -- FLYOVER			
DETAIL OF D=200CM CAST-IN-PLACE CONCRETE PILE(2)			

QUANTITY MATERIAL OF PILE FOR PIER P12L (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	42140	22	6.230	5775.71
N1-2	—————	D32	23400	66	6.230	9621.61
N2-1	○	D22	6170	119	3.040	2232.06
N2-2	○	D22	5542	89	3.040	1499.44
N3	○	D22	5831	15	3.040	265.89
N4	AVE —————	D16	1450	10	1.560	22.62
S1	∩	D13	670	60	0.995	40.00
Total Pier P12L						19457.34
					D32	15397.32 Kg
					D22	3997.40 Kg
					D16	22.62 Kg
					D13	40.00 Kg
Concrete Volume (m3)						116.24

QUANTITY MATERIAL OF PILE FOR PIER P12R (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	42140	22	6.230	5775.71
N1-2	—————	D32	23400	66	6.230	9621.61
N2-1	○	D22	6170	119	3.040	2232.06
N2-2	○	D22	5542	89	3.040	1499.44
N3	○	D22	5831	15	3.040	265.89
N4	AVE —————	D16	1450	10	1.560	22.62
S1	∩	D13	670	60	0.995	40.00
Total Pier P12R						19457.34
					D32	15397.32 Kg
					D22	3997.40 Kg
					D16	22.62 Kg
					D13	40.00 Kg
Concrete Volume (m3)						116.24

304

**C-2 RAMP BRIDGE**

**C-2-1 GENERAL VIEW**

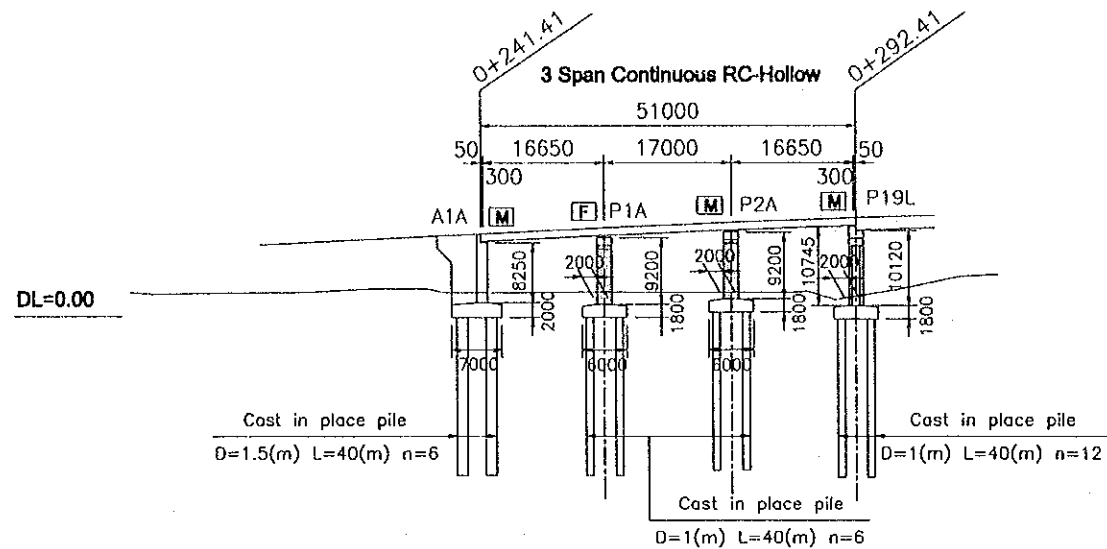
300

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		DESIGNED BY NAME S.WATARE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE 
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.3.14	

PACKAGE 2	SCALE	DRAWING No. C-2-1-1	SHEET No.
GENERAL VIEW OF A-RAMP BRIDGE			

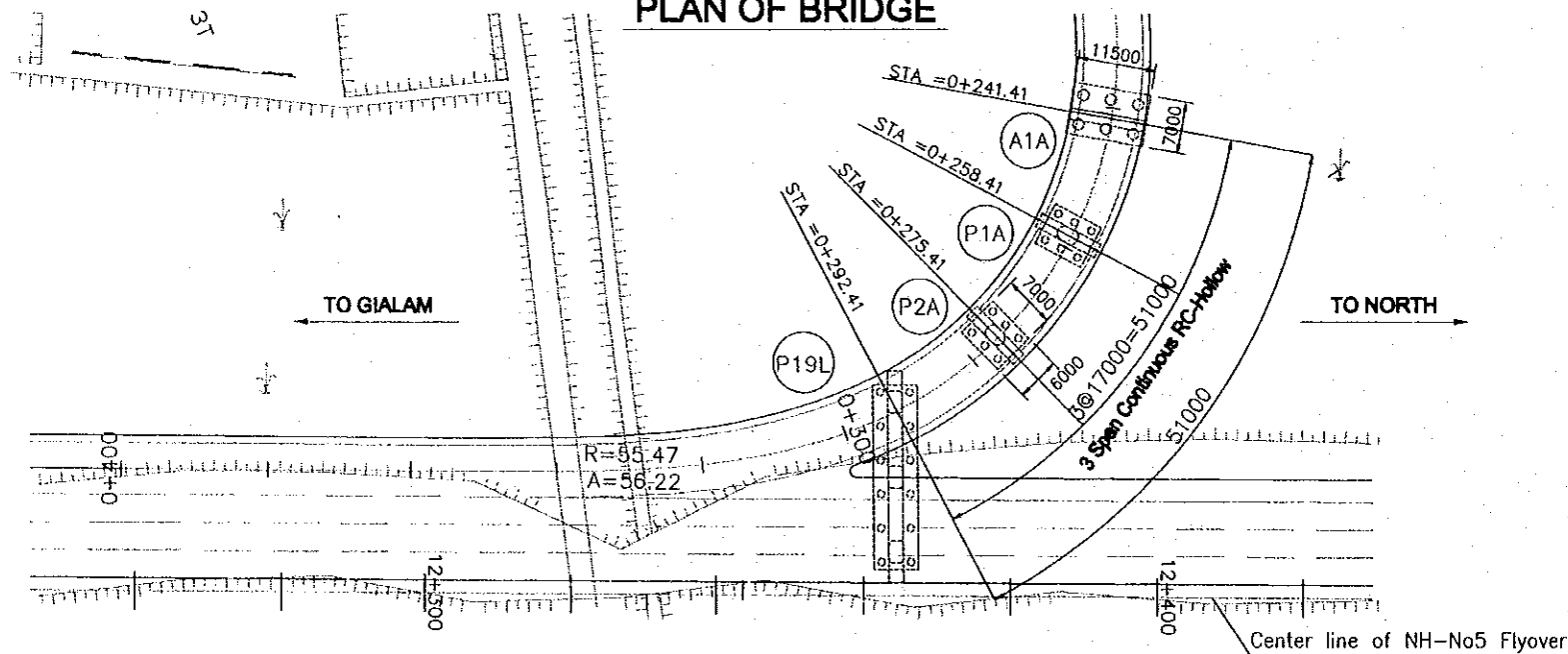
### PROFILE OF BRIDGE

(SCALE: 1:1000)



GRADE					
PROPOSED HEIGHT	10.992	11.411	11.799	12.516	13.145
GROUND LEVEL	3.091	3.090	3.110	3.103	2.990
STATION	0+241.41	0+250.00	0+258.41	0+275.41	0+292.41

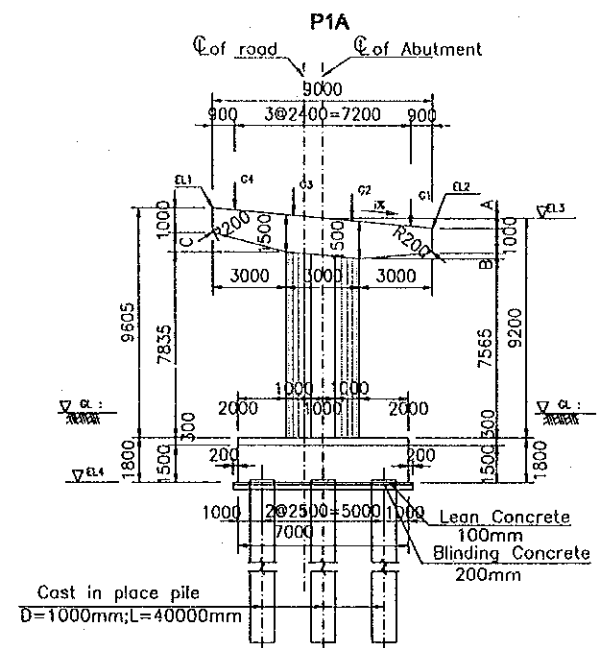
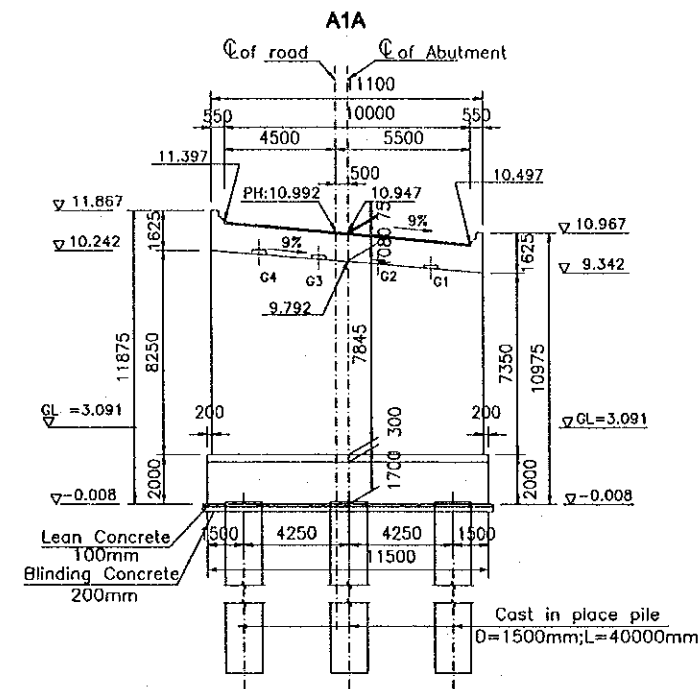
### PLAN OF BRIDGE



### TYPICAL CROSS SECTION OF BRIDGE

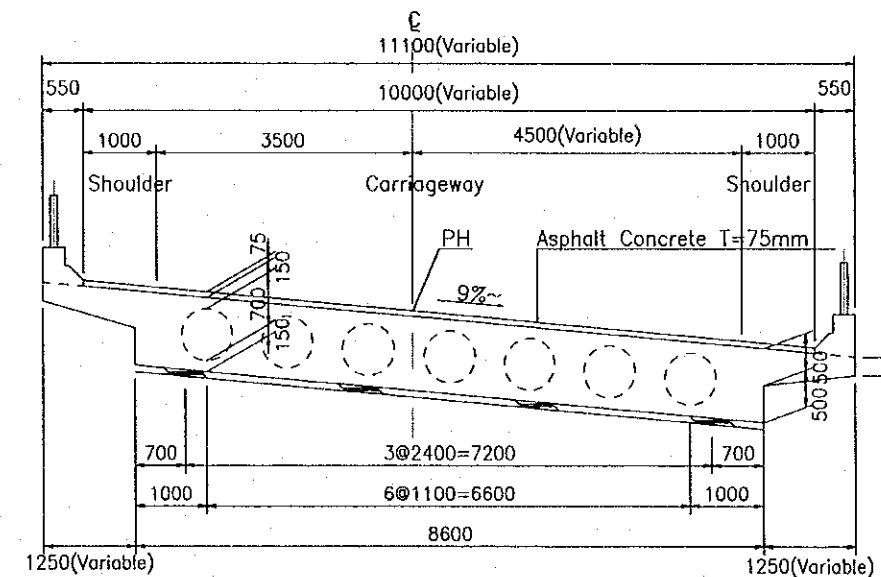
#### TYPICAL CROSS SECTION OF SUBSTRUCTURE

(SCALE: 1:300)



#### TYPICAL CROSS SECTION OF SUPERSTRUCTURE

(SCALE: 1:100)

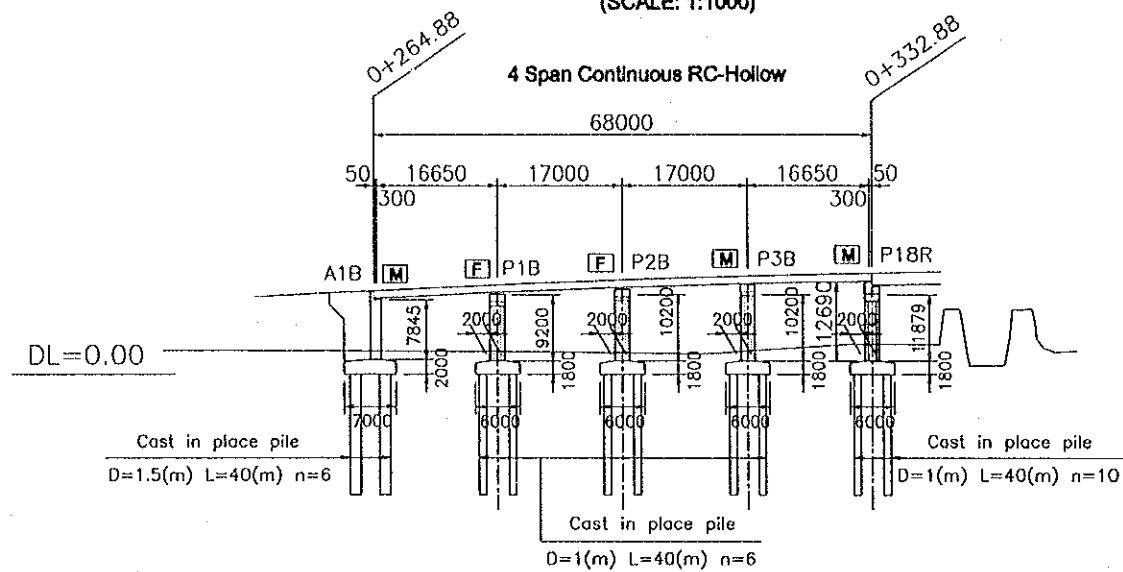


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TIANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE
		S. WATABE
		2002.3.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-2-1-2	
GENERAL VIEW OF B - RAMP BRIDGE			

### PROFILE OF BRIDGE

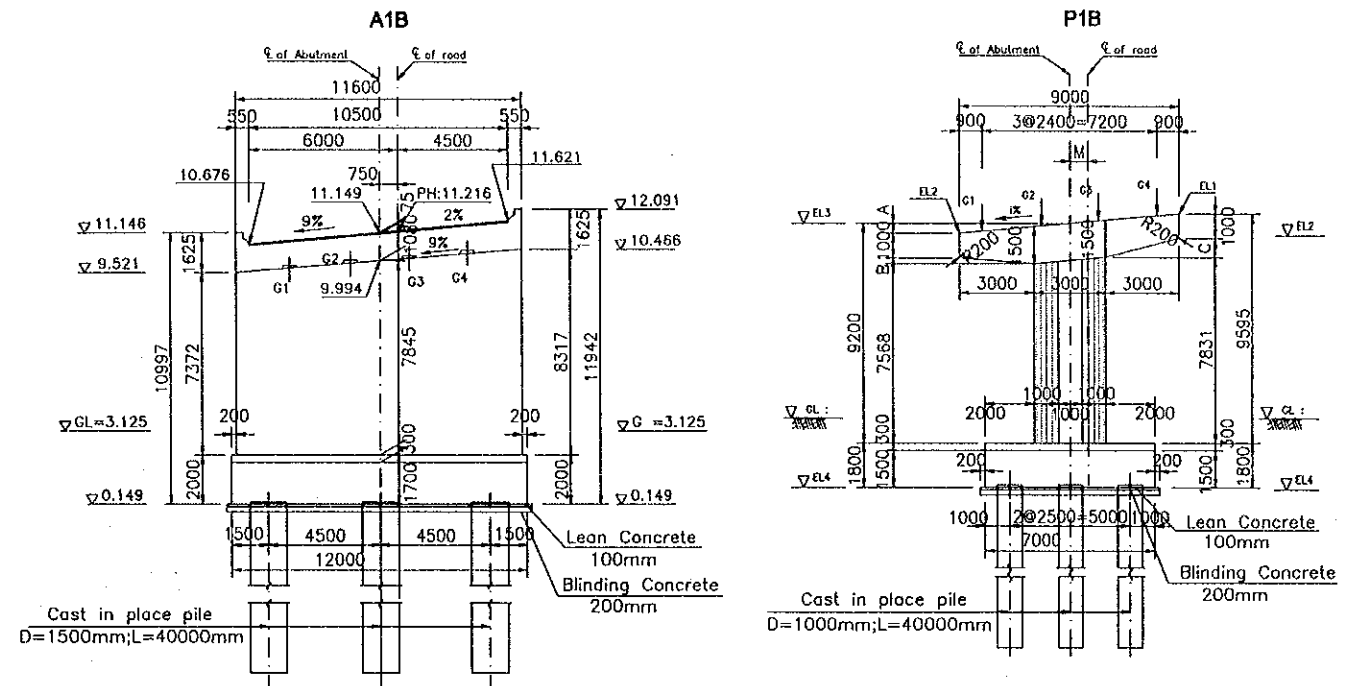
(SCALE: 1:1000)



### TYPICAL CROSS SECTION OF BRIDGE

#### TYPICAL CROSS SECTION OF SUBSTRUCTURE

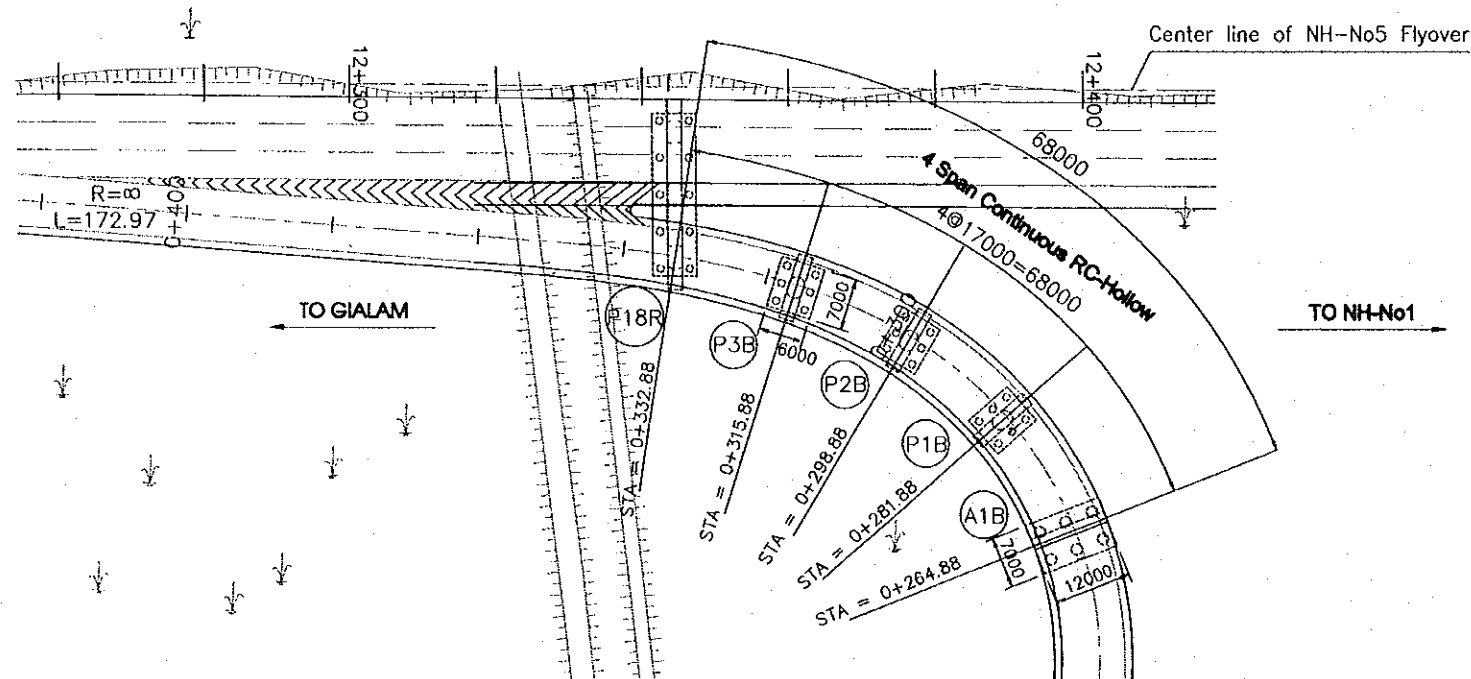
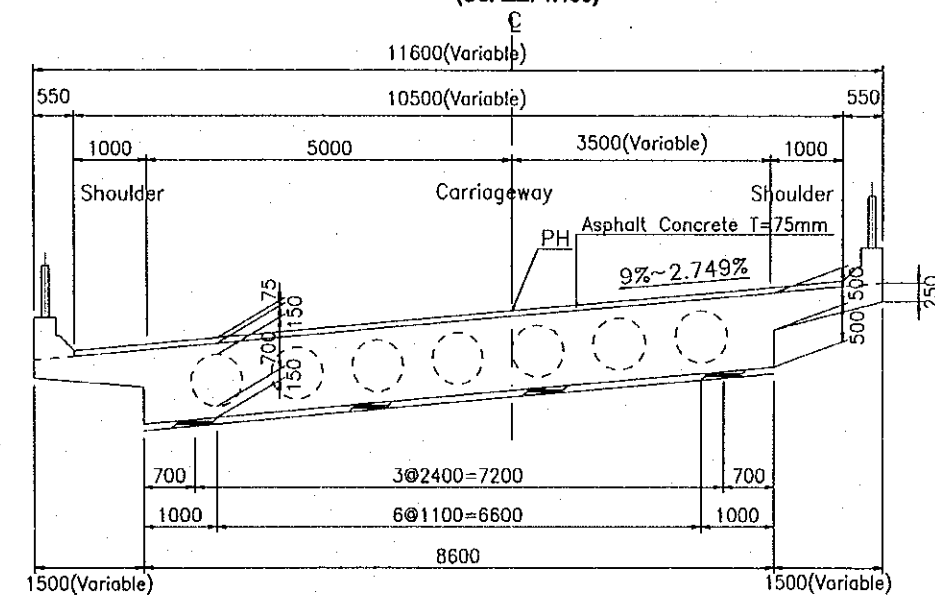
(SCALE: 1:300)



GRADE						
PROPOSED HEIGHT	11.216	12.030	12.366	12.694	13.208	13.574
GROUND LEVEL	3.125	3.113	3.100	3.078	3.109	3.312
STATION	0+264.88	0+281.88	0+290.00	0+298.88	0+315.88	0+332.88

#### TYPICAL CROSS SECTION OF SUPERSTRUCTURE

(SCALE: 1:100)



# **C-2 RAMP BRIDGE**

## **C-2-2 SUPERSTRUCTURE**



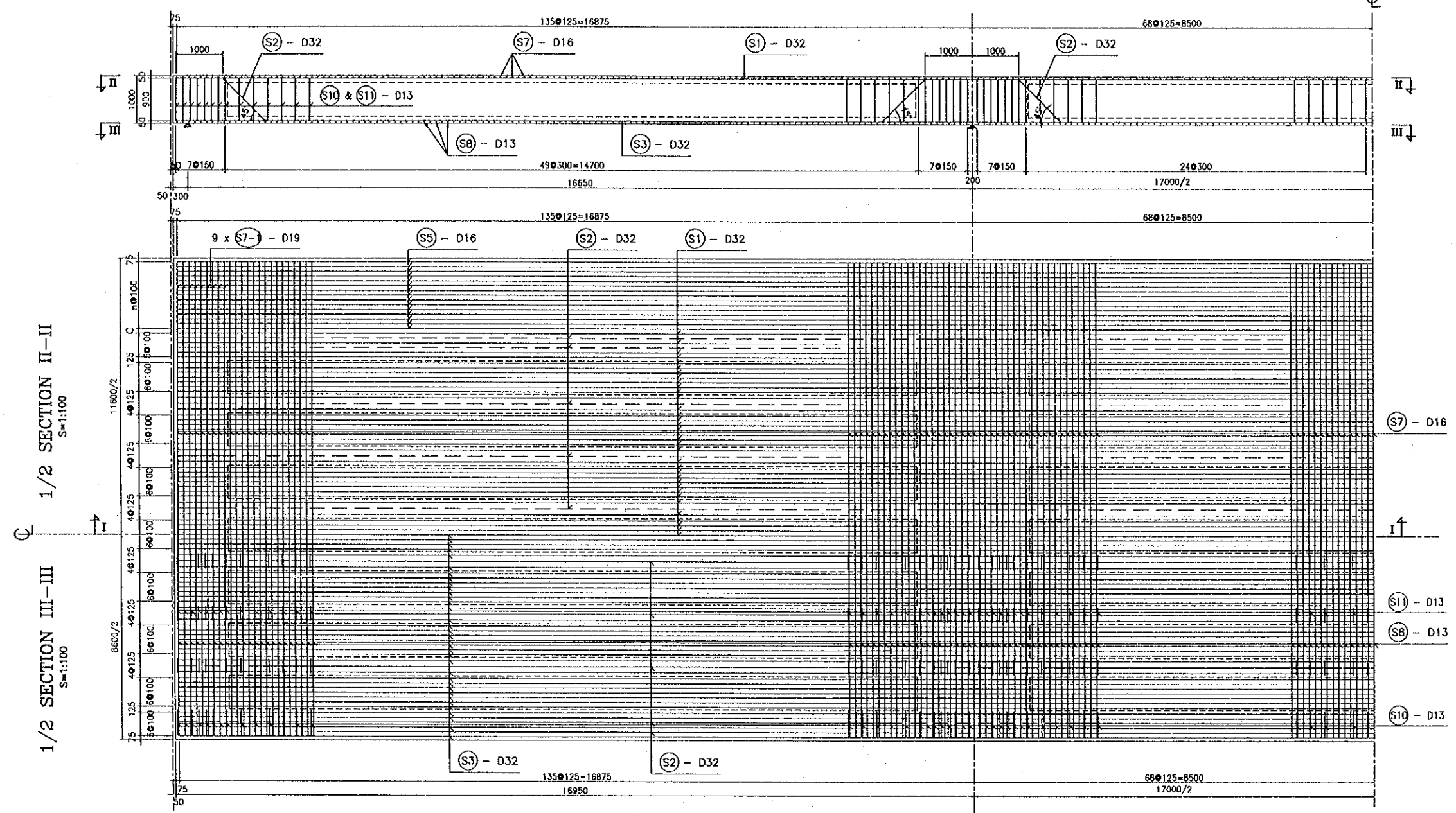




THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	DATE 2000. 8. 17
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE	DRAWING No. C-2-2-3	SHEET No.
RE-BAR ARRANGEMENT OF A-RAMP BRIDGE			

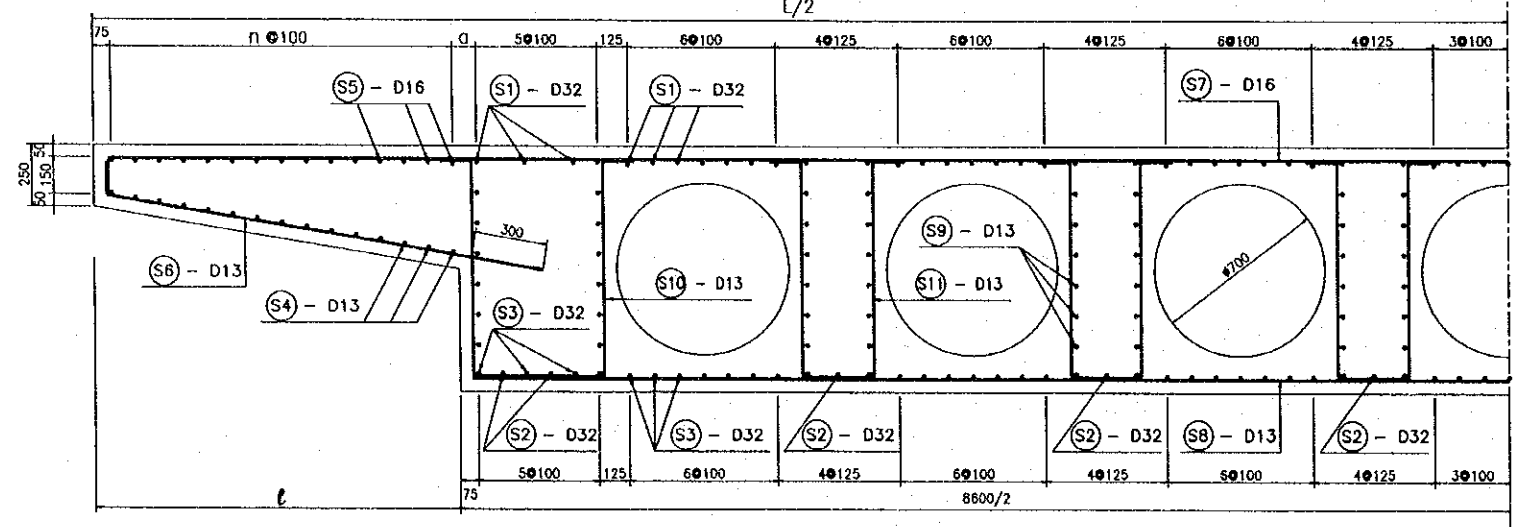
**SECTION I-I**  
S=1:100



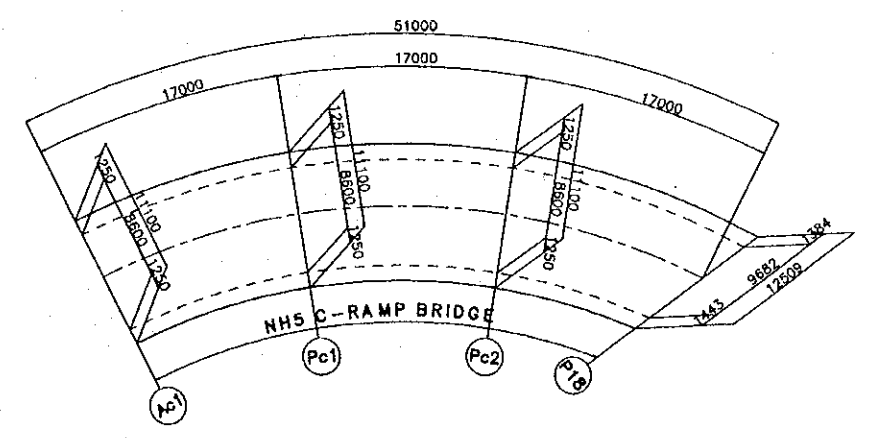
**1/2 SECTION II-II**  
S=1:100

**1/2 SECTION III-III**  
S=1:100

**HALF OF CROSS SECTION**  
S=1:30



**KEY PLAN**  
S=1:600





# **C-2 RAMP BRIDGE**

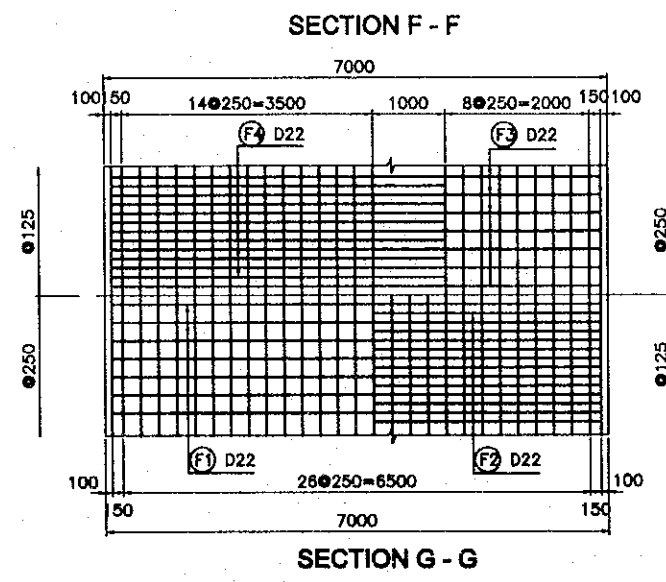
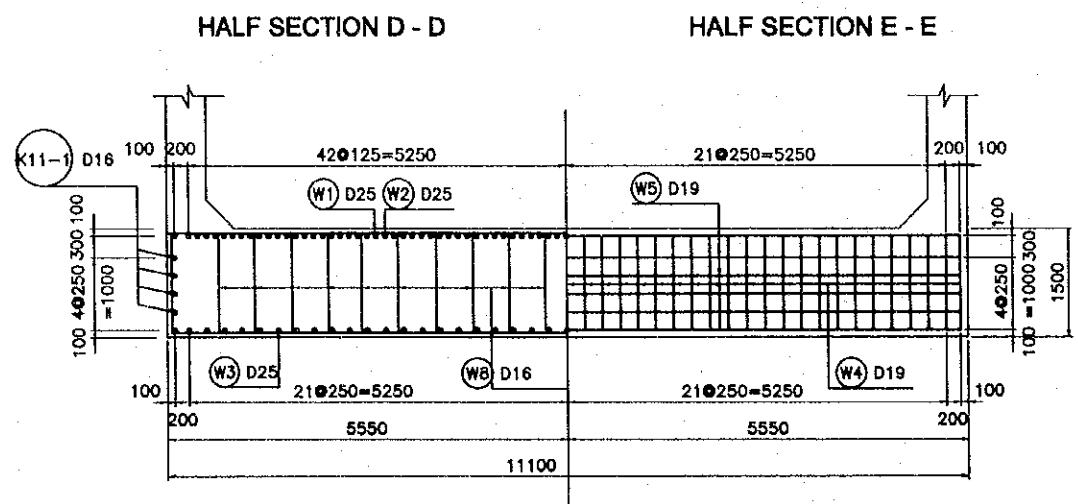
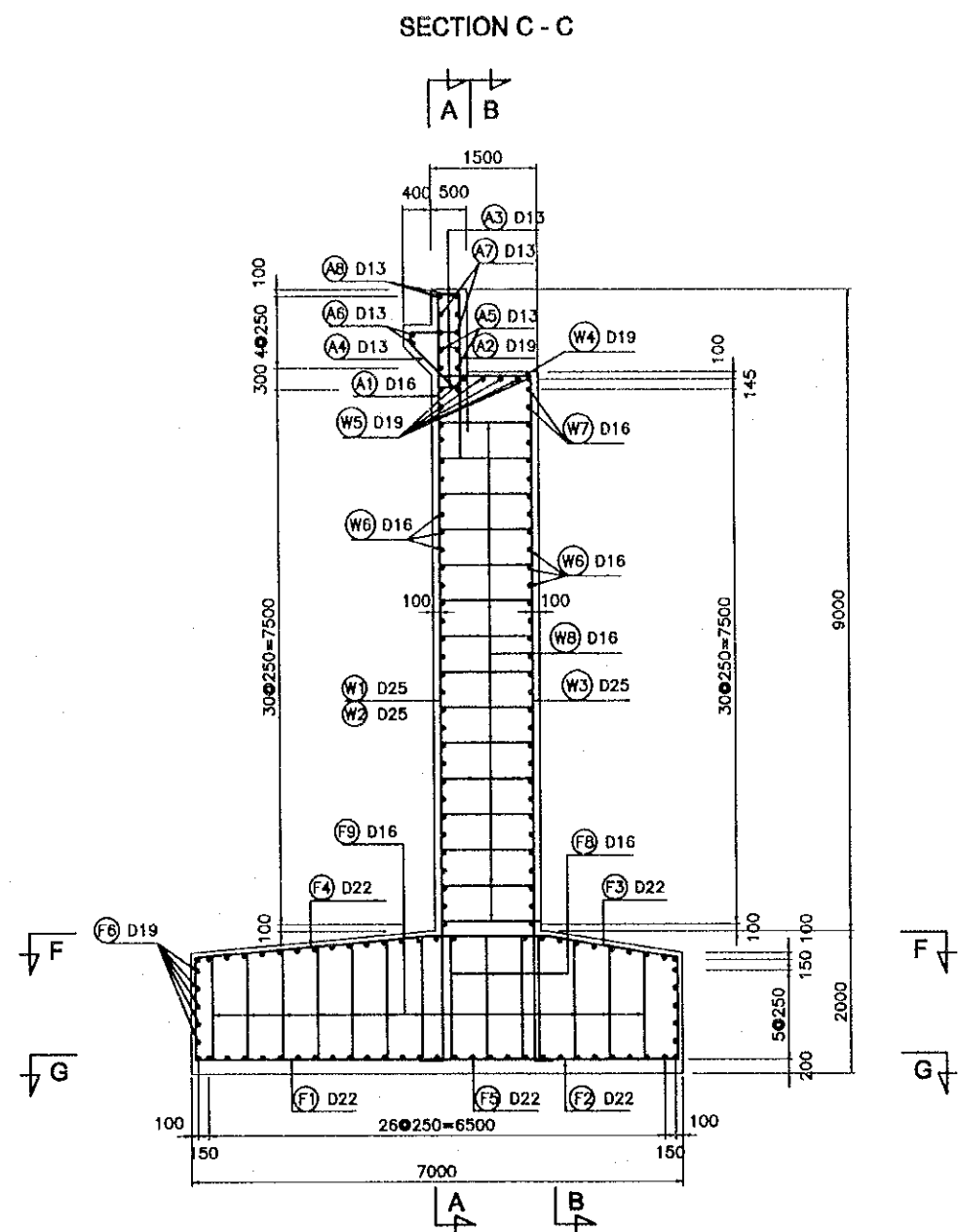
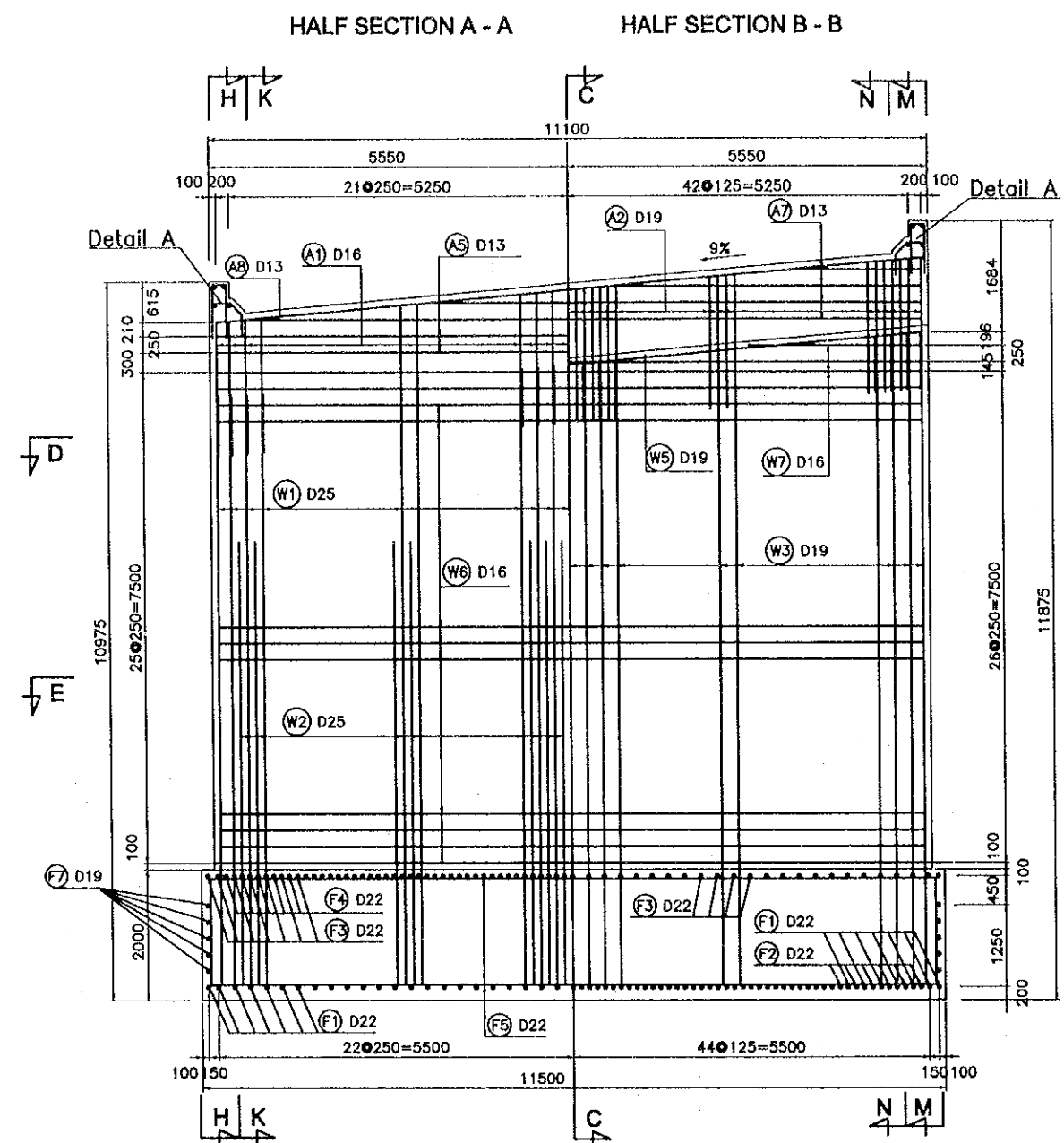
## **C-2-3 SUBSTRUCTURE**

0.0



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2002.3.17	

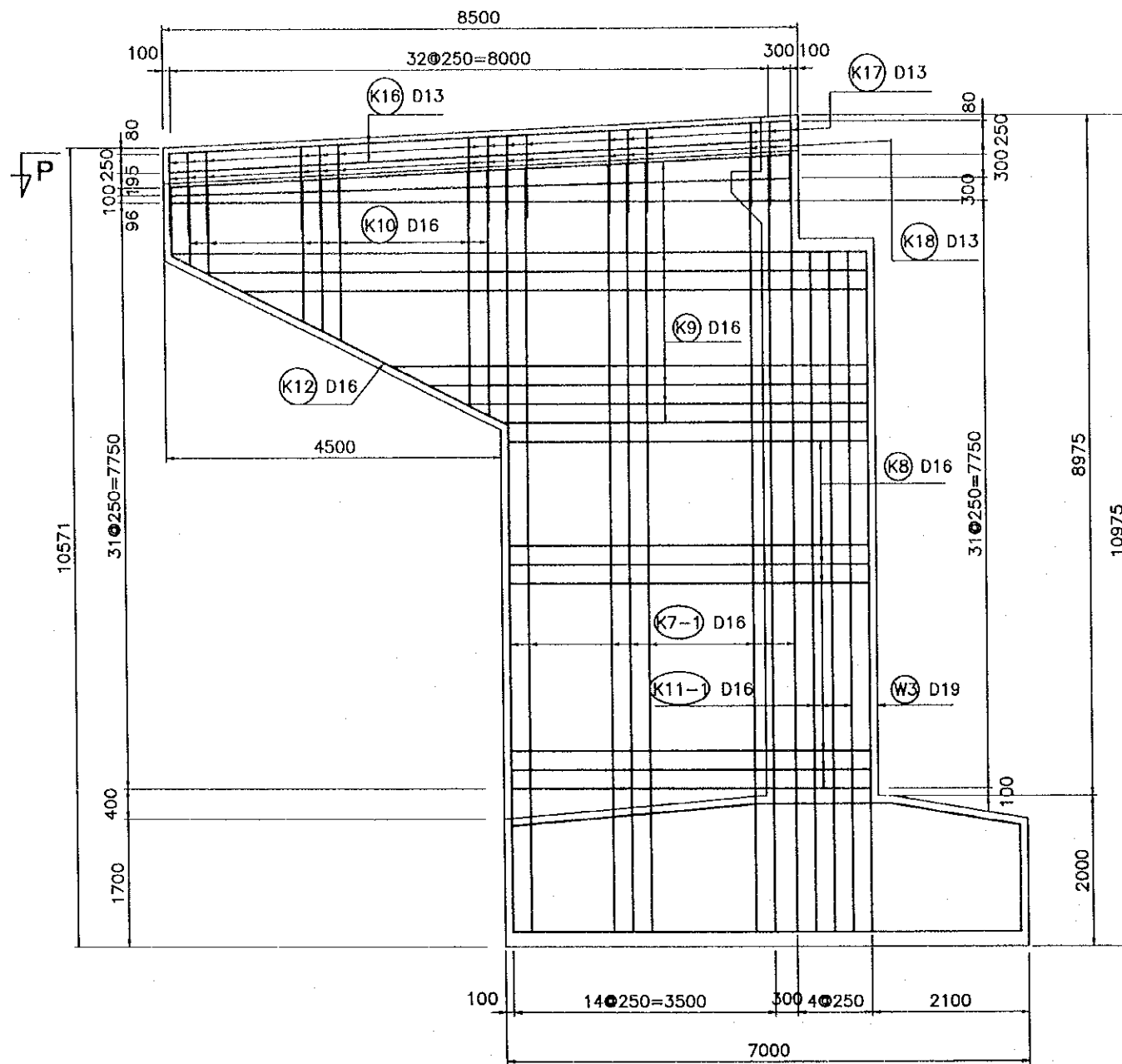
PACKAGE 2	SCALE 1/100	DRAWING No. C-2-3-2	SHEET No.
NATIONAL HIGHWAY No.5 FLYOVER -- RAMP A BAR ARRANGMENT FOR ABUTMENT A1a (1)			



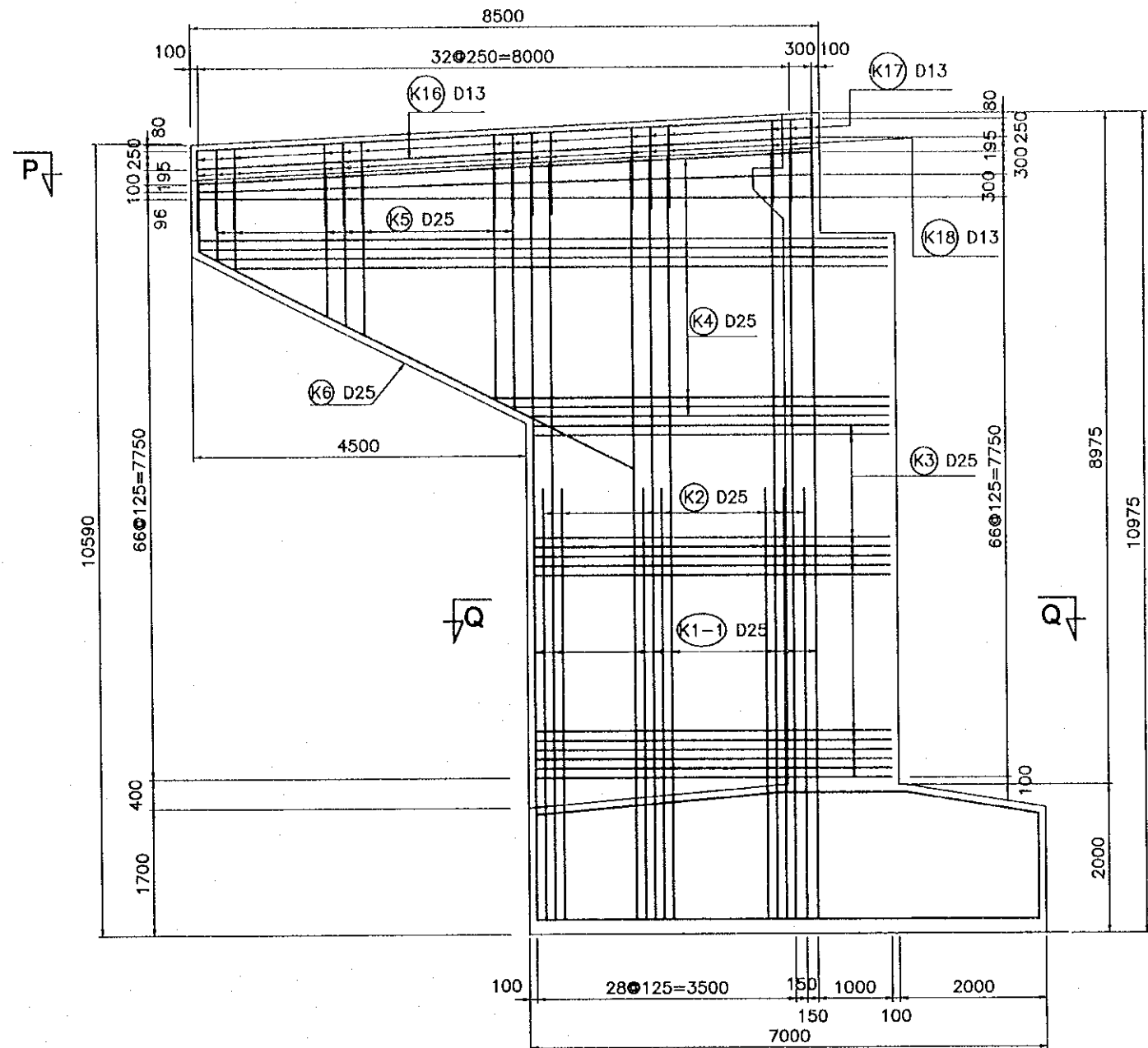
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	PACIFIC CONSULTANTS INTERNATIONAL	SIGNATURE <i>[Signature]</i>
COMPLETION		DATE 2000. 3. 14

PACKAGE 2	SCALE 1/100	DRAWING No. C-2-3-3	SHEET No.
NATIONAL HIGHWAY No.5 FLYOVER - RAMP A BAR ARRANGMENT FOR ABUTMENT A10 (2)			

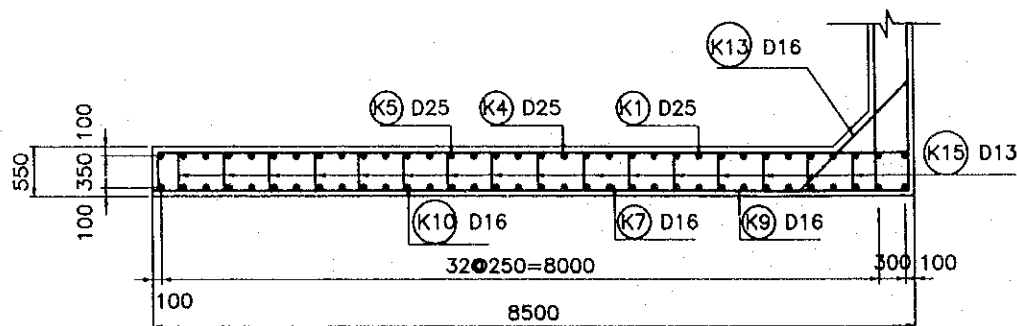
SECTION H - H



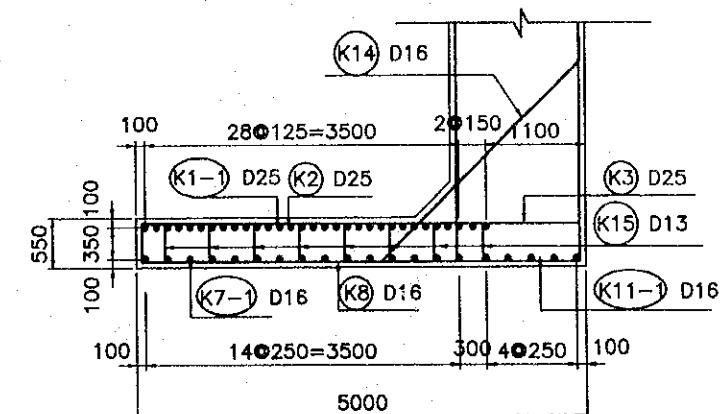
SECTION K - K



SECTION P - P



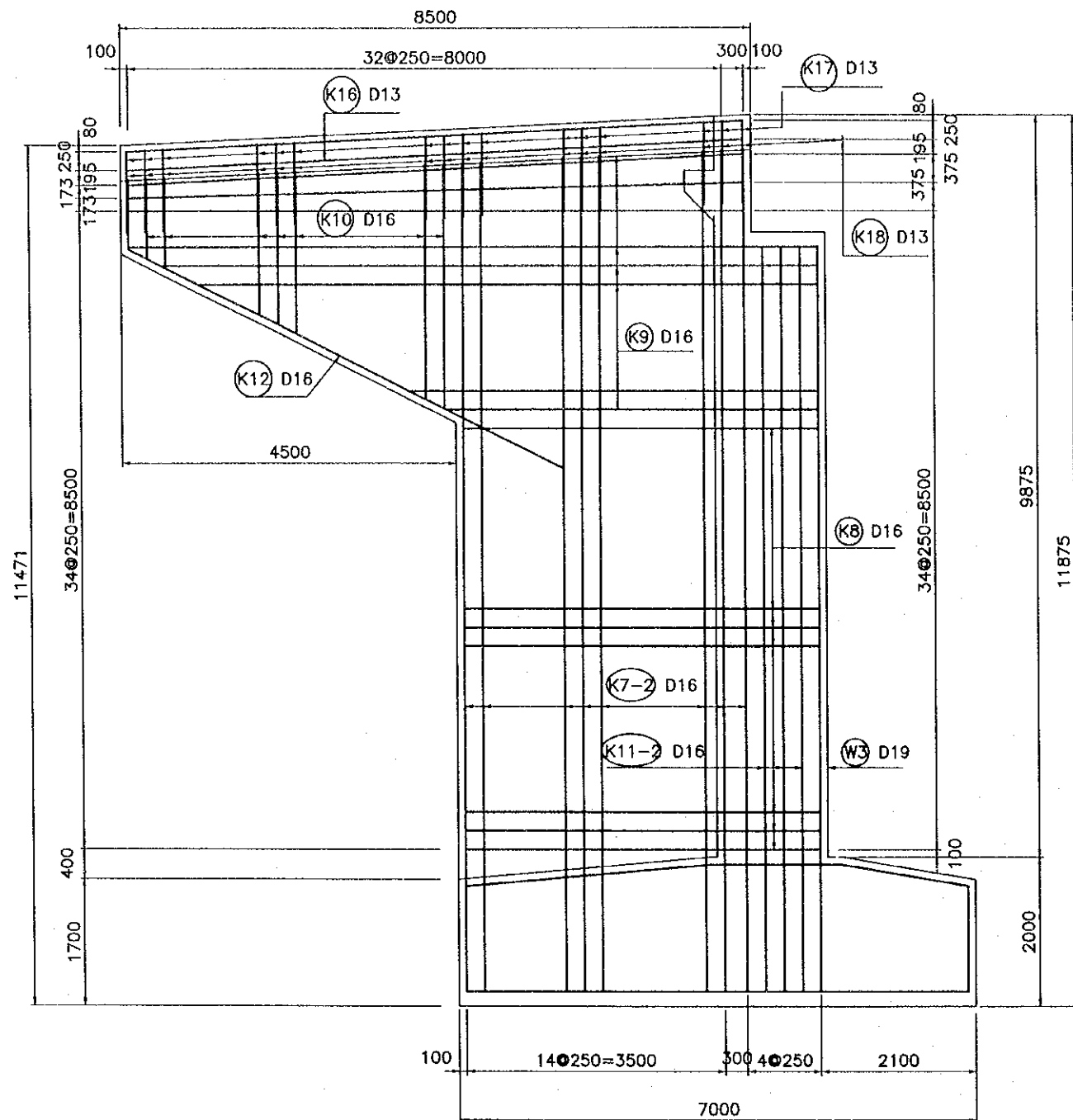
SECTION Q - Q



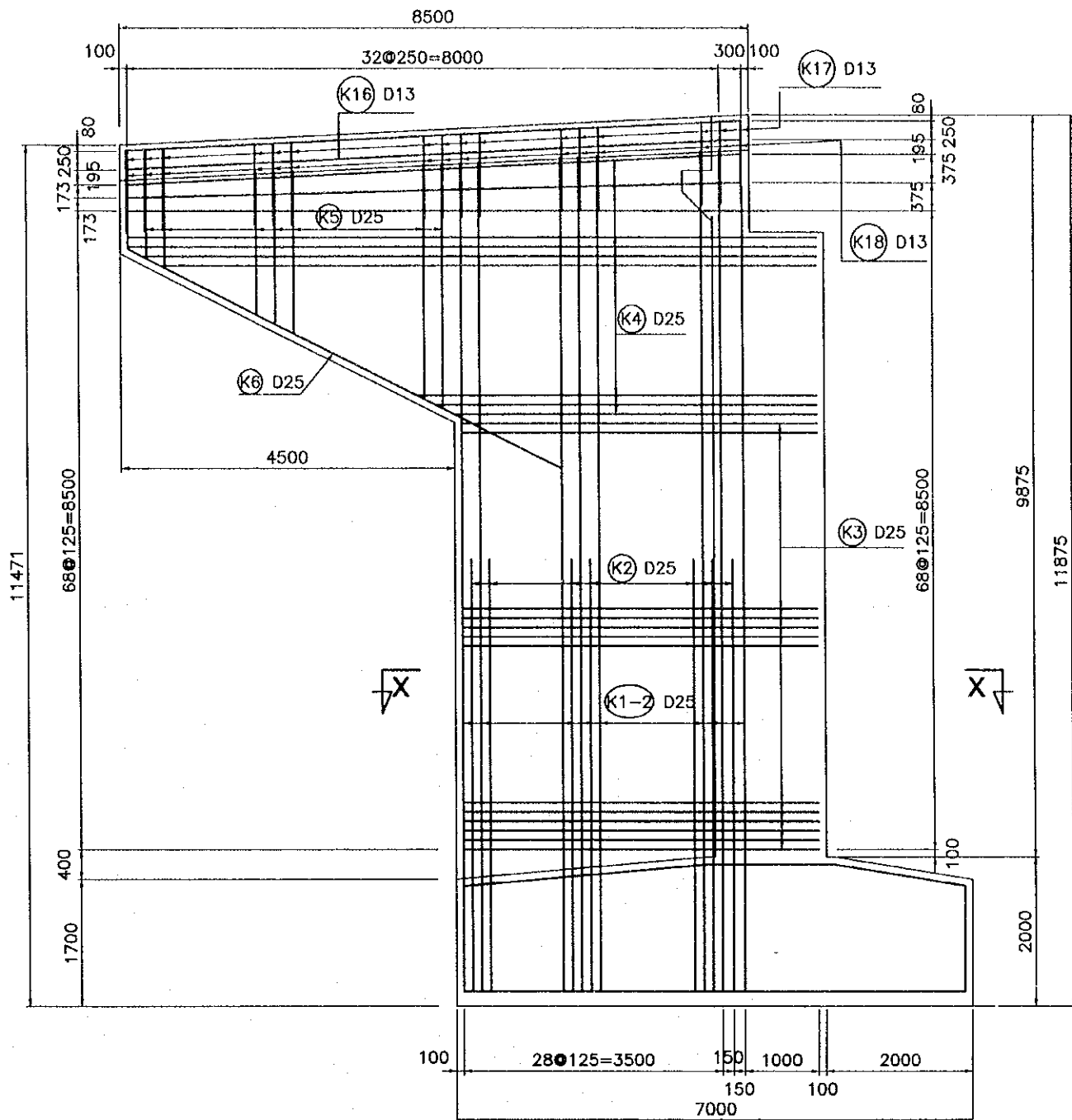
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THUONG LOANG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT	DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.3.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-2-3-4	
NATIONAL HIGHWAY No.5 FLYOVER - RAMP A BAR ARRANGMENT FOR ABUTMENT A1a (3)			

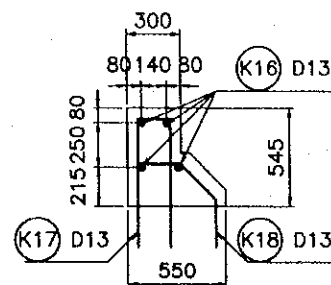
SECTION M - M



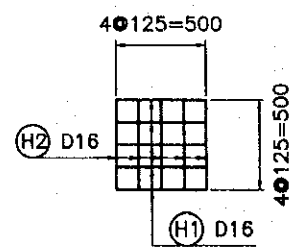
SECTION N - N



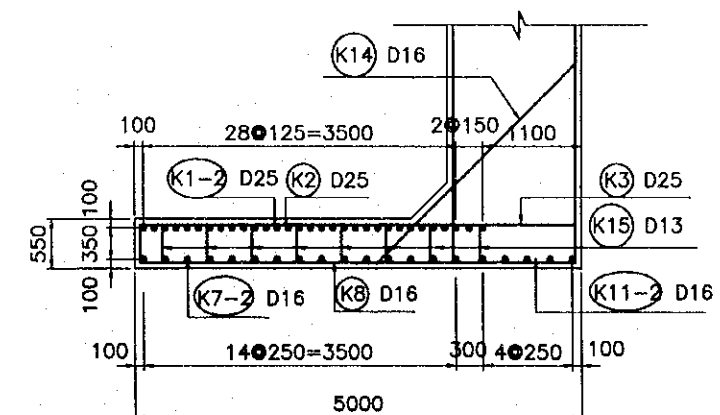
DETAIL A  
(S = 1/50)



REI. BARS UNDER  
GROUND PAD  
(S = 1/50)



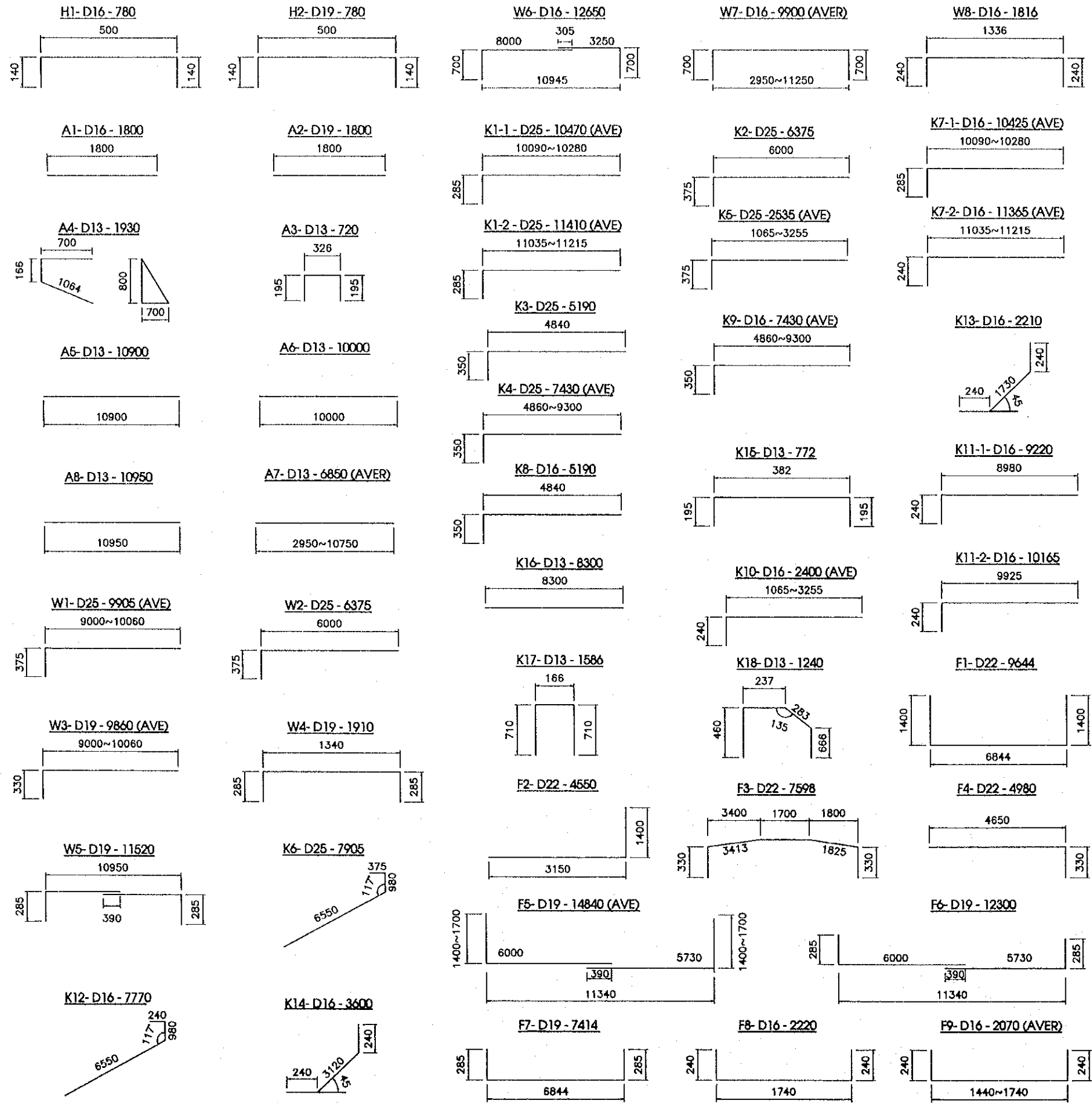
SECTION X - X



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-2-3-5	
NATIONAL HIGHWAY No.5 FLYOVER -- RAMP A BAR ARRANGEMENT OF ABUTMENT A1a (4)			

LIST OF REINFORCING BARS



QUANTITY REINFORCEMENT FOR ABUTMENT A1A

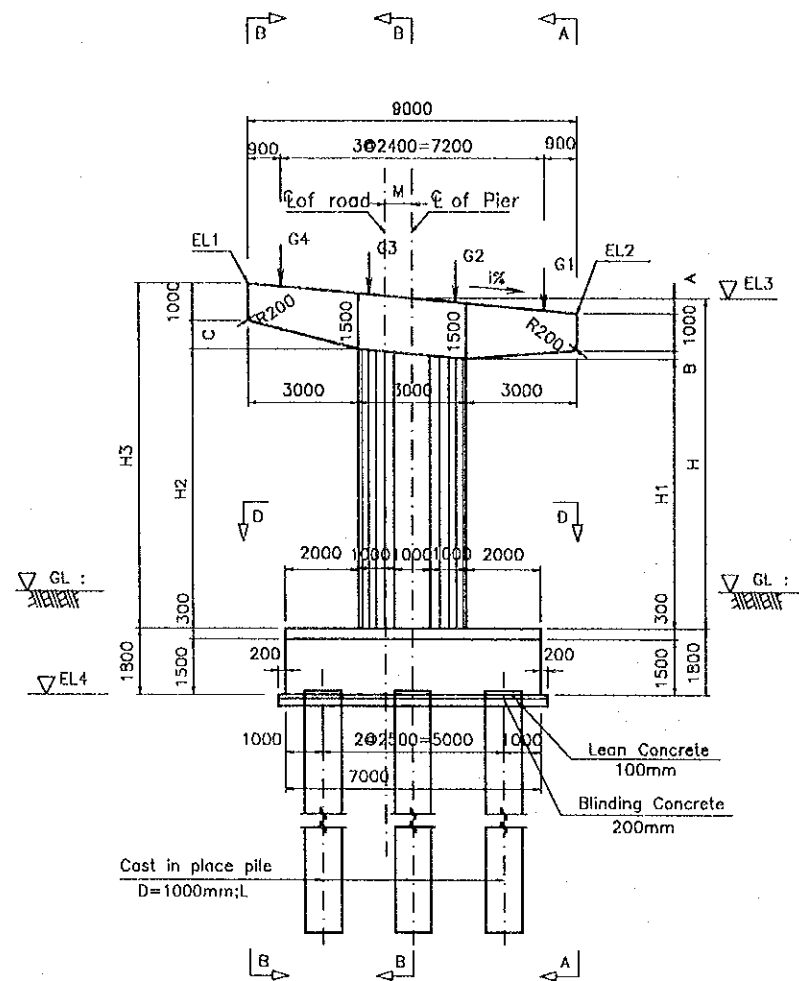
TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm			kg/m	
H1		D16	780	20	1.560	24.34
H2		D16	780	20	1.560	24.34
A1		D16	1800	45	1.560	126.36
A2		D19	1800	87	2.250	352.35
A3		D13	720	66	0.995	47.28
A4		D13	1930	42	0.995	80.65
A5		D13	10900	5	0.995	54.23
A6		D13	10000	2	0.995	19.90
A7		D13	6850	8	0.995	54.53
A8		D13	10950	2	0.995	21.79
W1	AVE	D25	9905	47	3.980	1852.83
W2		D25	6375	44	3.980	1116.39
W3	AVE	D19	9860	47	2.250	1042.70
W4		D19	1910	47	2.250	201.98
W5		D19	11520	5	2.250	129.60
W6		D16	12650	61	1.560	1203.77
W7	AVE	D16	9900	4	1.560	61.78
W8		D16	1816	308	1.560	872.55
K1-1	AVE	D25	10470	16	3.980	666.73
K1-2	AVE	D25	11410	16	3.980	726.59
K2		D25	6375	32	3.980	811.92
K3		D25	5190	84	3.980	1735.12
K4	AVE	D25	7430	50	3.980	1478.57
K5	AVE	D25	2535	34	3.980	343.04
K6		D25	7905	2	3.980	62.92
K7-1	AVE	D16	10425	16	1.560	260.21
K7-2	AVE	D16	11365	16	1.560	283.67
K8		D16	5190	42	1.560	340.05
K9	AVE	D16	7430	25	1.560	289.77
K10	AVE	D16	2400	34	1.560	127.30
K11-1		D16	9220	3	1.560	43.15
K11-2		D16	10165	3	1.560	47.57
K12		D16	7770	2	1.560	24.24
K13		D16	2210	6	1.560	20.69
K14		D16	3600	62	1.560	348.19
K15		D13	772	396	0.995	304.18
K16		D13	8300	8	0.995	66.07
K17		D13	1586	68	0.995	107.31
K18		D13	1240	68	0.995	83.90
F1		D22	9644	47	3.040	1377.93
F2		D22	4550	44	3.040	608.61
F3		D22	7598	47	3.040	1085.60
F4		D22	4980	44	3.040	666.12
F5	AVE	D22	15330	55	3.040	2481.25
F6		D19	12800	10	2.250	278.75
F7		D19	7414	10	2.250	166.82
F8		D16	2220	72	1.560	249.35
F9	AVE	D16	2070	240	1.560	775.01
TOTAL ABUTMENT A1A						23145.99
		D25		8794.11	Kg	
		D22		6219.52	Kg	
		D19		2170.19	Kg	
		D16		5122.33	Kg	
		D13		839.84	Kg	



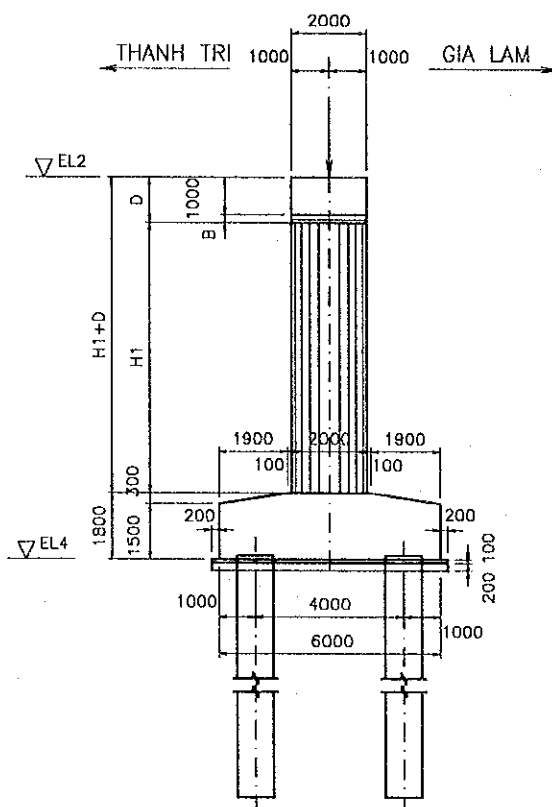
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/200	C-2-3-6	
NATIONAL HIGHWAY No.5 FLYOVER - RAMP A DETAIL OF PIERS P1a,P2a			

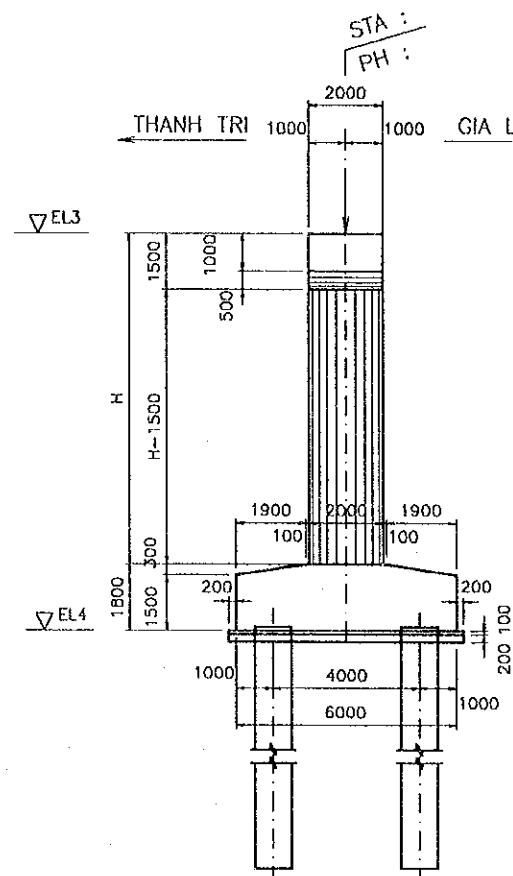
FRONT VIEW



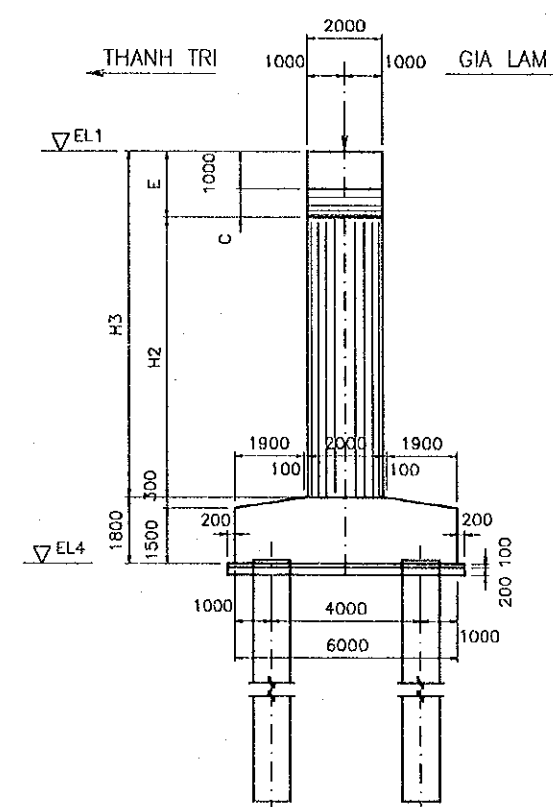
SECTION A - A



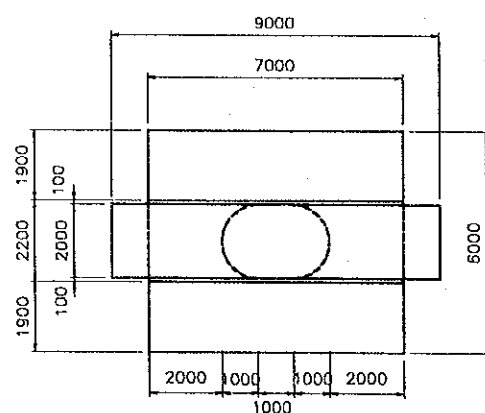
SECTION B - B



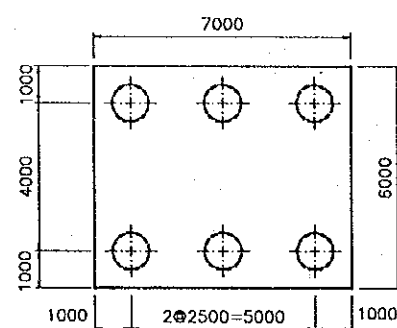
SECTION C - C



PLAN VIEW

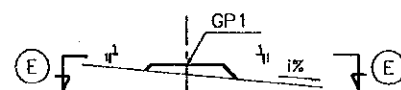


PILE ARRANGEMENT

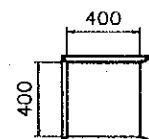


GIRDER BEARING SEAT DETAIL

(SC=1/50)



SECTION E-E



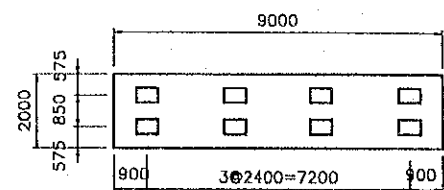
DEPTH OF SUPERSTRUCTURE FOR PIER P1A

Component	Depth(mm)
AC layer	75
Slab	1000
Motor1	20
Shoe(F)	32
Motor2	30
Total	1157

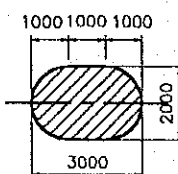
DEPTH OF SUPERSTRUCTURE FOR PIER P2A

Component	Depth(mm)
AC layer	75
Slab	1000
Motor1	20
Shoe(M)	32
Motor2	30
Total	1157

TOP VIEW



SECTION D - D



ELEVATION OF TOP BEARING SEAT GP1

Piers	Bearing seat	G1	G2	G3	G4
P1A	Elevation(m)	10.303	10.519	10.735	10.951
P2A	Elevation(m)	11.110	11.262	11.413	11.585

DIMENSIONS OF PIERS

Piers	STA(m)	PH(m)	i(%)	EL1(m)	EL2(m)	EL3(m)	EL4(m)	GL(m)	L(m)
P1A	0+258.41	11.799	9.00	11.002	10.192	10.597	-0.403	3.110	40
P2A	0+275.41	12.516	6.32	11.612	11.043	11.327	0.327	3.103	40

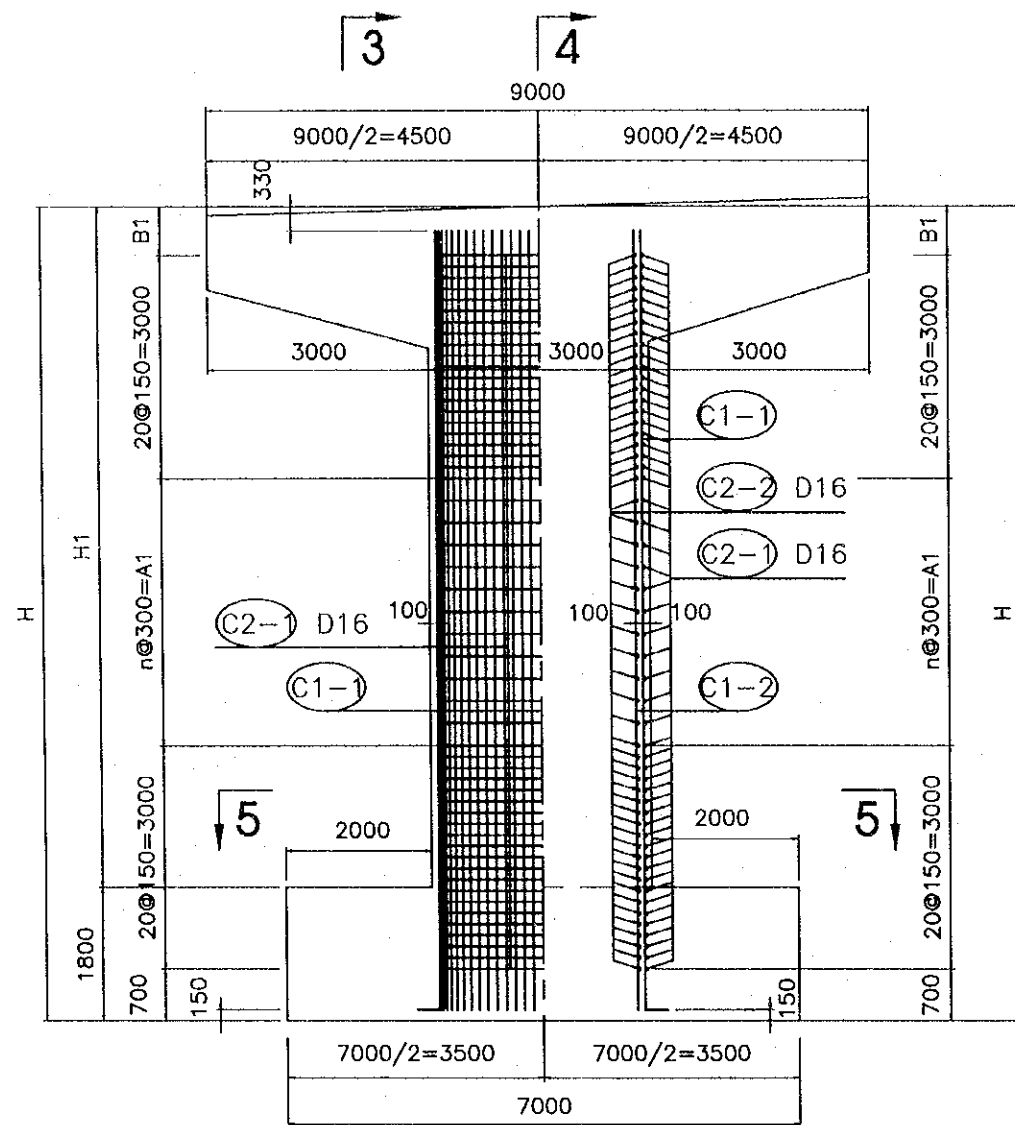
Piers	M(mm)	H(mm)	H1(mm)	H2(mm)	H3(mm)	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)
P1A	500	9200	7565	7835	9605	405	230	770	1230	1770
P2A	500	9200	7606	7795	9485	284	310	690	1310	1690



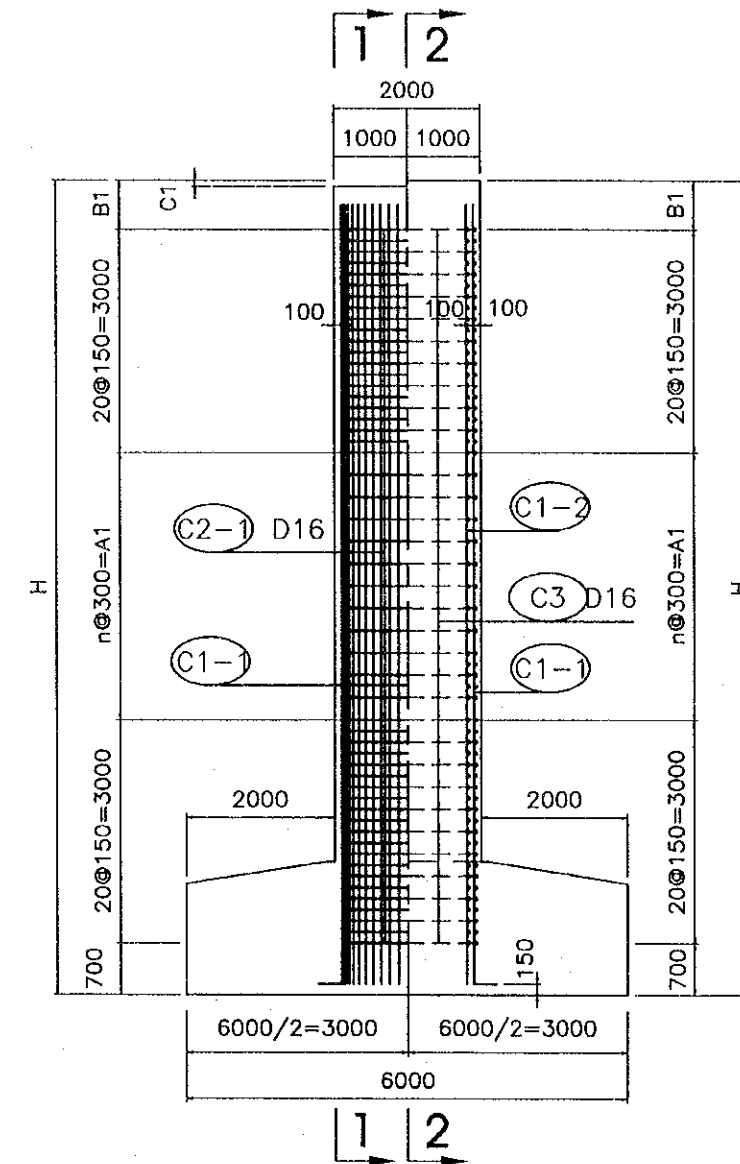
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
1	1/100	C-2-3-B	
NATIONAL HIGHWAY No.5 FLYOVER - RAMP A BAR ARRANGEMENT FOR PIERS P1a, P2a (2)			

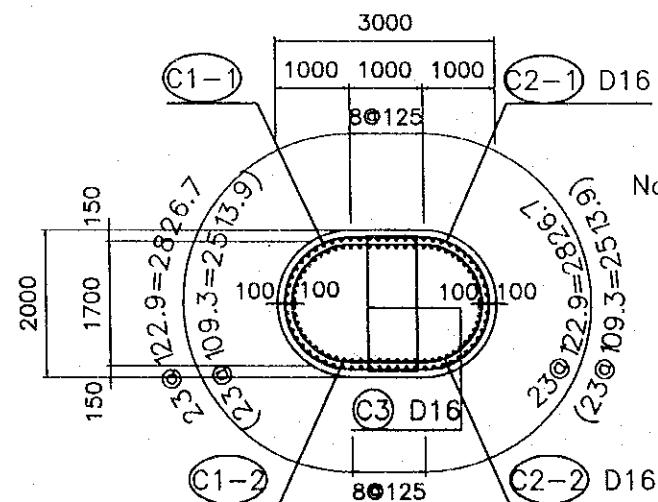
HALF SECTION 1 - 1      HALF SECTION 2 - 2



HALF SECTION 3 - 3      HALF SECTION 4 - 4



SECTION 5 - 5



Note: Value in (...) use inter row bar.

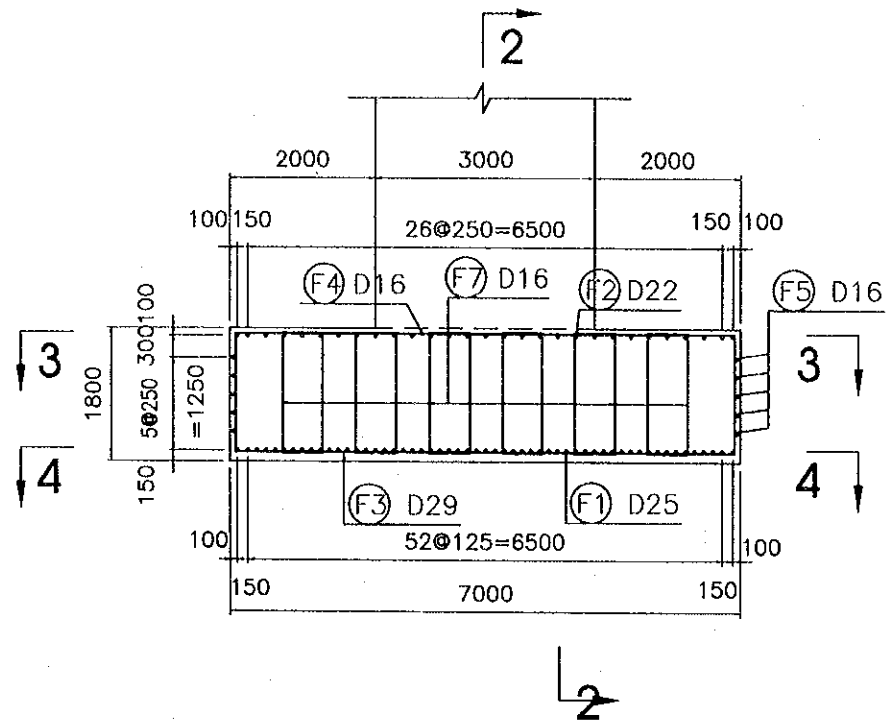
DIMENSIONS OF PIERS

ITEMS PIER	H(m)	H1(m)	A1(mm)	B1(mm)	C1(mm)	n
P1A	11000	9200	3900	400	135	13
P2A	11000	9200	3900	400	95	13

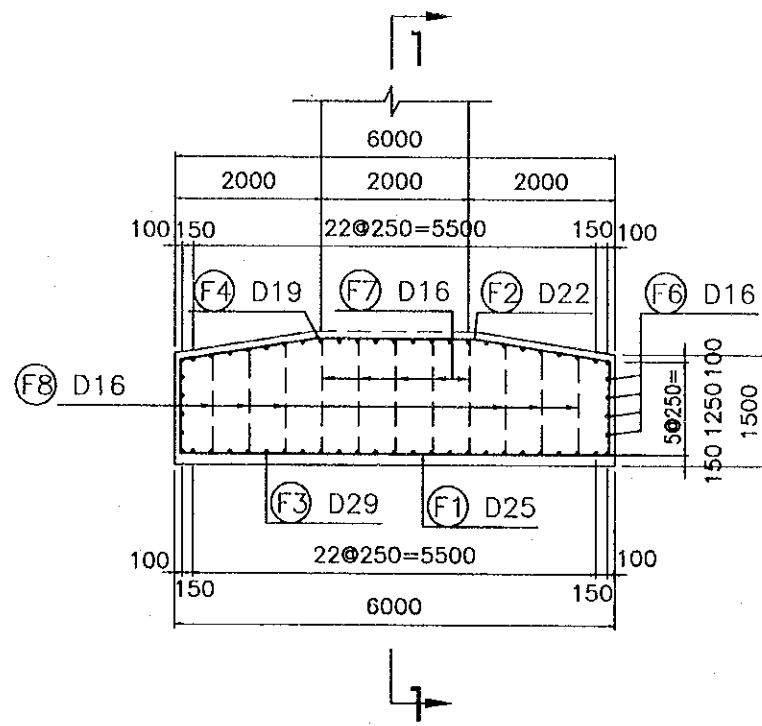
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.19

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-2-3-9	
NATIONAL HIGHWAY No.5 FLYOVER - RAMP A BAR ARRANGEMENT OF PIERS P1a, P2a (3)			

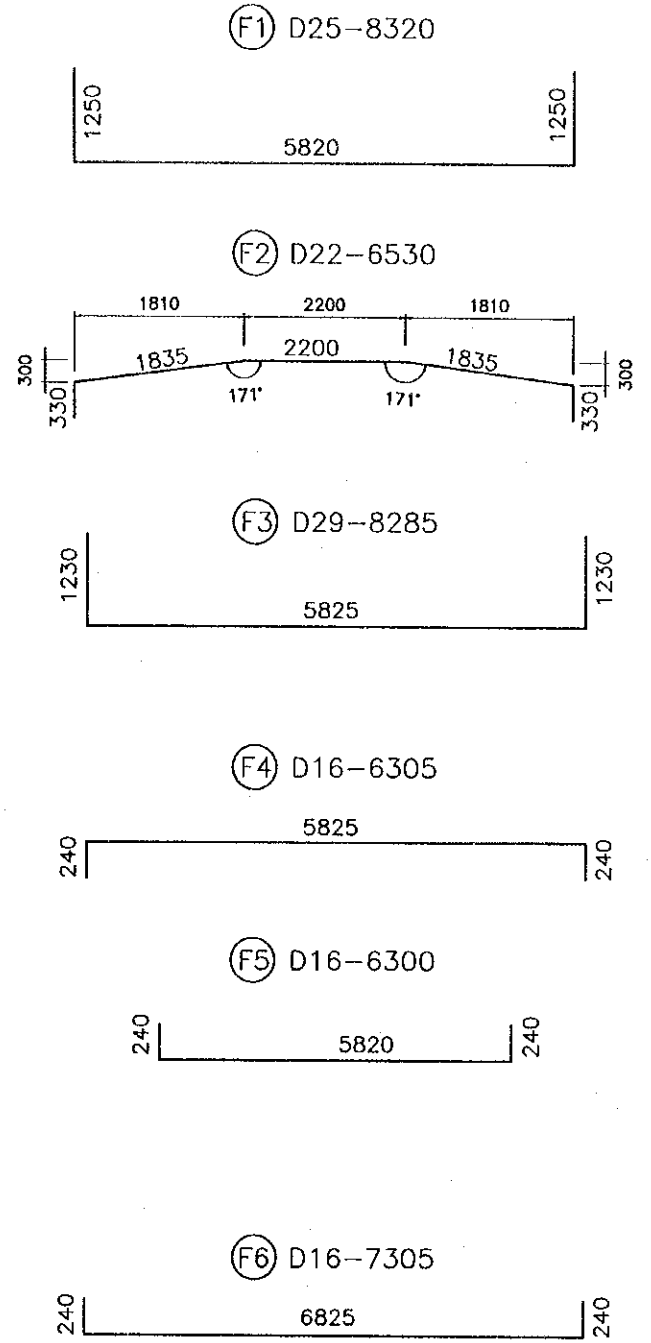
SECTION 1 - 1



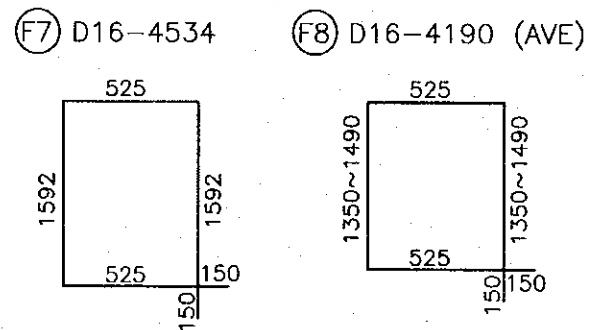
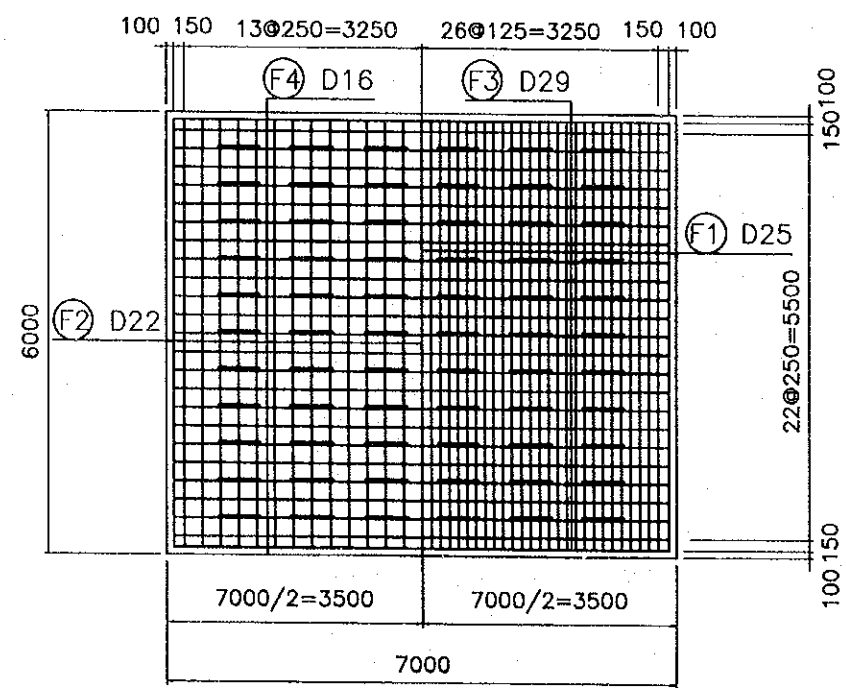
SECTION 2 - 2



LIST OF REINFORCING BARS FOR FOOTING



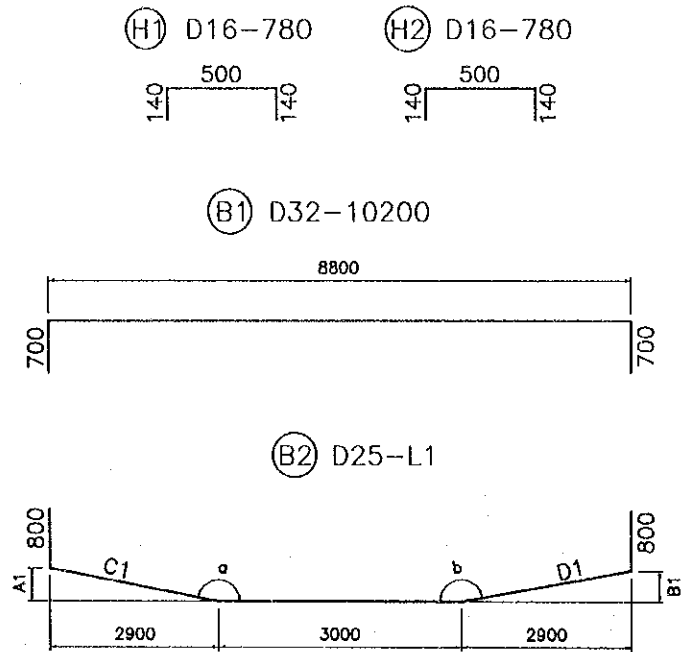
HALF SECTION 3 - 3 HALF SECTION 4 - 4



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATABE
PROJECT RED RIVER BRIDGE (TIANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2002.3.19

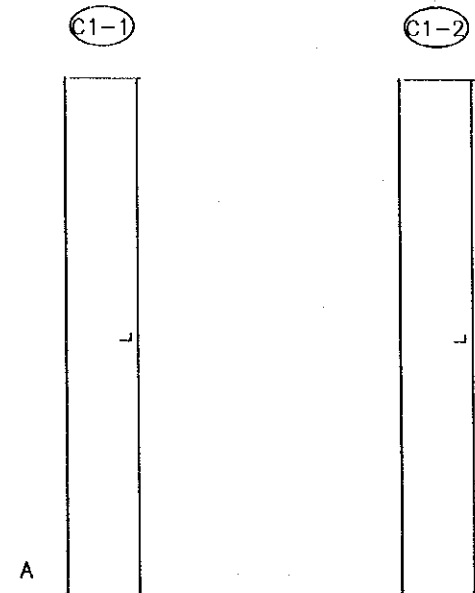
PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-2-3-10	
NATIONAL HIGHWAY No.5 FLYOVER -- RAMP A BAR ARRANGEMENT OF PIERS P1a,P2a (4)			

LIST OF REINFORCING BARS FOR BEAM AND COLUMN



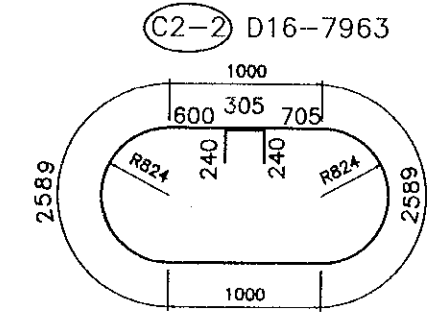
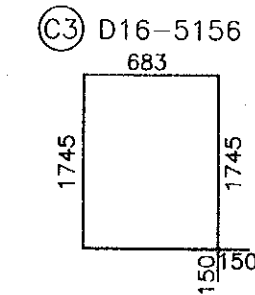
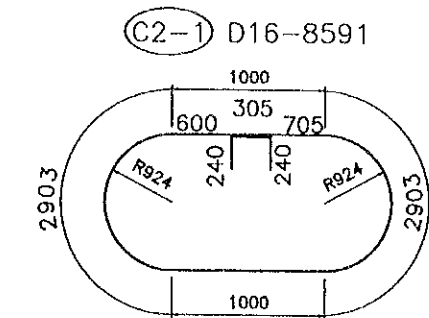
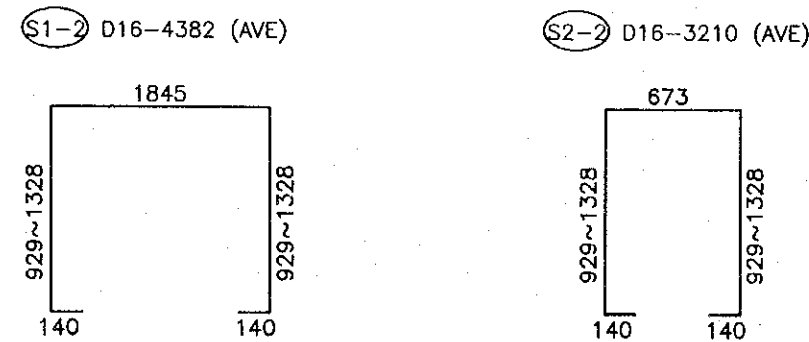
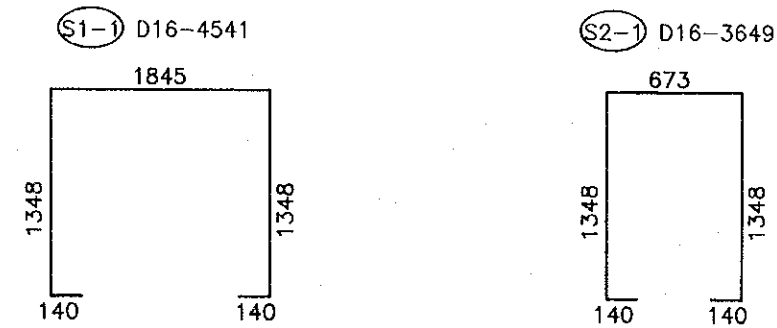
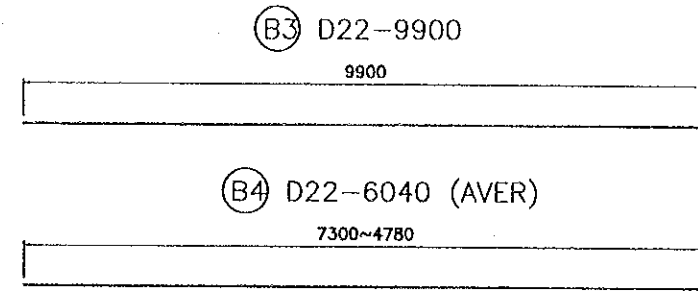
DIMENSIONS OF BAR B2

PIERS	A1 (mm)	B1 (mm)	C1 (mm)	D1 (mm)	L1 (mm)	a (°)	b (°)
P1C	770	230	3001	2909	10510	165	175
P2C	690	310	2981	2917	10498	166	174



DIMENSIONS OF BAR C1-1,C1-2

Items Piers	Diameter (mm)	A (mm)	L (mm)	Total C1-1 (mm)	Total C1-2 (mm)
P1A	D32	480	10520	11000	10520
P2A	D32	480	10520	11000	10520



0.708

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	
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PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.3.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-2-3-11	
NATIONAL HIGHWAY No.5 FLYOVER - RAMP A BAR ARRANGEMENT OF PIERS P1a,P2a (5)			

### QUANTITY REINFORCEMENT FOR PIER P1A

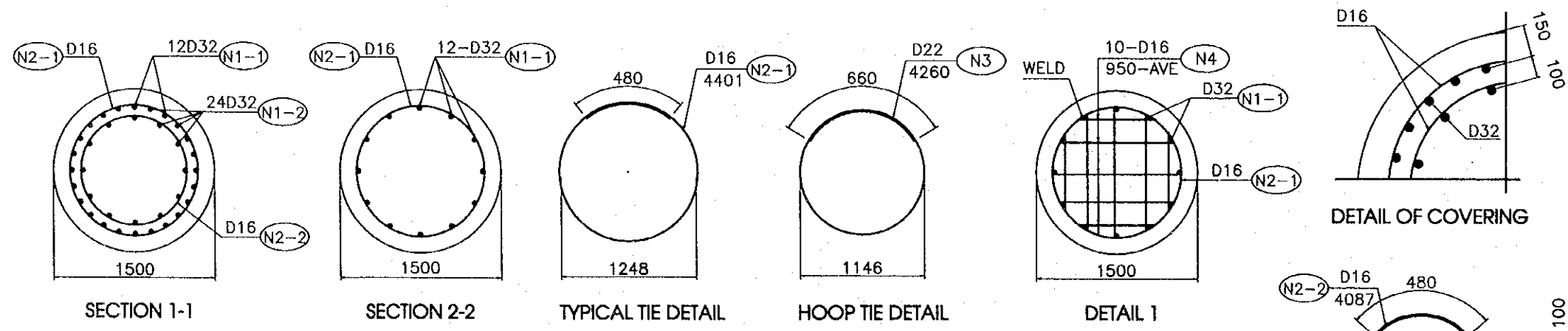
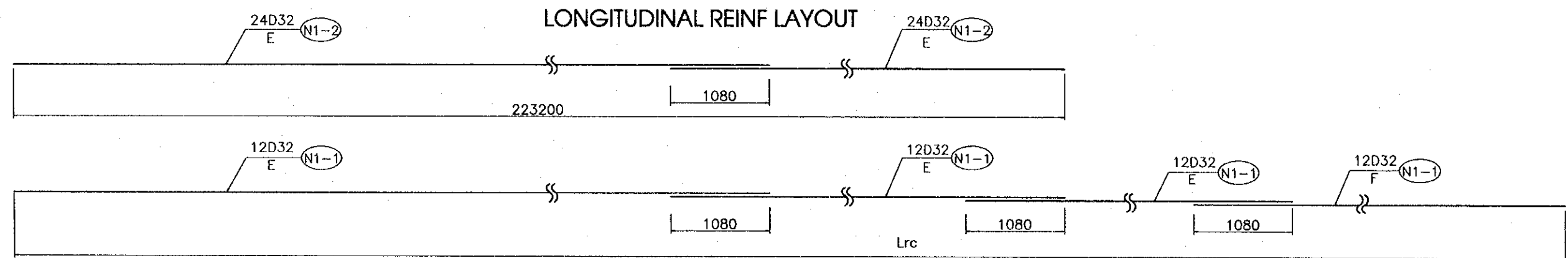
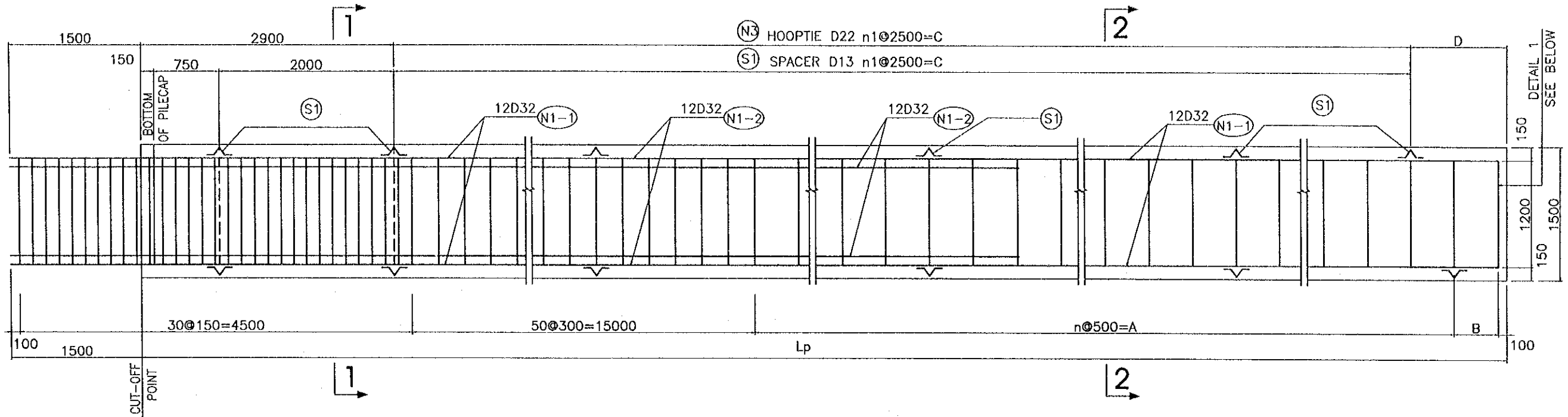
DETAILS	TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
			mm	mm		kg/m	kg
PIER CAP	H1		D16	780	20	1.560	24.34
	H2		D16	780	20	1.560	24.34
	B1		D32	10200	16	6.230	1016.74
	B2		D25	10510	16	3.980	669.28
	B3		D22	9900	6	3.040	180.58
	B4	AVE	D22	6040	6	3.040	110.17
	B5		D16	2125	10	1.560	33.15
	S1-1		D16	4541	19	1.560	134.60
	S1-2	AVE	D16	4382	40	1.560	273.44
	S2-1		D16	3649	19	1.560	108.16
	S2-2	AVE	D16	3210	40	1.560	200.30
	S3		D16	2125	59	1.560	195.59
	COLUMN	C1-1		D32	11000	64	6.230
C1-2			D32	10520	64	6.230	4194.53
C2-1			D16	8591	54	1.560	723.71
C2-2			D16	7963	54	1.560	670.80
C3			D16	5156	34	1.560	723.47
FOOTING	F1		D25	8320	55	3.980	1821.25
	F2		D22	6530	29	3.040	575.68
	F3		D29	8285	25	5.040	1043.91
	F4		D16	6305	25	1.560	245.90
	F5		D16	6300	10	1.560	98.28
	F6		D16	7305	8	1.560	91.17
	F7		D16	4534	30	1.560	212.19
	F8	AVE	D16	4190	36	1.560	235.31
SUMMARY	TOTAL PIER P1A						17542.78
			D32		9597.19	Kg	
			D29		1043.91	Kg	
			D25		2490.52	Kg	
			D22		866.43	Kg	
		D16		3544.73	Kg		

### QUANTITY REINFORCEMENT FOR PIER P2A

DETAILS	TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
			mm	mm		kg/m	kg
PIER CAP	H1		D16	780	20	1.560	24.34
	H2		D16	780	20	1.560	24.34
	B1		D32	10200	16	6.230	1016.74
	B2		D25	10498	16	3.980	668.51
	B3		D22	9900	6	3.040	180.58
	B4	AVE	D22	6040	6	3.040	110.17
	B5		D16	2125	10	1.560	33.15
	S1-1		D16	4541	19	1.560	134.60
	S1-2	AVE	D16	4382	40	1.560	273.44
	S2-1		D16	3649	19	1.560	108.16
	S2-2	AVE	D16	3210	40	1.560	200.30
	S3		D16	2125	59	1.560	195.59
	COLUMN	C1-1		D32	11000	64	6.230
C1-2			D32	10520	64	6.230	4194.53
C2-1			D16	8591	54	1.560	723.71
C2-2			D16	7963	54	1.560	670.80
C3			D16	5156	34	1.560	273.47
FOOTING	F1		D25	8320	55	3.980	1821.25
	F2		D22	6530	29	3.040	575.68
	F3		D29	8285	25	5.040	1043.91
	F4		D16	6305	25	1.560	245.90
	F5		D16	6300	10	1.560	98.28
	F6		D16	7305	8	1.560	91.17
	F7		D16	4534	30	1.560	212.19
	F8	AVE	D16	4190	36	1.560	235.31
SUMMARY	TOTAL PIER P2A						17542.02
			D32		9597.19	Kg	
			D29		1043.91	Kg	
			D25		2489.76	Kg	
			D22		866.43	Kg	
		D16		3544.73	Kg		

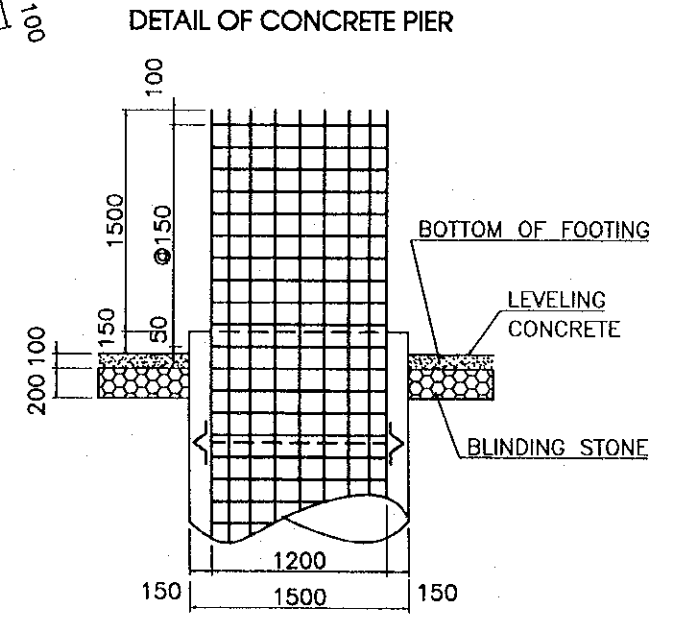
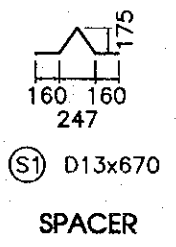
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	DATE 2000.3.17
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		


PACKAGE 2	SCALE 1/50	DRAWING No. C-2-3-12	SHEET No.
NATIONAL HIGHWAY No.5 FLYOVER - RAMP A DETAIL OF D=150CM CAST-IN-PLACE CONCRETE PILE(1)			



DIMENSIONS OF PILE

Pile	Dimensions of pile					Dimensions of bar N1					N1-2	
	Lp(mm)	A(mm)	B(mm)	C(mm)	D(mm)	n	n1	Lrc(mm)	E(mm)	F(mm)	Total(mm)	Total(mm)
A1A	40000	21500	300	35000	2600	43	14	41400	11700	9540	44640	23400



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JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000. 3. 17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-2-3-13	
NATIONAL HIGHWAY No.5 FLYOVER -- RAMP A DETAIL OF D=150CM CAST-IN-PLACE CONCRETE PILE(2)			

QUANTITY MATERIAL OF PILE FOR ABUTMENT A1A (PER 1 PILE)

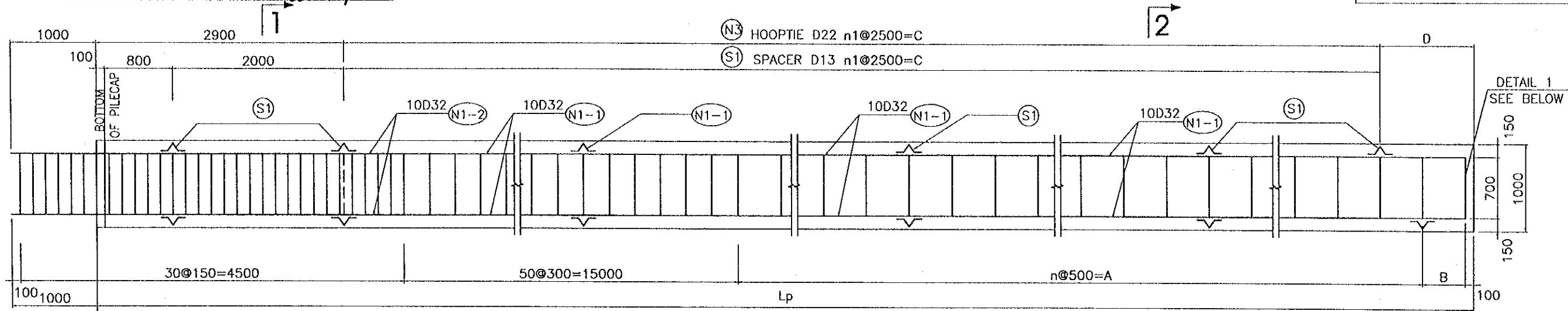
TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44640	12	6.230	3337.29
N1-2	—————	D32	23400	24	6.230	3498.77
N2-1	○	D16	4401	124	1.560	851.33
N2-2	○	D16	4087	89	1.560	567.44
N3	○	D22	4260	16	3.040	207.21
N4	AVE ———	D16	950	10	1.560	14.82
S1	∧	D13	670	64	0.995	42.67
Total abutment A1A						8519.51
				6836.05	Kg	
				207.21	Kg	
				1433.59	Kg	
				42.67	Kg	
Concrete Volume (m3)						70.69

3.2.0

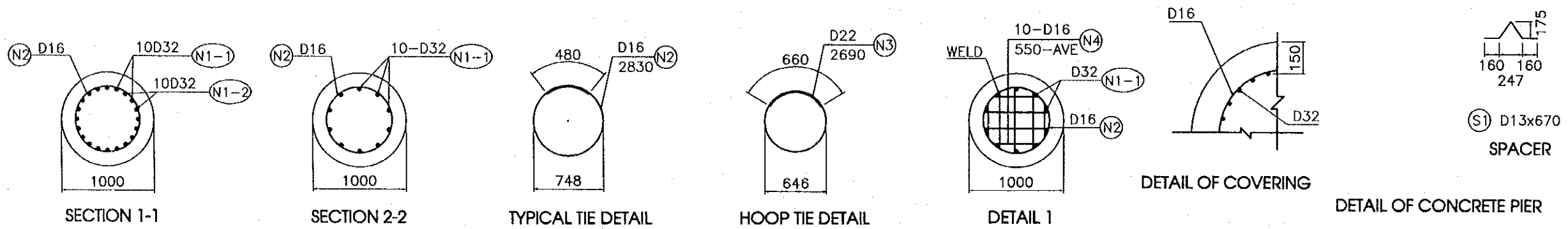
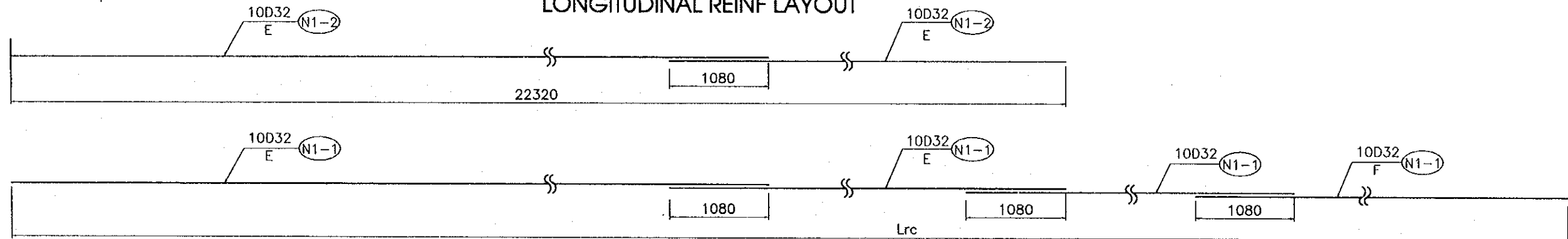


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRUNG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/50	C-2-3-14	
NATIONAL HIGHWAY No.5 FLYOVER - RAMP A			
DETAIL OF D=1000MM CAST-INPLACE CONCRETE PILE (1)			

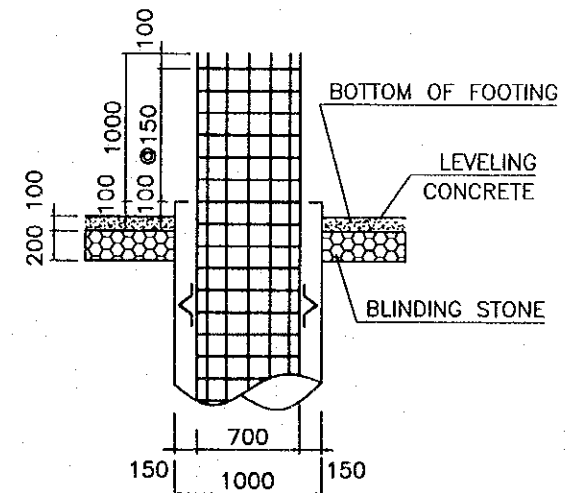



LONGITUDINAL REINF LAYOUT



DIMENSIONS OF PILE

Pile	Dimensions of pile							Dimensions of bar N1-1		N1-2		
	Lp(mm)	A(mm)	B(mm)	C(mm)	D(mm)	n	n1	Lrc(mm)	E(mm)	F(mm)	Total(mm)	Total(mm)
P1A	40000	21000	300	35000	2600	42	14	40900	11700	9040	44140	23400
P2A	40000	21000	300	35000	2600	42	14	40900	11700	9040	44140	23400



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATASE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATASE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-2-3-15	
NATIONAL HIGHWAY No.5 FLYOVER -- RAMP A			
DETAIL OF D=100CM CAST-IN-PLACE CONCRETE PILE(2)			

QUANTITY MATERIAL OF PILE FOR PIER P1A (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44140	10	6.230	2749.92
N1-2	—————	D32	23400	10	6.230	1457.82
N2-1	○	D16	2830	124	1.560	547.44
N3	○	D22	2690	16	3.040	130.84
N4	AVE —————	D16	550	10	1.560	8.58
S1	∧	D13	670	64	0.995	42.67
Total pier P1A						4937.26
					D32	4207.74 Kg
					D22	130.84 Kg
					D16	556.02 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42

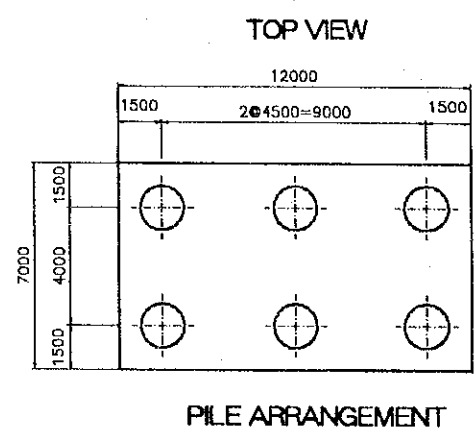
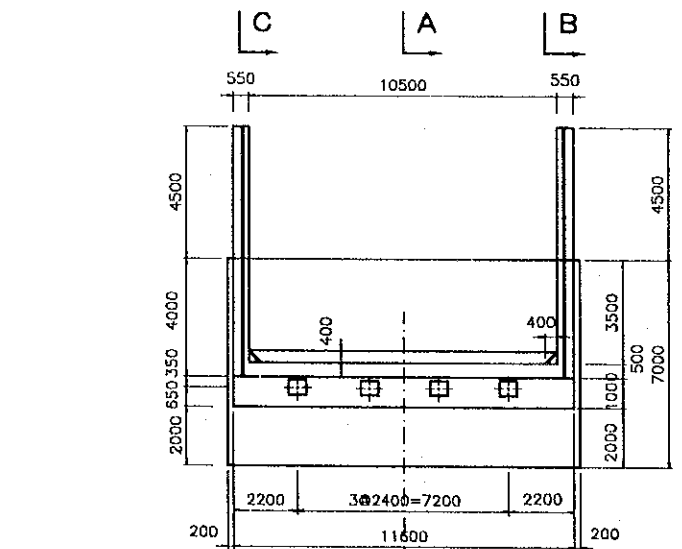
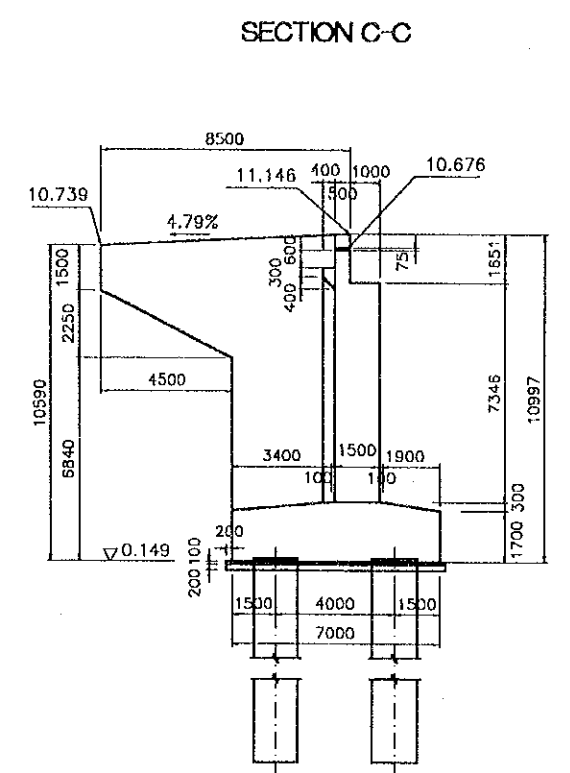
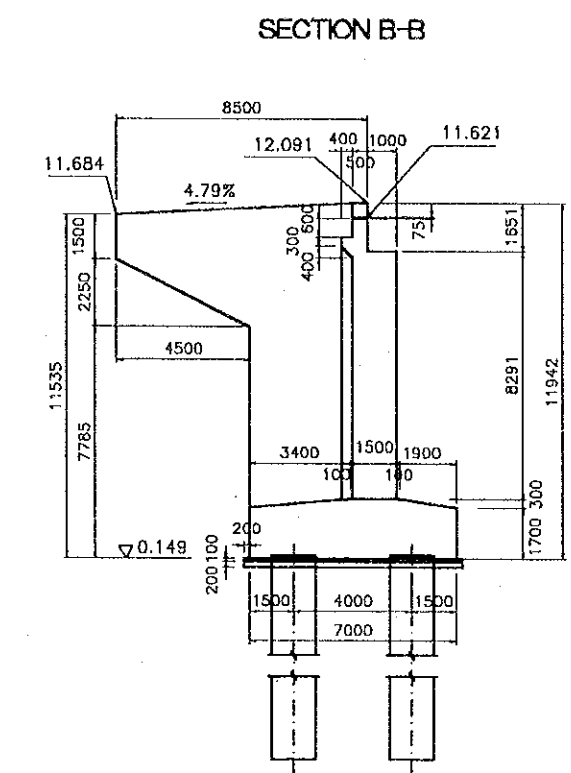
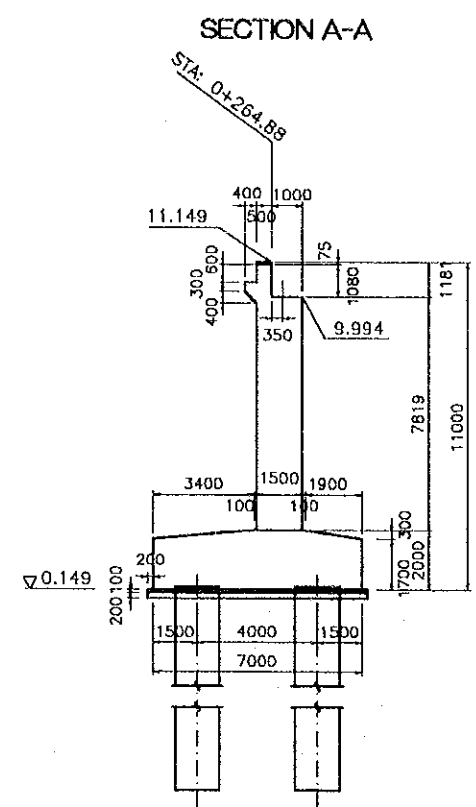
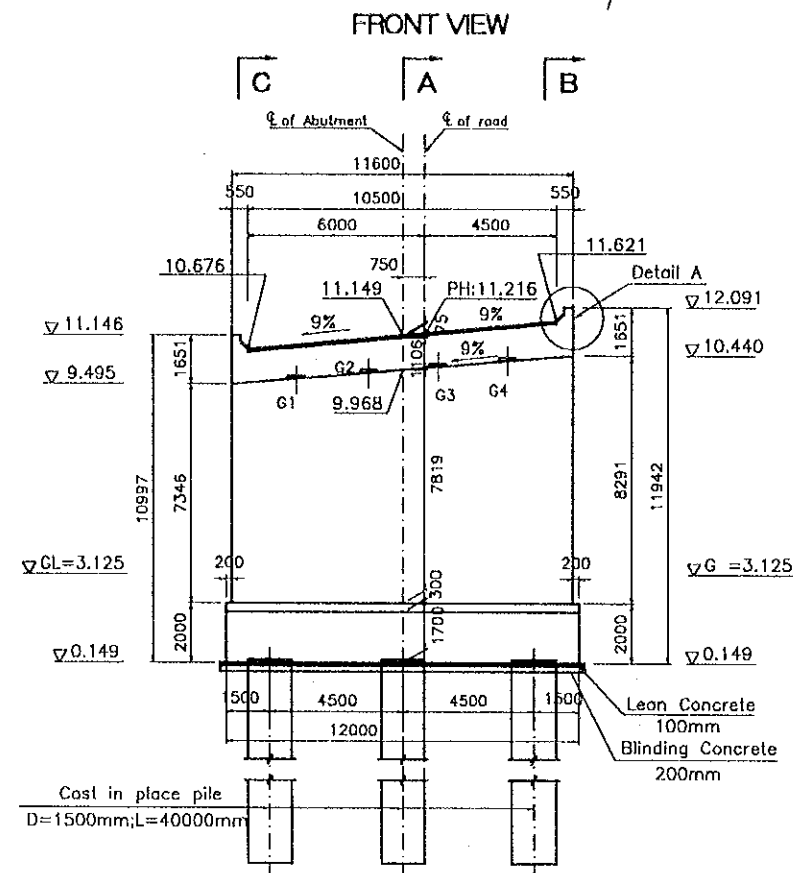
QUANTITY MATERIAL OF PILE FOR PIER P2A (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44140	10	6.230	2749.92
N1-2	—————	D32	23400	10	6.230	1457.82
N2-1	○	D16	2830	124	1.560	547.44
N3	○	D22	2690	16	3.040	130.84
N4	AVE —————	D16	550	10	1.560	8.58
S1	∧	D13	670	64	0.995	42.67
Total pier P2A						4937.26
					D32	4207.74 Kg
					D22	130.84 Kg
					D16	556.02 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42

320

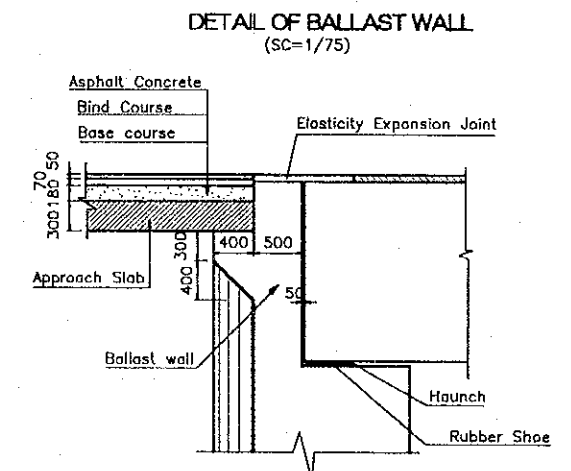
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THAI HO LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2006.1

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/250	C-2-3-16	
NATIONAL HIGHWAY No.5 FLYOVER - RAMP B DETAIL OF ABUTMENT A1b			



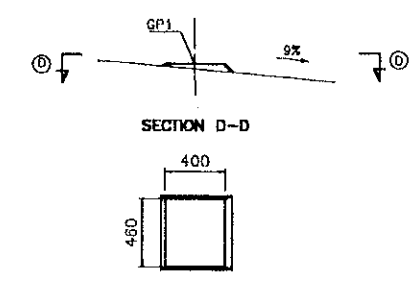
### DEPTH OF SUPERSTRUCTURE

Component	Depth(mm)
AC layer	75
Slab	1000
Mortar1	20
Shoe(M)	56
Mortar2	30
Total	1181



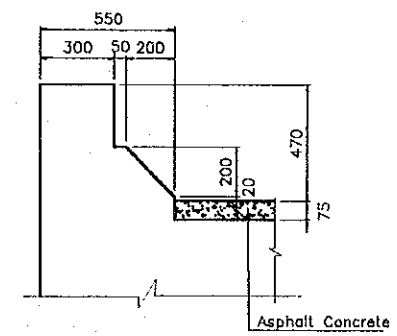
### GIRDER BEARING SEAT DETAIL

(SC=1/50)



### DETAIL - A

(SC=1/25)

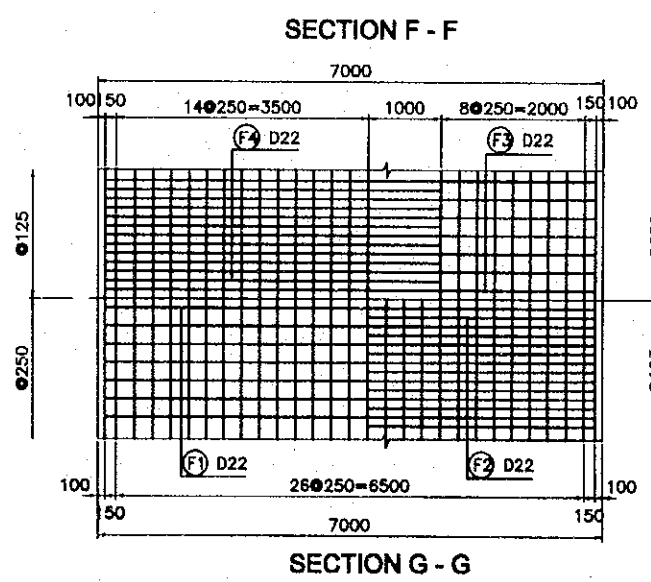
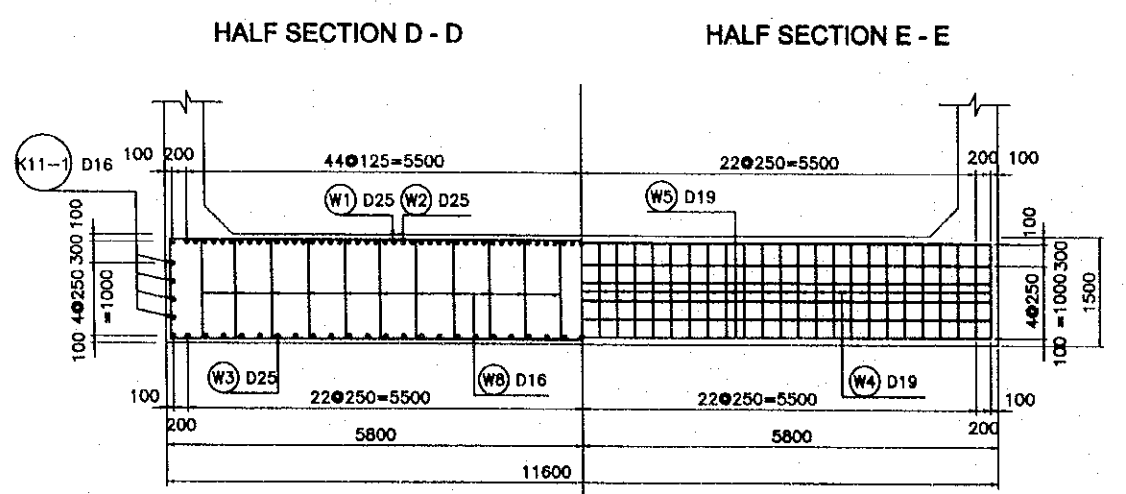
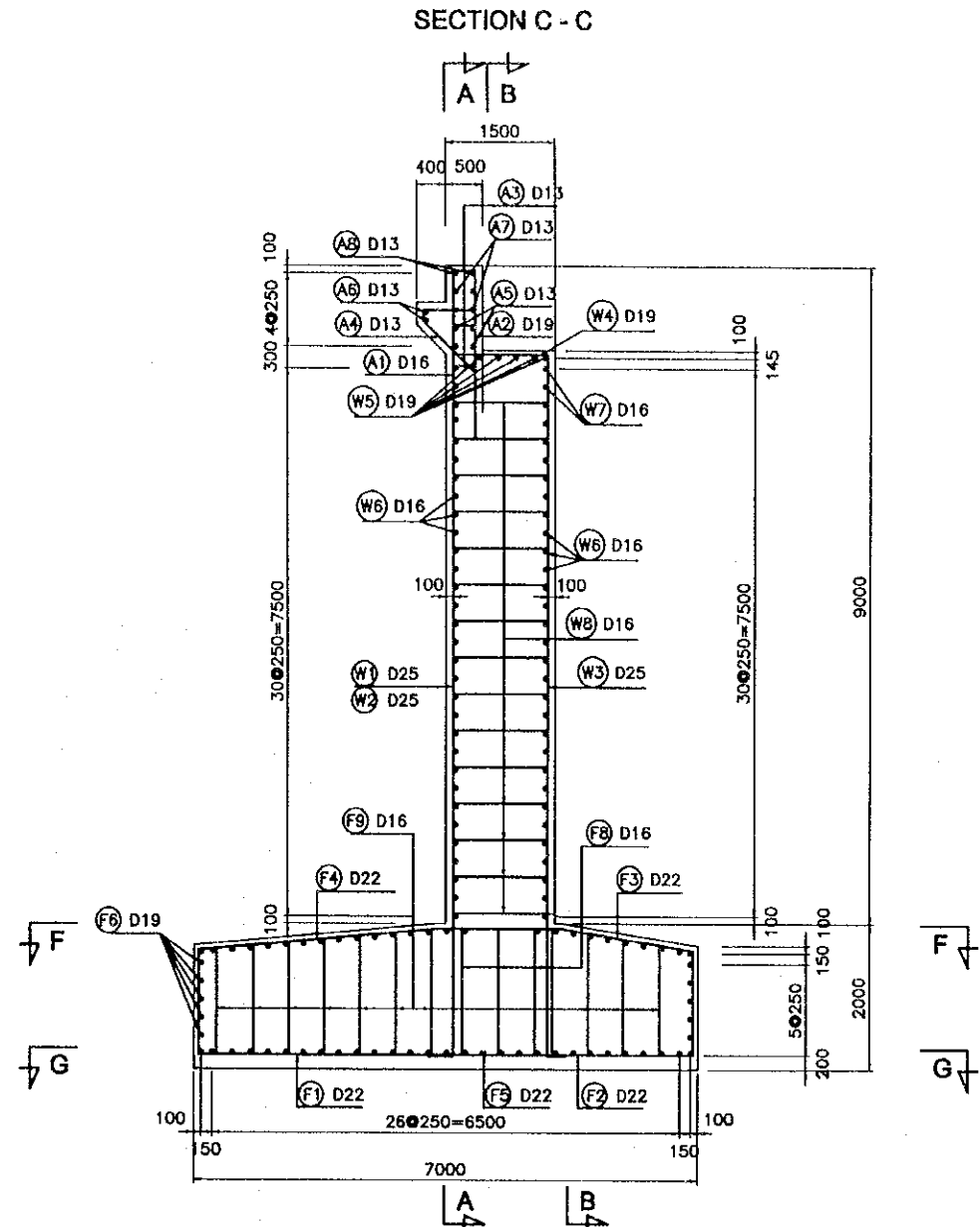
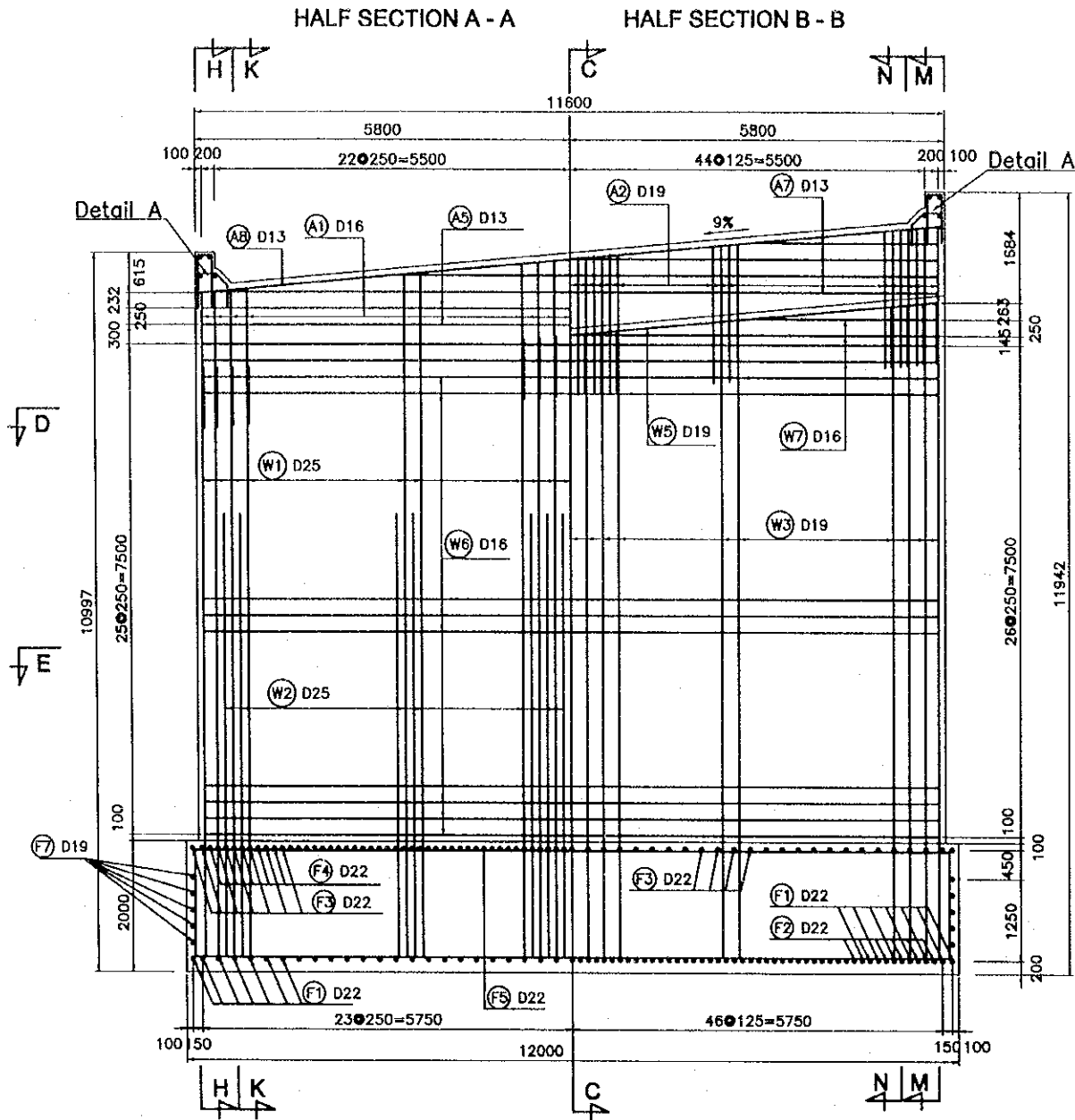


### ELEVATION OF TOP BEARING SEAT GP1

Bearing seat	G1	G2	G3	G4
Elevation(m)	9.674	9.890	10.106	10.322

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
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PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE

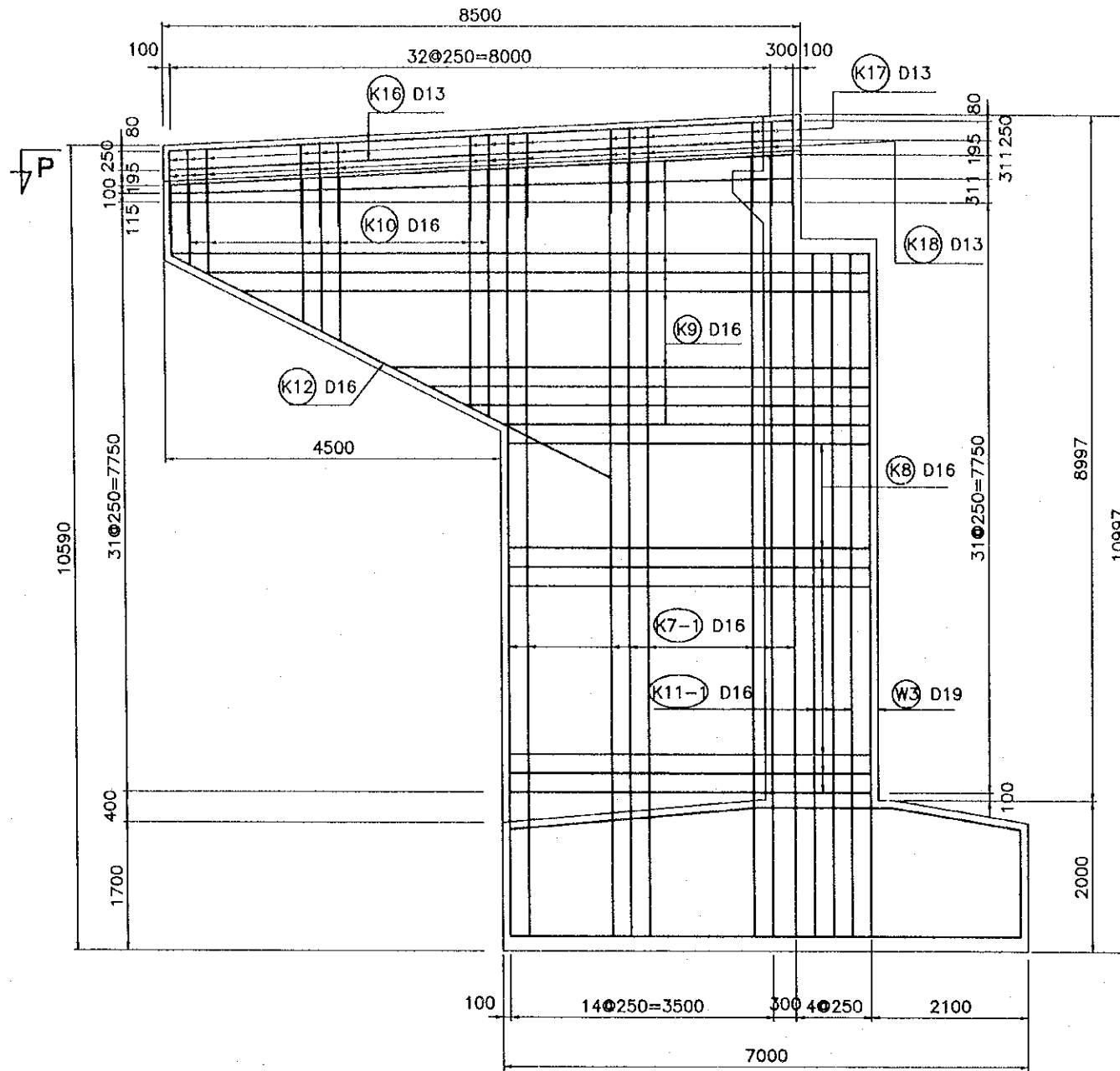
PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-2-3-17	
NATIONAL HIGHWAY No.5 FLYOVER - RAMP B BAR ARRANGEMENT FOR ABUTMENT A1b (1)			



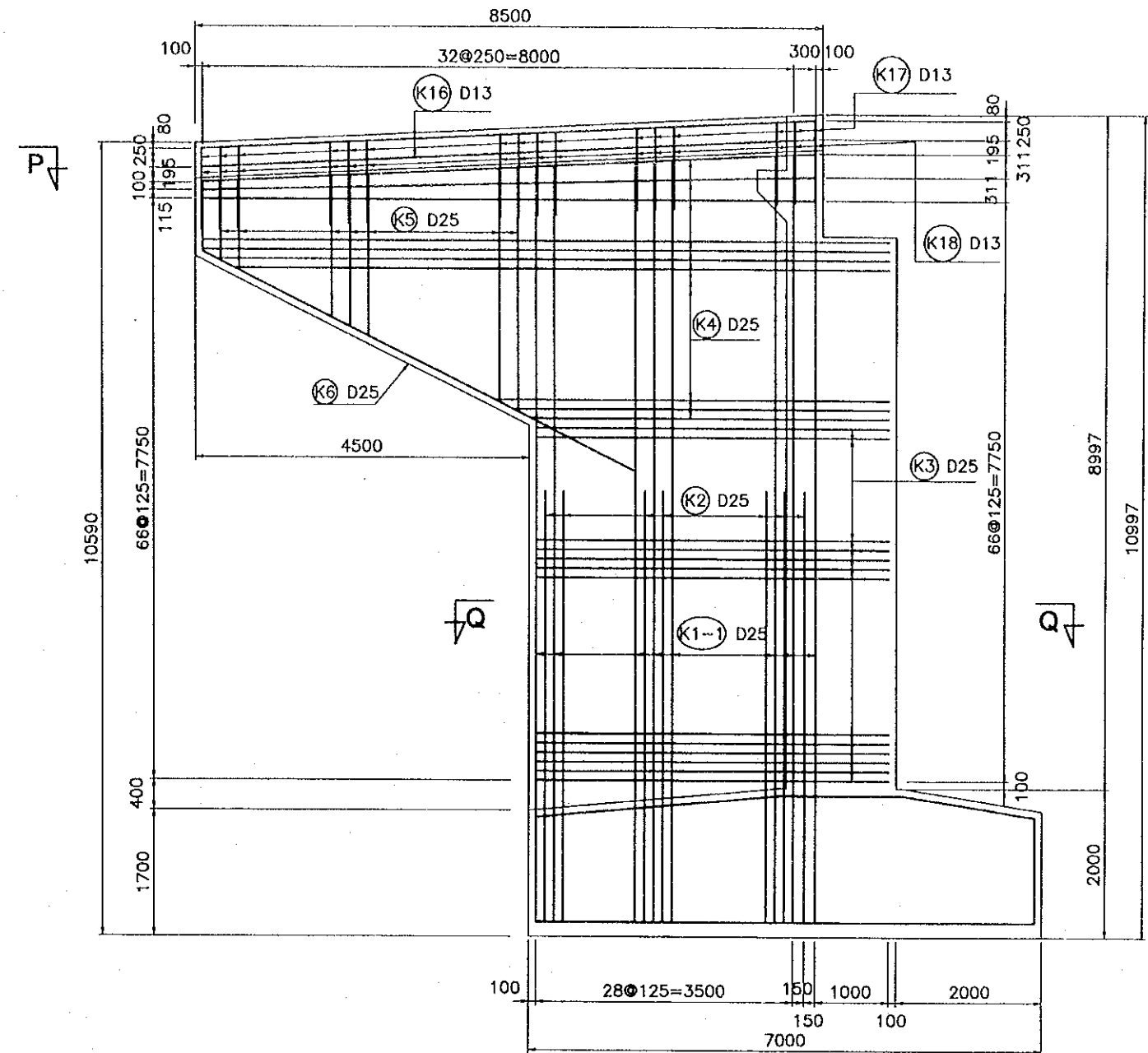
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000. 3. 17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-2-3-18	
NATIONAL HIGHWAY No.5 FLYOVER-RAMP B BAR ARRANGMENT FOR ABUTMENT A1b (2)			

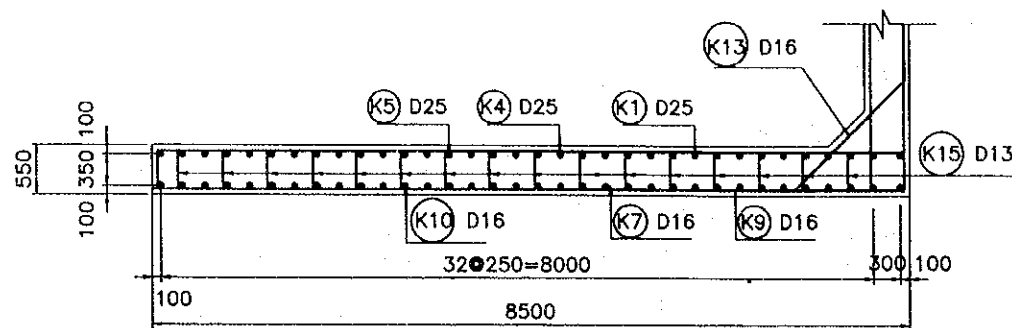
SECTION H - H



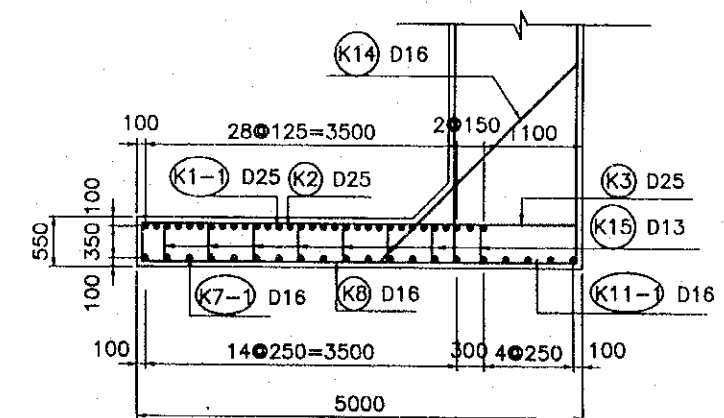
SECTION K - K



SECTION P - P



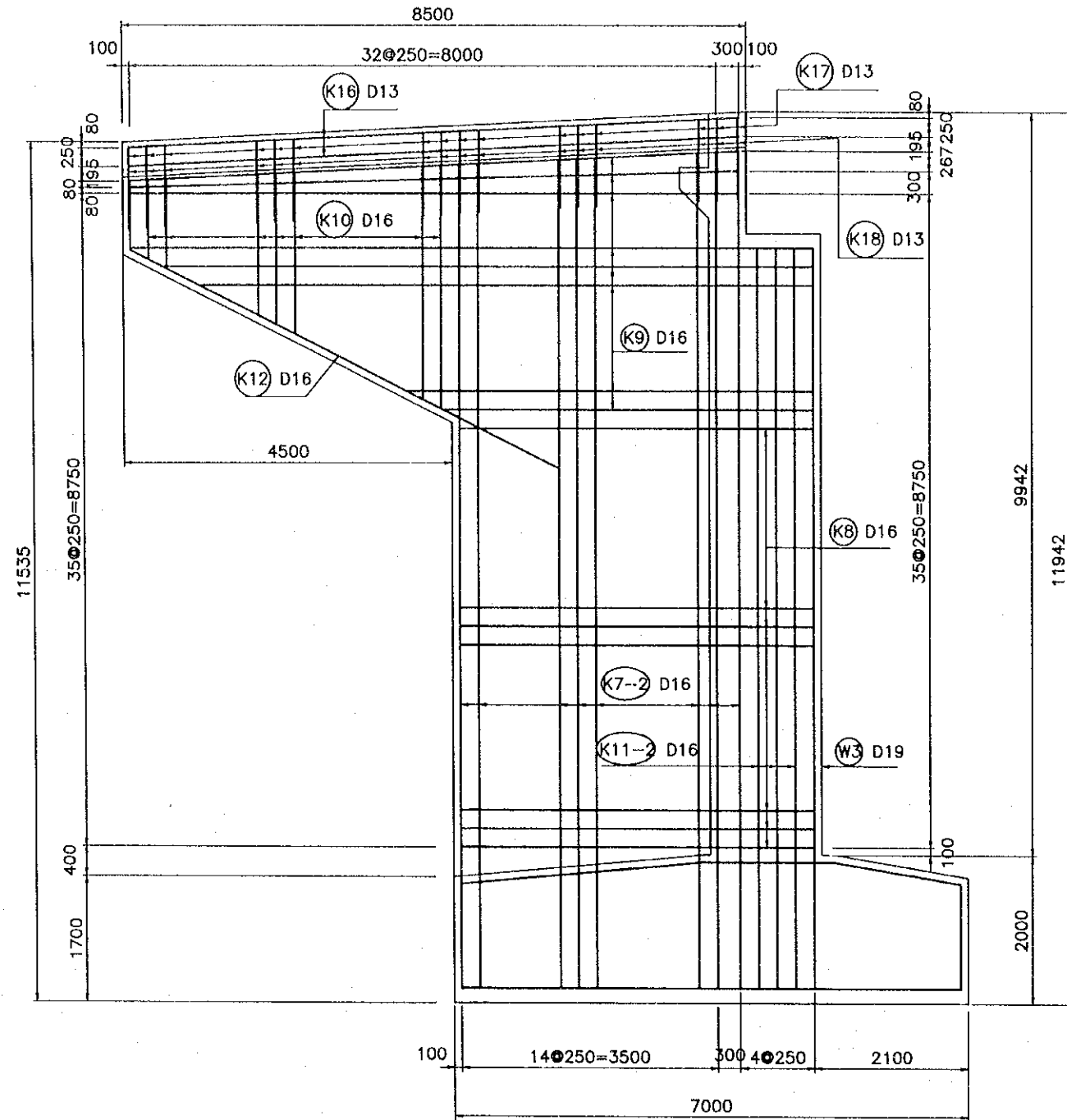
SECTION Q - Q



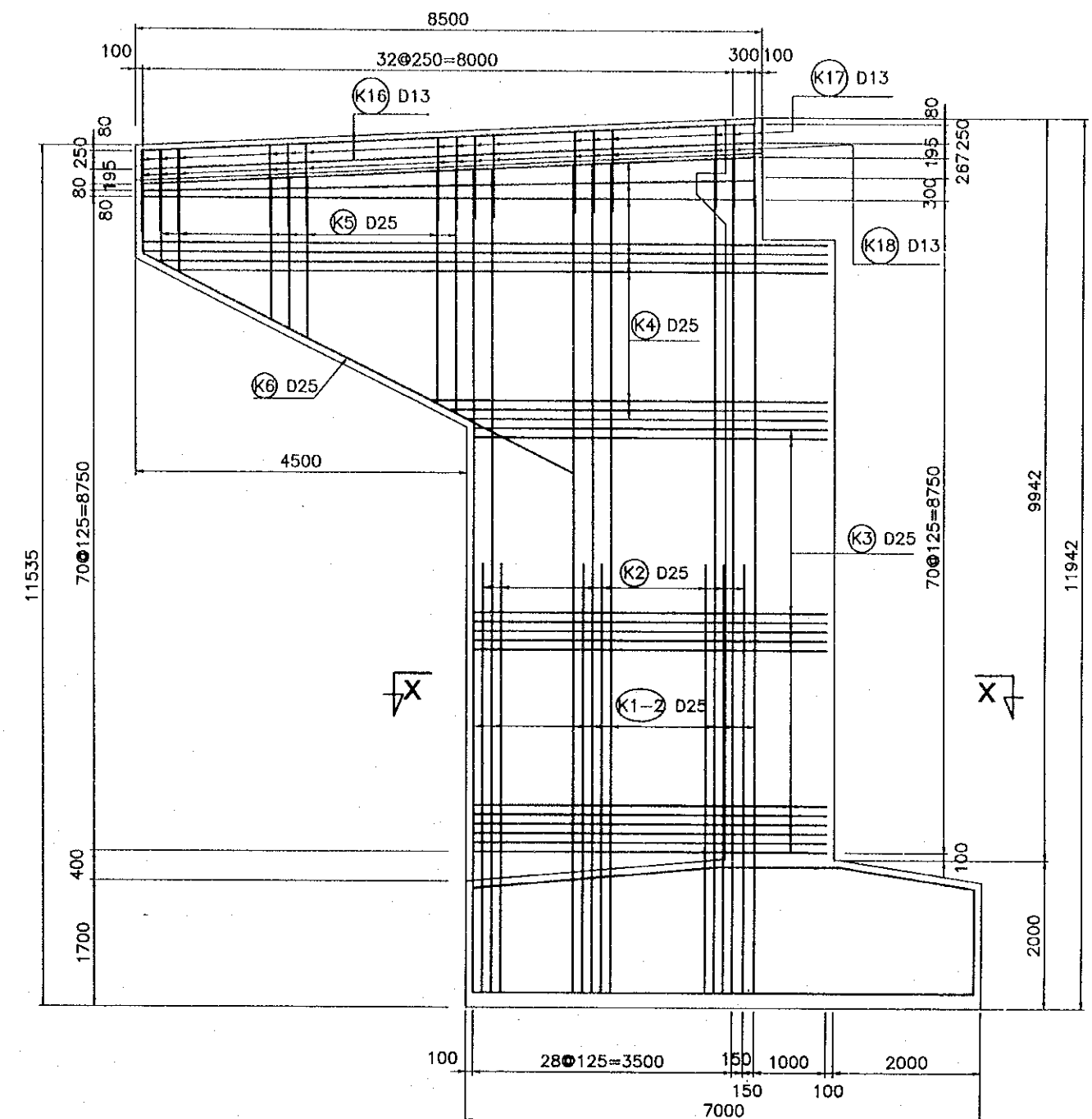
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT RED RIVER BRIDGE (HANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONTRACTOR PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.3.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-2-3-19	
NATIONAL HIGHWAY No.5 FLYOVER-RAMP B BAR ARRANGMENT FOR ABUTMENT A1b (3)			

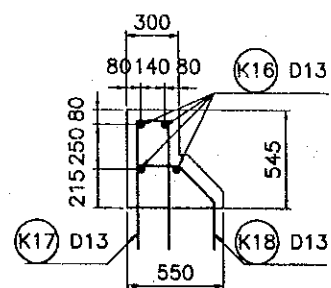
SECTION M - M



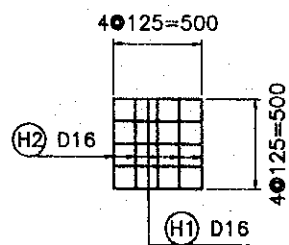
SECTION N - N



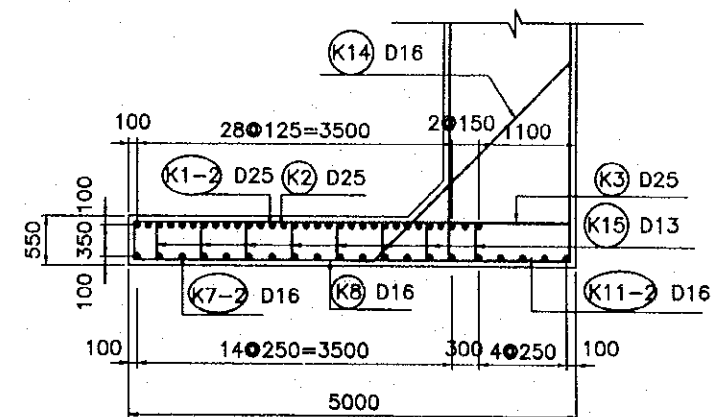
DETAIL A  
(S = 1/50)



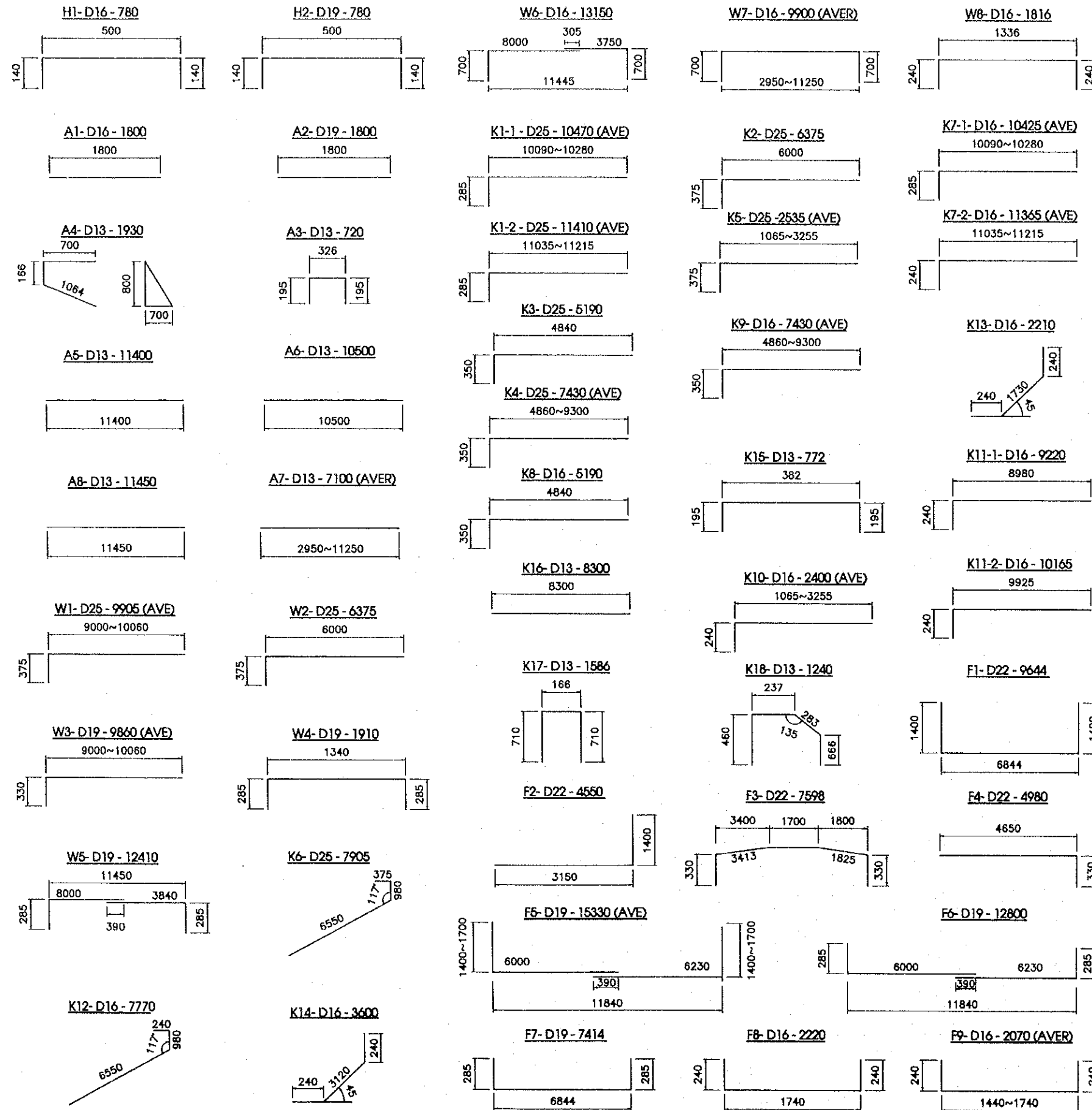
REI. BARS UNDER  
GROUND PAD  
(S = 1/50)



SECTION X - X



LIST OF REINFORCING BARS

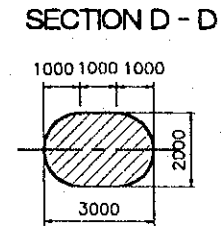
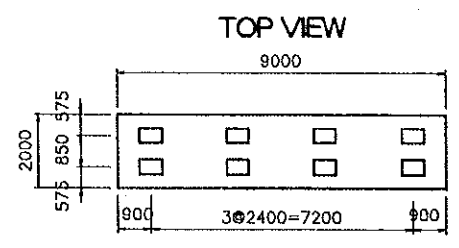
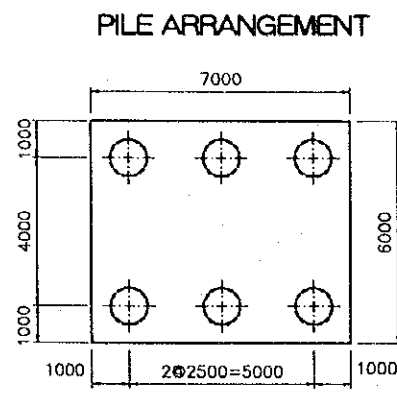
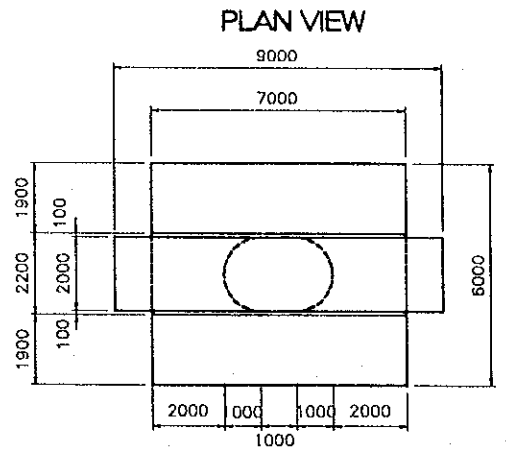
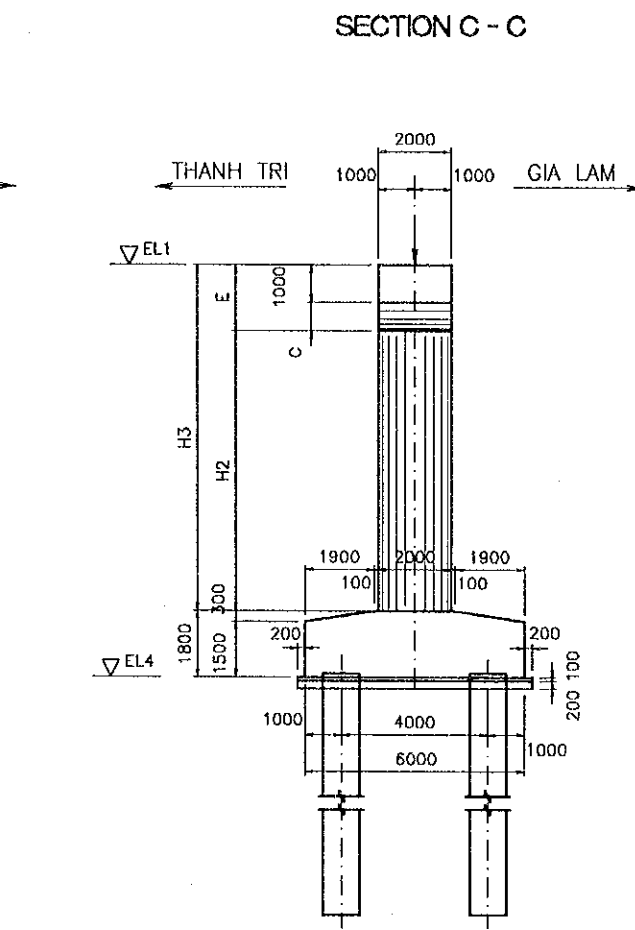
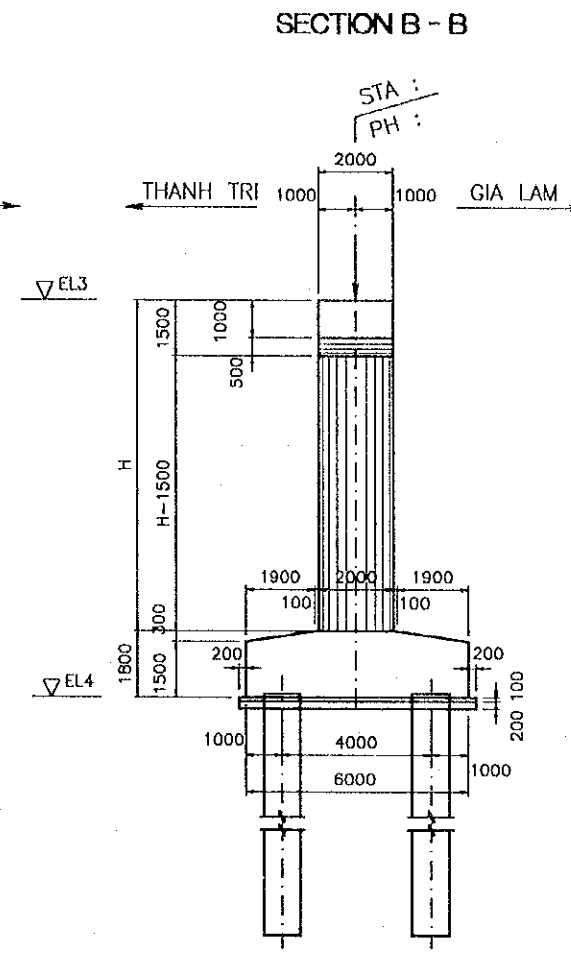
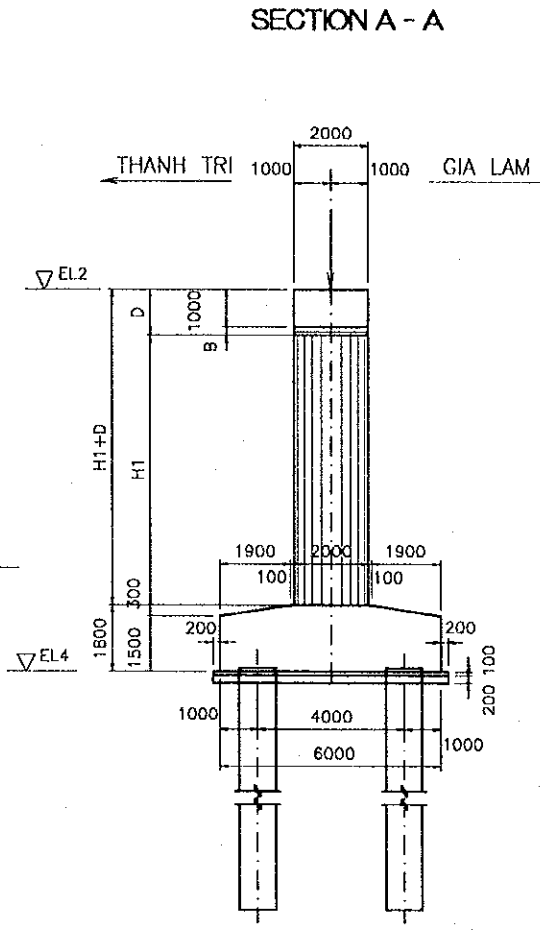
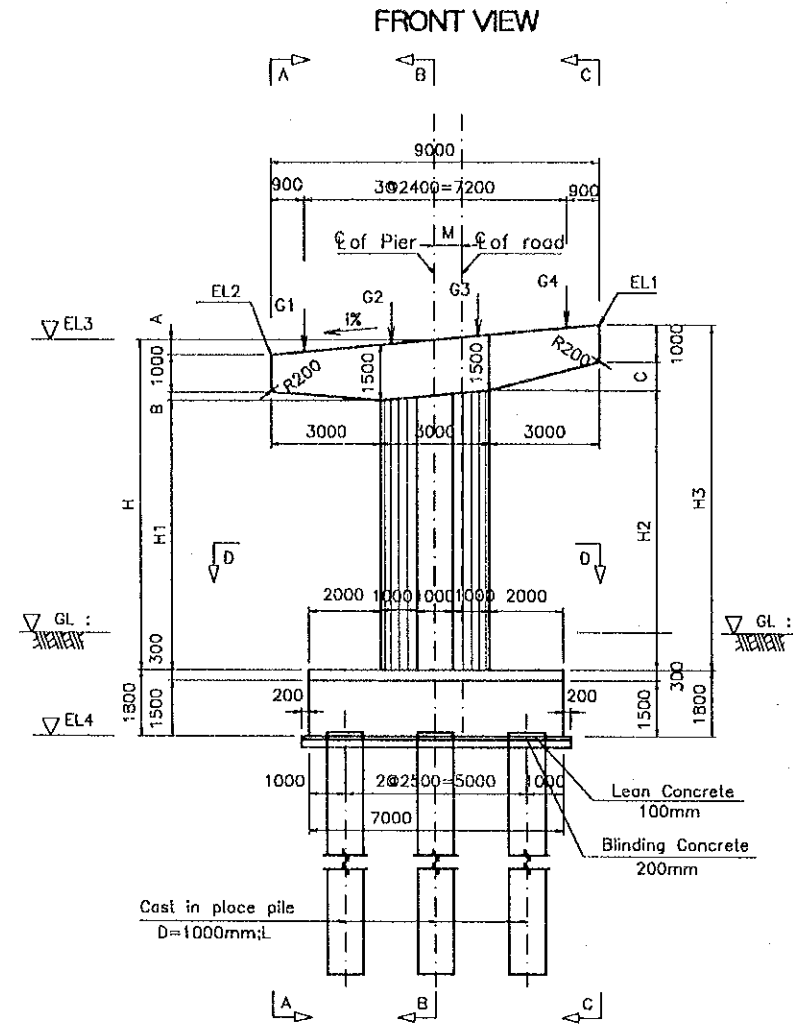


QUANTITY REINFORCEMENT FOR ABUTMENT A1B

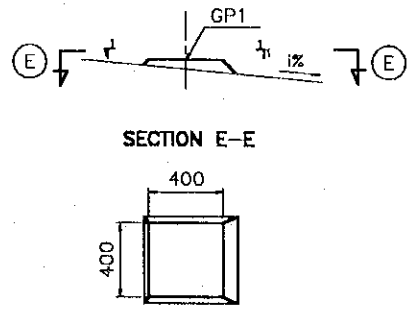
TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	
H1	[Diagram]	D16	780	20	1.560	24.34
H2	[Diagram]	D16	780	20	1.560	24.34
A1	[Diagram]	D16	1800	47	1.560	131.98
A2	[Diagram]	D19	1800	91	2.250	368.55
A3	[Diagram]	D13	720	66	0.995	47.28
A4	[Diagram]	D13	1930	42	0.995	80.65
A5	[Diagram]	D13	11400	5	0.995	56.72
A6	[Diagram]	D13	10500	2	0.995	20.90
A7	[Diagram]	D13	7100	8	0.995	56.52
A8	[Diagram]	D13	11450	2	0.995	22.79
W1 AVE	[Diagram]	D25	9905	47	3.980	1852.83
W2	[Diagram]	D25	6375	44	3.980	1116.39
W3 AVE	[Diagram]	D19	9860	47	2.250	1042.70
W4	[Diagram]	D19	1910	47	2.250	201.98
W5	[Diagram]	D19	12410	5	2.250	139.61
W6	[Diagram]	D16	13150	61	1.560	1251.35
W7 AVE	[Diagram]	D16	9900	4	1.560	61.78
W8	[Diagram]	D16	1816	308	1.560	872.55
K1-1 AVE	[Diagram]	D25	10470	16	3.980	666.73
K1-2 AVE	[Diagram]	D25	11410	16	3.980	726.59
K2	[Diagram]	D25	6375	32	3.980	811.92
K3	[Diagram]	D25	5190	84	3.980	1735.12
K4 AVE	[Diagram]	D25	7430	50	3.980	1478.57
K5 AVE	[Diagram]	D25	2535	34	3.980	343.04
K6	[Diagram]	D25	7905	2	3.980	62.92
K7-1 AVE	[Diagram]	D16	10425	16	1.560	260.21
K7-2 AVE	[Diagram]	D16	11365	16	1.560	283.67
K8	[Diagram]	D16	5190	42	1.560	340.05
K9 AVE	[Diagram]	D16	7430	25	1.560	289.77
K10 AVE	[Diagram]	D16	2400	34	1.560	127.30
K11-1	[Diagram]	D16	9220	3	1.560	43.15
K11-2	[Diagram]	D16	10165	3	1.560	47.57
K12	[Diagram]	D16	7770	2	1.560	24.24
K13	[Diagram]	D16	2210	6	1.560	20.69
K14	[Diagram]	D16	3600	62	1.560	348.19
K15	[Diagram]	D13	772	396	0.995	304.18
K16	[Diagram]	D13	8300	8	0.995	66.07
K17	[Diagram]	D13	1586	68	0.995	107.31
K18	[Diagram]	D13	1240	68	0.995	83.90
F1	[Diagram]	D22	9644	49	3.040	1436.57
F2	[Diagram]	D22	4550	46	3.040	636.27
F3	[Diagram]	D22	7598	49	3.040	1131.80
F4	[Diagram]	D22	4980	46	3.040	696.40
F5 AVE	[Diagram]	D22	15330	55	3.040	2563.18
F6	[Diagram]	D19	12800	10	2.250	288.00
F7	[Diagram]	D19	7414	10	2.250	166.82
F8	[Diagram]	D16	2220	72	1.560	249.35
F9 AVE	[Diagram]	D16	2070	240	1.560	775.01
TOTAL ABUTMENT A1B						23487.81
		D25		8794.11	Kg	
		D22		6464.22	Kg	
		D19		2207.66	Kg	
		D16		5175.52	Kg	
		D13		846.31	Kg	

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATABE
RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE <i>[Signature]</i>
PACIFIC CONSULTANTS INTERNATIONAL		DATE 2006.1

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/200	C-2-3-21	
NATIONAL HIGHWAY No.5 FLYOVER - RAMP B DETAIL OF PIERS P1b,P2b,P3b			



GIRDER BEARING SEAT DETAIL  
(SC=1/50)



DEPTH OF SUPERSTRUCTURE FOR PIER P1B      DEPTH OF SUPERSTRUCTURE FOR PIER P2B      DEPTH OF SUPERSTRUCTURE FOR PIER P3B

Component	Depth(mm)
AC layer	75
Slab	1000
Mortar1	20
Shoe(F)	32
Mortar2	30
Total	1157

Component	Depth(mm)
AC layer	75
Slab	1000
Mortar1	20
Shoe(F)	32
Mortar2	30
Total	1157

Component	Depth(mm)
AC layer	75
Slab	1000
Mortar1	20
Shoe(M)	44
Mortar2	30
Total	1169

DIMENSIONS OF PIERS

Items Pier	STA(m)	PH(m)	i(%)	EL1(m)	EL2(m)	EL3(m)	EL4(m)	GL(m)	L(m)
P1B	0+281.88	12.030	8.78	11.203	10.413	10.808	-0.192	3.113	40
P2B	0+298.88	12.694	6.75	11.799	11.191	11.495	-0.505	3.078	40
P3B	0+315.88	13.208	4.73	12.231	11.806	12.019	0.019	3.109	40

ELEVATION OF TOP BEARING SEAT GP1

Piers	Bearing seat	G1	G2	G3	G4
P1B	Elevation(m)	10.522	10.733	10.943	11.154
P2B	Elevation(m)	11.282	11.444	11.606	11.768
P3B	Elevation(m)	11.879	11.993	12.106	12.220

Items Pier	M(mm)	H(mm)	H1(mm)	H2(mm)	H3(mm)	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)
P1B	745	9200	7568	7833	9595	395	237	762	1237	1762
P2B	627.5	10200	8599	8801	10504	304	297	703	1297	1703
P3B	413.5	10200	8629	8770	10412	213	358	642	1358	1642

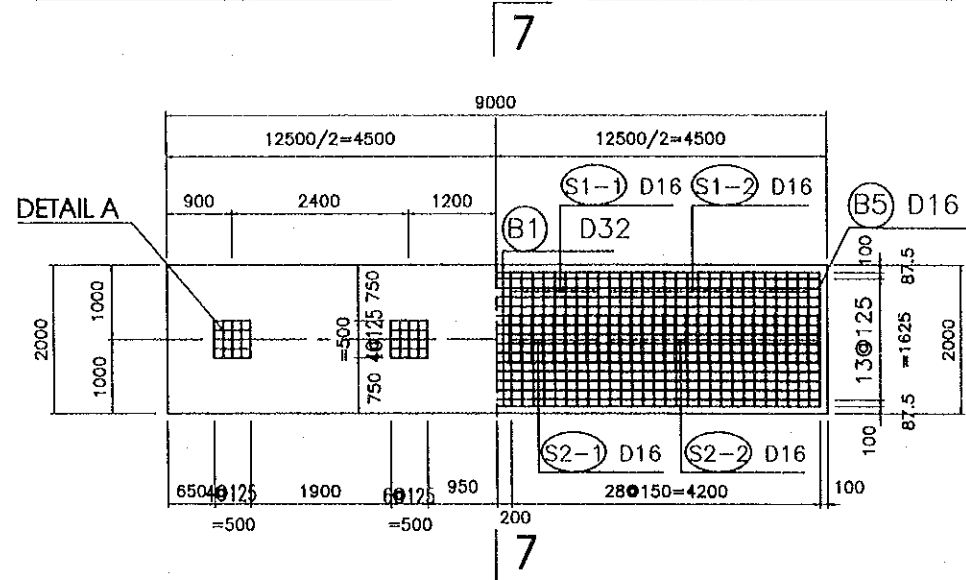


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THUNG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.3.14	

PACKAGE 2	SCALE 1/100	DRAWING No. C-2-3-22	SHEET No.
NATIONAL HIGHWAY No.5 FLYOVER - RAMP B BAR ARRANGEMENT FOR PIERS P1b,P2b,P3b (1)			

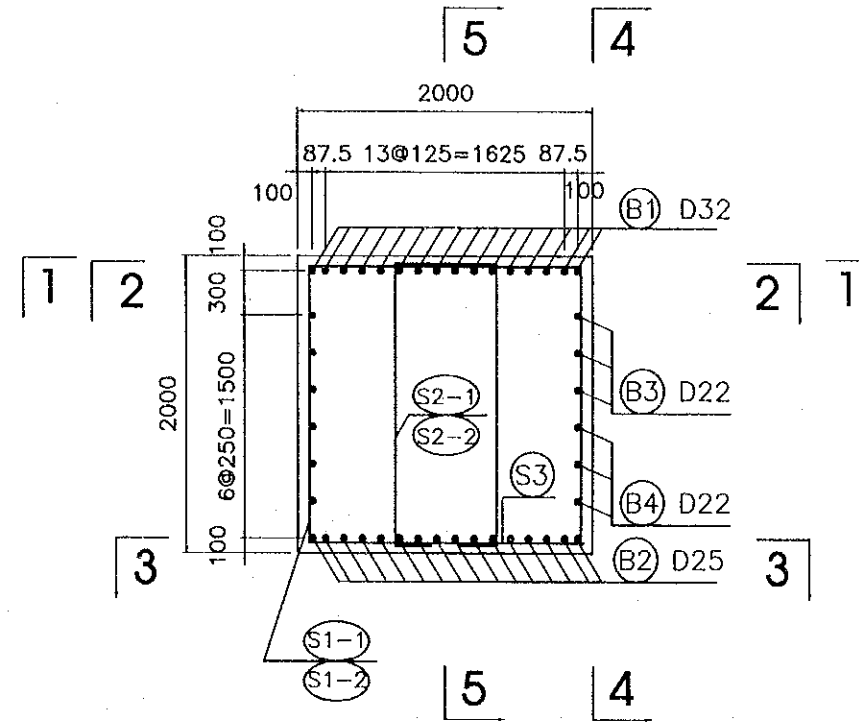
HALF SECTION 1 - 1

HALF SECTION 2 - 2



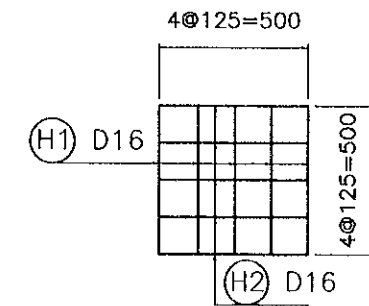
SECTION 7 - 7

(SC=1/50)

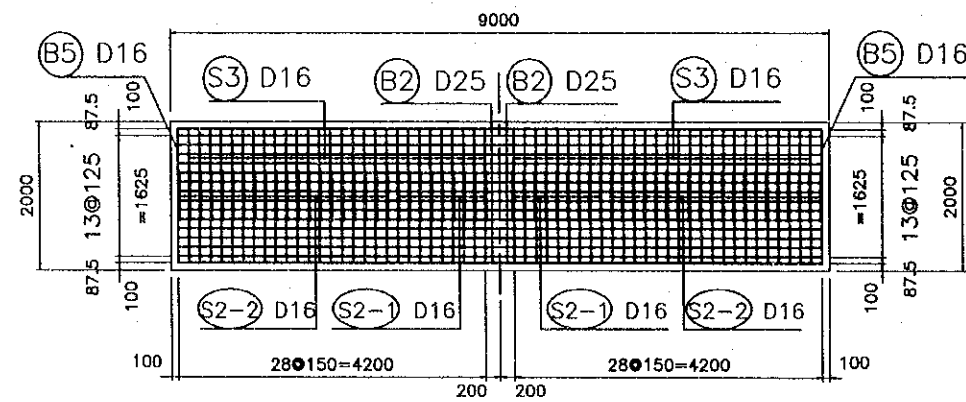


DETAIL A

(SC=1/25)

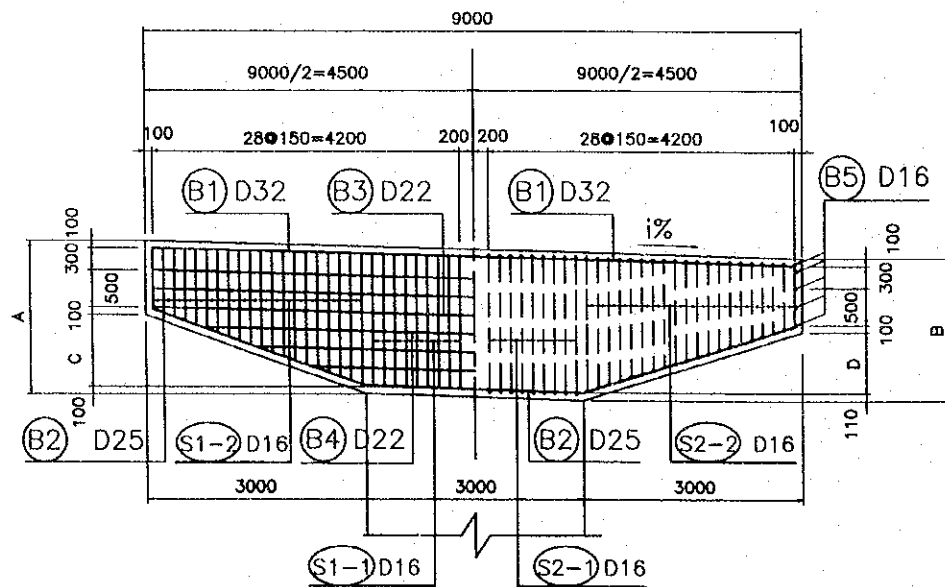


SECTION 3 - 3



HALF SECTION 4 - 4

HALF SECTION 5 - 5



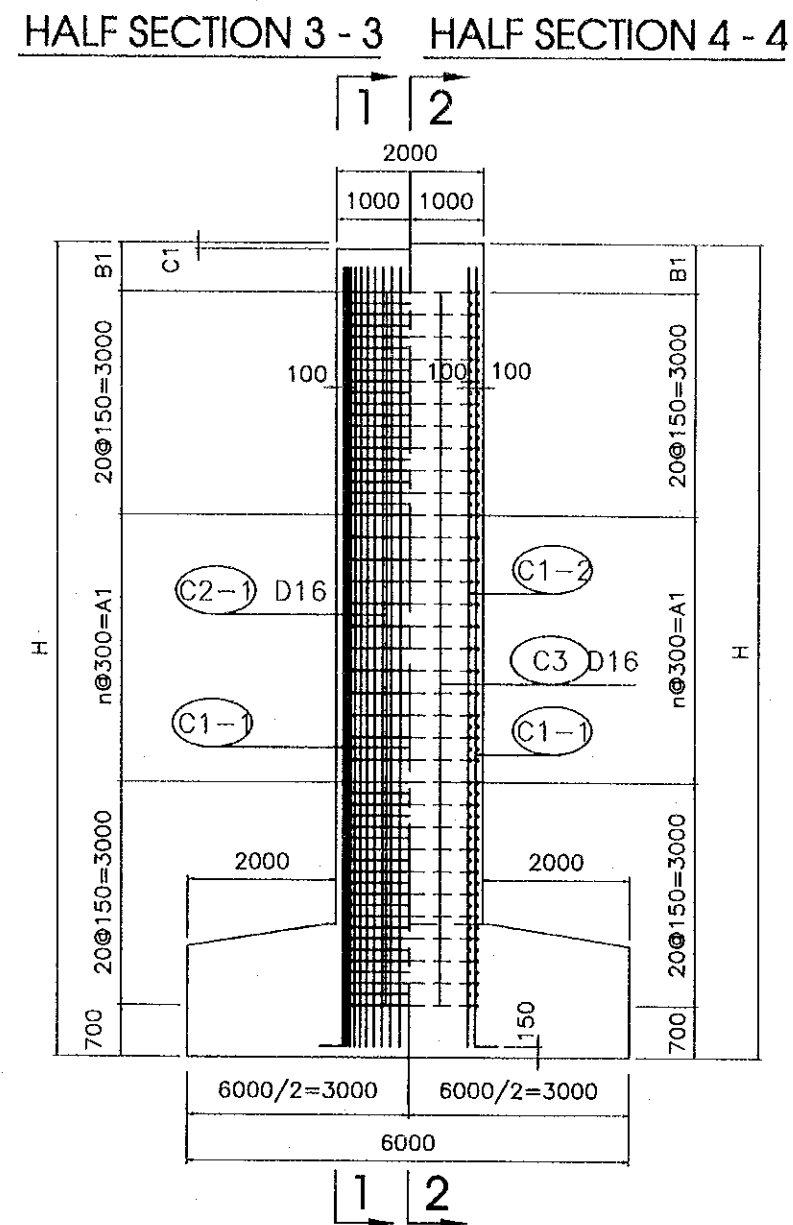
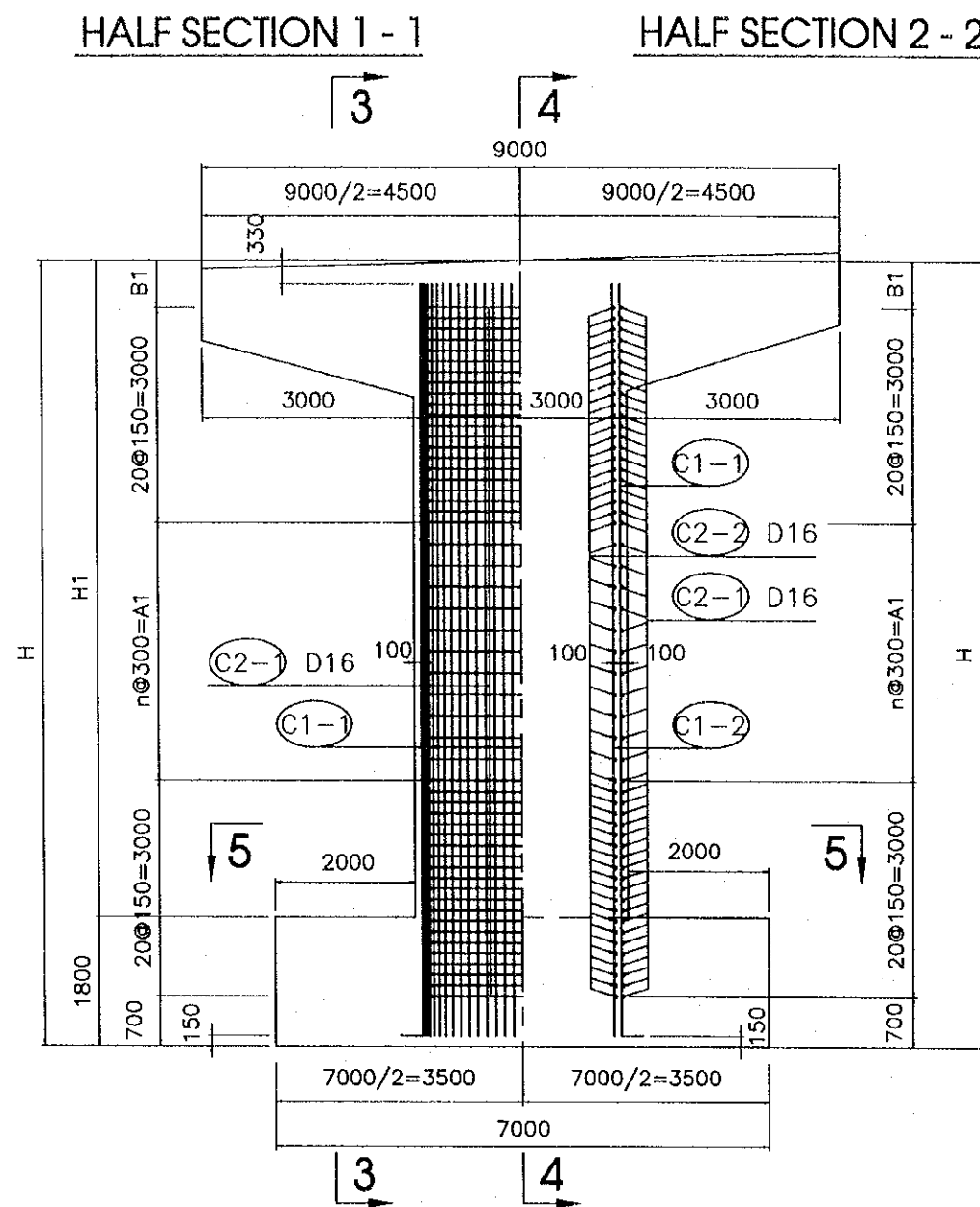
DIMENSIONS OF PIERS

PIER	A(mm)	B(mm)	C(mm)	D(mm)	i %
P1B	1763	1237	663	137	8.78
P2B	1703	1298	603	198	6.75
P3B	1642	1358	542	258	4.73

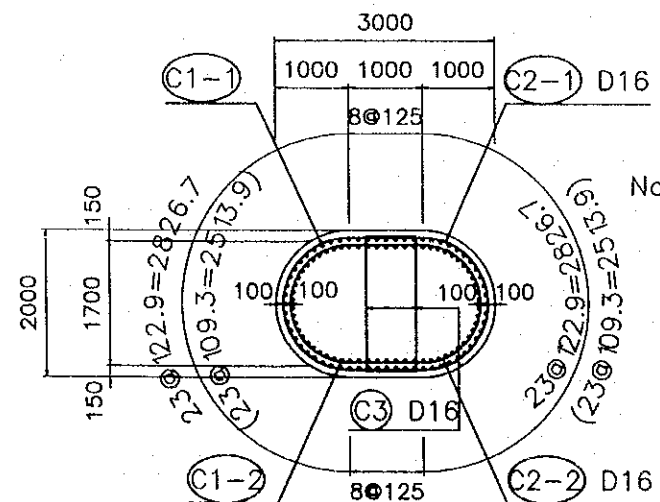
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2002.3.14

# NATIONAL HIGHWAY No.5 FLYOVER - RAMP A BAR ARRANGEMENT FOR PIERS P1A,P2A,P3A (2)

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-2-3-23	
NATIONAL HIGHWAY No.5 FLYOVER - RAMP B BAR ARRANGEMENT FOR PIERS P1b,P2b,P3b (2)			



## SECTION 5-5



Note: Value in (...) use inter row bar.

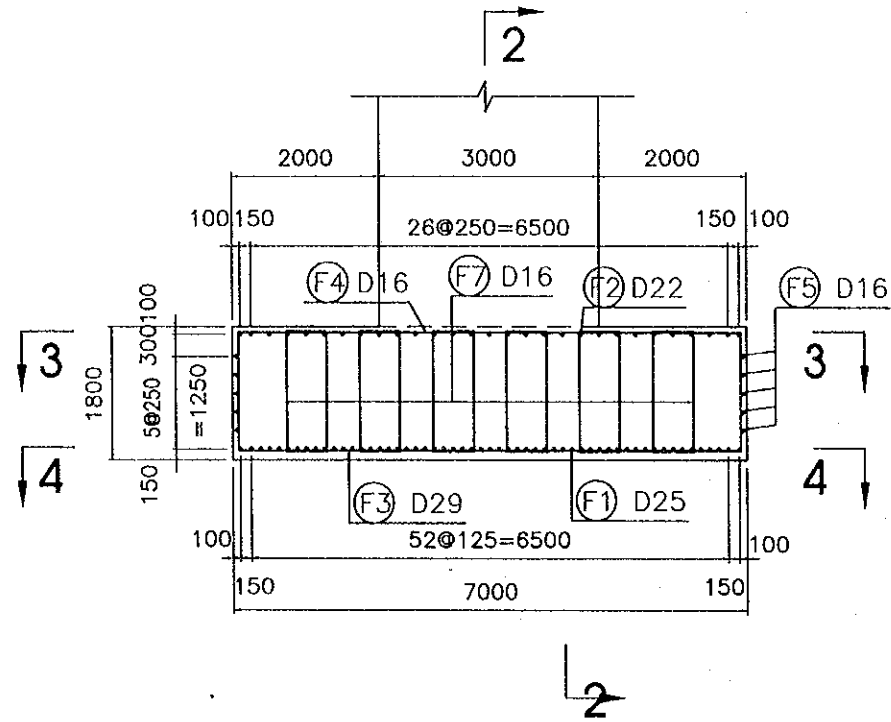
## DIMENSIONS OF PIERS

ITEMS PIER	H(m)	H1(m)	A1(mm)	B1(mm)	C1(mm)	n
P1B	11000	9200	3900	400	132	13
P2B	12000	10200	4800	500	101	16
P3B	12000	10200	4800	500	71	16

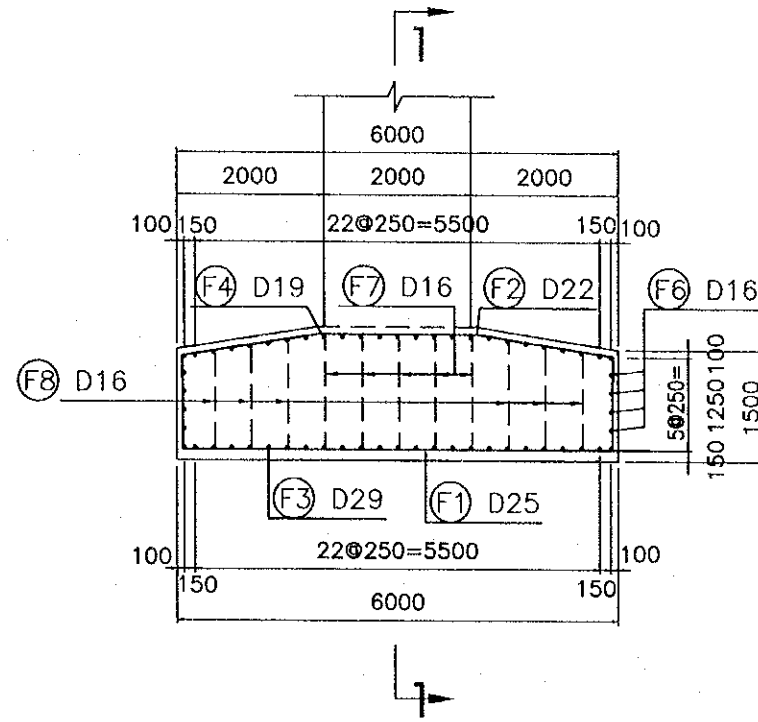
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.3.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-2-3-24	
NATIONAL HIGHWAY No.5 FLYOVER -- RAMP B BAR ARRANGEMENT OF PIERS P1a,P2a,P3a (3)			

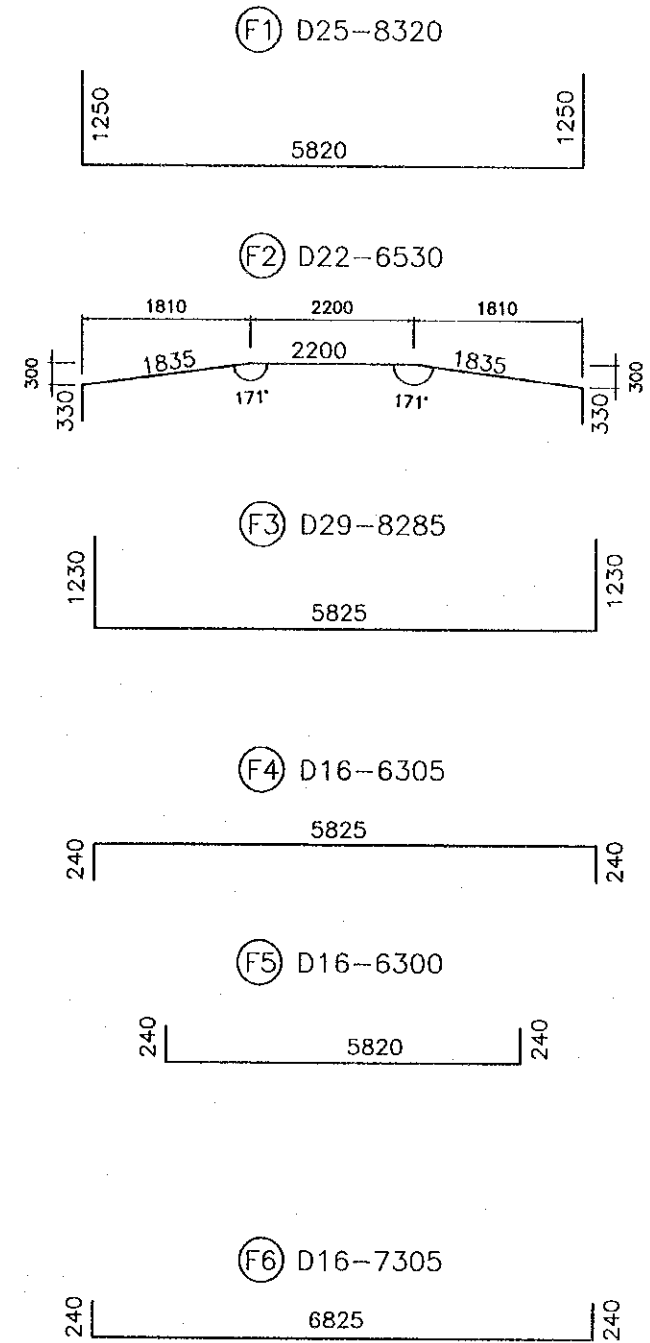
### SECTION 1 - 1



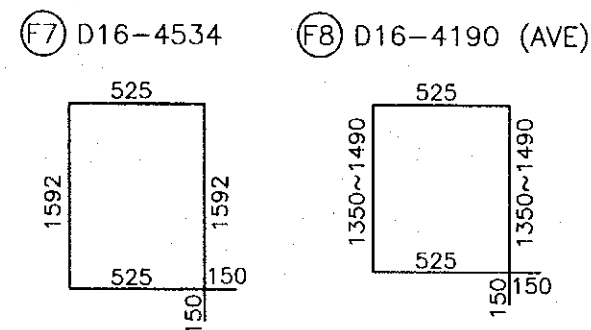
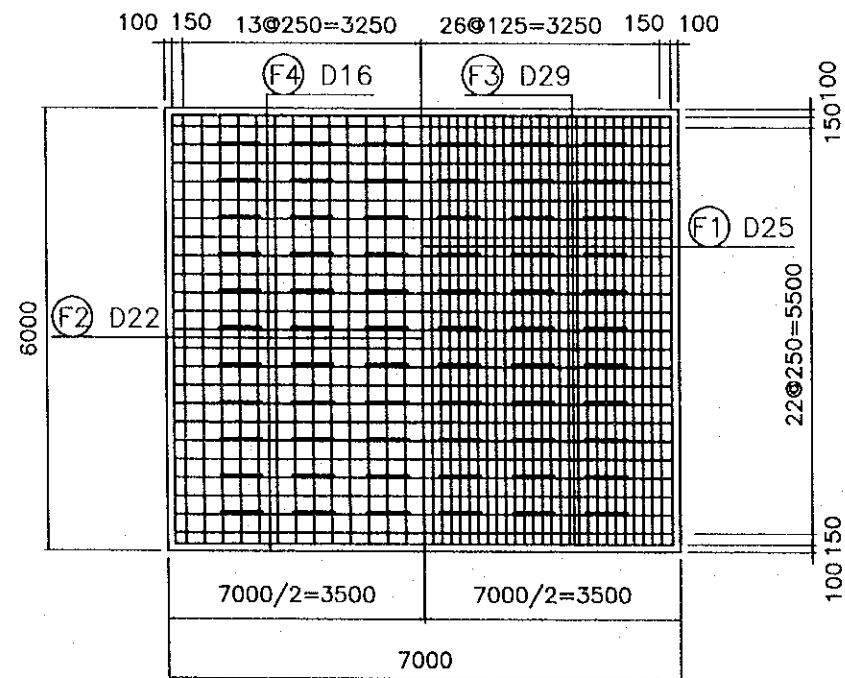
### SECTION 2 - 2



### LIST OF REINFORCING BARS FOR FOOTING



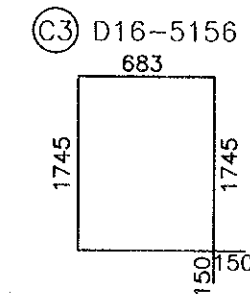
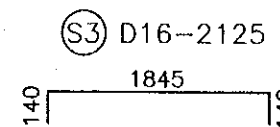
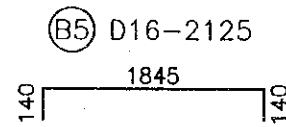
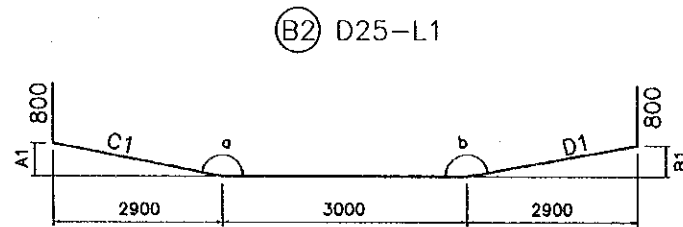
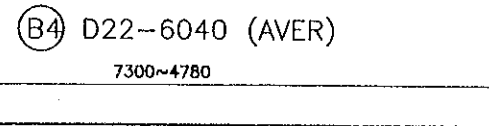
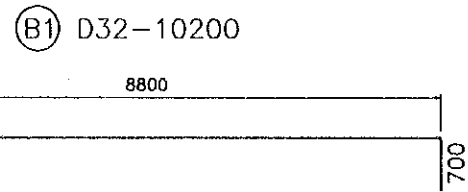
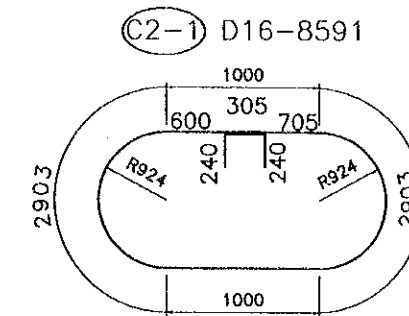
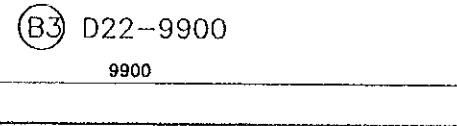
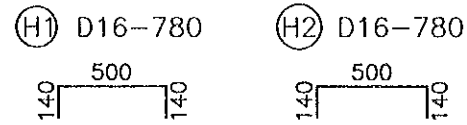
### HALF SECTION 3 - 3 HALF SECTION 4 - 4



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATAPE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATAPE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.19

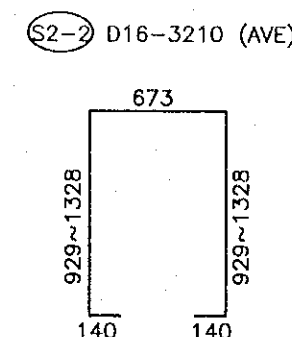
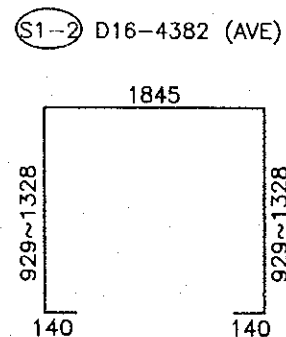
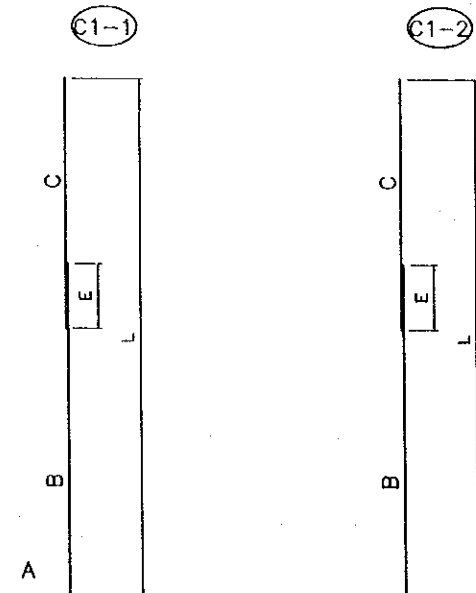
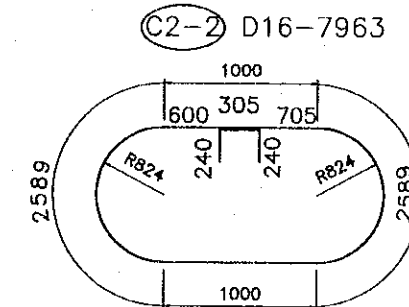
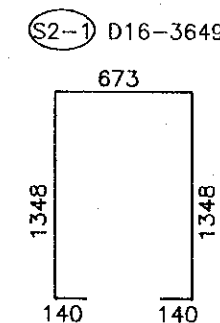
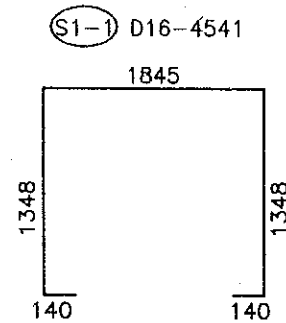
PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-2-3-25	
NATIONAL HIGHWAY No.5 FLYOVER - RAMP B BAR ARRANGEMENT OF PIERS P1b,P2b,P3b (4)			

### LIST OF REINFORCING BARS FOR BEAM AND COLUMN



DIMENSIONS OF BAR B2

PIERS	A1 (mm)	B1 (mm)	C1 (mm)	D1 (mm)	L1 (mm)	a (°)	b (°)
P1A	763	237	2999	2910	10509	165	175
P2A	703	298	2984	2915	10499	166	174
P3A	642	358	2970	2922	10492	167	163



DIMENSIONS OF BAR C1-1,C1-2

Items	Diameter (mm)	A (mm)	B (mm)	C (mm)	E (mm)	L (mm)	Total C1-1 (mm)	Total C1-2 (mm)
P1B	D32	480	10520	-	-	10520	11000	10520
P2B	D32	480	9000	3600	1080	11520	13080	11520
P3B	D32	480	9000	3600	1080	11520	13080	11520

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATASE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATASE
PROJECT	RED RIVER BRIDGE (NHANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000. 3. 14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-2-3-26	
NATIONAL HIGHWAY No.5 FLYOVER - RAMP B BAR ARRANGEMENT OF PIERS P1b,P2b,P3b (5)			

QUANTITY REINFORCEMENT FOR PIER P1B

DETAILS	TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
			mm	mm		kg/m	kg
PIER CAP	H1		D16	780	20	1.560	24.34
	H2		D16	780	20	1.560	24.34
	B1		D32	10200	16	6.230	1016.74
	B2		D25	10509	16	3.980	669.21
	B3		D22	9900	6	3.040	180.58
	B4	AVE	D22	6040	6	3.040	110.17
	B5		D16	2125	10	1.560	33.15
	S1-1		D16	4541	19	1.560	134.60
	S1-2	AVE	D16	4382	40	1.560	273.44
	S2-1		D16	3649	19	1.560	108.16
	S2-2	AVE	D16	3210	40	1.560	200.30
	S3		D16	2125	59	1.560	195.59
	COLUMN	C1-1		D32	11000	64	6.230
C1-2			D32	10520	64	6.230	4194.53
C2-1			D16	8591	54	1.560	723.71
C2-2			D16	7963	54	1.560	670.80
C3			D16	5156	34	1.560	723.47
FOOTING	F1		D25	8320	55	3.980	1821.25
	F2		D22	6530	29	3.040	575.68
	F3		D29	8285	25	5.040	1043.91
	F4		D16	6305	25	1.560	245.90
	F5		D16	6300	10	1.560	98.28
	F6		D16	7305	8	1.560	91.17
	F7		D16	4534	30	1.560	212.19
	F8	AVE	D16	4190	36	1.560	235.31
SUMMARY	TOTAL PIER P1B						17542.72
			D32		9597.19	Kg	
			D29		1043.91	Kg	
			D25		2490.46	Kg	
			D22		866.43	Kg	
		D16		3544.73	Kg		

QUANTITY REINFORCEMENT FOR PIER P3B

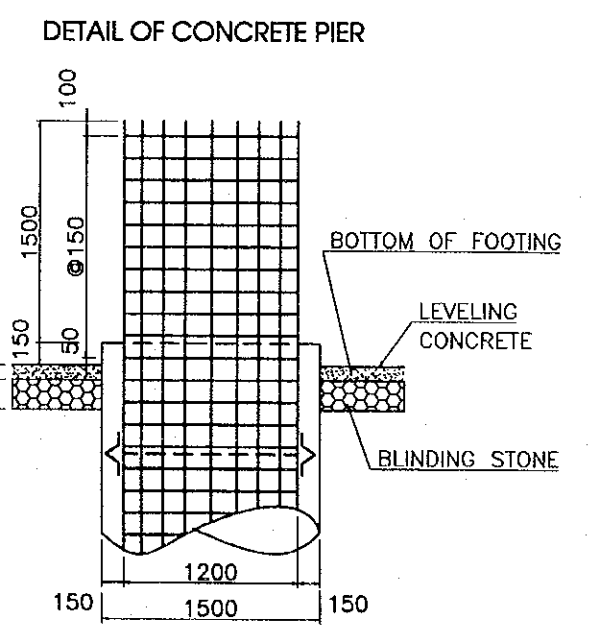
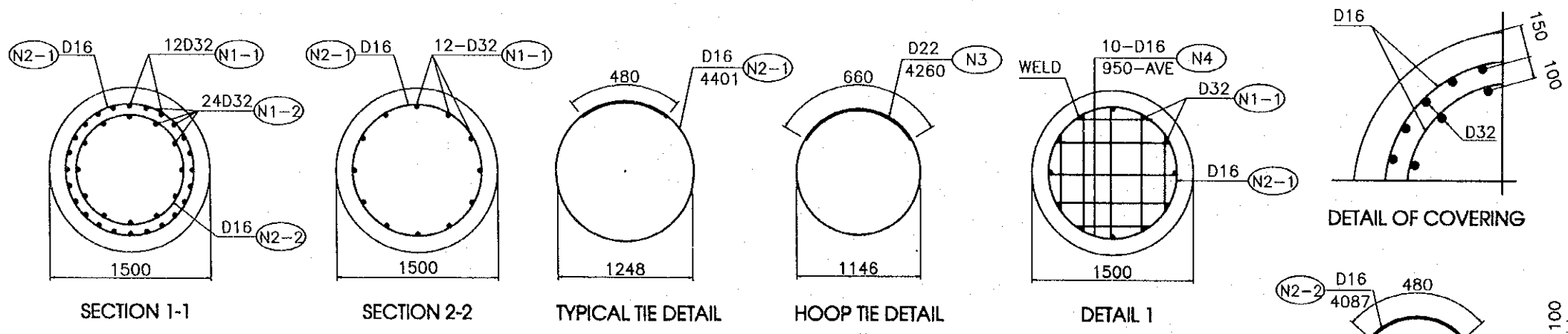
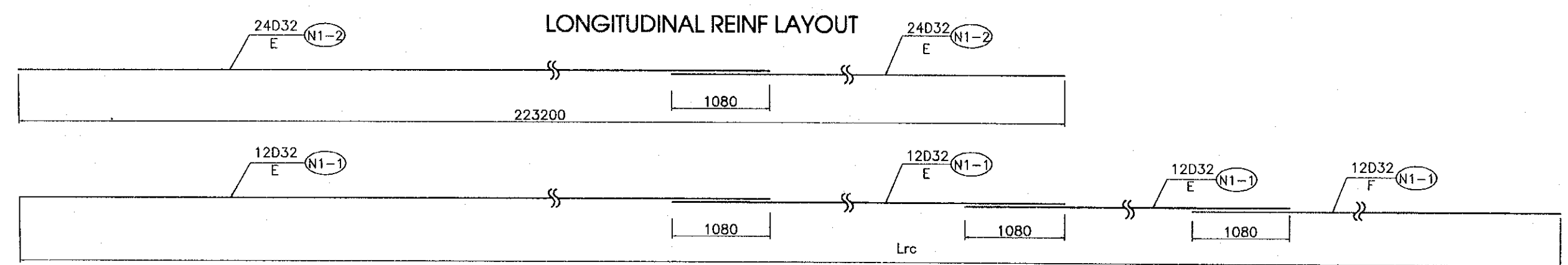
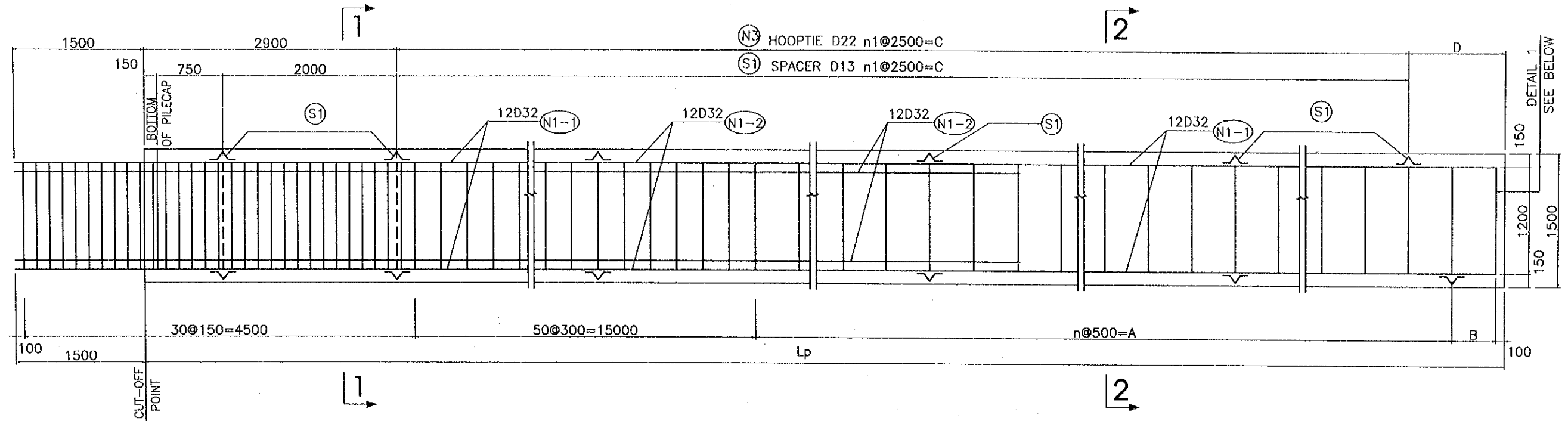
DETAILS	TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
			mm	mm		kg/m	kg
PIER CAP	H1		D16	780	20	1.560	24.34
	H2		D16	780	20	1.560	24.34
	B1		D32	10200	16	6.230	1016.74
	B2		D25	10492	16	3.980	668.13
	B3		D22	9900	6	3.040	180.58
	B4	AVE	D22	6040	6	3.040	110.17
	B5		D16	2125	10	1.560	33.15
	S1-1		D16	4541	19	1.560	134.60
	S1-2	AVE	D16	4382	40	1.560	273.44
	S2-1		D16	3649	19	1.560	108.16
	S2-2	AVE	D16	3210	40	1.560	200.30
	S3		D16	2125	59	1.560	195.59
	COLUMN	C1-1		D32	13080	64	6.230
C1-2			D32	11520	64	6.230	4593.25
C2-1			D16	8591	57	1.560	763.91
C2-2			D16	7963	57	1.560	708.07
C3			D16	5156	37	1.560	297.60
FOOTING	F1		D25	8320	55	3.980	1821.25
	F2		D22	6530	29	3.040	575.68
	F3		D29	8285	25	5.040	1043.91
	F4		D16	6305	25	1.560	245.90
	F5		D16	6300	10	1.560	98.28
	F6		D16	7305	8	1.560	91.17
	F7		D16	4534	30	1.560	212.19
	F8	AVE	D16	4190	36	1.560	235.31
SUMMARY	TOTAL PIER P3B						18871.30
			D32		10825.25	Kg	
			D29		1043.91	Kg	
			D25		2489.38	Kg	
			D22		866.43	Kg	
		D16		3646.33	Kg		

QUANTITY REINFORCEMENT FOR PIER P2B

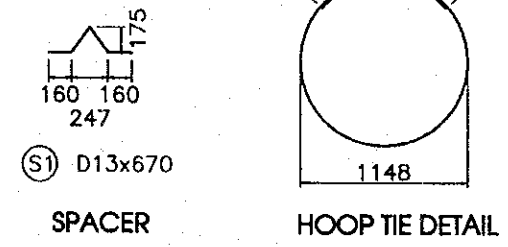
DETAILS	TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
			mm	mm		kg/m	kg
PIER CAP	H1		D16	780	20	1.560	24.34
	H2		D16	780	20	1.560	24.34
	B1		D32	10200	16	6.230	1016.74
	B2		D25	10499	16	3.980	668.58
	B3		D22	9900	6	3.040	180.58
	B4	AVE	D22	6040	6	3.040	110.17
	B5		D16	2125	10	1.560	33.15
	S1-1		D16	4541	19	1.560	134.60
	S1-2	AVE	D16	4382	40	1.560	273.44
	S2-1		D16	3649	19	1.560	108.16
	S2-2	AVE	D16	3210	40	1.560	200.30
	S3		D16	2125	59	1.560	195.59
	COLUMN	C1-1		D32	13080	64	6.230
C1-2			D32	11520	64	6.230	4593.25
C2-1			D16	8591	57	1.560	763.91
C2-2			D16	7963	57	1.560	708.07
C3			D16	5156	37	1.560	297.60
FOOTING	F1		D25	8320	55	3.980	1821.25
	F2		D22	6530	29	3.040	575.68
	F3		D29	8285	25	5.040	1043.91
	F4		D16	6305	25	1.560	245.90
	F5		D16	6300	10	1.560	98.28
	F6		D16	7305	8	1.560	91.17
	F7		D16	4534	30	1.560	212.19
	F8	AVE	D16	4190	36	1.560	235.31
SUMMARY	TOTAL PIER P2B						18871.74
			D32		10825.25	Kg	
			D29		1043.91	Kg	
			D25		2489.82	Kg	
			D22		866.43	Kg	
		D16		3646.33	Kg		


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		S. WATABE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE
		2000.3.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/50	C-2-3-27	
NATIONAL HIGHWAY No.5 FLYOVER - RAMP B			
DETAIL OF D=150CM CAST-IN-PLACE CONCRETE PILE(1)			



Pile	Dimensions of pile						Dimensions of bar N1					N1-2
	Lp(mm)	A(mm)	B(mm)	C(mm)	D(mm)	n	n1	Lrc(mm)	E(mm)	F(mm)	Total(mm)	Total(mm)
A1B	40000	21500	300	35000	2600	43	14	41400	11700	9540	44640	23400



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S.WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000. 8. 17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-2-3-28	
NATIONAL HIGHWAY No.5 FLYOVER - RAMP B			
DETAIL OF D=150CM CAST-IN-PLACE CONCRETE PILE(2)			

QUANTITY MATERIAL OF PILE FOR ABUTMENT A1B (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1	—————	D32	44640	12	6.230	3337.29
N1-2	—————	D32	23400	24	6.230	3498.77
N2-1	○	D16	4401	124	1.560	851.33
N2-2	○	D16	4087	89	1.560	567.44
N3	○	D22	4260	16	3.040	207.21
N4	AVE —————	D16	950	10	1.560	14.82
S1	∧	D13	670	64	0.995	42.67
Total abutment A1B						8519.51
					D32	6836.05 Kg
					D22	207.21 Kg
					D16	1433.59 Kg
					D13	42.67 Kg
Concrete Volume (m3)						70.69





THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000. 3. 14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-2-3-30	
NATIONAL HIGHWAY No.5 FLYOVER - RAMP B DETAIL OF D=100CM CAST-IN-PLACE CONCRETE PILE(2)			

QUANTITY MATERIAL OF PILE FOR PIER P1B (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1		D32	44140	10	6.230	2749.92
N1-2		D32	23400	10	6.230	1457.82
N2-1		D16	2830	124	1.560	547.44
N3		D22	2690	16	3.040	130.84
N4	AVE	D16	550	10	1.560	8.58
S1		D13	670	64	0.995	42.67
Total pier P1B						4937.26
					D32	4207.74 Kg
					D22	130.84 Kg
					D16	556.02 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42

QUANTITY MATERIAL OF PILE FOR PIER P2B (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1		D32	44140	10	6.230	2749.92
N1-2		D32	23400	10	6.230	1457.82
N2-1		D16	2830	124	1.560	547.44
N3		D22	2690	16	3.040	130.84
N4	AVE	D16	550	10	1.560	8.58
S1		D13	670	64	0.995	42.67
Total pier P2B						4937.26
					D32	4207.74 Kg
					D22	130.84 Kg
					D16	556.02 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42

QUANTITY MATERIAL OF PILE FOR PIER P3B (PER 1 PILE)

TYPE	SHAPE	DIAMETER	LENGTH	NUMBER	UNIT WEIGHT	WEIGHT
		mm	mm		kg/m	kg
N1-1		D32	44140	10	6.230	2749.92
N1-2		D32	23400	10	6.230	1457.82
N2-1		D16	2830	124	1.560	547.44
N3		D22	2690	16	3.040	130.84
N4	AVE	D16	550	10	1.560	8.58
S1		D13	670	64	0.995	42.67
Total pier P3B						4937.26
					D32	4207.74 Kg
					D22	130.84 Kg
					D16	556.02 Kg
					D13	42.67 Kg
Concrete Volume (m3)						31.42

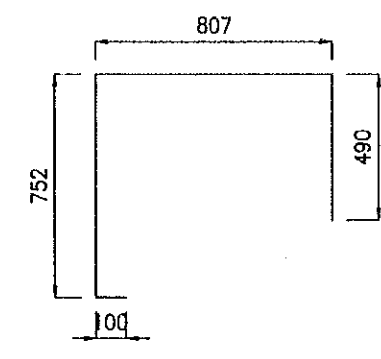
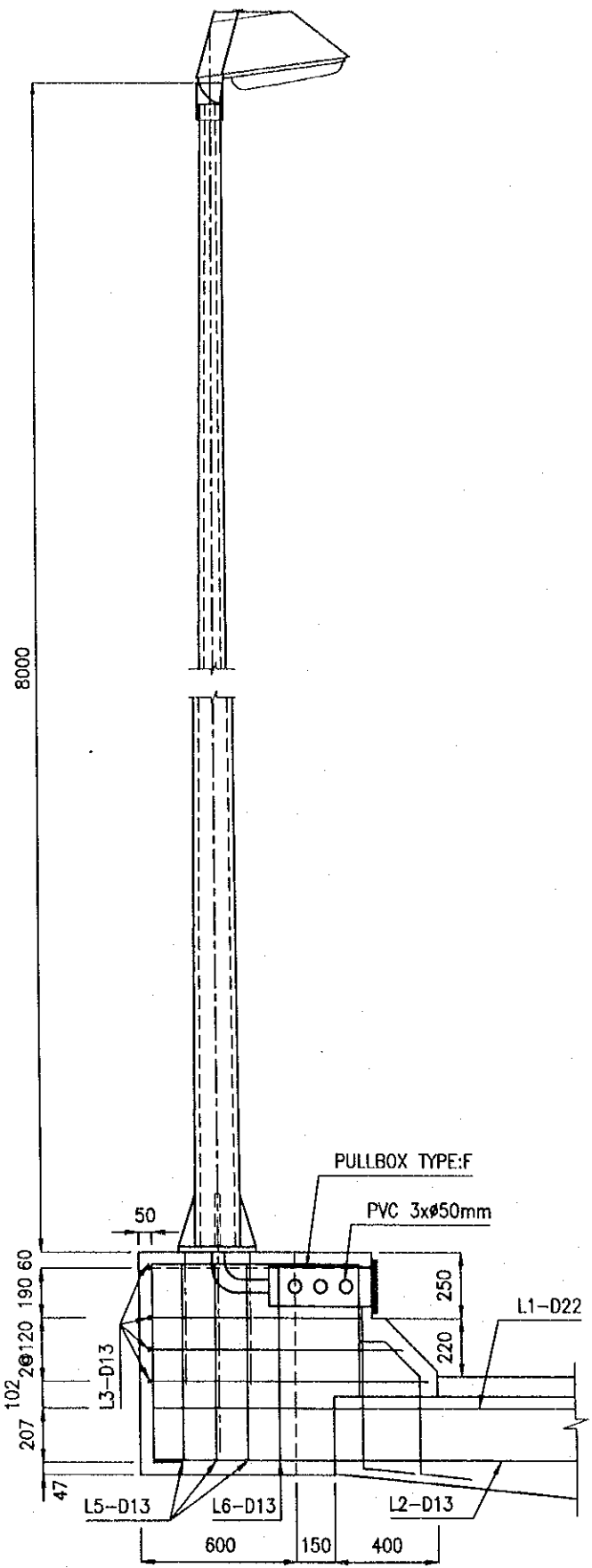
070

## **C-3 MISCELLANEOUS**

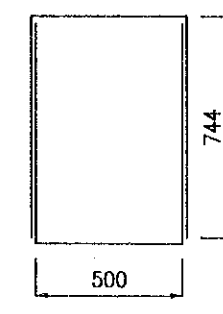
**C-3-1 LIGHT POLE BASE, EXP.JT, PARAPET, SHOE,  
DRAINAGE ARRANGEMENT**

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. KATAKE
PROJECT RED RIVER BRIDGE (THANH TRU BRIDGE) CONSTRUCTION PROJECT		SIGNATURE 
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.3.14

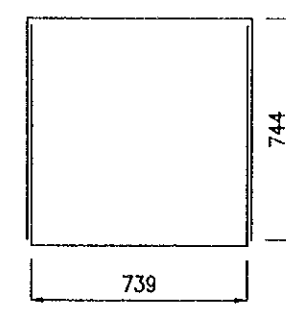
PACKAGE 2	SCALE 1/25	DRAWING No. C-3-1-1	SHEET No.
LIGHTING POLE BASE			



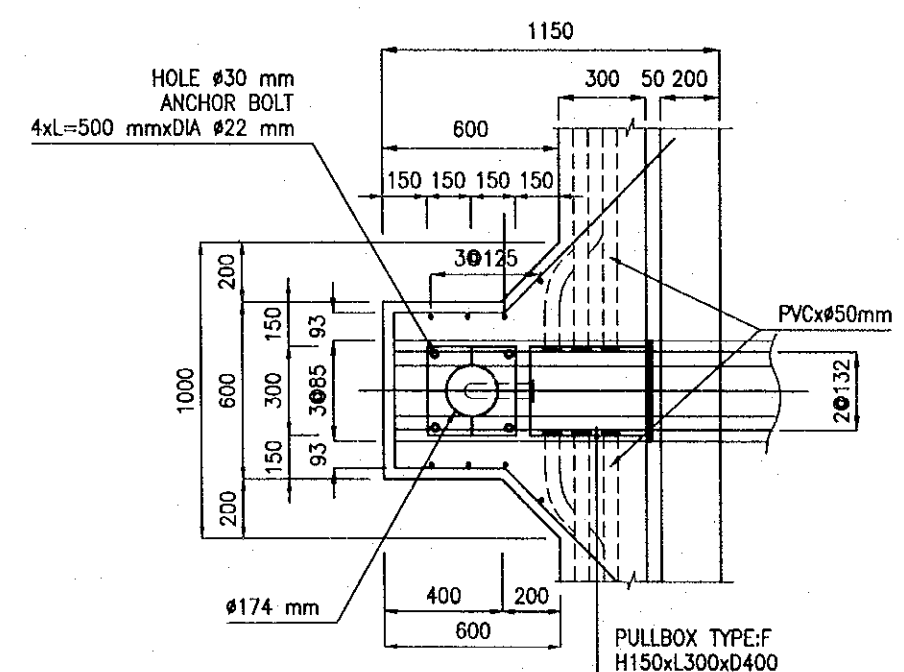
Ⓐ 4-D13x2150



Ⓑ 6-D13x1988

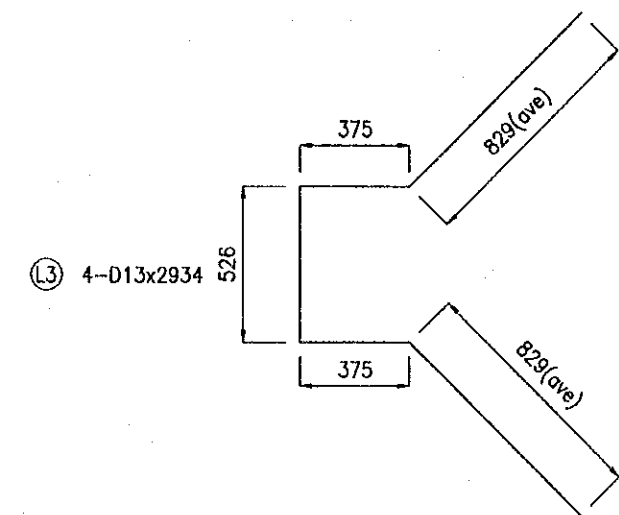


Ⓒ 2-D13x2227



Ⓓ 5-D22x2300

Ⓔ 3-D13x2300



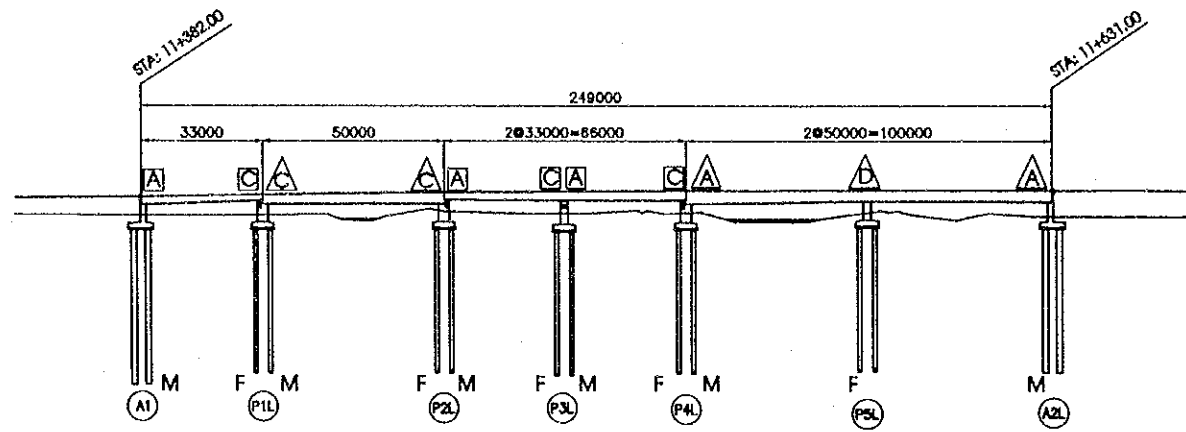
Ⓕ 4-D13x2934

QUANTITY OF REINFORCNG BAR					
TYPE	DIAMETER (mm)	NUMBER	LENGTH (mm)	UNIT WEIGHT (kg/m)	WEIGHT (kg)
L1	D22	5	2300	3.04	34.96
L2	D13	3	2300	0.995	6.87
L3	D13	4	2934	0.995	11.68
L4	D13	4	2150	0.995	8.56
L5	D13	6	1988	0.995	11.87
L6	D13	2	2227	0.995	4.43
TOTAL				D22	34.96
				D13	43.41

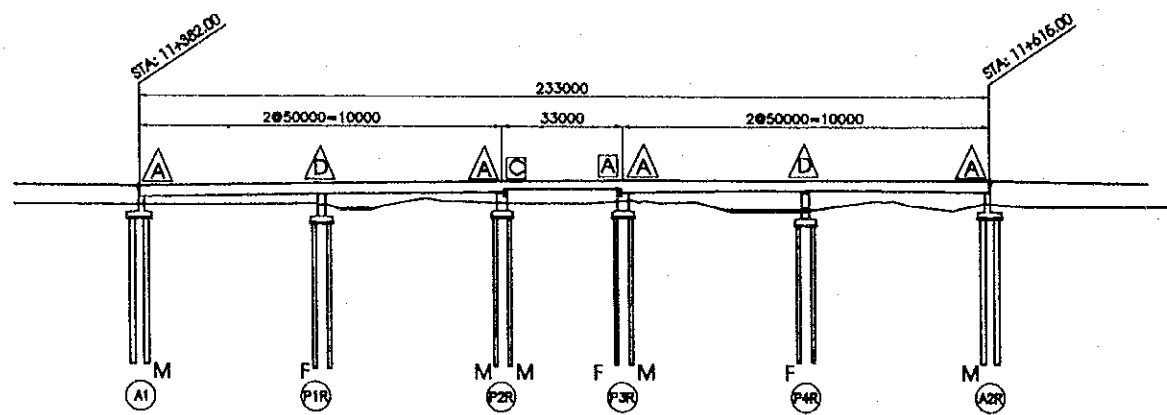
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATADA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRU BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.8.14

PACKAGE 2	SCALE 1/2000	DRAWING No. C-3-1-2	SHEET No.
BRIDGE ACCESSORY OF CAU BAY CANAL BRIDGE			

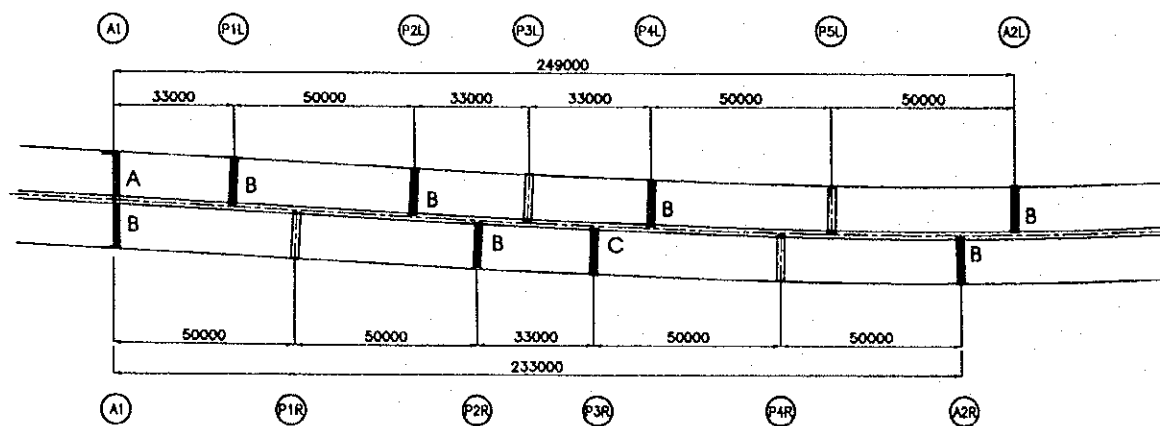
PROFILE OF LEFT CAU BAY CANAL BRIDGE



PROFILE OF RIGHT CAU BAY CANNAL BRIDGE

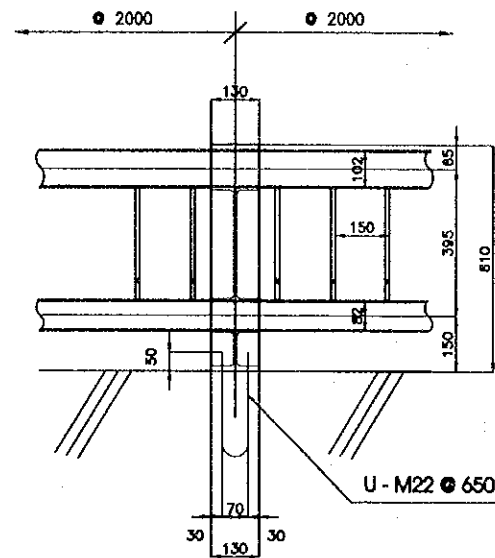


PLAN



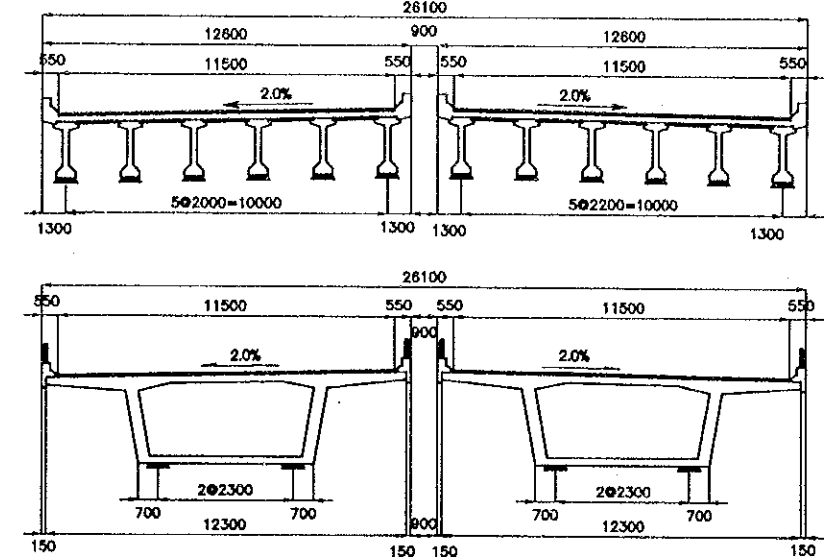
RAILING

SCALE: 1/20



CROSS SECTION

SCALE: 1/250



LIST OF BEARING SHOES, EXPANSION JOINT AND RAILING

PLACE	SPAN		KIND OF BEARING	BEARING			EXPANSION JOINT	
	LENGTH(m)	TYPE		TYPE		NUMBER		
A1L	33	PCI-GIRDER	M	33M	ELASTOMERIC BEARING	A	6	A
P1L			F	33F	ELASTOMERIC BEARING	C	6	B
P1L	50	BOX-GIRDER	M	50M	POT BEARING	C	2	B
P2L			F	50F	POT BEARING	C	2	B
P2L	33	PCI-GIRDER	M	33M	ELASTOMERIC BEARING	A	6	
P3L			F	33F	ELASTOMERIC BEARING	C	6	
P3L	33	PCI-GIRDER	M	33M	ELASTOMERIC BEARING	A	6	
P4L			F	33F	ELASTOMERIC BEARING	C	6	B
P4L	50	BOX-GIRDER	M	50M	POT BEARING	A	2	
P5L			F	50F	POT BEARING	D	2	
P5L	50	BOX-GIRDER						
A2L			M	50M	POT BEARING	C	2	B
A1R	50	BOX-GIRDER	M	50M	POT BEARING	A	2	B
P1R			F	50F	POT BEARING	D	2	
P1R	50	BOX-GIRDER						
P2R			M	50M	POT BEARING	A	2	B
P2R	33	PCI-GIRDER	M	33M	ELASTOMERIC BEARING	C	6	
P3R			F	33F	ELASTOMERIC BEARING	A	6	C
P3R	50	BOX-GIRDER	M	50M	POT BEARING	A	2	
P4R			F	50F	POT BEARING	D	2	
P4R	50	BOX-GIRDER						
A2R			M	50M	POT BEARING	A	2	B
TOTAL					ELASTOMERIC BEARING(A)		24(each)	
					ELASTOMERIC BEARING(C)		24(each)	
					POT BEARING(A)		10(each)	
					POT BEARING(C)		6(each)	
					POT BEARING(D)		6(each)	
					EXPANSION JOINT(A)		12(m)	
					EXPANSION JOINT(B)		84(m)	
					EXPANSION JOINT(C)		12(m)	
					RAILING		490(m)	

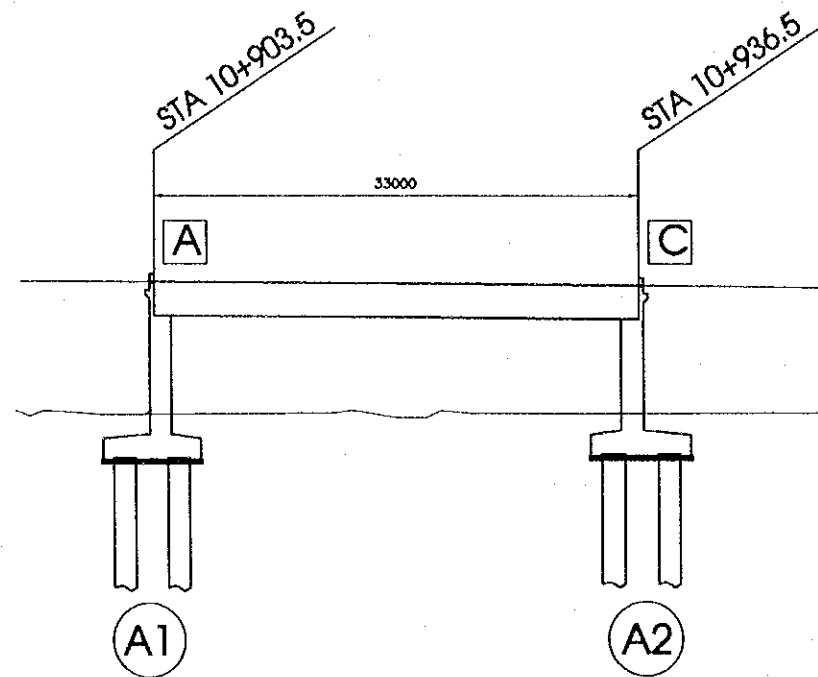
NOTE

- ⊕ PCI-GIRDER ELASTOMERIC BEARING (TYPE A, C)
- ⊕ BOX GIRDER POT BEARING (TYPE A, C, D)
- A, B, C : EXPANSION TYPE

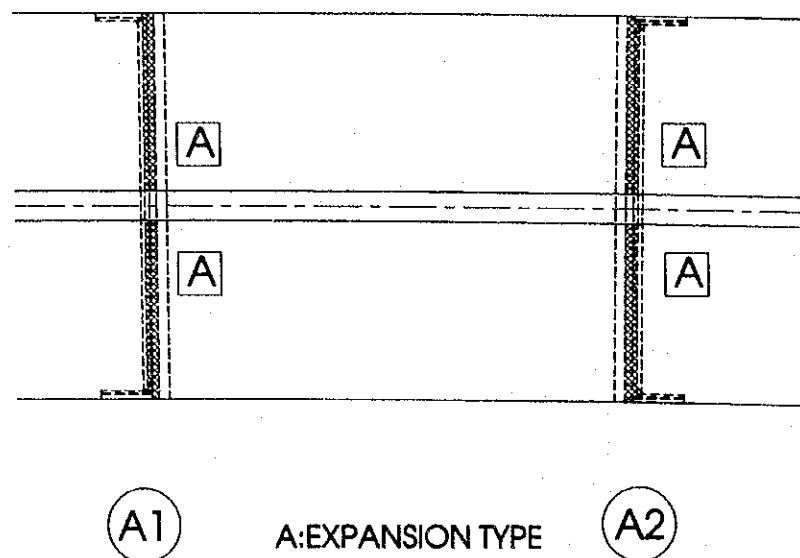
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRU BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	DATE 2000.11.14
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/500	DRAWING No. C-3-1-3	SHEET No.
BRIDGE ACCESSORY OF GIA LAM ROAD BRIDGE			

### PROFILE OF GIA LAM ROAD BRIDGE

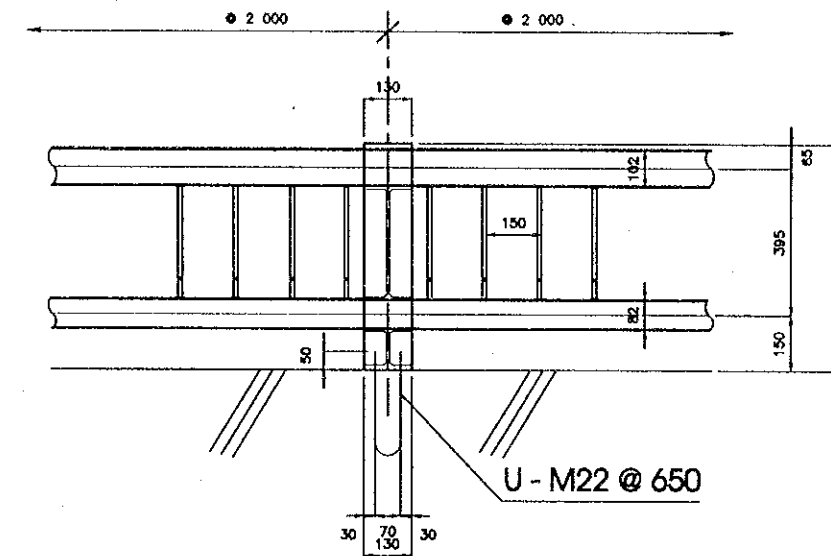


### PLAN



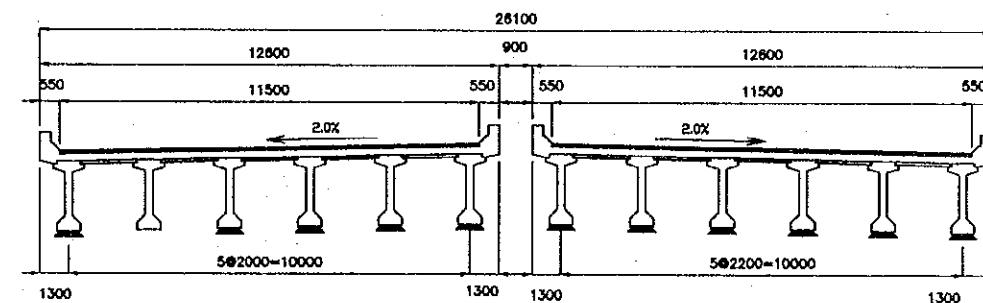
### RAILING

SCALE : 1/20



### CROSS SECTION

SCALE : 1/200

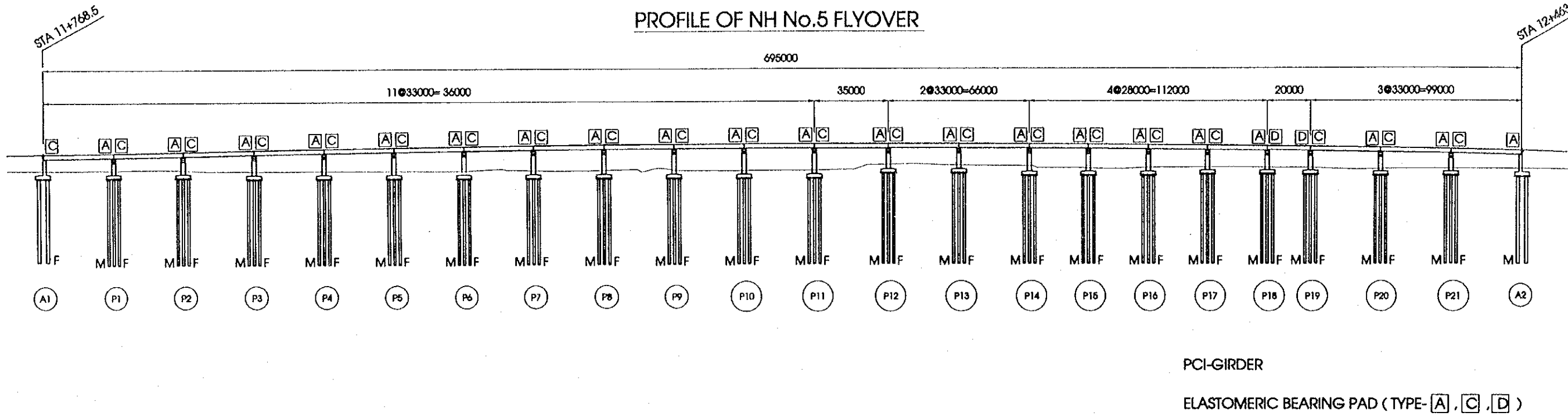


### LIST OF BEARING SHOES, EXPANSION JOINT AND RAILING

PLACE	SPAN		KIND OF BEARING	BEARING			EXPANSION JOINT
	LENGTH(m)	TYPE		TYPE	NUMBER		
A1L	33	PCI-ORDER	M	33M	ELASTOMERIC BEARING (A)	6	A
A2L			F	33F	ELASTOMERIC BEARING (C)	6	A
A1R	33	PCI-ORDER	M	33M	ELASTOMERIC BEARING (A)	6	A
A2R			F	33F	ELASTOMERIC BEARING (C)	6	A
TOTAL					ELASTOMERIC BEARING(A)	12(each)	
					ELASTOMERIC BEARING(C)	12(each)	
					EXPANSION JOINT(A)	48(m)	
					RAILING	86(m)	

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2002.03.19

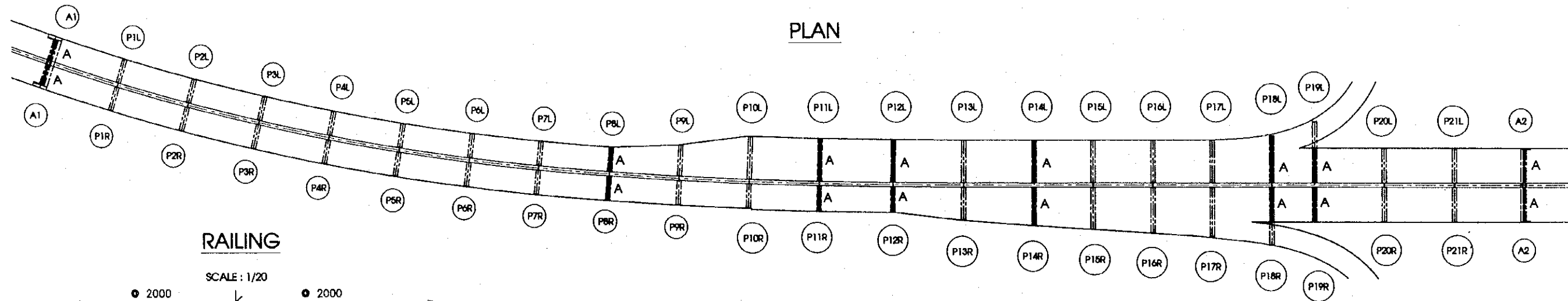
### PROFILE OF NH No.5 FLYOVER



PCI-GIRDER

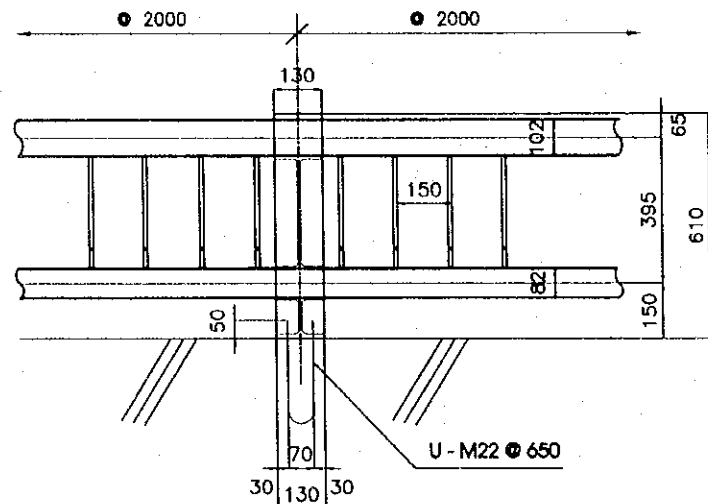
ELASTOMERIC BEARING PAD (TYPE- A , C , D )

### PLAN



### RAILING

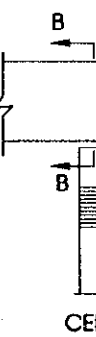
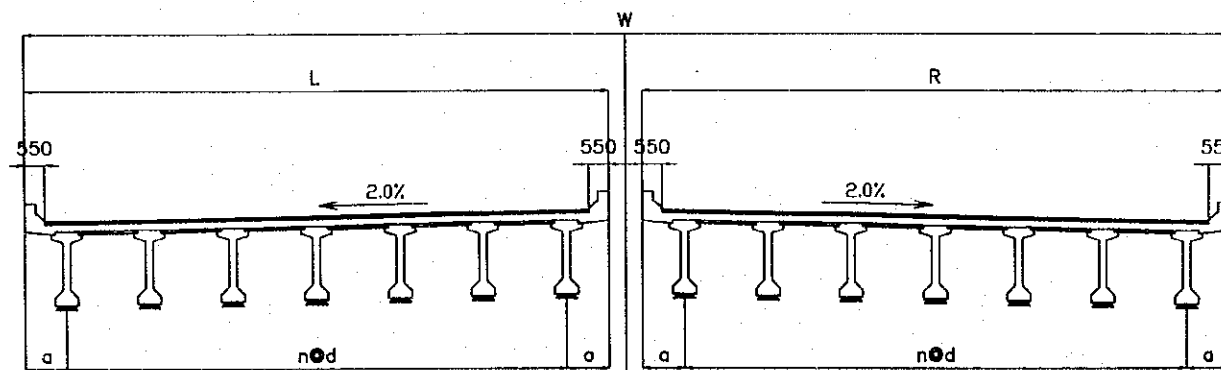
SCALE: 1/20



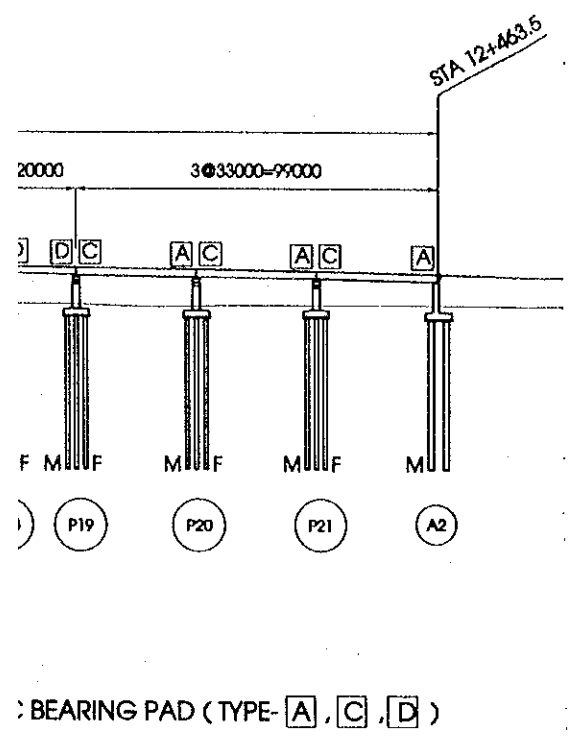
LENGTH OF RAILING : 1390 M

### LEFT

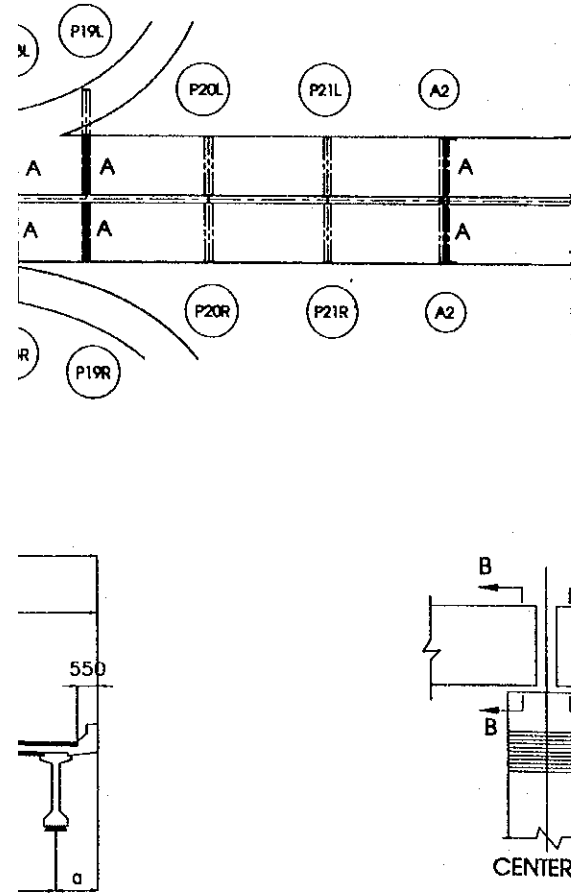
### RIGHT



### LIST OF BEARING SHOES, EXPANSION JOINT AND RAILING OF THE LEFT BRIDGE



LOCATION	SECTION A					SPAN LENGTH (m)	KIND OF BEARING	BEARING		SECTION B					SPAN LENGTH (m)	KIND OF BEARING	BEARING		EXPANSION JOINT							
	n	d (mm)	a (mm)	WL (mm)	Number of girder			TYPE	TYPE	NUMBER (each)	LOCATION	n	d (mm)	a (mm)			WL (mm)	Number of girder	TYPE	TYPE	NUMBER (each)	PIER	TYPE	LENGTH (mm)		
A1						33	P-G	F	E.B	A	6	A1	5	2000	1300	12600	6	33	P-G		E.B	C	6	A1	A	12600
P1	5	2000	1300	12600	6	33	P-G	F	E.B	A	6	P1	5	2000	1300	12600	6	33	P-G	M	E.B	C	6	P1		
P2	5	2000	1300	12600	6	33	P-G	F	E.B	A	6	P2	5	2000	1300	12600	6	33	P-G	M	E.B	C	6	P2		
P3	5	2000	1300	12600	6	33	P-G	F	E.B	A	6	P3	5	2000	1300	12600	6	33	P-G	M	E.B	C	6	P3		
P4	5	2000	1300	12600	6	33	P-G	F	E.B	A	6	P4	5	2000	1300	12600	6	33	P-G	M	E.B	C	6	P4		
P5	5	2000	1300	12600	6	33	P-G	F	E.B	A	6	P5	5	2000	1300	12600	6	33	P-G	M	E.B	C	6	P5		
P6	5	2000	1300	12600	6	33	P-G	F	E.B	A	6	P6	5	2000	1300	12600	6	33	P-G	M	E.B	C	6	P6		
P7	5	2000	1300	12600	6	33	P-G	F	E.B	A	6	P7	5	2000	1300	12600	6	33	P-G	M	E.B	C	6	P7		
P8	5	2000	1300	12800	6	33	P-G	F	E.B	A	6	P8	7	1943	1250	16100	8	33	P-G	M	E.B	C	8	P8	A	16100
P9	7	2300	1250	18600	8	33	P-G	F	E.B	A	8	P9	8	2013	1250	18800	9	33	P-G	M	E.B	C	9	P9		
P10	8	2325	1250	21100	9	33	P-G	F	E.B	A	9	P10	8	2325	1250	21100	9	33	P-G	M	E.B	C	9	P10		
P11	8	2325	1250	21100	9	33	P-G	F	E.B	A	9	P11	8	2325	1250	21100	9	33	P-G	M	E.B	C	9	P11	A	21100
P12	8	2325	1250	21100	9	35	P-G	F	E.B	A	9	P12	8	2325	1250	21100	9	35	P-G	M	E.B	C	9	P12	A	21100
P13	8	2325	1250	21100	9	33	P-G	F	E.B	A	9	P13	8	2325	1250	21100	9	33	P-G	M	E.B	C	9	P13		
P14	8	2325	1250	21100	9	33	P-G	F	E.B	A	9	P14	8	2325	1250	21100	9	33	P-G	M	E.B	C	9	P14	A	21100
P15	8	2325	1250	21100	9	28	P-G	F	E.B	A	9	P15	8	2325	1250	21100	9	28	P-G	M	E.B	C	9	P15		
P16	8	2325	1250	21100	9	28	P-G	F	E.B	A	9	P16	8	2325	1250	21100	9	28	P-G	M	E.B	C	9	P16		
P17	8	2330	1250	21140	9	28	P-G	F	E.B	A	9	P17	9	2071	1250	21140	10	28	P-G	M	E.B	C	10	P17		
P18	9	2364	1250	23778	10	28	P-G	F	E.B	A	10	P18	12	1773	1250	23778	13	20	P-G	M	E.B	D	13	P18	A	23778
P19	6	2250	1300	16100	13	20	P-G	F	E.B	D	13	P19	6	2250	1300	16100	7	33	P-G	M	E.B	C	7	P19	A	16100
P20	6	2250	1300	16100	7	33	P-G	F	E.B	A	7	P20	6	2250	1300	16100	7	33	P-G	M	E.B	C	7	P20		
P21	6	2250	1300	16100	7	33	P-G	F	E.B	A	7	P21	6	2250	1300	16100	7	33	P-G	M	E.B	C	7	P21		
A2	6	2250	1300	16100	7	33	P-G			A	7	A2					33	P-G	M	E.B			A2	A	16100	
TOTAL												E.B : ELASTOMERIC BEARING E.B(A):159(each) E.B(C):159(each) E.B(D):23(each)										EXPANSION JOINT:148(m) RAILING:695(m)				



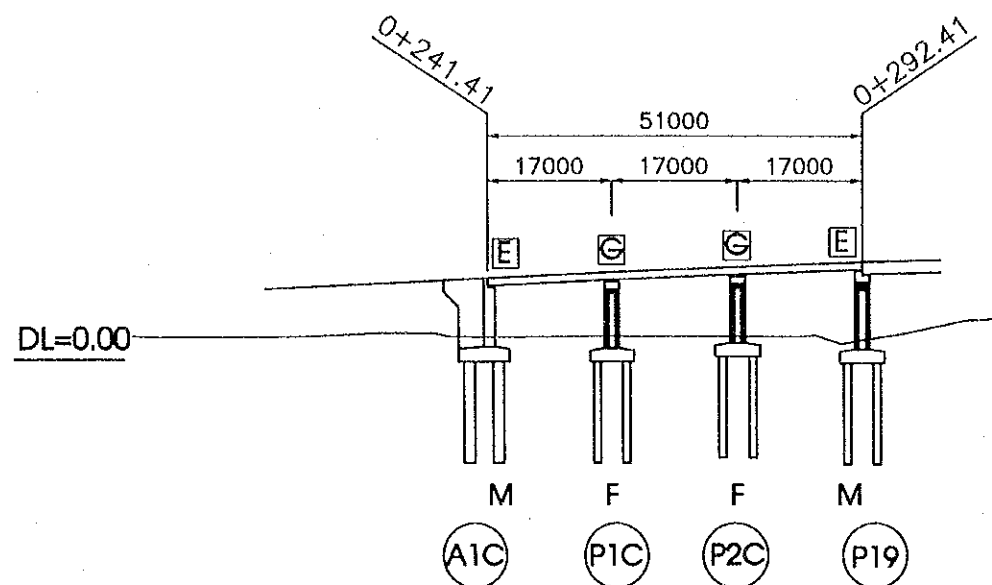
### LIST OF BEARING SHOES, EXPANSION JOINT AND RAILING OF THE RIGHT BRIDGE

LOCATION	SECTION A					SPAN LENGTH (m)	KIND OF BEARING	BEARING		SECTION B					SPAN LENGTH (m)	KIND OF BEARING	BEARING		EXPANSION JOINT							
	n	d (mm)	a (mm)	WL (mm)	Number of girder			TYPE	TYPE	NUMBER (each)	LOCATION	n	d (mm)	a (mm)			WL (mm)	Number of girder	TYPE	TYPE	NUMBER (each)	PIER	TYPE	LENGTH (mm)		
A1						33	P-G			A1	5	2000	1300	12600	6	33	P-G		E.B	C	6	A1	A	12600		
P1	5	2000	1300	12600	6	33	P-G	F	E.B	A	6	P1	5	2000	1300	12600	6	33	P-G	M	E.B	C	6	P1		
P2	5	2000	1300	12600	6	33	P-G	F	E.B	A	6	P2	5	2000	1300	12600	6	33	P-G	M	E.B	C	6	P2		
P3	5	2000	1300	12600	6	33	P-G	F	E.B	A	6	P3	5	2000	1300	12600	6	33	P-G	M	E.B	C	6	P3		
P4	5	2000	1300	12600	6	33	P-G	F	E.B	A	6	P4	5	2000	1300	12600	6	33	P-G	M	E.B	C	6	P4		
P5	5	2000	1300	12600	6	33	P-G	F	E.B	A	6	P5	5	2000	1300	12600	6	33	P-G	M	E.B	C	6	P5		
P6	5	2000	1300	12600	6	33	P-G	F	E.B	A	6	P6	5	2000	1300	12600	6	33	P-G	M	E.B	C	6	P6		
P7	5	2000	1300	12600	6	33	P-G	F	E.B	A	6	P7	5	2000	1300	12600	6	33	P-G	M	E.B	C	6	P7		
P8	5	2000	1300	12600	6	33	P-G	F	E.B	A	6	P8	5	2000	1300	12600	6	33	P-G	M	E.B	C	6	P8	A	12600
P9	5	2000	1300	12600	6	33	P-G	F	E.B	A	6	P9	5	2000	1300	12600	6	33	P-G	M	E.B	C	6	P9		
P10	5	2000	1300	12600	6	33	P-G	F	E.B	A	6	P10	5	2000	1300	12600	6	33	P-G	M	E.B	C	6	P10		
P11	5	2000	1300	12600	6	35	P-G	F	E.B	A	6	P11	6	2267	1250	16100	7	35	P-G	M	E.B	C	7	P11	A	16100
P12	6	2227	1250	15860	7	33	P-G	F	E.B	A	7	P12	6	2227	1250	15860	7	33	P-G	M	E.B	C	7	P12	A	15860
P13	6	2415	1250	16991	7	33	P-G	F	E.B	A	7	P13	7	2070	1250	16991	8	33	P-G	M	E.B	C	8	P13		
P14	7	2387	1250	19211	8	33	P-G	F	E.B	A	8	P14	8	2089	1250	19211	9	33	P-G	M	E.B	C	9	P14	A	19211
P15	8	2333	1250	21162	9	28	P-G	F	E.B	A	9	P15	9	2074	1250	21192	10	28	P-G	M	E.B	C	10	P15		
P16	9	2291	1250	23122	10	28	P-G	F	E.B	A	10	P16	10	2062	1250	23122	11	28	P-G	M	E.B	C	11	P16		
P17	10	2258	1250	25081	11	28	P-G	F	E.B	A	11	P17	11	2053	1250	25081	12	28	P-G	M	E.B	C	12	P17		
P18	11	2319	1250	28005	12	20	P-G	F	E.B	A	12	P18	6	2250	1300	16100	7	20	P-G	M	E.B	D	7	P18	A	16100
P19	6	2250	1300	16100	7	33	P-G	F	E.B	D	7	P19	6	2250	1300	16100	7	33	P-G	M	E.B	C	7	P19	A	16100
P20	6	2250	1300	16100	7	33	P-G	F	E.B	A	7	P20	6	2250	1300	16100	7	33	P-G	M	E.B	C	7	P20		
P21	6	2250	1300	16100	7	33	P-G	F	E.B	A	7	P21	6	2250	1300	16100	7	33	P-G	M	E.B	C	7	P21		
A2	6	2250	1300	16100	7	33	P-G			A	7	A2					33	P-G	M	E.B			A2	A	16100	
TOTAL												E.B : ELASTOMERIC BEARING E.B(A):139(each) E.B(C):139(each) E.B(D):14(each)										EXPANSION JOINT:125(m) RAILING:695(m)				

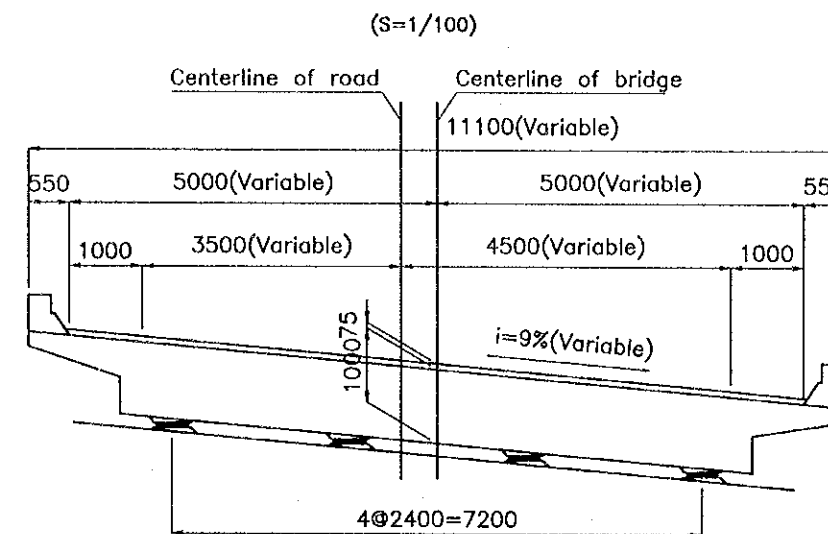
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM DANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATASE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATASE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.8.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/1000	C-3-1-5	
BRIDGE ACCESSORY OF RAMP A			

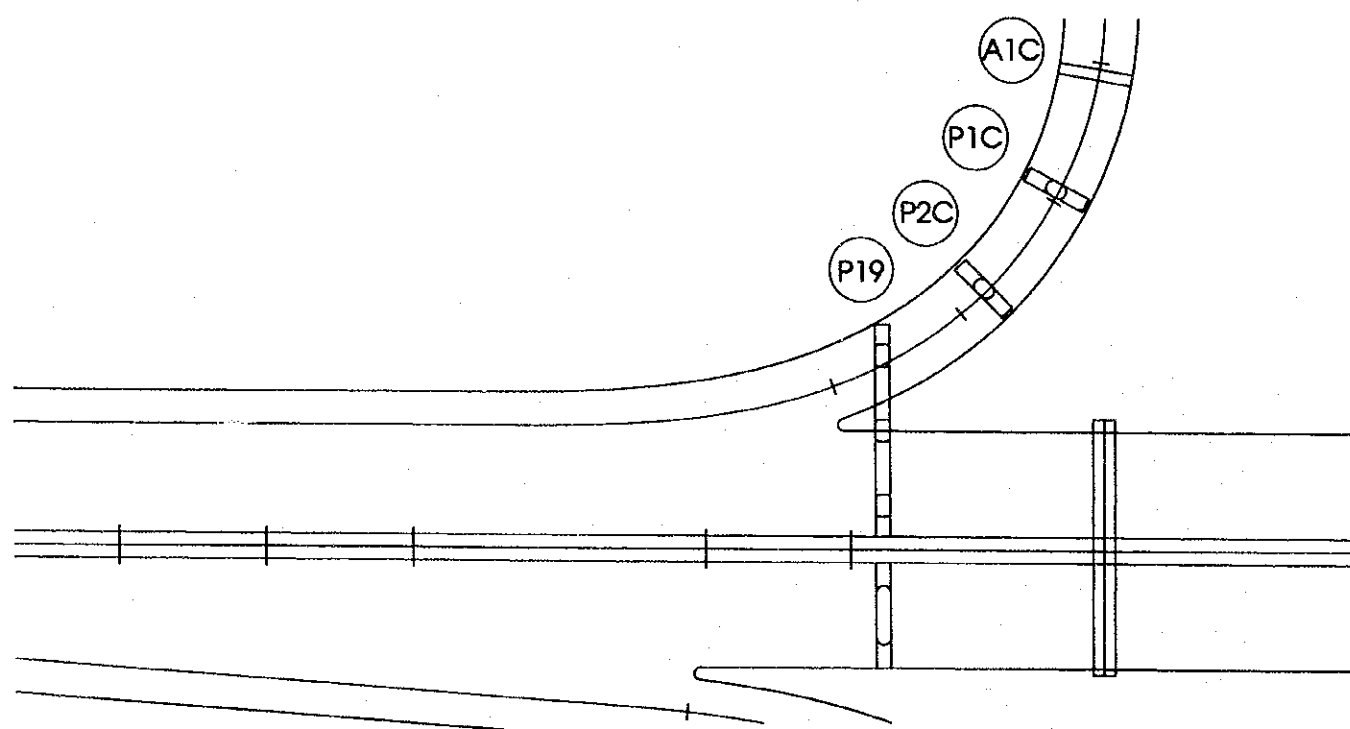
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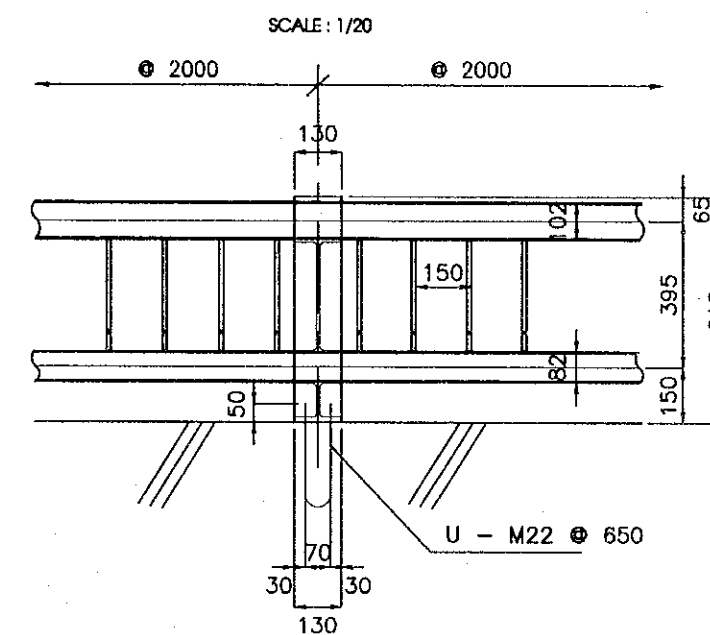
### CROSS SECTION



### PLAN



### RAILING



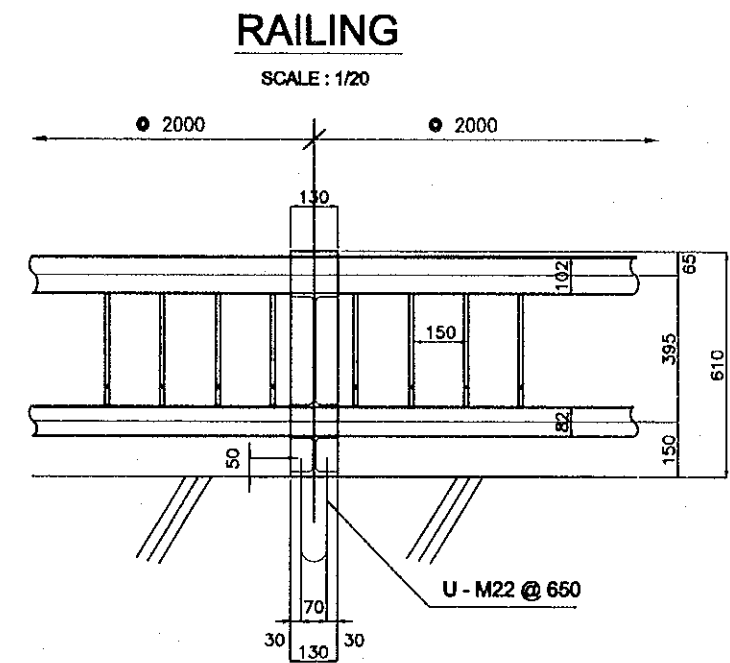
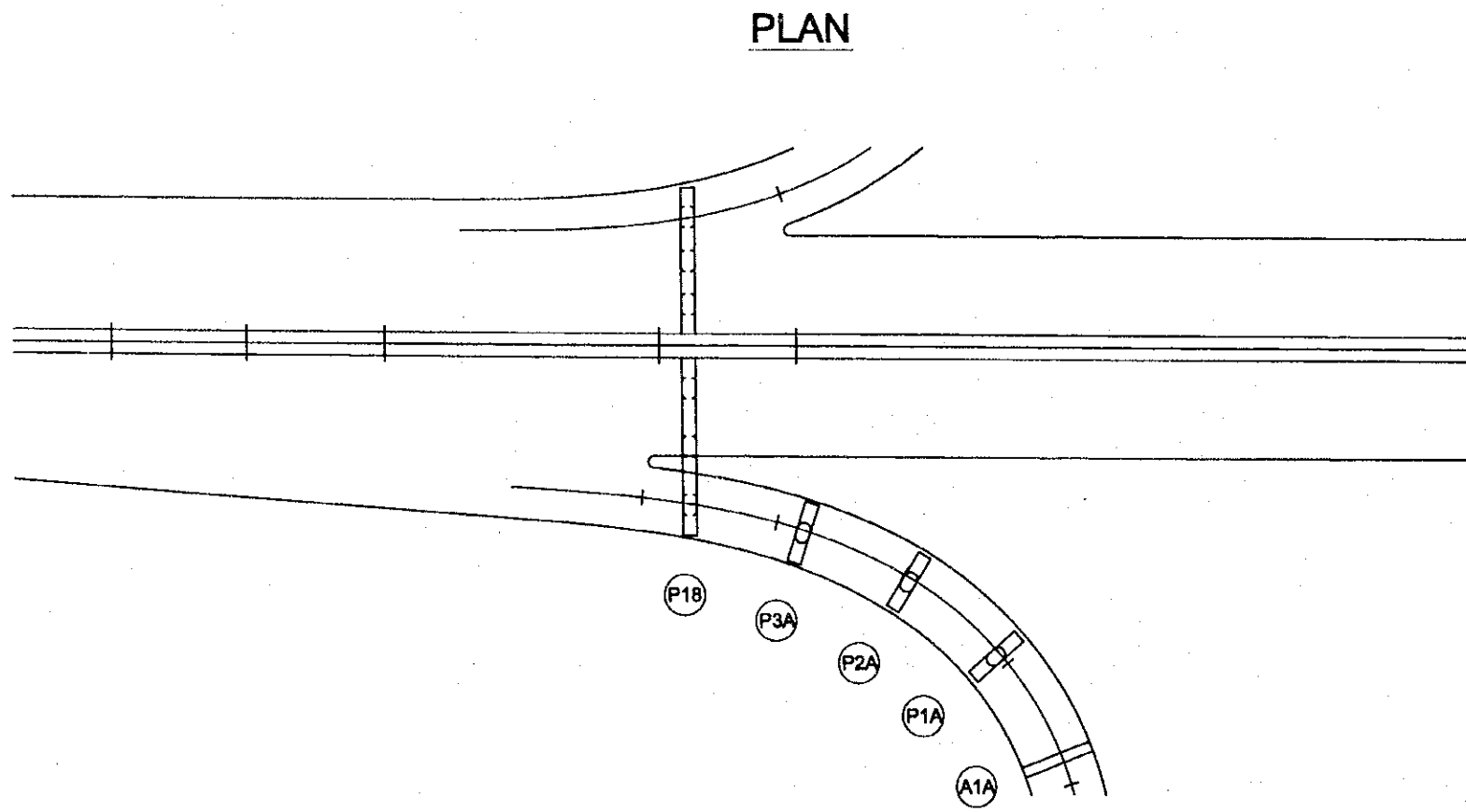
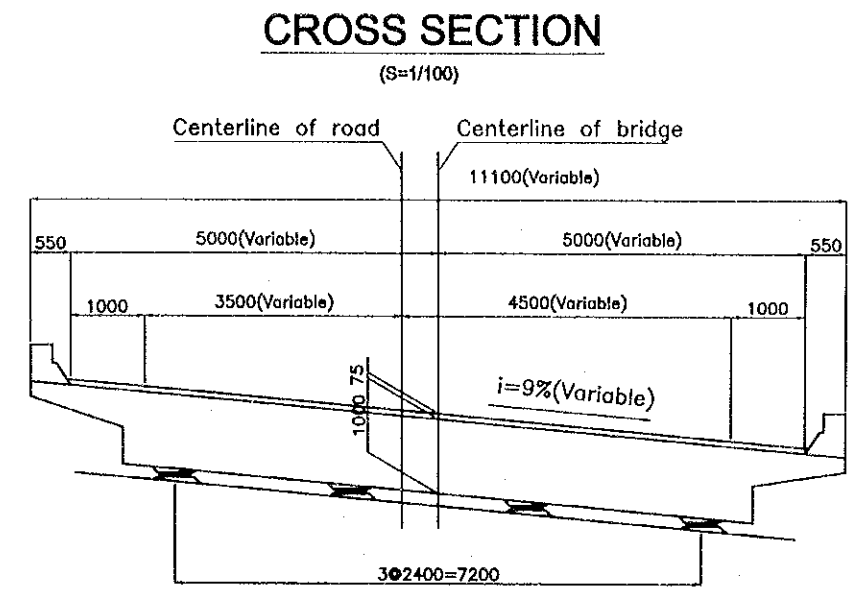
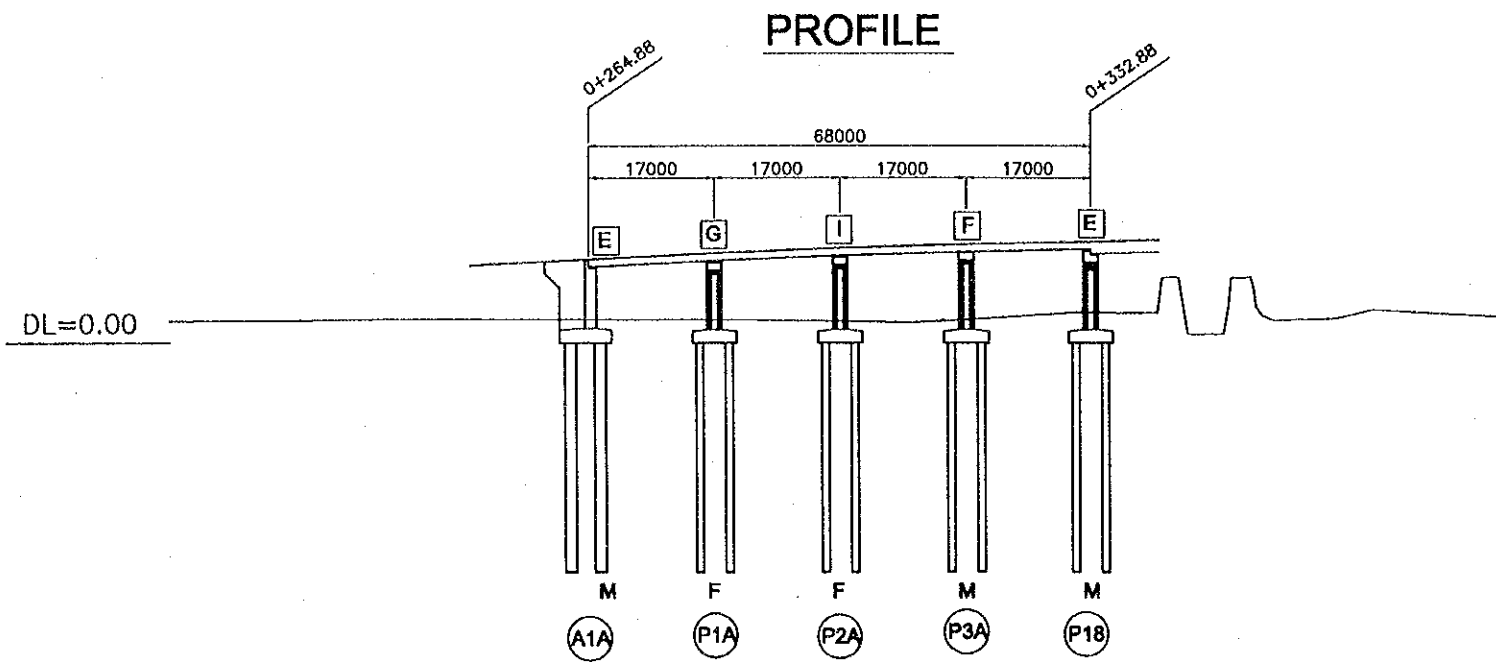
### LIST OF BEARING SHOE, EXPANSION JOINT AND RAILING

ACCESSORY	TYPE	QUANTITY
ELASTOMERIC B.P	E	8(each)
	G	8(each)
EXPANSION JOINT	SD-40	20.2(m)
RAILING		102(m)



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THUHO LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. MATSUDA
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE <i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.11.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/1000	C-3-1-6	
BRIDGE ACCESSORY OF RAMP B			



**LIST OF BEARING SHOE, EXPANSION JOINT AND RAILING**

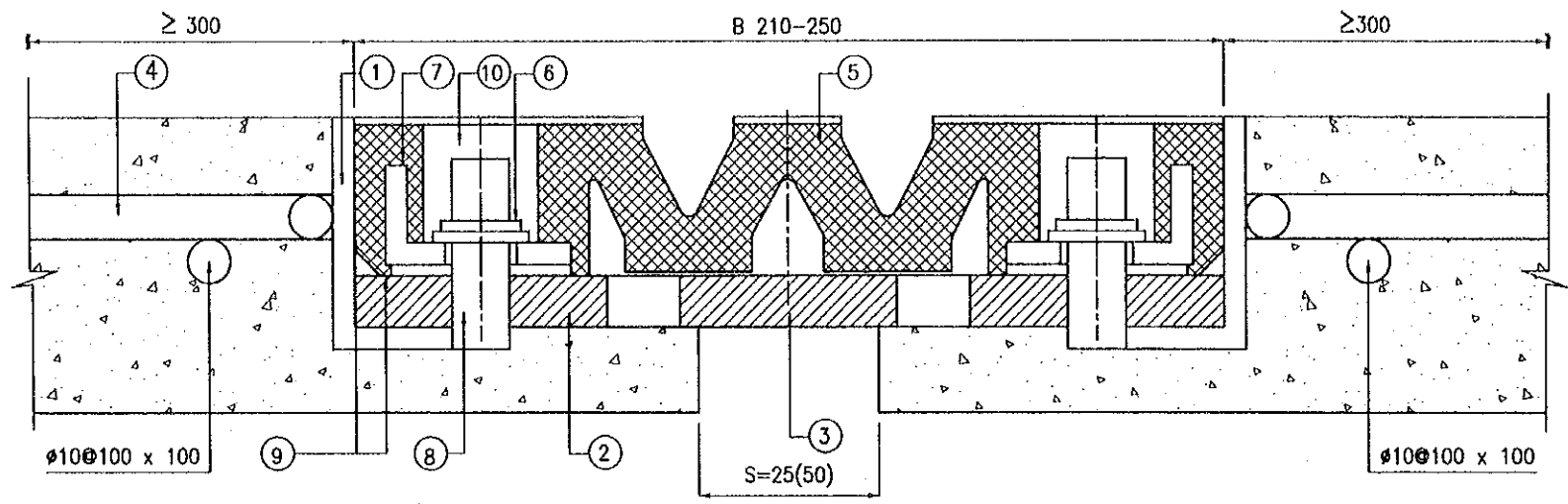
ACCESSORY	TYPE	QUANTITY
ELASTOMERIC B.P	E	8(each)
	G	4(each)
	F	4(each)
	I	4(each)
EXPANSION JOINT	SD-40	20.2(m)
RAILING		136(m)



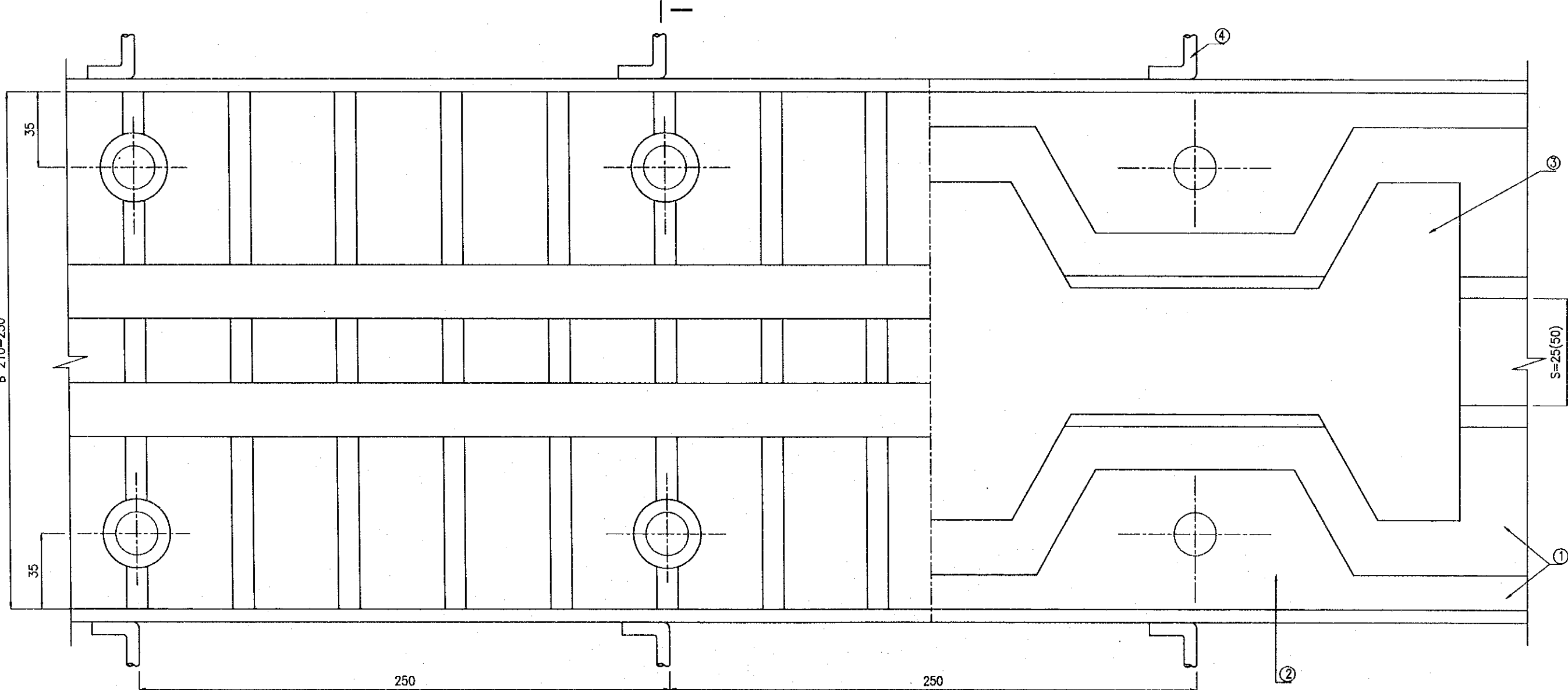
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE 	DATE 28.01.14
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/2	DRAWING No. C-3-1-B	SHEET No.
SD-40 EXPANSION JOINT(A)(2)			

### SECTION I-I



	TYPE	SHAPE	MATERIAL	NUMBER	UNIT WEIGHT (1M EXPANSION JOINT) (KG/M)	TOTAL (15.57 M)
1	ANGLE STEEL PLATE	L72x58x6	SS400	2	13.4	417.28(kg)
2	GEARWHEEL STEEL PLATE	990x70x12	SS400	2	9.1	283.37(kg)
3	BOTTOM STEEL PLATE	990x160x12	SS400	1	12.3	191.51(kg)
4	STEEL BAR	#12 L=450		8	3	373.68(kg)
TOTAL						1285.8(kg)
5	NEOPRENE RUBBER			1		15.57(m)
6	WASHER			8		126(each)
7	SPRING WASHER			8		126(each)
8	BOLT	M16x35		8		126(each)
9	FIXED RUBBER			2		31.14(m)
10	RUBBER CAP			8		126(each)





THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM  
 TRANH LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT

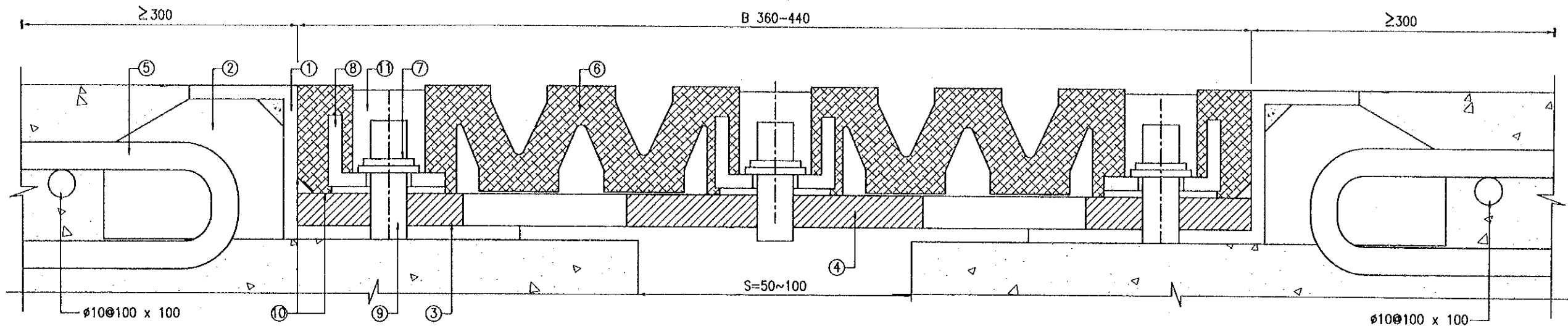
DESIGNED BY  
 NAME: S. WATABE  
 SIGNATURE: *[Signature]*  
 DATE: 2000.0.14

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  
 PROJECT: RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT  
 CONSULTANT: PACIFIC CONSULTANTS INTERNATIONAL

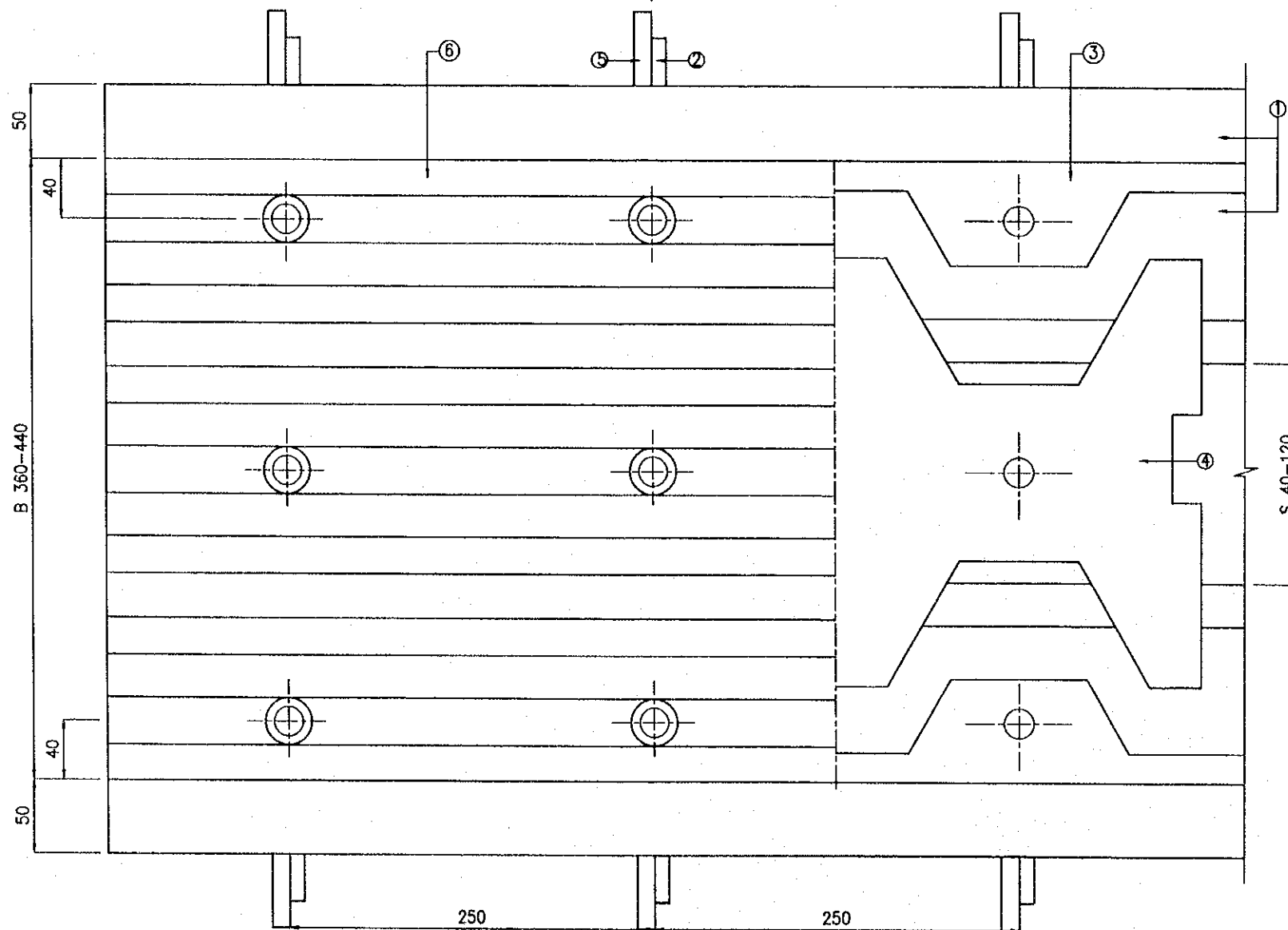
PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/2	C-3-1-10	

SD-80 EXPANSION JOINT(B)(2)

SECTION I-I  
 SCALE: 1/2  
 B 360-440



SCALE: 1/4

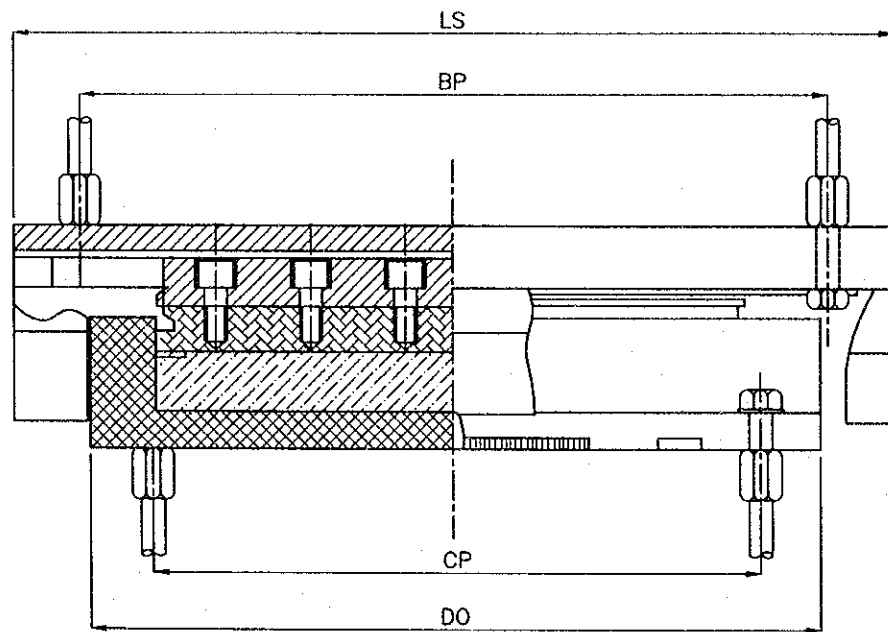


	TYPE	SHAPE	MATERIAL	NUMBER	UNIT WEIGHT (1M EXPANSION JOINT) (KG/M)	TOTAL (15.57 M)
1	ANGLE STEEL PLATE	170x74x6	SS400	2	23.0	716.22(kg)
2	STIFFENER	80x65x10	SS400	8	3.5	435.96(kg)
3	GEARWHEEL STEEL PLATE	990x130x16	SS400	2	13.2	411.05(kg)
4	BOTTOM STEEL PLATE	990x380x16	SS400	1	34.0	529.38(kg)
5	STEEL BAR	φ12 L=450		8	3.0	373.68(kg)
	<b>TOTAL</b>					<b>2466.3(kg)</b>
6	NEOPRENE RUBBER			1		15.57(m)
7	WASHER			12		189(each)
8	SPRING WASHER			12		189(each)
9	BOLT	M16x35		12		189(each)
10	FIXED RUBBER			2		31.14(m)
11	RUBBER CAP			12		189(each)

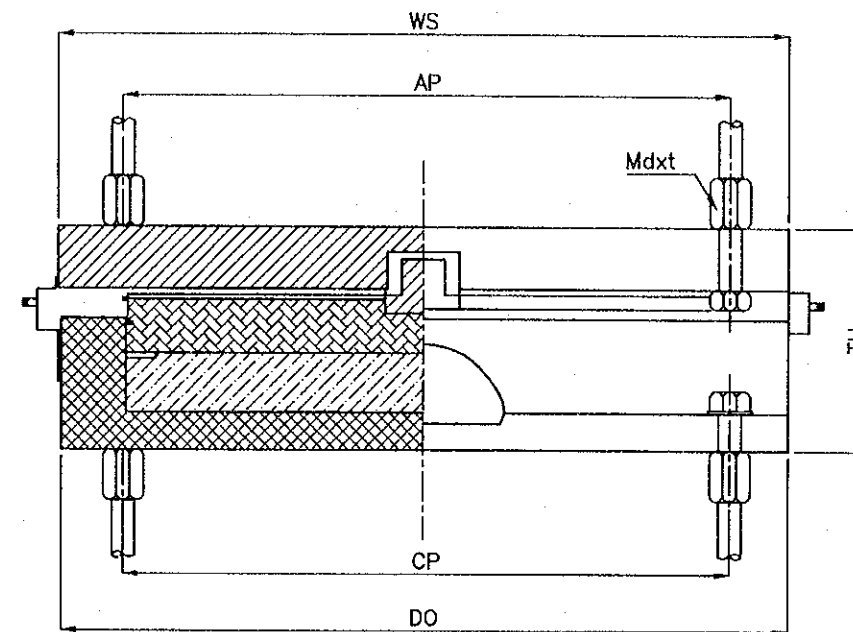
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. MATSUDA
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2022.11.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/5	C-3-1-11	
DETAIL OF POT BEARING SHOE(MOVE)			

LONGITUDINAL



TRANSVERSE

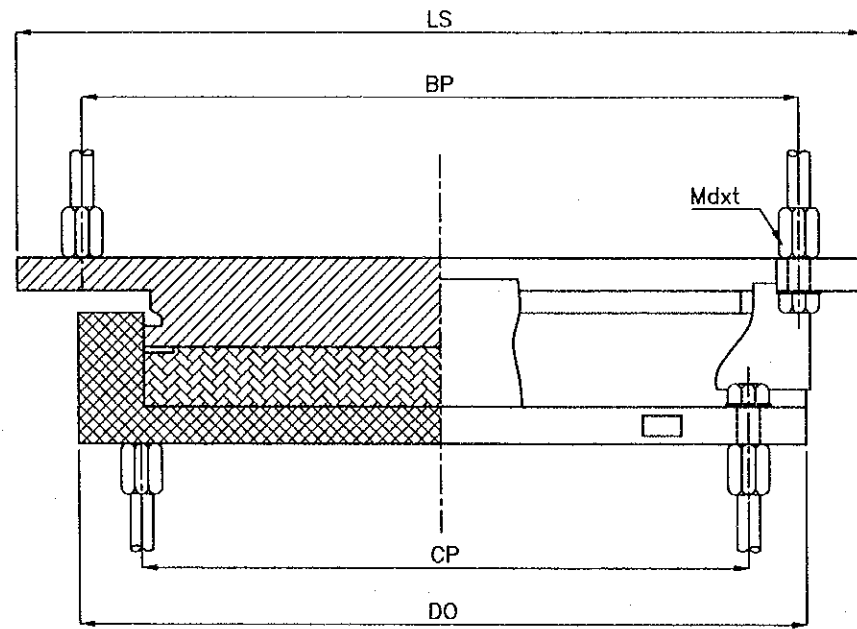


TYPE	REACTION (KN)	WEIGHT (KG)	DEMENSION							
			AP	BP	WS	LS	CP	DO	TH	Mdx
A-QPZ3500-ZX	3500	243	410	510	500	600	410	500	150	M20x2.5
B-QPZ4000-ZX	4000	317	460	560	550	650	460	550	160	M20x2.5
C-QPZ4500-ZX	4500	354	480	580	580	680	480	580	165	M20x2.5
D-QPZ10000-ZX	10000	994	730	830	880	980	730	880	220	M30x3
E-QPZ22500-ZX	22500	2830	1100	1300	1320	1520	1100	1320	275	M48x3

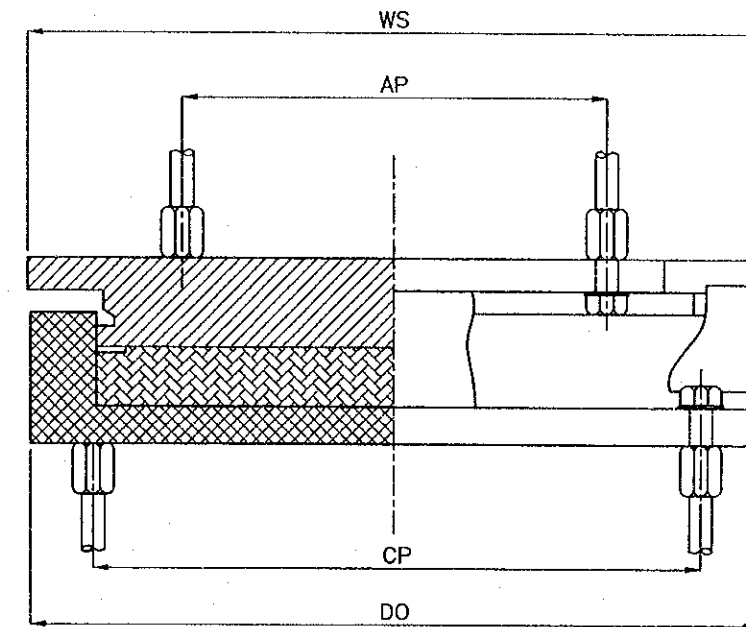
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TIN BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE
		S. MATSUDA
		2000.8.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/5	C-3-1-12	
DETAIL OF POT BEARING SHOE(FIX)			

### LONGITUDINAL



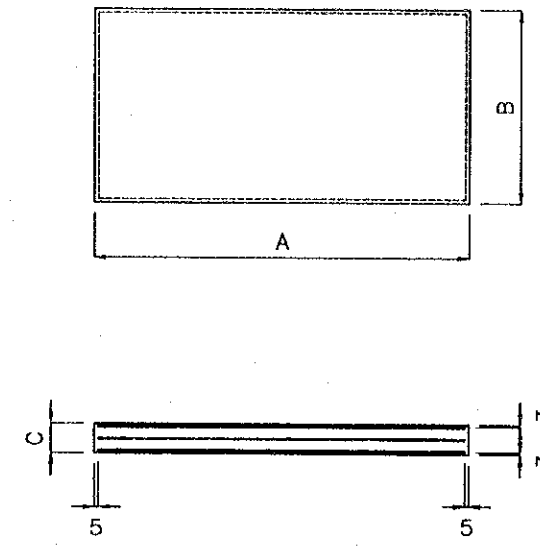
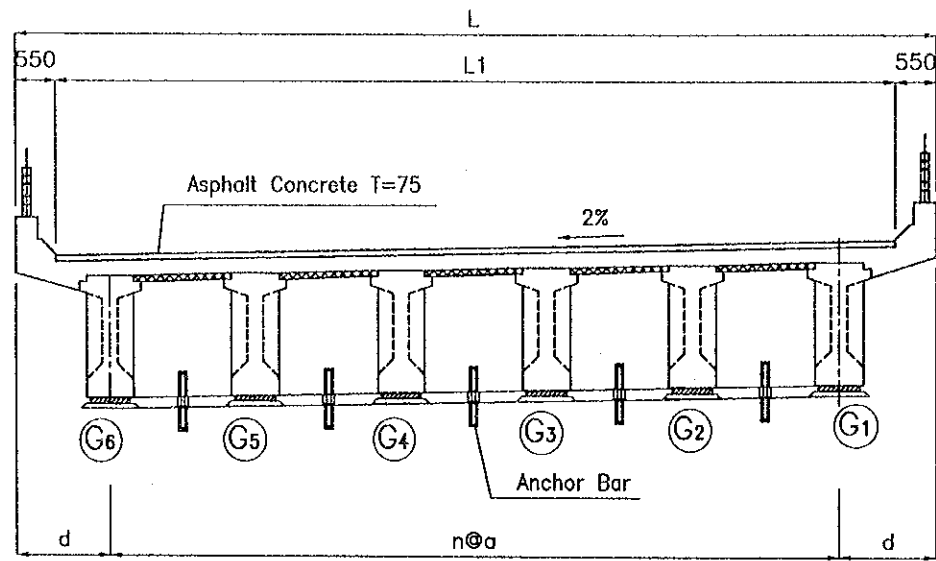
### TRANSVERSE



TYPE	REACTION (KN)	WEIGHT (KG)	DEMENSION							
			AP	BP	WS	LS	CP	DO	TH	Mdx
C-QPZ4500-GD	4500	306	330	560	580	660	480	580	145	M20x2.5
D-QPZ10000-GD	10000	933	490	850	880	1000	730	880	195	M30x3

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. NAITABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. NAITABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.8.14

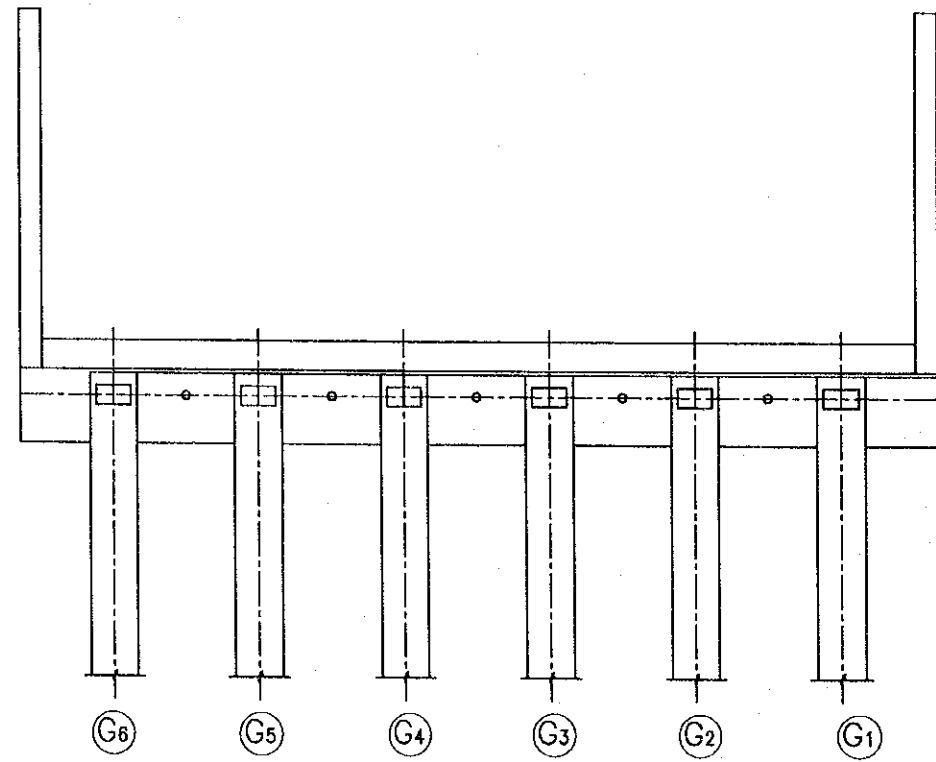
PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-3-1-13	
DETAIL OF ELASTOMERIC BEARING SHOE			



**NOTE**

ELASTOMERIC BEARING PAD IS USED  
FOR GIRDER SPAN: 20 m ~ 35 m

**DETAIL OF ELASTOMERIC BEARING PAD**



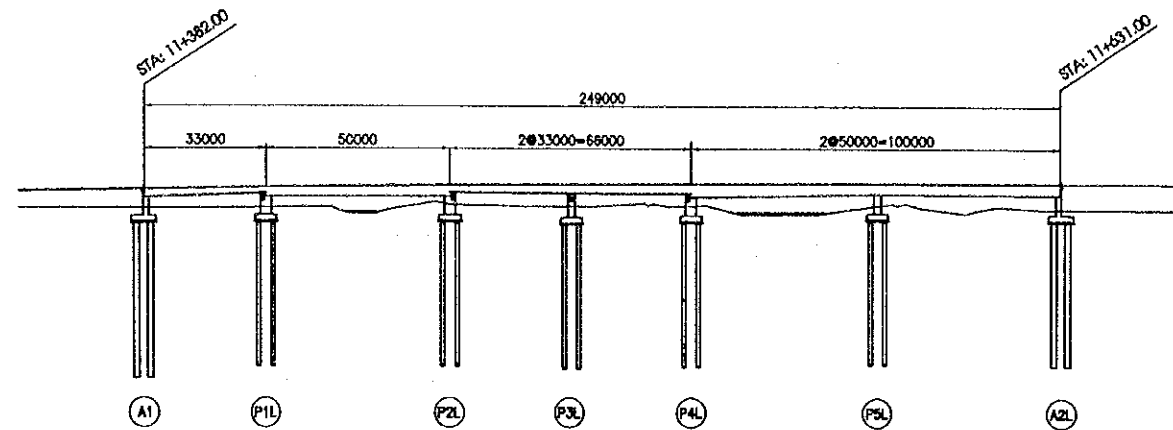
GIRDER SPAN(m)	TYPE			DEMEINSON(mm)			PLATE	REMARKS
				A	B	C		
20	MOVE	20M	D	510	260	40	3-500x250x2	
	FIX	20F	D	510	260	40	3-500x250x2	
28	MOVE	28M	B	510	310	44	3-500x300x2	
	FIX	28F	C	510	260	36	3-500x250x2	
33	MOVE	33M	A	510	310	56	4-500x300x2	
	FIX	33F	C	510	260	36	3-500x250x2	
35	MOVE	35M	A	510	310	56	4-500x300x2	
	FIX	35F	C	510	260	36	3-500x250x2	
RAMP BRIDGE R.C HOLLOW			E	330	330	56	4-320x320x2	
			F	510	510	44	3-500x500x2	
			G	510	510	32	3-500x500x2	
			H	480	480	32	3-470x470x2	



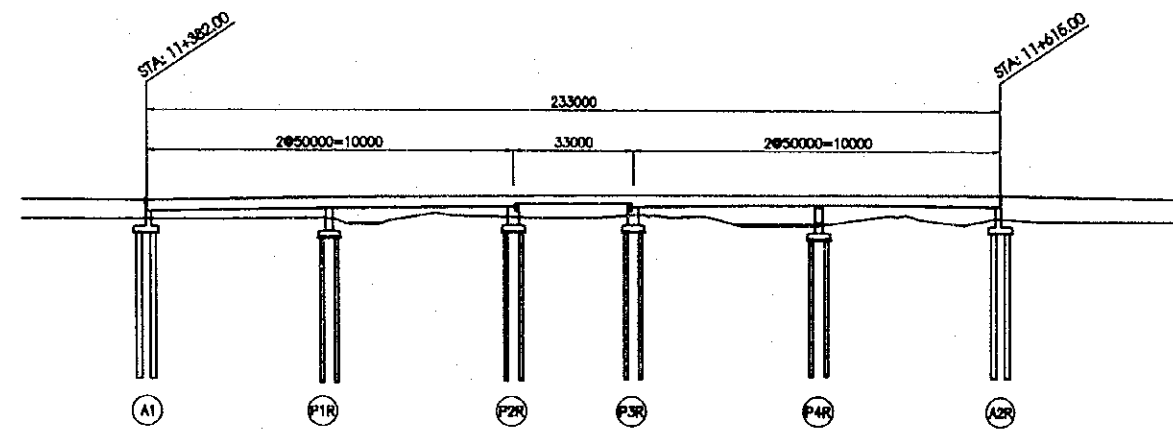
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	
CONTRACTOR PACIFIC CONSULTANTS INTERNATIONAL	DATE 2.000.11.14	

PACKAGE 2	SCALE 1/2000	DRAWING No. C-3-1-14	SHEET No.
DRAINAGE ARRANGEMENT OF CAU BAY CANAL BRIDGE			

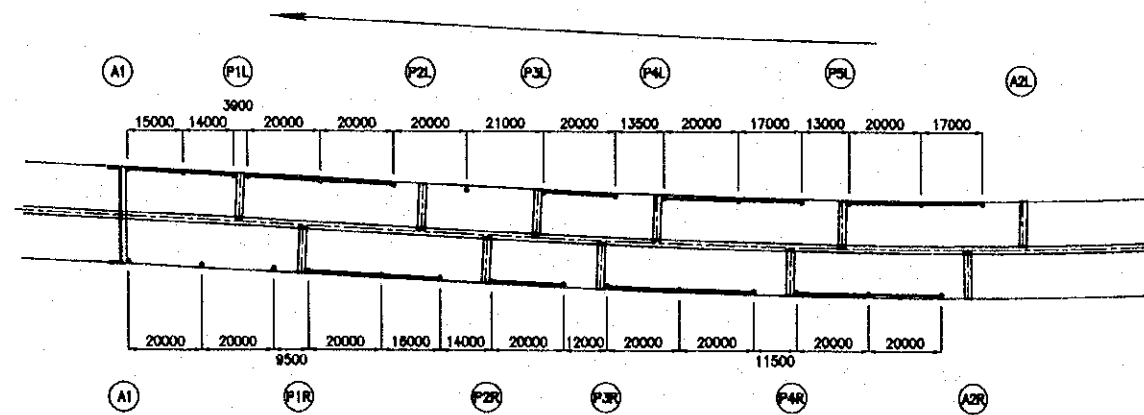
### PROFILE OF LEFT CAU BAY CANAL BRIDGE



### PROFILE OF RIGHT CAU BAY CANNAL BRIDGE



### PLAN

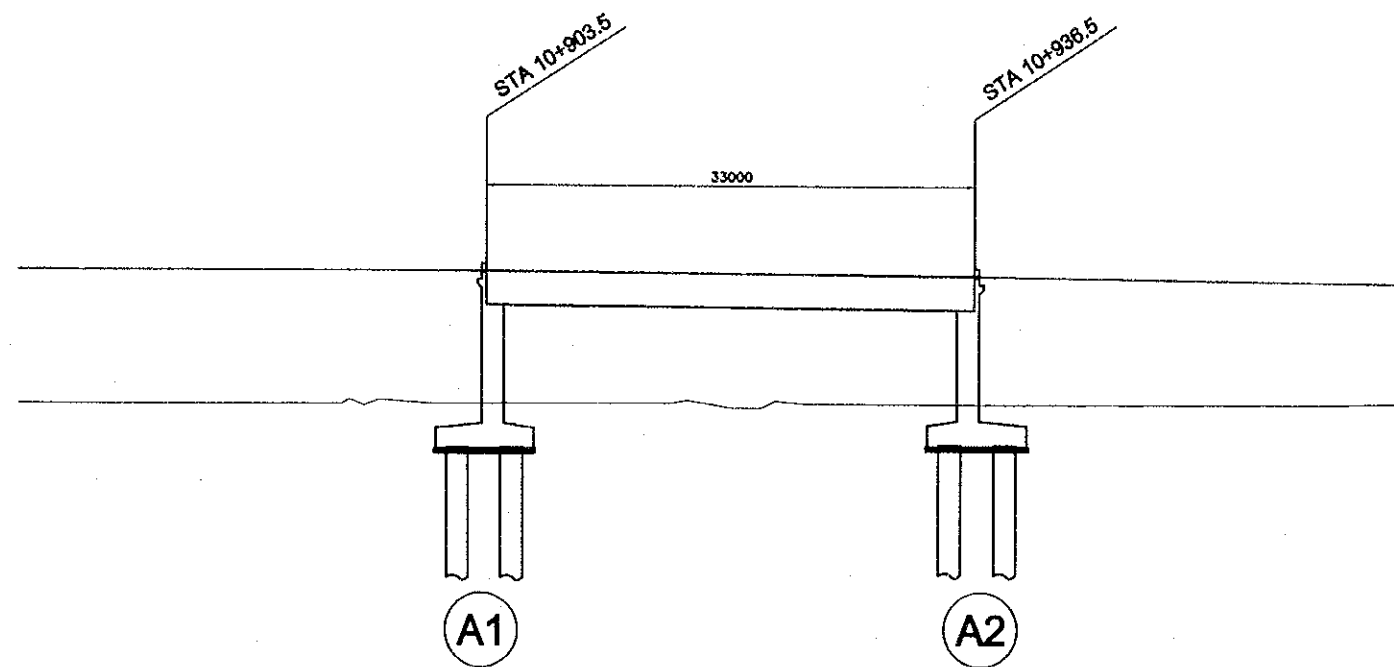


- TYPE A-DRAINAGE : 4each
- TYPE C-DRAINAGE : 2 each/40 m
- TYPE B-DRAINAGE : 7 each/259 m

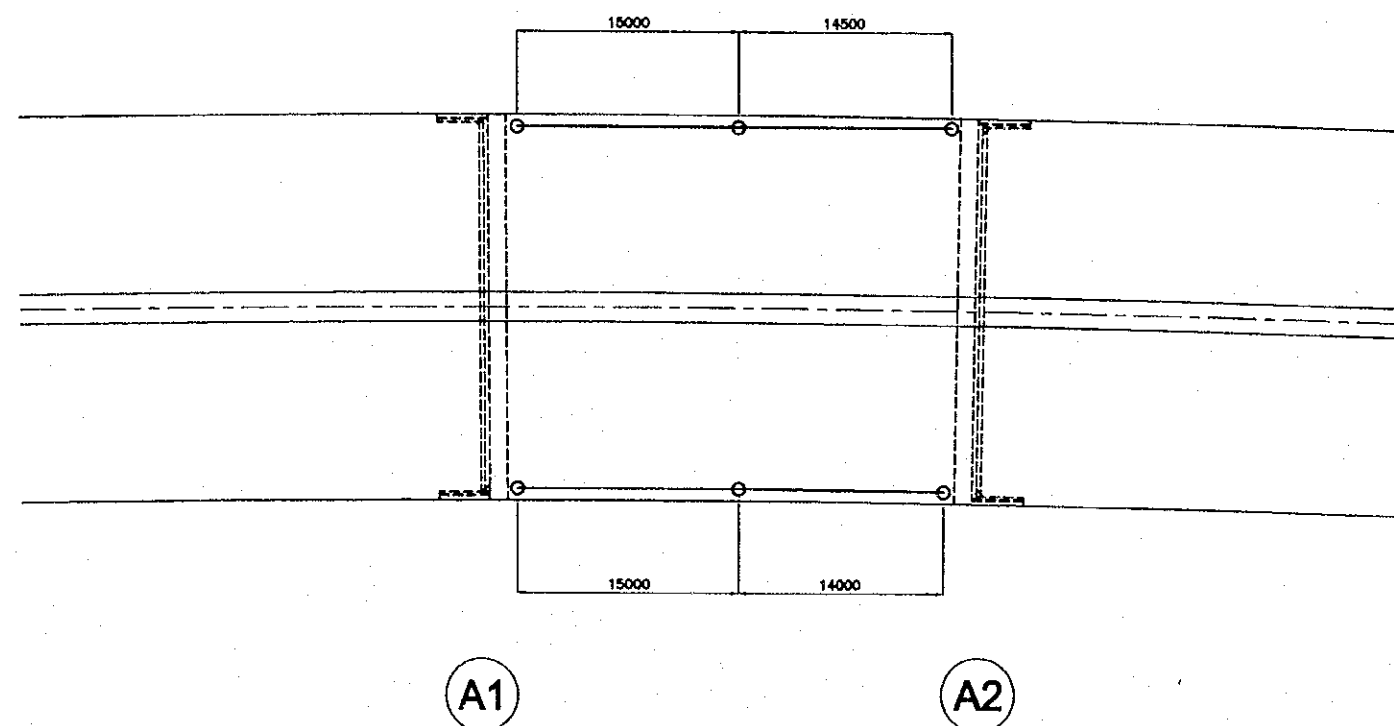
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATAGE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE 
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.3.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/500	C-3-1-15	
DRAINAGE ARRANGEMENT OF GIA LAM ROAD BRIDGE			

## PROFILE OF GIA LAM ROAD BRIDGE



PLAN

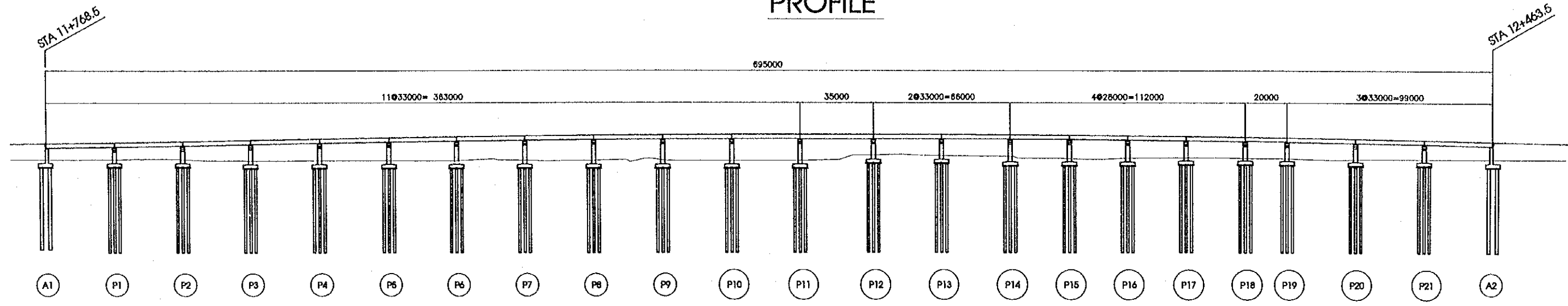


TYPE B-DRAINAGE : 2each/58.5 m

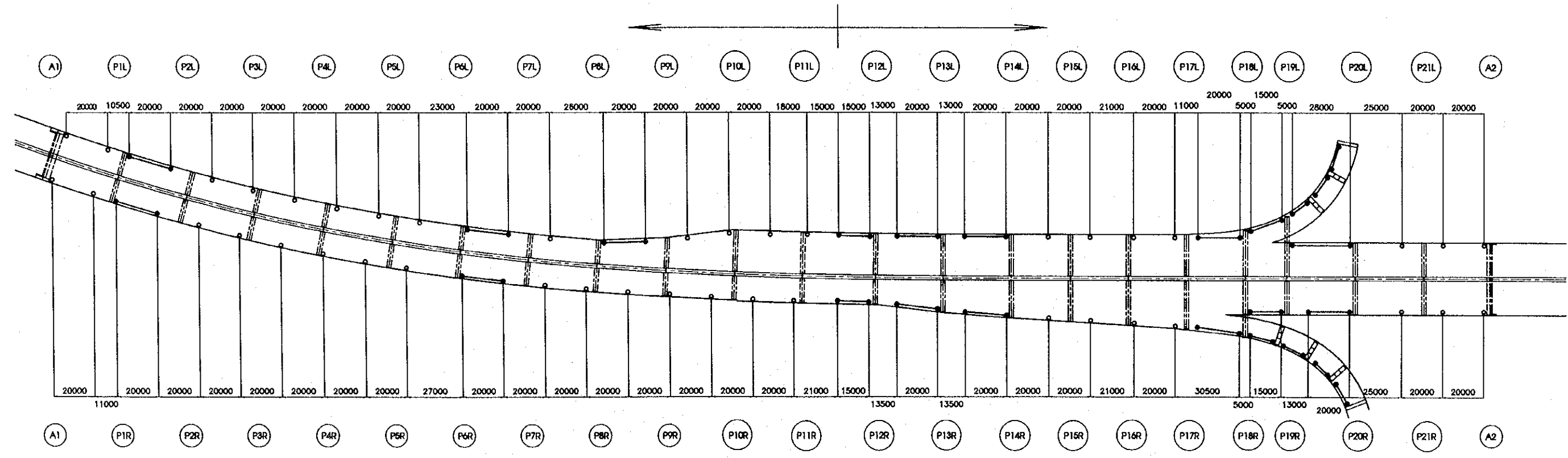
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2012.3.14

PACKAGE 2	SCALE 1/2000	DRAWING No. C-3-1-16	SHEET No.
DRAINAGE ARRANGEMENT OF NH No5 FLYOVER			

### PROFILE



### PLAN

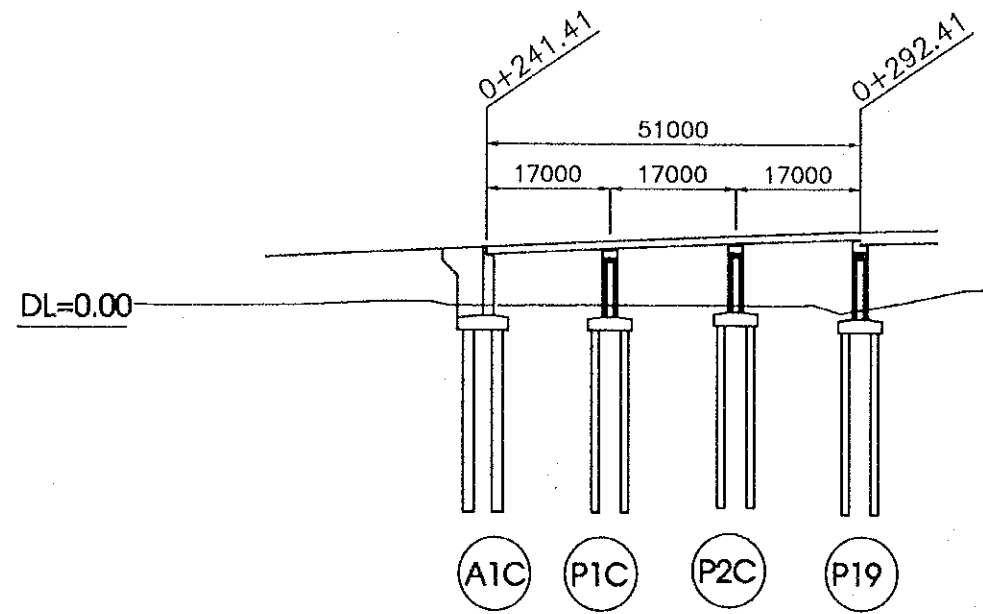


- TYPE C-DRAINAGE : 16 each/338 m
- TYPE A-DRAINAGE : 42 each

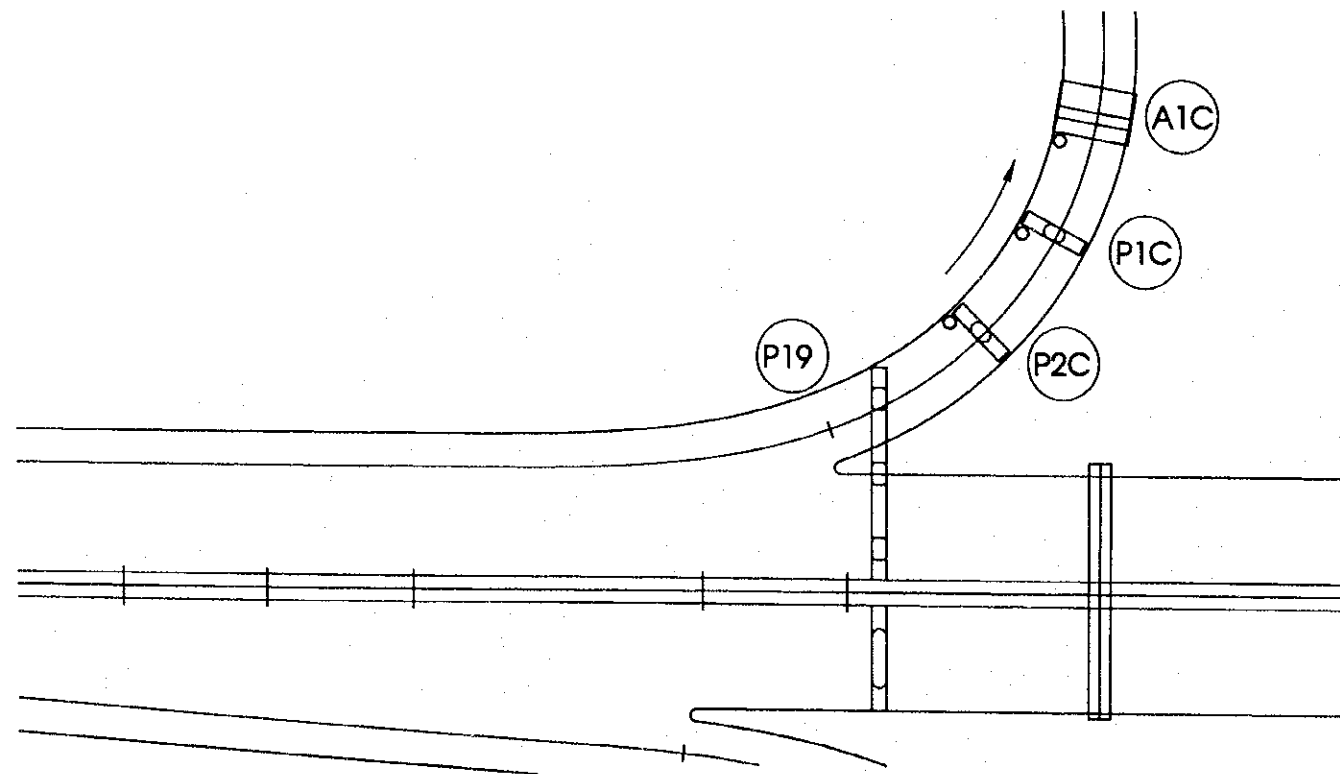
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANH LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATADA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATADA
PROJECT: RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONSULTANT: PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.3.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/1000	C-3-1-17	
DRAINAGE ARRANGEMENT OF RAMP A			

### PROFILE



### PLAN

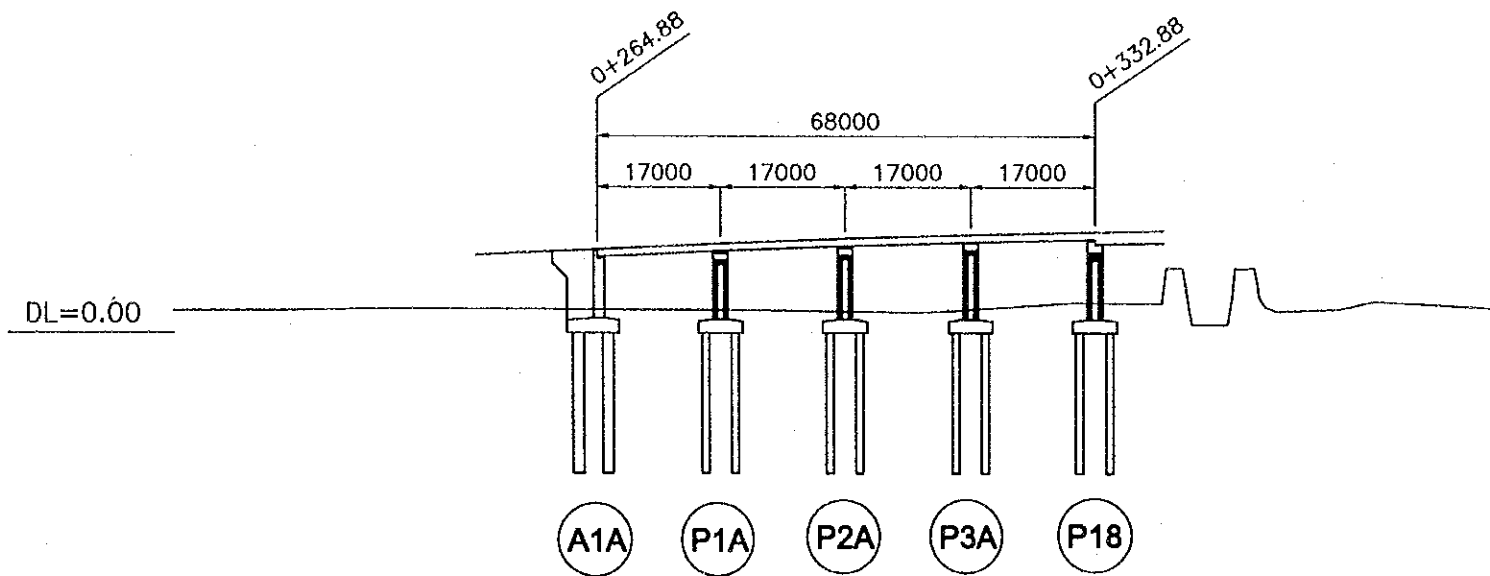


○ TYPE A-DRAINAGE : 3 each

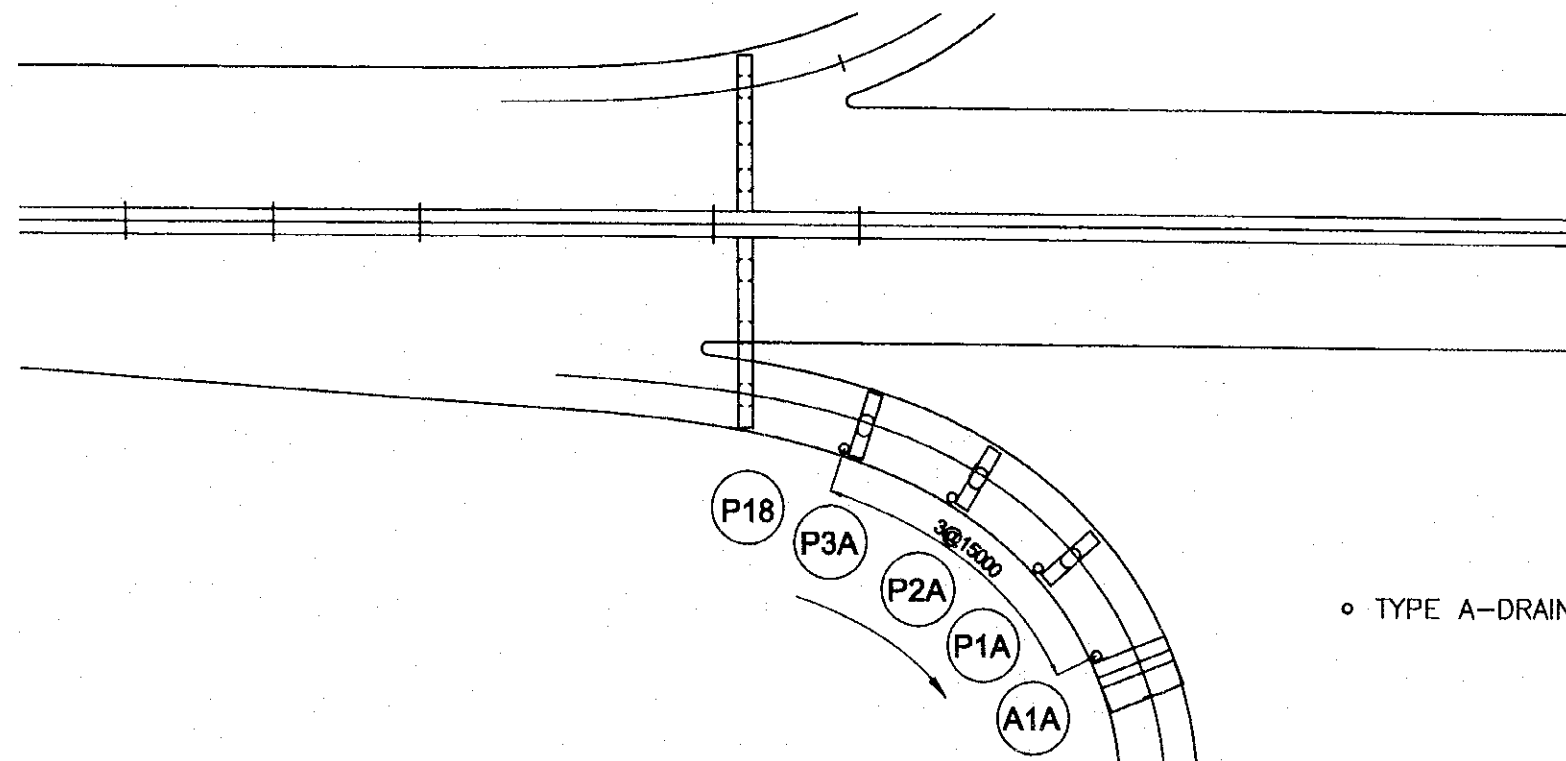
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATAGE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.12.19	

PACKAGE 2	SCALE 1/1000	DRAWING No. C-3-1-1B	SHEET No.
DRAINAGE ARRANGEMENT OF RAMP B			

### PROFILE



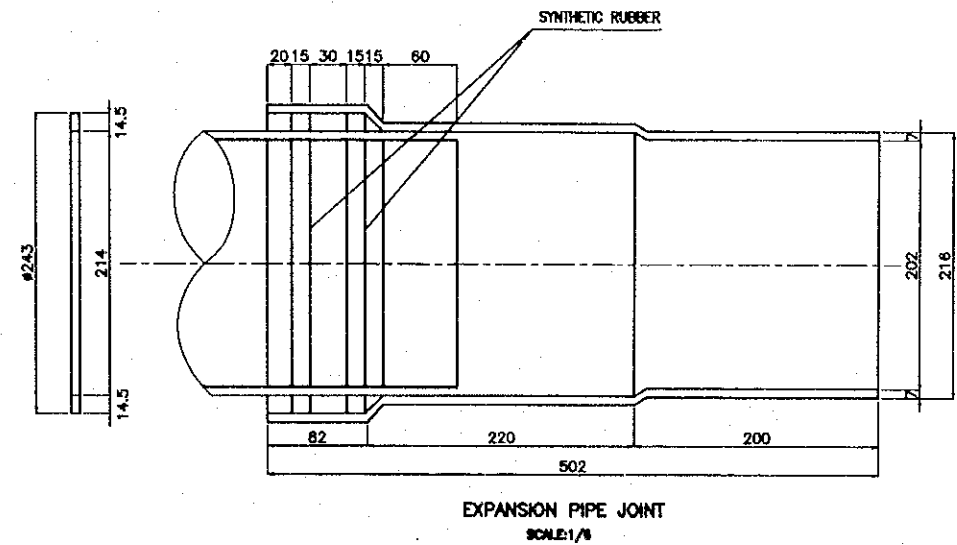
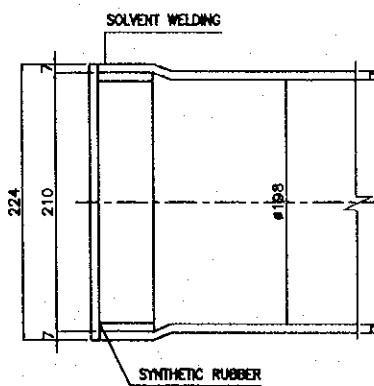
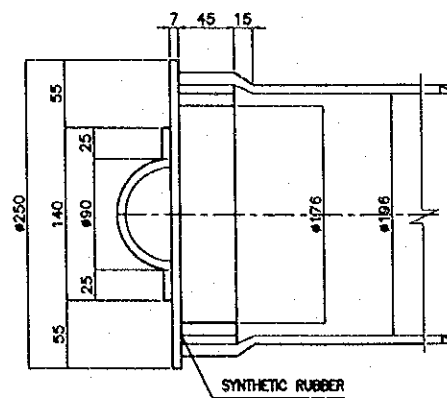
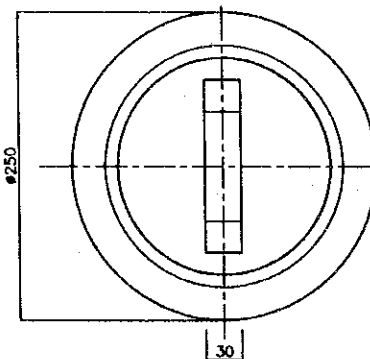
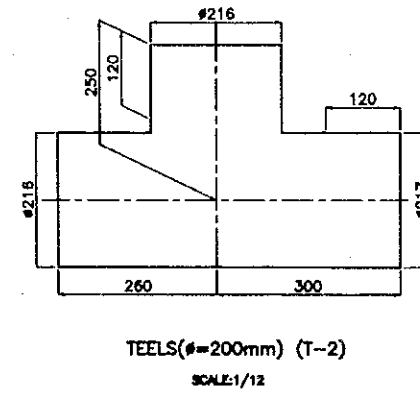
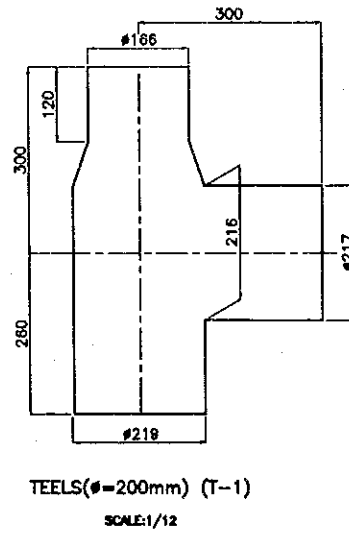
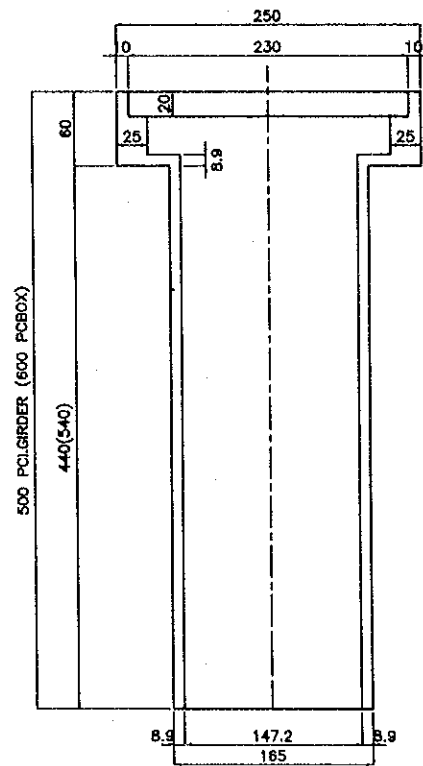
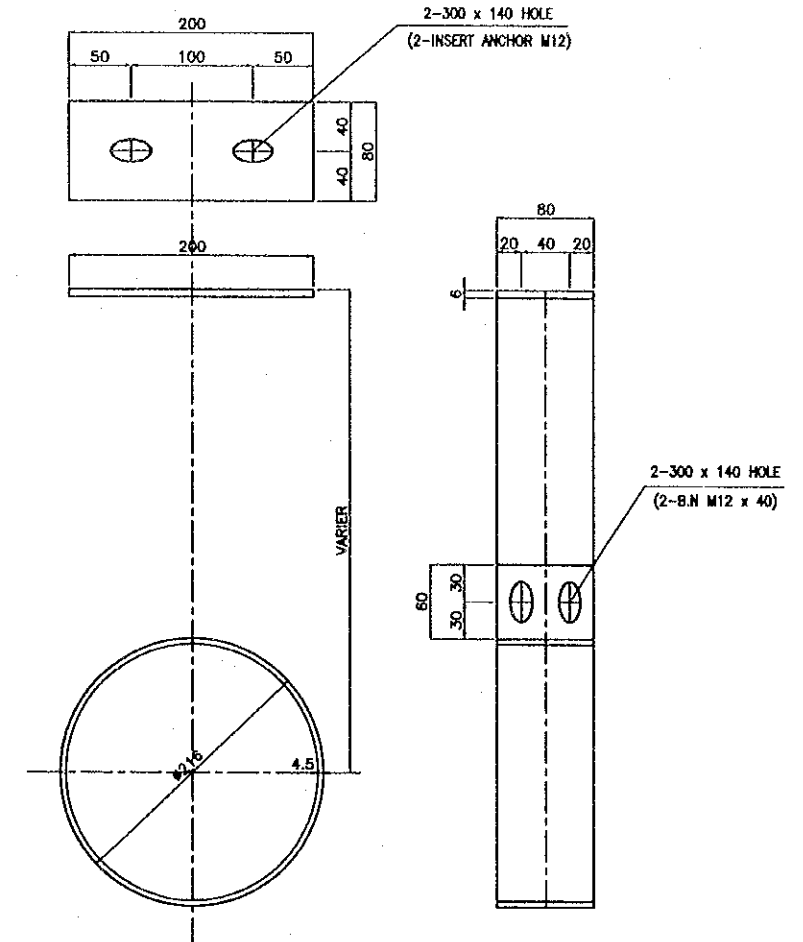
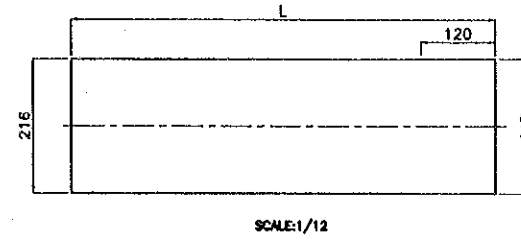
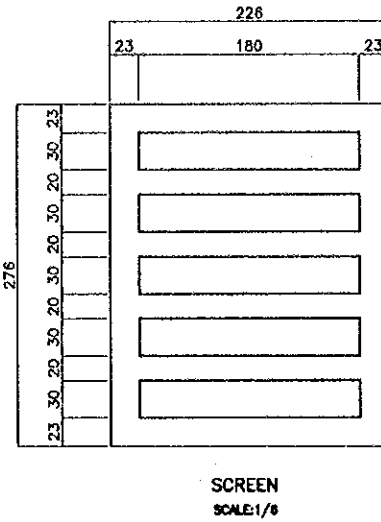
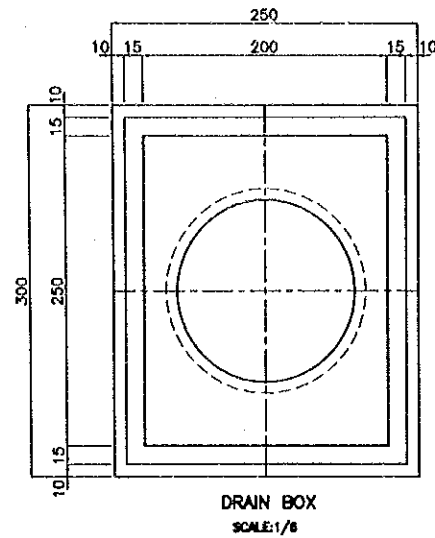
### PLAN



○ TYPE A-DRAINAGE : 4 each

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.12.14

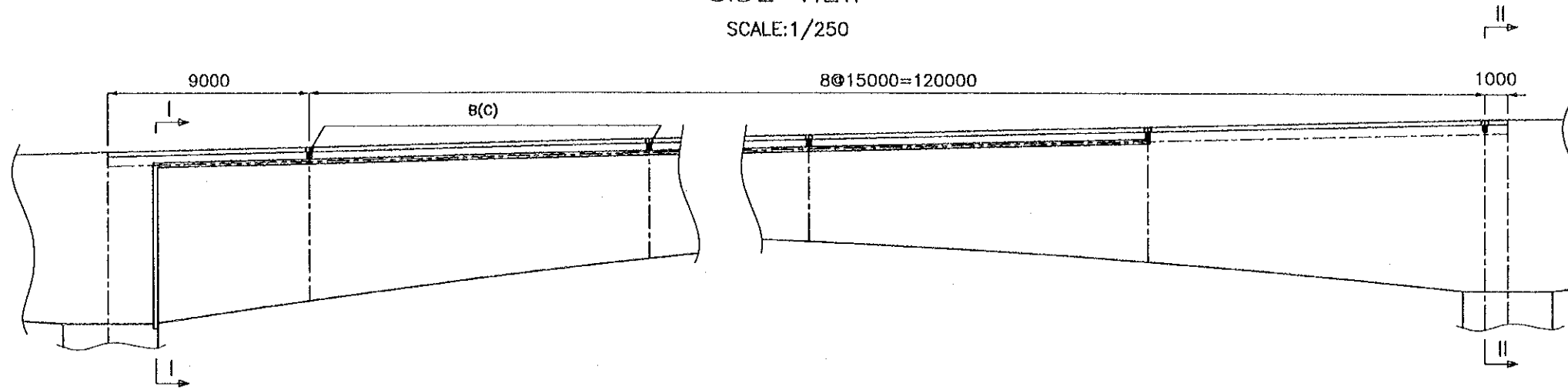
PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/6	C-3-1-19	
DETAIL OF DRAINAGE ON BRIDGE(1)			



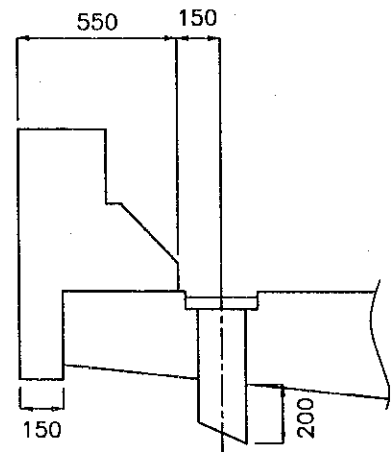
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRU BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/250	C-3-1-20	
DETAIL OF DRAINAGE ON BRIDGE(2)			

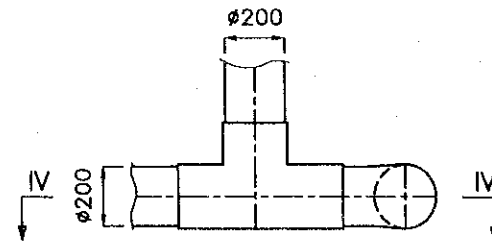
SIDE VIEW  
SCALE:1/250



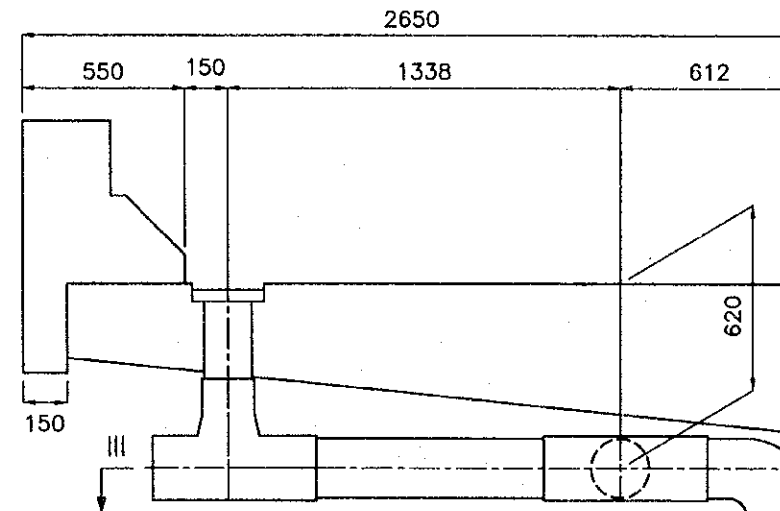
SECTION II-II(A)  
SCALE:1/25



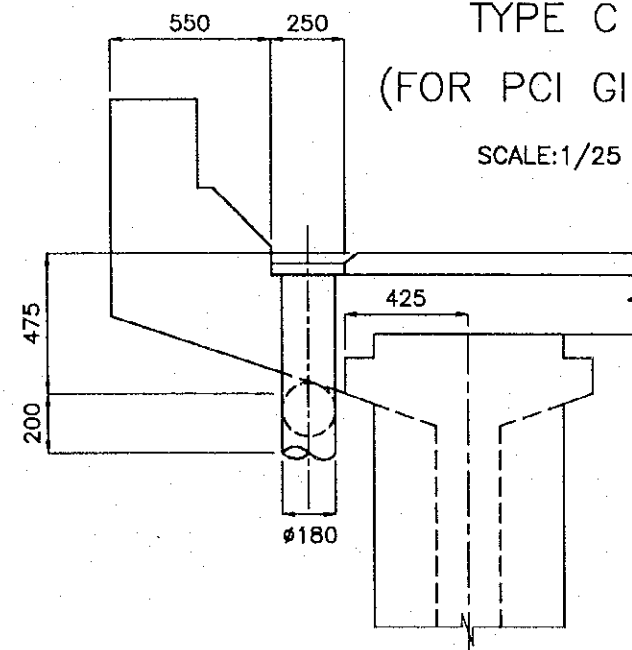
SECTION III-III  
SCALE:1/25



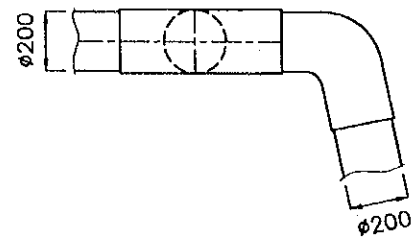
SECTION I-I  
TYPE C(FOR BOX GIRDER)  
SCALE:1/25



TYPE C  
(FOR PCI GIRDER)  
SCALE:1/25



SECTION IV-IV  
SCALE:1/25



**C-3 MISCELLANEOUS**

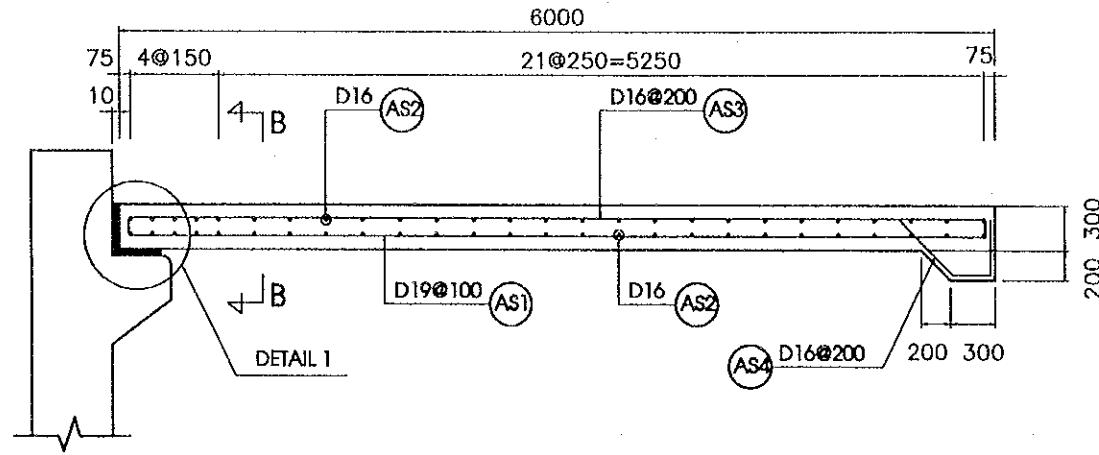
**C-3-2 APPROACH SLAB, SLOPE PROTECTION**



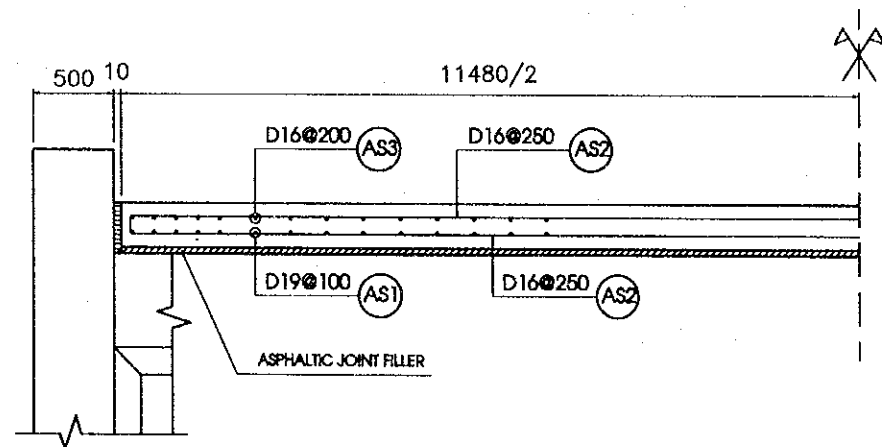
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.3.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-3-2-1	
NATIONAL HIGHWAY No.5 -- FLYOVER DETAIL OF APPROACH SLAB (1)			

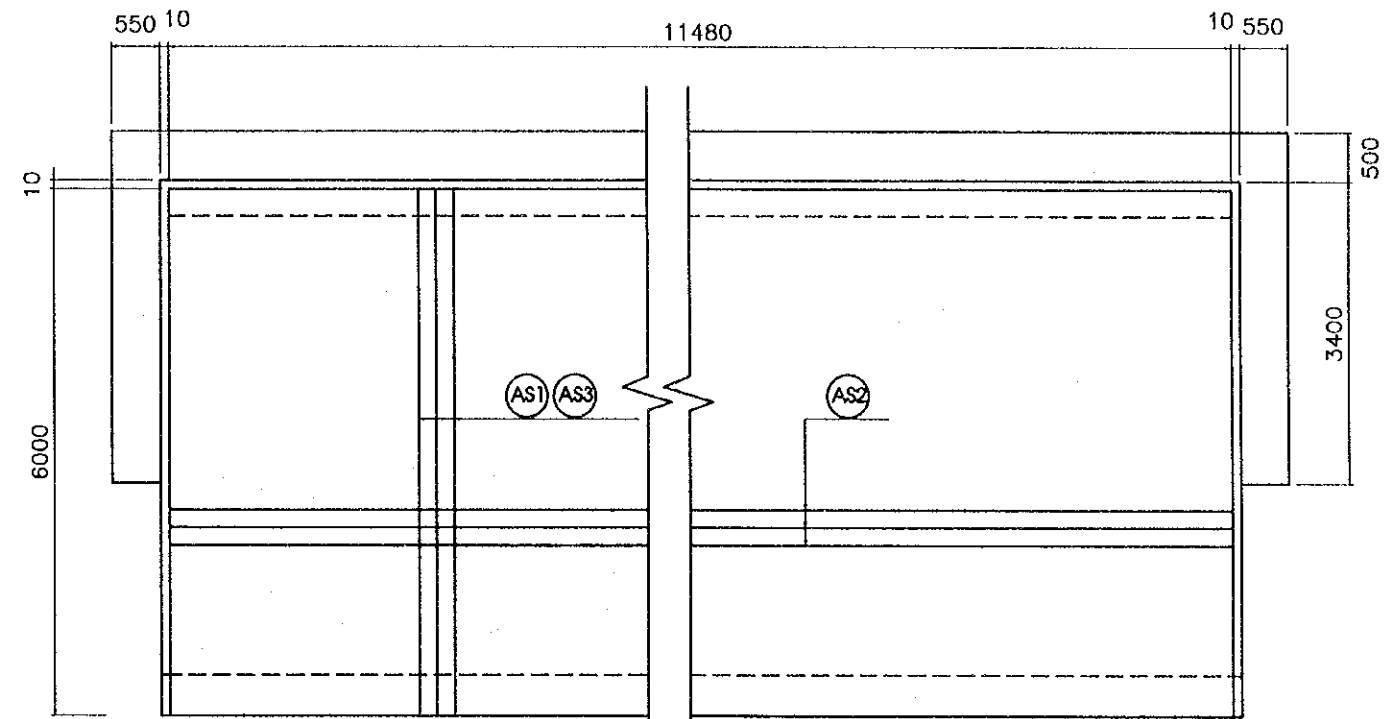
CROSS SECTION (TYPICAL)



HALF SECTION B-B



PLAN



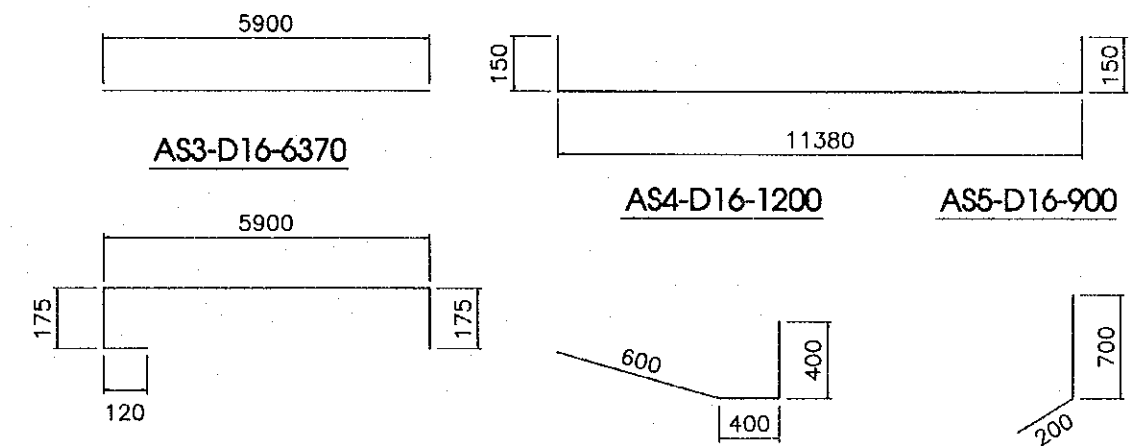
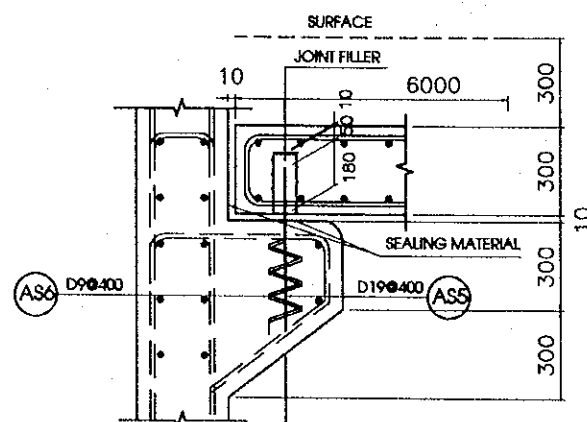
AS1-D19-5900

AS2-D16-11680

REINFORCING BAR LIST FOR APPROACH SLAB (PER 1 SLAB)

TYPE	SHAPE	DIAMETER OF BAR (mm)	QUANTITY OF BAR	LENGTH OF BAR (mm)	WEIGHT UNIT (Kg/m)	TOTAL STEEL (Kg)	
AS1	—	D19	115	5900	2.250	1527	
AS2	⌊	D16	52	11680	1.560	948	
AS3	⌊	D16	58	6370	1.560	576	
AS4	⌋	D16	58	1200	1.560	109	
AS5	—	D19	28	900	2.250	57	
AS6	⌋	D9	28	1260	0.499	18	
TOTAL					3235	Kg	
					D19	1584	Kg
					D16	1633	Kg
					D9	18	Kg
Quantity of concrete : 29.00 (m3)							

DETAIL 1



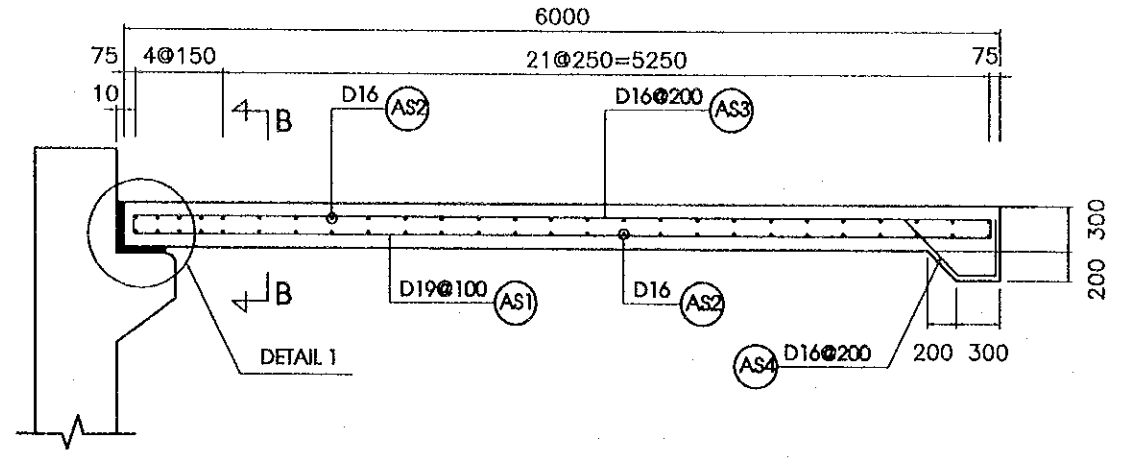
NOTES:

- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATES.
- REINFORCING BARS SHALL BE ARRANGED IN ACCORDANCE WITH THE AASHTO.
- SPLICES AND HOOKS SHALL BE PREPARED IN THE SHOP DRAWINGS PREPARED BY CONTRACTORS.
- REINFORCING BARS SHALL BE TWINED APPROPRIATELY AND STRONGLY.
- ABUTMENT A1 HAS TWO APPROACH SLAB.

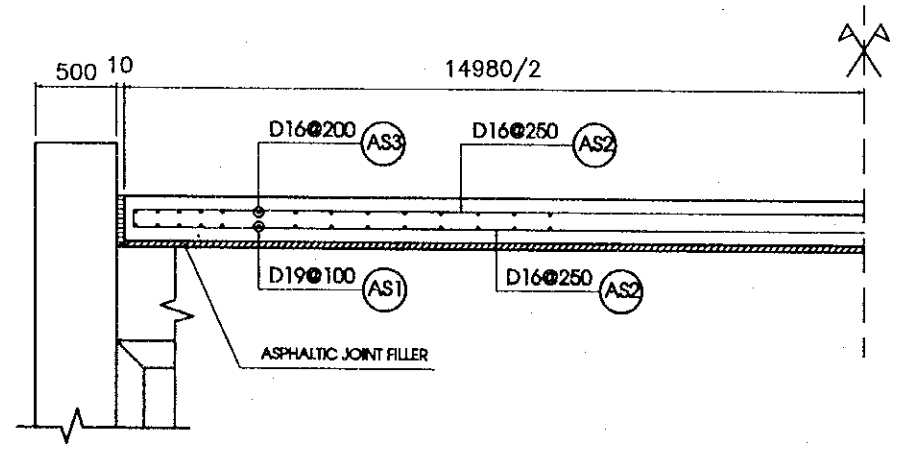
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATASE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (HANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.3.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-3-2-2	
NATIONAL HIGHWAY No.5 - FLYOVER DETAIL OF APPROACH SLAB (2)			

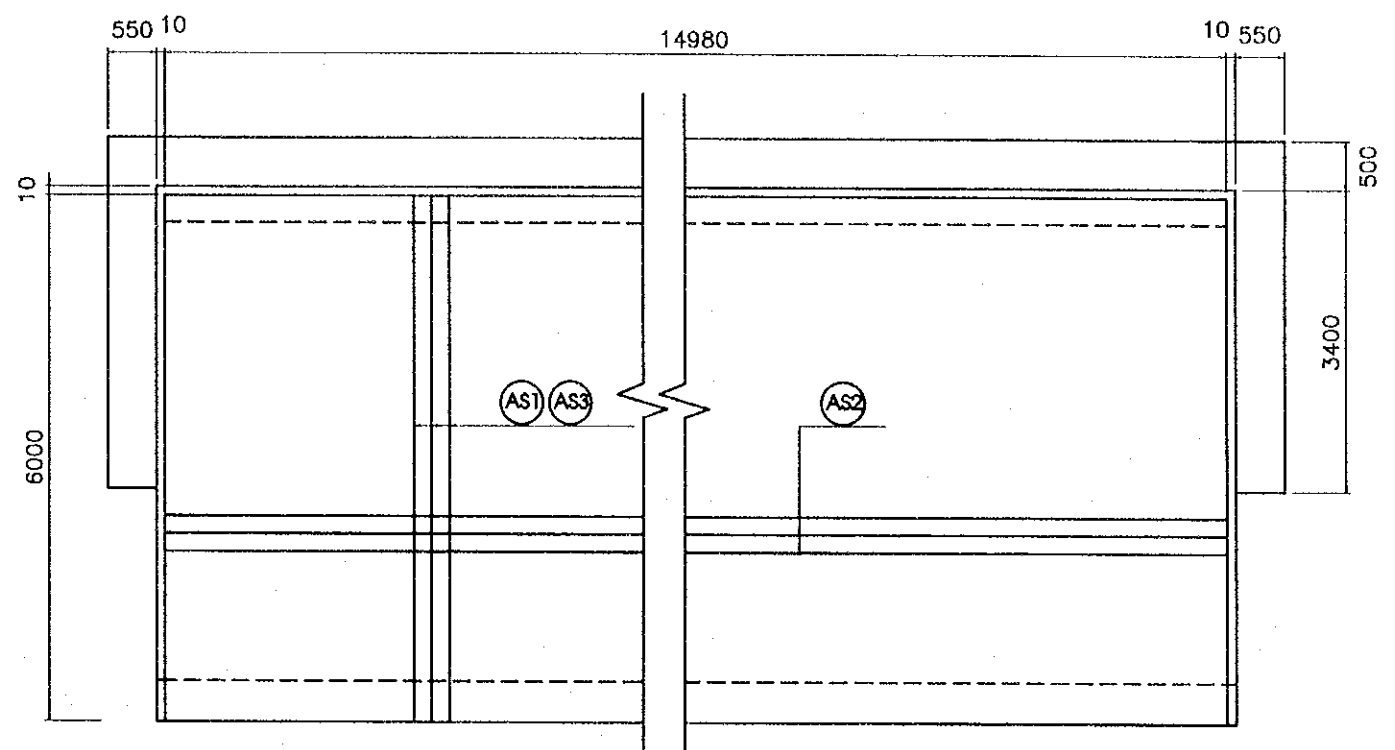
CROSS SECTION (TYPICAL)



HALF SECTION B-B



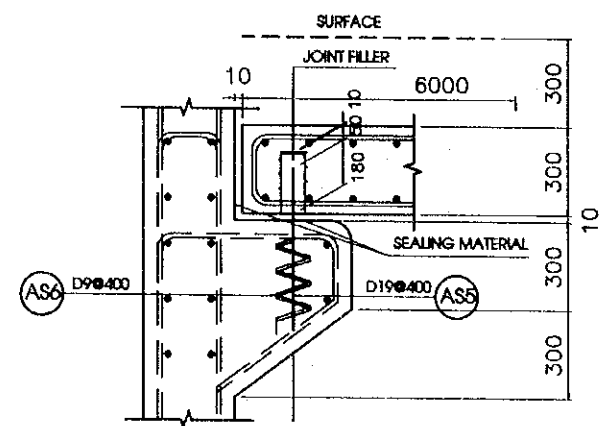
PLAN



REINFORCING BAR LIST FOR APPROACH SLAB (PER 1 SLAB)

TYPE	SHAPE	DIAMETER OF BAR (mm)	QUANTITY OF BAR	LENGTH OF BAR (mm)	WEIGHT UNIT (Kg/m)	TOTAL STEEL (Kg)
AS1	—	D19	149	5900	2.250	1978
AS2	—	D16	52	15485	1.560	1256
AS3	—	D16	75	6370	1.560	745
AS4	—	D16	75	1200	1.560	140
AS5	—	D19	38	900	2.250	77
AS6	—	D9	38	1260	0.499	24
TOTAL						
					D19	4220 Kg
					D16	2055 Kg
					D9	2141 Kg
					D9	24 Kg
Quantity of concrete : 29.00 (m3)						

DETAIL 1



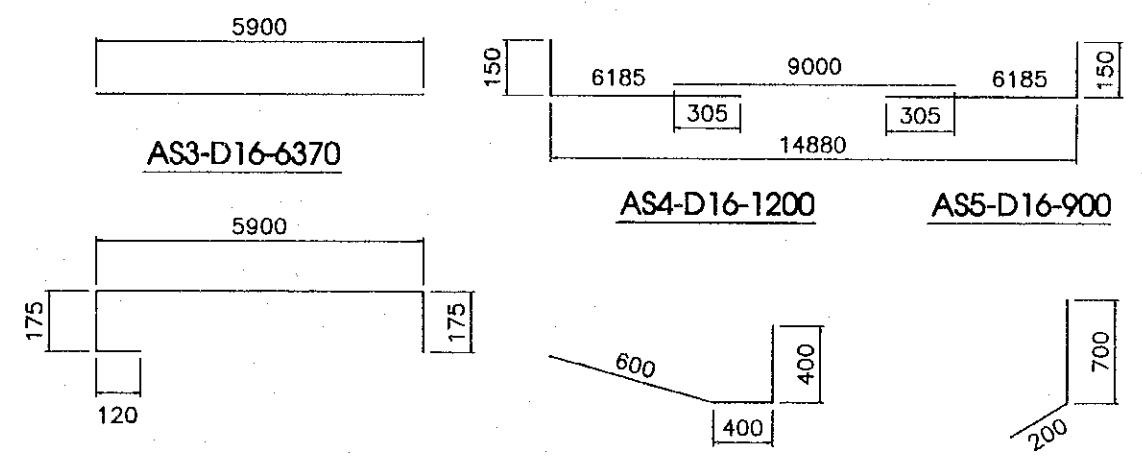
AS1-D19-5900

AS2-D16-15485

AS3-D16-6370

AS4-D16-1200

AS5-D16-900



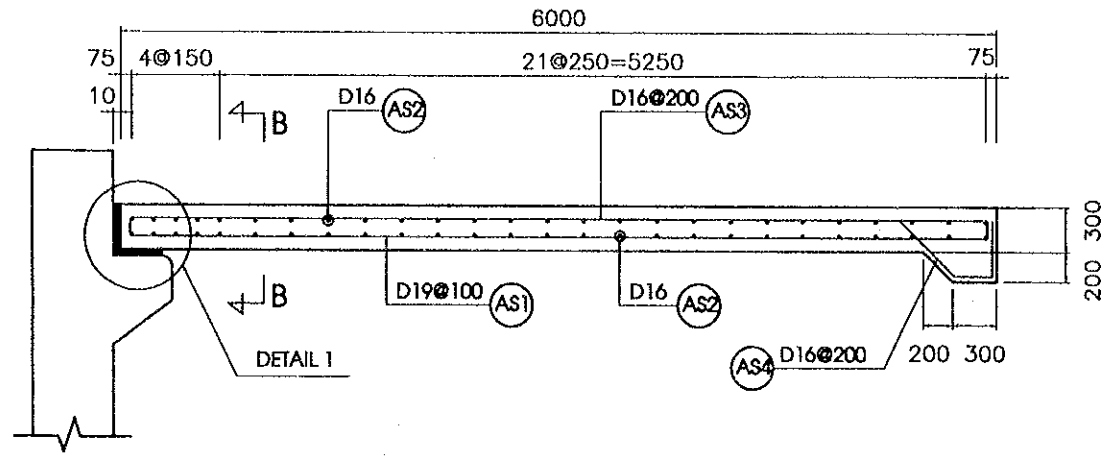
NOTES:

- 1- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATES.
- 2- REINFORCING BARS SHALL BE ARRANGED IN ACCORDANCE WITH THE AASHTO.
- 3- SPLICES AND HOOKS SHALL BE PREPARED IN THE SHOP DRAWINGS PREPARED BY CONTRACTORS.
- 4- REINFORCING BARS SHALL BE TWINED APPROPRIATELY AND STRONGLY.
- 5- ABUTMENT A2 HAS TWO APPROACH SLAB.

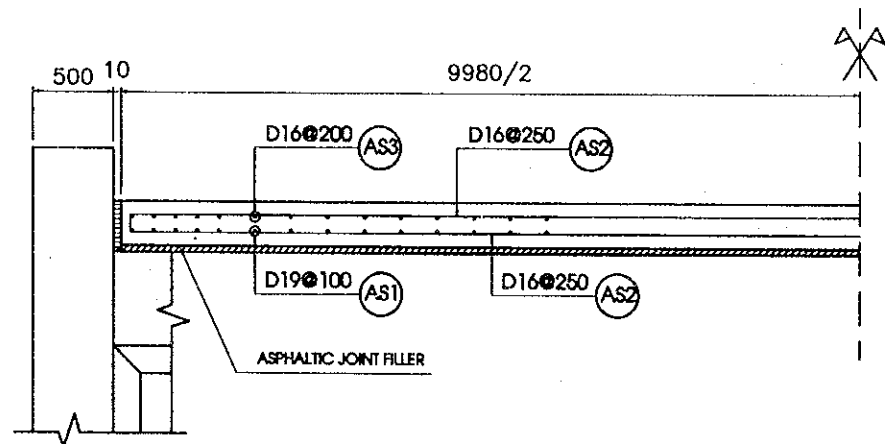
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000. 3. 17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-3-2-3	
NATIONAL HIGHWAY No.5 FLYOVER - RAMP A DETAIL OF APPROACH SLAB			

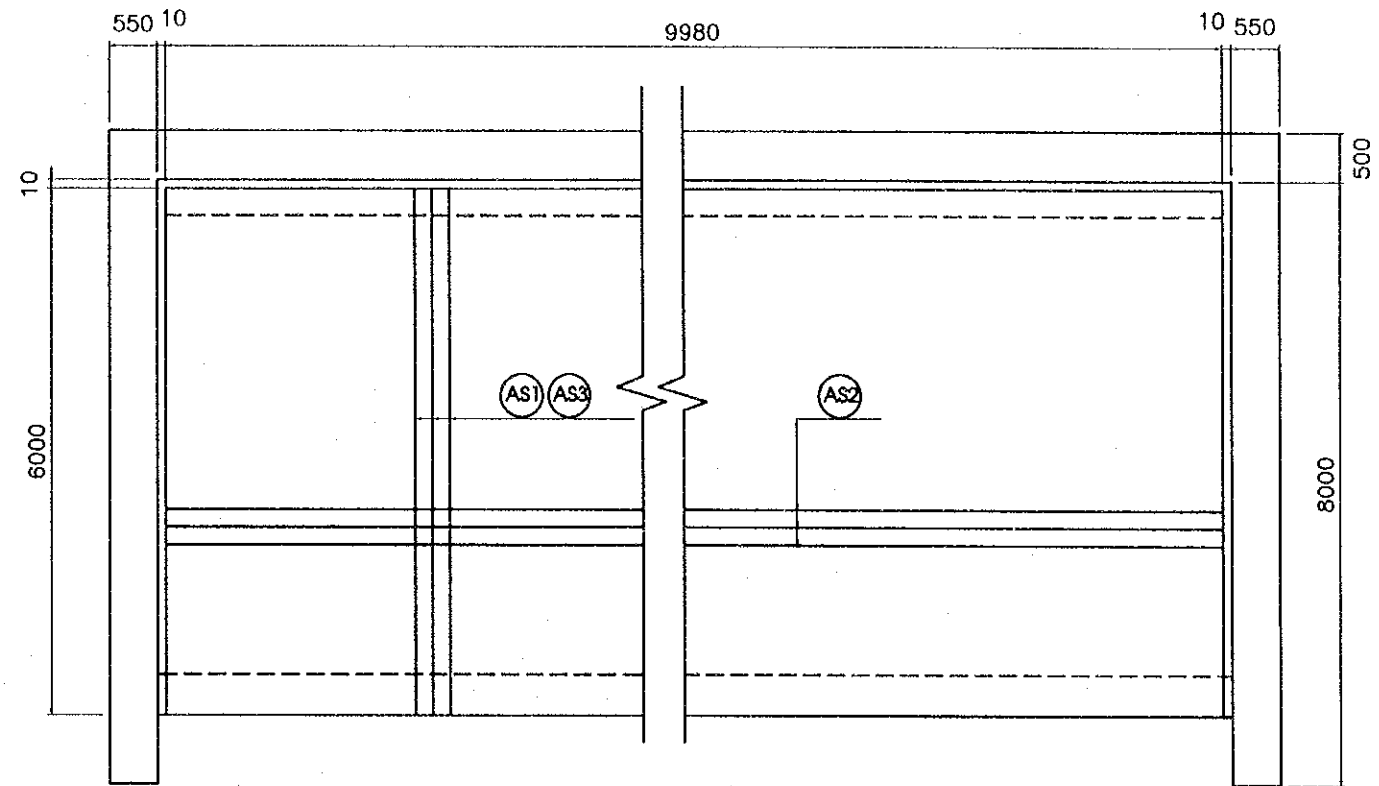
CROSS SECTION (TYPICAL)



HALF SECTION B-B



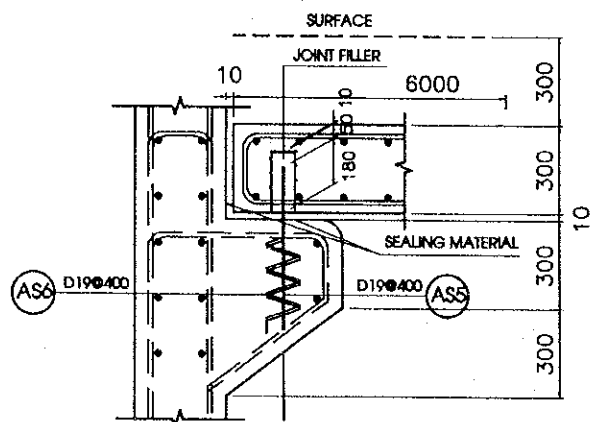
PLAN



REINFORCING BAR LIST FOR APPROACH SLAB

TYPE	SHAPE	DIAMETER OF BAR (mm)	QUANTITY OF BAR	LENGTH OF BAR (mm)	WEIGHT UNIT (Kg/m)	TOTAL STEEL (Kg)
AS1	—	D19	99	5900	2.250	1314
AS2	┌	D16	52	10180	1.560	826
AS3	┌	D16	50	6370	1.560	499
AS4	└	D16	50	1200	1.560	94
AS5	└	D19	24	900	2.250	49
AS6	⌋	D9	24	1260	0.499	15
TOTAL						2797 Kg
					D19	1363 Kg
					D16	1419 Kg
					D9	15 Kg
Quantity of concrete : 18.76 (m3)						

DETAIL 1



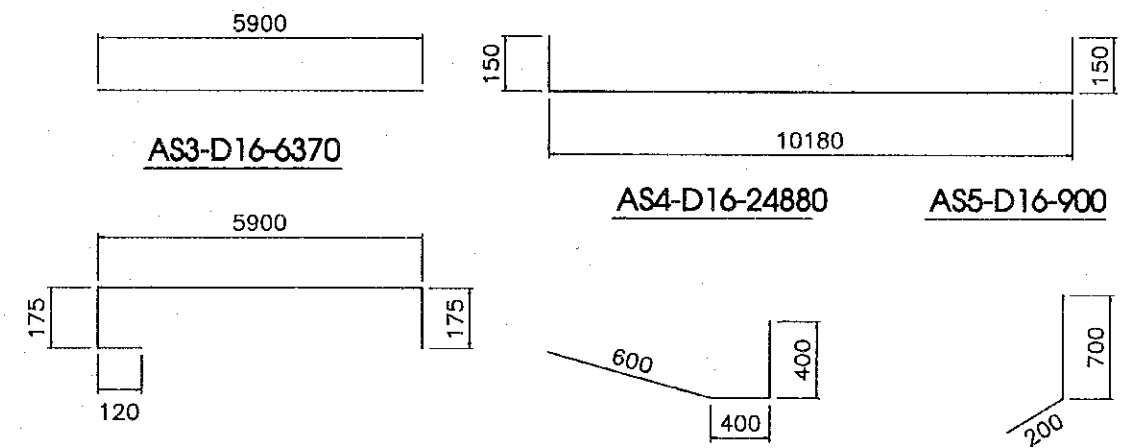
AS1-D19-5900

AS2-D16-10180

AS3-D16-6370

AS4-D16-24880

AS5-D16-900

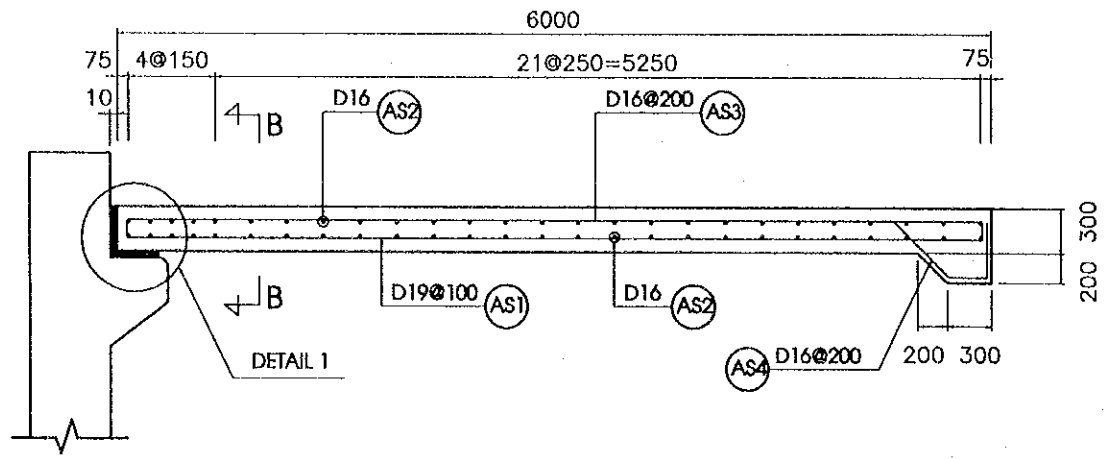


- NOTES:
- 1- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATES.
  - 2- REINFORCING BARS SHALL BE ARRANGED IN ACCORDANCE WITH THE AASHTO.
  - 3- SPLICES AND HOOKS SHALL BE PREPARED IN THE SHOP DRAWINGS PREPARED BY CONTRACTORS.
  - 4- REINFORCING BARS SHALL BE TWINED APPROPRIATELY AND STRONGLY.

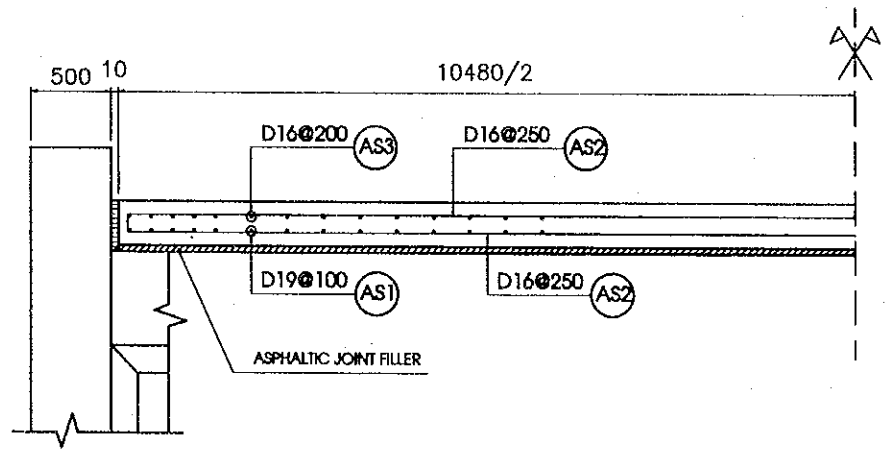
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.3.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-3-2-4	
NATIONAL HIGHWAY No.5 FLYOVER - RAMP B DETAIL OF APPROACH SLAB			

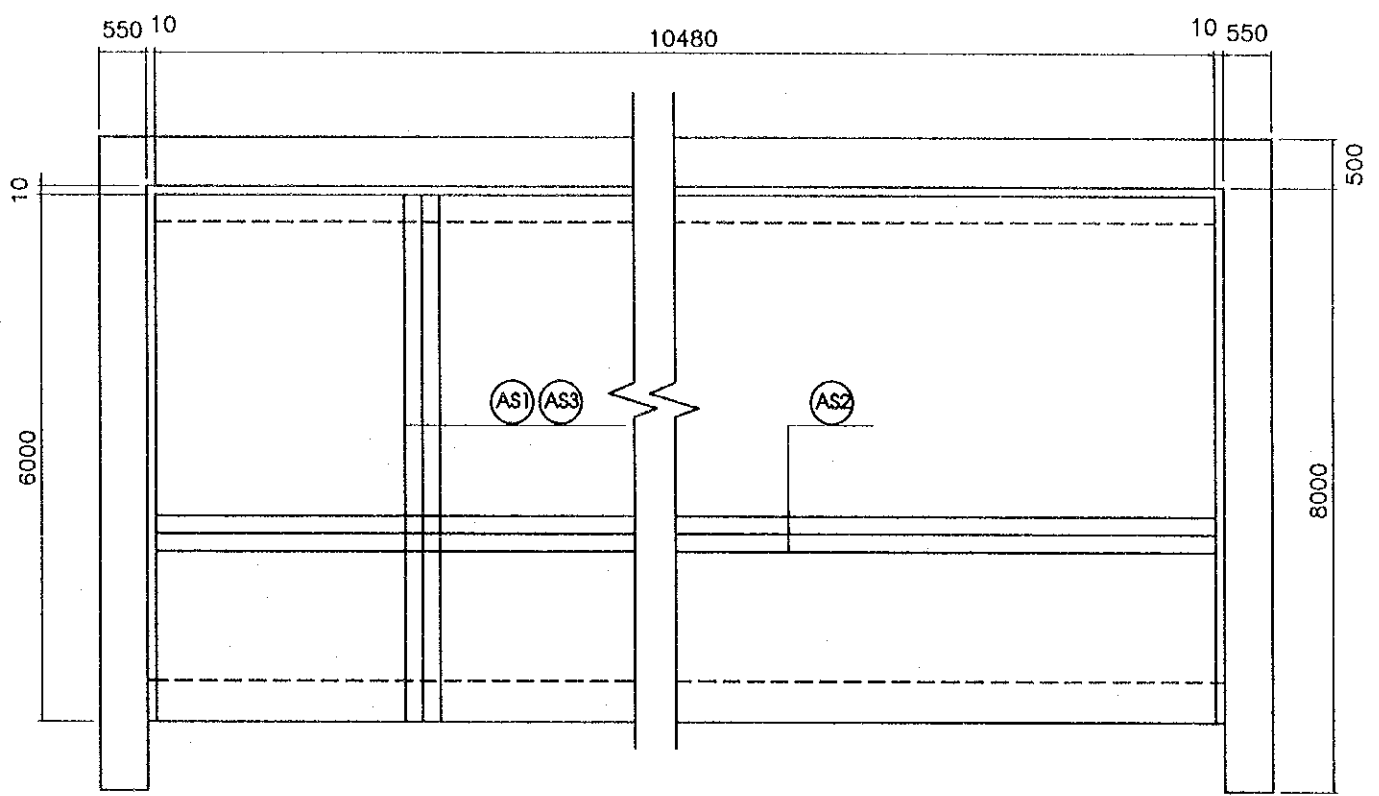
CROSS SECTION (TYPICAL)



HALF SECTION B-B



PLAN



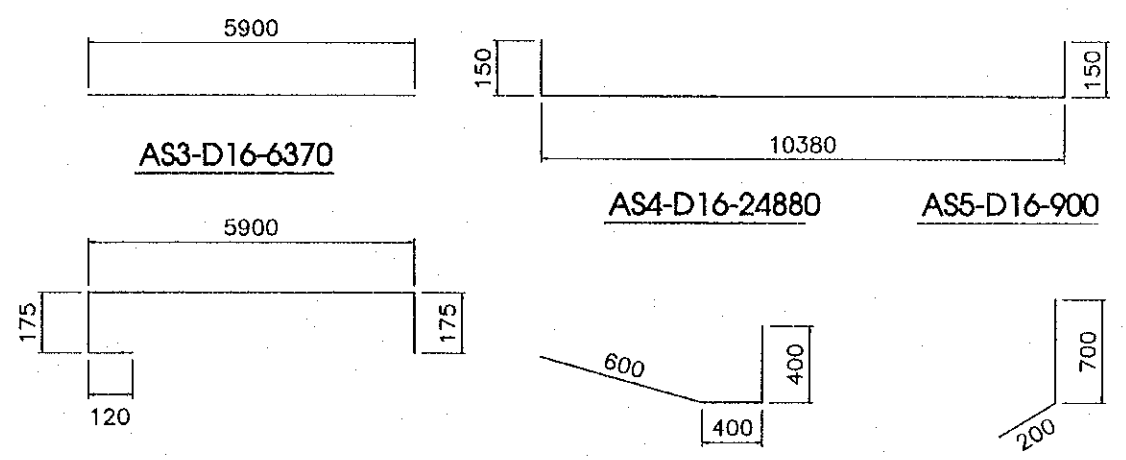
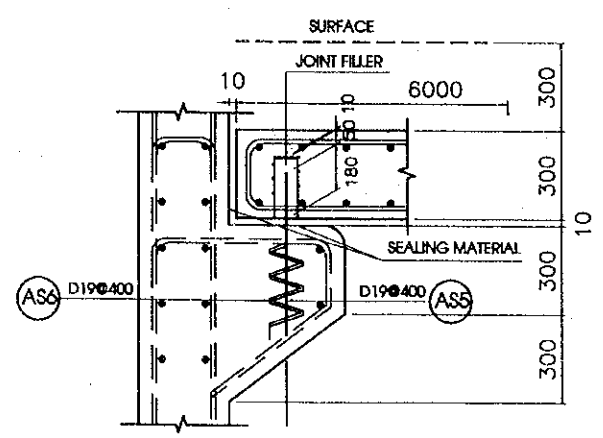
AS1-D19-5900

AS2-D16-10680

REINFORCING BAR LIST FOR APPROACH SLAB

TYPE	SHAPE	DIAMETER OF BAR (mm)	QUANTITY OF BAR	LENGTH OF BAR (mm)	WEIGHT UNIT (Kg/m)	TOTAL STEEL (Kg)
AS1		D19	103	5900	2.250	1367
AS2		D16	52	10680	1.560	866
AS3		D16	52	6370	1.560	517
AS4		D16	52	1200	1.560	130
AS5		D19	26	900	2.250	53
AS6		D9	26	1260	0.499	16
TOTAL						2949 Kg
					D19	1420 Kg
					D16	1513 Kg
					D9	16 Kg
Quantity of concrete : 19.70 (m3)						

DETAIL 1

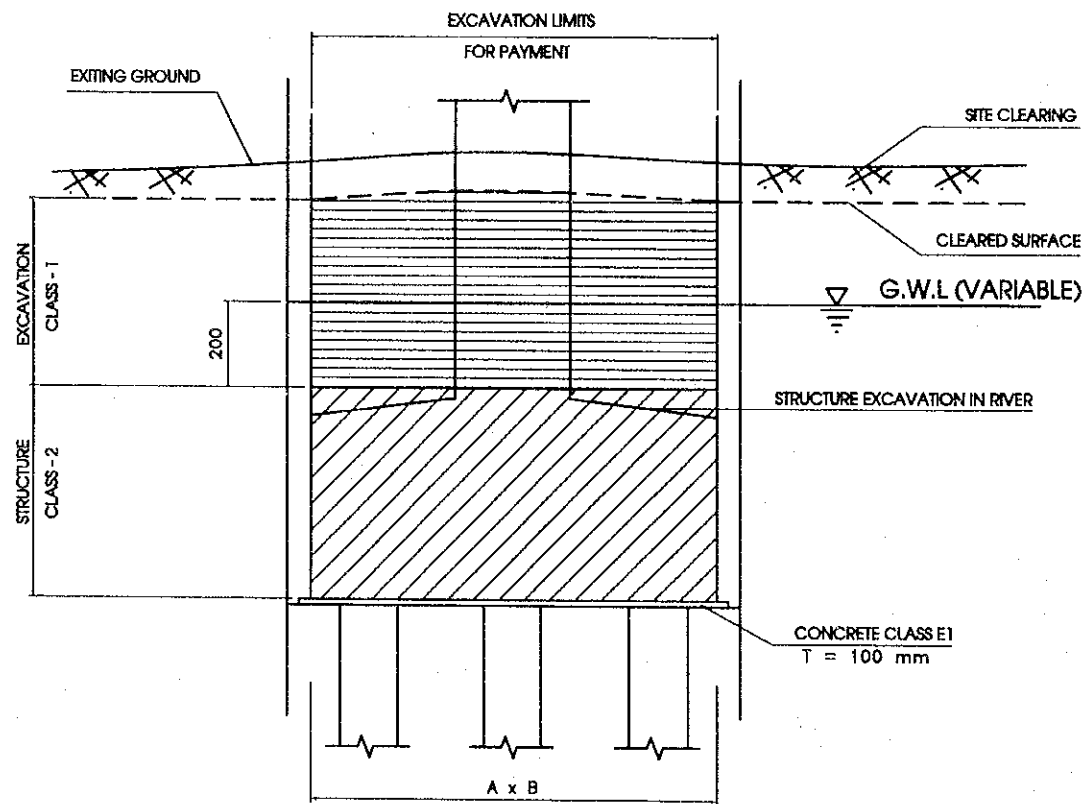


- NOTES:
- 1- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATES.
  - 2- REINFORCING BARS SHALL BE ARRANGED IN ACCORDANCE WITH THE AASHTO.
  - 3- SPLICES AND HOOKS SHALL BE PREPARED IN THE SHOP DRAWINGS PREPARED BY CONTRACTORS.
  - 4- REINFORCING BARS SHALL BE TWINED APPROPRIATELY AND STRONGLY.

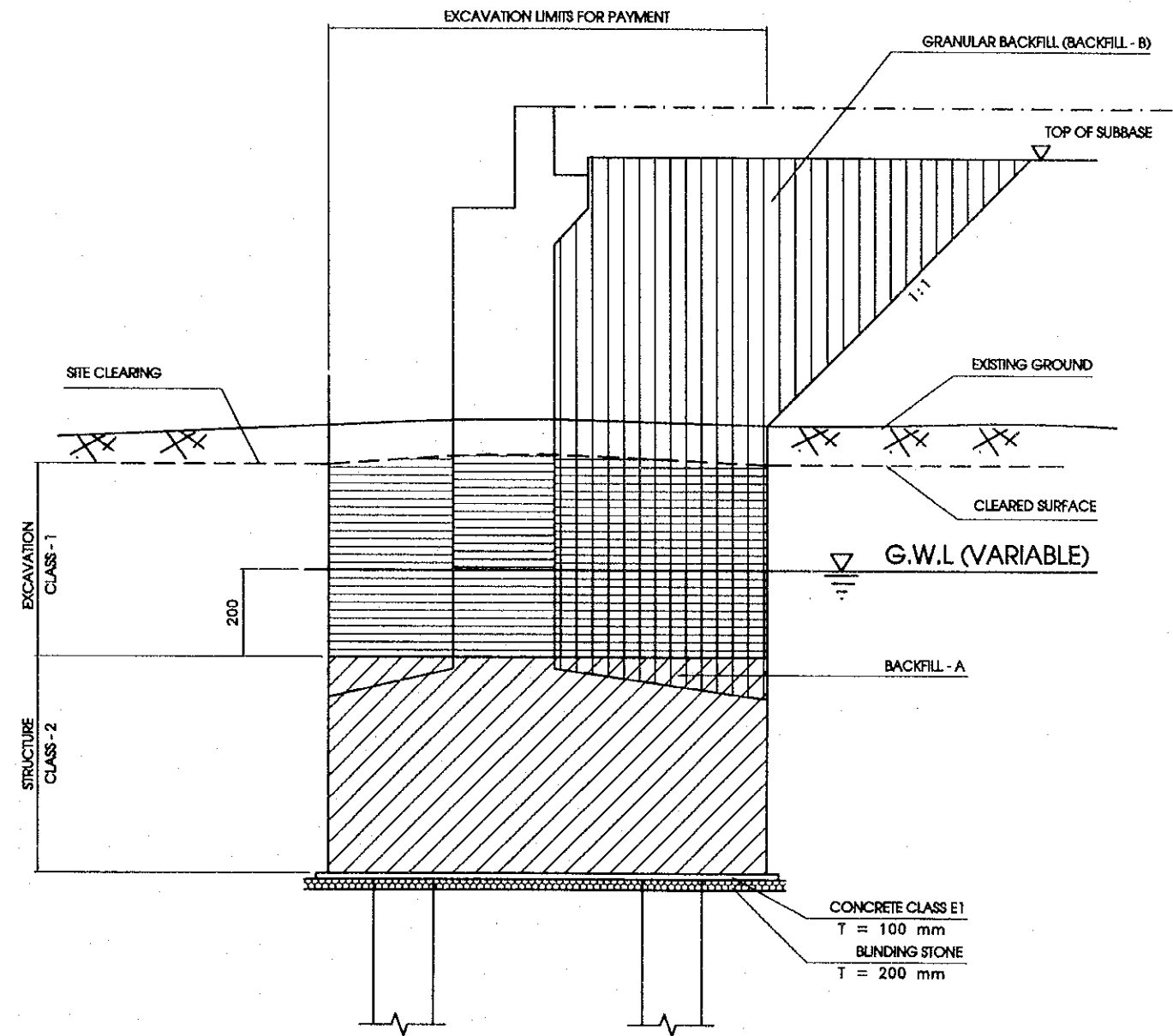
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATARE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATARE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000. 3. 14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-3-2-5	
NATIONAL HIGHWAY No.5 FLYOVER EXCAVATION TYPES FOR STRUCTURE			

PIER EXCAVATION ON LAND

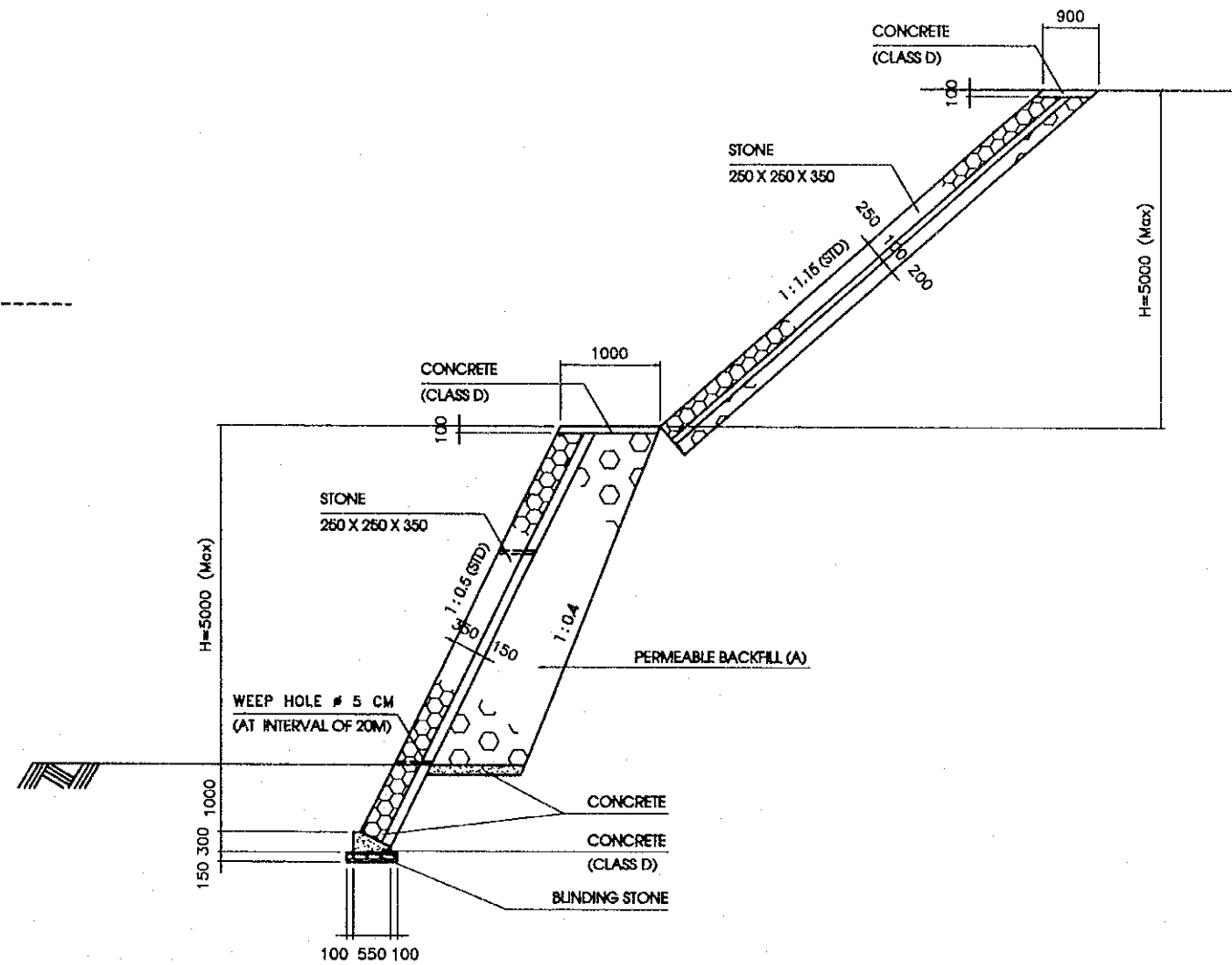
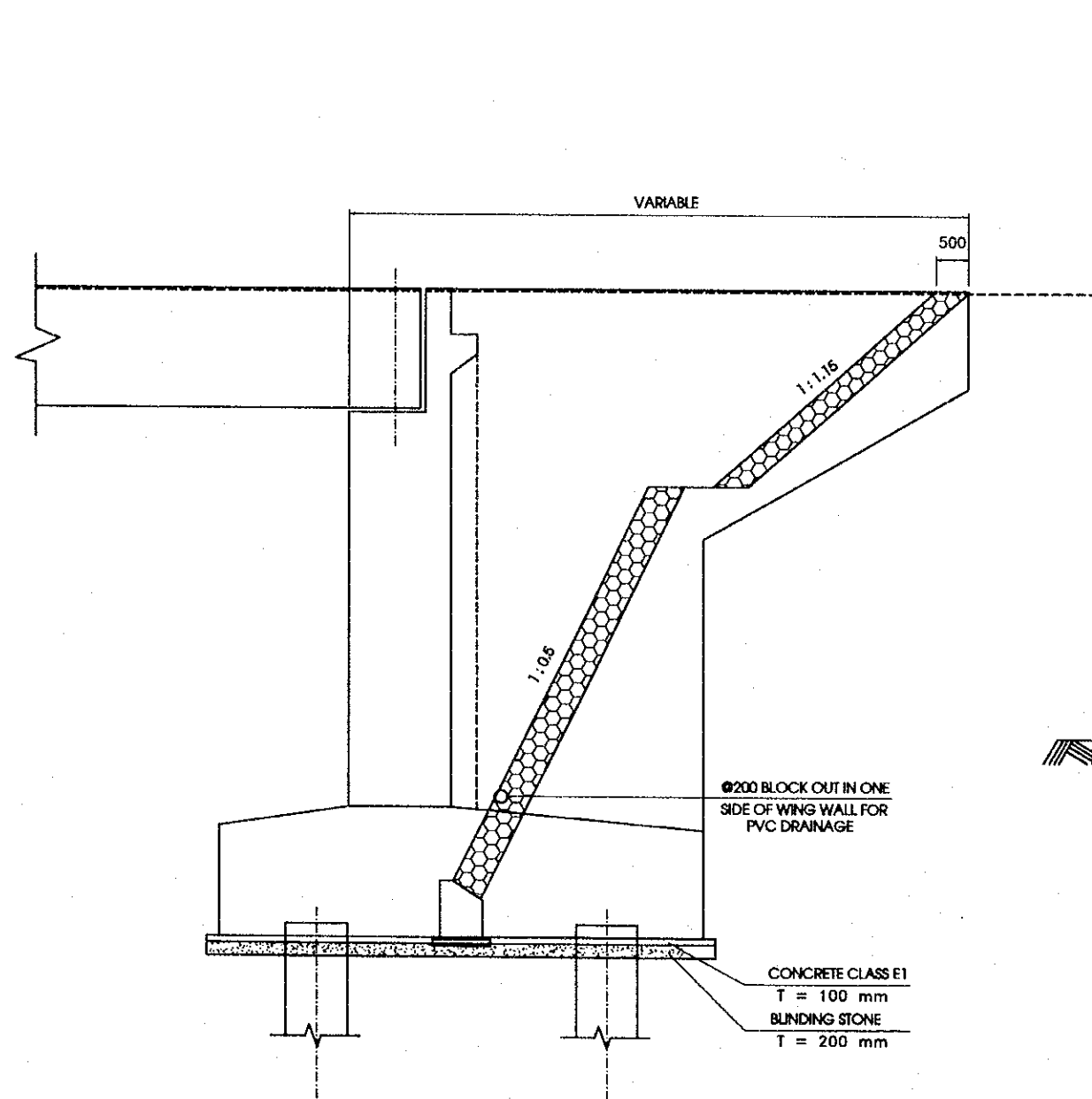


ABUTMENT EXCAVATION ON AND BACKFILL AREAS



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.03.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-3-2-6	
NATIONAL HIGHWAY No.5 FLYOVER DETAIL OF SLOPE PROTECTION			



**NOTE:**

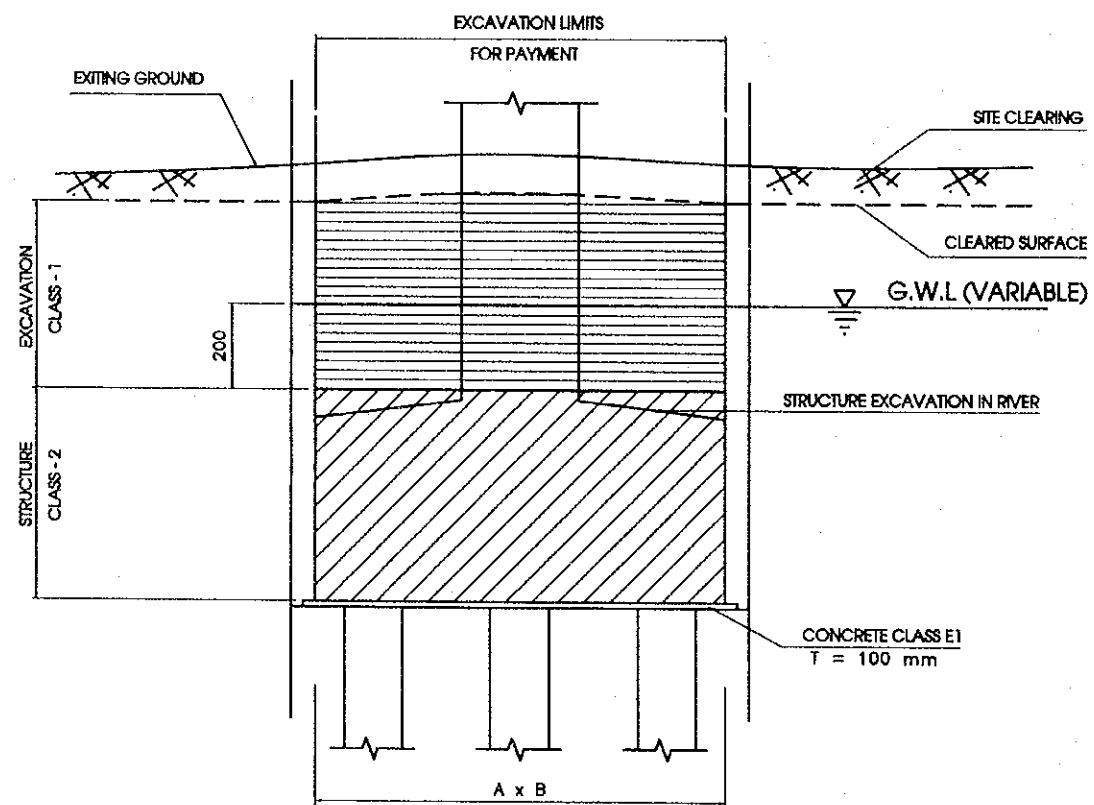
- 1- SLOPE PROTECTION IS TO BE PROVIDED AROUND THE ABUTMENT OF BRIDGE AND ENBANKMENT OF 20M LONG IN LONGITUDINAL DIRECTION
- 2- MATERIALS:
  - STONES SIZE ARE TO BE 25 x 25 x 35 (cm) AND 20 x 20 x 25 (cm)
  - BACKFILL CONCRETE IS TO BE CLASS-D
  - BACKFILL GRAVEL SIZE IS TO BE 10 (cm) TO (cm)

31.2

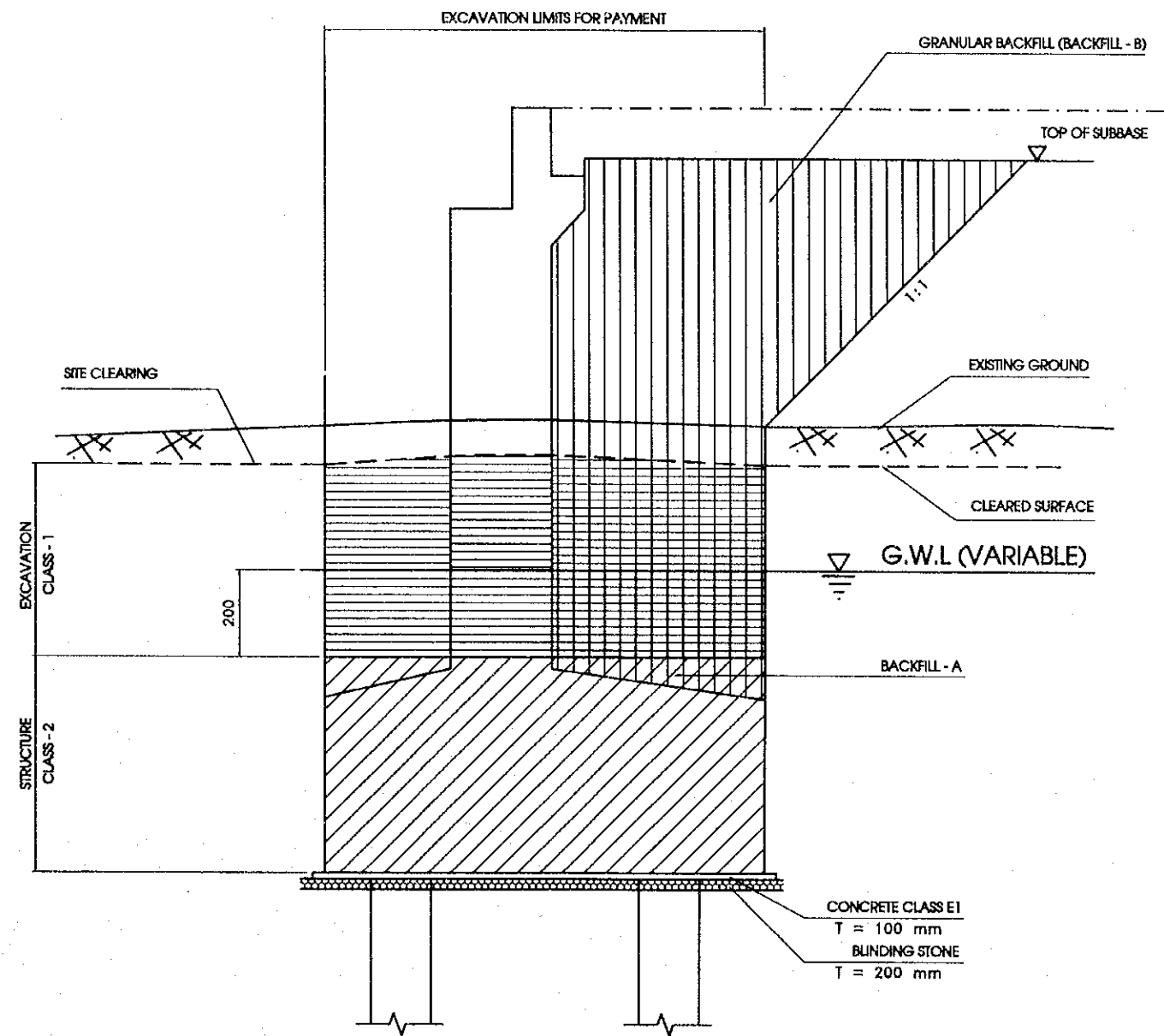
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATAGE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATAGE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-3-2-7	
NATIONAL HIGHWAY No.5 FLYOVER - RAMP A EXCAVATION TYPES FOR STRUCTURE			

### PIER EXCAVATION ON LAND

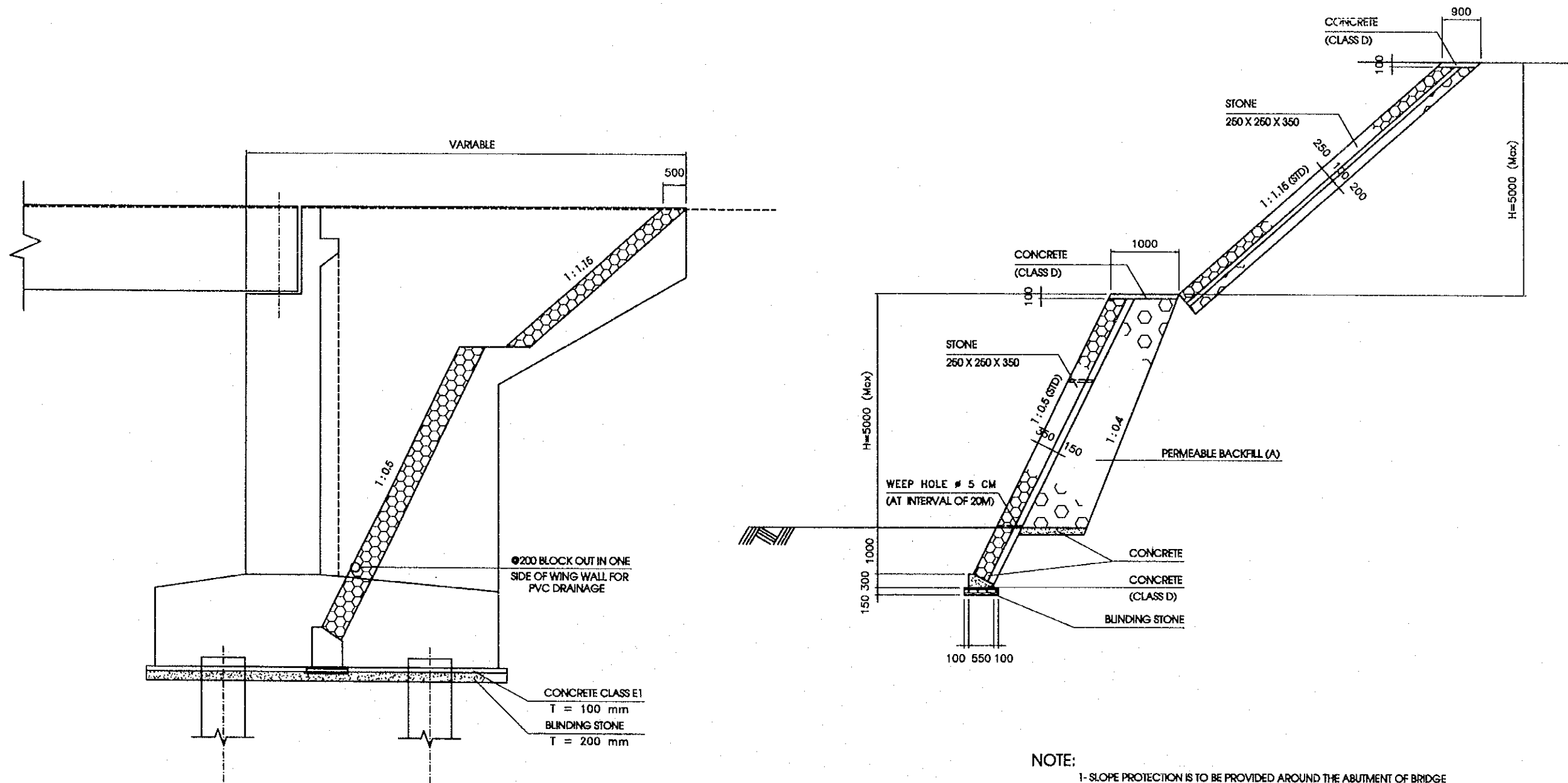


### ABUTMENT EXCAVATION ON AND BACKFILL AREAS



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.03.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-3-2-B	
NATIONAL HIGHWAY No.5 FLYOVER - RAMP A DETAIL OF SLOPE PROTECTION			



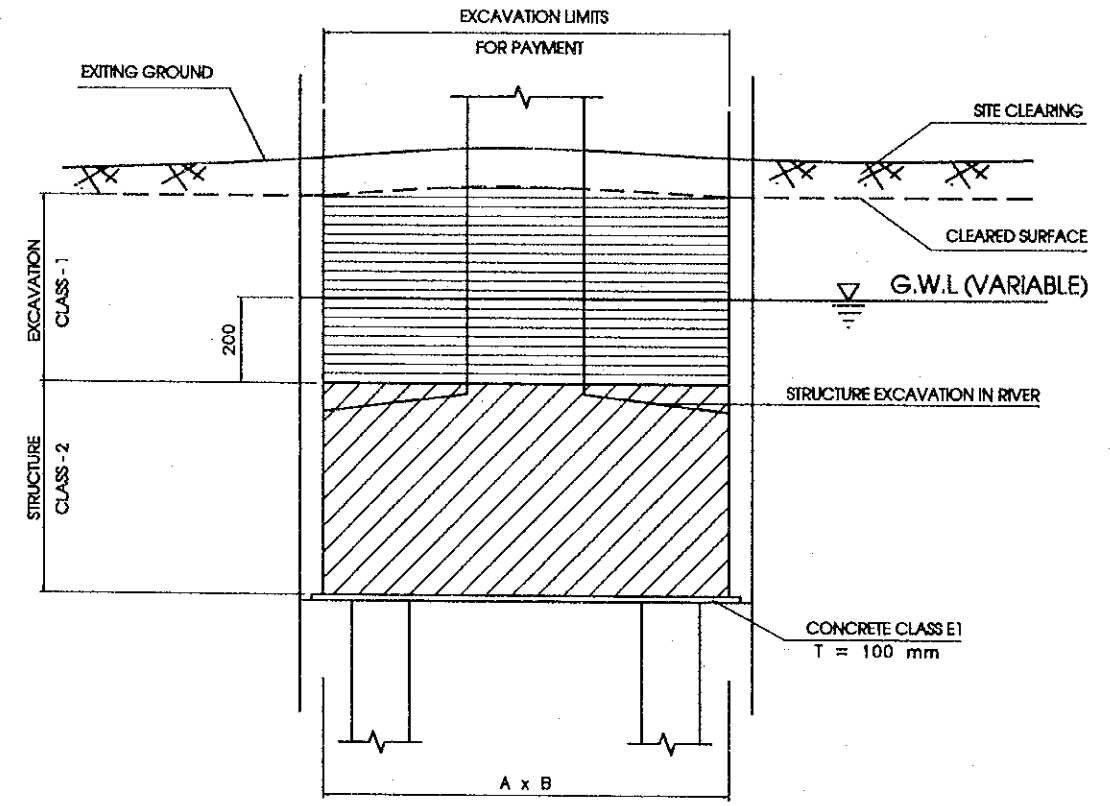
- NOTE:**
- SLOPE PROTECTION IS TO BE PROVIDED AROUND THE ABUTMENT OF BRIDGE AND ENBANKMENT OF 20M LONG IN LONGITUDINAL DIRECTION
  - MATERIALS:
    - STONES SIZE ARE TO BE 25 x 25 x 35 (cm) AND 20 x 20 x 25 (cm)
    - BACKFILL CONCRETE IS TO BE CLASS-D
    - BACKFILL GRAVEL SIZE IS TO BE 10 (cm) TO (cm)



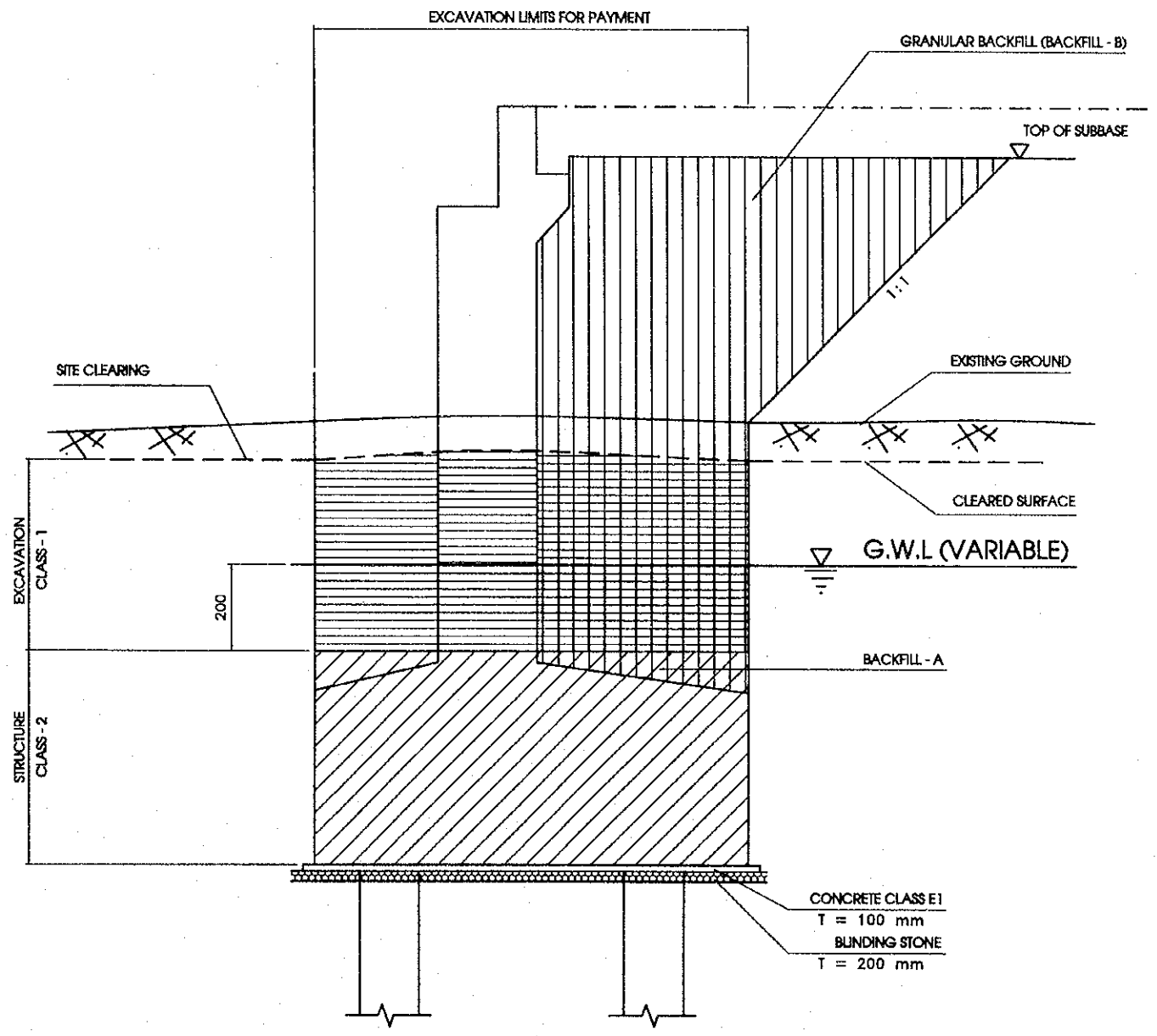
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.03.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-3-2-9	
NATIONAL HIGHWAY No.5 FLYOVER - RAMP B EXCAVATION TYPES FOR STRUCTURE			

PIER EXCAVATION ON LAND



ABUTMENT EXCAVATION ON AND BACKFILL AREAS



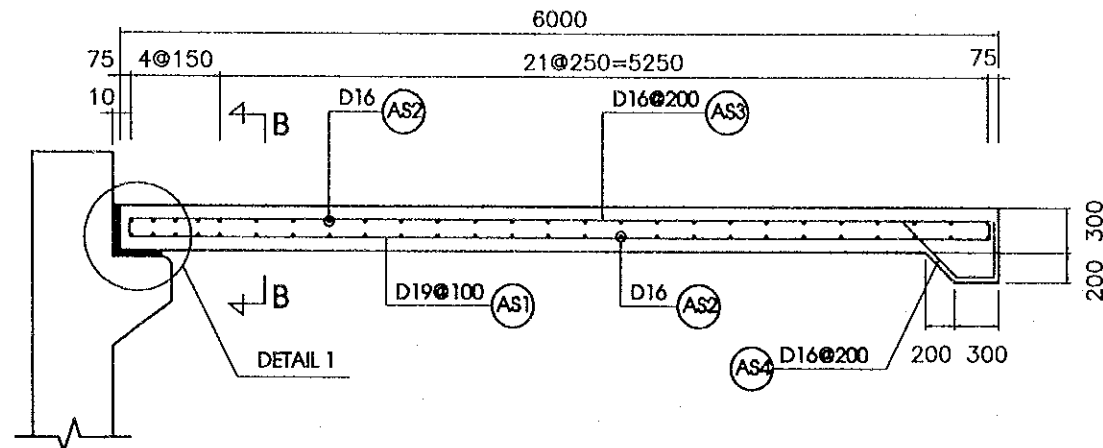
3/4



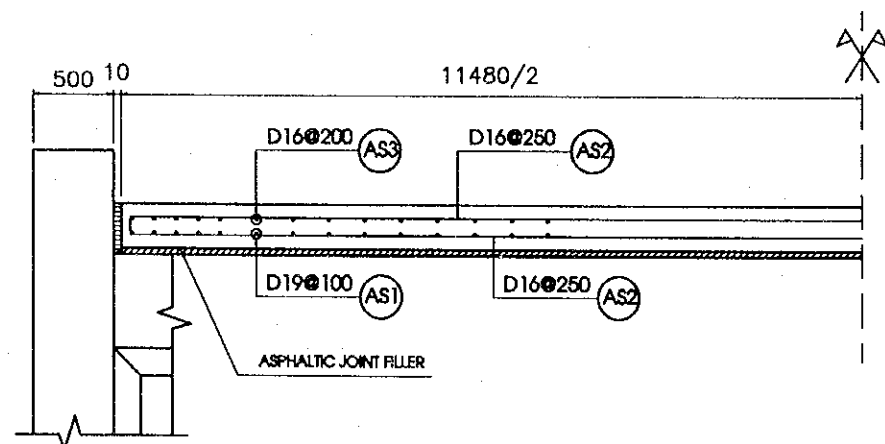
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S.WATABE
PROJECT: RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONSULTANT: PACIFIC CONSULTANTS INTERNATIONAL		DATE	2010. 8. 19

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-3-2-11	
CAU BAY CANAL BRIDGE DETAIL OF APPROACH SLAB			

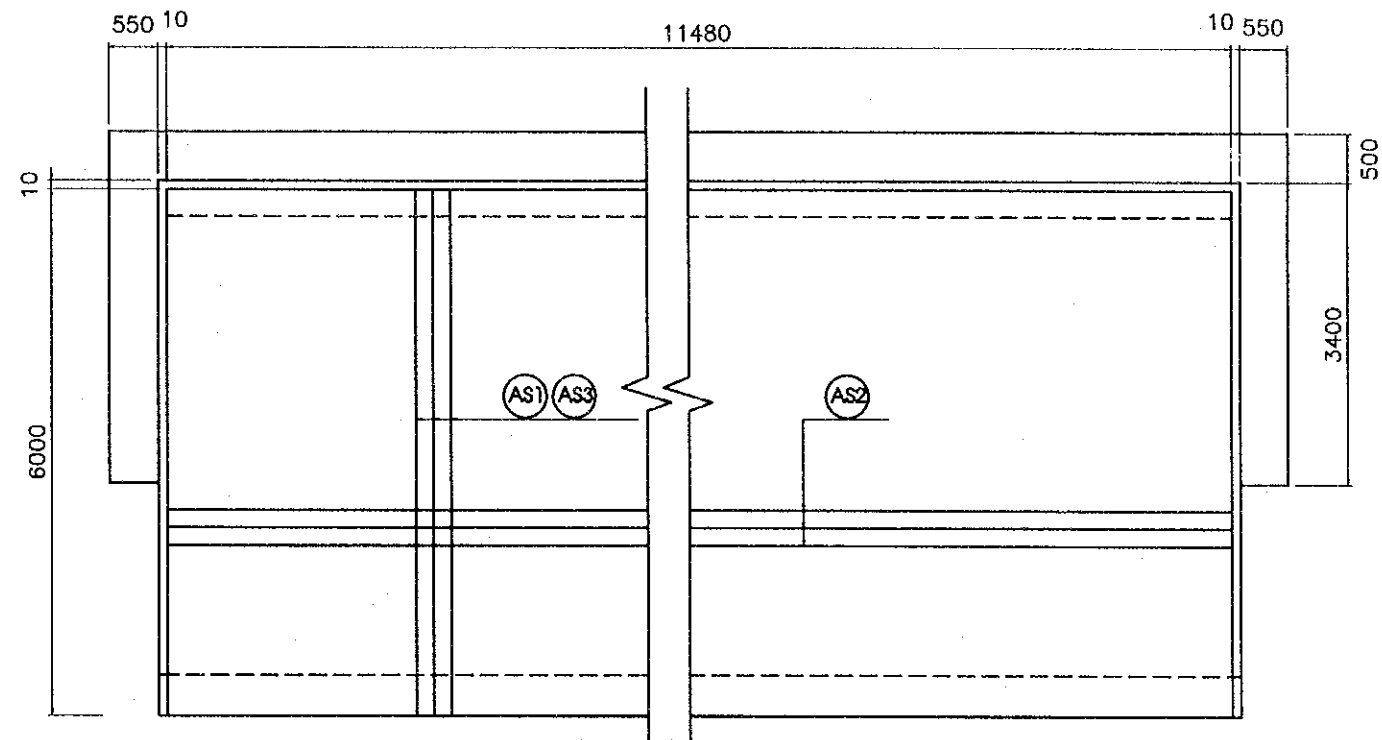
CROSS SECTION (TYPICAL)



HALF SECTION B-B



PLAN



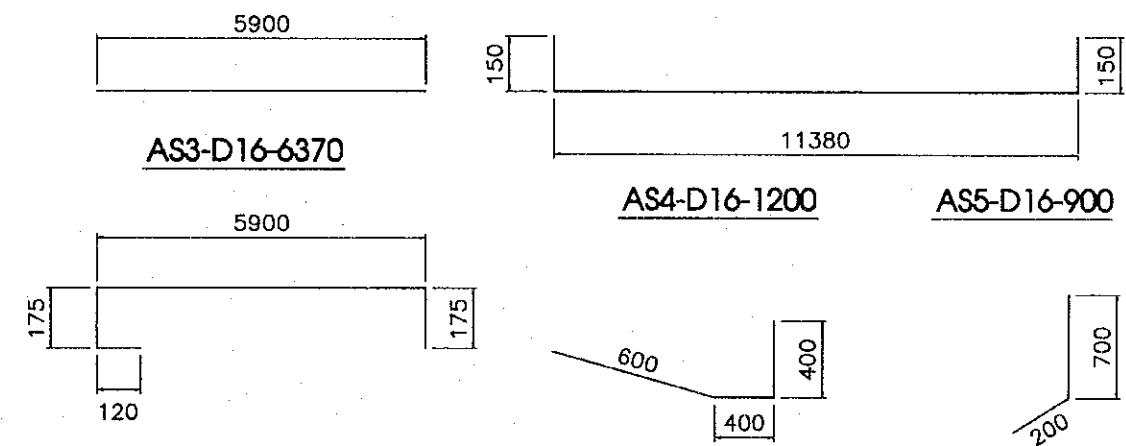
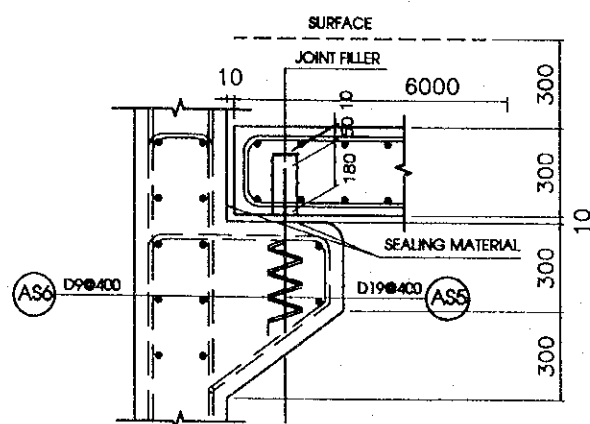
AS1-D19-5900

AS2-D16-11680

REINFORCING BAR LIST FOR APPROACH SLAB (PER 1 SLAB)

TYPE	SHAPE	DIAMETER OF BAR (mm)	QUANTITY OF BAR	LENGTH OF BAR (mm)	WEIGHT UNIT (Kg/m)	TOTAL STEEL (Kg)
AS1	—	D19	115	5900	2.250	1527
AS2	⌌	D16	52	11680	1.560	948
AS3	⌌	D16	58	6370	1.560	576
AS4	⌌	D16	58	1200	1.560	109
AS5	⌌	D19	28	900	2.250	57
AS6	⌌	D9	28	1260	0.499	18
TOTAL						3235 Kg
					D19	1584 Kg
					D16	1633 Kg
					D9	18 Kg
Quantity of concrete : 29.00 (m3)						

DETAIL 1

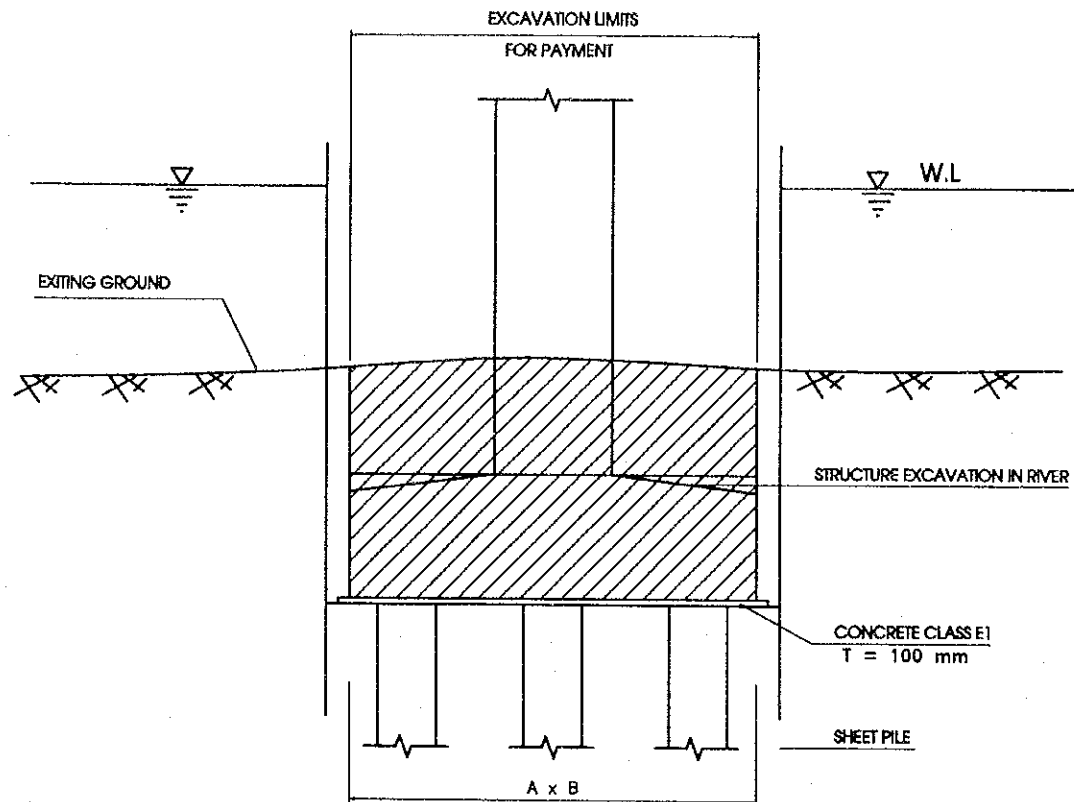


- NOTES:
- 1- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATES.
  - 2- REINFORCING BARS SHALL BE ARRANGED IN ACCORDANCE WITH THE AASHTO.
  - 3- SPLICES AND HOOKS SHALL BE PREPARED IN THE SHOP DRAWINGS PREPARED BY CONTRACTORS.
  - 4- REINFORCING BARS SHALL BE TWINED APPROPRIATELY AND STRONGLY.

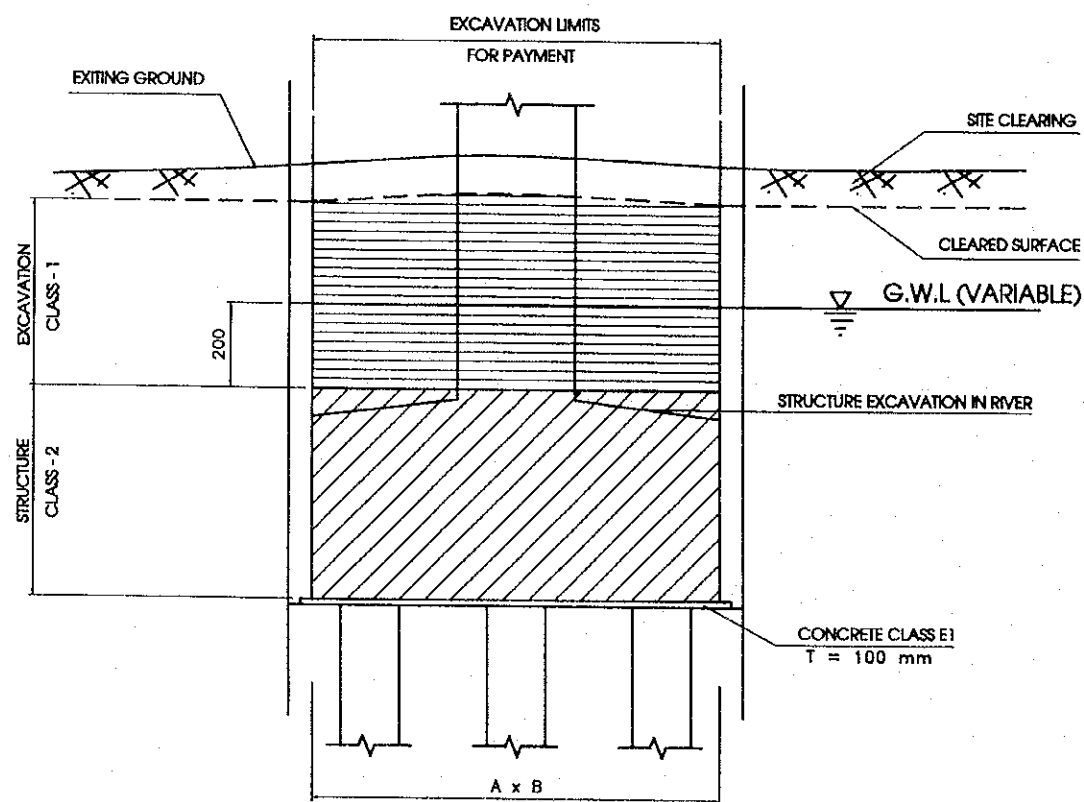
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.02.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-3-2-12	
CAU BAY CANAL BRIDGE EXCAVATION TYPES FOR STRUCTURE			

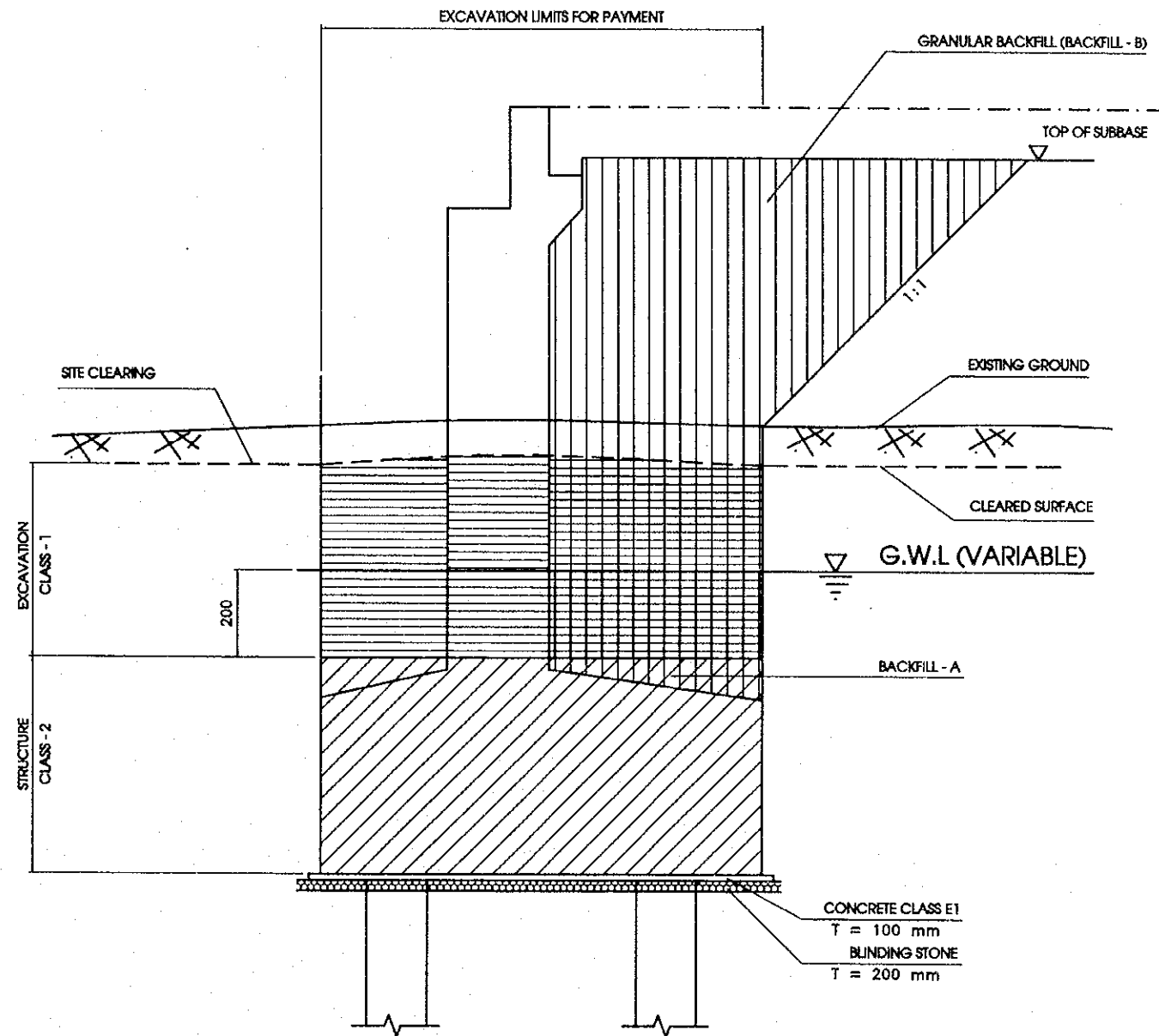
### PIER EXCAVATION IN RIVER



### PIER EXCAVATION ON LAND

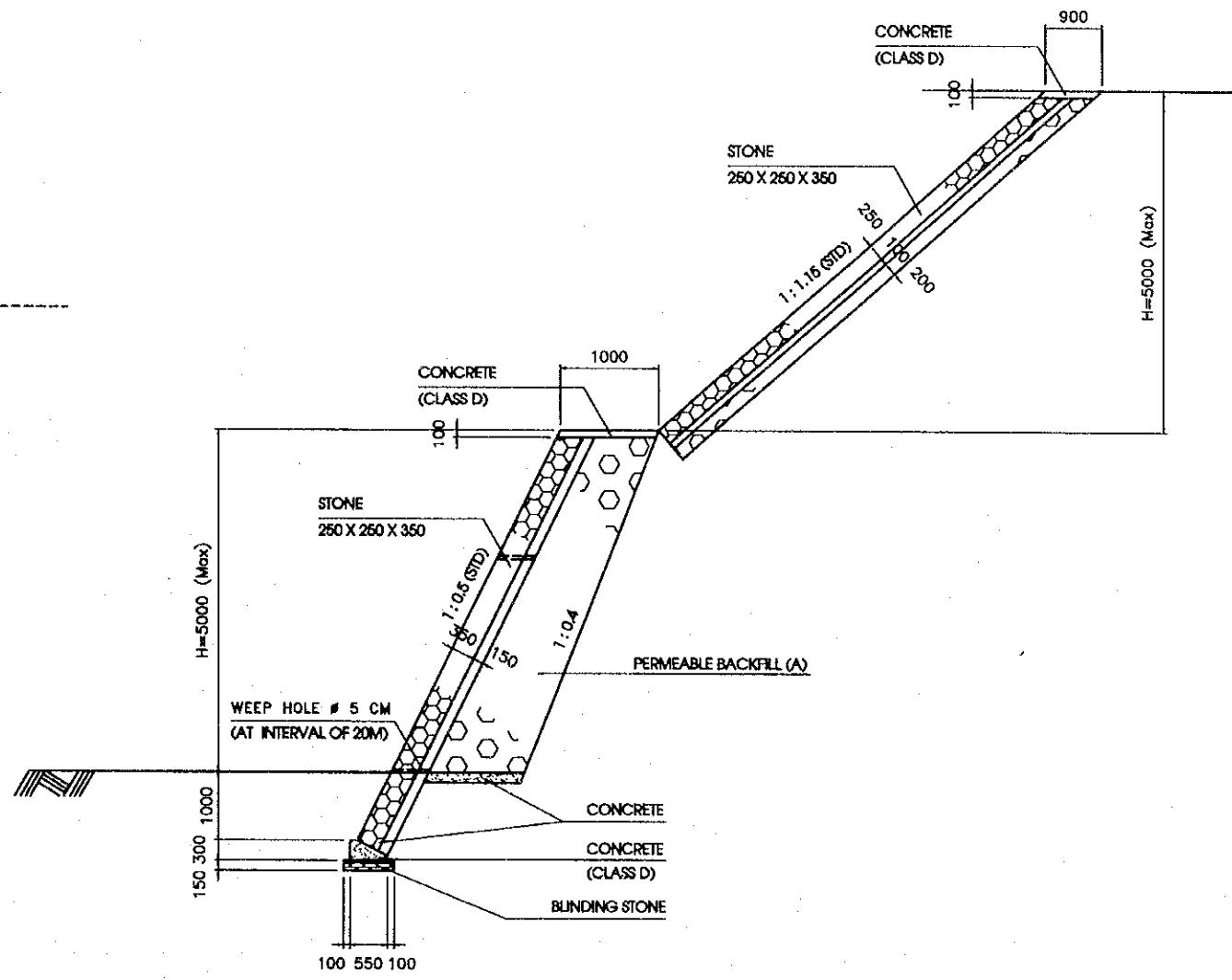
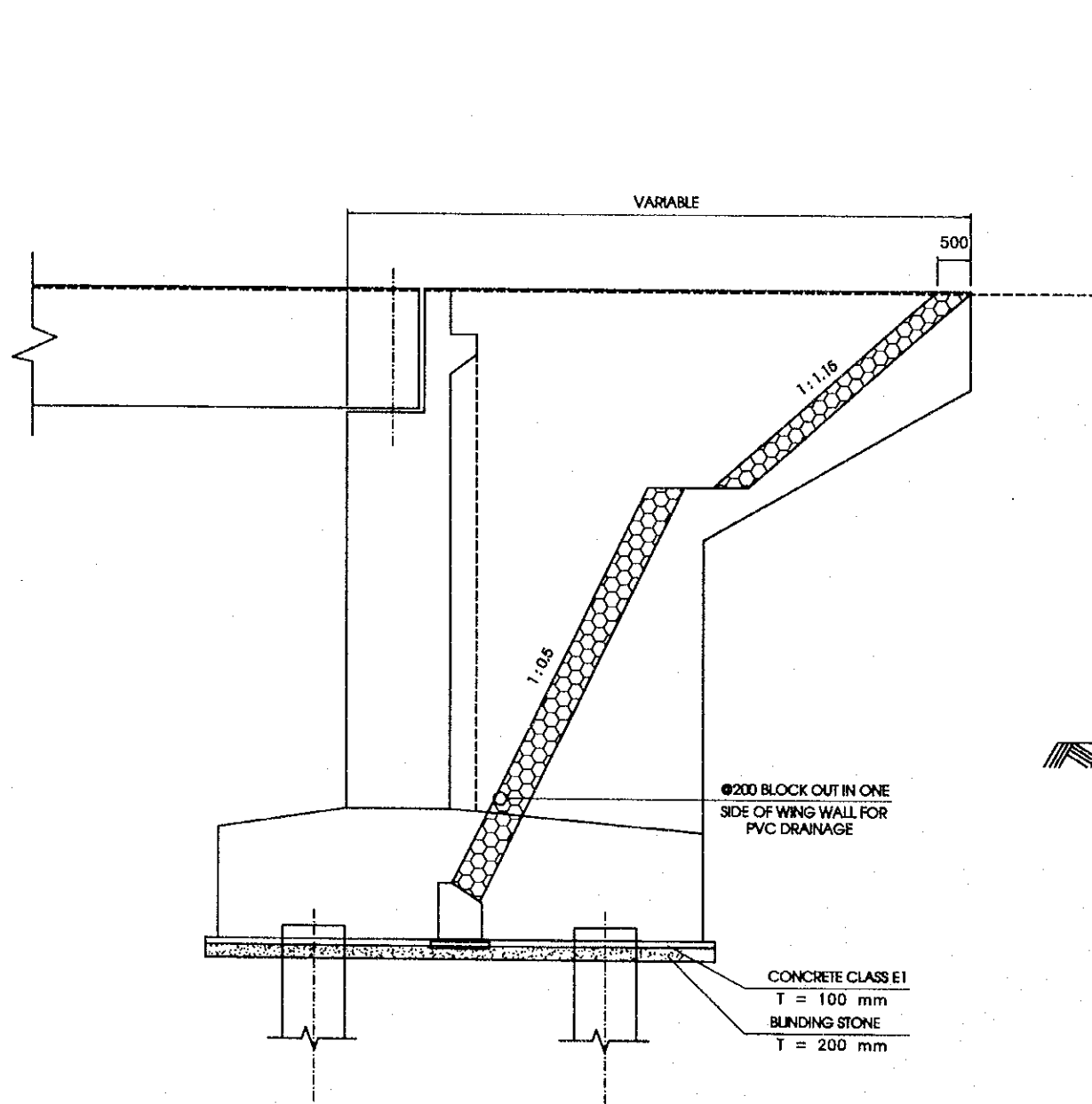


### ABUTMENT EXCAVATION ON AND BACKFILL AREAS



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATASE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATASE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.03.19

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		C-3-2-13	
CAU BAY CANAL BRIDGE DETAIL OF SLOPE PROTECTION			

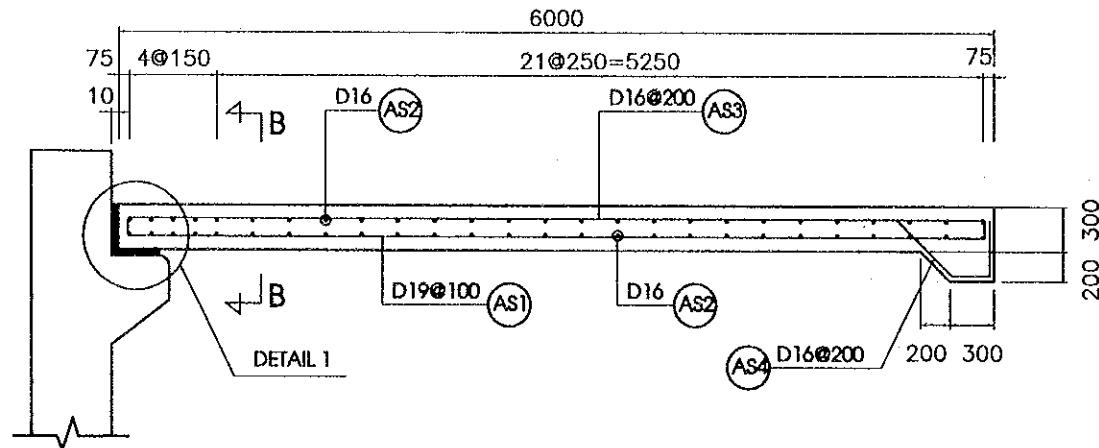


- NOTE:**
- 1- SLOPE PROTECTION IS TO BE PROVIDED AROUND THE ABUTMENT OF BRIDGE AND ENBANKMENT OF 20M LONG IN LONGITUDINAL DIRECTION
  - 2- MATERIALS:
    - STONES SIZE ARE TO BE 25 x 25 x 35 (cm) AND 20 x 20 x 25 (cm)
    - BACKFILL CONCRETE IS TO BE CLASS-D
    - BACKFILL GRAVEL SIZE IS TO BE 10 (cm) TO (cm)

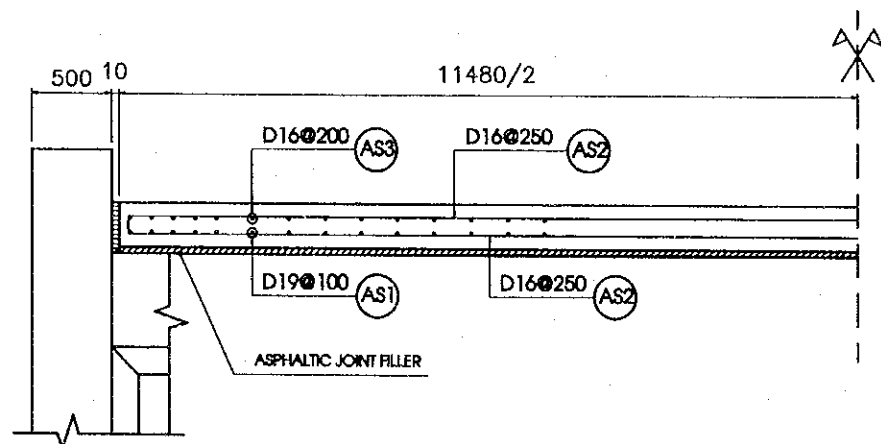
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. MATARE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. MATARE
PROJECT RED RIVER BRIDGE (HAWA TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2002.03.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	C-3-2-14	
GIA LAM ROAD BRIDGE DETAIL OF APPROACH SLAB			

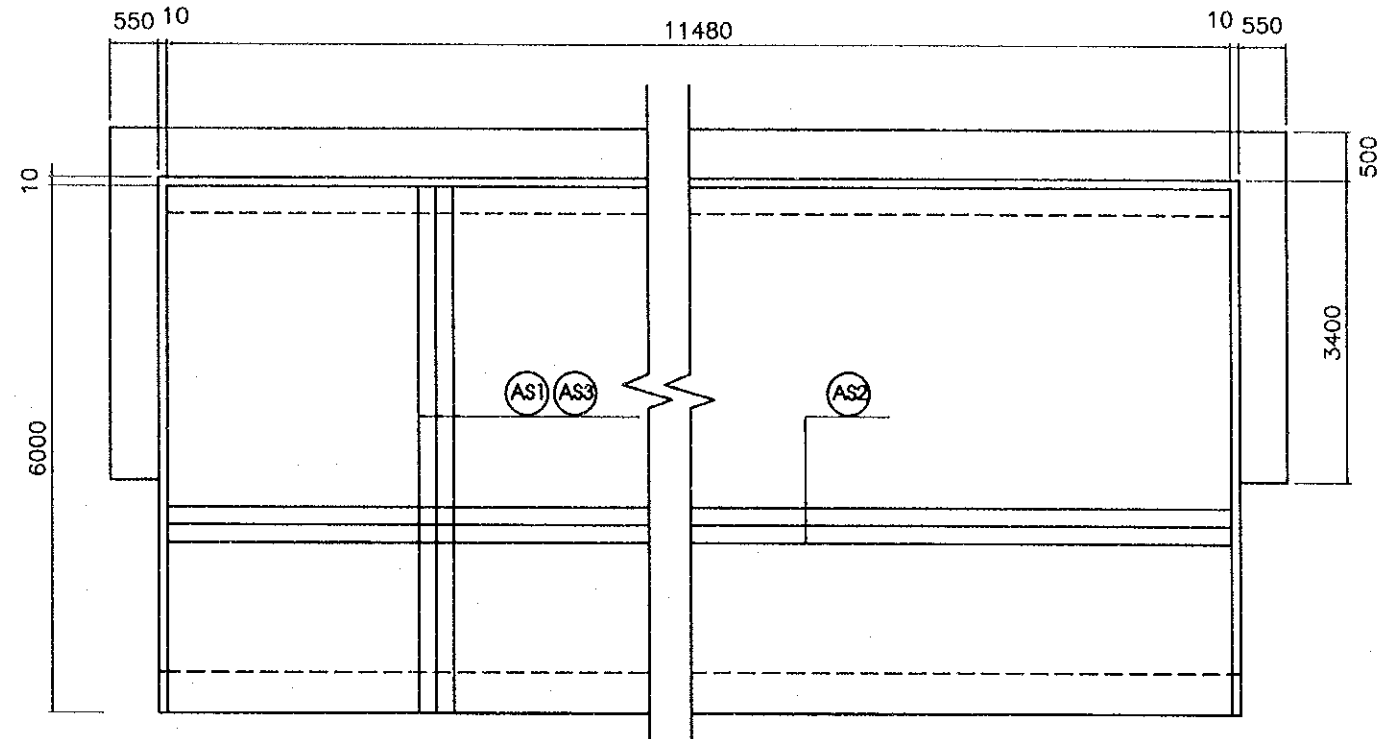
CROSS SECTION (TYPICAL)



HALF SECTION B-B



PLAN



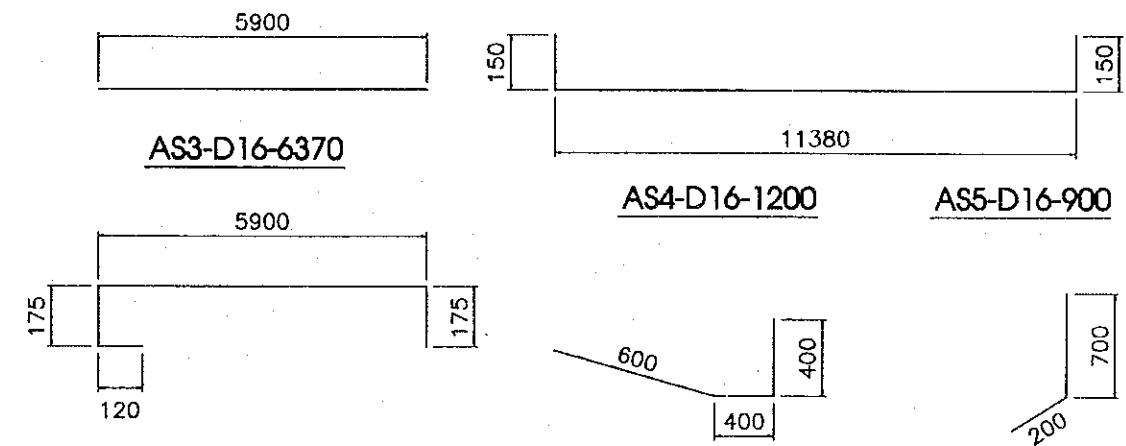
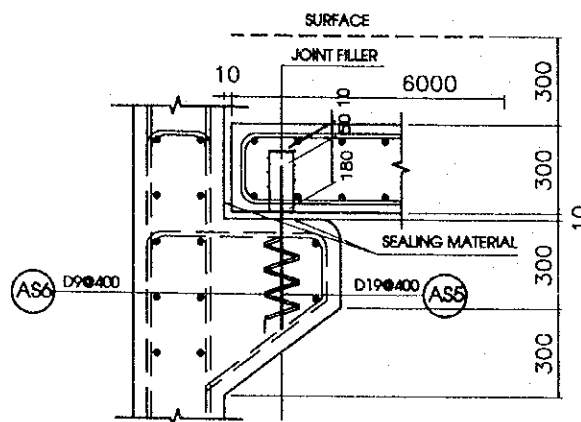
AS1-D19-5900

AS2-D16-11680

REINFORCING BAR LIST FOR APPROACH SLAB (PER 1 SLAB)

TYPE	SHAPE	DIAMETER OF BAR (mm)	QUANTITY OF BAR	LENGTH OF BAR (mm)	WEIGHT UNIT (Kg/m)	TOTAL STEEL (Kg)
AS1	—	D19	115	5900	2.250	1527
AS2	U	D16	52	11680	1.560	948
AS3	U	D16	58	8370	1.560	576
AS4	—	D16	58	1200	1.560	109
AS5	—	D19	28	900	2.250	57
AS6	W	D9	28	1260	0.499	18
TOTAL						
					3235	Kg
					1584	Kg
					1833	Kg
					18	Kg
Quantity of concrete : 29.00 (m3)						

DETAIL 1



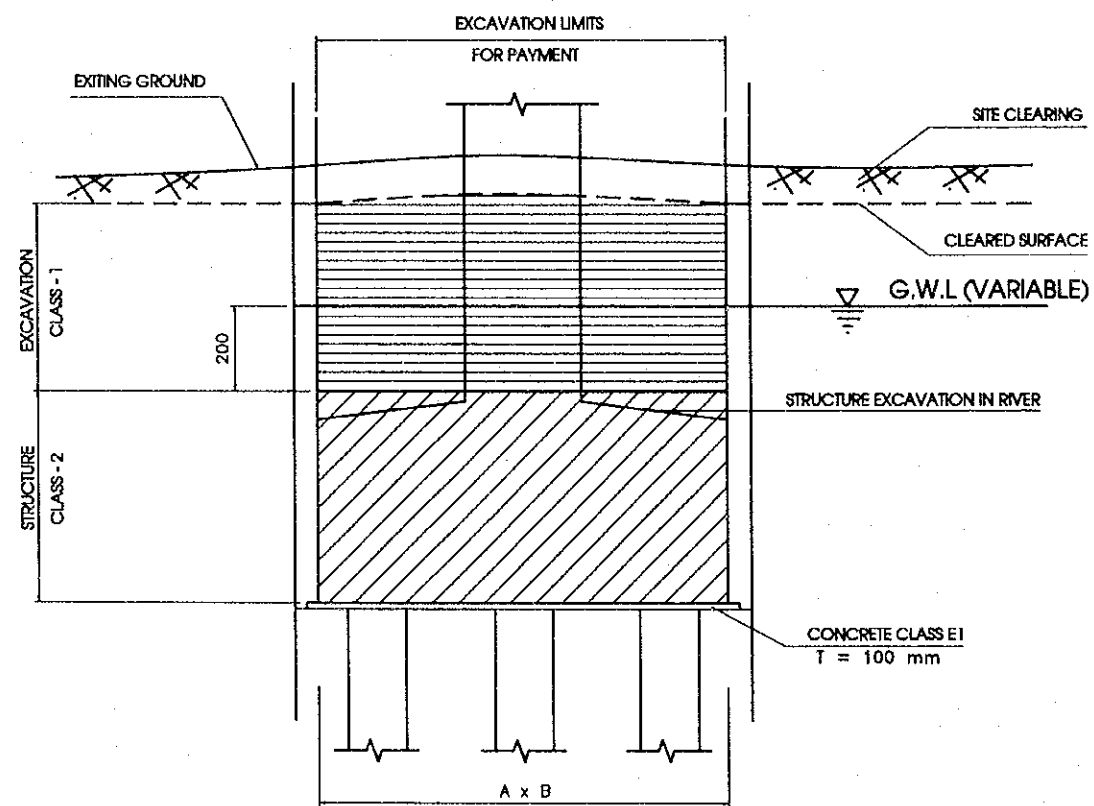
NOTES:

- 1- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATES.
- 2- REINFORCING BARS SHALL BE ARRANGED IN ACCORDANCE WITH THE AASHTO.
- 3- SPLICES AND HOOKS SHALL BE PREPARED IN THE SHOP DRAWINGS PREPARED BY CONTRACTORS.
- 4- REINFORCING BARS SHALL BE TWINED APPROPRIATELY AND STRONGLY.
- 5- ABUTMENT A1,A2 HAS TWO APPROACH SLAB.

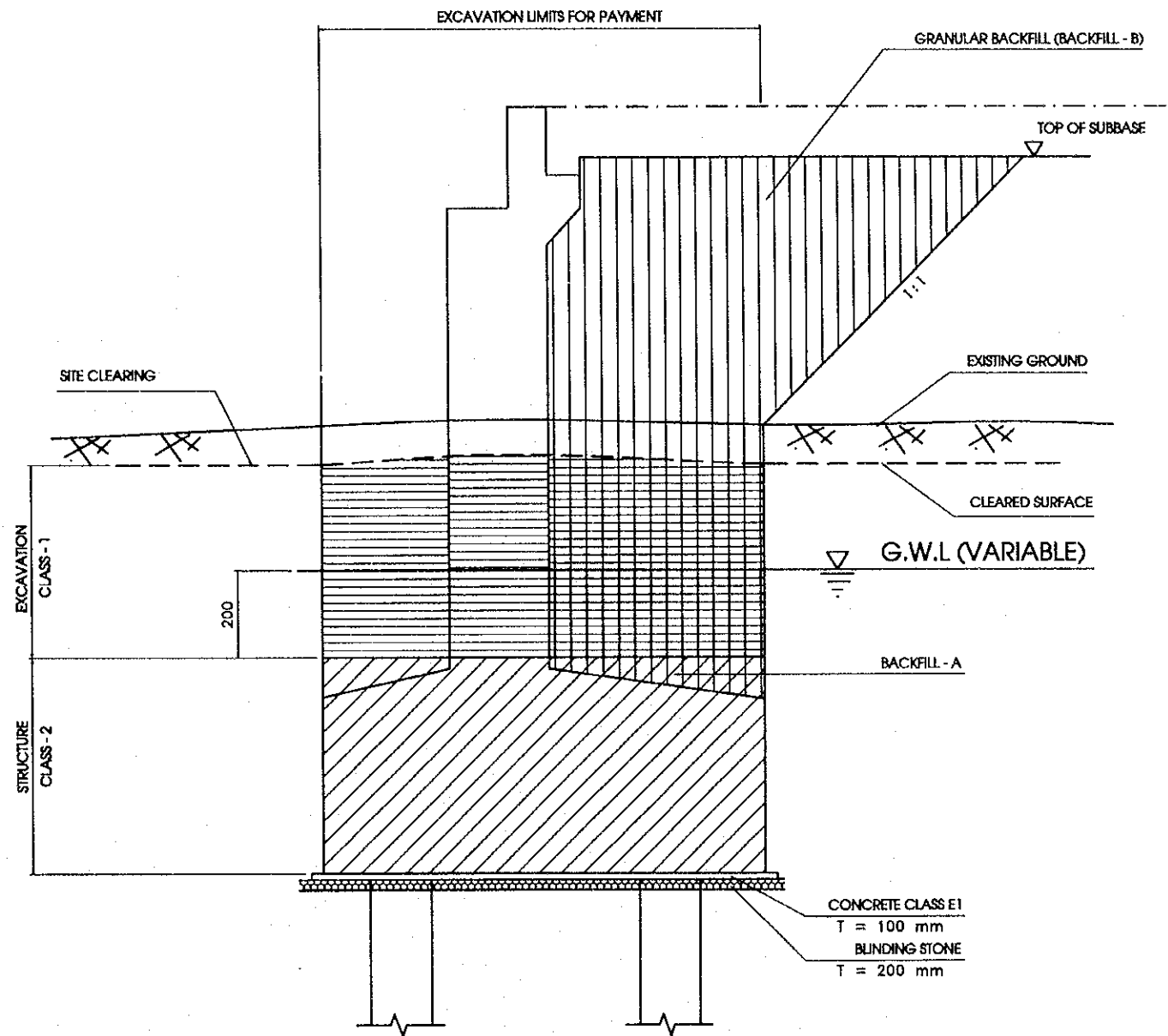
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANH LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE 	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000. 3. 17	

PACKAGE 2	SCALE	DRAWING No. C-3-2-15	SHEET No.
GIA LAM ROAD BRIDGE EXCAVATION TYPES FOR STRUCTURE			

PIER EXCAVATION ON LAND



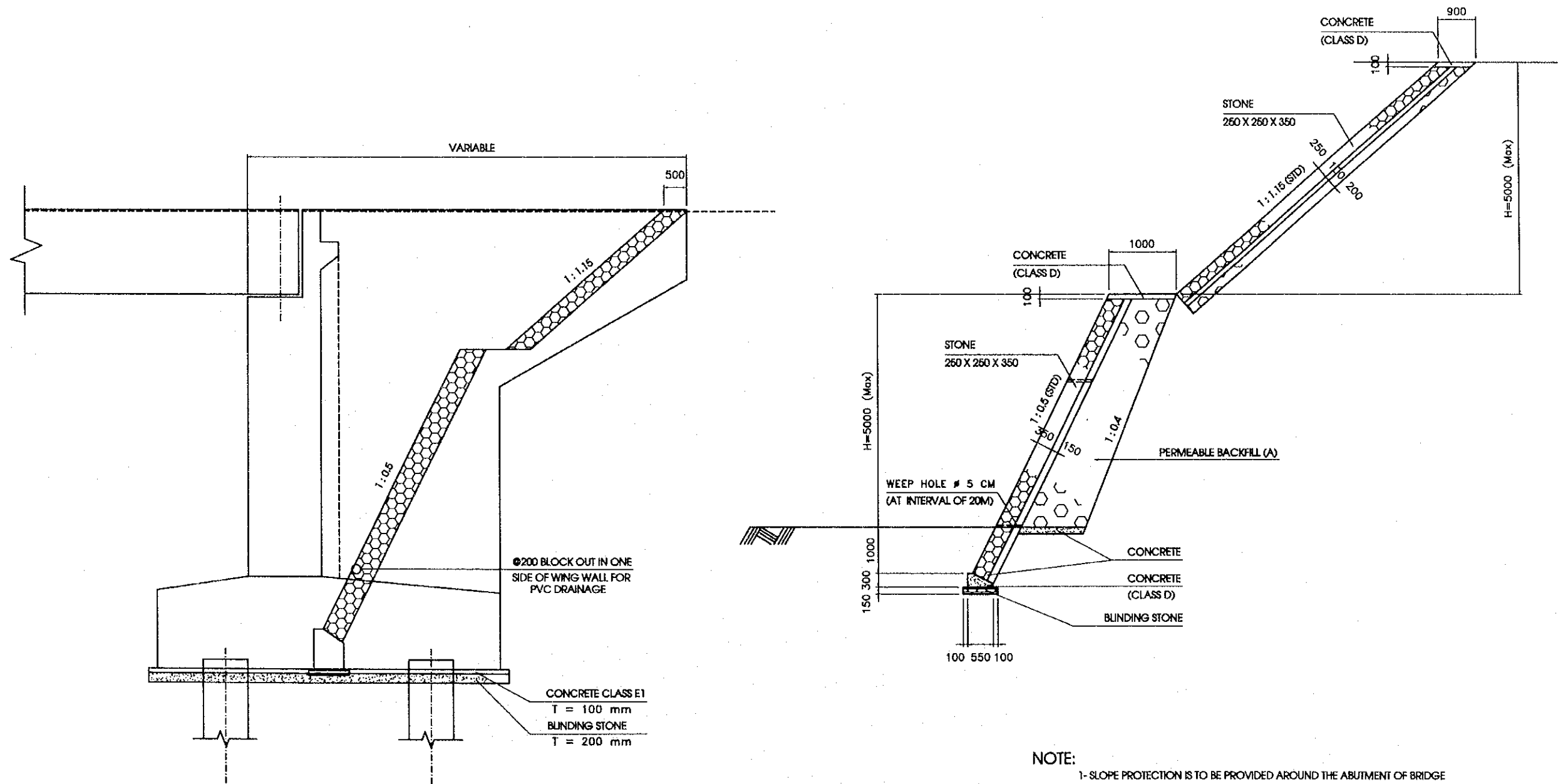
ABUTMENT EXCAVATION ON AND BACKFILL AREAS



003

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000. 3. 17

PACKAGE 2	SCALE	DRAWING No. C-3-2-16	SHEET No.
GIA LAM ROAD BRIDGE DETAIL OF SLOPE PROTECTION			



- NOTE:**
- 1- SLOPE PROTECTION IS TO BE PROVIDED AROUND THE ABUTMENT OF BRIDGE AND ENBANKMENT OF 20M LONG IN LONGITUDINAL DIRECTION
  - 2- MATERIALS:
    - STONES SIZE ARE TO BE 25 x 25 x 35 (cm) AND 20 x 20 x 25 (cm)
    - BACKFILL CONCRETE IS TO BE CLASS-D
    - BACKFILL GRAVEL SIZE IS TO BE 10 (cm) TO (cm)

T-3

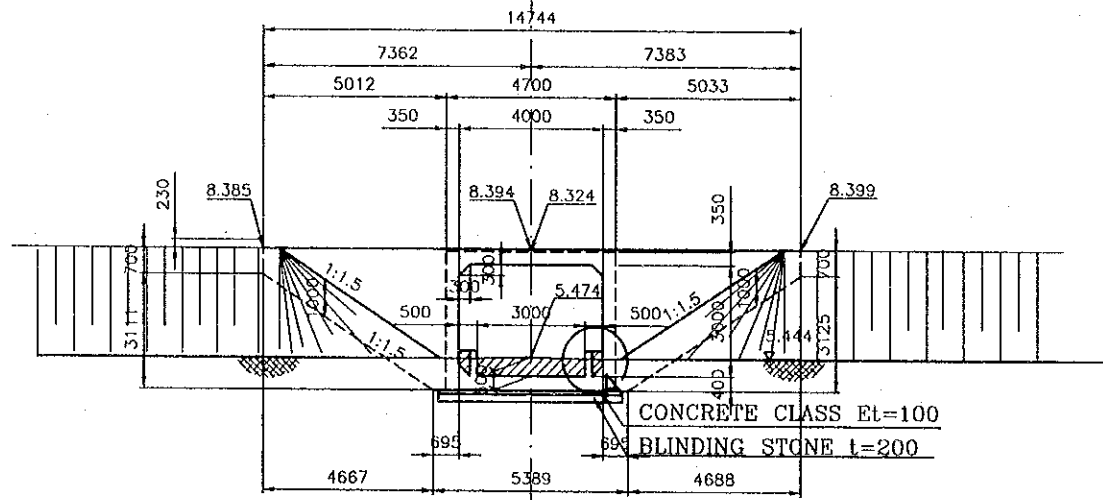


## **D. OTHER STRUCTURE**

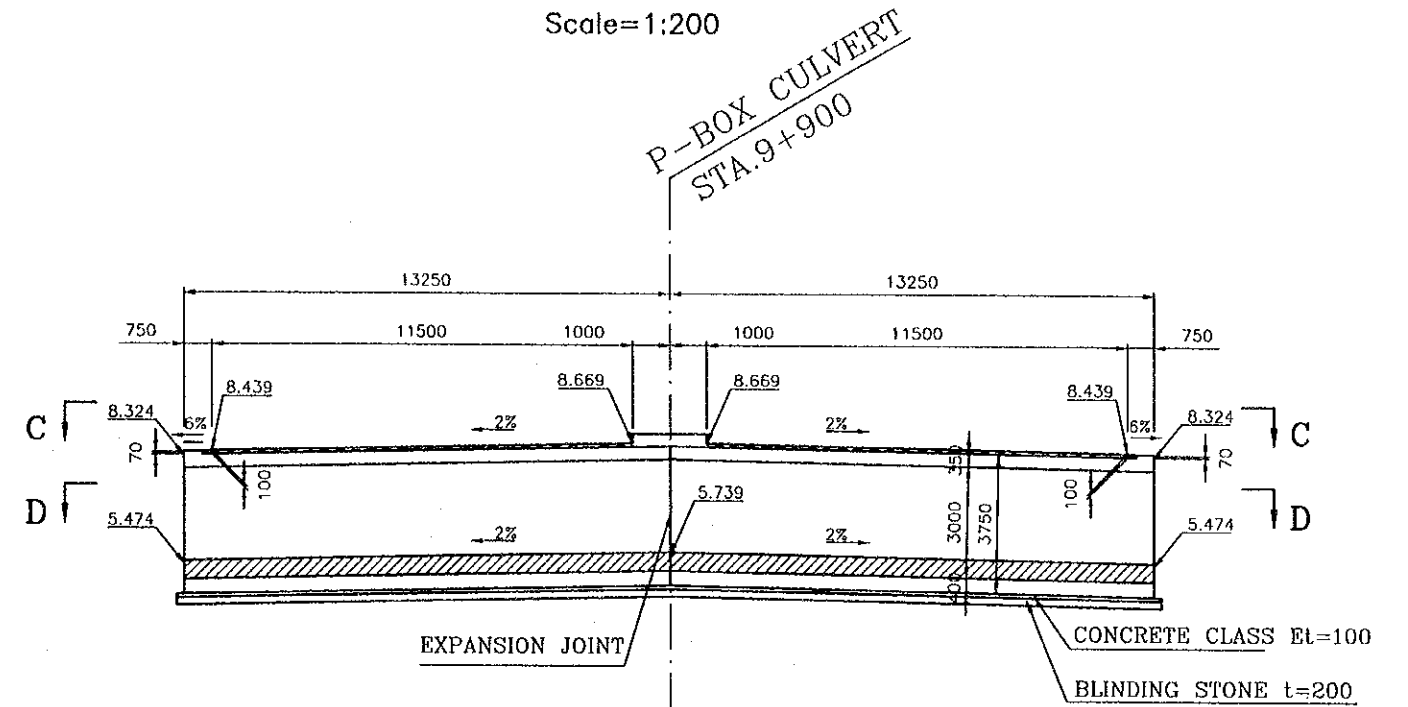
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2002.08.17

PACKAGE 2	SCALE AS SHOWN	DRAWING No. G-1-1	SHEET No.
P-BOX CULVERT (STA.9+900)			

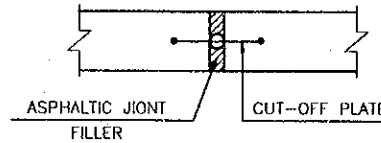
SECTION A-A  
Scale=1:200



SECTION B-B  
Scale=1:200



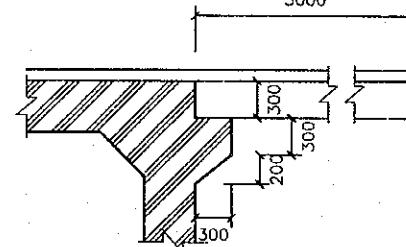
EXPANSION JOINT  
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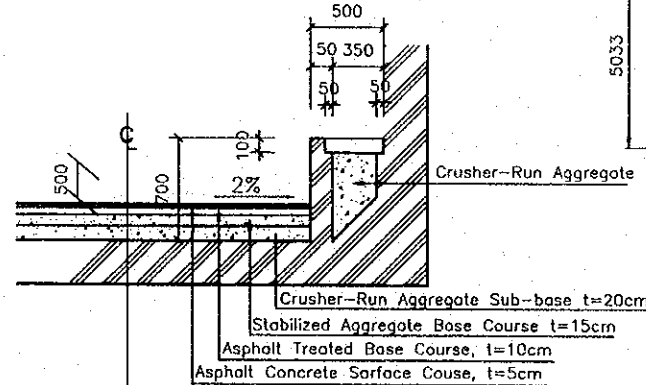
DETAIL CUT - OFF PLATE  
S=1:50



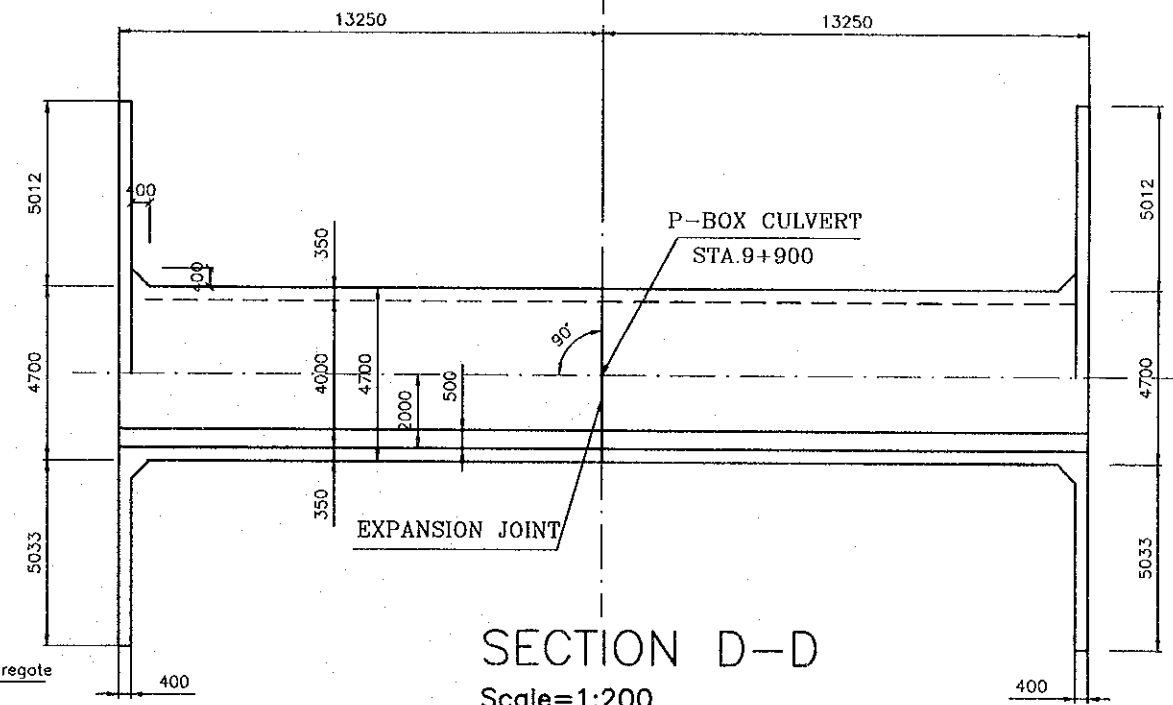
DETAIL OF APPROACH SLAB  
S=1:50



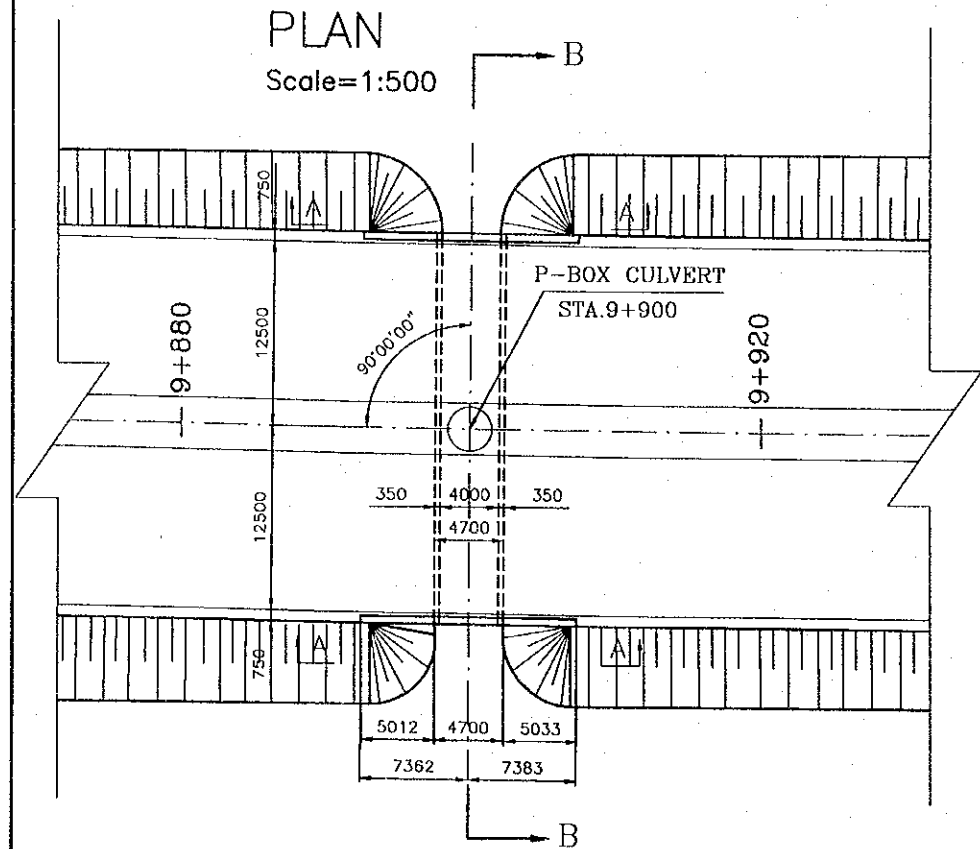
DETAIL A  
S=1:50



SECTION C-C  
Scale=1:200



SECTION D-D  
Scale=1:200



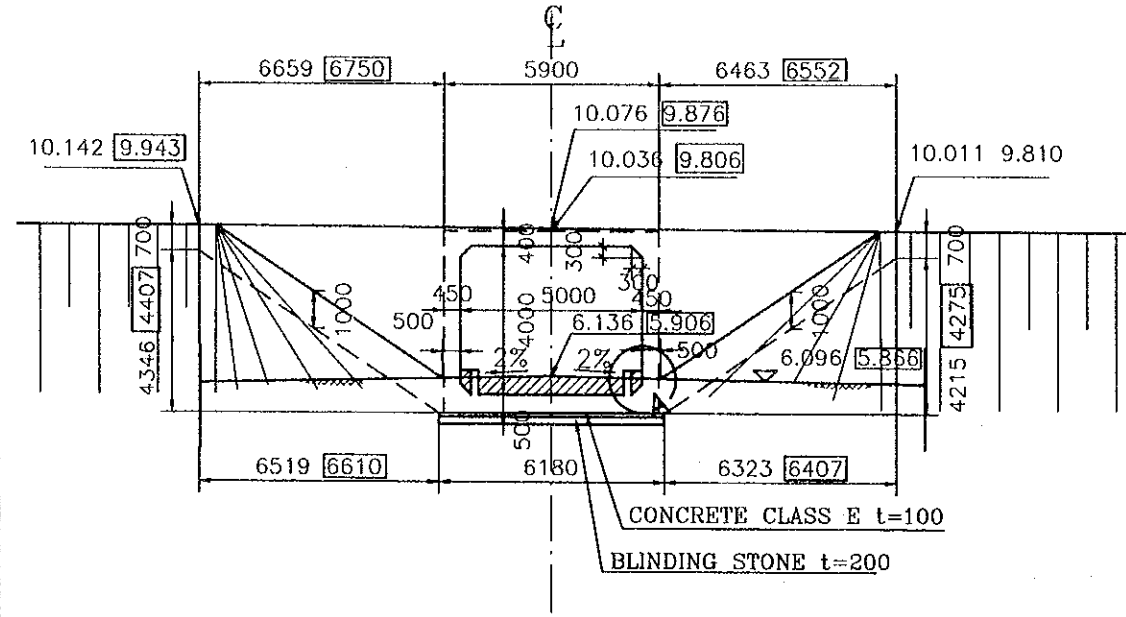


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY NAME SIGNATURE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		DATE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	PACIFIC CONSULTANTS INTERNATIONAL	2000. 2. 17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	AS SHOWN	0-1-3	
V-BOX CULVERT GIA LAM I.C (ON RAMP STA 0+224.300)			

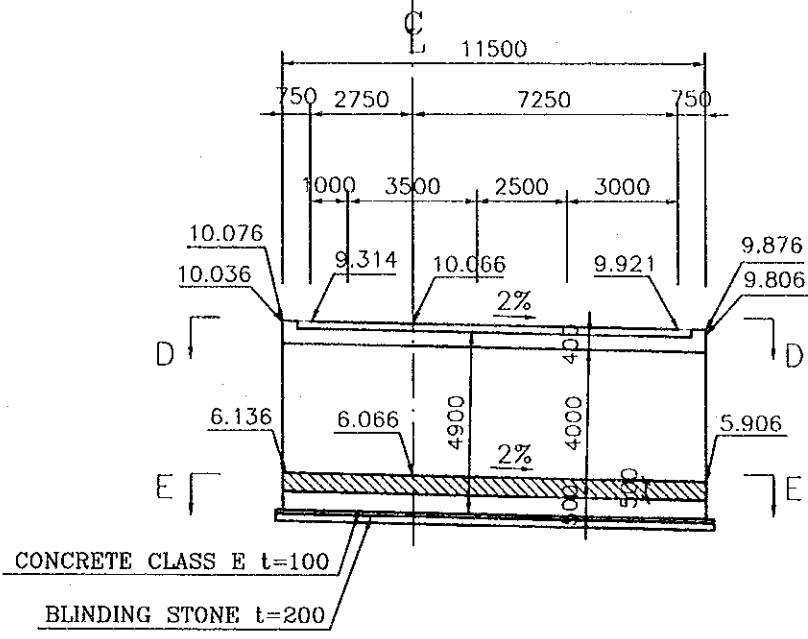
SECTION A-A B-B

Scale=1:100

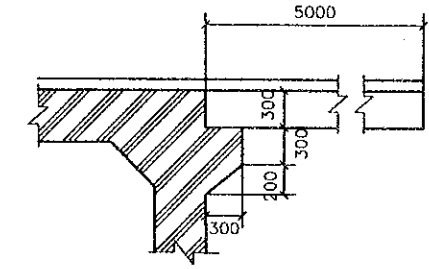


SECTION C-C

Scale=1:200

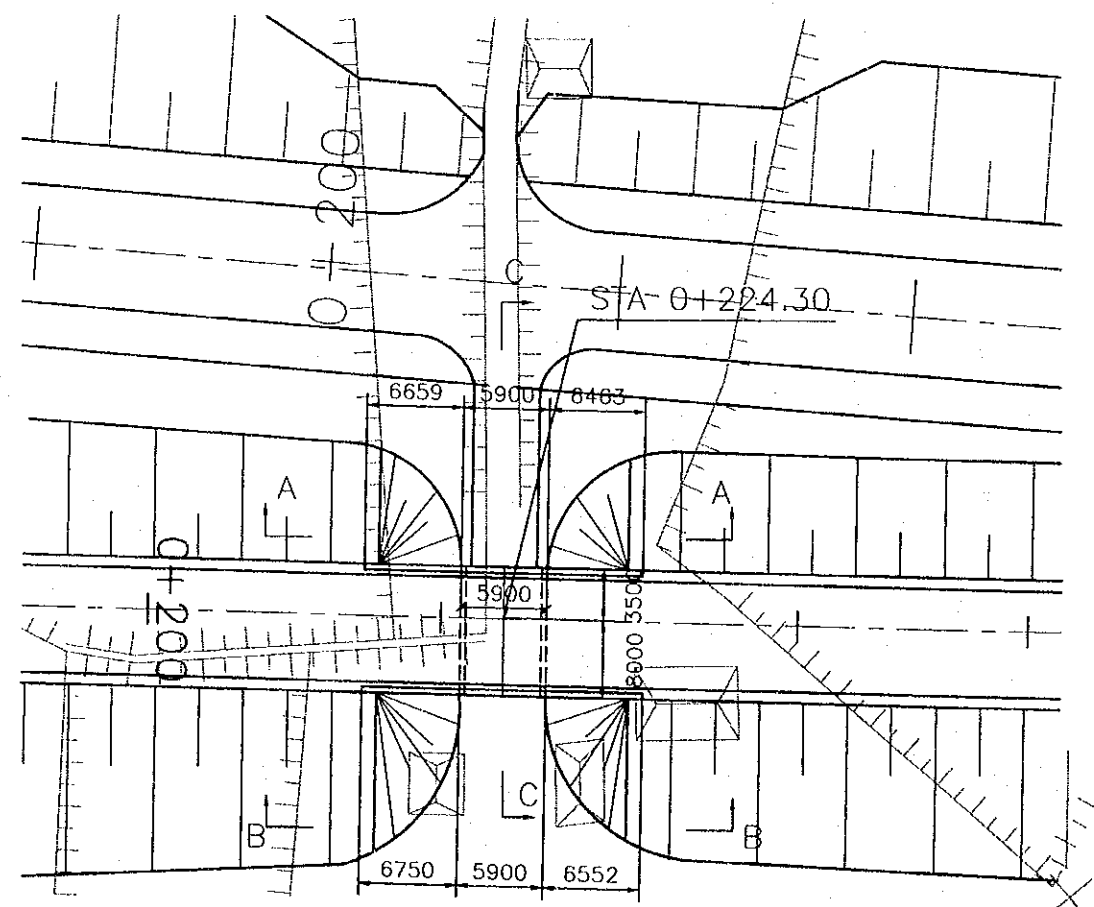


DETAIL OF APPROACH SLAB  
S=1:50



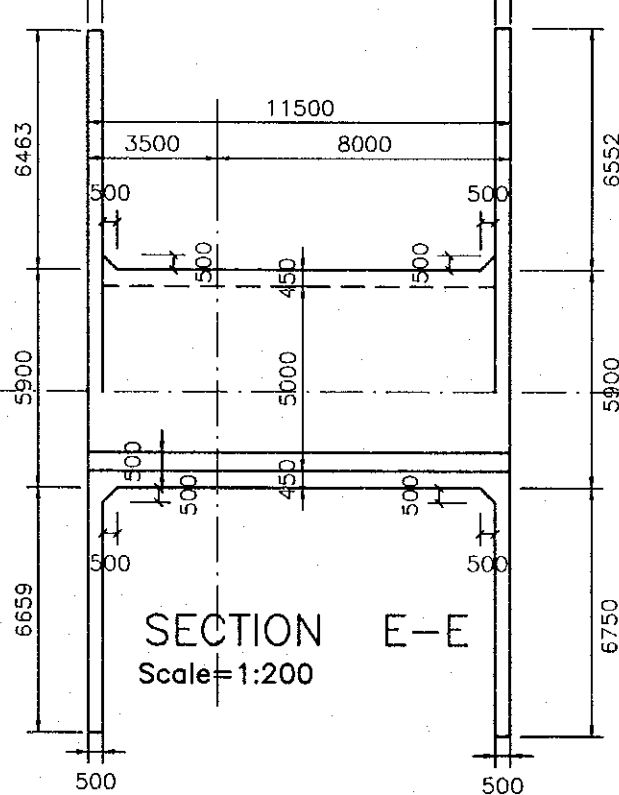
PLAN Scale=1:500

ON-RAMP



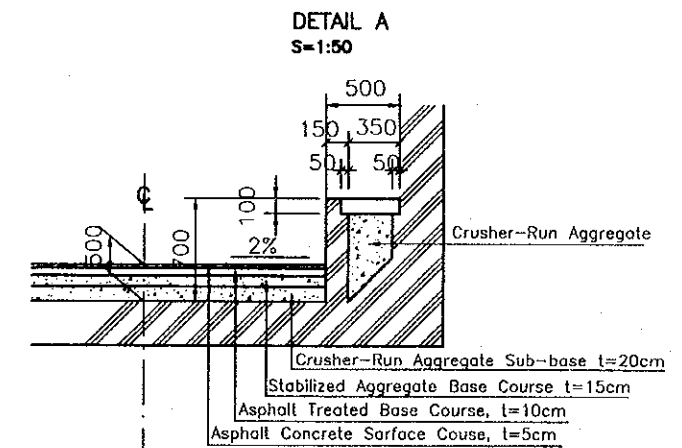
SECTION D-D

Scale=1:200



SECTION E-E

Scale=1:200



NOTE:

□ Is Section B-B



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATAKE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATAKE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.03.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	AS SHOWN	0 - 2 - 1	
DETAILS OF RETAINING WALL AND STONE MASONRY			

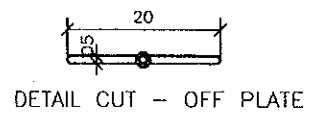
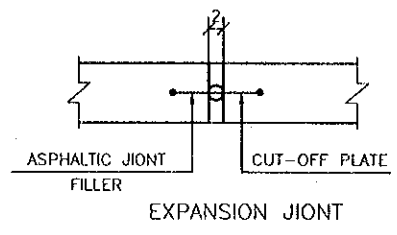
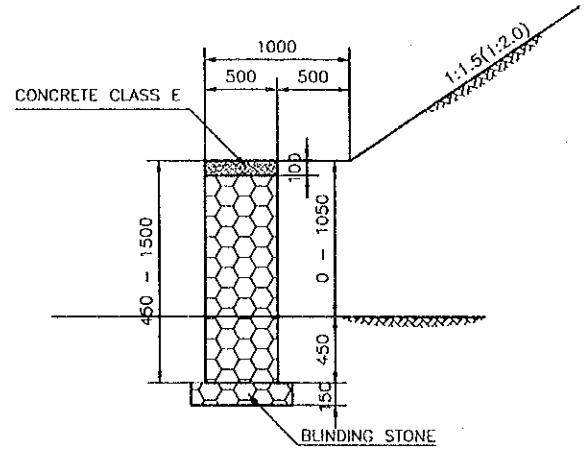
## RETAINING WALL

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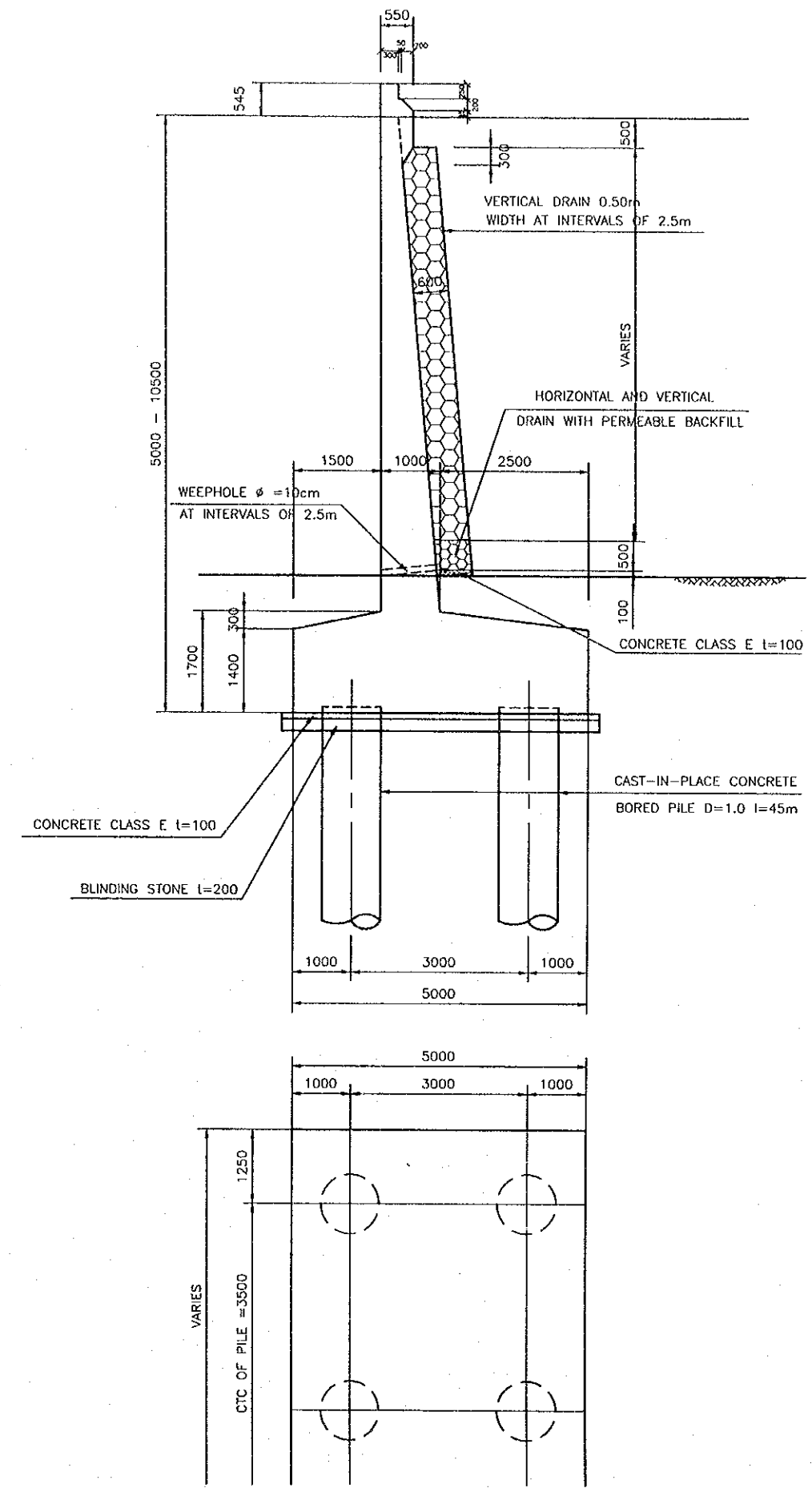
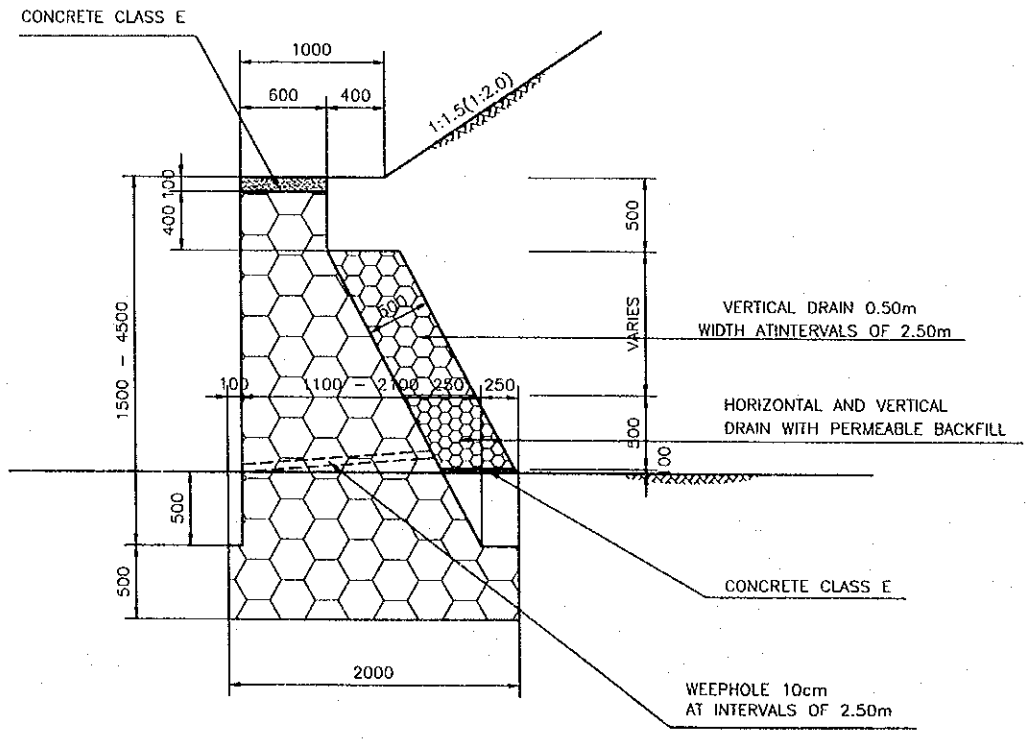
## STONE MASONRY

Scale=1:50

**TYPE A**



**TYPE B**

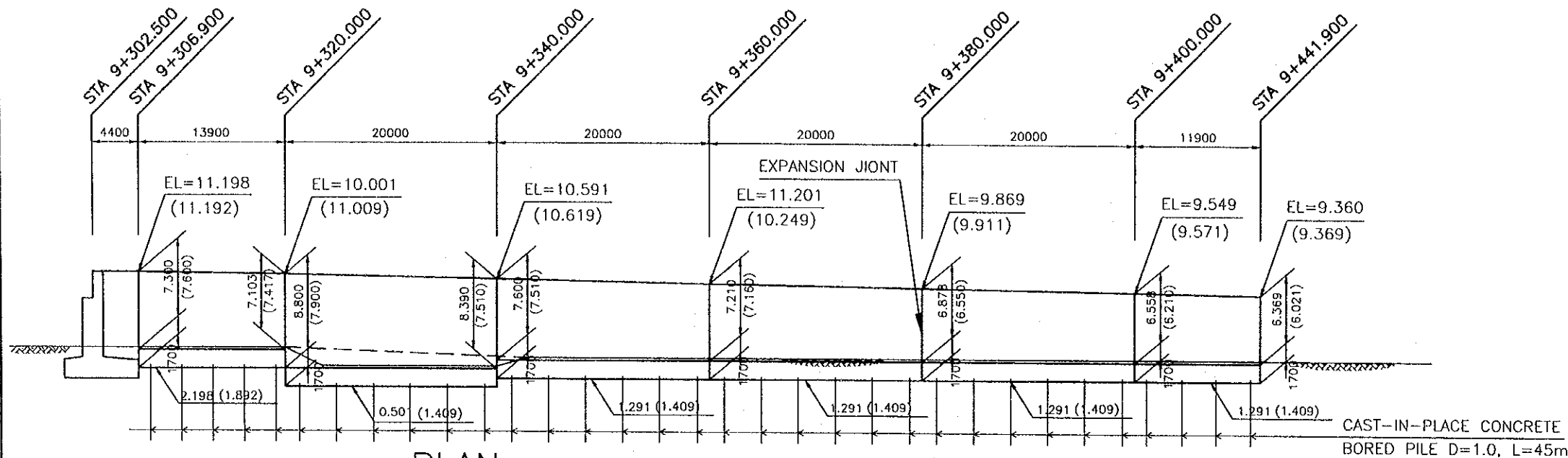


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT: RED RIVER BRIDGE (PHAM TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT: PACIFIC CONSULTANTS INTERNATIONAL		DATE: 2000. 8. 17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	AS SHOWN	D - 2 - 2	
LAYOUT OF RETAINING WALLS			

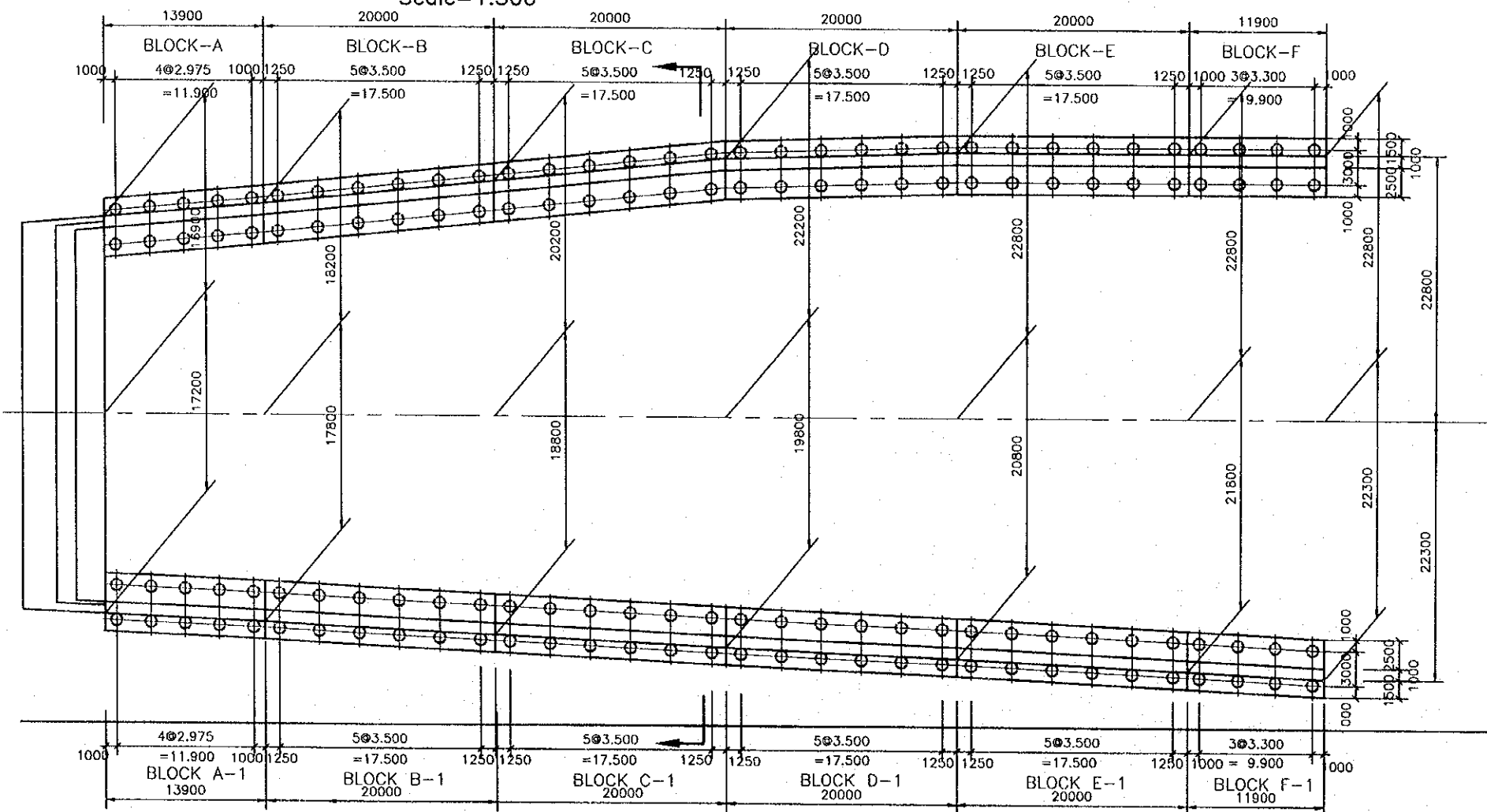
### PROFILE LEFT SIDE (RIGHT SIDE)

Scale=1:500



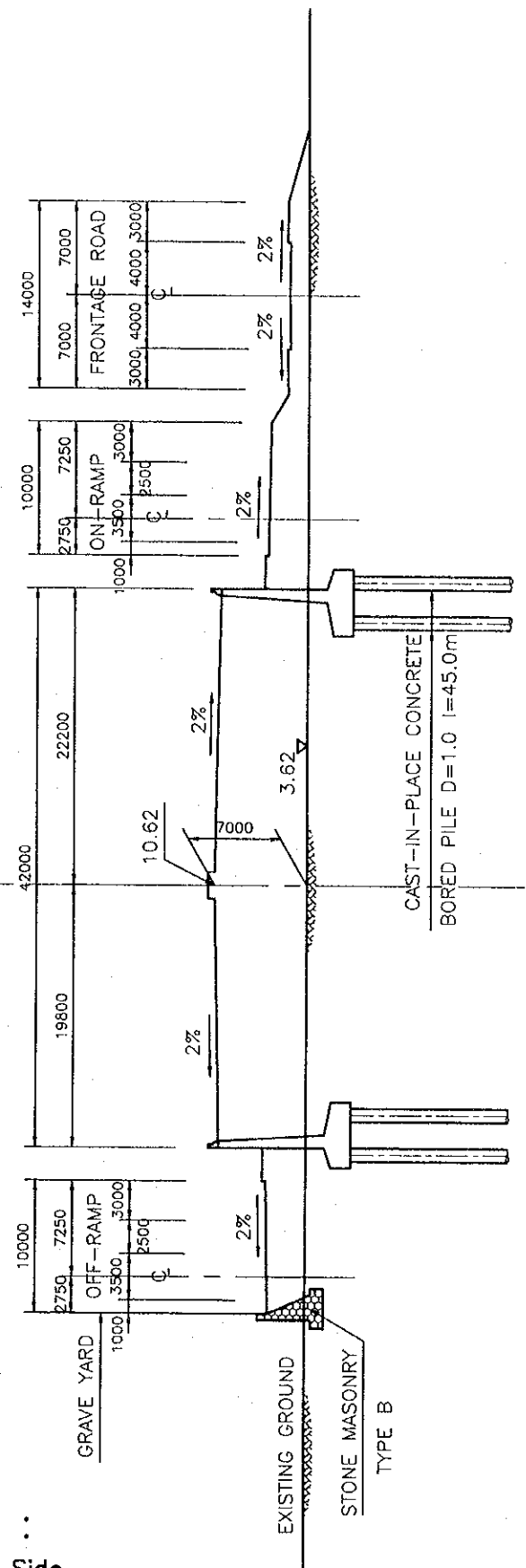
### PLAN

Scale=1:500



STA 9+360  
Scale=1:500

Scale=1:500



NOTE :  
( ) Right Side

# **E. DRAINAGE**

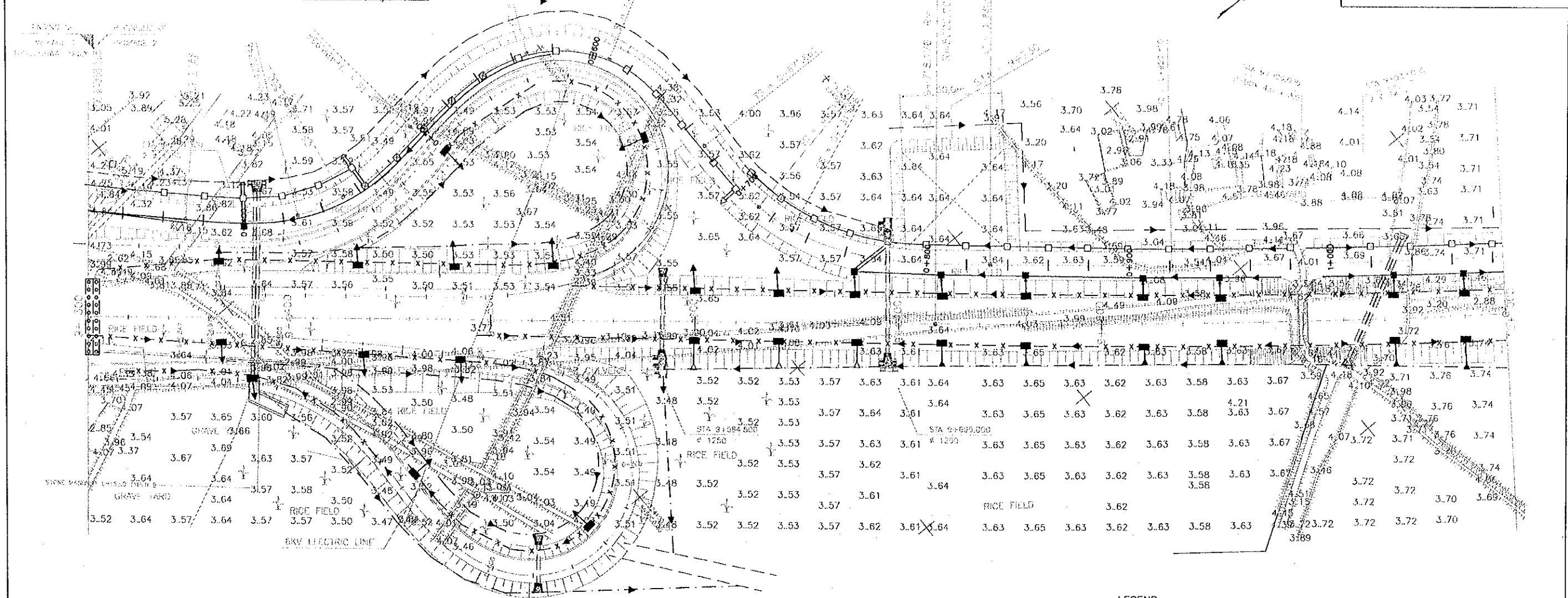
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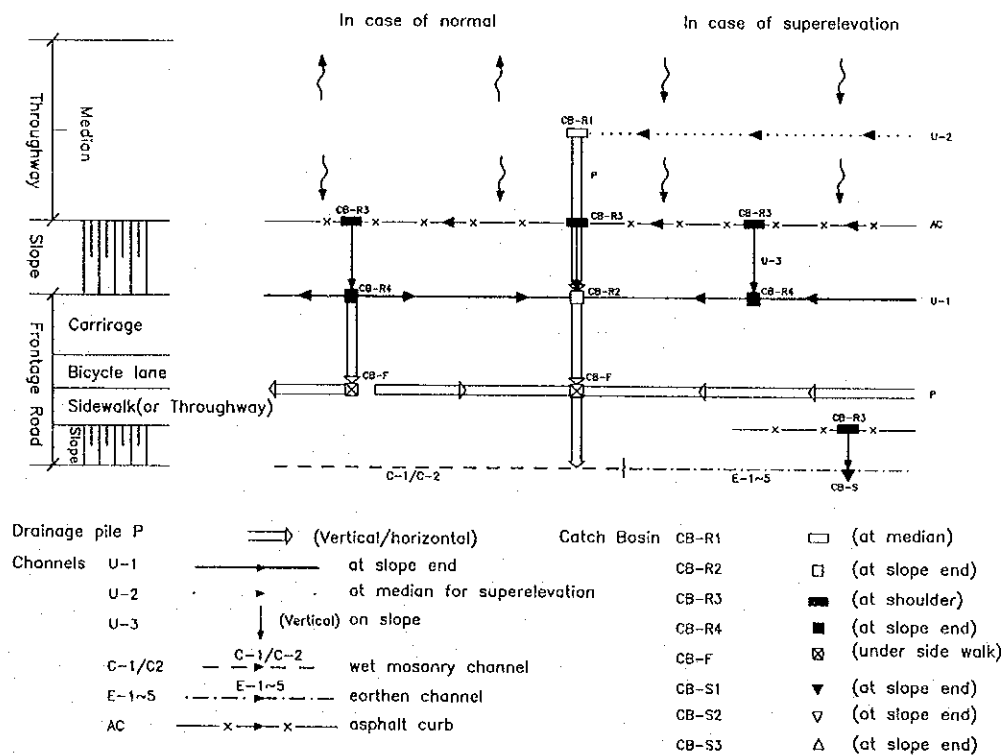


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATASE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.8.17

PACKAGE	SCHE	DRAWING No.	SHEET No.
2	1/2000	E-1-2	
THROUGH WAY AND FRONTAGE ROAD (2)			

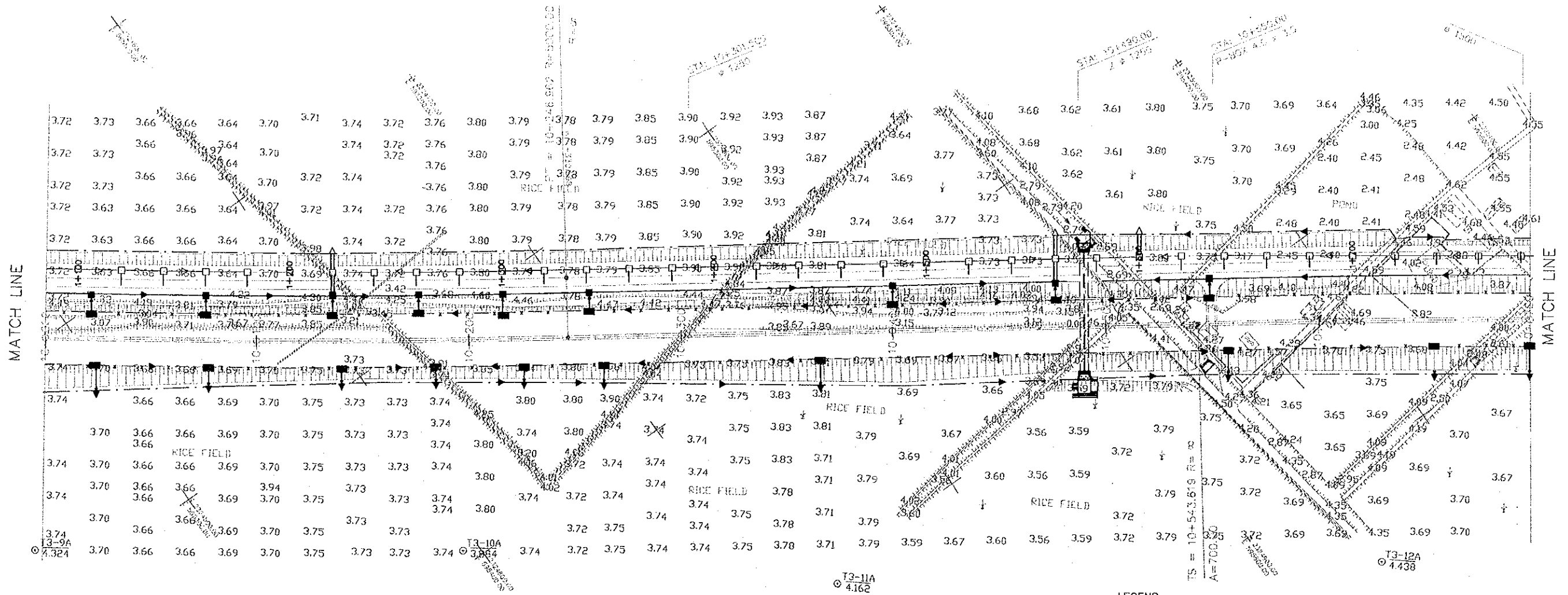


LEGEND

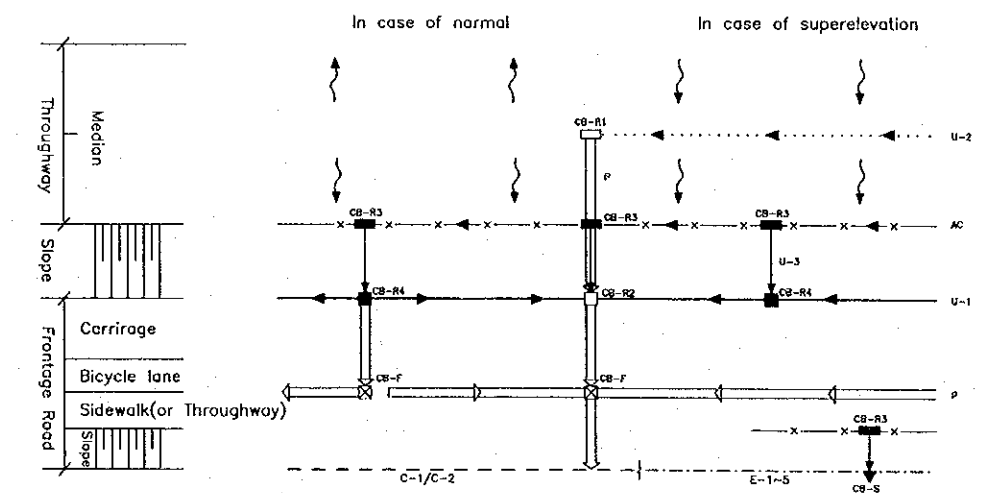


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2002.3.14	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/2000	DRAWING No. E-1-3	SHEET No.
THROUGH WAY AND FRONTAGE (3)			



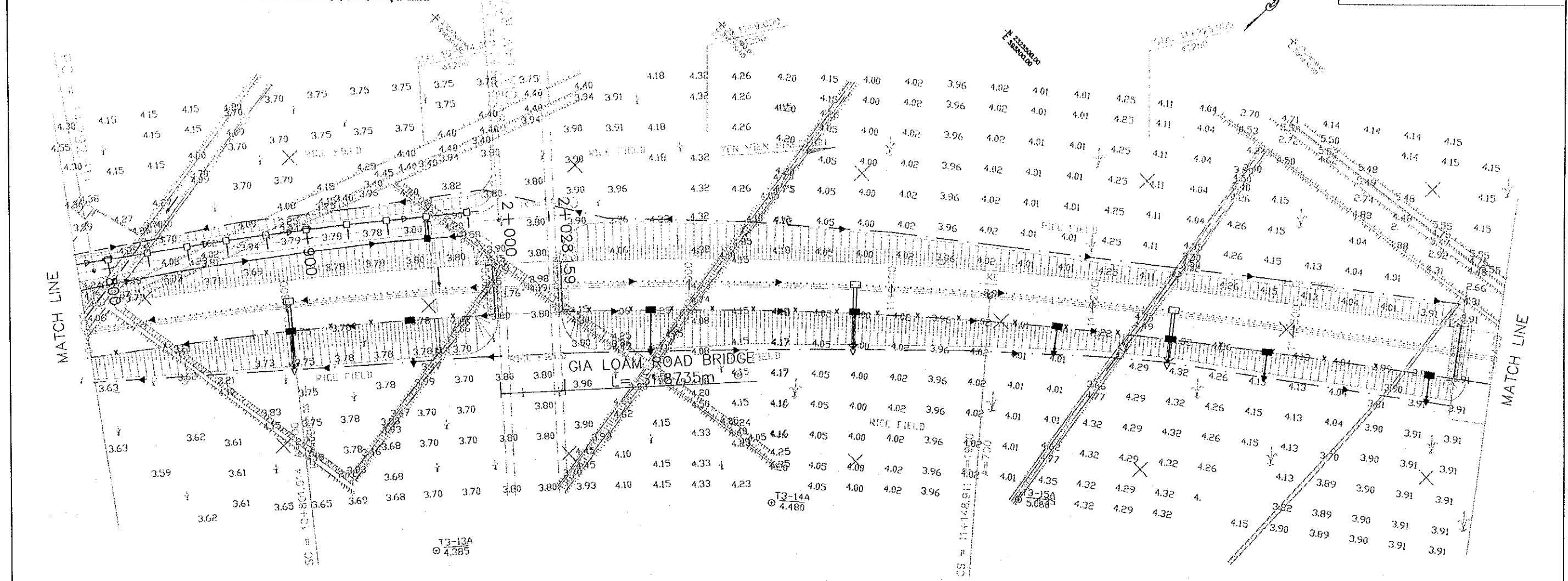
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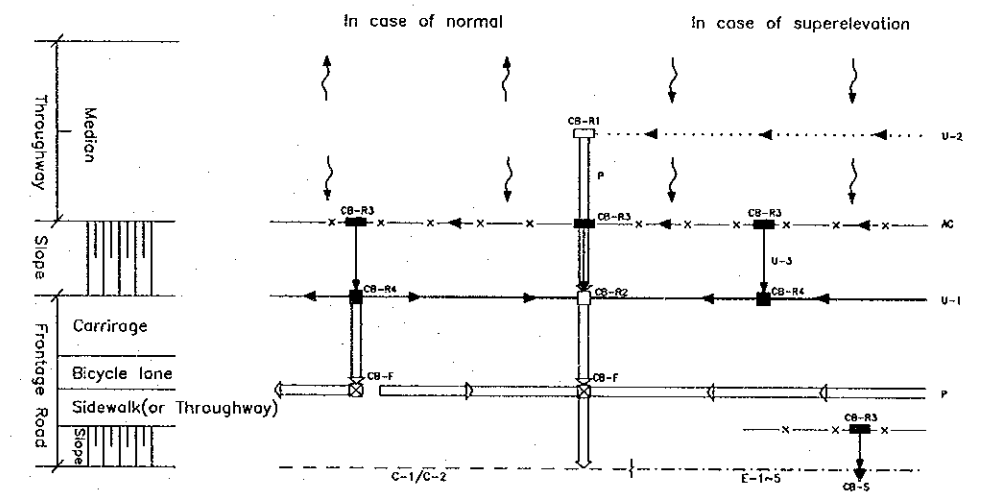
- |                 |                               |                   |                     |
|-----------------|-------------------------------|-------------------|---------------------|
| Drainage pile P | → (Vertical/horizontal)       | Catch Basin CB-R1 | □ (at median)       |
| Channels U-1    | → at slope end                | CB-R2             | □ (at slope end)    |
| U-2             | → at median for superlevation | CB-R3             | ■ (at shoulder)     |
| U-3             | ↓ (Vertical) on slope         | CB-R4             | ■ (at slope end)    |
| C-1/C2          | — C-1/C-2 wet masonry channel | CB-F              | ⊗ (under side walk) |
| E-1-5           | — E-1-5 earthen channel       | CB-S1             | ▽ (at slope end)    |
| AC              | — x — x — asphalt curb        | CB-S2             | ▽ (at slope end)    |
|                 |                               | CB-S3             | △ (at slope end)    |

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000. 08. 17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/2000	E-1-4	
THROUGH WAY AND FRONTAGE ROAD (4)			



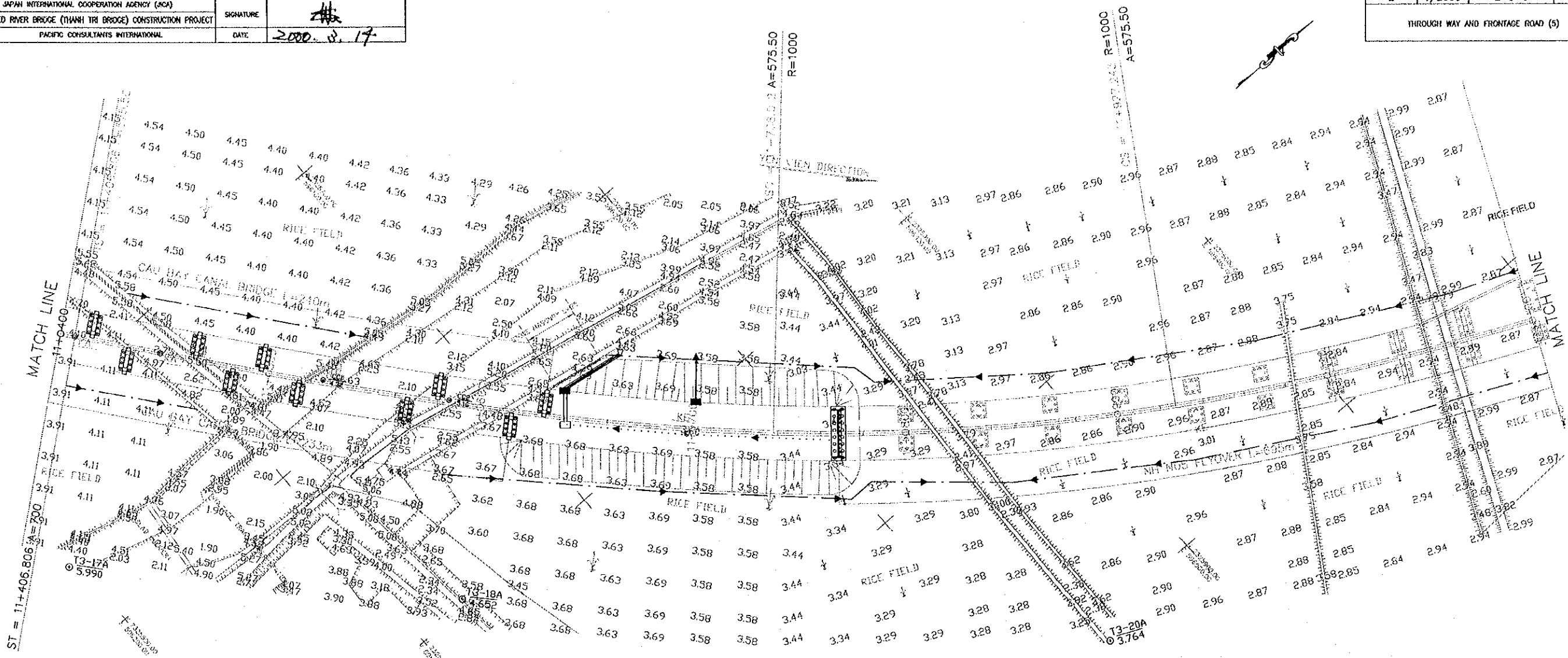
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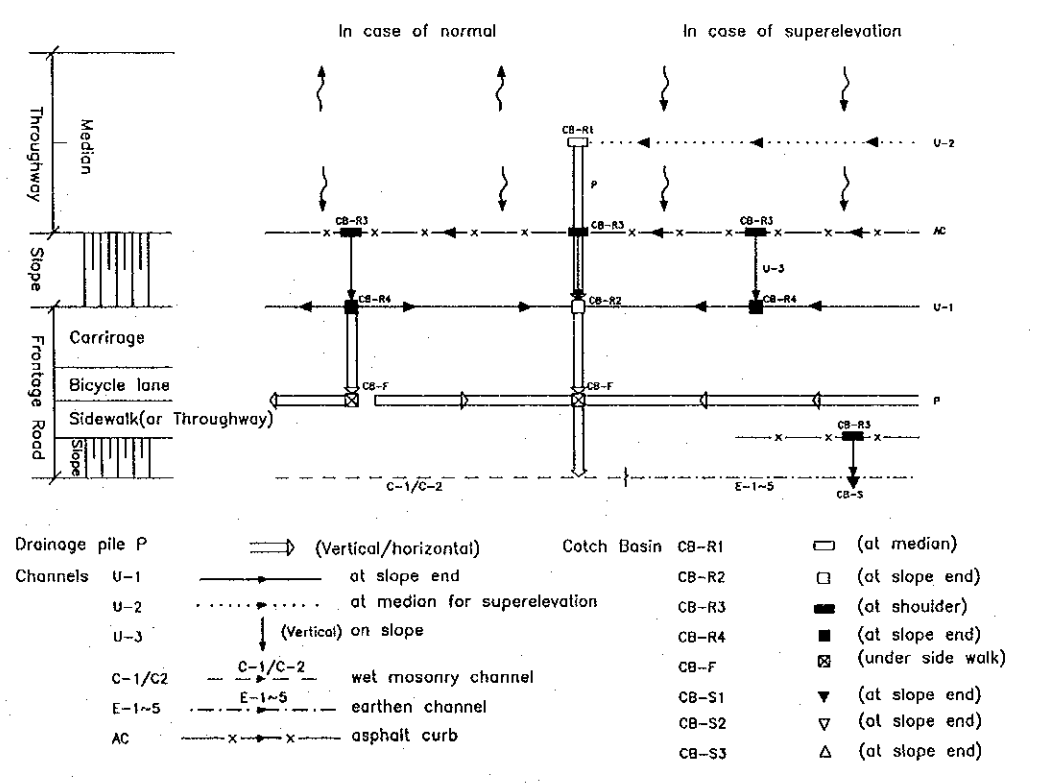
- |                 |                               |                   |                     |
|-----------------|-------------------------------|-------------------|---------------------|
| Drainage pile P | → (Vertical/horizontal)       | Catch Basin CB-R1 | □ (at median)       |
| Channels U-1    | → at slope end                | CB-R2             | □ (at slope end)    |
| U-2             | ⋯ at median for superlevation | CB-R3             | ■ (at shoulder)     |
| U-3             | ↓ (Vertical) on slope         | CB-R4             | ■ (at slope end)    |
| C-1/C2          | — C-1/C-2 wet masonry channel | CB-F              | ⊗ (under side walk) |
| E-1~5           | --- E-1~5 earthen channel     | CB-S1             | ▽ (at slope end)    |
| AC              | — x — x — asphalt curb        | CB-S2             | ▽ (at slope end)    |
|                 |                               | CB-S3             | △ (at slope end)    |

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATASEC
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000. 3. 17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/2000	E-3-5	
THROUGH WAY AND FRONTAGE ROAD (5)			



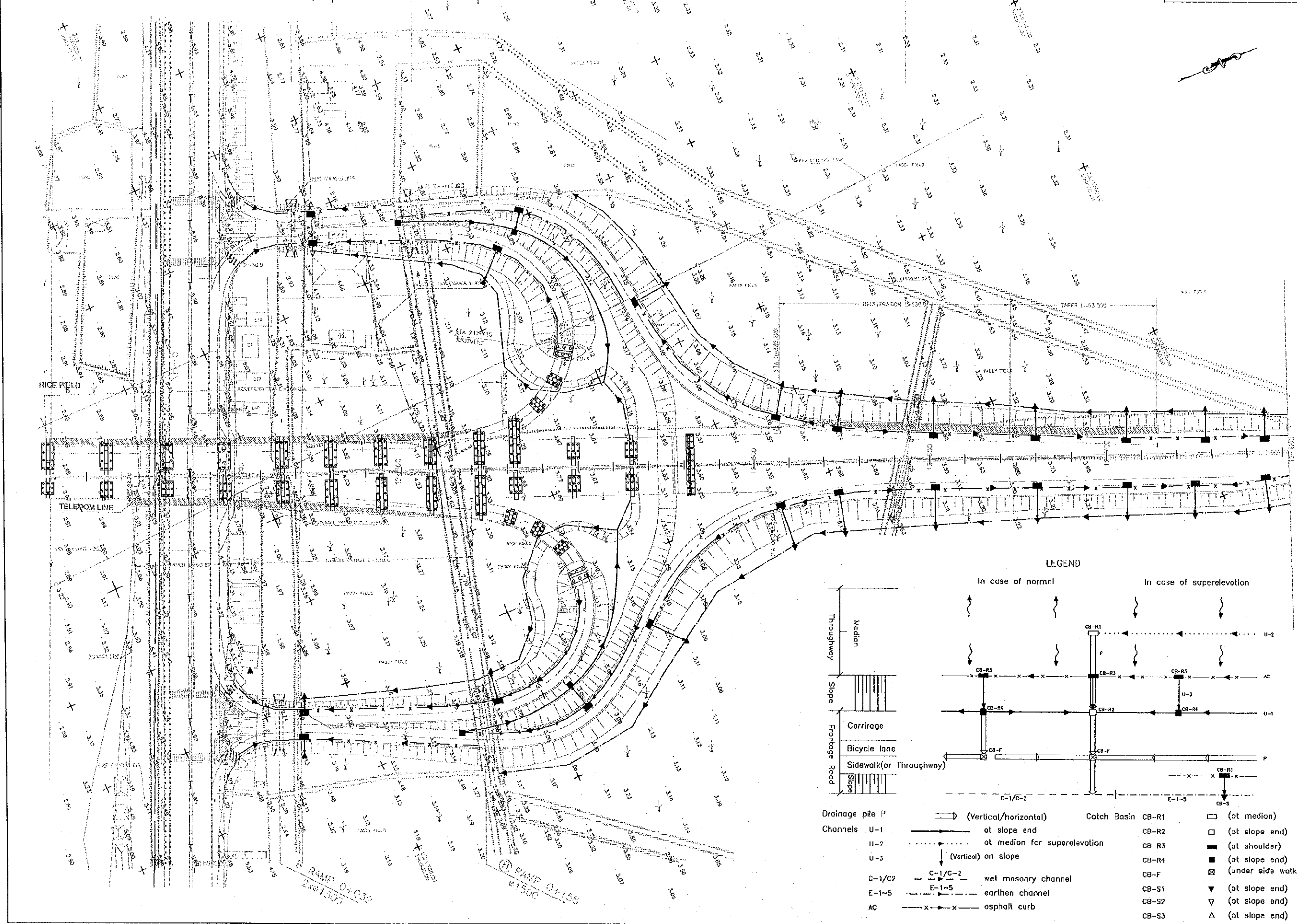
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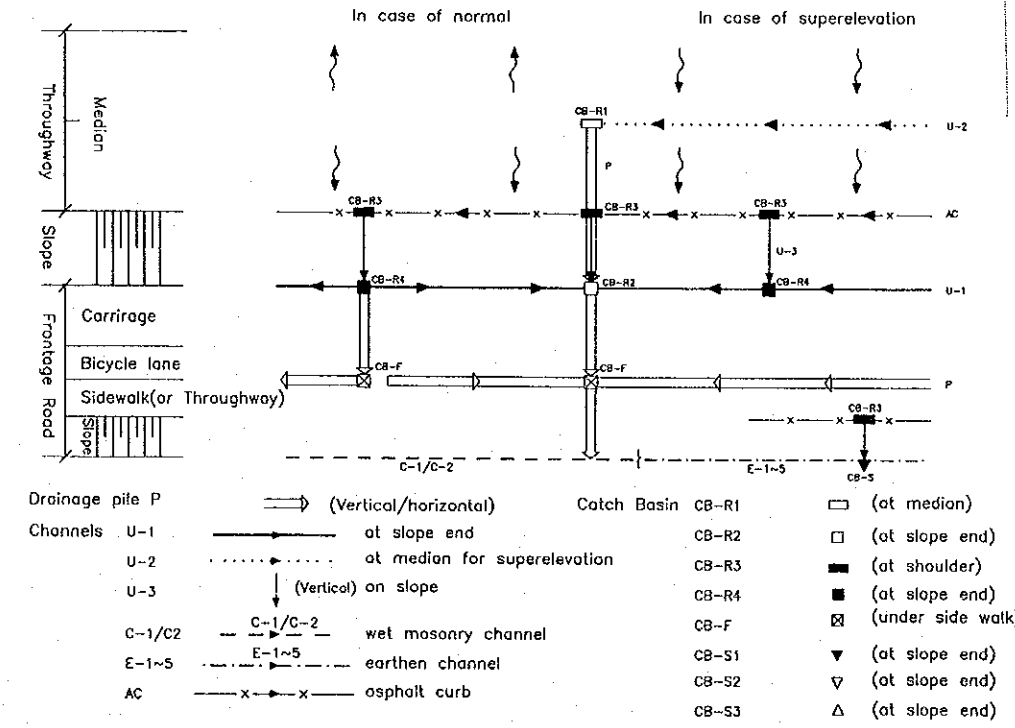
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATASE
PROJECT RED RIVER BRIDGE (HANG THI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE 
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.3.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/2000	E-1-6	
NH.No5 INTERCHANGE (1/2)			

305

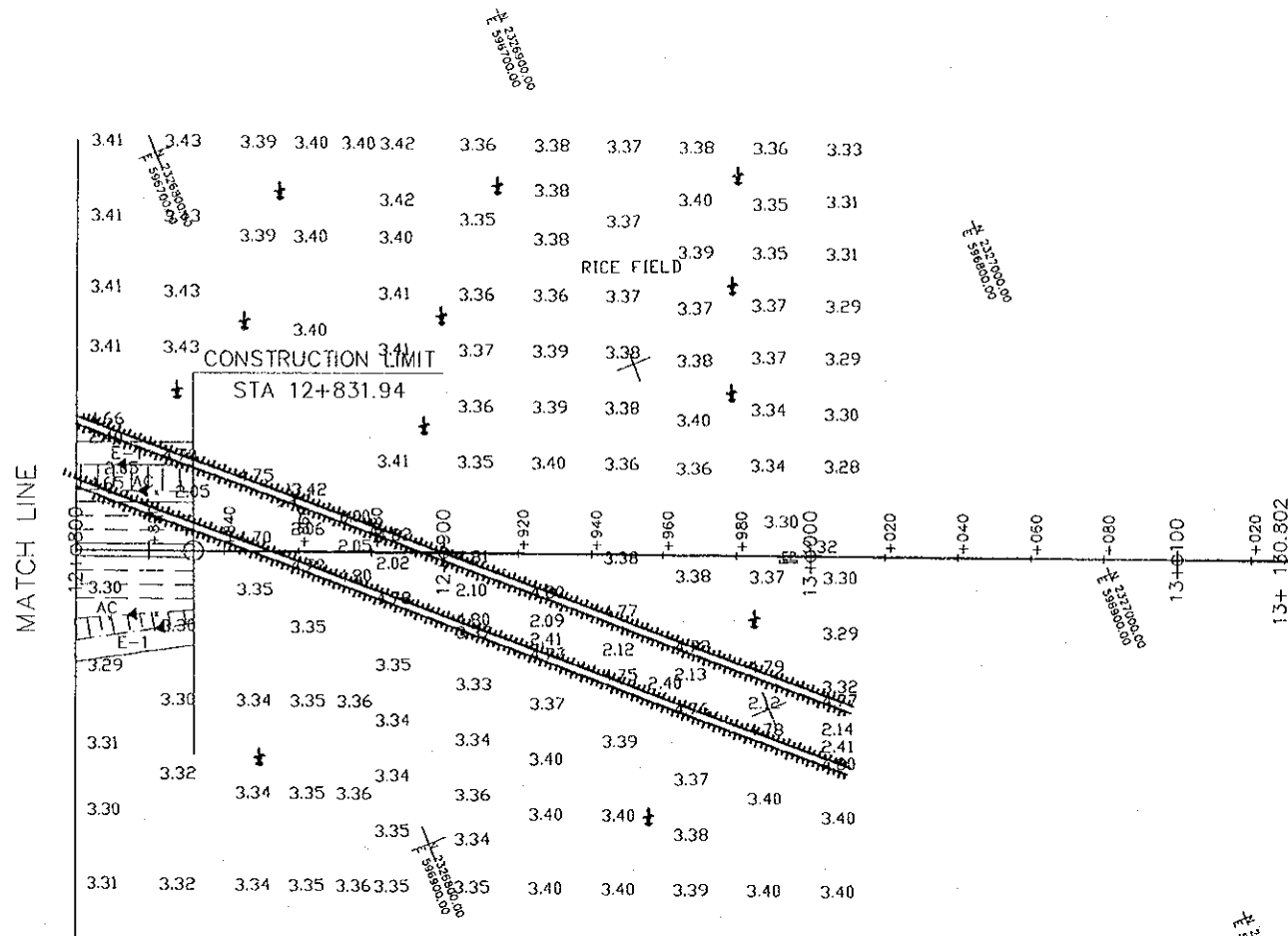


**LEGEND**

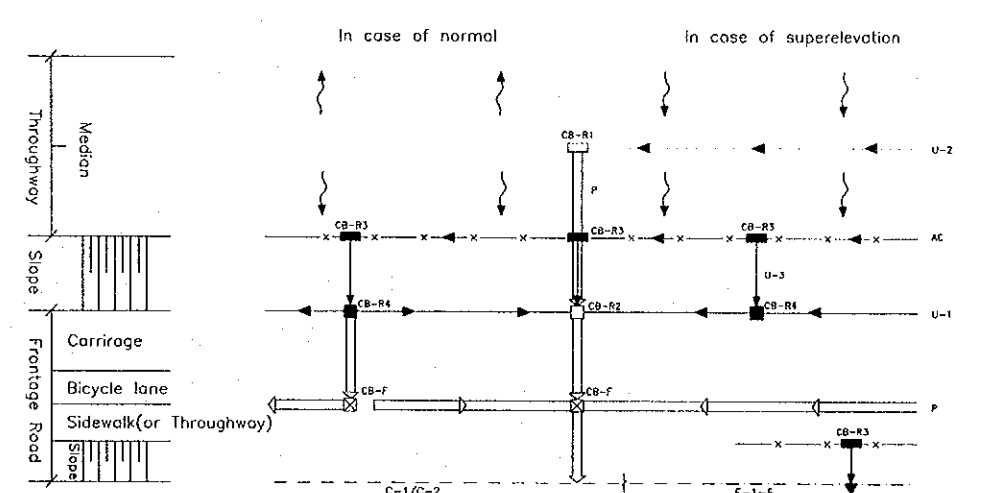


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S.MATSUME
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.6.1

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/2000	E-1-7	
NH No.5 INTERCHANGE (2/2)			



N 2327047.0895  
E 596914.935



- |                 |                                 |                   |                     |
|-----------------|---------------------------------|-------------------|---------------------|
| Drainage pile P | ⇨ (Vertical/horizontal)         | Catch Basin CB-R1 | □ (at median)       |
| Channels U-1    | → at slope end                  | CB-R2             | □ (at slope end)    |
| U-2             | → at median for superelevation  | CB-R3             | ■ (at shoulder)     |
| U-3             | ↓ (Vertical) on slope           | CB-R4             | ■ (at slope end)    |
| C-1/C2          | — C-1/C-2 — wet masonry channel | CB-F              | ⊗ (under side walk) |
| E-1~5           | — E-1~5 — earthen channel       | CB-S1             | ▼ (at slope end)    |
| AC              | — x — asphalt curb              | CB-S2             | ▽ (at slope end)    |
|                 |                                 | CB-S3             | △ (at slope end)    |



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANH LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		DESIGNED BY S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE 
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.09.17

## LIST OF PIPE CULVERT

PACKAGE 2	SCALE	DRAWING No. E-2-1	SHEET No.
LIST OF PIPE CULVERT			

Station	Pipe ø1250		Pipe ø1500		Inlet with Basin	Outlet with Basin	Remarks
	Type	Length(m)	Type	Length(m)	Type	Type	
0+150	A	46.80					Frontage road at dyke interchange
0+150	A	18.60					Ramp road A at dyke interchange
0+620	A	14.50					Ramp road A at dyke interchange
0+700	A	16.00					Ramp road B at dyke interchange
9+383.5	B	90.75			A	A	Relocation of existing channel
9+584.5			A	37.2		B	For draining the runoff of inside dyke interchange
9+695			A	57.75	B	C	
9+932	B	65.2				D	
10+301.5	A	74.6				S	
10+490			B	58.80	C	E	
10+694			A	81.25			
10+874	A	70.4				S	
11+009	A	60.0				S	
11+228	A	41.0				S	
0+039			B	27.6			Ramp road B at NH5 interchange
0+047			B	25.00			Ramp road C at NH5 interchange
0+158			A	36.5			Ramp road B at NH5 interchange
0+115.4			A	29.75			Ramp road C at NH5 interchange
12+585.5	A	63.00				S	
Total	Type A	404.85	Type A	242.45			
	Type B	155.95	Type B	114.40	3NOS.	10NOS.	

Note: 1. The details of work quantity are shown in the detailed drawings  
 2. Pipe culvert type A : 1 lane , type B : 2 lanes









THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM  
 THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT  
 JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

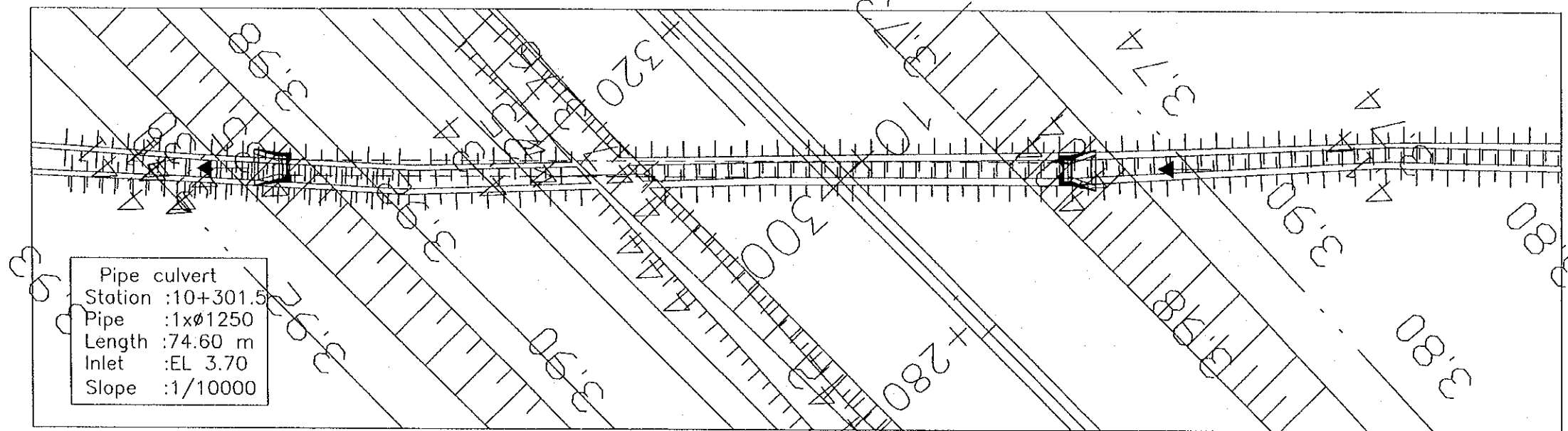
DESIGNED BY  
 NAME S.WATAGE  
 SIGNATURE *[Signature]*  
 DATE 2000. 2. 17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/500	E-2-5	

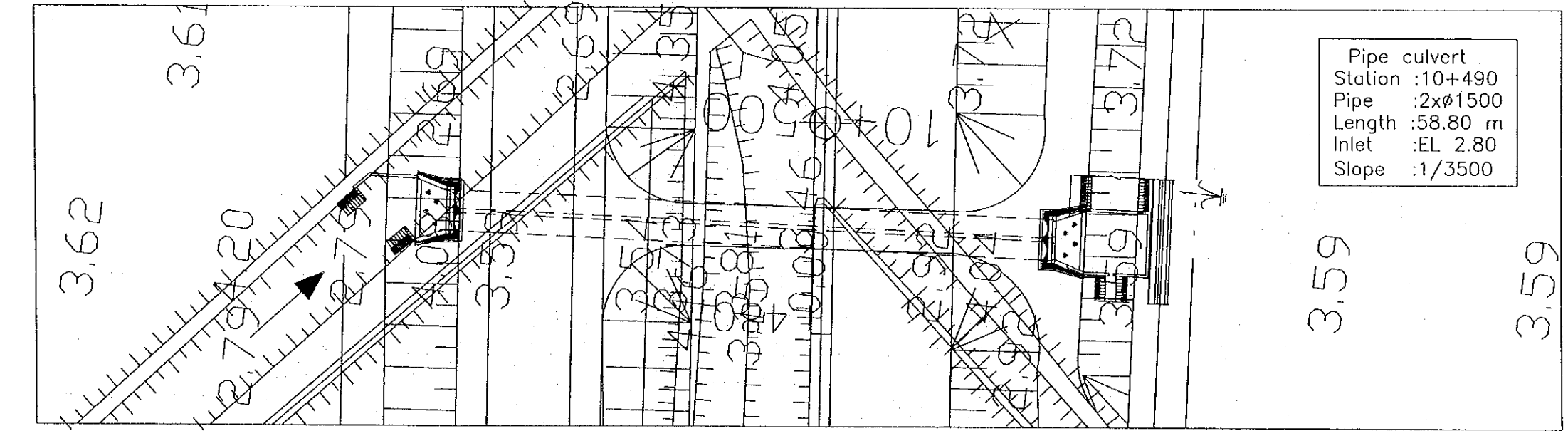
PIPE CULVERT PLAN (4/7)



Pipe culvert  
 Station : 9+932  
 Pipe : 2x $\phi$ 1250  
 Length : 65.20 m  
 Inlet : EL 3.00  
 Slope : 1/5000



Pipe culvert  
 Station : 10+301.5  
 Pipe : 1x $\phi$ 1250  
 Length : 74.60 m  
 Inlet : EL 3.70  
 Slope : 1/10000



Pipe culvert  
 Station : 10+490  
 Pipe : 2x $\phi$ 1500  
 Length : 58.80 m  
 Inlet : EL 2.80  
 Slope : 1/3500

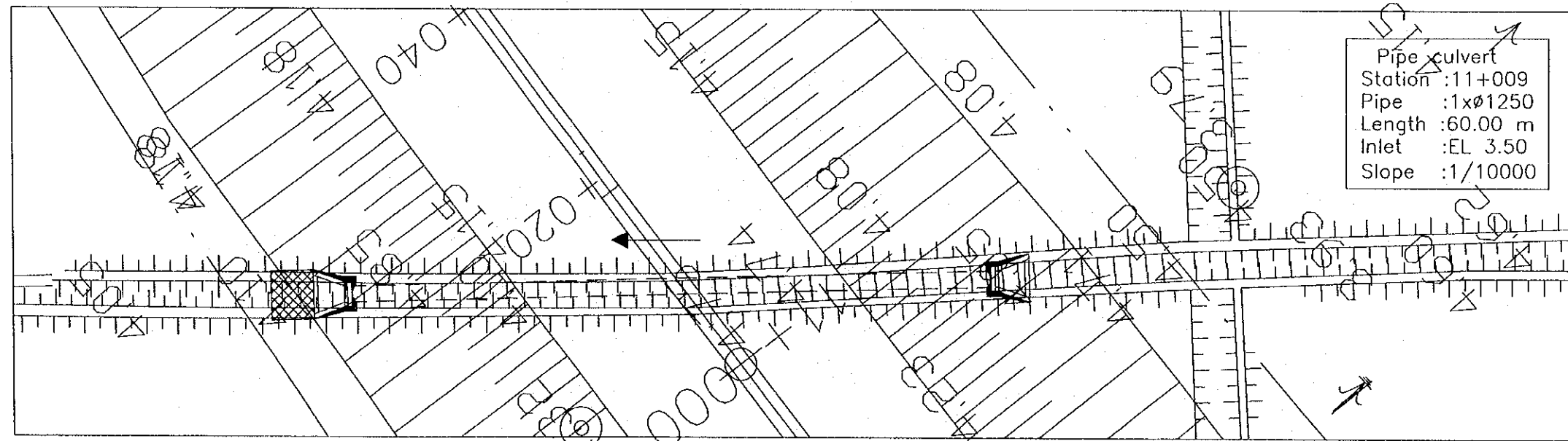
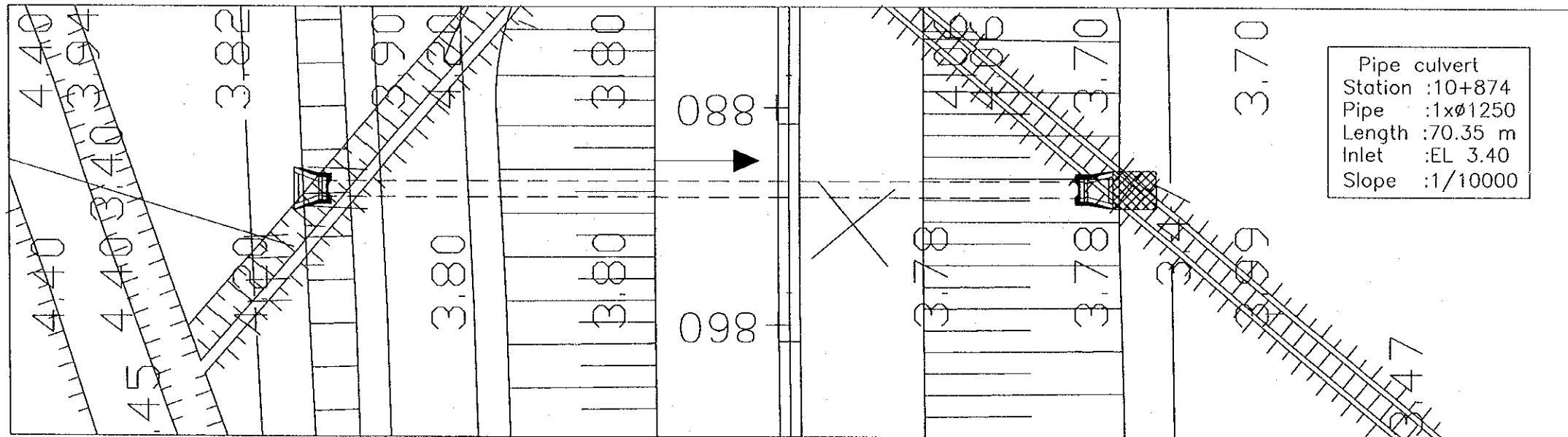
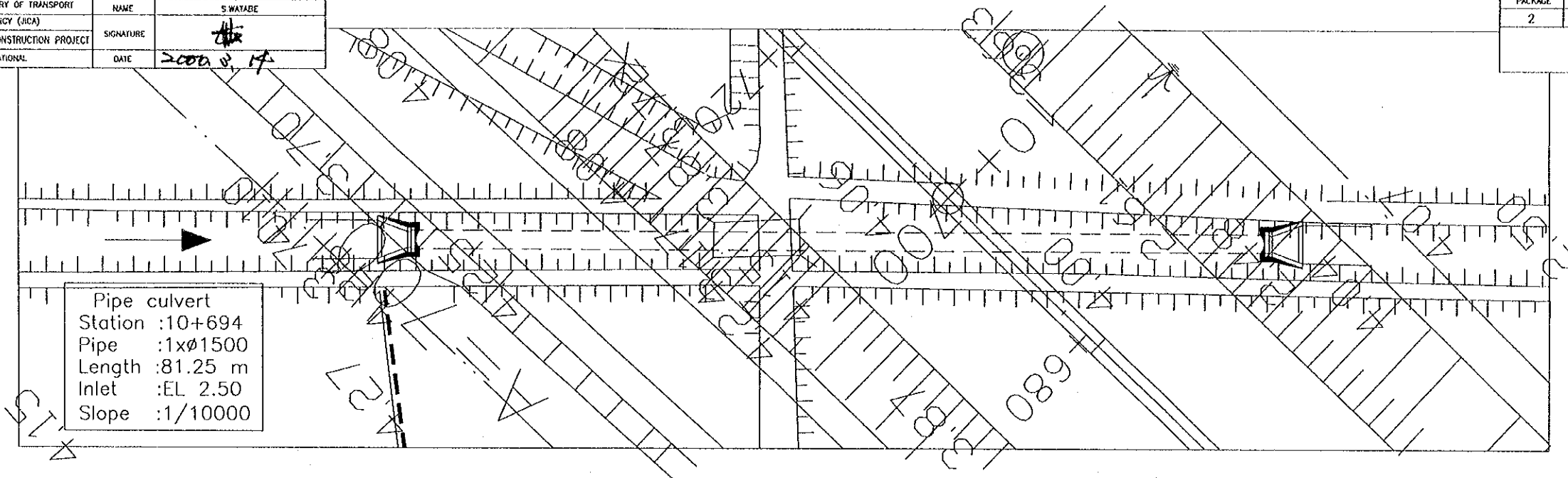
4/11

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM  
 THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT  
 JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  
 PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT  
 CONTRACTOR PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED BY  
 NAME S. WATABE  
 SIGNATURE  
 DATE 2002.8.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/500	E-2-6	

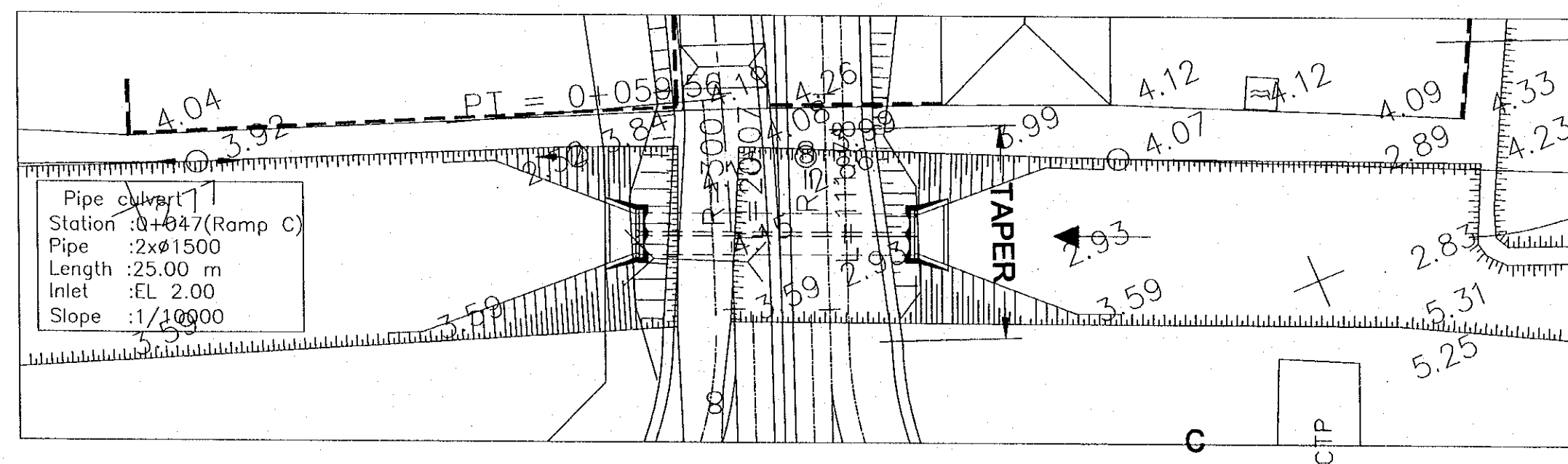
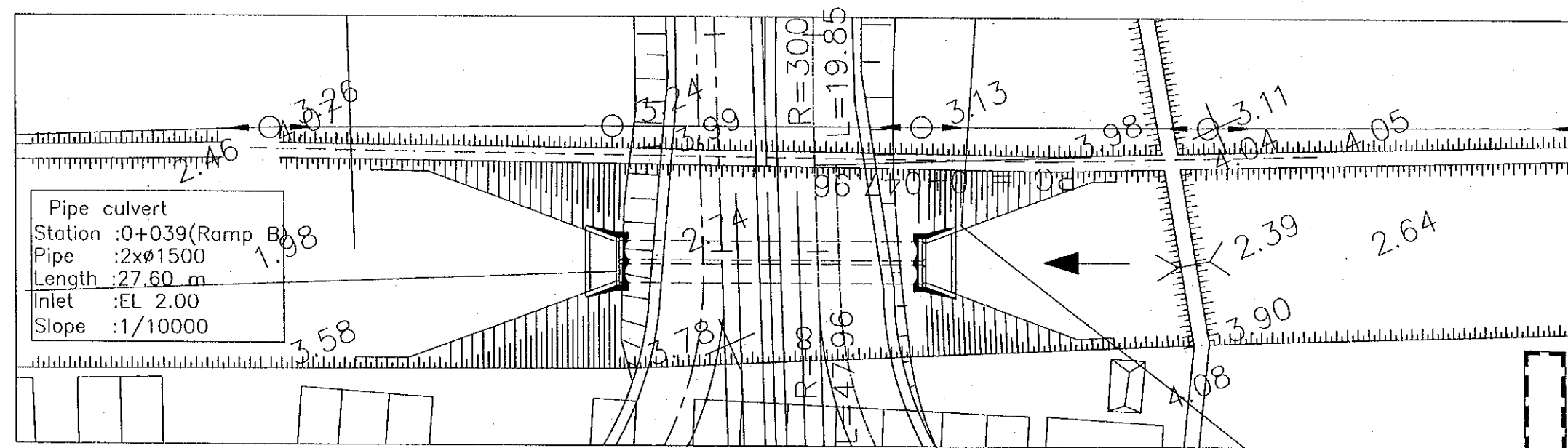
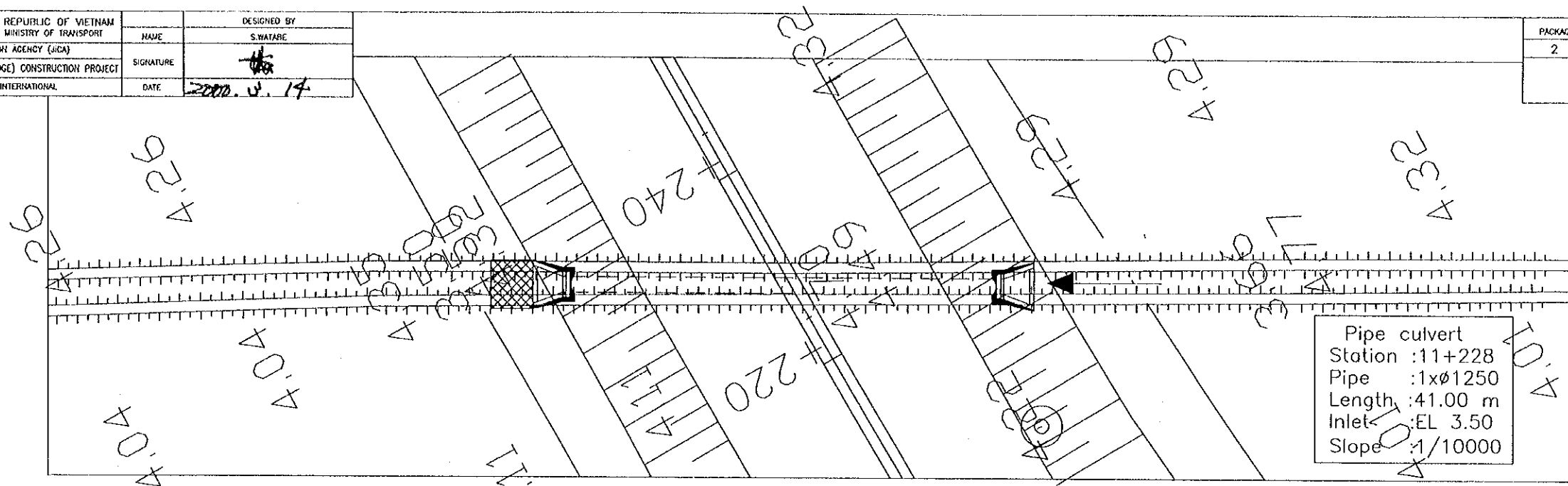
PIPE CULVERT PLAN (5/7)



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATARE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000. 3. 14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/500	E-2-7	

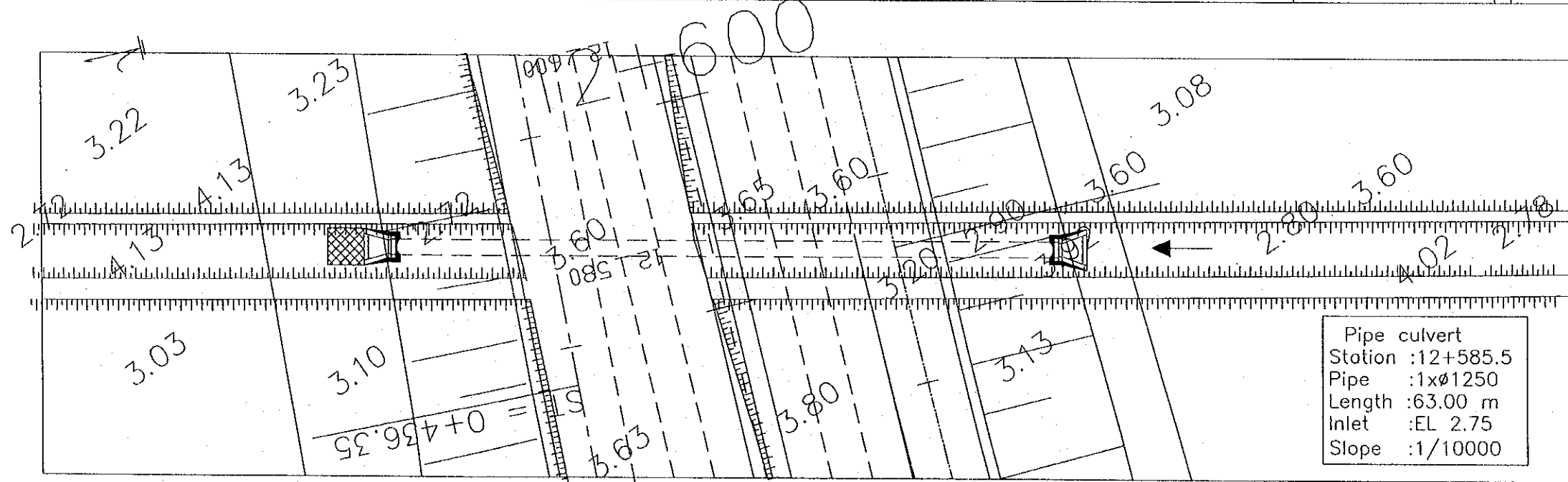
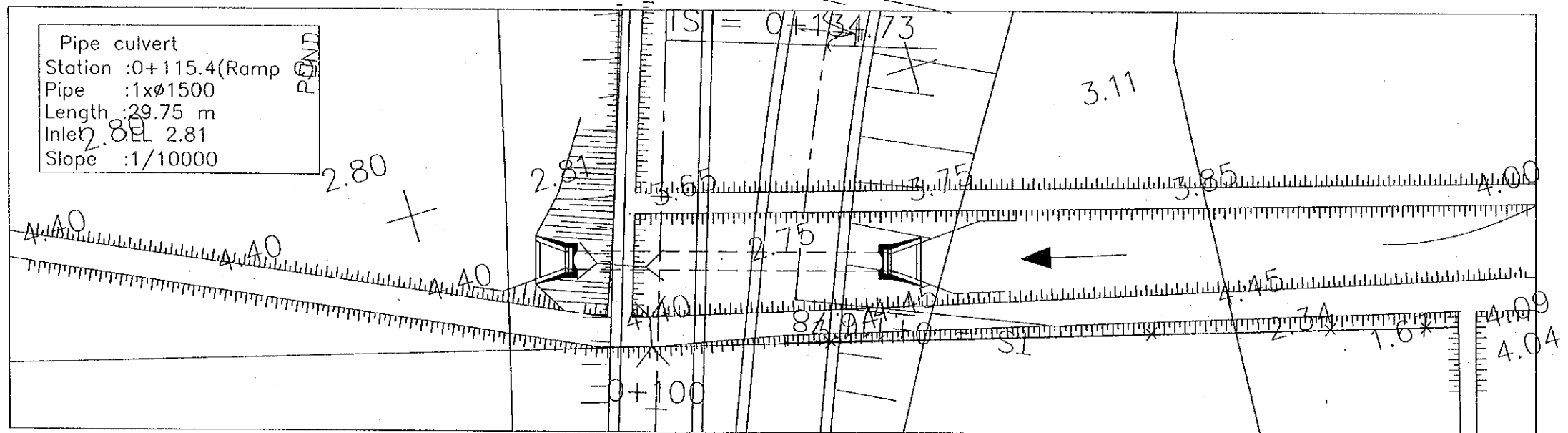
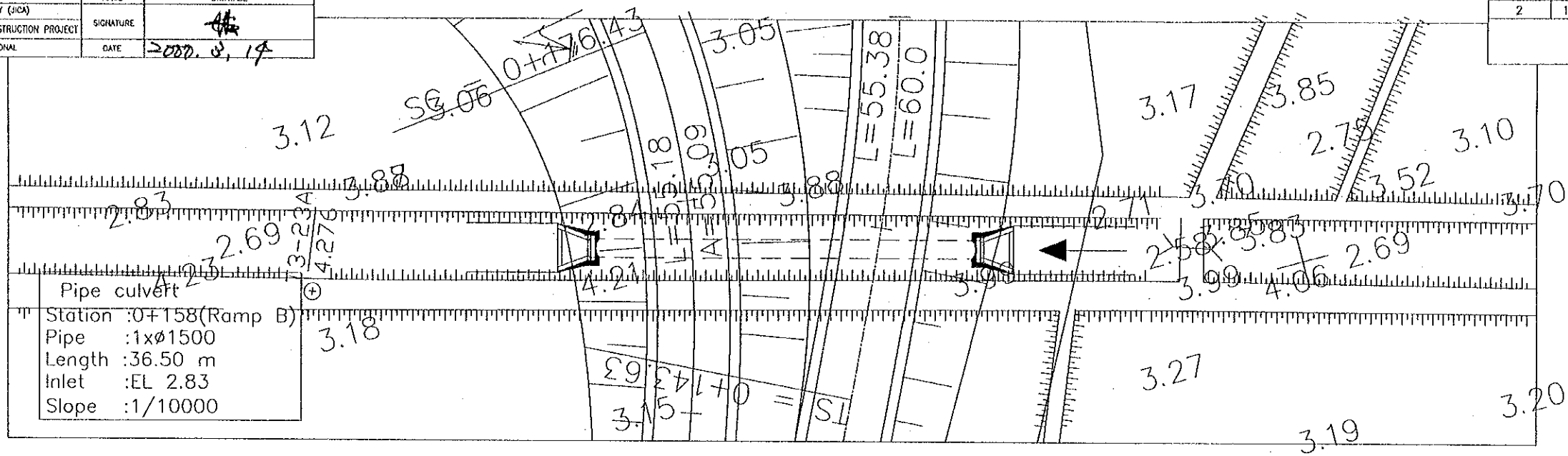
PIPE CULVERT PLAN (6/7)



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S.WATAGE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000. 02. 17	

PACKAGE 2	SCALE 1/500	DRAWING No. E-2-B	SHEET No.
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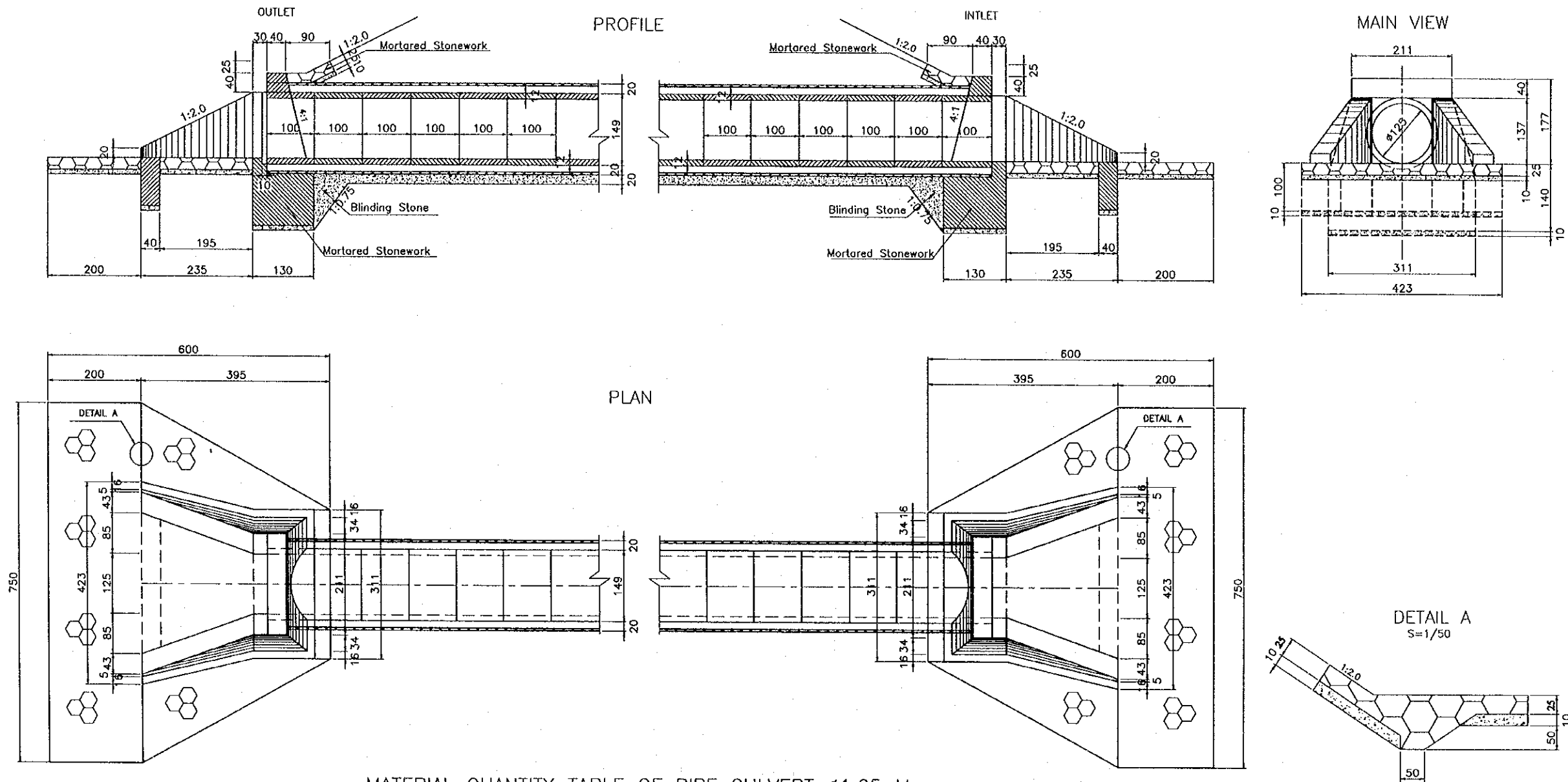
PIPE CULVERT PLAN (1/7)



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM DANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.08.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	E-2-9	
HEAD WALL OF PIPE CULVERT Ø1.25M			

## HEAD WALL OF PIPE CULVERT Ø1.25M



MATERIAL QUANTITY TABLE OF PIPE CULVERT Ø1.25 M

		Mortored stonework	Blinding stone	Mortar	Pipe culvert Ø1.25x1.0	Cement Mortar
	Unit	m3	m3	m3	m	m3
Inlet	Foundation	7.35	0.57			
	Head wall	1.57		0.25	1.0	0.05
	Wing wall	4.75		0.75		
	Protection	10.91	4.36			
Outlet	Foundation	7.35	0.57			
	Head wall	1.57		0.25	1.0	0.05
	Wing wall	4.75		0.75		
	Protection	10.91	4.36			
Total		49.16	9.86	2.00	2.0	0.1

**NOTE**

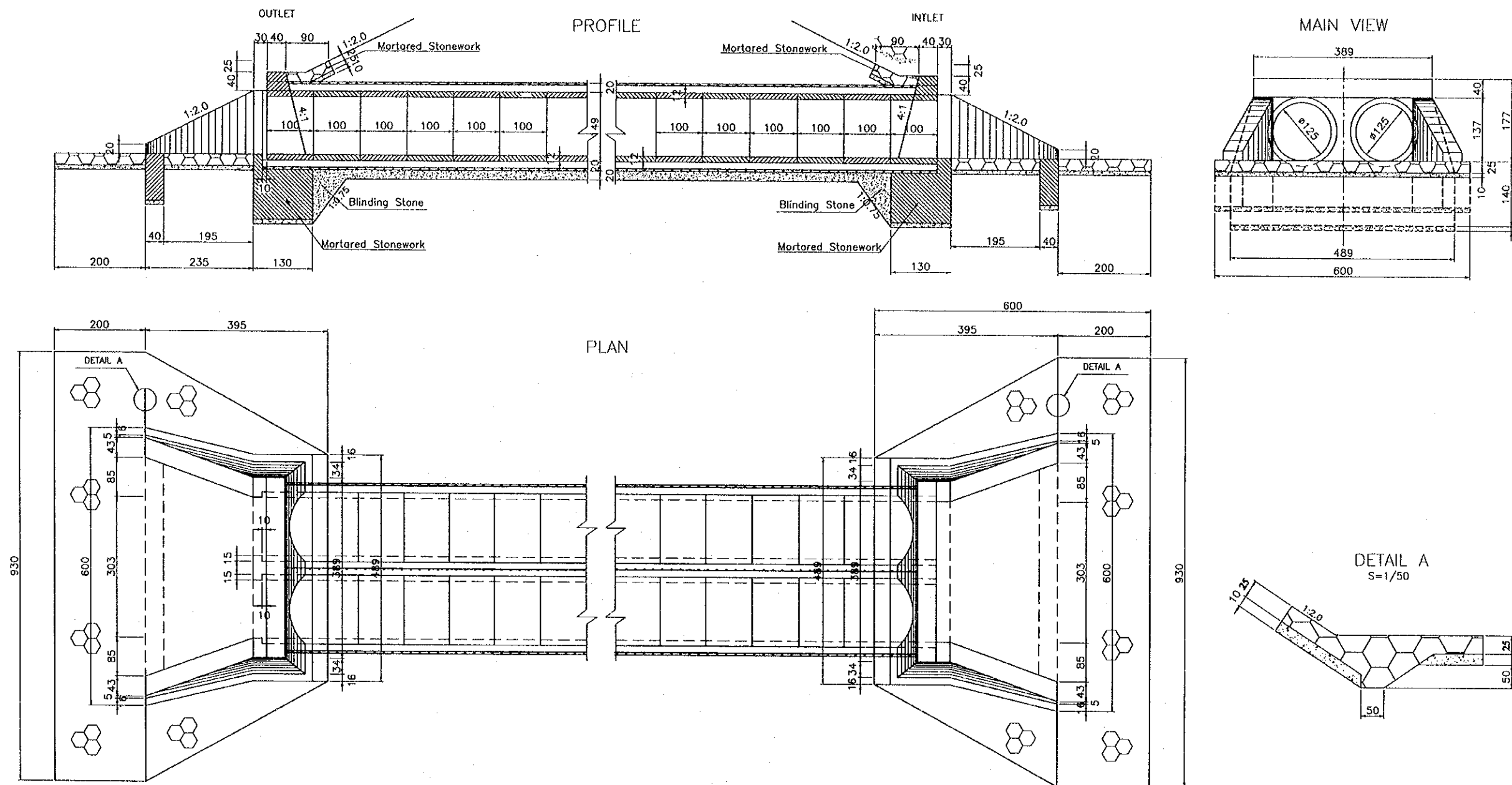
Construction of this pipe culvert shall be implemented in consideration of the consolidation of embankment. This is expected to be approximately 30 days after completion of embankment.



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	E-2-10	
HEAD WALL OF PIPE CULVERT 2x $\phi$ 1.25M			

## HEAD WALL OF PIPE CULVERT 2 $\phi$ 1.25M



MATERIAL QUANTITY TABLE OF PIPE CULVERT 2 $\phi$ 1.25 M

		Mortared stonework	Blinding stone	Mortar	Pipe culvert $\phi$ 1.25x1.0	Cement Mortar
	Unit	m <sup>3</sup>	m <sup>3</sup>	m <sup>3</sup>	m	m <sup>3</sup>
Inlet	Foundation	10.86	0.83			
	Head wall	2.53		0.40	2.00	0.08
	Wing wall	4.75		0.75		
	Protection	14.18	5.67			
Outlet	Foundation	10.86	0.83			
	Head wall	2.53		0.40	2.00	0.08
	Wing wall	4.75		0.75		
	Protection	14.18	5.67			
Total		64.64	13.00	2.30	4.00	0.16

**NOTE**

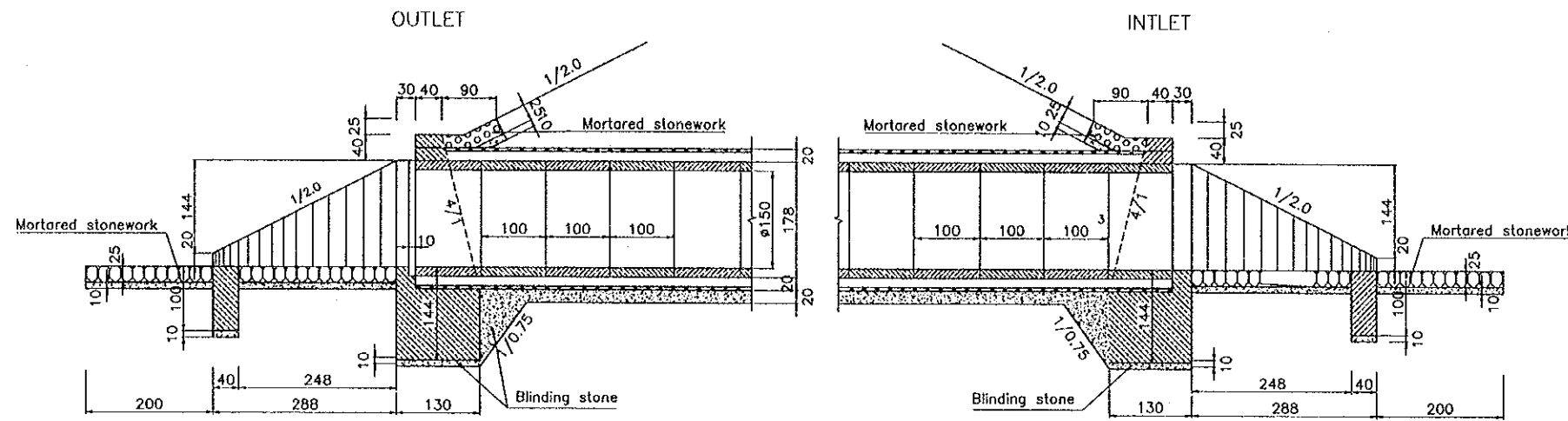
Construction of this pipe culvert shall be implemented in consideration of the consolidation of embankment. This is expected to be approximately 30 days after completion of embankment.

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THUNG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE
PROJECT RED RIVER BRIDGE (NUANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000, 3, 17	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

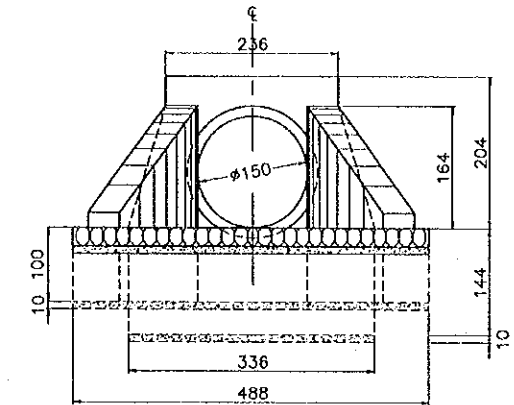
# HEAD WALL OF PIPE CULVERT $\phi 1.50\text{m}$

PACKAGE 2	SCALE 1/100	DRAWING No. E-2-11	SHEET No.
HEAD WALL OF PIPE CULVERT $\phi 1.50\text{M}$			

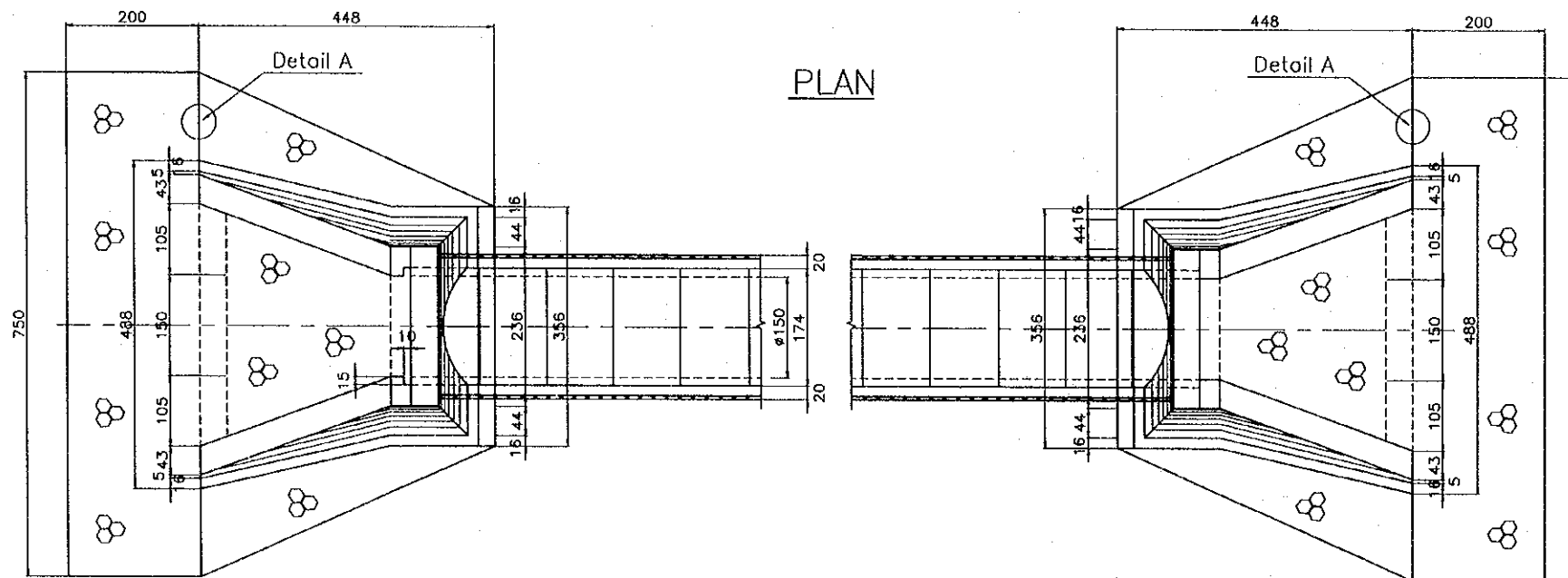
## PROFILE



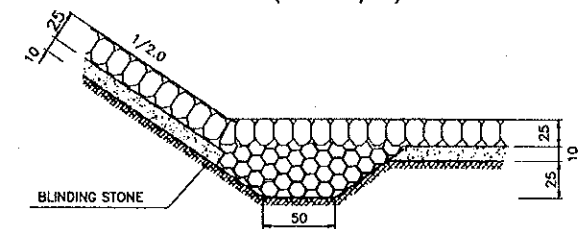
## MAIN VIEW



## PLAN



## DETAIL A (Scale : 1/50)



MATERIAL QUANTITIES TABLE OF PIPE CULVERT  $\phi 1.50\text{ M}$

		Mortared stonework	Blinding stone	Mortar	Pipe culvert $\phi 1.50 \times 1.0\text{ m}$	Cement Mortar
	Unit	m3	m3	m3	m	m3
Inlet	Foundation	8.24	0.63			
	Head wall	2.00		0.32	1.00	0.06
	Wing wall	6.62		1.05		
	Protection	12.01	4.80			
Outlet	Foundation	8.24	0.63			
	Head wall	2.00		0.32	1.00	0.06
	Wing wall	6.62		1.05		
	Protection	12.01	4.80			
Total		57.74	10.86	2.74	2.00	0.12

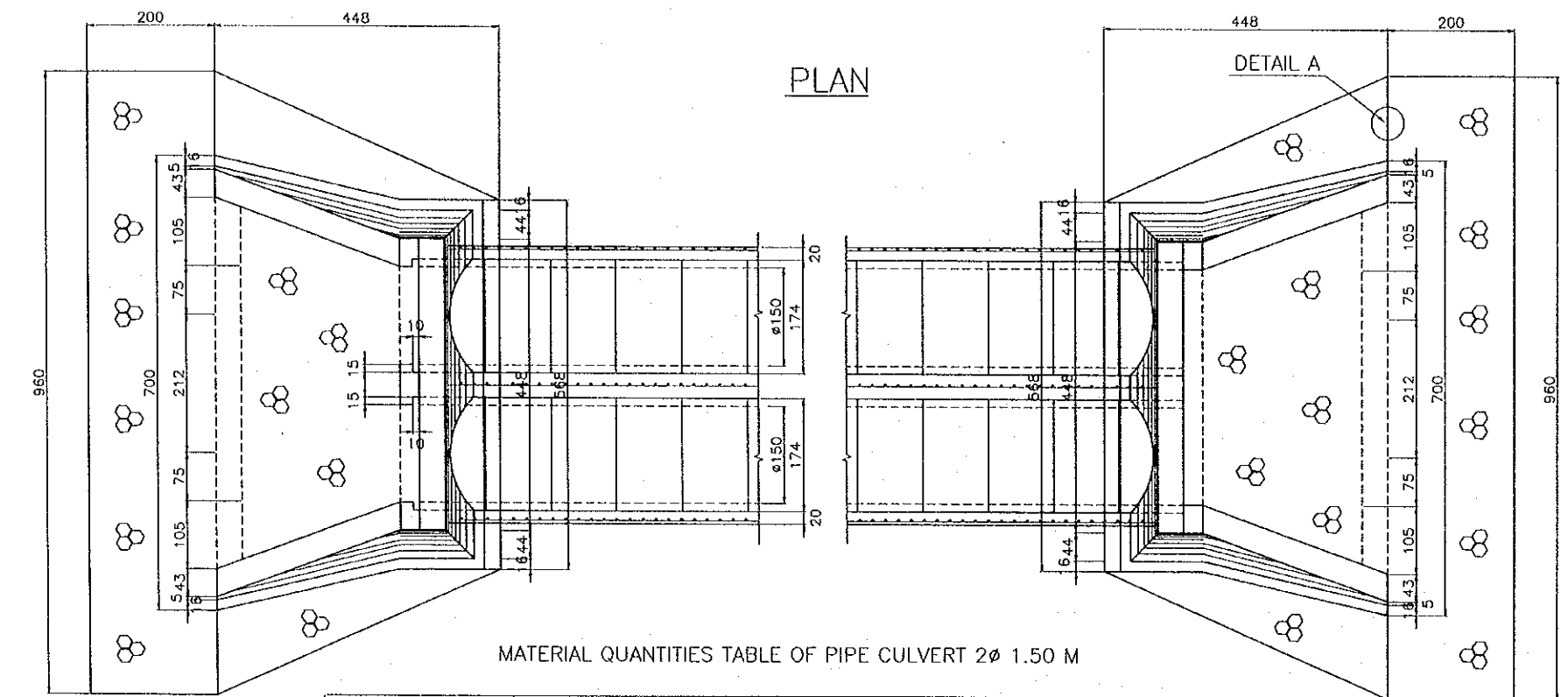
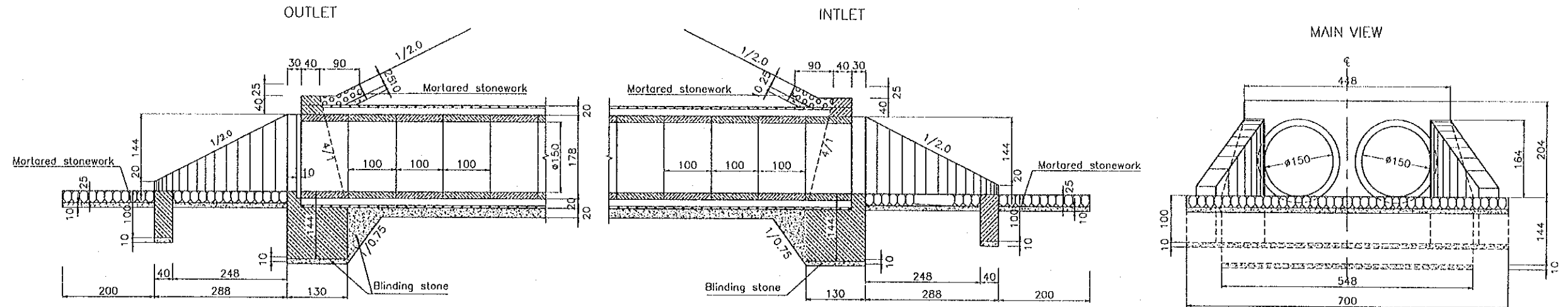
## NOTE

Construction of this culvert shall be implemented in consideration of the consolidation of embankment. This is expected to be approximately 30 days after completion of embankment

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATAGE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		DATE	
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.03.14

# HEAD WALL OF PIPE CULVERT 2Ø1.50m PROFILE

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	E-2-12	
HEAD WALL OF PIPE OF CULVERT 2xØ1.50M			



MATERIAL QUANTITIES TABLE OF PIPE CULVERT 2Ø 1.50 M

		Mortored stonework	Blinding stone	Mortar	Pipe culvert Ø1.50x1.0 m	Cement Mortar
Unit		m3	m3	m3	m	m3
Inlet	Foundation	13.06	0.99			
	Head wall	3.34		0.53	2.00	0.10
	Wing wall	6.62		1.05		
	Protection	16.17	6.47			
Outlet	Foundation	13.06	0.99			
	Head wall	3.34		0.53	2.00	0.10
	Wing wall	6.62		1.05		
	Protection	16.17	6.47			
Total		78.38	14.92	3.16	4.00	0.20

**NOTE**

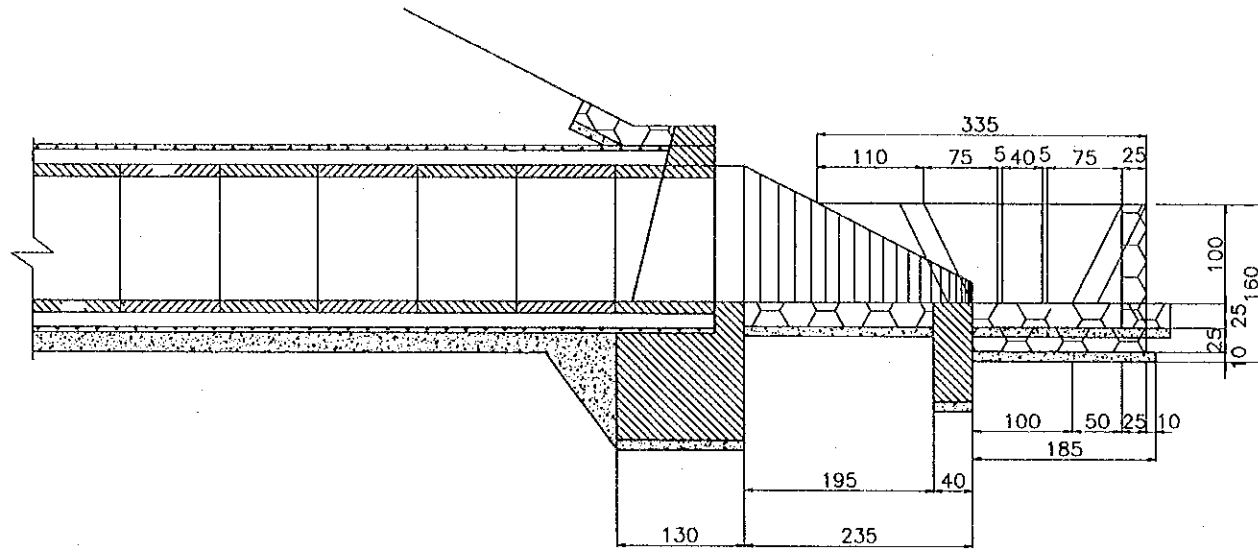
Construction of this culvert shall be implemented in consideration of the consolidation of embankment. This is expected to be approximately 30 days after completion of embankment

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATAGE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATAGE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000. 3. 17

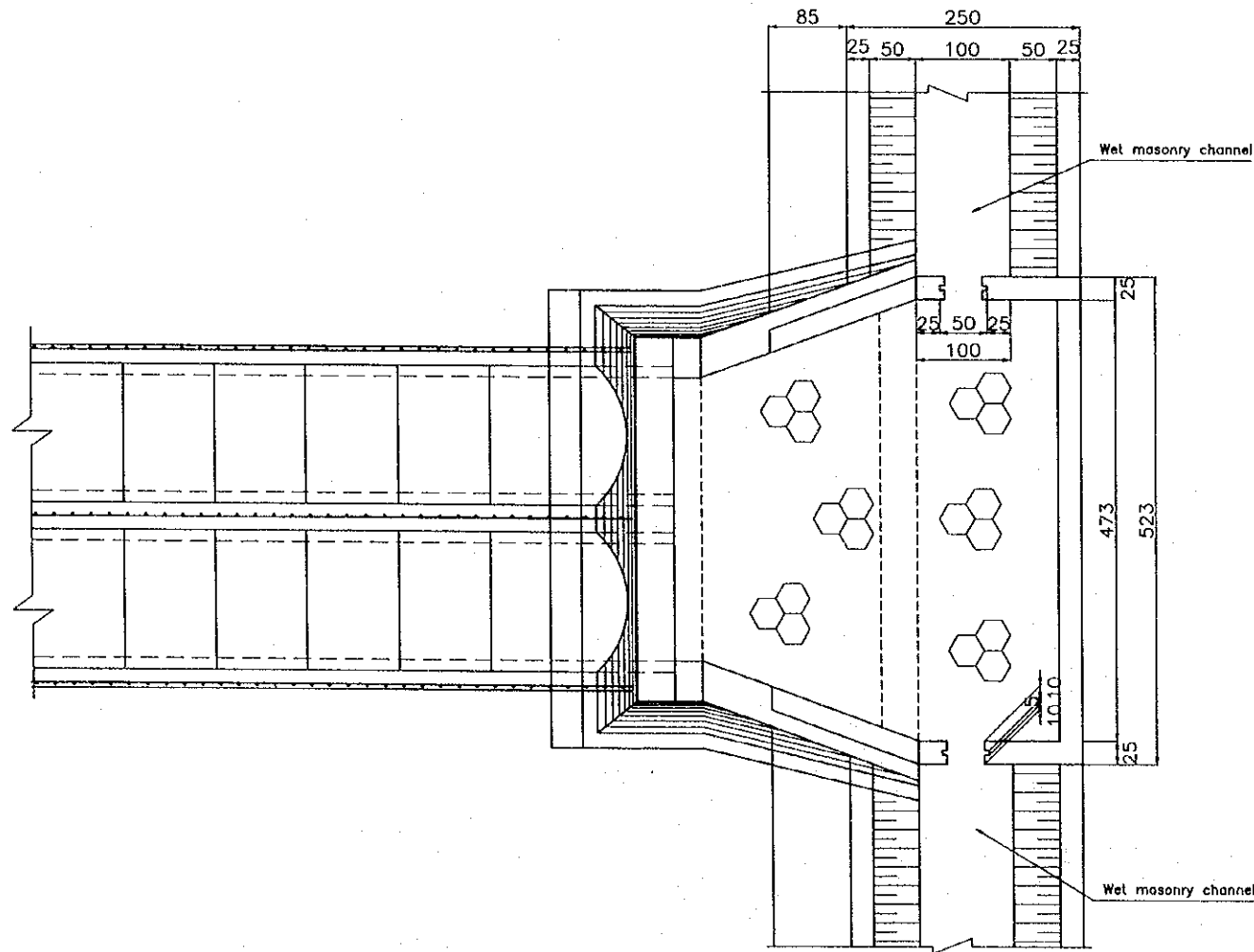
PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/75	E-2-13	
DETAIL OF PIPE CULVERT INLET (TYPE A) AT STA. 9+383.5			

## DETAIL OF PIPE CULVERT INLET (TYPE A) AT STA. 9+383.5

ELEVATION



PLAN



WORK QUANTITY

Mortared stone	4.98 m <sup>3</sup>
Blinding stone	1.00 m <sup>3</sup>
Excavation	24.39 m <sup>3</sup>
Backfilling	9.66 m <sup>3</sup>

NOTE

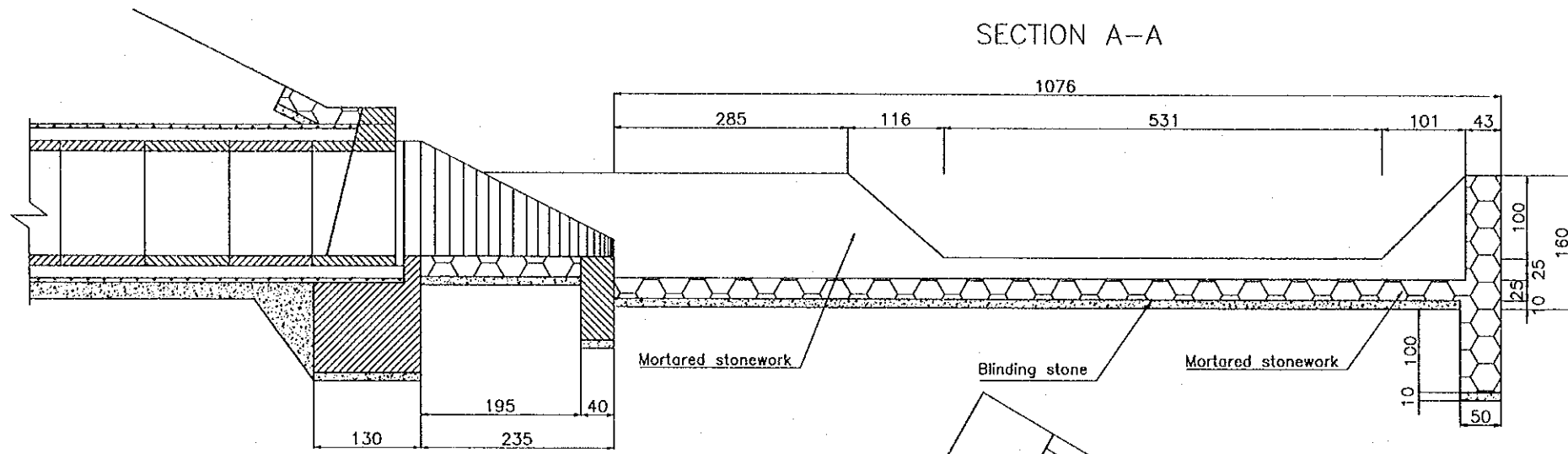
- 1- Stop log shall be installed on the basis of irrigation purpose
- 2- All dimentions are shown in centimeter

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THUNG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE <i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000. 0. 17

# DETAIL OF PIPE CULVERT OUTLET (TYPE A) AT STA. 9+383.5

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/75	E-2-14	
DETAIL OF PIPE CULVERT OUTLET (TYPE A) AT STA. 9+383.5			

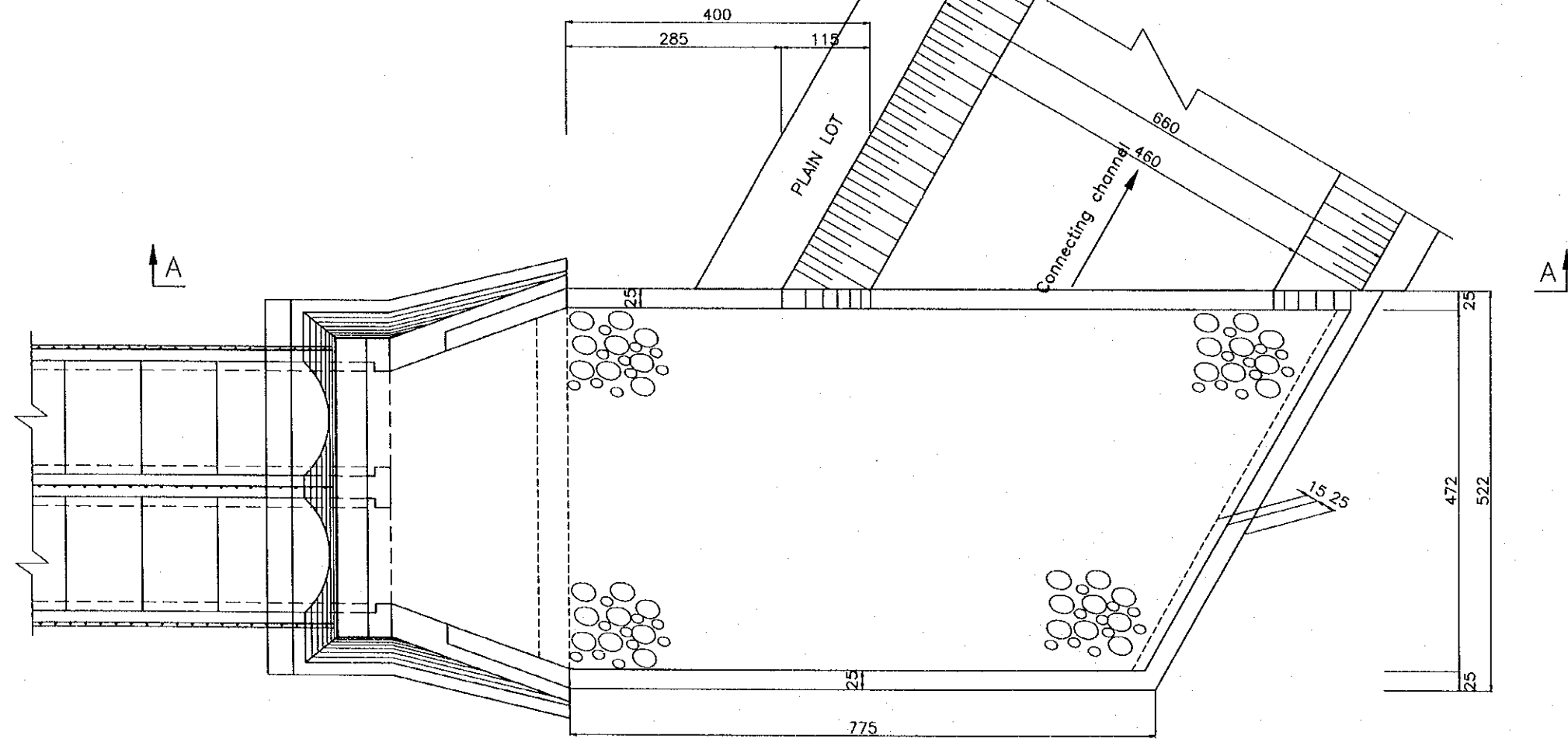
SECTION A-A



WORK QUANTITY

Mortared stone	21.29 m <sup>3</sup>
Blinding stone	5.13 m <sup>3</sup>
Excavation	98.98 m <sup>3</sup>
Backfilling	15.56 m <sup>3</sup>

PLAN



NOTE

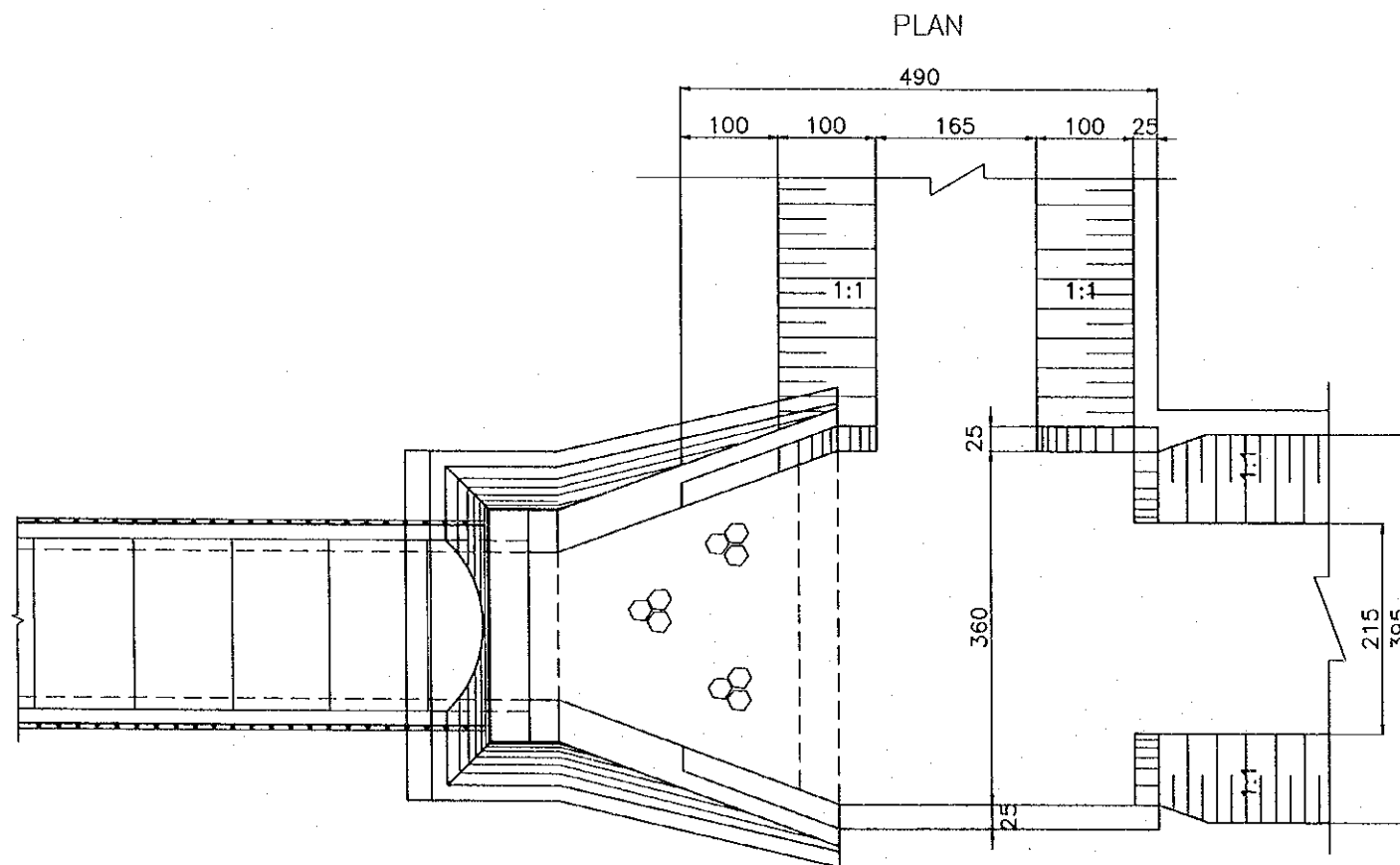
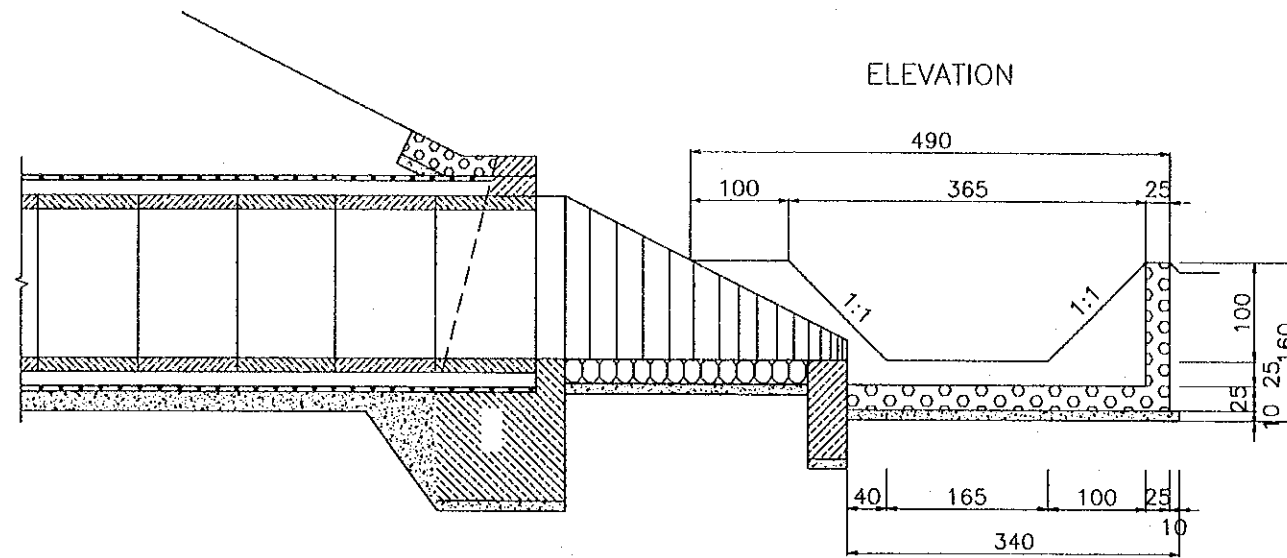
- 1- Stop log shall be installed on the basis of irrigation purpose
- 2- All dimensions are shown in centimeter

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000. 8. 17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/75	E-2-15	

DETAIL OF PIPE CULVERT OUTLET (TYPE B) AT STA. 9+584.5

DETAIL OF PIPE CULVERT OUTLET (TYPE B) AT STA. 9+584.5



WORK QUANTITY

Mortared stone	6.60 m <sup>3</sup>
Blinding stone	1.46 m <sup>3</sup>
Excavation	33.06 m <sup>3</sup>
Backfilling	11.31 m <sup>3</sup>

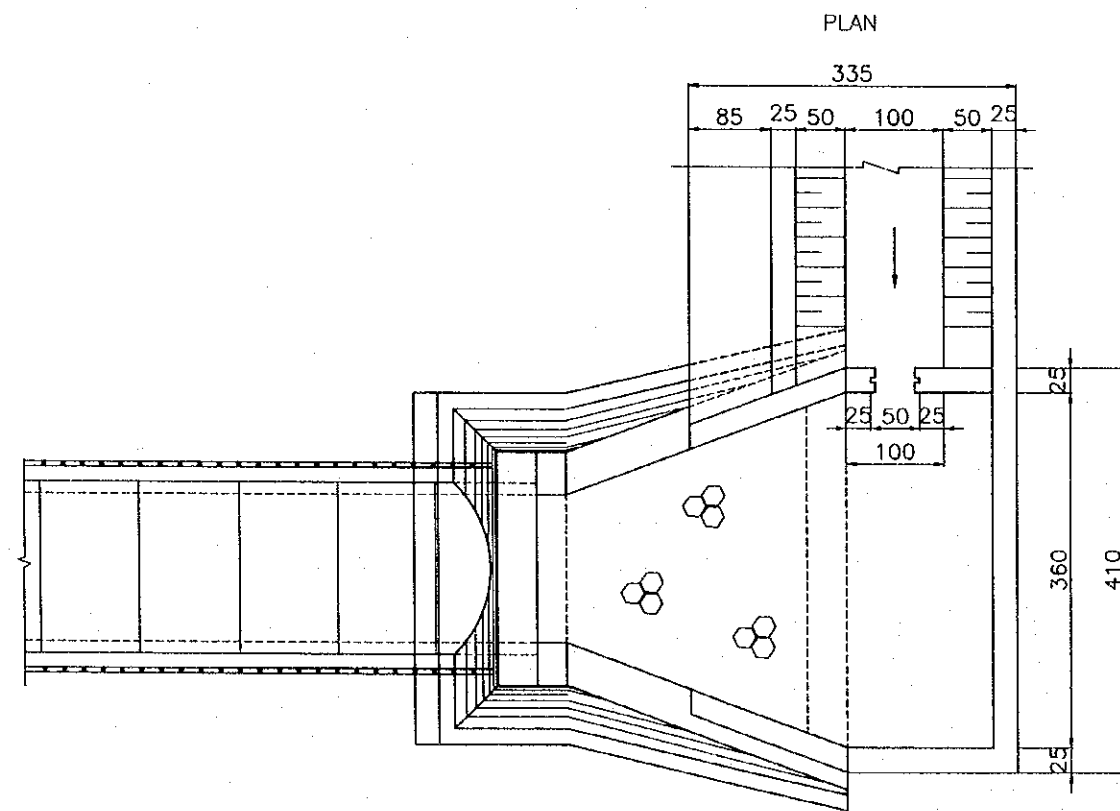
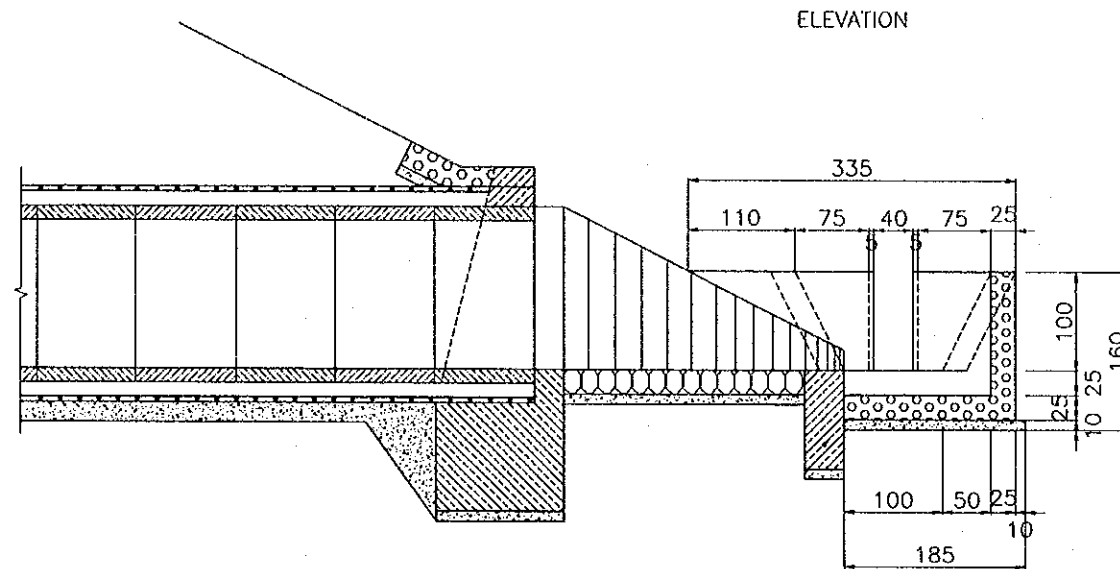
NOTE

- 1- Stop log shall be installed on the basis of irrigation purpose
- 2- All dimention are shown in centimeter

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATABE
PROJECT RED RIVER BRIDGE (HUANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000. 08. 14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/75	E-2-16	
DETAIL OF PIPE CULVERT INLET (TYPE B) AT STA. 9+695			

DETAIL OF PIPE CULVERT INLET (TYPE B) AT STA. 9+695



WORK QUANTITY

Mortared stone	4.23 m <sup>3</sup>
Blinding stone	0.80 m <sup>3</sup>
Excavation	20.17 m <sup>3</sup>
Backfilling	8.61 m <sup>3</sup>

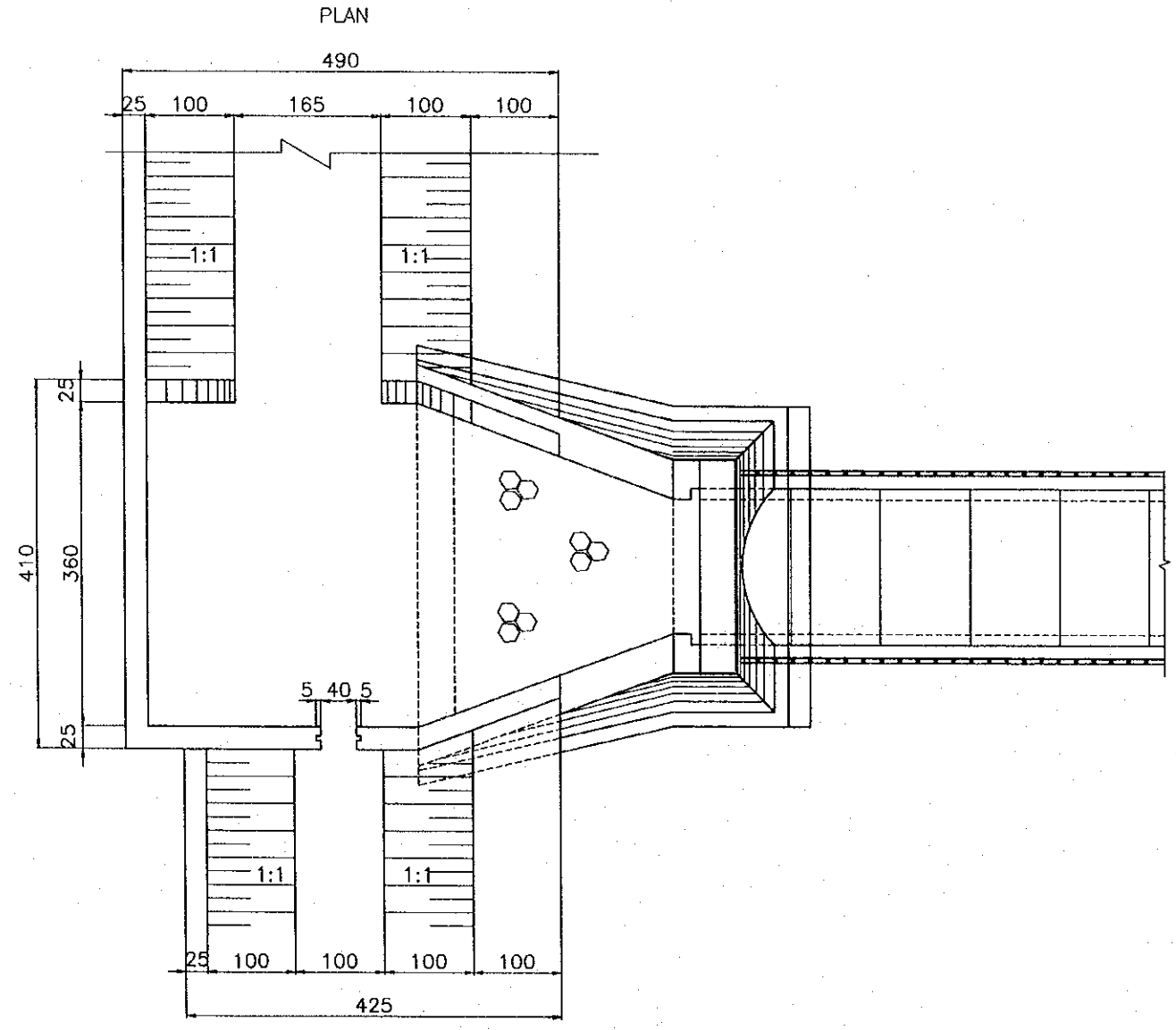
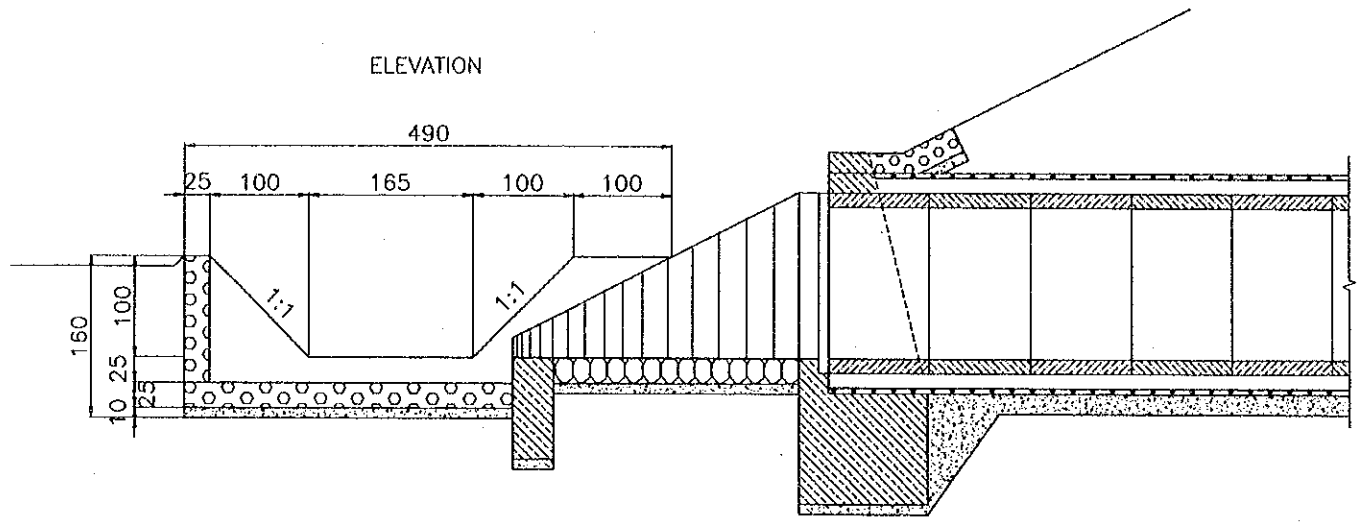
NOTE

- 1- Stop log shall be installed on the basis of irrigation purpose
- 2- All dimensions are shown in centimeter

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.8.17

DETAIL OF PIPE CULVERT OUTLET (TYPE C) AT STA. 9+695

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/75	E-2-17	
DETAIL OF PIPE CULVERT OUTLET (TYPE C) AT STA. 9+695			



WORK QUANTITY

Mortared stone	6.29 m <sup>3</sup>
Blinding stone	1.46 m <sup>3</sup>
Excavation	33.06 m <sup>3</sup>
Backfilling	11.31 m <sup>3</sup>

NOTE

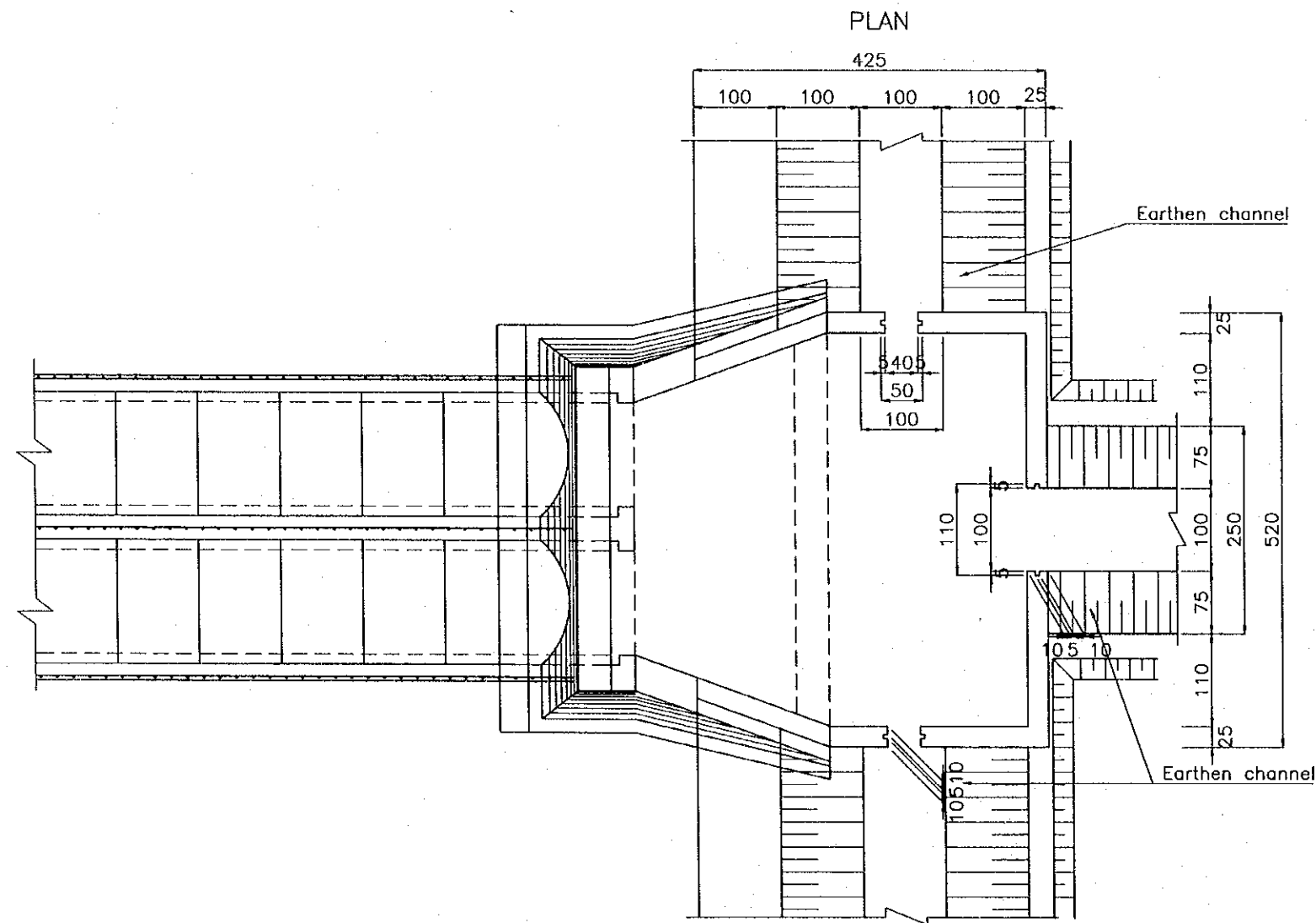
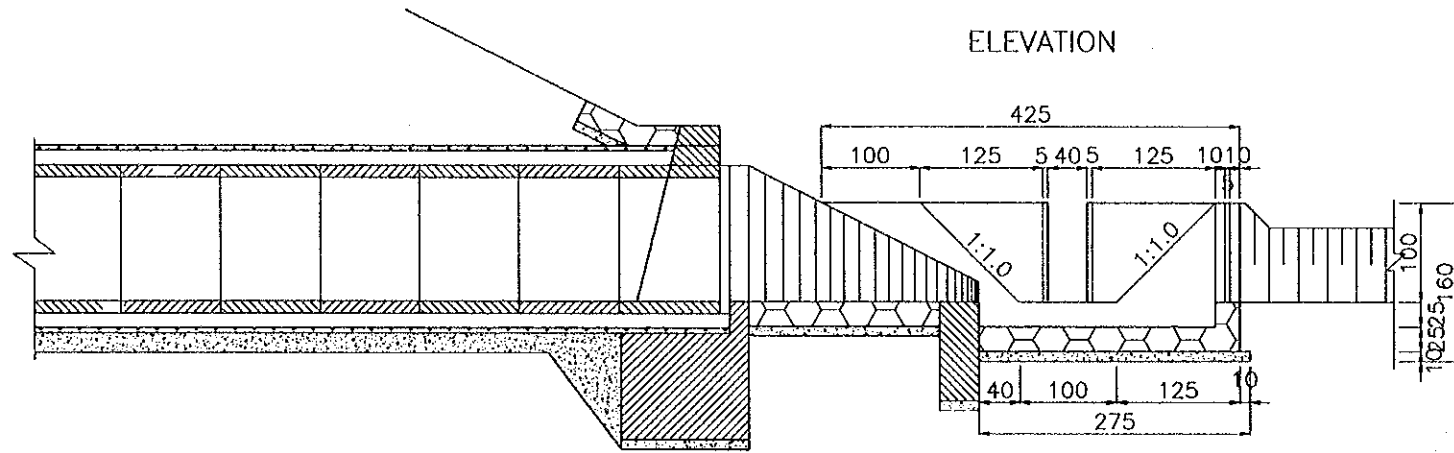
- 1- Stop log shall be installed on the basis of irrigation purpose
- 2- All dimentions are shown in centimeter



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. NATADE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000. 08. 14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/75	E-2-18	
DETAIL OF PIPE CULVERT OUTLET (TYPE D) AT STA. 9+932			

DETAIL OF PIPE CULVERT OUTLET (TYPE D) AT STA. 9+932



WORK QUANTITY

Mortared stone	6.44 m3
Blinding stone	0.82 m3
Excavation	33.46 m3
Backfilling	11.98 m3

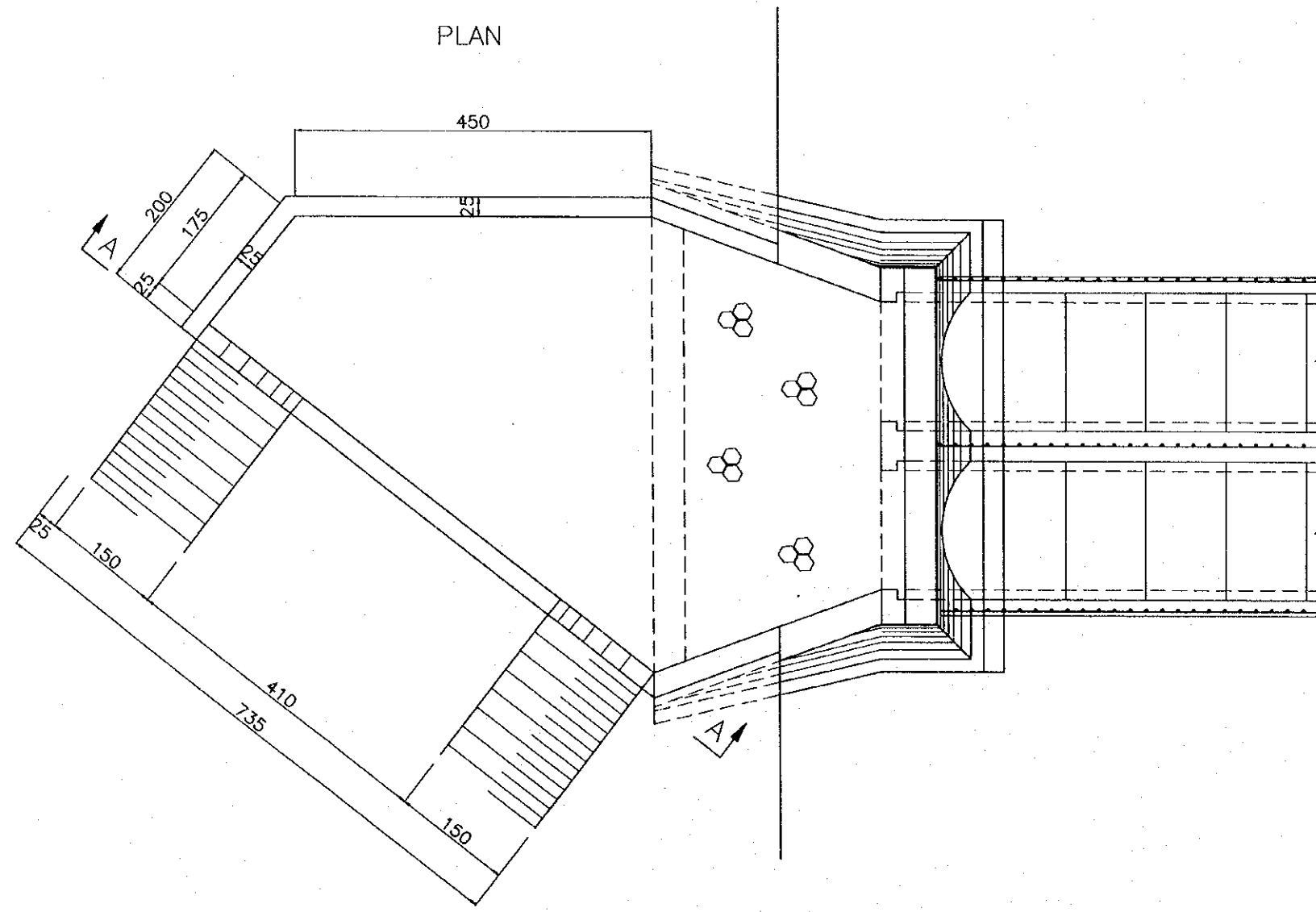
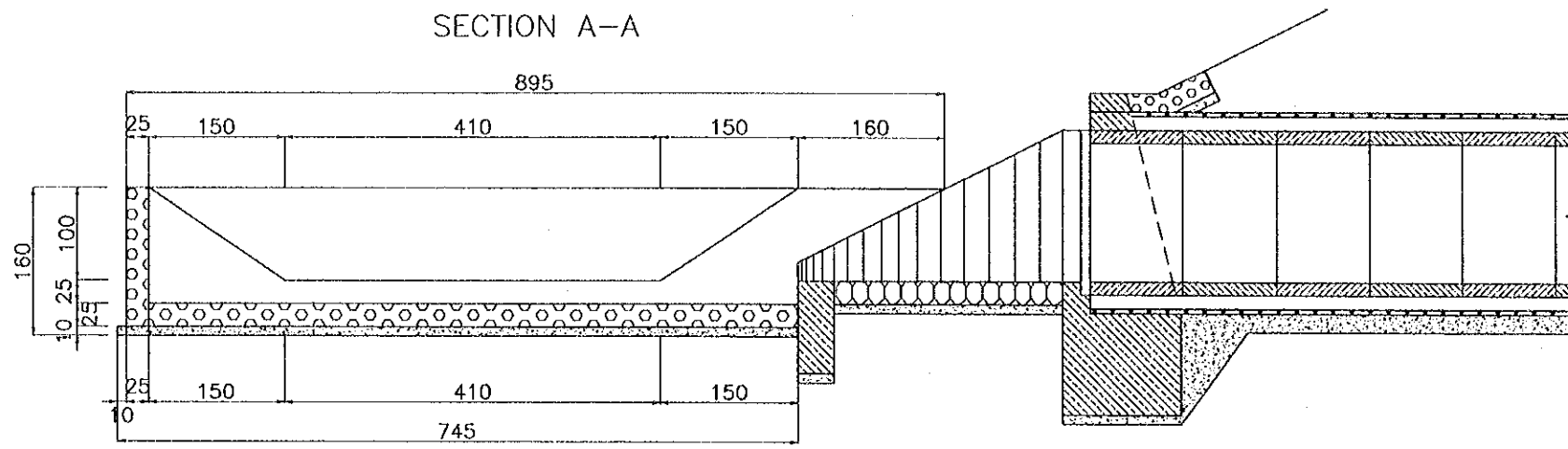
NOTE

- 1- Direction of earthen channel to the basin shall be altered in accordance with the configuration of basin
- 2- Stop log shall be installed on the basis of the irrigation purpose
- 3- All dimensions are in centimeter

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.3.17	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/75	DRAWING No. E-2-19	SHEET No.
DETAIL OF PIPE CULVERT INLET (TYPE C) AT STA. 10+490			

## DETAIL OF PIPE CULVERT INTLET (TYPE C) AT STA. 10+490



### WORK QUANTITY

Mortared stone	8.52 m <sup>3</sup>
Blinding stone	2.24 m <sup>3</sup>
Excavation	13.43 m <sup>3</sup>
Backfilling	--- m <sup>3</sup>

### NOTE

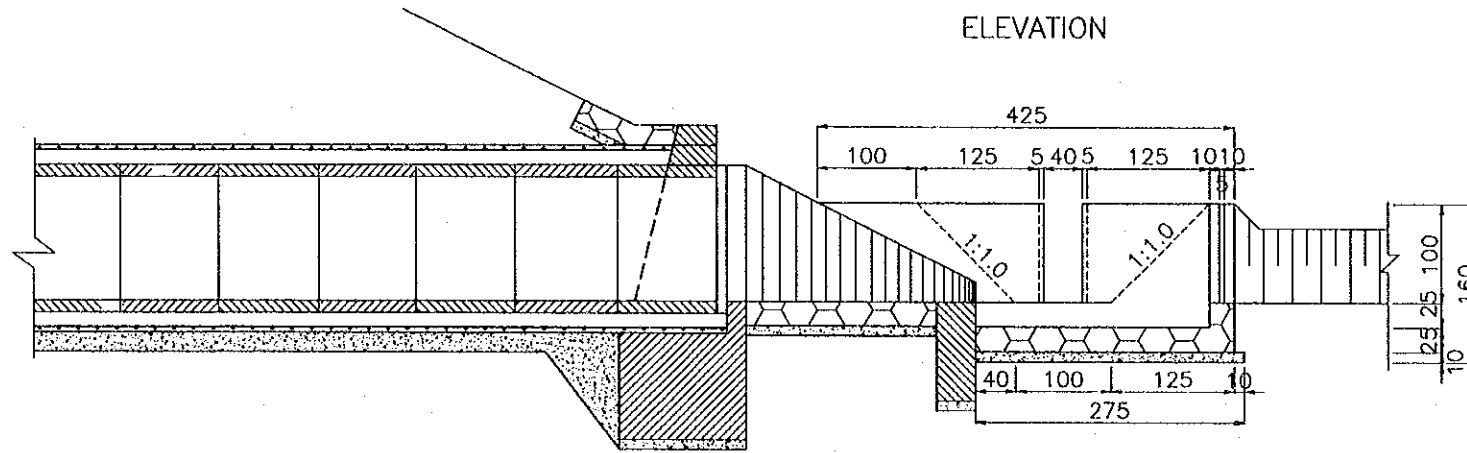
- 1- Stop log shall be installed on the basis of irrigation purpose
- 2- All dimensions are shown in centimeter



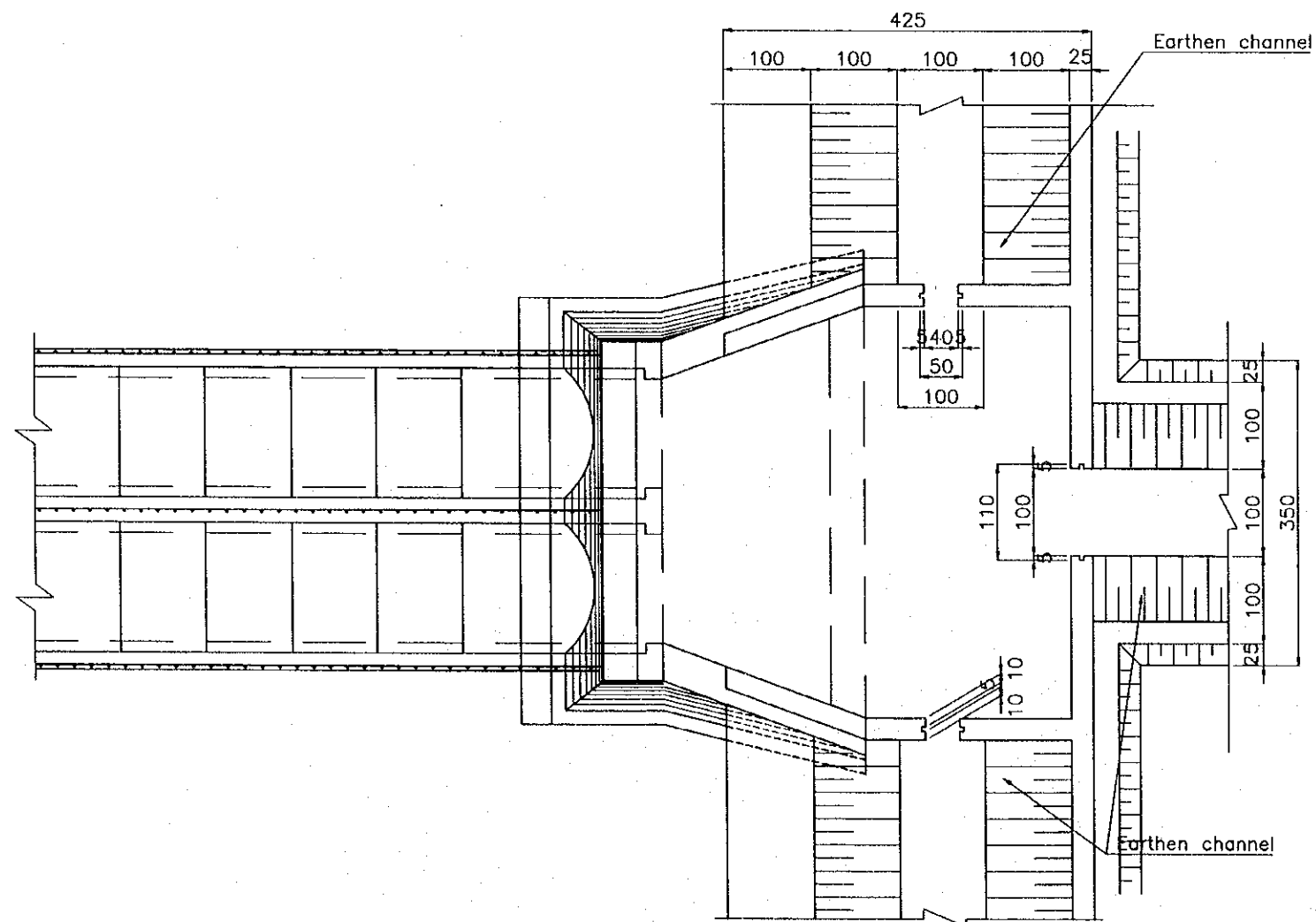
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/75	E--2--21	
DETAIL OF PIPE CULVERT OUTLET (TYPE S)			

DETAIL OF PIPE CULVERT OUTLET (TYPE S)



PLAN



WORK QUANTITY

Mortared stone	4.78 m3
Blinding stone	1.02 m3
Excavation	24.49 m3
Backfilling	9.56 m3

NOTE

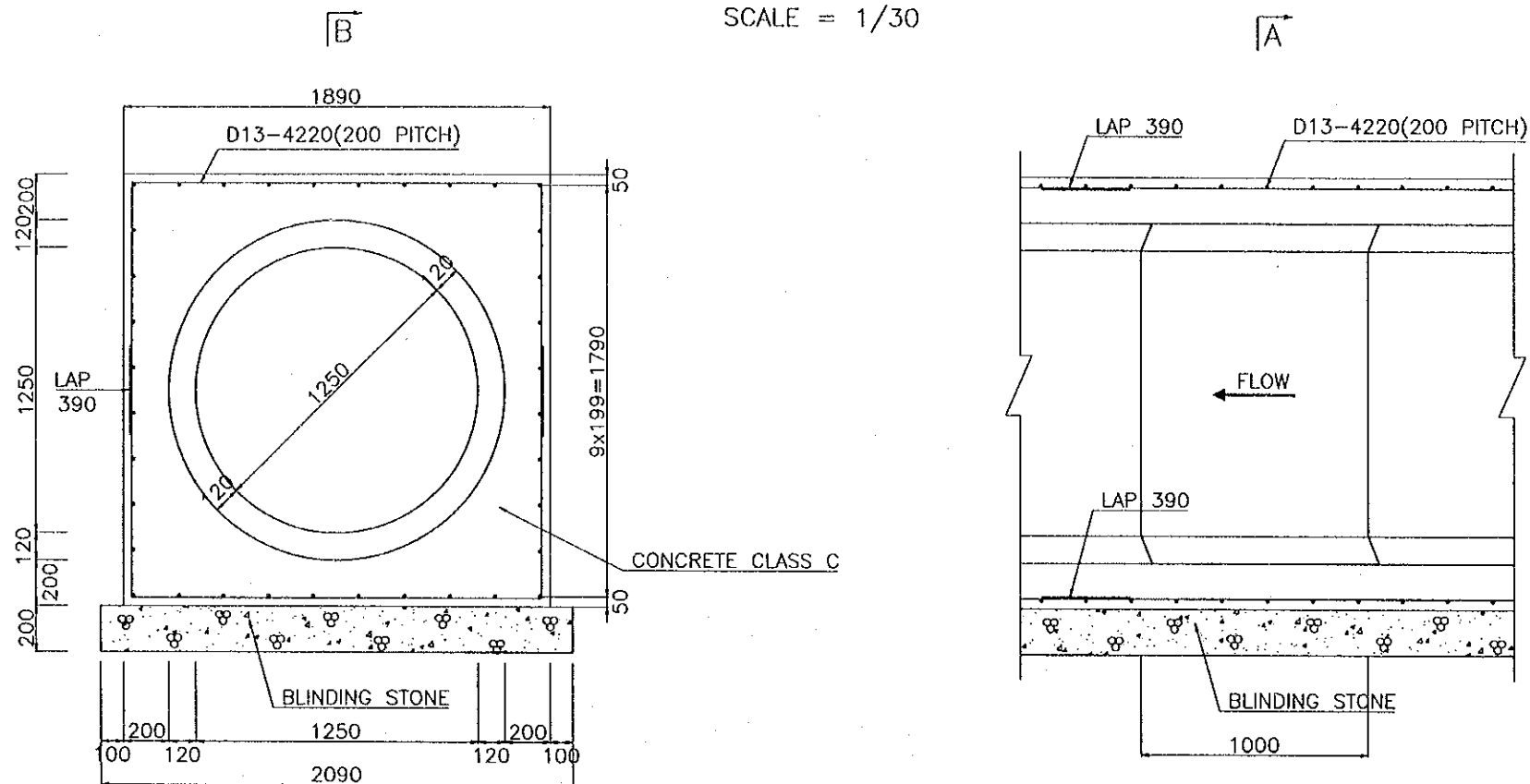
- 1- Direction of earthen channel to the basin shall be altered in accordance with the configuration of basin
- 2- Stop log shall be installed on the basis of the irrigation purpose
- 3- All dimensions are in centimeter

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/30	E-2-22	
DETAIL OF PIPE FOUNDATION (ø1250)			

### DETAIL OF PIPE FOUNDATION (ø1250)

SCALE = 1/30



SECTION A - A

SECTION B - B

FOUNDATION TYPE B (FOR PIPE CULVERT ø1250)

#### QUANTITY TABLE (PER ONE METER)

No	ITEM	UNIT	QUANTITY	REMARKS
1	CONCRETE CLASS C	M3	1.83	
2	FORM	M2	3.78	
3	REINFORCEMENT (D13)	KG	90.29	
4	BLINDING STONE	M3	0.42	
5	EXCAVATION	M3	10.06	
6	BACK FILLING	M3	6.11	

#### NOTES

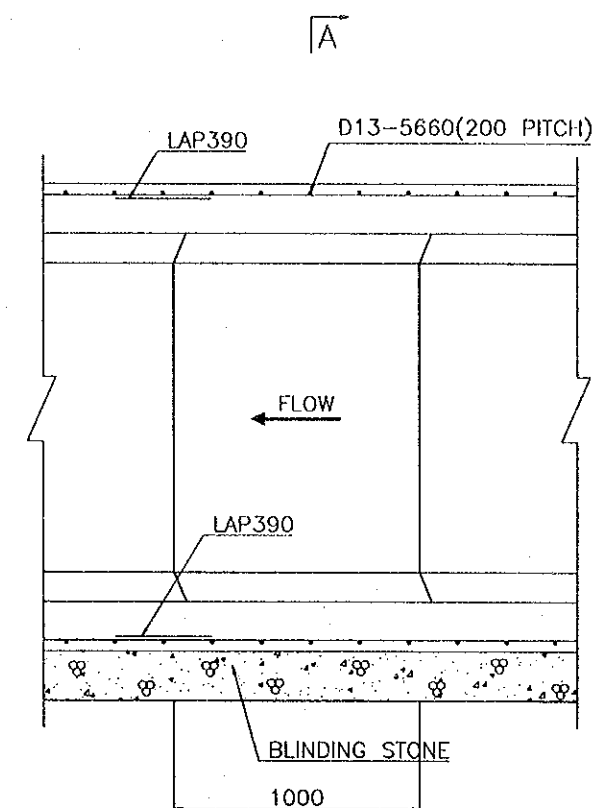
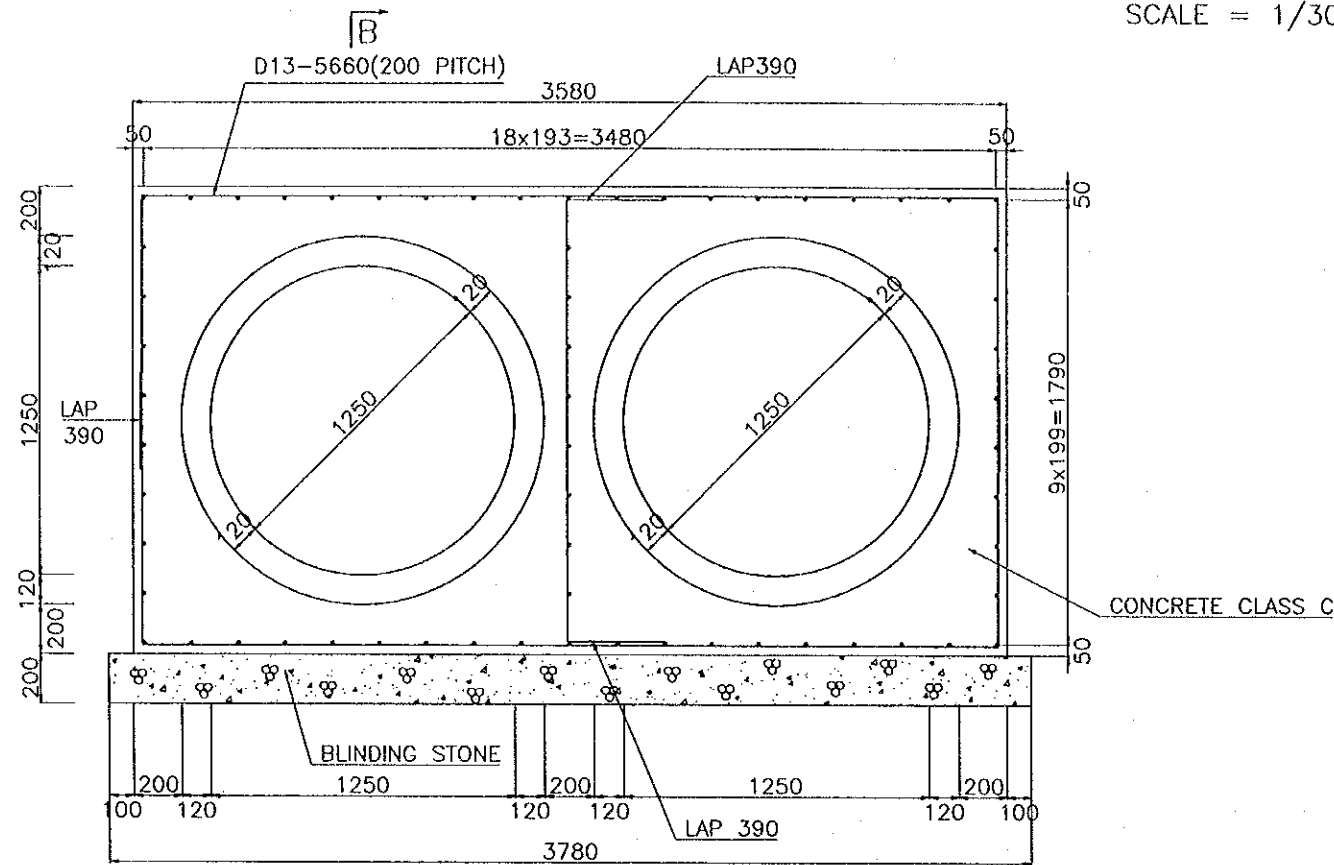
- 1- ALL DIMENSIONS ARE IN MILLIMETERS
- 2- STEEL BAR SHALL BE CONSIDERED 30D LAP AT THE CONSTRUCTION JOINT

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
ORGANIZATION	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.8.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/30	E-2-23	
DETAIL OF PIPE FOUNDATION (2xØ1250)			

### DETAIL OF PIPE FOUNDATION 2xØ1250

SCALE = 1/30



B

SECTION A - A

A

SECTION B - B

FOUNDATION TYPE C (FOR PIPE CULVERT 2xØ1250)

#### QUANTITY TABLE (PER ONE METER)

No	ITEM	UNIT	QUANTITY	REMARKS
1	CONCRETE CLASS C	M3	3.28	
2	FORM	M2	3.78	
3	REINFORCEMENT (D13)	KG	144.47	
4	BLINDING STONE	M3	0.76	
5	EXCAVATION	M3	15.90	
6	BACK FILLING	M3	8.38	

#### NOTES

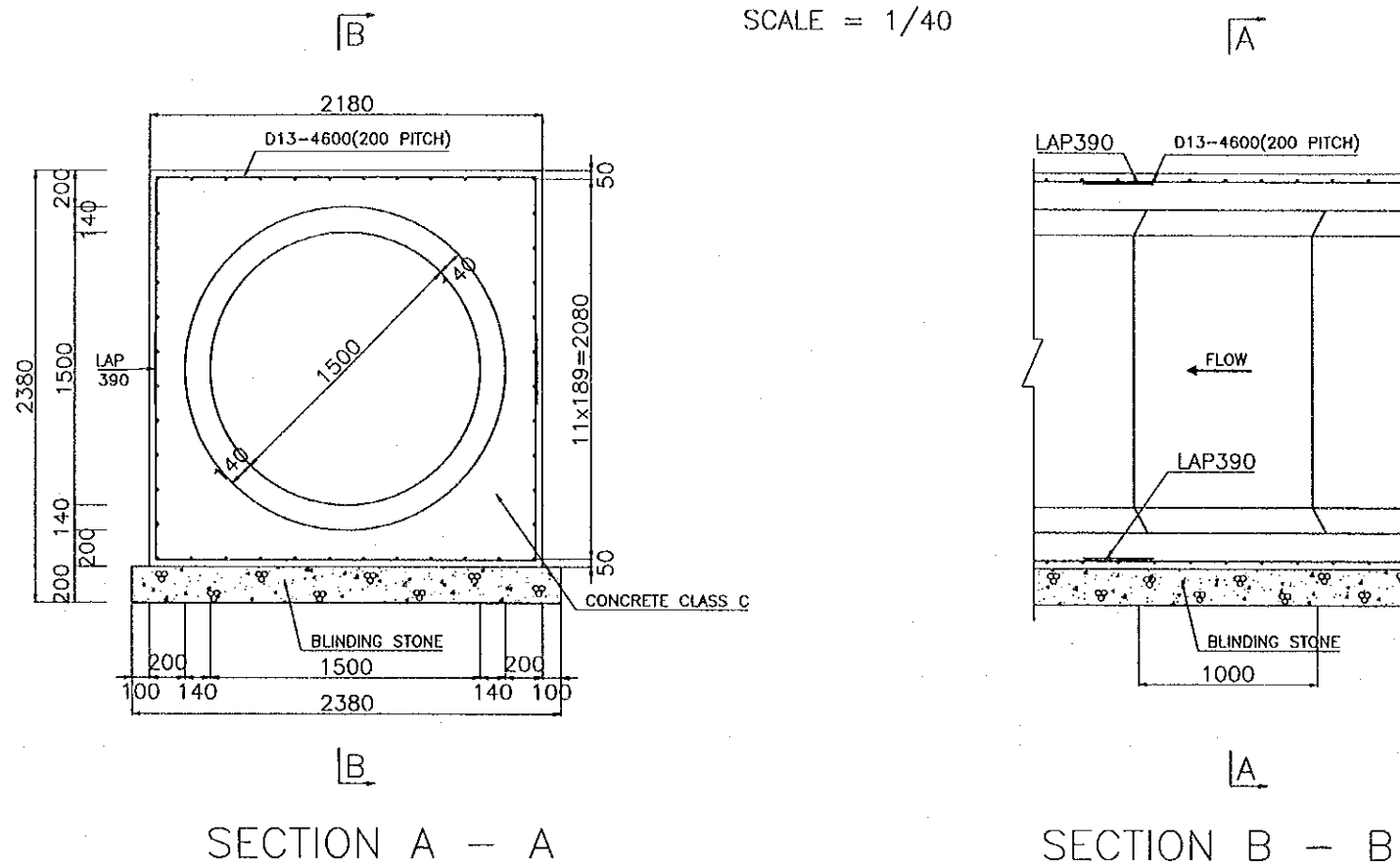
- 1- ALL DIMENSIONS ARE IN MILLIMETERS
- 2- STEEL BAR SHALL BE CONSIDERED 30D LAP AT THE CONSTRUCTION JOINT

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TUANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.17

PACKAGE 2	SCALE 1/40	DRAWING No. E-2-24	SHEET No.
DETAIL OF PIPE FOUNDATION (ø1500)			

## DETAIL OF PIPE FOUNDATION (ø1500)

SCALE = 1/40



FOUNDATION TYPE B (FOR PIPE CULVERT ø1500)

QUANTITY TABLE (PER ONE METER)

No	ITEM	UNIT	QUANTITY	REMARKS
1	CONCRETE CLASS C	M3	2.26	
2	FORM	M2	4.36	
3	REINFORCEMENT (D13)	KG	103.37	
4	BLINDING STONE	M3	0.48	
5	EXCAVATION	M3	12.44	
6	BACK FILLING	M3	7.25	

NOTES

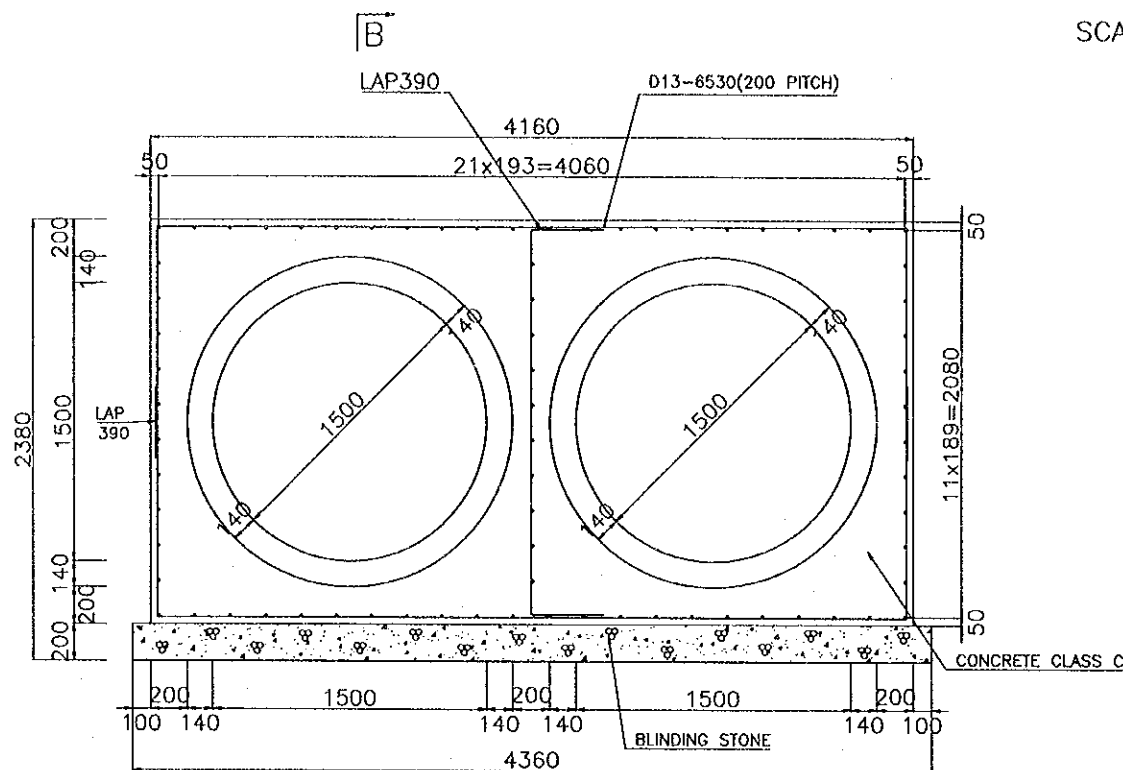
- 1-- ALL DIMENSIONS ARE IN MILLIMETERS
- 2-- STEEL BAR SHALL BE CONSIDERED 30D LAP AT THE CONSTRUCTION JOINT

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATADE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATADE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.2.17

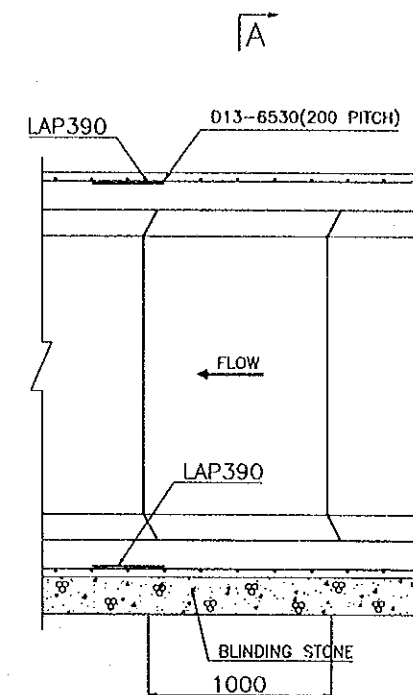
PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/40	E-2-25	
DETAIL OF PIPE FOUNDATION (2xø1500)			

### DETAIL OF PIPE FOUNDATION (2xø1500)

SCALE = 1/40



SECTION A - A



SECTION B - B

### FOUNDATION TYPE C (FOR PIPE CULVERT 2ø1500)

#### QUANTITY TABLE (PER ONE METER)

No	ITEM	UNIT	QUANTITY	REMARKS
1	CONCRETE CLASS C	M3	4.09	
2	FORM	M2	4.36	
3	REINFORCEMENT (D13)	KG	168.51	
4	BLINDING STONE	M3	0.87	
5	EXCAVATION	M3	17.70	
6	BACK FILLING	M3	7.76	

#### NOTES

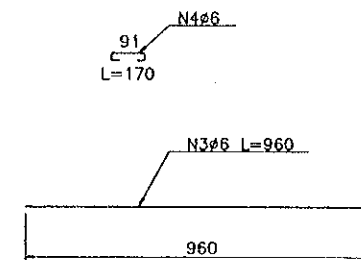
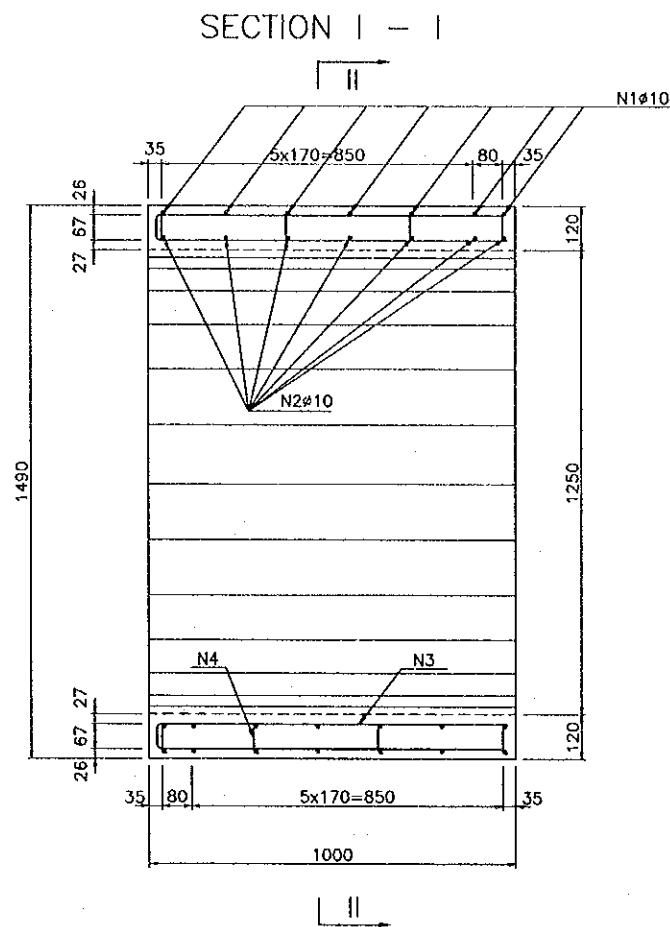
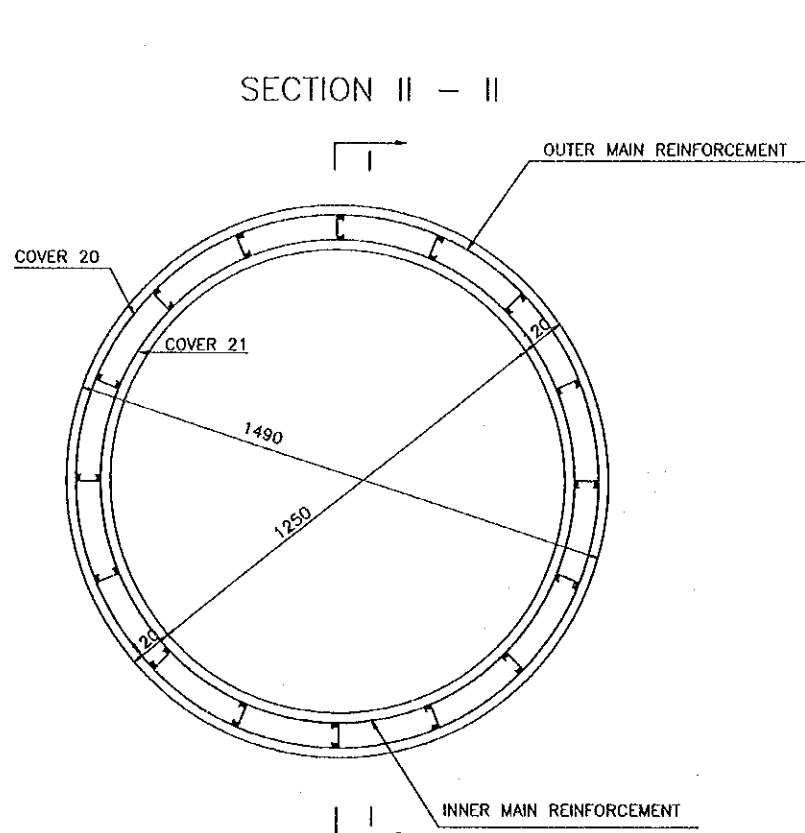
- 1- ALL DIMENSIONS ARE IN MILLIMETERS
- 2- STEEL BAR SHALL BE CONSIDERED 30D LAP AT THE CONSTRUCTION JOINT



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.12.17

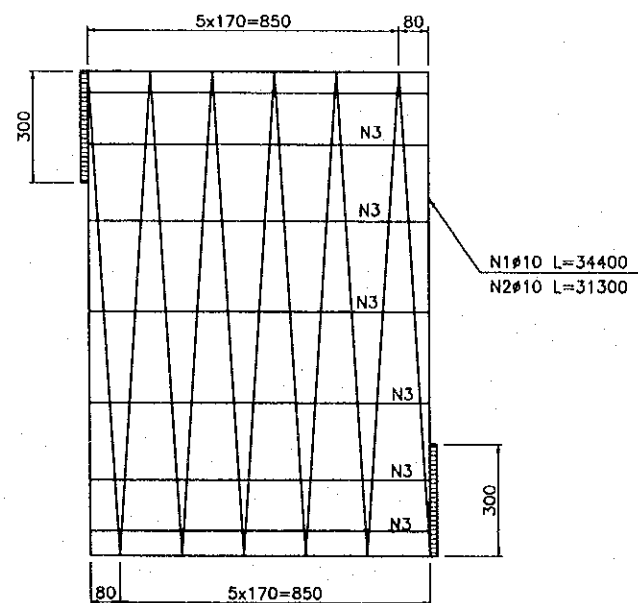
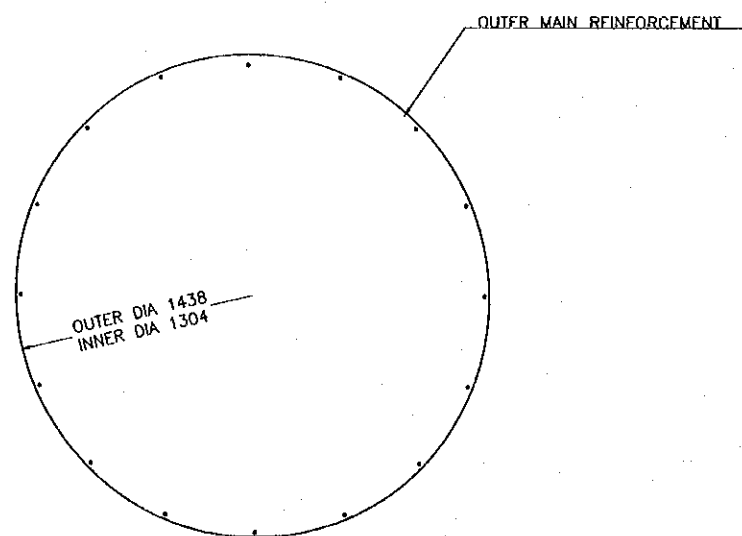
PACKAGE 2	SCALE 1/20	DRAWING No. E-2-26	SHEET No.
REINFORCEMENT DETAILS (FOR PIPE Ø 1250)			

## REINFORCEMENT DETAILS ( FOR PIPE Ø 1250)



### QUANTITY OF PIPE BLOCK MATERIAL

NAME OF BAR	DIA	LENGTH	No OF BAR	TOTAL LENGTH	SPECIFIC MASS	TOTAL MASS	CONCRETE CLASS E
N	mm	mm		m	Kg/m	Kg	m³
1	Ø10	34.400	1	34.40			
2	Ø10	31.300	1	31.30			
				65.70	0.62	40.7	
3	Ø6	960	32	30.70			
4	Ø6	170	56	9.50			
				40.20	0.22	8.9	
TOTAL						49.6	0.52



#### NOTES

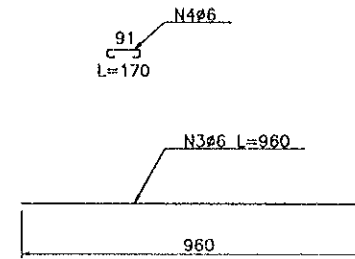
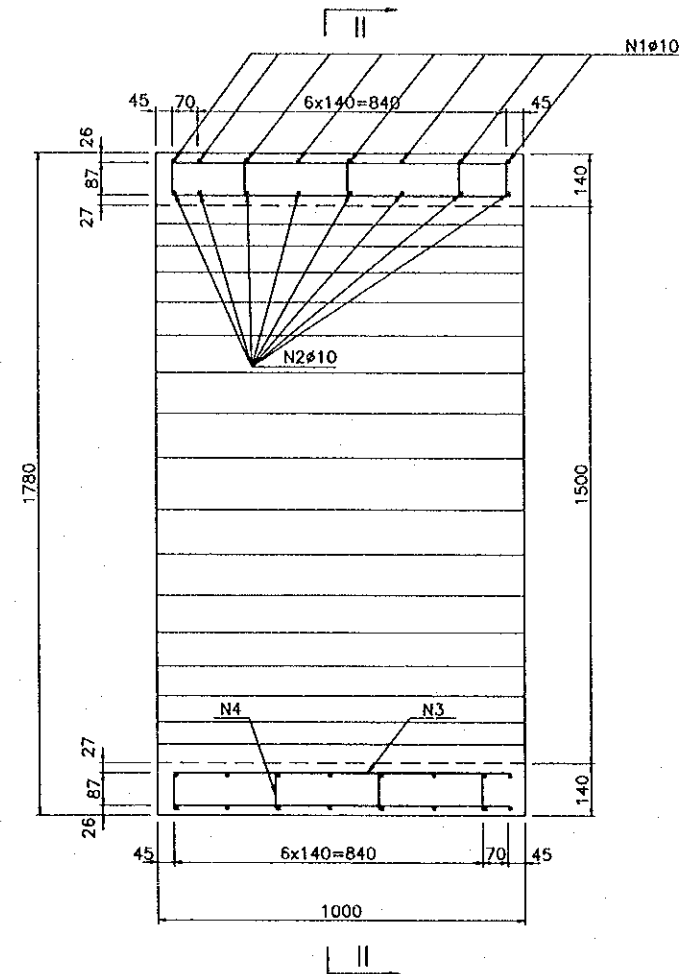
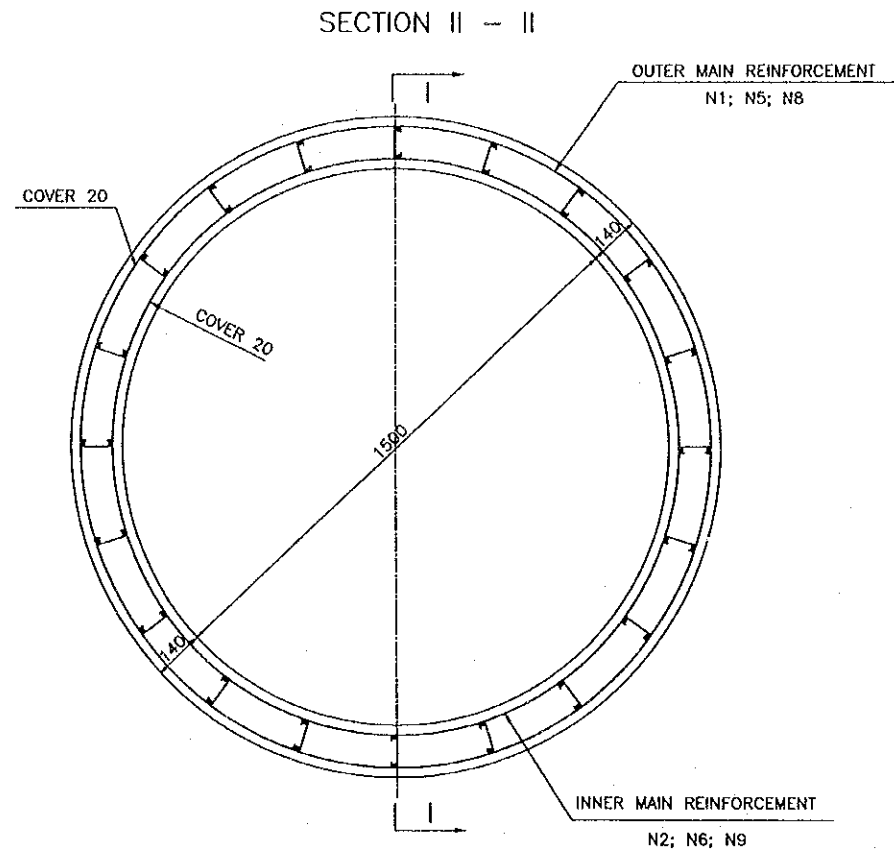
- 1 - CONCRETE USE CLASS C
- 2 - ALL THE DIMENSION ARE IN MILLIMETERS

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.8.14

PACKAGE 2	SCALE 1/20	DRAWING No. E-2-27	SHEET No.
REINFORCEMENT DETAILS (FOR PIPE Ø1500)			

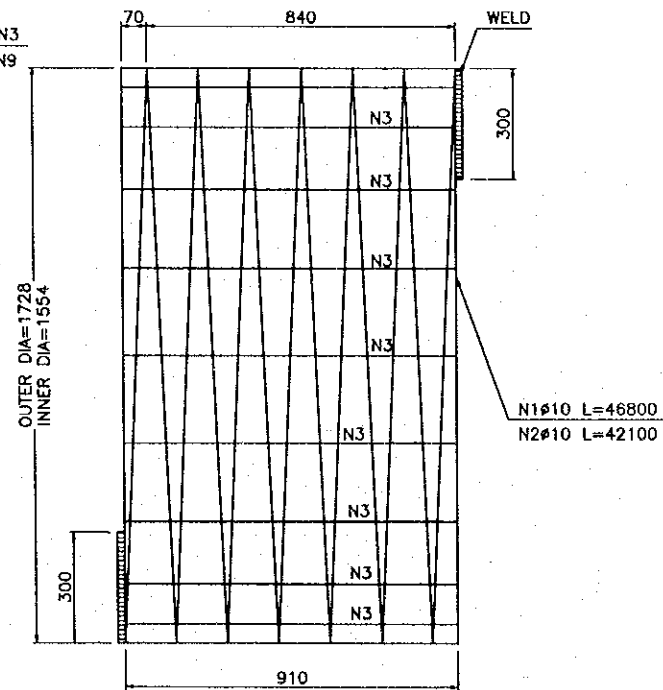
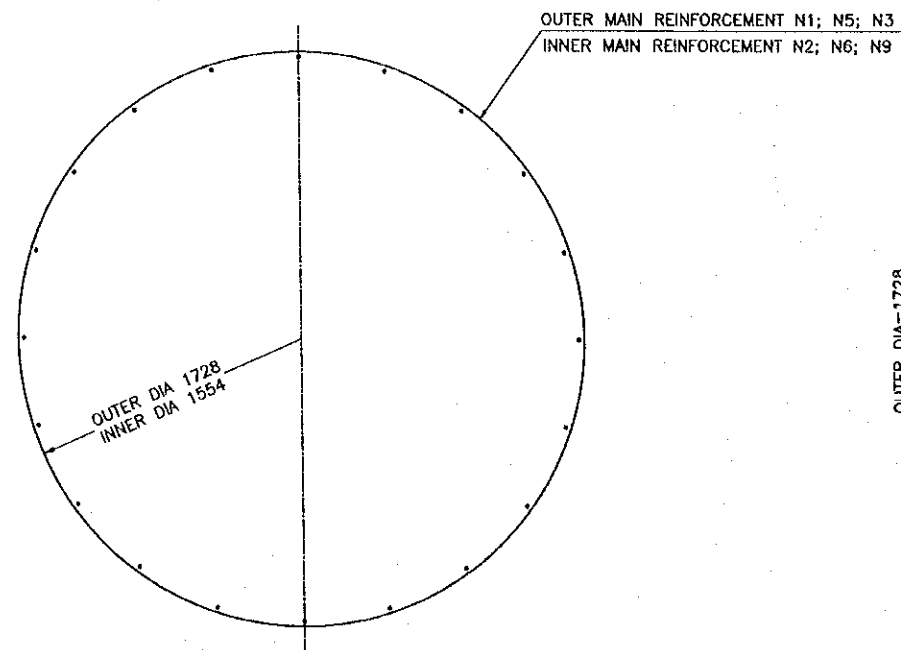
## REINFORCEMENT DETAILS (FOR PIPE Ø 1500)

SECTION I - I



QUANTITY OF PIPE BLOCK MATERIAL

LENGTH (m)	NAME OF REINFORCEMENT (N)	DIA (mm)	LENGTH OF REINFORCEMENT (mm)	No OF BAR	TOTAL OF LENGTH (m)	SPECIFIC MASS (Kg/m)	QUANTITY OF REINFORCEMENT (Kg)	CONCRETE CLASS C (m <sup>3</sup> )	
1.00	1	Ø10	46800	1	46.8				
	2	Ø10	42100	1	42.1				
	SUM	Ø10			88.9	0.62	55.2		
	3	Ø6	960	40	38.4				
1.00	4	Ø6	190	80	15.2				
	SUM	Ø6			53.6	0.222	11.9		
TOTAL								67.1	0.72



**NOTES**

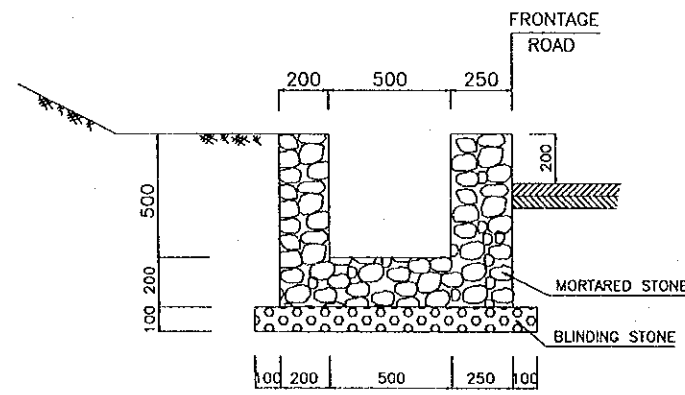
- 1 - CONCRETE USE CLASS C
- 2 - ALL THE DIMENSION ARE IN MILLIMETERS

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TUANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT	RED RIVER BRIDGE (DANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.8.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/30	E-3-1	
DRAINAGE CHANNEL DETAILS (1/2)			

## DRAINAGE CHANNEL DETAILS (1/2)

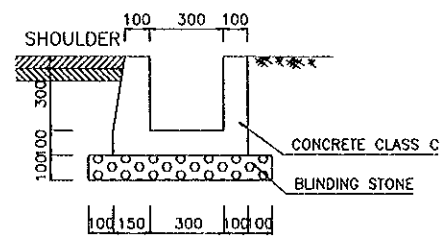
TYPE U-1



WORK QUANTITY (Per meter)

Item	Quantity (m <sup>3</sup> )
Mortared Stone	0.42
Blinding Stone	0.12
Excavation	1.58
Back Filling	0.80

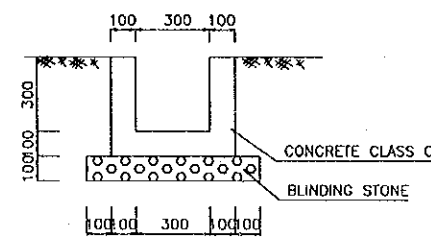
TYPE U-2



WORK QUANTITY (Per meter)

Item	Unit	Quantity
Concrete Class C	m <sup>3</sup>	0.12
Blinding Stone	m <sup>3</sup>	0.08
Excavation	m <sup>3</sup>	0.66
Back Filling	m <sup>3</sup>	0.38
Form	m <sup>2</sup>	1.50

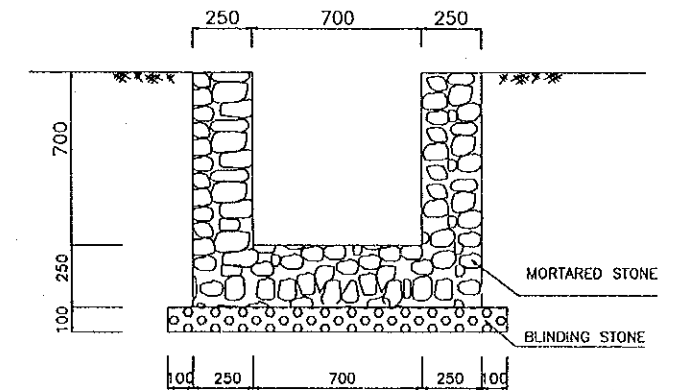
TYPE U-3



WORK QUANTITY (Per meter)

Item	Unit	Quantity
Concrete Class C	m <sup>3</sup>	0.11
Blinding Stone	m <sup>3</sup>	0.07
Excavation	m <sup>3</sup>	0.65
Back Filling	m <sup>3</sup>	0.43
Form	m <sup>2</sup>	1.40

TYPE U-4  
(For irrigation Gia Lam side)



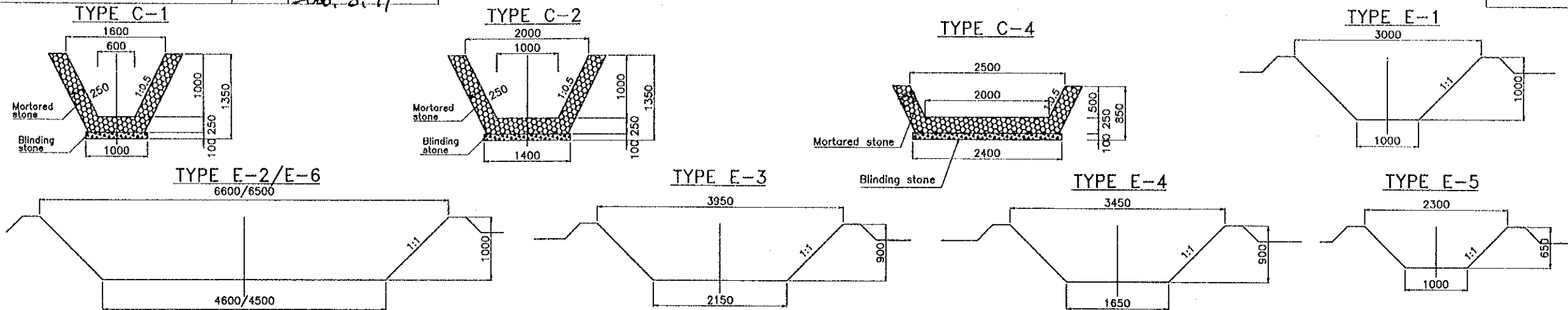
WORK QUANTITY (Per meter)

Item	Quantity (m <sup>3</sup> )
Mortared Stone	0.65
Blinding Stone	0.14
Excavation	2.42
Back Filling	1.14

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THUONG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. NATARE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000. 3. 17

# DRAINAGE CHANNEL DETAILS (2/2)

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	E-3-2	
DRAINAGE CHANNEL DETAILS (2/2)			



## LIST OF ROAD SIDE DRAIN

STATION	RIGHT SIDE		LEFT SIDE		REMARKS
	TYPE	LENGTH(m)	TYPE	LENGTH(m)	
9+120 ~ 9+320	C-1	200			
9+260 ~ 9+380			C-2	120	To be connected to pipe culvert
9+380 ~ 9+690			C-2	380	To be installed between pipe culverts
9+380 ~ 9+610	E-2	270			Relocation
9+580 ~	E-3	155			From pipe culvert for inside drain of interchange
9+580 ~ 9+690	E-4	110			From pipe culvert
9+700 ~ 9+950			C-3	285	From site office to be planned
9+950 ~ 10+120			E-5	170	
9+690 ~ 10+490	E-1	800			
10+490 ~ 10+550	E-6	70			Relocation
10+470 ~ 10+540	U-4	70			For irrigation from pump
10+120 ~ 10+480			E-1	360	
10+550 ~ 11+380	E-1	830			
10+490 ~ 10+630			E-1	140	
10+630 ~ 10+730			C-1	100	
10+730 ~ 11+380			E-1	650	
11+380 ~ 11+470	E-1	90			
11+420 ~ 11+540			E-1	60	
11+590 ~ 11+770	E-1	180			
11+640 ~ 11+770			E-1	120	
11+770 ~ 12+160	E-1	390			
11+770 ~ 12+160			E-1	390	
12+350 ~ 12+570	E-1	280			To be installed along ramp road
12+400 ~ 12+590			E-1	250	To be installed along ramp road
12+570 ~ 12+830	E-1	260			
12+590 ~ 12+790			E-1	200	

## WORK QUANTITY (PER m)

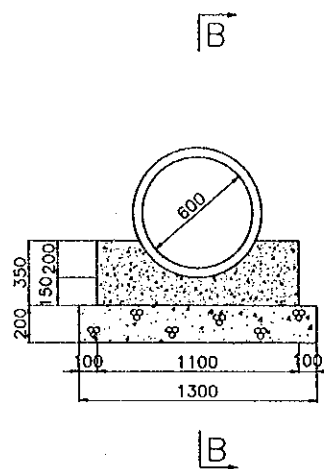
TYPE	ITEM	QUANTITY (m <sup>3</sup> )
C-1	Mortared stone	0.76
	Blinding stone	0.10
	Excavation	3.38
	Backfilling	1.36
C-2	Mortared stone	0.86
	Blinding stone	0.14
	Excavation	4.05
	Backfilling	1.49
C-4	Mortared stone	0.86
	Blinding stone	0.24
	Excavation	3.19
	Backfilling	0.95
E-1	Excavation	2.00
E-2	Excavation	5.60
E-3	Excavation	2.75
E-4	Excavation	2.30
E-5	Excavation	1.07
E-6	Excavation	5.50

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.17

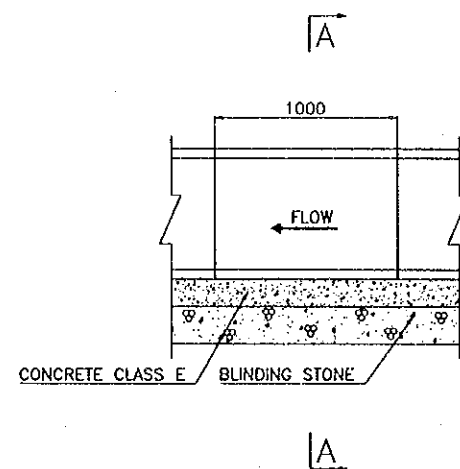
PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/40	E-3-3	
DETAIL OF DRAINAGE PIPE Ø 600			

### DETAIL OF DRAINAGE PIPE Ø600

SCALE = 1/40



SECTION A - A

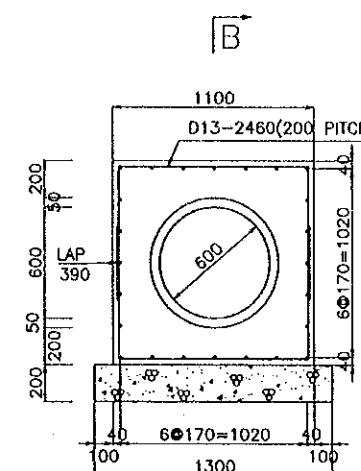


SECTION B - B

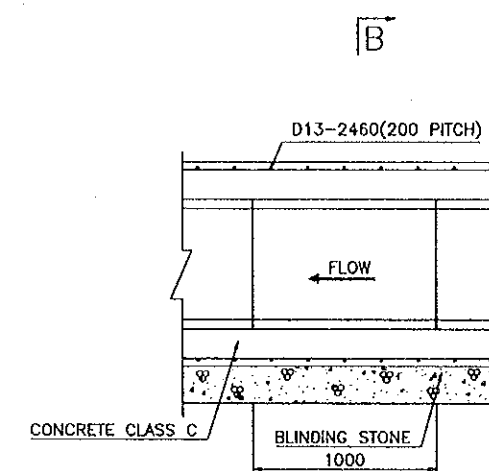
FOUNDATION TYPE A

QUANTITY TABLE (PER ONE METER)

No	ITEM	UNIT	QUANTITY	REMARKS
1	CONCRETE CLASS E	M3	0.29	
2	FORM	M2	0.70	
3	BLINDING STONE	M3	0.26	
4	EXCAVATION	M3	3.99	
5	BACK FILLING	M3	3.06	



SECTION A - A



SECTION B - B

FOUNDATION TYPE B

QUANTITY TABLE (PER ONE METER)

No	ITEM	UNIT	QUANTITY	REMARKS
1	CONCRETE CLASS C	M3	0.83	
2	FORM	M2	2.2	
3	REINFORCEMENT (D13)	KG	55.70	
4	BLINDING STONE	M3	0.26	
5	EXCAVATION	M3	4.86	
6	BACK FILLING	M3	3.43	

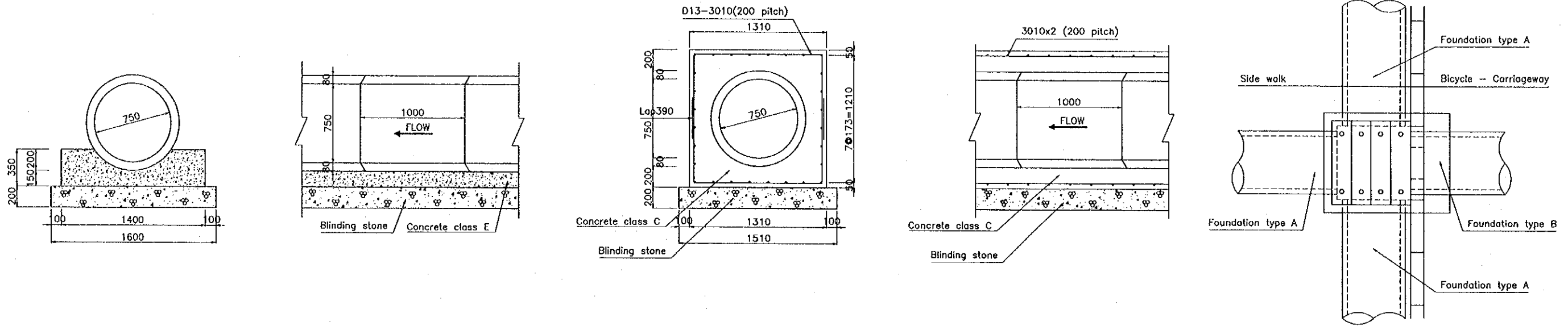
NOTES

1- ALL DIMENSIONS ARE IN MILLIMETERS

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	
PROJECT	RED RIVER BRIDGE (NAMHI TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2002. 3. 17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/40	E-3-4	
DETAIL OF PIPE DRAINAGE ø 750			

## DETAIL OF DRAINAGE PIPE ø750



FOUNDATION TYPE A  
QUANTITY TABLE (PER ONE METER)

No	Item	Unit	Quantity	Remarks
1	Concrete class E	m3	0.38	
2	Form	m2	0.70	
3	Blinding stone	m3	0.32	
4	Excavation	m3	4.50	
5	Back filling	m3	3.08	

FOUNDATION TYPE B  
QUANTITY TABLE (PER ONE METER)

No	Item	Unit	Quantity	Remarks
1	Concrete class C	m3	1.07	
2	Form	m2	2.62	
3	Reinforcement (D13)	Kg	63.74	
4	Blinding stone	m3	0.30	
5	Excavation	m3	3.87	
6	Back filling	m3	1.85	

NOTES

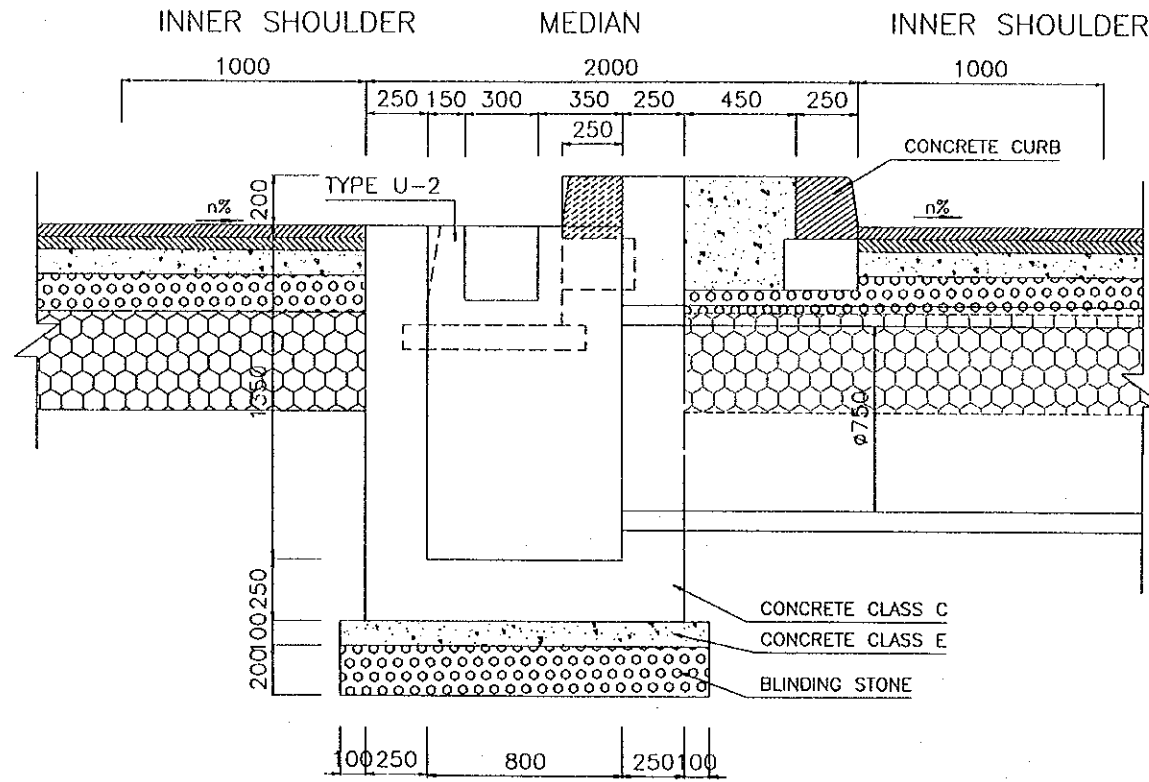
All dimensions are in millimeter

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATASE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATASE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000. 3. 14

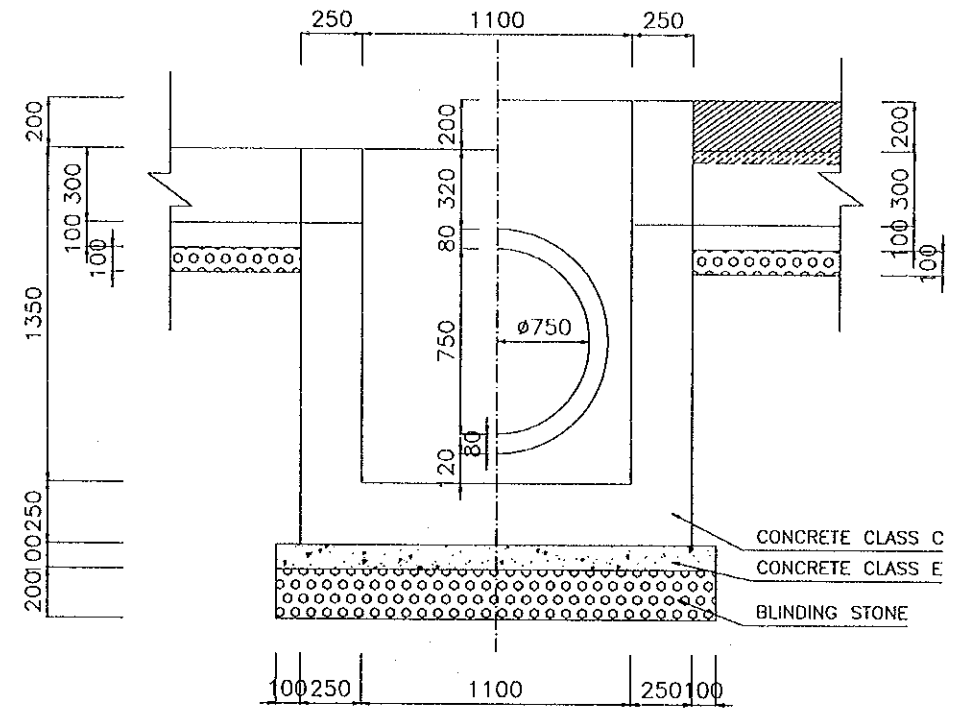
# CATCH BASIN TYPE CB-R1 (1/2)

PACKAGE	SCHE	DRAWING No.	SHEET No.
2	1/30	E-3-5	
CATCH BASIN TYPE CB-R1 (1/2)			

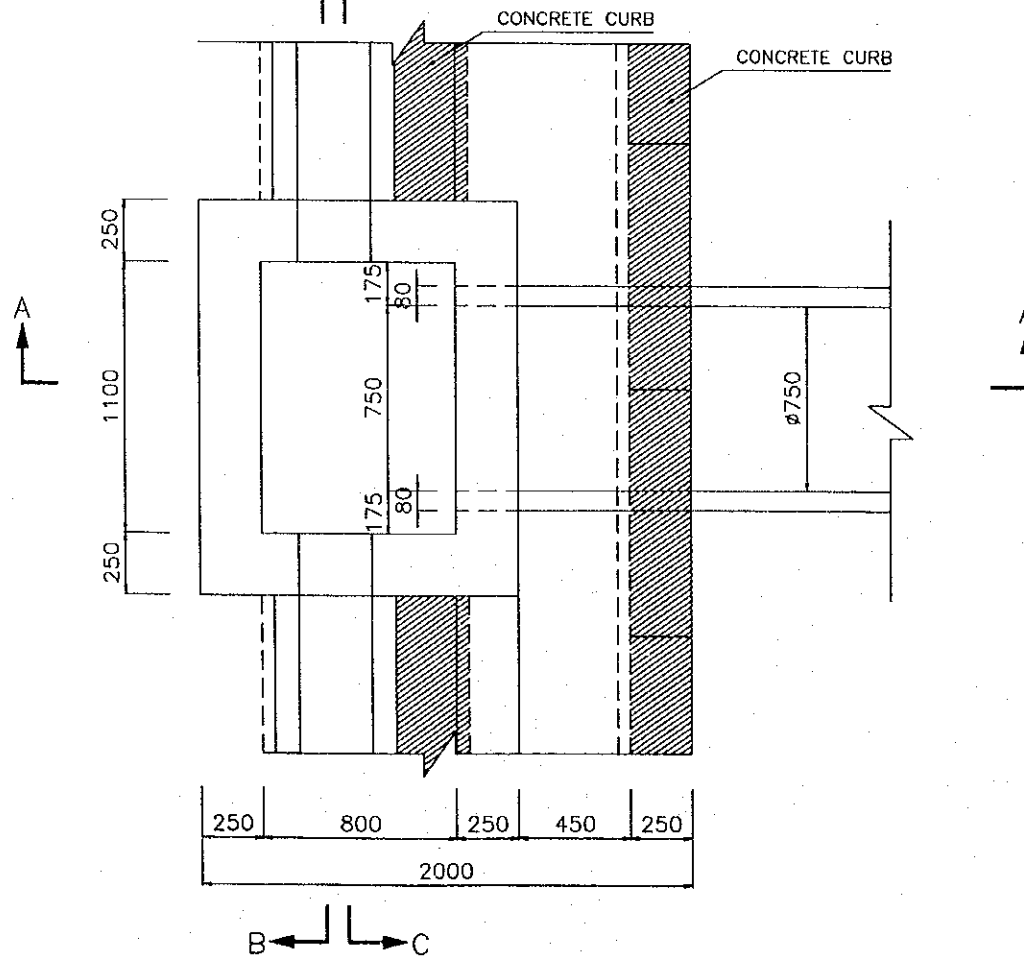
SECTION A-A



SECTION B-B SECTION C-C



PLAN



WORK QUANTITY (Per each)

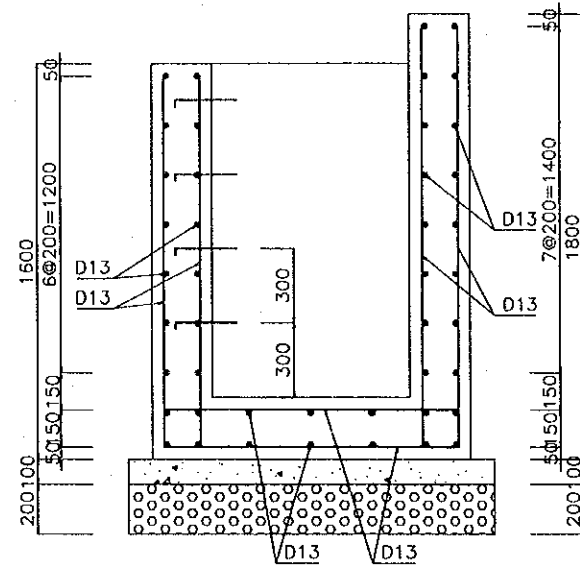
Item	Unit	Quantity
Concrete Class C	m <sup>3</sup>	2.012
Concrete Class E	m <sup>3</sup>	0.270
Blinding Stone	m <sup>3</sup>	0.54
Excavation	m <sup>3</sup>	9.67
Back Filling	m <sup>3</sup>	5.53
Form	m <sup>2</sup>	14.75
Reinforcement	-	see next drawing

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECT'S MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (TUANH TRI BRIDGE) CONSTRUCTION PROJECT	PACIFIC CONSULTANTS INTERNATIONAL	SIGNATURE
CONSULTANT		DATE 2000. 11. 17

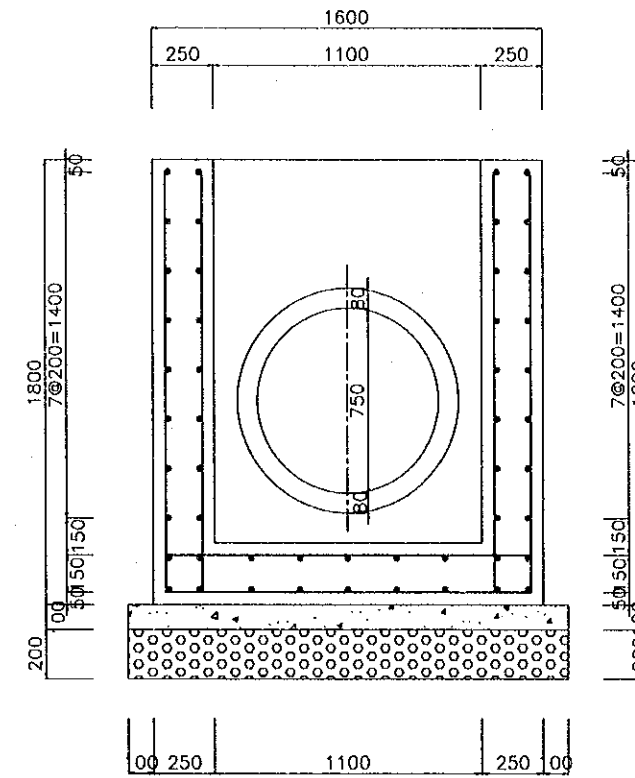
PACKAGE 2	SCALE 1/30	DRAWING No. E-3-6	SHEET No.
CATCH BASIN TYPE CB-R1 (2/2)			

## CATCH BASIN TYPE CB-R1 (2/2)

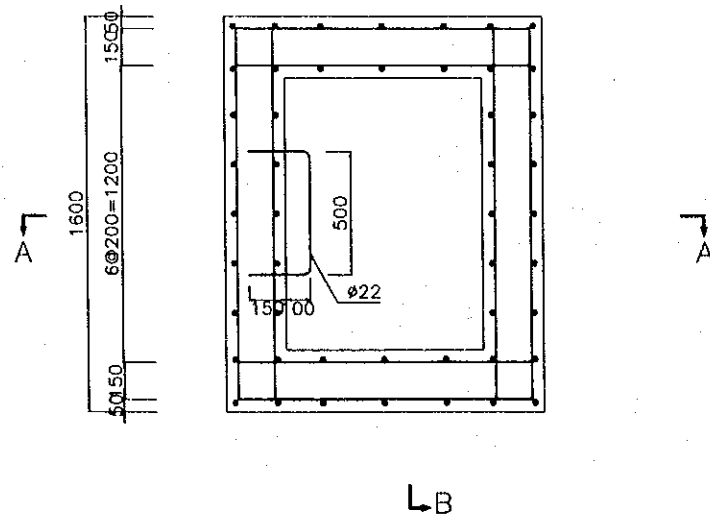
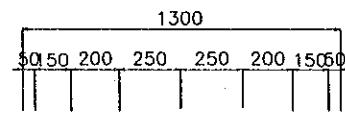
SECTION A-A  
INNER SHOULDER      MEDIAN      INNER SHOULDER



SECTION B-B



PLAN



QUANTITY LIST OF REINFORCEMENT

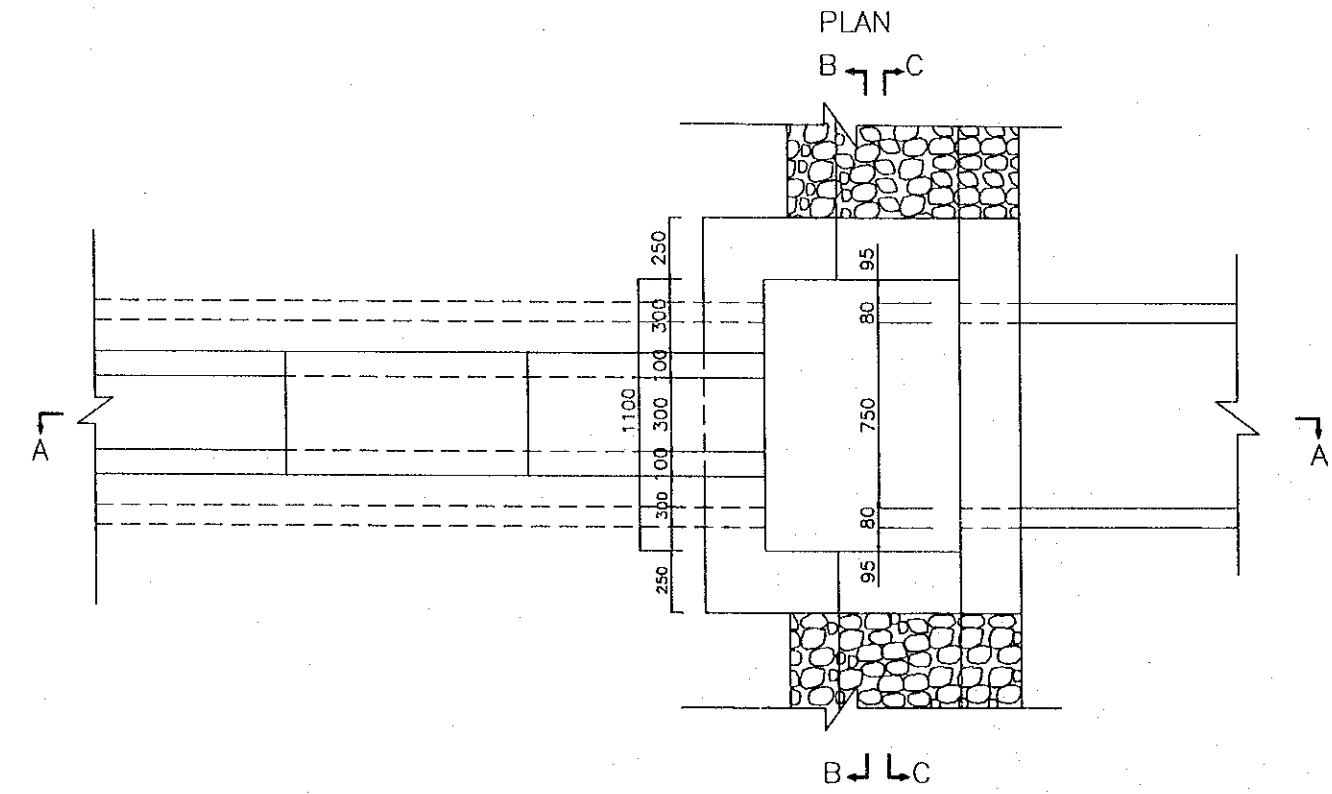
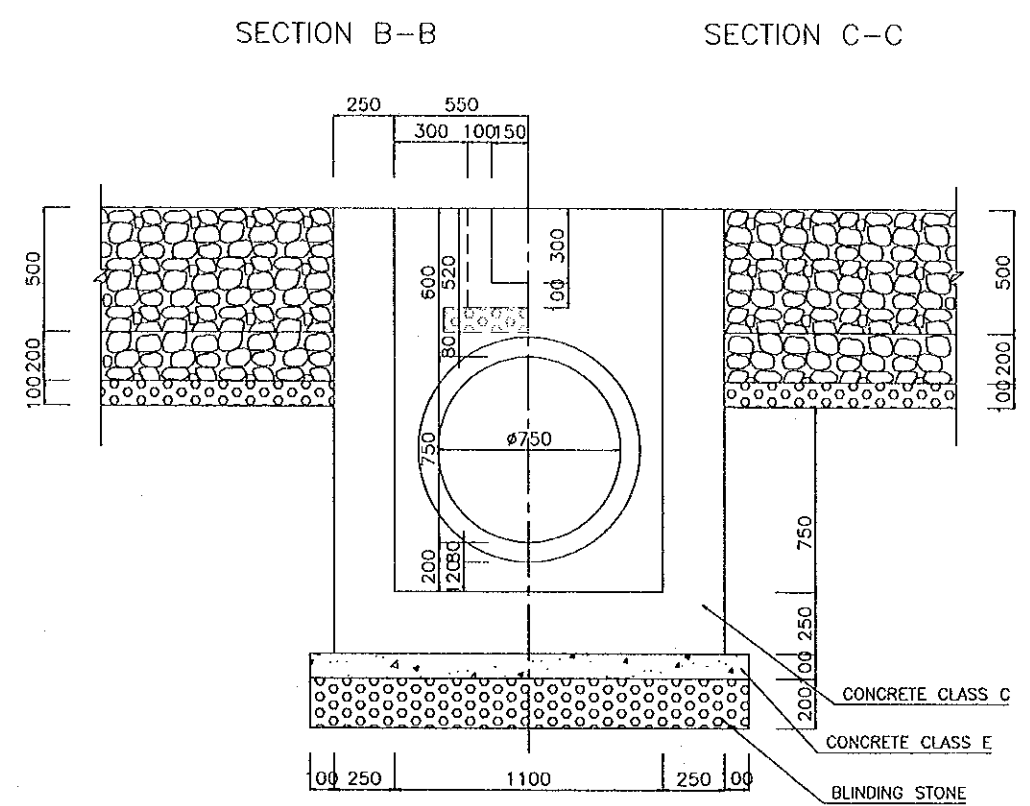
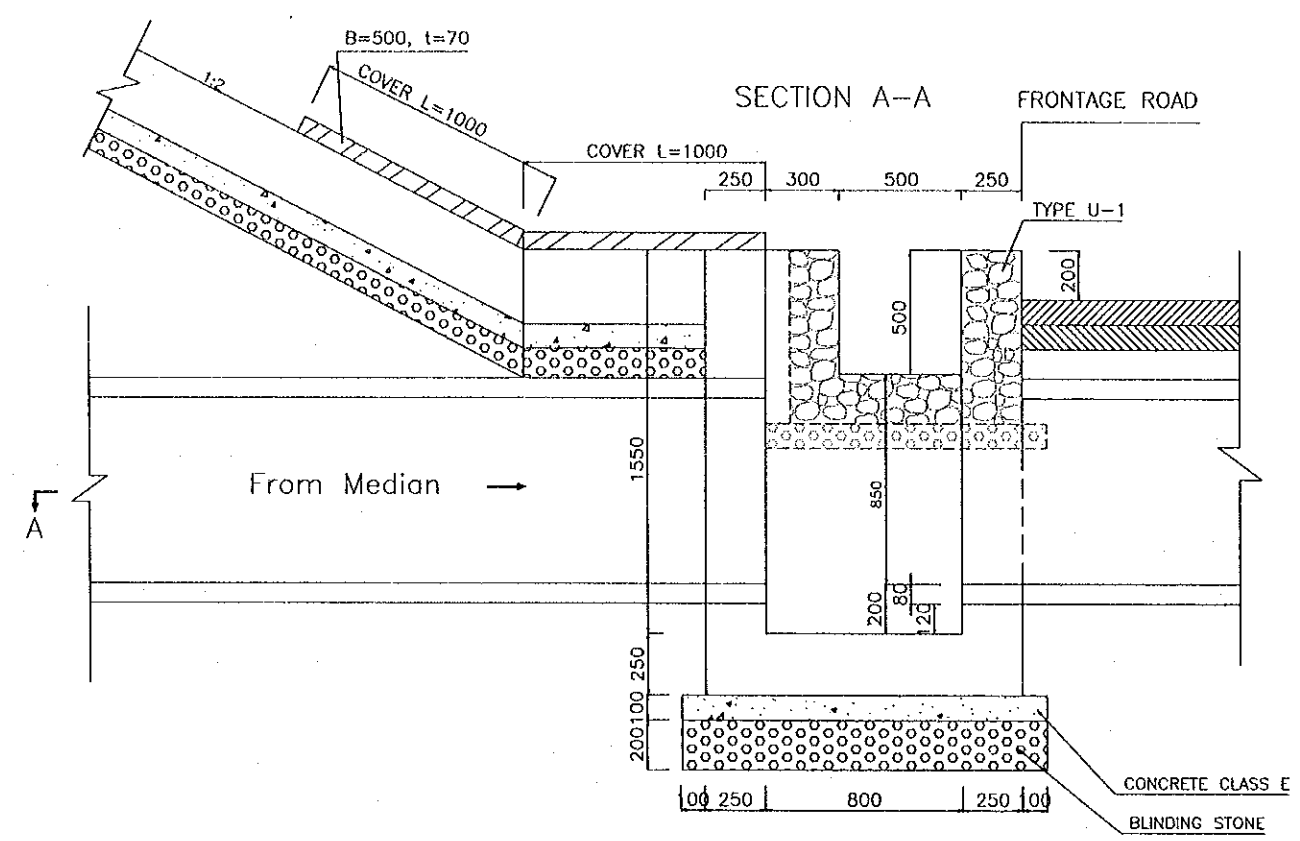
Basin Body (per each)	Diameter (mm)	Total weight (kg)
	D13	178.03
ø22	14.90	



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.3.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/30	E-3-7	
CATCH BASIN TYPE CB-R4 (1/2)			

### CATCH BASIN TYPE CB-R4 (1/2)



#### WORK QUANTITY (Per each)

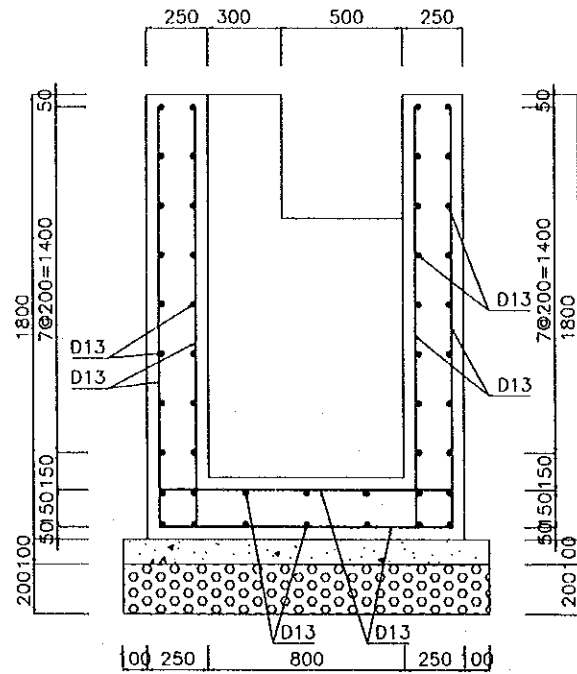
Item	Unit	Quantity
Concrete Class C	m <sup>3</sup>	1.907
Concrete Class E	m <sup>3</sup>	0.27
Blinding Stone	m <sup>3</sup>	0.54
Excavation	m <sup>3</sup>	16.92
Back Filling	m <sup>3</sup>	12.36
Form	m <sup>2</sup>	13.53
Reinforcement	-	see next drawing

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATABE
PROJECT RED RIVER BRIDGE (HANH THAI BRIDGE) CONSTRUCTION PROJECT	PACIFIC CONSULTANTS INTERNATIONAL	SIGNATURE <i>[Signature]</i>
CONSULTANT		DATE 2000.3.14

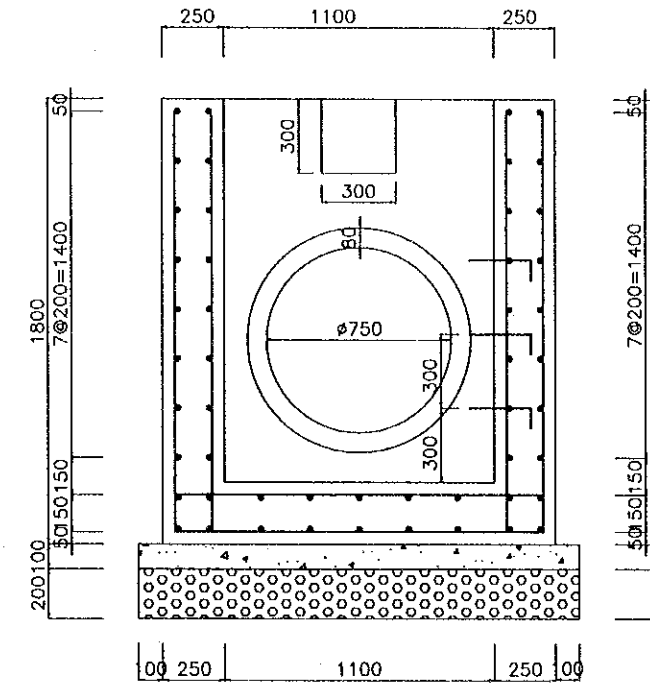
PACKAGE 2	SCALE 1/30	DRAWING No. E-3-8	SHEET No.
CATCH BASIN TYPE CB-R2 (2/2)			

### CATCH BASIN TYPE CB-R2 (2/2)

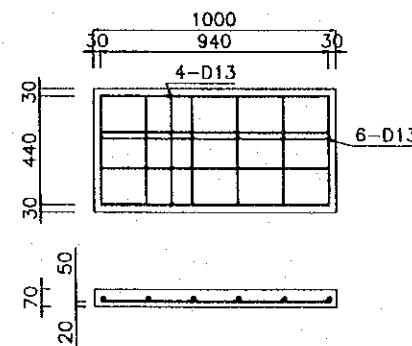
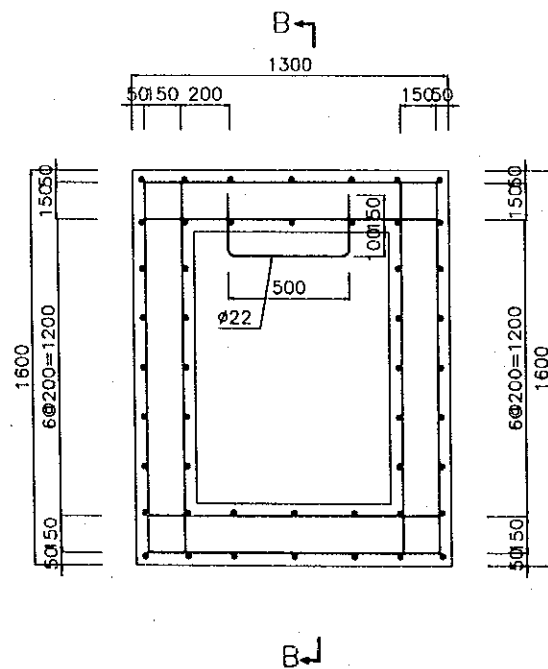
SECTION A-A



SECTION B-B



PLAN



QUANTITY LIST OF REINFORCEMENT

	Diameter (mm)	Total weight (kg)
Basin body (per each)	D13	175.74
	ø22	11.18

QUANTITY LIST OF COVER (PER 2 ONE)

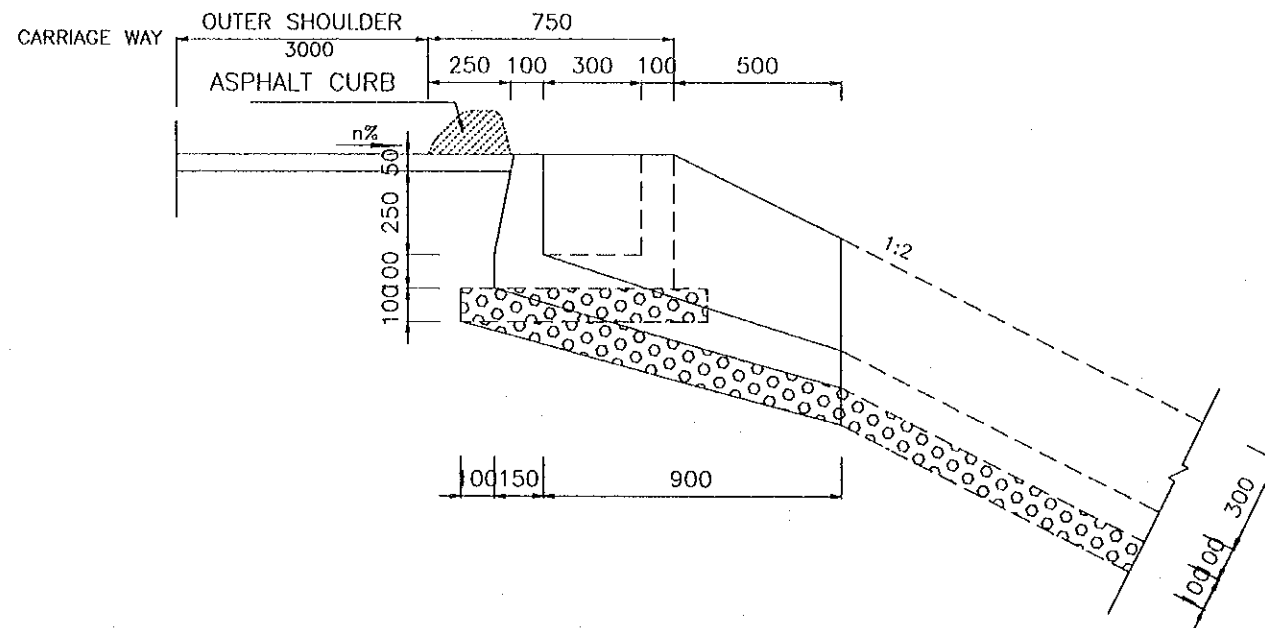
Item	Unit	Quantity
Concrete (Class C)	m <sup>3</sup>	0.07
Form	m <sup>3</sup>	0.42
Reinforcement (D13)	Kg	12.72

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WAFAR
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2008. 3. 14

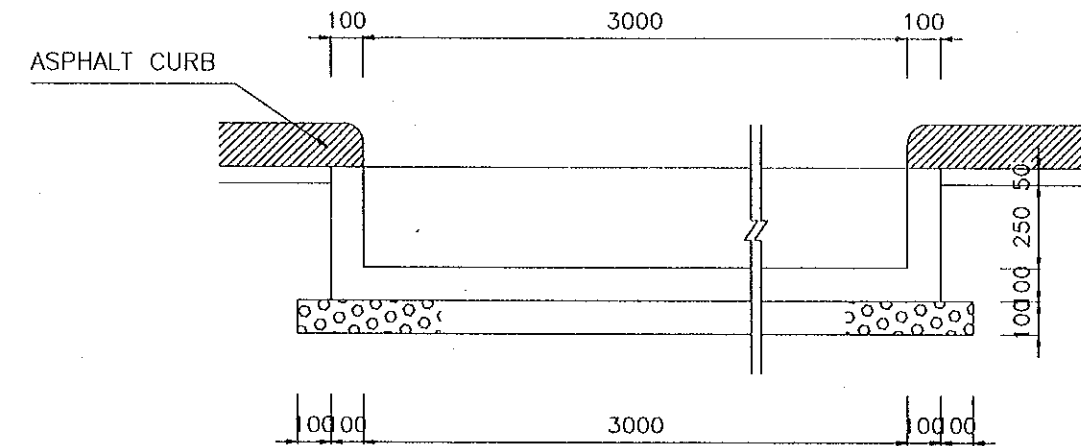
PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/25	E-3-9	
CATCH BASIN TYPE CB-R3			

# CATCH BASIN TYPE CB-R3

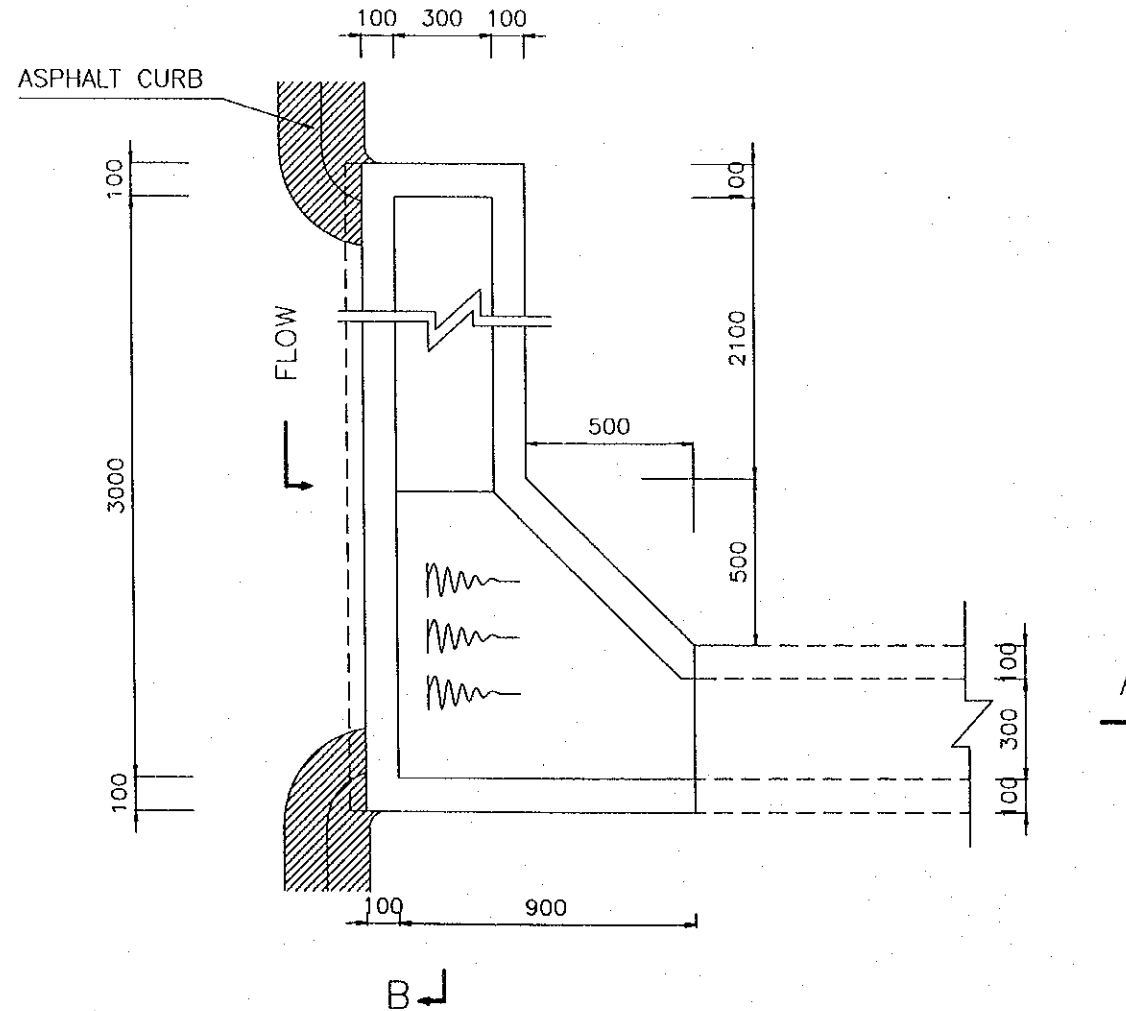
## SECTION A-A



## SECTION B-B



## PLAN



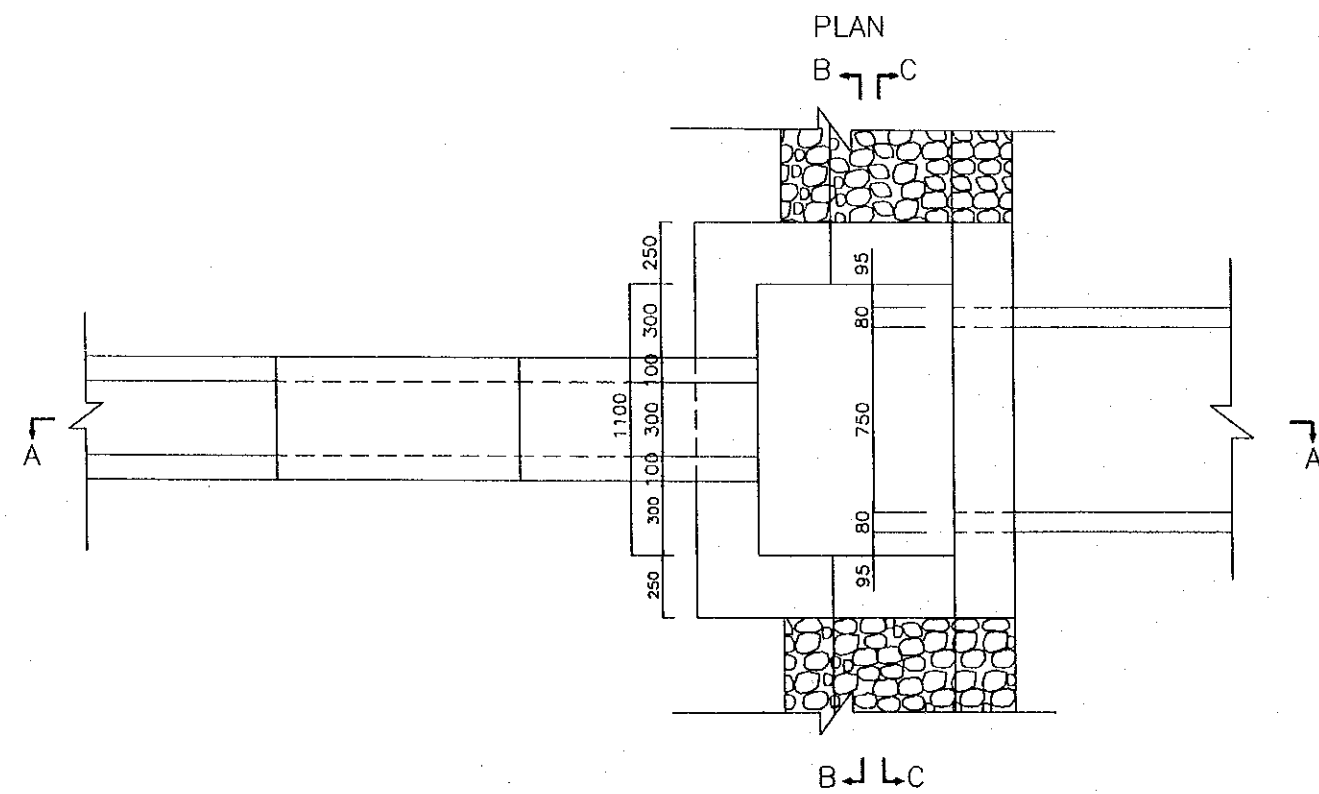
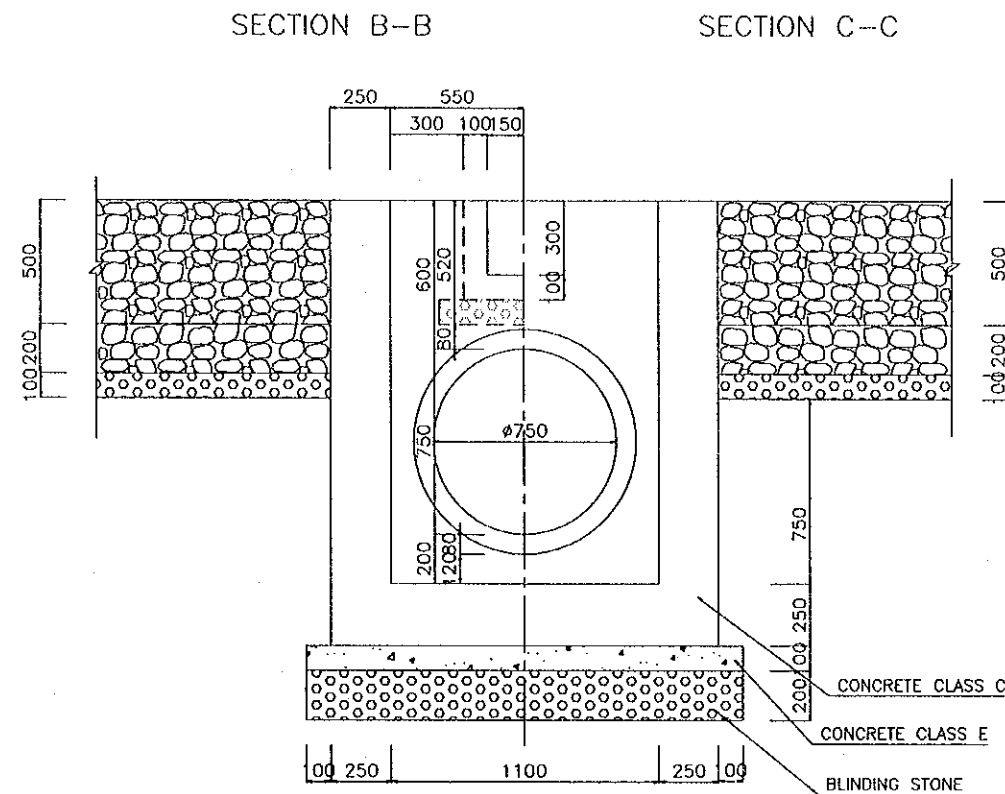
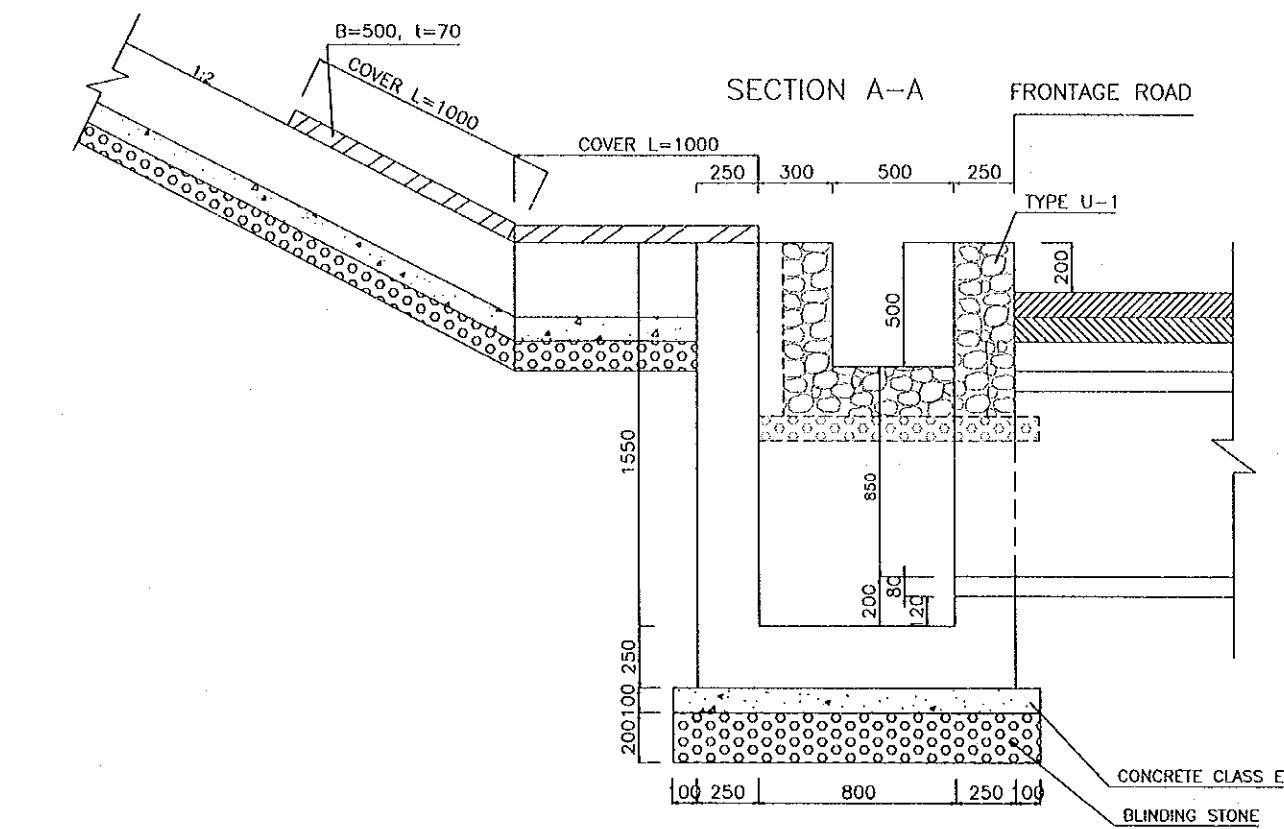
## WORK QUANTITY (Per each)

Item	Unit	Quantity
Concrete Class C	m <sup>3</sup>	0.469
Blinding Stone	m <sup>3</sup>	0.30
Excavation	m <sup>3</sup>	2.46
Back Filling	m <sup>3</sup>	1.20
Form	m <sup>2</sup>	5.00

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATAGE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.2.14	
COMPANY PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/30	DRAWING No. E-3-10	SHEET No.
CATCH BASIN TYPE CB-R4 (1/2)			

### CATCH BASIN TYPE CB-R4 (1/2)



WORK QUANTITY (Per each)

Item	Unit	Quantity
Concrete Class C	m <sup>3</sup>	2.069
Concrete Class E	m <sup>3</sup>	0.270
Blinding Stone	m <sup>3</sup>	0.540
Excavation	m <sup>3</sup>	16.92
Back Filling	m <sup>3</sup>	12.36
Form	m <sup>2</sup>	15.59
Reinforcement	-	see next drawing

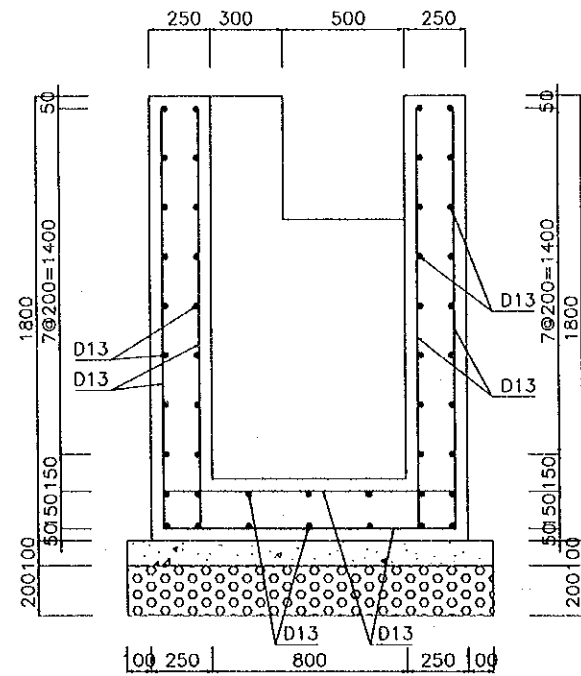
Note: Type A is with pipe, Type B is without pipe.

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATAKE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000. 3. 17

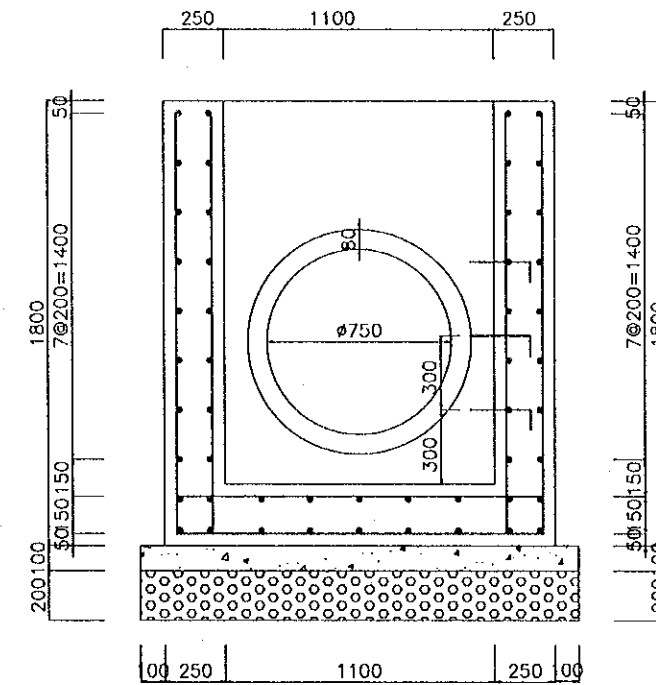
PACKAGE 2	SCALE 1/30	DRAWING No. E-3-11	SHEET No.
CATCH BASIN TYPE CB-R2 (2/2)			

### CATCH BASIN TYPE CB-R4 (2/2)

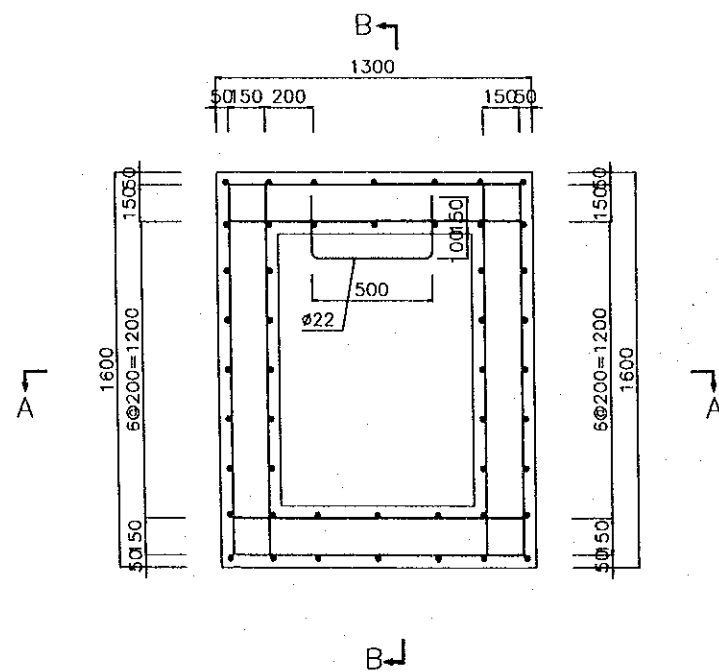
SECTION A-A



SECTION B-B



PLAN

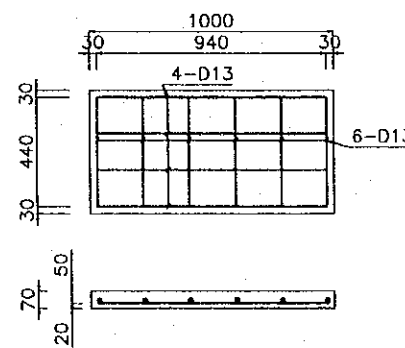


QUANTITY LIST OF REINFORCEMENT

Basin body (per each)	Diameter (mm)	Total weight (kg)
	D13	189.16
	Ø22	11.18

QUANTITY LIST OF COVER (PER 2 ONE)

Item	Unit	Quantity
Concrete (Class C)	m <sup>3</sup>	0.07
Form	m <sup>3</sup>	0.42
Reinforcement (D13)	Kg	12.72

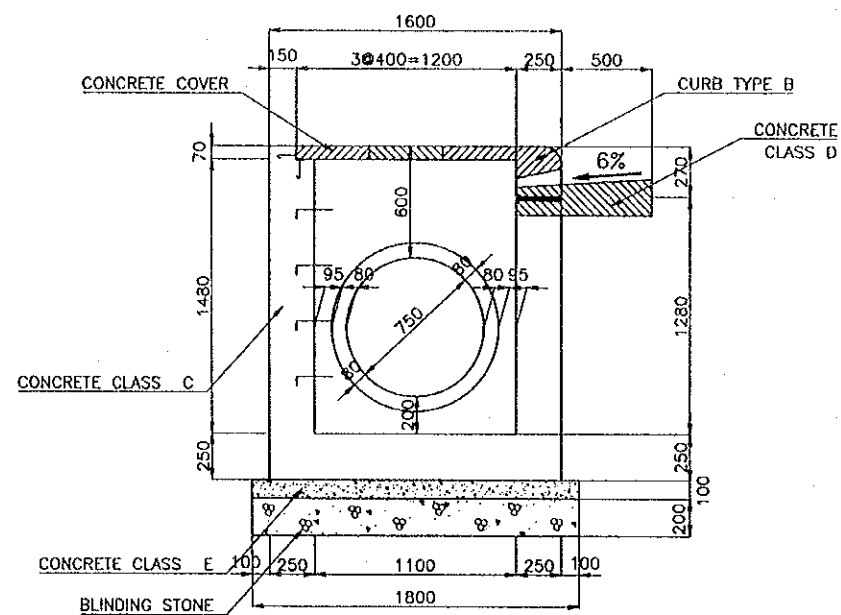


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATAGE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.14

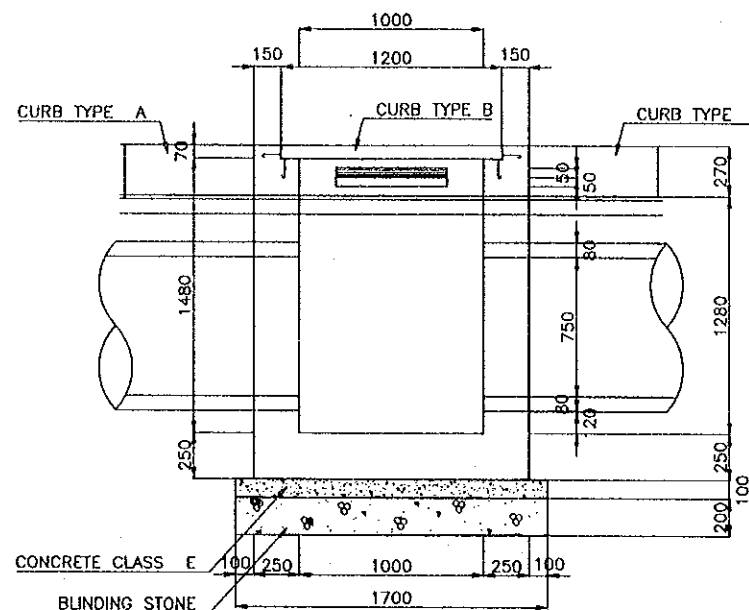
PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/40	E-3-12	
CATCH BASIN TYPE CB-F			

## CATCH BASIN TYPE CB-F(1/2)

SCALE = 1/40



SECTION A - A



SECTION B - B

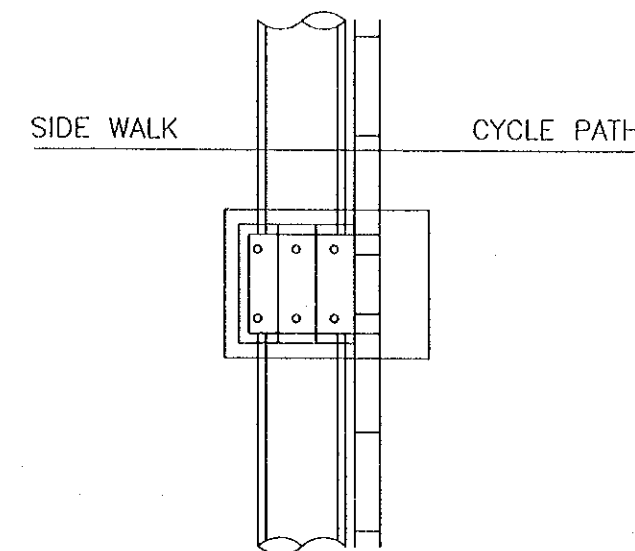


DIAGRAM TYPE A

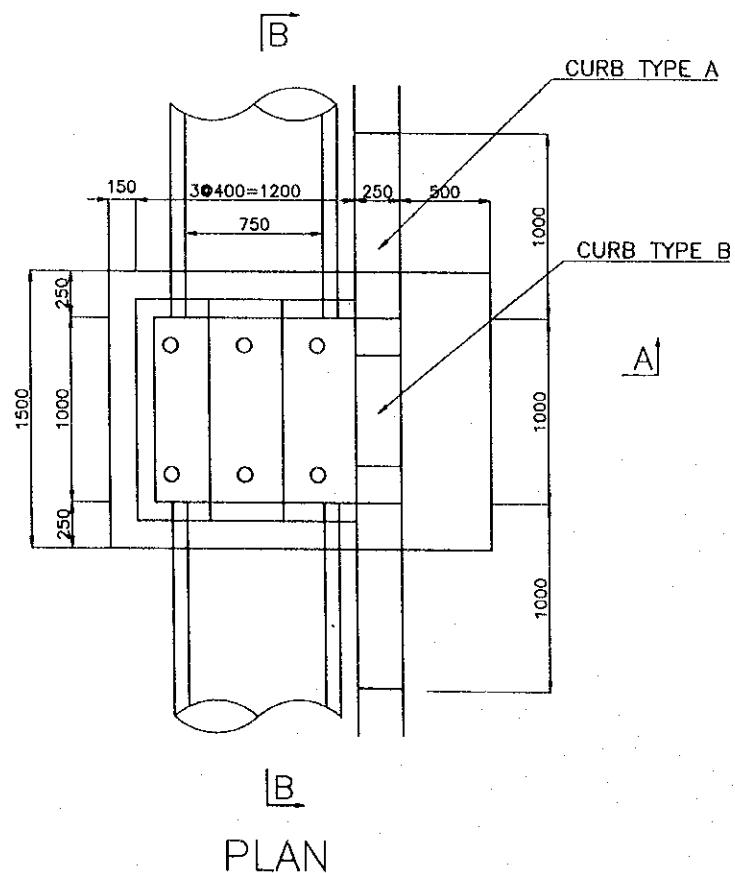
S = 1/75

### QUANTITY LIST

	No	ITEM	UNIT	QUANTITY	REMARK
BODY (PER EACH)	1	CONCRETE CLASS C	M3	1.69	
	2	FORM	M2	14.83	
	3	CONCRETE CLASS E	M3	0.31	
	4	BLINDING STONE	M3	0.62	
	5	EXCAVATION	M3	10.43	
	6	BACK FILLING	M3	6.08	
COVER (PER 3 ONE)	7	REINFORCEMENT	---	---	SEE NEXT DRAWING
	8	CONCRETE CLASS C	M3	0.097	
	9	FORM	M2	0.66	
	10	REINFORCEMENT	---	---	SEE NEXT DRAWING

NOTES

1- ALL DIMENSIONS ARE IN MILLIMETERS



PLAN

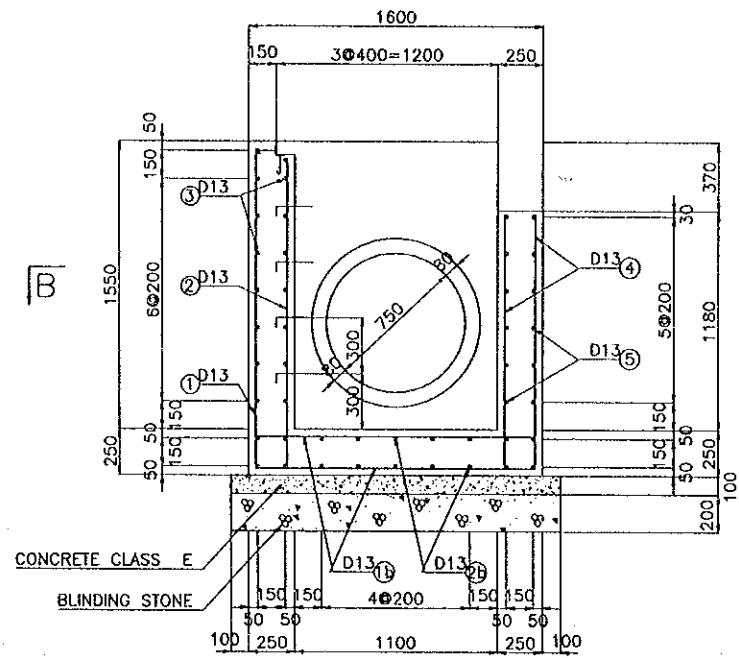
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THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
COMPILED BY	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000. 3. 17

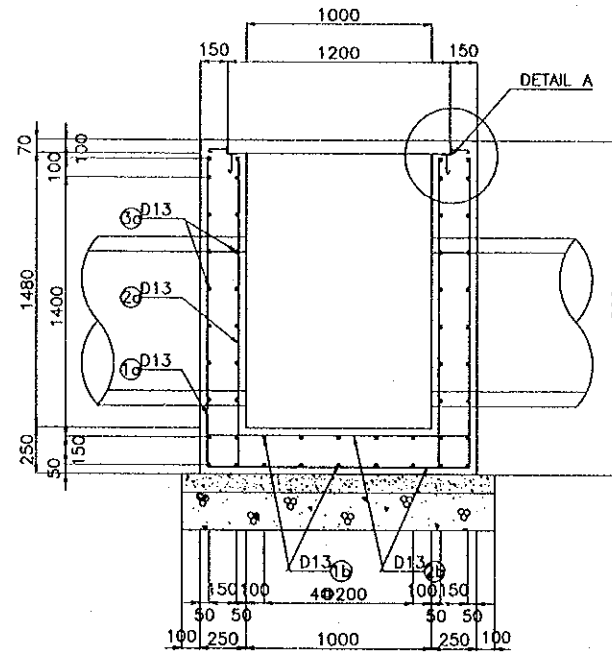
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CATCH BASIN TYPE CB-F (2/2)			

### CATCH BASIN TYPE CB-F(2/2)

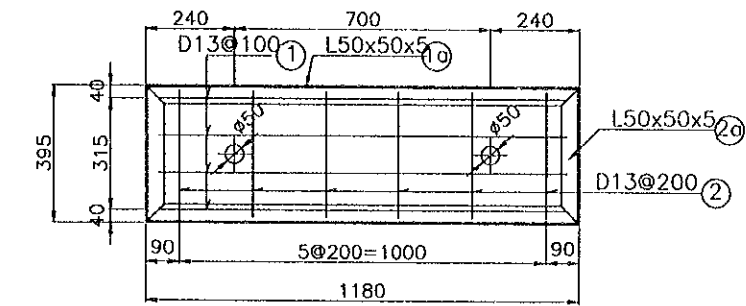
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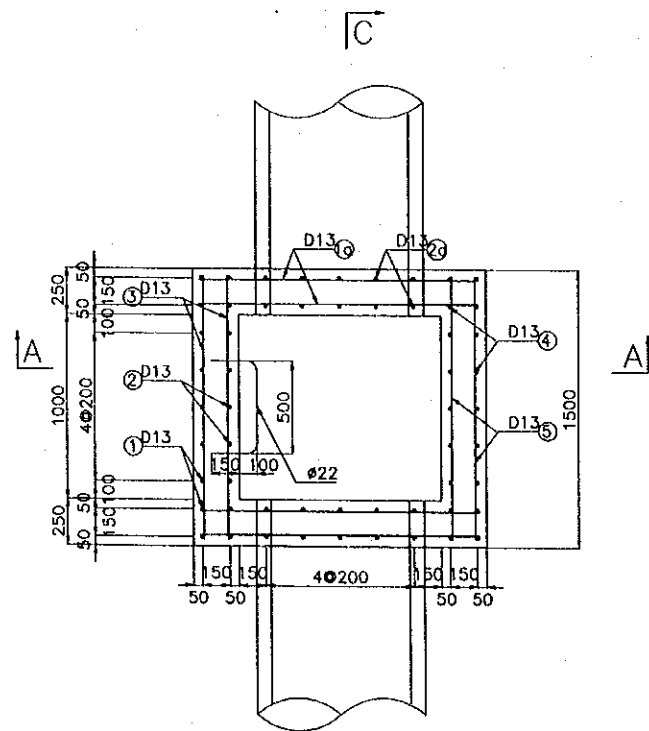
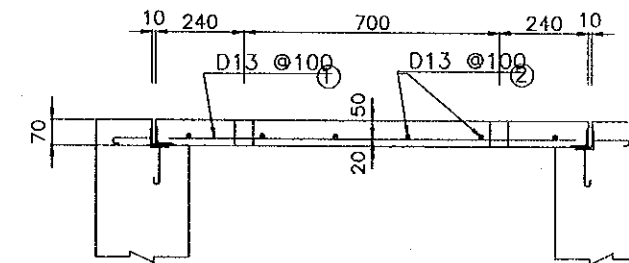
SECTION A - A



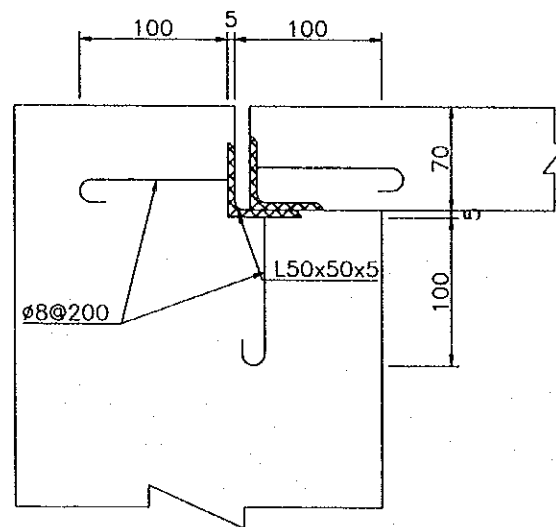
SECTION C-C



CONCRETE CURB (1/20)



SECTION B-B



DETAIL A (1/5)

### QUANTITY LIST OF REINFORCEMENT

No	ITEM	DIAMETER mm	TOTAL WEIGHT Kg	REMARK
1	CATCH BASIN BODY (PER EACH)	D13	216.73	
		Ø8	3.06	
		Ø22	12.15	
		L50x50x5	13.19	
2	CATCH BASIN COVER (PER 3 ONE)	D13	18.76	
		Ø8	4.27	
		L50x50x5	33.36	

### NOTES

1- ALL DIMENSIONS ARE IN MILLIMETERS

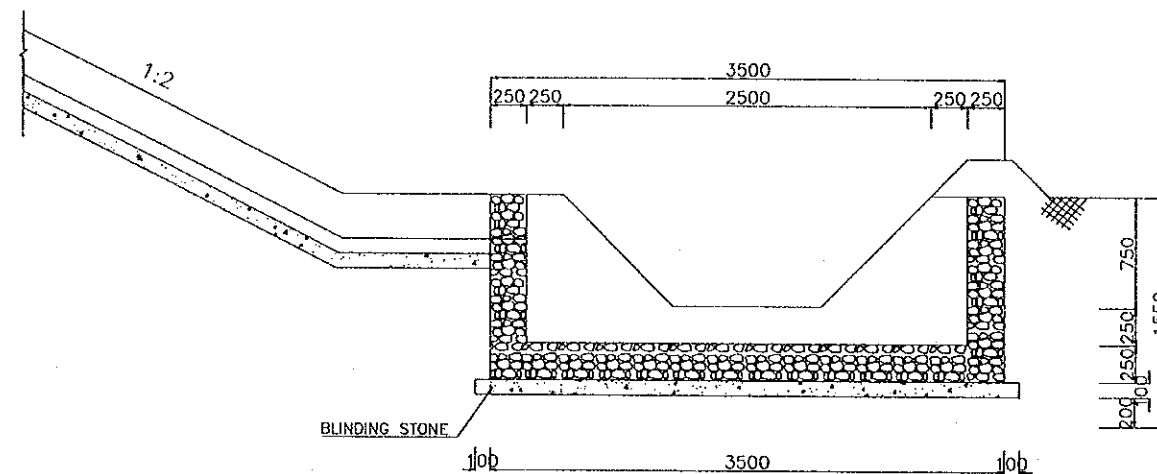
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATAGE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATAGE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2002.2.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/50	E-3-14	

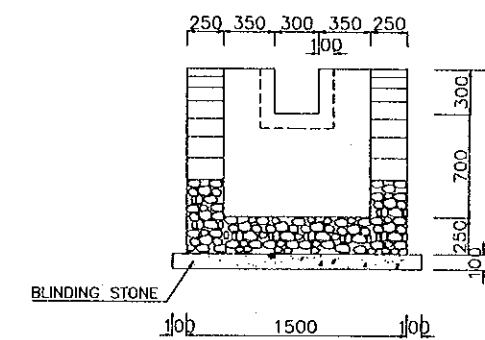
CATCH BASIN TYPE CB-S1

## CATCH BASIN TYPE CB-S1

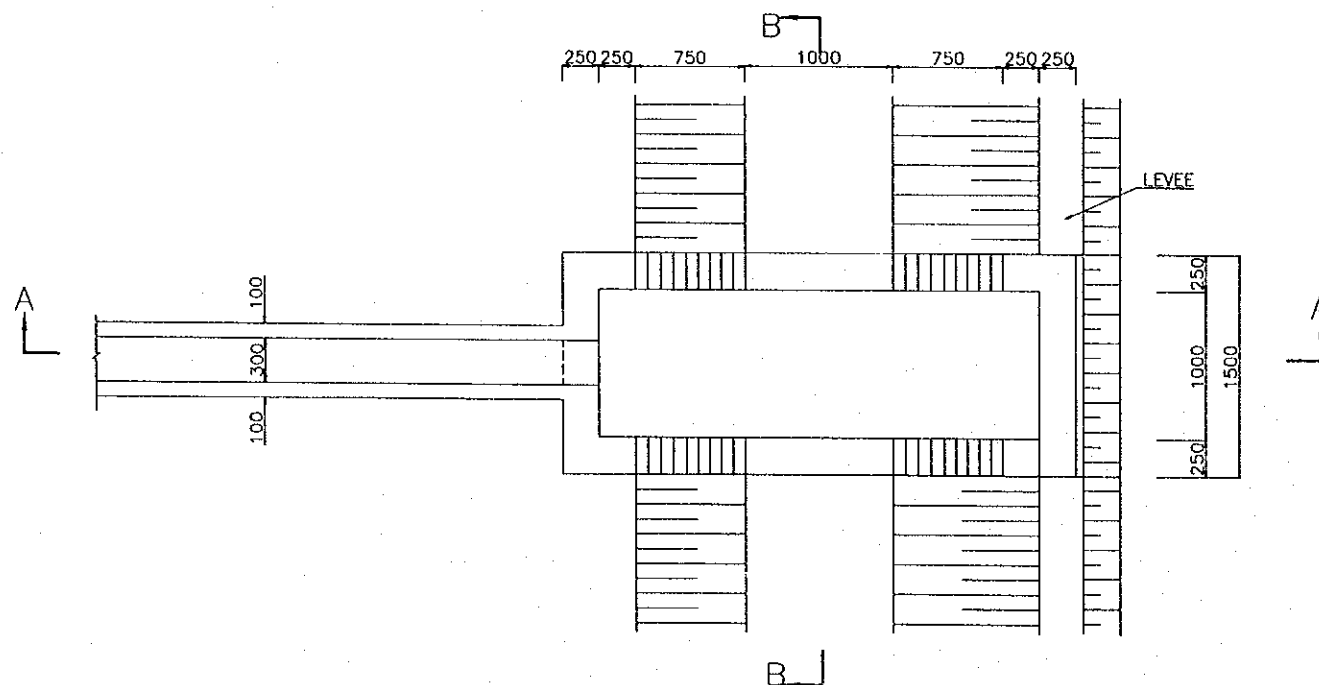
SECTION A-A



SECTION B-B



PLAN



WORK QUANTITY (Per each)

Item	Unit	Quantity
Hortared stone	m <sup>3</sup>	2.88
Blinding Stone	m <sup>3</sup>	0.63
Excavation	m <sup>3</sup>	15.80
Back Filling	m <sup>3</sup>	8.61

Note

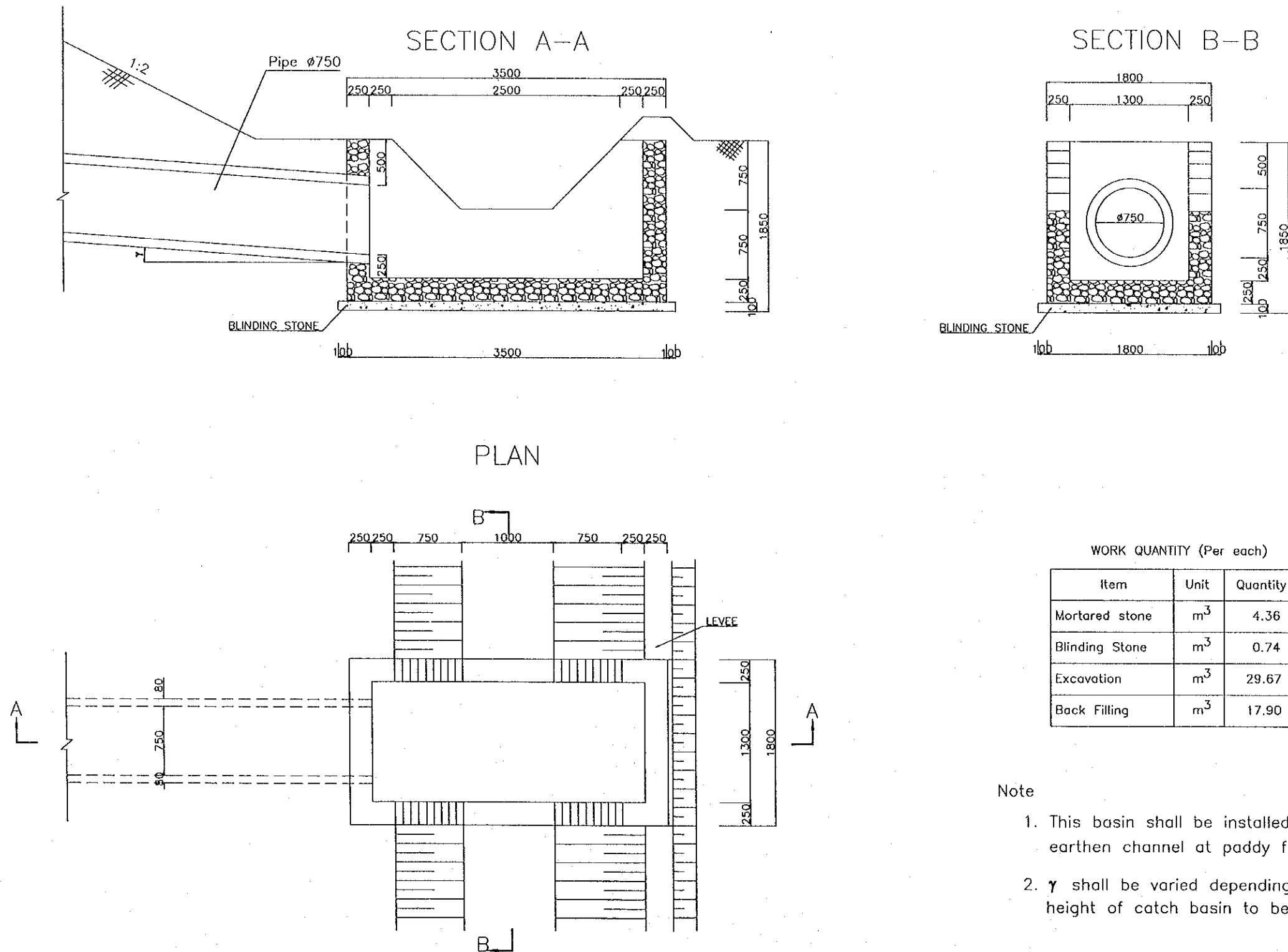
This basin shall be installed in the earthen channel at paddy field.



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY NAME S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.3.17	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/50	DRAWING No. E-3-15	SHEET No.
CATCH BASIN TYPE CB-S2			

## CATCH BASIN TYPE CB-S2



WORK QUANTITY (Per each)

Item	Unit	Quantity
Mortared stone	m <sup>3</sup>	4.36
Blinding Stone	m <sup>3</sup>	0.74
Excavation	m <sup>3</sup>	29.67
Back Filling	m <sup>3</sup>	17.90

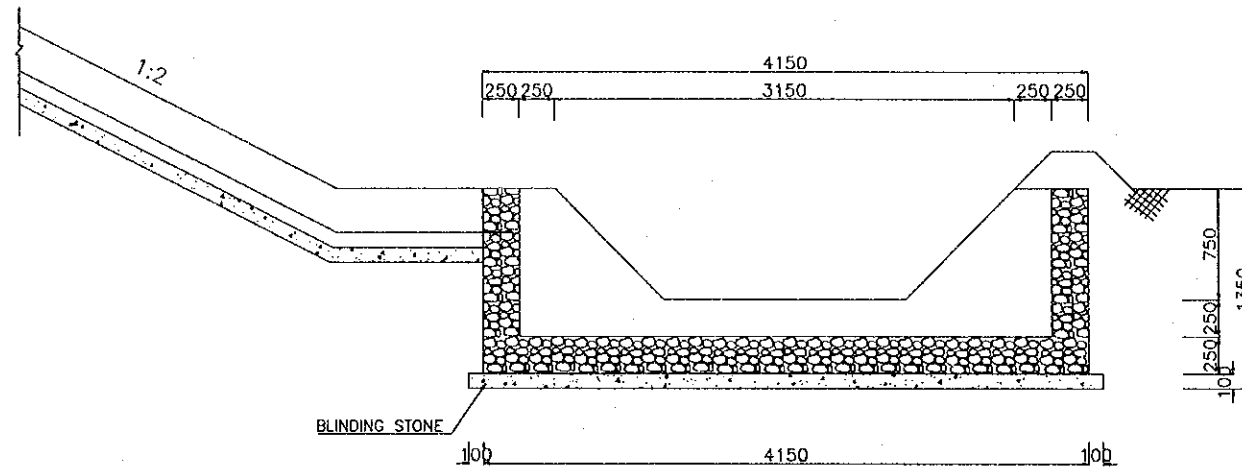
- Note
1. This basin shall be installed in the earthen channel at paddy field.
  2.  $\gamma$  shall be varied depending on the installation height of catch basin to be connected

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	
ORGANIZATION PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.3.14	

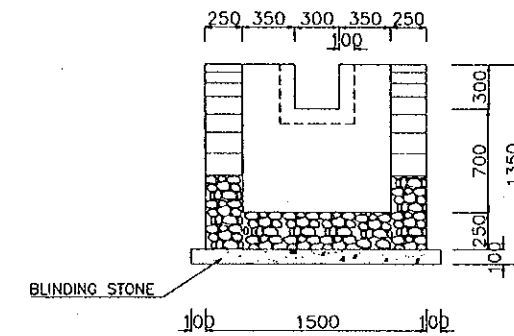
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CATCH BASIN TYPE CB-S3			

## CATCH BASIN TYPE CB-S3

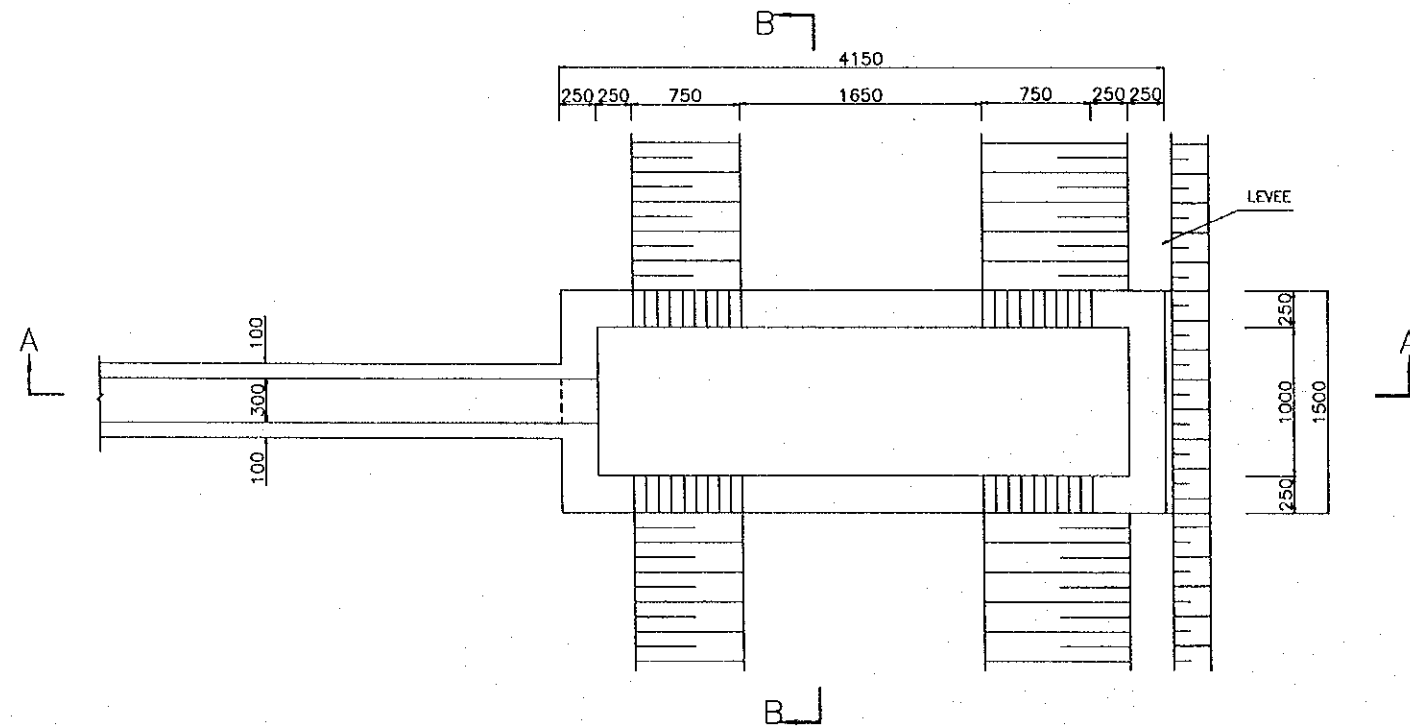
### SECTION A-A



### SECTION B-B



### PLAN



#### WORK QUANTITY (Per each)

Item	Unit	Quantity
Mortared stone	m <sup>3</sup>	3.21
Blinding Stone	m <sup>3</sup>	0.74
Excavation	m <sup>3</sup>	20.32
Back Filling	m <sup>3</sup>	11.80

Note

This basin shall be installed in the earthen channel at paddy field.

# **F. ROAD LIGHTING AND TRAFFIC SIGNAL**

4.0

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY NAME S. MATASE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE 
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2006.6.1	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE	DRAWING No. F-1	SHEET No.
ABBREVIATIONS AND GENERAL NOTES			

## ROAD LIGHTING SYSTEM

### GENERAL NOTES

THE FOLLOWINGS ELECTRICAL FACILITIES WORKS HEREIN SHALL BE EXECUTED IN ACCORDANCE WITH THE REQUIREMENTS STANDARDS OF THE PROCEEDINGS OF VIETNAM CONSTRUCTION STANDARDS VOL. IV, V, VI AND BUILDING CODE OF VIETNAM VOL. II AND JIS OR / AND LATEST EDITION RULES OR REGULATIONS OF THE LOCAL AUTHORITIES AND THE REQUIREMENTS OF THE VIET NAM POWER CORPORATION

#### 1. MEDIUM VOLTAGE

AN ELECTRICAL POWER SUPPLY SYSTEM TO SUITE THE PROJECT SCOPE AND SUBSTATION SYSTEM REQUIREMENTS HAS BEEN PLANNED USING BRANCH CONNECTIONS FROM THE 6.3KV, 11KV, 22KV, OR MORE HIGHER VOLTAGE POWER TRANSMISSION LINE NETWORKS.

THIS WILL ALSO INCLUDE THE MATERIALS, SUPPLY, INSTALLATIONS AND COMMISSIONING TEST TO A PERFORMANCE SPECIFICATIONS.

PAYMENT FOR THIS SYSTEMS OF THE WORKS WILL BE BY LUMP SUM INCORPORATING THE POWER COMPANY.

#### 2. AC 380 VOLTS 3- PHASES, 4 - WIRES, 50 HZ, POWER RECEIVING POINT.

AC 380 VOLTS 3-PHASES POWER WILL BE CONNECTED FROM THE TERMINAL RECEIVING POINT OF VIETNAM POWER CORPORATION ( HA NOI POWER COMPANY ) DISTRIBUTION LINE, WHERE IT WILL BE LOCATED OR TERMINATED AT A OUTDOOR ON POLE INSTALLATION TWO (2) TYPE CONTROL METERING PANEL (SS) OF THE TRANSFORMER SECONDARY.

#### 3. METHOD OF CABLING

THE MAIN FEEDER AND RELATED CABLES WILL BE TERMINATED AT THE DISTRIBUTION PANEL ( MDP ) FROM THE SS PANEL BY UNDERGROUND BURIAL AT GRADE SECTION, OR IN EMBED CONCRETE PARAPET ON THE BRIDGE SECTION FOR LIGHTING PANEL (DB) AND EACH LIGHTING POLES.

#### 4. DISTRIBUTION CABLES

LUBRICANTS FOR ASSISTING IN THE PULLING OR WIRES SHALL BE THOSE SPECIFICALLY RECOMMENDED BY THE CABLE MANUFACTURER'S. ALL DISTRIBUTION CABLE RUN, XLPE / PVC TYPE CABLES 1KV / 0.6 KV SHALL INCLUDE AN INSULATED COPPER EQUIPMENT GROUNDING CONDUCTOR SIZED AS REQUIRED BY THE RATING OF THE OVER LOAD DEVICE SUPPLYING THE PHASE CONDUCTORS. TERMINATIONS OF INSULATED LIGHTING CABLES SHALL BE PROTECTED ACCIDENTAL CONTACT, DETERIORATION OF COVERINGS AND MOISTURE BY THE USE OF TERMINATING DEVICES AND MATERIAL. TERMINATIONS SHALL BE MADE USING MATERIALS AND METHODS AS INDICATED OR SPECIFIED HEREIN OR AS DESIGNATED BY THE WRITTEN INSTRUCTION OF THE CABLE MANUFACTURER AND TERMINATION KIT MANUFACTURER.

#### 5. LIGHTING SYSTEMS

LIGHTING EACH ITEMS AS SHOWN ON THE DRAWINGS SHALL CONSIST OF LIGHTING LANTERN, LAMPS, POWER DISTRIBUTION, ELECTRICAL CONTROL, BALLAST'S, TIMING DEVICES AND MOUNTING ACCESSORIES, AS SHOWN SCOPE OF ITEMS.

- BRIDGE LIGHTING AND AT GRADE LIGHTING
- LIGHTING UP FOR BRIGE FACILITY
- INTERCHANGE SECTION LIGHT
- TOOL GATE FACILITY
- FLASHING LIGHT FOR RAMPWAYS OF INTERCHANGE

#### 6. SYSTEM GROUNDING FOR ELECTRICAL FACILITIES

THE SYSTEMS GROUNDING SHALL BE EXECAVATED THE GROUND TO A DEPTH OF 600 MM AFTER WHICH GROUNDING RODS SHALL BE DRIVEN NEARLY LOCATION MDP. THE DEPTH OF TOP OF THE PROTECTOR-GROUNDING ROD TO BE DRIVEN SHALL BE 1.5 METER.

THE GROUNDING RESISTANCE SHALL BE MEASURED AT EACH GROUNDING ROD. WHERE THE REQUIRED GROUNDING RESISTANCE CANNOT BE OBTAINED AN ADDITIONAL GROUNDING ROD SHALL BE PROVIDED. THE DISTANCE BETWEEN GROUNDING RODS SHALL BE WIDER THAN THE LENGHT OF THE GROUNDING RODS. GROUNDING RODS SHALL BE PLACED AT LEAST 3.0 METER AWAY FROM EXISTING OR FUTURE STRUCTURE. CONCRETE LOCATION MAKER SHALL BE PLACED FOR GROUNDING RODS AS DETAILED ON THE DRAWINGS.

#### 7. UNDERGROUND DUCT BANK OF CROSSING ROAD

UNDERGROUND DUCT LINES SHALL BE CONSTRUCTED OF INDIVIDUAL PVC CONDUITS ENCASED IN CONCRETE. DUCT SHALL NOT BE SMALLER LESS THAN 100 MM IN DIA METER UNLESS OTHERWISE INDICATED. THE TOP OF THE CONCRETE ENVELOPE SHALL NOT BE LESS 450 MM BELOW GRADE, EXCEPT THAT UNDER CROSSING ROAD AND PAVEMENT, IT SHALL NOT BE LESS THAN 600 MM BELOW GRADE.

#### 8. LIGHTNING PROTECTION SYSTEM

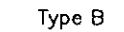
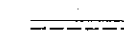
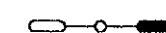
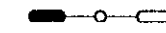
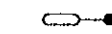
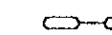
AN EARTHING SYSTEM PROVIDED FOR LIGHTNING PROTECTION MUST BE COMPATIBLE WITH THE TOPOGRAPHICAL GEOLOGICAL, METEOROLOGICAL CONDITION AND THE CHARACTERISTICS OF THE CONSTRUCTION WORKS.

LIGHTNING PROTECTION MEASURES MUST BE ACTIVE WHEN ANY HIGH METAL STRUCTURE IS ERECTED AT HIGH LEVEL AND / OR IN THE OPEN AIR AND WHEN TECHNICAL EQUIPMENT ARE INSTALLED INSIDE THE CONSTRUCTIONS. WHEN THE LIGHTNING PROTECTION SYSTEM IS INSTALLED, MEASURES MUST BE TAKEN TO ENSURE ITS EFFECTIVENESS FOR SAFETY OF OCCUPANTS, TECHNICAL EQUIPMENT AND THE WHOLE CONSTRUCTION IN THE LIGHTNING PROTECTION AREA.

THE LIGHTNING PROTECTION SYSTEM MUST BE OPERATED IMMEDIATELY AFTER FINISHING OF CONSTRUCTION. AFTER INSTALLATION, THE LIGHTNING PROTECTION SYSTEM MUST BE TESTED FOR THE PURPOSE OF ACCEPTANCE. DURING USAGE, THE SYSTEM MUST CONTINUALLY BE SUBJECT TO PERIODIC INSPECTION AND MAINTENANCE.

LIGHTNING PROTECTION SYSTEMS FOR RESIDENTIAL PUBLIC AND INDUSTRIAL BUILDINGS ARE STIPULATED IN CHAPTER 12 OF BUILDING CODE OF VIETNAM II.

### SYMBOL



### ABBREVIATION

#### DESCRIPTION

STREET LIGHTING, SINGLE ARM TYPE -A2.1  
150 WATTS HIGH PRESSURE SODIUM (HPS-T) LUMINARY, 10 M STEEL POLE WITH CONCRETE FOUNDATION OF INTERCHANGE SECTION.

STREET LIGHTING, SINGLE ARM TYPE - A4.11  
150 WATTS HIGH PRESSURE SODIUM (HPS-T) LUMINARY, 8 M STEEL POLE. WITHOUT CONCRETE FOUNDATION ON INNER PARAPET OF BRIDGE STRUCTURE

STREET LIGHTING, DOUBLE ARM TYPE - B2.1  
150 WATTS x 2 HIGH PRESSURE SODIUM (HPS-T) LUMINARY, 10 M STEEL POLE. WITH CONCRETE FOUNDATION AT GRADE

STREET LIGHTING TYPE - E, UNDER BRIDGE SECTION CEILING SUSPENSION MOUNTED TYPE. LAMP 150 WATTS HIGH PRESSURE SODIUM (HPS-T) LUMINARY AND INCLUDED FITTING MATERIALS.

LIGHTING TYPE: G1  
CEILING MOUNTED OF EXIT AND ENTRANCE IN CULVERT BOX WATERPROOFING TYPE OF FLUORESCENT FL1-36 WATT

DISTRIBUTION PANEL -MDP  
OUT DOOR USED TYPE SELF STANDING WITH FOUNDATION

LIGHTING PANEL - DB  
OUT DOOR USED TYPE, SELF STANDING WITH FOUNDATION.

380 / 220 VOLTS AC 3 PHASES- 3 WIRES, 50 HZ DISTRIBUTION PANEL - SS  
ON POLE MOUNTED, AND OUT DOOR USED TYPE SUPPLY POWER FROM TRANSFORMER SECONDARY.

MANHOLE TYPE - A

MANHOLE TYPE - B

PULL BOX TYPE - F 400 x 300 x 150  
OUTDOOR USED, EMBED INTO OUTER PARAPET WALL AT THE BRIDGE

PULL BOX TYPE - G 300 x 300 x 300  
OUTDOOR USED, MOUNT SURFACE OF OUTER PARAPET OF BRIDGE SECTIONS

PVC CONDUIT DIA 50 MM x 3  
EMBED INTO CONCRETE PARAPET ON MAIN BRIDGE SECTION

PVC CONDUIT DIA 50 MM X 2  
EMBED INTO CONCRETE PARAPET ON APPROACH BRIDGE SECTION

Type A  
DUCT BANK UNDER GROUND FOR CROSSING AT GRADE

Type B  
DUCT BANK UNDER GROUND FOR TOLL GATE

CABLE XLPE / PVC STEEL TAPE ARMOURD TYPE, OUT DOOR USED.  
UNDERGROUND BURIAL DEPTH 1.5 METER

PVC #50mm CONDUIT RISE/DOWN

FLASHING LIGHT TYPE-1 IS MOUNTED DIVERGING POINT OF ON/OFF RAMP  
METAL CLAD MADE WATERPROOF TYPE AND WITH CONCRETE FOUNDATION

TRAFFIC CONTROL PANEL TYPE-A FOR AUTOMATIC OR MANUAL OPERATE  
FOR TRAFFIC CONTROLLED AT INTERSECTION. METAL CLAD MADE WATERPROOF TYPE AND WITH CONCRETE FOUNDATION

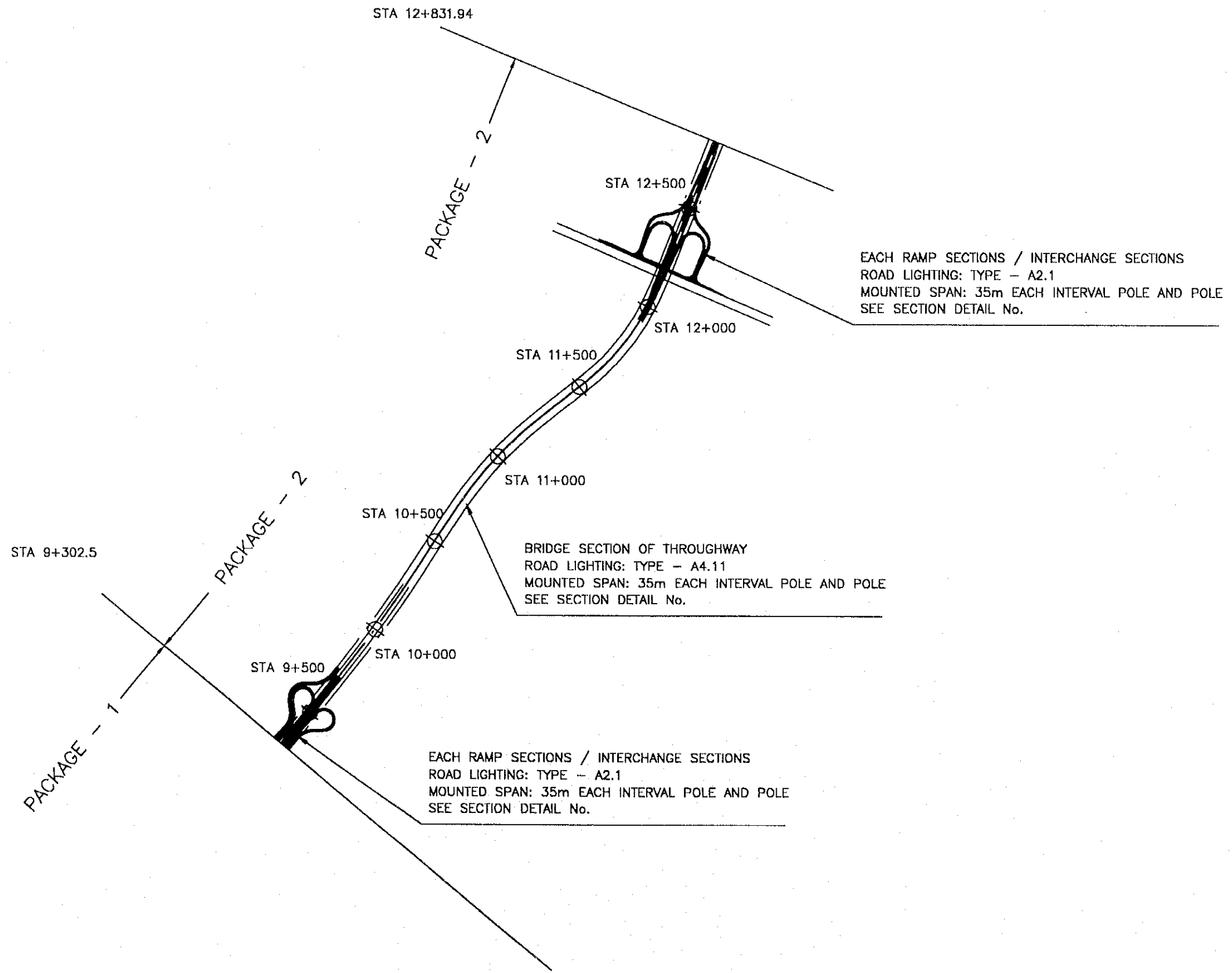
TRAFFIC LIGHT TYPE-1 (STEEL POLE 5m STAND MOUNTED TYPE)

TRAFFIC LIGHT TYPE-2 (STEEL POLE 12m OVERHEAD MOUNTED TYPE)

CONTROL CABLE, UNDER GROUND OUTDOOR USED TYPE  
XLPE / PVC 7c-3.5mm2 STRANDED TYPE

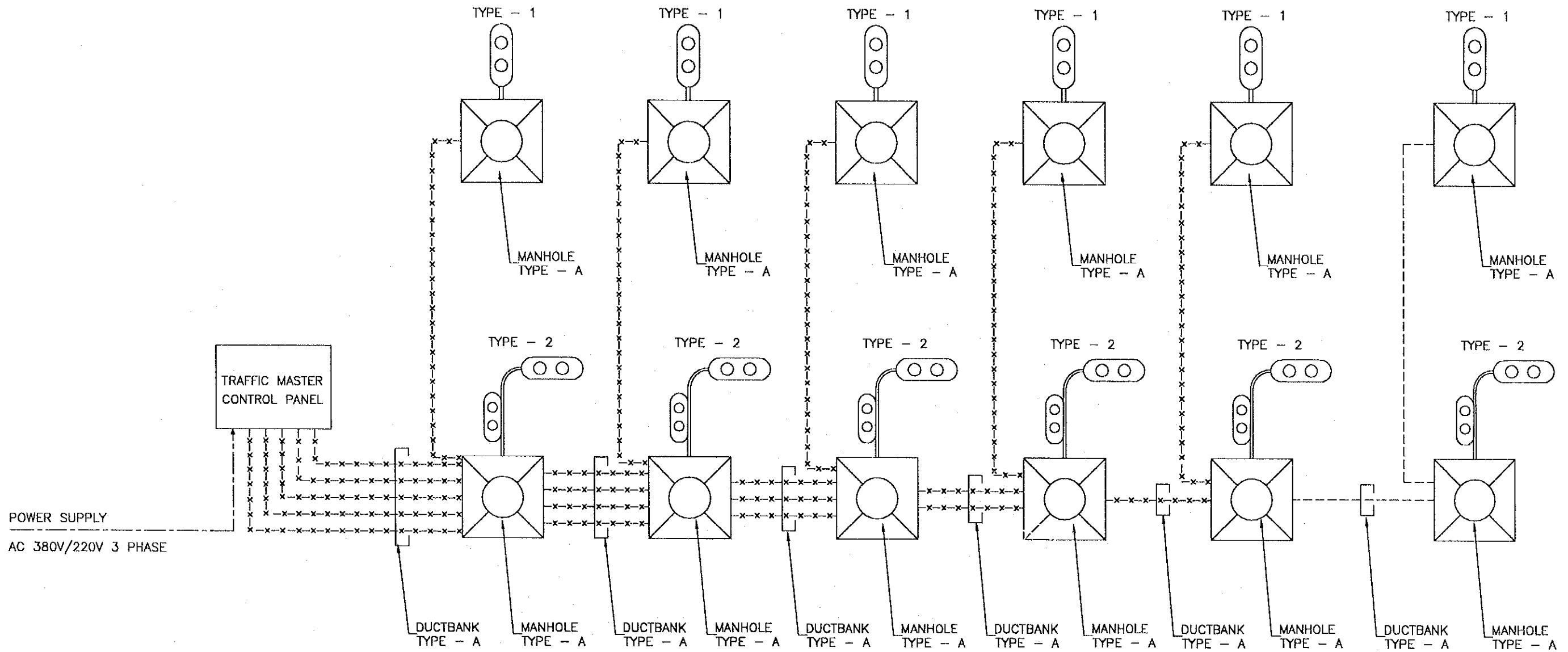
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.6.1

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/20000	F - 2	
GENERAL PLAN - 4			



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	
PROJECT	RED RIVER BRIDGE (HUANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
COMPLETION	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.6.1

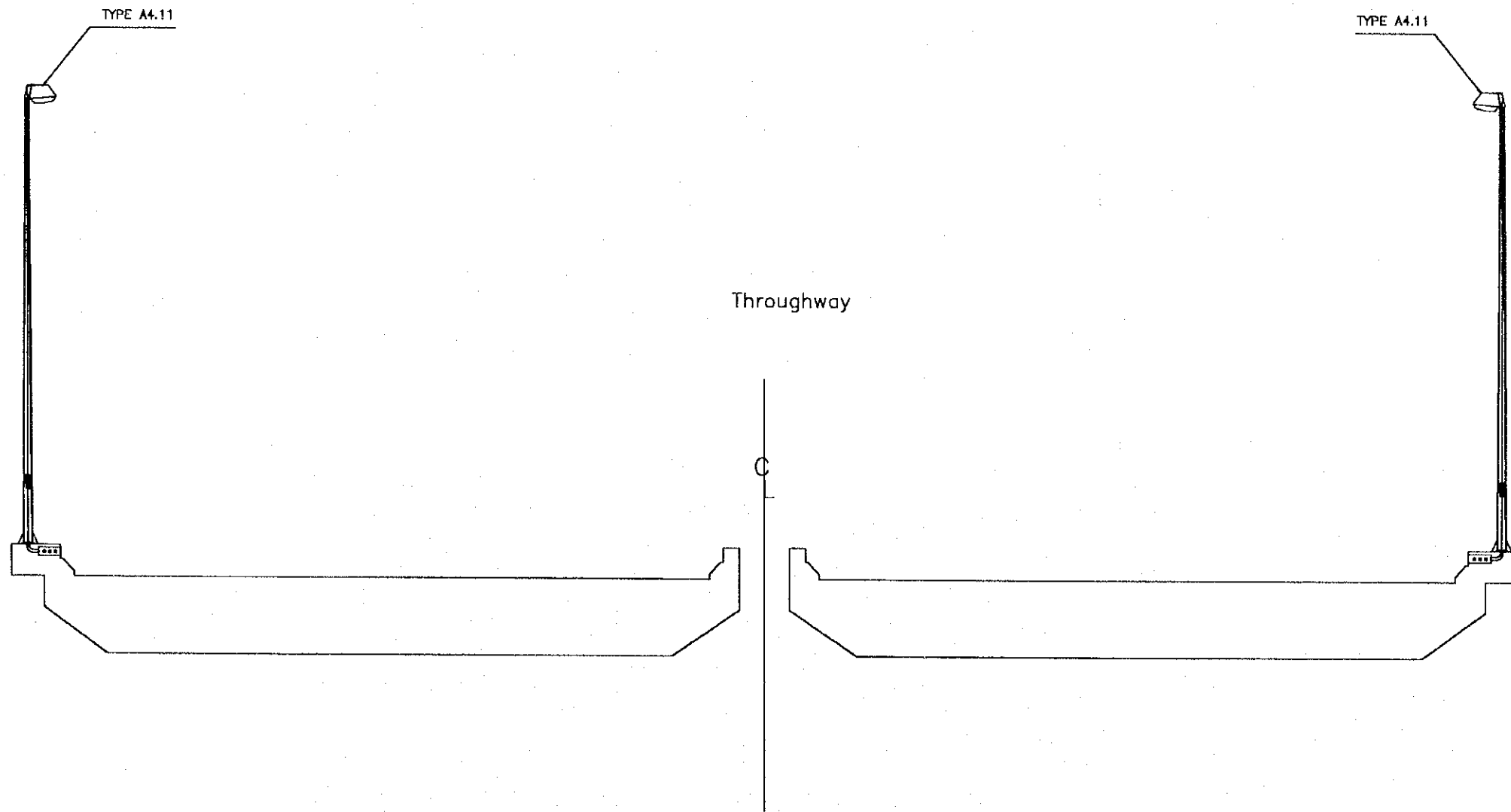
PACKAGE	SCALE	DRAWING No.	SHEET No.
2		F - 3	
TRAFFIC SIGNAL DIAGRAM			



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.6.1

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/100	F - 4	
PROFILE OF ROAD LIGHTING - 1			

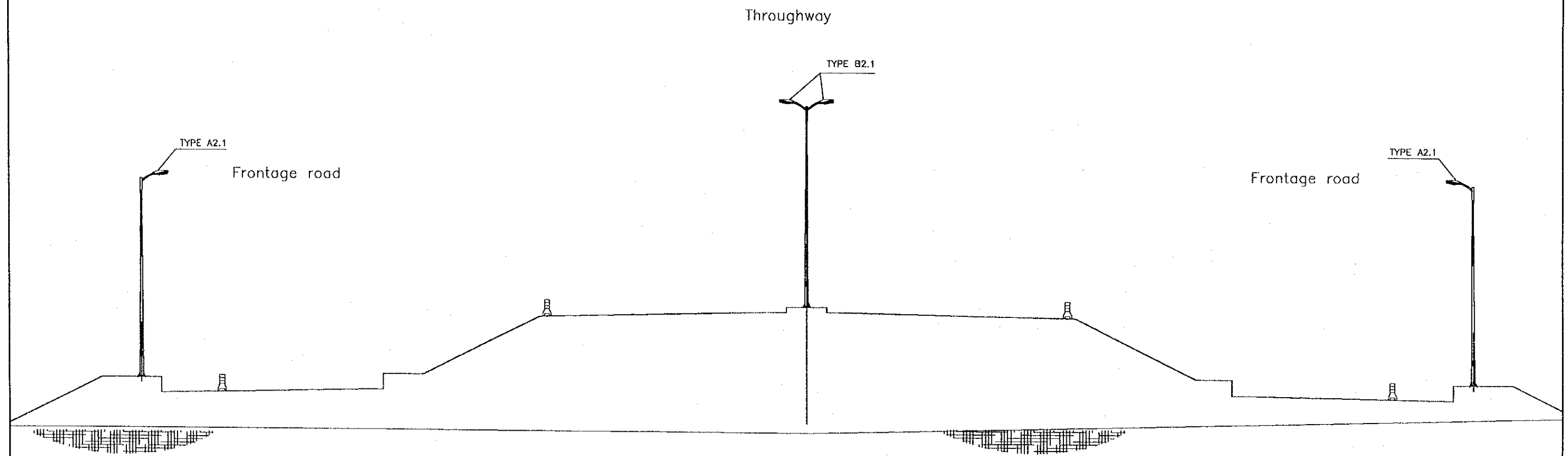
### TYPICAL BRIDGE SECTION



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TUHMO LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	SIGNATURE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.6.1

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/200	F - 5	
PROFILE OF ROAD LIGHTING -- 2			

AT GRADE SECTION --1

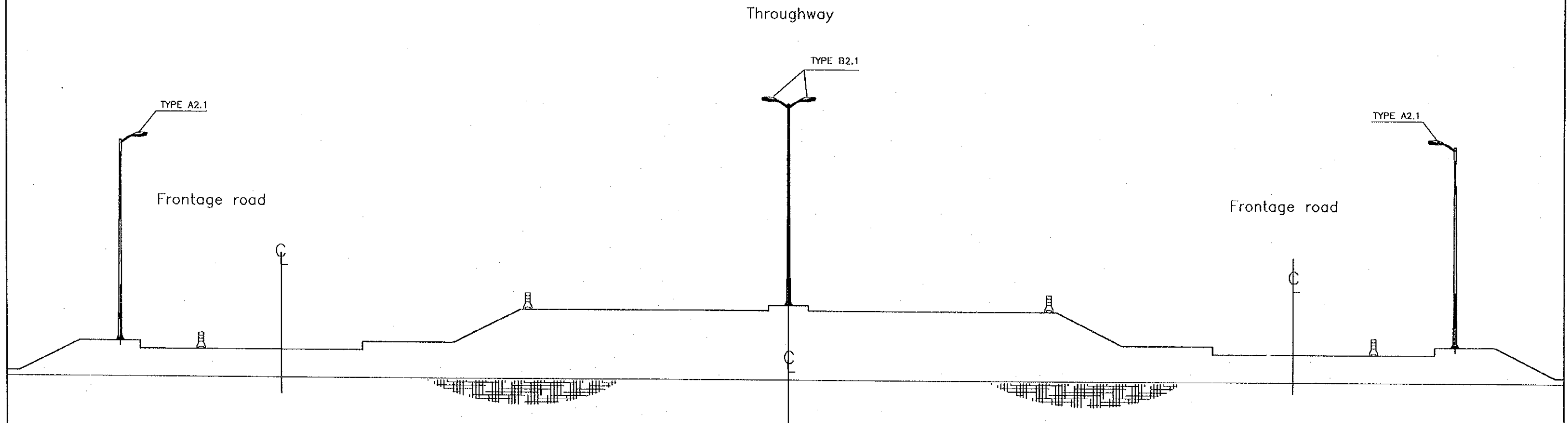




THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT	RED RIVER BRIDGE (THANH TRU BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.6.1

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/200	F - 6	
PROFILE OF ROAD LIGHTING - 3			

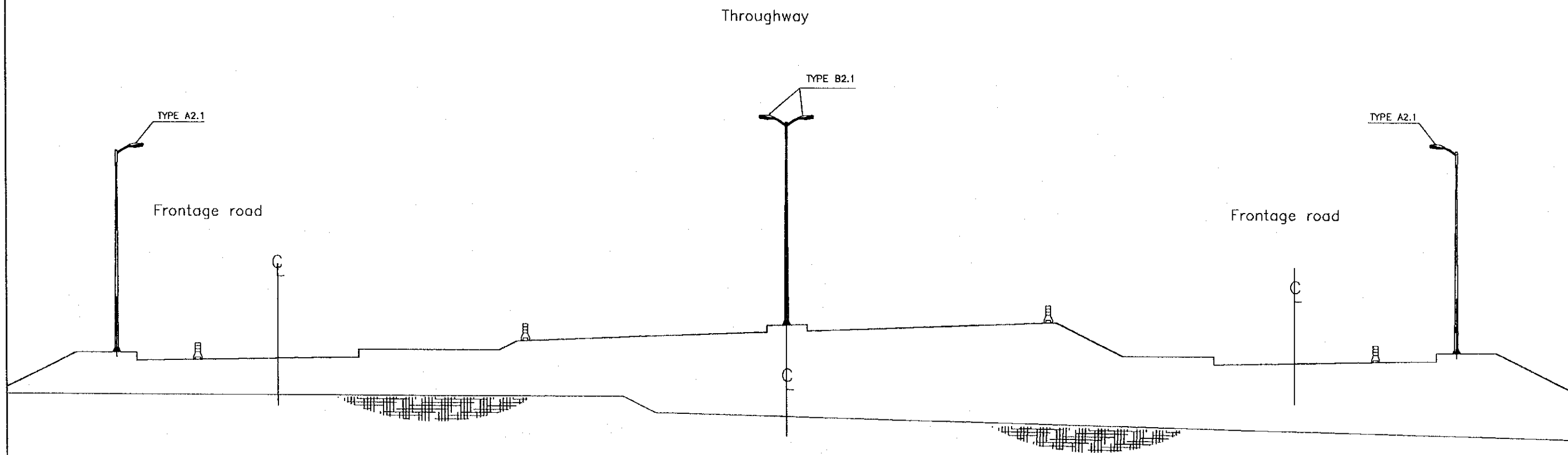
AT GRADE SECTION -2



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TUANG LONH PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
RED RIVER BRIDGE (THANH TRU BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
PACIFIC CONSULTANTS INTERNATIONAL		DATE

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/200	F - 7	-
PROFILE OF ROAD LIGHTING - 4			

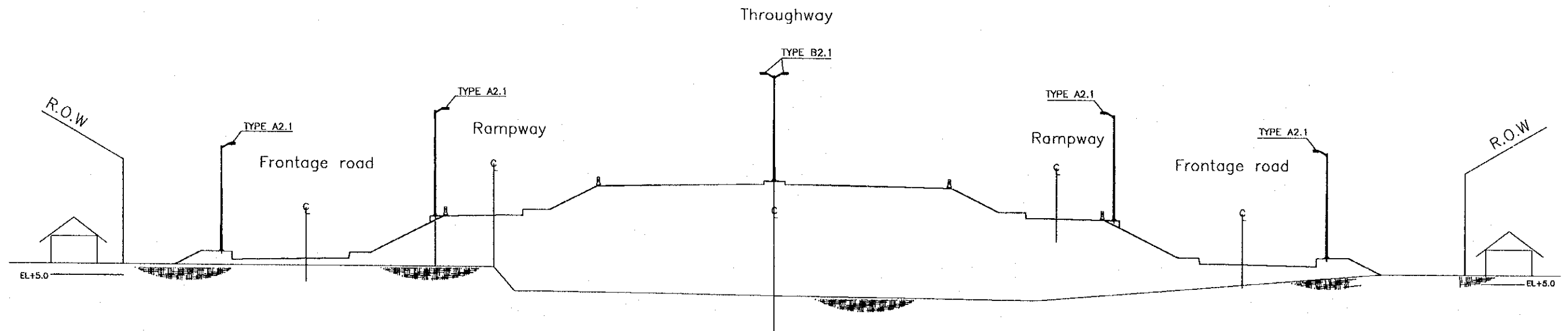
AT GRADE SECTION -3



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JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. MATSUDA
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.6.1

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/400	F - 8	
PROFILE OF ROAD LIGHTING - 5			

AT GRADE SECTION - 4



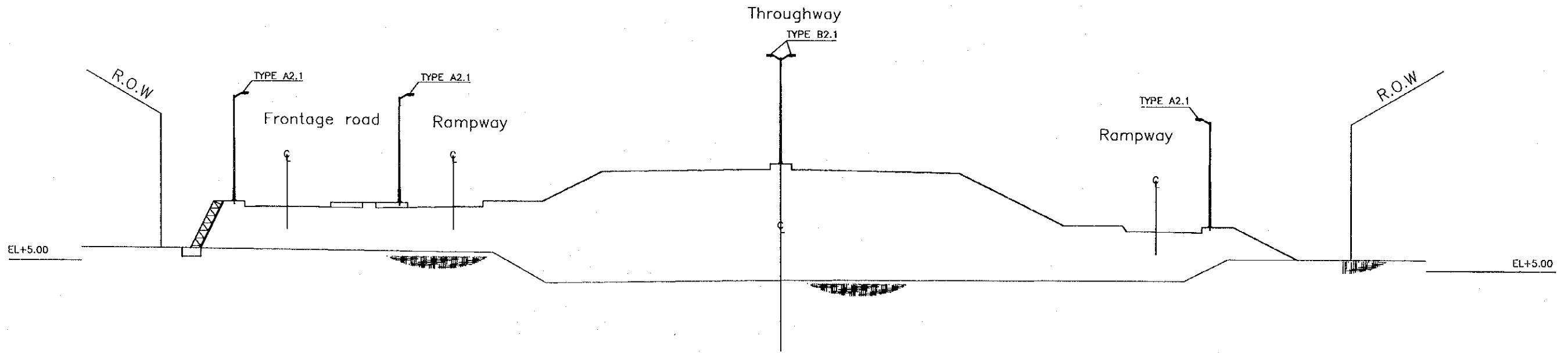
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM  
THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT

DESIGNED BY  
NAME: S. MATSUDA  
SIGNATURE: *[Signature]*  
DATE: 2000.10.1

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/400	F - 9	

PROFILE OF ROAD LIGHTING - 6

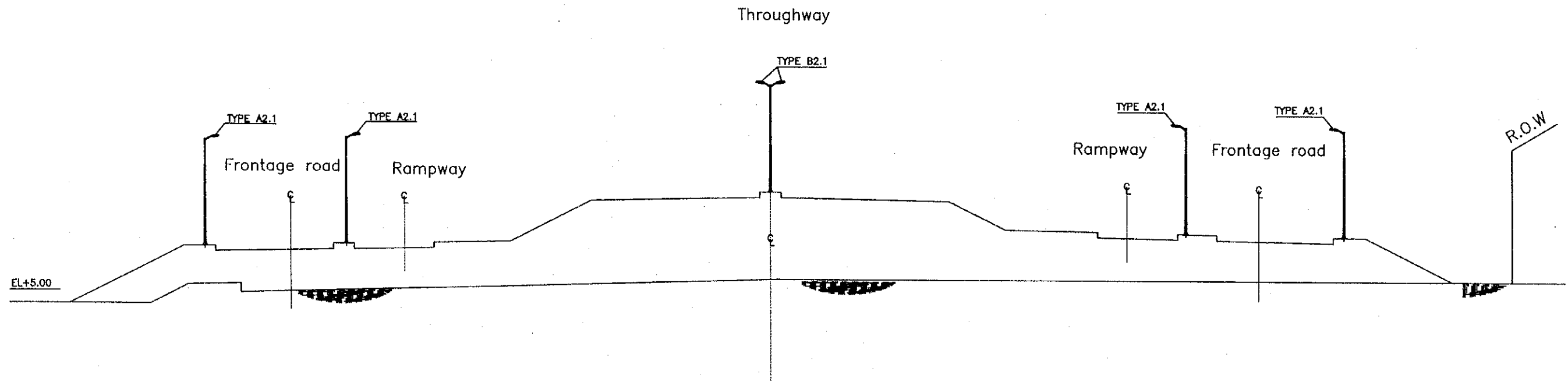
### AT GRADE SECTION -5



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATADE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.8.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/400	F - 10	
PROFILE OF ROAD LIGHTING - 7			

AT GRADE SECTION -- 6

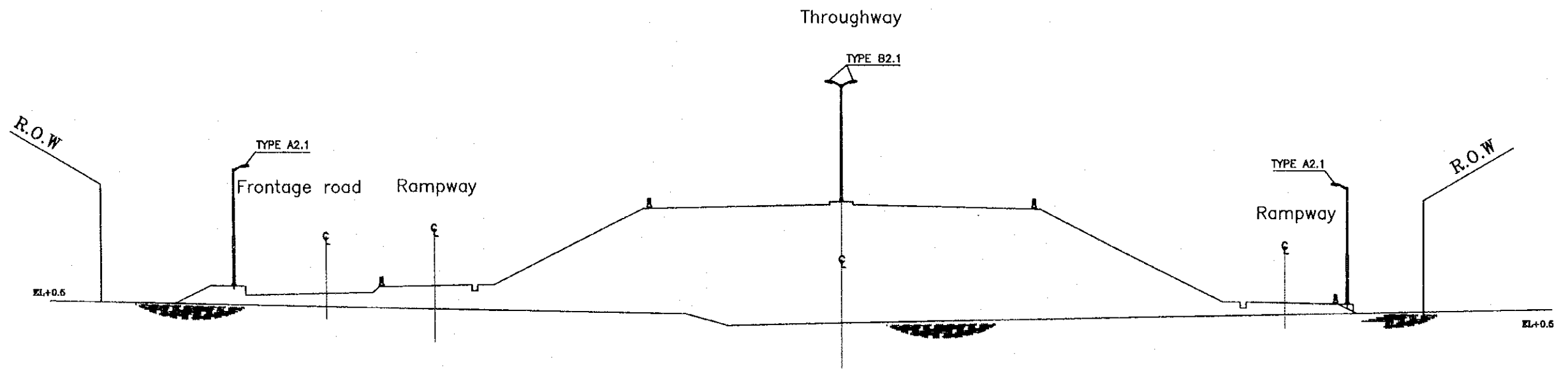


400

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY NAME S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2002.3.17	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/400	DRAWING No. F - 11	SHEET No.
PROFILE OF ROAD LIGHTING - 8			

AT GRADE SECTION - 7

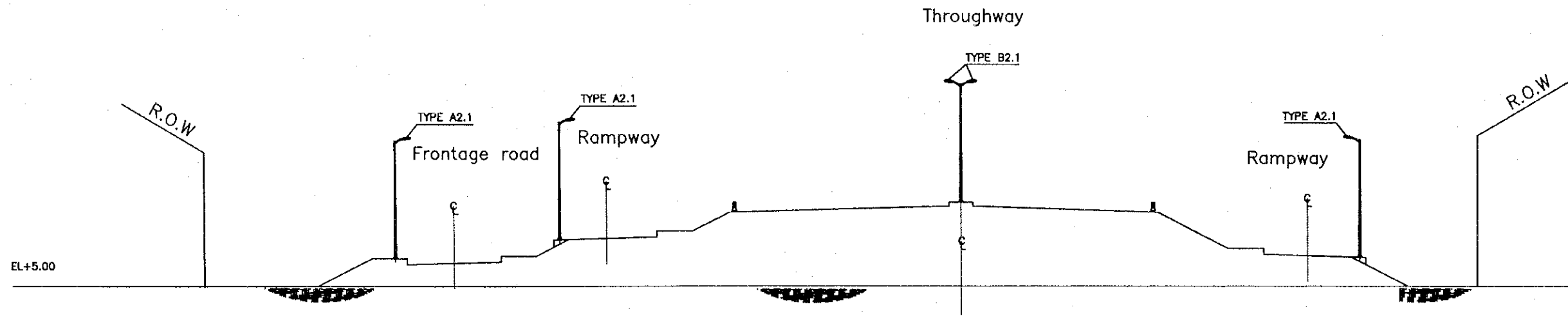


401

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. MATSUDA
PROJECT RED RIVER BRIDGE (THANH TRU BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE Sept. 3, 1988	

PACKAGE 2	SCALE 1/400	DRAWING No. F - 12	SHEET No.
PROFILE OF ROAD LIGHTING - 9			

AT GRADE SECTION - 8



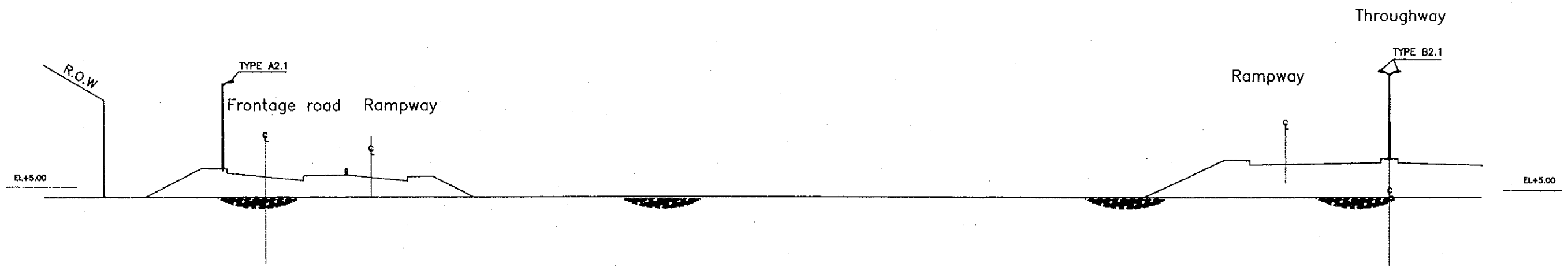
400

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TUANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY NAME S. MATASE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.3.14	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/500	DIAGRAM No. F - 13	SHEET No.
PROFILE OF ROAD LIGHTING -- 10			

AT GRADE SECTION -- 9

2500

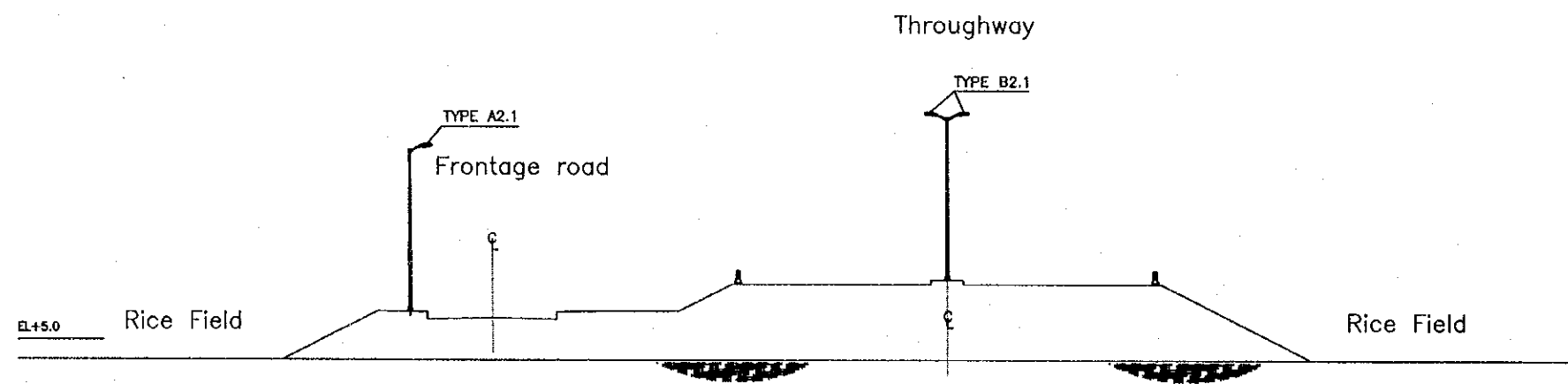




THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATADE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000. 5. 17

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/400	F - 14	
PROFILE OF ROAD LIGHTING - 11			

AT GRADE SECTION - 10

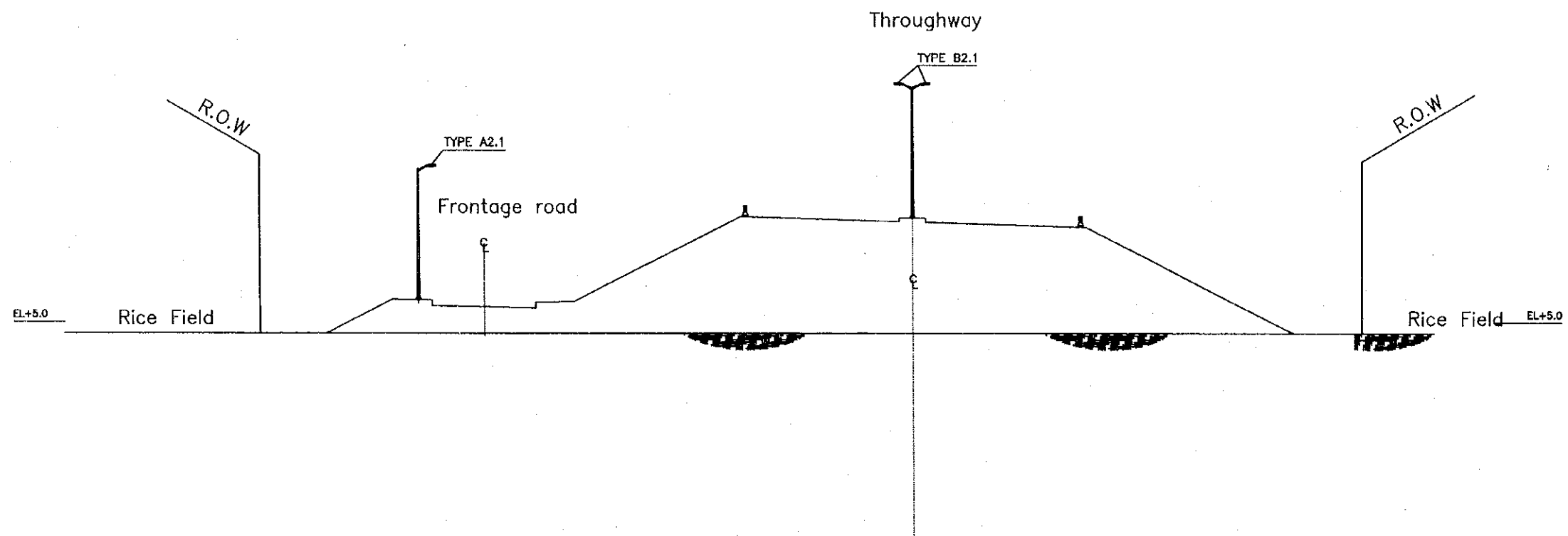


454

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TUHUO LOHO PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.3.17	

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/400	F - 15	
PROFILE OF ROAD LIGHTING - 12			

AT GRADE SECTION - 11



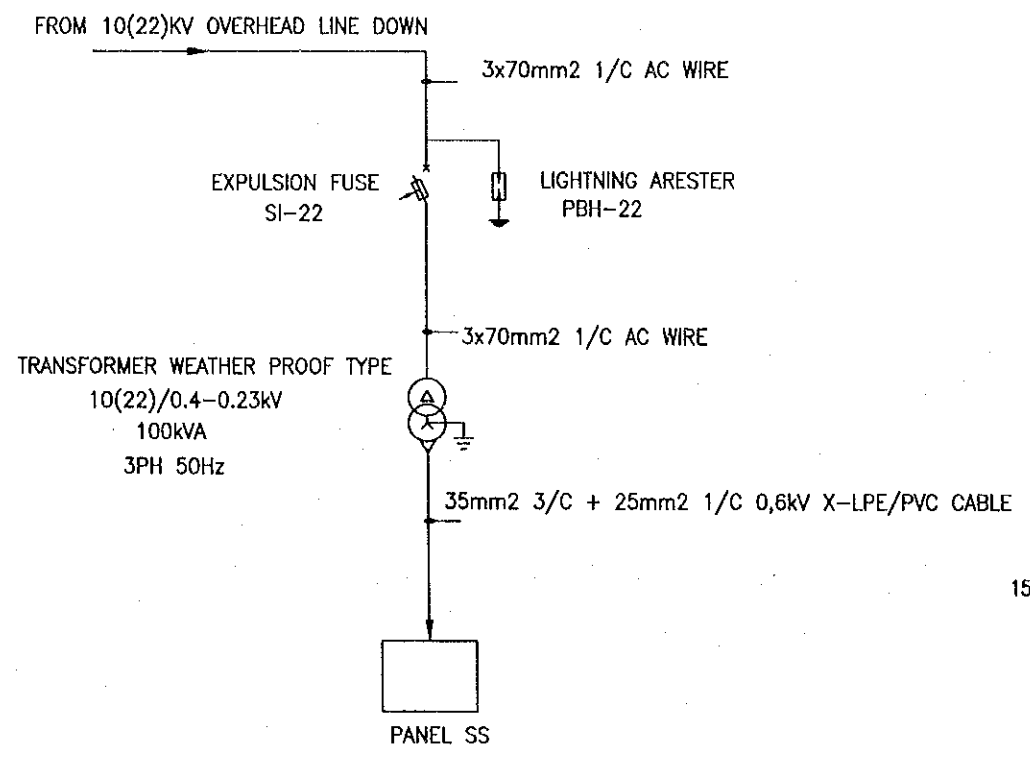
450

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. NAITABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. NAITABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	DATE 2000. 3. 14
CONTRACT PACIFIC CONSULTANTS INTERNATIONAL		

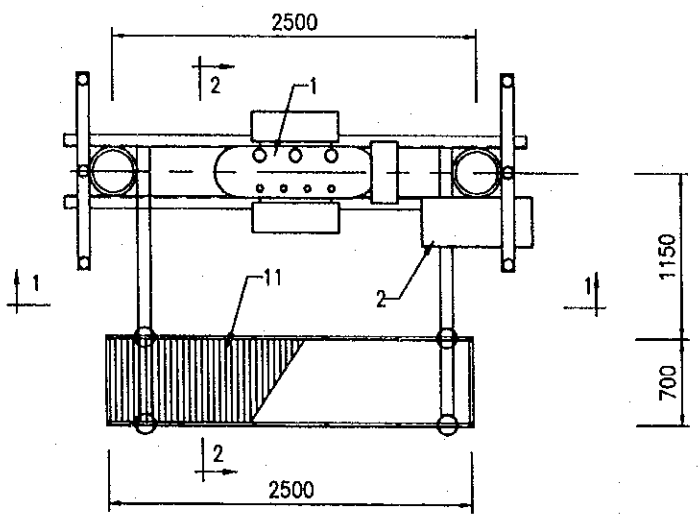
PACKAGE 2	SCALE 1/50	DRAWING No. F - 16	SHEET No.
SUBSTATION TYPE -- Ia			

(POLE MOUNTED MORE THAN 50KVA, 100KVA)

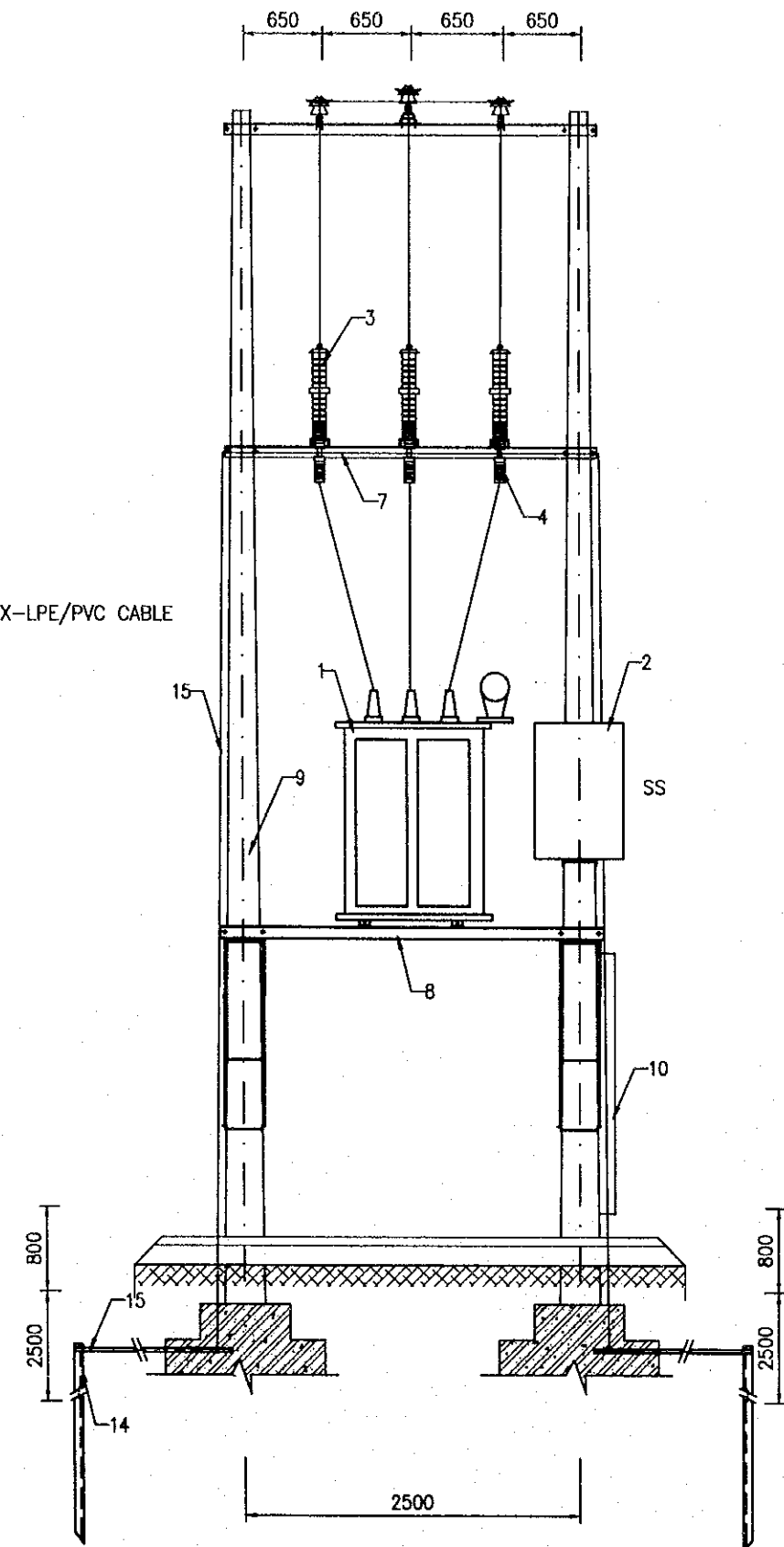
SINGLE LINE DIAGRAM



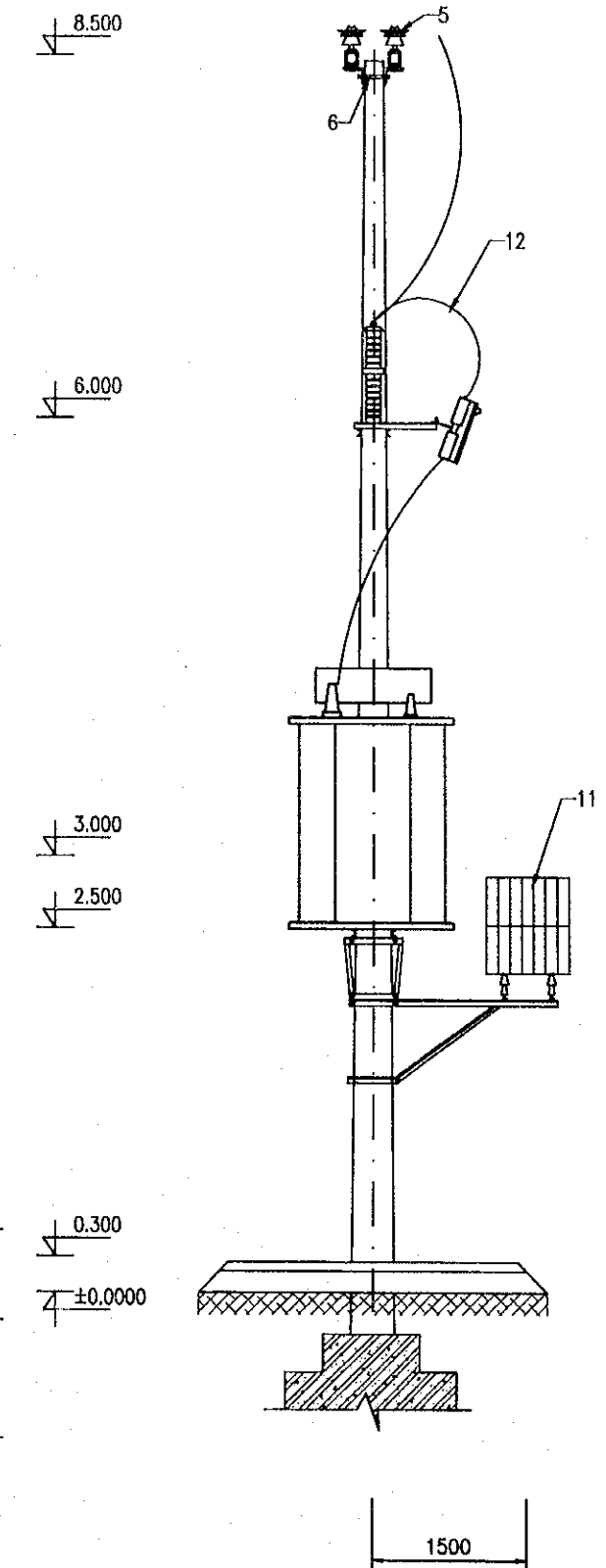
PLAN



VIEW 1



VIEW 2



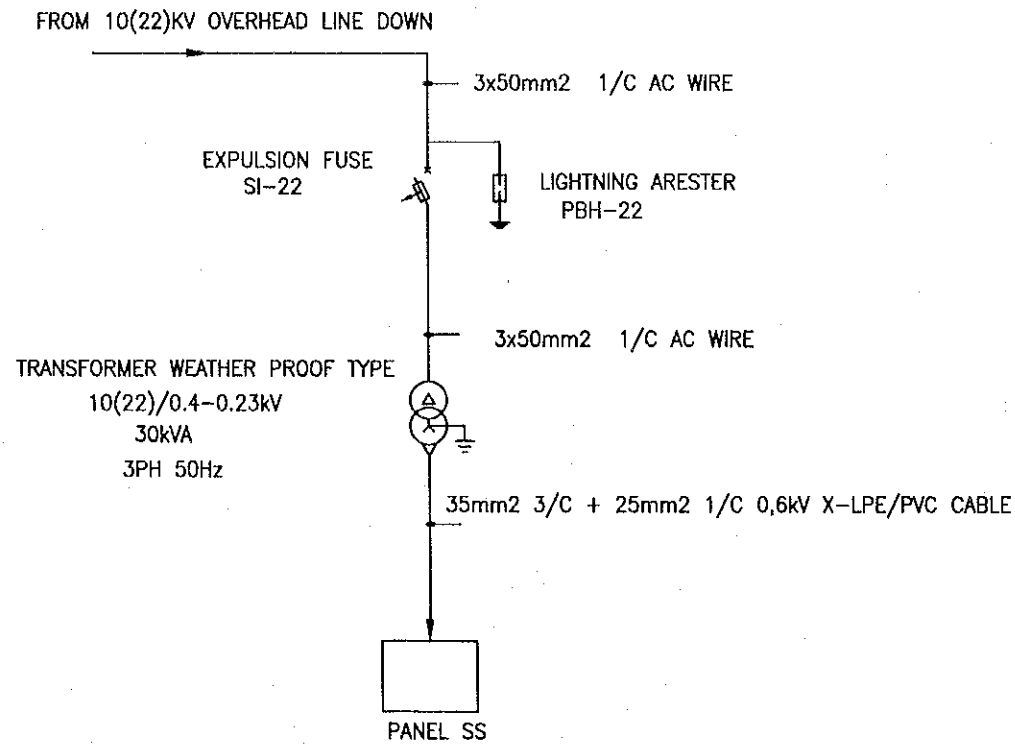
450

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.17

PACKAGE 2	SCALE 1/50	DRAWING No. F - 17	SHEET No.
SUBSTATION TYPE - IIa			

(POLE MOUNTED MORE THAN 31.5KVA)

SINGLE LINE DIAGRAM

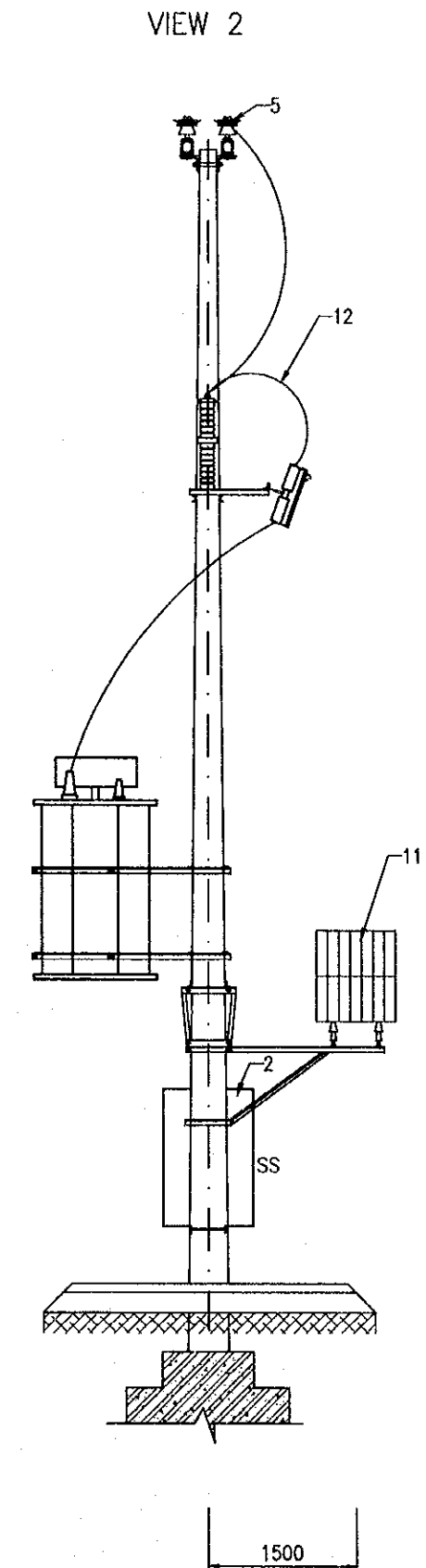
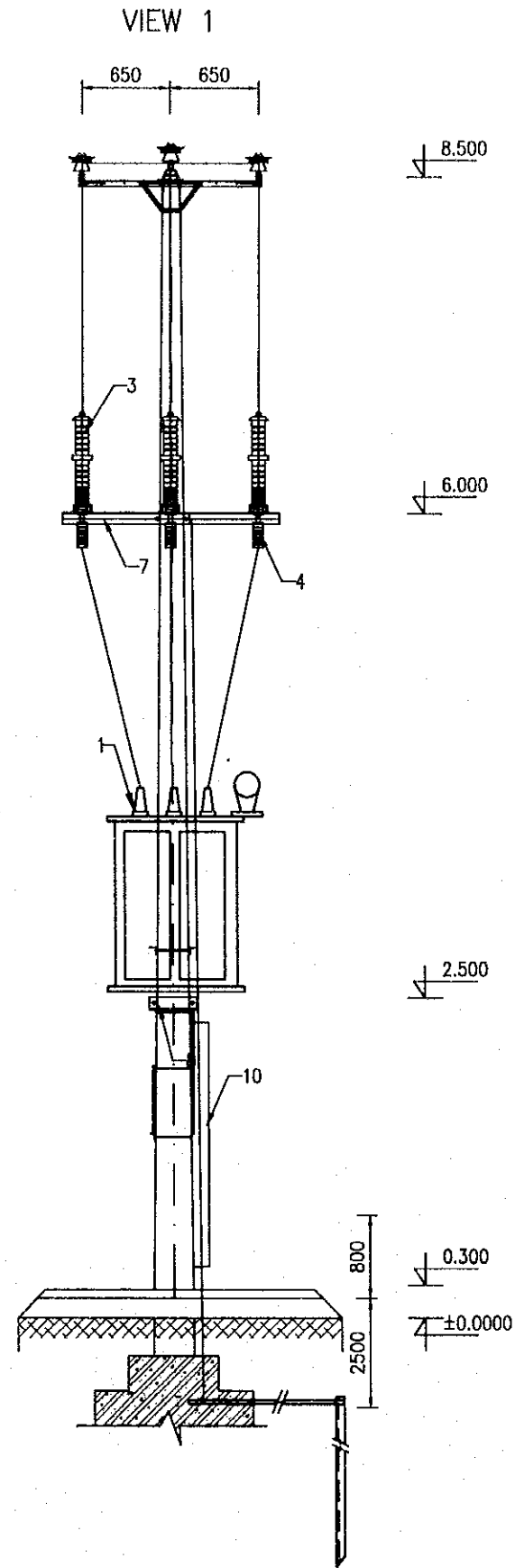


NOTE

- 1 POWER TRANSFORMER
- 2 SUB-SWITCH PANEL
- 3 LIGHTNING ARESSTER PBH-22
- 4 EXPULSION FUSE SI-22
- 5 SUPPORTING INSULATOR 22KV
- 6 22KV INSULATOR SUPPORTING BEAM
- 7 FUSE AND LIGHTNING ARESSTER FIXING BEAM
- 8 TRANSFORMER MOUNTING BEAM
- 9 CENTRIFUGAL R.C. POLE LENGTH 10M
- 10 STEEL LADDER
- 11 WORKING SUPPORTER
- 12 50mm2 AC WIRE
- 13 25mm2 4/C XLPE/PVC 0,6kV CABLE
- 14 GROUNDING STEEL L50x5 ROD
- 15 A1 Ø12 GROUNDING WIRE

LEGENDS

- LIGHTNING ARESTER
- CABLE SEALING END
- EXPULSION FUSE
- PLUG - IN EQUIPMENT
- POWER TRANSFORMER WITH SEPARATE WINDING CONNECTIONS: DELTA- STAR Δ/λ



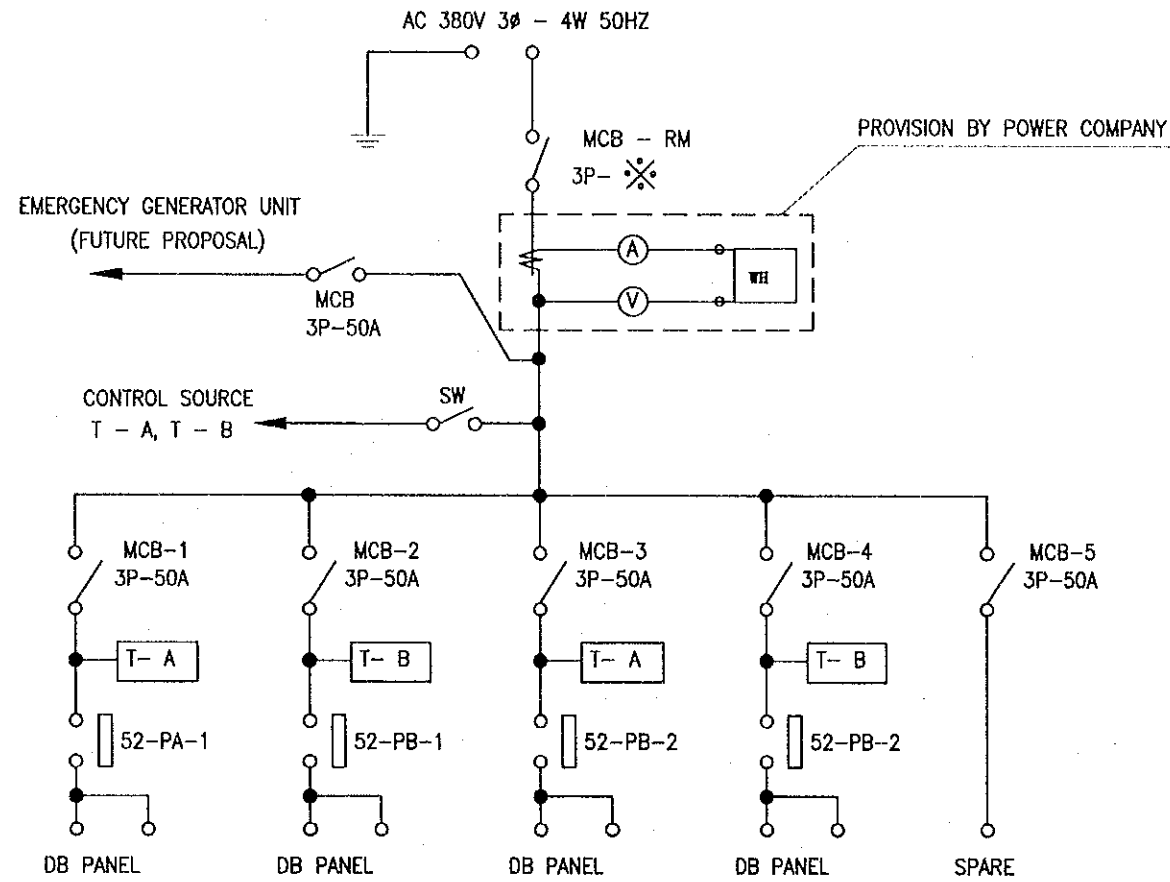
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATANE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRU BRIDGE) CONSTRUCTION PROJECT	DATE 2000.3.14	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE	DRAWING No. F-18	SHEET No.
DIAGRAM OF MDP			

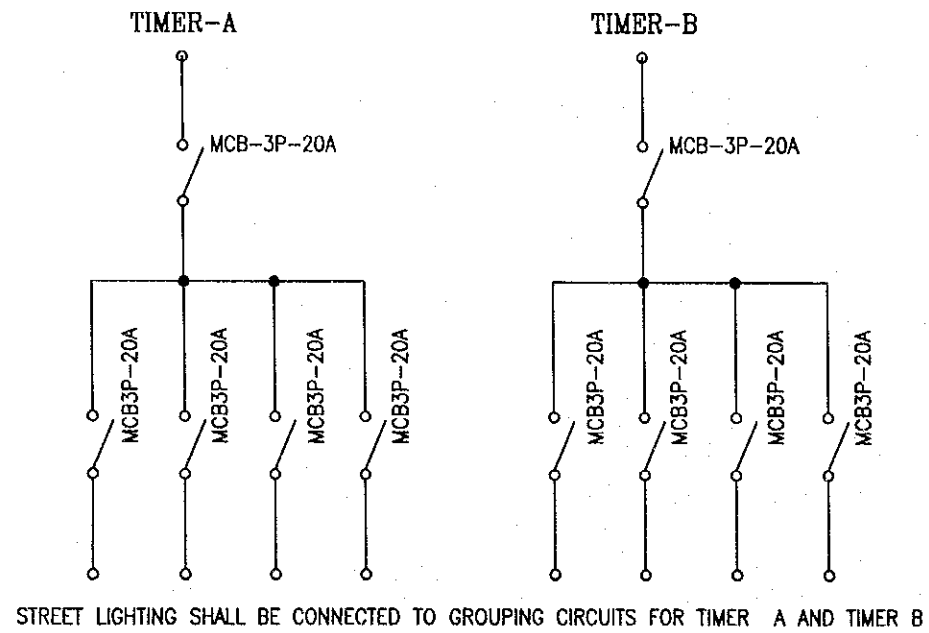
### SINGLE LINE DIAGRAM OF MDP - J99

POWER CONNECTION FOR :

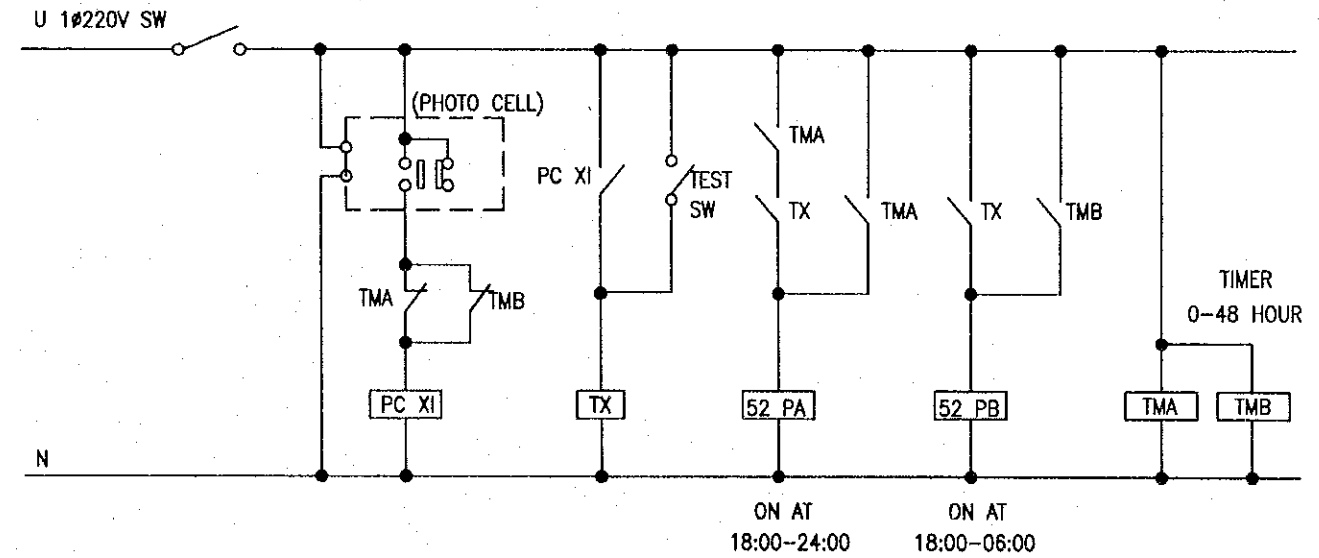
- ⊗ 31.5 KVA : 60 AT
- 50.0 KVA : 95 AT
- 100 KVA : 190 AT



### SINGLE LINE DIAGRAM OF DB



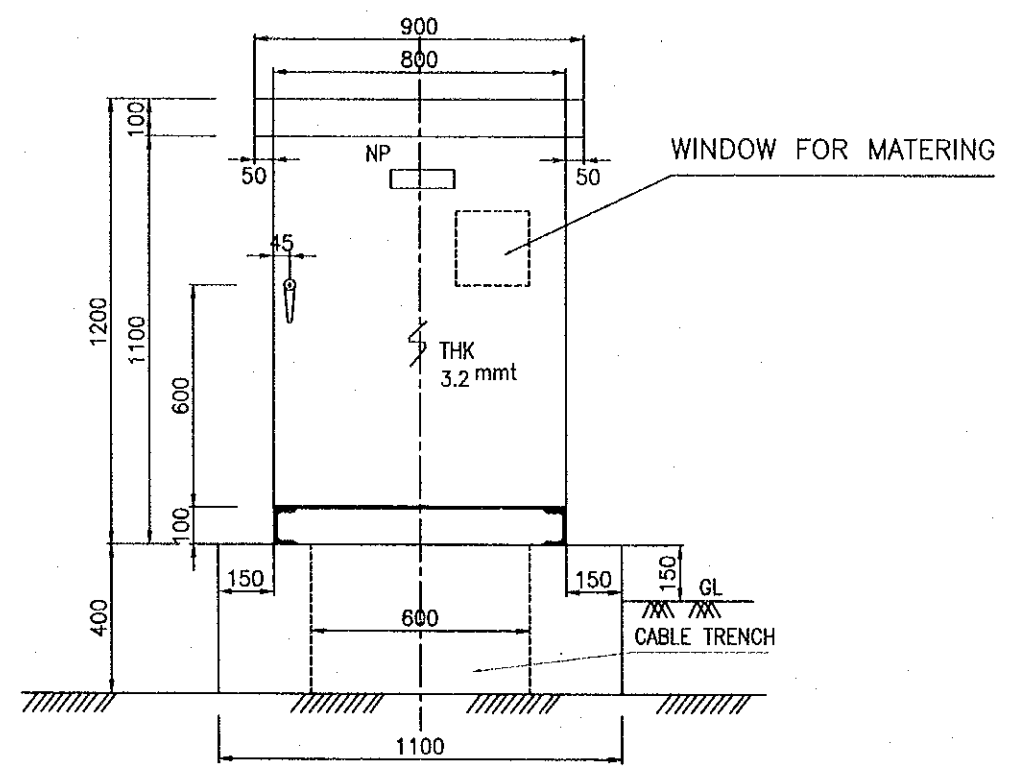
### SCHEMATIC DIAGRAM FOR TIMING ILLUMINATIONS



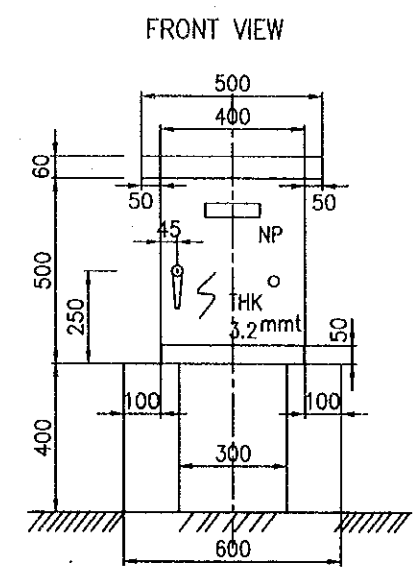
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	2000.3.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/20	F - 19	
PANEL DETAIL			

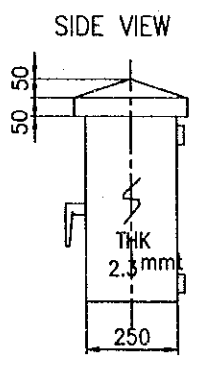
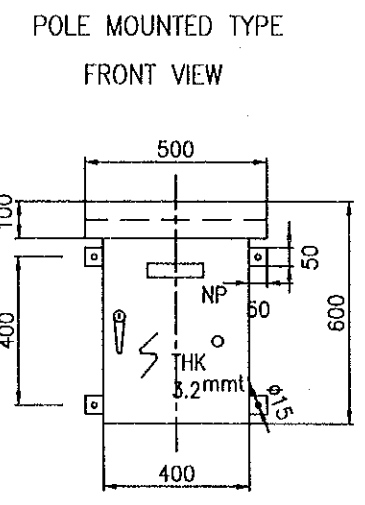
PANEL MDP - J99  
FRONT VIEW



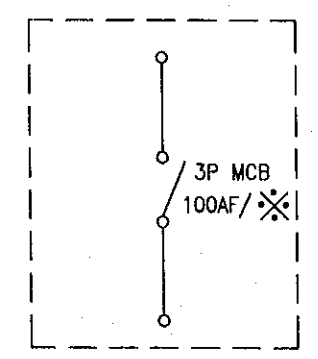
PANEL DB  
FRONT VIEW



PANEL SS



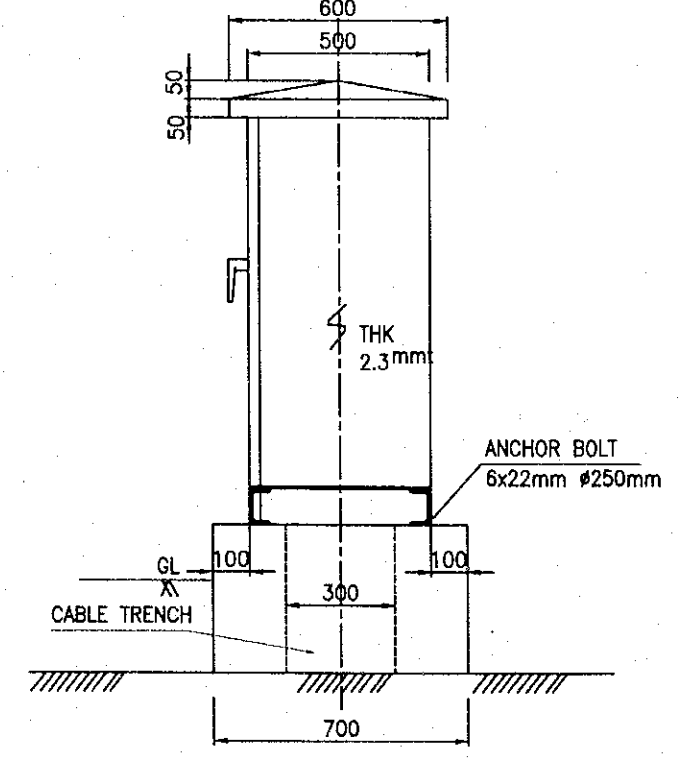
SINGLE LINE DIAGRAM OF SS



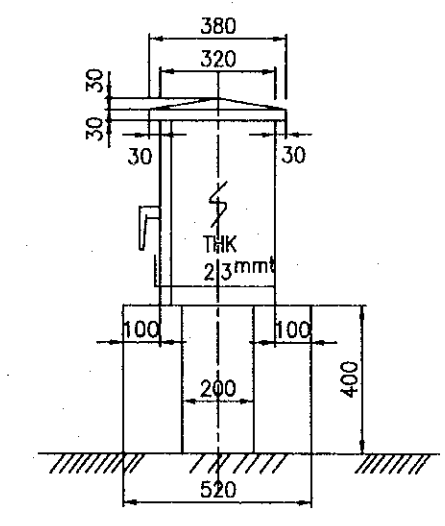
POWER CONNECTION FOR :

- ⊗ 31.5 KVA : 60 AT
- ⊗ 50.0 KVA : 95 AT
- ⊗ 100 KVA : 190 AT

SIDE VIEW



SIDE VIEW

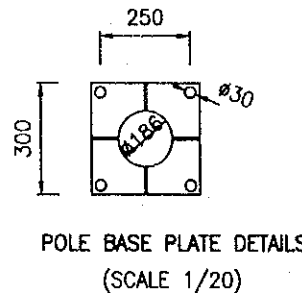
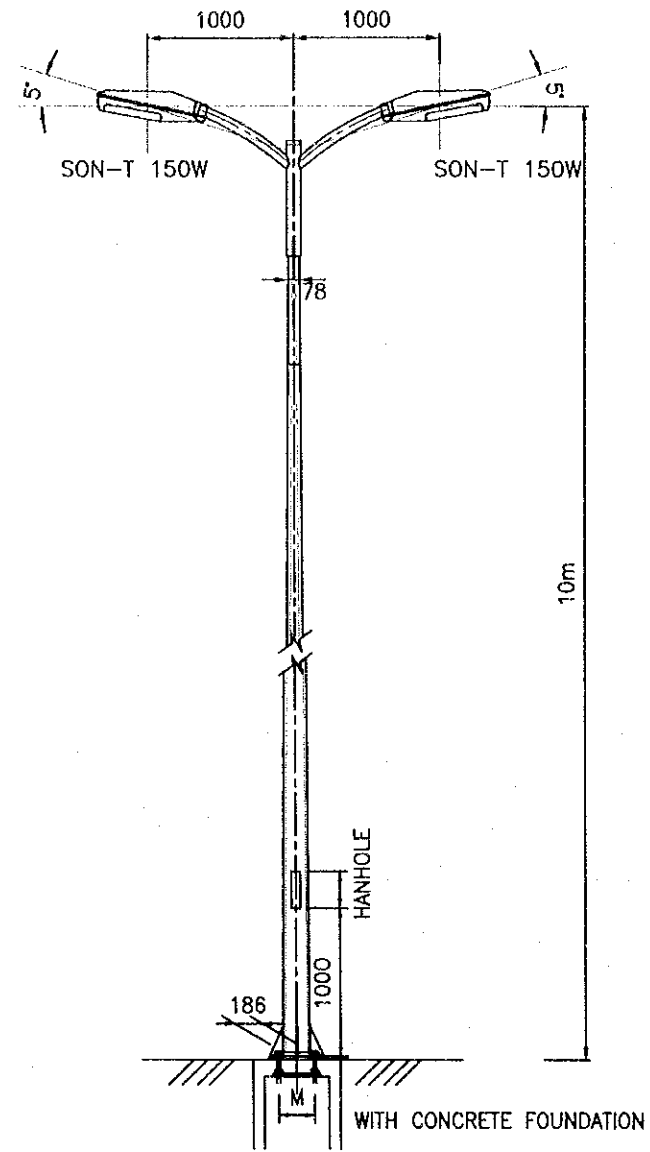


400

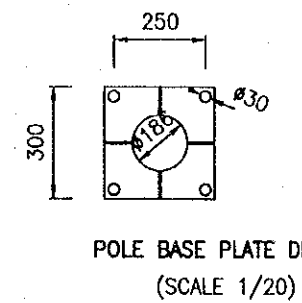
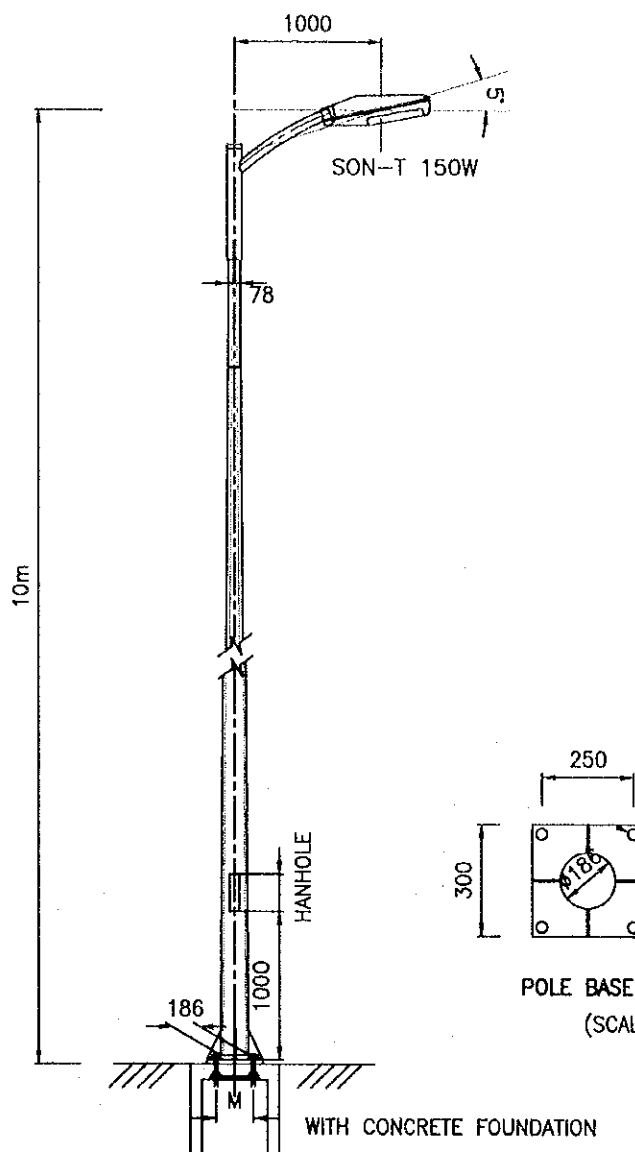
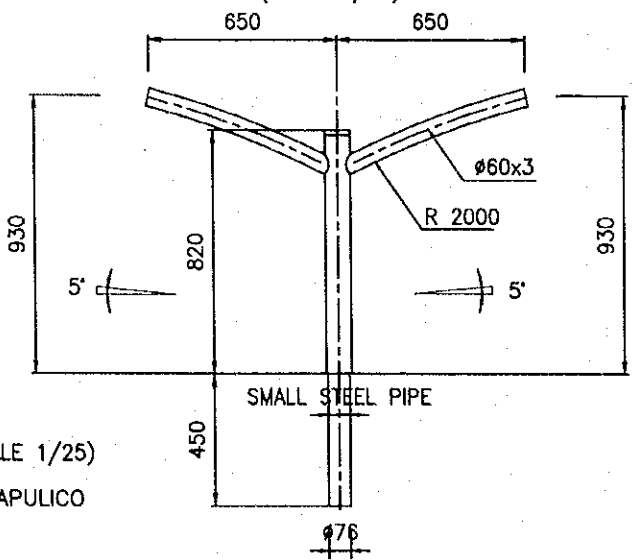
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRU BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.8.17

( FOR AT GRADE SECTION )

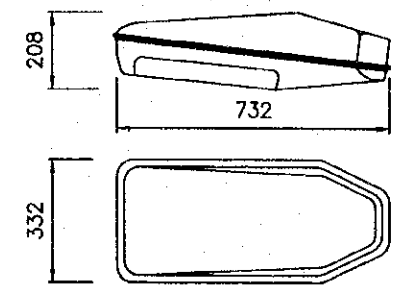
PACKAGE	SCALE	DRAWING No.	SHEET No.
2	AS SHOWN	F - 20	
LIGHTING DETAIL - 1			



TYPE-B2.1  
POLE No: 162207-1 BY HAPULICO  
(SCALE 1/50)



TYPE-A2.1  
POLE No: 164125 BY HAPULICO  
(SCALE 1/50)



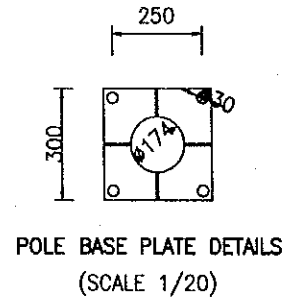
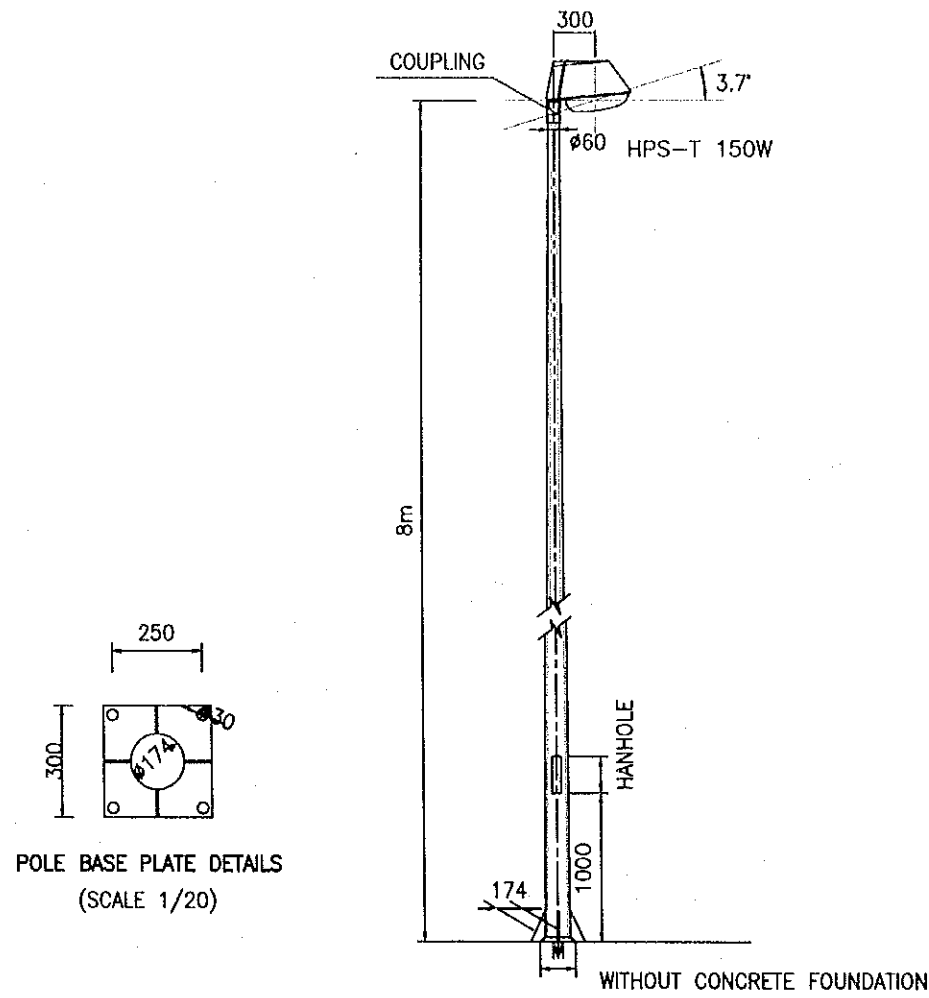
LANTERN-1:  
ONYX 2 BY SCHREDER  
(SCALE 1/20)

400

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.19

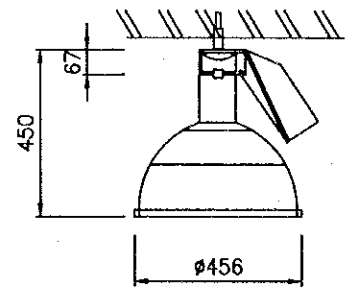
PACKAGE	SCALE	DRAWING No.	SHEET No.
2	AS SHOWN	F - 21	
LIGHTING DETAIL - 2			

( FOR BRIDGE SECTION )

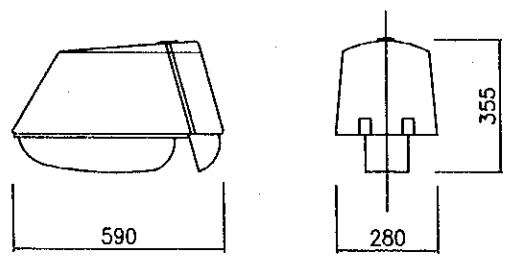


TYPE-A4 .11 ( FOR MAIN BRIDGE )  
POLE No: 162206-2 BY HAPULICO  
(SCALE 1/50)

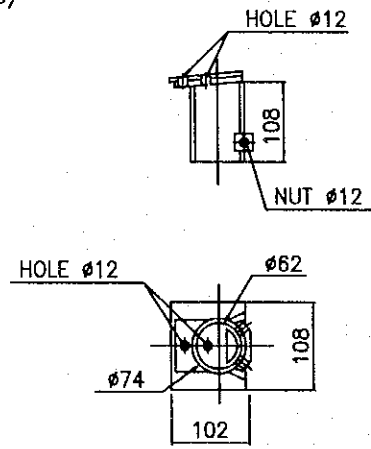
HIGH BAY LIGHT TYPE - E1  
SCALE 1/10 UNIT: mm  
UNDER BRIDGE SECTION



The highbay lighting type - E1 is suitable for under bridge or under viaduct sections. The luminaries is fitted with a faceted aluminum reflector for variable photometric distribution. It can take clear tubular and coated elliptical lamps 150 watts. The tightly sealed model is suitable for installation in damp and dusty environments.



LANTERN-2: (SCALE 1/20)  
( FOR MAIN BRIDGE )  
H/SGS 305/150 T POS10  
BY PHILIPS



COUPLING:  
(SCALE 1/10)

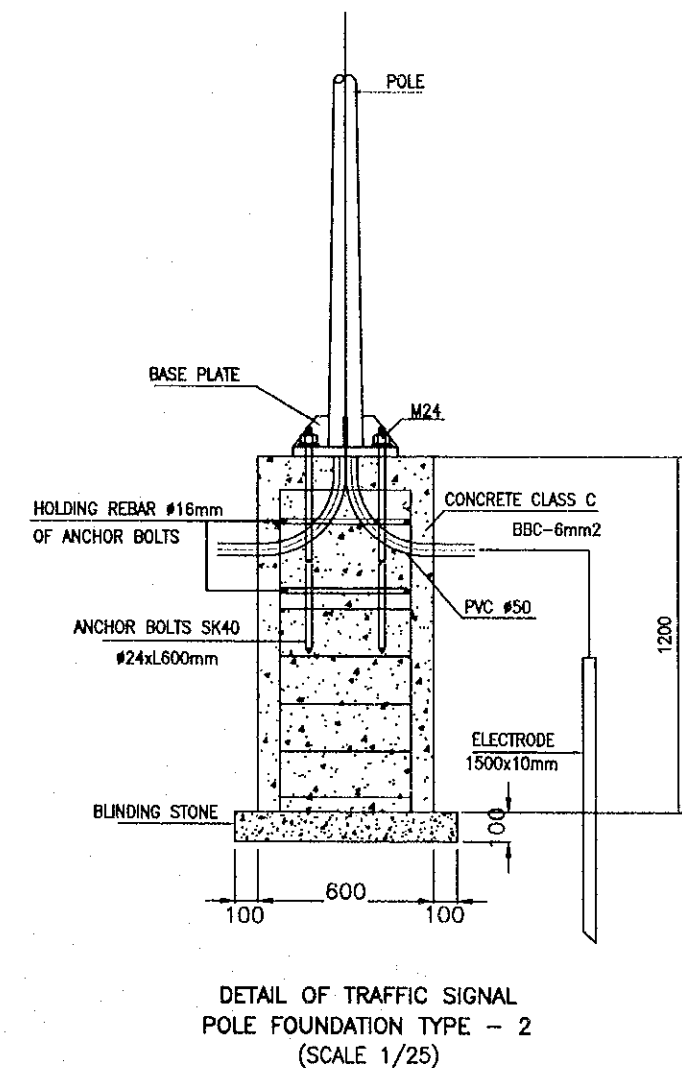
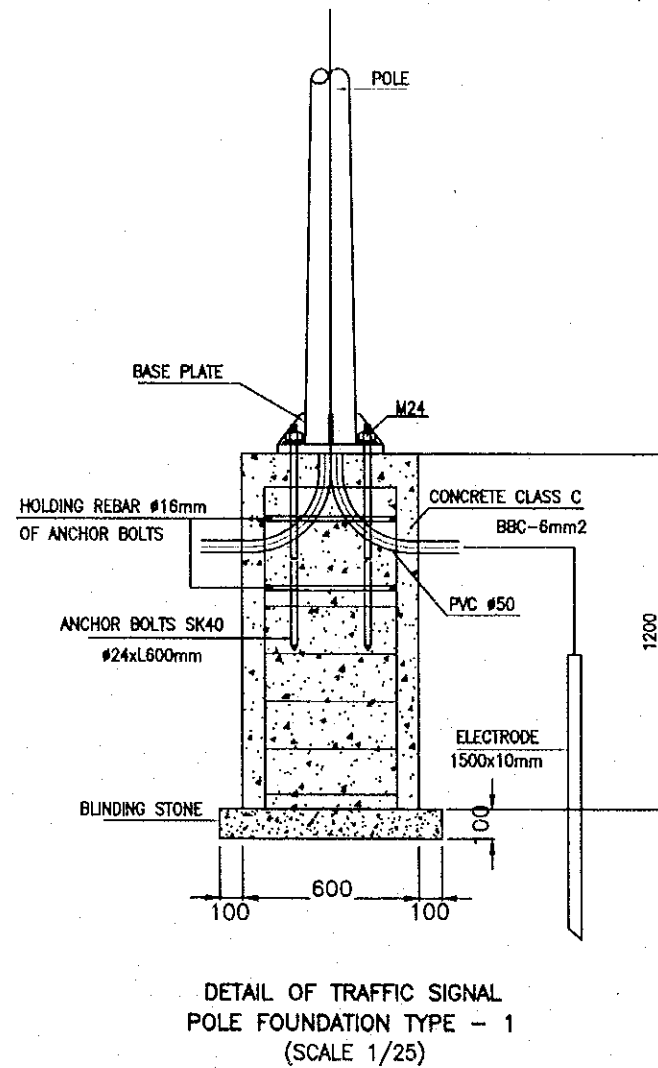
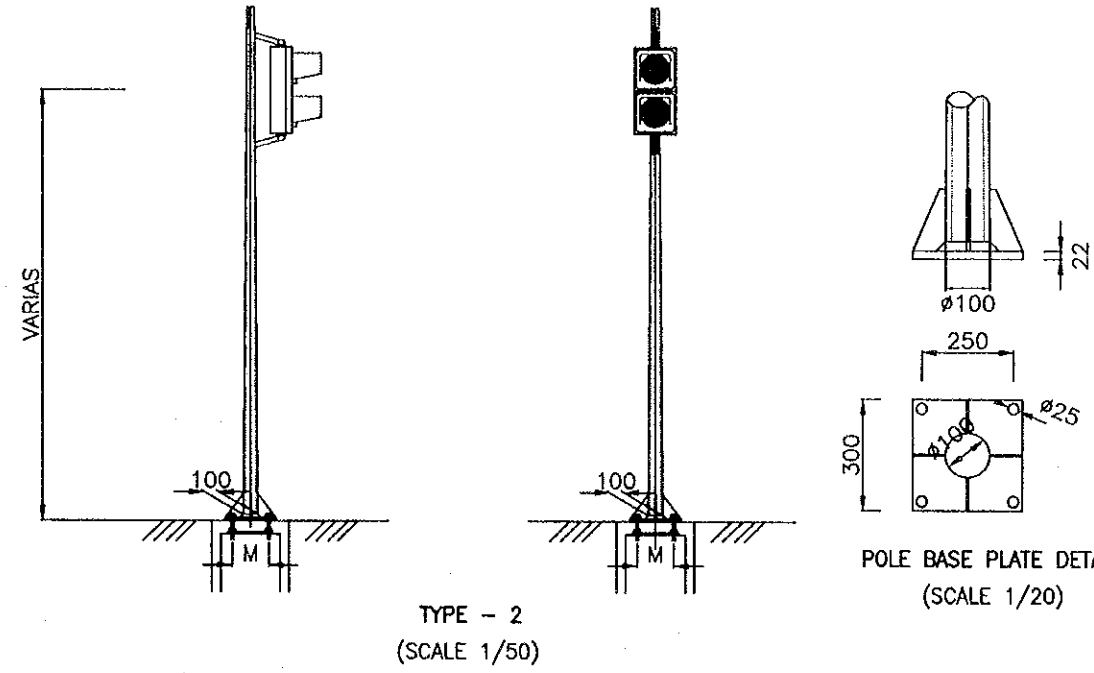
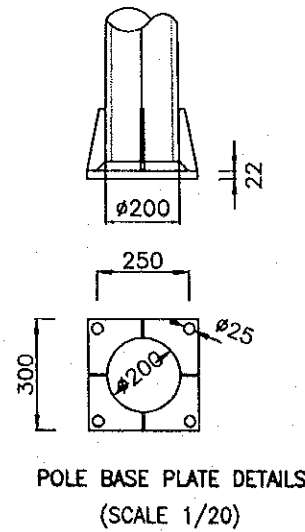
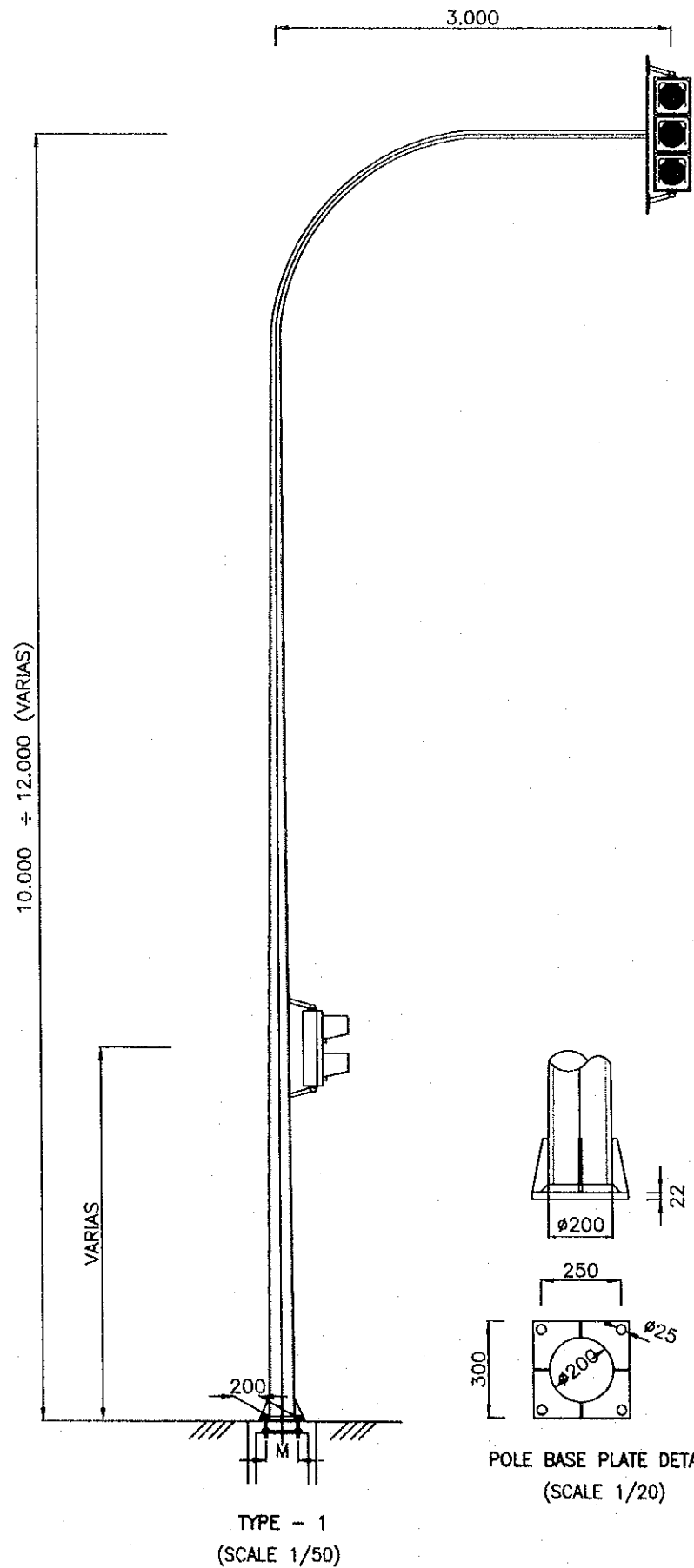
401



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2002. 8. 17

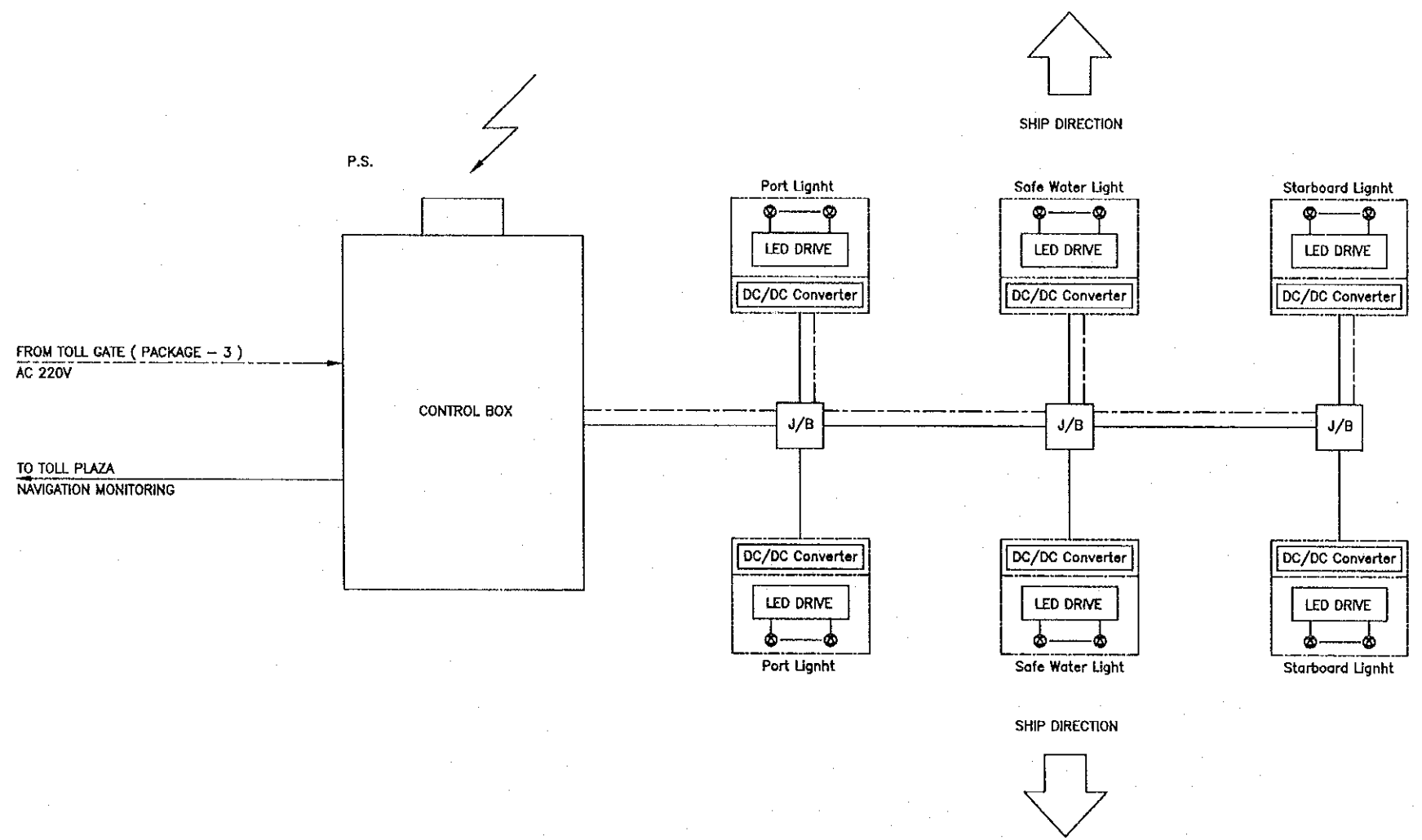
PACKAGE	SCALE	DRAWING No.	SHEET No.
2	AS SHOWN	F - 22	
TRAFFIC SIGNAL			

# TRAFFIC SIGNAL



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	DATE 2010.3.14
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE	DRAWING No. F-23	SHEET No.
NAVIGATION SYSTEM DIAGRAM			



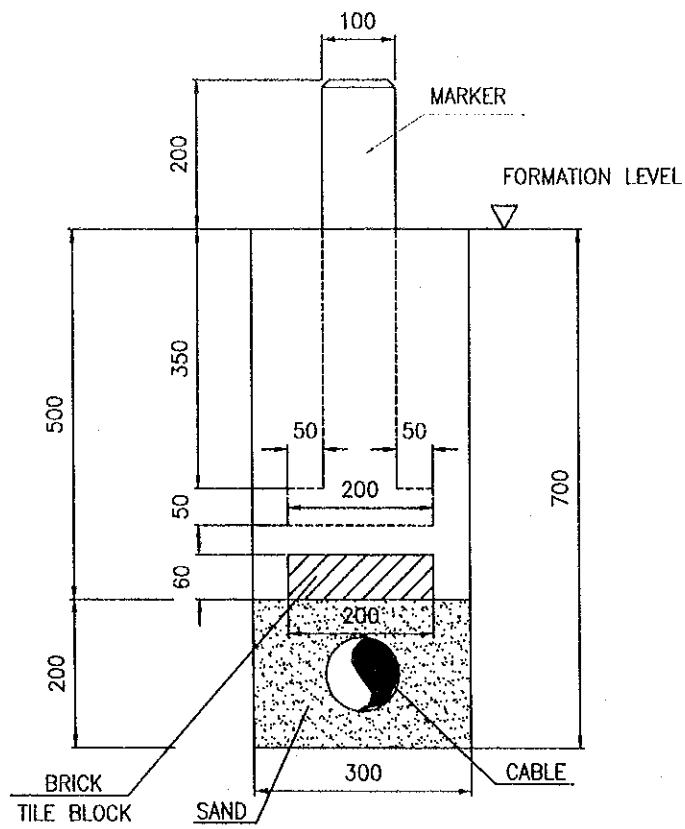
405

----- Power Line  
 \_\_\_\_\_ Signal Line  
 (Manufacturer's Recommendation)

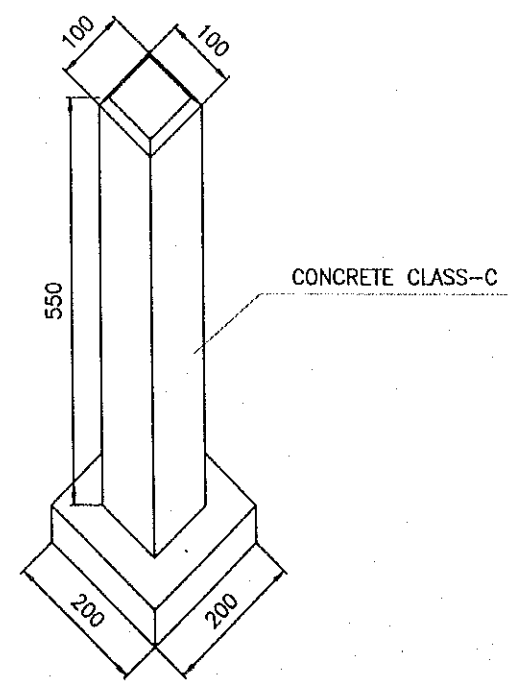
REMARKS:  
 P.S. : PHOTO SENSOR  
 J/B : JUNCTION BOX

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THU XI LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000. 3. 14	

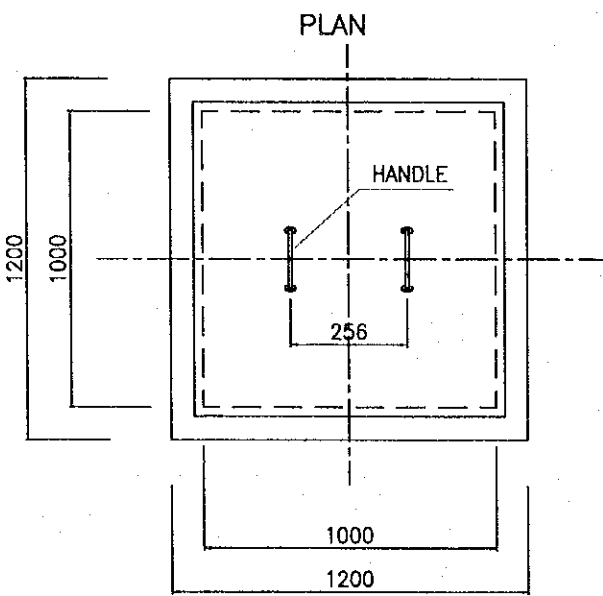
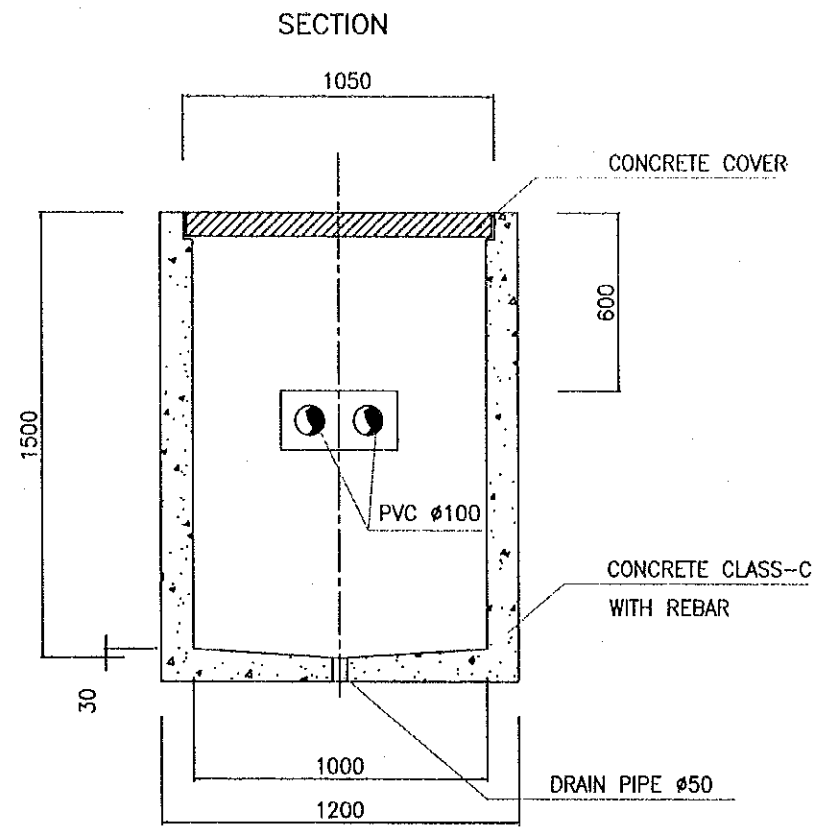
PACKAGE 2	SCALE AS SHOWN	DRAWING No. F - 24	SHEET No.
INSTALLATION DETAIL - 1			



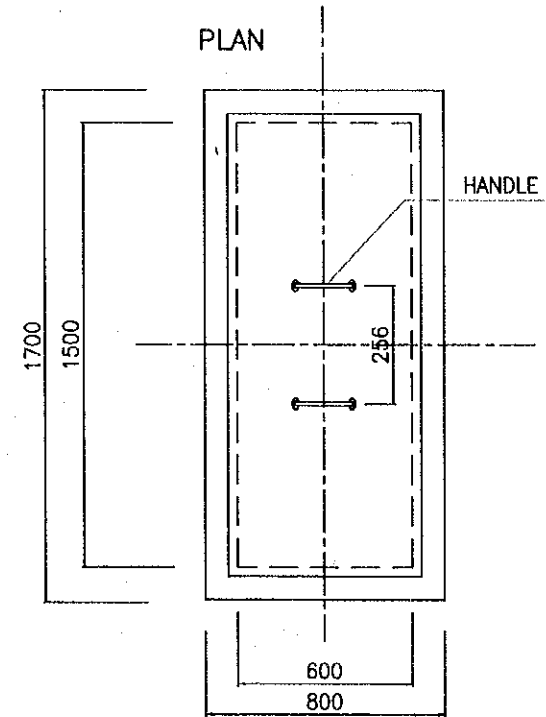
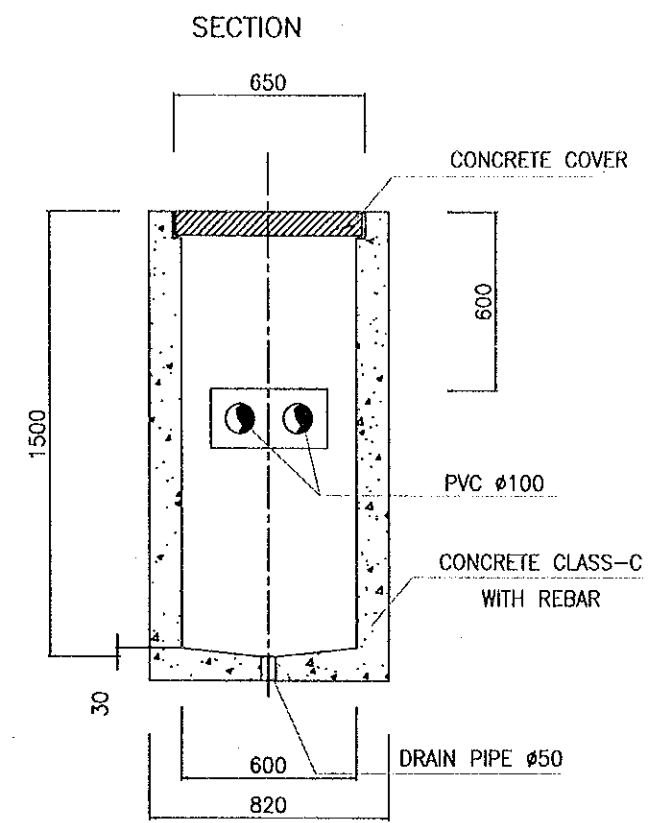
DIRECT BURIED CABLE DETAIL  
SCALE 1:10



CABLE MARKER SCALE 1:10



MANHOLE DETAIL  
TYPE - A  
SCALE 1:25

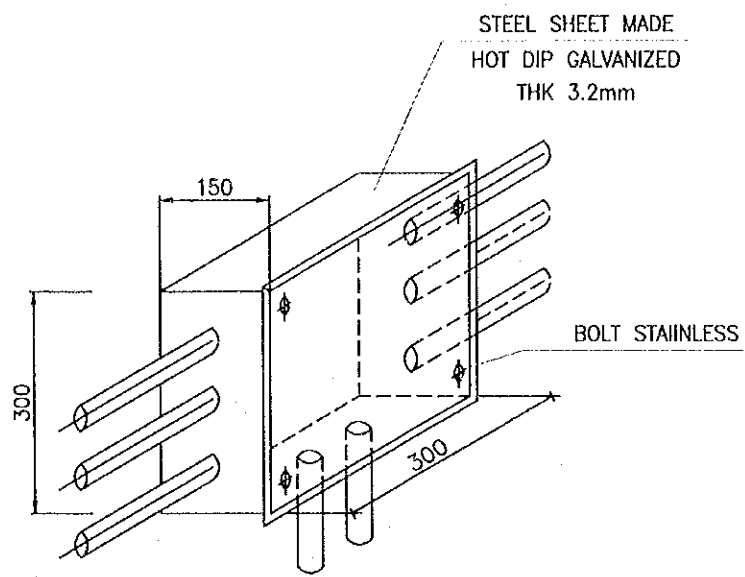


MANHOLE DETAIL  
TYPE - B  
SCALE 1:25

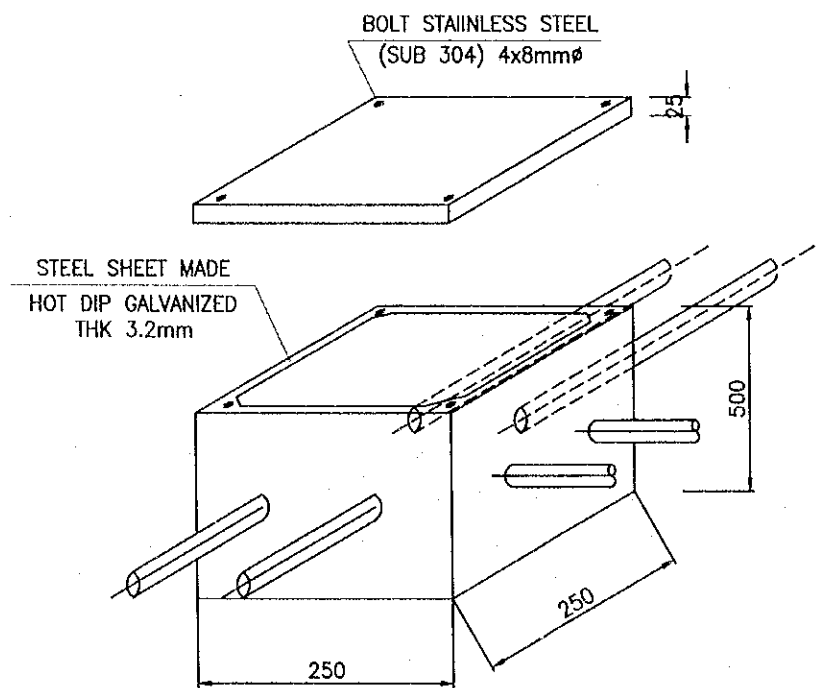
453

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATAE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATAE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	DATE 2000.11.14
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

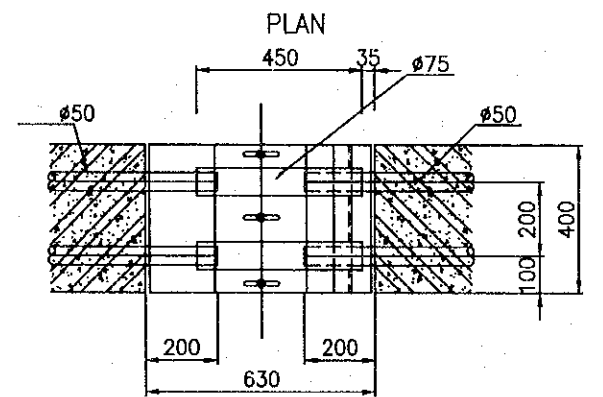
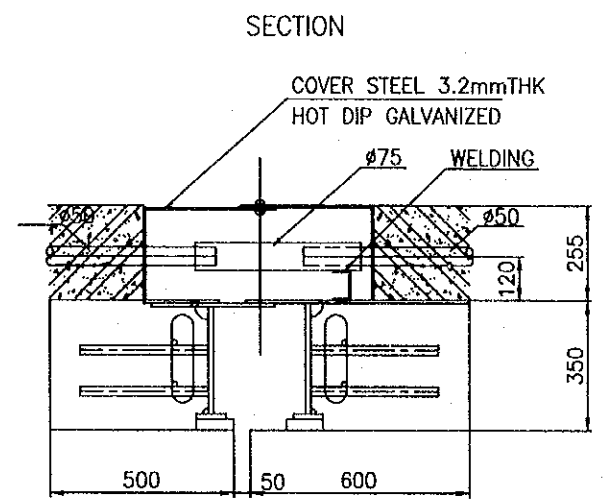
PACKAGE 2	SCALE AS SHOWN	DRAWING No. F - 25	SHEET No.
INSTALLATION DETAIL - 2a			



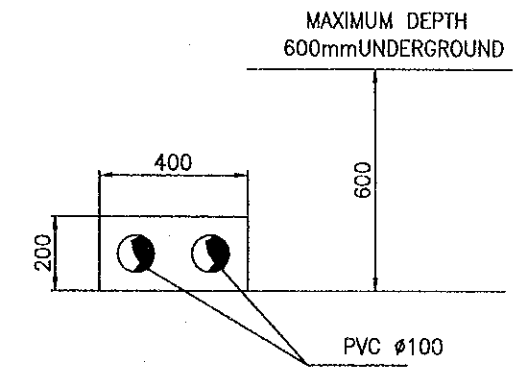
PULL BOX TYPE- B  
(SCALE 1/10)



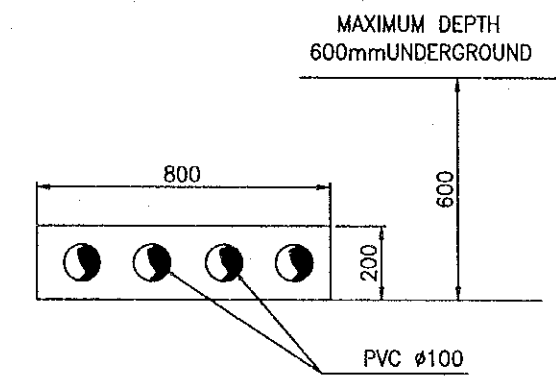
FULL BOX TYPE- C (SCALE 1/10)  
IN CONCRETE CENTER MEDIUM



EXPANSION JOINT  
(SCALE 1/20)



UNDERGROUND  
DUCT BANK DETAIL  
TYPE - A



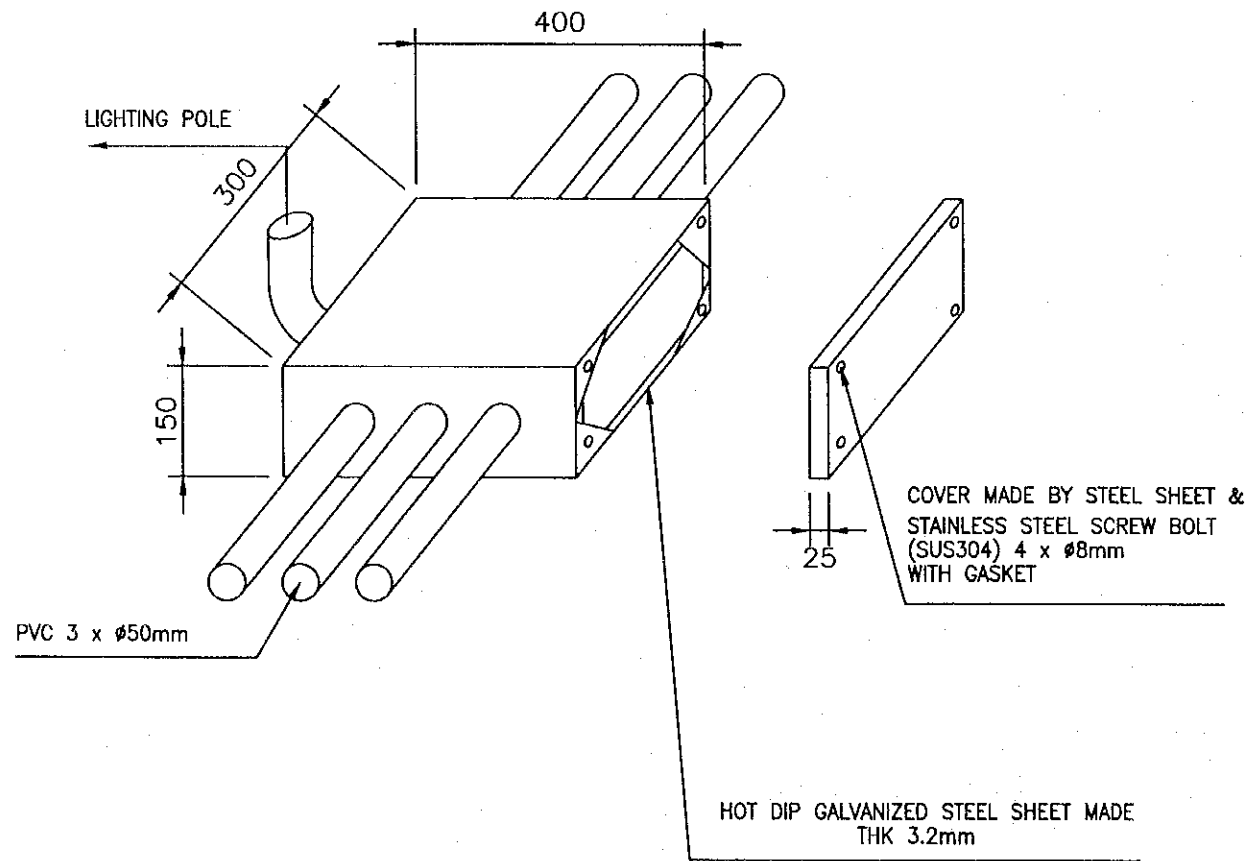
UNDERGROUND  
DUCT BANK DETAIL  
TYPE - B

405

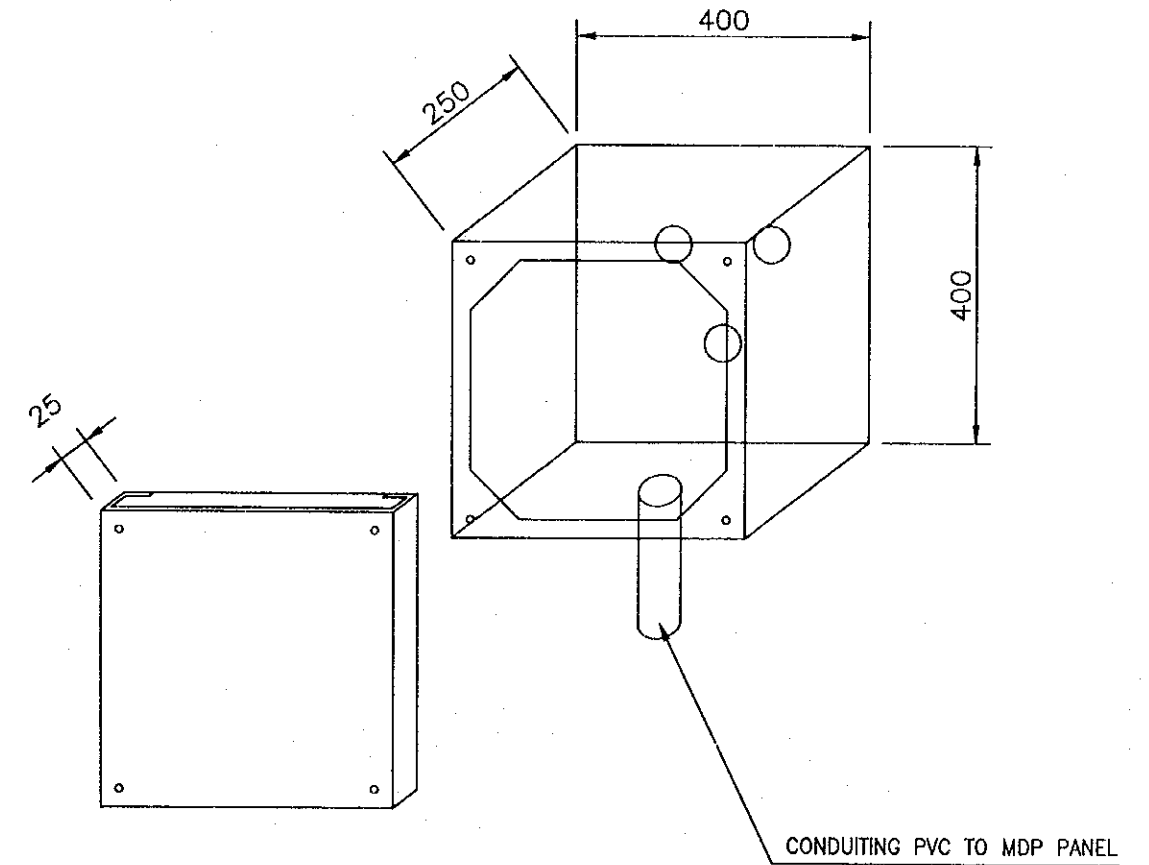
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUDA	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE		
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.08.17	

PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/10	F - 26	
INSTALLATION DETAIL - 3			

INSTALLATION DETAIL - 9  
PULLBOX TYPE - F (SCALE 1/10)  
EMBED CONCRETE OF OUTER PARAPET

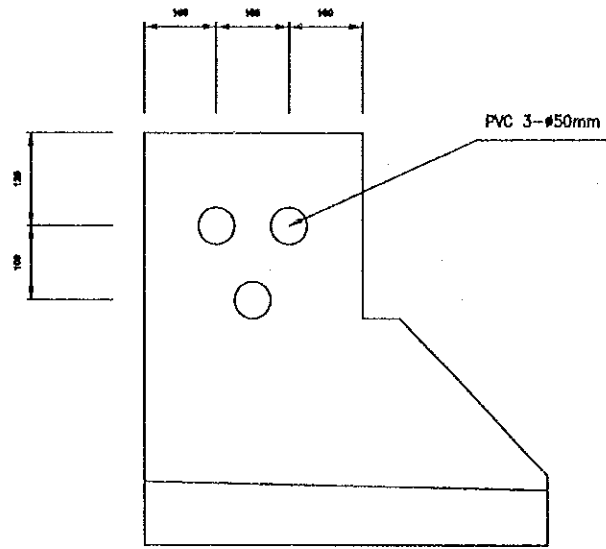


INSTALLATION DETAIL - 10  
PULLBOX TYPE G (SCALE 1/10)  
(SURFACE MOUNTED AT BRIDGE BOTH SIDE TERMINATION POINT)

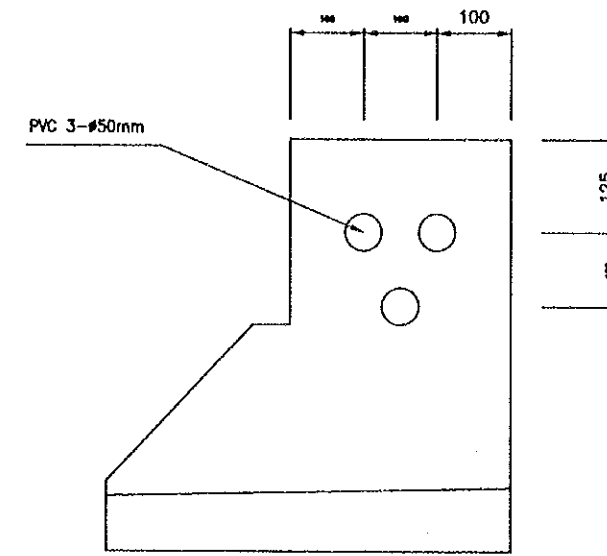


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATAGE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATAGE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.14

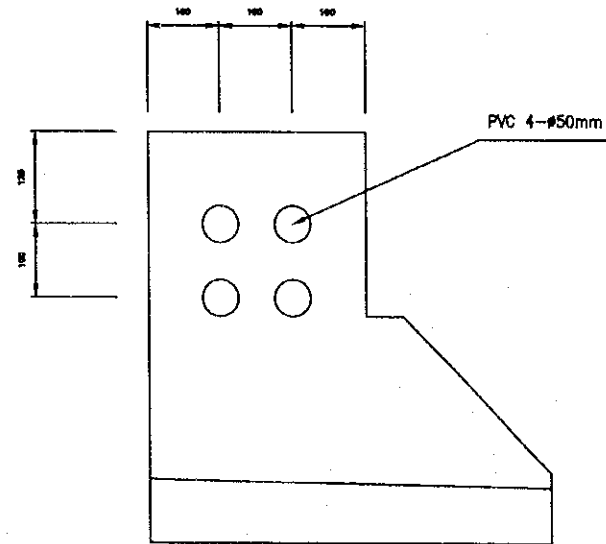
PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/10	F - 27	
INSTALLATION DETAIL - 4			



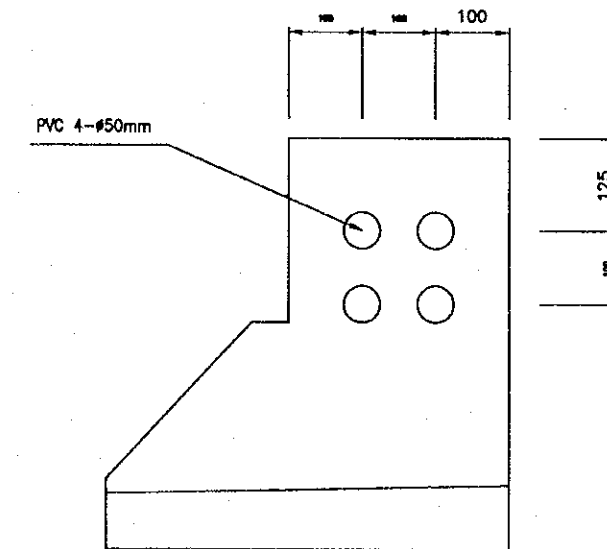
EMBED CONDUITING DETAIL - 1  
( AT OUTER PARAPET )  
SCALE: 1/10



EMBED CONDUITING DETAIL - 2  
( AT OUTER PARAPET )  
SCALE: 1/10



EMBED CONDUITING DETAIL - 3  
( AT OUTER PARAPET OF MAIN BRIDGE )  
SCALE: 1/10



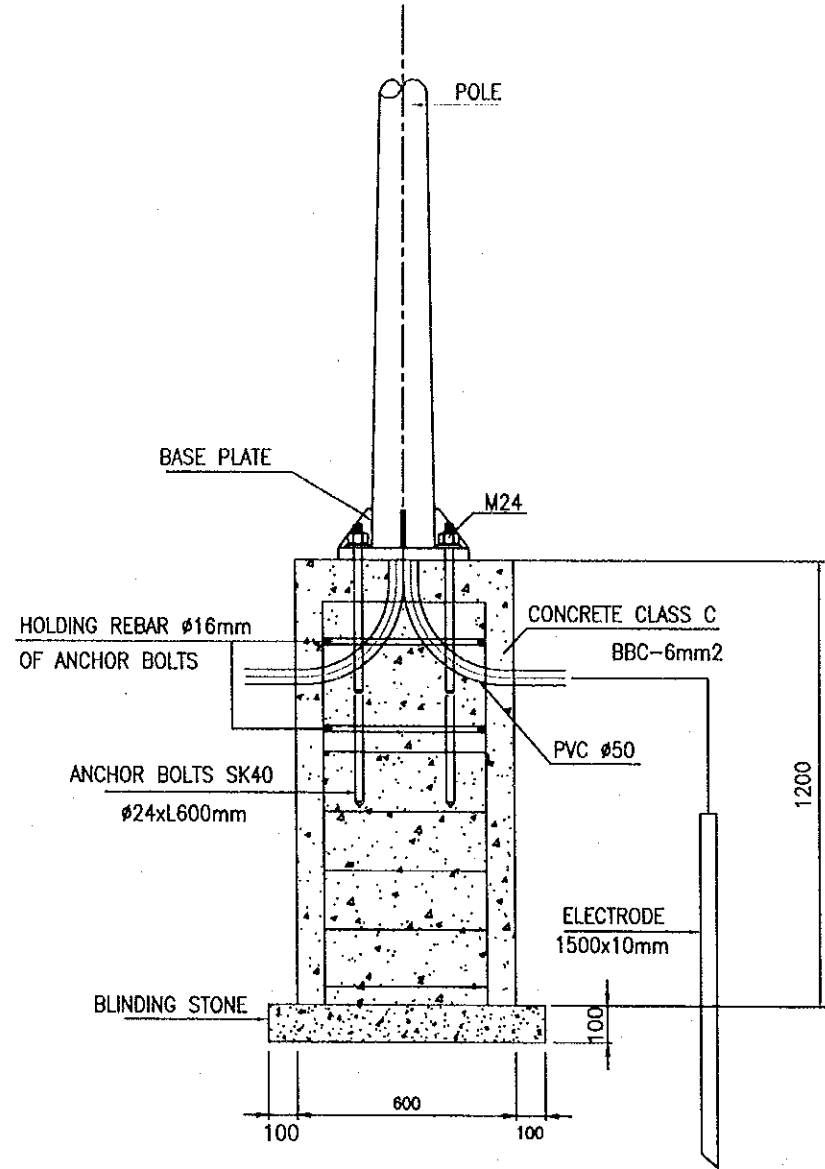
EMBED CONDUITING DETAIL - 4  
( AT OUTER PARAPET OF MAIN BRIDGE )  
SCALE: 1/10

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THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. NITABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	
RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
PROJECT		DATE	2000. 3. 17
CONSULTANT		PACIFIC CONSULTANTS INTERNATIONAL	

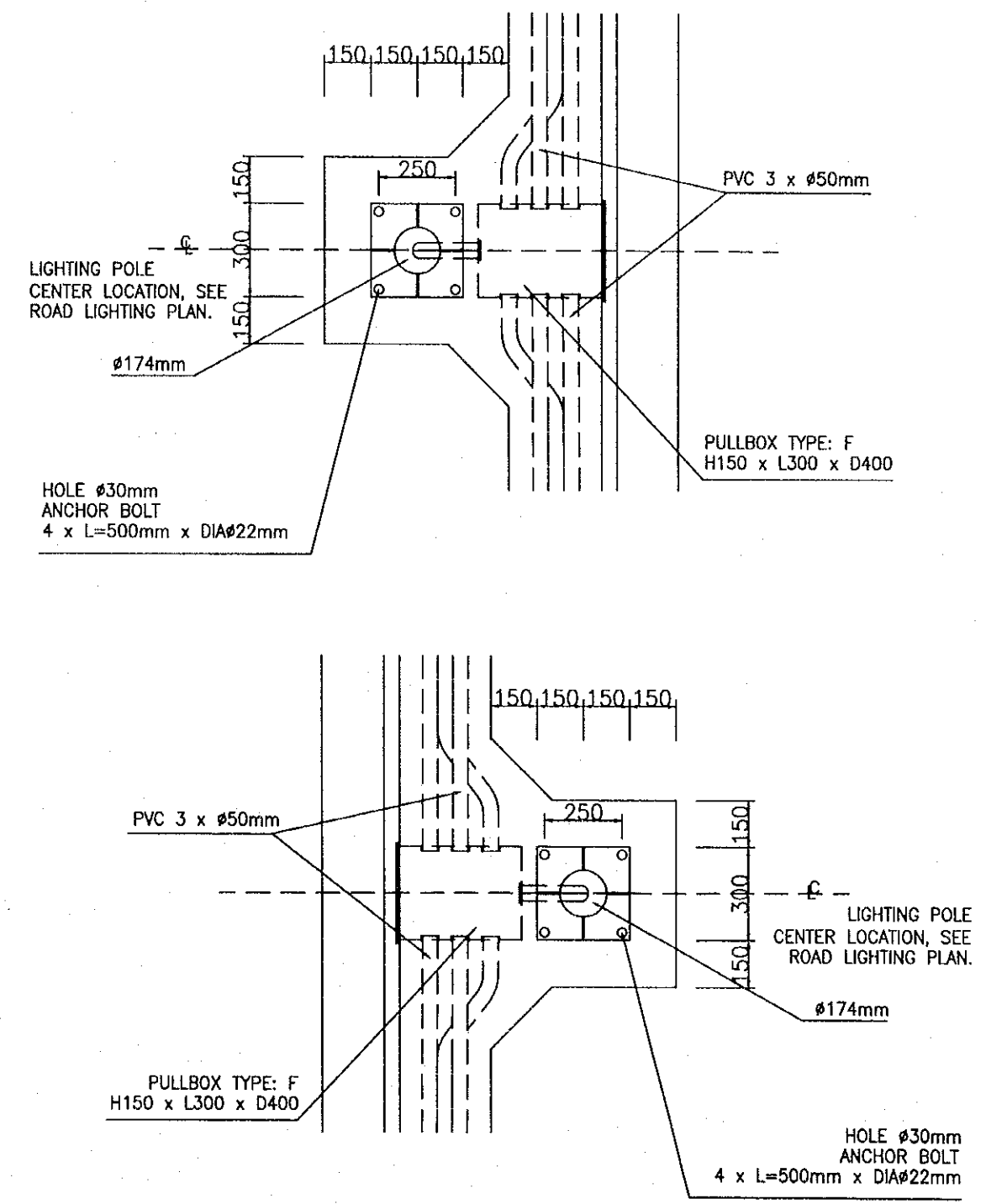
PACKAGE	SCALE	DRAWING No.	SHEET No.
2	1/20	F - 28	
FOUNDATION DETAIL - 1a			

BRIDGE SECTION  
LIGHTING TYPE A4.11 FOUNDATION DETAIL - 1  
SCALE: 1/20



DETAIL OF POLE FOUNDATION  
FOR TYPE B2, A2  
(SCALE 1/20)

OUTER PARAPET SECTION



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# **G. EMPLOYERS AND ENGINEERS SITE OFFICE**

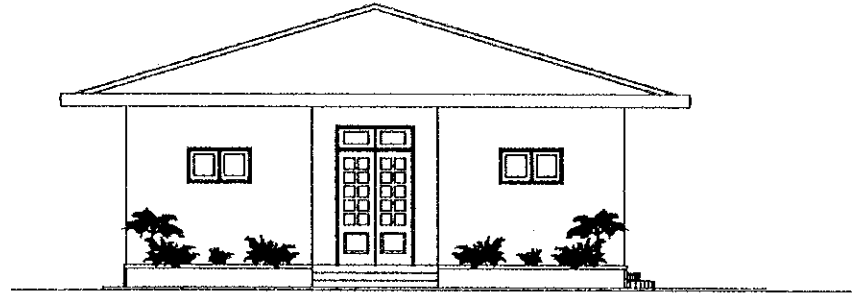


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT: RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONSULTANT: PACIFIC CONSULTANTS INTERNATIONAL		DATE	2020.6.11

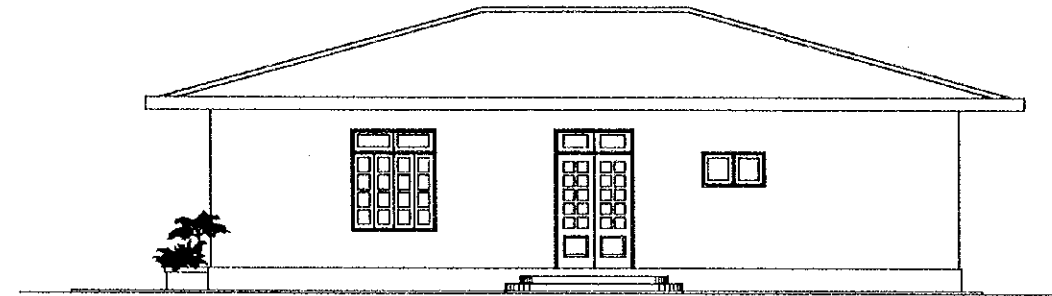
PACKAGE	SCALE	DRAWING No.	SHEET No.
2	AS SHOWN	G-1	
EMPLOYERS AND ENGINEERS SITE OFFICE (WITH ACCOMMODATION)			

# TYPE-1

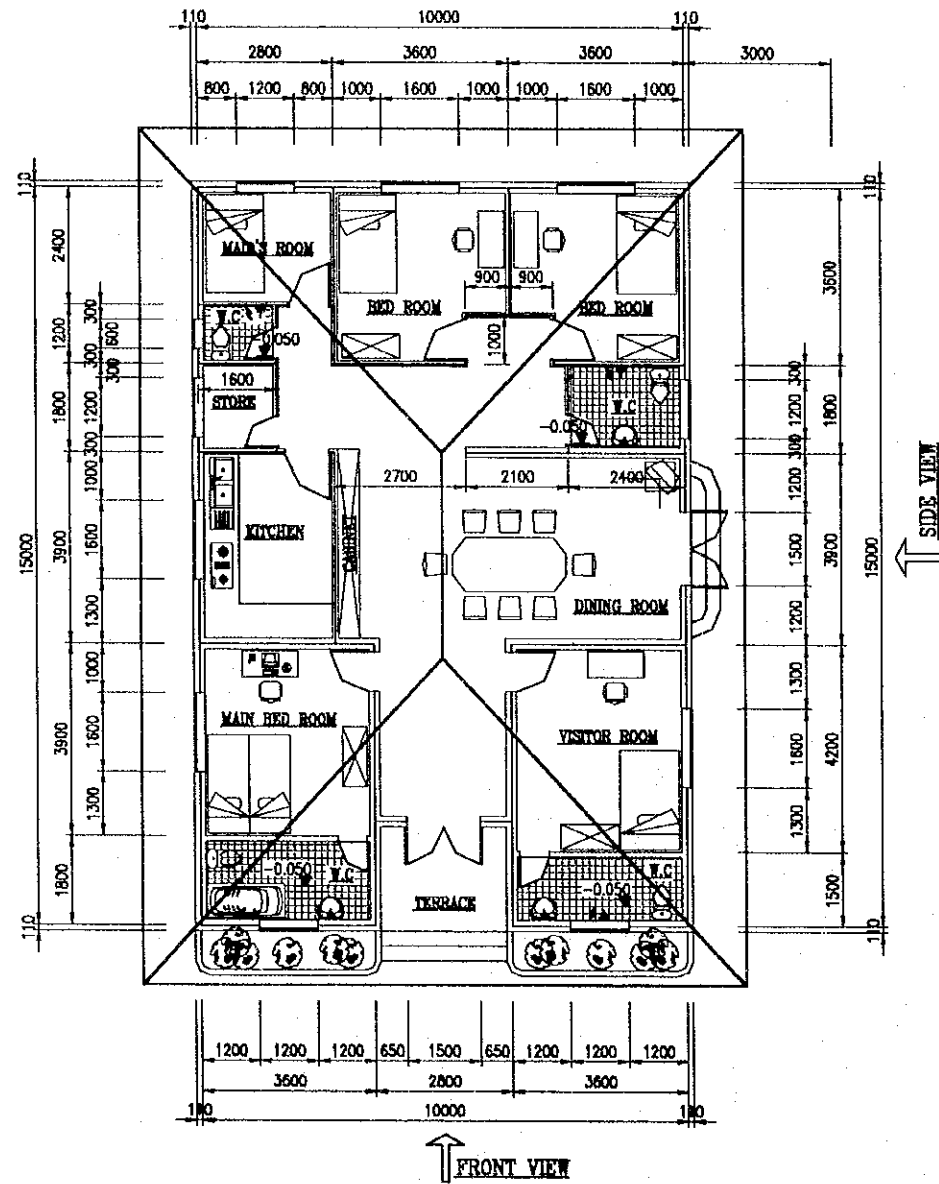
**FRONT VIEW**  
SCALE : 1/150



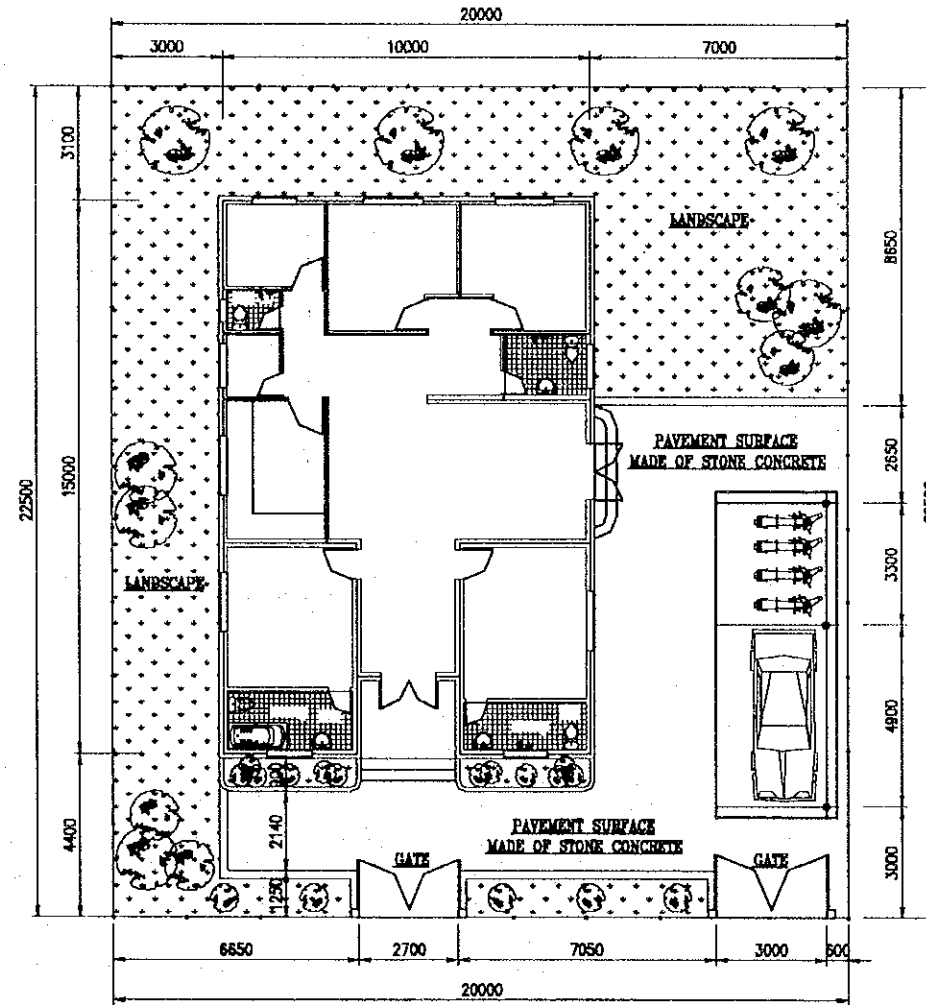
**SIDE VIEW**  
SCALE : 1/150



**PLAN**  
SCALE : 1/150



**SITE PLAN**  
SCALE : 1/200



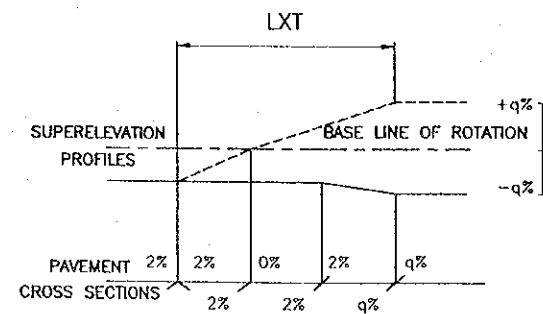
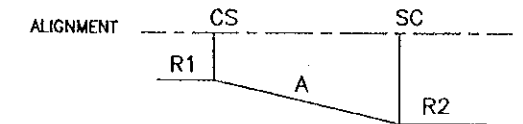
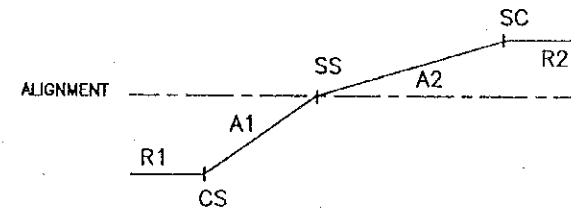
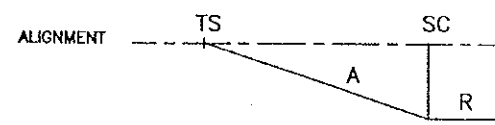
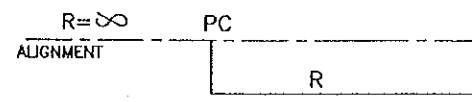
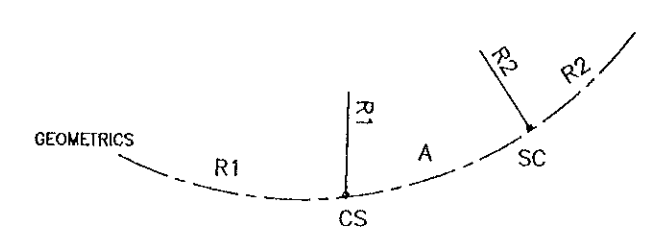
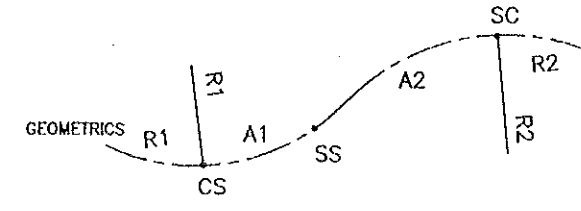
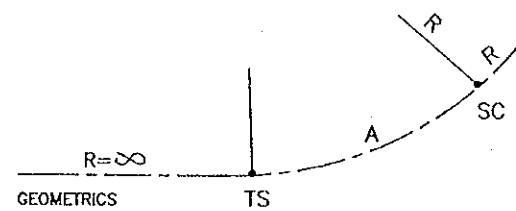
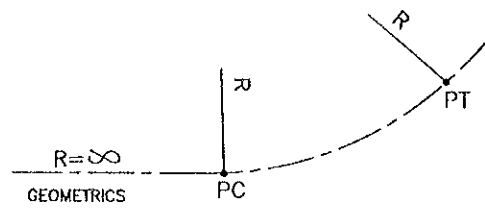


# H. MISCELLANEOUS

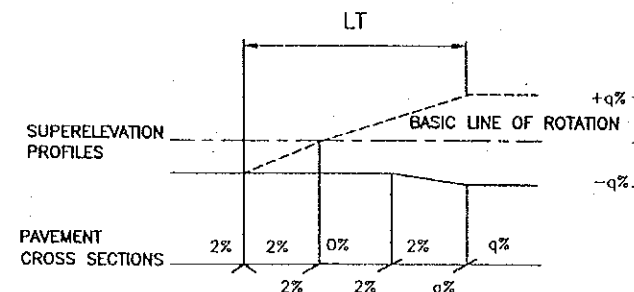
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2003.3.17

PACKAGE 2	SCALE	DRAWING No. H-1	SHEET No.
SUPERELEVATION DIAGRAMS			

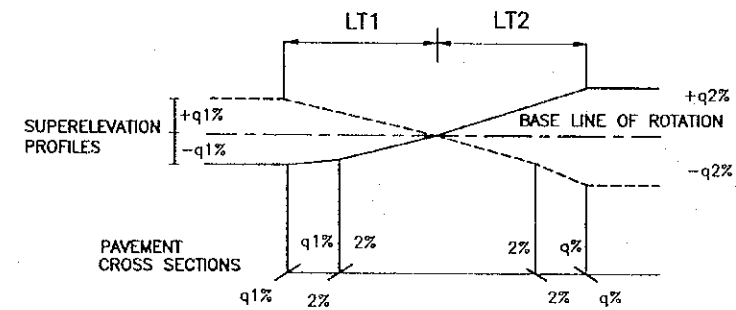
# SUPERELEVATION DIAGRAMAS



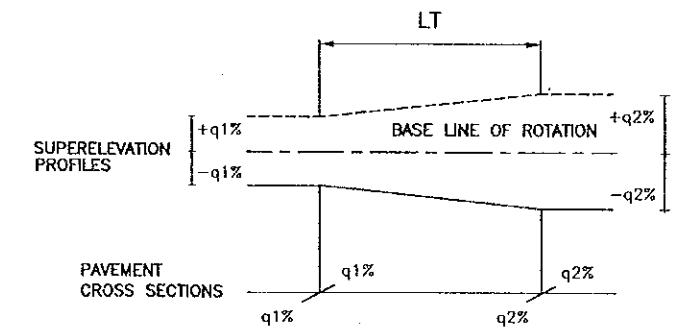
CASE 1. TANGENT-CIRCULAR (WITHOUT TRANSITION CURVE)



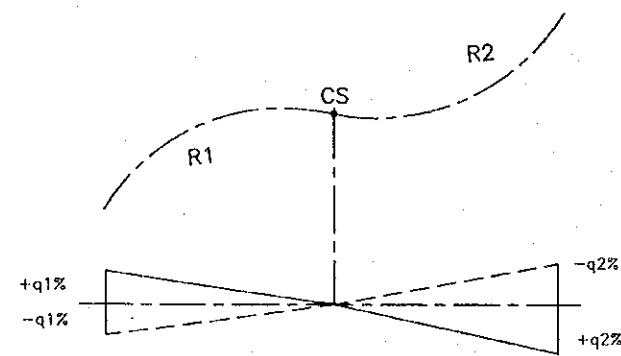
CASE 2. TANGENT-TRANSITION CURVE-CIRCULAR CURVE



CASE 3. CIRCULAR CURVE-REVERSE TRANSITION CURVE-CIRCULAR CURVE



CASE 4. CIRCULAR CURVE-TRANSITION CURVE-CIRCULAR CURVE



CASE 5. CIRCULAR CURVE - CIRCULAR CURVE

### LEGEND

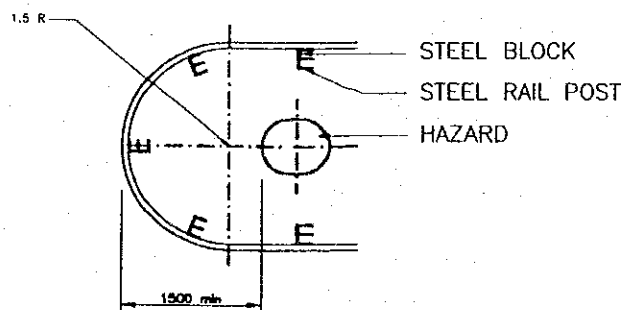
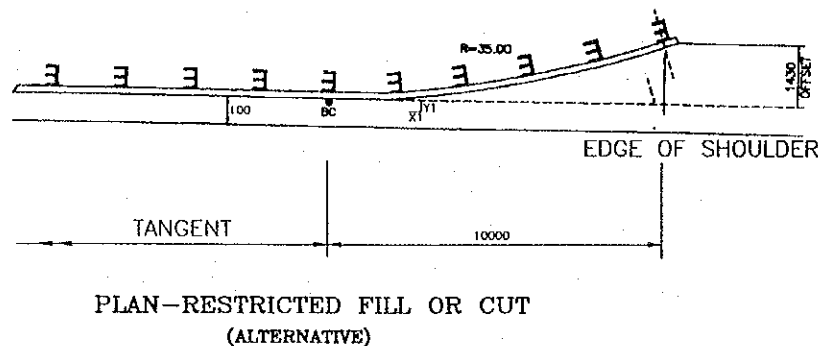
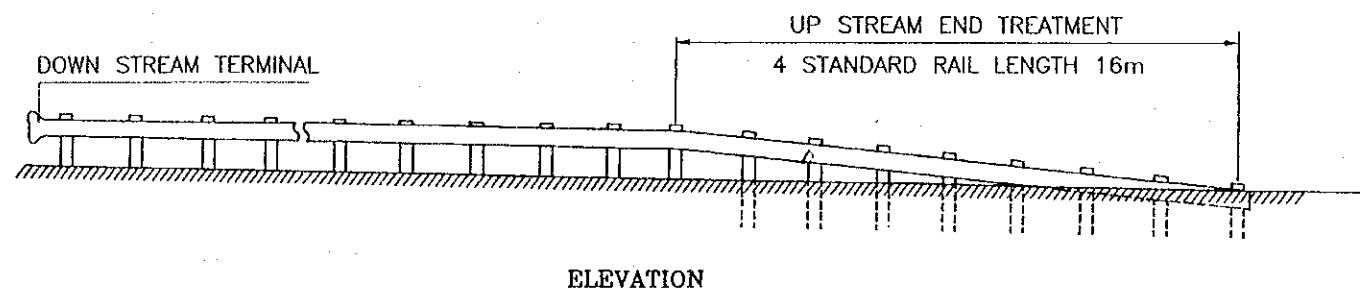
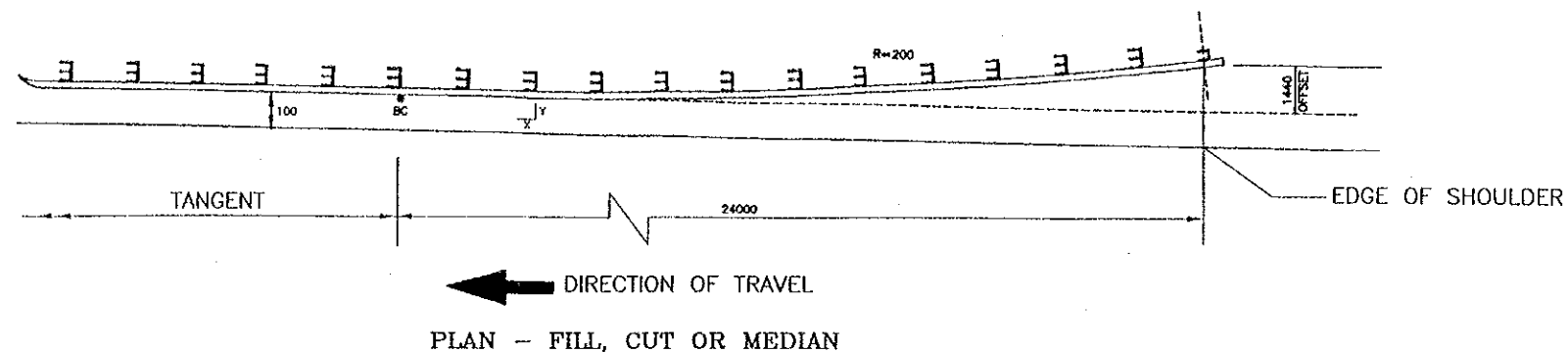
- : CENTER OF ROADWAY
- : LEFT SIDE EDGE OF CARRIAGEWAY LOOKING UP CHAINAGE
- : RIGHT SIDE EDGE OF CARRIAGEWAY LOOKING UP CHAINAGE
- LT(1,2) : LENGTH OF SUPERELEVATION RUNOUT & RUNOFF
- q : PERCENT OF FULLY SUPERELEVATION
- PC : TANGENT TO CIRCULAR CURVE
- TS : BEGINNING POINT OF TRANSITION CURVE
- ST : END POINT OF TRANSITION CURVE
- CS : A POINT OF TRANSITION CURVE CONNECTED TO CIRCULAR CURVE
- SC : ANOTHER POINT OF TRANSITION CURVE CONNECTED TO CIRCULAR CURVE
- SS : TRANSITION CURVE TO TRANSITION CURVE
- A : PARAMETER OF TRANSITION CURVE
- R : RADIUS OF CIRCULAR CURVE

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANH LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATARI
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.17

PACKAGE 2	SCALE	DRAWING No. H-2	SHEET No.
STEEL BEAM GUARDRAIL GR-A (1)			

# STEEL BEAM GUARDRAIL (TYPE GR-A)

RAIL OFFSET TABLE	
FILL OR CUT	
X (mm)	Y (mm)
2000	10
4000	40
6000	90
8000	160
10000	250
12000	360
14000	490
16000	640
18000	810
20000	1000
22000	1210
24000	1440
ALTERNATE CUT	
X1	Y1
2000	60
4000	230
6000	510
8000	910
10000	1430



LOCATION OF GUARDRAIL (Type GR-A)

No	STATION	Remarks
THROUGHWAY		
Raised Median		
1	KM.9+298.00 - KM.10+903.50	Both Side
2	KM.10+936.5 - KM.11+382.00	Both Side
3	KM.11+615.00 - KM.11+768.50	Both Side
4	KM.12+463.50 - KM.12+831.94	Both Side
Embankment		
1	KM.9+302.50 - KM.9+520.00	Both Side
2	KM.9+780.00 - KM.10+030.00	Both Side
3	KM.10+300.00 - KM.10+903.50	Both Side
4	KM.10+936.50 - KM.11+377.50	Both Side
5	KM.11+615.00 - KM.11+768.50	Both Side
6	KM.12+463.50 - KM.12+620	Both Side
FRONTAGE ROAD		
Left Side		
1	KM.0+000.00 - KM.0+220.00	One Side
2	KM.0+371.19 - KM.0+831.45	One Side
RAMP ROAD		
Gia Lam Dyke Interchange		
Ramp A	KM.0+020.00 - KM.0+060.00	One Side
	KM.0+060.00 - KM.0+741.598	Both Side
	KM.0+741.598 - KM.0+789.654	One Side
Ramp B	KM.0+020.00 - KM.0+040.00	One Side
	KM.0+040.00 - KM.0+6784.388	Both Side
NH No.5 Interchange		
Ramp A	KM.0+000.00 - KM.0+241.41	Both Side
Ramp B	KM.0+000.00 - KM.0+264.88	Both Side
Ramp C	KM.0+000.00 - KM.0+375.88	Both Side
Ramp D	KM.0+000.00 - KM.0+383.65	Both Side

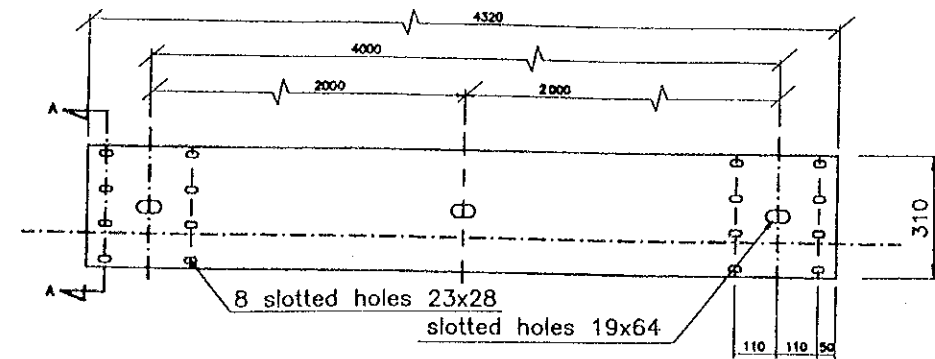
NOTES:

1. Straight guardrail panels to be placed to fit curve when radius exceeds 45m. Curved guardrail panels to be placed to fit curve when radius is 45m or less.
2. All lateral dimensions measured from face of rail.
3. Guardrail may be placed as far as practical from edge of shoulder in no case may guardrail be placed down a slope steeper than 4:1.

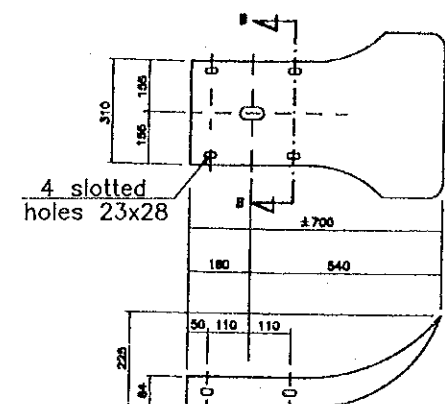
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATANE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	DATE 2000. 0. 17
COOPERATION PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE	DRAWING No. H-3	SHEET No.
STEEL BEAM GUARDRAIL GR-A (2)			

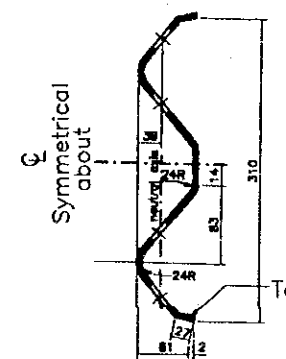
## STEEL BEAM GUARDRAIL (TYPE GR-A)



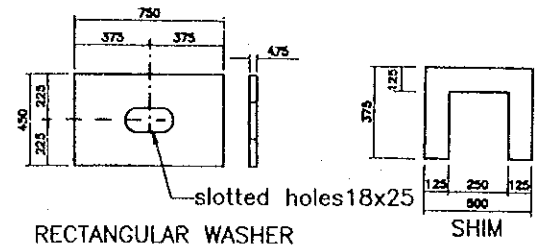
FRONT ELEVATION



DOWN STREAM END TREATMENT

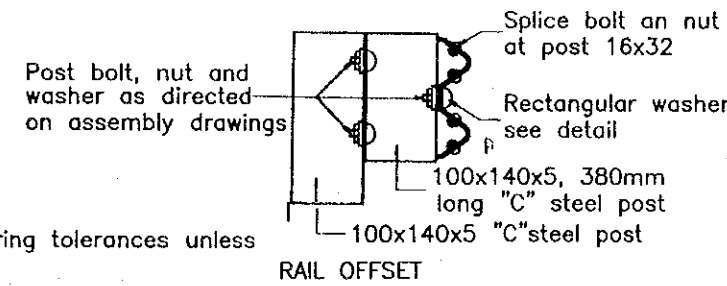


ENLARGED SECTION A-A  
(Section B\_B, similar)



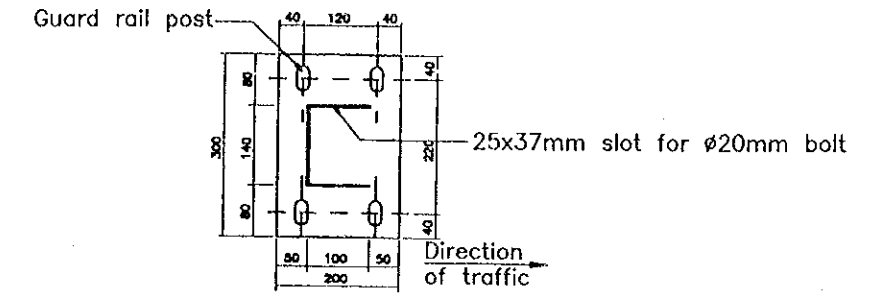
NOTES:

- All dimension subject to manufacturing tolerances unless otherwise indicated
- Shim, 2mm thick steel
- Rail to be 2.74mm thick, rail and components to conform to AASHTO M-180, class A, type 1
- A 'W' section back up plate 300mm in length must be placed rail elements at intermediate post (non splice posts)



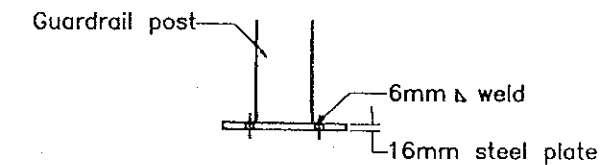
RAIL OFFSET

### STEEL BASE FOR GUARDRAIL POST ON BRIDGES AND BOX CULVERTS



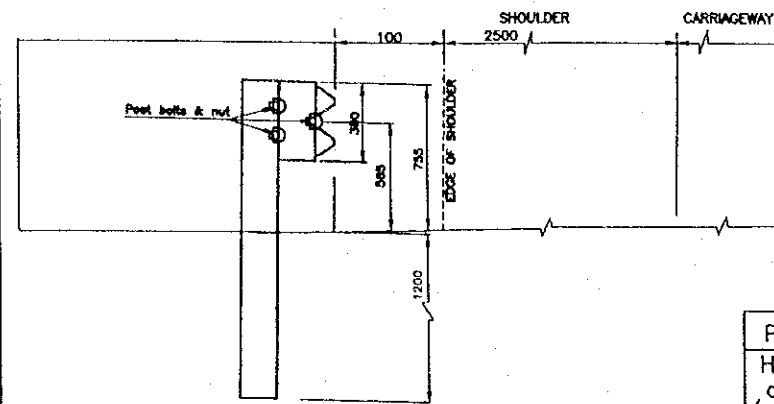
NOTES:

- Base shall be anchored into concrete using 4xØ22mm threaded cinch anchors and nut



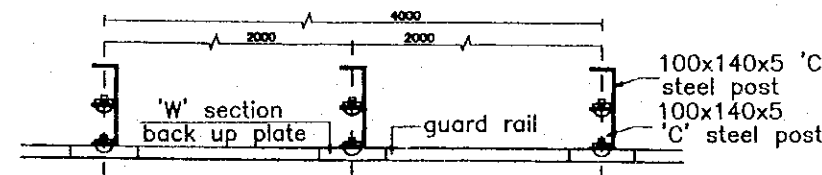
SIDE VIEW

### STEEL BEAM GUARDRAIL ASSEMBLY DETAILS

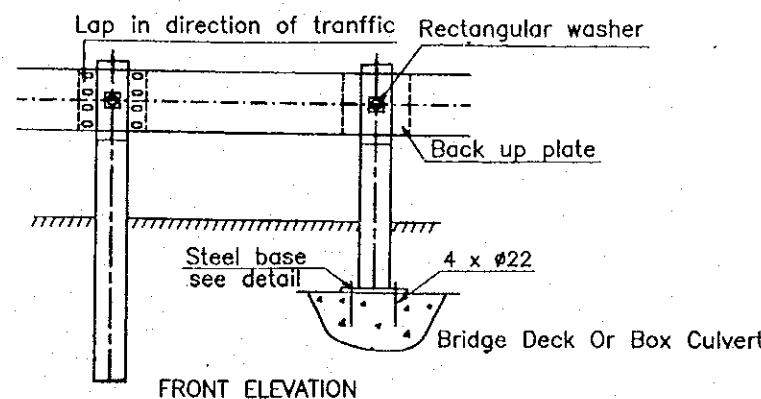


SIDE ELEVATION

POST BOLTS AND HOLES		
Hole dia (mm)	Post bolts and nuts (mm)	Washer
18	16x45	Rect Plate



PLAN



FRONT ELEVATION

NOTES:

- Post and offset block to be in accordance with AASHTO M-180 post to be set by instrument for alignment and grade, with top parallel to pavement grade.
- Where guardrail is adjacent to curb, mounting height shall be measured:
  - Vertically at face of guardrail when face of guardrail is more than 30cm beyond gutter line
  - Vertically at gutterline when face of guardrail is 30cm or less beyond gutter line
- To produce an even alignment, provide shim where necessary.

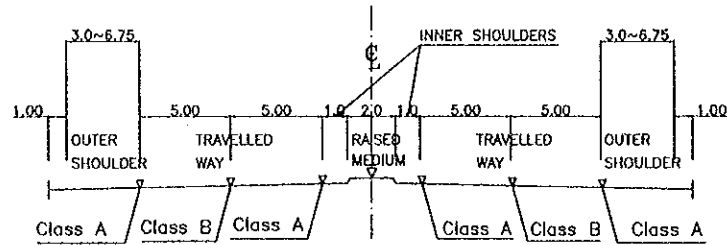


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	SINATAGE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONTRACTOR PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.3.14

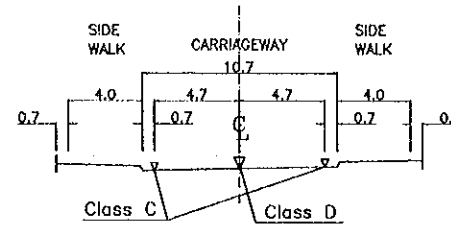
PACKAGE	SCALE	DRAWING No.	SHEET No.
2	As shown	H-5	
TYPICAL ROAD MARKING			

## CROSS SECTIONAL MARKING POSITION

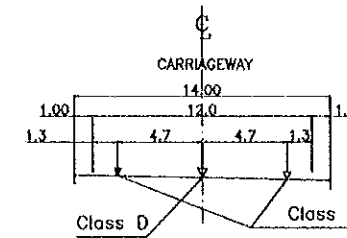
Scale = 1/300



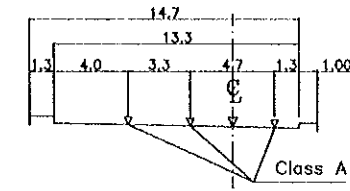
THROUGHWAY  
( Type T-1, T-2, T-3, T-4, T-5 & T-6 )



TWO-LANE, TWO-WAY FRONTAGE ROAD  
( Type F-3 & F-4 )



TWO-LANE, ONE-WAY RAMP  
( Type R-2 )



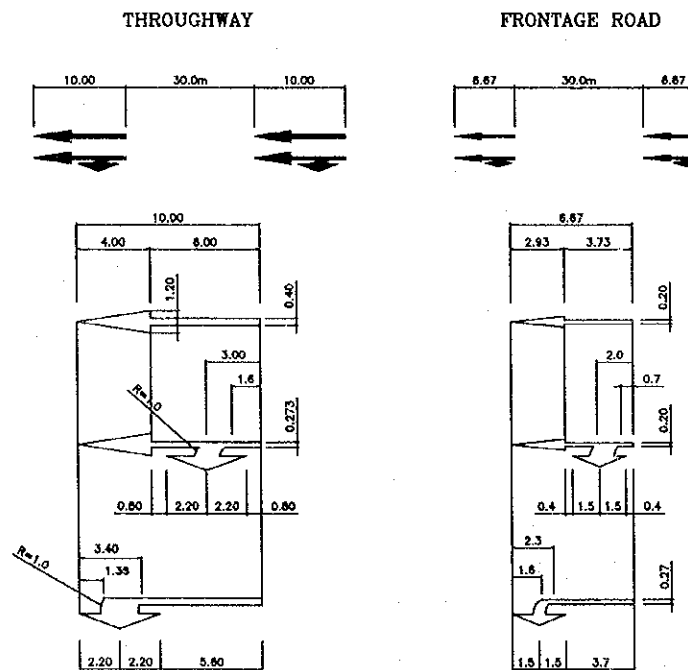
ONE LANE, ONE-WAY RAMP  
WITH BICYCLE LANE  
( Type R-5 )

## TYPICAL ROAD MARKING

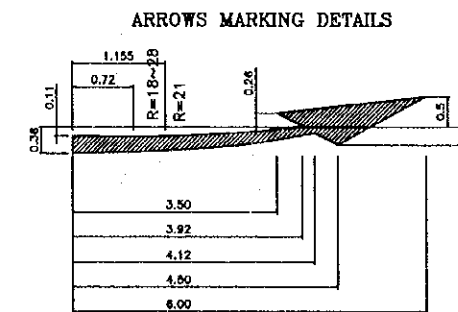
### TYPES OF LANE MARKINGS

CLASS	LANE MARKINGS
A	THROUGHWAY RAMP WAY (SIDE LINES)
B	THROUGHWAY (LANE SEPARATION)
C	FRONTAGE ROAD (SIDE LINES)
D	FRONTAGE ROAD AND RAMP WAY (LANE SEPARATION)
E	MERCING AND DIVERGING AREA (ON/OFF RAMP) TOLL GATE AREA

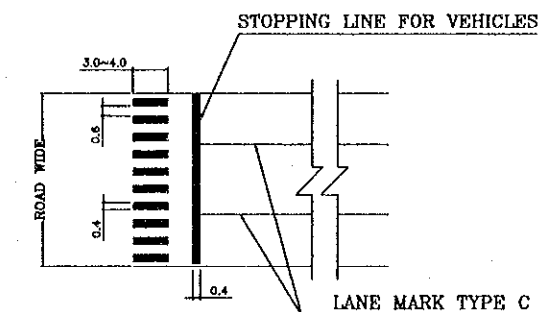
### SPECIAL ROAD MARKING Scale = 1/300



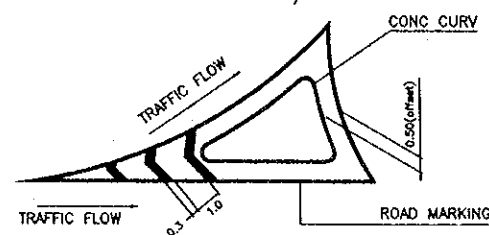
### FOR LANE SHIFT Scale = 1/120



### MARKING OF PEDESTRIAN CROSSING Scale = 1/450



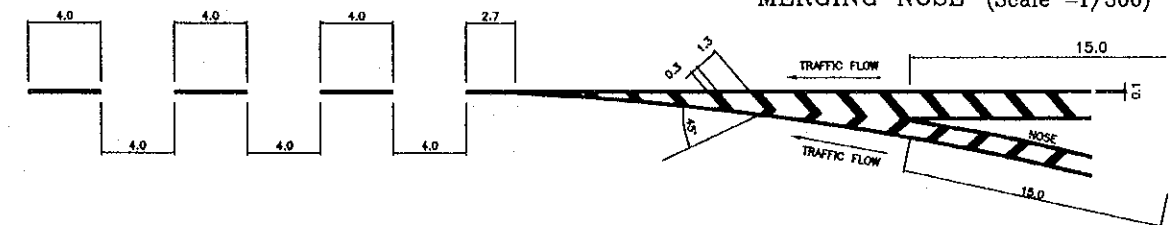
### TRAFFIC ISLAND (STANDARD) Scale = 1/300



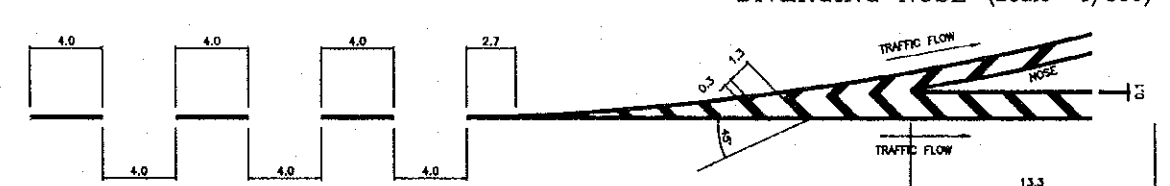
#### NOTE :

- MARKING AT ALL TRAFFIC ISLAND TO BE AS SHOWN ABOVE.
- ROAD MARKING ARE GENERALLY TO FOLLOW THE STANDARD GIVEN IN " ROAD TRAFFIC SIGNS 22TCN 237-97 "

### MERGING NOSE (Scale = 1/300)



### DIVERGING NOSE (Scale = 1/300)



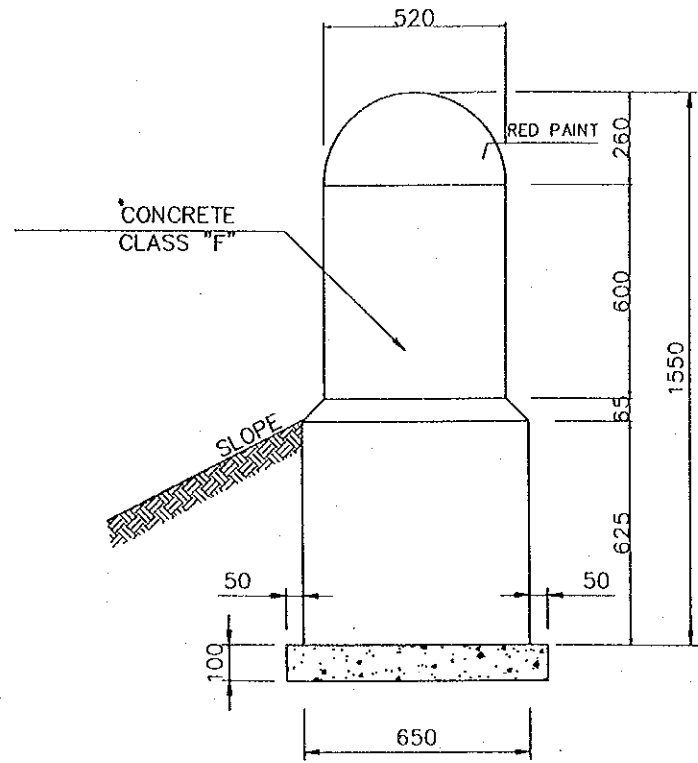


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000. 3. 17	

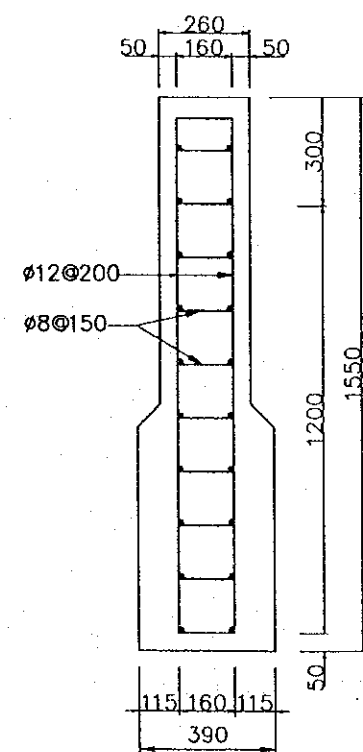
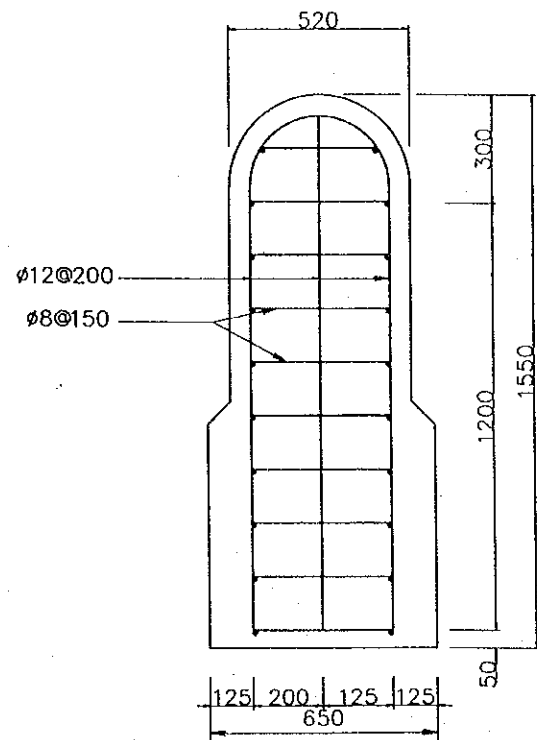
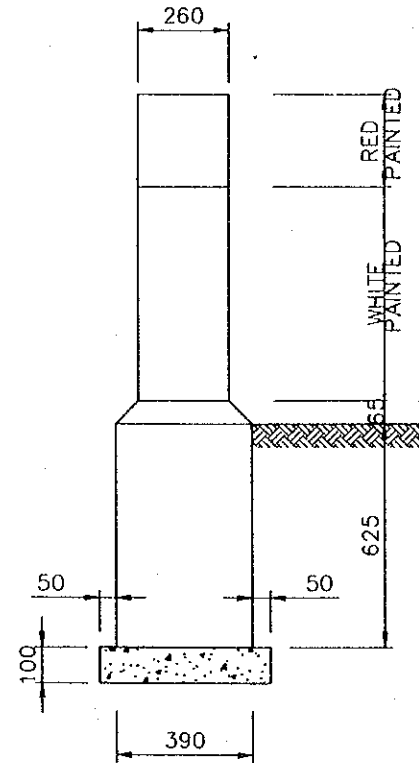
PACKAGE 2	SCALE	DRAWING No. H-6	SHEET No.
KILOMETER POST			

### DETAIL OF KILOMETER POST

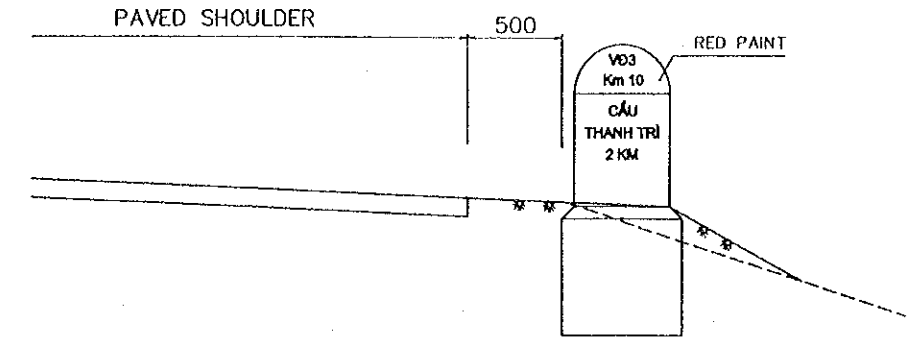
FRONT VIEW



SIDE VIEW



### INSTALLATION OF KM POST



### LOCATION OF KILOMETER POSTS

No.	STATION	REMARKS
	Throughway	
1	KM. 10 + 000.00	Both sides
2	KM. 11 + 000.00	Both sides
3	KM. 12 + 000.00	Both sides

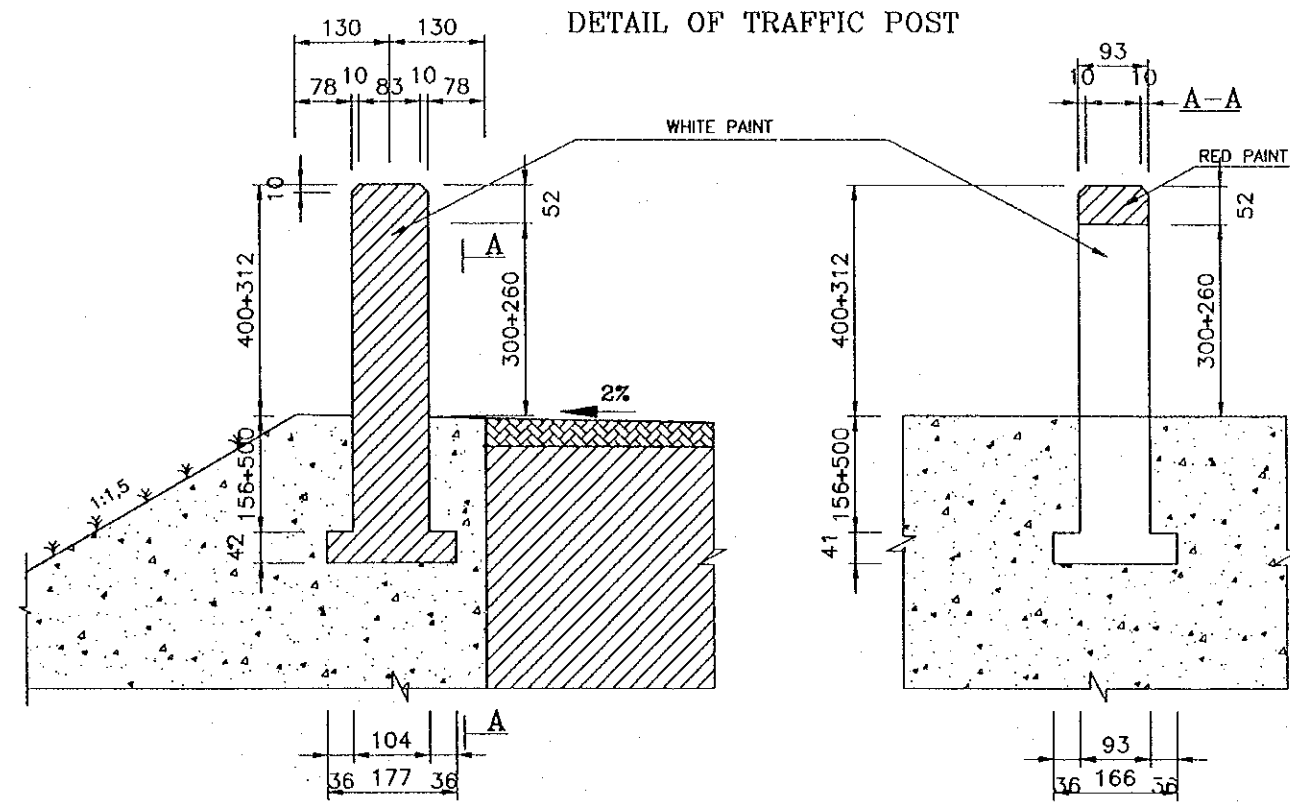
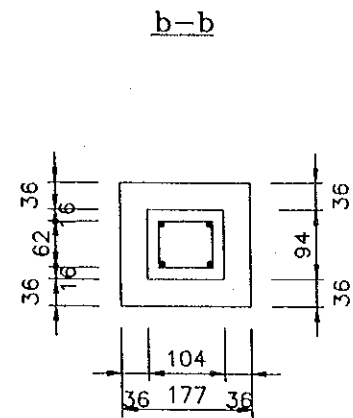
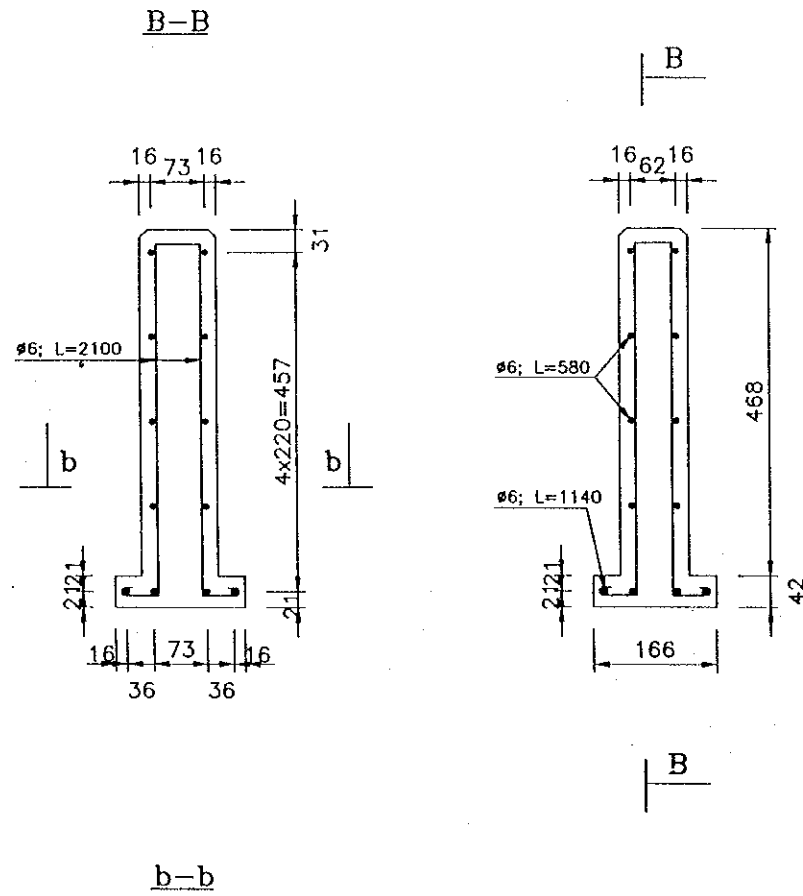
**NOTES**

1. NOT TO SCALE
2. ALL DIMENSIONS ARE IN MILLIMETERS
3. REFLECTIVE PAINT SHALL BE USED.

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (NAMH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONTRACTOR PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.3.19

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		H-7	
TRAFFIC POST			

## TRAFFIC POST



LOCATION OF TRAFFIC POSTS

No.	STATION	REMARKS
Throughway		
1	KM.9+520.00 - KM.9+780.00	Both sides
2	KM.10+030.00 - KM.10+300.00	Both sides
3	KM.12+620.00 - KM.12+831.94	Both sides
Frontage Road		
1	KM.0+220.00 - KM.0+371.19	Left side
2	KM.0+831.45 - KM.2+028.16	Left side

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT	DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	NAME
PROJECT: RED RIVER BRIDGE (THANH TRU BRIDGE) CONSTRUCTION PROJECT	SIGNATURE
CONSULTANT: PACIFIC CONSULTANTS INTERNATIONAL	DATE: 2000.05.17

# REGULATORY SIGNS

PACKAGE	SCALE	DRAWING No.	SHEET No.
3		H-8	
STANDARDS OF TRAFFIC SIGNS(1)			

NOT TO SCALE

The grid contains the following signs and their descriptions:

- 101 RESTRICTED ROAD
- 102 SINGLE WAY
- 103A NO LEFT TURN FOR CARS
- 103B NO RIGHT TURN FOR CARS
- 106A TRUCK RESTRICTED
- 106B OVER 25T-TRUCK RESTRICTED
- 108 TRAILER RESTRICTED
- 109 TRACTOR RESTRICTED
- 110B BICYCLE WITH GOODS RESTRICTED
- 111A MOTORCYCLE RESTRICTED
- 111B LAWMO RESTRICTED
- 111C TRICYCLE RESTRICTED
- 111D CYCLO RESTRICTED
- 119 TRUCK'S LENGTH LIMITED
- 120 TRAILER'S LENGTH LIMITED
- 121A MINIMUM CLEARANCE BETWEEN TWO VEHICLES
- 122 END OF OVERTAKING RESTRICTION
- 123A NO LEFT TURN
- 123B NO RIGHT TURN
- 131B ODD DAYS NO PARKING
- 131C EVEN DAYS NO PARKING
- 132 PRIORITY TO OPPOSITE TRAFFIC FOLLOW
- 101 NO ENTRY BOTH DIRECTIONS
- 102 NO ENTRY (700)
- 103 NO ENTRY FOR CARS
- 104 NO ENTRY FOR MOTORBIKES
- 105 NO ENTRY FOR CAR AND MOTORBIKES
- 106a NO ENTRY FOR TRUCKS
- 107 NO ENTRY FOR BUSES AND TRUCKS
- 110a NO ENTRY FOR BICYCLES
- 112 NO ENTRY FOR PEDESTRIAN
- 113 NO ENTRY FOR CARTS
- 114 NO ENTRY FOR ANIMAL-DRAWN CARTS
- 115 WEIGHT LIMIT
- 116 AXLE LOAD LIMIT
- 117 HEIGHT LIMIT
- 118 WIDTH LIMIT
- 122 STOP
- 123a NO TURNING LEFT
- 123b NO TURNING RIGHT
- 124a NO TURNING BACK (U-TURN NOT PERMITTED)
- 125 NO OVERTAKING
- 127 MAX. SPEED ALLOWED
- 128 USE OF HORN NOT PERMITTED
- 129 TAX COLLECTION STATION
- 130 NO STOPPING AND PARKING
- 131 NO PARKING
- 134 END OF MAX SPEED
- 135 END OF PROHIBITION
- 301a
- 301b
- 301c 301c TO 301i
- 301e DIRECTION TO BE FOLLOWED
- 301d
- 301f
- 301h
- 301i
- 302a DIRECTION TO AVOID OBSTACLES
- 302b
- 302c TRAFFIC ISLAND AHEAD
- 304 ENTRY FOR NON-MOTORIZED VEHICLES
- 305 PEDESTRIAN LANE
- 306 MINIMUM SPEED ALLOWED
- 307 END OF MINIMUM SPEED LIMIT

## NOTE:

1. All dimensions are in Millimeters (mm) unless otherwise indicated. Dimensions shown in the brackets are used for Frontage Road and Ramp Road.
2. Materials, Dimensions, size of letters and numerals and color of all traffic signs are generally to follow Vietnamese Standards 22 TCN 237-97. Therefore, traffic signs used for Throughway are generally larger than that used for Highway 1.3 times or 1.5 times where necessary.
3. Final selection and location of traffic signs shall be decided by the Engineer following Vietnamese Standards given in Road Traffic Signs 22 TCN 237-97.

400

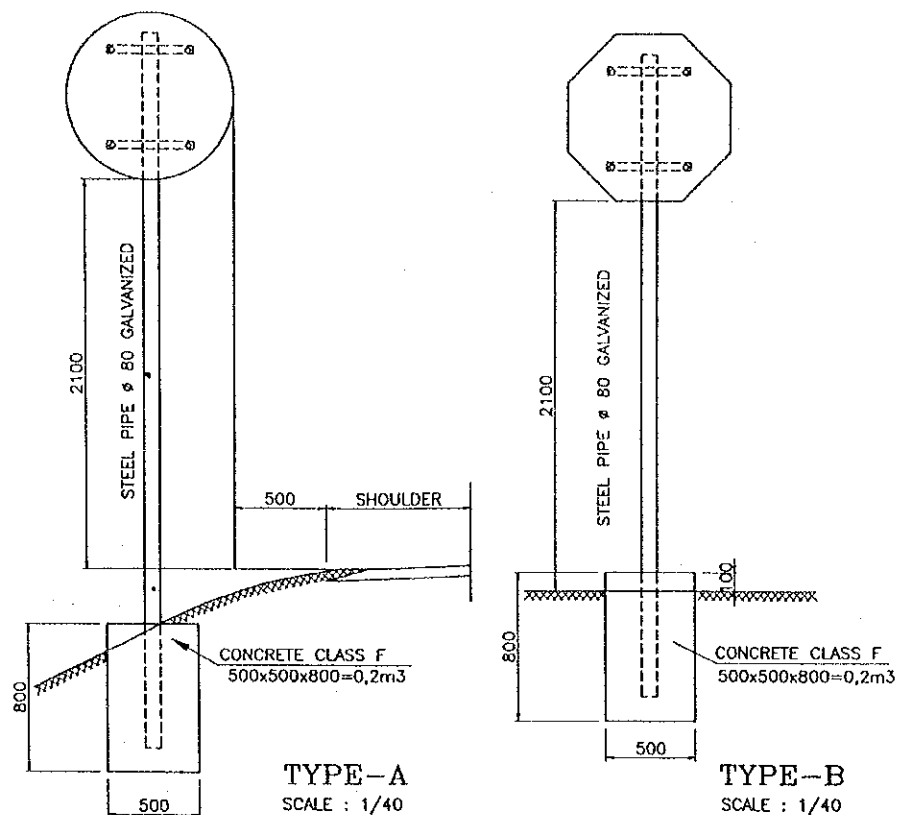


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATADE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2002.3.14

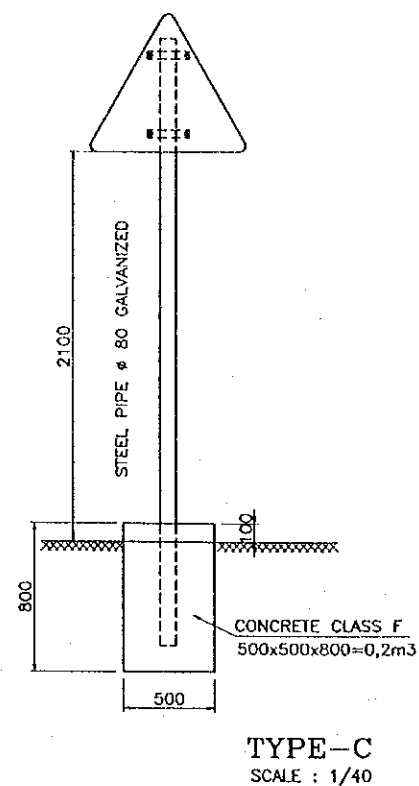
# INSTALLATION OF TRAFFIC SIGNS

PACKAGE 2	SCALE AS SHOWN	DRAWING No. H-10	SHEET No.
INSTALLATION OF TRAFFIC SIGNS			

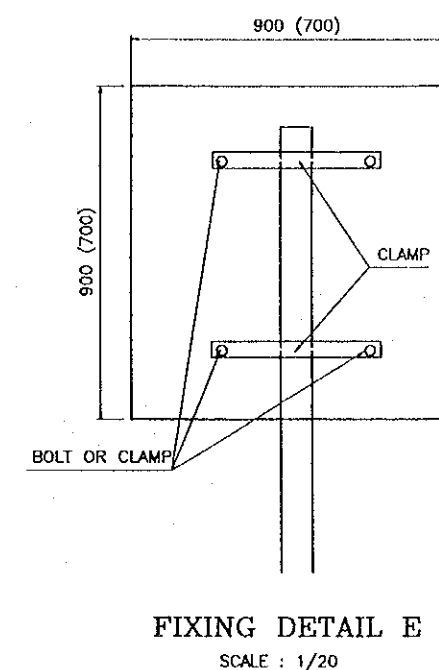
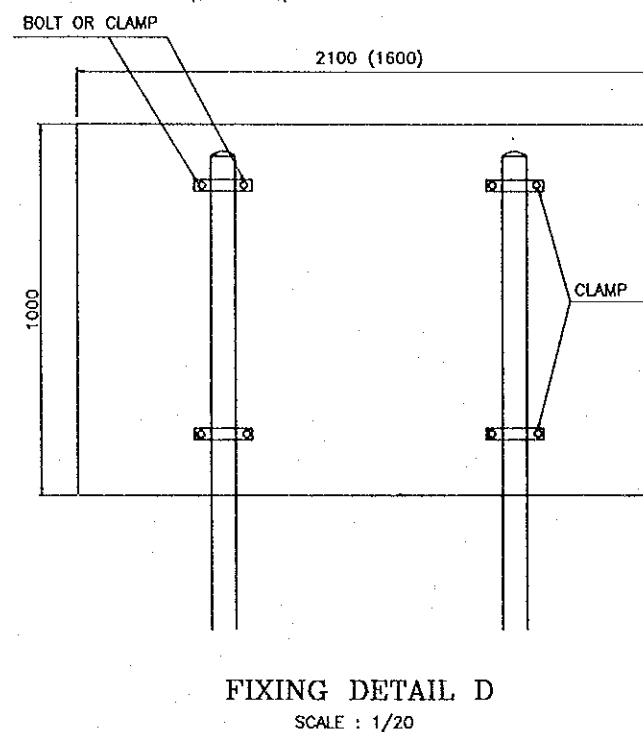
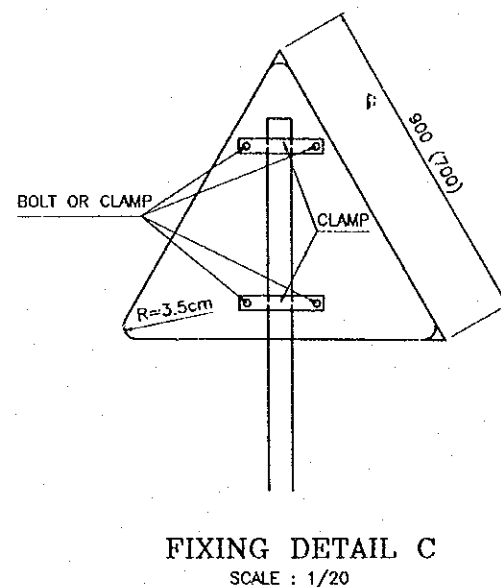
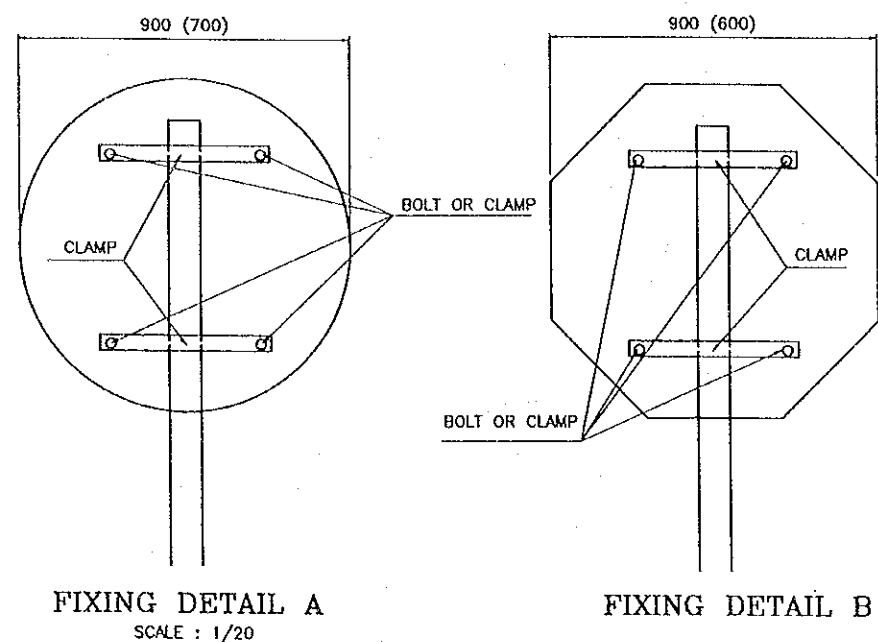
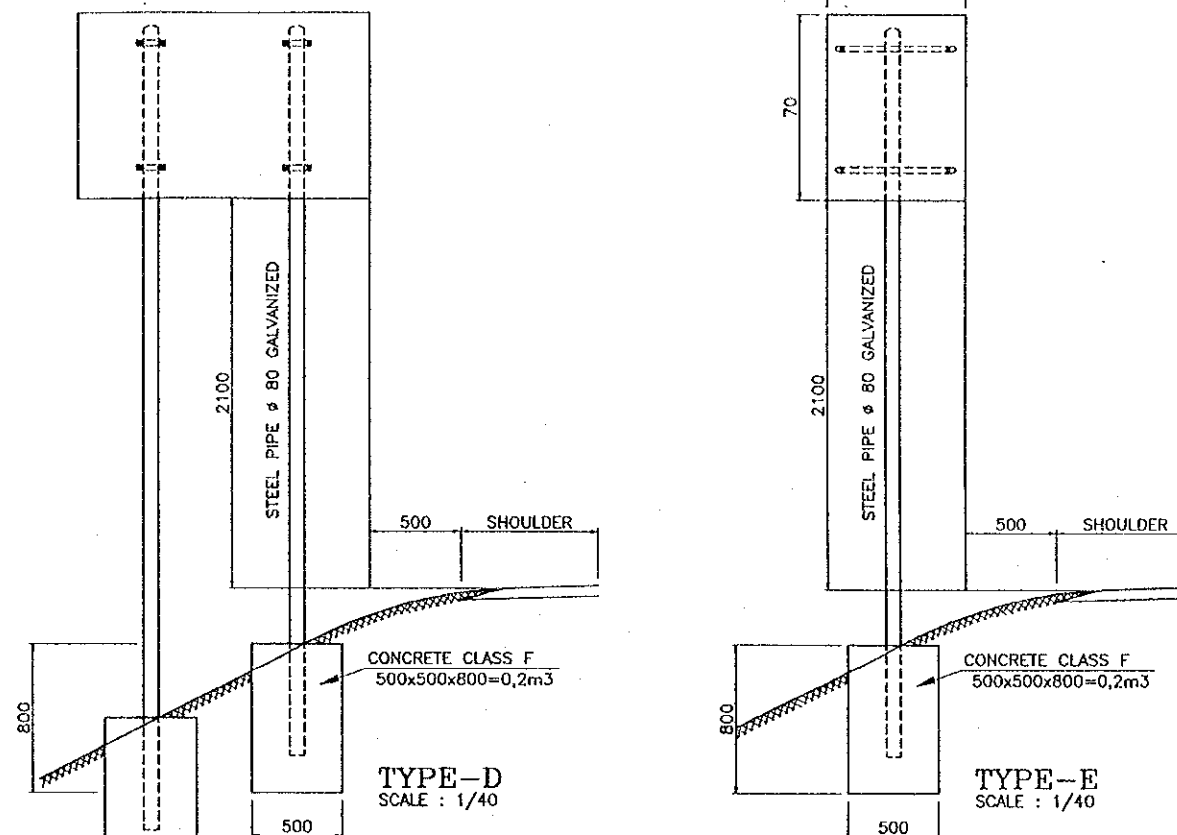
## REGULATORY SIGNS



## WARNING SIGNS



## GUIDE SIGNS



### NOTE:

- All dimensions are in Millimeters (mm) unless otherwise indicated. Dimensions shown in the brackets are used for Frontage Road and Ramp Road.
- In accordance with Vietnamese Standards 22 TCN 237-97, dimensions of the traffic signs used for Throughway are generally larger than that used for Frontage Road and Ramp Road 1.3 times or 1.5 times where necessary. Dimensions of Guide Signs may vary from that shown in this Drawing depending on the types used.
- Installation of traffic signs in Bridge Deck or Box Culvert shall be instructed by the Engineer.

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THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE

PACKAGE	SCALE	DRAWING No.	SHEET No.
2		H-11	

SUMMARY TABLES OF TRAFFIC SIGNS

SUMMARY TABLES OF TRAFFIC SIGNS

REGULATORY SIGNS

No.	STATION	NAME OF SIGNS	LEFT	RIGHT	TYPE
<b>Throughway</b>					
1	Km. 9+310	127	●		A
2	Km. 9+400	127		●	A
3	Km. 9+600	127		●	A
4	Km. 12+100	301f		●	A
5	Km. 12+480	115	●		A
6	Km. 12+800	301f	●		A
<b>Frontage Road (left side)</b>					
1	Km. 0+200	122x2	●	●	B
1	Km. 0+980	122		●	B
2	Km. 1+000	122	●		B
3	Km. 1+560	122		●	B
4	Km. 1+590	122	●		B
<b>Interchange's Ramp Roads</b>					
<b>Gia Lam Dyke IC</b>					
1	Ramp A	127, 115		●	A
2	Ramp B	301i	●		A
<b>NH No.5 IC</b>					
1	Ramp C	127, 301i,	●		A
2	Ramp A	127x2, 110a, 115		●	A
3	Ramp B	127, 301i	●		A
4	Ramp D	127x2, 110a, 115	●		A
<b>At-grade Intersections</b>					
1	Gia Lam Dyke	102, 127, 301i, 122x5, 301f, 301h 117x2, 115	●	●	A B,A A
2	NH No.5 (1)	102x2, 127,117 122x4, 304x2	●	●	A B,A
3	NH No.5 (2)	117,102x2 122x4, 304x2	●	●	A B,A

WARNING SIGNS

No.	STATION	NAME OF SIGNS	LEFT	RIGHT	TYPE
<b>Throughway: None</b>					
<b>Frontage Road (left side)</b>					
1	Km. 0+100	224		●	C
2	Km. 0+320	233, 202a, 224		●	C
3	Km. 0+700	233	●		C
4	Km. 0+860	202b	●		C
5	Km. 0+880	207a, 224		●	C
6	Km. 1+080	207a, 224	●		C
7	Km. 1+460	207b, 224		●	C
8	Km. 1+690	207b, 224	●		C
<b>Interchange's Ramp Roads</b>					
<b>Gia Lam Dyke IC</b>					
2	Ramp A	202a, 233, 238		●	C
3	Ramp B	224, 234, 202b, 233	●		C
<b>NH No.5 IC</b>					
1	Ramp C	224, 202b, 233 226	●		C
2	Ramp A	202b, 233, 238		●	C
3	Ramp B	202b, 233, 224 226	●		C
4	Ramp D	202a, 233	●		C
<b>At-grade Intersections</b>					
1	Gia Lam Dyke	224x2	●	●	C
2	NH No.5 (1)	224x2	●	●	C
3	NH No.5 (2)	224x2	●	●	C

GUIDE SIGNS

No.	STATION	NAME OF SIGNS	LEFT	RIGHT	TYPE
<b>Throughway</b>					
1	Km. 9+320	440, 414b	●	●	D
2	Km. 9+370	437	●		D
4	Km. 9+800	439	●		D
5	Km. 10+890	440		●	D
6	Km. 10+950	440	●		D
7	Km. 11+370	440		●	D
8	Km. 11+650	440	●		D
9	Km. 11+700	414b		●	D
10	Km. 11+760	440		●	D
11	Km.12+100	414b		●	D
12	Km. 12+480	440	●		D
13	Km. 12+800	414b	●		D
<b>Frontage Road (left side)</b>					
1	0+200	423bx2		●	E
2	Km. 0+970	423b		●	E
3	Km. 1+000	423b	●		E
4	Km. 1+560	423b		●	E
5	Km. 1+590	423b	●		E
<b>Interchange's Ramp Roads</b>					
<b>Gia Lam Dyke IC</b>					
1	Ramp B	414b	●		D
<b>NH No.5 IC</b>					
1	Ramp C	423ax2 414a	●	●	E D
2	Ramp A	423b, 437		●	E,D
3	Ramp B	414a	●		D
4	Ramp D	423ax2 423b	●		E E
<b>At-grade Intersections</b>					
1	Gia Lam Dyke	423bx6, 414c	●	●	E,D
2	NH No.5 (1)	423ax2, 411, 414cx2	●	●	E,D D
3	NH No.5 (2)	423ax2, 411, 414c	●	●	E,D D

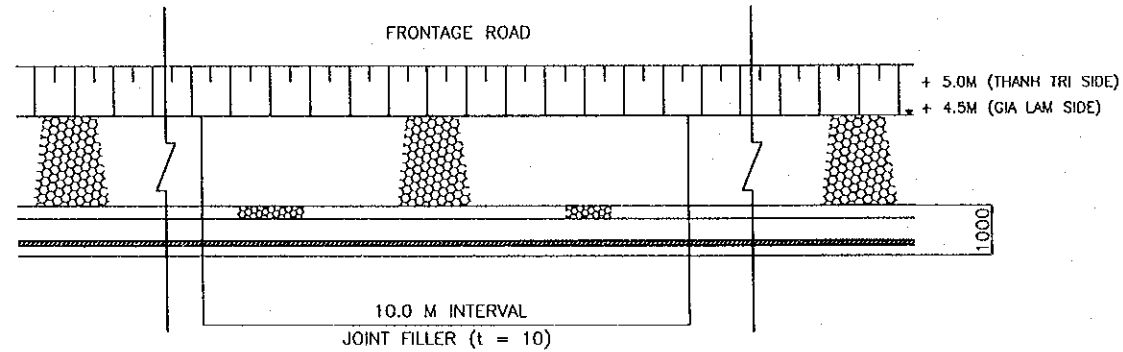
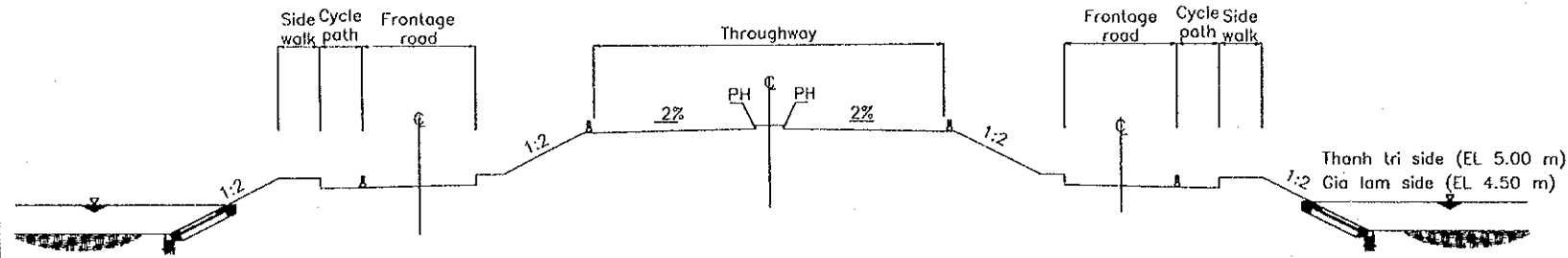
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THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TIWANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT	DESIGNED BY NAME S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000. 3. 14
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	

PACKAGE 2	SCALE AS SHOWN	DRAWING No. H-12	SHEET No.
SLOPE PROTECTION IN POND			

## SLOPE PROTECTION IN POND (GIA LAM SIDE)

SCALE : 1/400

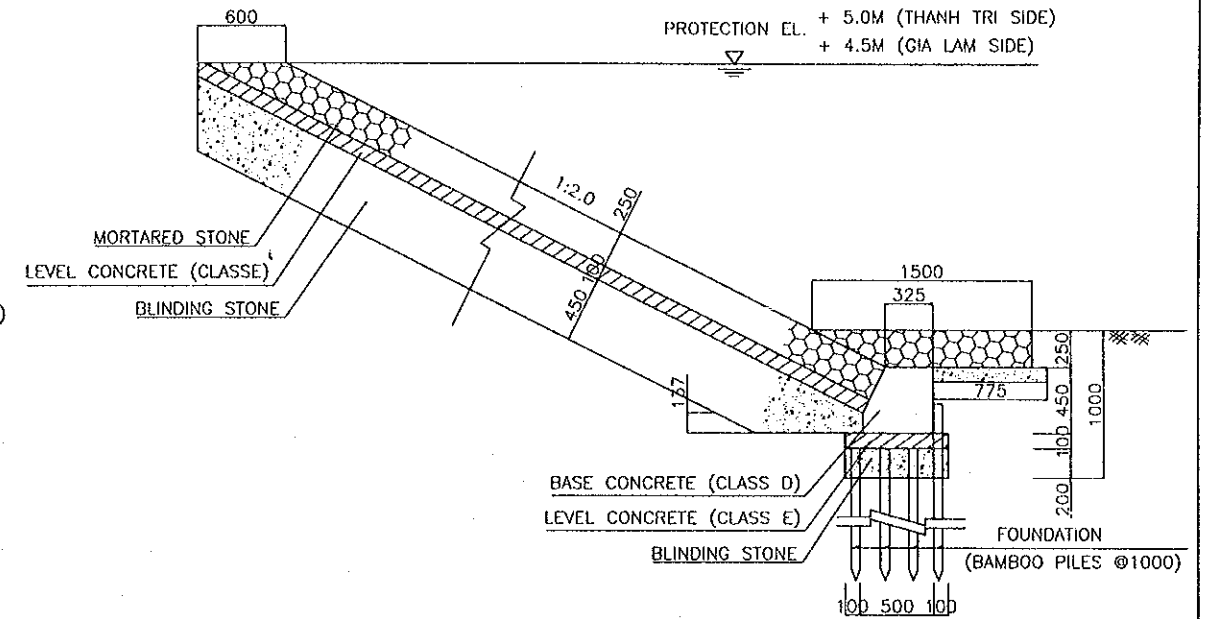


### WORK QUANTITY (Per m)

Item	Unit	Quantity	
		H=2.0m	H=3.8m
Concrete (D)	m <sup>3</sup>	0.198	0.198
Concrete (E)	m <sup>3</sup>	0.610	1.020
Form	m <sup>2</sup>	1.140	1.140
Mortared stone	m <sup>3</sup>	1.730	2.680
Blinding stone	m <sup>3</sup>	2.600	4.410
Bamboo	pieces	4	4
Joint filler	m <sup>2</sup>	0.230	0.380

## SLOPE PROTECTION DETAILS

SCALE: 1/20



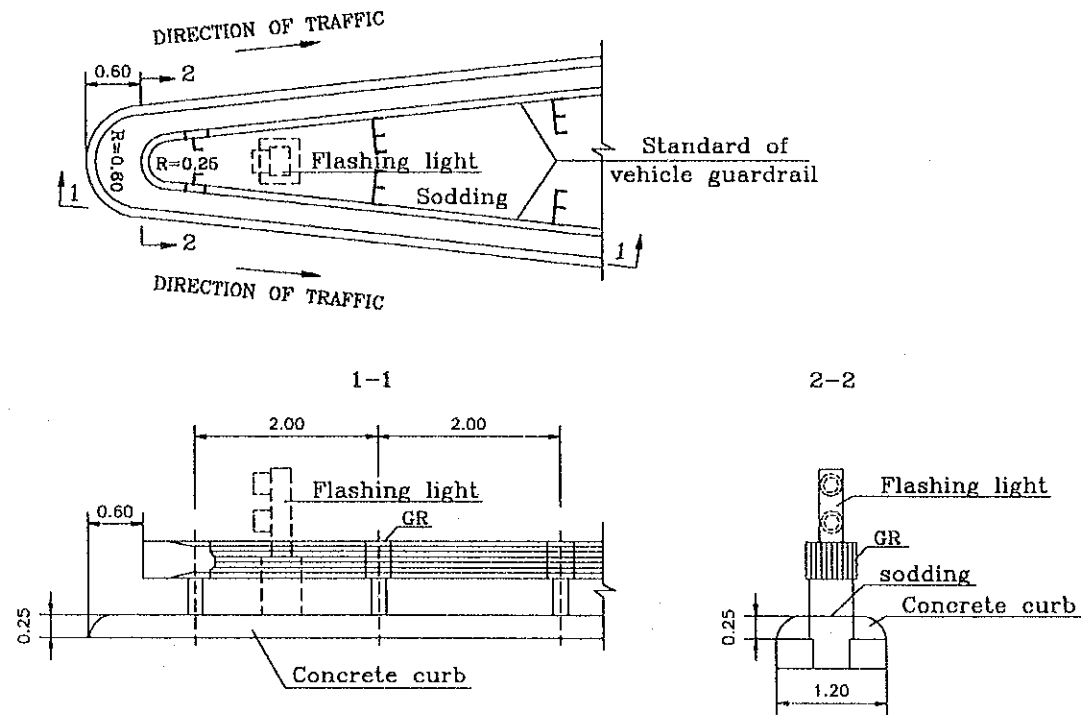
### LIST OF SLOPE PROTECTION

FRONTAGE ROAD STATION	Left or right	Length (m)	Height (m)	Remarks
0+080~0+200	Left	120	2.0	
0+230~0+270	Left	40	2.0	
(A) RAMP STATION 0+080~0+190	Right	110	2.0	GIA LAM DYKE
Total		270m	H=2.0m	

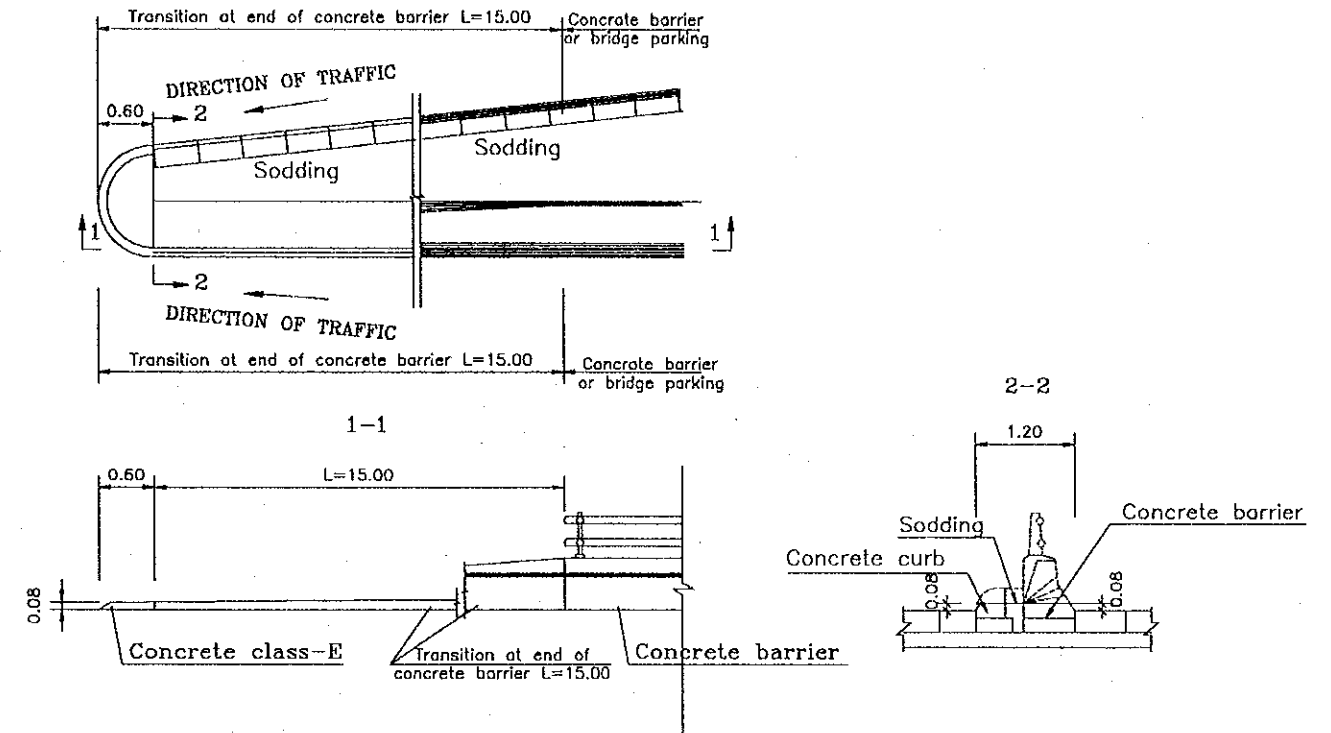
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. NAYABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	DATE 2002.6.1
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/80	DRAWING No. 11-13	SHEET No.
NOSE DETAILS			

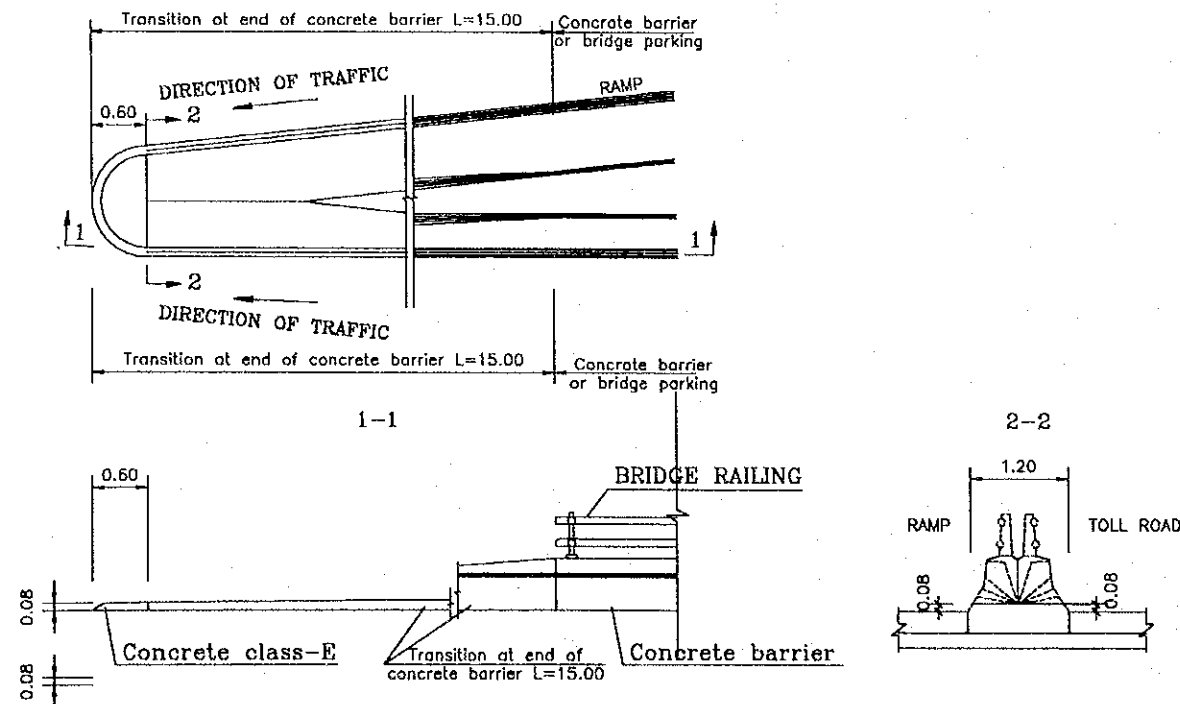
### STANDARD OF DIVERGING NOSE S= 1/80



### STANDARD OF MERGING NOSE S= 1/80



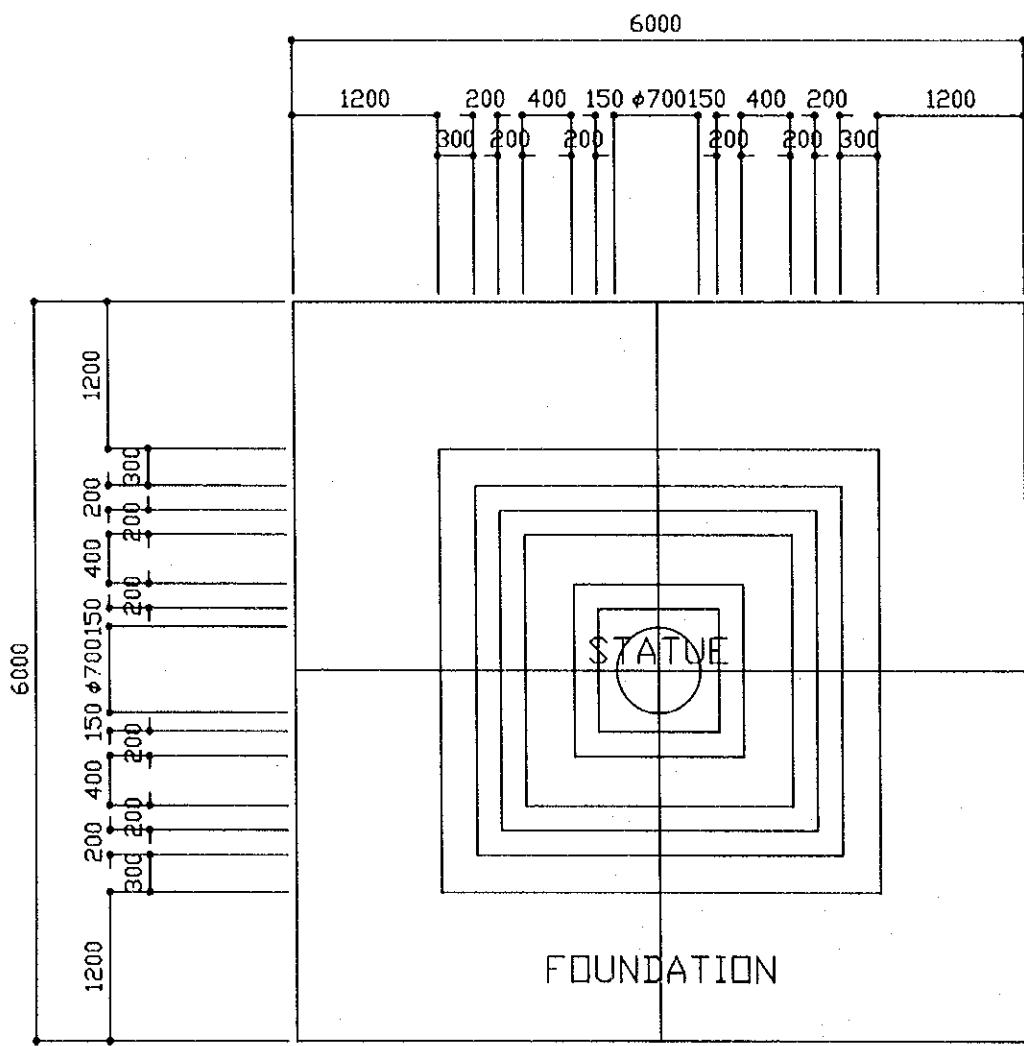
### STANDARD OF MERGING NOSE S= 1/80



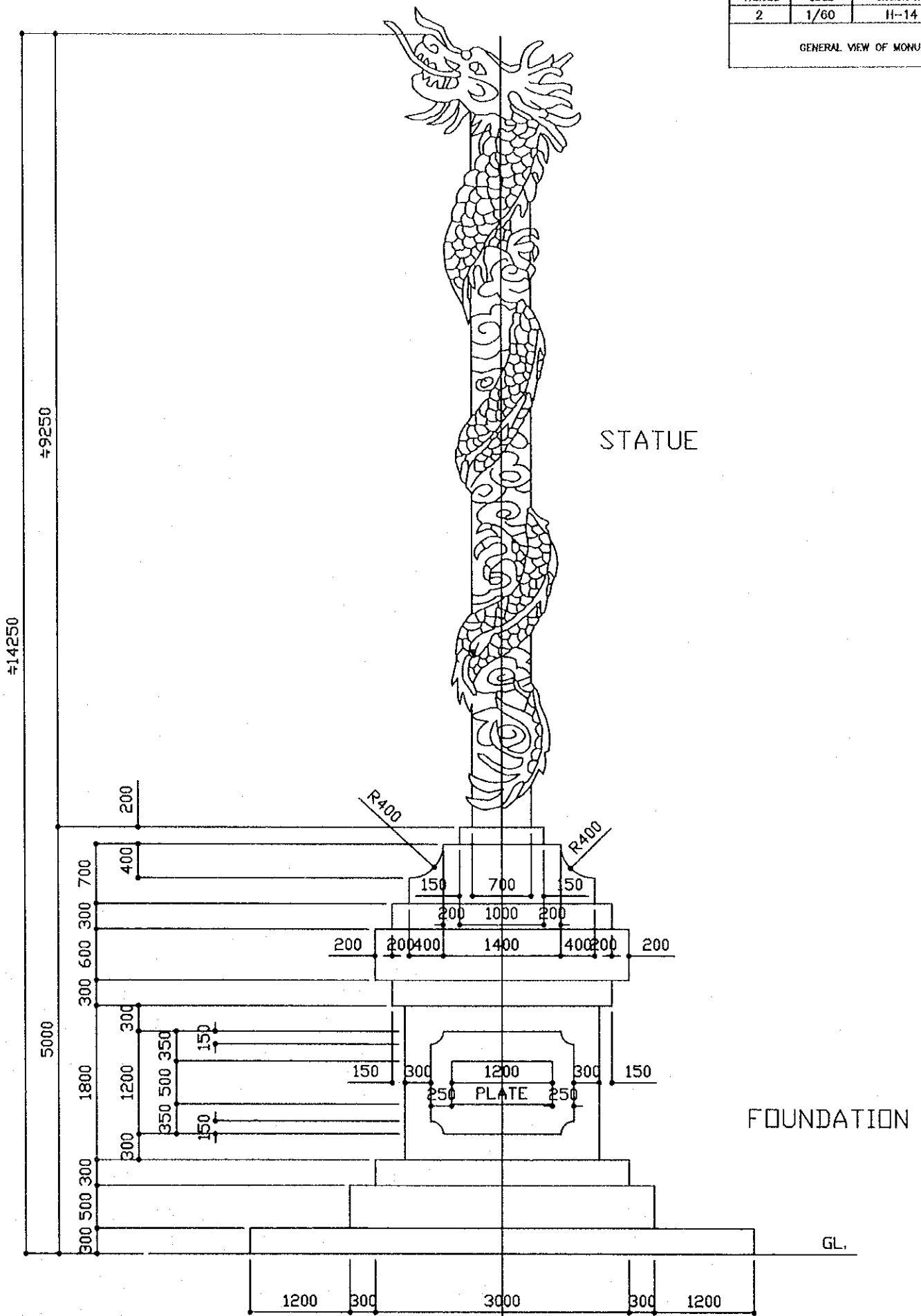


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TIENHONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	DATE 2000, 6-1
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 2	SCALE 1/60	DRAWING No. H-14	SHEET No.
GENERAL VIEW OF MONUMENT			



PLAN



ELEVATION





JICA