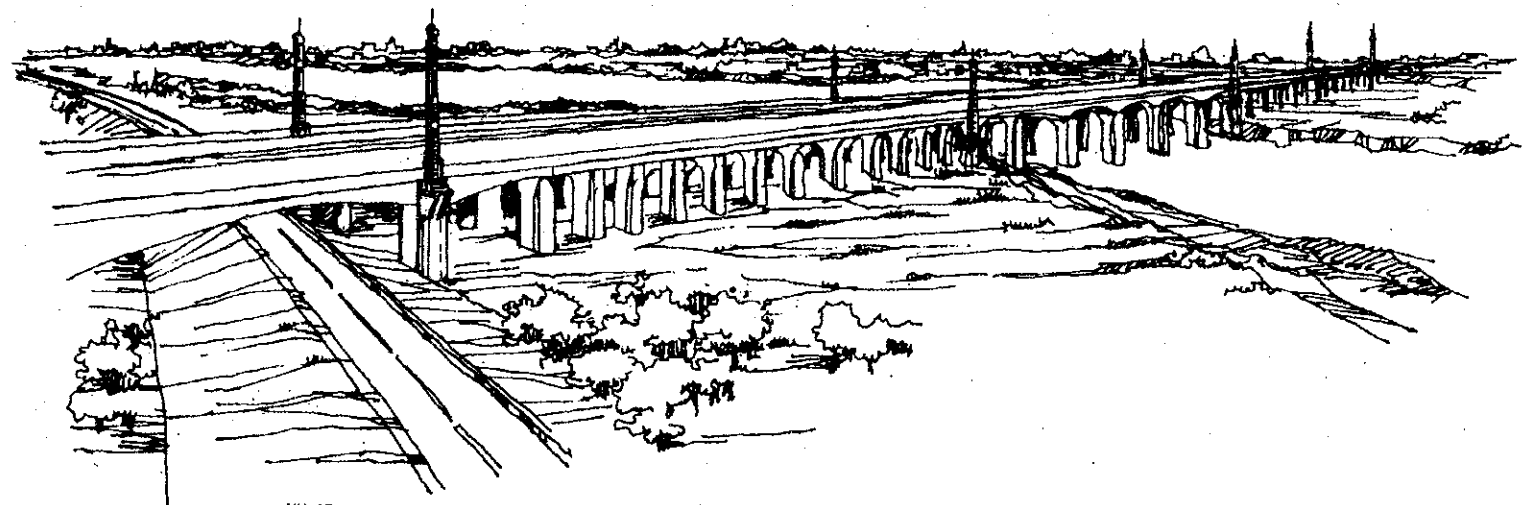


JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
PROJECT MANAGEMENT UNIT THANG LONG
MINISTRY OF TRANSPORT
THE SOCIALIST REPUBLIC OF VIET NAM

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

FINAL REPORT

VOLUME X : DRAWINGS
〈 PACKAGE - 3 〉
(2 of 2)



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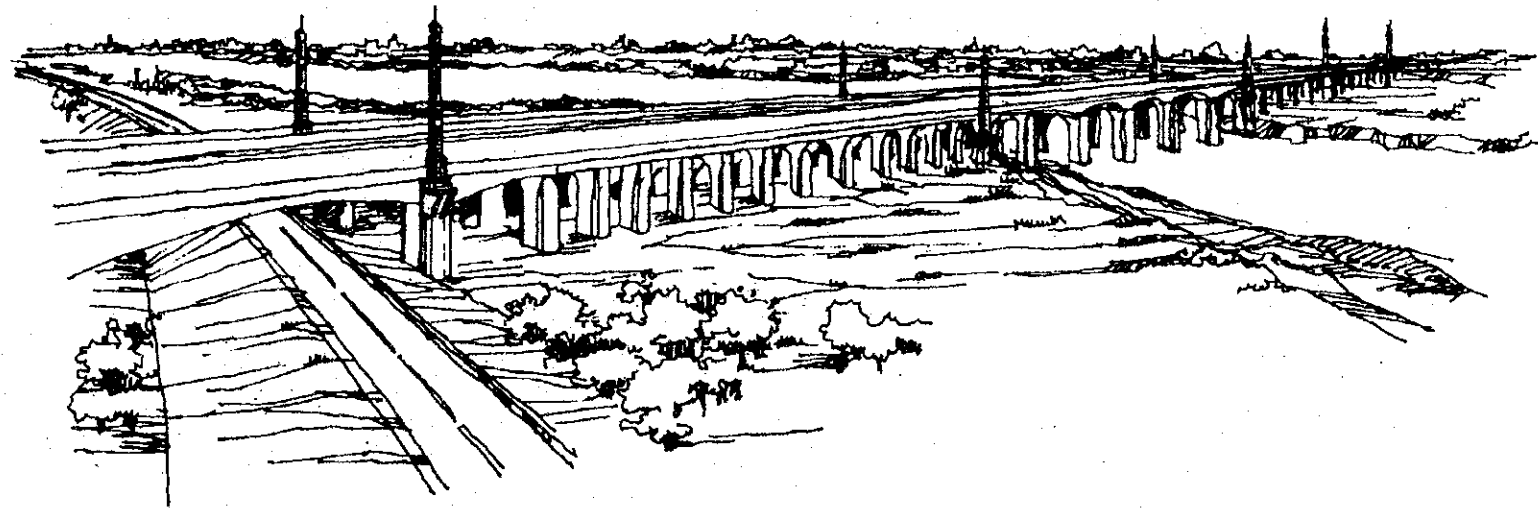
PROJECT MANAGEMENT UNIT THANG LONG
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**THE DETAILED DESIGN OF
THE RED RIVER BRIDGE (THANH TRI BRIDGE)
CONSTRUCTION PROJECT
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PACIFIC CONSULTANTS INTERNATIONAL



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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)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2022.03.17	

DRAWING SCHEDULE (1)

PACKAGE 3	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 DRAWING SCHEDULE (4)
- A-5 PROJECT LOCATION MAP
- A-6 ABBREVIATION AND SYMBOLS
- A-7 LEGEND
- A-8 GENERAL NOTES

B. HIGHWAY

B-1 TYPICAL CROSS SECTION

- B-1-1 TYPICAL CROSS SECTION (STA 0+100)
- B-1-2 TYPICAL CROSS SECTION (STA 1+060)
- B-1-3 TYPICAL CROSS SECTION (STA 2+600)
- B-1-4 TYPICAL CROSS SECTION (STA 3+340)
- B-1-5 TYPICAL CROSS SECTION (STA 5+420)
- B-1-6 TYPICAL CROSS SECTION (STA 5+800)
- B-1-7 TYPICAL CROSS SECTION (STA 6+060)
- B-1-8 TYPICAL CROSS SECTION (TYPE F1 & F2)
- B-1-9 TYPICAL CROSS SECTION (TYPE F5 & 6)
- B-1-10 TYPICAL CROSS SECTION (TYPE R1 & R3)
- B-1-11 TYPICAL CROSS SECTION (TYPE R4 & R6)
- B-1-12 TYPICAL CROSS SECTION (TYPE R6 & R7)
- B-1-13 TYPICAL CROSS SECTION (TYPE R8 & R9)
- B-1-14 PAVEMENT DETAIL

B-2 ALIGNMENT LAYOUT

- B-2-1 ALIGNMENT LAYOUT (STA 0+000 - STA 0+200)
- B-2-2 ALIGNMENT LAYOUT (STA 0+200 - STA 0+900)
- B-2-3 ALIGNMENT LAYOUT (STA 0+900 - STA 1+600)
- B-2-4 ALIGNMENT LAYOUT (STA 1+600 - STA 2+300)
- B-2-5 ALIGNMENT LAYOUT (STA 2+300 - STA 3+000)
- B-2-6 ALIGNMENT LAYOUT (STA 3+000 - STA 3+700)
- B-2-7 ALIGNMENT LAYOUT (STA 3+700 - STA 4+400)
- B-2-8 ALIGNMENT LAYOUT (STA 4+400 - STA 5+100)
- B-2-9 ALIGNMENT LAYOUT (STA 5+100 - STA 5+800)
- B-2-10 ALIGNMENT LAYOUT (STA 5+800 - STA 6+218.50)
- B-2-11 ALIGNMENT LAYOUT (PHAP VAN CAU GIE I.C 1)
- B-2-12 ALIGNMENT LAYOUT (PHAP VAN CAU GIE I.C 2)
- B-2-13 ALIGNMENT LAYOUT (PHAP VAN CAU GIE I.C 3)
- B-2-14 ALIGNMENT LAYOUT (NGUYEN TAM TRINH I.C)
- B-2-15 ALIGNMENT LAYOUT (LINH NAM I.C)

B-3 PLAN AND PROFILE

- B-3-1 THROUGH WAY (STA 0+500 - STA 0+200)
- B-3-2 THROUGH WAY (STA 0+200 - STA 0+900)
- B-3-3 THROUGH WAY (STA 0+900 - STA 1+600)
- B-3-4 THROUGH WAY (STA 1+600 - STA 2+300)
- B-3-5 THROUGH WAY (STA 2+300 - STA 3+000)
- B-3-6 THROUGH WAY (STA 3+000 - STA 3+700)
- B-3-7 THROUGH WAY (STA 3+700 - STA 4+400)
- B-3-8 THROUGH WAY (STA 4+400 - STA 5+100)
- B-3-9 THROUGH WAY (STA 5+100 - STA 5+800)
- B-3-10 THROUGH WAY (STA 5+800 - STA 6+500)
- B-3-11 PHAP VAN CAU GIE INTERCHANGE PLAN (1/2)
- B-3-12 PHAP VAN CAU GIE INTERCHANGE PLAN (2/2)
- B-3-13 PHAP VAN CAU GIE INTERCHANGE PROFILE (1/3)
- B-3-14 PHAP VAN CAU GIE INTERCHANGE PROFILE (2/3)
- B-3-15 PHAP VAN CAU GIE INTERCHANGE PROFILE (3/3)

- B-3-16 NGUYEN TAM TRINH INTERCHANGE PROFILE
- B-3-17 LINH NAM INTERCHANGE PROFILE (1/2)
- B-3-18 LINH NAM INTERCHANGE PROFILE (2/2)
- B-3-19 FRONTAGE ROAD PROFILE (LEFT SIDE) (1/5)
- B-3-20 FRONTAGE ROAD PROFILE (LEFT SIDE) (2/5)
- B-3-21 FRONTAGE ROAD PROFILE (LEFT SIDE) (3/5)
- B-3-22 FRONTAGE ROAD PROFILE (LEFT SIDE) (4/5)
- B-3-23 FRONTAGE ROAD PROFILE (LEFT SIDE) (5/5)
- B-3-24 FRONTAGE ROAD PROFILE (RIGHT SIDE) (1/5)
- B-3-25 FRONTAGE ROAD PROFILE (RIGHT SIDE) (2/5)
- B-3-26 FRONTAGE ROAD PROFILE (RIGHT SIDE) (3/5)
- B-3-27 FRONTAGE ROAD PROFILE (RIGHT SIDE) (4/5)
- B-3-28 FRONTAGE ROAD PROFILE (RIGHT SIDE) (5/5)

B-4 INTERCHANGE PLAN (SCALE 1/1000)

- B-4-1 PHAP VAN CAU GIE INTERCHANGE (1/8)
- B-4-2 PHAP VAN CAU GIE INTERCHANGE (2/8)
- B-4-3 PHAP VAN CAU GIE INTERCHANGE (3/8)
- B-4-4 PHAP VAN CAU GIE INTERCHANGE (4/8)
- B-4-5 PHAP VAN CAU GIE INTERCHANGE (5/8)
- B-4-6 PHAP VAN CAU GIE INTERCHANGE (6/8)
- B-4-7 PHAP VAN CAU GIE INTERCHANGE (7/8)
- B-4-8 PHAP VAN CAU GIE INTERCHANGE (8/8)
- B-4-9 NGUYEN TAM TRINH INTERCHANGE (1/2)
- B-4-10 NGUYEN TAM TRINH INTERCHANGE (2/2)
- B-4-11 LINH NAM INTERCHANGE (1/3)
- B-4-12 LINH NAM INTERCHANGE (2/3)
- B-4-13 LINH NAM INTERCHANGE (3/3)

B-5 INTERSECTION

- B-5-1 NH No.1 INTERSECTION (1/2)
- B-5-2 NH No.1 INTERSECTION (2/2)
- B-5-3 PHAP VAN CAU GIE ROAD INTERSECTION

B-6 SOFT GROUND TREATMENT

- B-6-1 SOFT GROUND TREATMENT (TYPE A)
- B-6-2 SOFT GROUND TREATMENT (TYPE B)
- B-6-3 SOFT GROUND TREATMENT (TYPE EF, TYPE G)
- B-6-4 SOFT GROUND TREATMENT (TYPE H, TYPE I)

B-7 LAYOUT OF TRAFFIC SIGNS

- B-7-1 LAYOUT OF TRAFFIC SIGNS (KM. 0+000 - KM. 0+900)
- B-7-2 LAYOUT OF TRAFFIC SIGNS (KM. 0+900 - KM. 2+300)
- B-7-3 LAYOUT OF TRAFFIC SIGNS (KM. 2+300 - KM. 3+700)
- B-7-4 LAYOUT OF TRAFFIC SIGNS (KM. 3+700 - KM. 5+100)
- B-7-5 LAYOUT OF TRAFFIC SIGNS (KM. 5+100 - KM. 6+218.50)
- B-7-6 LAYOUT OF TRAFFIC SIGNS FOR PHAP VAN - CAU GIE INTERCHANGE (1)
- B-7-7 LAYOUT OF TRAFFIC SIGNS FOR PHAP VAN - CAU GIE INTERCHANGE (2)
- B-7-8 LAYOUT OF TRAFFIC SIGNS FOR NH No.1 INTERSECTION
- B-7-9 LAYOUT OF TRAFFIC SIGNS FOR PHAP VAN - CAU GIE INTERSECTION

C. BRIDGE

C-1 THROUGHWAY

C-1-1 GENERAL VIEW

- C-1-1-1 GENERAL VIEW OF NGUYEN TAM TRINH BRIDGE
- C-1-1-2 GENERAL VIEW OF LINH NAM ROAD BRIDGE
- C-1-1-3 GENERAL VIEW OF PHAP VAN VIADUCT BRIDGE
- C-1-1-4 GENERAL VIEW OF KIM NGUU RIVER BRIDGE

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 NGUYEN TAM TRINH BRIDGE, STRUCTURAL DIMENSIONS (1/2)
- C-1-2a-3 NGUYEN TAM TRINH BRIDGE, STRUCTURAL DIMENSIONS (2/2)
- C-1-2a-4 NGUYEN TAM TRINH BRIDGE, TENDON ARRANGEMENT (1/2)
- C-1-2a-5 NGUYEN TAM TRINH BRIDGE, TENDON ARRANGEMENT (2/2)
- C-1-2a-6 NGUYEN TAM TRINH BRIDGE, REINFORCEMENT ARRANGEMENT (1/3)
- C-1-2a-7 NGUYEN TAM TRINH BRIDGE, REINFORCEMENT ARRANGEMENT (2/3)
- C-1-2a-8 NGUYEN TAM TRINH BRIDGE, REINFORCEMENT ARRANGEMENT (3/3)
- C-1-2a-9 NGUYEN TAM TRINH BRIDGE, REBAR BENDING SCHEDULE (1/3)
- C-1-2a-10 NGUYEN TAM TRINH BRIDGE, REBAR BENDING SCHEDULE (2/3)
- C-1-2a-11 NGUYEN TAM TRINH BRIDGE, REBAR BENDING SCHEDULE (3/3)
- C-1-2a-12 LINH NAM BRIDGE, STRUCTURAL DIMENSIONS (1/2)
- C-1-2a-13 LINH NAM BRIDGE, STRUCTURAL DIMENSIONS (2/2)
- C-1-2a-14 LINH NAM BRIDGE, TENDON ARRANGEMENT (1/2)
- C-1-2a-15 LINH NAM BRIDGE, TENDON ARRANGEMENT (2/2)
- C-1-2a-16 LINH NAM BRIDGE, REINFORCEMENT ARRANGEMENT (1/3)
- C-1-2a-17 LINH NAM BRIDGE, REINFORCEMENT ARRANGEMENT (2/3)
- C-1-2a-18 LINH NAM BRIDGE, REINFORCEMENT ARRANGEMENT (3/3)
- C-1-2a-19 LINH NAM BRIDGE, REBAR BENDING SCHEDULE (1/3)
- C-1-2a-20 LINH NAM BRIDGE, REBAR BENDING SCHEDULE (2/3)
- C-1-2a-21 LINH NAM BRIDGE, REBAR BENDING SCHEDULE (3/3)

C-1-2b PC I GIRDER

- C-1-2b-1 DETAIL OF PHAP VAN VIADUCT (1)
- C-1-2b-2 DETAIL OF PHAP VAN VIADUCT (2)
- C-1-2b-3 DETAIL OF PHAP VAN VIADUCT (3)
- C-1-2b-4 DETAIL OF PHAP VAN VIADUCT (4)
- C-1-2b-5 DETAIL OF PHAP VAN VIADUCT (5)
- C-1-2b-6 DETAIL OF PHAP VAN VIADUCT (6)
- C-1-2b-7 DETAIL OF PHAP VAN VIADUCT (7)
- C-1-2b-8 DETAIL OF PHAP VAN VIADUCT (8)
- C-1-2b-9 DETAIL OF PHAP VAN VIADUCT (9)
- C-1-2b-10 DETAIL OF PHAP VAN VIADUCT (10)
- C-1-2b-11 DETAIL OF PHAP VAN VIADUCT (11)
- C-1-2b-12 DETAIL OF PHAP VAN VIADUCT (12)
- C-1-2b-13 DETAIL OF PHAP VAN VIADUCT (13)
- C-1-2b-14 DETAIL OF PHAP VAN VIADUCT (14)
- C-1-2b-15 DETAIL OF PHAP VAN VIADUCT (15-1)
- C-1-2b-16 DETAIL OF PHAP VAN VIADUCT (15-2)
- C-1-2b-17 DETAIL OF PHAP VAN VIADUCT (16)
- C-1-2b-18 DETAIL OF PHAP VAN VIADUCT (17)
- C-1-2b-19 DETAIL OF PHAP VAN VIADUCT (18)
- C-1-2b-20 DETAIL OF PHAP VAN VIADUCT (19)
- C-1-2b-21 DETAIL OF PHAP VAN VIADUCT (20)
- C-1-2b-22 DETAIL OF PHAP VAN VIADUCT (21)
- C-1-2b-23 DETAIL OF KIM NGUU RIVER BRIDGE (1)
- C-1-2b-24 DETAIL OF KIM NGUU RIVER BRIDGE (2)
- C-1-2b-25 GENERAL VIEW GIRDER
- C-1-2b-26 RE-BAR ARRANGEMENT OF GIRDER (1)
- C-1-2b-27 RE-BAR ARRANGEMENT OF GIRDER (2)

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY NAME SIGNATURE DATE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE DATE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.11.17
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	

DRAWING SCHEDULE (2)

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

- C-1-2b-28 RE-BAR ARRANGEMENT OF GIRDER (3)
- C-1-2b-29 RE-BAR BENDING SCHEDULE OF GIRDER (1)
- C-1-2b-30 RE-BAR BENDING SCHEDULE OF GIRDER (2)
- C-1-2b-31 RE-BAR BENDING SCHEDULE OF GIRDER (3)
- C-1-2b-32 PC CABLE ARRANGEMENT OF GIRDER (1)
- C-1-2b-33 PC CABLE ARRANGEMENT OF GIRDER (2)
- C-1-2b-34 PC CABLE ARRANGEMENT OF GIRDER (3)
- C-1-2b-35 RE-BAR ARRANGEMENT OF DIAPHRAGM (1-1)
- C-1-2b-36 RE-BAR ARRANGEMENT OF DIAPHRAGM (1-2)
- C-1-2b-37 RE-BAR ARRANGEMENT OF DIAPHRAGM (2)
- C-1-2b-38 RE-BAR ARRANGEMENT OF DIAPHRAGM (3)
- C-1-2b-39 RE-BAR ARRANGEMENT OF DIAPHRAGM (4-1)
- C-1-2b-40 RE-BAR ARRANGEMENT OF DIAPHRAGM (4-2)
- C-1-2b-41 RE-BAR ARRANGEMENT OF DIAPHRAGM (5)
- C-1-2b-42 RE-BAR ARRANGEMENT OF DIAPHRAGM (6)
- C-1-2b-43 RE-BAR ARRANGEMENT OF DIAPHRAGM (7)
- C-1-2b-44 RE-BAR ARRANGEMENT OF DIAPHRAGM (8)
- C-1-2b-45 RE-BAR ARRANGEMENT OF DIAPHRAGM (9)
- C-1-2b-46 RE-BAR ARRANGEMENT OF DECK SLAB (1-1)
- C-1-2b-47 RE-BAR ARRANGEMENT OF DECK SLAB (1-2)
- C-1-2b-48 RE-BAR ARRANGEMENT OF DECK SLAB (1-3)
- C-1-2b-49 RE-BAR ARRANGEMENT OF DECK SLAB (1-4)
- C-1-2b-50 RE-BAR ARRANGEMENT OF DECK SLAB (1-5)
- C-1-2b-51 RE-BAR ARRANGEMENT OF DECK SLAB (1-6)
- C-1-2b-52 RE-BAR ARRANGEMENT OF DECK SLAB (1-7)
- C-1-2b-53 RE-BAR ARRANGEMENT OF DECK SLAB (2-1)
- C-1-2b-54 RE-BAR ARRANGEMENT OF DECK SLAB (2-2)
- C-1-2b-55 RE-BAR ARRANGEMENT OF DECK SLAB (2-3)
- C-1-2b-56 RE-BAR ARRANGEMENT OF DECK SLAB (2-4)
- C-1-2b-57 RE-BAR ARRANGEMENT OF DECK SLAB (2-5)
- C-1-2b-58 RE-BAR ARRANGEMENT OF DECK SLAB (2-6)
- C-1-2b-59 RE-BAR ARRANGEMENT OF DECK SLAB (2-7)
- C-1-2b-60 RE-BAR ARRANGEMENT OF DECK SLAB (2-8)
- C-1-2b-61 RE-BAR ARRANGEMENT OF DECK SLAB (2-8)
- C-1-2b-62 RE-BAR ARRANGEMENT OF DECK SLAB (2-10)
- C-1-2b-63 RE-BAR ARRANGEMENT OF DECK SLAB (2-11)
- C-1-2b-64 RE-BAR ARRANGEMENT OF DECK SLAB (2-12)
- C-1-2b-65 RE-BAR ARRANGEMENT OF DECK SLAB (2-13)
- C-1-2b-66 RE-BAR ARRANGEMENT OF DECK SLAB (2-14)
- C-1-2b-67 RE-BAR ARRANGEMENT OF DECK SLAB (2-15)
- C-1-2b-68 RE-BAR ARRANGEMENT OF DECK SLAB (2-16)
- C-1-2b-69 RE-BAR ARRANGEMENT OF DECK SLAB (2-17)

C-1-3 SUBSTRUCTURE

C-1-3a PHAP VAN VIADUCT

- C-1-3a-1 DETAIL OF ABUTMENT A1
- C-1-3a-2 BAR ARRANGEMENT OF ABUTMENTA1(1)
- C-1-3a-3 BAR ARRANGEMENT OF ABUTMENTA1(2)
- C-1-3a-4 BAR ARRANGEMENT OF ABUTMENTA1(3)
- C-1-3a-5 DETAIL OF PIER P1R,P12L-P14L,P12R-P18R(1)
- C-1-3a-6 DETAIL OF PIER P1R,P12L-P14L,P12R-P18R(2)
- C-1-3a-7 BAR ARRANGEMENT OF PIER P1R,P12L-P14L,P12R-P18R(1)
- C-1-3a-8 BAR ARRANGEMENT OF PIER P1R,P12L-P14L,P12R-P18R(2)
- C-1-3a-9 BAR ARRANGEMENT OF PIER P1R,P12L-P14L,P12R-P18R(3)
- C-1-3a-10 BAR ARRANGEMENT OF PIER P1R,P12L-P14L,P12R-P18R(4)
- C-1-3a-11 BAR ARRANGEMENT OF PIER P1R,P12L-P14L,P12R-P18R(5)
- C-1-3a-12 DETAIL OF PIER P1L
- C-1-3a-13 DETAIL OF PIER P2L,P3L
- C-1-3a-14 BAR ARRANGEMENT OF PIER P1L(1)
- C-1-3a-15 BAR ARRANGEMENT OF PIER P1L(2)
- C-1-3a-16 BAR ARRANGEMENT OF PIER P1L(3)
- C-1-3a-17 BAR ARRANGEMENT OF PIER P1L(4)
- C-1-3a-18 DETAIL OF PIER P2R,P17L,P18L(1)
- C-1-3a-19 DETAIL OF PIER P2R,P17L,P18L(2)
- C-1-3a-20 DETAIL OF PIER P3R

- C-1-3a-21 DETAIL OF PIER P4R
- C-1-3a-22 DETAIL OF PIER P5R,P6R,P7R(1)
- C-1-3a-23 DETAIL OF PIER P5R,P6R,P7R(2)
- C-1-3a-24 BAR ARRANGEMENT OF PIER P2R-P7R,P17R,P18L(1)
- C-1-3a-25 BAR ARRANGEMENT OF PIER P2R-P7R,P17R,P18L(2)
- C-1-3a-26 BAR ARRANGEMENT OF PIER P2R-P7R,P17R,P18L(3)
- C-1-3a-27 BAR ARRANGEMENT OF PIER P2R-P7R,P17R,P18L(4)
- C-1-3a-28 BAR ARRANGEMENT OF PIER P2R-P7R,P17R,P18L(5)
- C-1-3a-29 DETAIL OF PIER P4L
- C-1-3a-30 DETAIL OF PIER P5L
- C-1-3a-31 BAR ARRANGEMENT OF PIER P4L,P5L(1)
- C-1-3a-32 BAR ARRANGEMENT OF PIER P4L,P5L(2)
- C-1-3a-33 BAR ARRANGEMENT OF PIER P4L,P5L(3)
- C-1-3a-34 BAR ARRANGEMENT OF PIER P4L,P5L(4)
- C-1-3a-35 DETAIL OF PIER P6L
- C-1-3a-36 BAR ARRANGEMENT OF PIER P6L(1)
- C-1-3a-37 BAR ARRANGEMENT OF PIER P6L(2)
- C-1-3a-38 BAR ARRANGEMENT OF PIER P6L(3)
- C-1-3a-39 BAR ARRANGEMENT OF PIER P6L(4)
- C-1-3a-40 DETAIL OF PIER P7L
- C-1-3a-41 BAR ARRANGEMENT OF PIER P7L(1)
- C-1-3a-42 BAR ARRANGEMENT OF PIER P7L(2)
- C-1-3a-43 BAR ARRANGEMENT OF PIER P7L(3)
- C-1-3a-44 BAR ARRANGEMENT OF PIER P7L(4)
- C-1-3a-45 DETAIL OF PIER P8L
- C-1-3a-46 BAR ARRANGEMENT OF PIER P8L(1)
- C-1-3a-47 BAR ARRANGEMENT OF PIER P8L(2)
- C-1-3a-48 BAR ARRANGEMENT OF PIER P8L(3)
- C-1-3a-49 BAR ARRANGEMENT OF PIER P8L(4)
- C-1-3a-50 DETAIL OF PIER P8R
- C-1-3a-51 BAR ARRANGEMENT OF PIER P8R(1)
- C-1-3a-52 BAR ARRANGEMENT OF PIER P8R(2)
- C-1-3a-53 BAR ARRANGEMENT OF PIER P8R(3)
- C-1-3a-54 BAR ARRANGEMENT OF PIER P8R(4)
- C-1-3a-55 DETAIL OF PIER P9L
- C-1-3a-56 DETAIL OF PIER P9R
- C-1-3a-57 DETAIL OF PIER P10L
- C-1-3a-58 BAR ARRANGEMENT OF PIER P9L, P9R, P11L (1)
- C-1-3a-59 BAR ARRANGEMENT OF PIER P9L, P9R, P11L (2)
- C-1-3a-60 BAR ARRANGEMENT OF PIER P9L, P9R, P11L (3)
- C-1-3a-61 BAR ARRANGEMENT OF PIER P9L, P9R, P11L (4)
- C-1-3a-62 BAR ARRANGEMENT OF PIER P9L, P9R, P11L (5)
- C-1-3a-63 DETAIL OF PIER P10L
- C-1-3a-64 DETAIL OF PIER P11L
- C-1-3a-65 BAR ARRANGEMENT OF PIER P10L, P11L (1)
- C-1-3a-66 BAR ARRANGEMENT OF PIER P10L, P11L (2)
- C-1-3a-67 BAR ARRANGEMENT OF PIER P10L, P11L (3)
- C-1-3a-68 BAR ARRANGEMENT OF PIER P10L, P11L (4)
- C-1-3a-69 DETAIL OF PIER P10R
- C-1-3a-70 DETAIL OF PIER P11R
- C-1-3a-71 BAR ARRANGEMENT OF PIER P10R, P11R (1)
- C-1-3a-72 BAR ARRANGEMENT OF PIER P10R, P11R (2)
- C-1-3a-73 BAR ARRANGEMENT OF PIER P10R, P11R (3)
- C-1-3a-74 BAR ARRANGEMENT OF PIER P10R, P11R (4)
- C-1-3a-75 DETAIL OF PIER P15L
- C-1-3a-76 BAR ARRANGEMENT OF PIER P15L(1)
- C-1-3a-77 BAR ARRANGEMENT OF PIER P15L(2)
- C-1-3a-78 BAR ARRANGEMENT OF PIER P15L(3)
- C-1-3a-79 BAR ARRANGEMENT OF PIER P15L(4)
- C-1-3a-80 DETAIL OF D=150CM CAST-IN PLACE CONCRETE PILE
- C-1-3a-81 DETAIL OF D=100CM CAST-IN PLACE CONCRETE PILE(1)
- C-1-3a-82 DETAIL OF D=100CM CAST-IN PLACE CONCRETE PILE(2)
- C-1-3a-83 DETAIL OF D=100CM CAST-IN PLACE CONCRETE PILE(3)
- C-1-3a-84 DETAIL OF D=100CM CAST-IN PLACE CONCRETE PILE(4)
- C-1-3a-85 DETAIL OF D=100CM CAST-IN PLACE CONCRETE PILE(5)

C-1-3b KIM NGUU RIVER BRIDGE

- C-1-3b-1 DETAIL OF ABUTMENT A1C,A2C
- C-1-3b-2 BAR ARRANGEMENT OF ABUTMENTA1C,A2C(1)
- C-1-3b-3 BAR ARRANGEMENT OF ABUTMENTA1C,A2C(2)
- C-1-3b-4 BAR ARRANGEMENT OF ABUTMENTA1C,A2C(3)
- C-1-3b-5 DETAIL OF ABUTMENT A1FL,A2FL,A1FR,A2FR
- C-1-3b-6 BAR ARRANGEMENT OF ABUTMENTA1FL,A2FL (1)
- C-1-3b-7 BAR ARRANGEMENT OF ABUTMENTA1FL,A2FL (2)
- C-1-3b-8 BAR ARRANGEMENT OF ABUTMENTA1FL,A2FL (3)
- C-1-3b-9 BAR ARRANGEMENT OF ABUTMENTA1FR,A2FR(1)
- C-1-3b-10 BAR ARRANGEMENT OF ABUTMENTA1FR,A2FR(2)
- C-1-3b-11 BAR ARRANGEMENT OF ABUTMENTA1FR,A2FR(3)
- C-1-3b-12 DETAIL OF PIER P1,P2
- C-1-3b-13 BAR ARRANGEMENT OF PIER P1,P2(1)
- C-1-3b-14 BAR ARRANGEMENT OF PIER P1,P2(2)
- C-1-3b-15 BAR ARRANGEMENT OF PIER P1,P2(3)
- C-1-3b-16 BAR ARRANGEMENT OF PIER P1,P2(4)
- C-1-3b-17 DETAIL OF PIER P1F,P2F
- C-1-3b-18 BAR ARRANGEMENT OF PIER P1F,P2F(1)
- C-1-3b-19 BAR ARRANGEMENT OF PIER P1F,P2F(2)
- C-1-3b-20 BAR ARRANGEMENT OF PIER P1F,P2F(3)
- C-1-3b-21 BAR ARRANGEMENT OF PIER P1F,P2F(4)
- C-1-3b-22 DETAIL OF D=100CM CAST-IN PLACE CONCRETE PILE
- C-1-3b-23 DETAIL OF D=150CM CAST-IN PLACE CONCRETE PILE
- C-1-3b-24 BAR ARRANGEMENT OF D=100,150CM CAST-IN PLACE CONCRETE PILE

C-1-3c NGUYEN TAM TRINH BRIDGE

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

C-1-3d LINH NAM BRIDGE

- C-1-3d-1 DETAIL OF ABUTMENT A1,A2
- C-1-3d-2 BAR ARRANGEMENT OF ABUTMENT A1,A2(1)
- C-1-3d-3 BAR ARRANGEMENT OF ABUTMENT A1,A2(2)
- C-1-3d-4 BAR ARRANGEMENT OF ABUTMENT A1,A2(3)
- C-1-3d-5 DETAIL OF D=150CM CAST-IN PLACE CONCRETE PILE
- C-1-3d-6 GENERAL VIEW OF A-RAMP BRIDGE
- C-1-3d-7 GENERAL VIEW OF B-RAMP BRIDGE
- C-1-3d-8 GENERAL VIEW OF C-RAMP BRIDGE

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-2-1-3 GENERAL VIEW OF C-RAMP BRIDGE

C-2-2 SUPERSTRUCTURE

- C-2-2-1 DETAIL OF PHAP VAN VIADUCT A-RAMP BRIDGE1
- C-2-2-2 DETAIL OF PHAP VAN VIADUCT A-RAMP BRIDGE2
- C-2-2-3 DETAIL OF PHAP VAN VIADUCT B-RAMP BRIDGE1
- C-2-2-4 DETAIL OF PHAP VAN VIADUCT B-RAMP BRIDGE2
- C-2-2-5 DETAIL OF PHAP VAN VIADUCT C-RAMP BRIDGE1
- C-2-2-6 DETAIL OF PHAP VAN VIADUCT C-RAMP BRIDGE2
- C-2-2-7 RE-BAR ARRANGEMENT OF A-RAMP BRIDGE
- C-2-2-8 RE-BAR ARRANGEMENT OF B-RAMP BRIDGE
- C-2-2-9 RE-BAR ARRANGEMENT OF C-RAMP BRIDGE

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

DRAWING SCHEDULE (3)

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

C-2-3 SUBSTRUCTURE

- C-2-3-1 DETAIL OF ABUTMENT AAB1
- C-2-3-2 BAR ARRANGEMENT OF ABUTMENT AAB1(1)
- C-2-3-3 BAR ARRANGEMENT OF ABUTMENT AAB1(2)
- C-2-3-4 BAR ARRANGEMENT OF ABUTMENT AAB1(3)
- C-2-3-5 BAR ARRANGEMENT OF ABUTMENT AAB1(4)
- C-2-3-6 DETAIL OF D=1.5M CAST-IN PLACE CONCRETE PILE
- C-2-3-7 DETAIL OF PIER PA1-PA5
- C-2-3-8 BAR ARRANGEMENT OF PIER PA1-PA5(1)
- C-2-3-9 BAR ARRANGEMENT OF PIER PA1-PA5(2)
- C-2-3-10 BAR ARRANGEMENT OF PIER PA1-PA5(3)
- C-2-3-11 BAR ARRANGEMENT OF PIER PA1-PA5(4)
- C-2-3-12 BAR ARRANGEMENT OF PIER PA1-PA5(5)
- C-2-3-13 DETAIL OF D=100CM CAST-IN PLACE CONCRETE PILE
- C-2-3-14 DETAIL OF PIER PB1-PB6
- C-2-3-15 BAR ARRANGEMENT OF PIER PB1-PB6(1)
- C-2-3-16 BAR ARRANGEMENT OF PIER PB1-PB6(2)
- C-2-3-17 BAR ARRANGEMENT OF PIER PB1-PB6(3)
- C-2-3-18 BAR ARRANGEMENT OF PIER PB1-PB6(4)
- C-2-3-19 BAR ARRANGEMENT OF PIER PB1-PB6(5)
- C-2-3-20 DETAIL OF D=100CM CAST-IN PLACE CONCRETE PILE
- C-2-3-21 DETAIL OF ABUTMENT AC1
- C-2-3-22 BAR ARRANGEMENT OF ABUTMENT AC1(1)
- C-2-3-23 BAR ARRANGEMENT OF ABUTMENT AC1(2)
- C-2-3-24 BAR ARRANGEMENT OF ABUTMENT AC1(3)
- C-2-3-25 DETAIL OF PIER PC1-PC5
- C-2-3-26 DETAIL OF PIER PC6
- C-2-3-27 BAR ARRANGEMENT OF PIER PC1-PC6(1)
- C-2-3-28 BAR ARRANGEMENT OF PIER PC1-PC6(2)
- C-2-3-29 BAR ARRANGEMENT OF PIER PC1-PC6(3)
- C-2-3-30 BAR ARRANGEMENT OF PIER PC1-PC6(4)
- C-2-3-31 BAR ARRANGEMENT OF PIER PC1-PC6(5)
- C-2-3-32 DETAIL OF PIER PC7
- C-2-3-33 BAR ARRANGEMENT OF PIER PC7(1)
- C-2-3-34 BAR ARRANGEMENT OF PIER PC7(2)
- C-2-3-35 BAR ARRANGEMENT OF PIER PC7(3)
- C-2-3-36 BAR ARRANGEMENT OF PIER PC7(4)
- C-2-3-37 DETAIL OF D=1.50M CAST-IN PLACE CONCRETE PILE
- C-2-3-38 DETAIL OF D=1.00M CAST-IN PLACE CONCRETE PILE(1)
- C-2-3-39 DETAIL OF D=1.00M CAST-IN PLACE CONCRETE PILE(2)
- C-2-3-40 DETAIL OF D=1.00M CAST-IN PLACE CONCRETE PILE(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 NGUYEN TAM TRINH BRIDGE
- C-3-1-3 BRIDGE ACCESSORY OF LINH NAM BRIDGE
- C-3-1-4 BRIDGE ACCESSORY OF KIM NGUU RIVER BRIDGE
- C-3-1-5 BRIDGE ACCESSORY OF PHAP VAN VIADUCT
- C-3-1-6 BRIDGE ACCESSORY OF RAMP A
- C-3-1-7 BRIDGE ACCESSORY OF RAMP B
- C-3-1-8 BRIDGE ACCESSORY OF RAMP C
- C-3-1-9 SD-40 EXPANSION JOINT (A) (1)
- C-3-1-10 SD-40 EXPANSION JOINT (A) (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 NGUYEN TAM TRINH BRIDGE
- C-3-1-15 DRAINAGE ARRANGEMENT OF LINH NAM BRIDGE
- C-3-1-16 DRAINAGE ARRANGEMENT OF KIM NGUU RIVER BRIDGE
- C-3-1-17 DRAINAGE ARRANGEMENT OF PHAP VAN VIADUCT
- C-3-1-18 DRAINAGE ARRANGEMENT OF RAMP A

- C-3-1-19 DRAINAGE ARRANGEMENT OF RAMP B
- C-3-1-20 DRAINAGE ARRANGEMENT OF RAMP C
- C-3-1-21 DETAIL OF DRAINAGE ON BRIDGE (1)
- C-3-1-22 DETAIL OF DRAINAGE ON BRIDGE (2)

C-3-2 APPROACH SLAB, SLOPE PROTECTION

- C-3-2-1 DETAIL OF APPROACH SLAB(1)
- C-3-2-2 DETAIL OF APPROACH SLAB(2)
- C-3-2-3 DETAIL OF APPROACH SLAB(3)
- C-3-2-4 DETAIL OF APPROACH SLAB(4)
- C-3-2-5 DETAIL OF SLOPE PROTECTION(1)
- C-3-2-6 DETAIL OF SLOPE PROTECTION(2)
- C-3-2-7 DETAIL OF SLOPE PROTECTION(3)
- C-3-2-8 DETAIL OF SLOPE PROTECTION(4)

D. OTHER STRUCTURES

D-1 BOX CULVERT

- D-1-1 V - BOX CULVERT (STA. 1+190)
- D-1-2 P - BOX CULVERT (STA. 2+310)
- D-1-3 V - BOX CULVERT (STA. 3+439.300)
- D-1-4 V - BOX CULVERT (STA. 3+965.690)
- D-1-5 P - BOX CULVERT (STA. 4+503.455)
- D-1-6 V - BOX CULVERT (STA. 4+820)
- D-1-7 V - BOX CULVERT (STA. 5+120)
- D-1-8 V - BOX CULVERT (STA. 6+164.890)
- D-1-9 V - BOX CULVERT (FRONTAGE ROAD (L) STA. 0+555.852)
- D-1-10 V - BOX CULVERT (FRONTAGE ROAD (R) STA. 0+550.080)

D-2 RETAINING WALL

- D-2-1 DETAILS OF RETAINING WALL & STONE MASONRY

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 THROUGH WAY AND FRONTAGE ROAD (6)
- E-1-7 THROUGH WAY AND FRONTAGE ROAD (7)
- E-1-8 THROUGH WAY AND FRONTAGE ROAD (8)
- E-1-9 THROUGH WAY AND FRONTAGE ROAD (9)
- E-1-10 THROUGH WAY AND FRONTAGE ROAD (10)
- E-1-11 PHAP VAN CAU GIE INTERCHANGE (1/2)
- E-1-12 PHAP VAN CAU GIE INTERCHANGE (2/2)

E-2 BOX / PIPE CULVERT

- E-2-1 LIST OF BOX / PIPE CULVERT
- E-2-2 BOX CULVERT (LEFT SIDE FRONTAGE ROAD STA. 0+510)
- E-2-3 BOX CULVERT (RIGHT SIDE FRONTAGE ROAD STA. 0+517)
- E-2-4 BOX CULVERT (STA. 2+397.461)
- E-2-5 BOX CULVERT (STA. 4+890.300)
- E-2-6 PIPE CULVERT (LEFT SIDE FRONTAGE ROAD STA. 0+680, RIGHT SIDE FRONTAGE ROAD STA. 0+640, A B RAMP STA. 0+080)
- E-2-7 PIPE CULVERT (E F RAMP STA. 0+060, H RAMP STA. 0+360)
- E-2-8 PIPE CULVERT (STA. 3+089, STA. 3+656.3, STA. 3+973.5)
- E-2-9 PIPE CULVERT (STA. 4+553, STA. 5+262)

- E-2-10 HEAD WALL OF PIPE CULVERT F 1.25
- E-2-11 HEAD WALL OF PIPE CULVERT 2xF1.25
- E-2-12 HEAD WALL OF PIPE CULVERT F1.50
- E-2-13 HEAD WALL OF PIPE CULVERT 2xF1.50
- E-2-14 DETAIL OF PIPE CULVERT OUTLET / INLET (AT STA. 4+553)
- E-2-15 DETAIL OF PIPE FOUNDATION (F1.25)
- E-2-16 DETAIL OF PIPE FOUNDATION (2xF1.25)
- E-2-17 DETAIL OF PIPE FOUNDATION (F1.50)
- E-2-18 DETAIL OF PIPE FOUNDATION (2xF1.50)
- E-2-19 REINFORCEMENT DETAILS (FOR PIPE F1.25)
- E-2-20 REINFORCEMENT DETAILS (FOR PIPE F1.50)

E-3 RELOCATION OF EXISTING DRAINAGE CHANNEL

- E-3-1 PLAN, PROFILE
- E-3-2 CHANNEL DETAILS

E-4 DETAILS OF CHANNEL, PIPE, BASIN

- E-4-1 DRAINAGE CHANNEL DETAILS (1/2)
- E-4-2 DRAINAGE CHANNEL DETAILS (2/2)
- E-4-3 DETAIL OF DRAINAGE PIPE F 600
- E-4-4 DETAIL OF DRAINAGE PIPE F 750
- E-4-5 CATCH BASIN TYPE CB-R1 (1/2)
- E-4-6 CATCH BASIN TYPE CB-R1 (2/2)
- E-4-7 CATCH BASIN TYPE CB-R2 (1/2)
- E-4-8 CATCH BASIN TYPE CB-R2 (2/2)
- E-4-9 CATCH BASIN TYPE CB-R3
- E-4-10 CATCH BASIN TYPE CB-R4 (1/2)
- E-4-11 CATCH BASIN TYPE CB-R4 (2/2)
- E-4-12 CATCH BASIN TYPE CB-F (1/2)
- E-4-13 CATCH BASIN TYPE CB-F (2/2)
- E-4-14 CATCH BASIN TYPE CB-S1
- E-4-15 CATCH BASIN TYPE CB-S2
- E-4-16 CATCH BASIN TYPE CB-S3
- E-4-17 DRAINAGE FACILITIES SURROUNDING TOLL PLA ZA (1/3)
- E-4-18 DRAINAGE FACILITIES SURROUNDING TOLL PLA ZA (2/3)
- E-4-19 DRAINAGE FACILITIES SURROUNDING TOLL PLA ZA (3/3)

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATAGE
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	

DRAWING SCHEDULE (4)

PACKAGE 3	SCALE	DRAWING No. A-4	SHEET No.
DRAWING SCHEDULE (4)			

F. ROAD LIGHTING AND TRAFFIC SIGNAL

- F-1 ABBREVIATIONS AND GENERAL NOTES
- F-2 GENERAL PLAN - 1
- F-3 GENERAL PLAN - 2
- F-4 TRAFFIC SIGNAL DIAGRAM
- F-5 PROFILE OF ROAD LIGHTING - 1
- F-6 PROFILE OF ROAD LIGHTING - 2
- F-7 PROFILE OF ROAD LIGHTING - 3
- F-8 PROFILE OF ROAD LIGHTING - 4
- F-9 PROFILE OF ROAD LIGHTING - 5
- F-10 PROFILE OF ROAD LIGHTING - 6
- F-11 PROFILE OF ROAD LIGHTING - 7
- F-12 PROFILE OF ROAD LIGHTING - 8
- F-13 PROFILE OF ROAD LIGHTING - 9
- F-14 PROFILE OF ROAD LIGHTING - 10
- F-15 PROFILE OF ROAD LIGHTING - 11
- F-16 PROFILE OF ROAD LIGHTING - 12
- F-17 SUBSTATION TYPE IA
- F-18 SUBSTATION TYPE IIA
- F-19 DIAGRAM OF MDP
- F-20 PANEL DETAIL
- F-21 LIGHTING DETAIL - 1
- F-22 LIGHTING DETAIL - 2
- F-23 TRAFFIC SIGNAL
- F-24 NAVIGATION SYSTEM DIAGRAM
- F-25 INSTALLATION DETAIL - 1
- F-26 INSTALLATION DETAIL 2A
- F-27 INSTALLATION DETAIL 3
- F-28 INSTALLATION DETAIL 4
- F-29 FOUNDATION DETAIL 1A

G. TOLL PLAZA AND TOLL FACILITIES

- G-1 GENERAL NOTES
- G-2 SITE LOCATION - 2
- G-3 TOLL PLAZA - 2
- G-4 TOLL PLAZA PROFILE - 2
- G-5 TOLL ISLAND - 2
- G-6 TOLL GATE SECTION - 2
- G-7 CANOPY DETAIL - 2
- G-8 TOLL ISLAND DETAIL - 3
- G-9 TOLL ISLAND DETAIL - 4
- G-10 MANHOLE LAYOUT - 2
- G-11 MANHOLE SECTION - 2
- G-12 TOLL PLAZA FUTURE PLAN - 5
- G-13 TOLL PLAZA FUTURE PLAN - 8
- G-14 TOLL PLAZA FUTURE PLAN - 7
- G-15 TOLL PLAZA FUTURE PLAN - 8
- G-16 TOLL BUILDING PLAN - 2
- G-17 FIRST FLOOR PLAN - 2
- G-18 SECOND FLOOR PLAN - 2
- G-19 TOLL BUILDING PROFILE - 5
- G-20 TOLL BUILDING PROFILE - 6
- G-21 TOLL BUILDING PROFILE - 7
- G-22 TOLL BUILDING PROFILE - 8
- G-23 DIMENSION SCHEDULE
- G-24 FINISHED SCHEDULE
- G-25 SECTION DETAIL - 4
- G-26 SECTION DETAIL - 5
- G-27 SECTION DETAIL - 6
- G-28 GENERAL NOTES - 2
- G-29 DIAGRAM OF WATER SUPPLY SYSTEM - 1B
- G-30 GENERAL NOTES - 1B
- G-31 ABBREVIATIONS
- G-32 POWER DISTRIBUTION DIAGRAM - 2

- G-33 POWER DISTRIBUTION DIAGRAM - 2B
- G-34 ABBREVIATION AND GENERAL NOTES - 1B
- G-35 TOLL COLLECTION SYSTEM DIAGRAM - 1A
- G-36 POWER DISTRIBUTION DIAGRAM - 1A
- G-37 TOLL EQUIPMENT - 4
- G-38 TOLL EQUIPMENT - 3A
- G-39 TOLL GATE SECTION PROFILE - 2
- G-40 LIGHTING LAYOUT - 2
- G-41 LIGHTNING PROTECTION SYSTEM - 4
- G-42 LIGHTNING PROTECTION SYSTEM - 5
- G-43 LIGHTNING PROTECTION SYSTEM - 6
- G-44 TOLL BOOTH EQUIPMENT LAYOUT - 3
- G-45 TOLL BOOTH EQUIPMENT LAYOUT - 4
- G-46 TOLL BOOTH DETAILS - 2
- G-47 LIGHT DETAILS - 2
- G-48 INSTALLATION DETAILS - 3
- G-49 INSTALLATION DETAILS - 4
- G-50 FOUNDATION PLAN - 1

H. EMPLOYERS AND ENGINEERS SITE OFFICE

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

I. MISCELLANEOUS WORKS

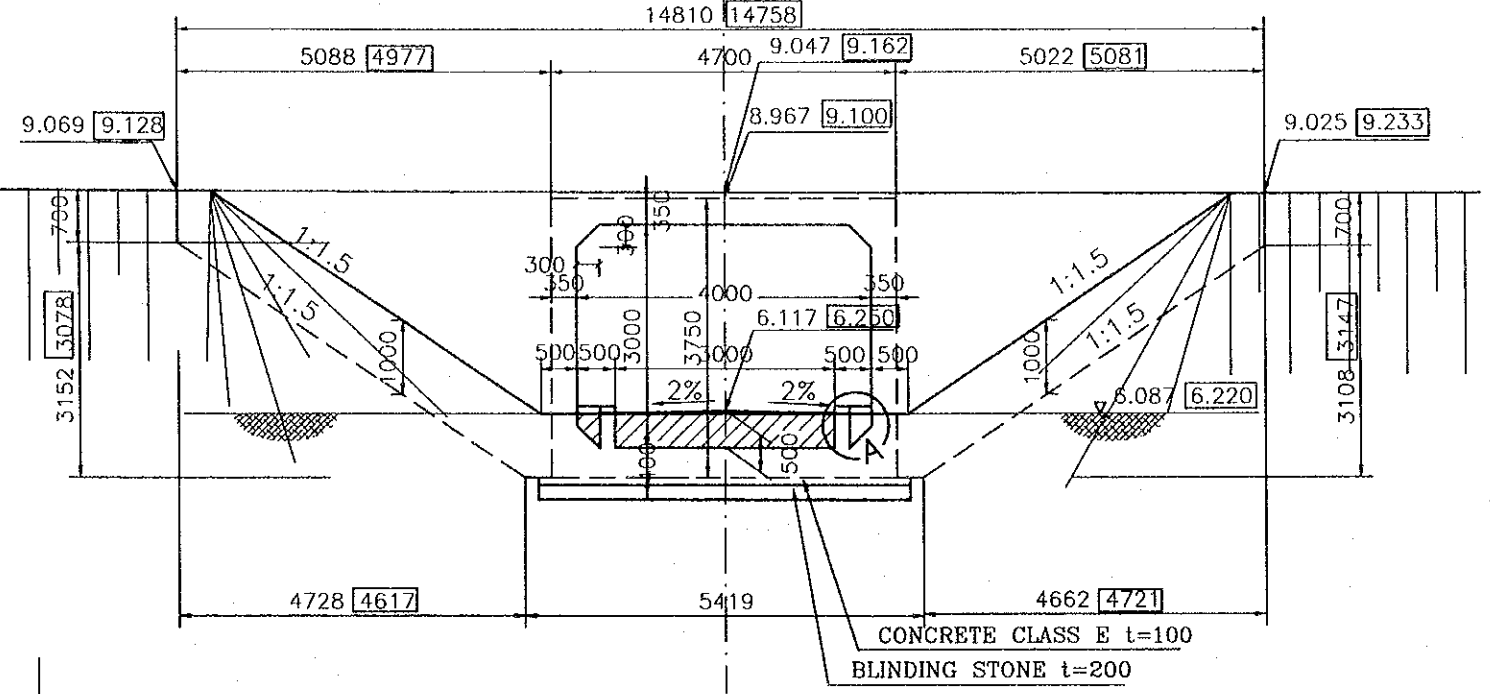
- I-1 SUPERELEVATION DIAGRAMS
- I-2 STEEL BEAM GUARDRAIL GR-A (1)
- I-3 STEEL BEAM GUARDRAIL GR-A (2)
- I-4 REMOVABLE GUARDRAIL GR-B
- I-5 TYPICAL ROAD MARKING
- I-6 KILOMETER POST
- I-7 TRAFFIC POST
- I-8 STANDARD OF TRAFFIC SIGNS (1)
- I-9 STANDARD OF TRAFFIC SIGNS (2)
- I-10 INSTALLATION OF TRAFFIC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

D. OTHER STRUCTURE

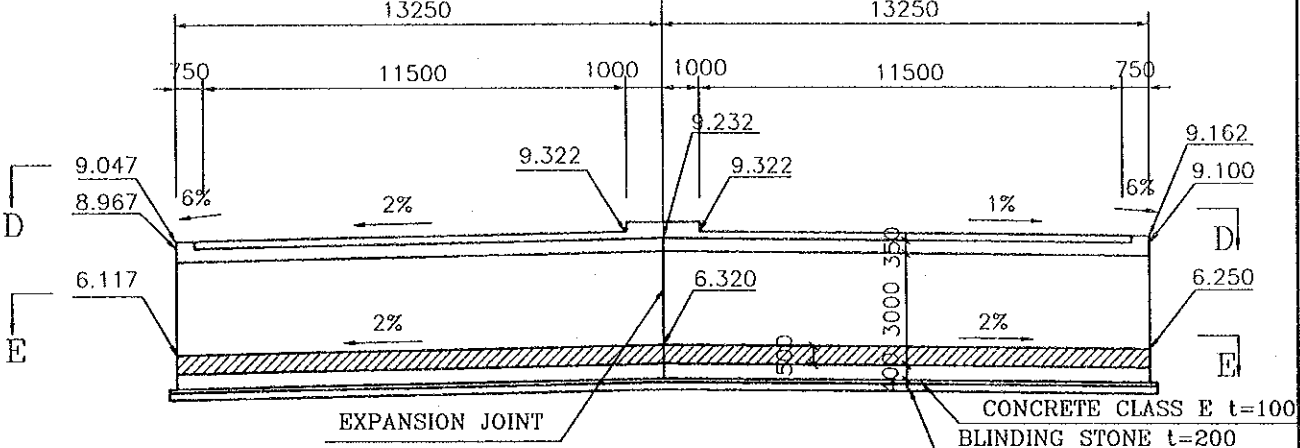
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE <i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2007. 8. 14

PACKAGE 3	SCALE AS SHOWN	DRAWING No. D-1-1	SHEET No.
V-BOX CULVERT (STA 1+900)			

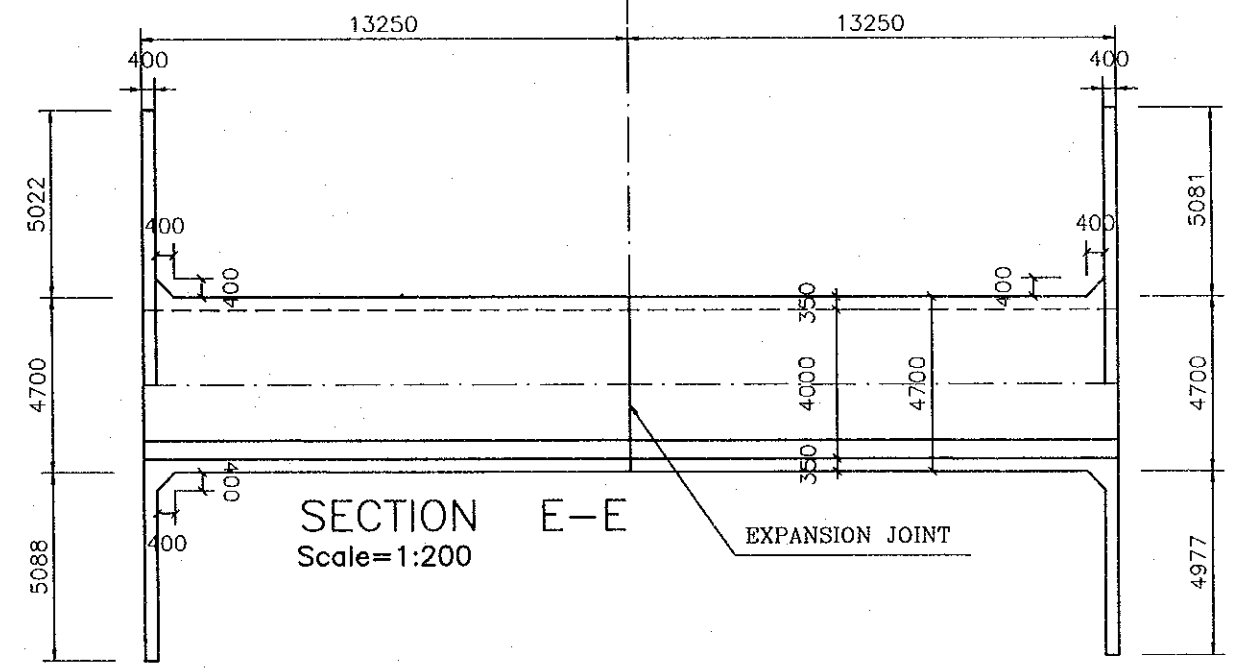
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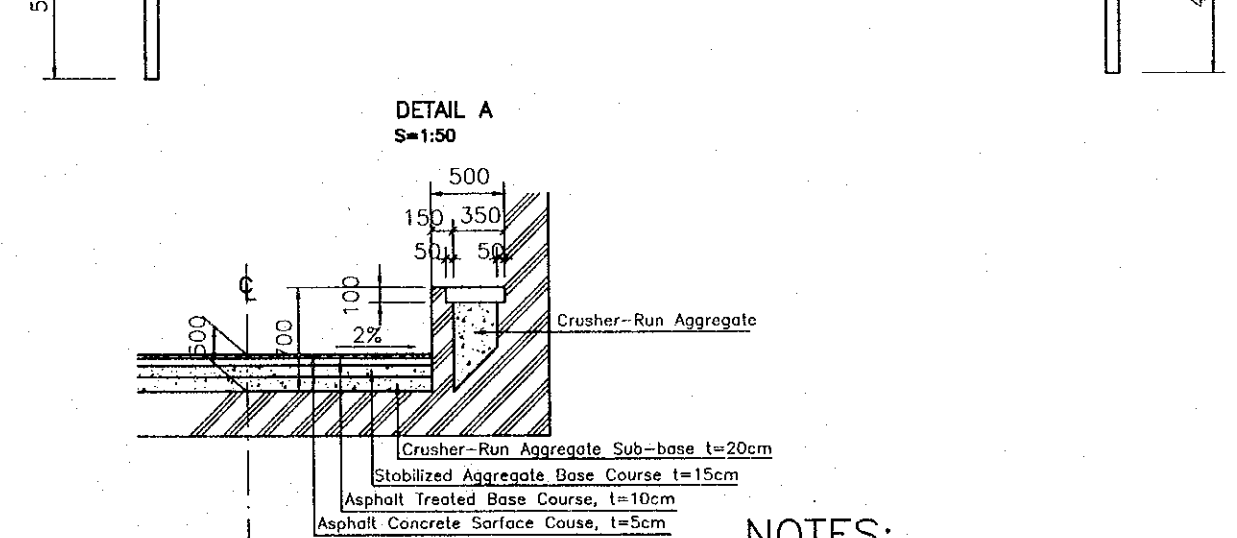
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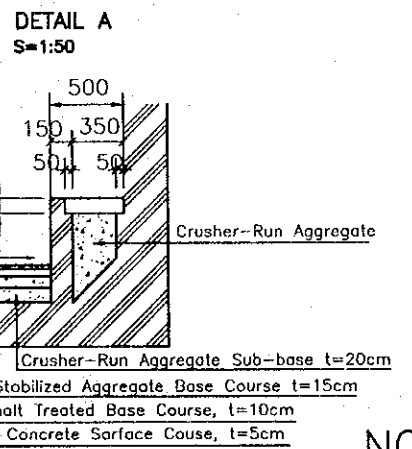
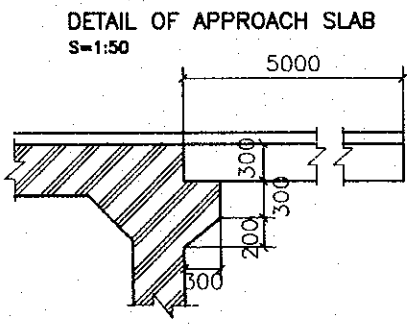
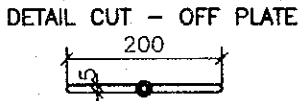
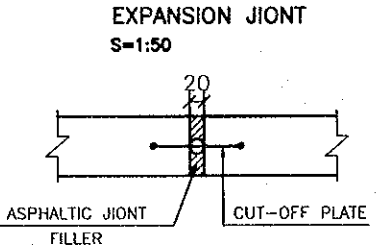
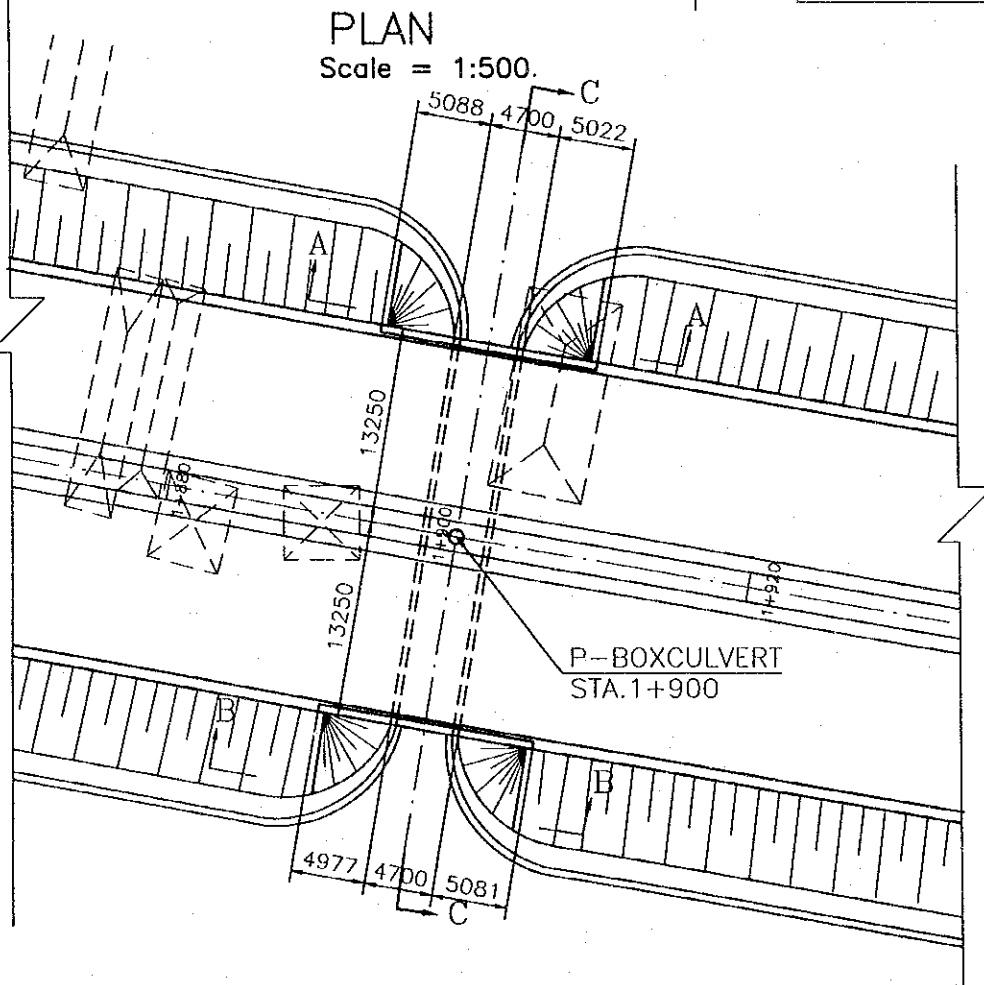
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SECTION E-E
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PLAN
Scale = 1:500



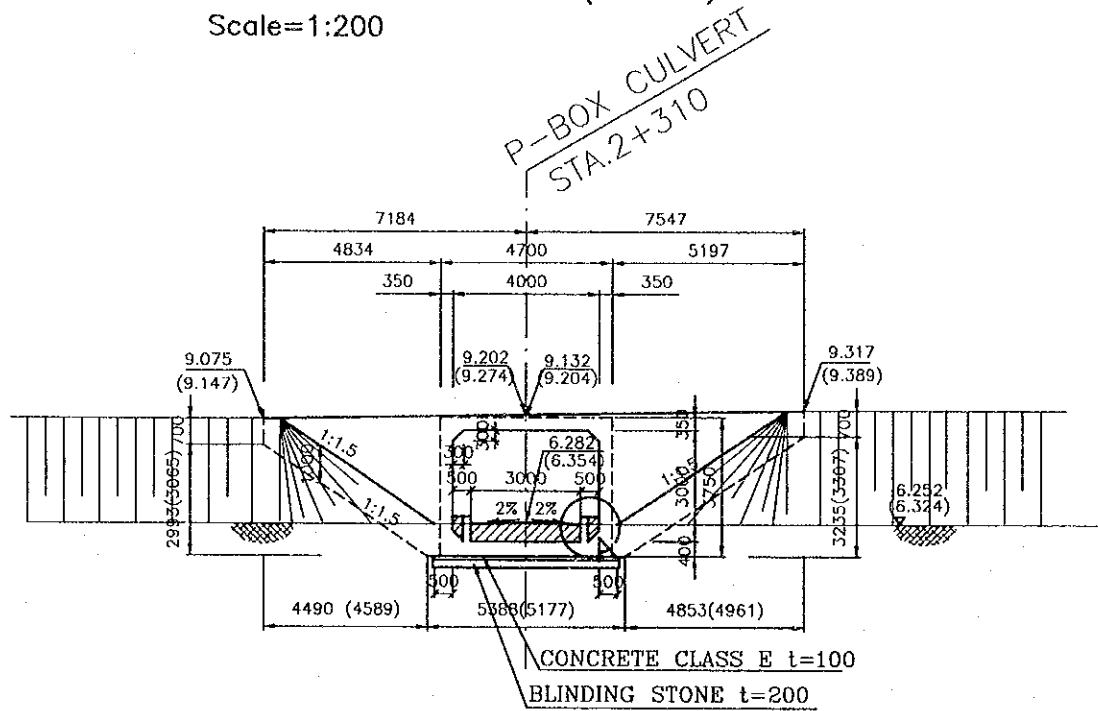
NOTES:
() Is Pependicular Section
□ Is Section B-B

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 <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.3.19
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	

PACKAGE 3	SCALE AS SHOWN	DRAWING No. D-1-2	SHEET No.
P - BOX CULVERT (STA 2+310)			

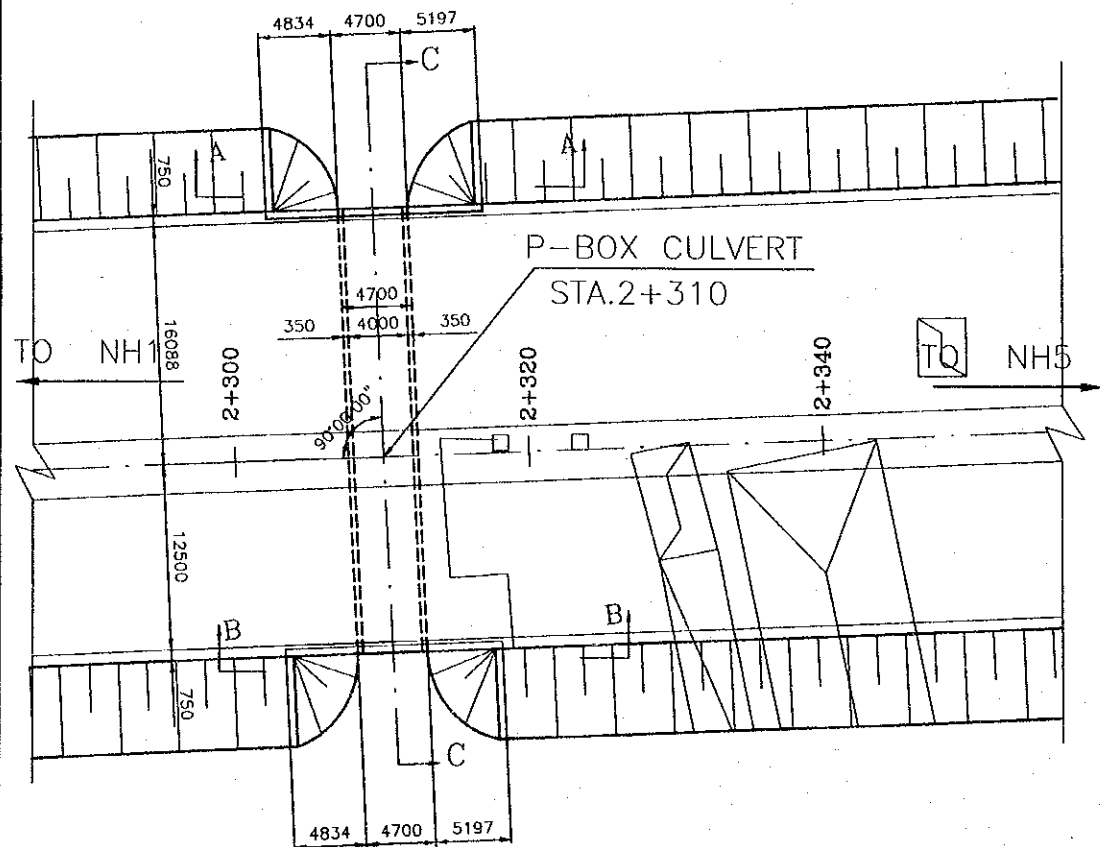
SECTION A-A (B-B)

Scale=1:200



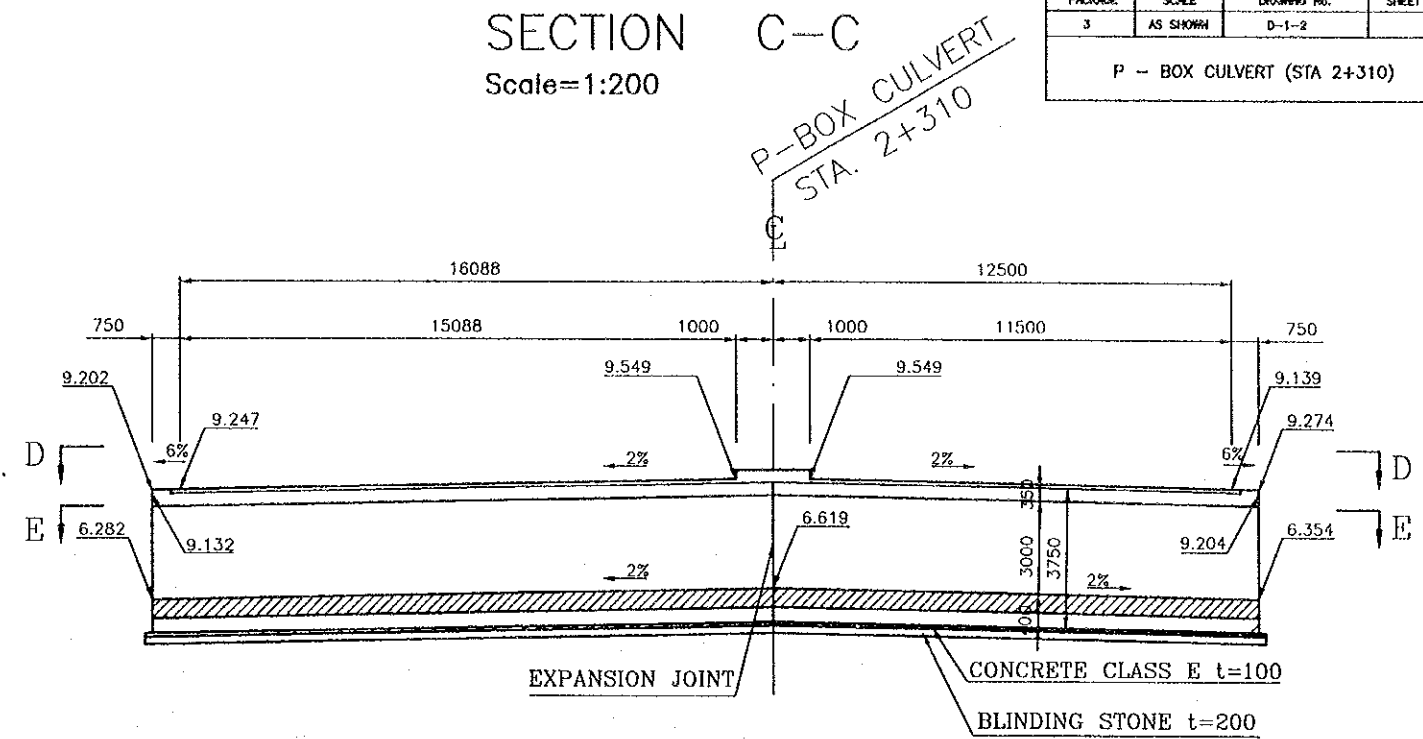
PLAN

Scale=1:500



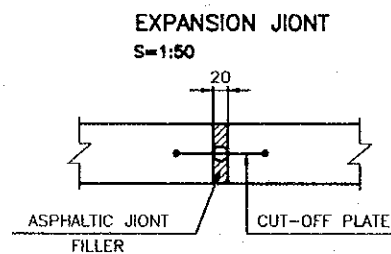
SECTION C-C

Scale=1:200

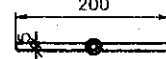


SECTION D-D

Scale=1:200

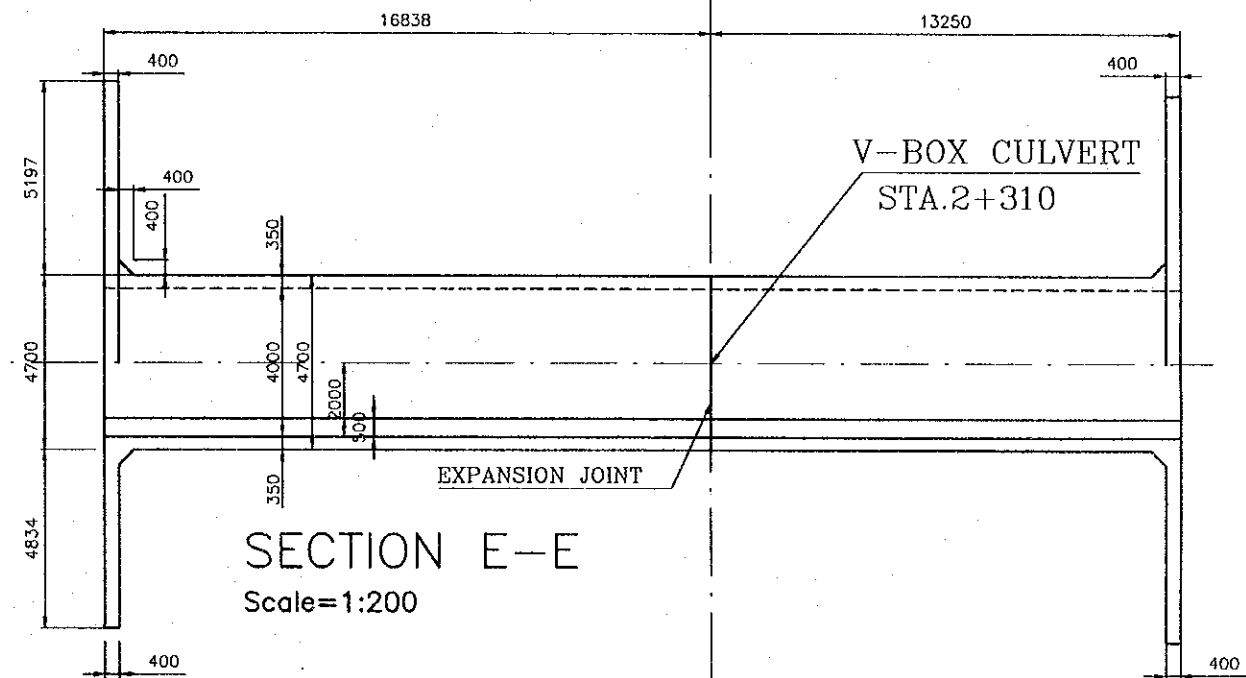
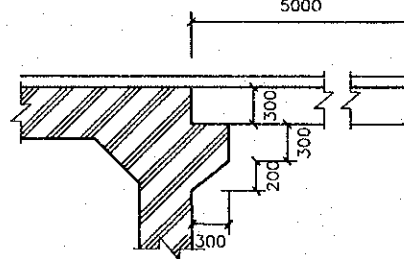


DETAIL CUT - OFF PLATE



DETAIL OF APPROACH SLAB

S=1:50

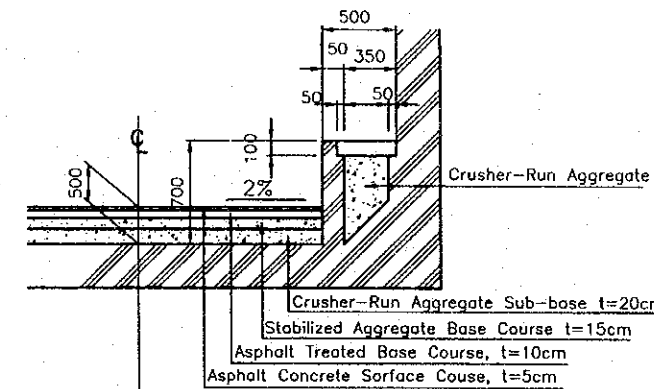


SECTION E-E

Scale=1:200

DETAIL A

S=1:50



NOTE :

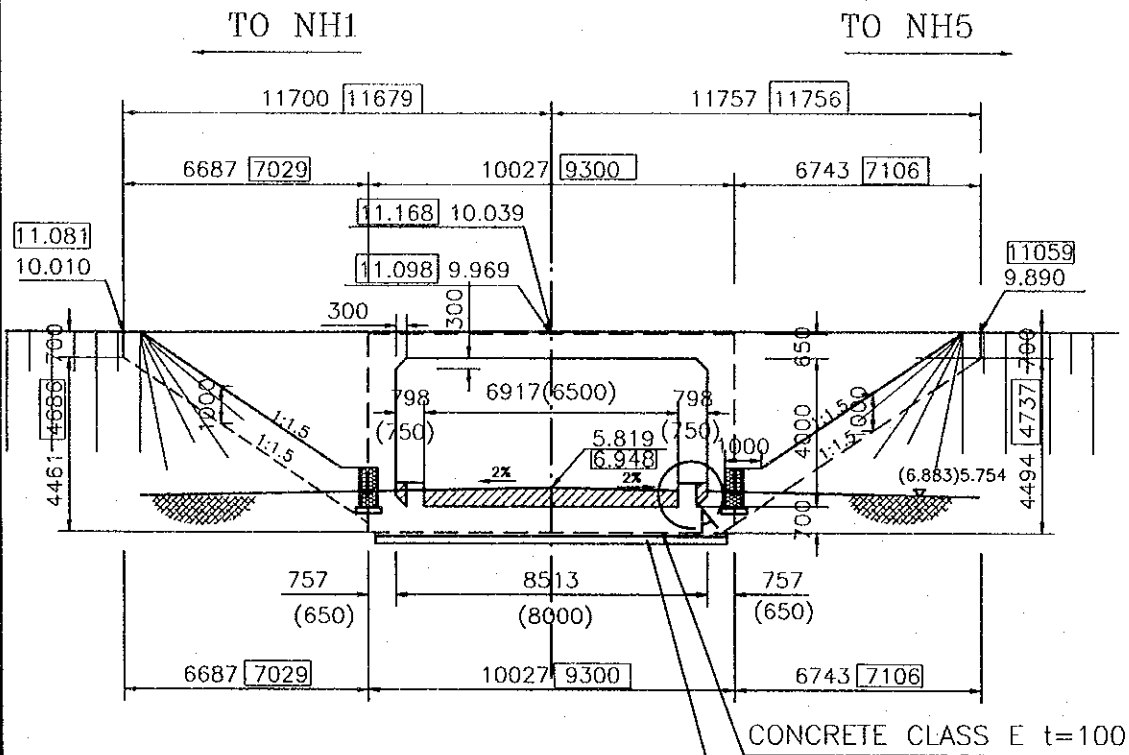
() Is Section B-B

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT	DESIGNED BY NAME S. NATARE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.8.19
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	

PACKAGE J	SCALE AS SHOWN	DRAWING No. D-1-3	SHEET No.
V-BOX CULVERT (STA 3+439.380)			

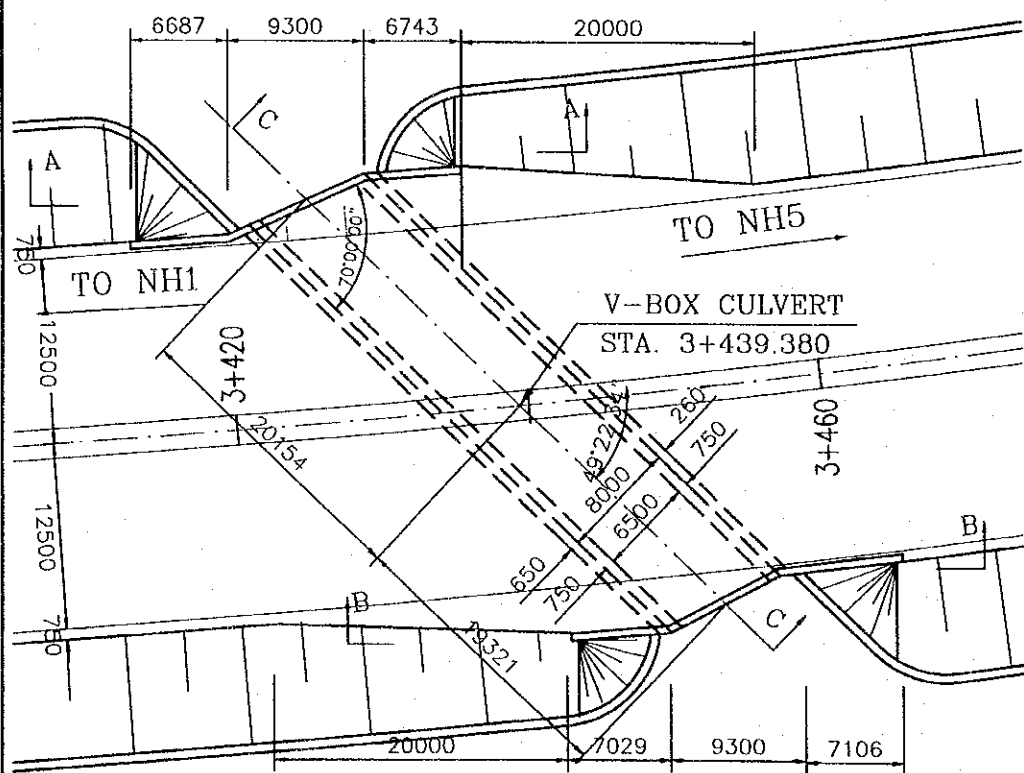
SECTION A-A B-B

Scale=1:200



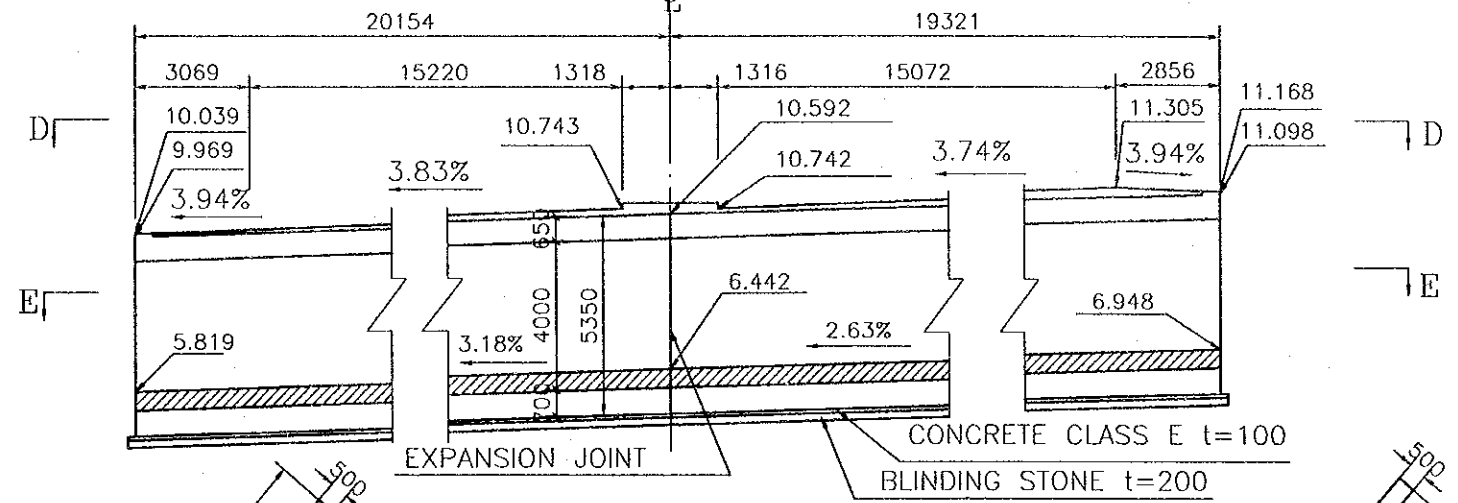
PLAN

Scale=1:500



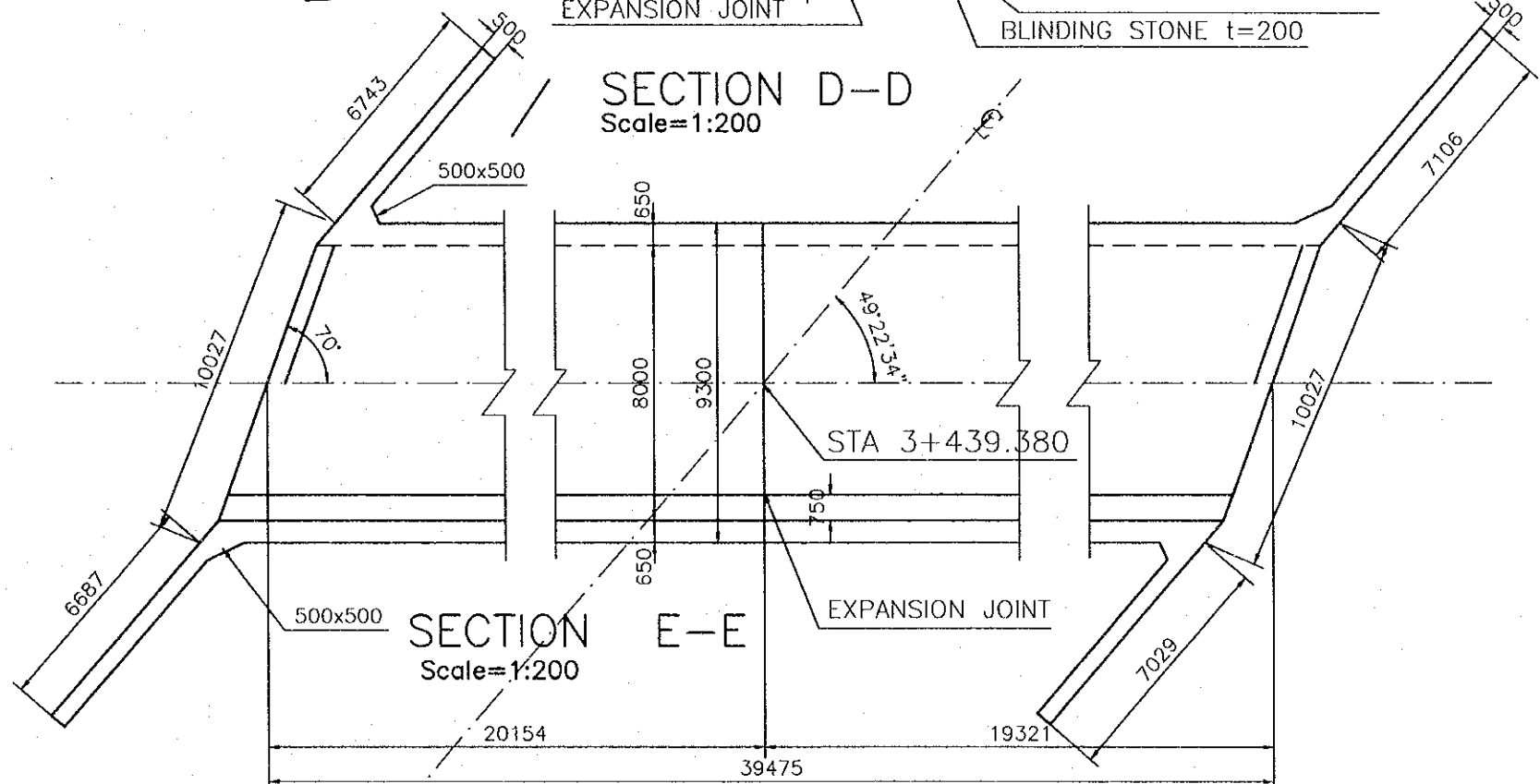
SECTION C-C

Scale=1:200



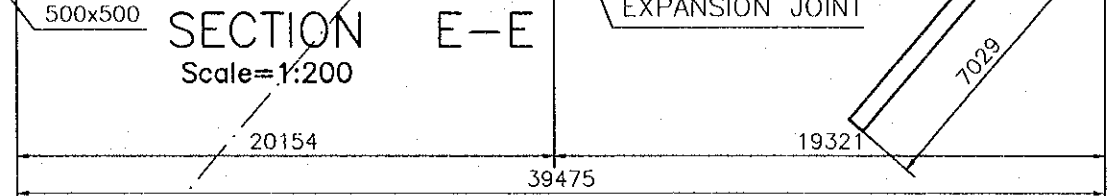
SECTION D-D

Scale=1:200



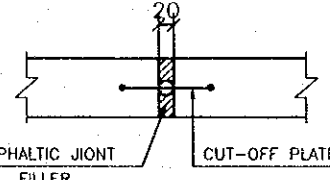
SECTION E-E

Scale=1:200

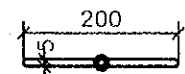


EXPANSION JOINT

S=1:50

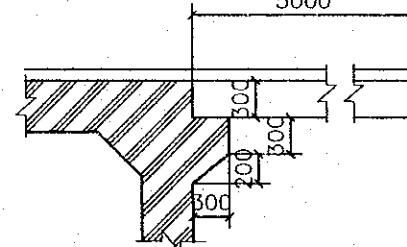


DETAIL CUT - OFF PLATE



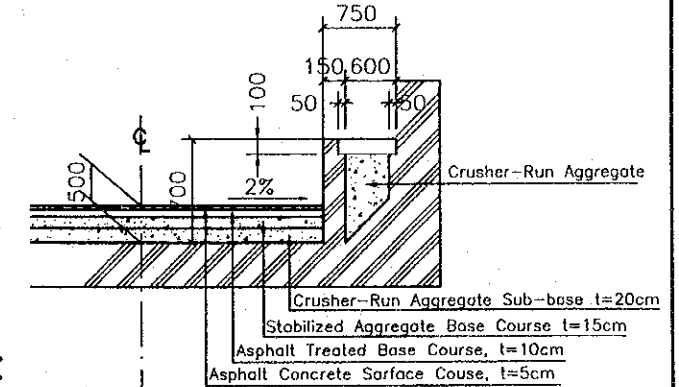
DETAIL OF APPROACH SLAB

S=1:50



DETAIL A

S=1:50



NOTES:

() : Is Perpendicular Section

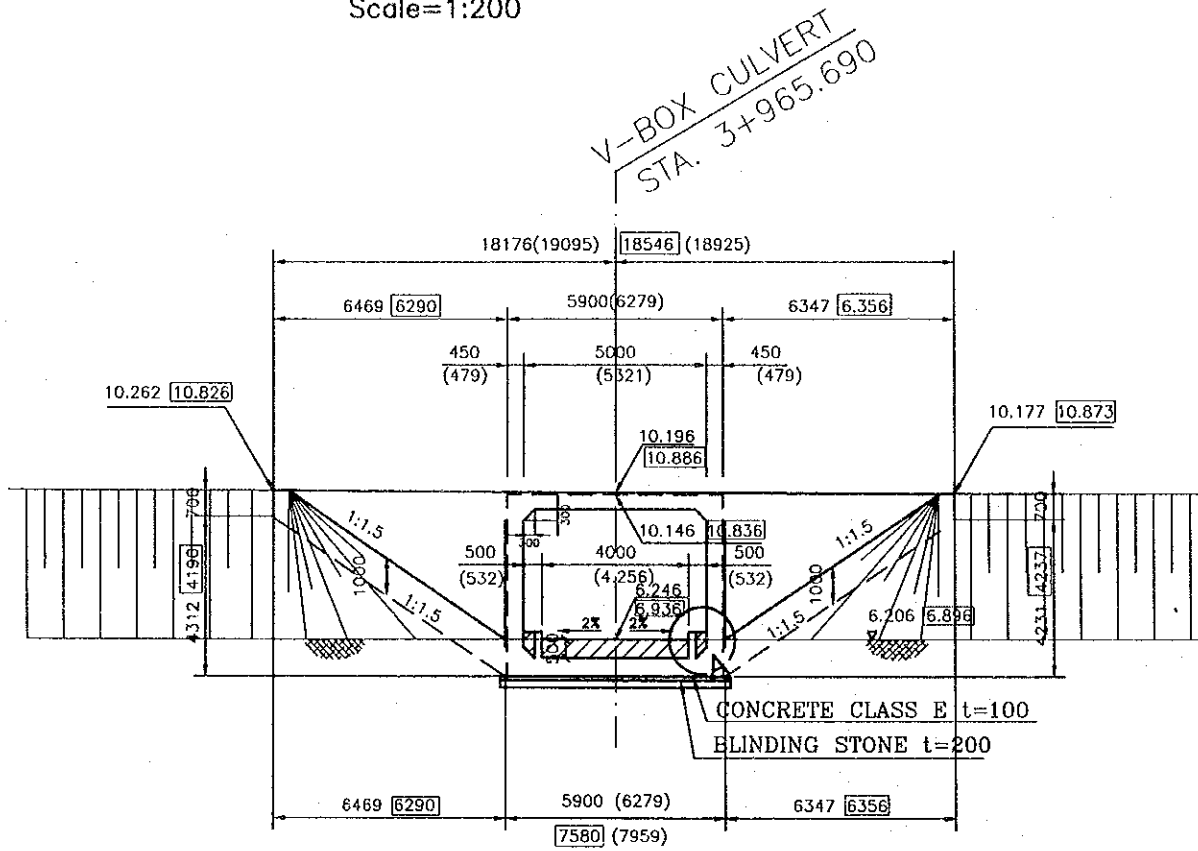
[] : Is Section B-B

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 2000.0.14
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 3	SCALE AS SHOWN	DRAWING No. D-1-4	SHEET No.
V-Box Culvert (STA 3+965.690)			

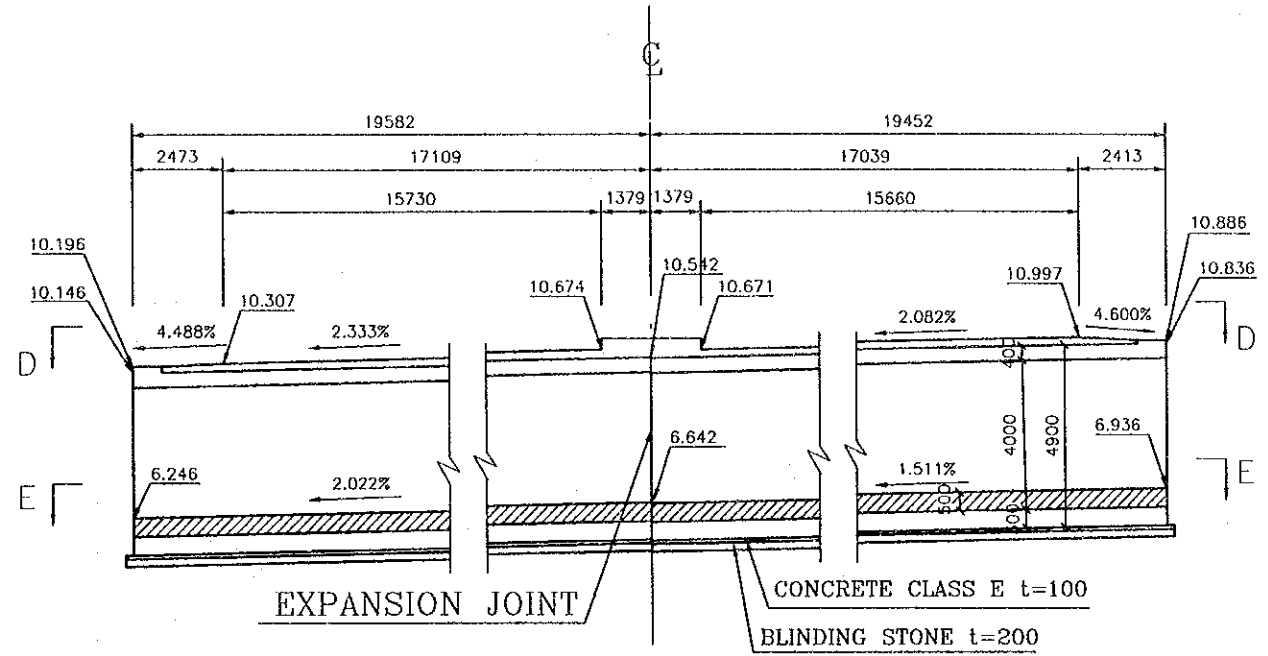
SECTION A-A B-B

Scale=1:200



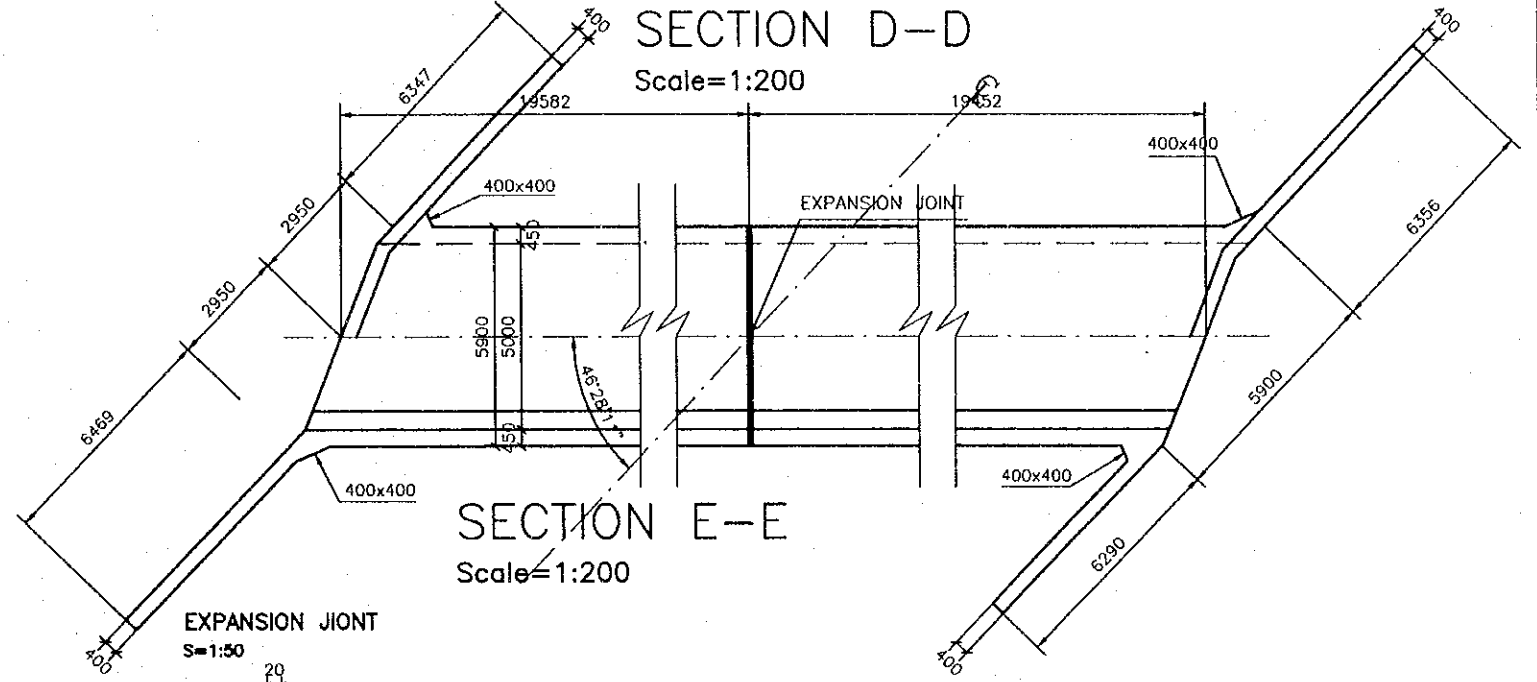
SECTION C-C

Scale=1:200



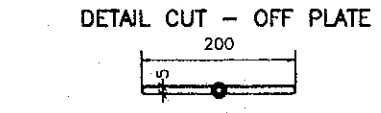
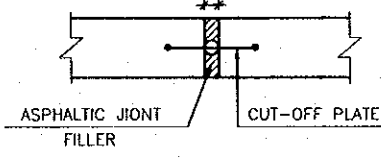
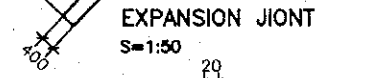
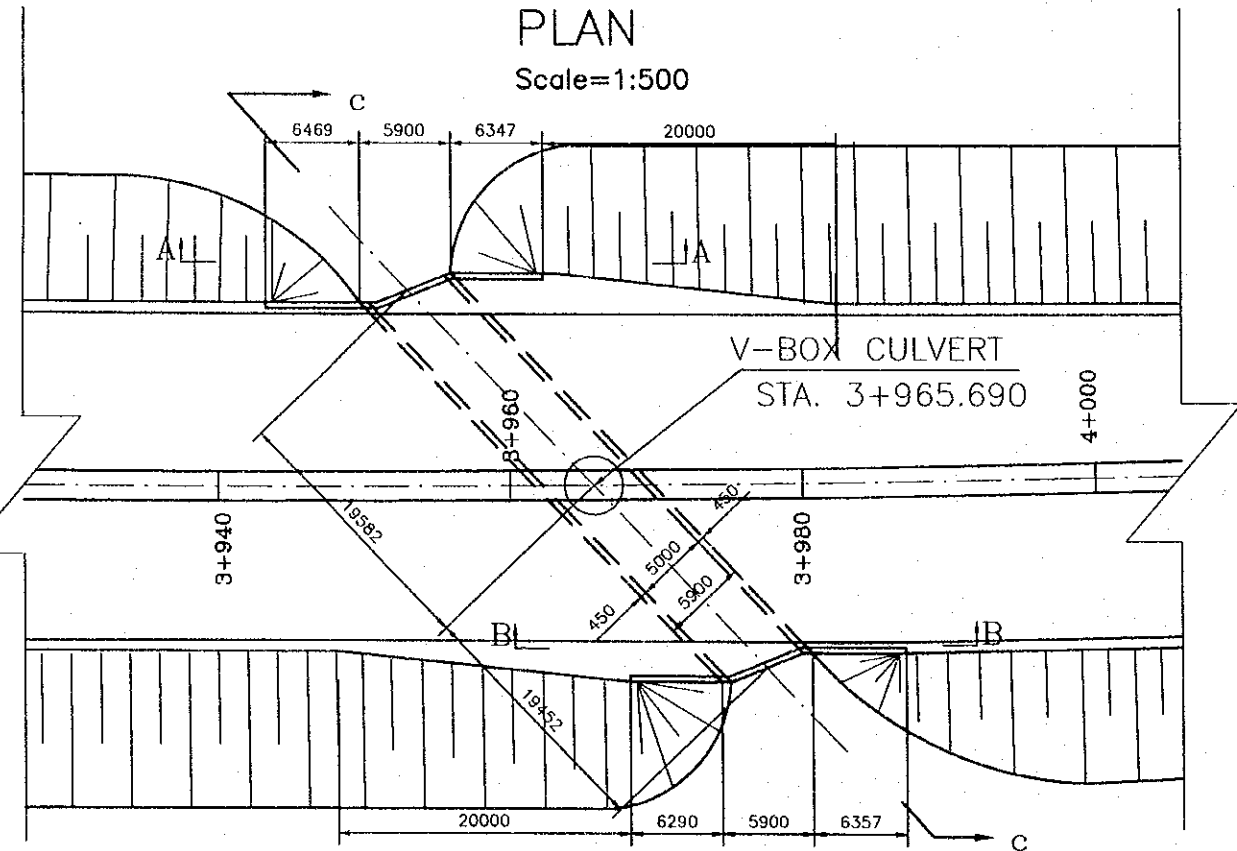
SECTION D-D

Scale=1:200



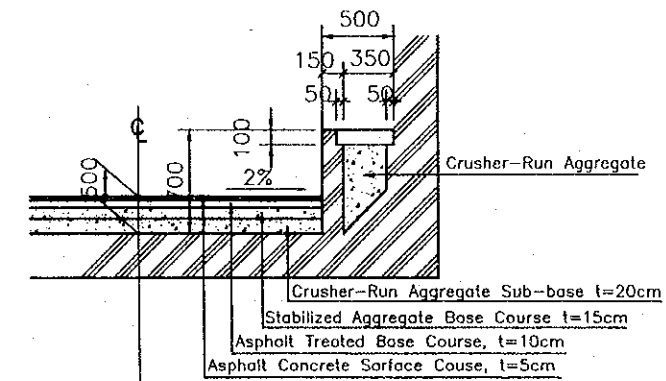
PLAN

Scale=1:500



DETAIL A

S=1:50

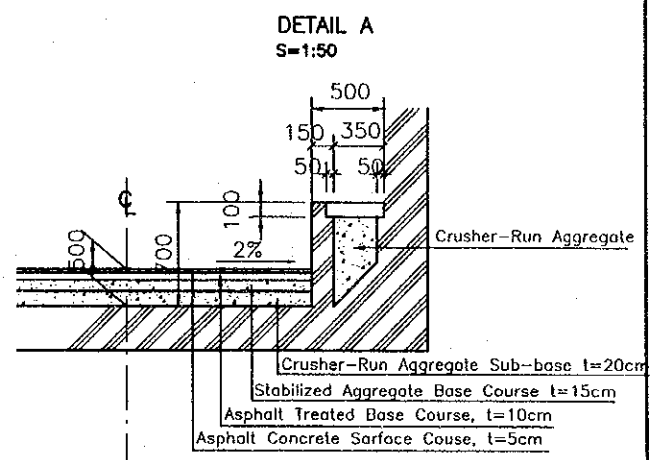
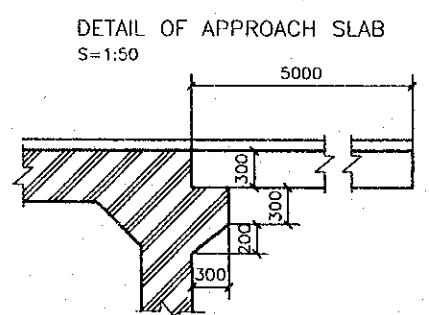
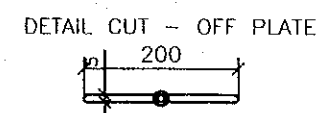
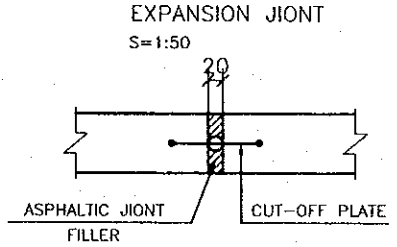
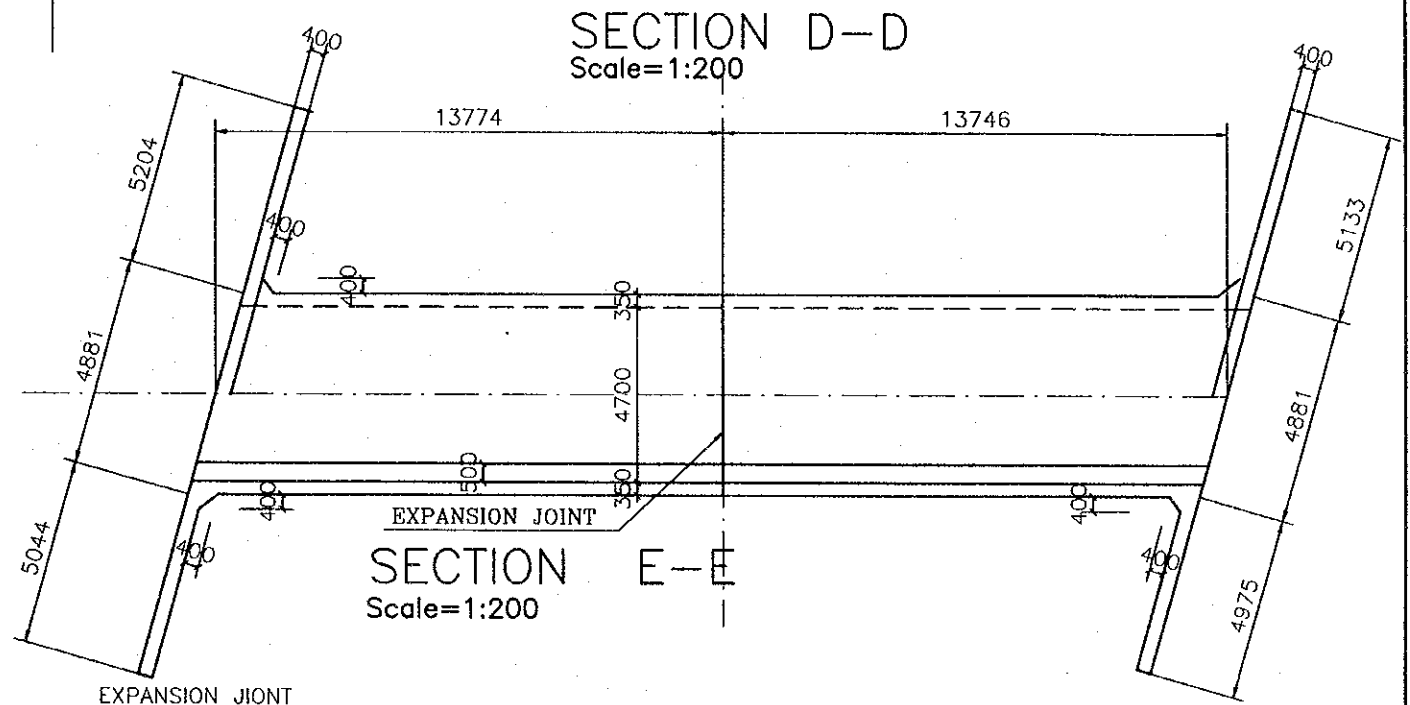
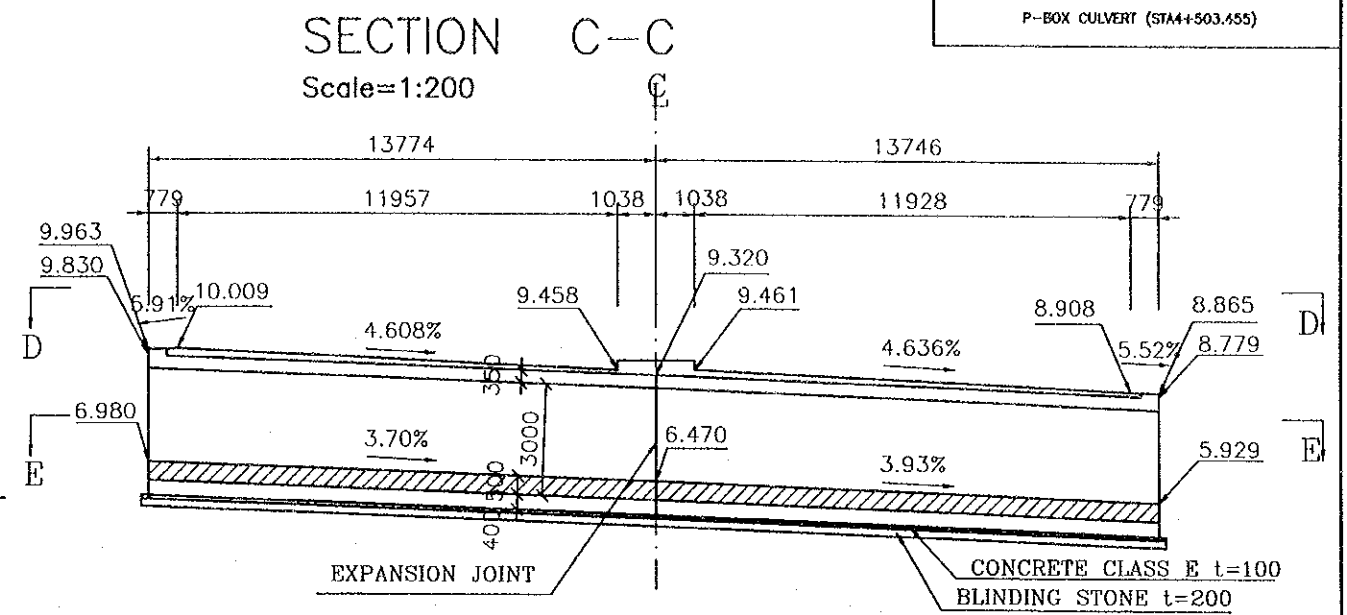
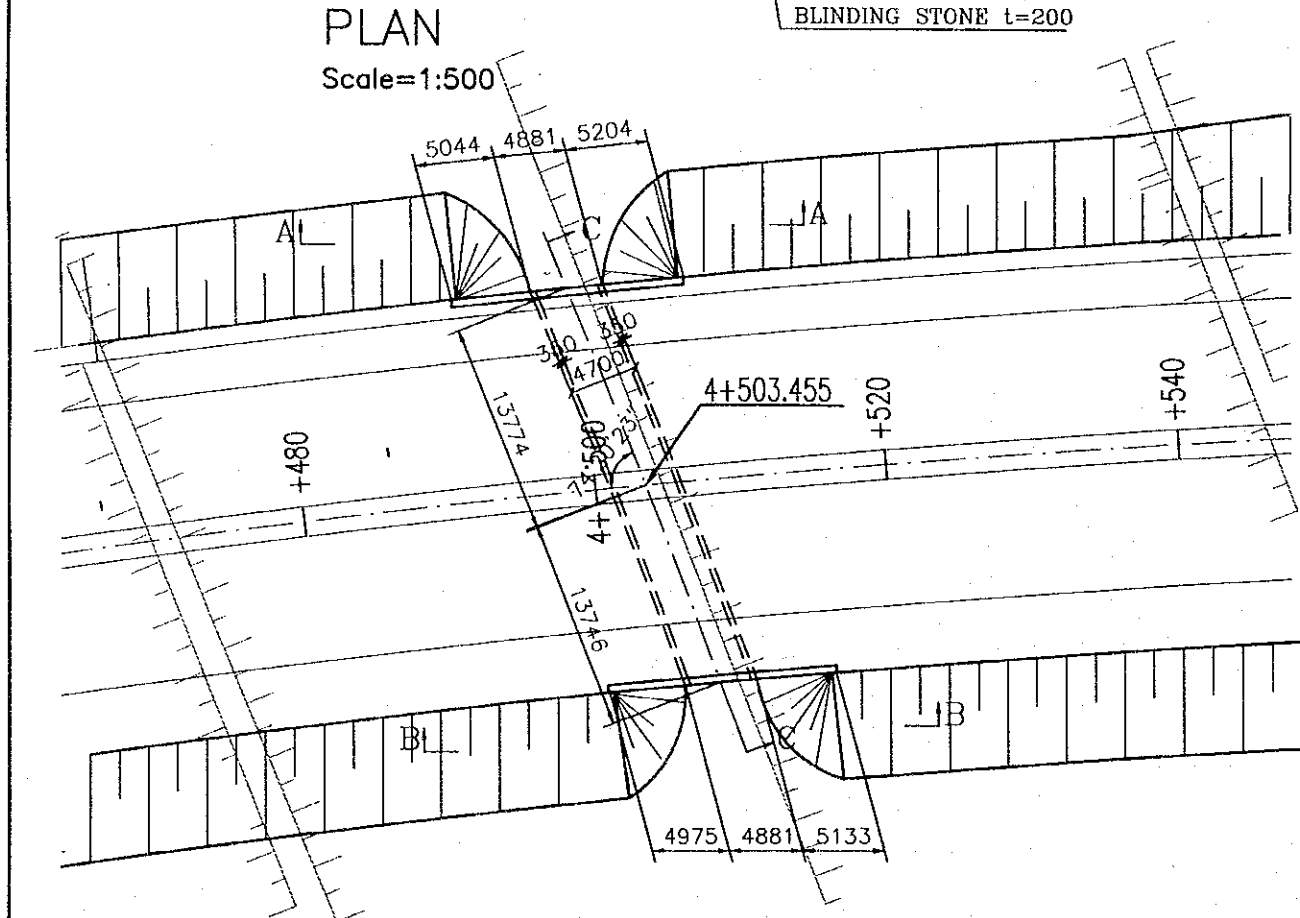
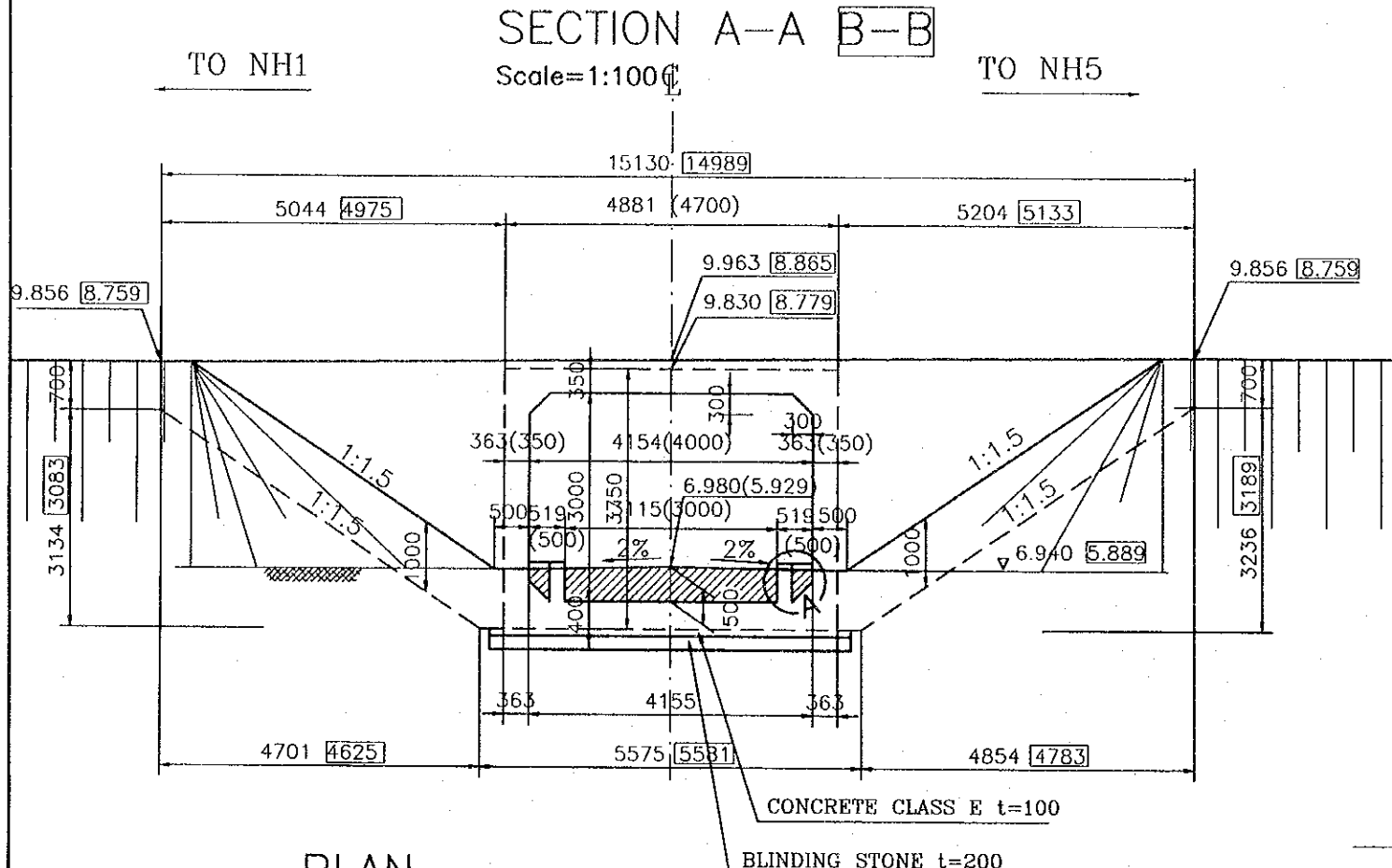


NOTES:

- () Is Pependicular Section
- Is Section B-B

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG 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	2000.8.19

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	AS SHOWN	0-1-3	
P-BOX CULVERT (STA4+503.455)			



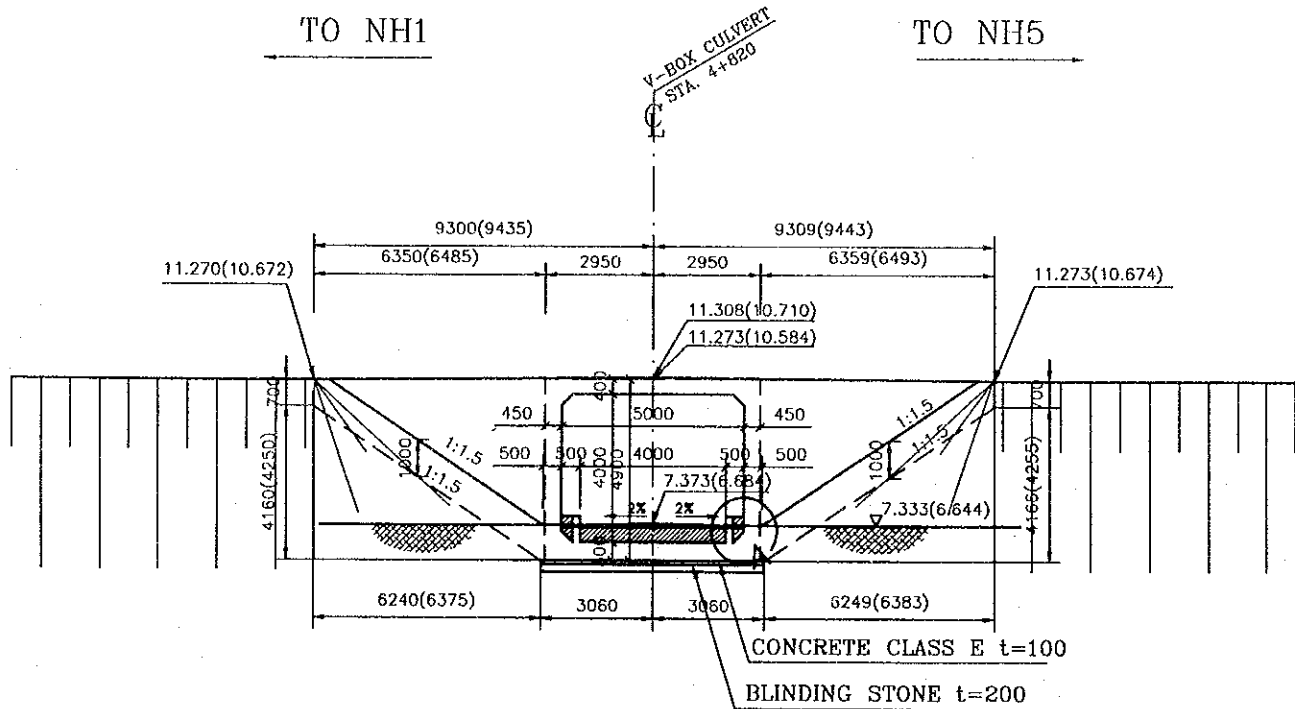
NOTES:
 () Is Perpendicular Section
 □ Is Section B-B

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>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.19

PACKAGE 3	SCALE AS SHOWN	DRAWING No. D-1-6	SHEET No.
V-BOX CULVERT (STA 4+820)			

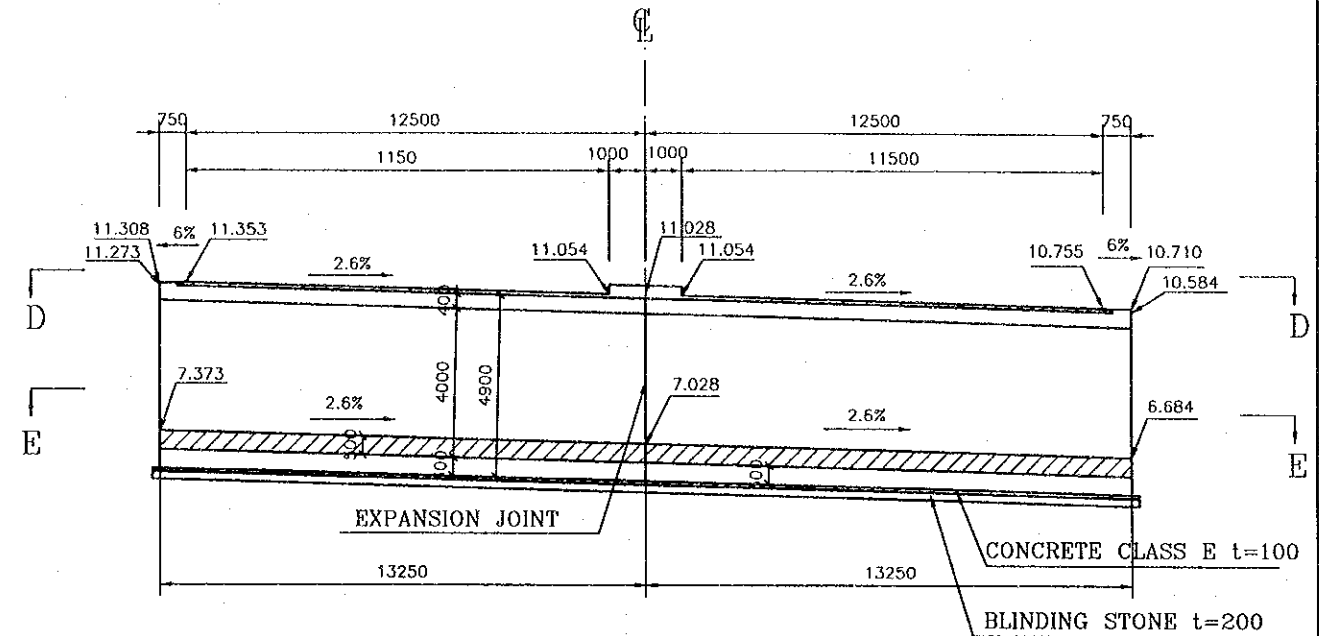
SECTION A-A(B-B)

Scale=1:200



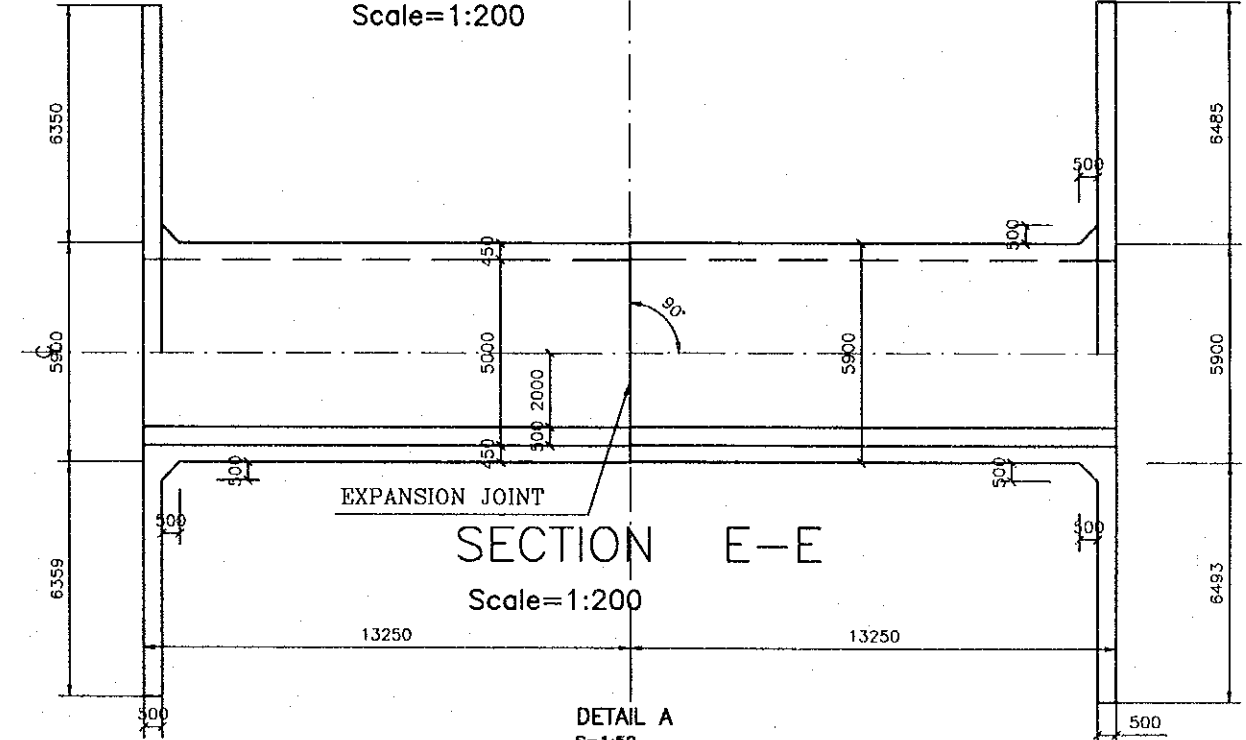
SECTION C-C

Scale=1:200



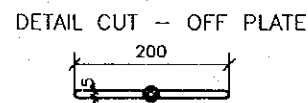
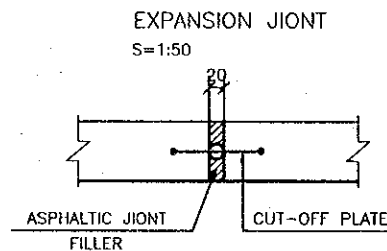
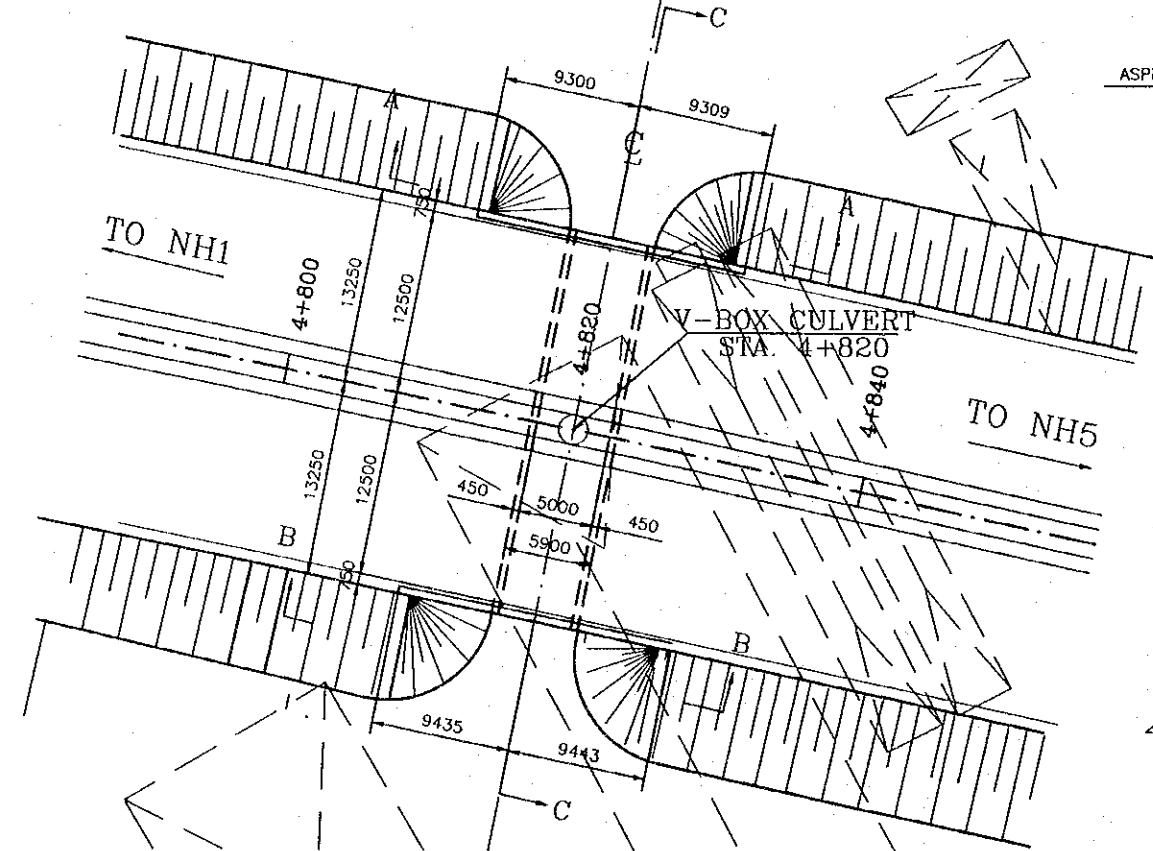
SECTION D-D

Scale=1:200

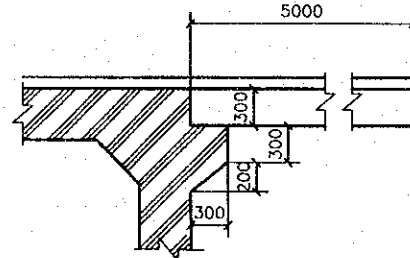


PLAN

Scale=1:500

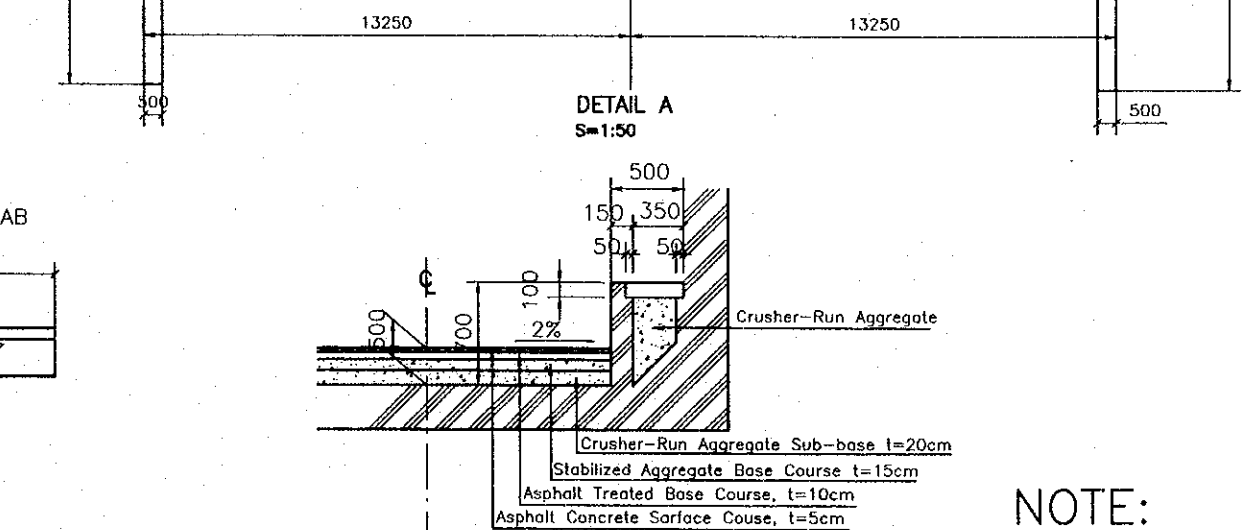


DETAIL OF APPROACH SLAB
S=1:50

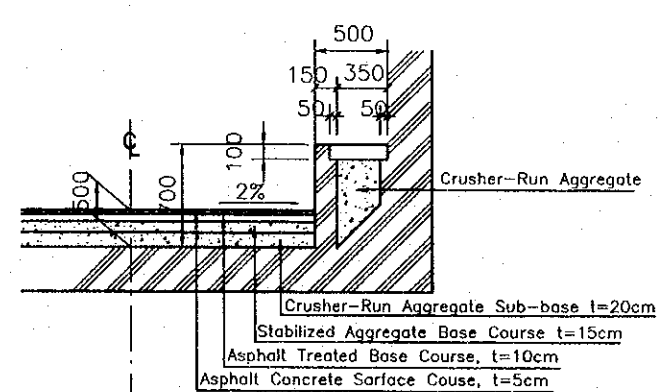


SECTION E-E

Scale=1:200



DETAIL A
S=1:50

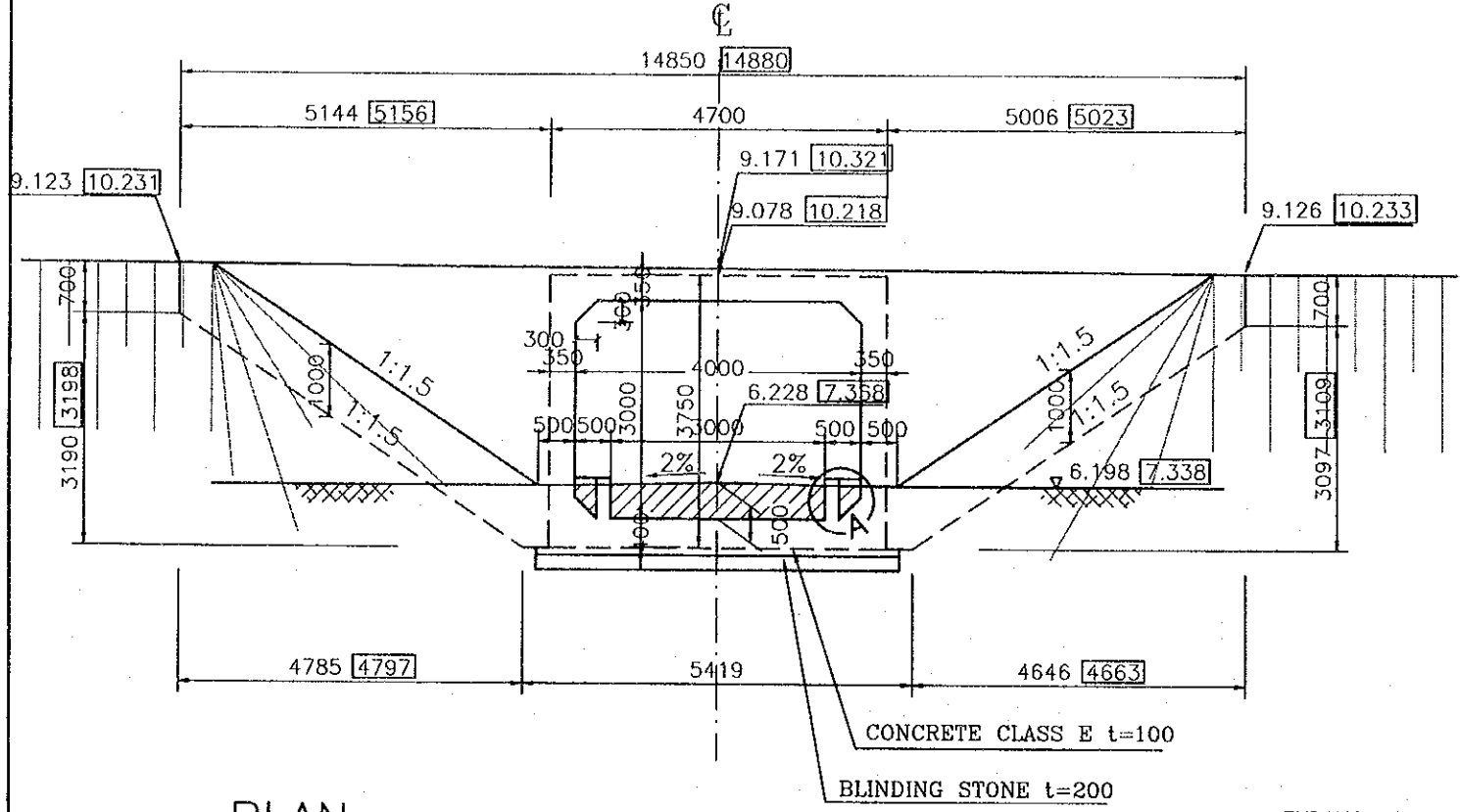


NOTE:
() Is Section B-B

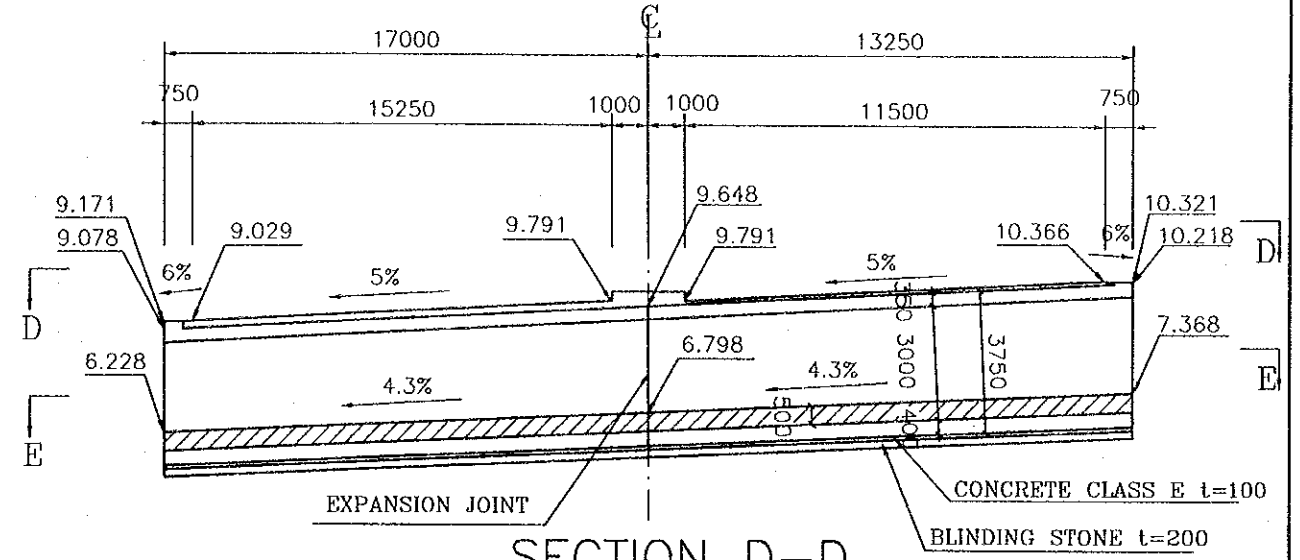
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATANE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATANE
PROJECT	RED RIVER BRIDGE (HANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.03.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	AS SHOWN	D-1-7	
P-BOX CULVERT (STA 5+120)			

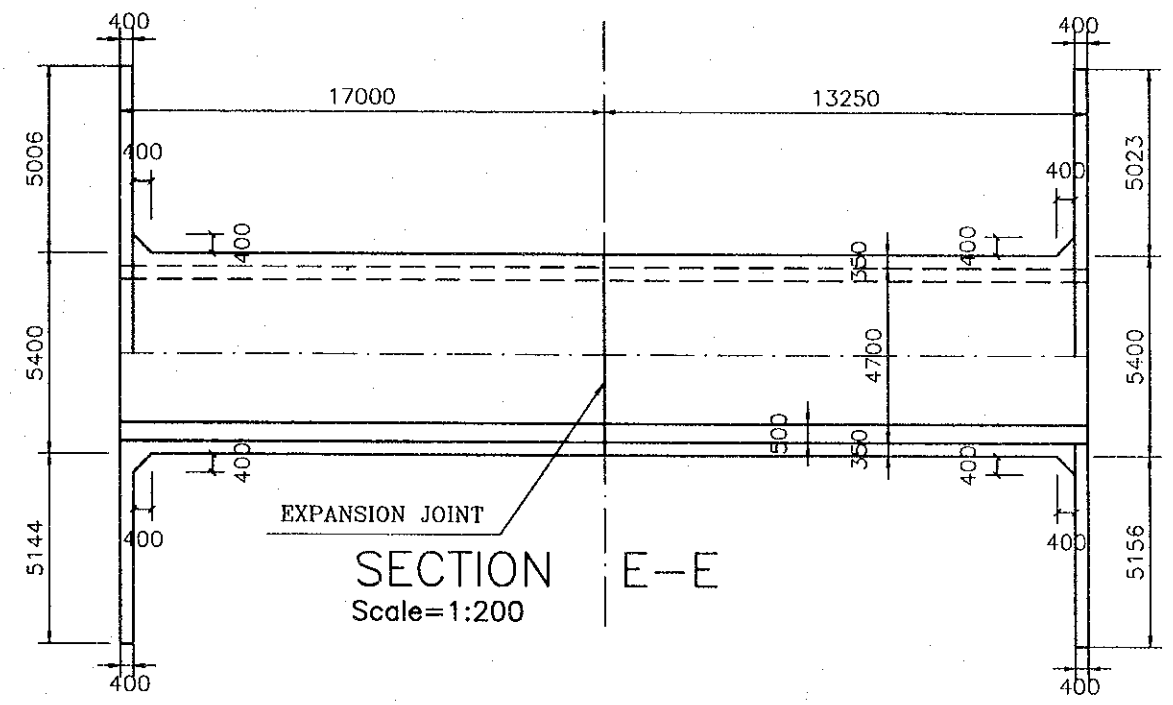
SECTION A-A B-B
Scale=1:100



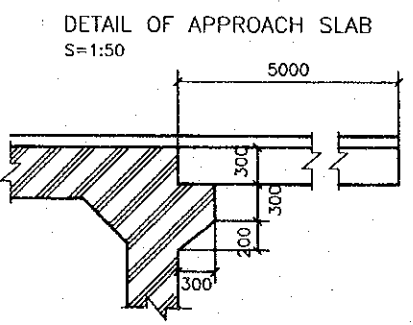
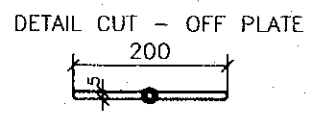
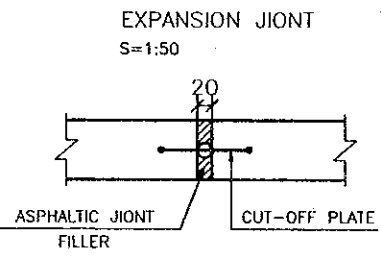
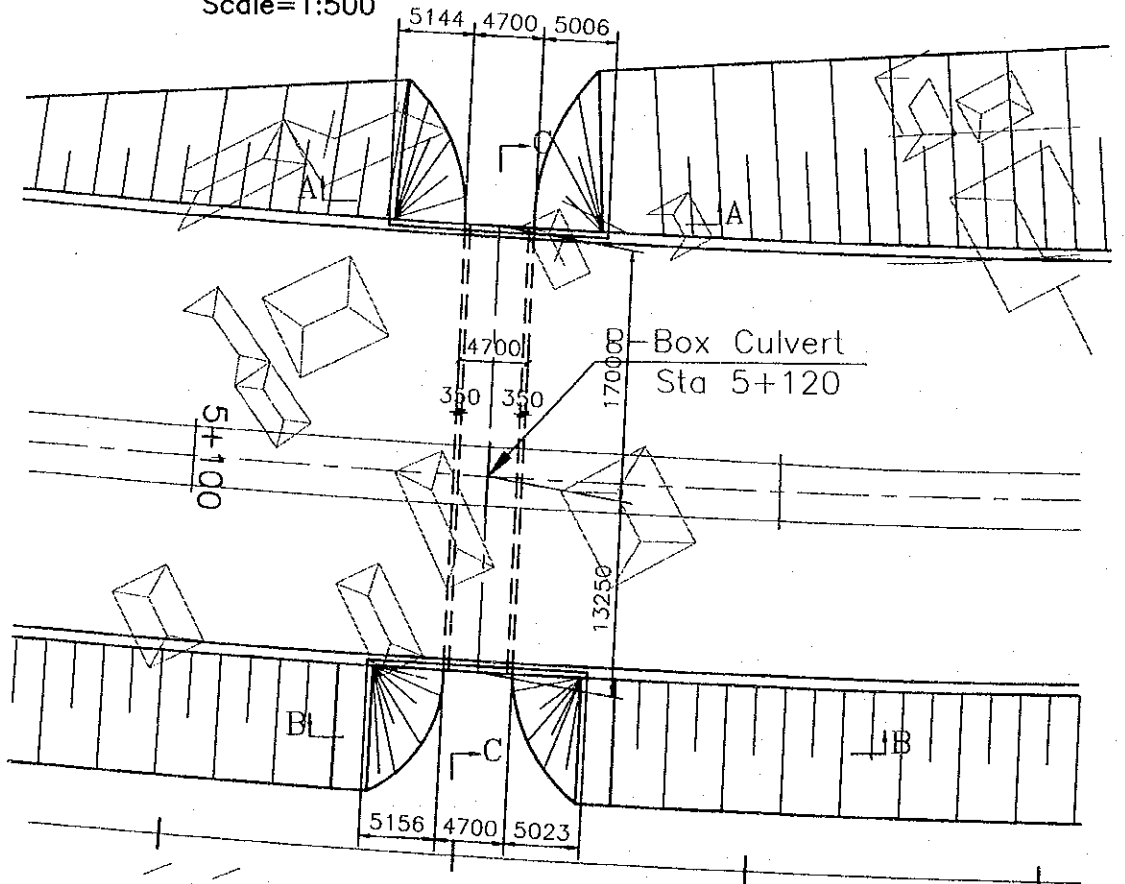
SECTION C-C
Scale=1:200



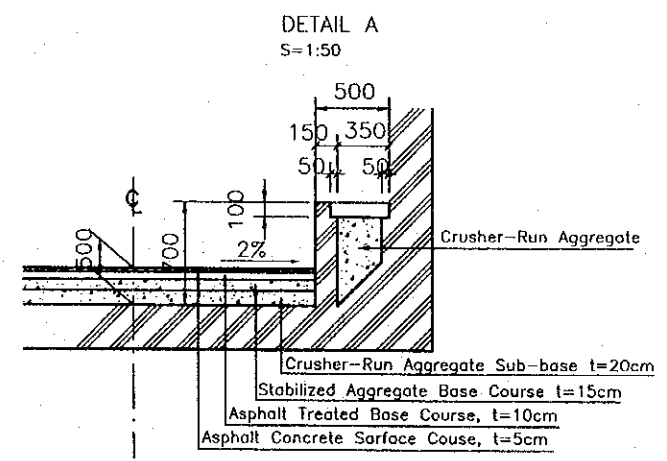
SECTION D-D
Scale=1:200



PLAN
Scale=1:500



SECTION E-E
Scale=1:200



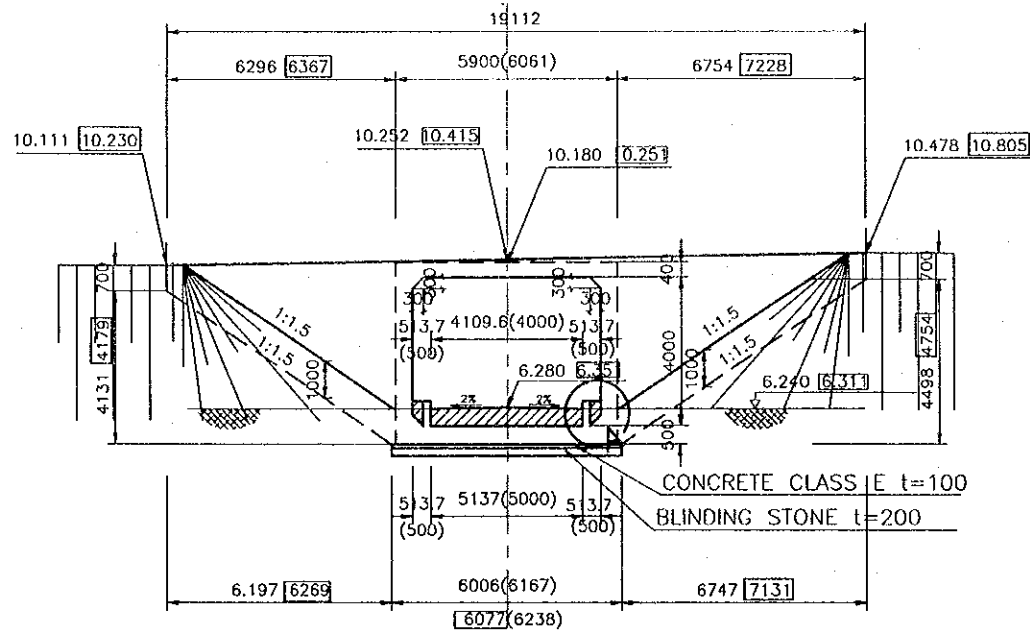
NOTE:
□ Is Section B-B

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT	DESIGNED BY NAME 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 3	SCALE AS SHOWN	DRAWING No. D-1-8	SHEET No.
V-BOX CULVERT (STA 6+164.890)			

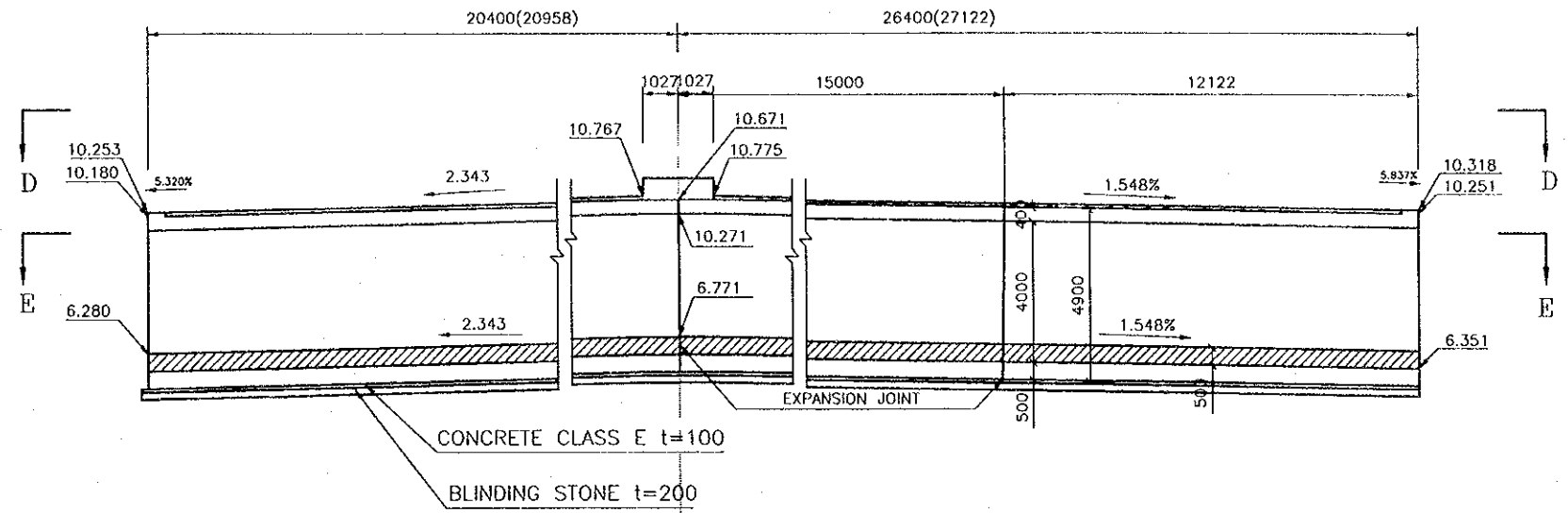
SECTION A-A

Scale=1:200



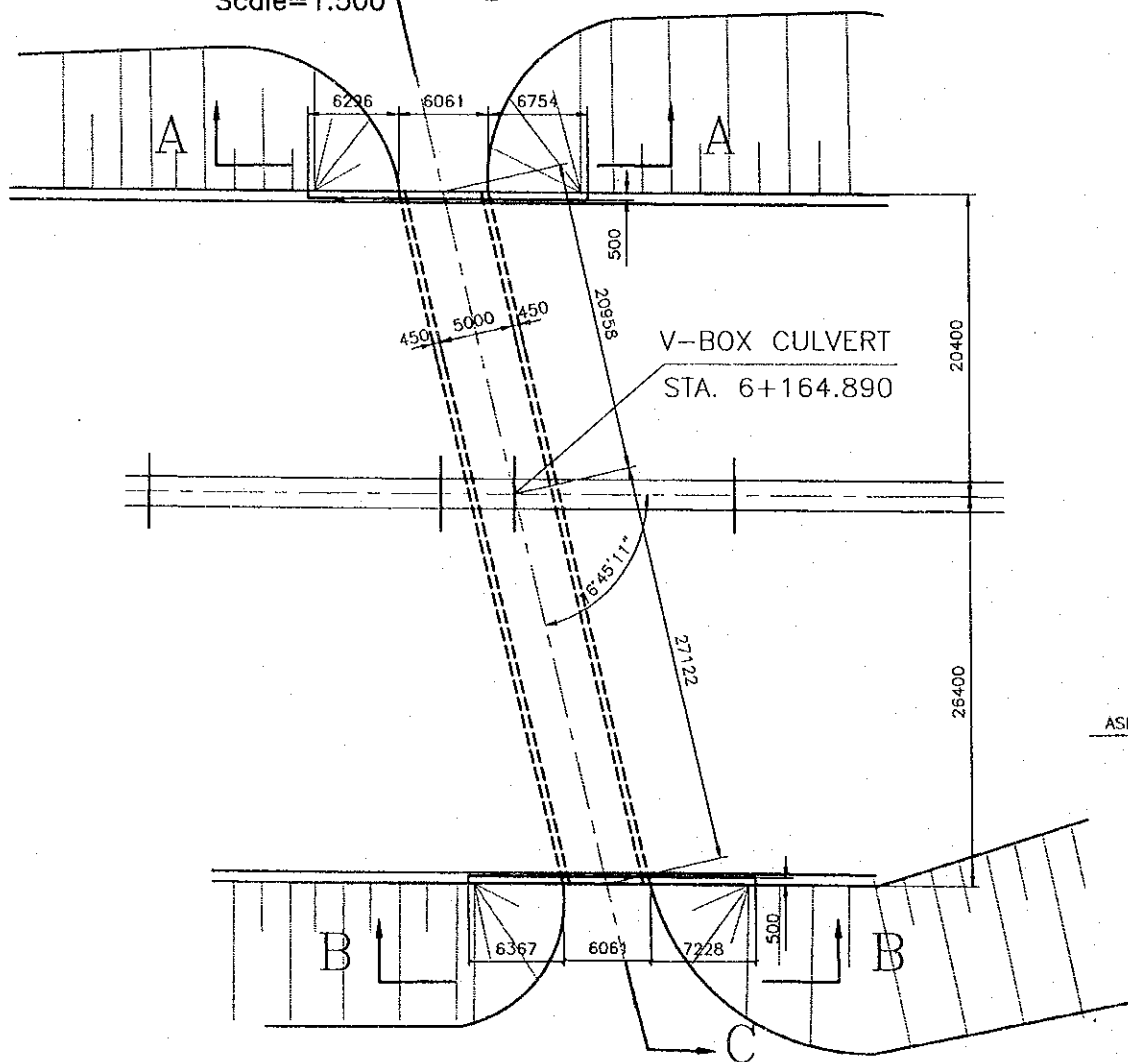
SECTION C-C

Scale=1:200



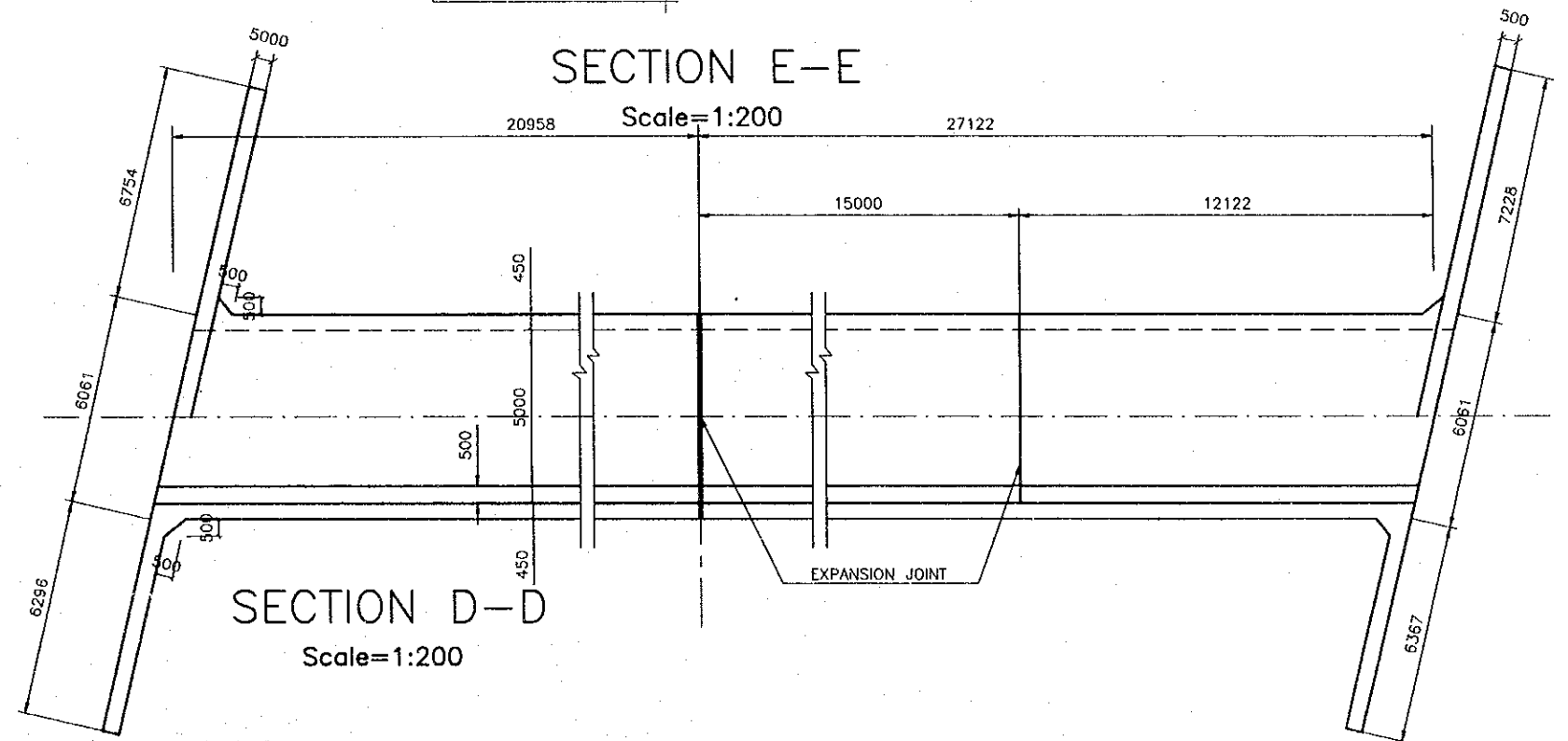
PLAN

Scale=1:500



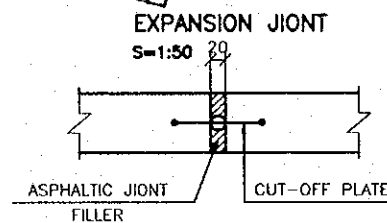
SECTION E-E

Scale=1:200

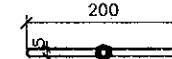


SECTION D-D

Scale=1:200

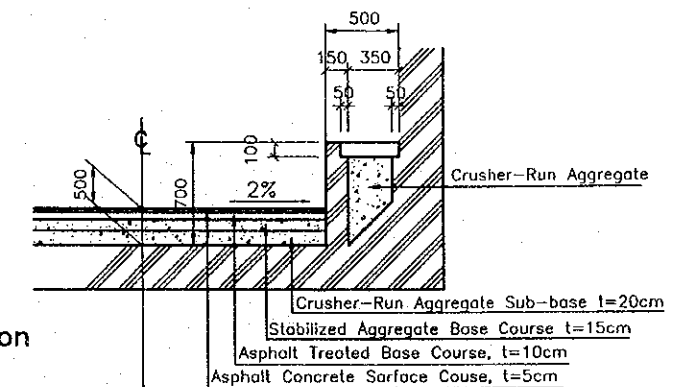


DETAIL CUT - OFF PLATE



DETAIL A

S=1:50



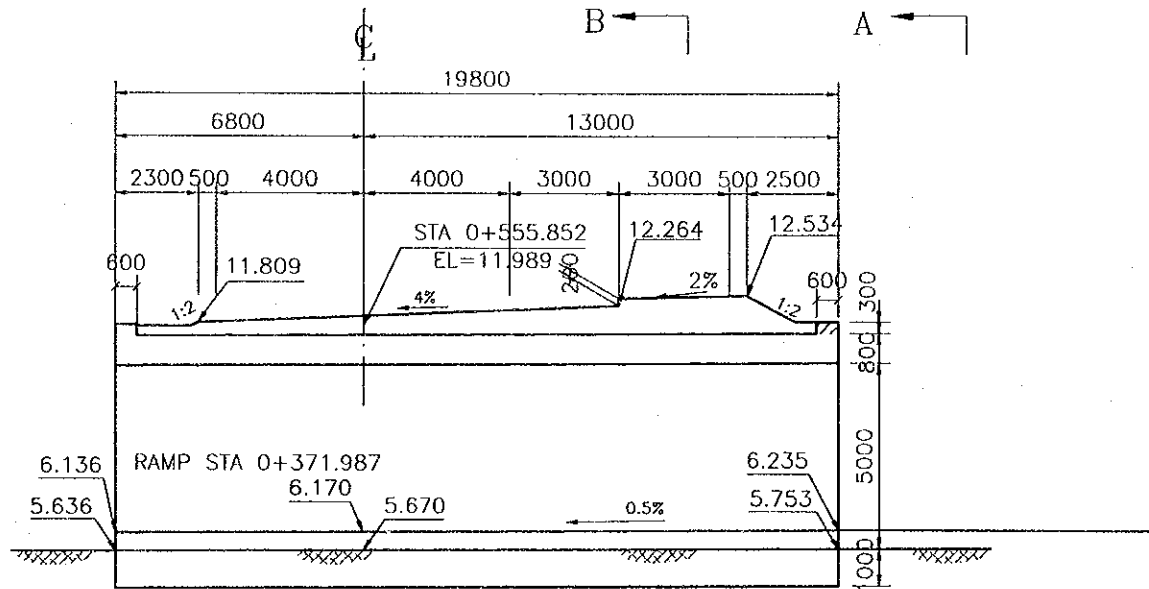
NOTES:

- () Is Perpendicular Section
- Is Section B-B

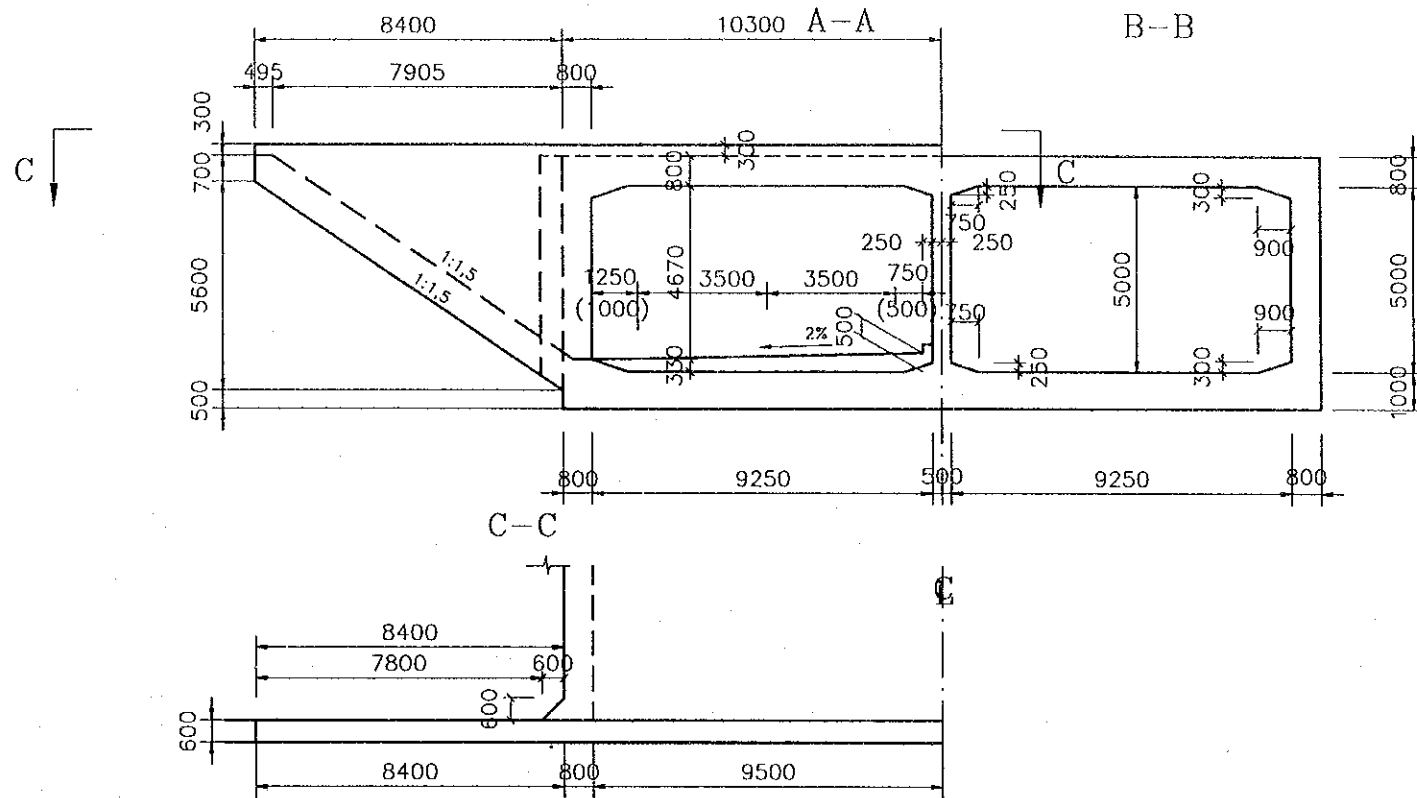
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	SUNATAGE
PROJECT RED RIVER BRIDGE (THANG TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS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

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	AS SHOWN	D-1-9	
V-BOX CULVERT FRONTAGE ROAS (STA 0+555.852)			

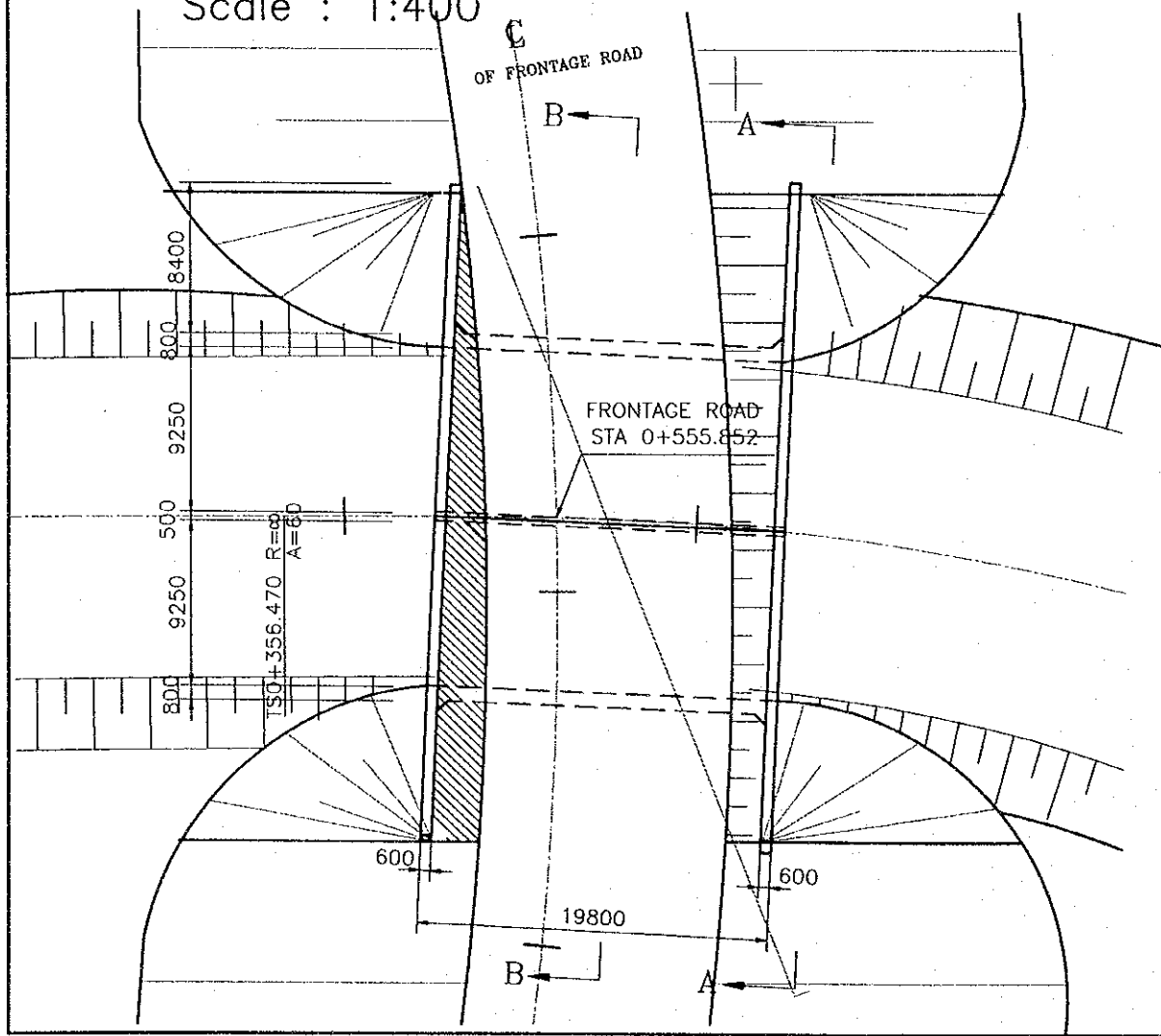
PROFILE
Scale : 1:200



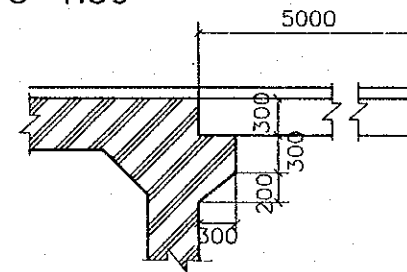
CROSS SECTION
Scale : 1:200



PLAN
Scale : 1:400



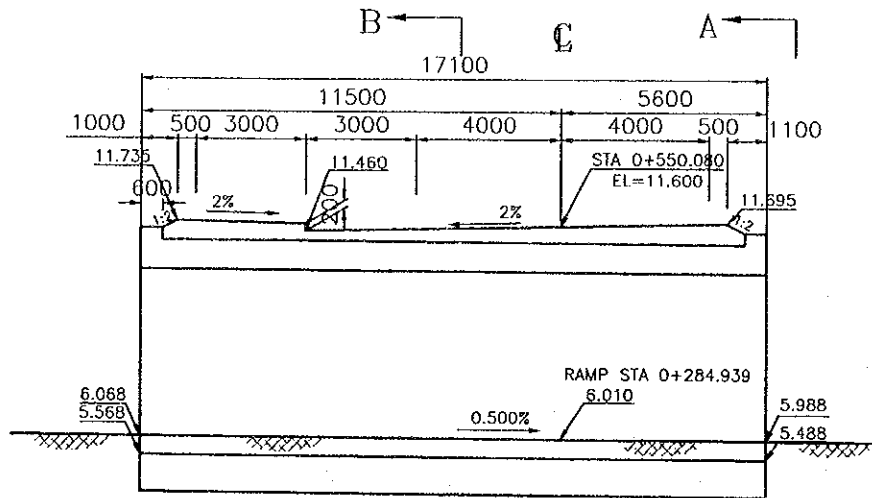
DETAIL OF APPROACH SLAB
S=1:50



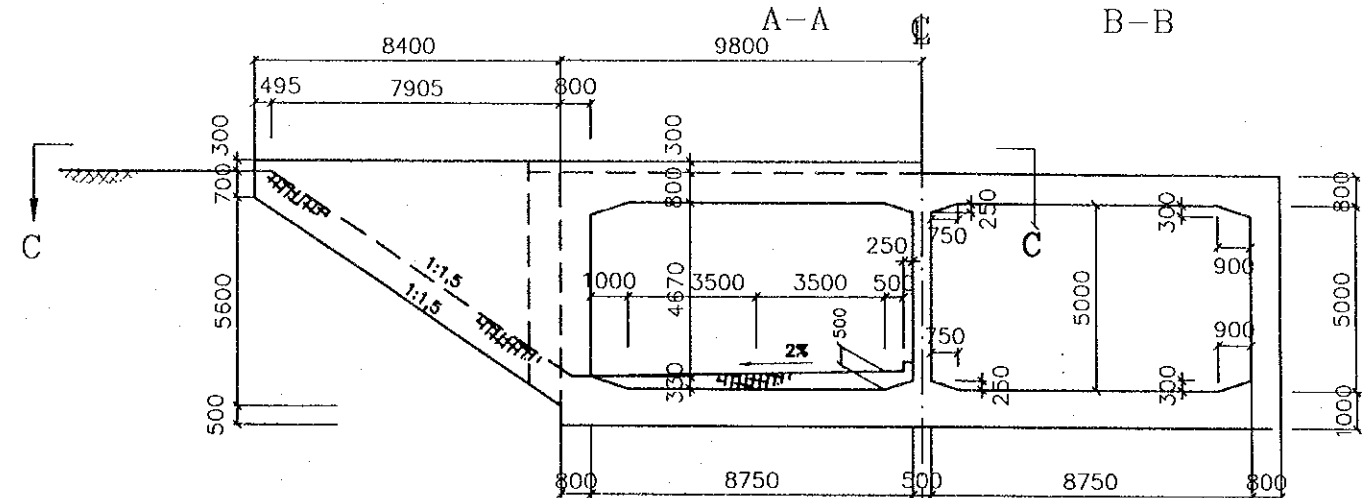
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT	DESIGNED BY S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL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

PACKAGE 3	SCALE AS SHOWN	DRAWING No. D-1-10	SHEET No.
V-BOX CULVERT FRONTAGE ROAD (STA 0+550.080)			

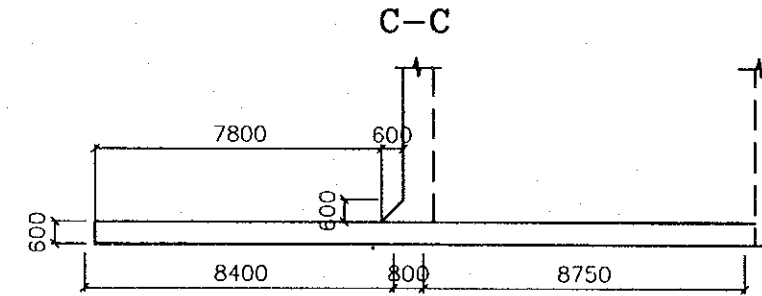
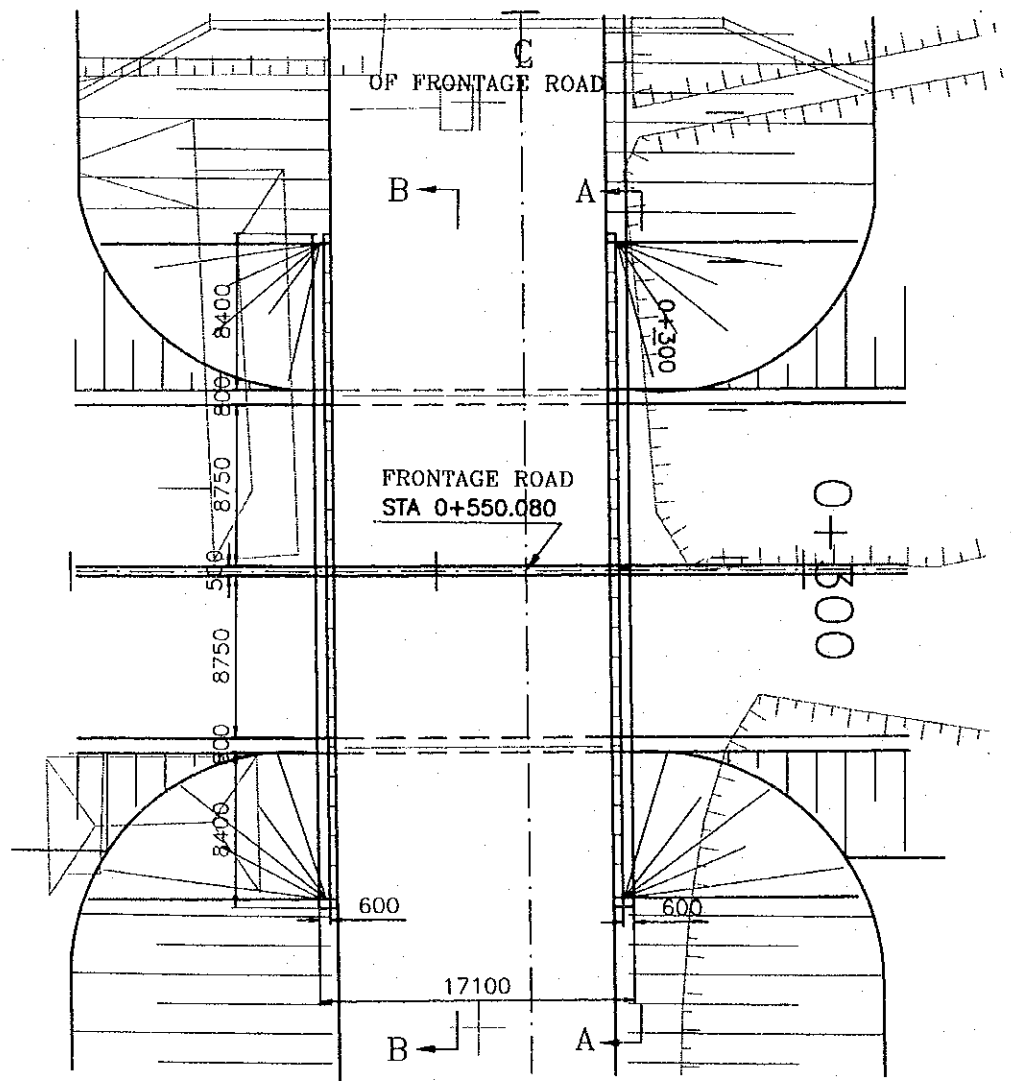
PROFILE
Scale : 1:200



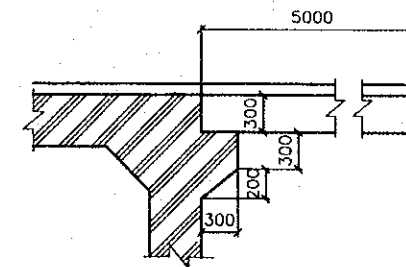
CROSS SECTION
Scale : 1:200



PLAN
Scale : 1:400



DETAIL OF APPROACH SLAB
S=1:50



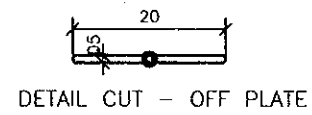
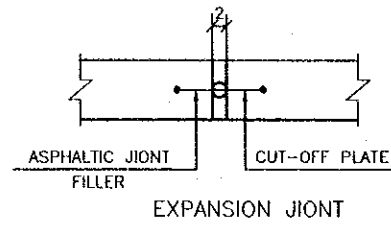
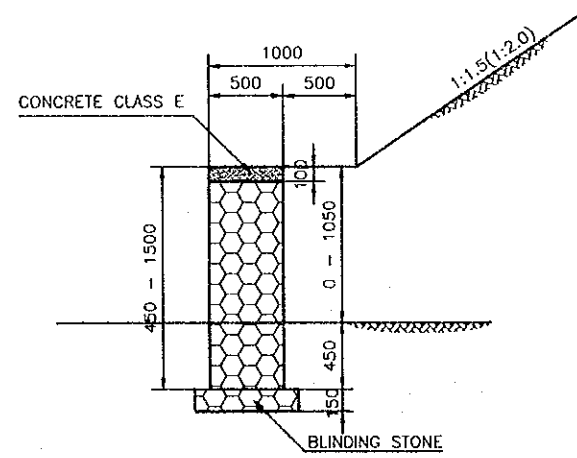
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT	DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000 8.14

PACKAGE 3	SCALE AS SHOWN	DRAWING No. D-2-1	SHEET No.
DETAILS OF RETAINING WALL AND STONE MASONRY			

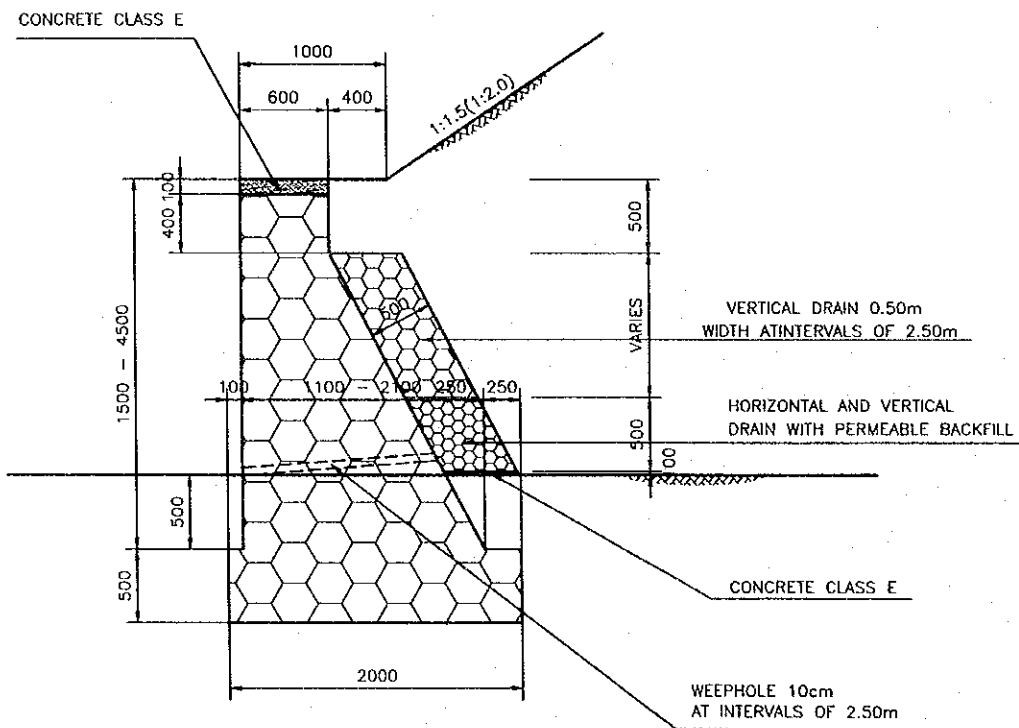
STONE MASONRY

Scale=1:50

TYPE A

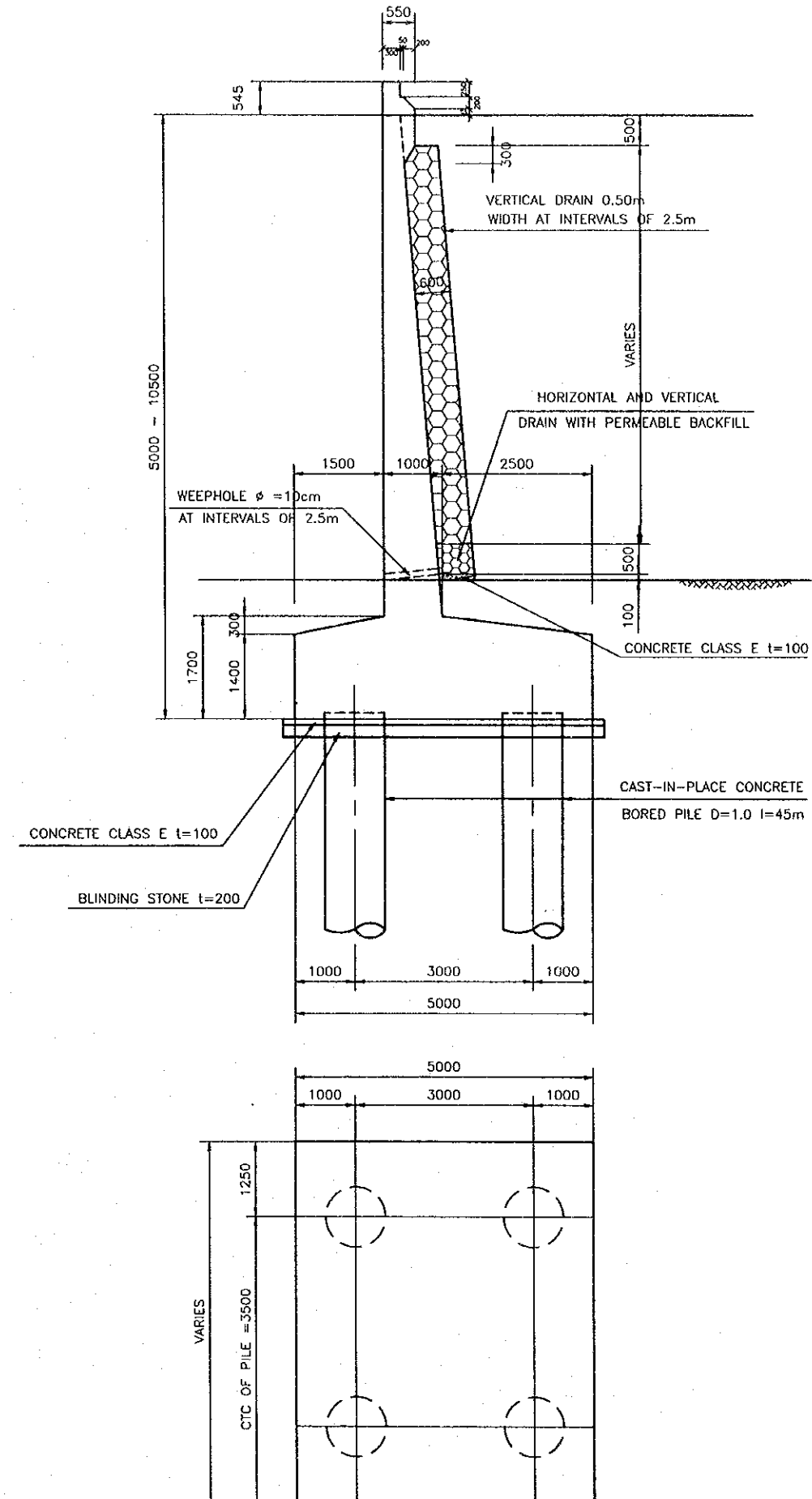


TYPE B



RETAINING WALL

Scale=1:100

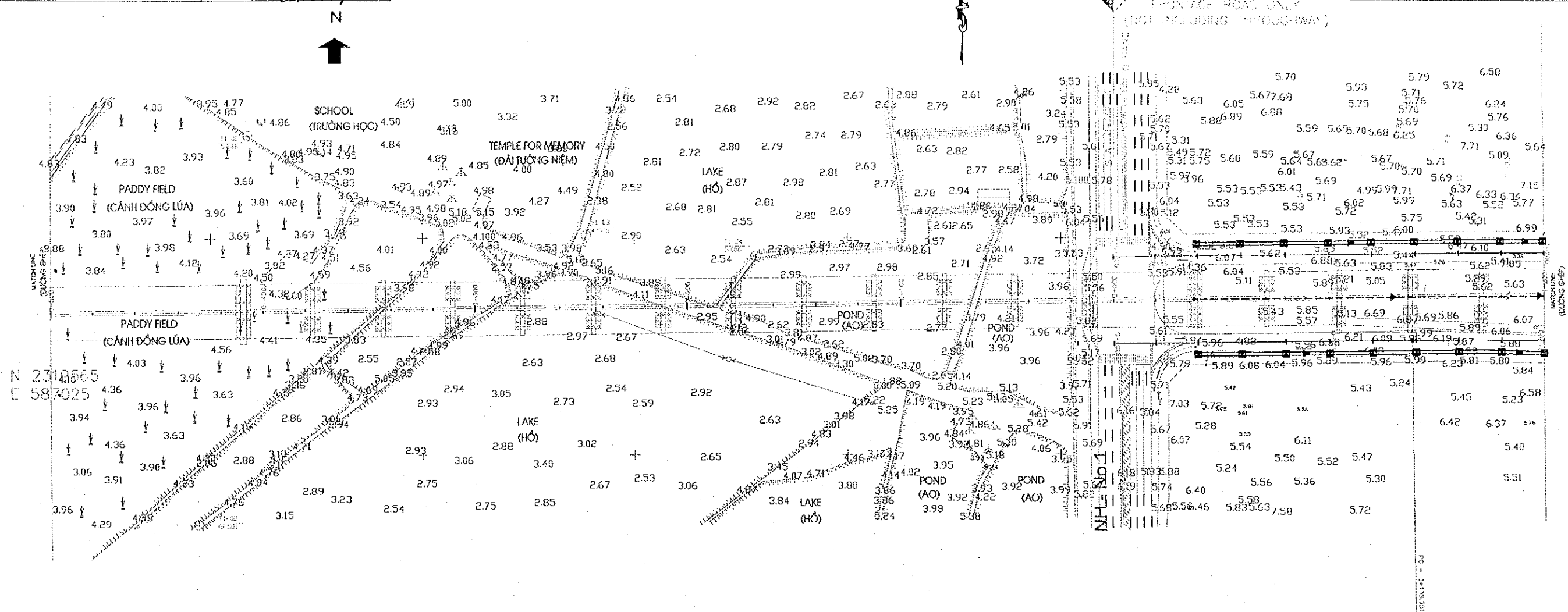


E. DRAINAGE

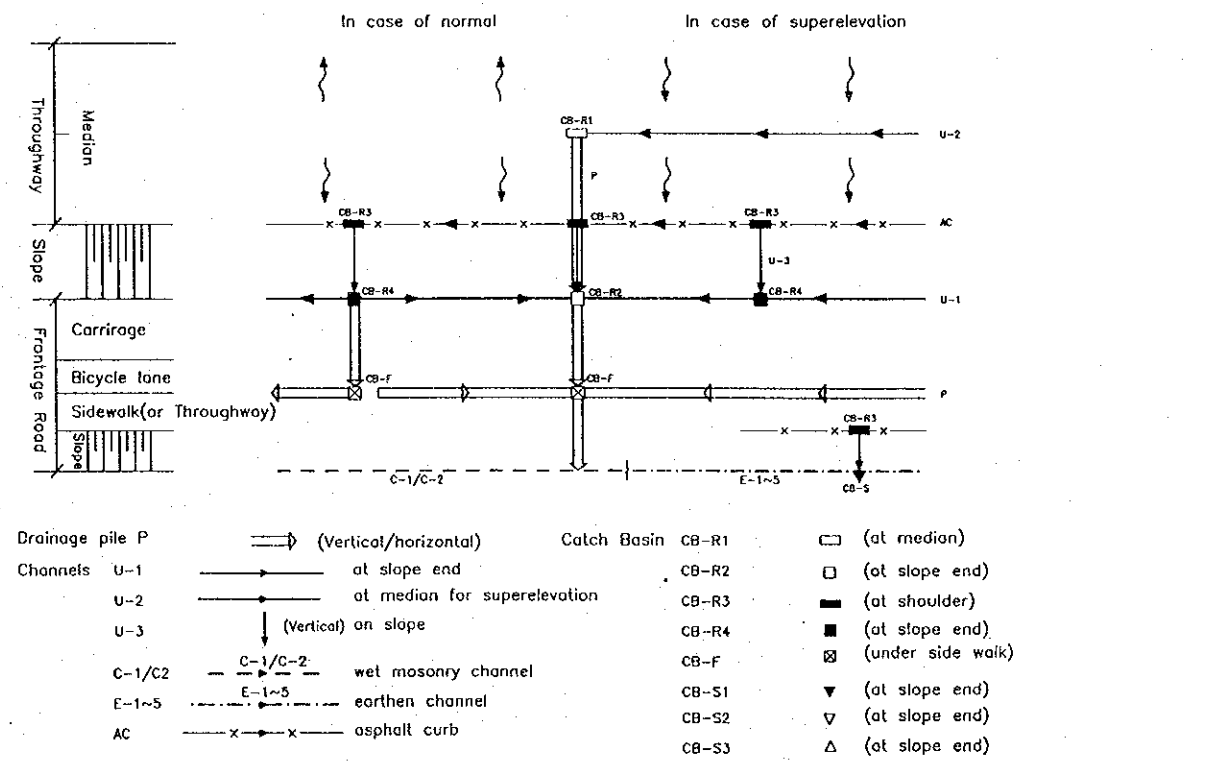
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATADA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL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

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/2000	E-1-1	

THROUGH WAY AND FRONTAGE ROAD (1)



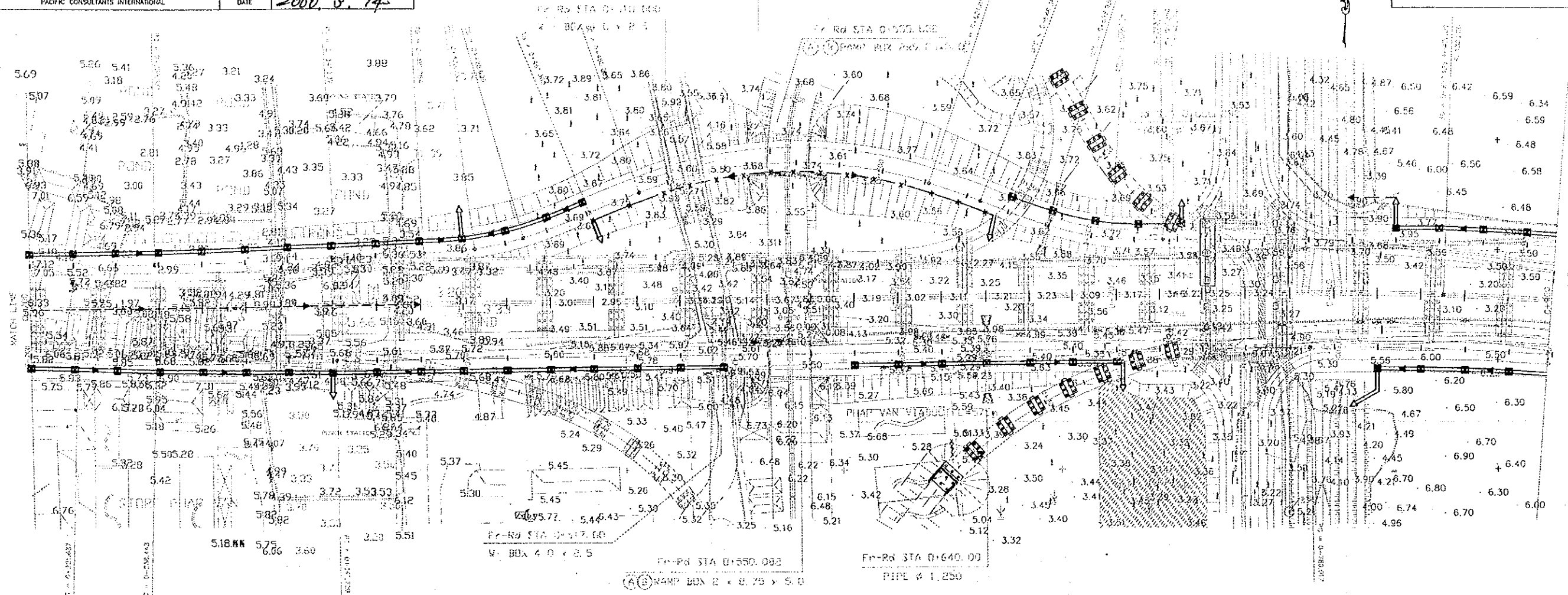
LEGEND



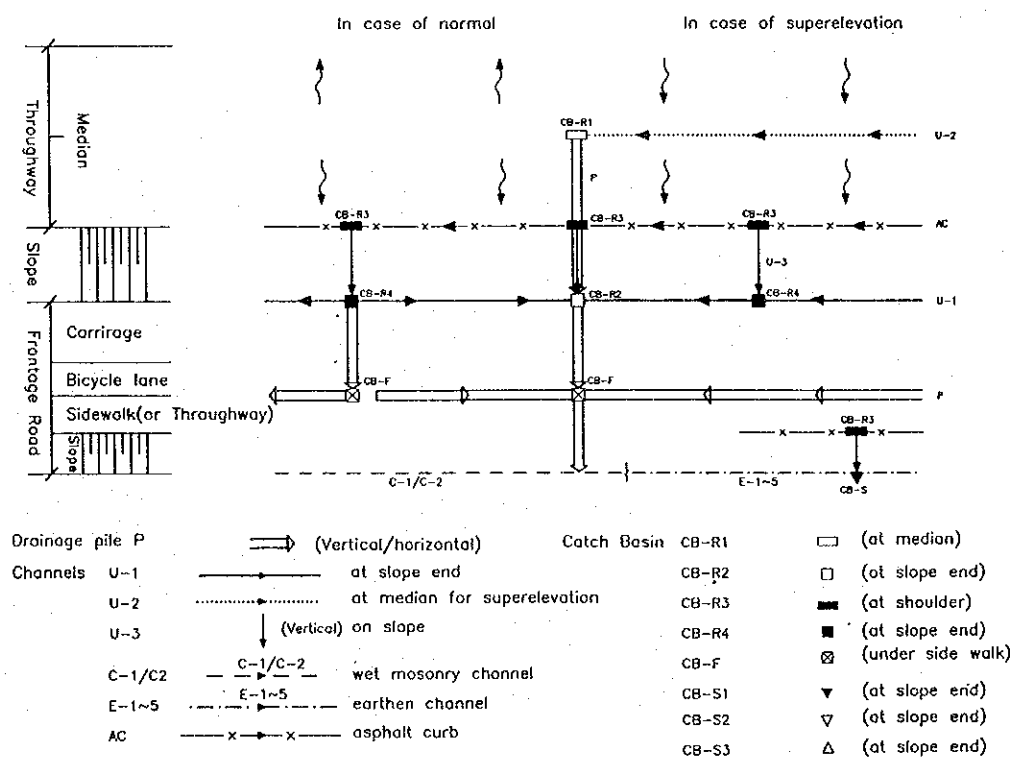
- | | | | | | |
|-----------------|--|------------------------------|-------------------|--|-------------------|
| Drainage pile P | | (Vertical/horizontal) | Catch Basin CB-R1 | | (at median) |
| Channels U-1 | | at slope end | CB-R2 | | (at slope end) |
| U-2 | | at median for superelevation | CB-R3 | | (at shoulder) |
| U-3 | | (Vertical) on slope | CB-R4 | | (at slope end) |
| C-1/C-2 | | wet masonry channel | CB-F | | (under side walk) |
| E-1-5 | | earthen channel | CB-S1 | | (at slope end) |
| AC | | asphalt curb | CB-S2 | | (at slope end) |
| | | | CB-S3 | | (at slope end) |

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE <i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000. 5. 14

PACKAGE 3	SCALE 1/2000	DRAWING No. E-1-2	SHEET No.
THROUGH WAY AND FRONTAGE ROAD (?)			

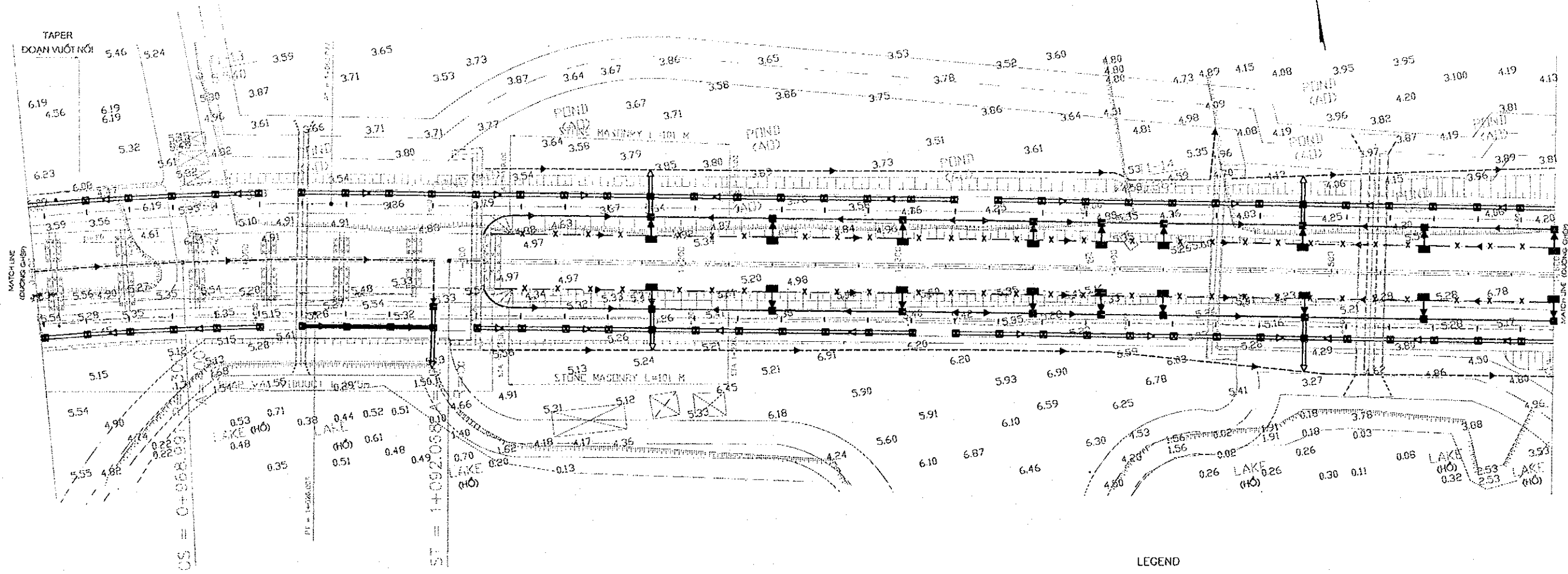


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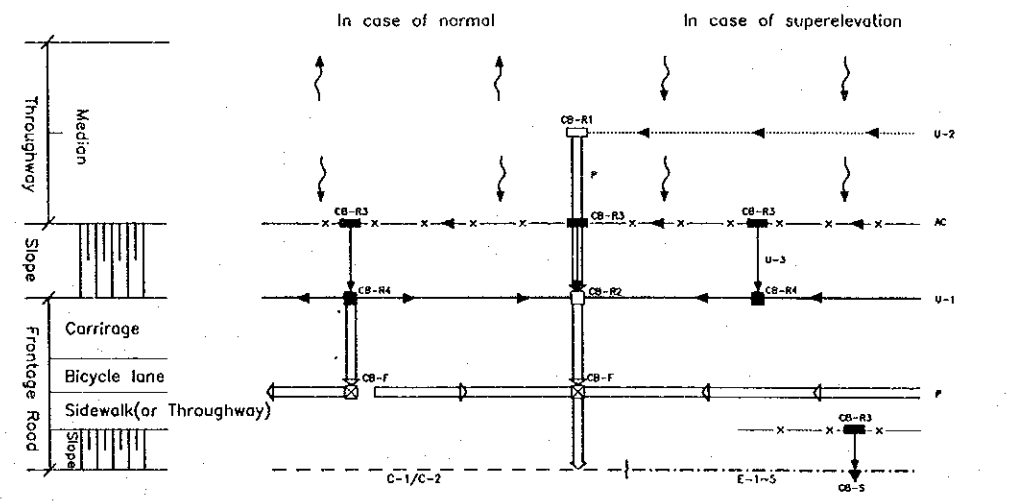


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THUNG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATADA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	DATE 2000. 11. 17
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 3	SCALE 1/2000	DRAWING No. E-1-3	SHEET No.
THROUGH WAY AND FRONTAGE ROAD (3)			



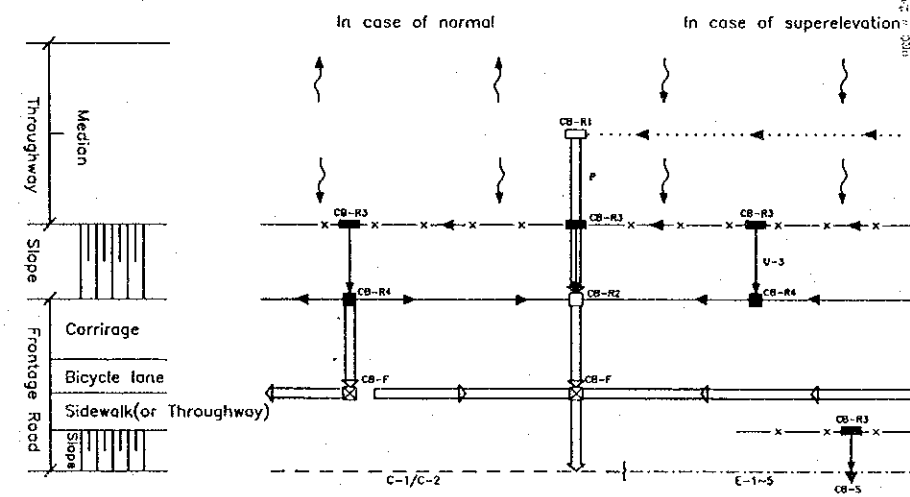
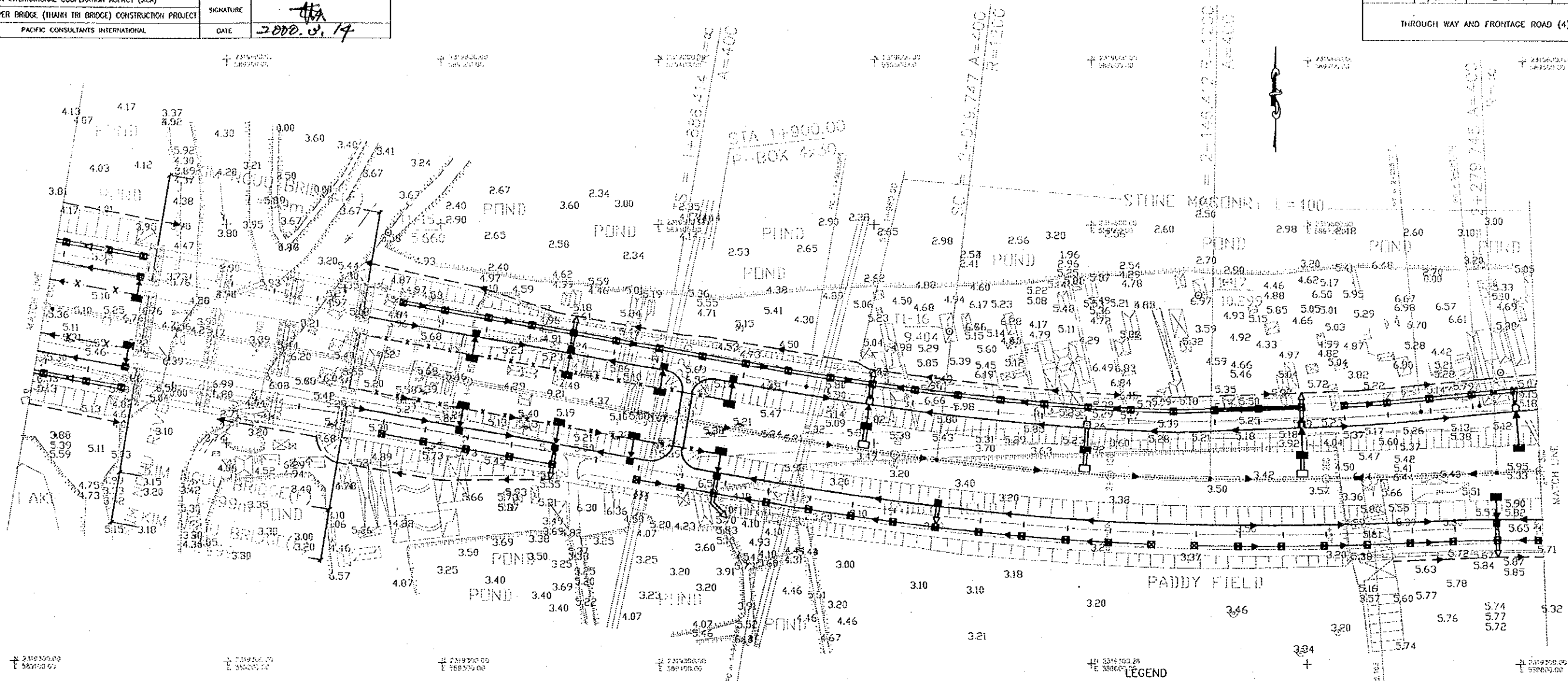
LEGEND



- | | | | |
|-----------------|----------------------------------|-------------------|---------------------|
| 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-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. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.03.14	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

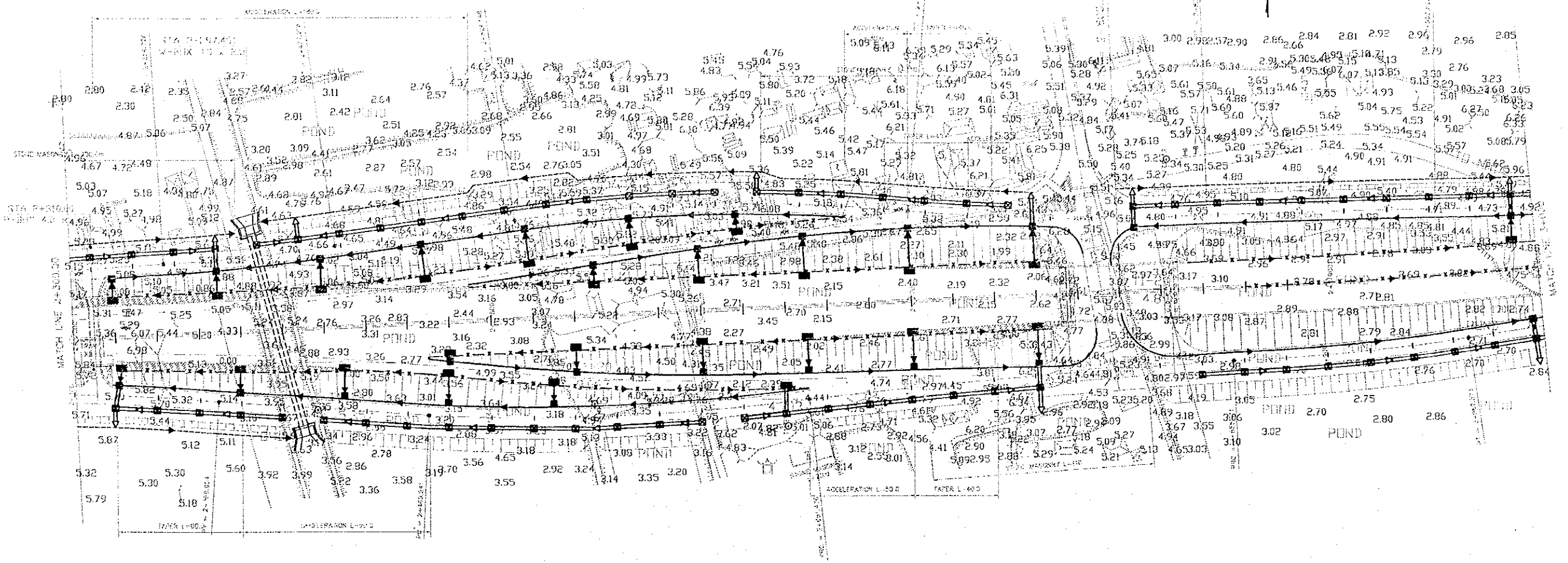
PACKAGE 3	SCALE 1/2000	DRAWING No. E-1-4	SHEET No.
THROUGH WAY AND FRONTAGE ROAD (4)			



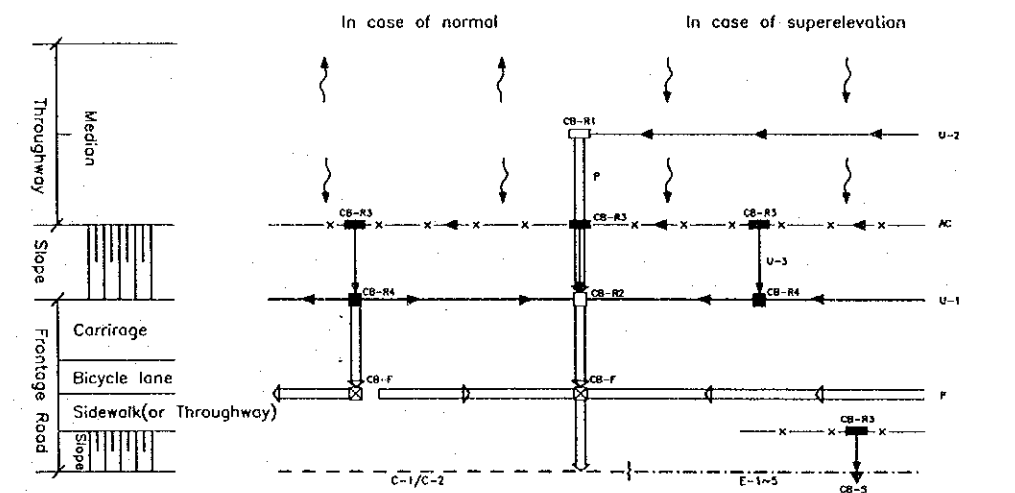
Drainage pile P	— (Vertical/horizontal)	Catch Basin CB-R1	□ (at median)
Channels U-1	— (at slope end)	CB-R2	□ (at slope end)
U-2	— (at median for superelevation)	CB-R3	■ (at shoulder)
U-3	— (Vertical) on slope	CB-R4	■ (at slope end)
C-1/C-2	— C-1/C-2 wet masonry channel	CB-F	⊗ (under side walk)
E-1~5	— 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 THUNG 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	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.03.14

PACKAGE	SCALE	DRAWING No	SHEET No.
3	1/2000	E-1-5	
THROUGH WAY AND FRONTAGE ROAD (5)			



LEGEND

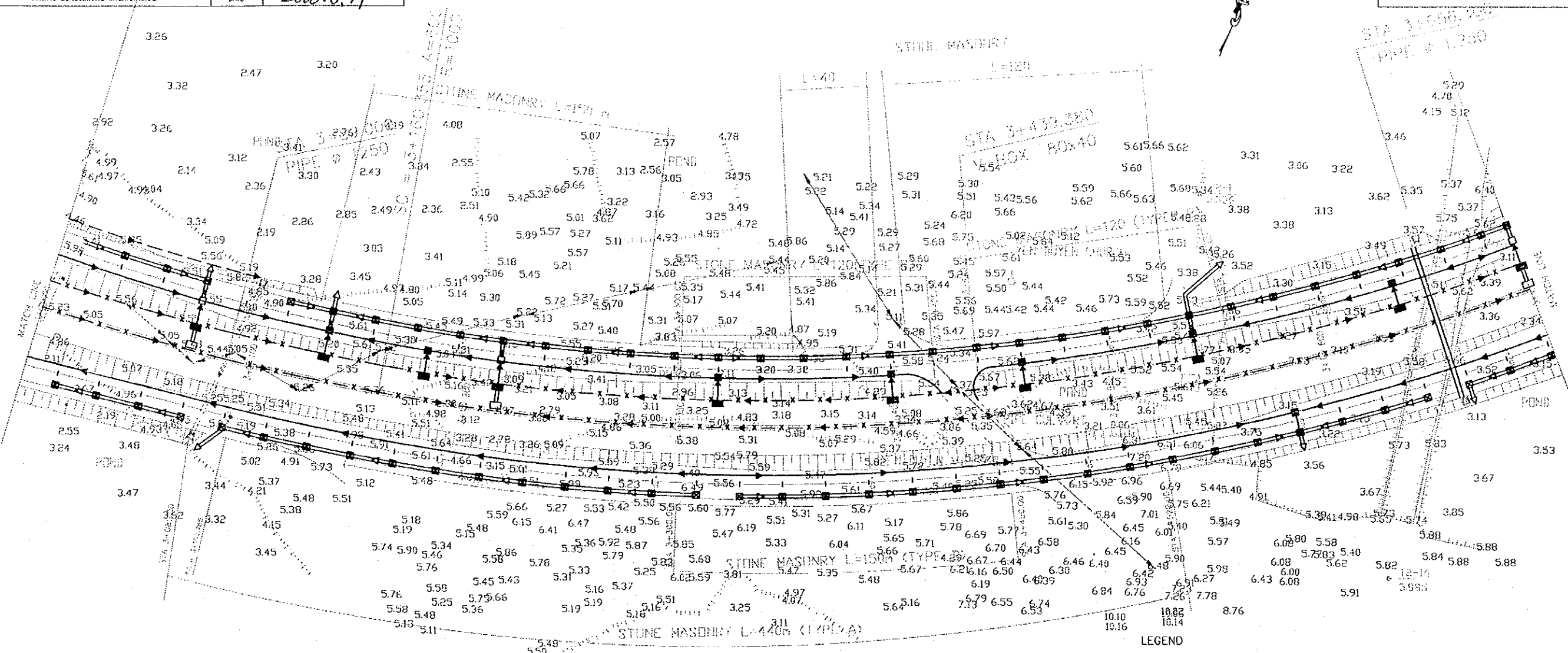


- | | | | |
|-----------------|-------------------------------|-------------------|---------------------|
| Drainage pile P | → (Vertical/horizontal) | Catch Basin CB-R1 | □ (at median) |
| Channels U-1 | → at slope end | CB-R2 | □ (at slope end) |
| U-2 | ↓ at median for superlevation | CB-R3 | ■ (at shoulder) |
| U-3 | ↓ (Vertical) on slope | CB-R4 | ■ (at slope end) |
| C-1/C-2 | 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) |

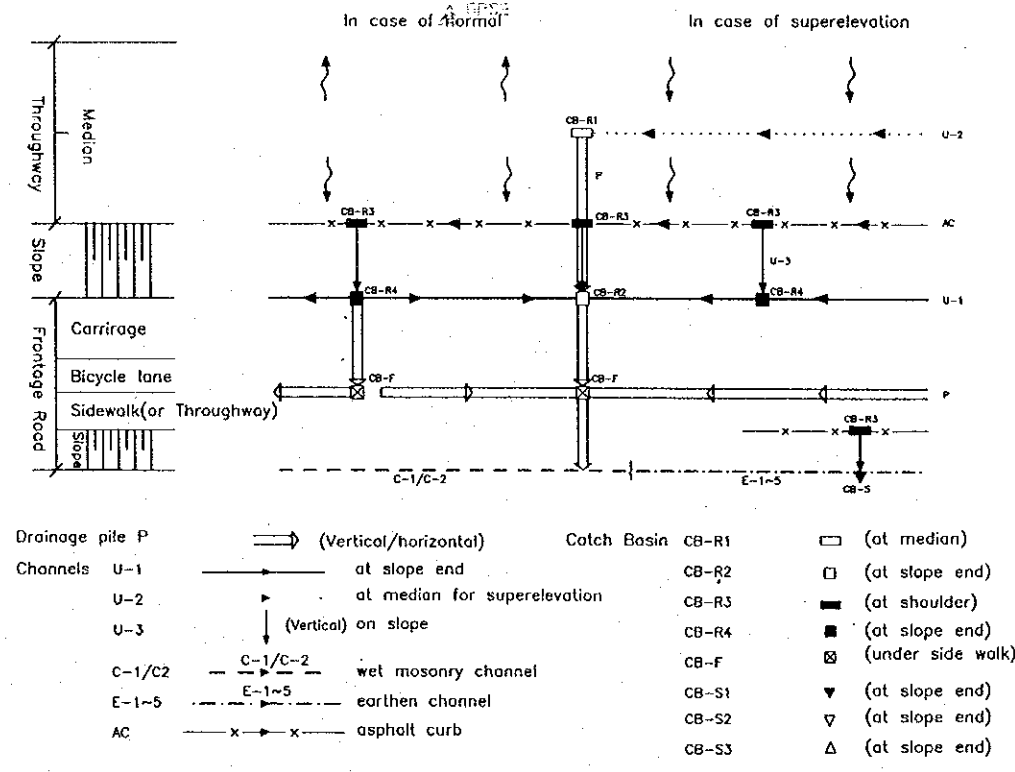
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATADA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
OPERATION PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.0.14

PACKAGE 3	SCALE 1/2000	DRAWING No. E-1-6	SHEET No.
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THROUGH WAY AND FRONTAGE ROAD (6)

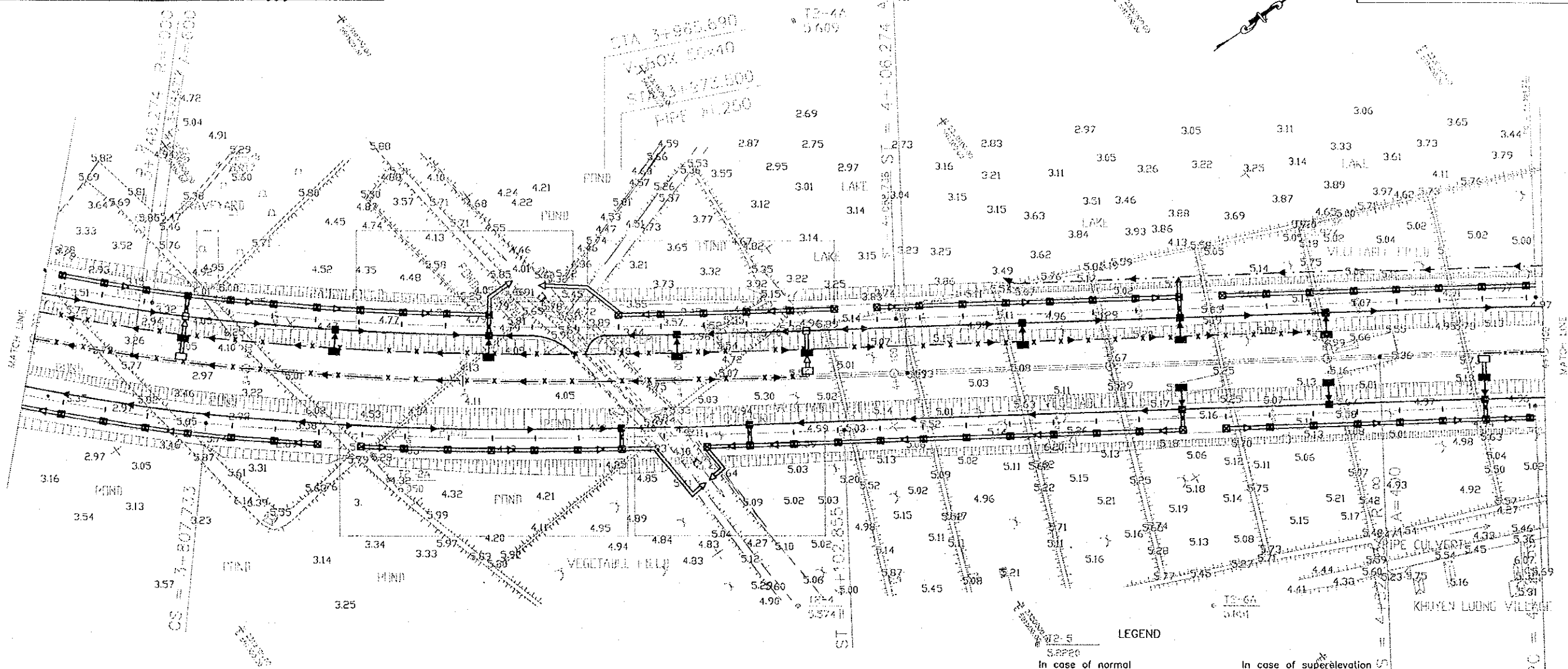


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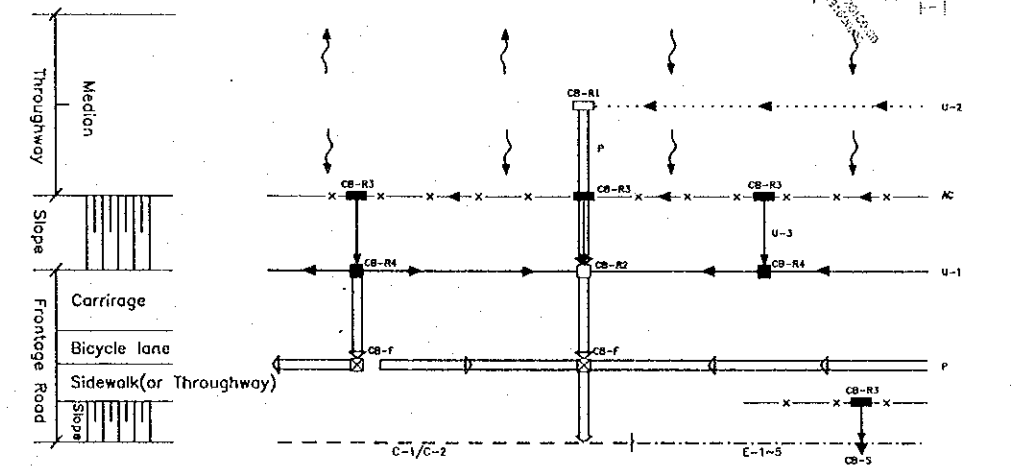


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
ORGANIZATION PACIFIC CONSULTANTS INTERNATIONAL		DATE

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/2000	E-1-7	
THROUGH WAY AND FRONTAGE ROAD (7)			



LEGEND
 In case of normal
 In case of superelevation

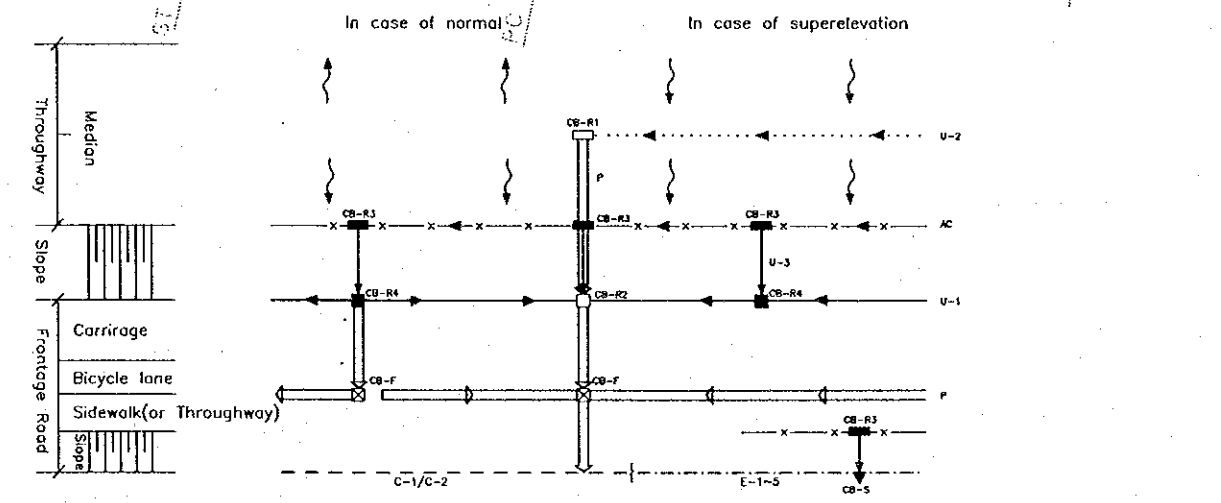
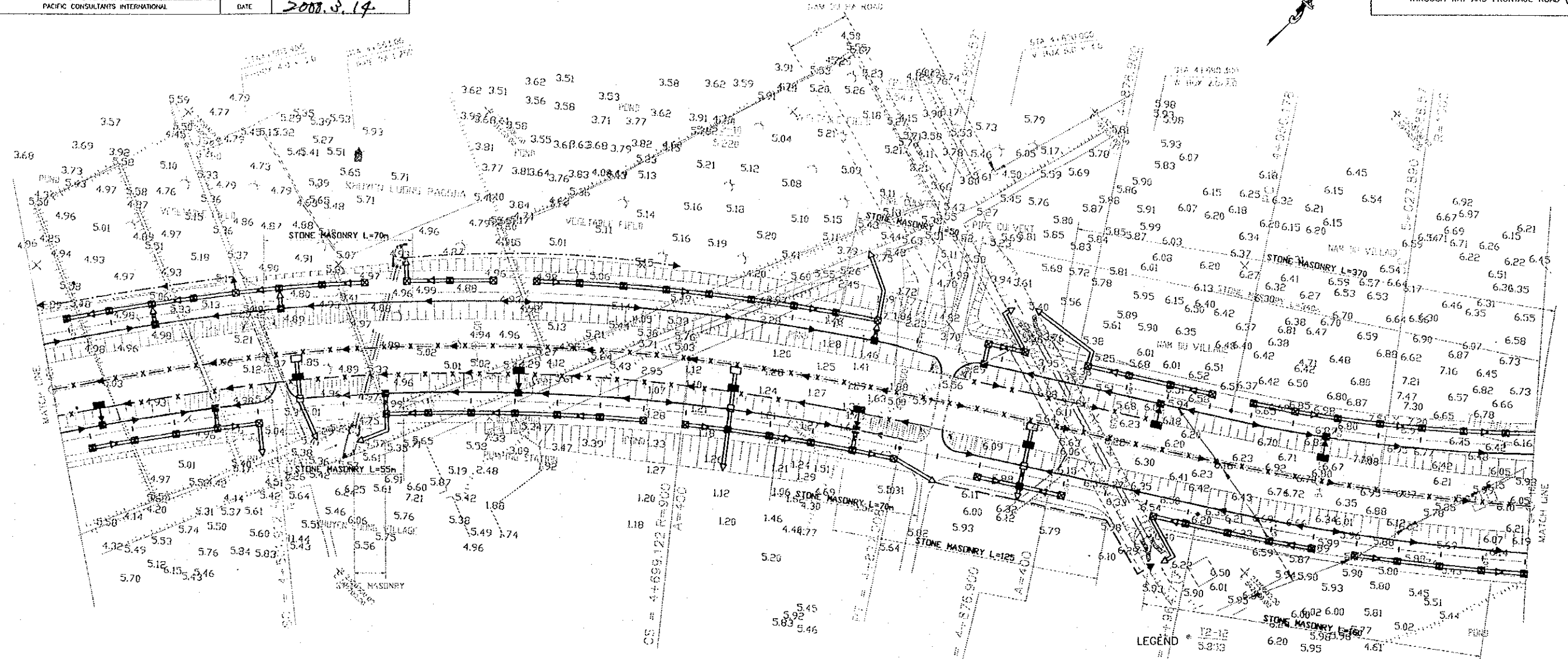


- | | | | |
|-----------------|--------------------------------|-------------------|---------------------|
| Drainage pile P | ⇨ (Vertical/horizontal) | Catch Basin CB-R1 | □ (at median) |
| Channels U-1 | → at slope end | CB-R2 | □ (at slope end) |
| U-2 | → at median for superelevation | CB-R3 | ■ (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 THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S.WATAGE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	
PROJECT	RED RIVER BRIDGE (NHANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2002.3.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/2000	E-1-8	

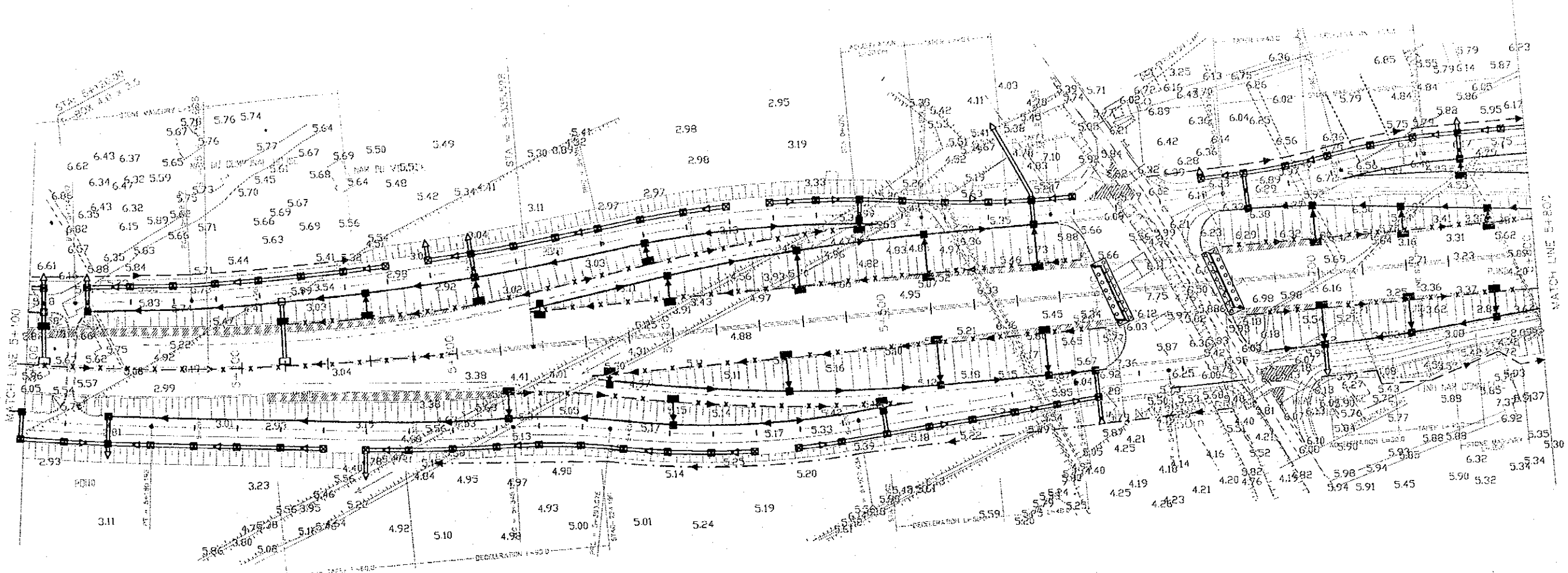
THROUGH WAY AND FRONTAGE ROAD (B)



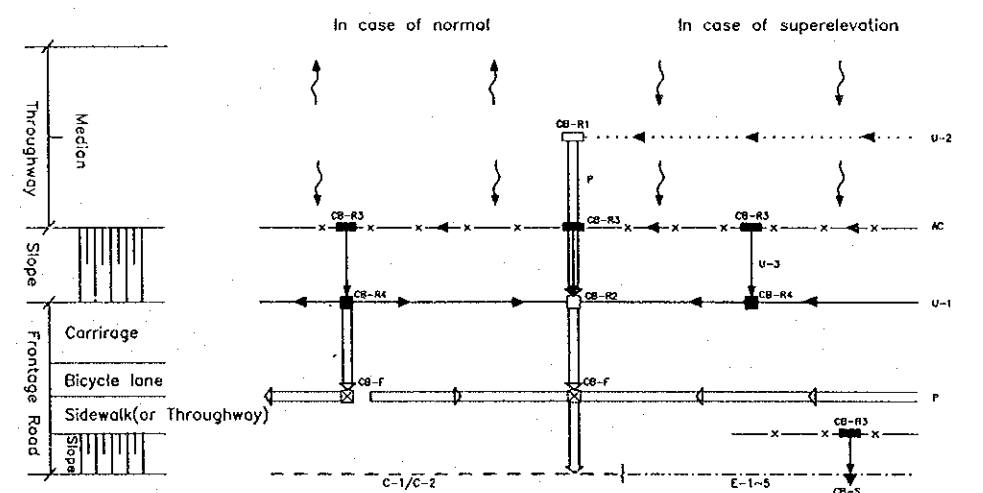
Drainage pile P	⇒ (Vertical/horizontal)	Catch Basin CB-R1	□ (at median)
Channels U-1	— (at slope end)	CB-R2	□ (at slope end)
U-2	— (at median for superlevation)	CB-R3	■ (at shoulder)
U-3	↓ (Vertical) on slope	CB-R4	■ (at slope end)
C-1/C-2	— C-1/C-2 wet masonry channel	CB-F	⊗ (under side walk)
E-1-5	— 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 TRANH LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		NAME S. WATABE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		SIGNATURE
		DATE 2000.3.14

PACKAGE 3	SCALE 1/2000	DRAWING No. E-1-9	SHEET No.
THROUGH WAY AND FRONTAGE ROAD (9)			



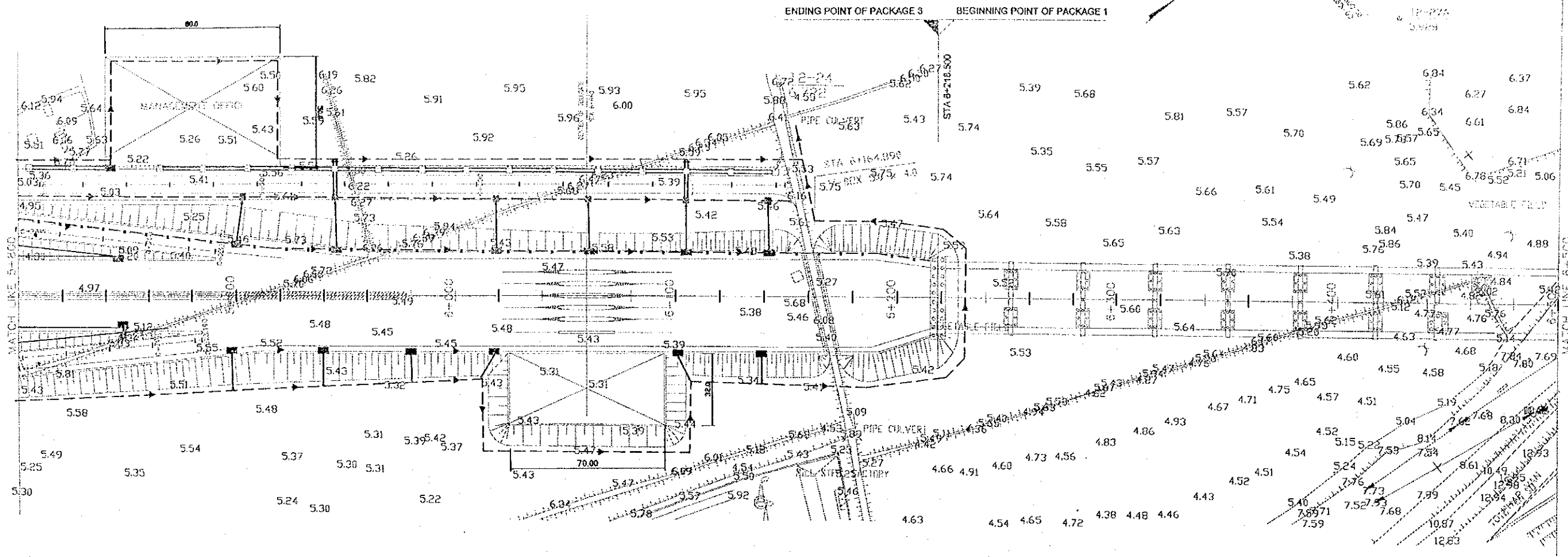
LEGEND



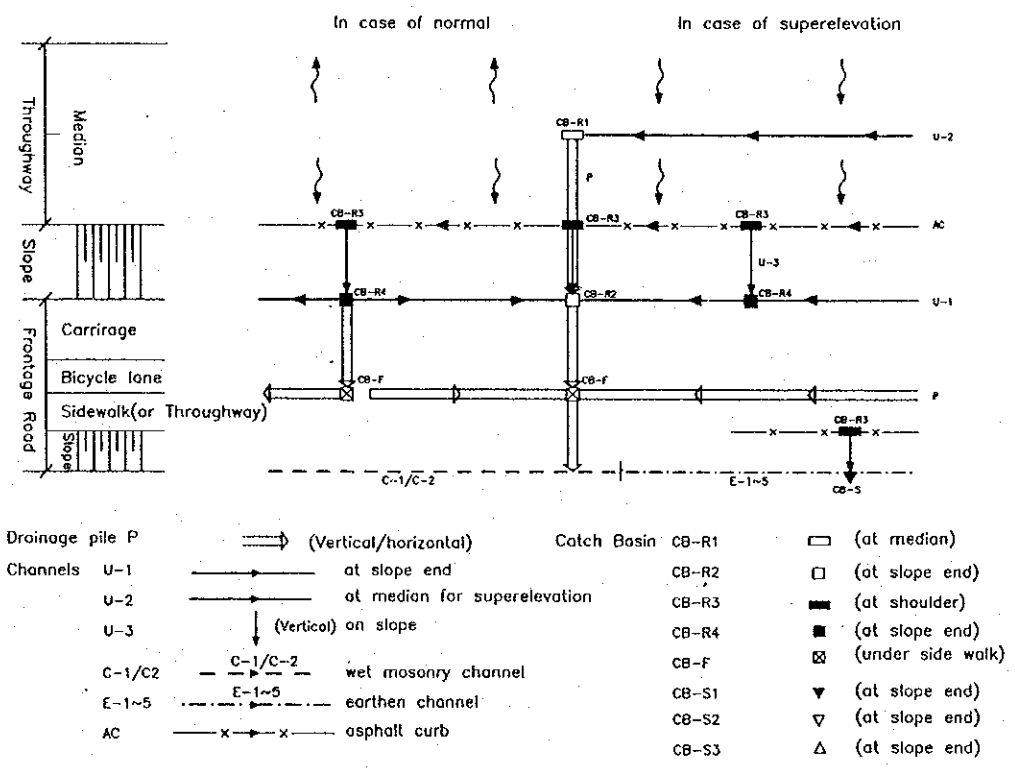
- | | | | |
|-----------------|--------------------------------------|-------------------|---------------------|
| Drainage pile P | ⇒ (Vertical/horizontal) | Catch Basin CB-R1 | □ (at median) |
| Channels U-1 | — (at slope end) | CB-R2 | □ (at slope end) |
| U-2 | (at median for superelevation) | CB-R3 | ■ (at shoulder) |
| U-3 | ↓ (Vertical) on slope | CB-R4 | ■ (at slope end) |
| C-1/C-2 | — 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	CHECKED BY	APPROVED BY
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.
3	1/2000	E-1-10	
THROUGH WAY AND FRONTAGE ROAD (10)			

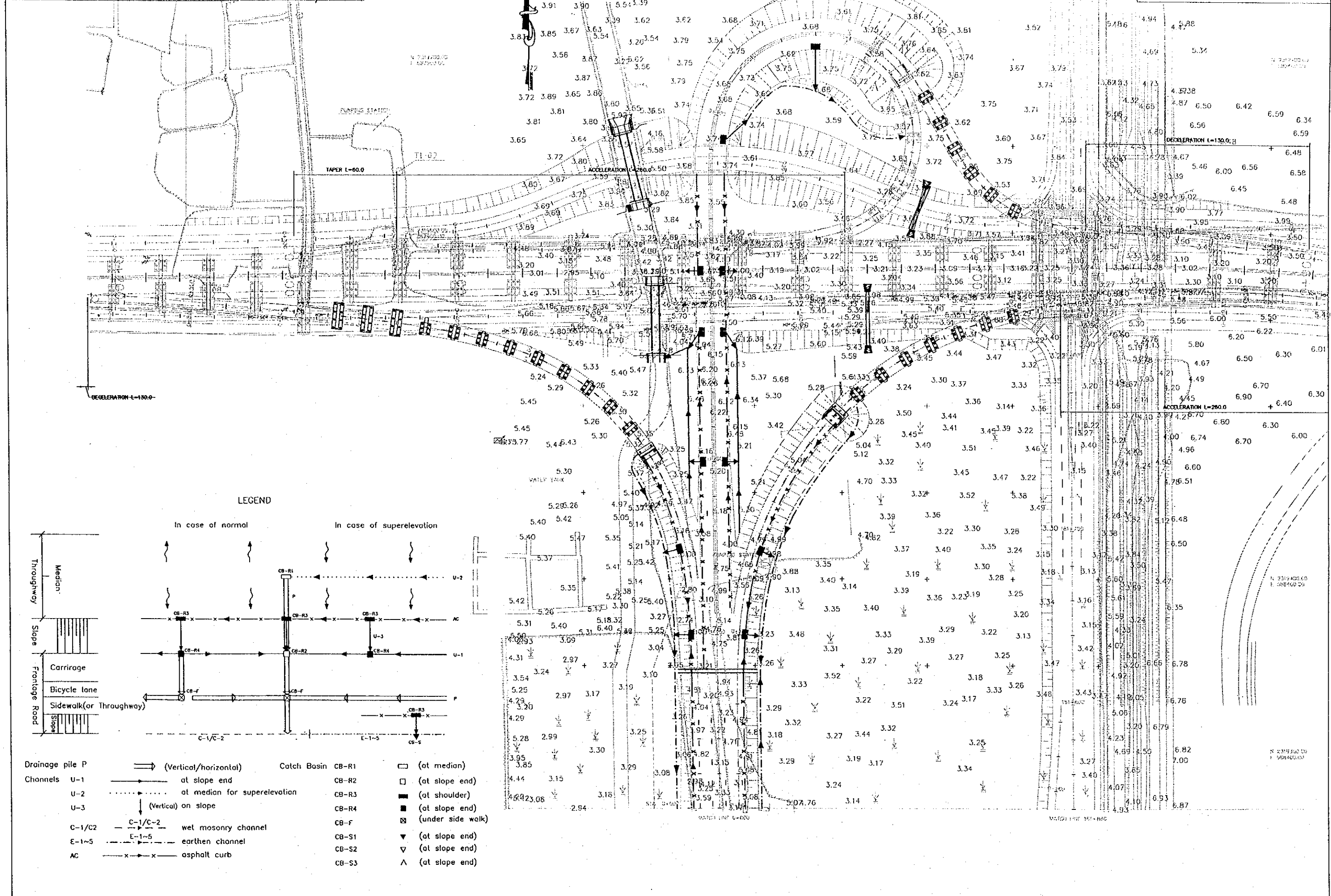


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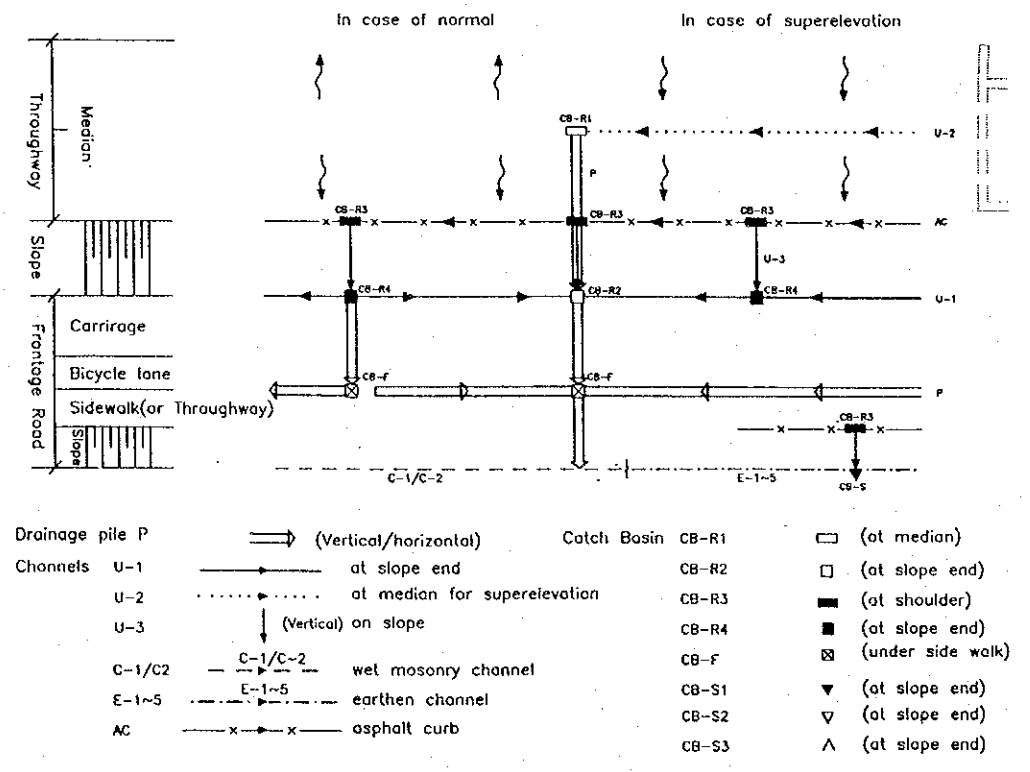


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATADE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	DATE 2000.05.14
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 3	SCALE 1/2000	DRAWING No. E-1-11	SHEET No.
THROUGH WAY AND FRONTAGE ROAD (11)			

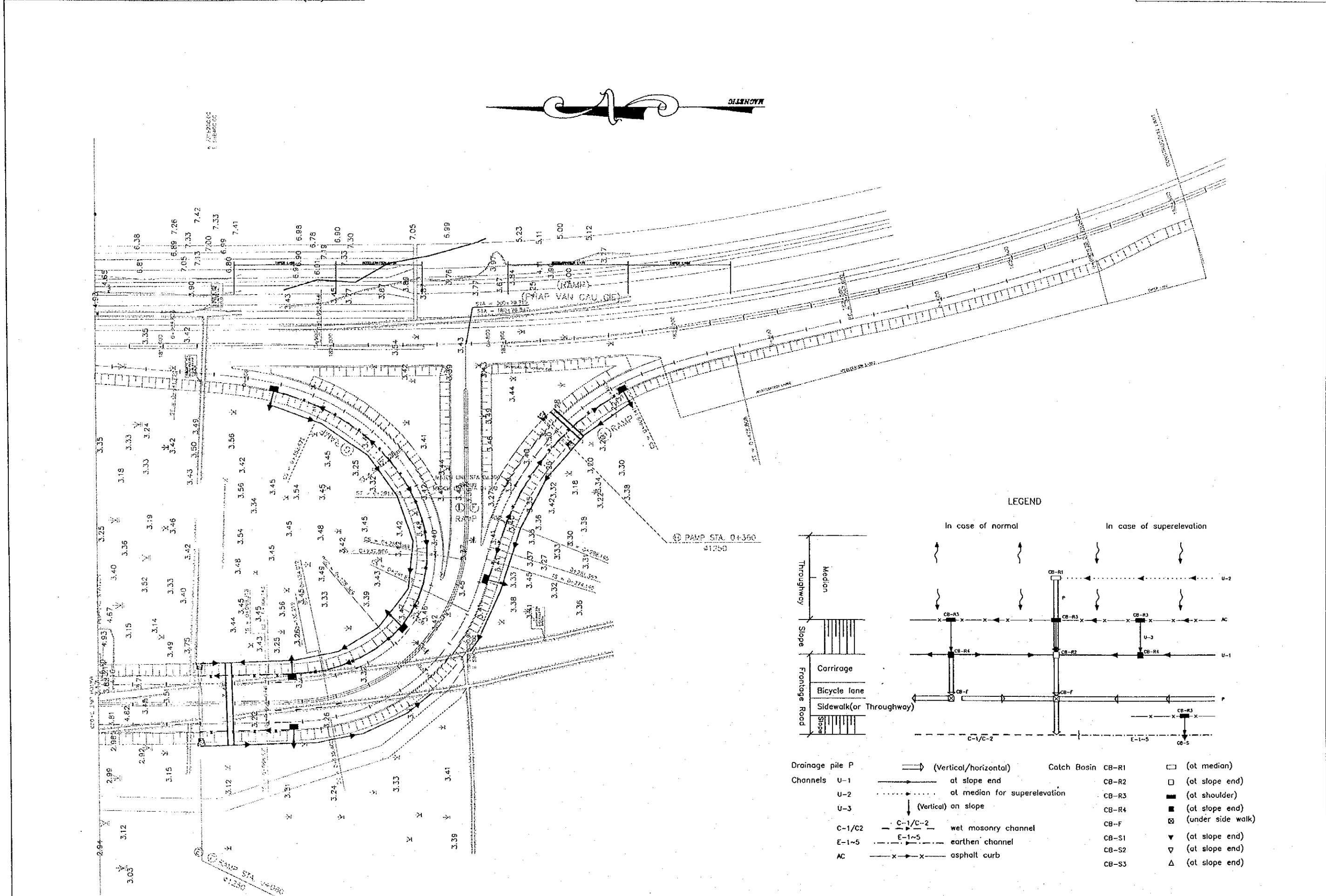


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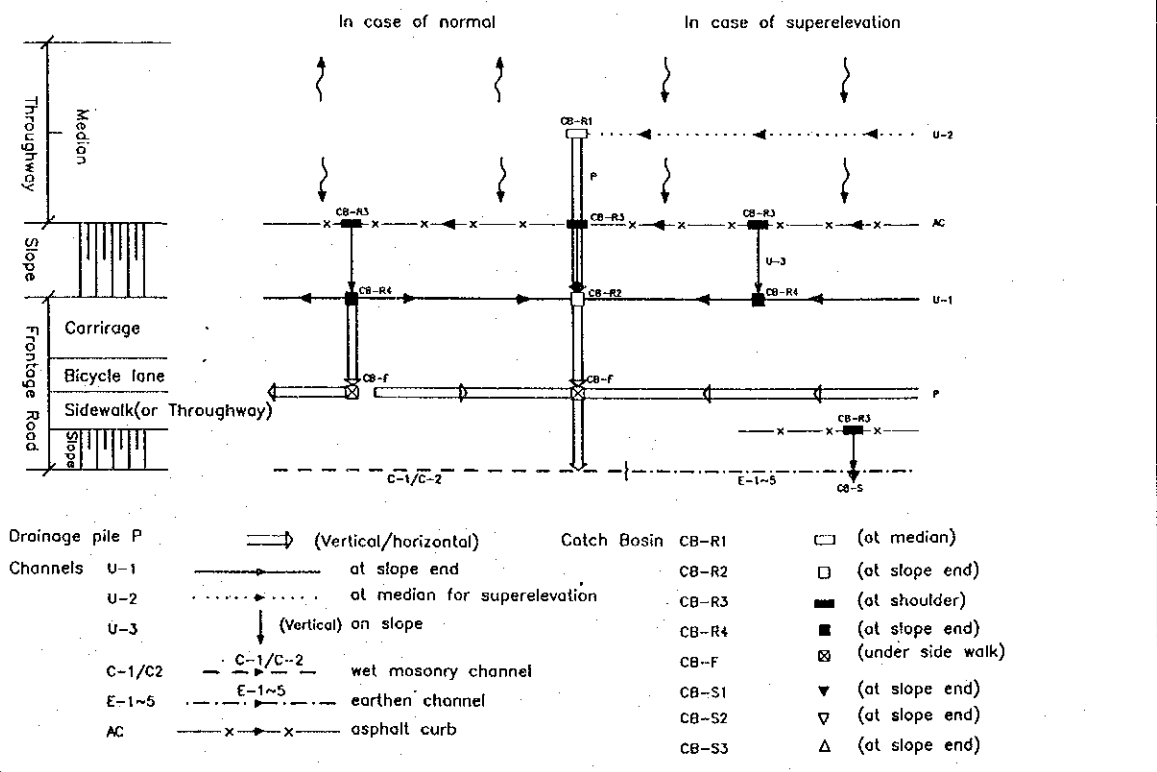


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000-09-14

PACKAGE 3	SCALE 1/2000	DRAWING No. E-1-12	SHEET No.
THROUGH WAY AND FRONTAGE ROAD (12)			



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.WAJABE
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.
3		E-2-1	
LIST OF BOX / PIPE CULVERT			

LIST OF BOX / PIPE CULVERT

Station	Pipe ϕ 1250		Box culvert		Inlet with Basin Type	Outlet with Basin Type	Remarks
	Type	Length(m)	Dimension (m)	Length(m)			
0+510			4.0x2.5	39.50			At right side frontage road
0+517			4.0x2.5	39.50			At left side frontage road
2+397.461			4.0x2.5	93.00			
0+680	A	26.75					At left side frontage road
0+640	A	32.95					At right side frontage road
0+080	A	32.50					Ramp road AB at Phap Van Cau Gie interchange
0+060	A	32.00					Ramp road EF at Phap Van Cau Gie interchange
0+360	A	27.70					Ramp road H at Phap Van Cau Gie interchange
3+089	A	74.60					For connecting between ponds
3+656.3	A	74.20					For connecting between ponds
3+973.5	A	101.6					
4+553	B	77.00			A	A	Relocation of existing channel
4+890.3			2.0x2.0	104.00			
5+262	A	91.80					For connecting between ponds
Total	Type A	494.10					
	Type B	77.00			1No	1No	

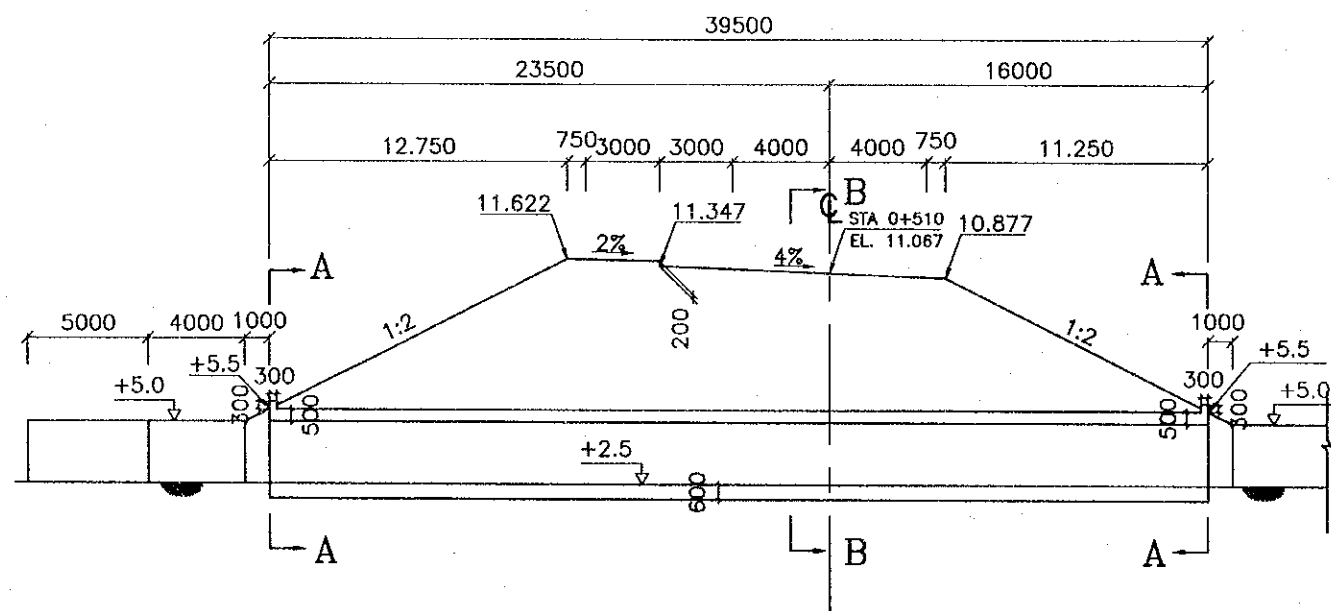
Note: 1. The details of work quantity are shown in the detailed drawings
2. Pipe culvert Type A: 1 lane , Type B: 2 lanes

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		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	2000.05.17

PACKAGE 3	SCALE AS SHOWN	DRAWING No. E-2-2	SHEET No.
BOX CULVERT (LEFT SIDE FRONTAGE ROAD, STA.0+510)			

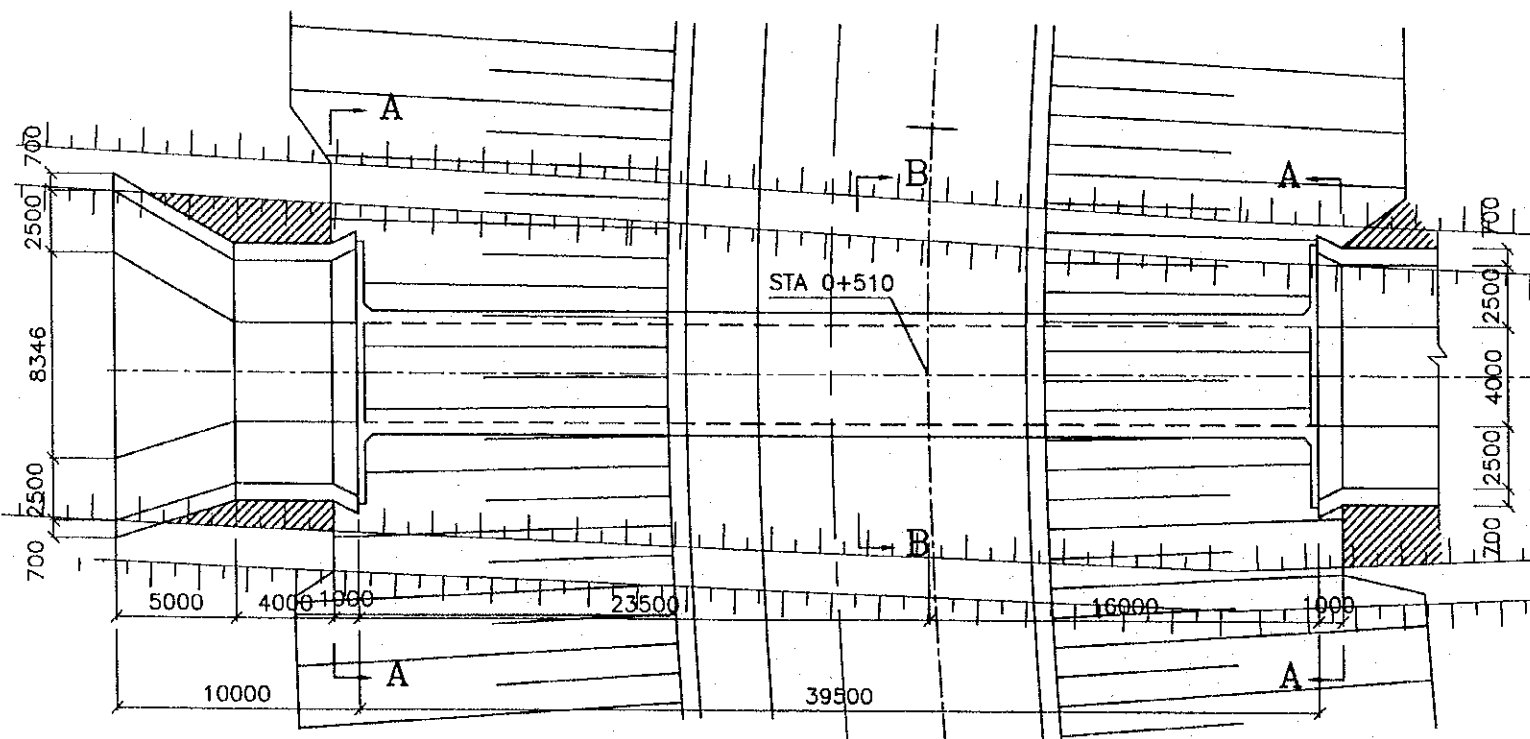
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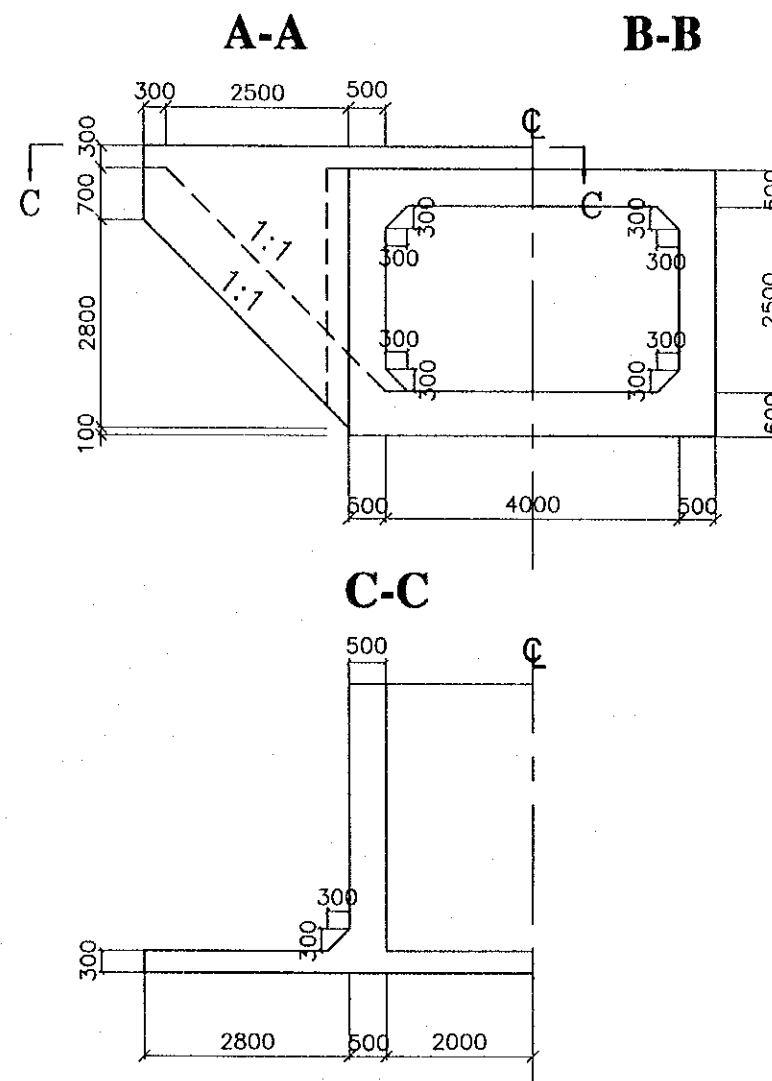
PLAN

Scale=1:300



CROSS SECTION

Scale=1:100

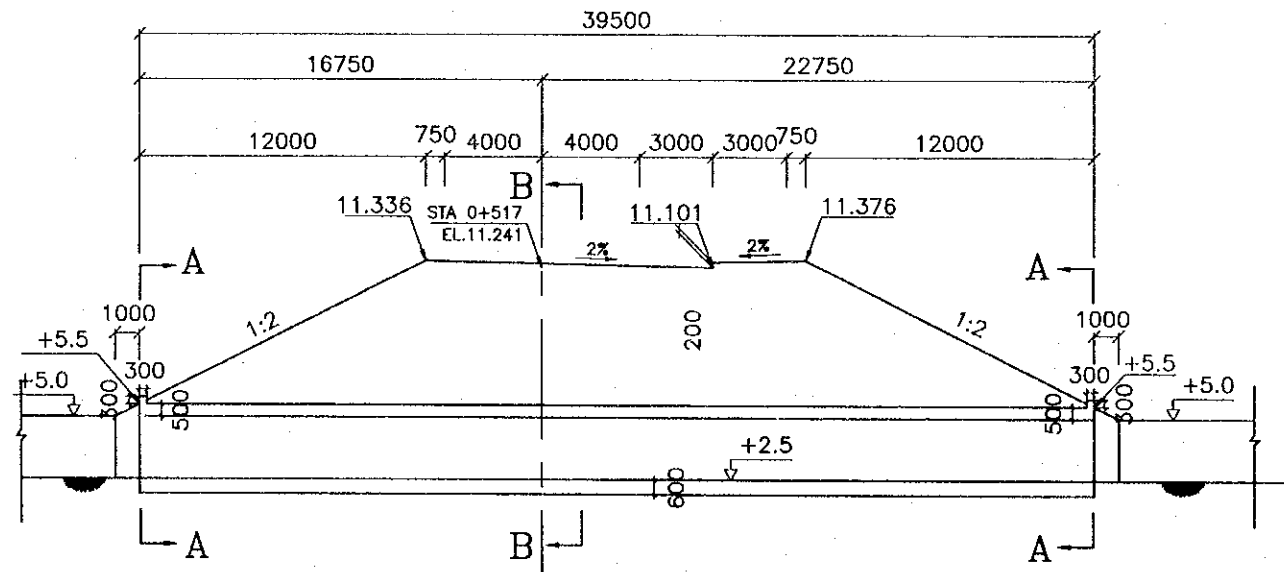


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME S.WATABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.01.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	AS SHOWN	E-2-3	
BOX CULVERT (RIGHT SIDE FRONTAGE ROAD, STA.0+517)			

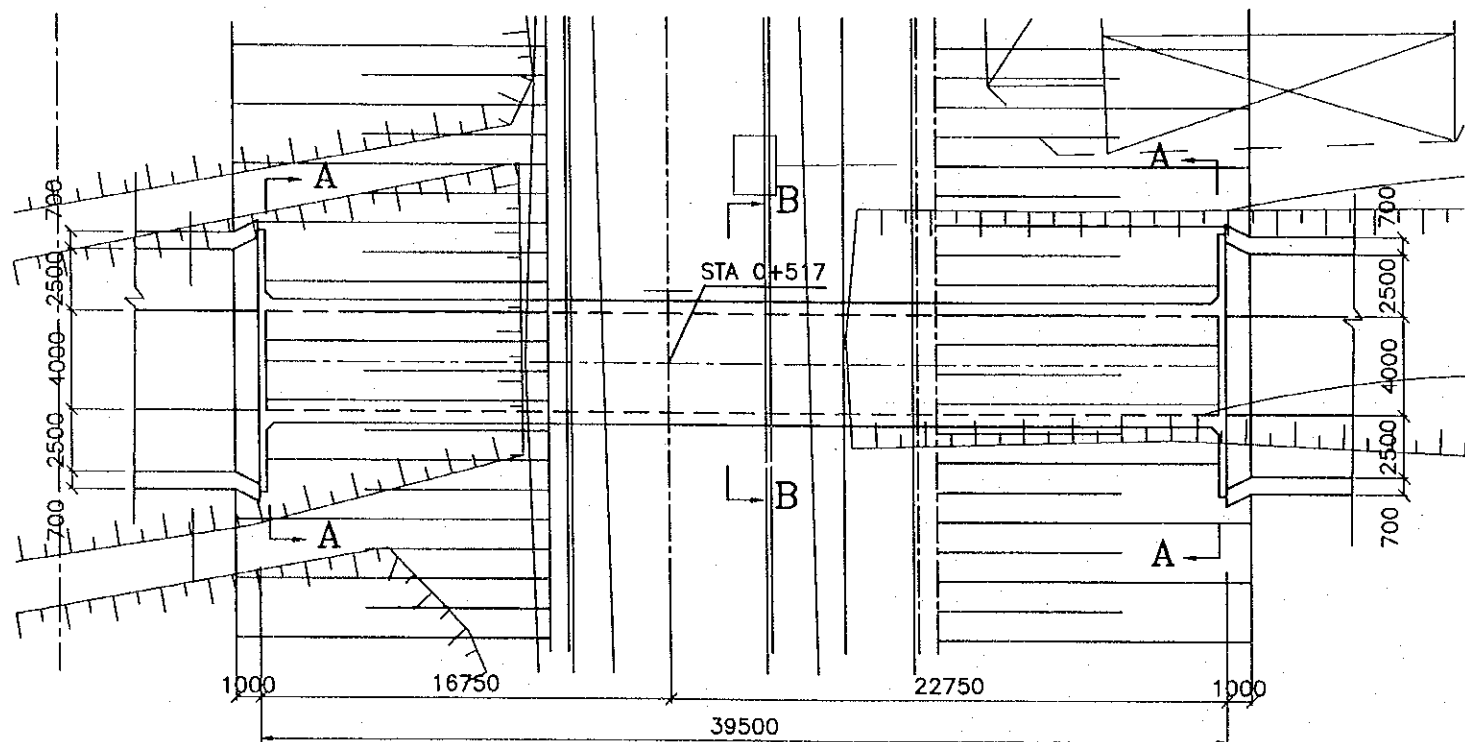
PROFILE

Scale=1:300



PLAN

Scale=1:300

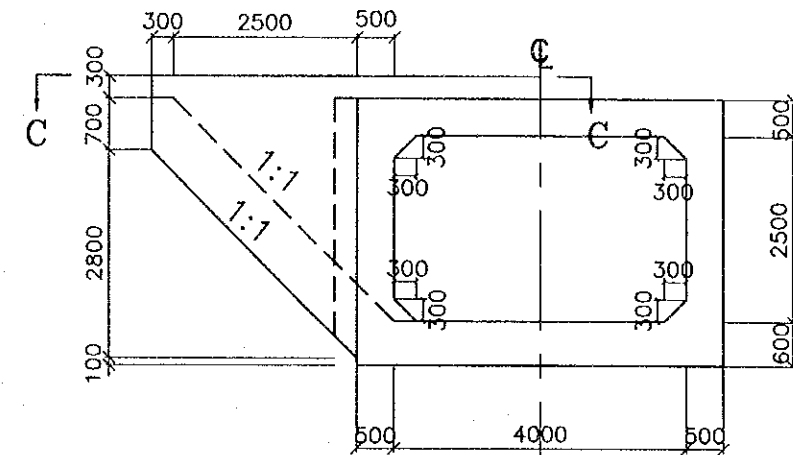


CROSSECTION

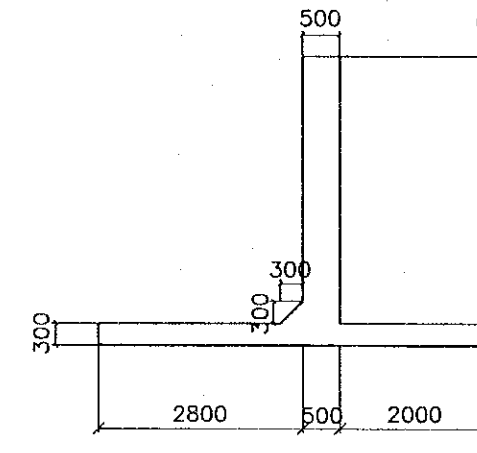
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A-A

B-B



C-C

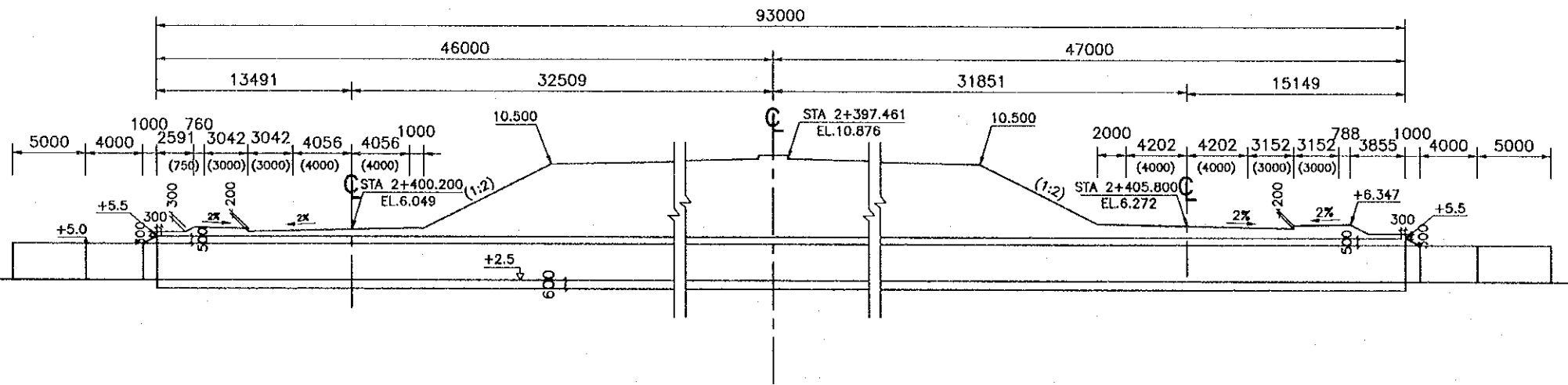


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.03.14

PACKAGE 3	SCALE AS SHOWN	DRAWING No. E-2-4	SHEET No.
BOX CULVERT (STA. 2+397.416)			

PROFILE

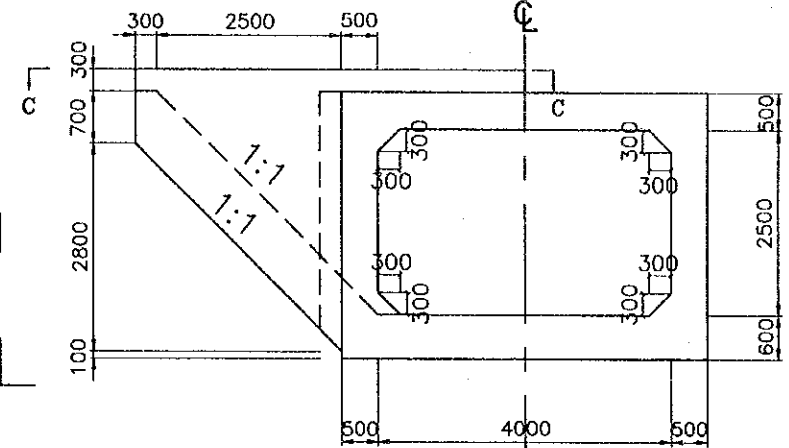
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CROSS SECTION

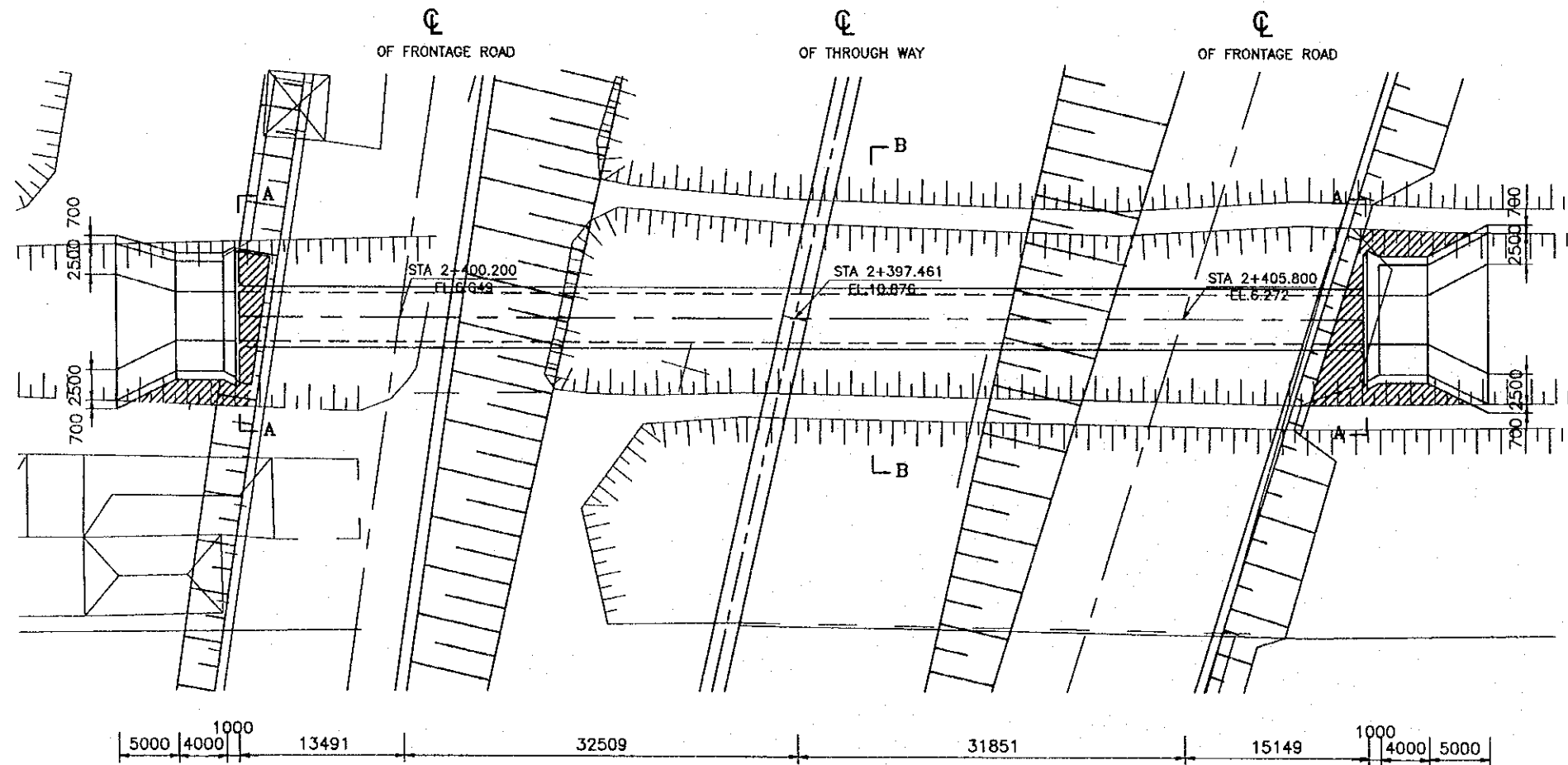
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A-A B-B

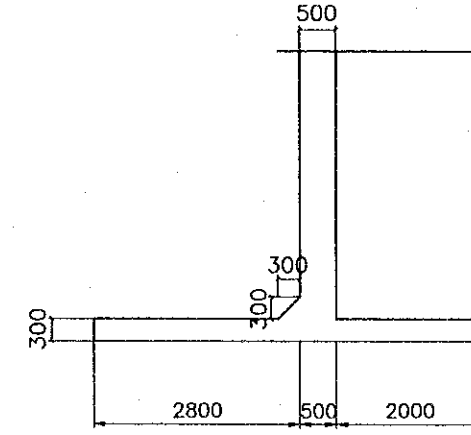


PLAN

Scale=1:500



C-C

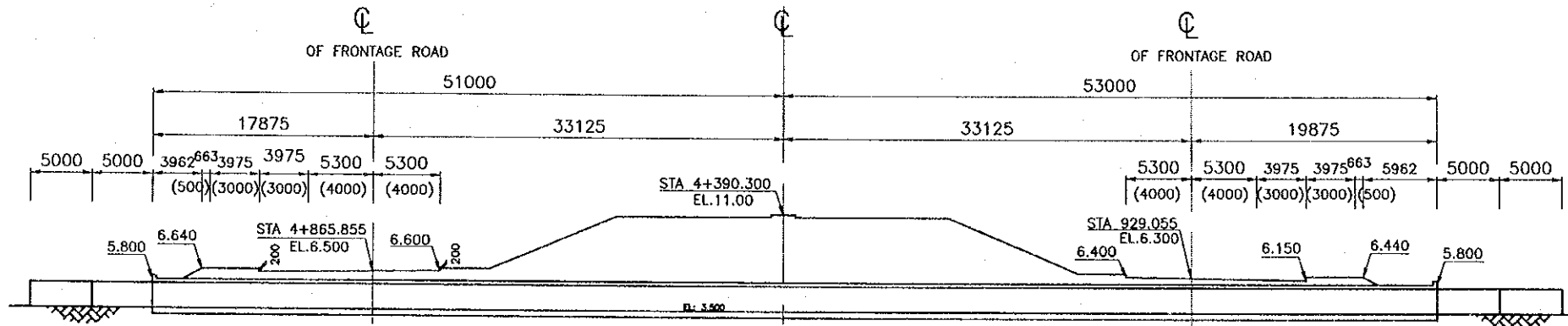


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANH LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT: RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT: PACIFIC CONSULTANTS INTERNATIONAL		DATE: 2000.03.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	AS SHOWN	E-2-5	83
BOX CULVER (STA 4+890.300)			

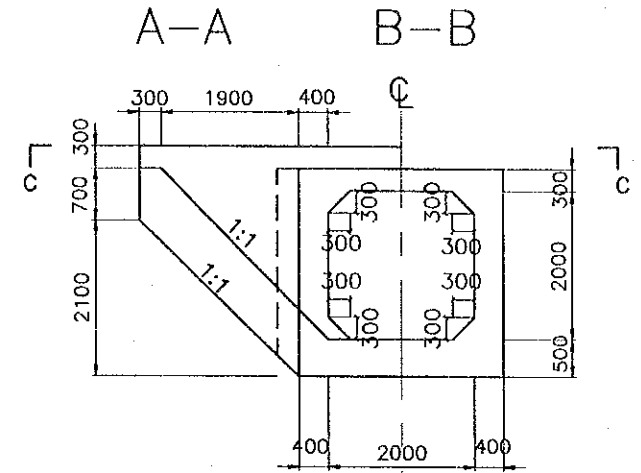
PROFILE

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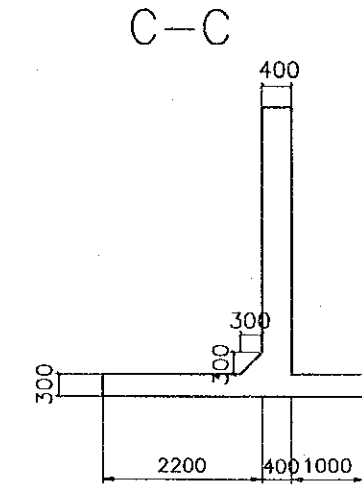
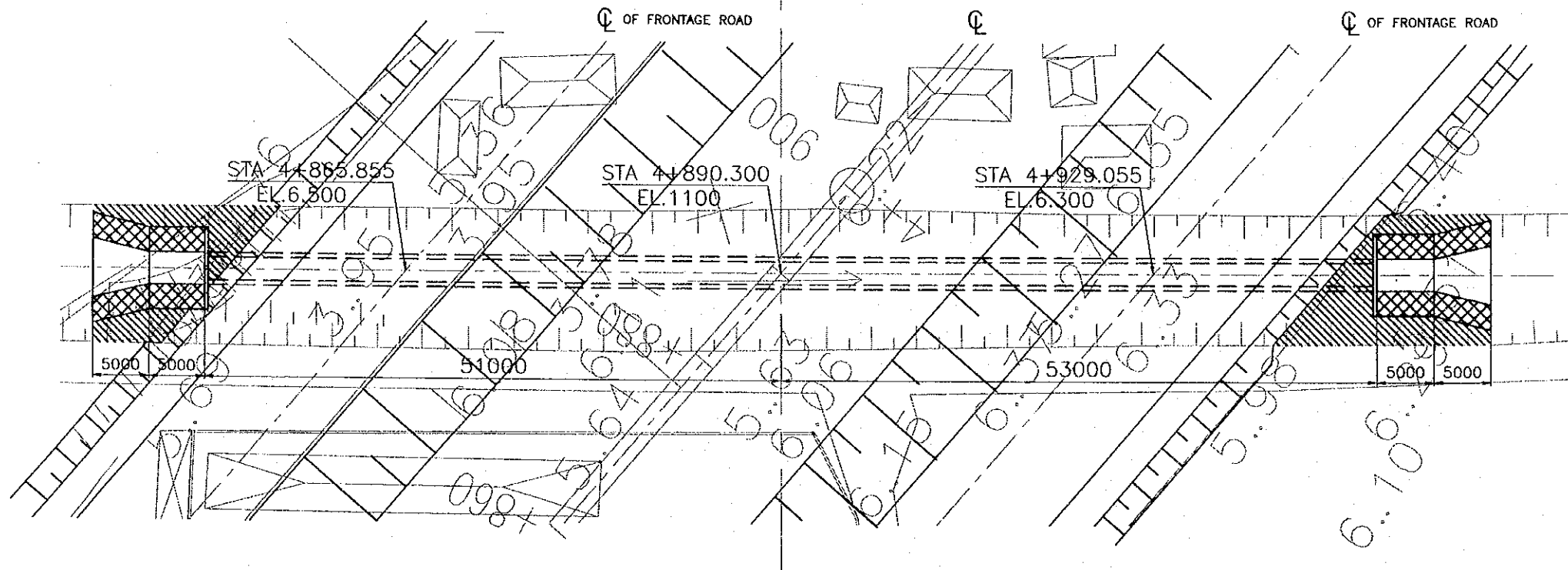
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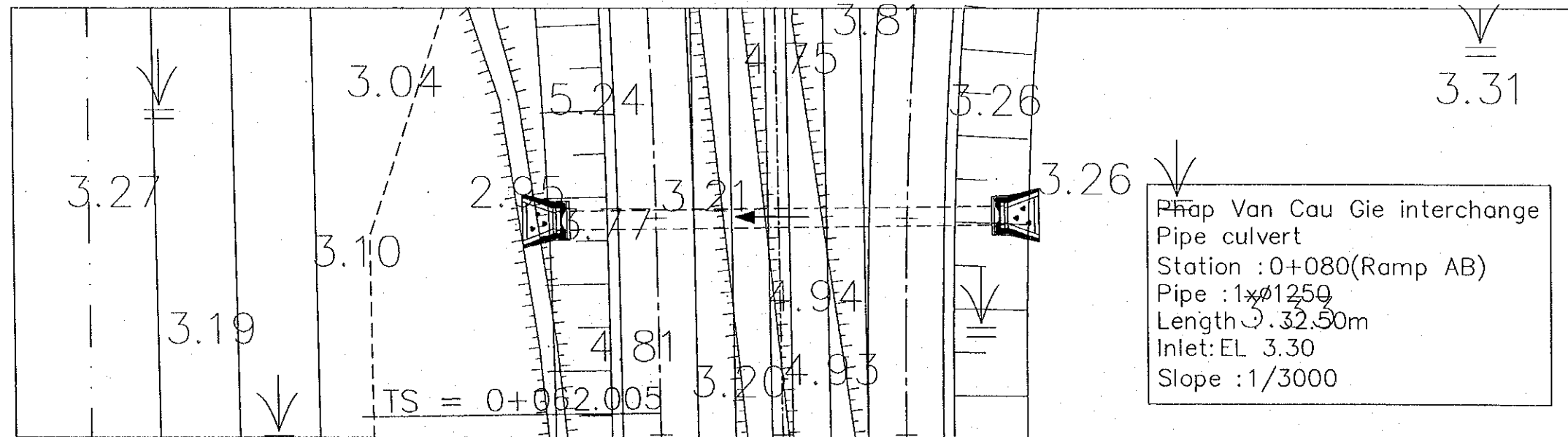
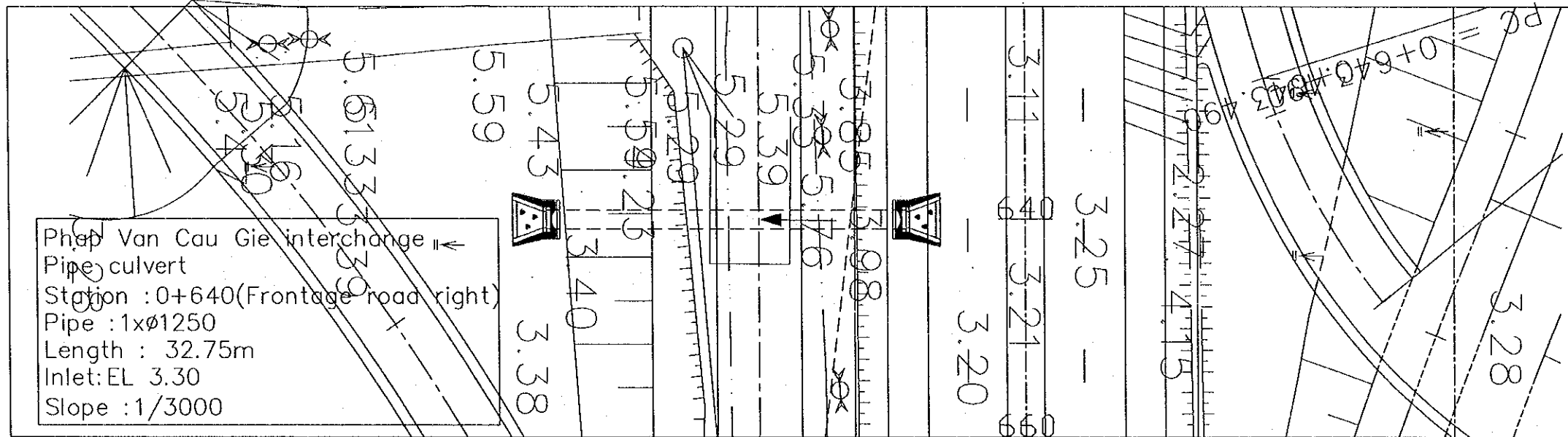
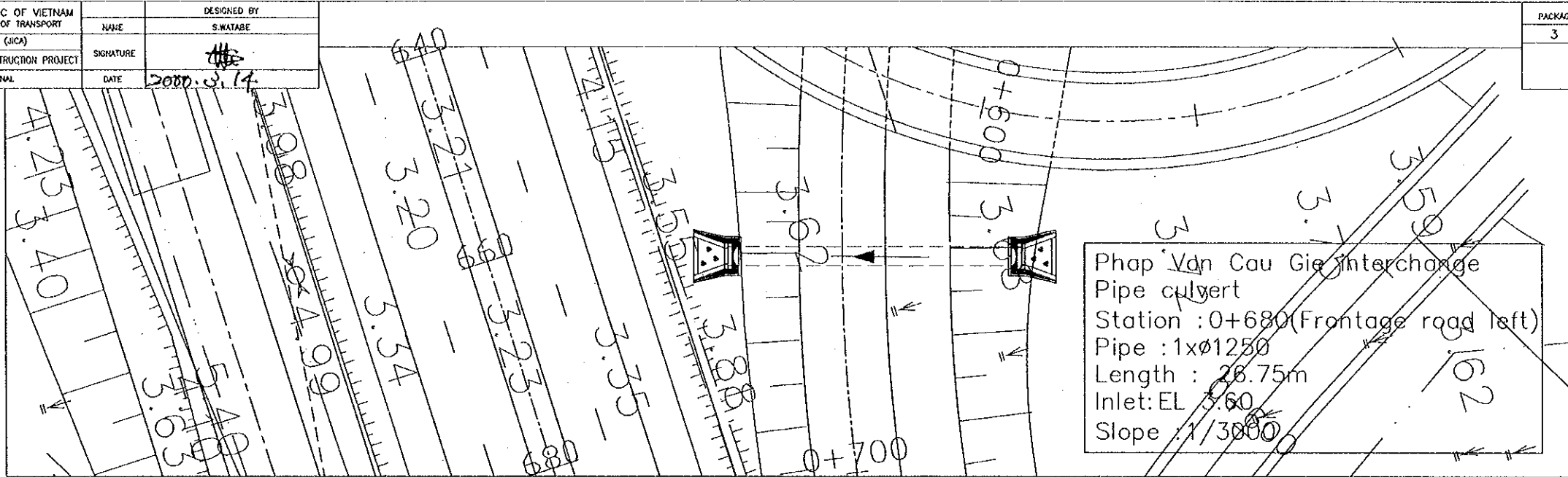
PLAN

Scale=1:500



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 (HUANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.3.14

PACKAGE 3	SCALE 1/500	DRAWING No. E-2-6	SHEET No.
PIPE CULVERT PLAN (1/4)			

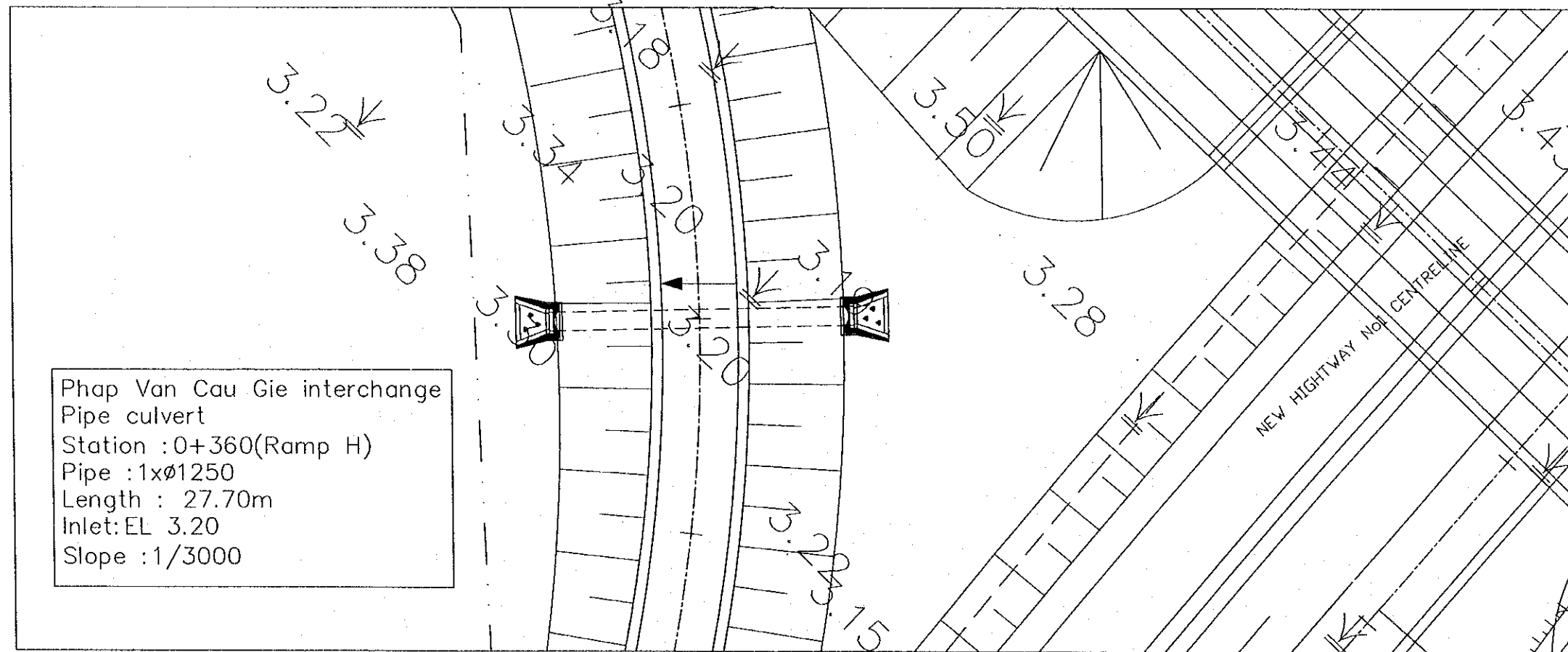
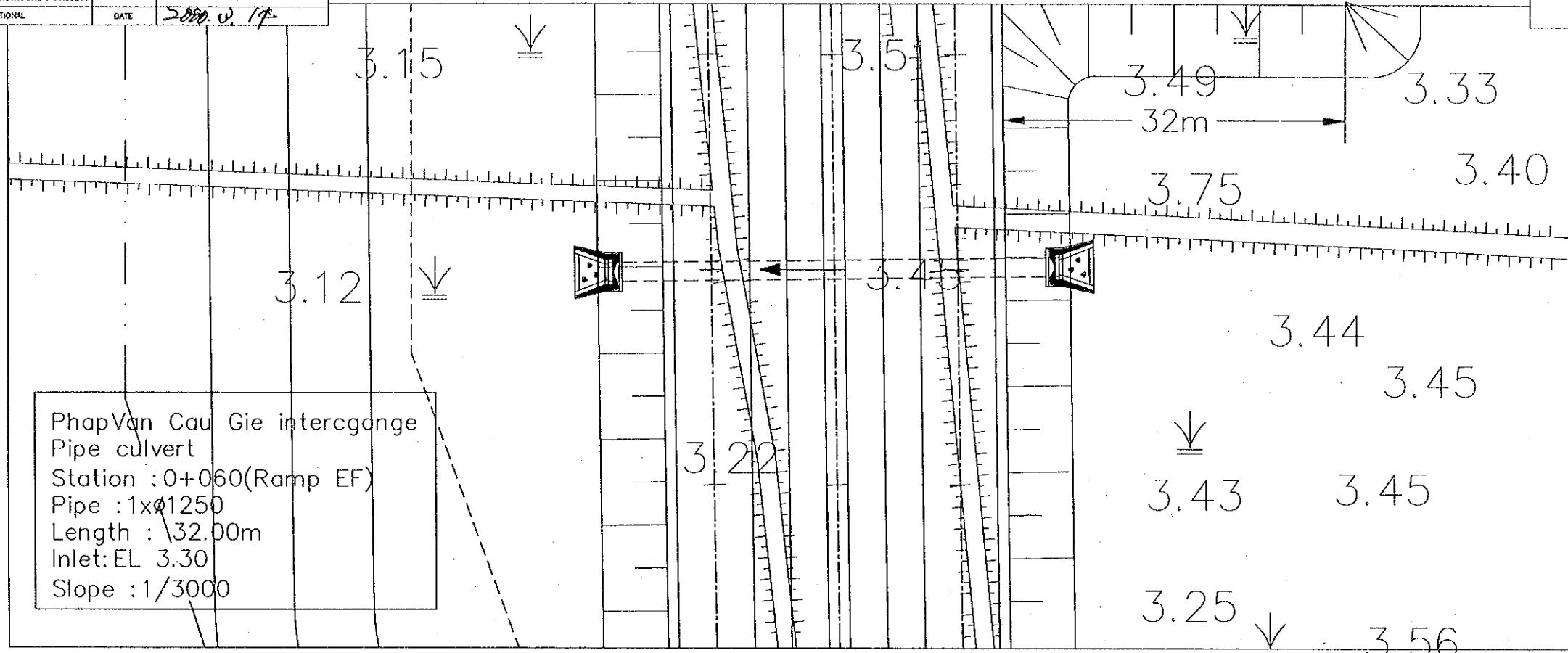


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM
 THANH LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT
 JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
 PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT
 CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED BY
 NAME S. WATABE
 SIGNATURE *[Signature]*
 DATE 2000.0.18

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/500	E-2-7	

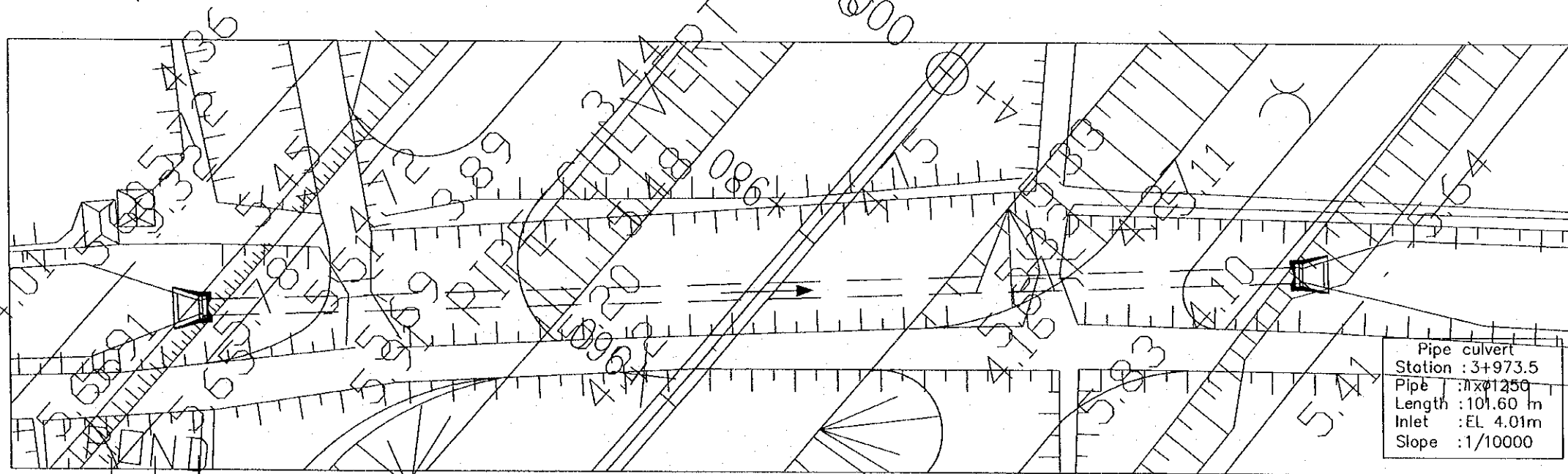
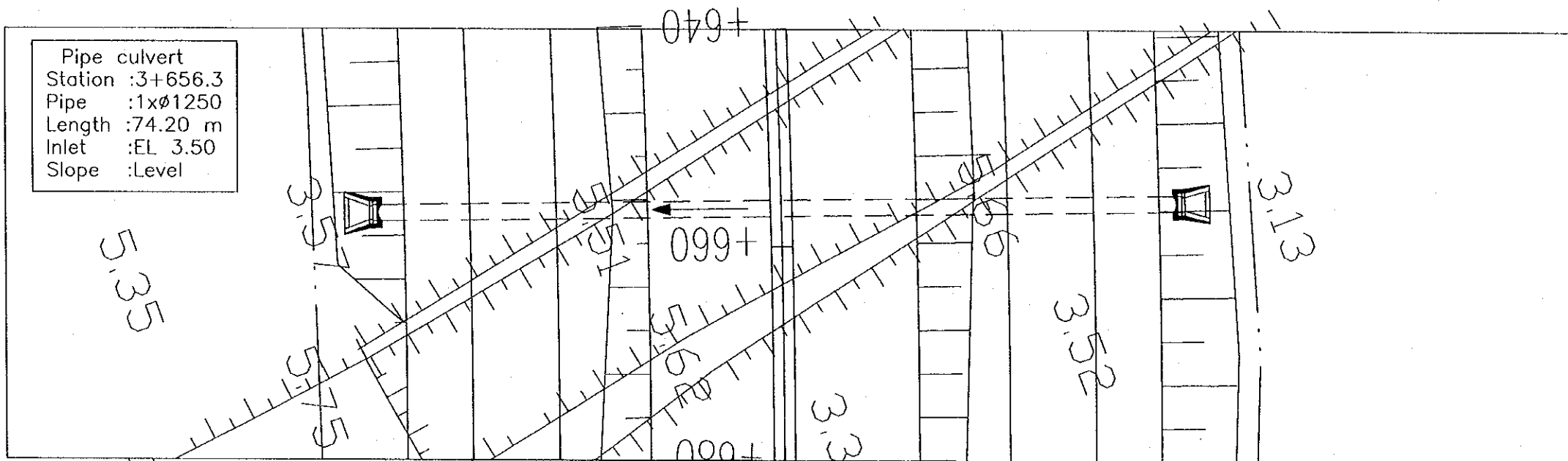
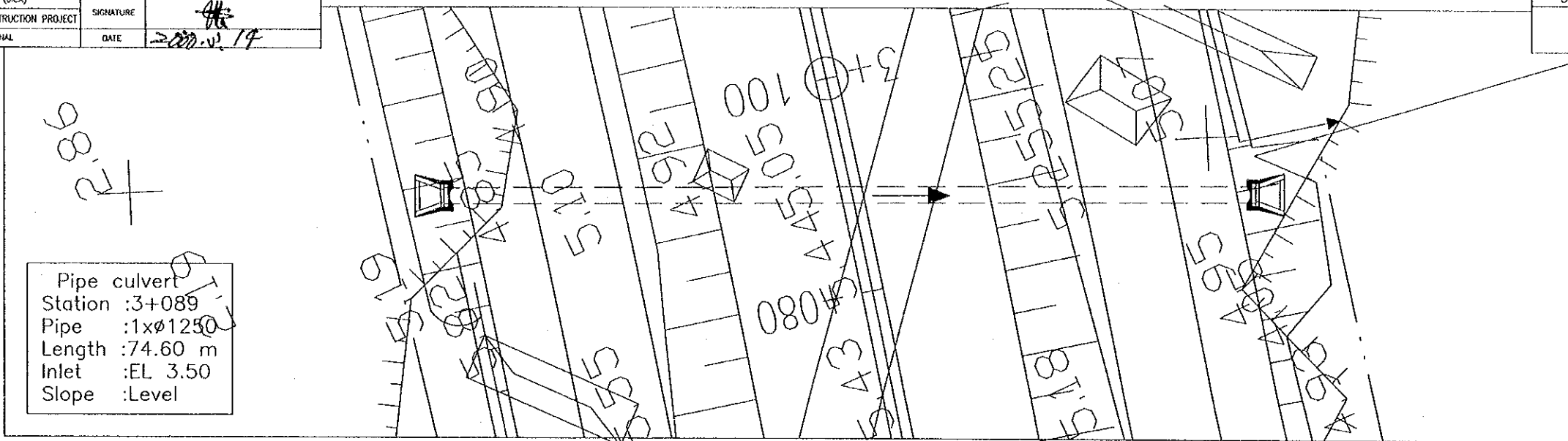
PIPE CULVERT PLAN (2/4)



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.WATADA
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONTRACTOR PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000.02.14

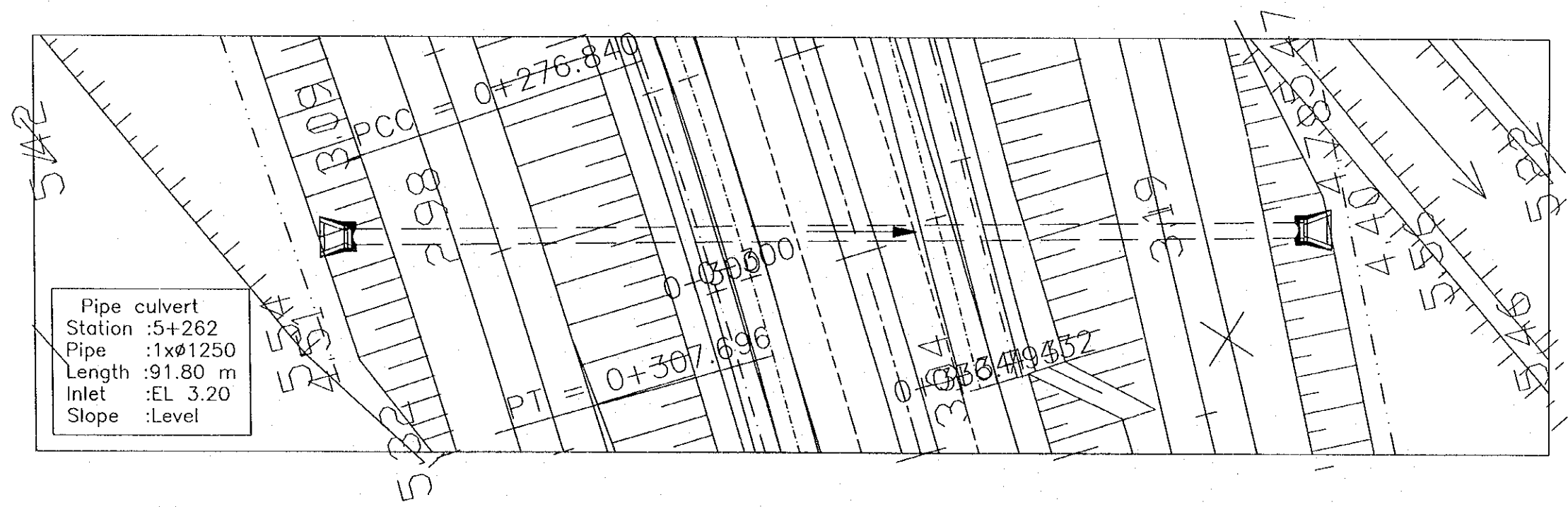
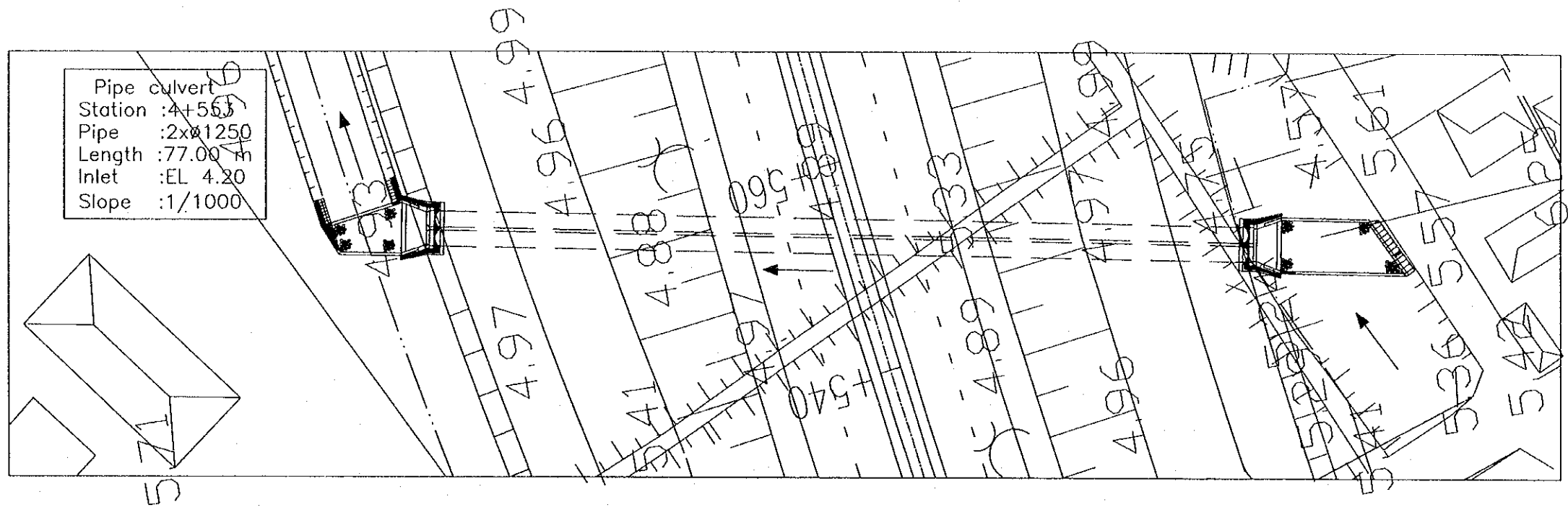
PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/500	E-2-B	

PIPE CULVERT PLAN (3/4)



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 2000.08.14	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

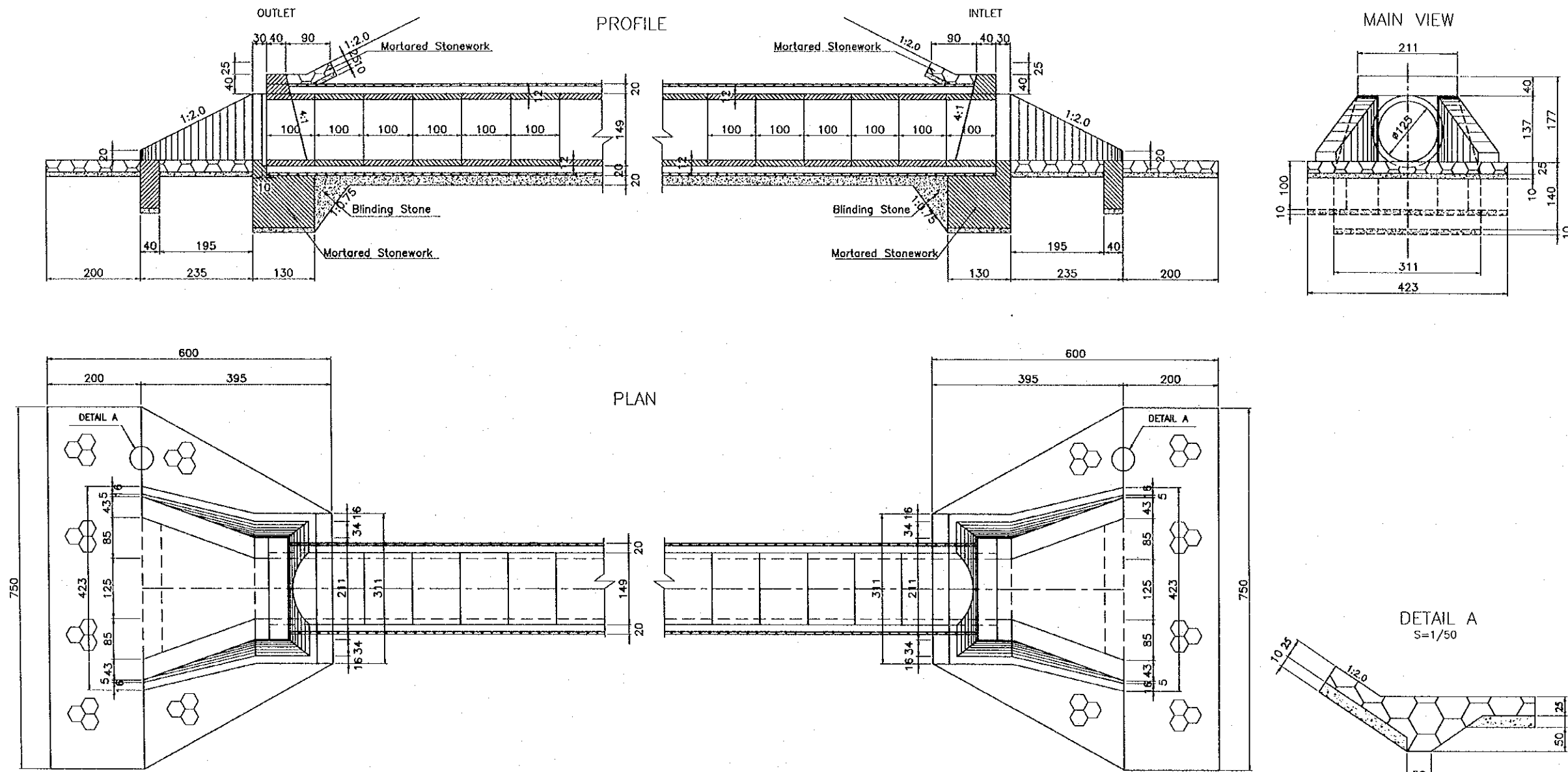
PACKAGE 3	SCALE 1/500	DRAWING No. E-2-9	SHEET No.
PIPE CULVERT PLAN (4/4)			



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)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.14

PACKAGE 3	SCALE 1/100	DRAWING No. E-2-10	SHEET No.
HEAD WALL OF PIPE CULVERT Ø1.25M			

HEAD WALL OF PIPE CULVERT Ø1.25M



MATERIAL QUANTITY TABLE OF PIPE CULVERT Ø1.25 M

		Mortared stonework	Blinding stone	Mortar	Pipe culvert Ø1.25x1.0	Cement Mortar
	Unit	m ³	m ³	m ³	m	m ³
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

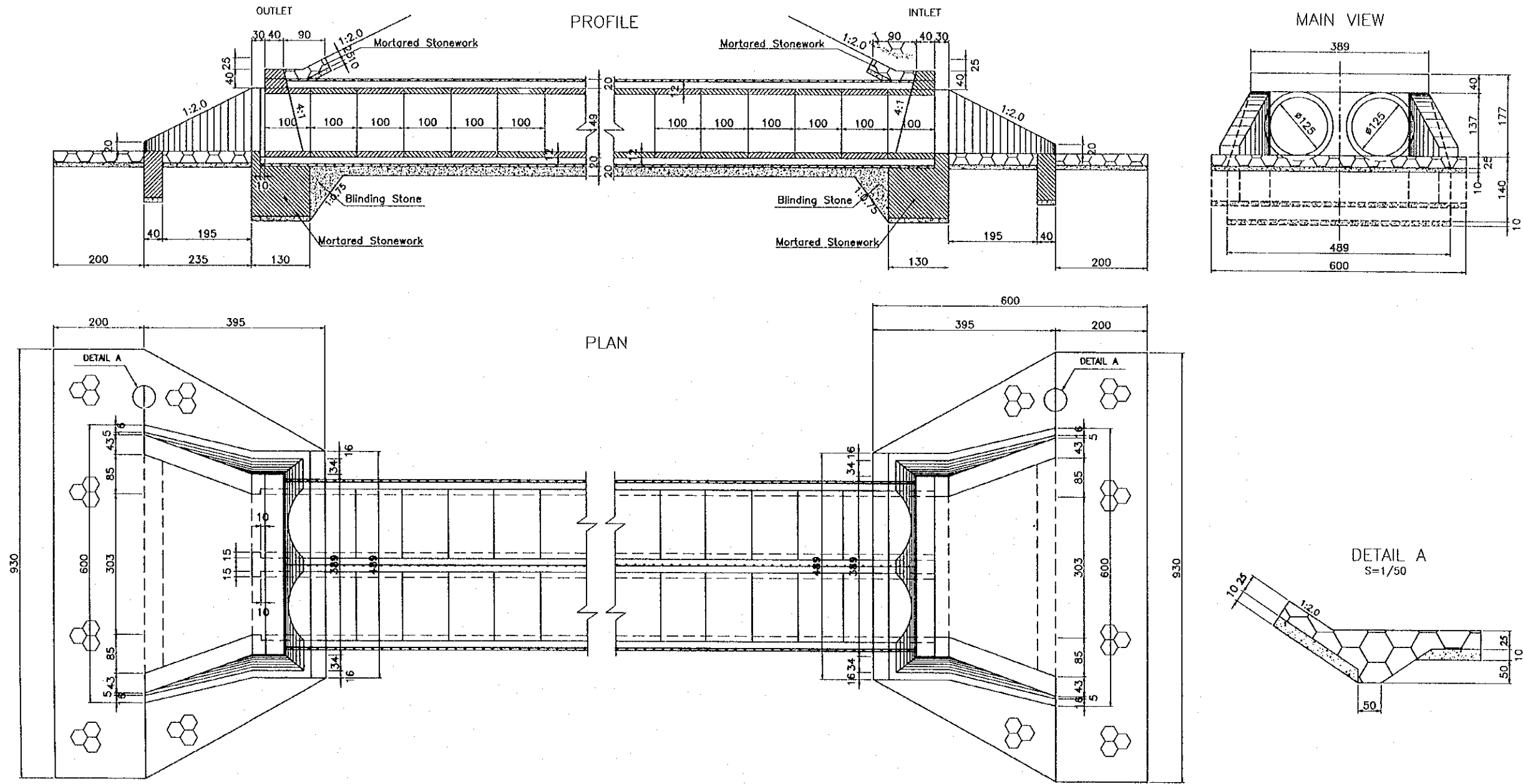
NOTE

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 HANG 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 2000.3.14
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 3	SCALE 1/100	DRAWING No. E-2-11	SHEET No.
HEAD WALL OF PIPE CULVERT 2x ϕ 1.25M			

HEAD WALL OF PIPE CULVERT 2 ϕ 1.25M



MATERIAL QUANTITY TABLE OF PIPE CULVERT 2 ϕ 1.25 M

		Mortared stonework	Blinding stone	Mortar	Pipe culvert ϕ 1.25x1.0	Cement Mortar
	Unit	m ³	m ³	m ³	m	m ³
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

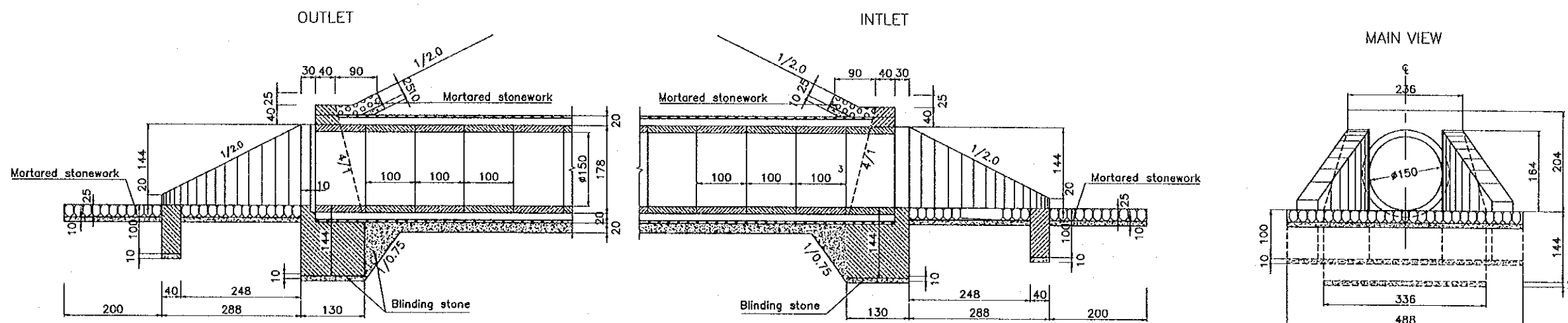
Construction of this pipe culvert shall be implemented in consideration of the consolidation of embankment. This is expected to be approximately 30 days after completion of embankment.

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM 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	2000.2.17

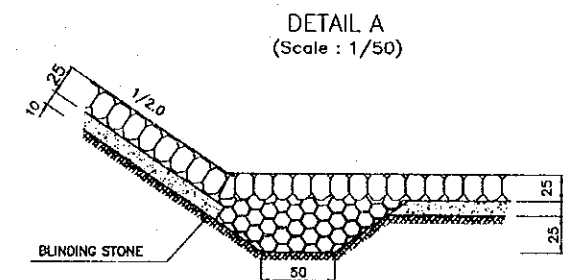
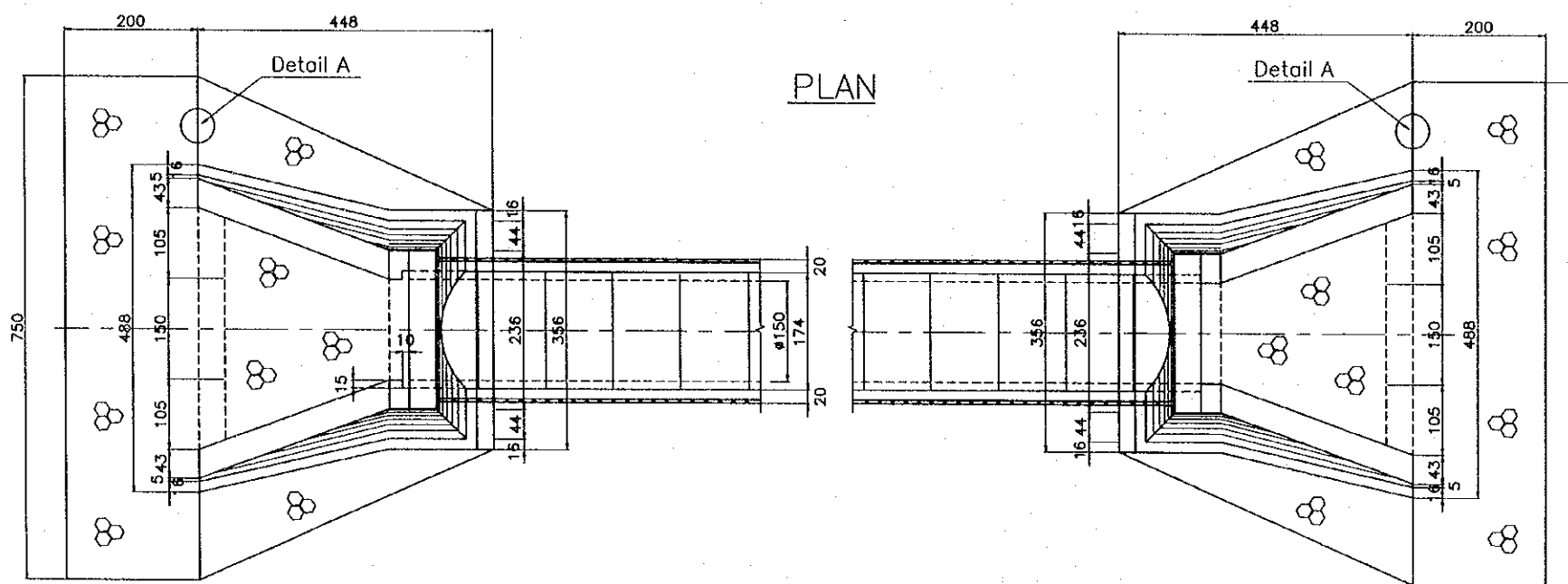
HEAD WALL OF PIPE CULVERT $\phi 1.50\text{m}$

PACKAGE 3	SCALE 1/100	DRAWING No. E-2-12	SHEET No.
HEAD WALL OF PIPE CULVERT $\phi 1.50\text{M}$			

PROFILE



PLAN



MATERIAL QUANTITIES TABLE OF PIPE CULVERT $\phi 1.50\text{ M}$

Unit		Mortared stonework	Blinding stone	Mortar	Pipe culvert $\phi 1.50 \times 1.0\text{ m}$	Cement Mortar
Unit		m ³	m ³	m ³	m	m ³
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

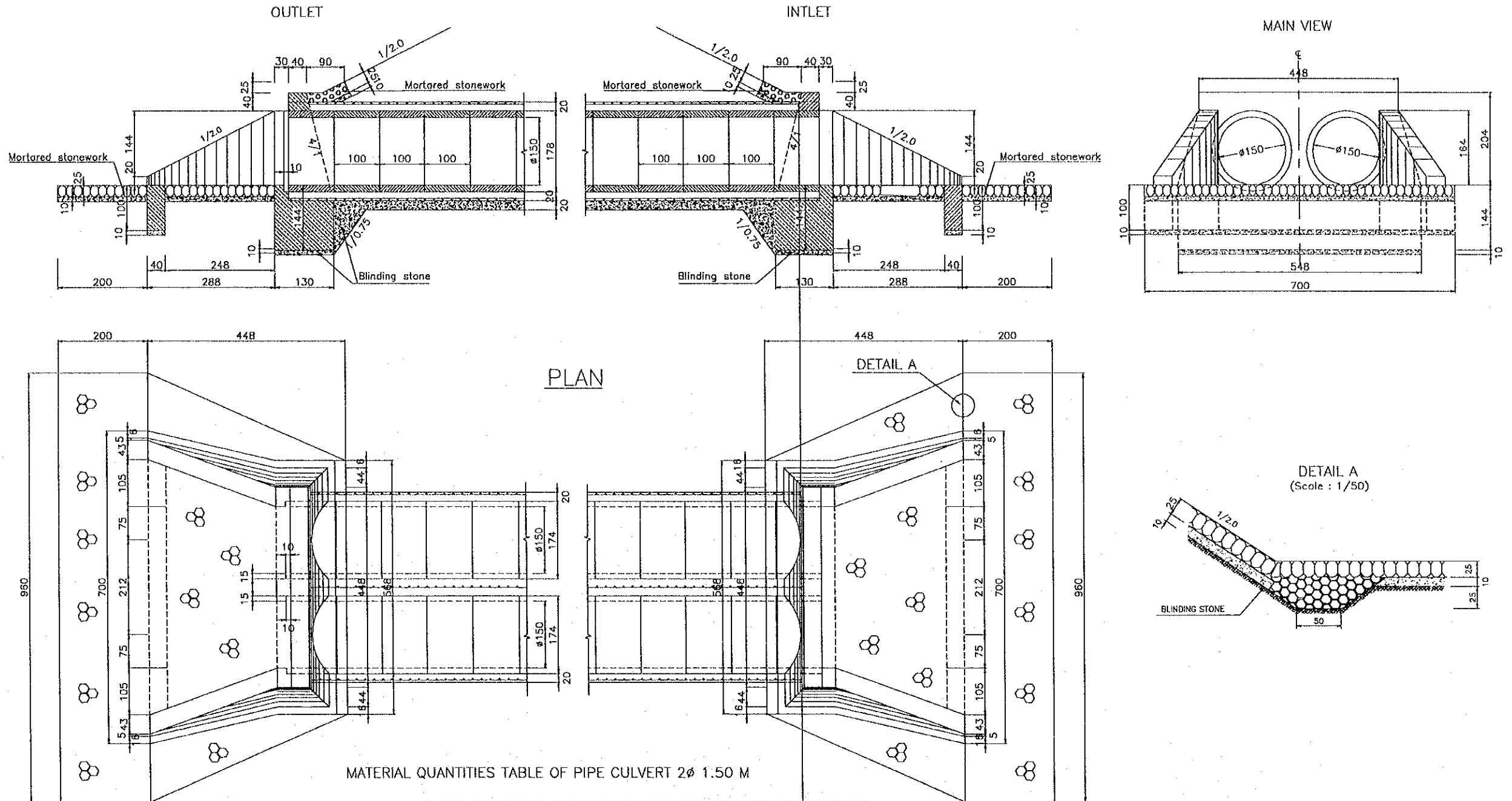
NOTE

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. 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

HEAD WALL OF PIPE CULVERT 2 ϕ 1.50m PROFILE

PACKAGE 3	SCALE 1/100	DRAWING No. E-2-13	SHEET No.
HEAD WALL OF PIPE OF CULVERT 2x ϕ 1.50M			



MATERIAL QUANTITIES TABLE OF PIPE CULVERT 2 ϕ 1.50 M

		Mortared stonework	Blinding stone	Mortar	Pipe culvert ϕ 1.50x1.0 m	Cement Mortar
Unit		m ³	m ³	m ³	m	m ³
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

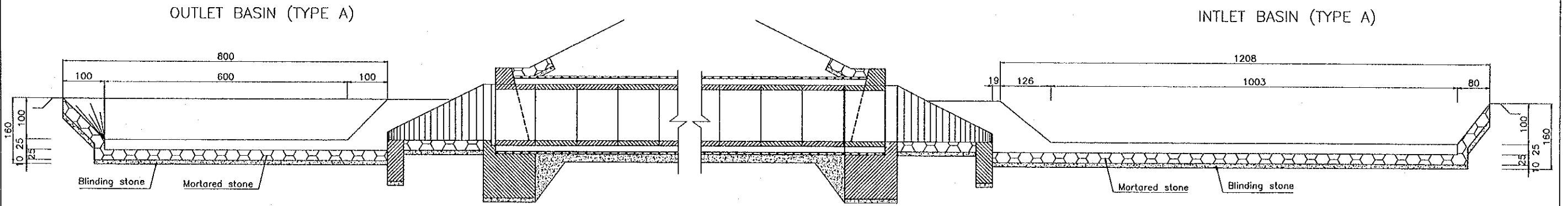
Construction of this culvert shall be implemented in consideration of the consolidation of embankment. This is expected to be approximately 30 days after completion of embankment

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. 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

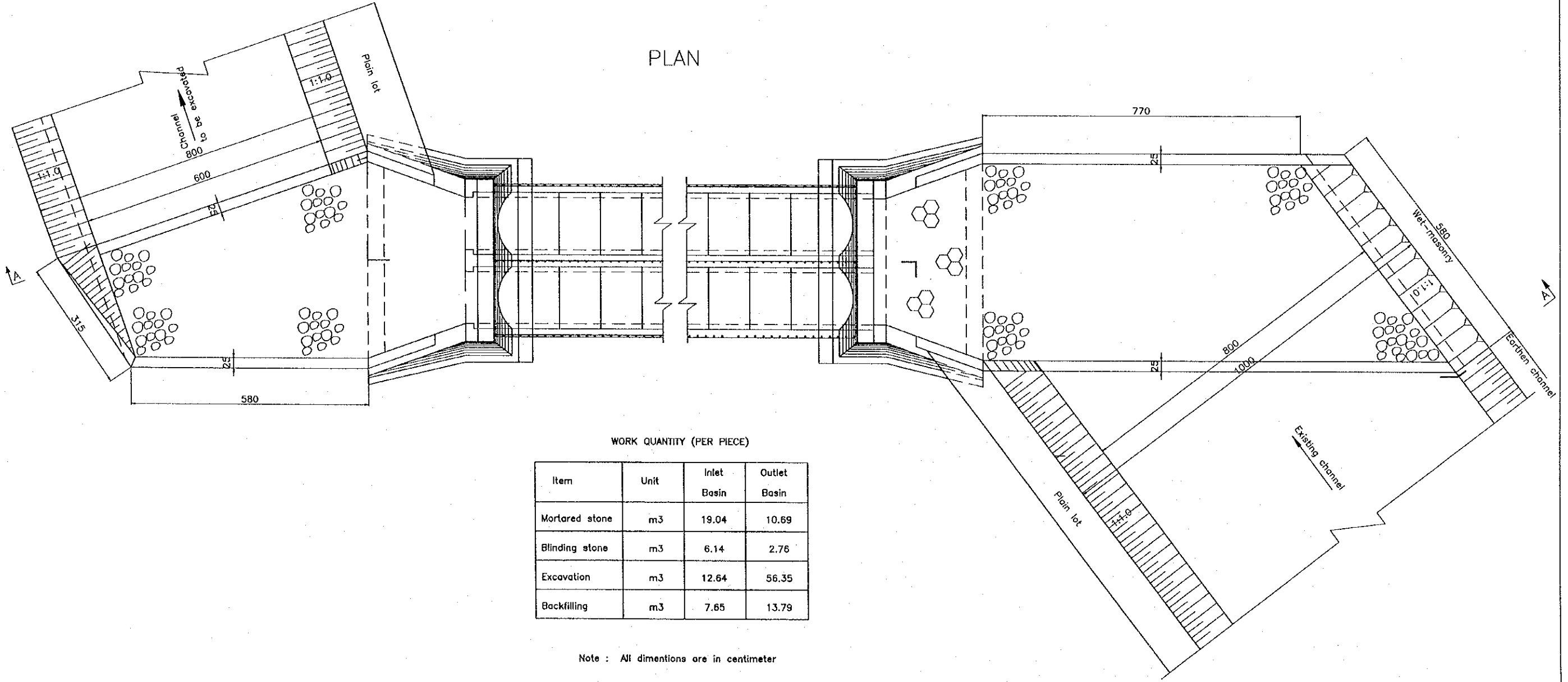
PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/100	E-2-14	
DETAIL OF PIPE CULVERT OUTLET- INLET AT STA. 4+553			

DETAIL OF PIPE CULVERT OUTLET/INLET AT STA. 4+553

SECTION A-A



PLAN



WORK QUANTITY (PER PIECE)

Item	Unit	Inlet Basin	Outlet Basin
Mortared stone	m ³	19.04	10.69
Blinding stone	m ³	6.14	2.76
Excavation	m ³	12.64	56.35
Backfilling	m ³	7.65	13.79

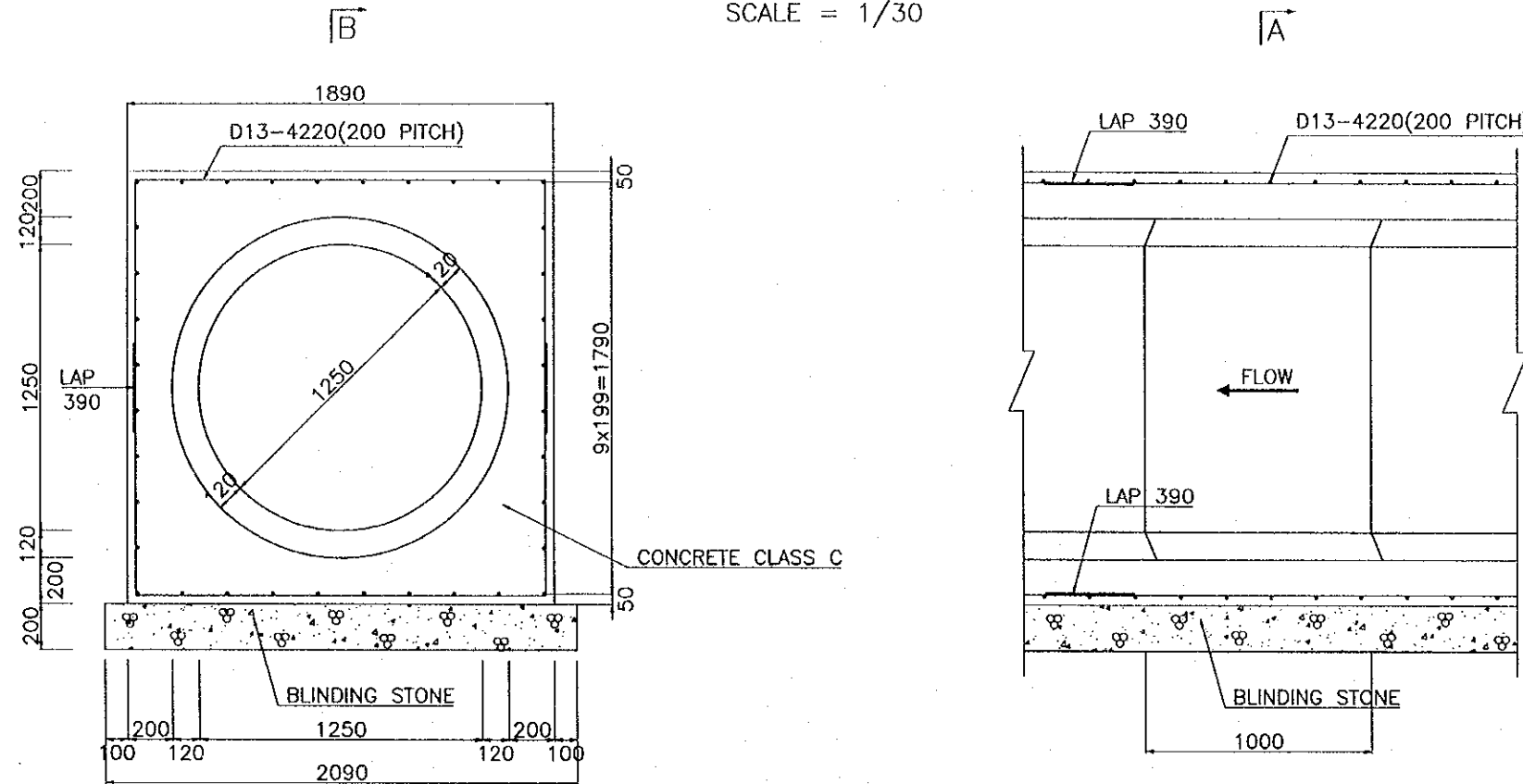
Note : All dimintions are in centimeter

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TUONG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WAIABE
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.
3	1/30	E-2-15	
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

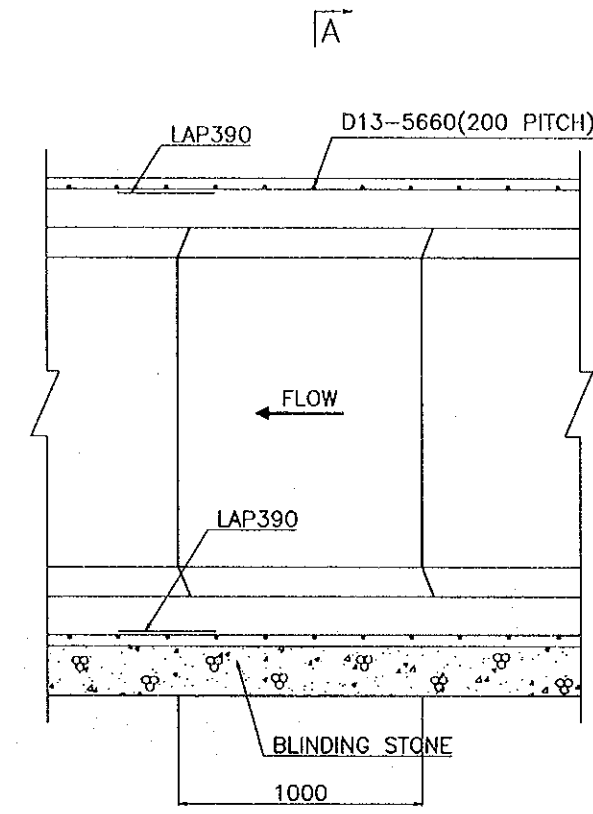
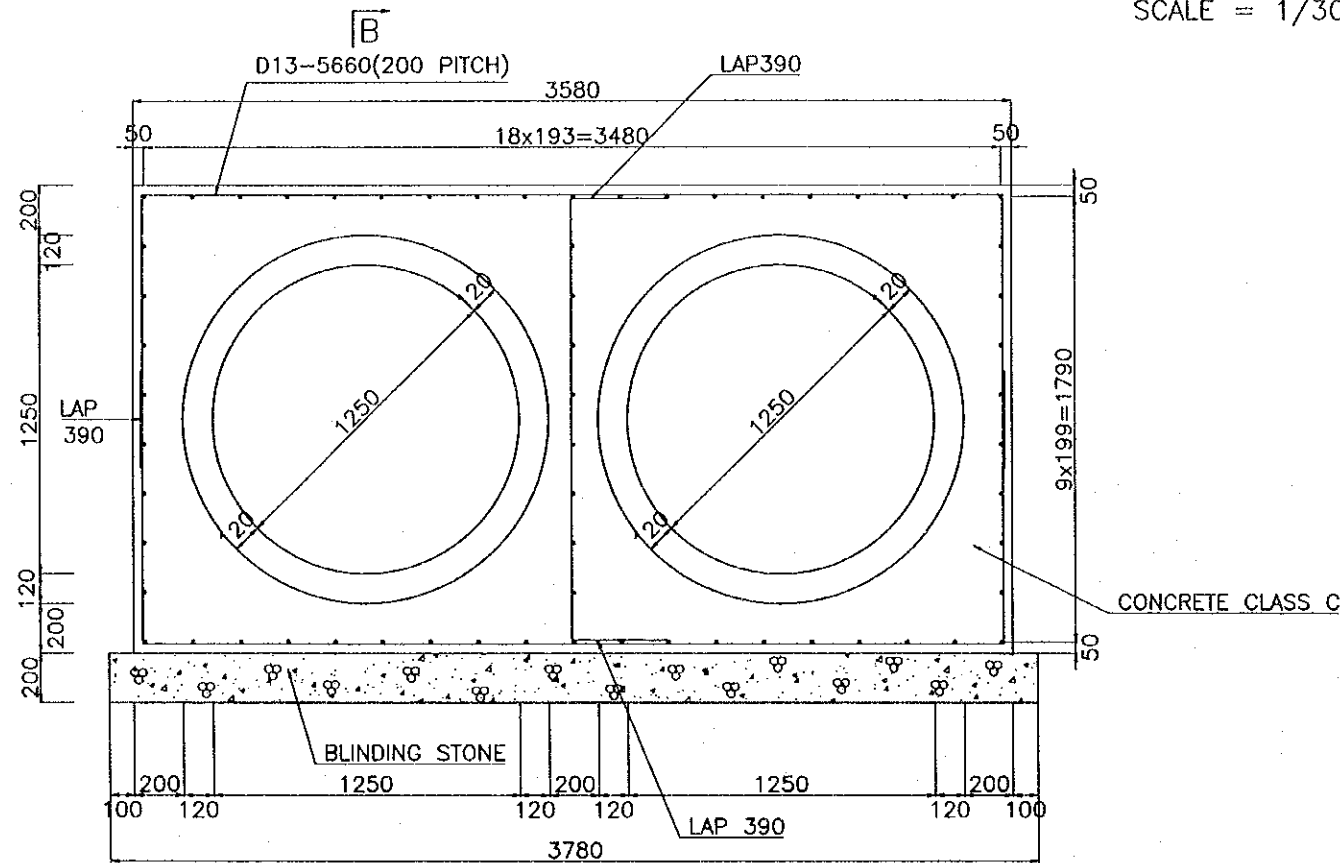
- 1- ALL DIMENSIONS ARE IN MILLIMETERS
- 2- STEEL BAR SHALL BE CONSIDERED 30D LAP AT THE CONSTRUCTION JOINT

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATADA
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 3	SCALE 1/30	DRAWING No. E-2-16	SHEET No.
DETAIL OF PIPE FOUNDATION (2xØ1250)			

DETAIL OF PIPE FOUNDATION 2xØ1250

SCALE = 1/30



SECTION 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

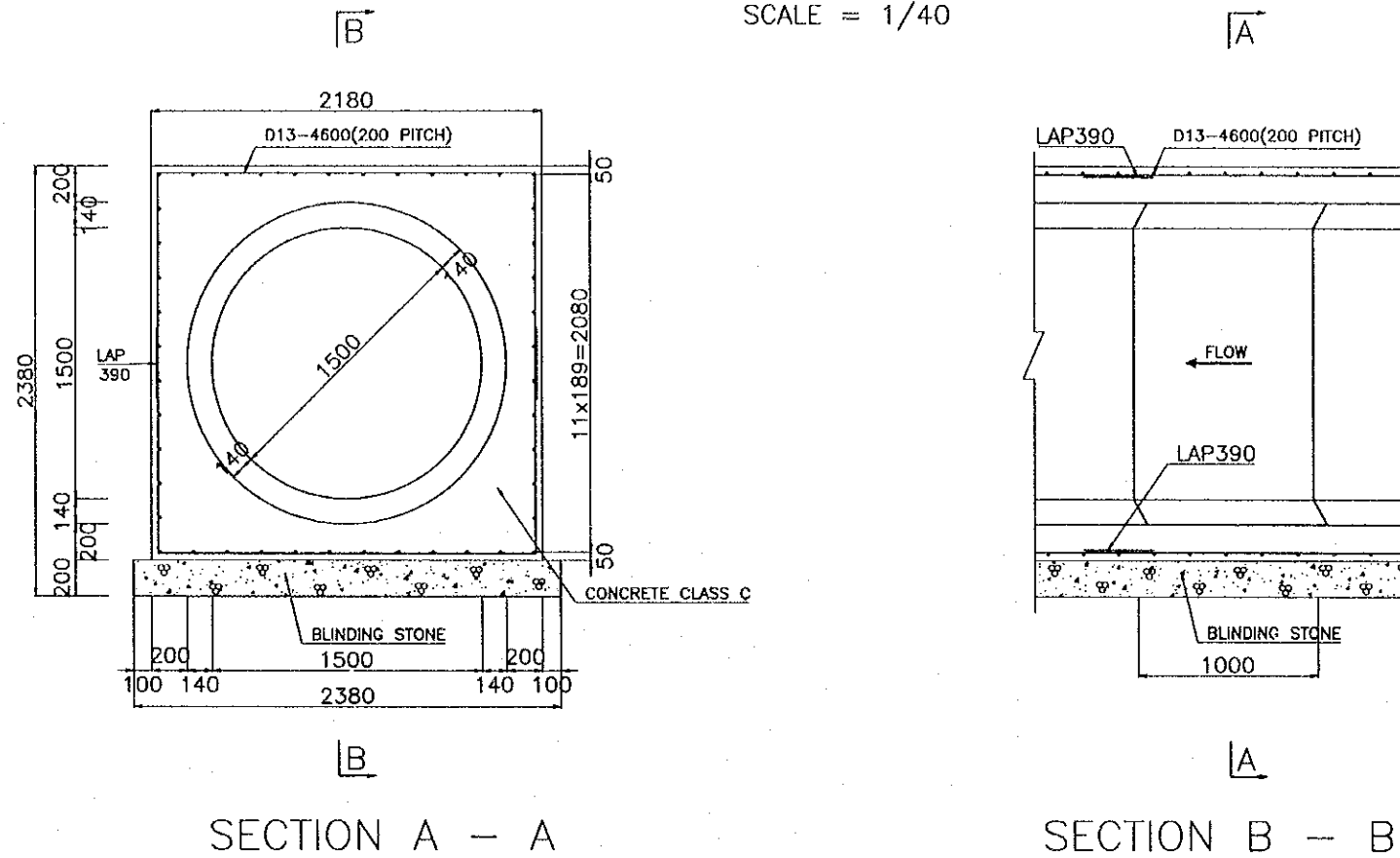
- 1- ALL DIMENSIONS ARE IN MILLIMETERS
- 2- STEEL BAR SHALL BE CONSIDERED 30D LAP AT THE CONSTRUCTION JOINT

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRUNG 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. 03. 14
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	

PACKAGE 3	SCALE 1/40	DRAWING No. E-2-17	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

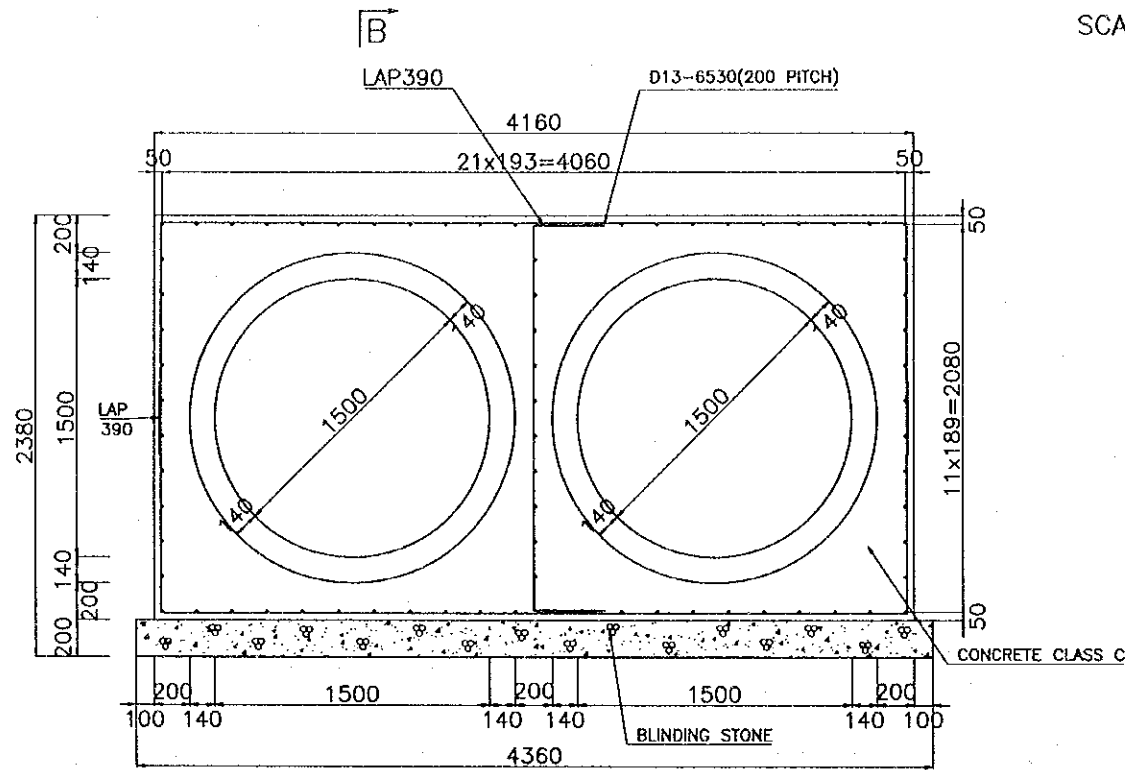
- 1- ALL DIMENSIONS ARE IN MILLIMETERS
- 2- STEEL BAR SHALL BE CONSIDERED 30D LAP AT THE CONSTRUCTION JOINT

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
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		

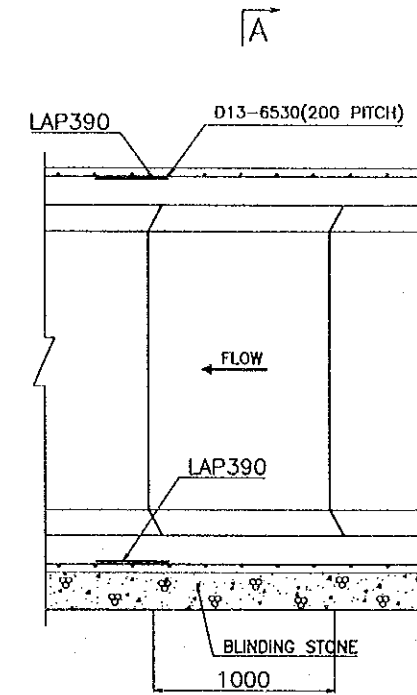
PACKAGE 3	SCALE 1/40	DRAWING No. E-2-18	SHEET No.
DETAIL OF PIPE FOUNDATION (2x ϕ 1500)			

DETAIL OF PIPE FOUNDATION (2x ϕ 1500)

SCALE = 1/40



SECTION A - A



SECTION B - B

FOUNDATION TYPE C (FOR PIPE CULVERT 2 ϕ 1500)

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	

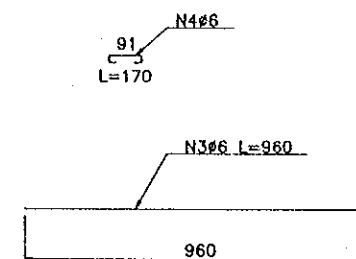
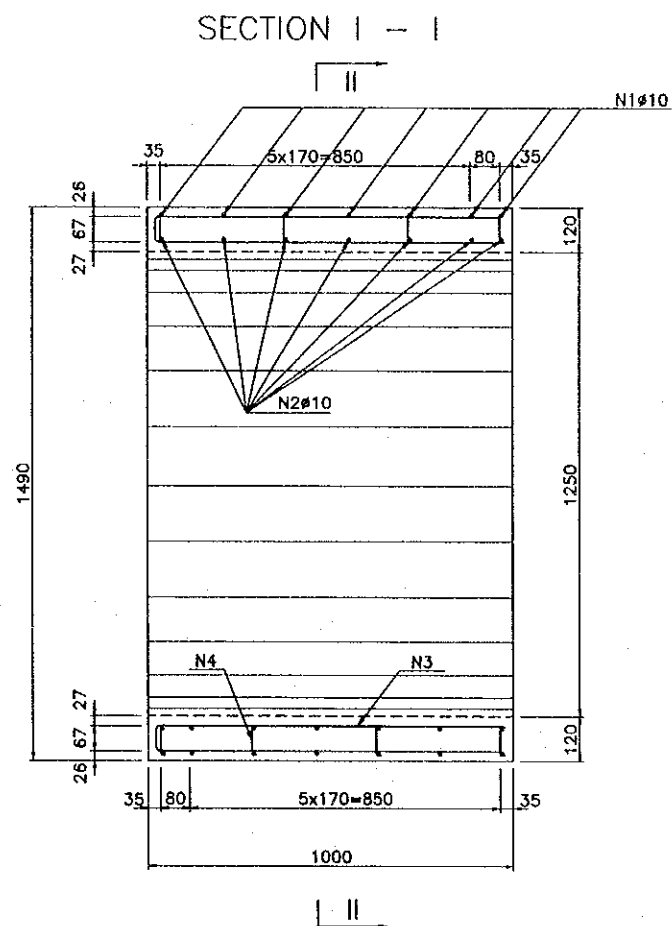
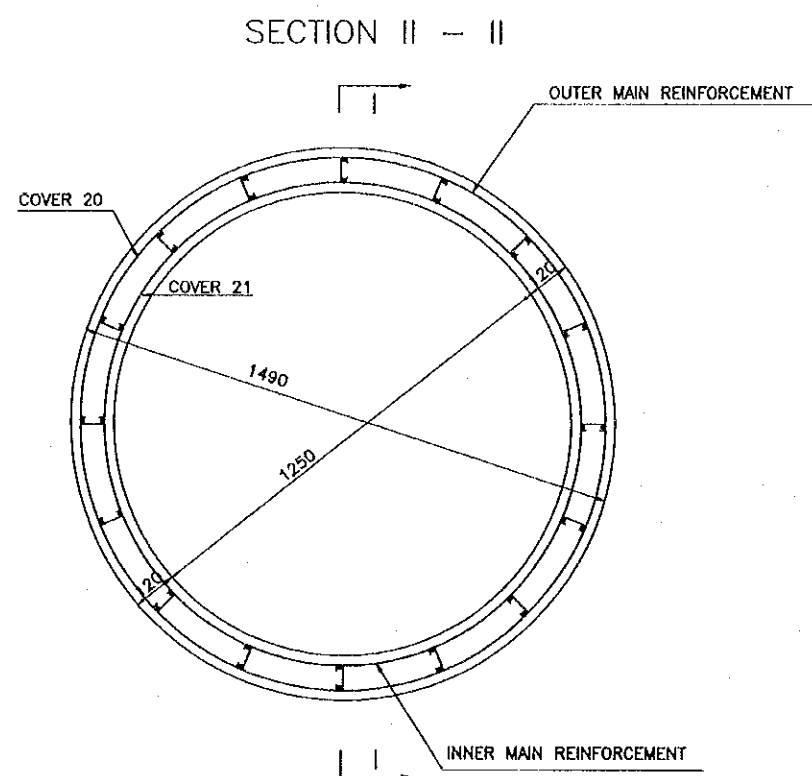
NOTES

- 1- ALL DIMENSIONS ARE IN MILLIMETERS
- 2- STEEL BAR SHALL BE CONSIDERED 300 LAP AT THE CONSTRUCTION JOINT

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	2000.01.17

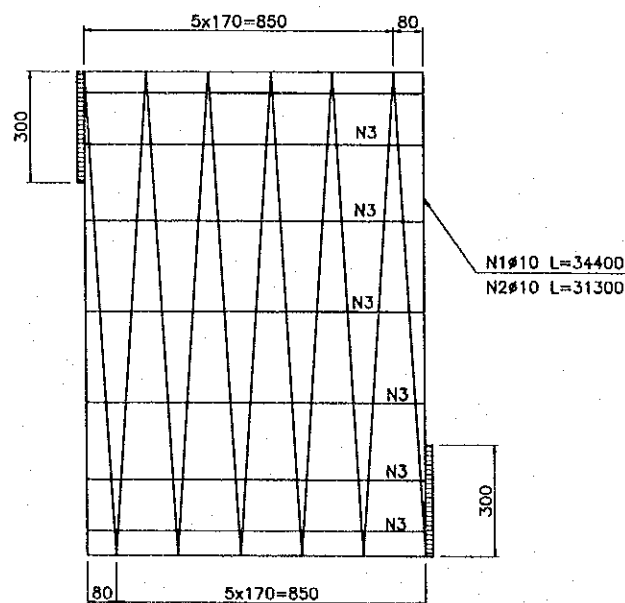
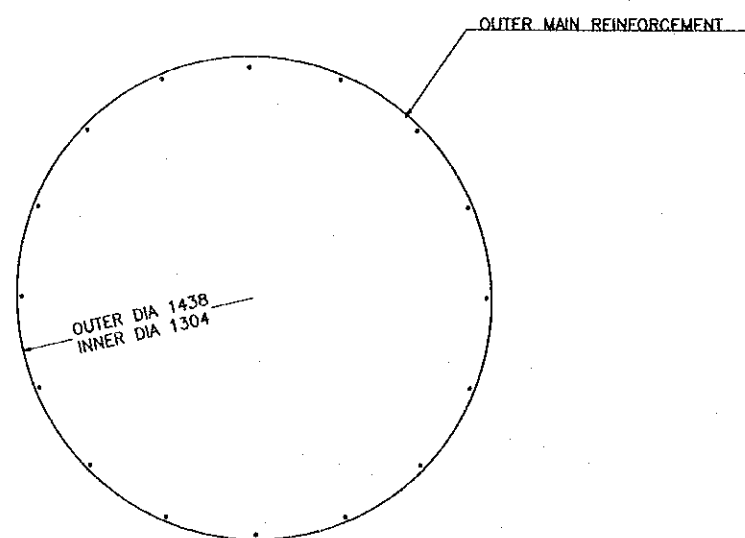
PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/20	E-2-19	
REINFORCEMENT DETAILS (FOR PIPE Ø1250)			

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
	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

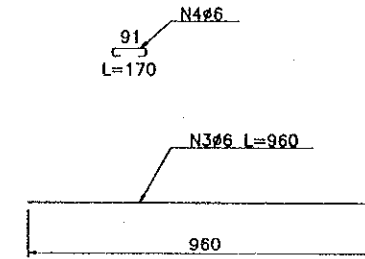
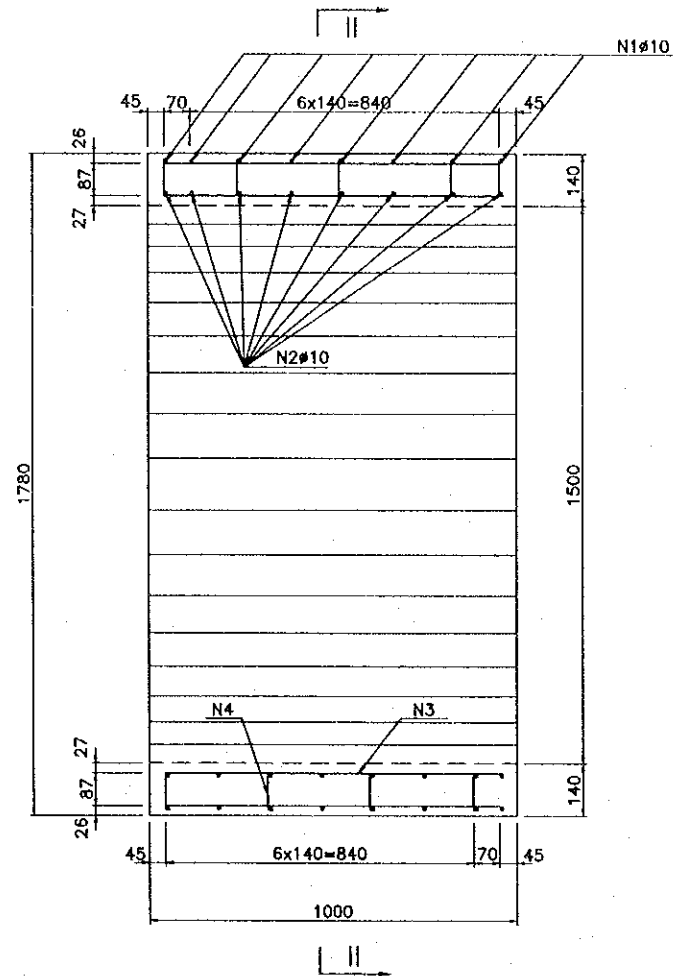
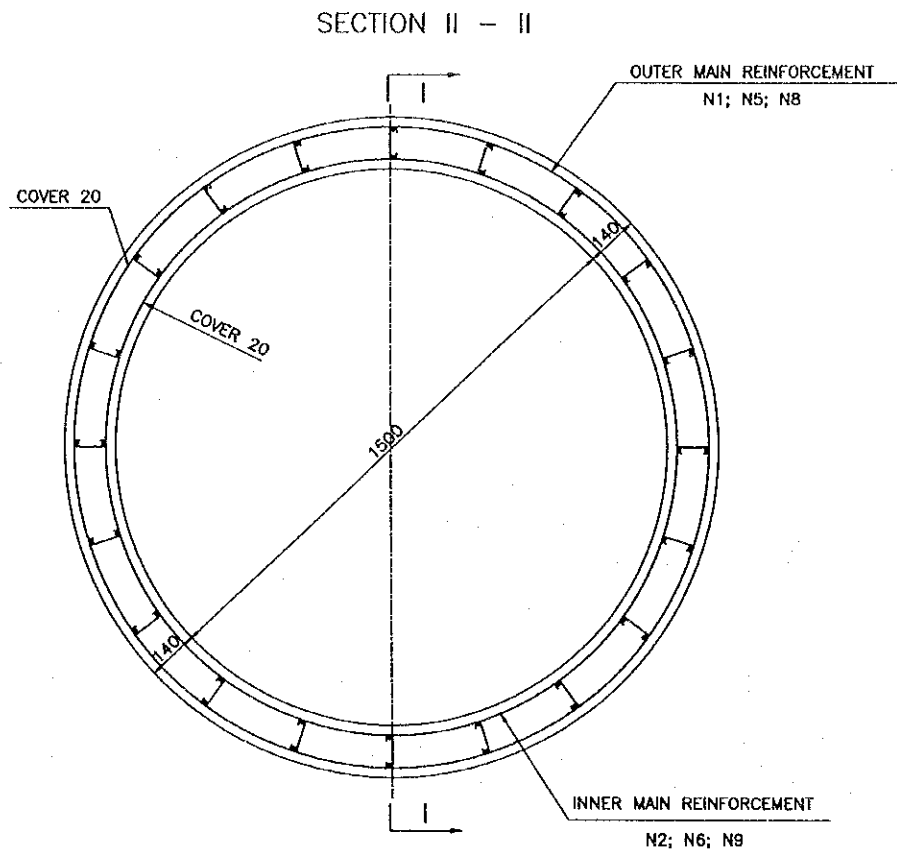
- 1 - CONCRETE USE CLASS C
- 2 - ALL THE DIMENSION ARE IN MILLIMETERS

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. 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	2000.08.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/20	E-2-20	
REINFORCEMENT DETAILS (FOR PIPE Ø 1500)			

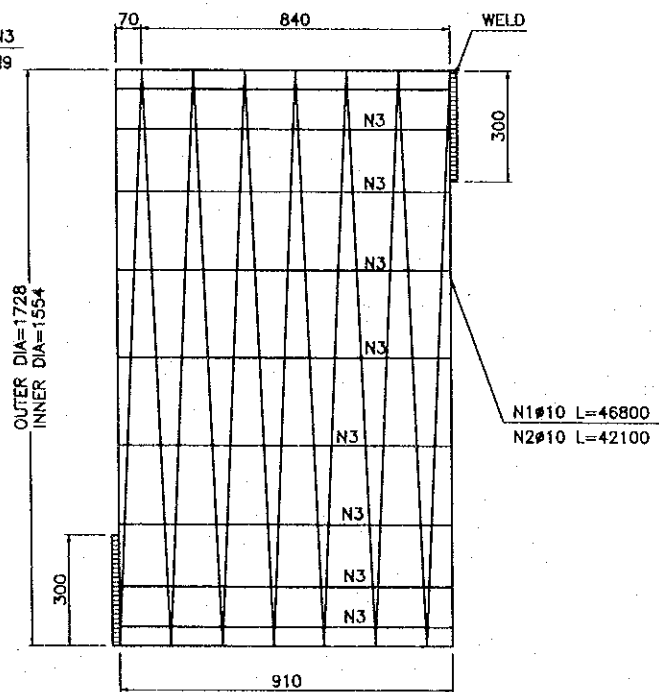
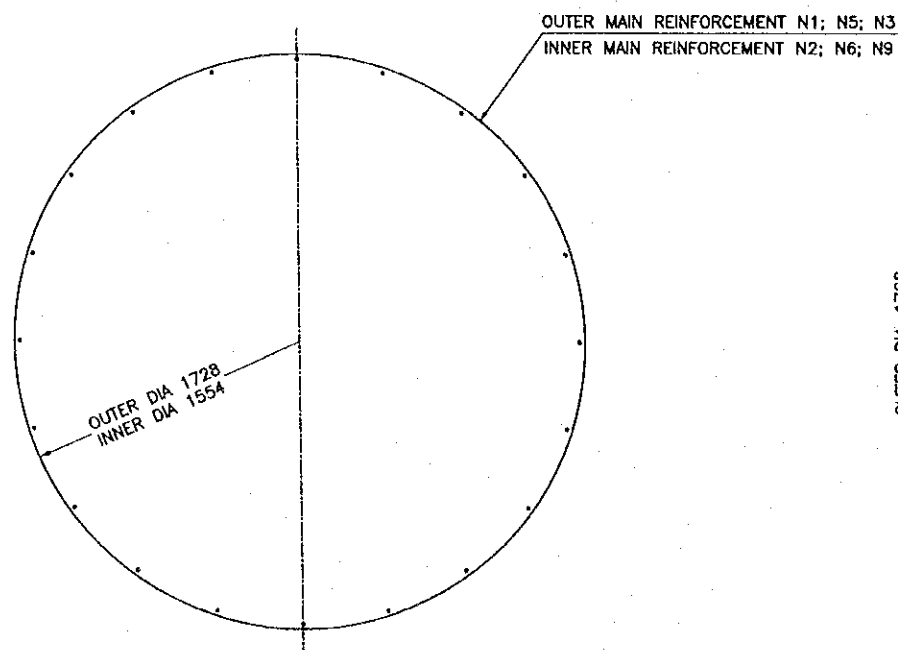
REINFORCEMENT DETAILS (FOR PIPE Ø 1500)

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 ³)	
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				
	4	Ø6	190	80	15.2				
	SUM		Ø6		53.6	0.222	11.9		
TOTAL								67.1	0.72



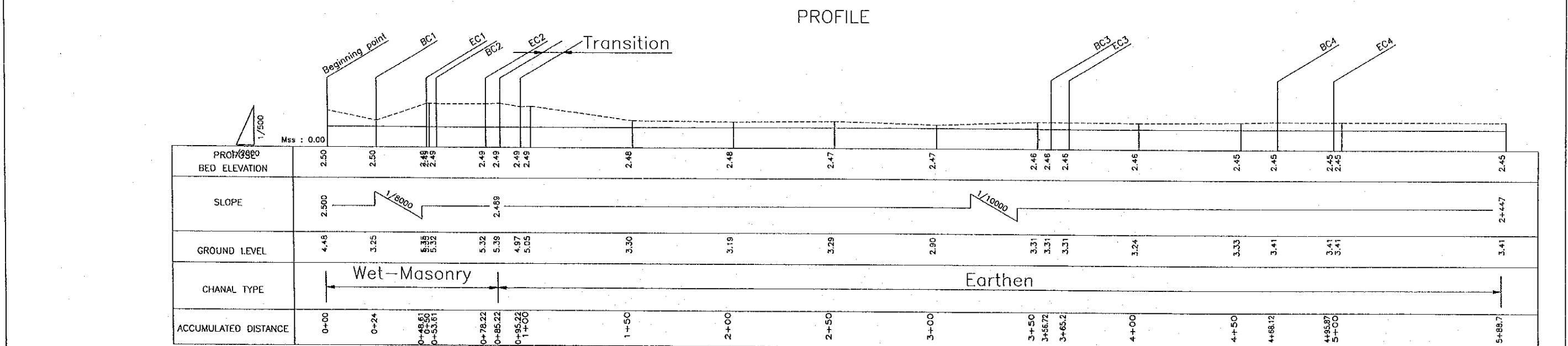
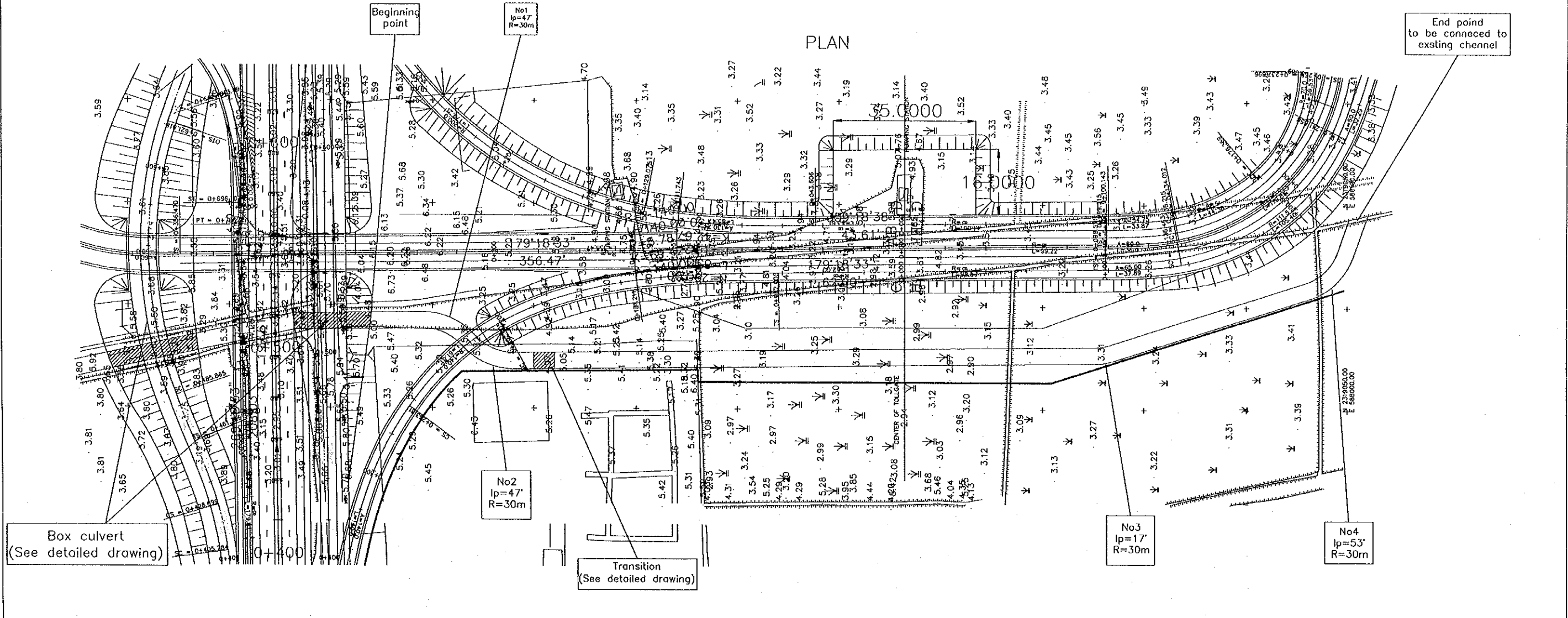
NOTES

- 1 - CONCRETE USE CLASS C
- 2 - ALL THE DIMENSION ARE IN MILLIMETERS

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM 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	2000.3.14

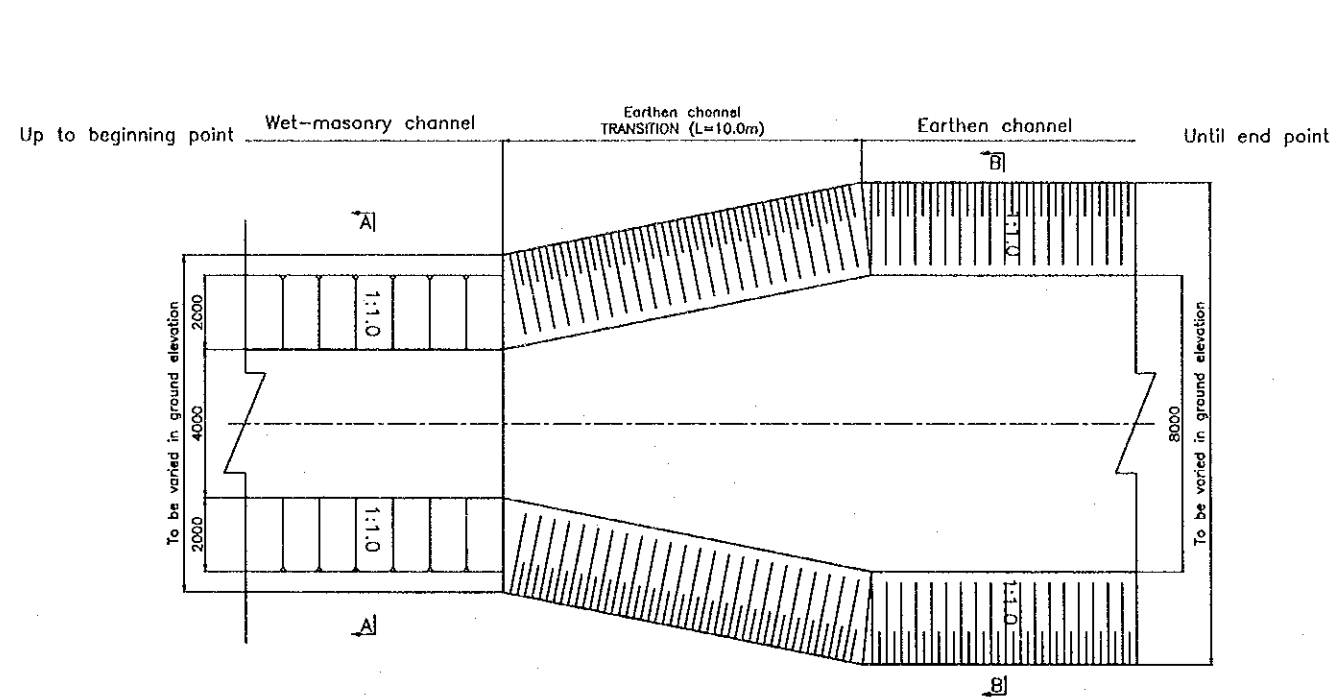
RELOCATION OF EXISTING DRAINAGE CHANNEL AT STA.0+510

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/2000	E-3-1	
RELOCATION OF EXISTING DRAINAGE CHANNEL AT STA.0+510			



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 3	SCALE AS SHOWN	DRAWING No. E-3-2	SHEET No.
CHANNEL RELOCATION DETAILS			

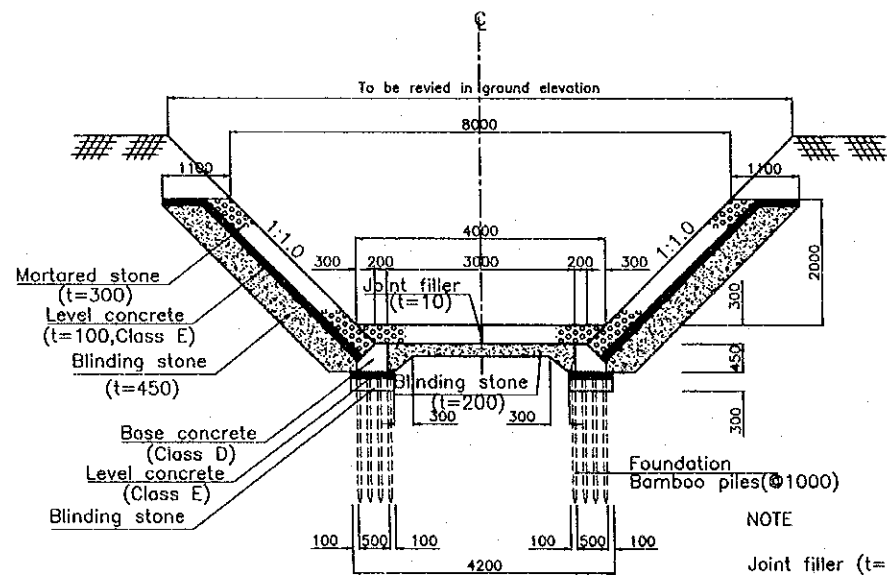


PLAN (Scale :1/200)

WORK QUANTITY

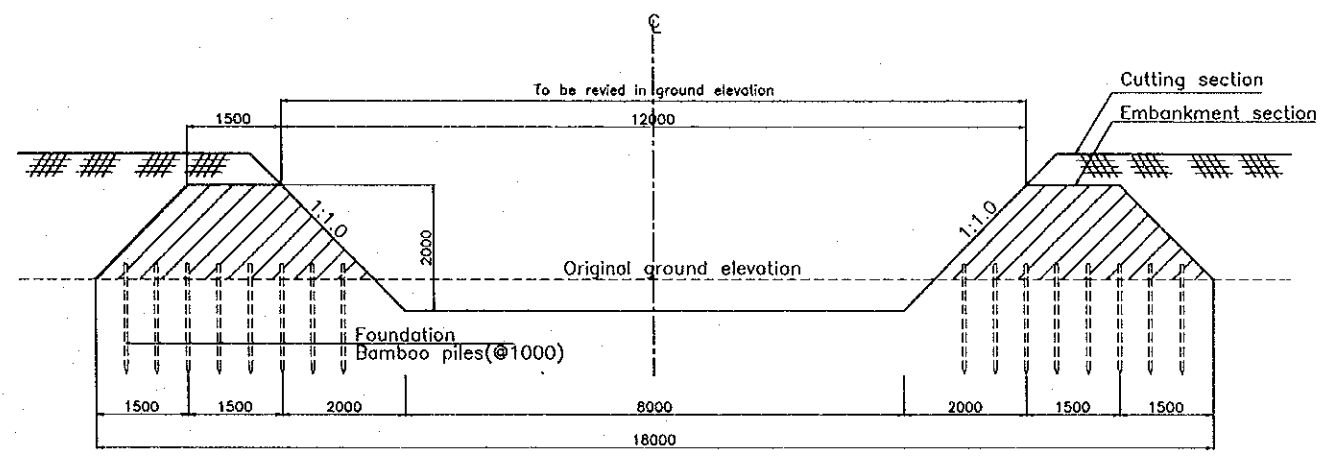
(per m)

Channel Kind	Length (m)	Item	Unit	Quantity	Remarks
Wet-Masonry	85.2	Concrete (D)	m ³	0.36	For base
		Form	m ²	0.90	For base
		Concrete (E)	m ³	0.99	For leveling
		Form	m ²	0.20	For leveling
		Mortared stone	m ³	3.46	
		Blinding stone	m ³	4.91	
		Excavation Backfilling	m ³	40.0 30.3	
Link channel	20.0				STA.0+510 left frontage
Link channel	20.0				STA.0+517 Right frontage
Link channel	20.0				STA.2+397.4
Link channel	20.0				STA.4+890.3
Total	165.2				
Earthen (Transition)	10.0	Excavation	m ³	23.6	The mean
Earthen (Transition)	70.0	Excavation	m ³	26.3	
Earthen (Embankment)	423.5	Excavation	m ³	4.3	
		Embankment	m ³	4.5	



SECTION A-A (Scale :1/100)

NOTE
Joint filler (t=10) shall be installed at 20 m interval at the stretch of wet-masonry channel



SECTION B-B (Scale :1/100)

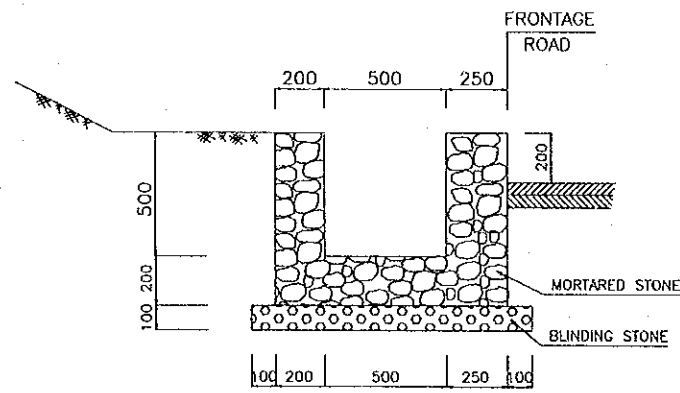
NOTE
Material mixed with clayey soil shall be used for embankment

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	2000.3.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/30	E-4-1	
DRAINAGE CHANNEL DETAILS (1/2)			

DRAINAGE CHANNEL DETAILS (1/2)

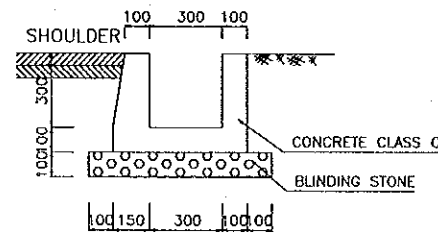
TYPE U-1



WORK QUANTITY (Per meter)

Item	Quantity (m ³)
Mortared Stone	0.42
Blinding Stone	0.12
Excavation	1.58
Back Filling	0.80

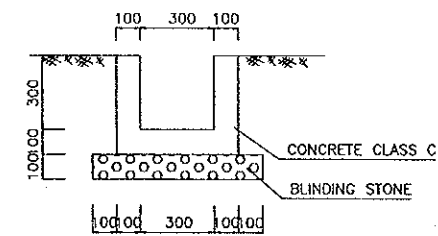
TYPE U-2



WORK QUANTITY (Per meter)

Item	Unit	Quantity
Concrete Class C	m ³	0.12
Blinding Stone	m ³	0.08
Excavation	m ³	0.66
Back Filling	m ³	0.38
Form	m ²	1.50

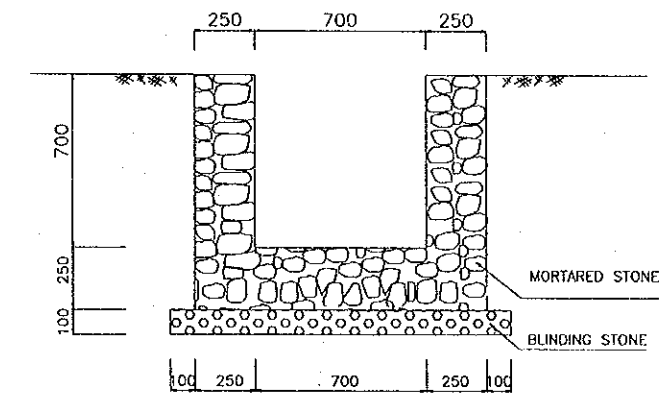
TYPE U-3



WORK QUANTITY (Per meter)

Item	Unit	Quantity
Concrete Class C	m ³	0.11
Blinding Stone	m ³	0.07
Excavation	m ³	0.65
Back Filling	m ³	0.43
Form	m ²	1.40

TYPE U-4
(For irrigation Gia Lam side)



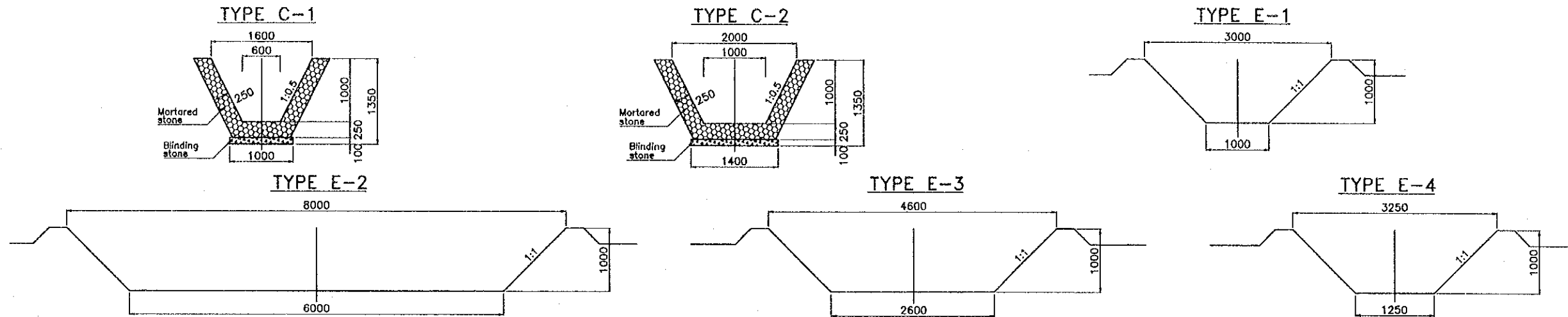
WORK QUANTITY (Per meter)

Item	Quantity (m ³)
Mortared Stone	0.65
Blinding Stone	0.14
Excavation	2.42
Back Filling	1.14

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 3	SCALE 1/100	DRAWING No. E-4-2	SHEET No.
DRAINAGE CHANNEL DETAILS (2/2)			

DRAINAGE CHANNEL DETAILS (2/2)



LIST OF ROAD SIDE DRAIN

STATION	RIGHT SIDE		LEFT SIDE		REMARKS
	TYPE	LENGTH(m)	TYPE	LENGTH(m)	
0+020 ~ 0+380	C-1	360			Under the bridge
0+840 ~ 1+110	C-1	270			Under the bridge
1+110 ~ 1+640	C-2	530			
1+110 ~ 1+450			C-1	340	
1+460 ~ 1+660			C-1	200	
1+700 ~ 1+850	C-1	150			
2+220 ~ 2+400	C-1	180			
1+800 ~ 2+020			C-1	220	
2+020 ~ 2+380			C-1	360	
2+520 ~ 2+760			C-1	240	
2+840 ~ 3+090			C-1	250	
4+160 ~ 4+490			E-1	330	
4+570 ~ 4+730			E-2	210	Relocation
4+820 ~ 4+920	C-1	100			
5+100 ~ 5+270	C-2	160			
5+300 ~ 5+660	E-3	360			Relocation
5+700 ~ 6+220	C-1	780			Surrounding tollgate
5+640 ~ 6+150			C-1	630	Surrounding tollgate
6+150 ~			E-4	100	Transition to existing channel

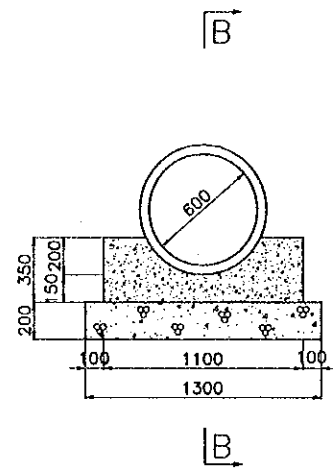
WORK QUANTITY (PER m)

TYPE	ITEM	QUANTITY (m3)
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
E-1	Excavation	2.00
E-2	Excavation	7.00
E-3	Excavation	2.70
E-4	Excavation	2.25

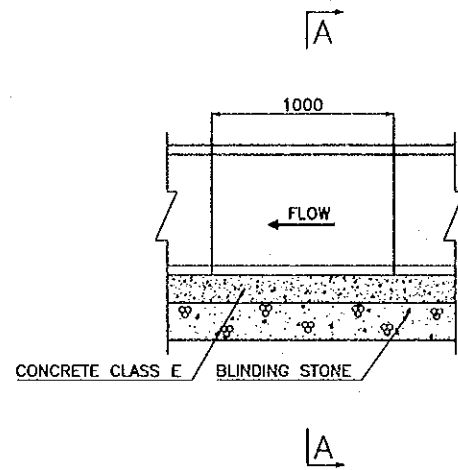
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. HATAKE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. HATAKE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.2.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/40	E-4-3	
DETAIL OF DRAINAGE PIPE ϕ 600			

DETAIL OF DRAINAGE PIPE ϕ 600
SCALE = 1/40

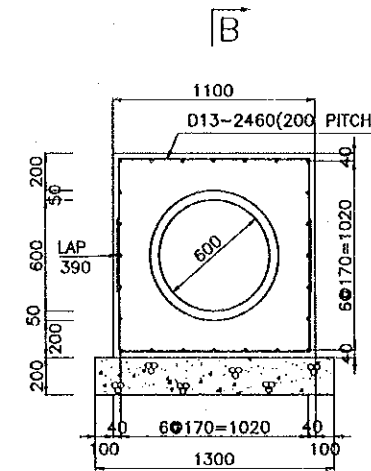


SECTION A - A

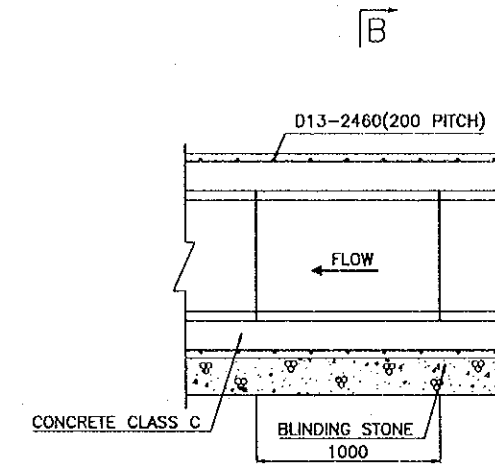


SECTION B - B

FOUNDATION TYPE A



SECTION A - A



SECTION B - B

FOUNDATION TYPE B

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	

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	

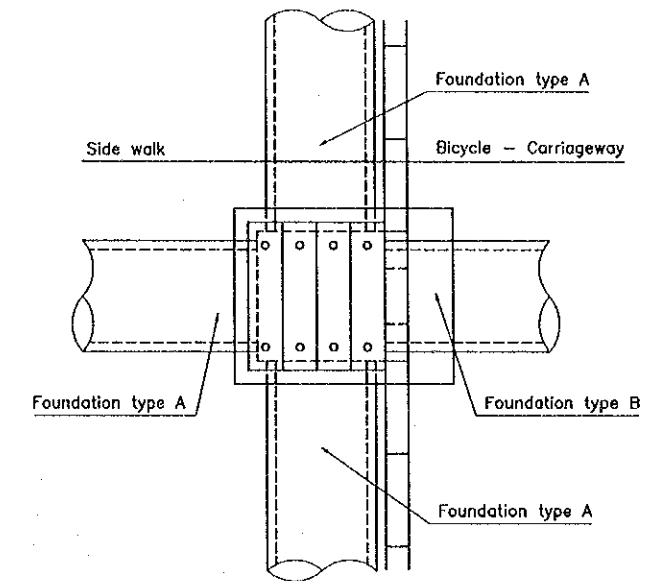
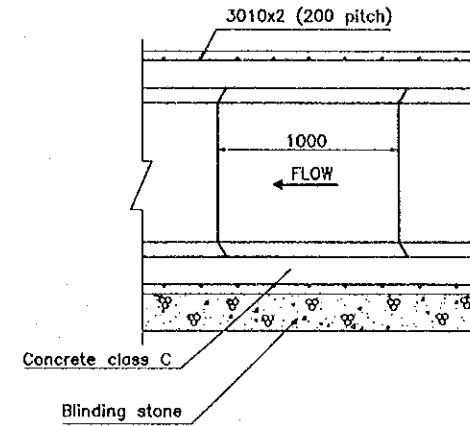
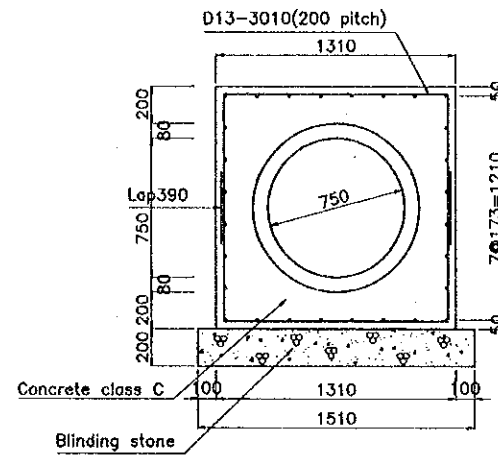
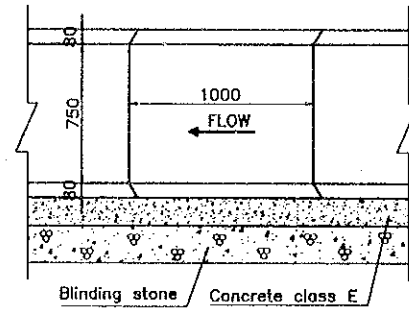
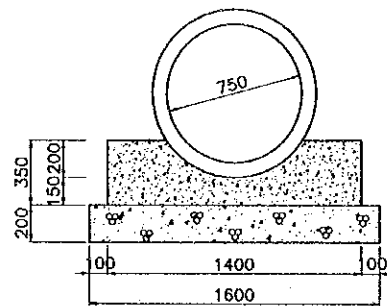
NOTES

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. 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	2000.01.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/40	E-4-4	
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

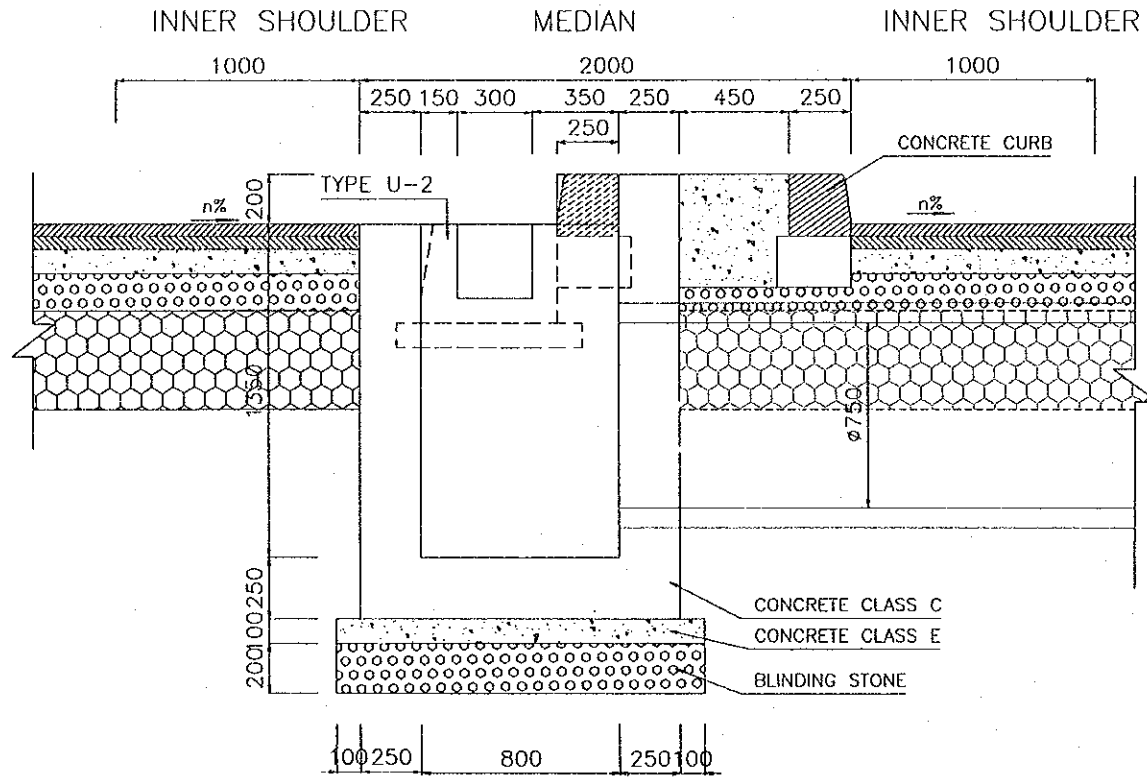
All dimensions are in millimeter

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. 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. 5. 14

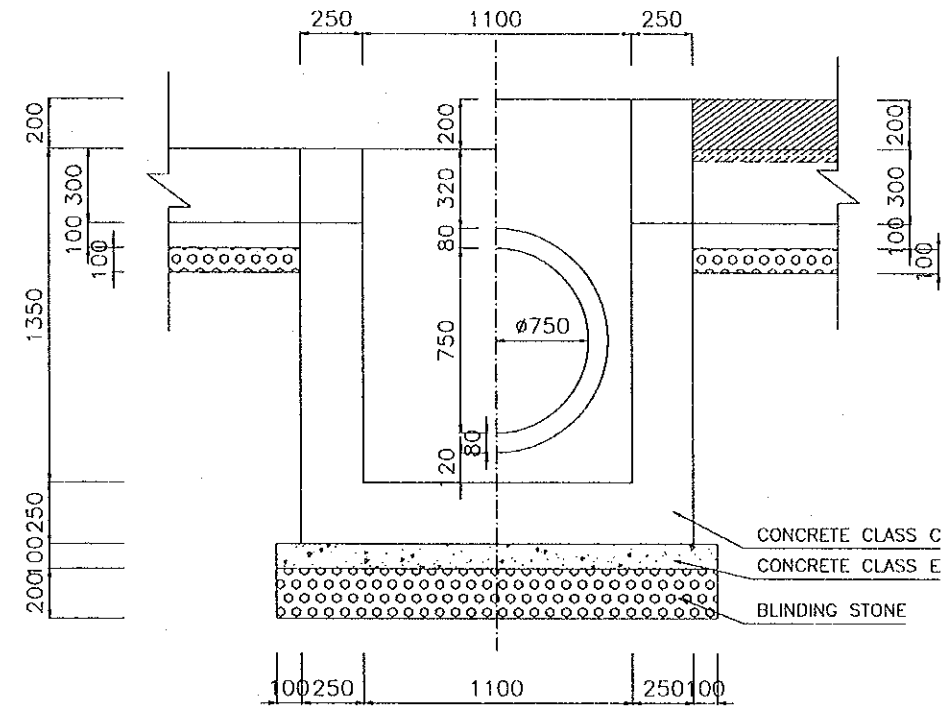
CATCH BASIN TYPE CB-R1 (1/2)

PACKAGE 3	SCALE 1/30	DRAWING No. E-4-5	SHEET No.
CATCH BASIN TYPE CB-R1 (1/2)			

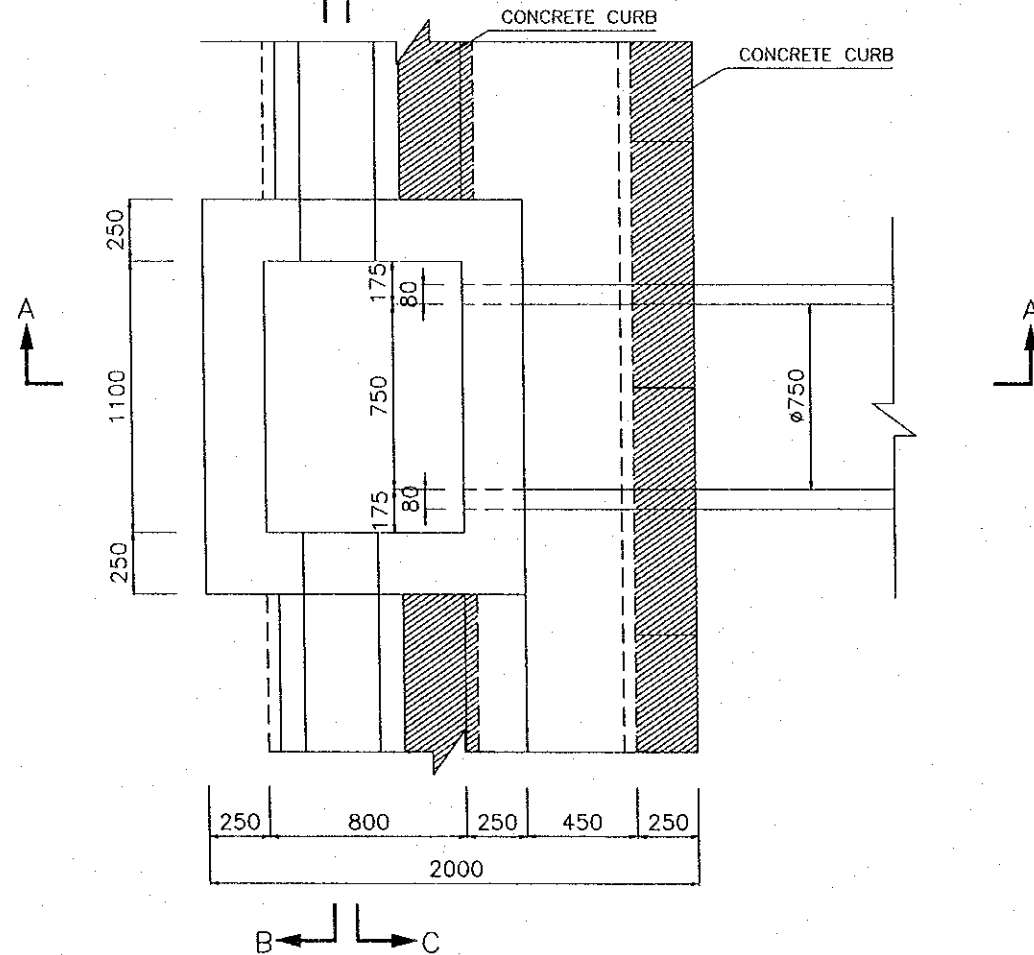
SECTION A-A



SECTION B-B SECTION C-C



PLAN



WORK QUANTITY (Per each)

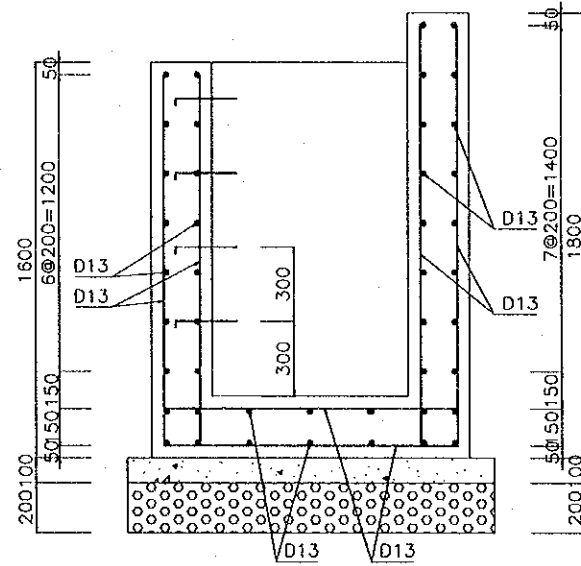
Item	Unit	Quantity
Concrete Class C	m ³	2.012
Concrete Class E	m ³	0.270
Blinding Stone	m ³	0.54
Excavation	m ³	9.67
Back Filling	m ³	5.53
Form	m ²	14.75
Reinforcement	-	see next drawing

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
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.5.14

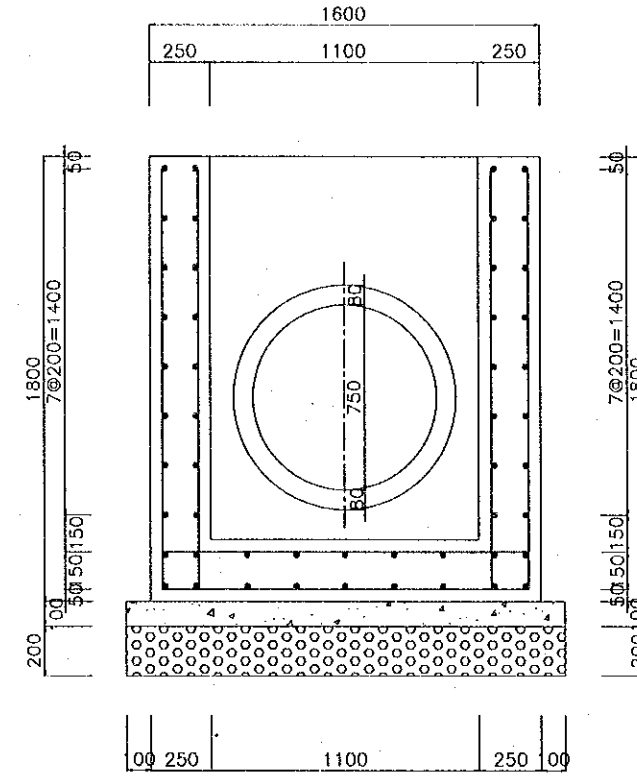
PACKAGE 3	SCALE 1/30	DRAWING No. E-4-6	SHEET No.
CATCH BASIN TYPE CB-R1 (2/2)			

CATCH BASIN TYPE CB-R1 (2/2)

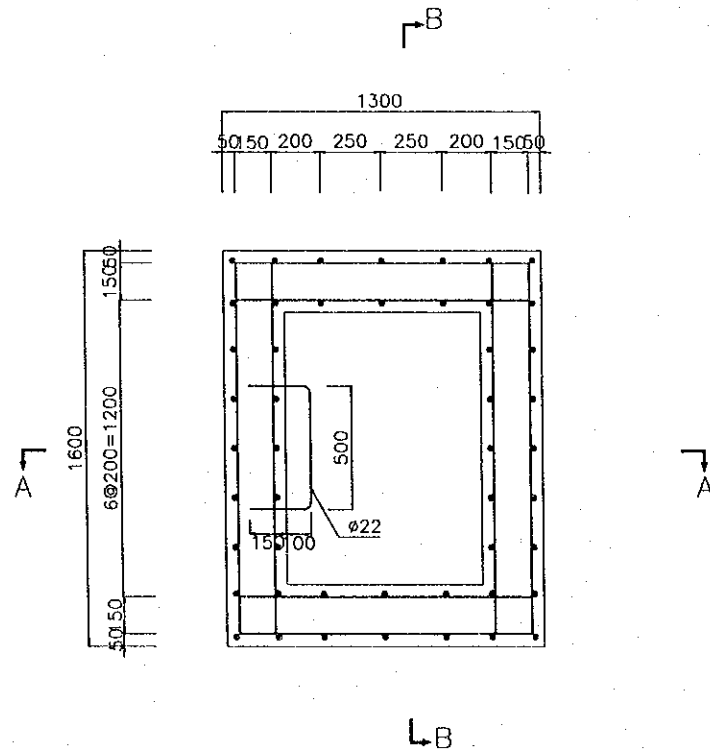
SECTION A-A
INNER SHOULDER MEDIAN INNER SHOULDER



SECTION B-B



PLAN



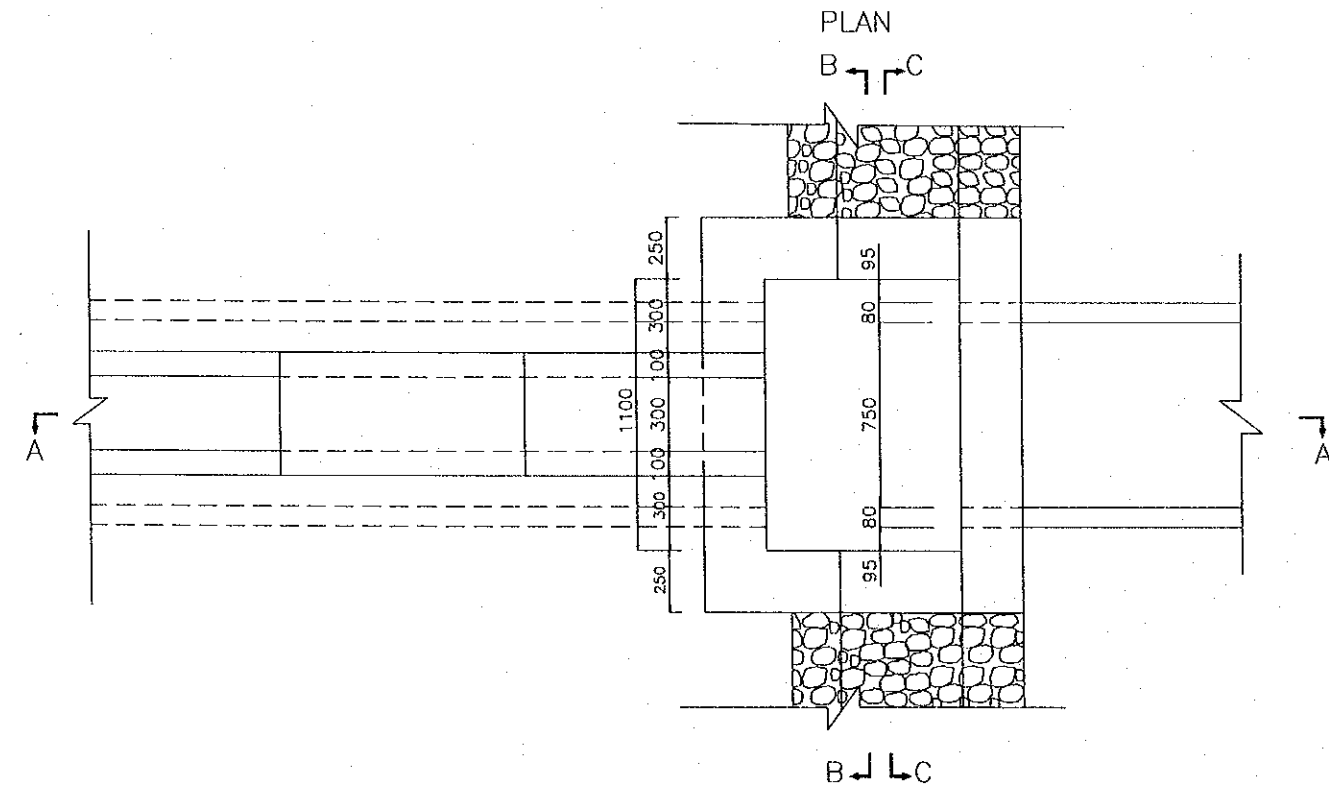
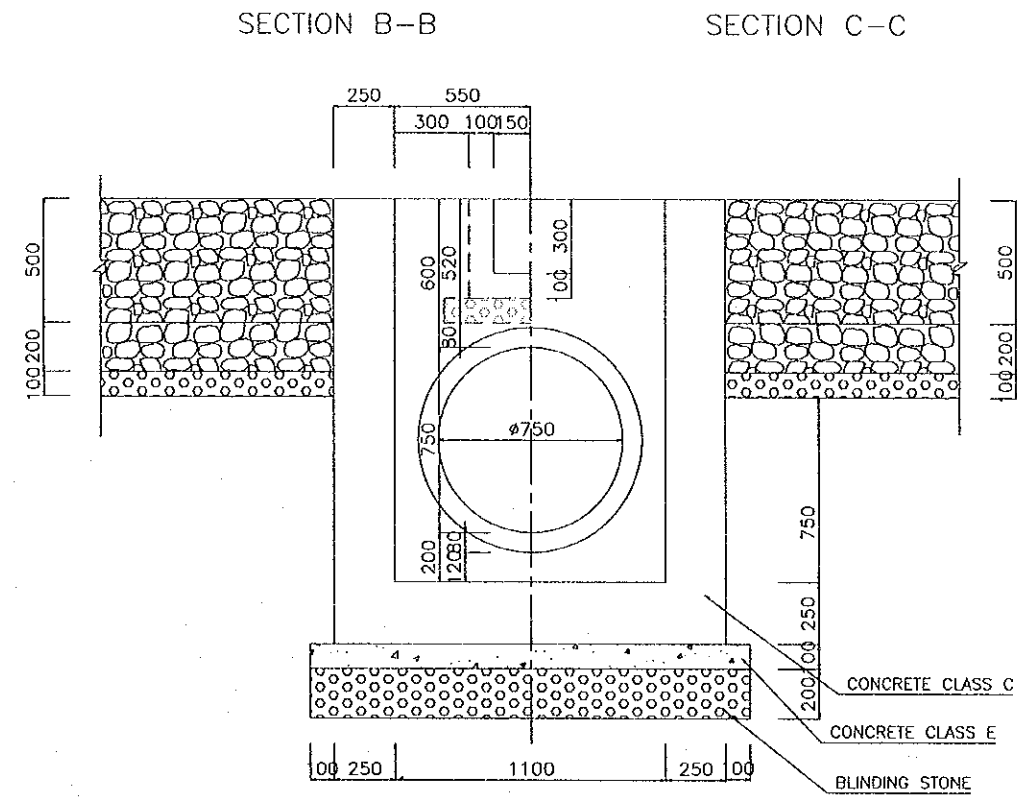
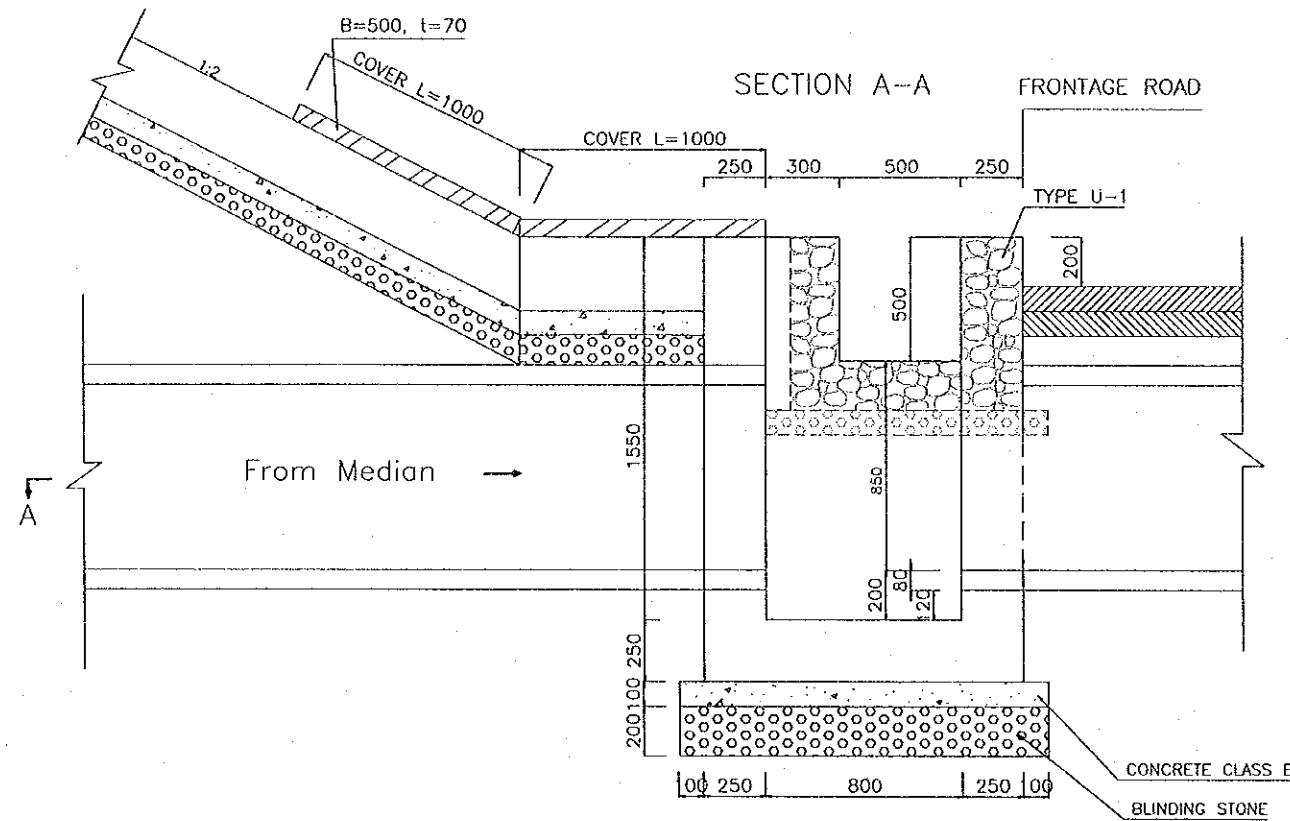
QUANTITY LIST OF REINFORCEMENT

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. NATARU
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		
PROJECT RED RIVER BRIDGE (DIANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000-3-14	

PACKAGE 3	SCALE 1/30	DRAWING No. E-4-7	SHEET No.
CATCH BASIN TYPE CB-R4 (1/2)			

CATCH BASIN TYPE CB-R4 (1/2)



WORK QUANTITY (Per each)

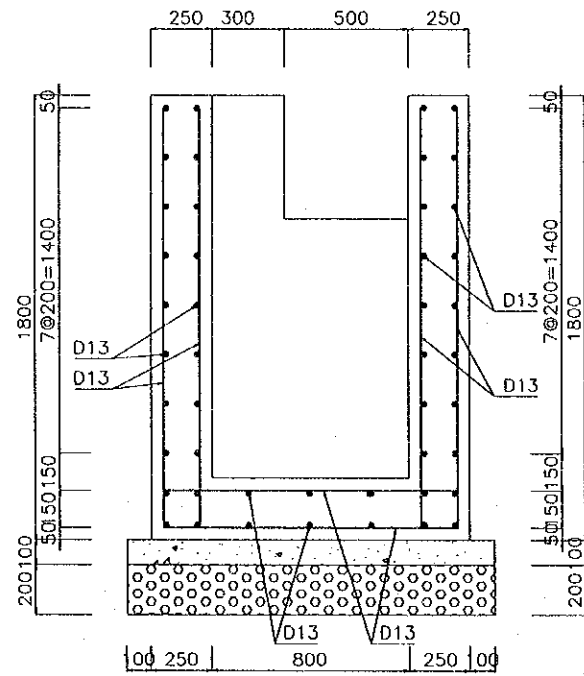
Item	Unit	Quantity
Concrete Class C	m ³	1.907
Concrete Class E	m ³	0.27
Blinding Stone	m ³	0.54
Excavation	m ³	16.92
Back Filling	m ³	12.36
Form	m ²	13.53
Reinforcement	-	see next drawing

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 TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.02.17	

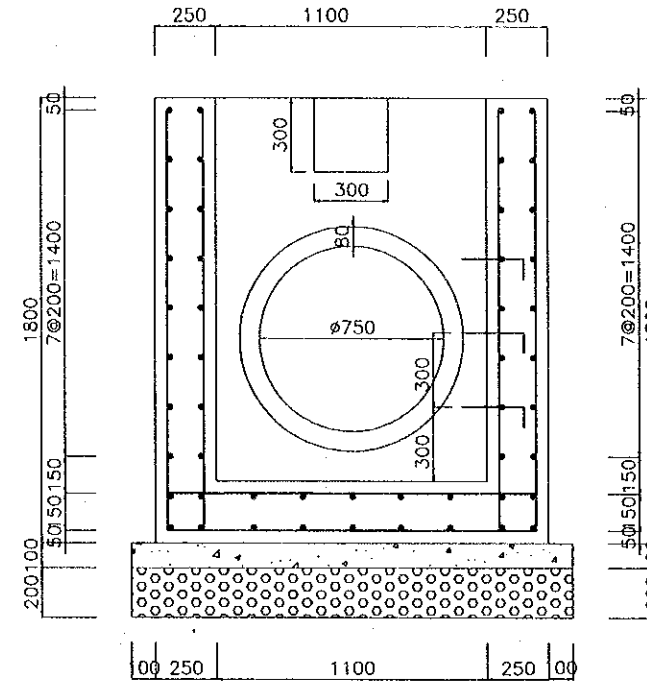
PACKAGE 3	SCALE 1/30	DRAWING No. E-4-8	SHEET No.
CATCH BASIN TYPE CB-R2 (2/2)			

CATCH BASIN TYPE CB-R2 (2/2)

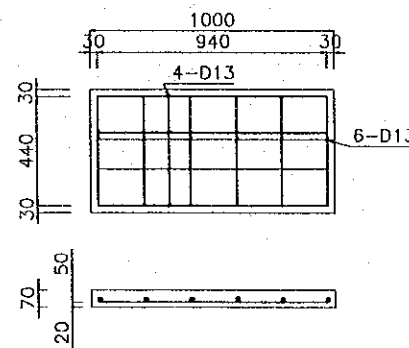
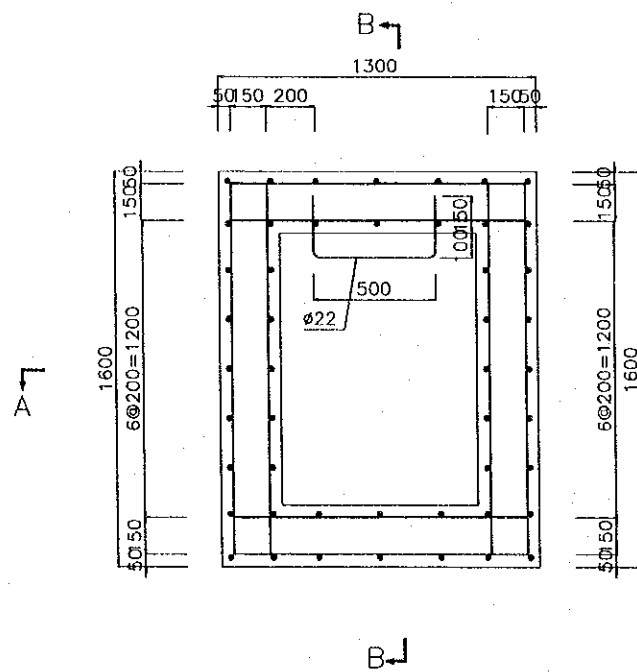
SECTION A-A



SECTION B-B



PLAN



QUANTITY LIST OF REINFORCEMENT

Basin body (per each)	Diameter (mm)	Total weight (kg)
	D13	175.74
	Ø22	11.18

QUANTITY LIST OF COVER (PER 2 ONE)

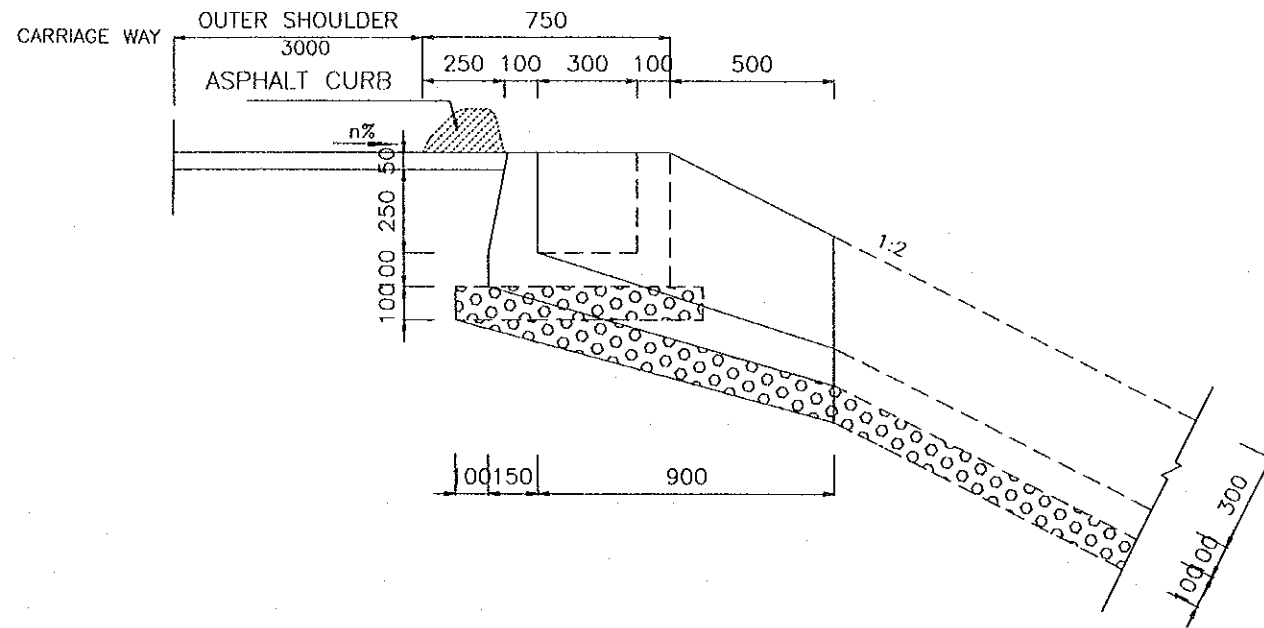
Item	Unit	Quantity
Concrete (Class C)	m ³	0.07
Form	m ³	0.42
Reinforcement (D13)	Kg	12.72

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. 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

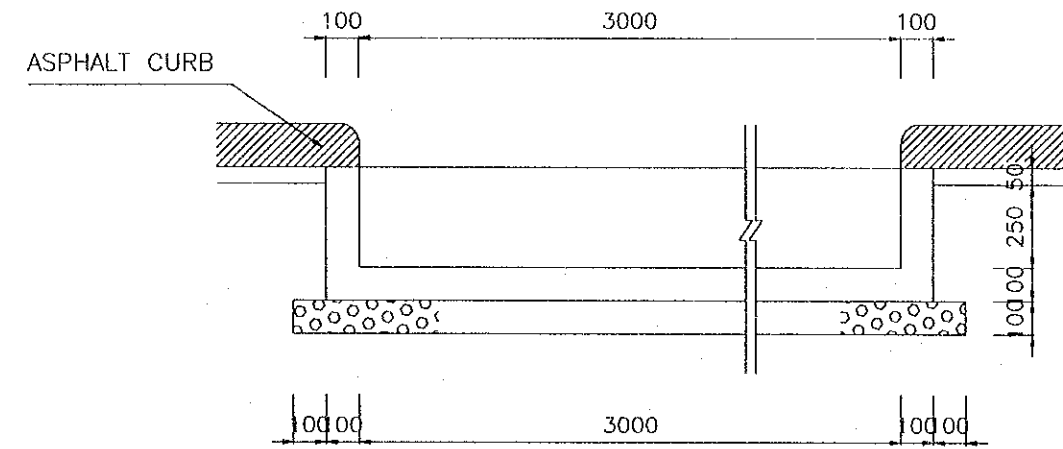
PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/25	E-4-9	
CATCH BASIN TYPE CB-R3			

CATCH BASIN TYPE CB-R3

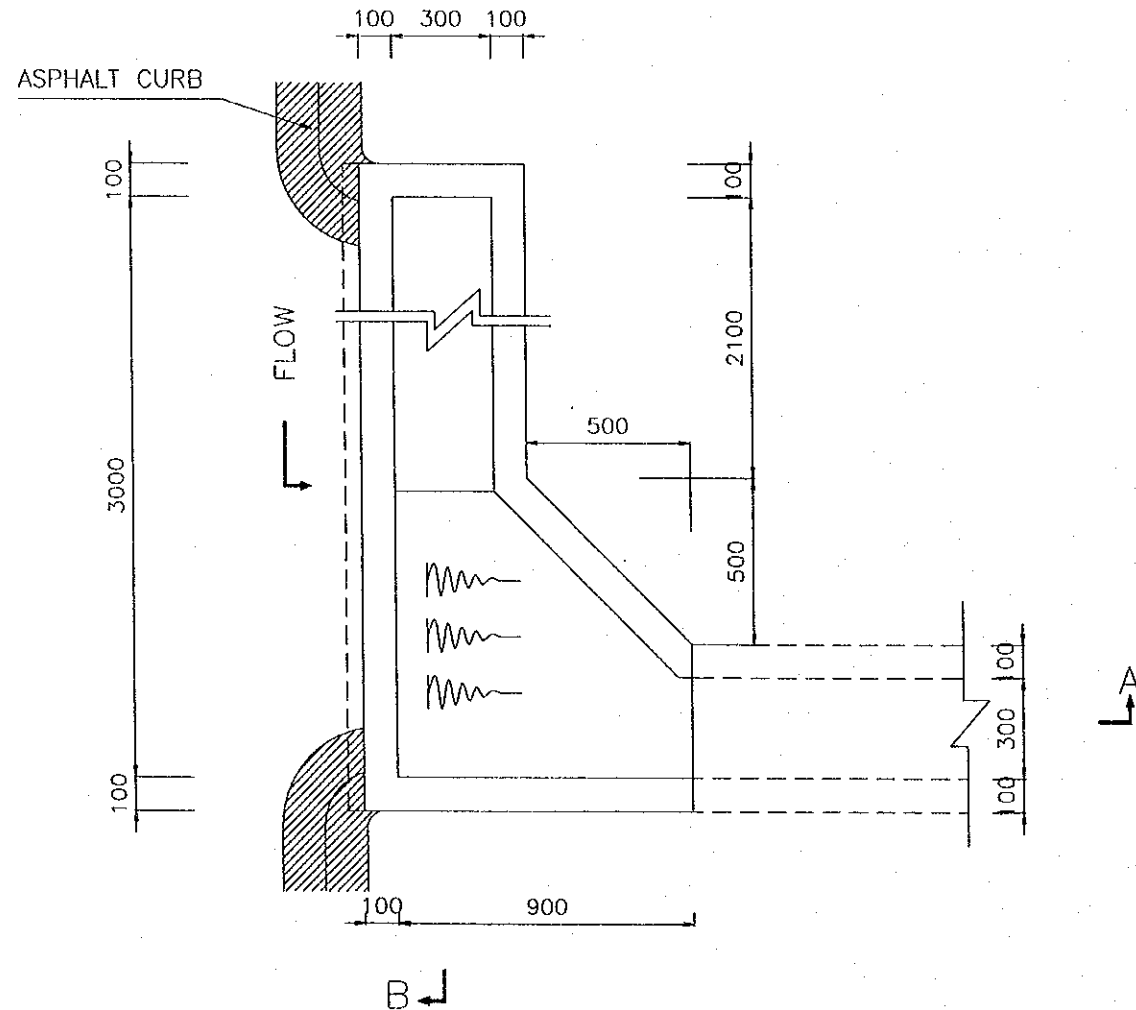
SECTION A-A



SECTION B-B



PLAN



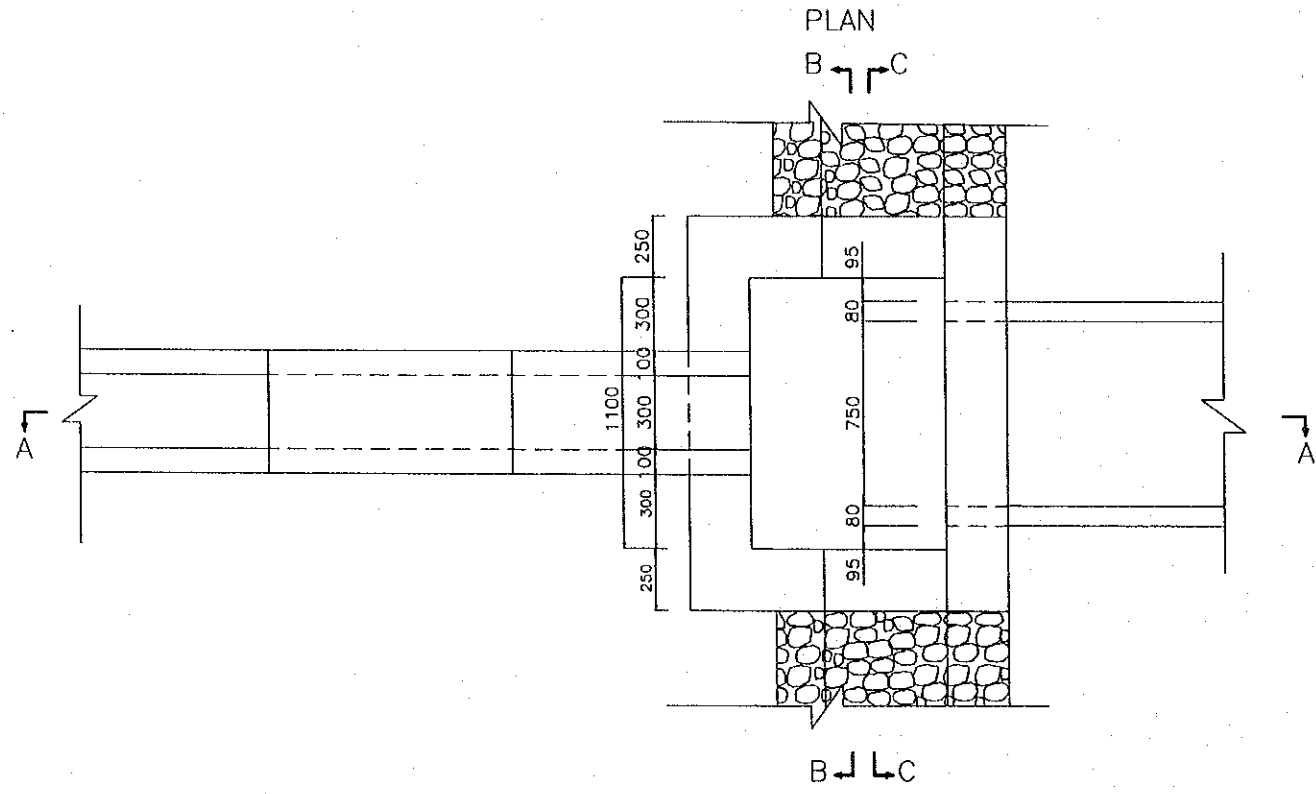
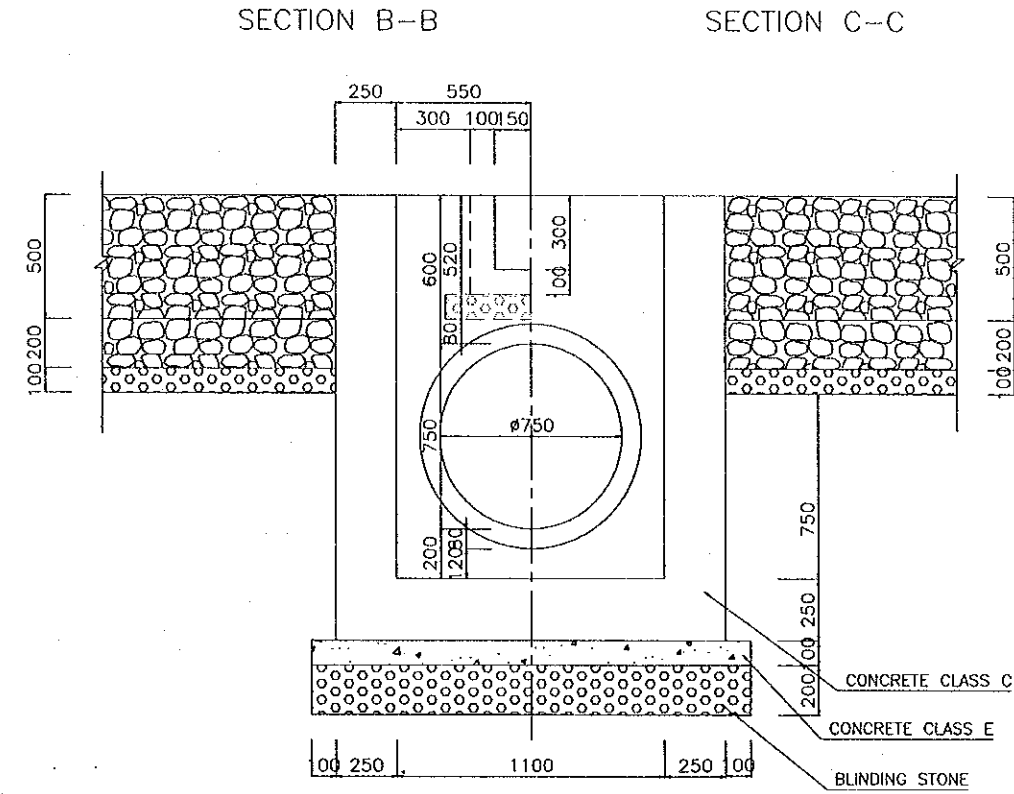
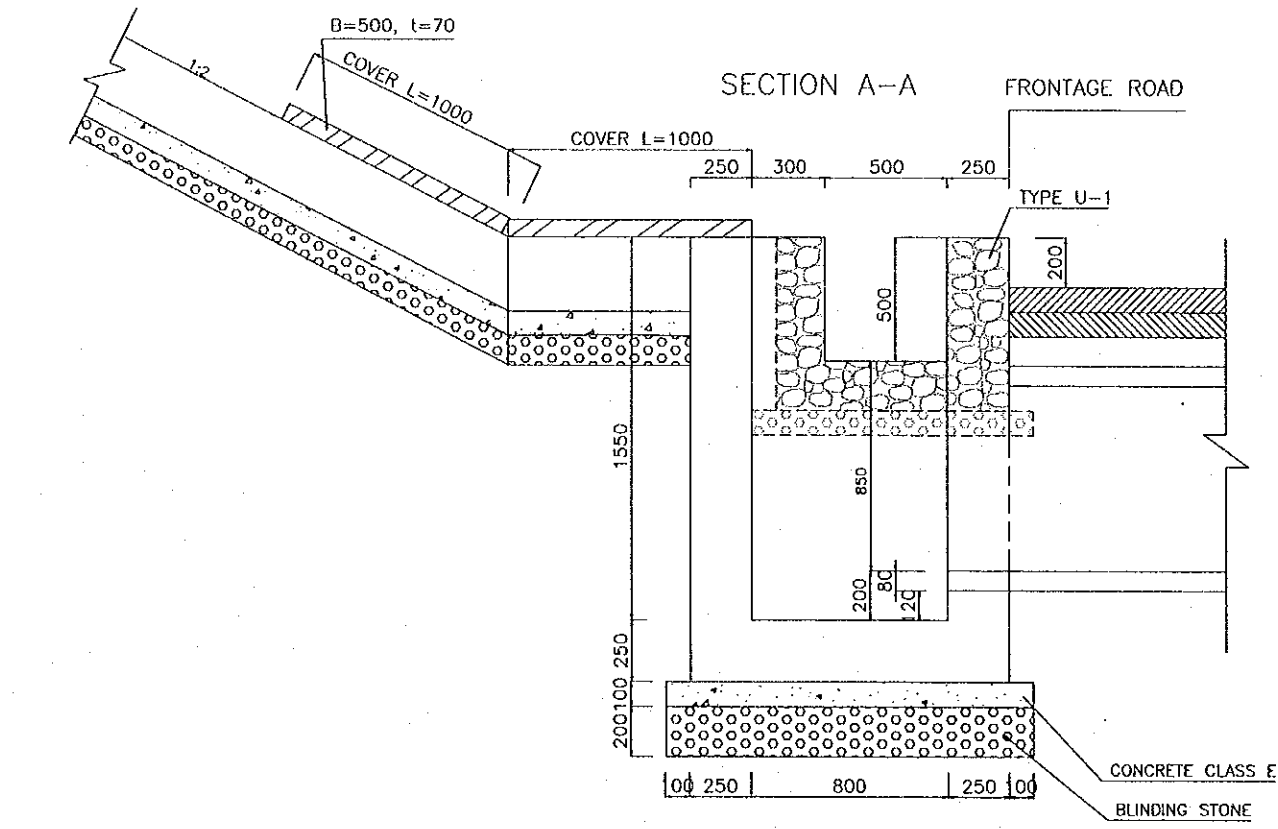
WORK QUANTITY (Per each)

Item	Unit	Quantity
Concrete Class C	m ³	0.469
Blinding Stone	m ³	0.30
Excavation	m ³	2.46
Back Filling	m ³	1.20
Form	m ²	5.00

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	2000.3.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/30	E-4-10	
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 ³	2.069
Concrete Class E	m ³	0.270
Blinding Stone	m ³	0.540
Excavation	m ³	16.92
Back Filling	m ³	12.36
Form	m ²	15.59
Reinforcement	-	see next drawing

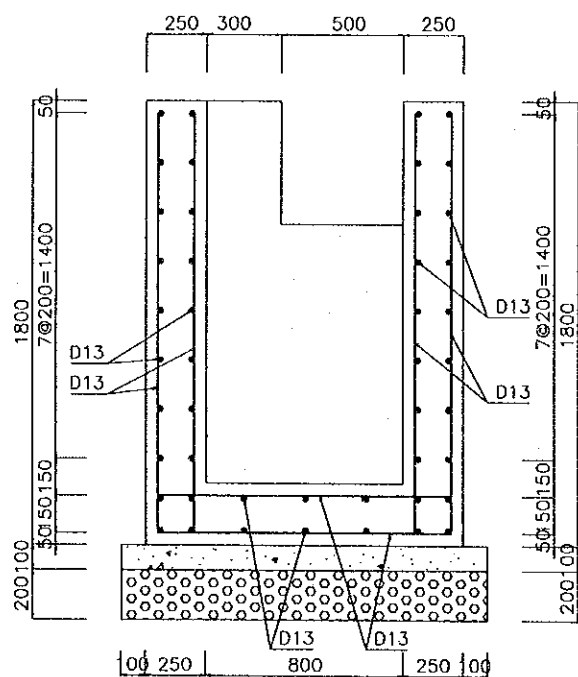
Note: Type A is with pipe, Type B is without pipe.

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

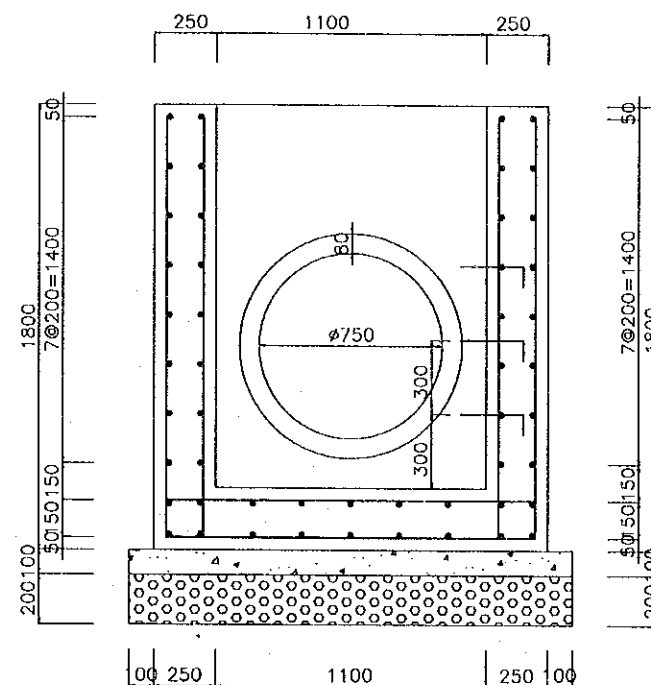
PACKAGE 3	SCALE 1/30	DRAWING No. E-4-11	SHEET No.
CATCH BASIN TYPE CB-R2 (2/2)			

CATCH BASIN TYPE CB-R4 (2/2)

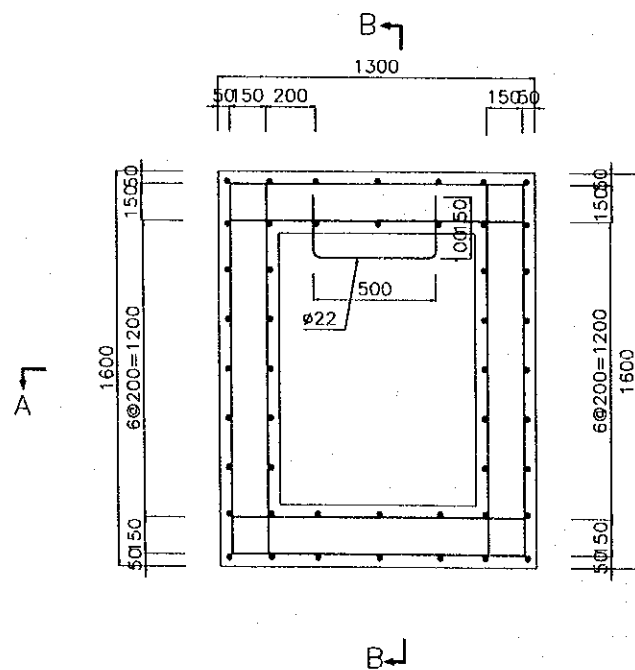
SECTION A-A



SECTION B-B



PLAN

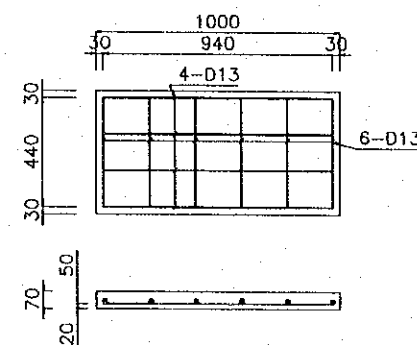


QUANTITY LIST OF REINFORCEMENT

Basin body (per each)	Diameter (mm)	Total weight (kg)
	D13	189.16
	φ22	11.18

QUANTITY LIST OF COVER (PER 2 ONE)

Item	Unit	Quantity
Concrete (Class C)	m ³	0.07
Form	m ³	0.42
Reinforcement (D13)	Kg	12.72

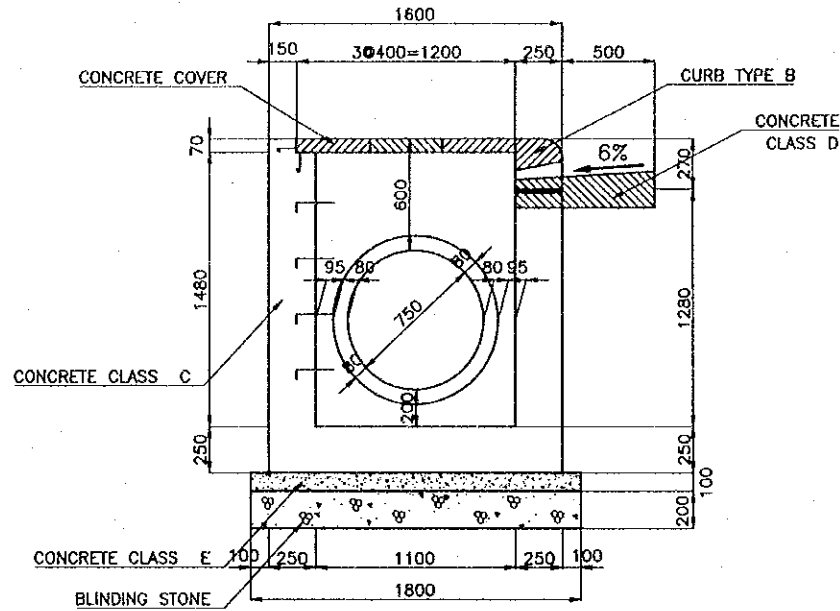


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TUHANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT	DESIGNED BY NAME S. WATASE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (HANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.3.14
CONSULTANT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

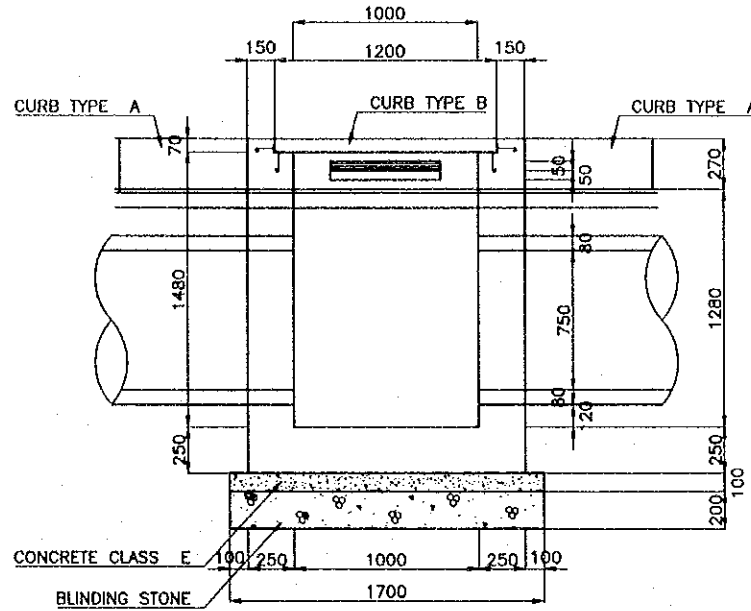
PACKAGE 3	SCALE 1/40	DRAWING No. E-4-12	SHEET No.
CATCH BASIN TYPE CB-F			

CATCH BASIN TYPE CB-F(1/2)

SCALE = 1/40



SECTION A - A



SECTION B - B

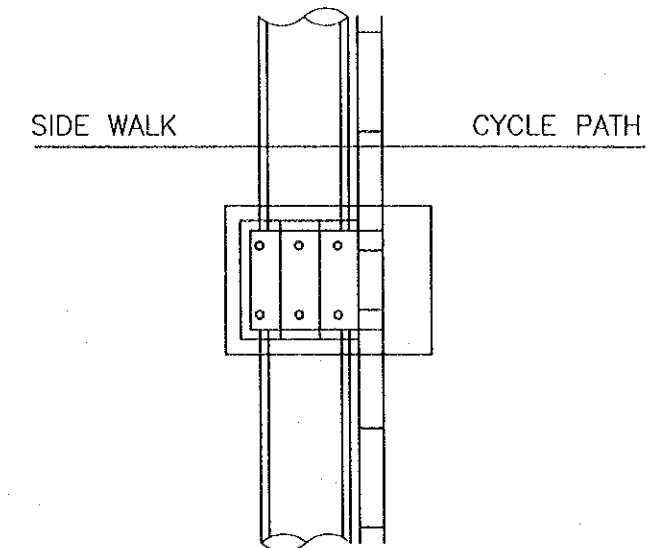
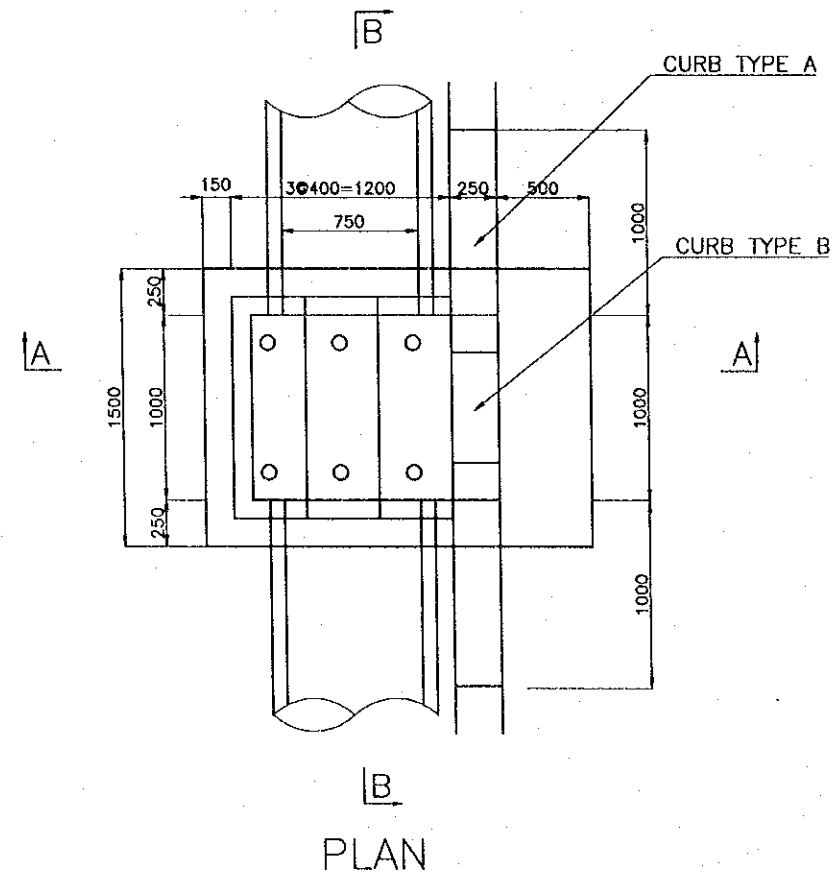


DIAGRAM TYPE A

S = 1/75

QUANTITY LIST



PLAN

	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

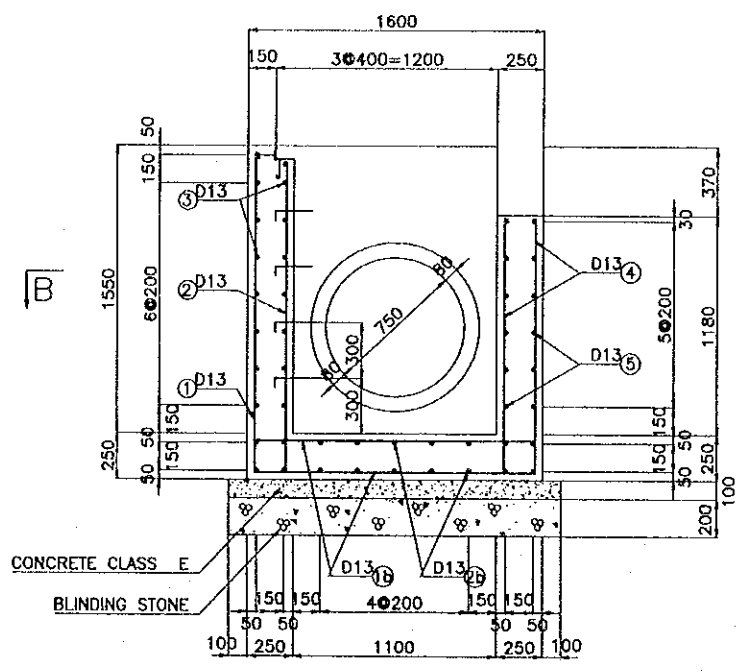
1- ALL DIMENSIONS ARE IN MILLIMETERS

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	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.17

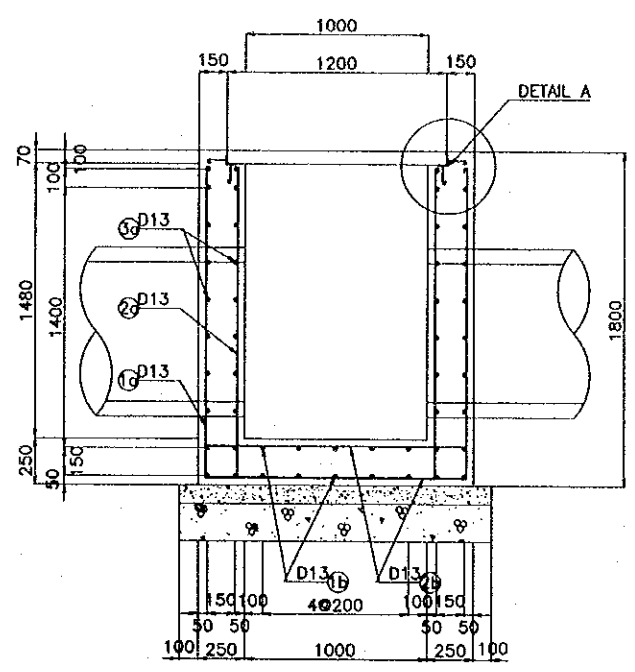
PACKAGE 3	SCALE 1/40	DRAWING No. E-4-13	SHEET No.
CATCH BASIN TYPE CB-F (2/2)			

CATCH BASIN TYPE CB-F(2/2)

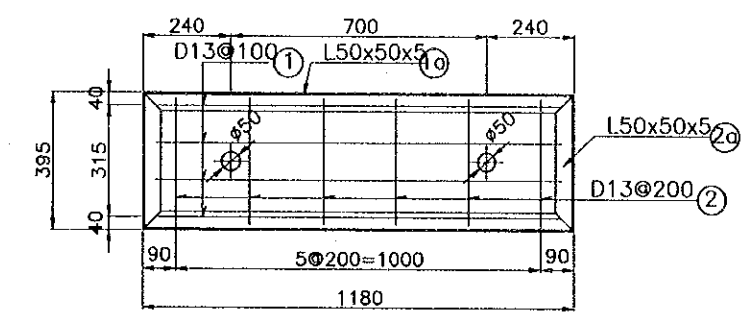
SCALE = 1/40



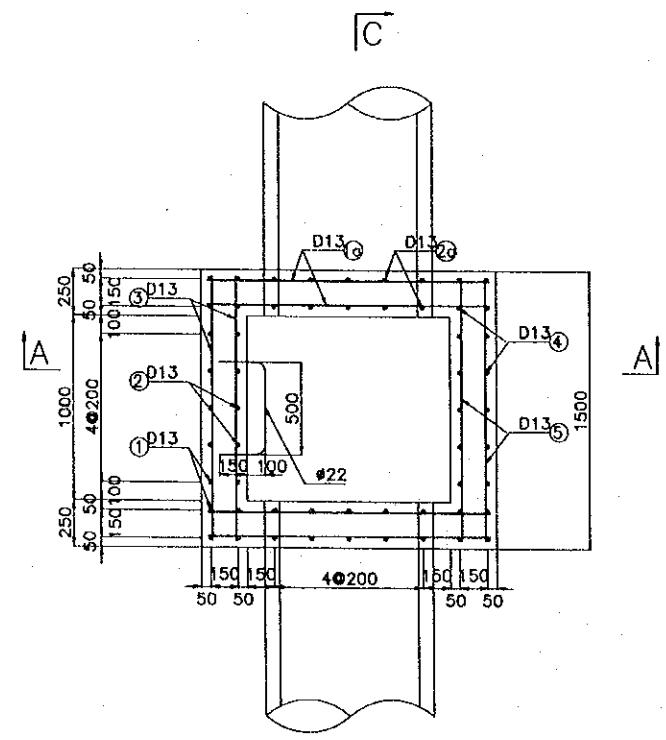
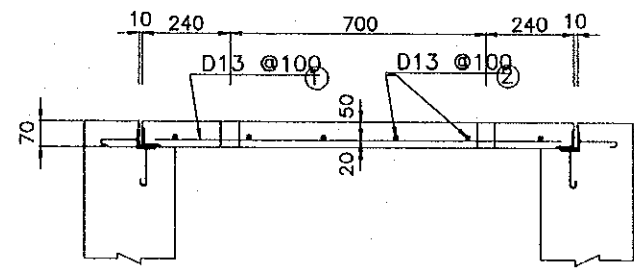
SECTION A - A



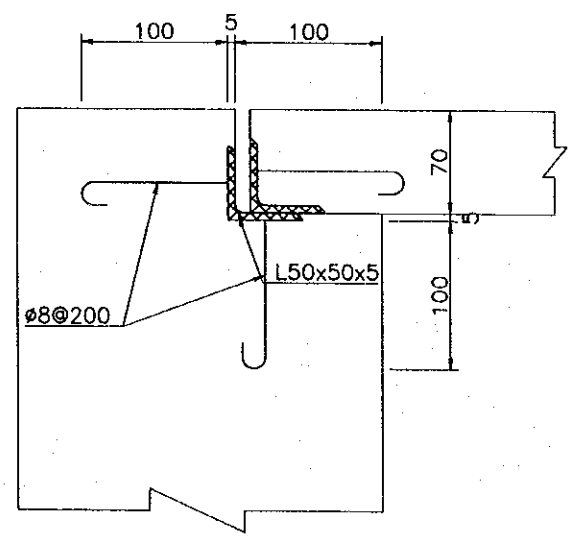
SECTION C - C



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

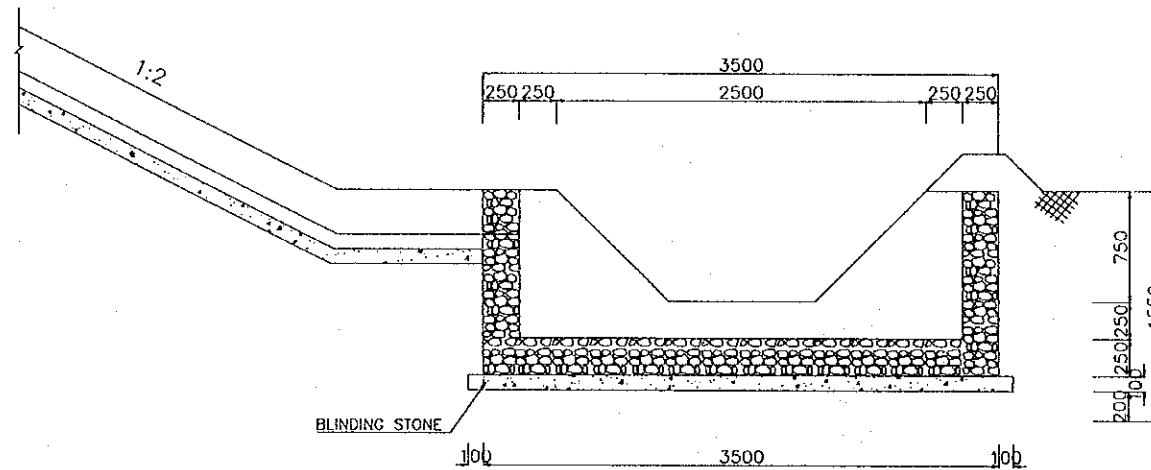
1- ALL DIMENSIONS ARE IN MILLIMETERS

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)		
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE 	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000. 3. 14	

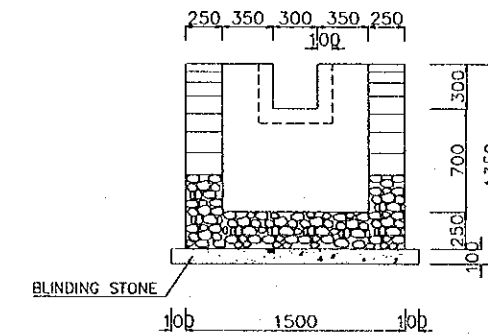
PACKAGE 3	SCALE 1/50	DRAWING No. E-4-14	SHEET No.
CATCH BASIN TYPE CB-S1			

CATCH BASIN TYPE CB-S1

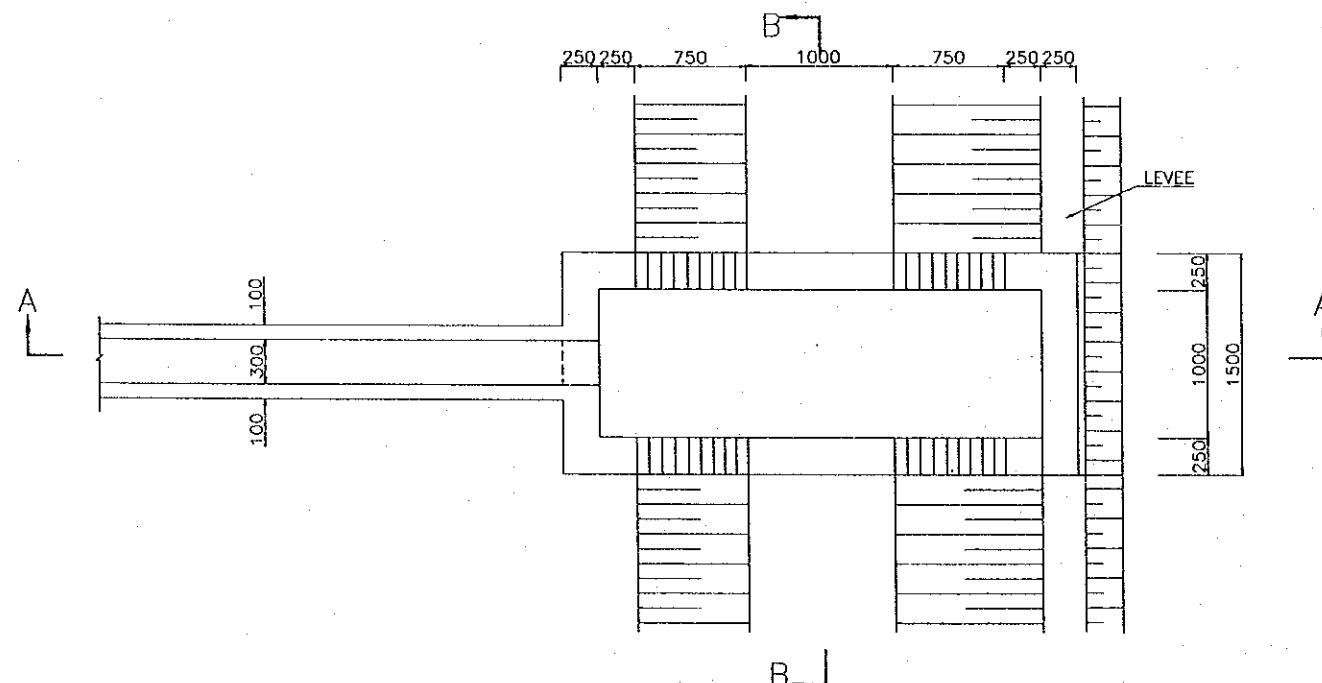
SECTION A-A



SECTION B-B



PLAN



WORK QUANTITY (Per each)

Item	Unit	Quantity
Hortared stone	m ³	2.88
Blinding Stone	m ³	0.63
Excavation	m ³	15.80
Back Filling	m ³	8.61

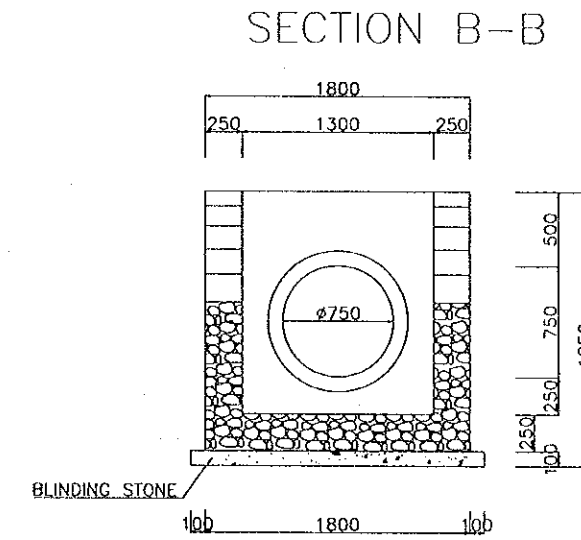
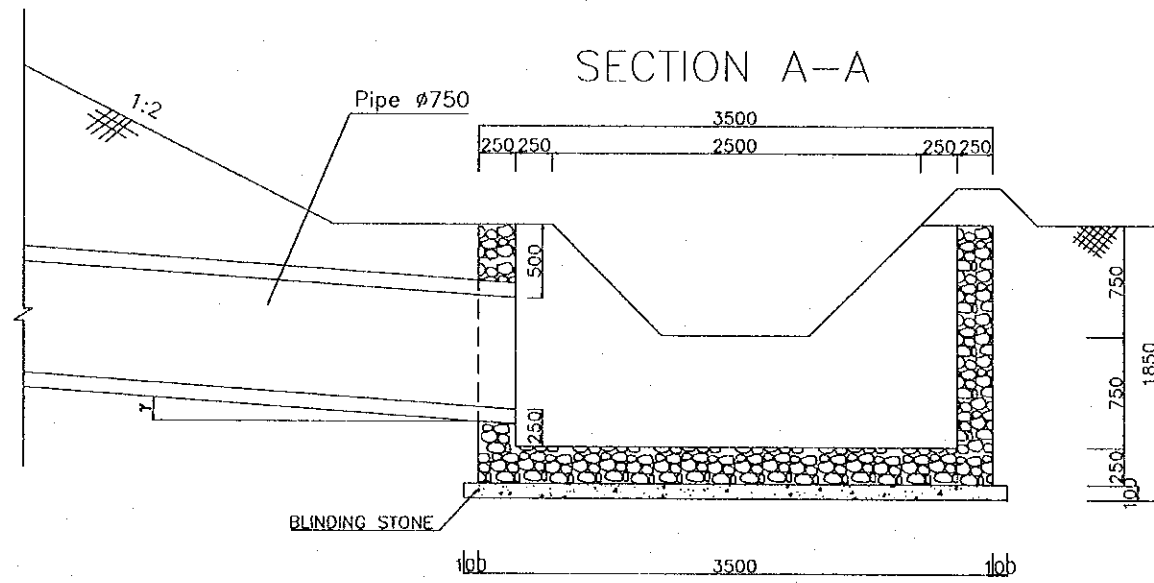
Note

This basin shall be installed in the earthen channel at paddy field.

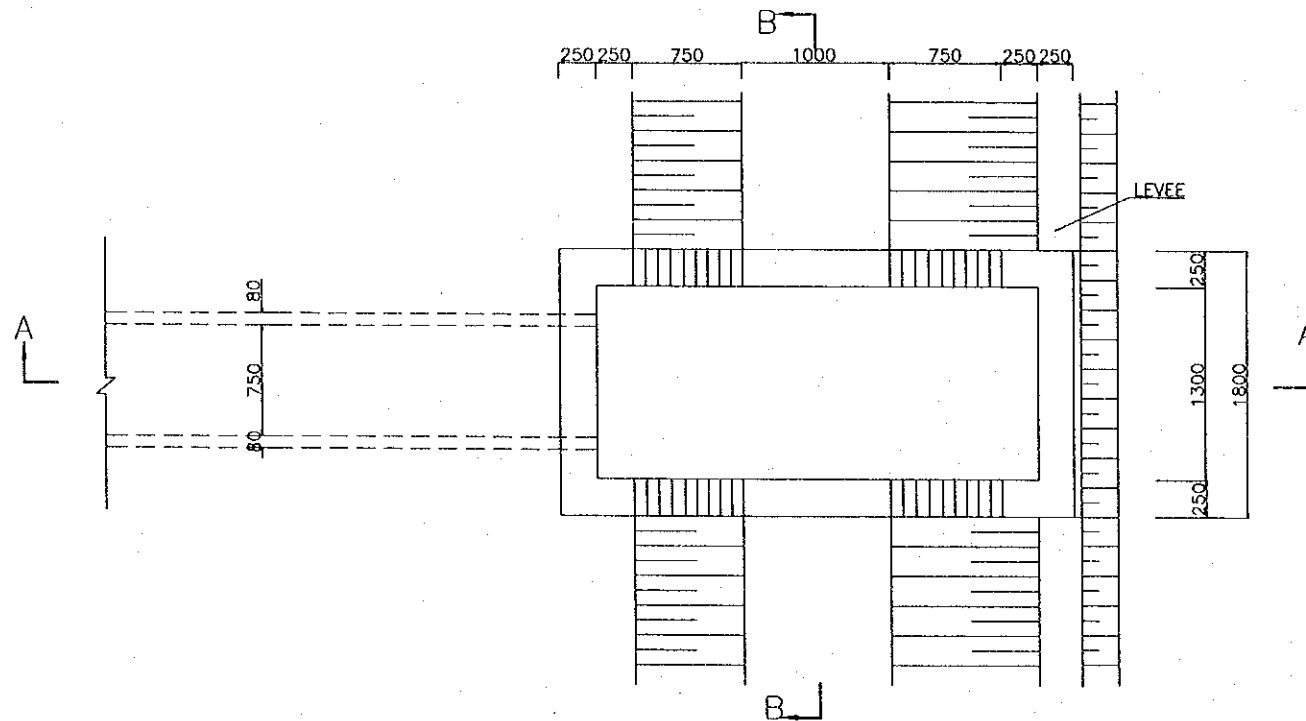
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.11.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/50	E-4-15	
CATCH BASIN TYPE CB-S2			

CATCH BASIN TYPE CB-S2



PLAN



WORK QUANTITY (Per each)

Item	Unit	Quantity
Mortared stone	m ³	4.36
Blinding Stone	m ³	0.74
Excavation	m ³	29.67
Back Filling	m ³	17.90

Note

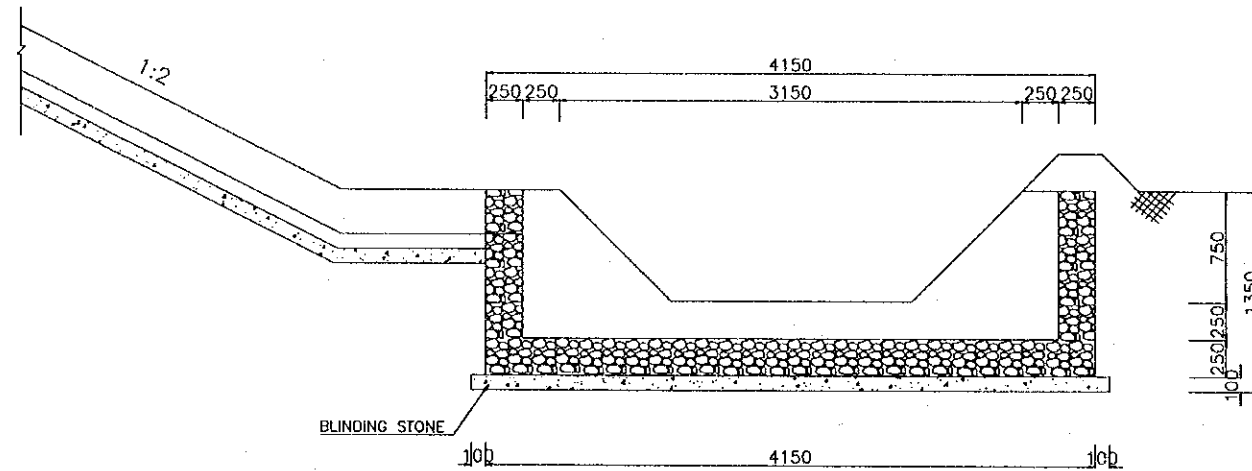
1. This basin shall be installed in the earthen channel at paddy field.
2. γ shall be varied depending on the installation height of catch basin to be connected

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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	2000.12.17

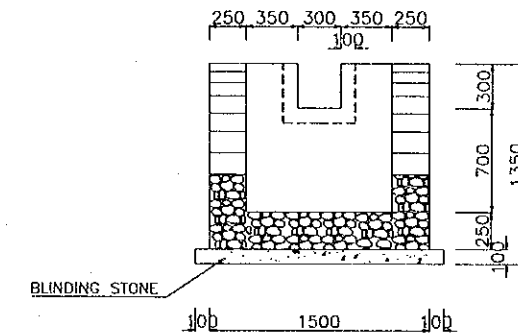
PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/50	E-4-16	
CATCH BASIN TYPE CB-S3			

CATCH BASIN TYPE CB-S3

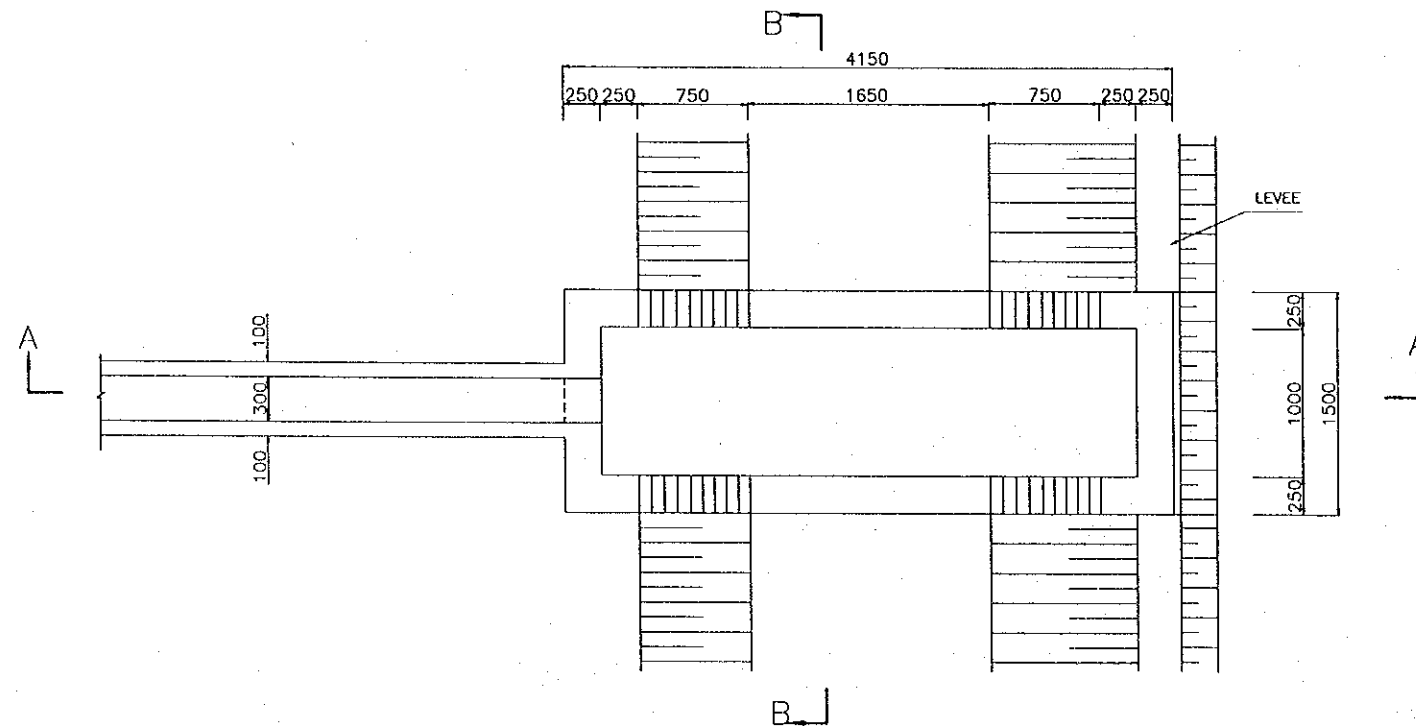
SECTION A-A



SECTION B-B



PLAN



WORK QUANTITY (Per each)

Item	Unit	Quantity
Mortared stone	m ³	3.21
Blinding Stone	m ³	0.74
Excavation	m ³	20.32
Back Filling	m ³	11.80

Note

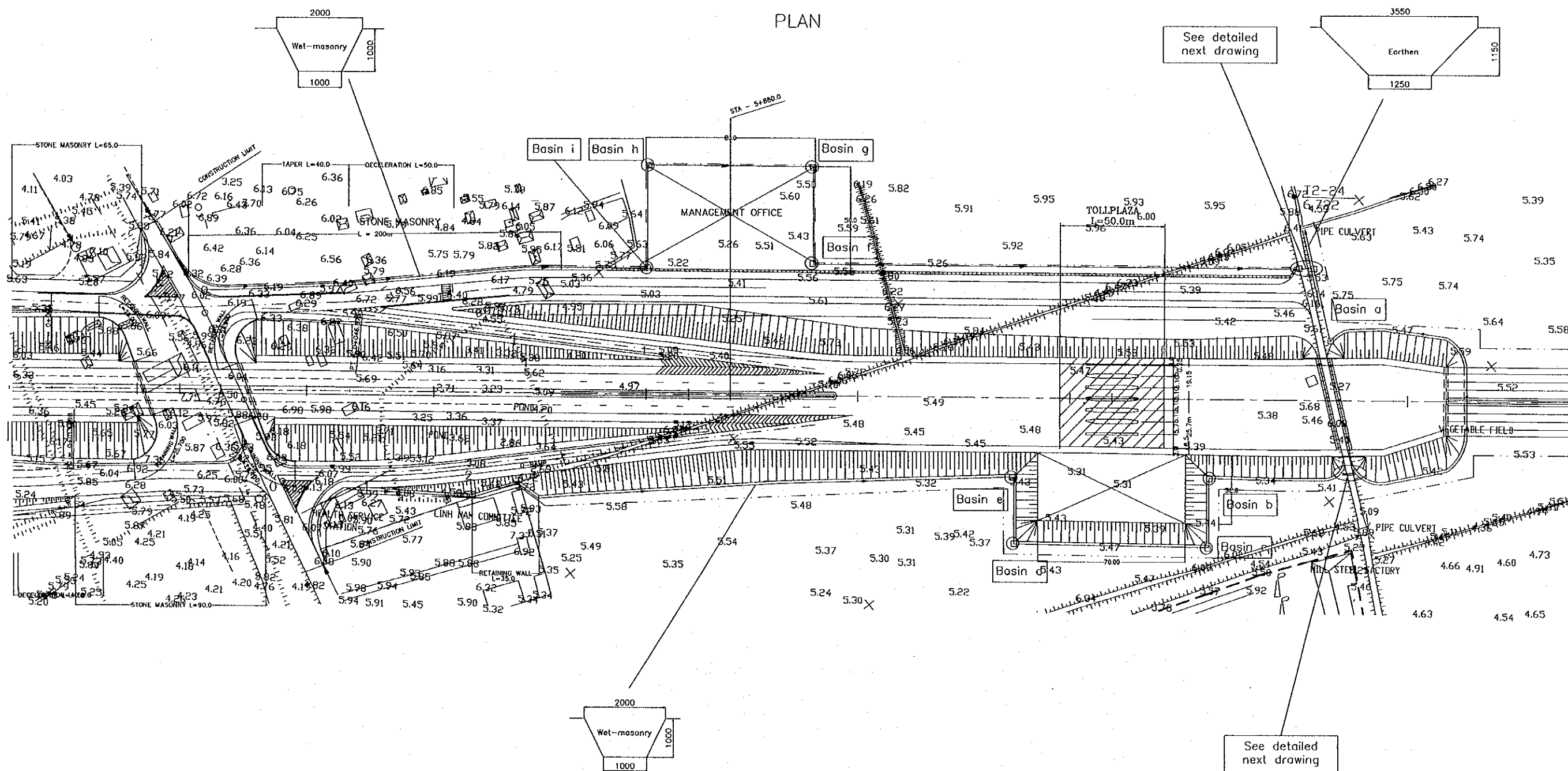
This basin shall be installed in the earthen channel at paddy field.

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 TRU BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.3.14	

PACKAGE 3	SCALE 1/2000	DRAWING No. E-4-17	SHEET No.
DRAINAGE FACILITIES SURROUNDING TOLLPLAZA(1/3)			

DRAINAGE FACILITIES SURROUNDING TOLLPLAZA (1/3)

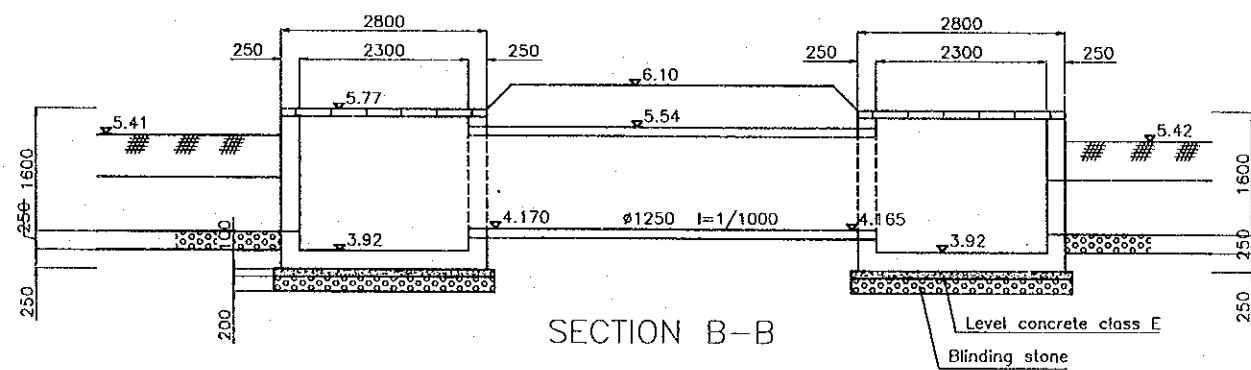
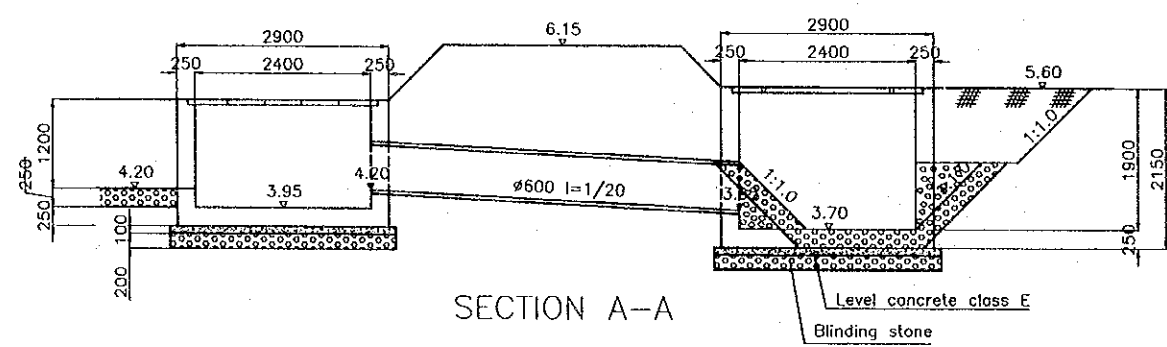
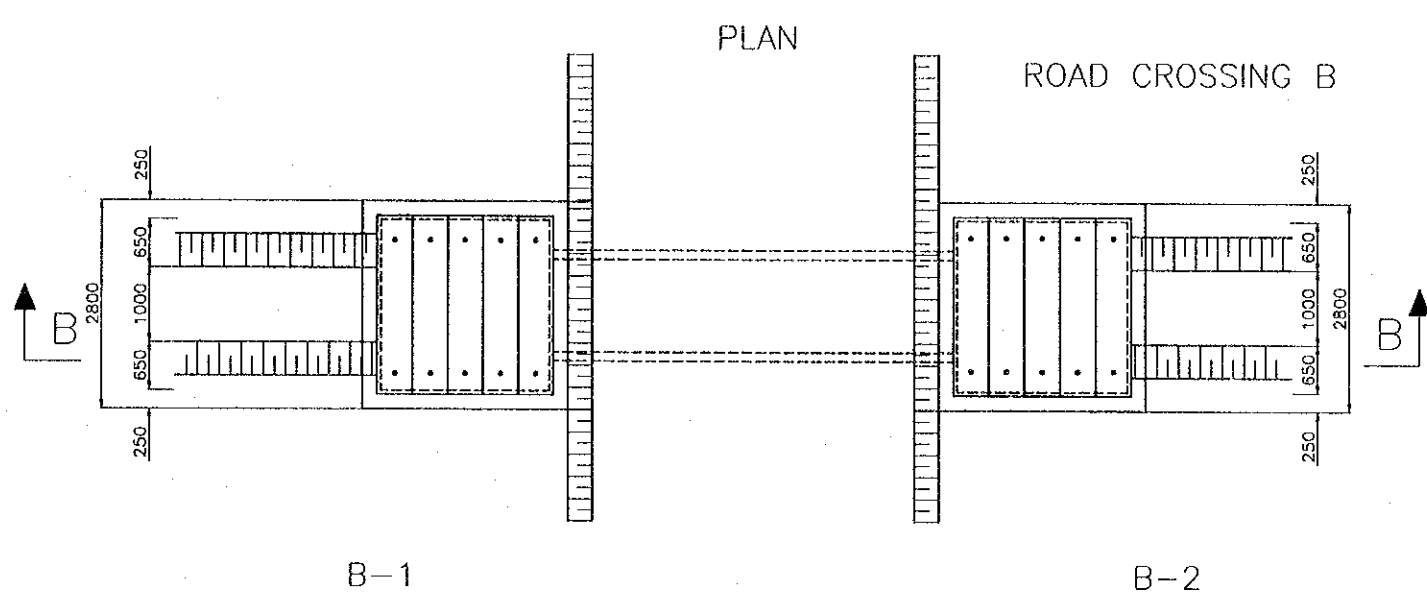
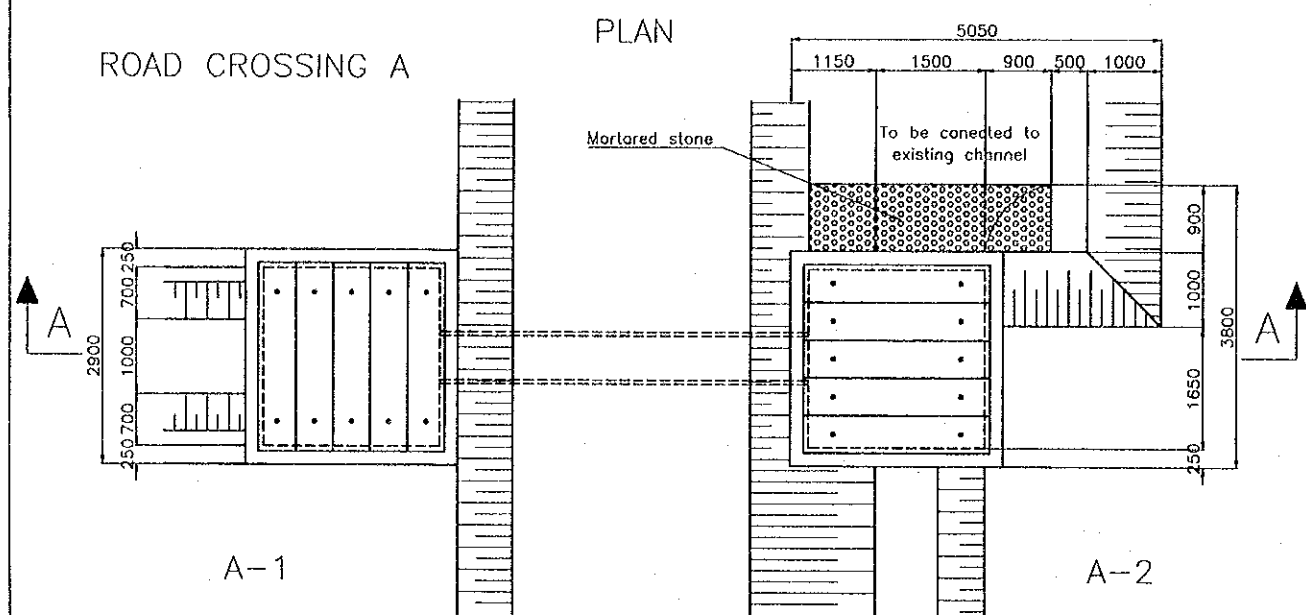
PLAN



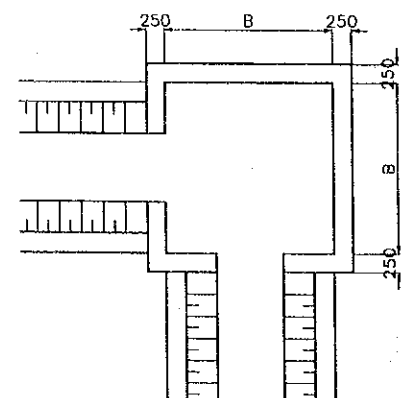
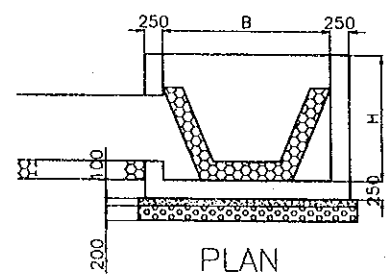
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS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

DRAINAGE FACILITIES SURROUNDING TOLLPLAZA (2/3)

PACKAGE 3	SCALE 1/100	DRAWING No. E-4-18	SHEET No.
DRAINAGE FACILITIES SURROUNDING TOLLPLAZA (2/3)			



BASIN DETAILS




DIMENSION OF BASINS

Basin	B (mm)	H (mm)	Basin bed Elevation
a	2300	1700	3.74
b	2300	1300	3.99
c	2300	1300	4.03
d	2300	1300	4.12
e	2300	1300	4.15
f	2400	1300	4.18
g	2400	1300	4.23
h	2400	1300	4.31
i	2400	1300	4.36

WORK QUANTITY BY BASIN

Item	Type	a		b~e		f~i	
		Unit	Quantity	Unit	Quantity	Unit	Quantity
Concrete class C		m3	5.55	m3	4.53	m3	4.80
Form		m2	33.80	m2	25.64	m2	26.24
Reinforcement		Kg	440.00	Kg	360.00	Kg	380.00
Leveling concrete class E		m3	0.90	m3	0.90	m3	0.96
Blinding stone		m3	0.18	m3	1.80	m3	1.92
Excavation		m3	48.61	m3	35.11	m3	36.72
Backfilling		m3	30.62	m3	20.26	m3	20.80

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JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. YATABE
PROJECT	RED RIVER BRIDGE (HANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
3		E-4-19	
DRAINAGE FACILITIES SURROUNDING TOLLPLAZA (3/3)			

DRAINAGE FACILITIES SURROUNDING TOLLPLAZA (3/3)

Item	Unit	Road crossing A		Road crossing B	Remarks
		A-1	A-2	B-1	
Concrete (class C)	m3	5.47	5.52	5.49	B-1 :2NOS
Form	m2	30.36	31.45	34.61	
Reinforcement (φ13)	Kg	430.00	440.00	440.00	
Step (φ22)	Kg	14.90 (4 NOS.)	18.63 (5 NOS.)	18.63 (5 NOS.)	L=12.5 m per piece
Leveling concrete (Class E)	m3	0.96	0.96	0.90	
Blinding stone	m3	1.92	1.92	1.80	
Excavation	m3	38.69	49.89	45.55	
Back filling	m3	21.51	28.93	26.39	
Mortared stone	m3	-	1.18	-	
Cover (per each basin)					
Concrete (class C)	m3	0.44	0.44	0.44	
Reinforcement (φ13)	Kg	76.94	76.94	76.94	
Form	m2	2.10	2.10	2.10	
L50x50x5	Kg	150.76	150.76	150.96	
φ8	Kg	9.88	9.88	9.88	

F. ROAD LIGHTING AND TRAFFIC SIGNAL

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	2000.11.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
3		F-01	
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 BRIDGE FACILITY
- INTERCHANGE SECTION LIGHT
- TOOL GATE FACILITY
- FLASHING LIGHT FOR RAMPWAYS OF INTERCHANGE

6. SYSTEM GROUNDING FOR ELECTRICAL FACILITIES

THE SYSTEMS GROUNDING SHALL BE EXCAVATED 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 LENGTH 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 RESIDENTAL PUBLIC AND INDUSTRIAL BUILDINGS ARE STIPULATED IN CHAPTER 12 OF BUILDING CODE OF VIETNAM II.

ABBREVIATION

SYMBOL

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. 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 2000.08.14	

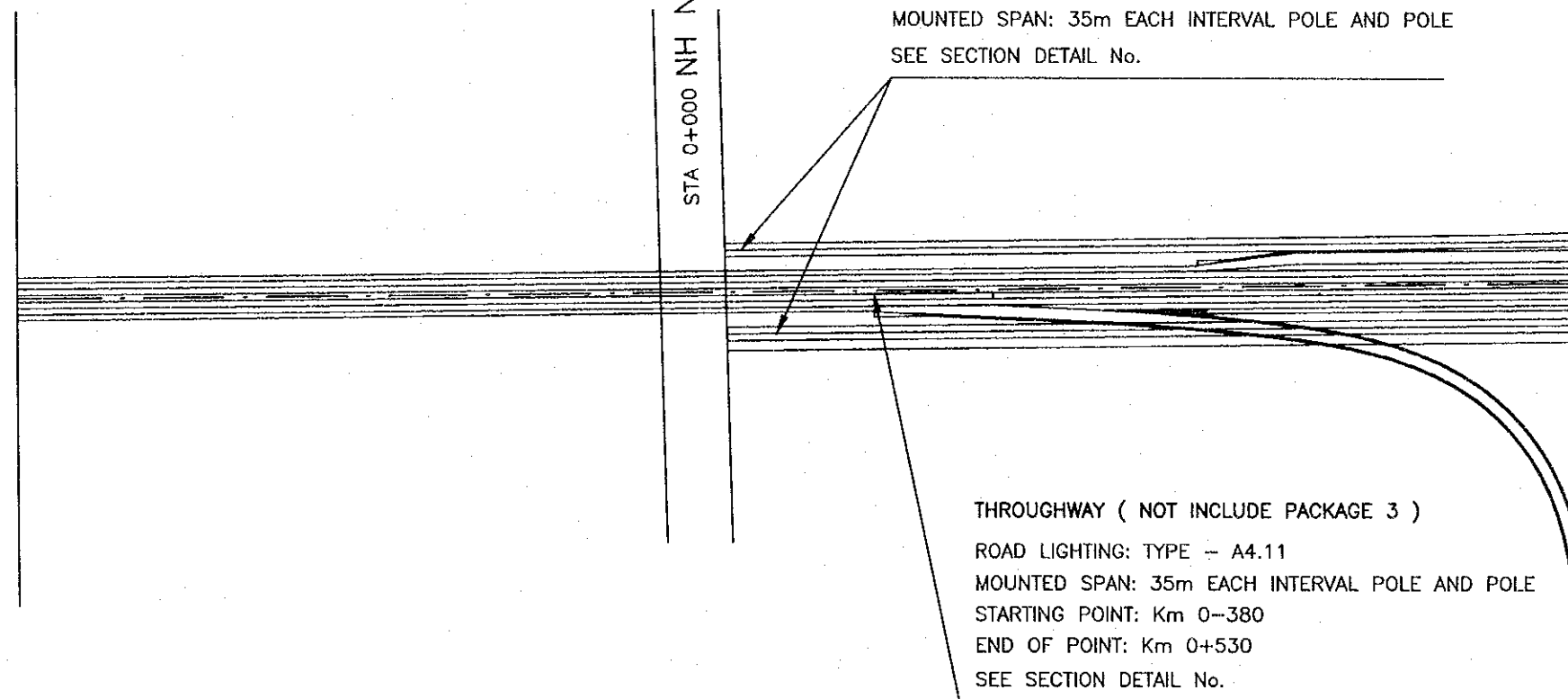
PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/400	F - 02	
GENERAL PLAN - 1			

STA 0-409.5

STA 0+000 NH No.1

FRONTAGE SECTION (INCLUDING PACKAGE 3)

ROAD LIGHTING: TYPE - A2.1
MOUNTED SPAN: 35m EACH INTERVAL POLE AND POLE
SEE SECTION DETAIL No.

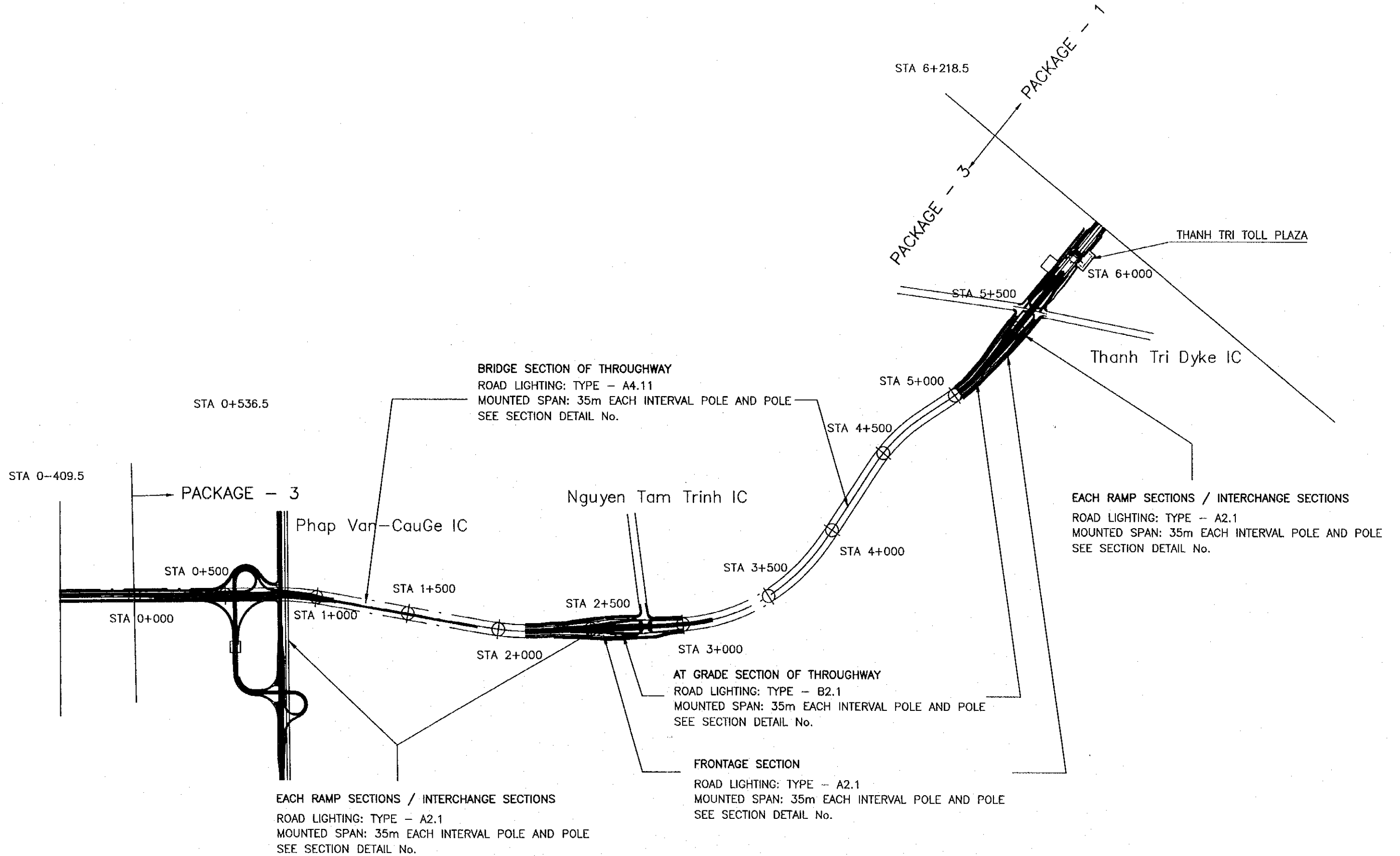


THROUGHWAY (NOT INCLUDE PACKAGE 3)

ROAD LIGHTING: TYPE - A4.11
MOUNTED SPAN: 35m EACH INTERVAL POLE AND POLE
STARTING POINT: Km 0-380
END OF POINT: Km 0+530
SEE SECTION DETAIL No.

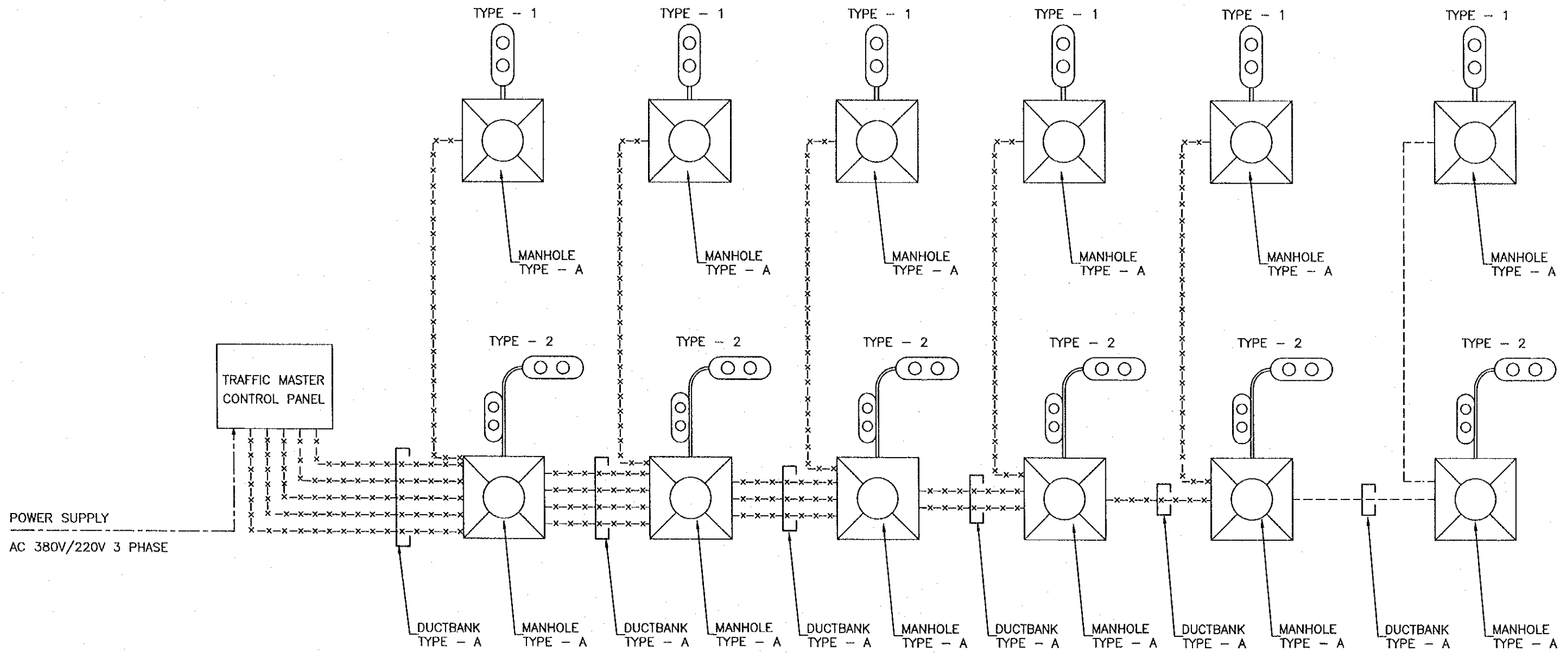
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/20000	F - 03	
GENERAL PLAN - 2			



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 2000.04.17	

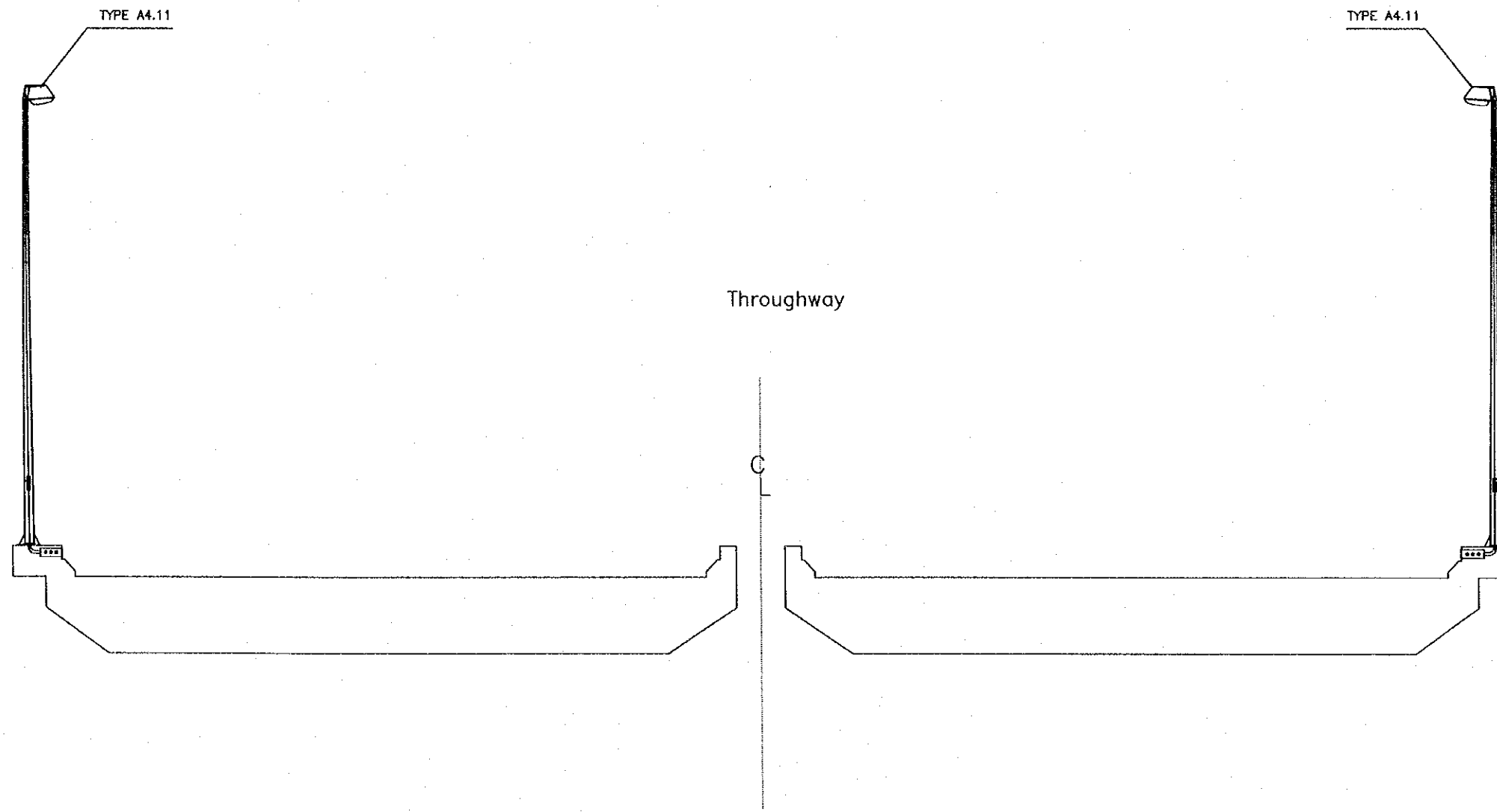
PACKAGE 3	SCALE	DRAWING No. F-04	SHEET No.
TRAFFIC SIGNAL DIAGRAM			



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)		
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.3.14	

PACKAGE 3	SCALE 1/100	DRAWING No. F - 05	SHEET No.
PROFILE OF ROAD LIGHTING - 1			

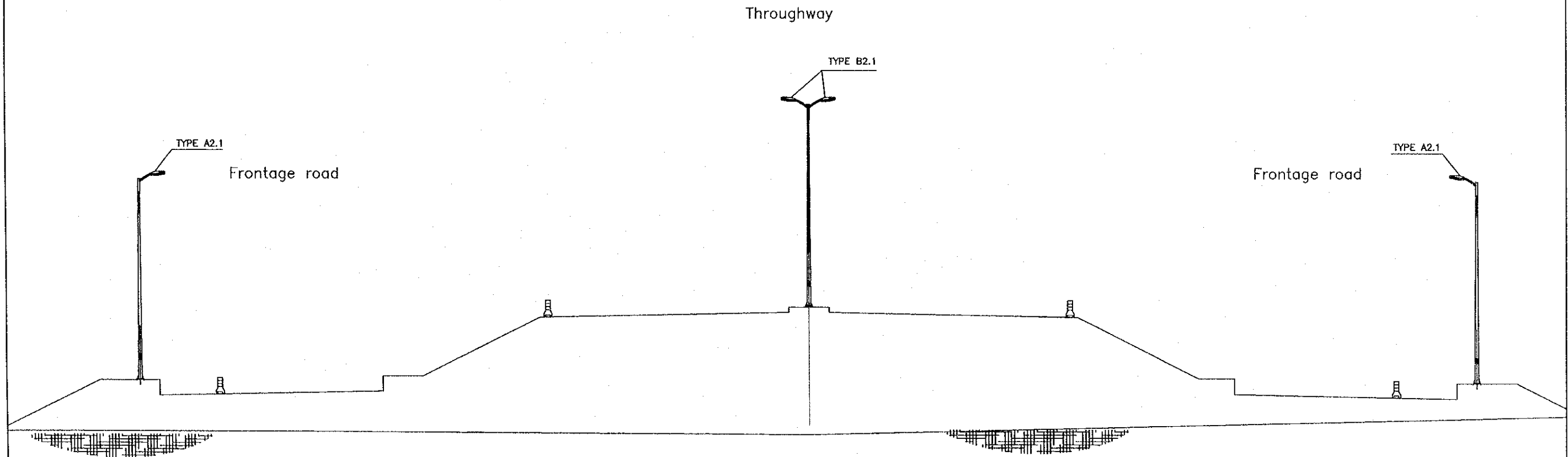
TYPICAL BRIDGE SECTION



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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 2000.11.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/200	F - 06	
PROFILE OF ROAD LIGHTING - 2			

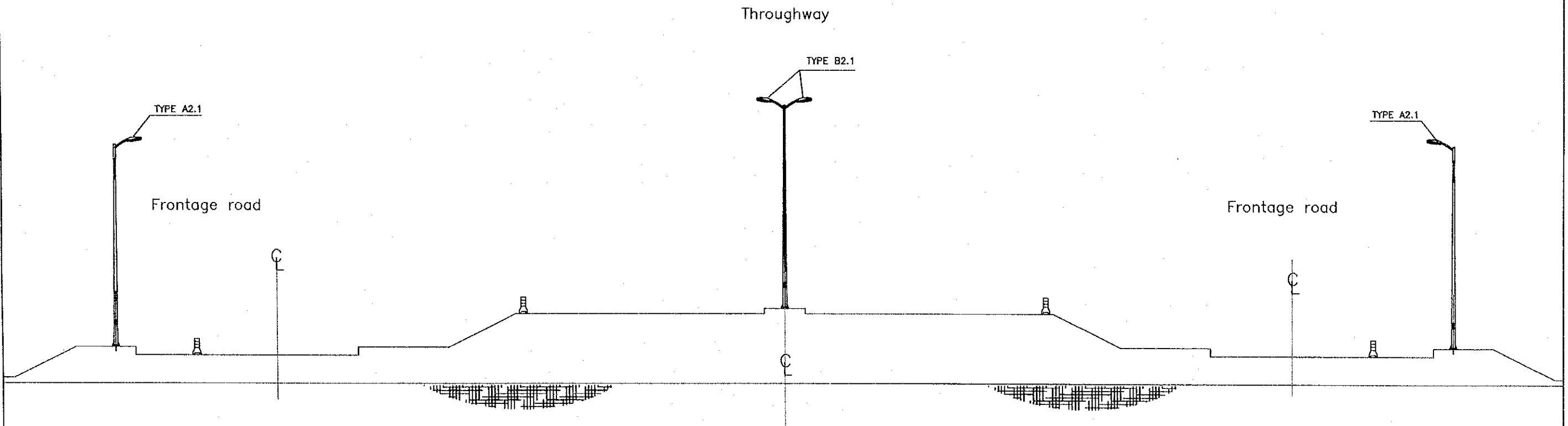
AT GRADE SECTION -1



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PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	SEP 2. 17

PACKAGE 3	SCALE 1/200	DRAWING No. F - 07	SHEET No.
PROFILE OF ROAD LIGHTING - 3			

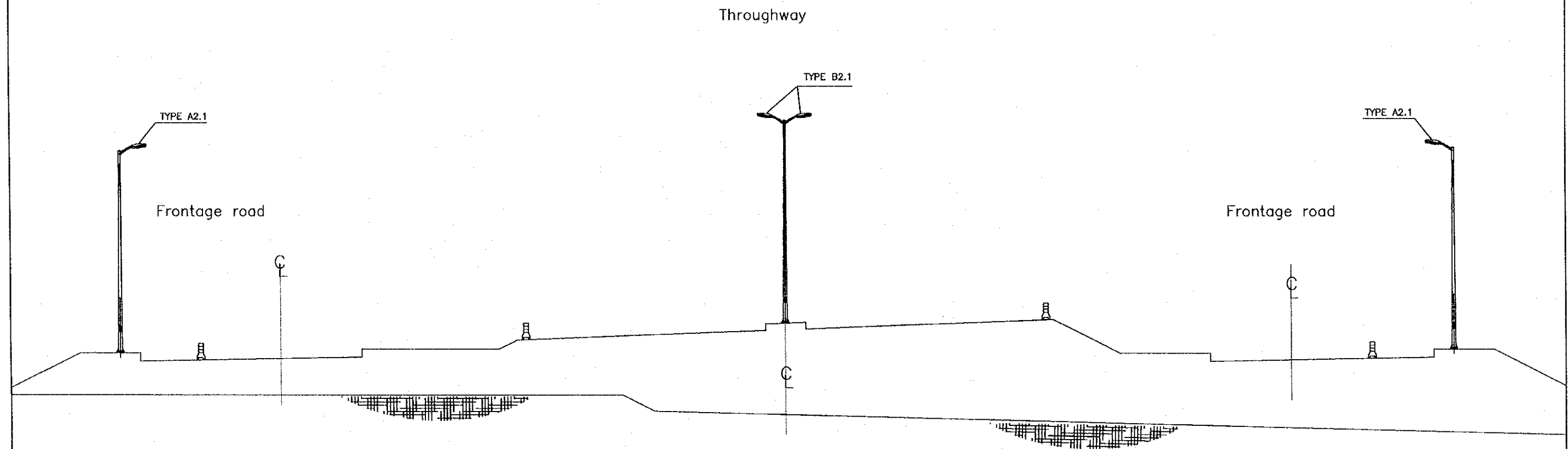
AT GRADE SECTION -2



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TỈNH 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	2000.02.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/200	F - 0B	
PROFILE OF ROAD LIGHTING - 4			

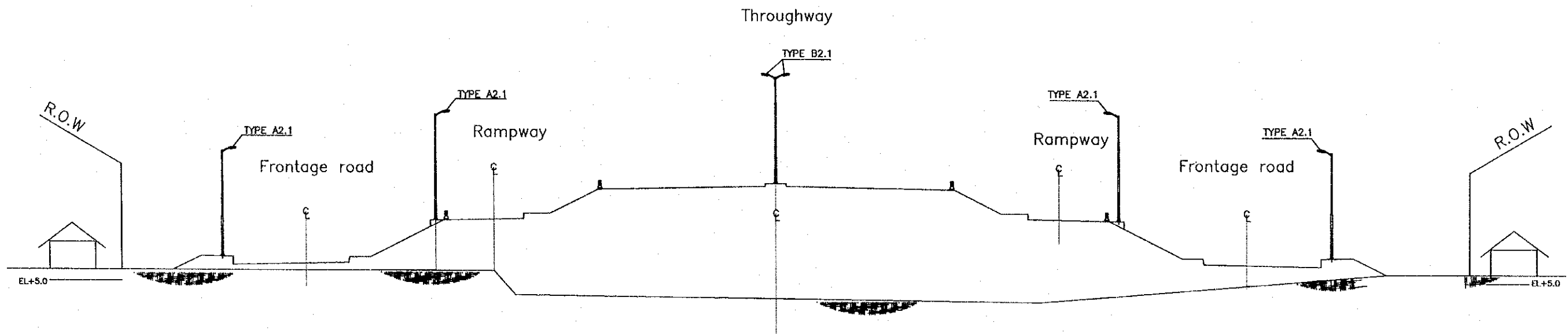
AT GRADE SECTION -3



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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 3	SCALE 1/400	DRAWING No. F - 09	SHEET No.
PROFILE OF ROAD LIGHTING - 5			

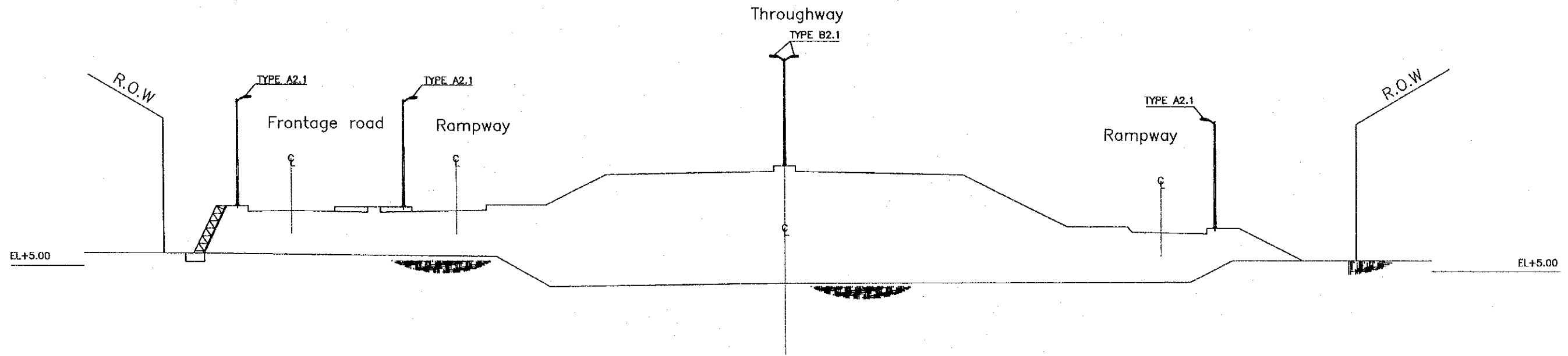
AT GRADE SECTION -4



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	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	2000.03.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/400	F - 10	
PROFILE OF ROAD LIGHTING - 6			

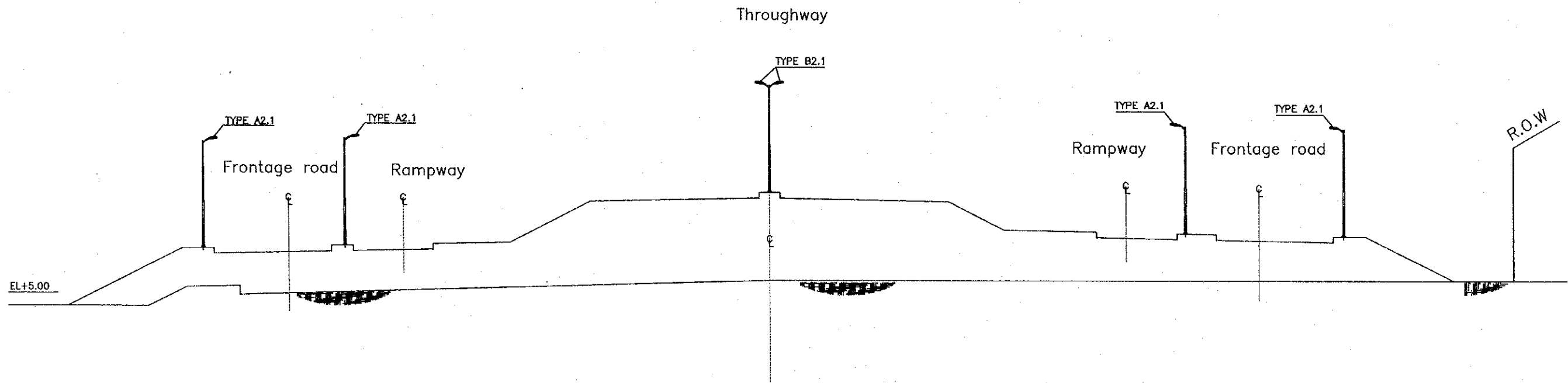
AT GRADE SECTION -5



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

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/400	F - 11	
PROFILE OF ROAD LIGHTING - 7			

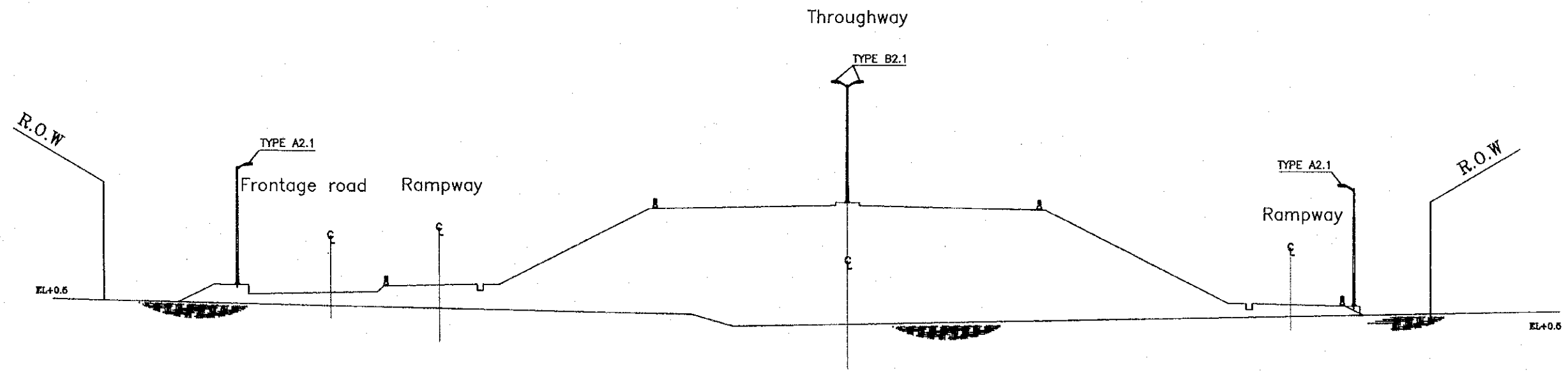
AT GRADE SECTION - 6



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 2000.09.17	

PACKAGE 3	SCALE 1/400	DRAWING No. F - 12	SHEET No.
PROFILE OF ROAD LIGHTING -- B			

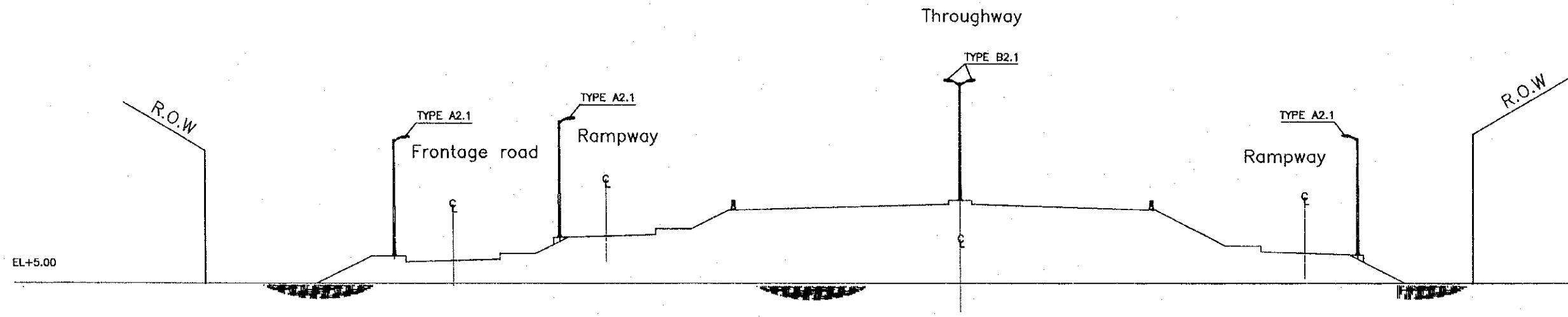
AT GRADE SECTION - 7



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UHT, 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>
CONSULTING	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000. 8. 17

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/400	F - 13	
PROFILE OF ROAD LIGHTING - 8			

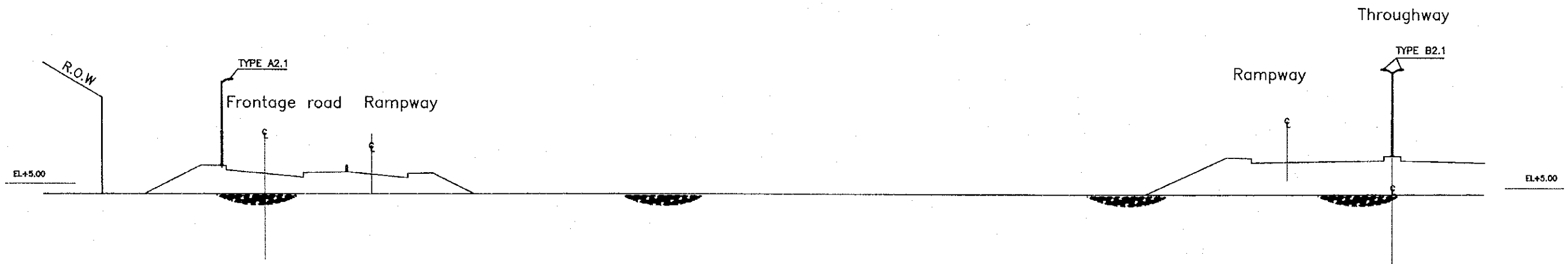
AT GRADE SECTION - 8



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. NATADE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE SEP. 19

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/500	F - 14	
PROFILE OF ROAD LIGHTING - 10			

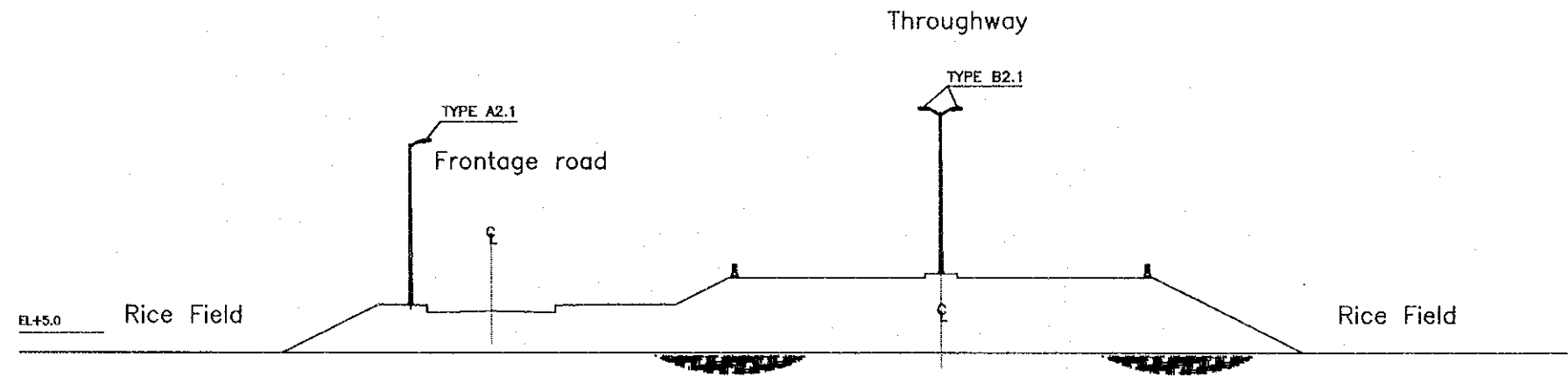
AT GRADE SECTION -- 9



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	2000.10.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
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PROFILE OF ROAD LIGHTING - 11			

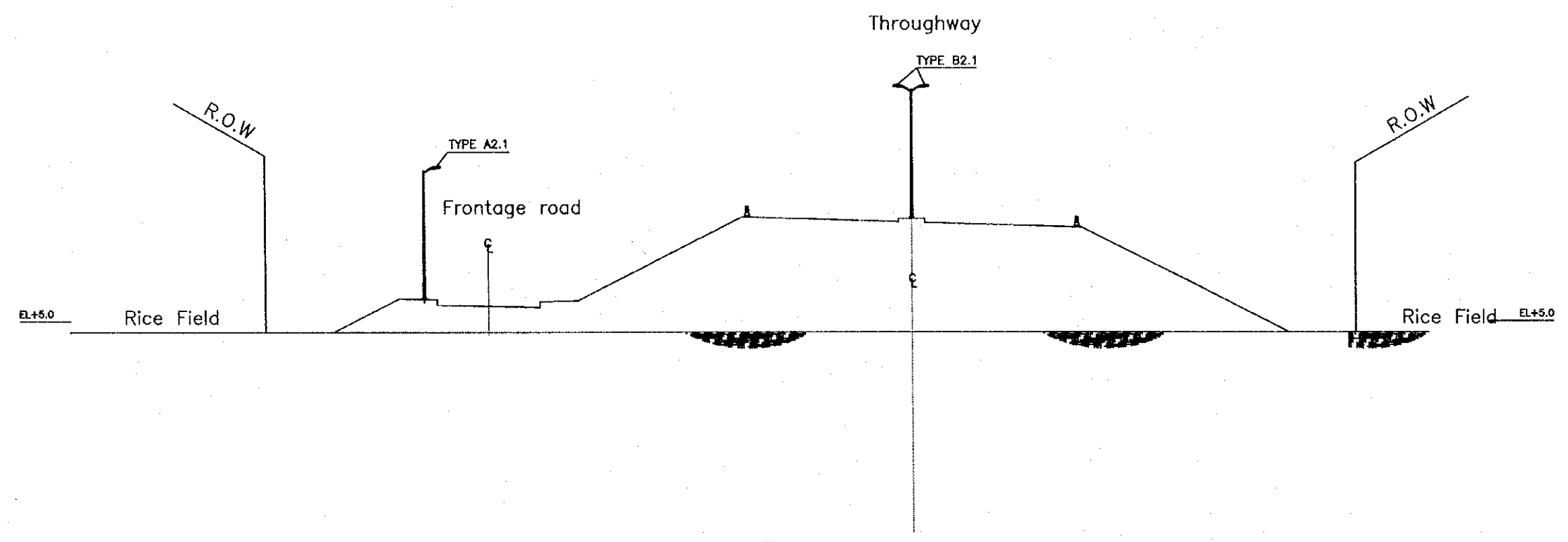
AT GRADE SECTION - 10



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 <i>[Signature]</i>	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000. 8. 14	

PACKAGE 3	SCALE 1/400	DRAWING No. F - 16	SHEET No.
PROFILE OF ROAD LIGHTING - 12			

AT GRADE SECTION - 11

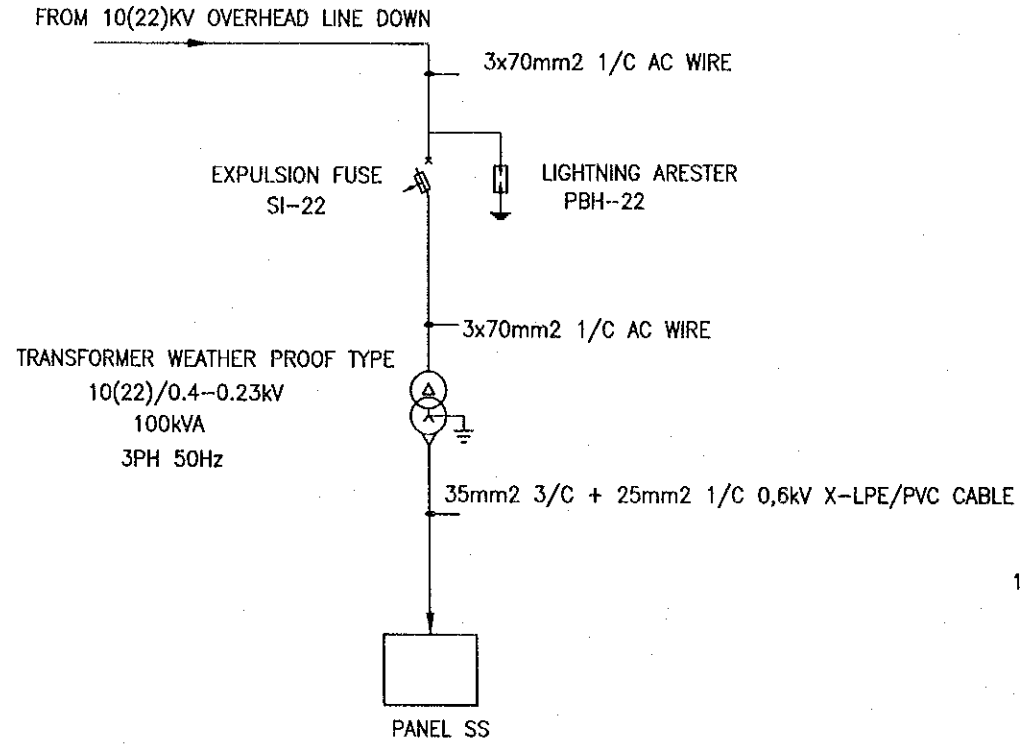


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRU BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.08.17

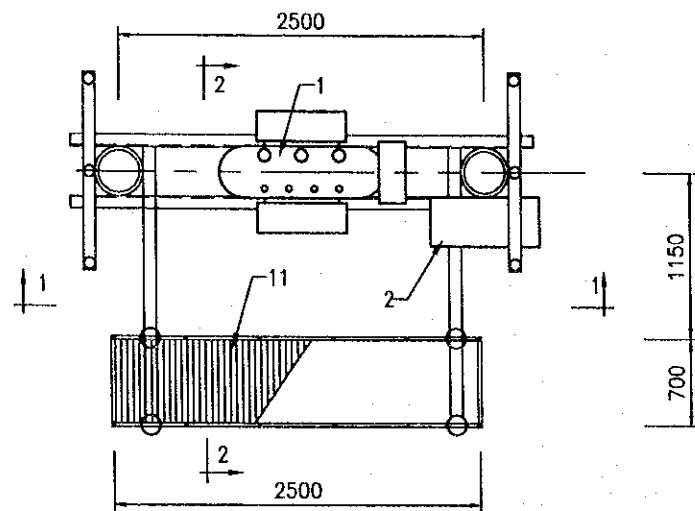
PACKAGE 3	SCALE 1/50	DRAWING No. F - 17	SHEET No.
SUBSTATION TYPE - Is			

(POLE MOUNTED MORE THAN 50KVA, 100KVA)

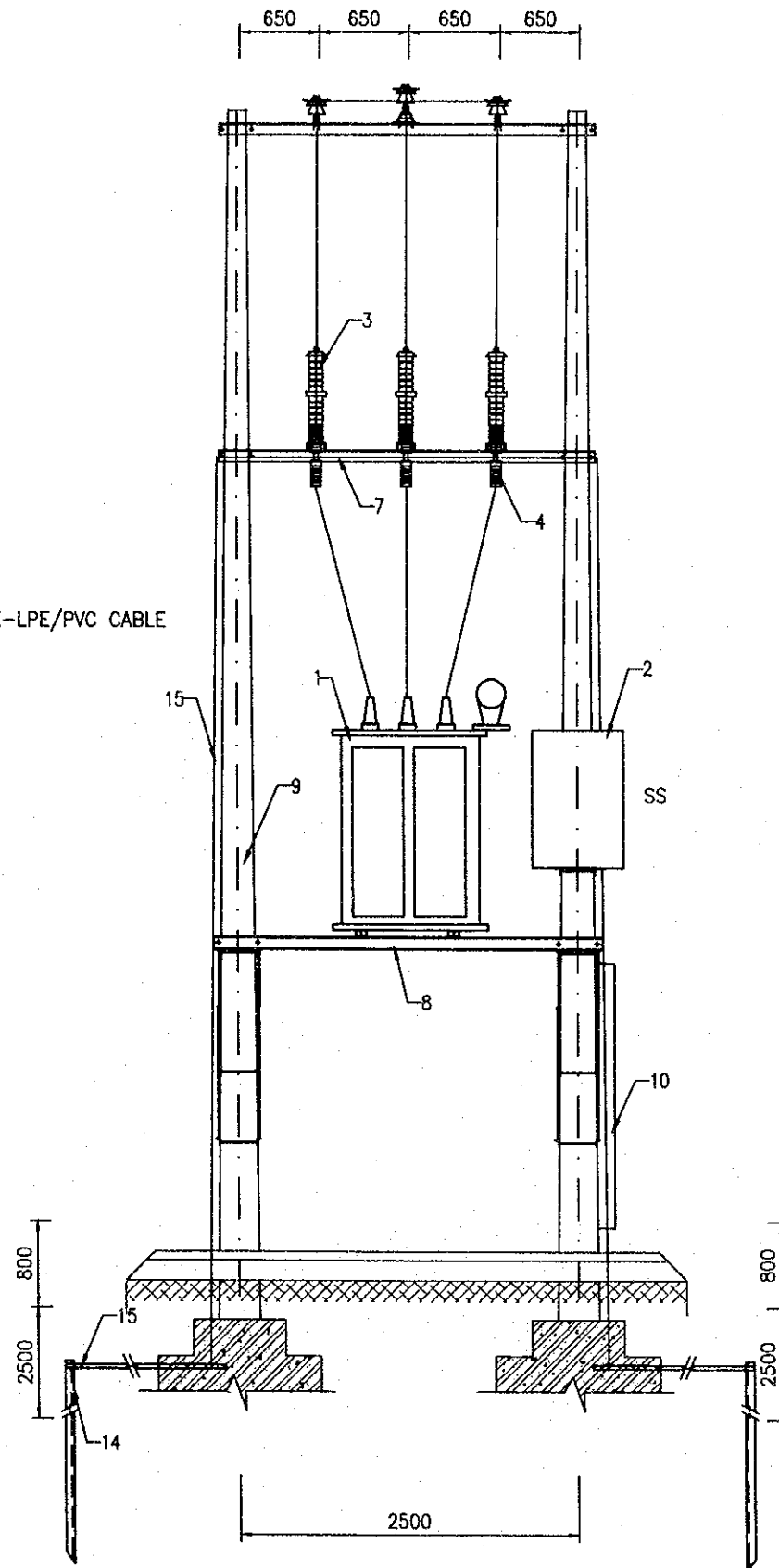
SINGLE LINE DIAGRAM



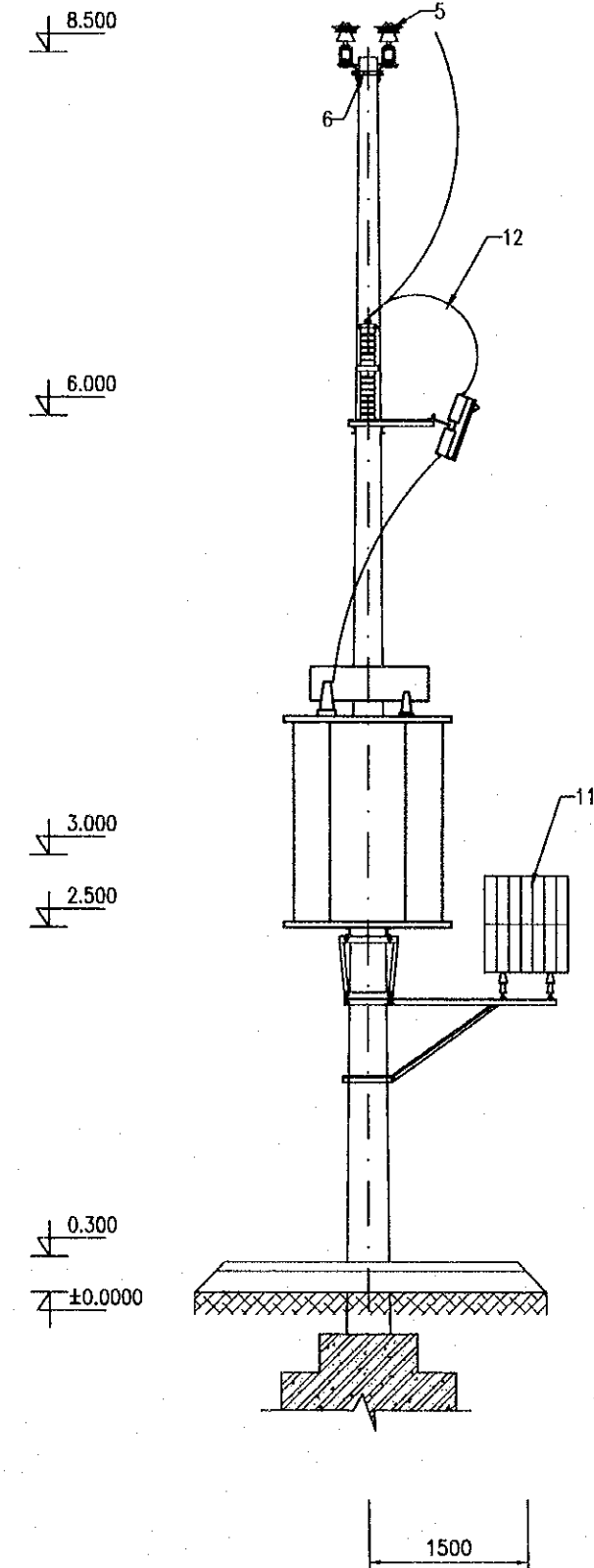
PLAN



VIEW 1



VIEW 2

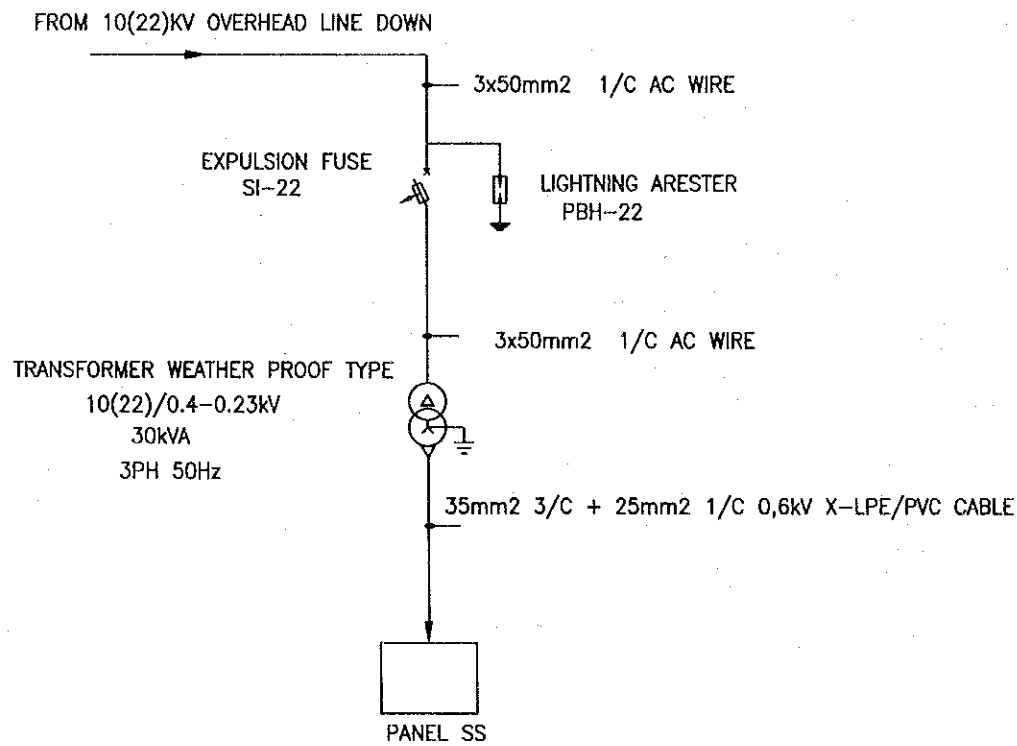


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE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

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/50	F - 18	
SUBSTATION TYPE - IIa			

(POLE MOUNTED MORE THAN 31.5KV)

SINGLE LINE DIAGRAM

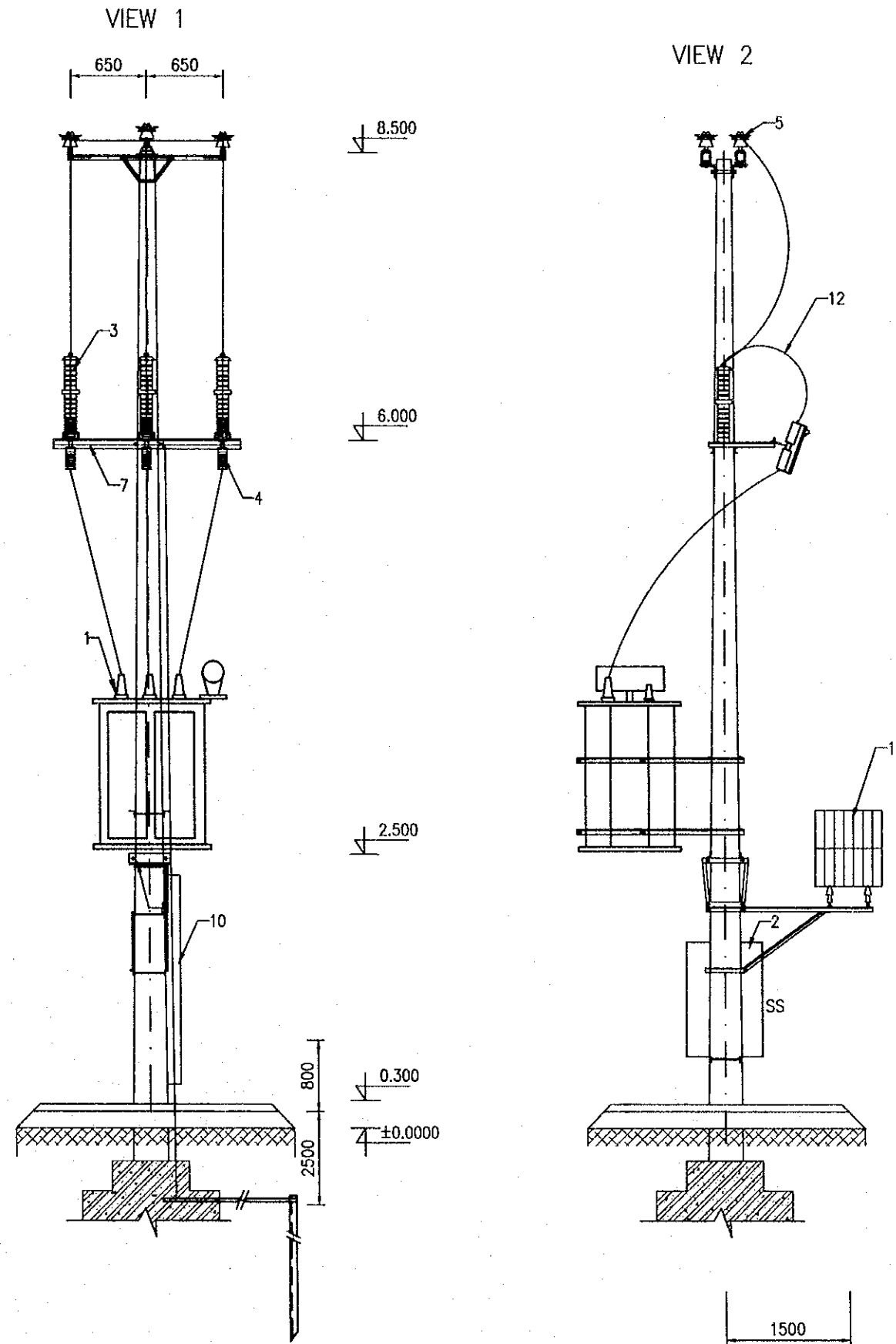


NOTE

- 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 #12 GROUNDING WIRE

LEGENDS

- LIGHTNING ARESSTER
- CABLE SEALING END
- EXPULSION FUSE
- PLUG - IN EQUIPMENT
- POWER TRANSFORMER WITH SEPARATE WINDING CONNECTIONS: DELTA- STAR Δ/λ

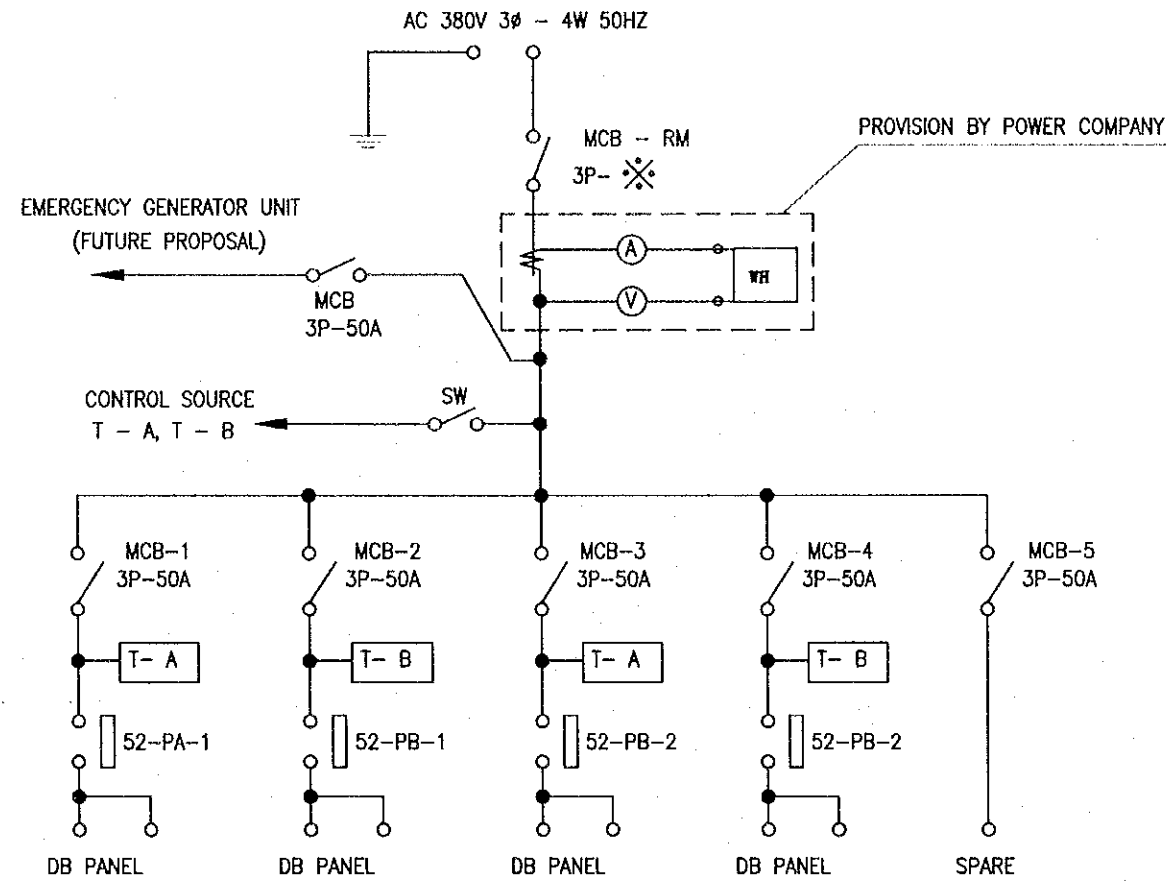


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. NATASE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000. 01. 17	
CONSULTANT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

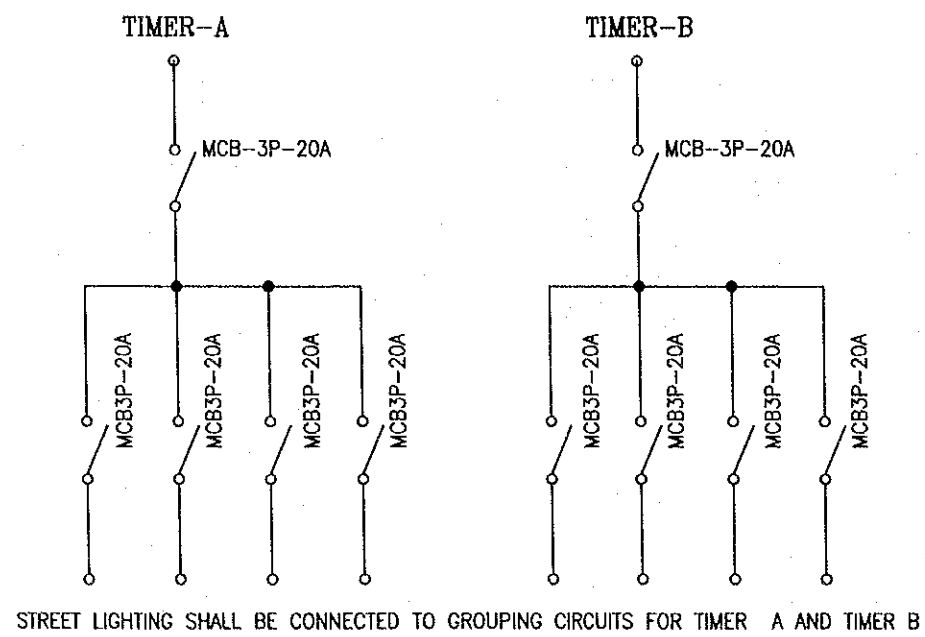
PACKAGE 3	SCALE	DRAWING No. F - 19	SHEET No.
DIAGRAM OF MDP			

SINGLE LINE DIAGRAM OF MDP - J99

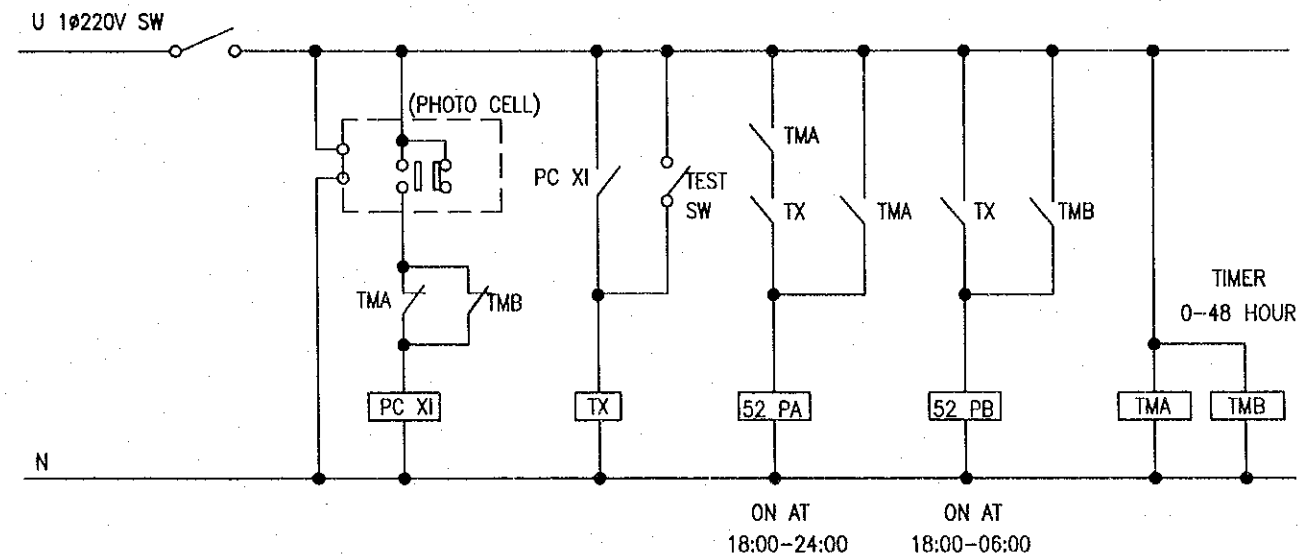
POWER CONNECTION FOR :
 ✖ 31.5 KVA : 60 AT
 50.0 KVA : 95 AT
 100 KVA : 190 AT



SINGLE LINE DIAGRAM OF DB



SCHEMATIC DIAGRAM FOR TIMING ILLUMINATIONS

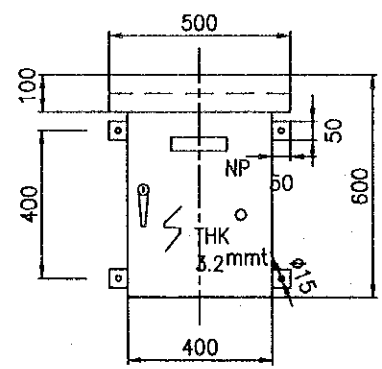


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. MATSUDA
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
COMMISSIONER PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000. 0. 14

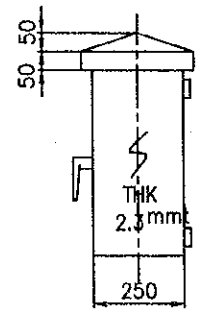
PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/20	F - 20	
PANEL DETAIL			

PANEL SS

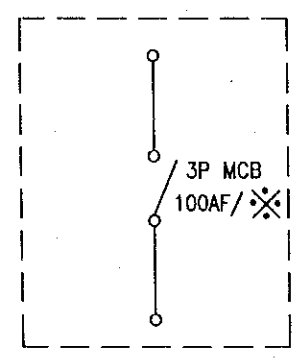
POLE MOUNTED TYPE
FRONT VIEW



SIDE VIEW

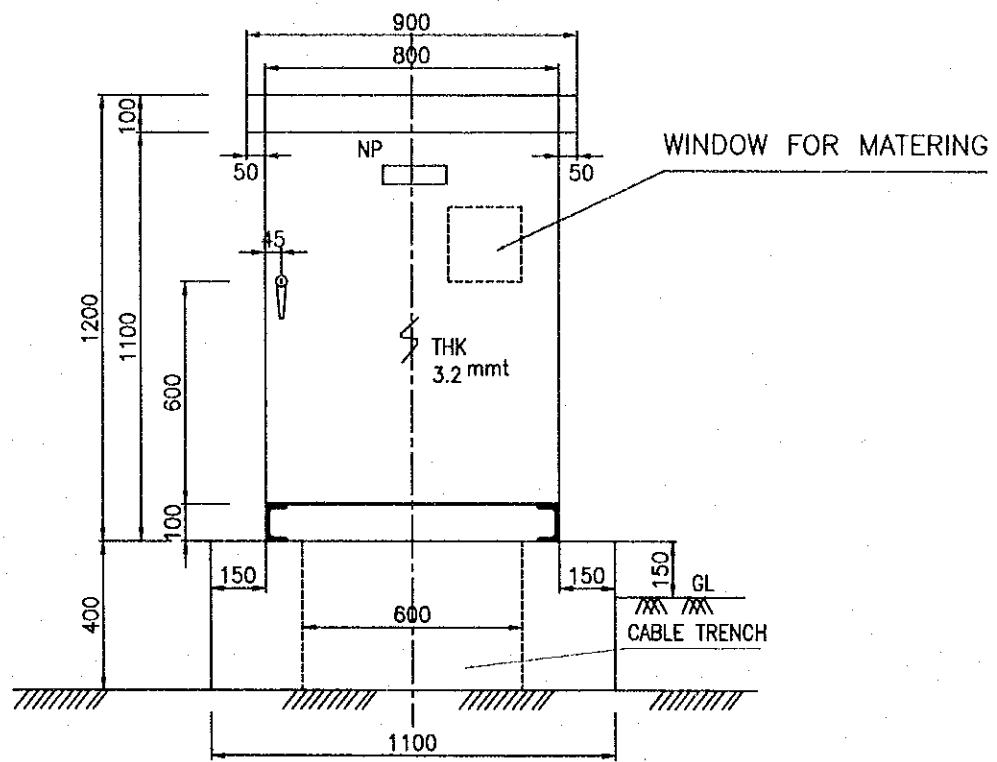


SINGLE LINE DIAGRAM OF SS

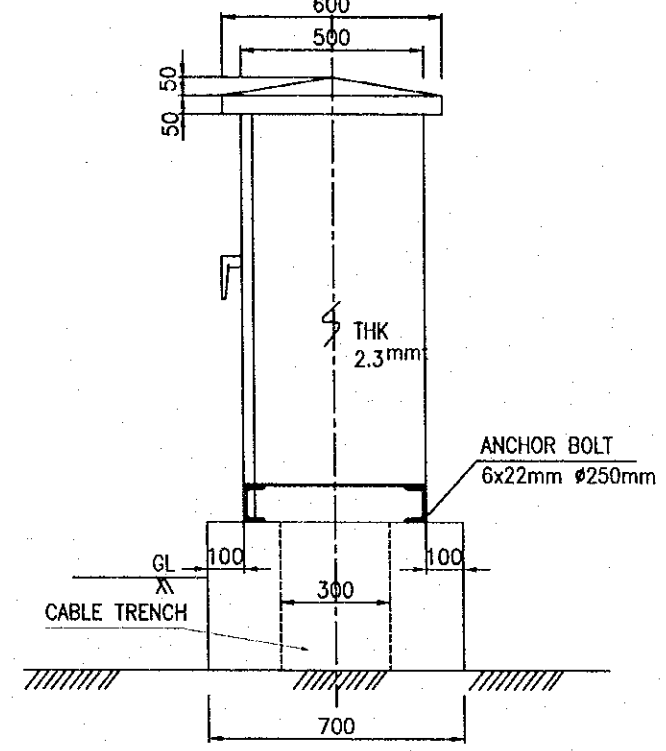


POWER CONNECTION FOR :
 ✱ 31.5 KVA : 60 AT
 50.0 KVA : 95 AT
 100 KVA : 190 AT

PANEL MDP - J99
FRONT VIEW

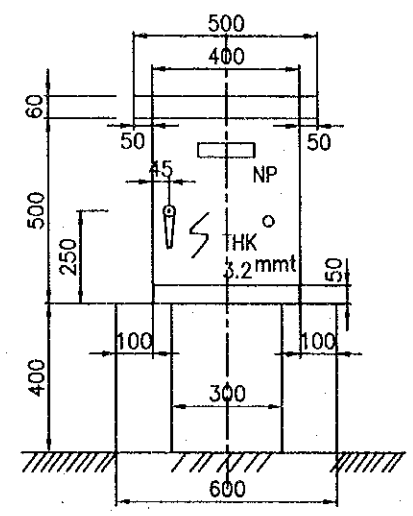


SIDE VIEW

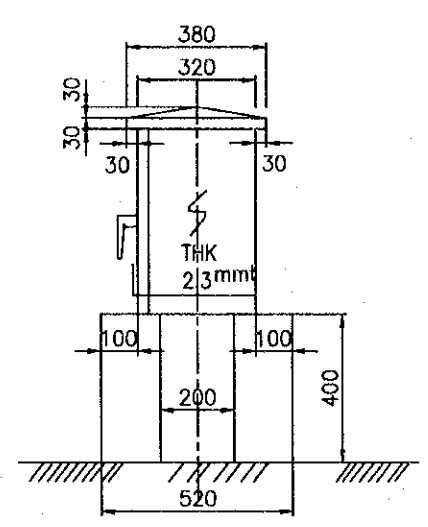


PANEL DB

FRONT VIEW



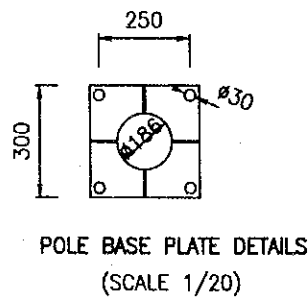
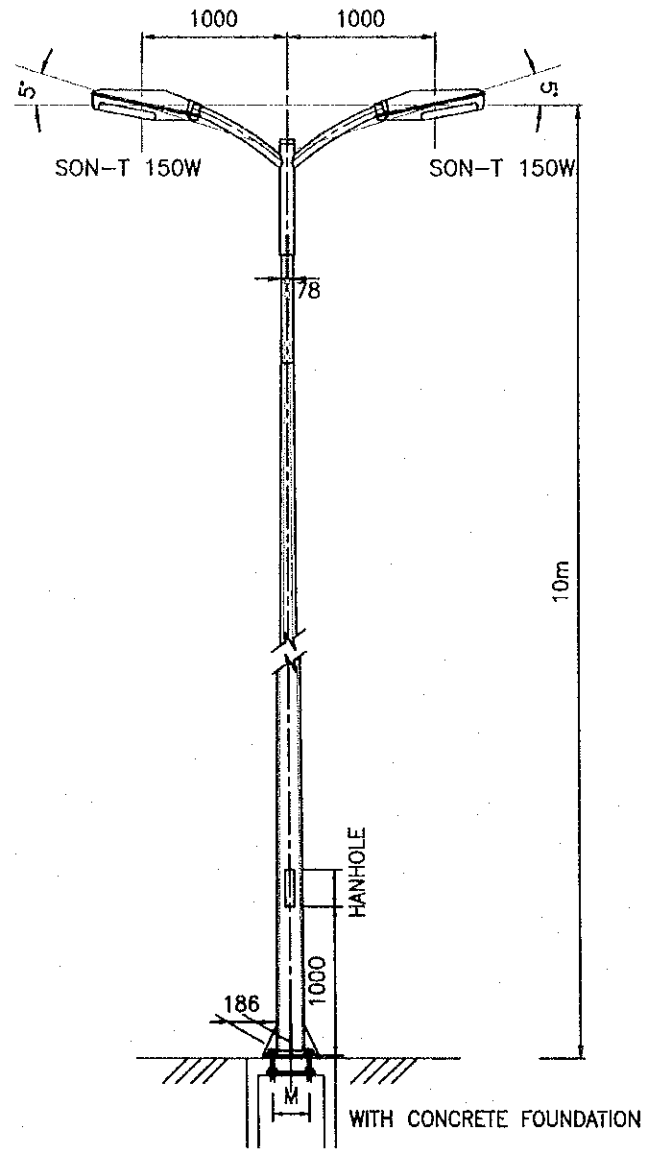
SIDE VIEW



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	2002.11.14

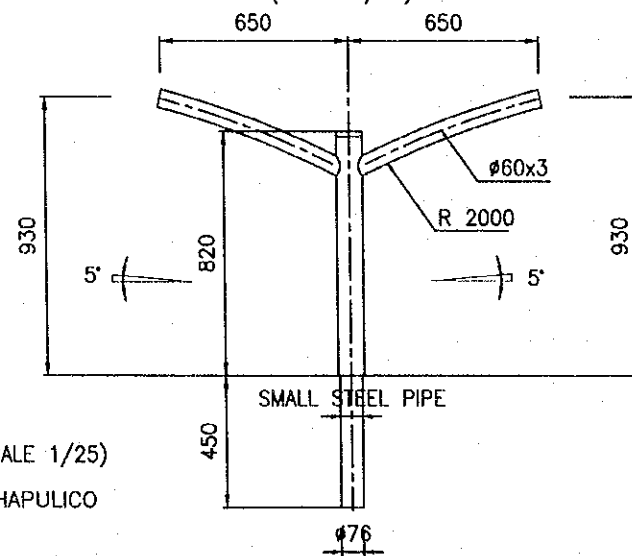
(FOR AT GRADE SECTION)

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	AS SHOWN	F - 21	
LIGHTING DETAIL - 1			

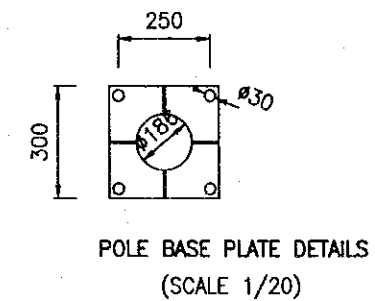
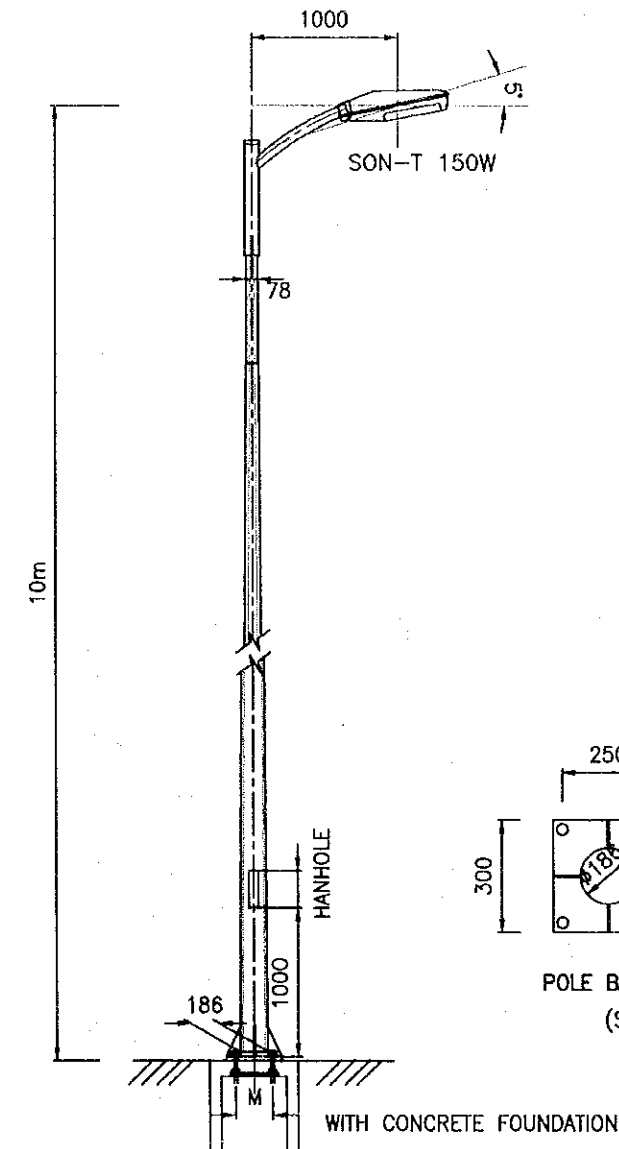


TYPE- B2.1

POLE No: 162207-1 BY HAPULICO
(SCALE 1/50)

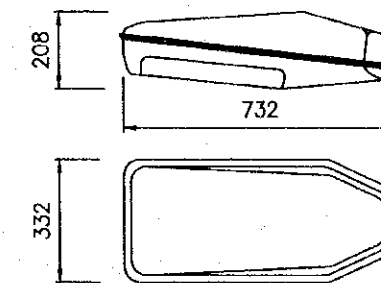


DOUBLE ARM: (SCALE 1/25)
198203 2CE-TC-78 BY HAPULICO



TYPE-A2.1

POLE No: 164125 BY HAPULICO
(SCALE 1/50)

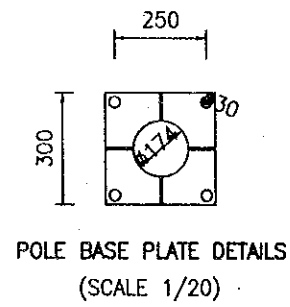
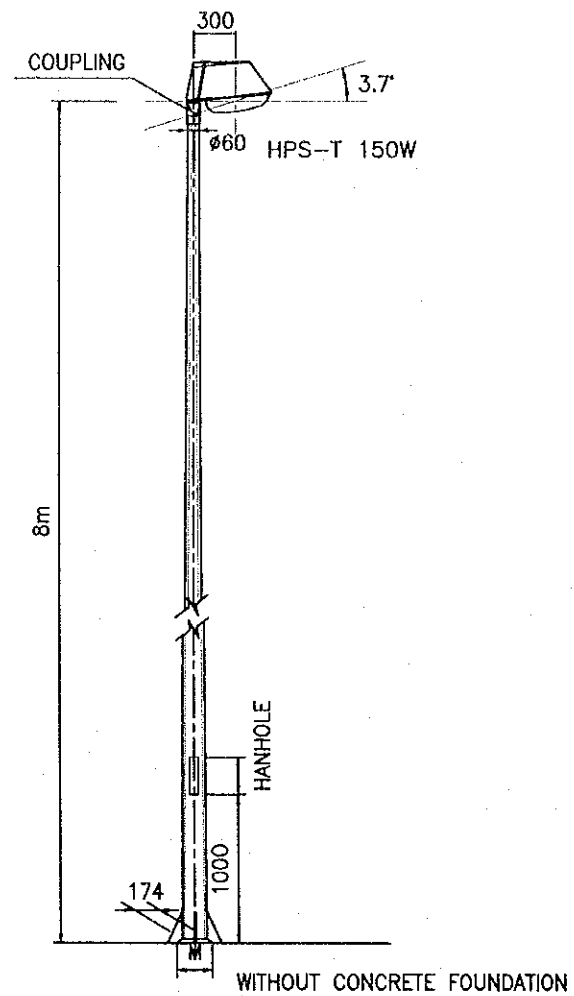


LANTERN-1:
ONYX 2 BY SCHREDER
(SCALE 1/20)

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 (HANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
COMPLETION	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000. 3. 17

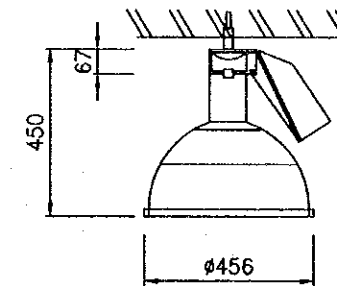
PACKAGE	SCALE	DRAWING No.	SHEET No.
3	AS SHOWN	F - 22	
LIGHTING DETAIL - 2			

(FOR BRIDGE SECTION)

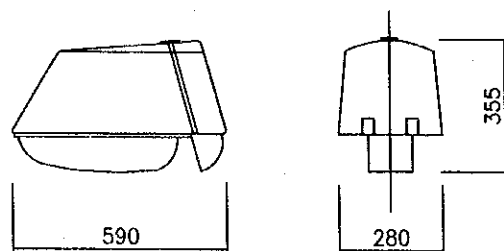


TYPE-A4 .11 (FOR MAIN BRIDGE)
POLE No: 162206-2 BY HAPULICO
(SCALE 1/50)

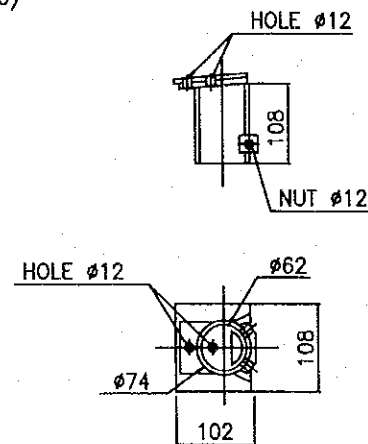
HIGH BAY LIGHT TYPE - E1
SCALE 1/10 UNIT: mm
UNDER BRIDGE SECTION



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

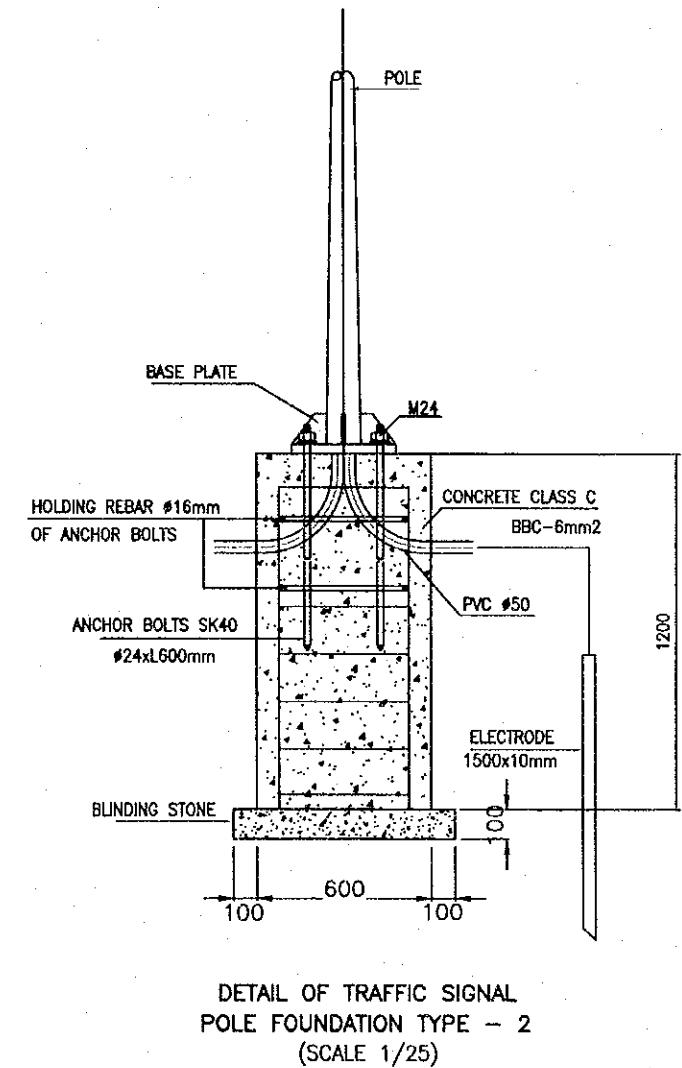
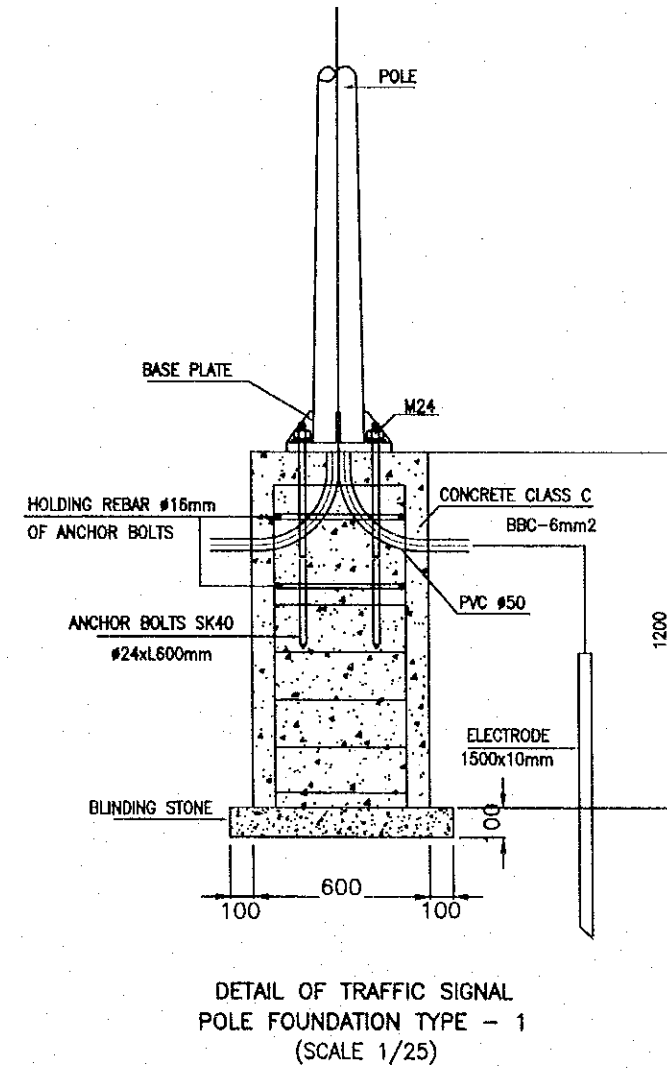
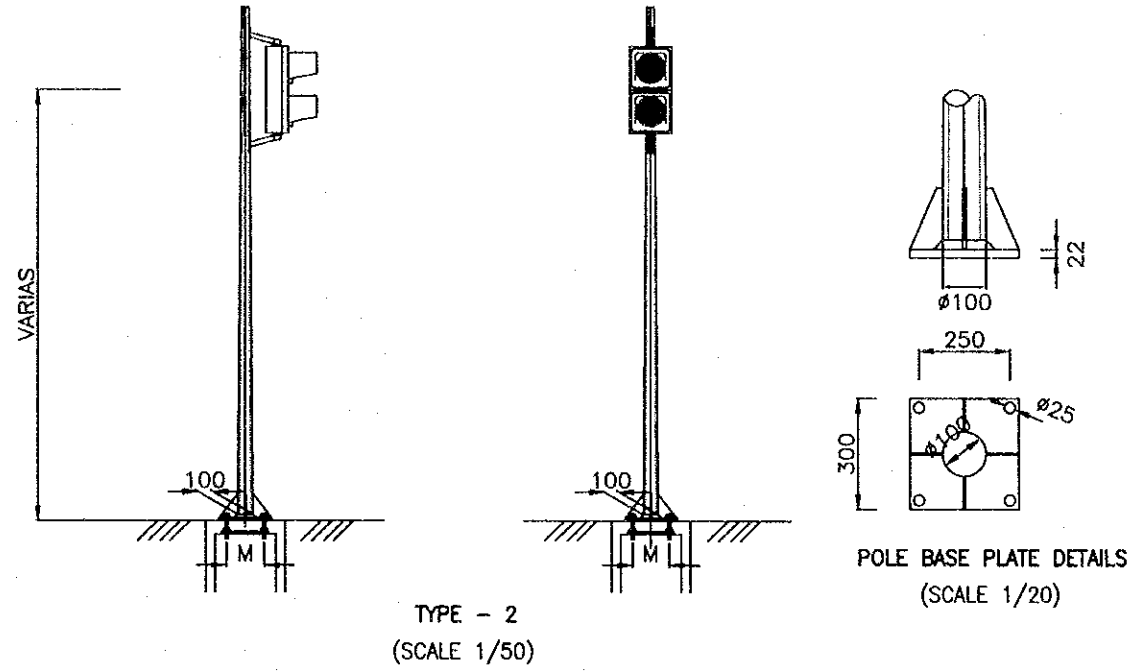
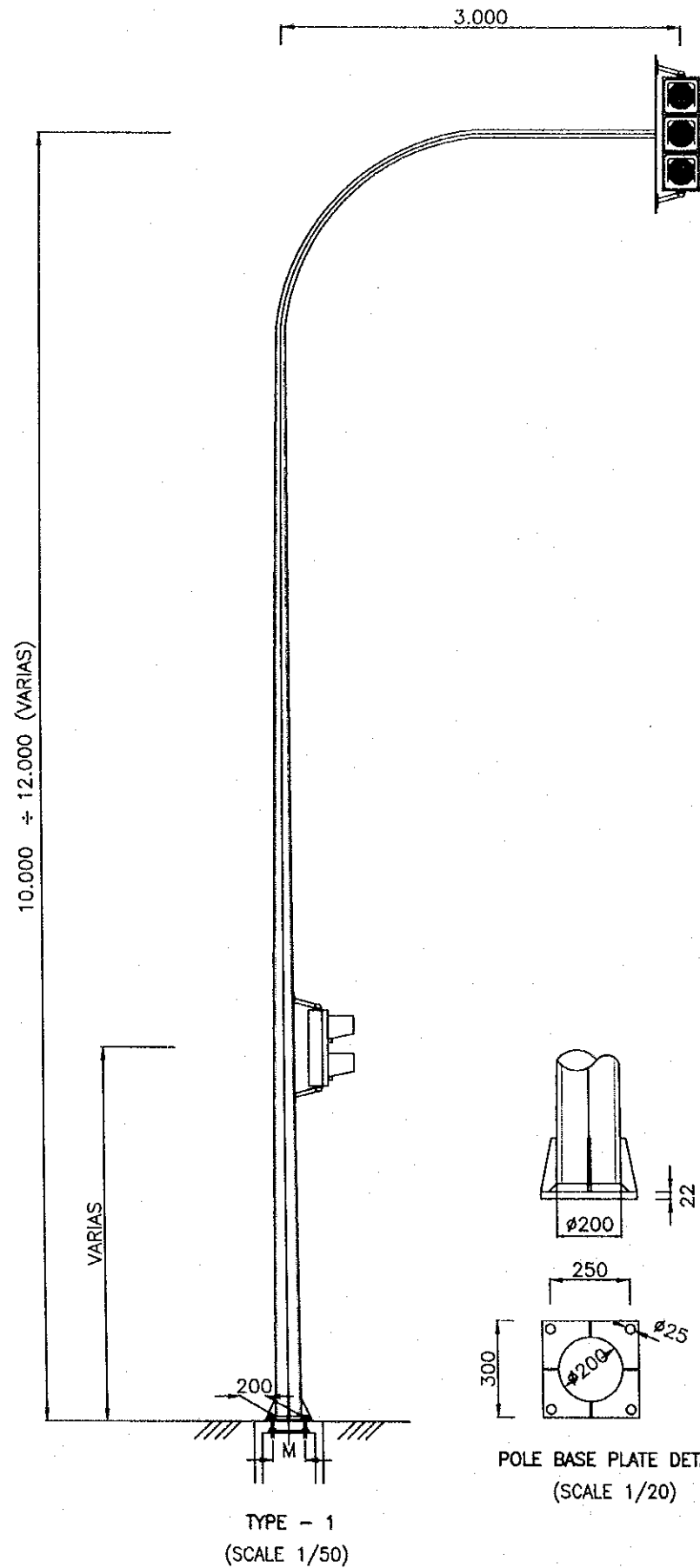


COUPLING:
(SCALE 1/10)

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANH LOHO 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

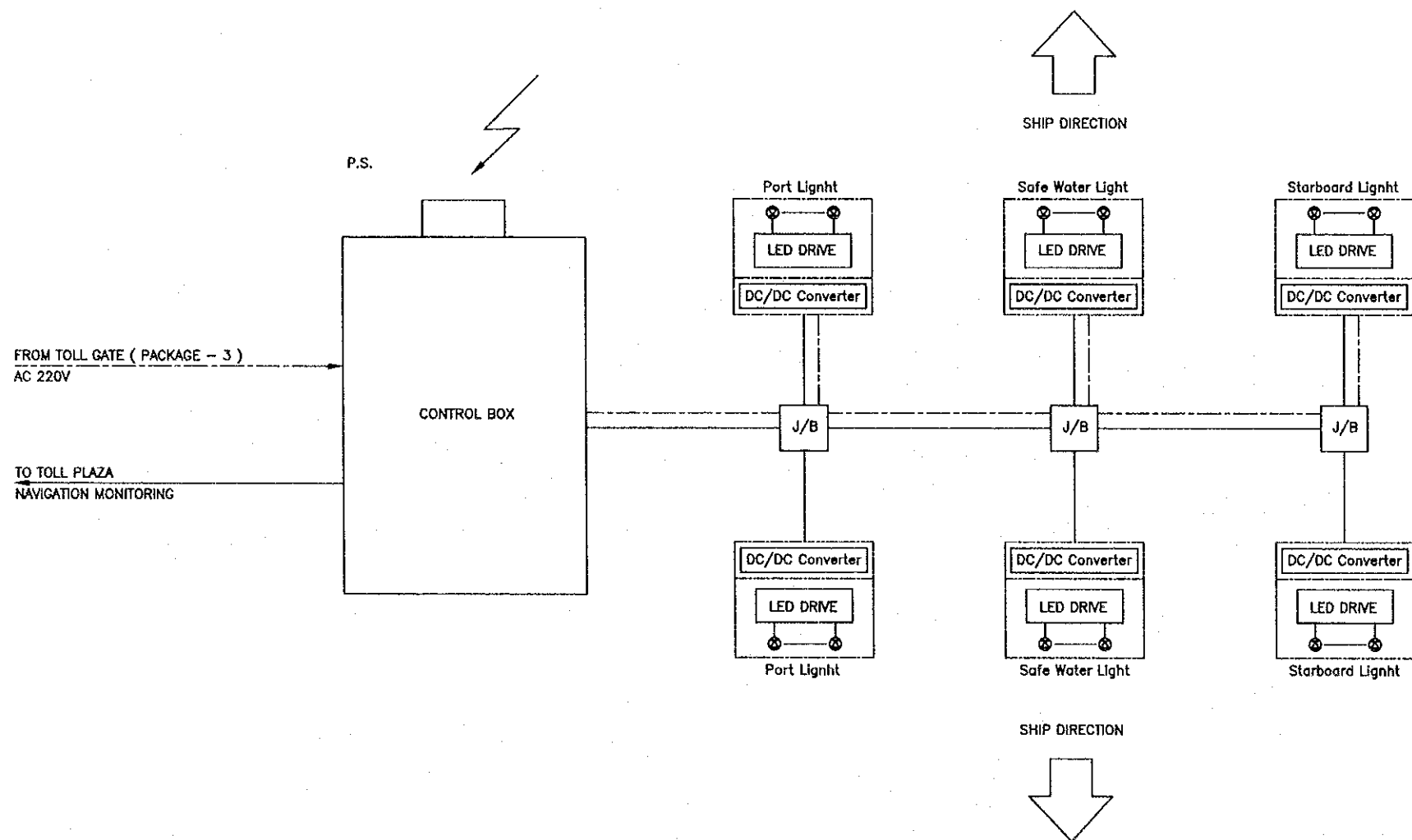
PACKAGE 3	SCALE AS SHOWN	DRAWING No. F - 23	SHEET No.
TRAFFIC SIGNAL			

TRAFFIC SIGNAL



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	2000.8.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
3		F - 24	
NAVIGATION SYSTEM DIAGRAM			

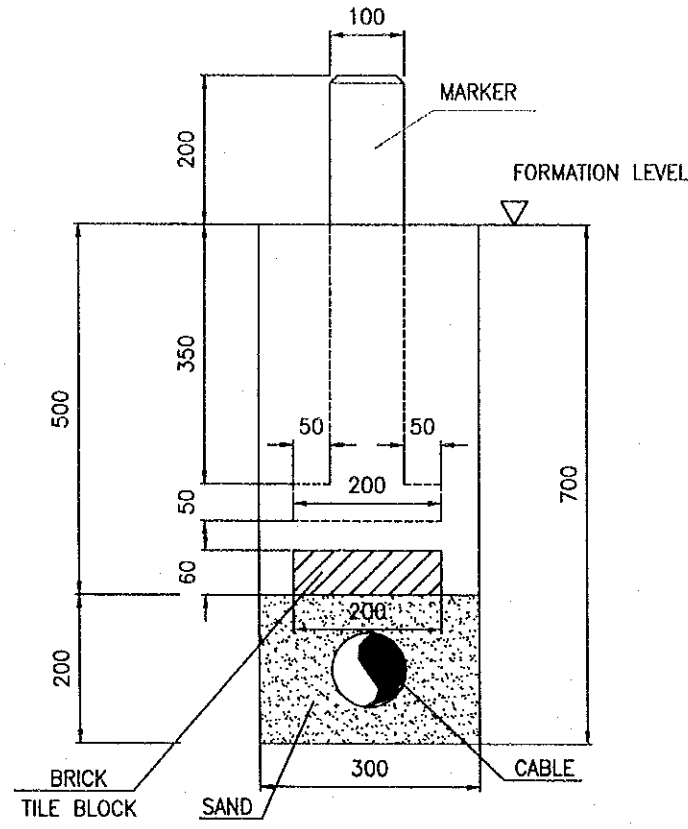


----- Power Line
 _____ Signal Line
 (Manufacturer's Recommendation)

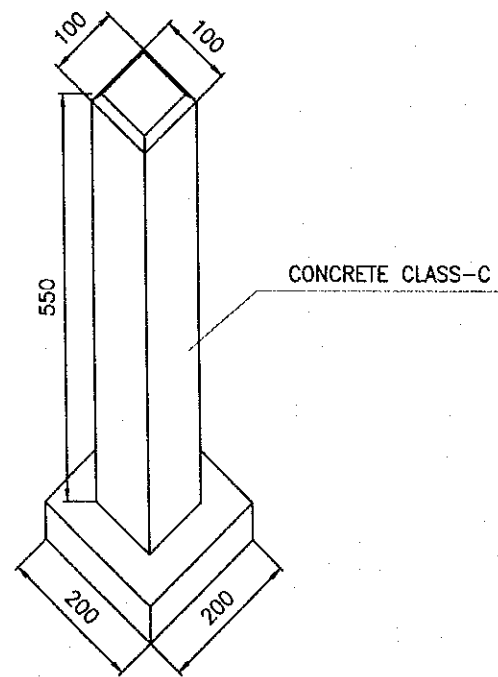
REMARKS:
 P.S. : PHOTO SENSOR
 J/B : JUNCTION BOX

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

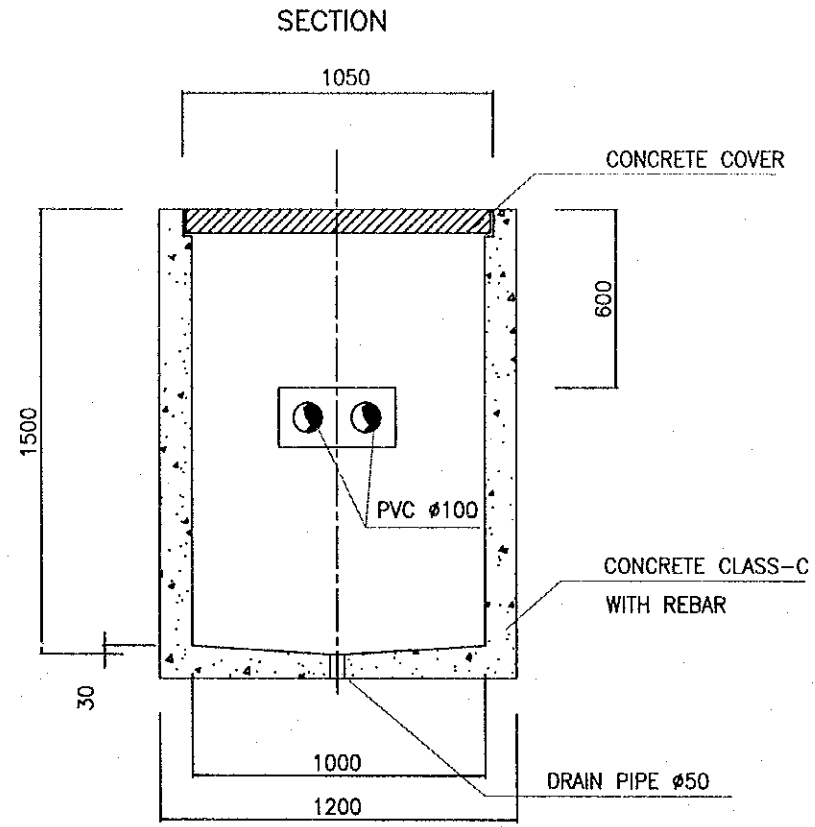
PACKAGE 3	SCALE AS SHOWN	DRAWING No. F - 25	SHEET No.
INSTALLATION DETAIL - 1			



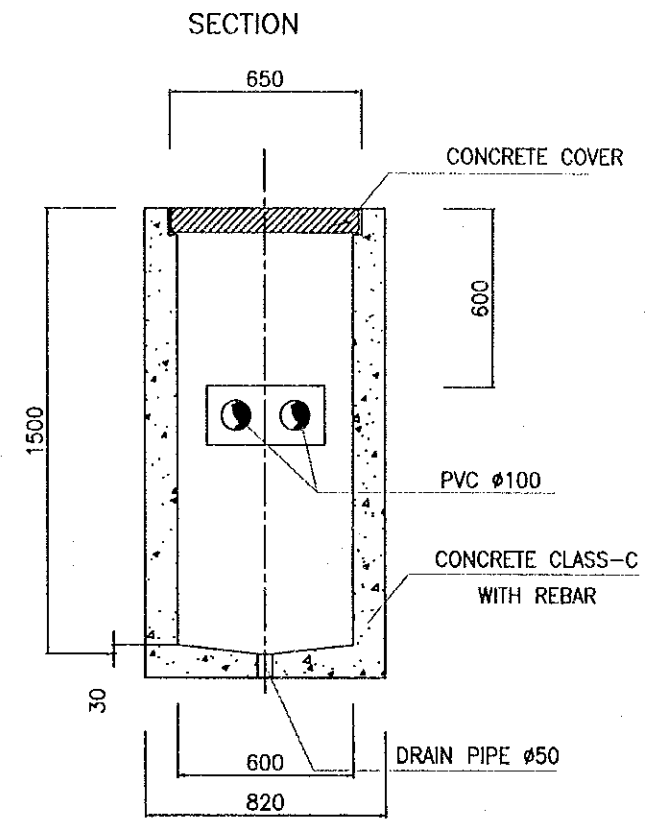
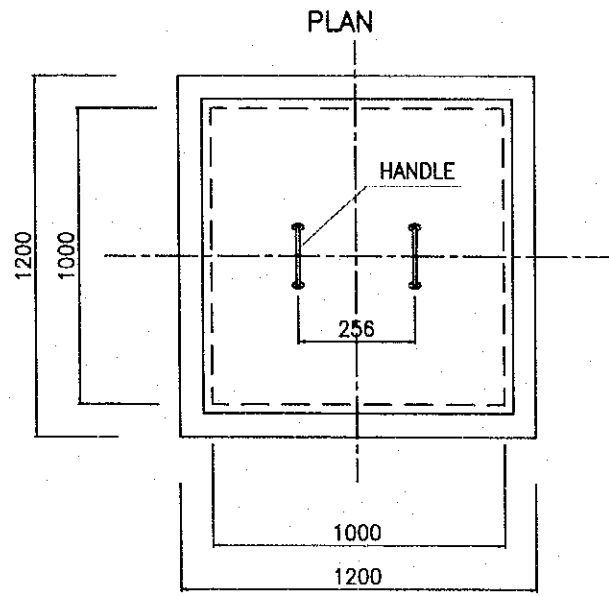
DIRECT BURIED CABLE DETAIL
SCALE 1:10



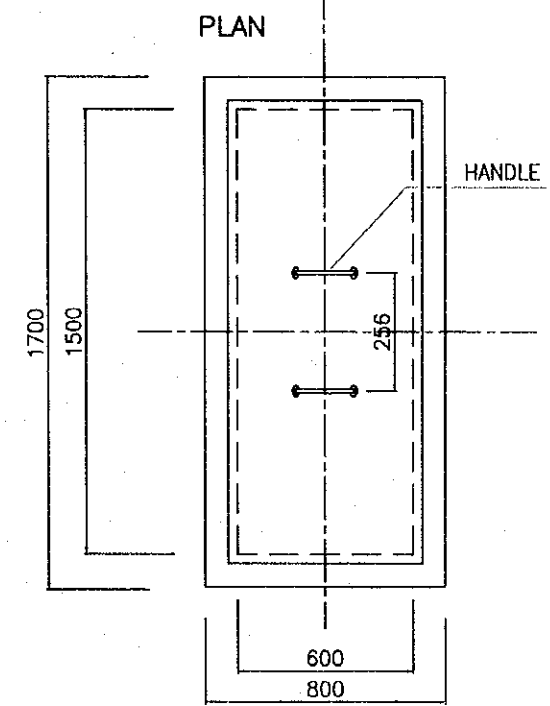
CABLE MARKER SCALE 1:10



MANHOLE DETAIL
TYPE - A
SCALE 1:25

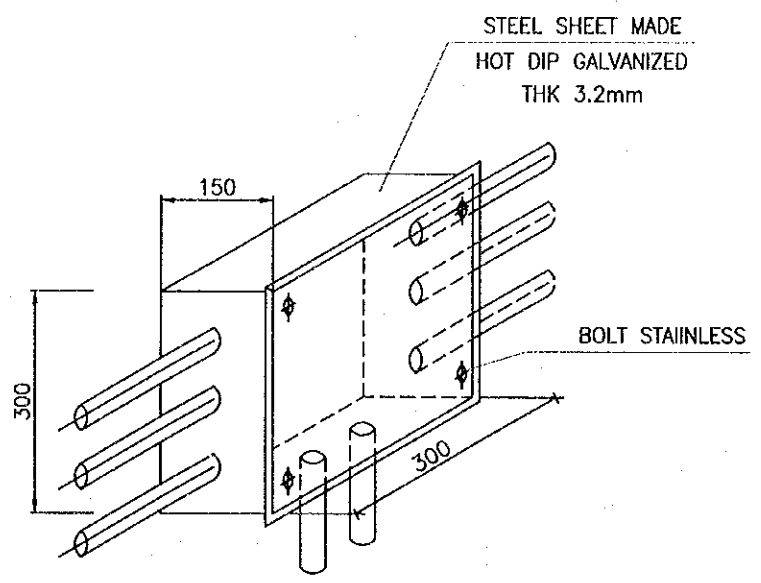


MANHOLE DETAIL
TYPE - B
SCALE 1:25

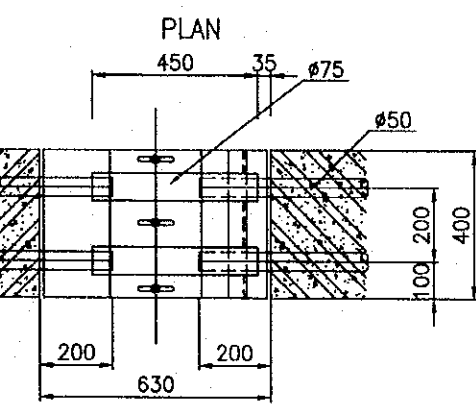
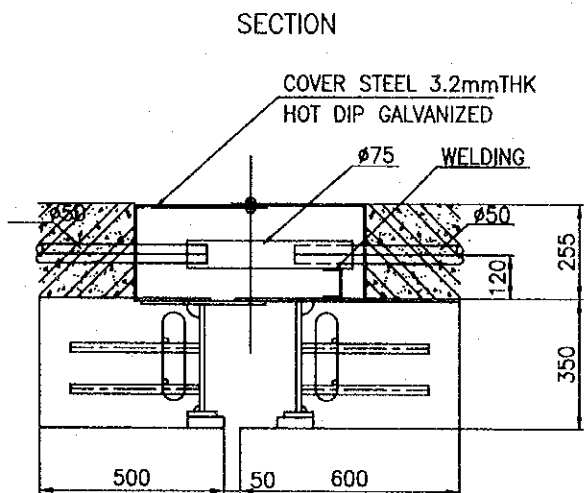


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	SINATAGE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.8.19

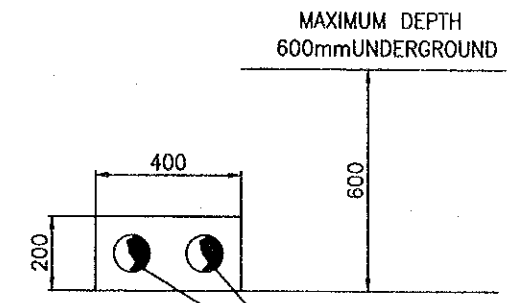
PACKAGE	SCALE	DRAWING No.	SHEET No.
3	AS SHOWN	F - 26	
INSTALLATION DETAIL - 2a			



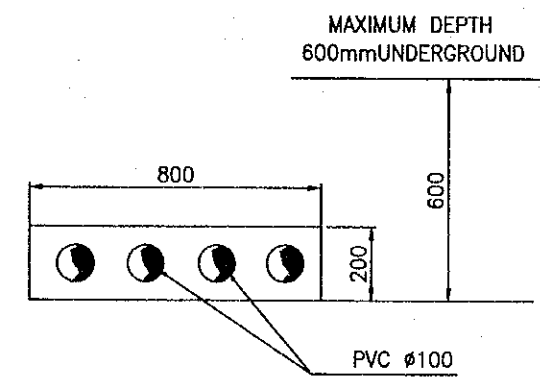
PULL BOX TYPE- B
(SCALE 1/10)



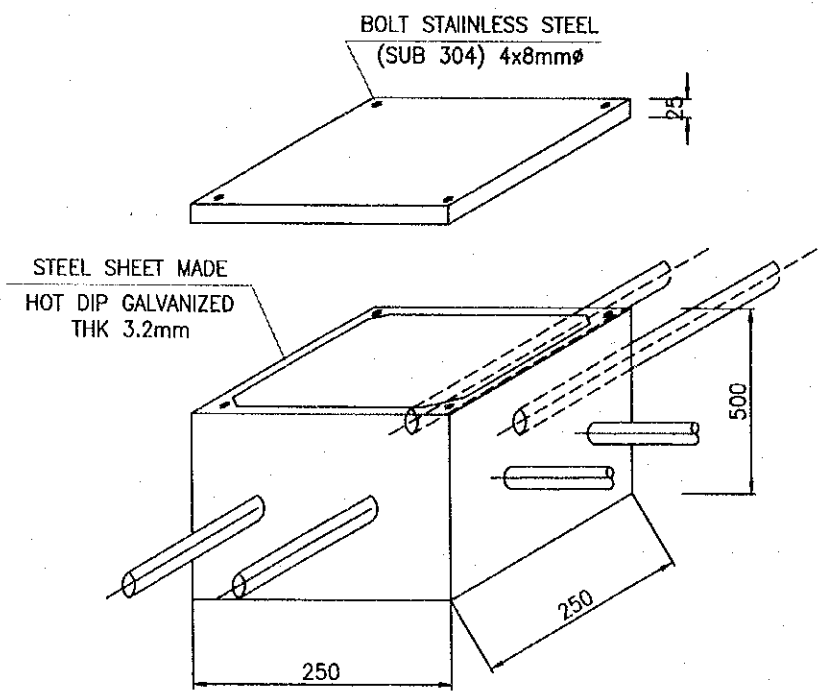
EXPANSION JOINT
(SCALE 1/20)



UNDERGROUND
DUCT BANK DETAIL
TYPE - A



UNDERGROUND
DUCT BANK DETAIL
TYPE - B

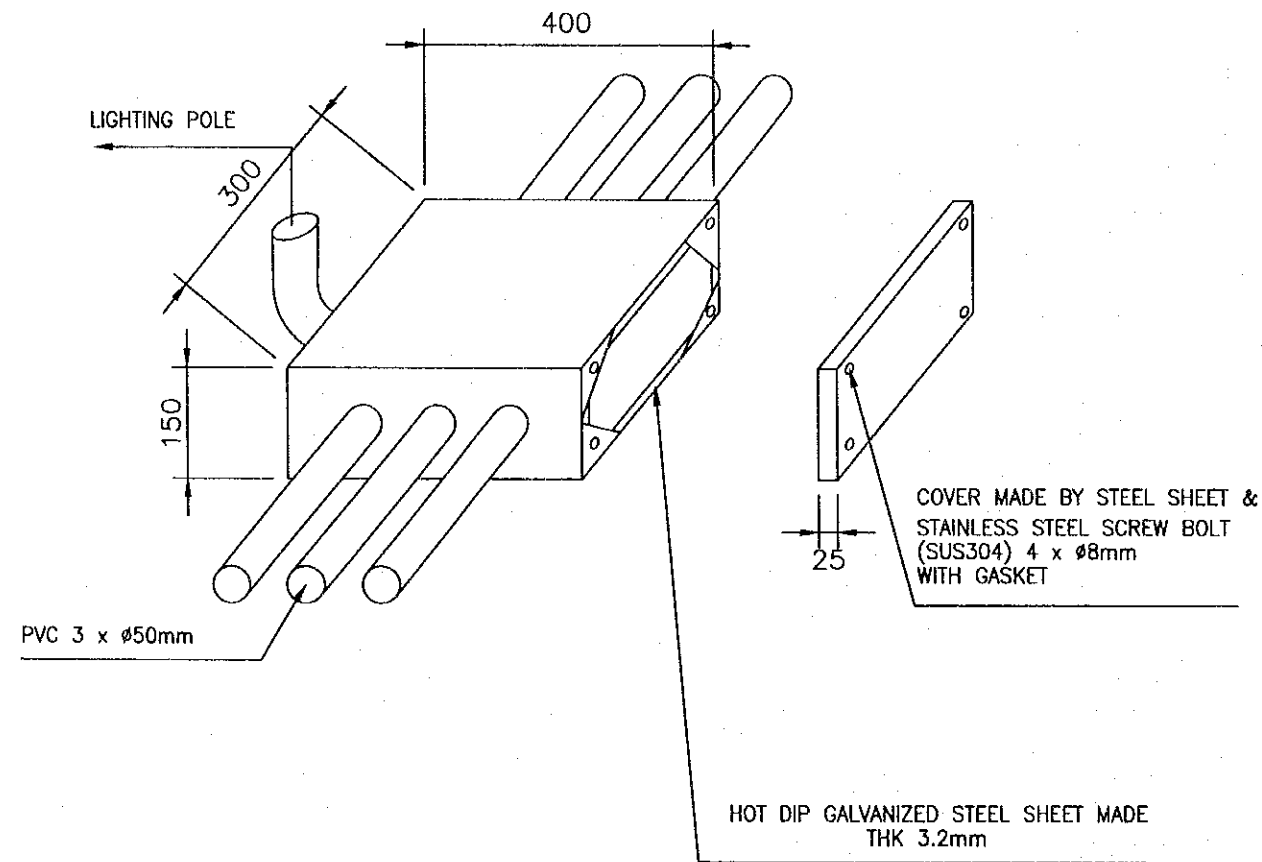


FULL BOX TYPE- C (SCALE 1/10)
IN CONCRETE CENTER MEDIUM

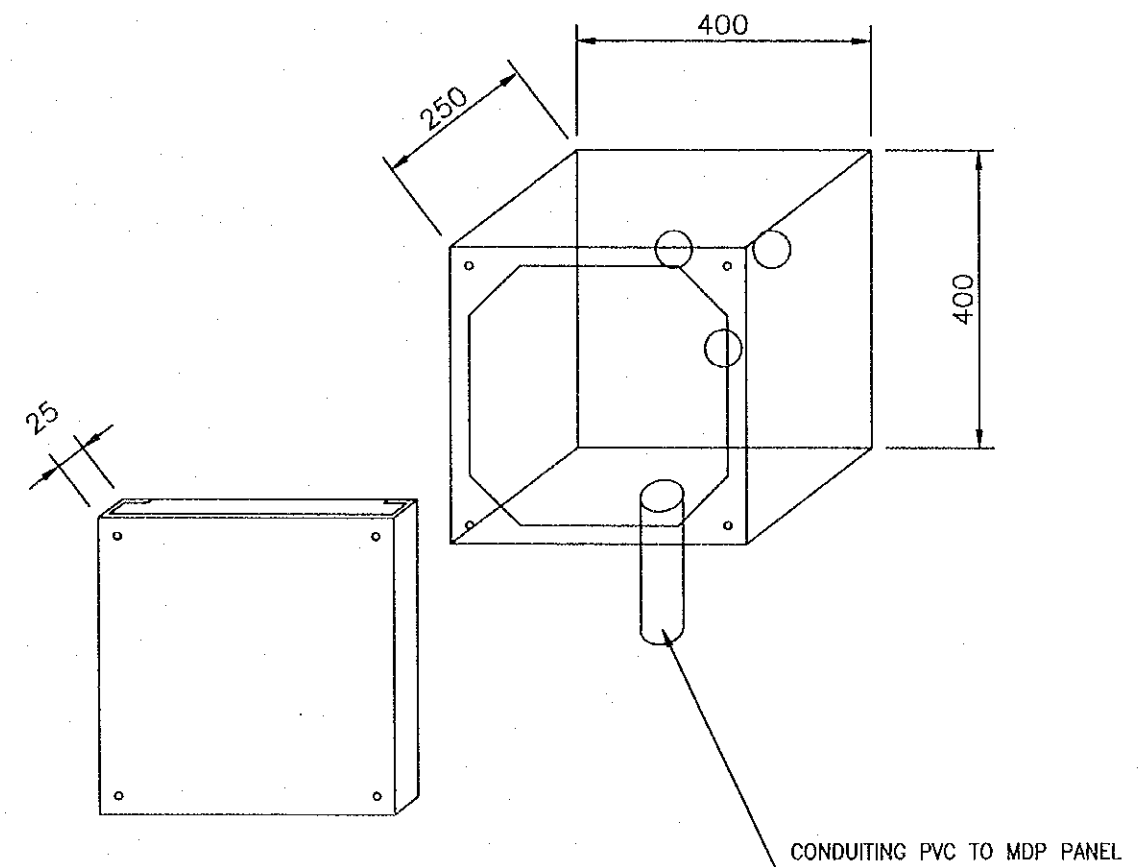
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. MATSUDA
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT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

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/10	F - 27	
INSTALLATION DETAIL - 3			

INSTALLATION DETAIL - 9
PULLBOX TYPE - F (SCALE 1/10)
EMBED CONCRETE OF OUTER PARAPET

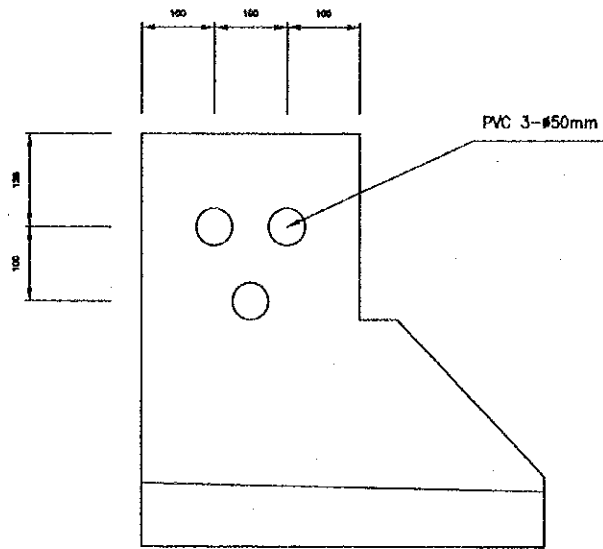


INSTALLATION DETAIL - 10
PULLBOX TYPE G (SCALE 1/10)
(SURFACE MOUNTED AT BRIDGE BOTH SIDE TERMINATION POINT)

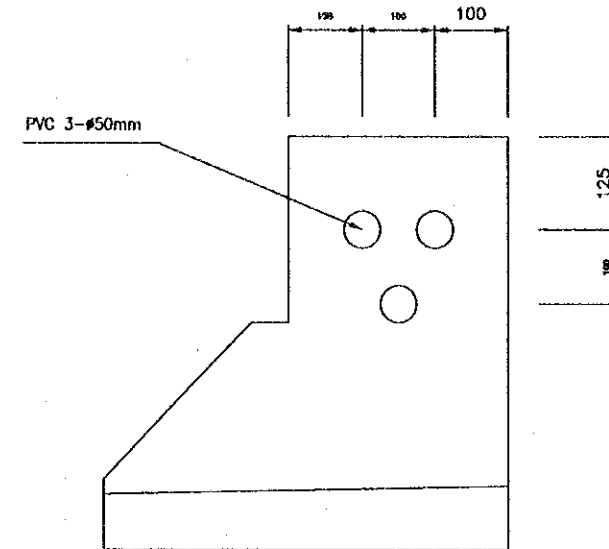


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. NAYABE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE	<i>[Signature]</i>
COMMISSIONER PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.03.14

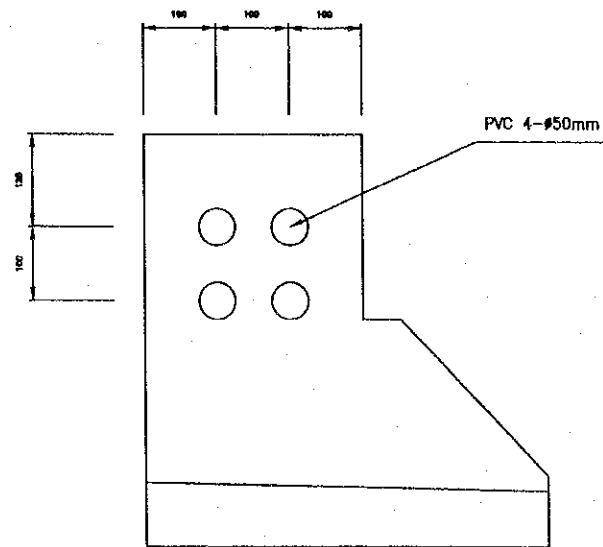
PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/10	F - 2B	
INSTALLATION DETAIL - 4			



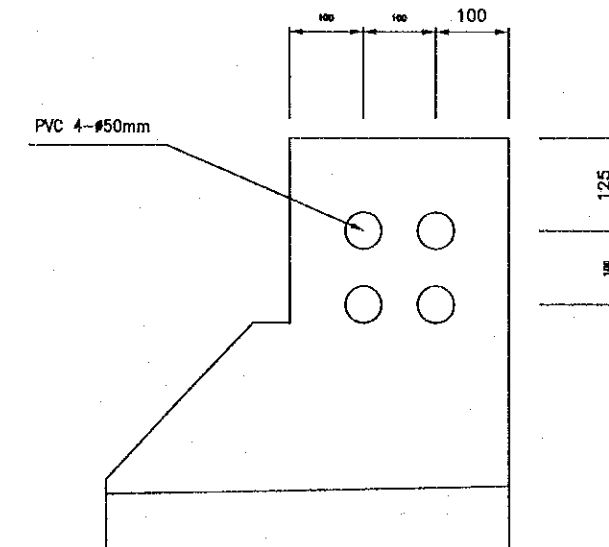
EMBED CONDUITING DETAIL - 1
(AT OUTER PARAPET)
SCALE:1/10



EMBED CONDUITING DETAIL - 2
(AT OUTER PARAPET)
SCALE:1/10



EMBED CONDUITING DETAIL - 3
(AT OUTER PARAPET OF MAIN BRIDGE)
SCALE:1/10

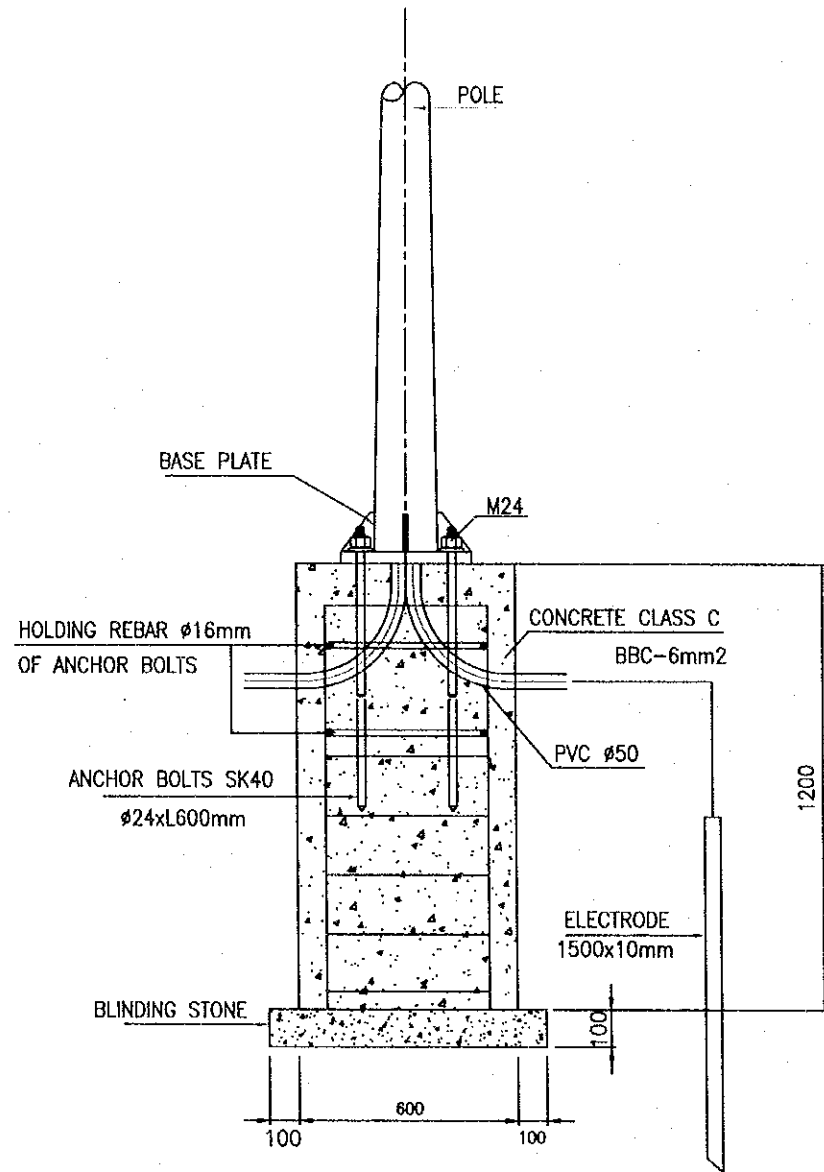


EMBED CONDUITING DETAIL - 4
(AT OUTER PARAPET OF MAIN BRIDGE)
SCALE:1/10

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	SIGNATURE <i>[Signature]</i>	DATE 2000.3.14
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

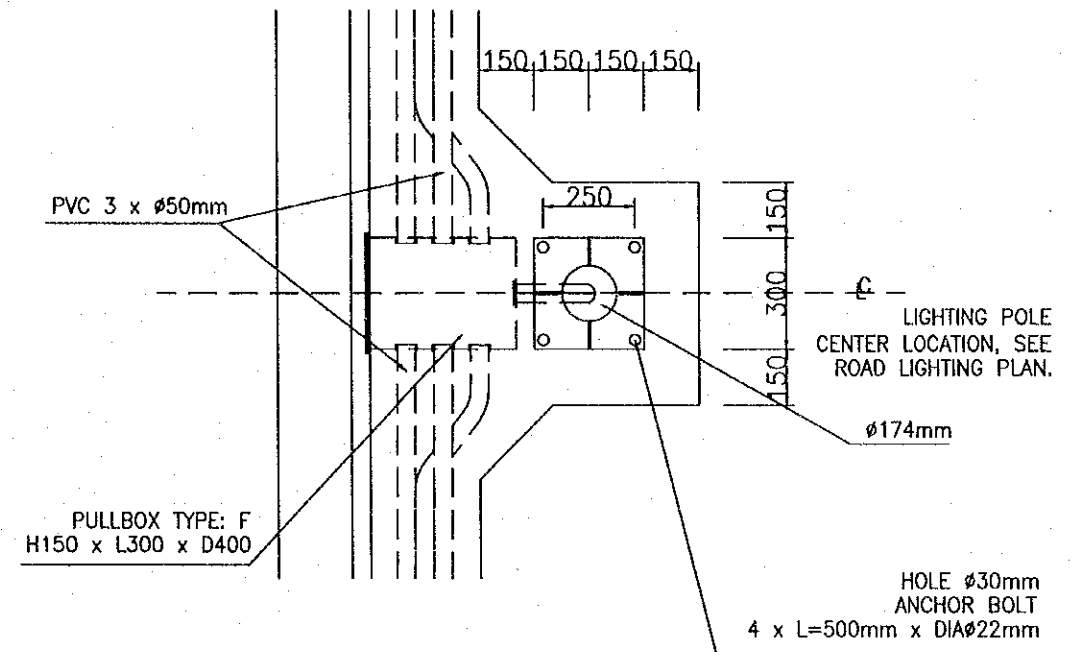
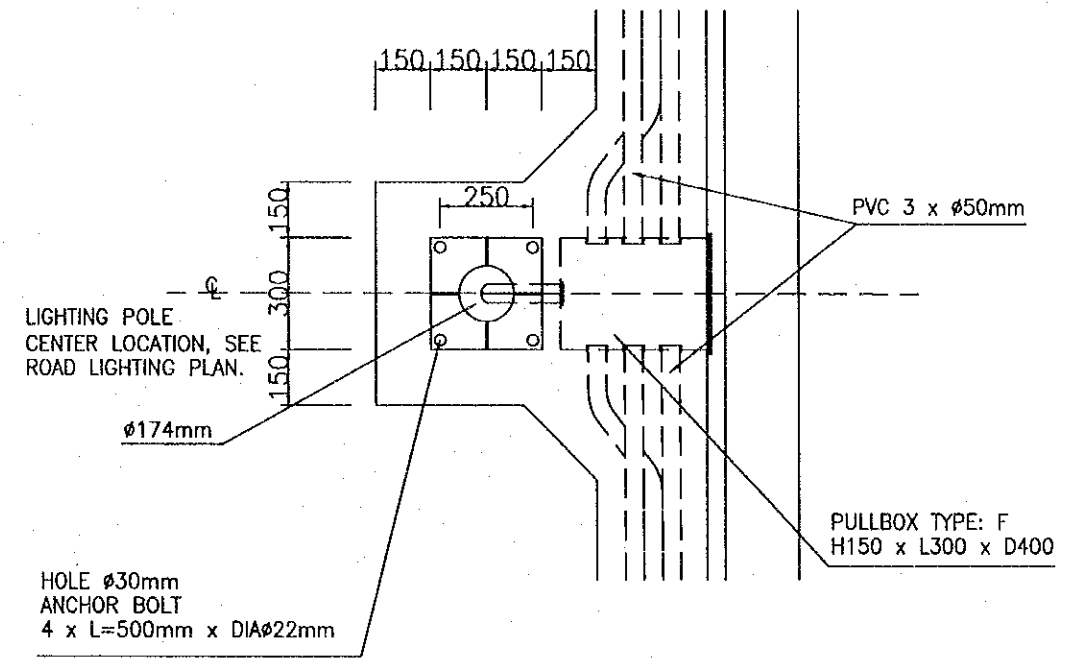
PACKAGE 3	SCALE 1/20	DRAWING No. F -- 29	SHEET No.
FOUNDATION DETAIL - 1a			

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



G. TOLL PLAZA AND TOLL FACILITIES

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 2007.8.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
3		G-01	
GENERAL NOTES			

GENERAL NOTES

ARCHITECTURE WORKS

The design of Toll Building and facility (TB) is to exclude road maintenance function of the Road Management Unit (RMU), and also same design stage of the Toll gate facility (TG) in the project, facilities specification defines the general requirements for the quality control of materials and workmanship, obligatory to the satisfactory completion of the work item in accordance with the scope of works herein described.

1. Toll Building

- Main Building and Sub-building.
- Garden and plantation
- Guard booth
- Parking area and access road entrance to the building
- Fencing and gates
- Garden outdoor lighting
- Deep well
- Water reservoir and overhead tank
- Underground septic tank
- Substation

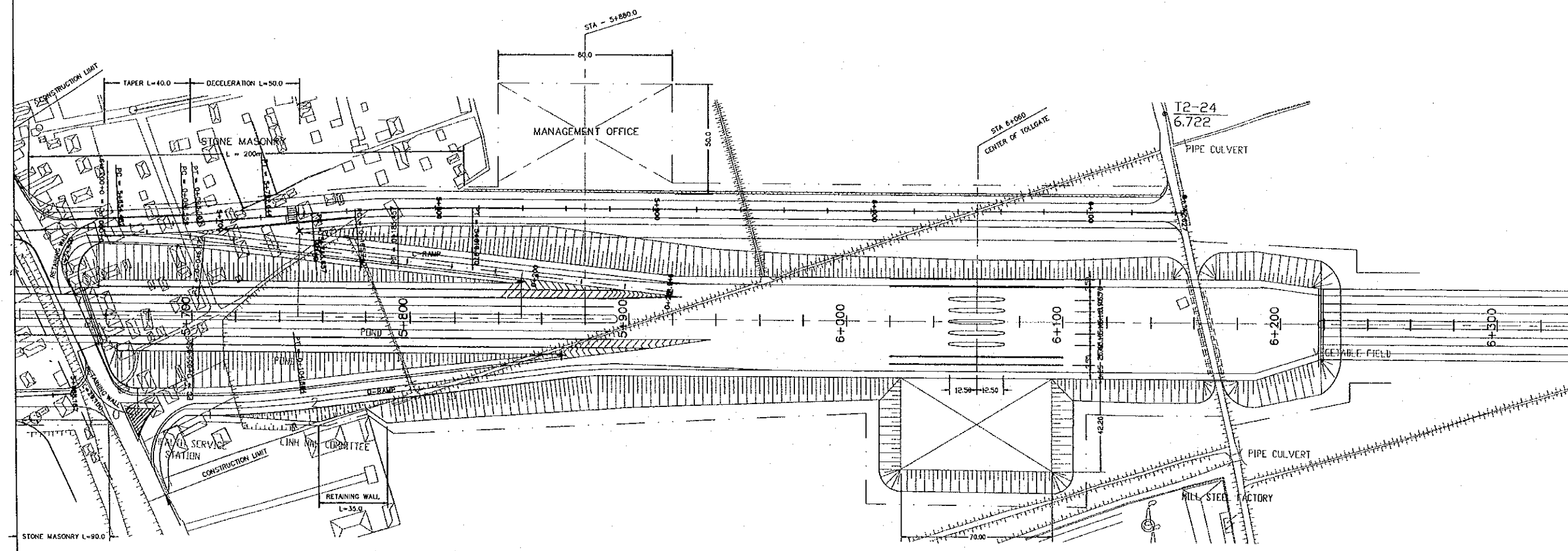
2. Requirements

- The architecture works include the design, supply, delivery, installation, setting to works, testing commissioning training documentation and 24 month maintenance period and defects liability period in accordance with the relevant specifications.
 - All works which are included in the Contract shall be subject to the each document relevant to the Contract. In the event of conflict the order of precedence shall be as stated in this specifications.
 - Drawings and specifications are intended to provide for include everything necessary for the proper and complete design supply and installation of the works in every part not withstanding that each and every items necessary may not be explicitly shown on the drawings or mentioned in the specifications.
 - The Drawings do not show all offers, materials, fittings, and accessories that may be required. The Contractor shall investigate carefully the structural and finish conditions affecting the work and furnish all such fittings and accessories as may be required at no additional cost to the Employer.
 - The Contractor shall abide by and comply with the true intent and meaning of all the Drawings and the specifications taken as a whole and shall not avail himself or any unintentional error or omission or apparent contradiction should any exist.
 - Architecture / Civil work works for support to the Toll Collection System.
- The Contractor shall be support to the following items for the Toll Collection System
- (1) Each toll islands shall be finished work by mortar or / and concrete
 - (2) All conduiting, pull boxes, junction boxes, and opening concrete hole works between of the roof canpy, toll islands, coloumns and toll booths shall be supprted to the Toll Collection system.
 - (3) Equipment room in the Toll Building shall be clean up for toll collection system.

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. 5. 17	

PACKAGE 3	SCALE 1/2000	DRAWING No. G-002	SHEET No.
SITE LOCATION - 2			

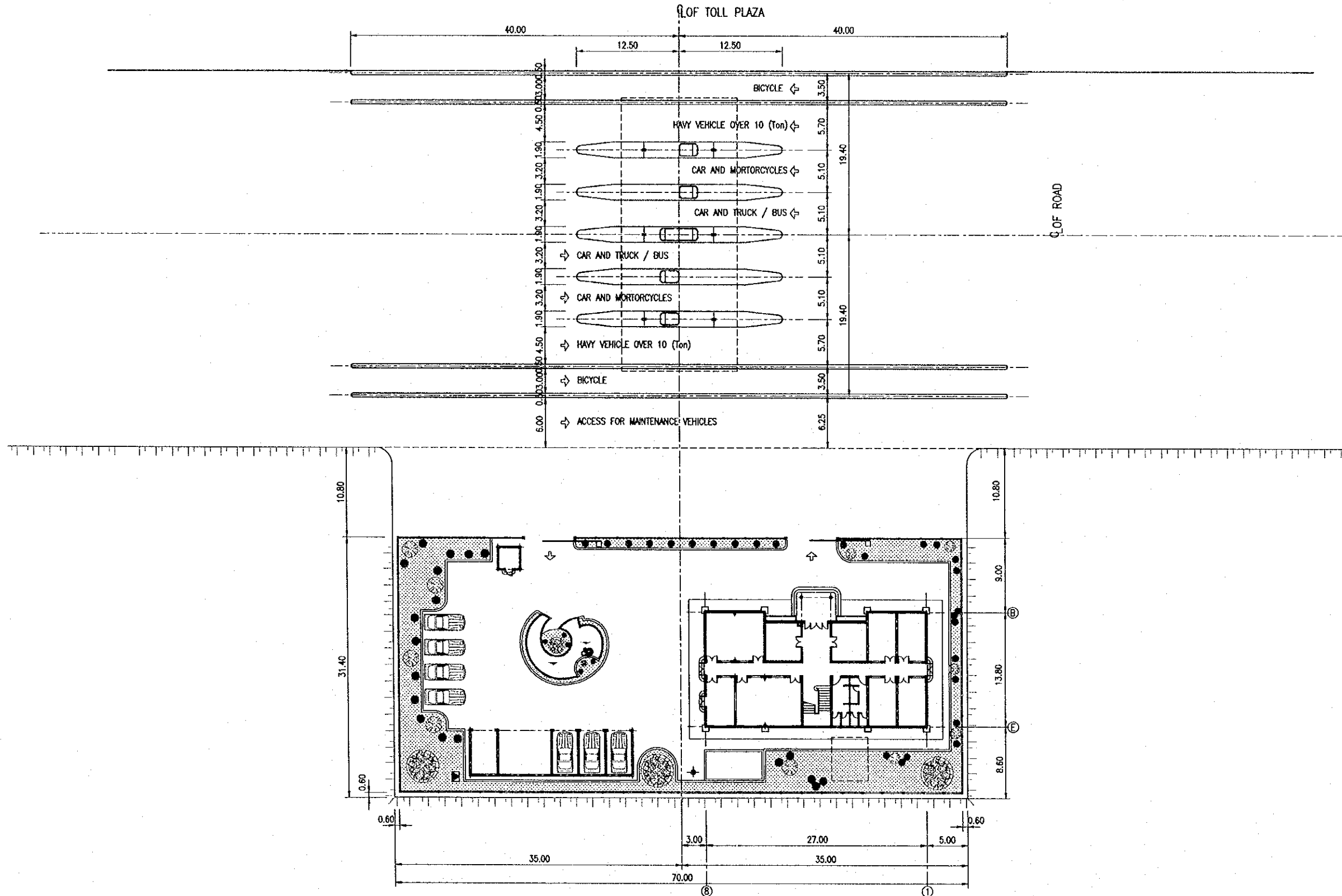
THANH TRI BRIDGE TOLL PLAZA



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	2002.3.14

PACKAGE 3	SCALE 1/500	DRAWING No. G-03	SHEET No.
TOLL PLAZA PLAN - 2			

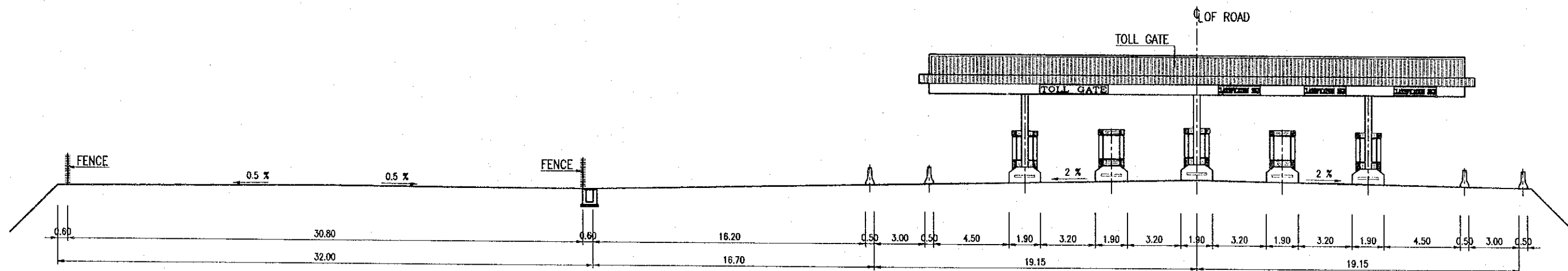
THANH TRI BRIDGE
(LINH NAM - THANH TRI - HA NOI)
TOLL PLAZA PLAN



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM		DESIGNED BY	
THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		NAME	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	SCALE	DRAWING No.	SHEET No.
3	1/250	G-04	
TOLL PLAZA PROFILE - 2			

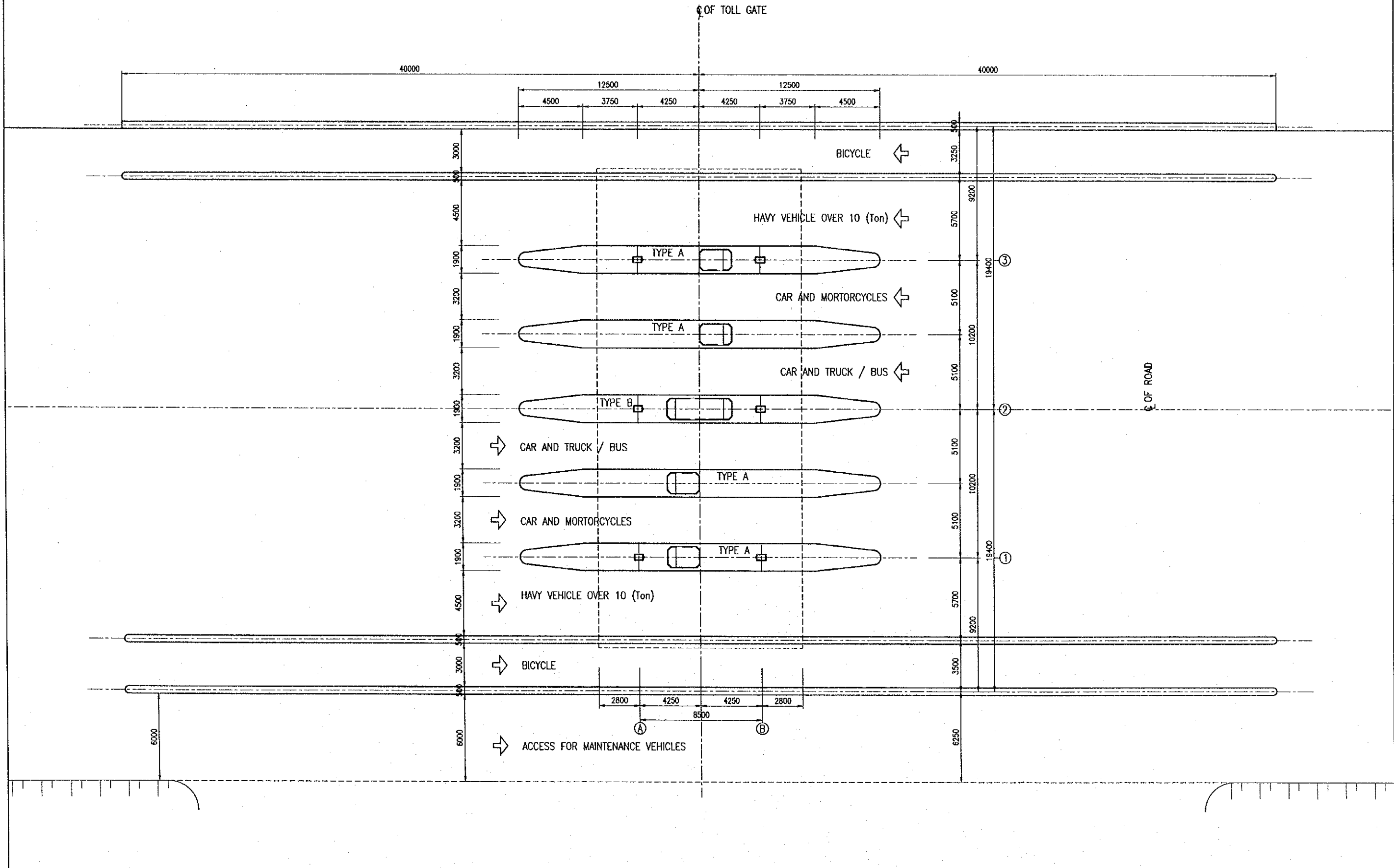
THANH TRI BRIDGE
(LINH NAM - THANH TRI - HA NOI)
TOLL PLAZA PROFILE



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	PACIFIC CONSULTANTS INTERNATIONAL	SIGNATURE <i>[Signature]</i>
DATE 2012.3.14		

PACKAGE 3	SCALE 1/250	DRAWING No. G-05	SHEET No.
TOLL ISLAND PLAN -- 2			

THANH TRI BRIDGE
(LINH NAM - THANH TRI - HA NOI)
TOLL PLAN



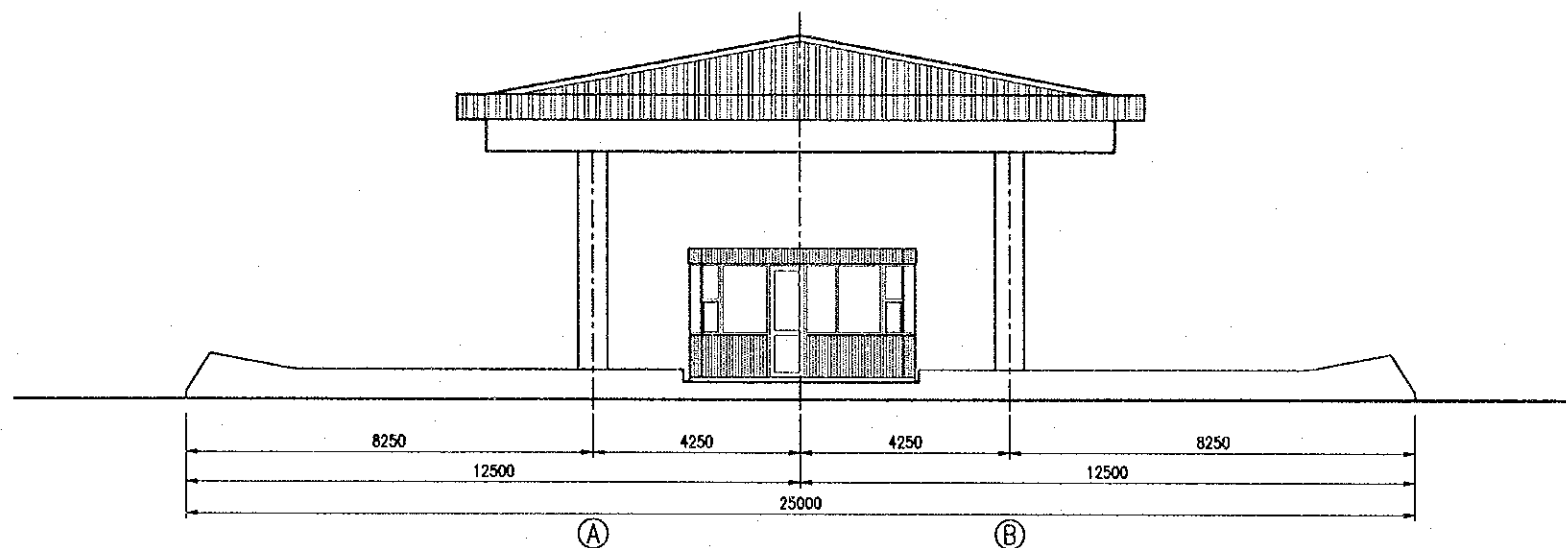
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATASE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATASE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.03.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/150	G-06	

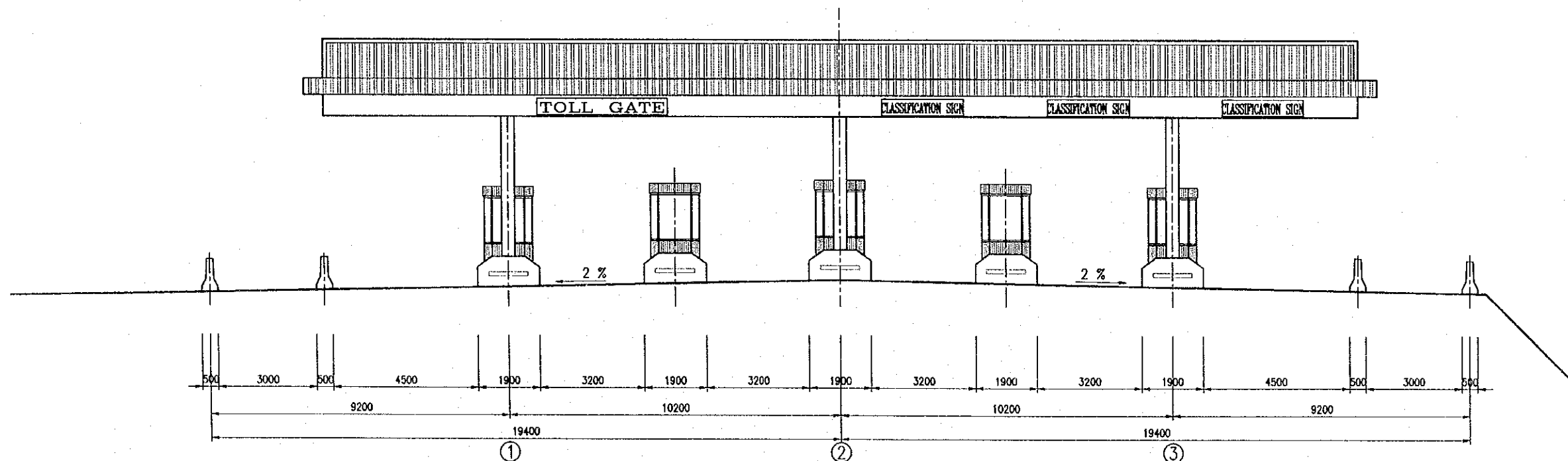
TOLL GATE SECTIONS - 2

THANH TRI BRIDGE
(LINH NAM - THANH TRI - HA NOI)

SIDE VIEW



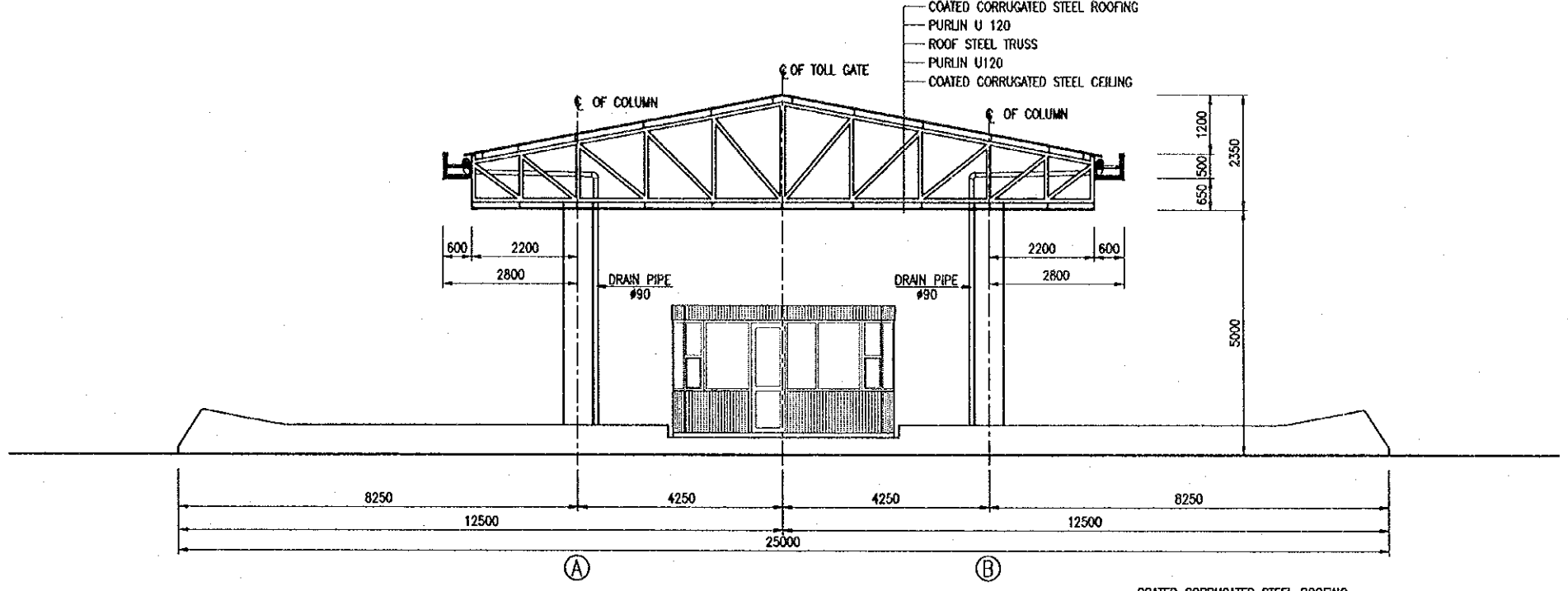
FRONT VIEW



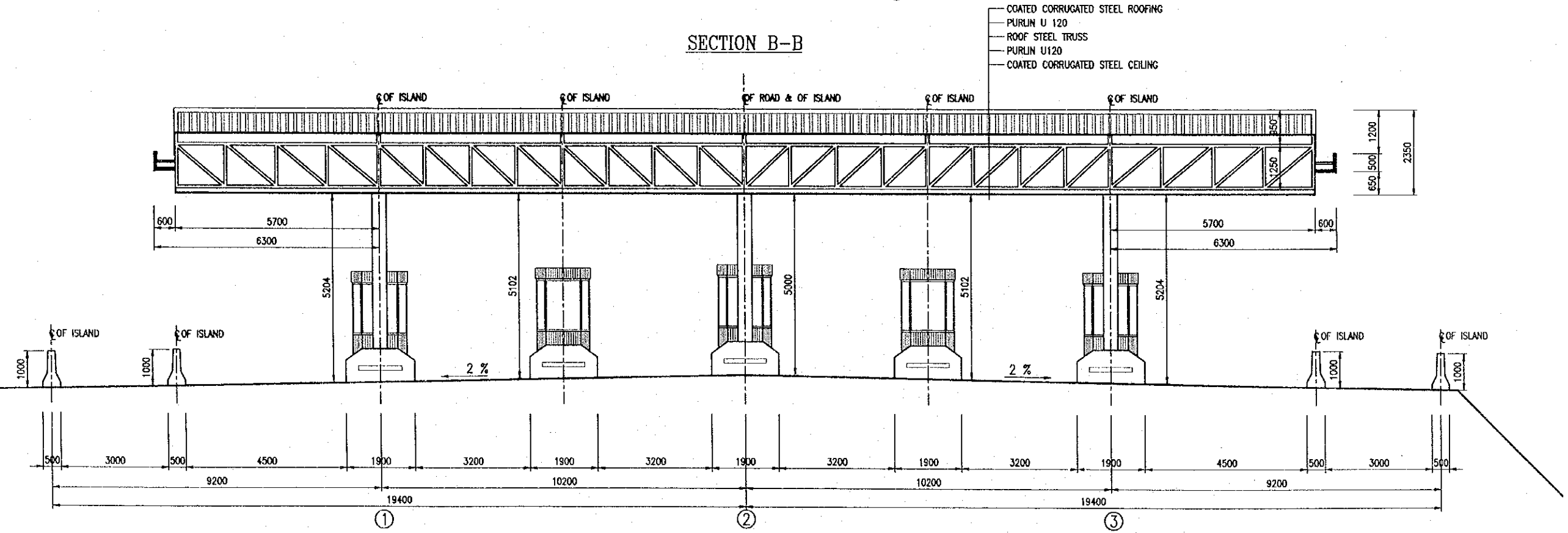
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATADA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2020.9.17	

PACKAGE 3	SCALE 1/125	DRAWING No. G-07	SHEET No.
CANOPY DETAILS - 2			

SECTION A-A



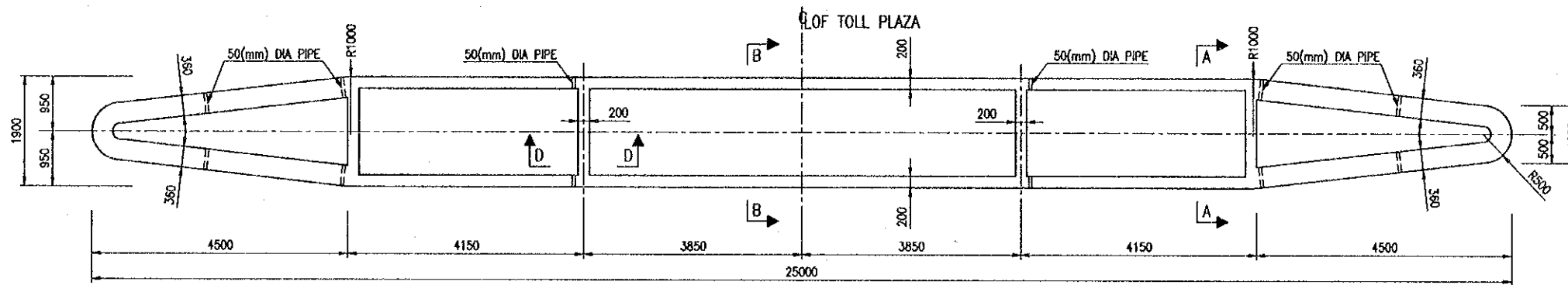
SECTION B-B



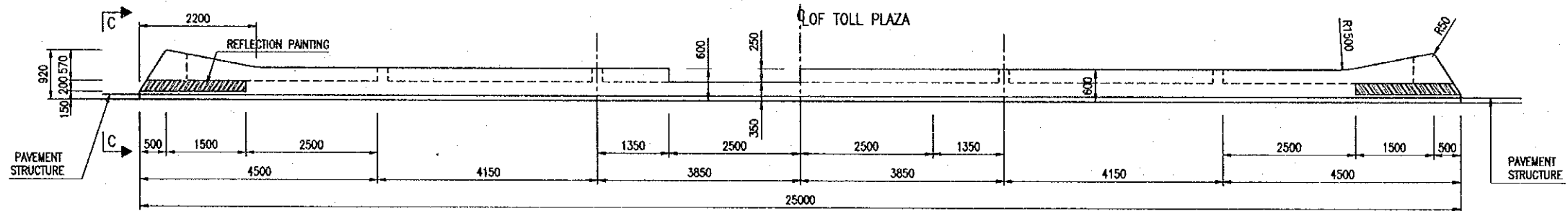
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT	RED RIVER BRIDGE (THANH TRU BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT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

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	AS SHOWN	G-08	
TOLL ISLAND DETAILS - 3			

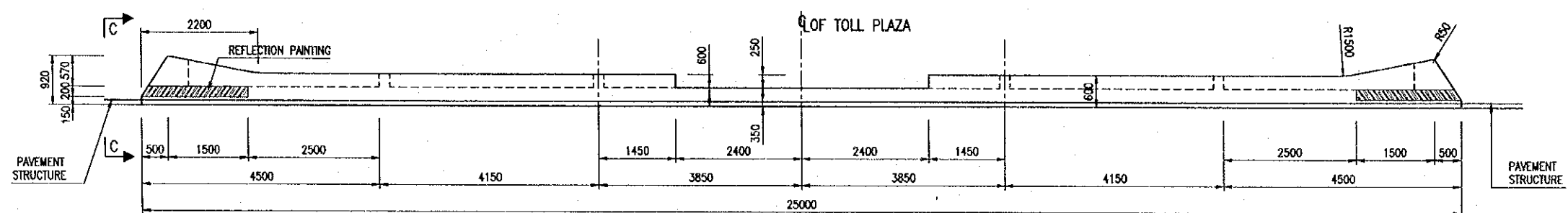
ISLAND PLAN
SCALE : 1/100



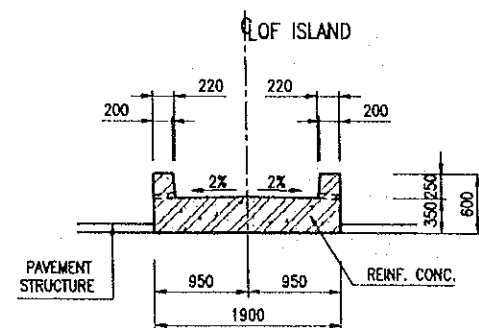
TRAFFIC ISLAND TYPE A
SCALE : 1/100



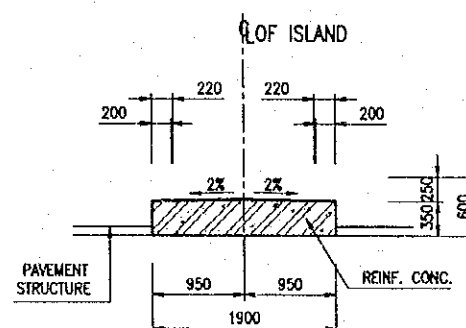
TRAFFIC ISLAND TYPE B
SCALE : 1/100



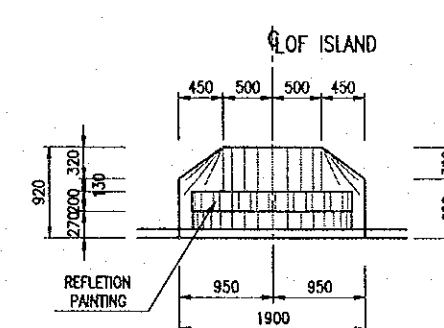
SECTION A-A
SCALE : 1/75



SECTION B-B
SCALE : 1/75



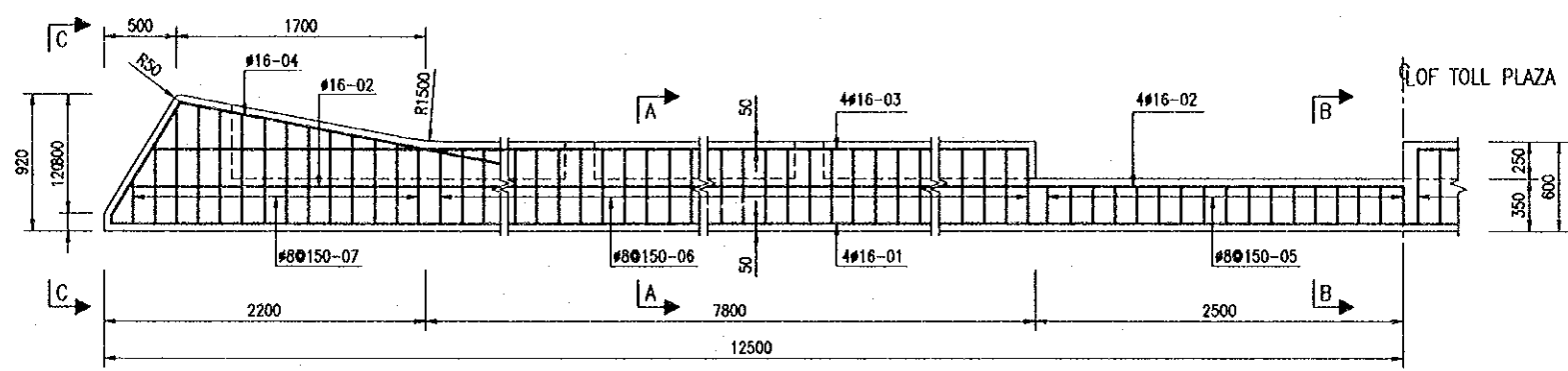
SECTION C-C
SCALE : 1/75



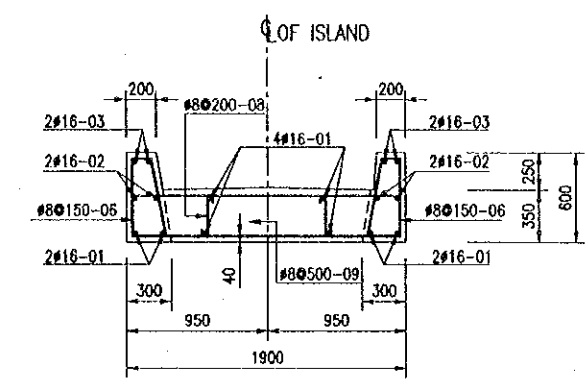
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY NAME S. WATADA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000.07.17	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 3	SCALE 1/50	DRAWING No. G-09	SHEET No.
TOLL ISLAND DETAILS - 4			

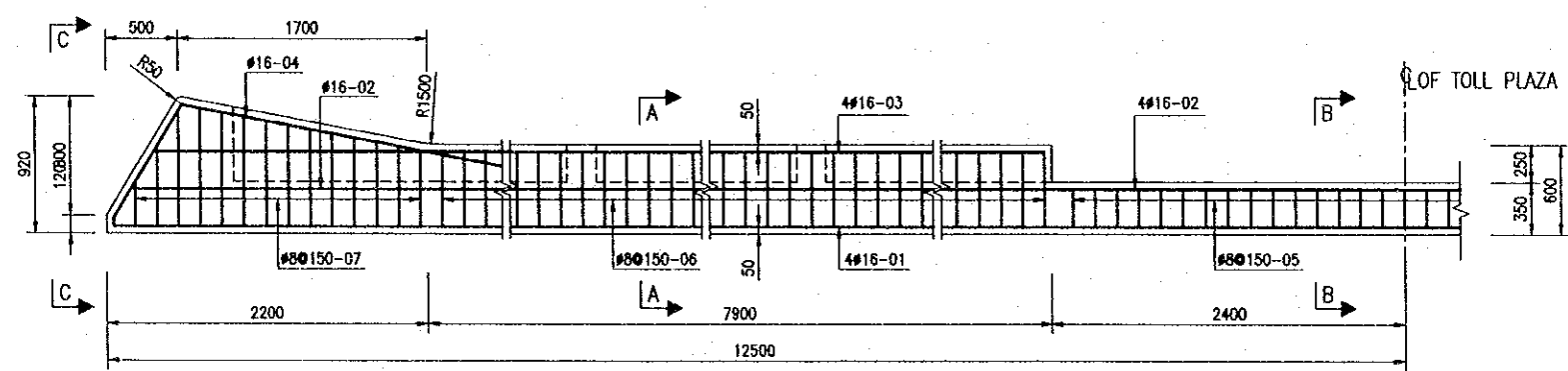
REINFORCEMENT FOR TRAFFIC ISLAND TYPE A



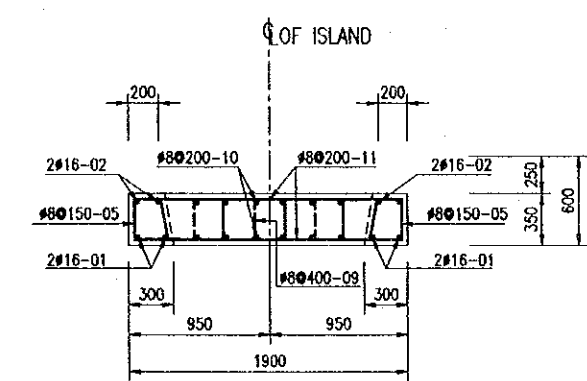
SECTION A-A



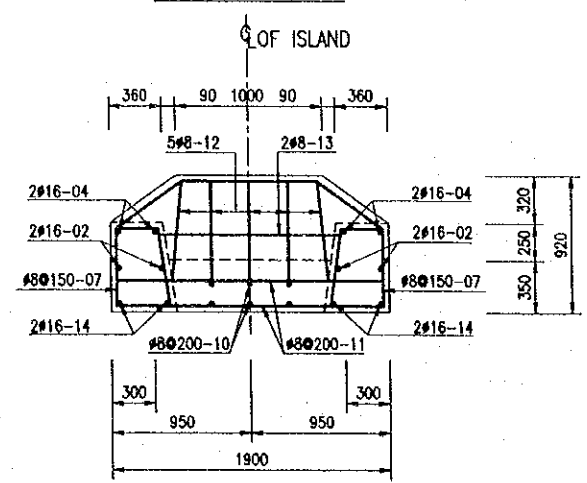
REINFORCEMENT FOR TRAFFIC ISLAND TYPE B



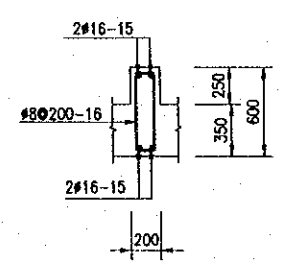
SECTION B-B



SECTION C-C



SECTION D-D
(SEE DWG. G-008)



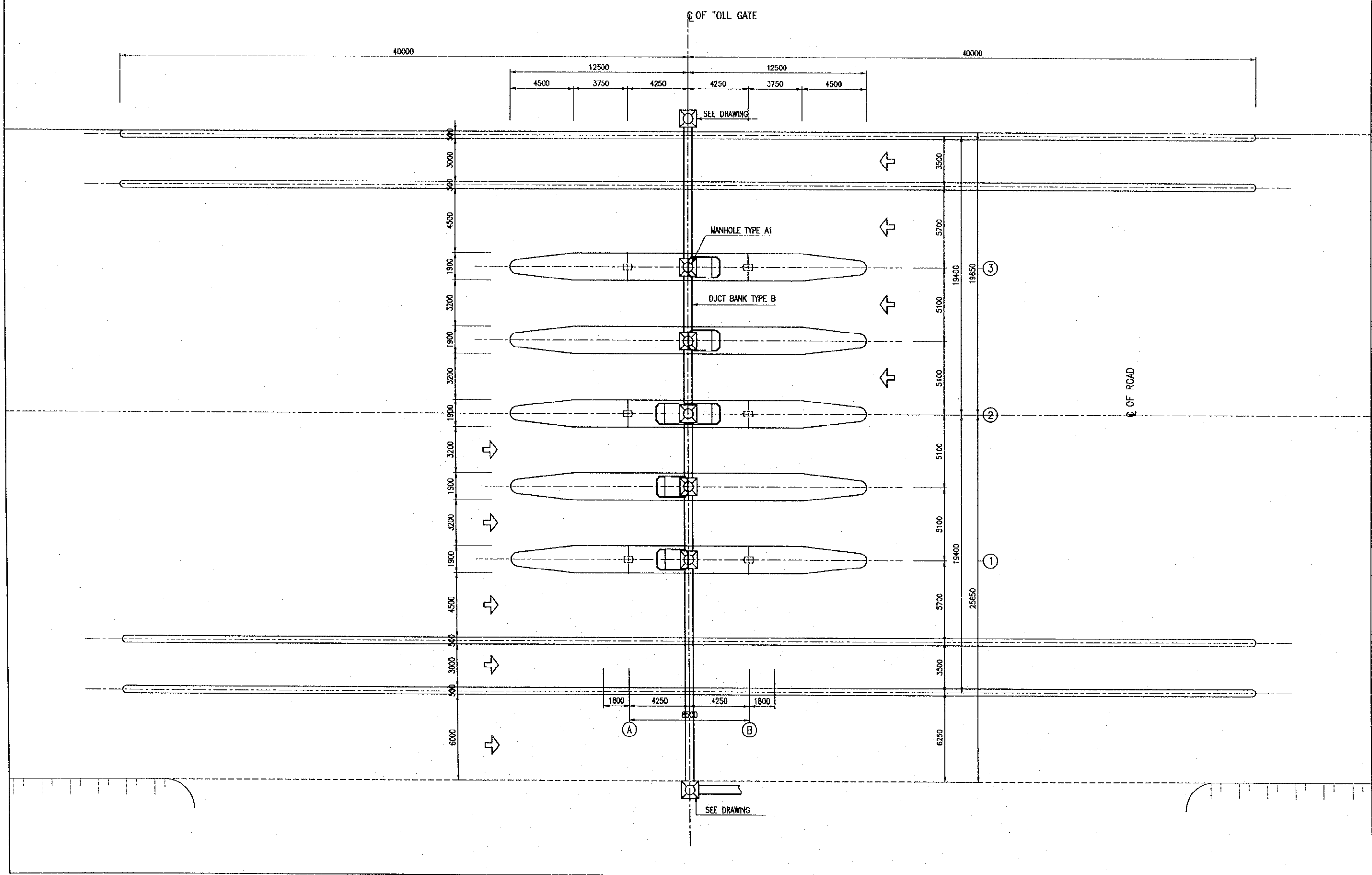
MATERIAL LIST FOR TOLL ISLAND

ITEM	CONCRETE (m3)	HIGH STRENGTH STEEL (kg)	MILD STEEL (kg)	FORMWORK (m2)
ISLAND	14.7	597.6	445.49	34.0

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

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/250	G-10	
MANHOLE LAYOUT - 2			

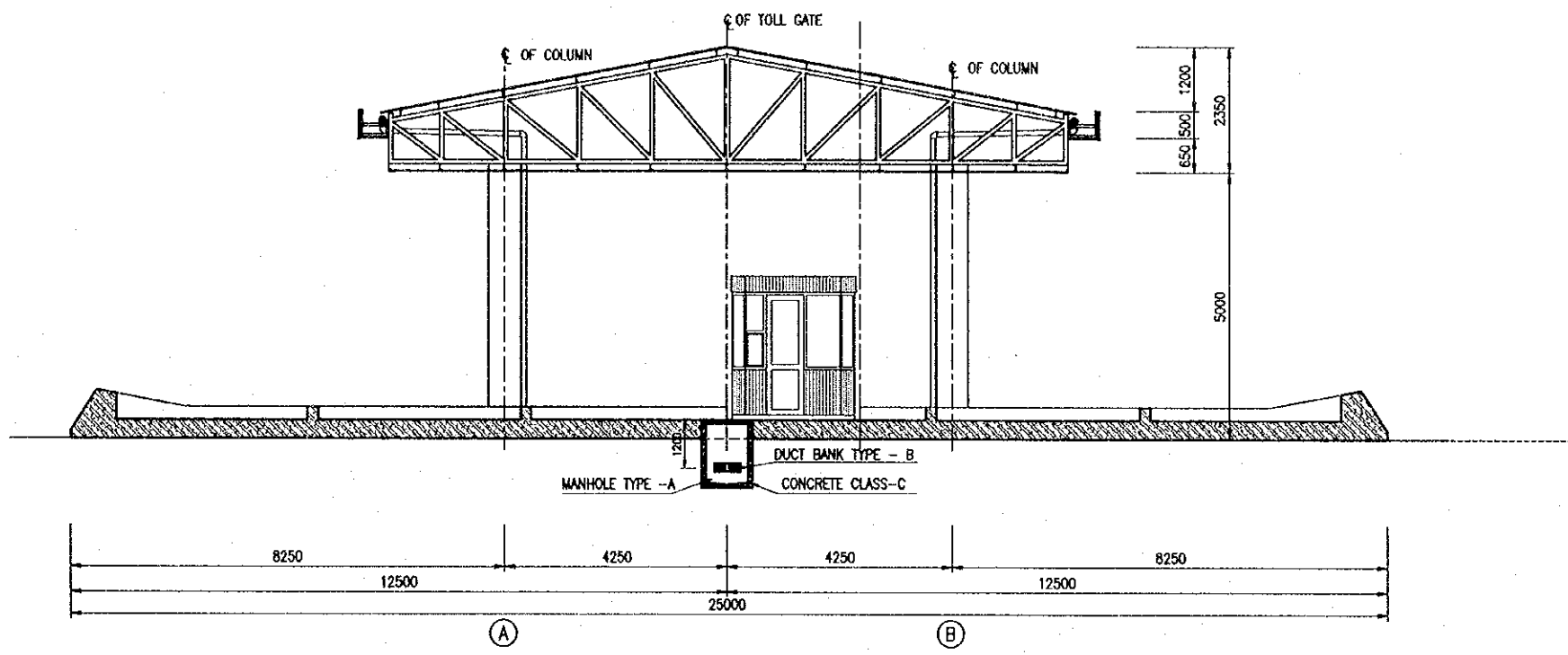
PHAP VAN CAU GIE INTERCHANGE
(THINH LIET - THANH TRI - HA NOI)
TOLL PLAN



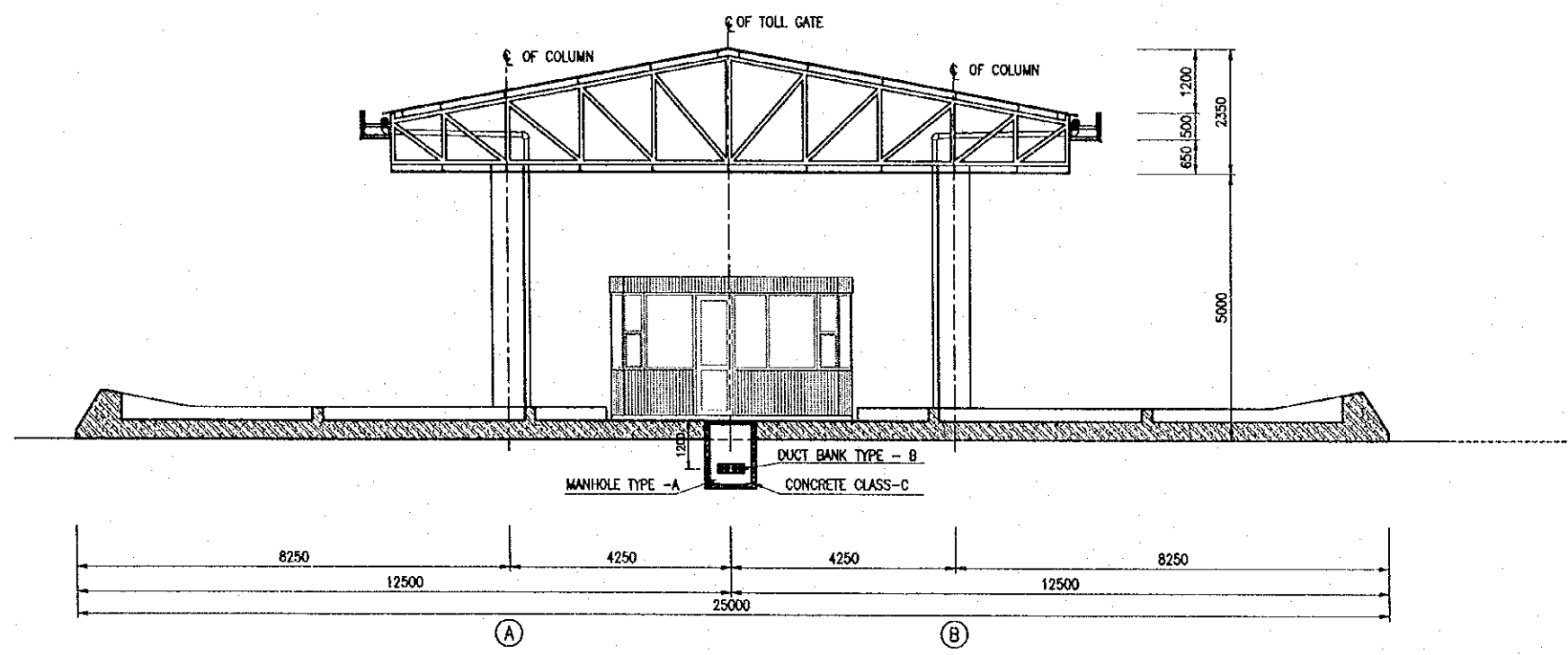
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. NAYABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000. 01. 14	

PACKAGE 3	SCALE 1/125	DRAWING No. G-11	SHEET No.
MANHOLE SECTIONS - 2			

BOTH SIDE BOOTH



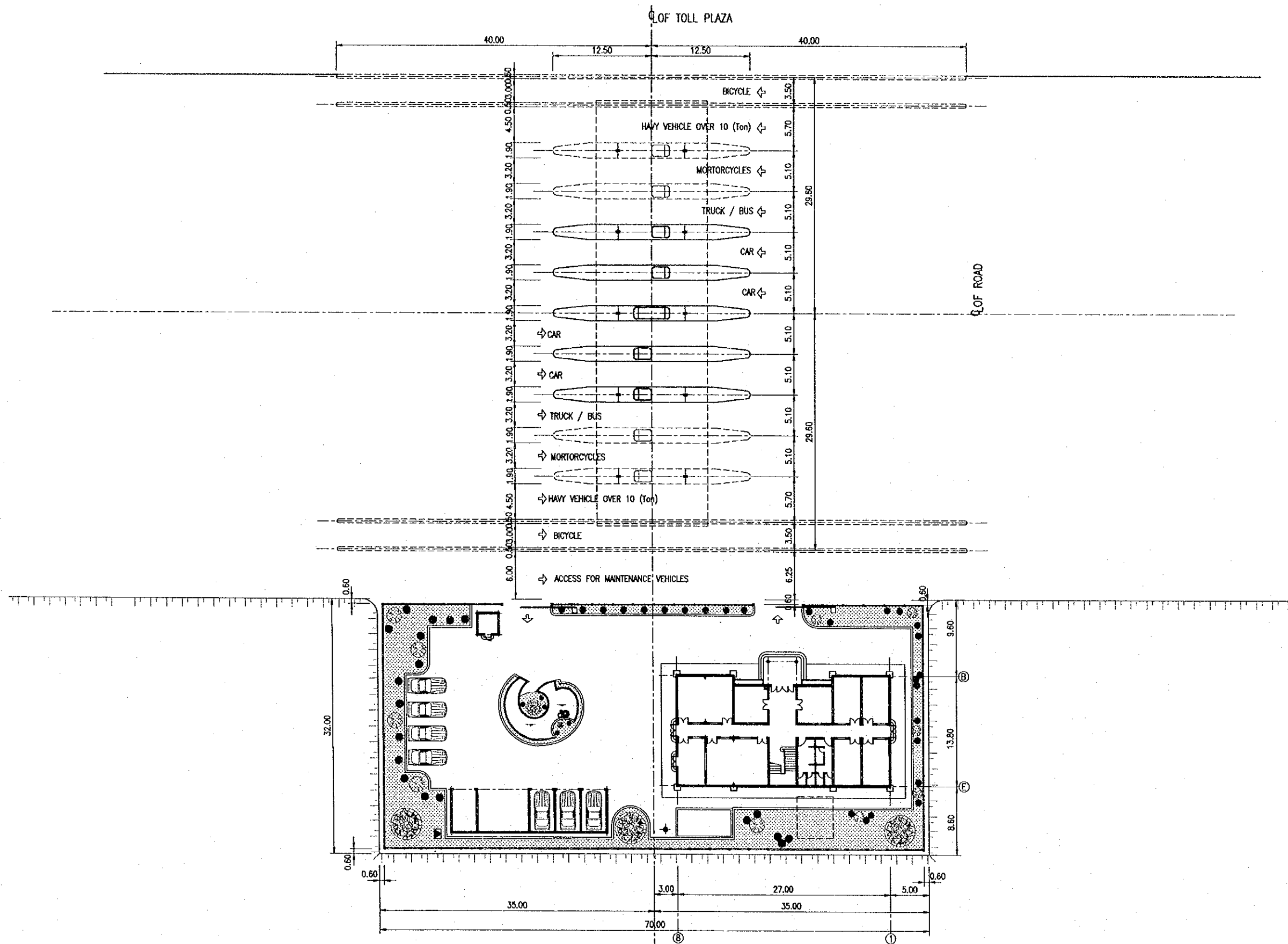
CENTRAL BOOTH



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>	
CONTRACTOR PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.3.14	

PACKAGE 3	SCALE 1/500	DRAWING No. G-12	SHEET No.
TOLL PLAZA FUTURE PLAN -5			

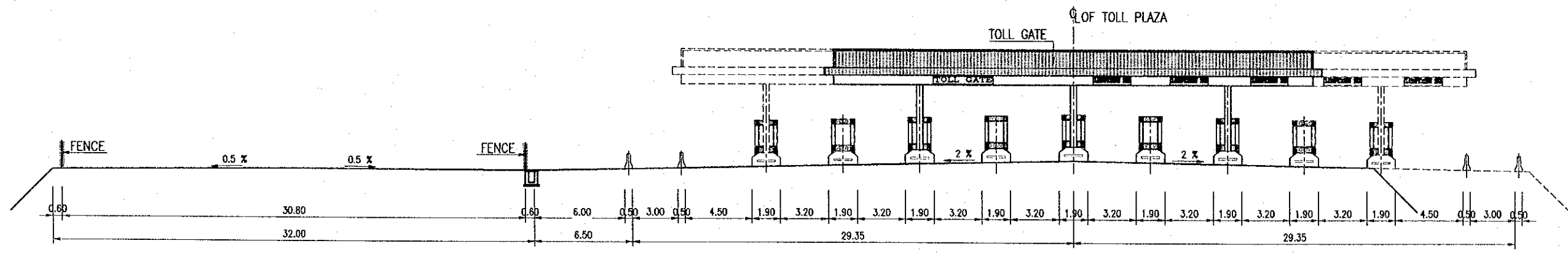
**THANH TRI BRIDGE
(LINH NAM - THANH TRI - HA NOI)
TOLL PLAZA PLAN**



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 2010.0.17	

PACKAGE 3	SCALE 1/300	DRAWING No. G-13	SHEET No.
TOLL PLAZA FUTURE PLAN -- 6			

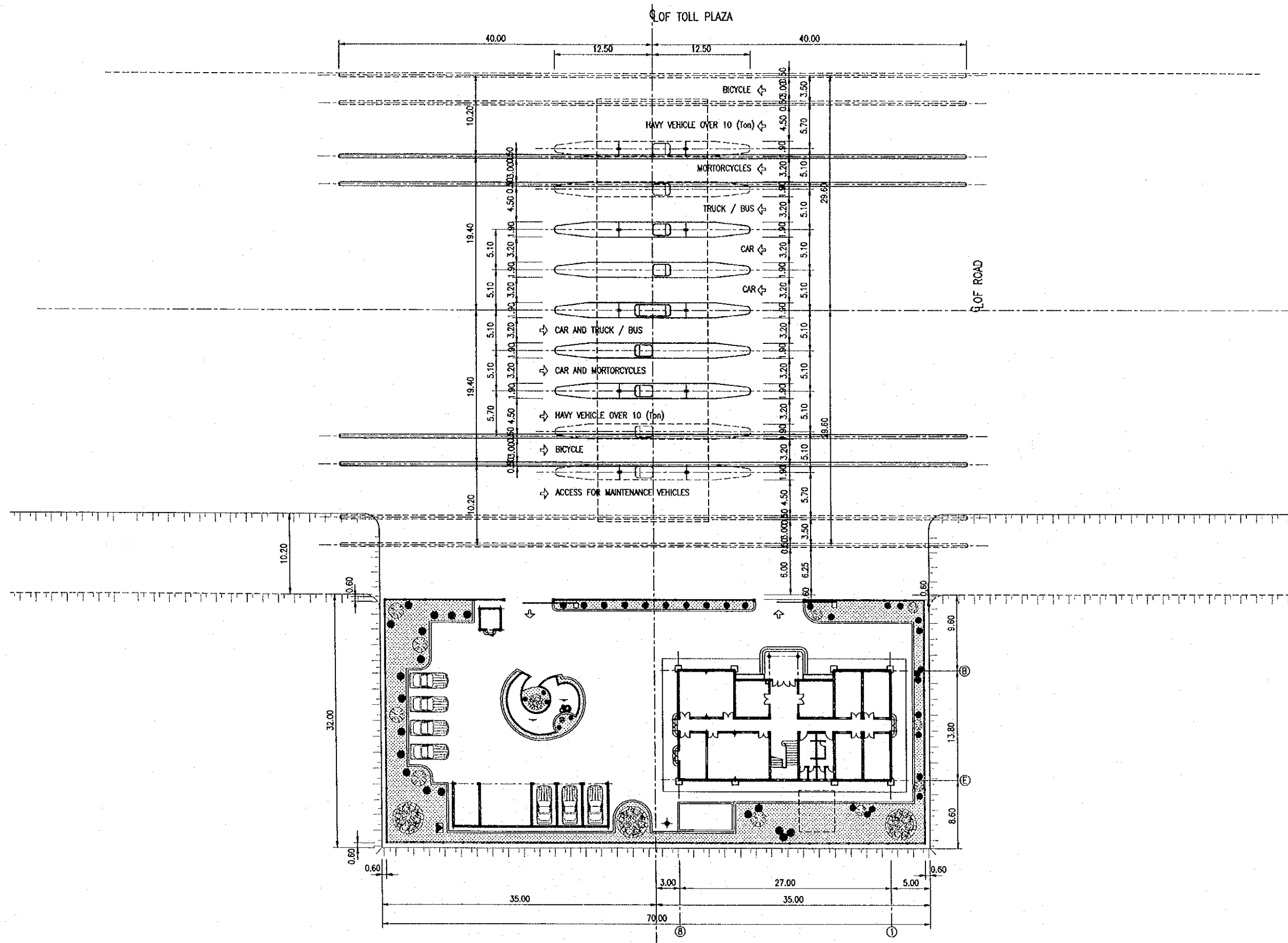
THANH TRI BRIDGE
(LINH NAM - THANH TRI - HA NOI)
TOLL GATE PROFILE



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATANI
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONTRACTOR PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.02.19

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/500	G--14	
TOLL PLAZA FUTURE PLAN - 7			

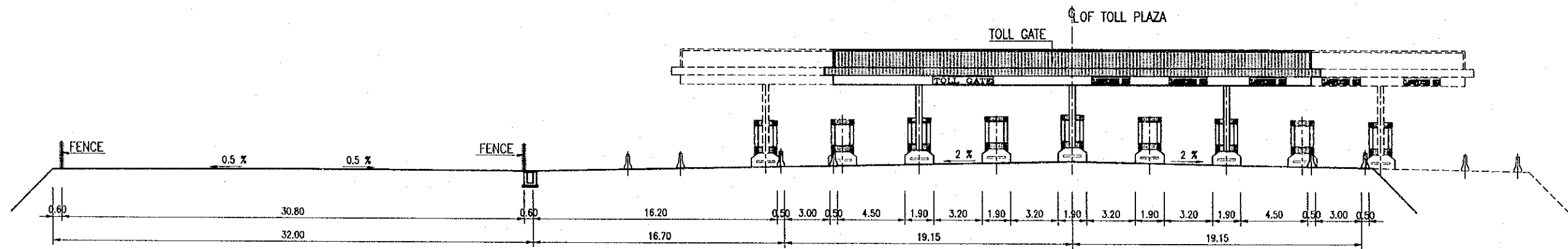
THANH TRI BRIDGE (LINH NAM - THANH TRI - HA NOI) TOLL PLAZA PLAN



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>
CONTRACTOR PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.01.17

PACKAGE 3	SCALE 1/300	DRAWING No. G-15	SHEET No.
TOLL PLAZA FUTURE PLAN - 8			

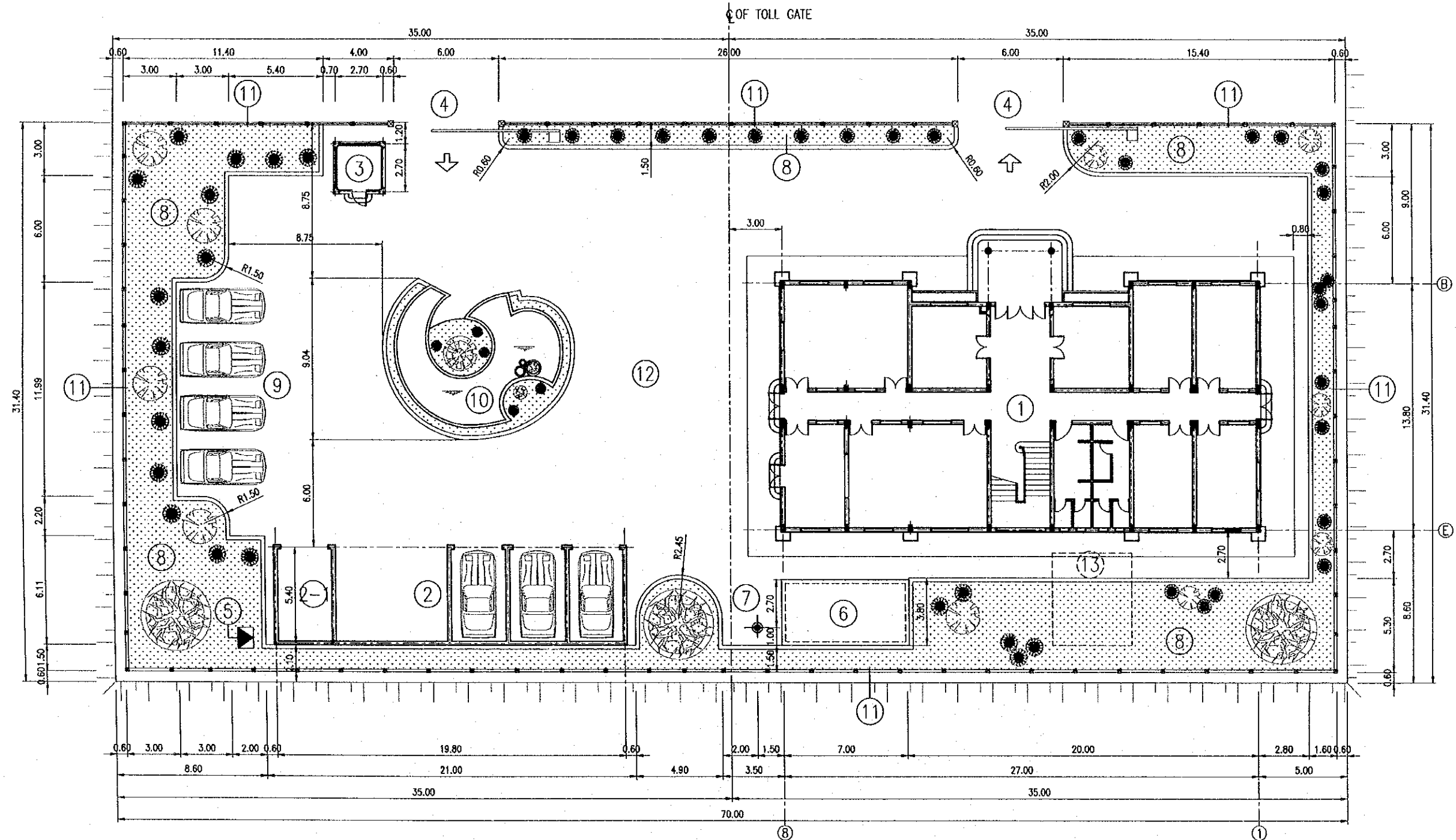
THANH TRI BRIDGE
(LINH NAM - THANH TRI - HA NOI)
TOLL GATE PROFILE



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
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE 2000. 11. 19

PACKAGE 3	SCALE 1/250	DRAWING No. G-16	SHEET No.
TOLL BUILDING PLAN - 2			

**PHAP VAN CAU GIE INTERCHANGE
(THINH LIET - THANH TRI - HA NOI)
GENERAL PLAN**



- | | | |
|-------------------------------|--------------------|---|
| ① TOLL BUILDING | ⑤ ELECTRIC STATION | ⑨ PARKING |
| ② GARAGE + MOTOR-BIKE KEEPING | ⑥ WATER STATION | ⑩ TANK SCENERY |
| ②- GENERATOR ROOM | ⑦ WELL | ⑪ FENCE |
| ③ GUARD HOUSE | ⑧ LANDSCAPE | ⑫ PAVEMENT SURFACE MADE OF STONE CONCRETE |
| ④ GATE | | ⑬ SEPTIC TANK |

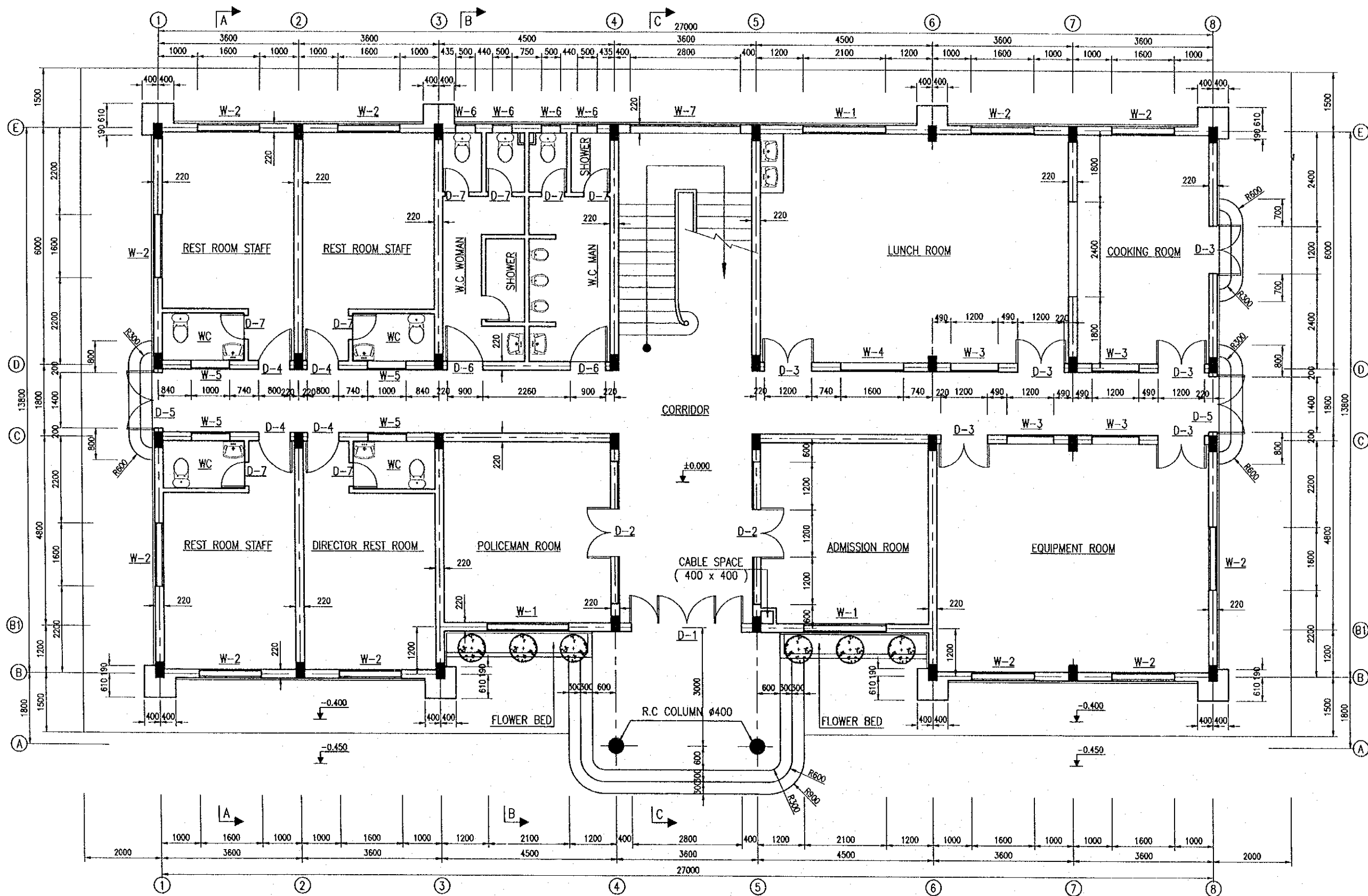
NOTES

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE INDICATED

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

PACKAGE 3	SCALE 1/100	DRAWING No. G-17	SHEET No.
FIRST FLOOR PLAN - 1			

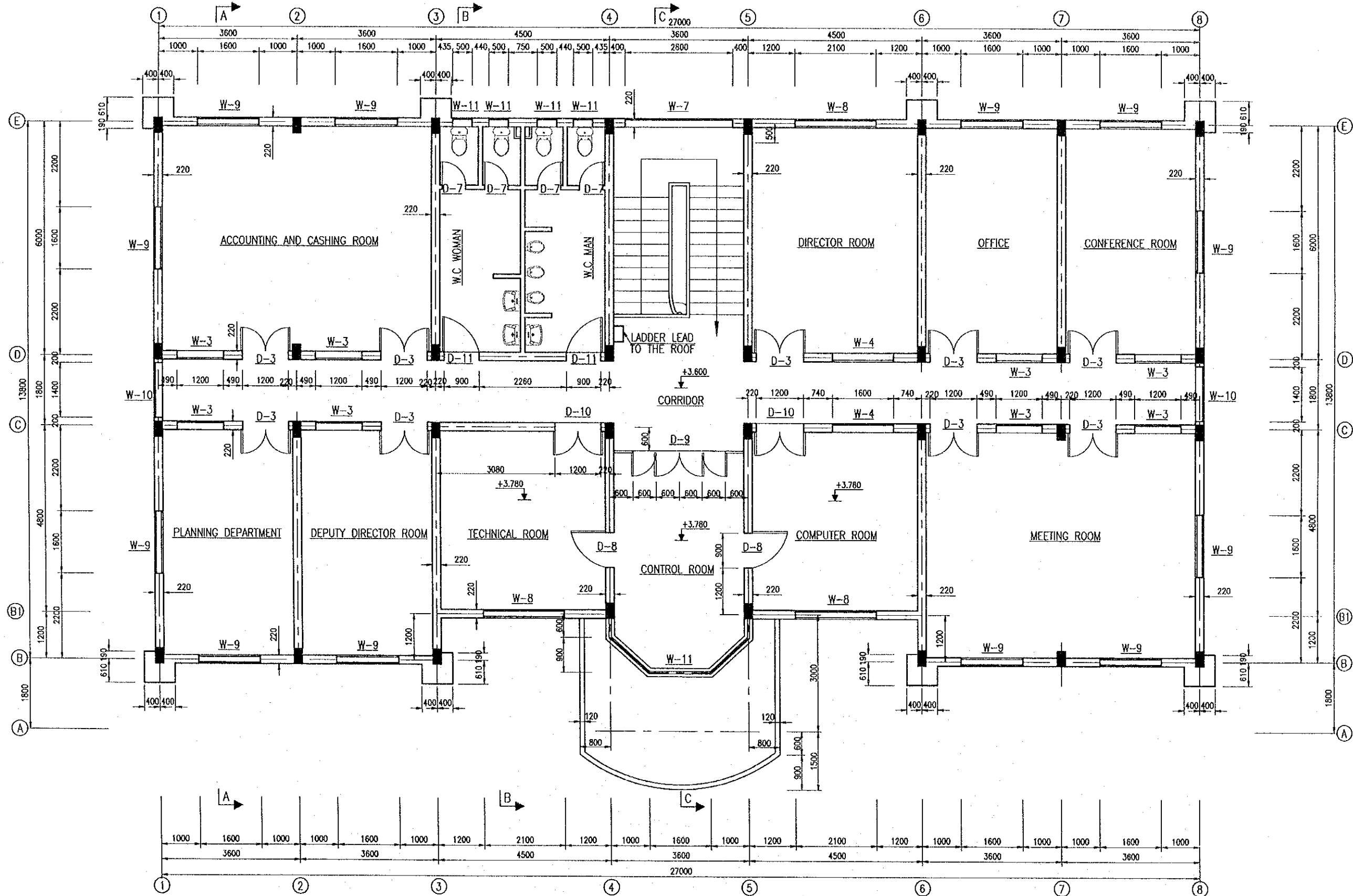
FIRST FLOOR PLAN



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. 05. 14
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 3	SCALE 1/100	DRAWING No. C-18	SHEET No.
SECOND FLOOR PLAN - 2			

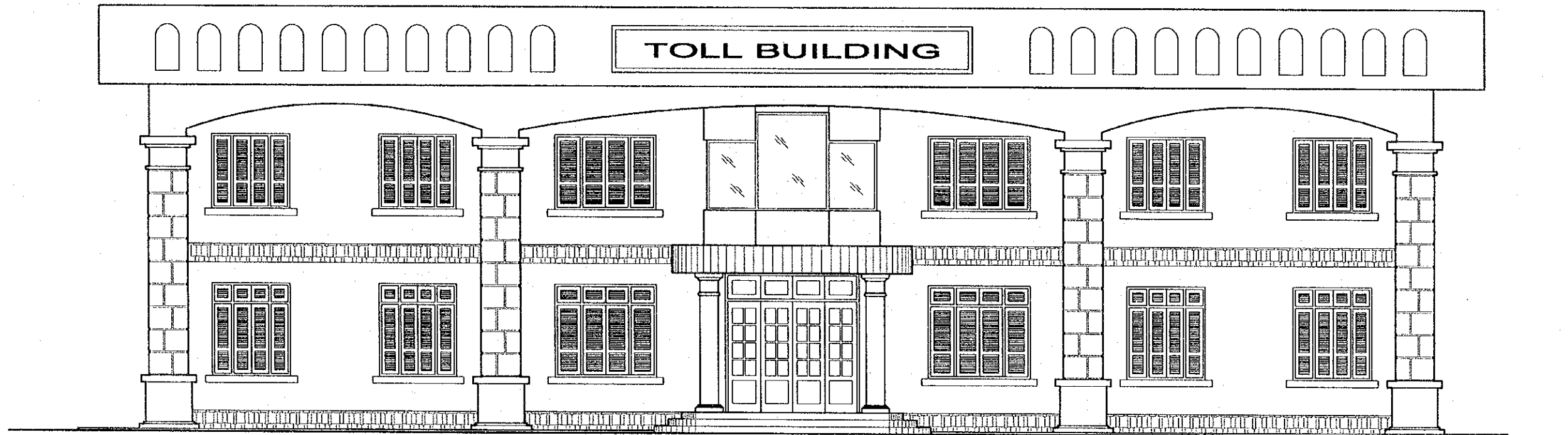
SECOND FLOOR PLAN



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. MATSUE
PROJECT	RED RIVER BRIDGE (HANH TIEN BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.3.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/100	G-19	
TOLL BUILDING PROFILE - 5			

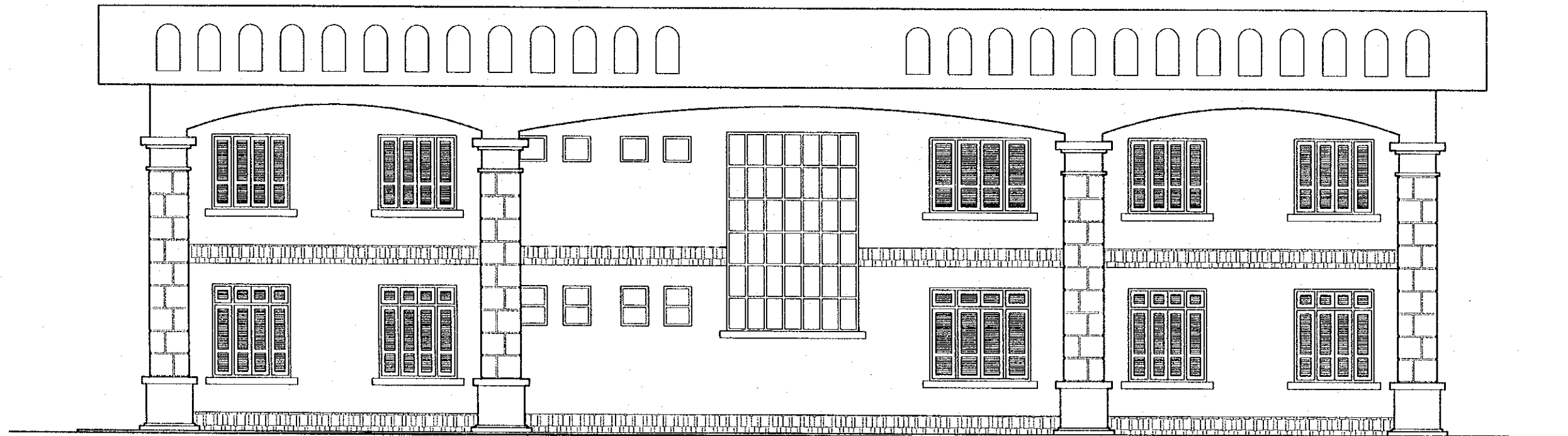
ELEVATION AXIS 1 - 8



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 3	SCALE 1/100	DRAWING No. G-20	SHEET No.
TOLL BUILDING PROFILE - 6			

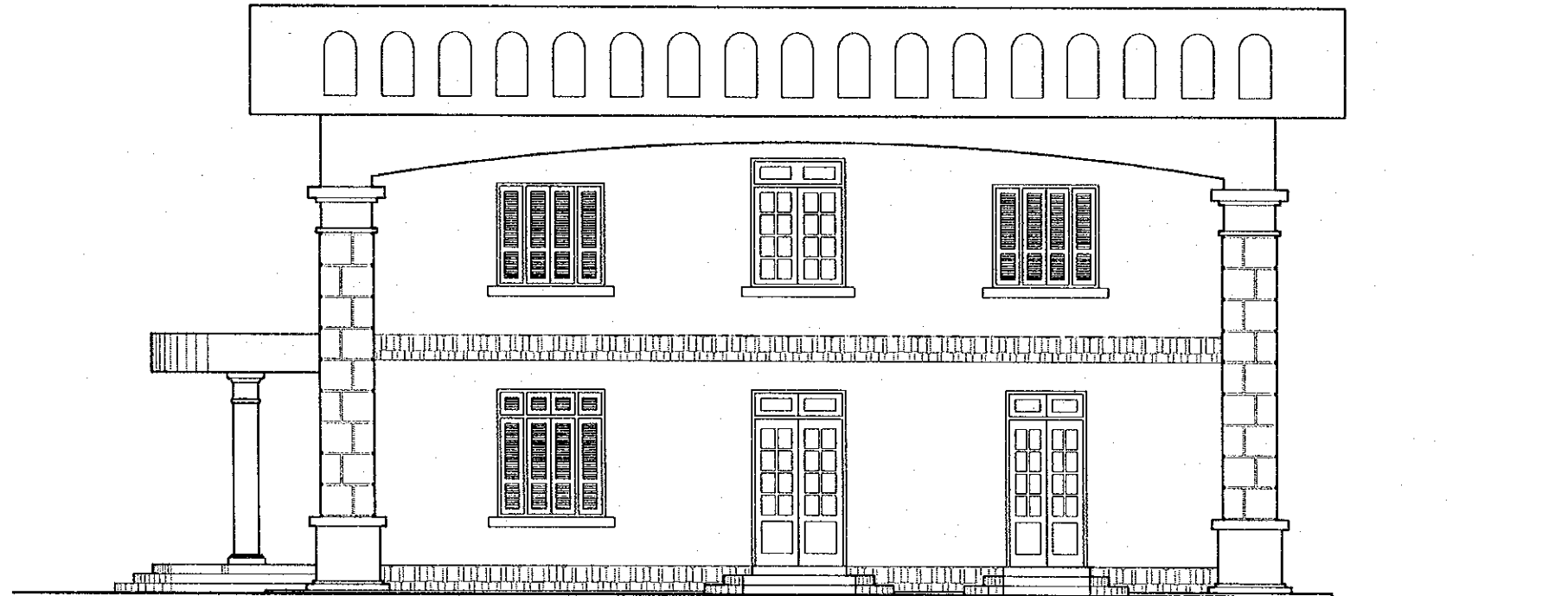
ELEVATION EXIS 8 - 1



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	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.
3	1/100	G-21	
TOLL BUILDING PROFILE - 7			

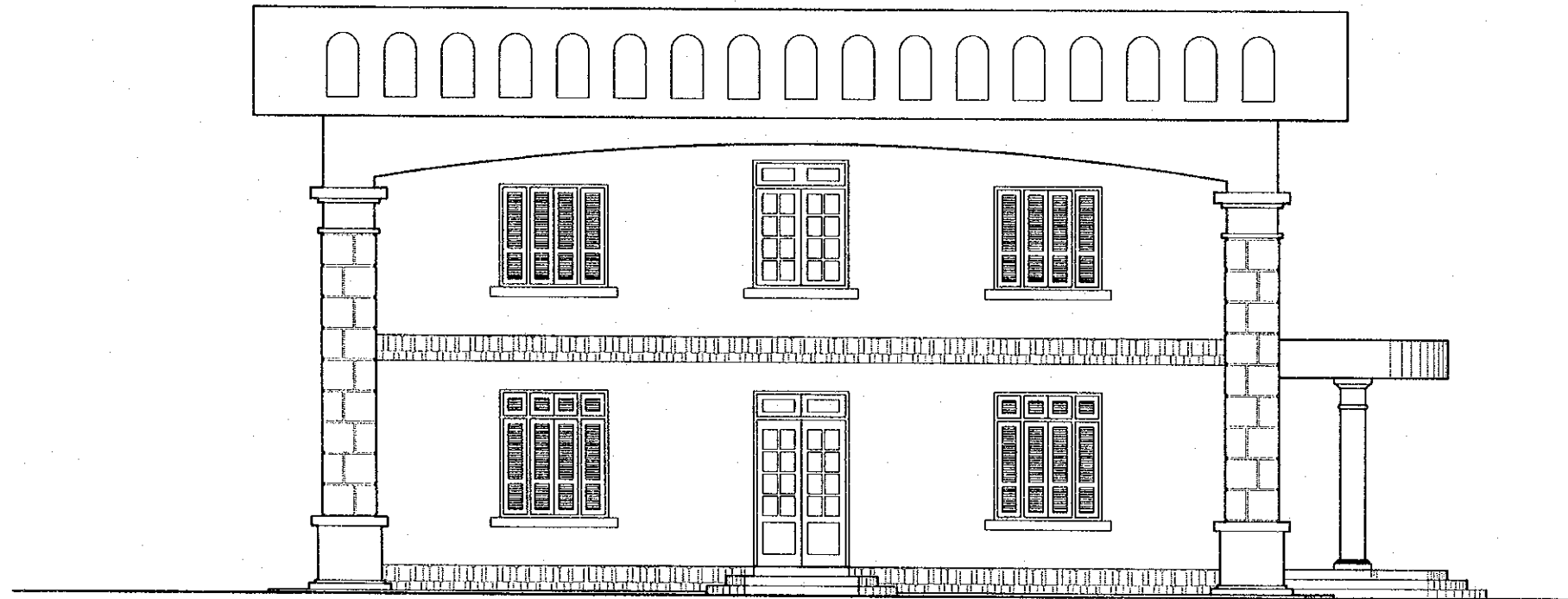
ELEVATION EXIS A - E



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	2000.01.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/100	G-22	
TOLL BUILDING PROFILE - B			

ELEVATION EXIS E - A



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LOHO 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.
3		G-23	
DIMENSION SCHEDULE			

DIMENSION SCHEDULE

TOLL BUILDING

No.	DESCRIPTION	DIMENSION (m)	QUANTITY	SQUARE (m ²)	FLOOR(m ²)	WALL(m ²)	CEILING(m ²)	REMARKS
1	EQUIPMENT ROOM	5,78 x 6,98	1	40.34	40.34	64.17	40.34	
2	ADMISSION ROOM	4,58 x 4,28	1	19.60	19.60	49.25	19.60	
3	POLICEMAN ROOM	4,58 x 4,28	1	19.60	19.60	49.25	19.60	
4	DIRECTOR REST ROOM	4,47 x 3,38	1	15.11	16.64	56.74	19.54	
5	TOILET IN THE DIRECTOR REST ROOM	1,20 x 2,10	1	2.52	2.52	21.10	2.52	
6	REST ROOM STAFF(FROM AXIS 2 TO AXIS 3)	4,47 x 3,38	1	15.11	16.64	56.74	19.54	
7	REST ROOM STAFF(FROM AXIS 1 TO AXIS 2)	4,47 x 3,38	2	15.11	16.64	53.34	19.54	
8	TOILET IN THE REST ROOM STAFF	1,20 x 2,10	3	2.52	2.52	9.55	2.52	
9	COOKING ROOM	5,78 x 3,38	1	19.54	19.54	47.25	19.54	
10	LUNCH ROOM	5,78 x 7,88	1	45.55	45.55	70.95	45.55	
11	TOILET ON THE FIRST FLOOR (FROM AXIS 3 TO AXIS 4)	5,78 x 4,28	1	24.74	24.74	147.71	24.74	
12	CORRIDOR ON THE FIRST FLOOR	(1,58 x 26,78) + (4,80 x 3,38)	1	55.83	55.83	137.54	55.83	
13	STAIR	6,00 x 3,38	1	20.28	20.28	54.49	20.28	
14	MEETING ROOM	5,78 x 6,98	1	40.34	40.34	66.21	40.34	
15	COMPUTER ROOM	4,58 x 4,28	1	19.60	19.60	49.00	19.60	
16	CONTROL ROOM	5,54 x 3,38	1	17.94	17.94	22.41	17.94	
17	TECHNICAL ROOM	4,58 x 4,28	1	19.60	19.60	52.40	19.60	
18	DEPUTY DIRECTOR ROOM	5,78 x 3,38	1	19.54	19.54	55.23	19.54	
19	PLANNING DEPARTMENT ROOM	5,78 x 3,38	1	19.54	19.54	52.51	19.54	
20	CONFERENCE ROOM	5,78 x 3,38	1	19.54	19.54	52.51	19.54	
21	OFFICE	5,78 x 3,38	1	19.54	19.54	55.23	19.54	
22	DIRECTOR ROOM	5,78 x 4,28	1	24.74	24.74	59.93	24.74	
23	ACCOUNTING AND CASHING ROOM	5,78 x 6,98	1	40.34	40.34	66.21	40.34	
24	TOILET ON THE SECOND FLOOR (FROM AXIS 3 TO AXIS 4)	5,78 x 4,28	1	24.74	24.74	138.37	24.74	
25	CORRIDOR ON THE SECOND FLOOR	(1,58 x 26,78) + (0,71 x 3,38)	1	44.71	44.71	97.22	44.71	

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>AW</i>	DATE 2000.03.14
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 3	SCALE	DRAWING No. G-24	SHEET No.
FINISHED SCHEDULE			

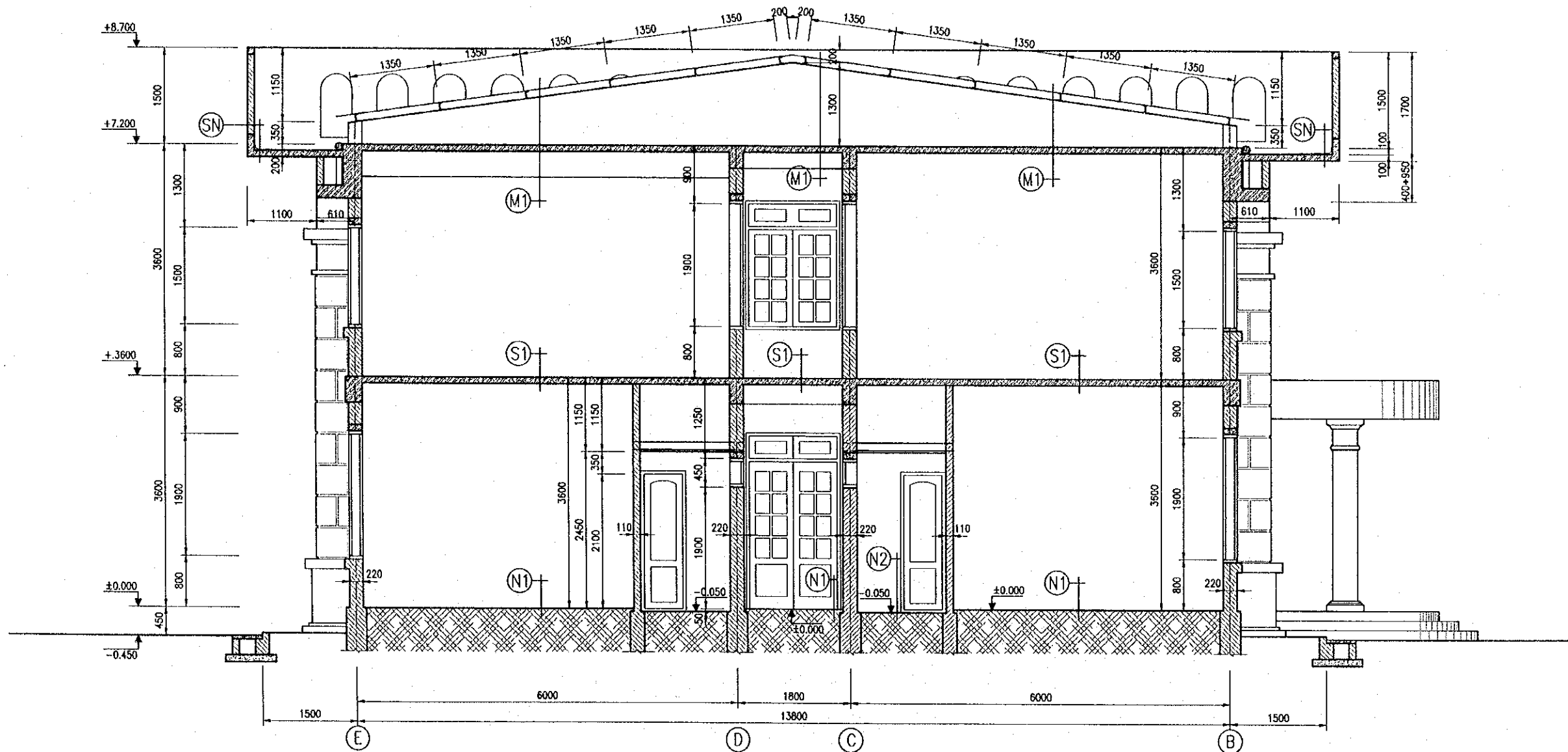
**FINISHED SCHEDULE
TOLL BUILDING**

No.	DESCRIPTION	DIMENSION (m)	QUANTITY	SQUARE (m ²)	FLOOR	WALL	CEILING	REMARKS
1	EQUIPMENT ROOM	5,78 x 6,98	1	40.34	Ceramic tile	Plaster	Exposed	
2	ADMISSION ROOM	4,58 x 4,28	1	19.60	Ceramic tile	Plaster	Exposed	
3	POLICEMAN ROOM	4,58 x 4,28	1	19.60	Ceramic tile	Plaster	Exposed	
4	DIRECTOR REST ROOM	4,47 x 3,38	1	15.11	Ceramic tile	Plaster	Exposed	
5	TOILET IN THE DIRECTOR REST ROOM	1,20 x 2,10	1	2.52	Ceramic tile	Plaster and ceramic tile	Exposed	
6	REST ROOM STAFF(FROM AXIS 2 TO AXIS 3)	4,47 x 3,38	1	15.11	Ceramic tile	Plaster	Exposed	
7	REST ROOM STAFF(FROM AXIS 1 TO AXIS 2)	4,47 x 3,38	2	15.11	Ceramic tile	Plaster	Exposed	
8	TOILET IN THE REST ROOM STAFF	1,20 x 2,10	3	2.52	Ceramic tile	plaster and ceramic tile	Exposed	
9	COOKING ROOM	5,78 x 3,38	1	19.54	Ceramic tile	plaster and ceramic tile	Exposed	
10	LUNCH ROOM	5,78 x 7,88	1	45.55	Ceramic tile	Plaster	Exposed	
11	TOILET ON THE FIRST FLOOR (FROM AXIS 3 TO AXIS 4)	5,78 x 4,28	1	24.74	Ceramic tile	Plaster and ceramic tile	Exposed	
12	CORRIDOR ON THE FIRST FLOOR	(1,58 x 26,78) + (4,80 x 3,38)	1	55.83	Ceramic tile end granitoid	Plaster	Exposed	
13	STAIR	6,00 x 3,38	1	20.28	Ceramic tile end granitoid	Plaster	Exposed	
14	MEETING ROOM	5,78 x 6,98	1	40.34	Ceramic tile	Plaster	Exposed	
15	COMPUTER ROOM	4,58 x 4,28	1	19.60	Floor board	Plaster	Exposed	
16	CONTROL ROOM	5,54 x 3,38	1	17.94	Floor board	Plaster	Exposed	
17	TECHNICAL ROOM	4,58 x 4,28	1	19.60	Floor board	Plaster	Exposed	
18	DEPUTY DIRECTOR ROOM	5,78 x 3,38	1	19.54	Ceramic tile	Plaster	Exposed	
19	PLANNING DEPARTMENT ROOM	5,78 x 3,38	1	19.54	Ceramic tile	Plaster	Exposed	
20	CONFERENCE ROOM	5,78 x 3,38	1	19.54	Ceramic tile	Plaster	Exposed	
21	OFFICE	5,78 x 3,38	1	19.54	Ceramic tile	Plaster	Exposed	
22	DIRECTOR ROOM	5,78 x 4,28	1	24.74	Ceramic tile	Plaster	Exposed	
23	ACCOUNTING AND CASHING ROOM	5,78 x 6,98	1	40.34	Ceramic tile	Plaster	Exposed	
24	TOILET ON THE SECOND FLOOR (FROM AXIS 3 TO AXIS 4)	5,78 x 4,28	1	24.74	Ceramic tile	Plaster and ceramic tile	Exposed	
25	CORRIDOR ON THE FIRST FLOOR	(1,58 x 26,78) + (0,71 x 3,38)	1	44.71	Ceramic tile	Plaster	Exposed	

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>	DATE 2000.11.17
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 3	SCALE 1/75	DRAWING No. G-25	SHEET No.
SECTION DETAILS - 4			

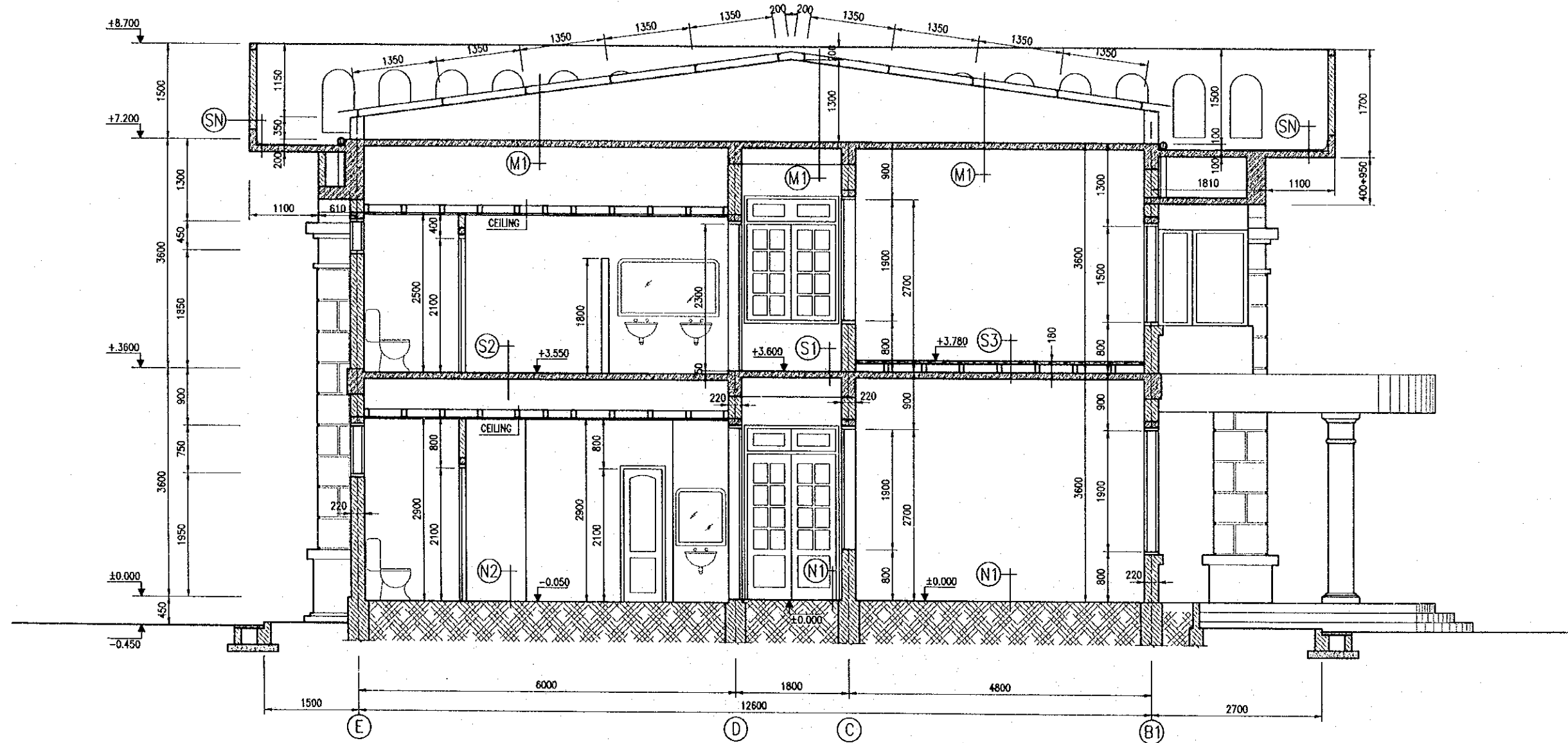
SECTION A-A



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT	DESIGNED BY S. KATARE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.12.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/75	G-26	
SECTION DETAILS - 5			

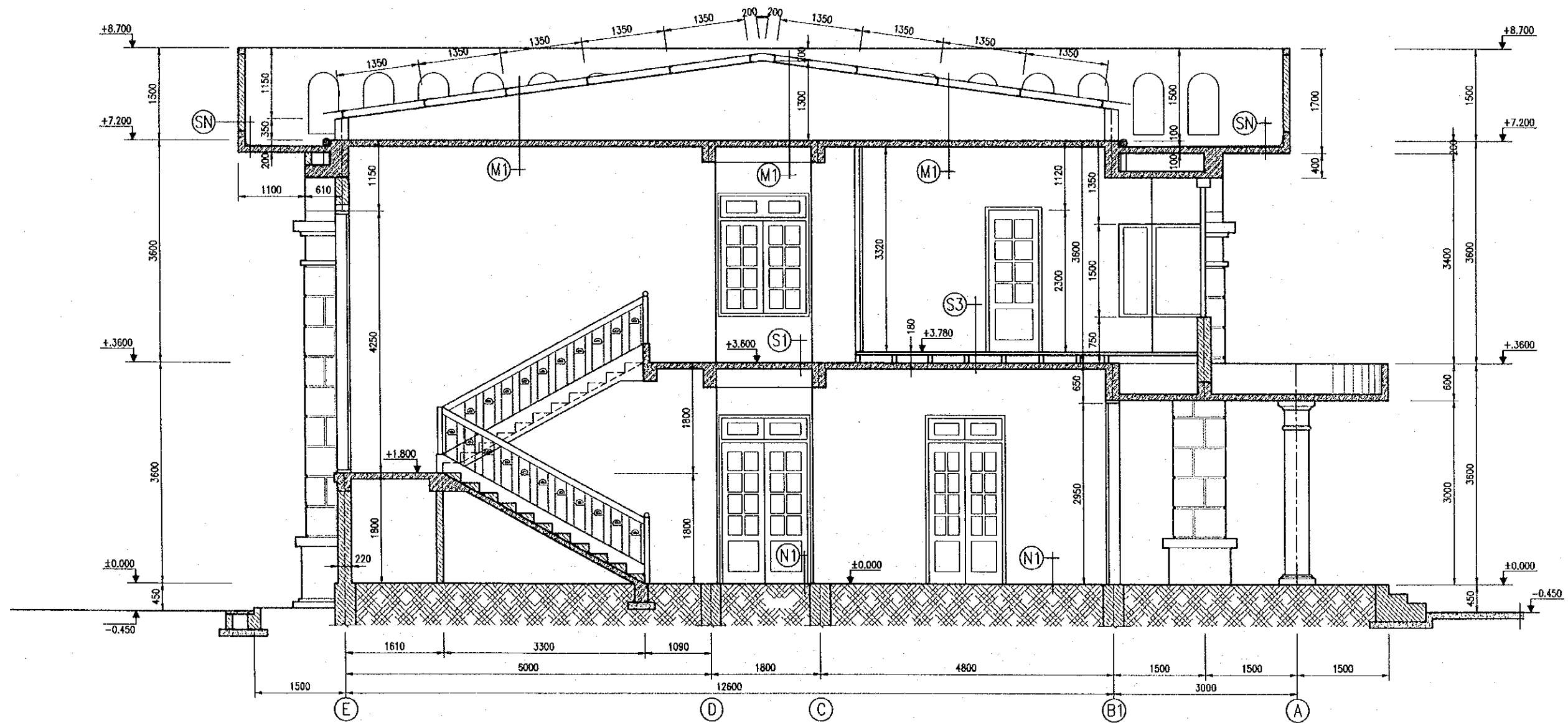
SECTION B-B




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 3	SCALE 1/75	DRAWING No. G-27	SHEET No.
SECTION DETAILS -- 6			

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. WATAGE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE 
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE 2010.05.19

PACKAGE	SCALE	DRAWING No.	SHEET No.
3		G-28	
GENERAL NOTE -- 2			

GENERAL NOTE – BUILDING UTILITIES WORKS – 2

1. SYMBOL

	REMARK
—	Zinc steel pipe for water
—)	PVC pipe for sewage
(C _k)	Position of pipe to tank on the roof
(C)	Position of pipe to take water from tank on the roof to
(t _r)	Position of pipe for waste water from bath-room
(t _x)	Position of pipe for waste water from wc
(t _m)	Position of pipe for rain water

2. GENERAL

This Building Utilities works of the Toll Building (TB) as included operational functions of Road Management Unit (RMU) facilities specifications defines the general requirements for the quality control of materials and workmanship, obligatory to the satisfactory completion of the work items in accordance with the scope of works herein described.

- Pippins of clean water supply system, hot water line system.
- City water inlet system with watermetering devices or deep well pumping system.
- Plumbing of waste, drainage systems and outdoor drainage system.
- Plumbing's / piping of toilet and sanitary systems.
- Plumbing of underground septic tank.
- Piping of water reservoir and overhead water tank.
- Air conditioning system and ventilation system.
- Fire Extinguisher (chemical ABC), if required by the Vietnam standards.

All work shall be done under the administration of the Engineer. Any changes made thereof shall be with the approval of the Engineer.

All work hereunder shall comply with the latest building codes, plumbing codes, and sanitary codes, in case of the absence of any code in the locality.

2. Requirements

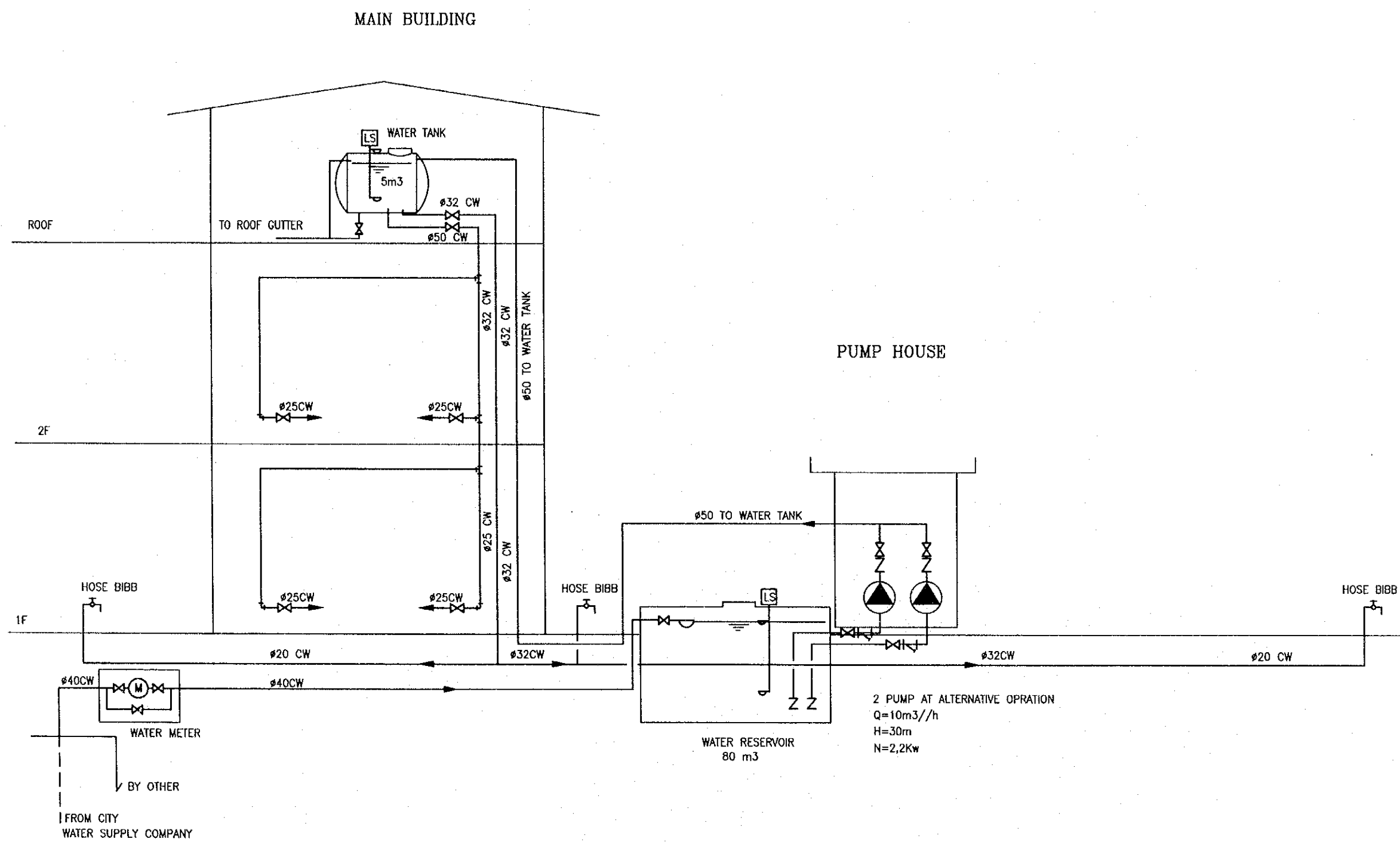
All building utilities installation shall be done in accordance with the Building code of Vietnam, applicable ordinances, rules and regulations of the Proceeding of Vietnam Construction Standards vol. IV, V, VI, and VII.

The building utility works shall be done under the supervision of a licensed Building Utility Engineer.

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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.
3		G-29	
DIAGRAM OF WATER SUPPLY SYSTEM - 1B			

DIAGRAM OF WATER SUPPLY SYSTEM - 1B



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	2022.02.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
3		G-30	
GENERAL NOTES - 1B			

GENERAL NOTES - ELECTRICAL WORKS

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 VIETNAM 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 (QUANG NINH POWER COMPANY) DISTRIBUTION LINE, WHERE IT WILL BE LOCATED OR TERMINATED AT A OUTDOOR ON POLE INSTALLATION TWO (2) 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 SIZER 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 BALASTS TIMING DEVICES AND MOUNTING ACCESSORIES, AS SHOWN SCOPE OF ITEMS.

- BRIDGE LIGHTING AND AT GRADE LIGHTING
- LIGHTING UP
- WARNING LIGHTS

6. SYSTEM GROUNDING FOR ELECTRICAL FACILITIES

THE SYSTEMS GROUNDING SHALL BE EXCAVATED 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 LENGTH OF THE GROUNDING RODS. GROUNDING RODS SHALL BE PLACED AT LEAST 3.0 METER AWAY FROM EXISTING OR FUTURE STRUCTURE. CONCRETE LOCATION MARKER 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 100mm 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.

9. CONDUITING EARTHING CABLING FOR TELEPHONE AND COMPUTER SYSTEMS

EXCEPT AS HEREINAFTER SPECIFIED OR SHOWN ON THE DRAWINGS, ALL SIGNALING CABLE AND TRANSMISSION DATA CABLES SHALL BE IN RIGID HOT DIPPED GALVANIZED STEEL CONDUITS OR PVC CONDUITS.

9 - 1 CONDUIT EARTHING

EARTHING SHALL BE PROVIDED FOR ALL EXPOSED METALLIC SURFACE INCLUDING CONDUIT, MOUNTING POLES, GANTRIES, JUNCTION BOXES, EQUIPMENT CABINETS ETC., WHEREVER CURRENT CARRYING POWER CABLE IN EXCESS OF 110 VOLTS IN POTENTIAL ARE USED OR CONTAINED THEREIN OR WHICH COULD UNDER ANY CIRCUMSTANCES COME INTO ELECTRICAL CONTACT WITH SUCH EQUIPMENT.

WHERE REQUIRED BY THE SENSITIVE NATURE OF THE EQUIPMENT A SEPARATE "ELECTRONIC EARTH" INCLUDING RODS AS NECESSARY SHALL BE PROVIDED.

NO EQUIPMENT SHALL USE THE PROTECTION GROUNDING CIRCUIT FOR THE PURPOSES OF THE ELECTRONIC OR SHIELDING GROUND.

9 - 2 CABLES AND WIRES

ALL CABLES SHALL BE PROVIDED WITH IDENTIFICATION LABELS AT EACH END AT ALL POSITIONS WHERE CABLES CHANGE DIRECTION.

IN INSTANCES WHERE CABLES ARE MULTIPLE RUN, LABELS SHALL BE PROVIDED AT 30 M INTERVALS.

LABELS SHALL BE MANUFACTURED FROM METAL DISC ENGRAVED TO SHOW THE SIZE OF THE CABLE, PHASE IF APPLICABLE,

CABLE SCHEDULE DESIGNATION AND THE EQUIPMENT BEING FED.

WHERE MULTICORE CABLES ARE FOR INDICATION PROTECTION AND CONTROL APPLICATIONS EACH CORE SHALL HAVE AN IDENTIFICATION CODE ON ENGRAVED FERRULES OVER THE CABLE PROTECTION CONCRETE OR BRICK TAILS.

THE FERRULES SHALL BE NUMBERED TO CORRESPOND TO A WIRING DIAGRAM APPROVED BY THE ENGINEER.

10. EMERGENCY STAND-BY GENERATOR UNIT.

THE DIESEL ENGINE AND GENERATOR UNITS SHALL BE SOUND PROOF TYPE WITH THE NECESSARY FITTINGS AND ACCESSORIES

ALL INSTALLED IN A TOLL BUILDING, WHICH IS ALSO INCLUDED IN THE SCOPE OF WORKS.

ALL THE WORKS SHALL BE MEASURED ON A EACH BASIS INSTALLATIONS MATERIALS FOR PIPING FOR WATER COOLING, LUBRICATION OIL FUEL SUPPLY, DRAIN AND FOUNDATION FOR MACHINE BAD, WITH ANCHOR BOLTS, NUT AND WASHERS, CONDUITS AND FITTINGS, CABLING AND WIRING OR / AND CONNECTION, GROUNDING MATERIALS AND FACTORY TEST OR FIELD TEST AND COMMISSIONING TEST WITH DATA OR OPERATION AND MAINTENANCE DOCUMENT.

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	
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2012.08.19

PACKAGE	SCALE	DRAWING No.	SHEET No.
3		G-31	
ABBREVIATIONS			

ABBREVIATION

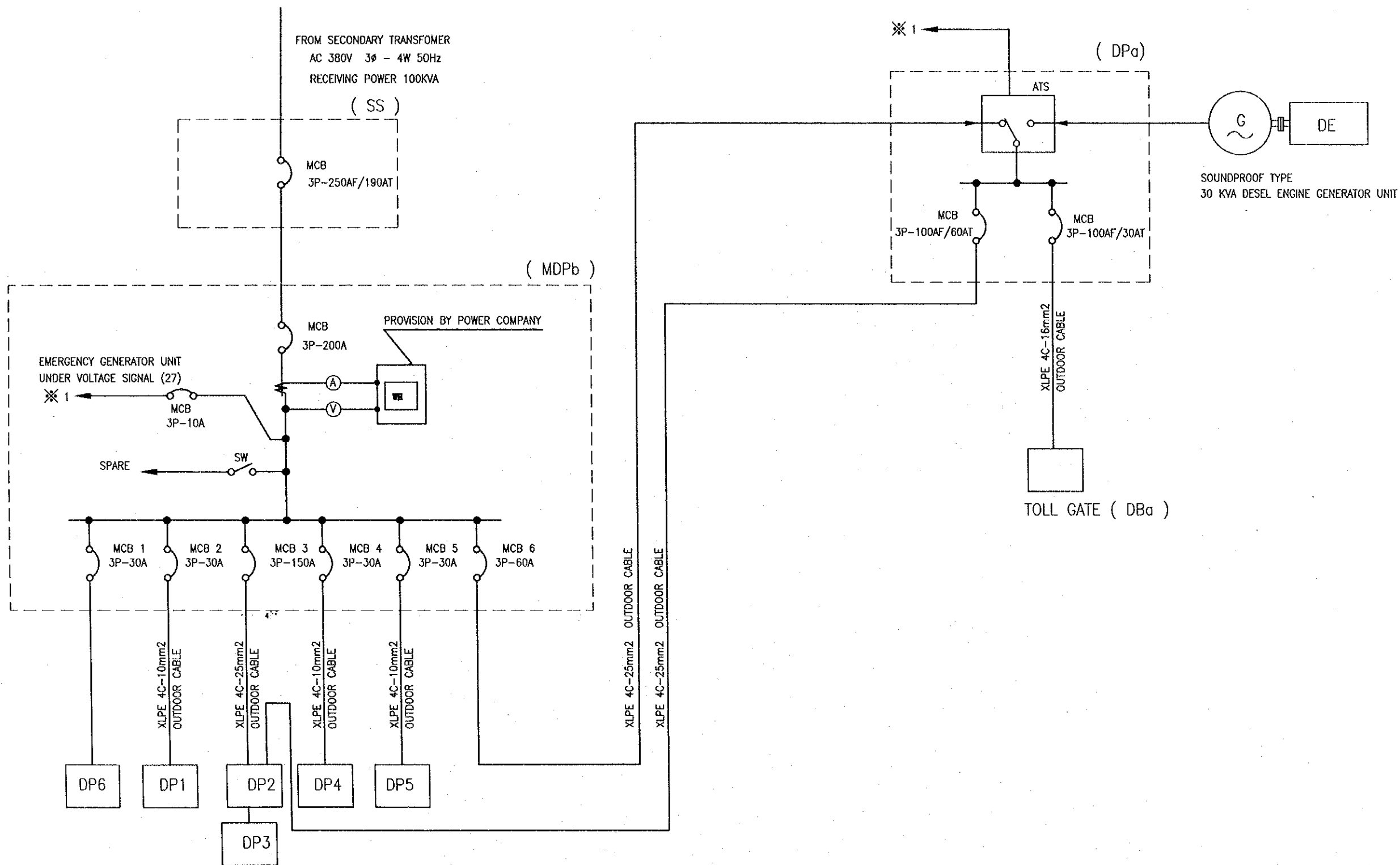
SYMBOL	DISCRIPTION
- TOLL PLAZA LIGHTING	
	HIGHBAY LIGHTING, TYPE-E CEILING SUSPENSION MOUNTED 150 WATTS HIGH PRESSURE SODIUM (HPS-T) LUMINARY
	FLOOD LIGHTING, TYPE-F WALL MOUNTED 150 WATTS HIGH PRESSURE SODIUM (HPS-T) LUMINARY
	OVERHEAD TRAFFIC LIGHT (OTL)
	LIGHTING PANEL - DB ₀ OUT DOOR AND INTO TOLL GATE USED, TWELVE (12) CIRCUITS COMPOSE, SELF STANDING
	CONTROL PANEL - CP INDOOR USED TYPE, WALL MOUNTED
	MANHOLE TYPE - A1
	DUCT BANK TYPE - B FOR TOLL GATE
	PULL BOX TYPE - D , 300x300x150 mm OUTDOOR USED, EXPOSED SURFACE CEILING / WALL MOUNTED TYPE

SYMBOL	DISCRIPTION
	PULL BOX TYPE - E , 200 x 200 x 100 EMBED IN CONCRETE USED TYPE WITHIN FITTINGS
	DOWN AND UP RISE FOR CONDUITS
	PVC CONDUIT DIA 50 mm EMBED INTO CONCRETE FLOOR
	STEEL CONDUIT DIA 25 mm OUTDOOR USED, EXPOSE SURFACE OR EMBED IN CONCRETE CEILING / WALL
	CABLE XLPE TYPE, OUTDOOR USED UNDERGROUND DEPTH 1.5 METER
- LIGHTNING PROTECTION SYSTEM	
	AIR TERMINATION
	TOP OF ROOF CONDUCTOR (BCC) 8mm ²
	UNDERGROUND CONDUCTOR (BCC) 8mm ²
	DOWN CONDUCTOR (BCC) 8mm ²
	ELECTRODE GROUNDING RESISTANCE SHALL BE LESS 5 OHMS

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	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2002.3.17

PACKAGE 3	SCALE	DRAWING No. G-32	SHEET No.
POWER DISTRIBUTION DIAGRAM - 2			

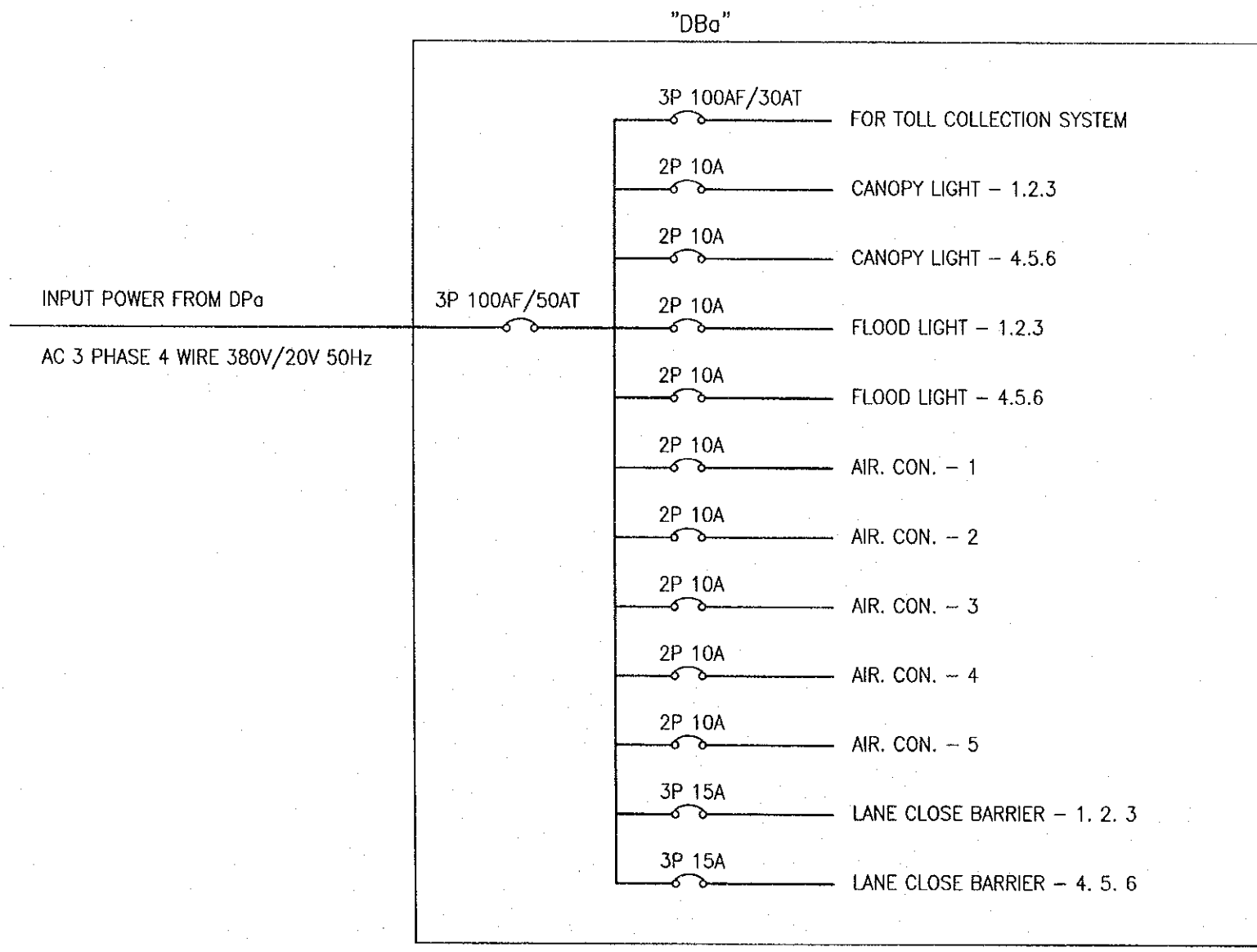
POWER DISTRIBUTION DIAGRAM - 1b



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. WAYARE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.08.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
3		G-33	
POWER DISTRIBUTION DIAGRAM - 2b			

POWER DISTRIBUTION DIAGRAM 2b



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
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE 	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2002.5.14	

PACKAGE 3	SCALE	DRAWING No. G-34	SHEET No.
ABBREVIATIONS AND GENERAL NOTES - 1b			

ABBREVIATIONS AND GENERAL NOTES - 1b (TOLL COLLECTION SYSTEM)

GENERAL NOTES

1. SYSTEM CONFIGURATION

- 1.1 THE TOLL COLLECTION SYSTEM IS COMPRISED TOLL BOOTH AND EQUIPMENT, ASSOCIATED SIGNS, AUTOMATIC VEHICLE POST CLASSIFICATION SYSTEM, ANCILLARY ITEMS, TOLL PROCESSOR SYSTEMS, TOLL SUPERVISORS DESK EQUIPMENT, A DATA PROCESSOR SYSTEM, STATION AND COMMUNICATION SYSTEMS, HEIGHT DETECTORS AND ASSOCIATED SIGNS AND SIGNALS.
- 1.2 ALL TOLL SHALL BE COLLECTED SEMI AUTOMATIC OR MANUAL OPERATION, PAYMENT SHALL BE HANDED TO A COLLECTOR IN BOOTH WHO WILL REGISTER EACH VEHICLE AND PAYMENT.
- 1.3 PAYMENT SHALL BE MADE EITHER BY CASH OR BY PRE-PAID CARDS OR VOUCHER.
- 1.4 ALL TRAFFIC LANES EACH TOLL GATE SHALL BE SINGLE DIRECTION AND BE SERVED BY A TOLL BOOTH ON THE DRIVER'S SIDE OF THE VEHICLE.

2. SYSTEM FUNCTION OUTLINES

- 2.1 THIS TOLL COLLECTION SYSTEM IS AN OPEN SYSTEM (ENTRY PAYMENT SYSTEM) IN WHICH THE TOLL FARE FOR A VEHICLE SOLELY DEPENDS ON THE VEHICLE CLASS.
- 2.2 EACH TOLL GATE WILL BE LOCATED AT THE ENTRY / EXIT GATES OF THE PROJECT.
- 2.3 THE PATRON SHOULD STOP AND PAY AT THE ENTRY AND / OR EXIT GATES OF TOLL BOOTHS. AFTER PAID THE TOLL FEE, LANE OPEN BY KEYBOARD AND AUTOMATICALLY FUNCTION AND PATRON IS FREE ENTER OR EXIT INTO THE TOLL WAY OR ARTERIAL.
- 2.4 METHOD OF TOLL PAYMENT SYSTEMS WILL BE AS FOLLOW:
 - CASH
 - PRE-PAID CARDS OR VOUCHERS
 - NON-REVENUE
 - REGISTRATION TAG OF AUTO TOLL COLLECTION SYSTEM FOR FUTURE EXTENSION
- 2.5 THE TOLL COLLECTOR OPERATOR SHOULD VISUALLY ASSESS THE CLASS OF EACH VEHICLE AND PRESS THE VEHICLE CLASS KEY ON THE TOLL COLLECTOR'S TERMINAL (TCT). THE TOLL FARE WILL BE AUTOMATICALLY DISPLAYED ON THE TCT FOR THE TOLL COLLECTOR.
- 2.6 THE TOLL COLLECTOR WILL INQUIRE THE METHOD OF PAYMENT TO THE PATRON AND PRESS THE METHOD OF PAYMENT KEY ON THE TCT. IN CASE OF A CASH PAYMENT, A RECEIPT WILL BE ATOMATICALLY PRINTED OUT FORM THE LANE PRINTER (LPR).
- 2.7 AS THE VEHICLES THE LANE, IT WILL BE DETECTED BY THE LOOP COIL DETECTOR (LVD). THE LVD BEFORE THE TRANSACTION IS PROPERLY COMPLETED.
- 2.8 AT TERMINATION OF THE SHIFT, THE END OF REPORT WILL BE AUTOMATICALLY PRINTED OUT INSIDE OF THE LANE PRINTER IN THE BOOTH. THE REPORT WILL BE TAKEN OUT FROM THE LANE PRINTER ONLY BY MEANS OF USING THE SUPERVISOR'S KEY.
- 2.9 A DAILY REPORT OF EACH LANE WILL BE AUTOMATICALLY PRINTED OUT INSIDE OF THE LANE PRINTER AT THE END THE EVERY OPERATED DAY. THE REPORT WILL BE TAKEN OUT FROM THE LANE PRINTER ONLY BY MEANS OF USING THE SUPERVISOR'S KEY.
- 2.10 THE TOLL COLLECTOR'S TERMINAL (TCT) WILL BE PLANED WITH THE INTERFACE WITH WHICH THE DATA OF THE END SHIFT CAN BE AUTOMATICALLY TRANSMITTED TO THE CENTRAL COMPUTER SYSTEM TO BE EQUIPPED TO THE FUTURE.
- 2.11 A STATION PROCESSOR AND CENTRAL PRINTER WILL BE DESIGNED IN THE CENTRAL BOOTH.
- 2.12 THE VEHICLE CLASS UNIT BY THE COLLECTOR AND LANE ACTIVITIES WILL BE INDICATED AND WARNED ON THE VEHICLE CLASS AND LANE MONITOR TO BE LOCATED INSIDE THE SUPERVISION BOOTH IN THE ENTRY GATE OR EXIT GATE SYSTEMS.

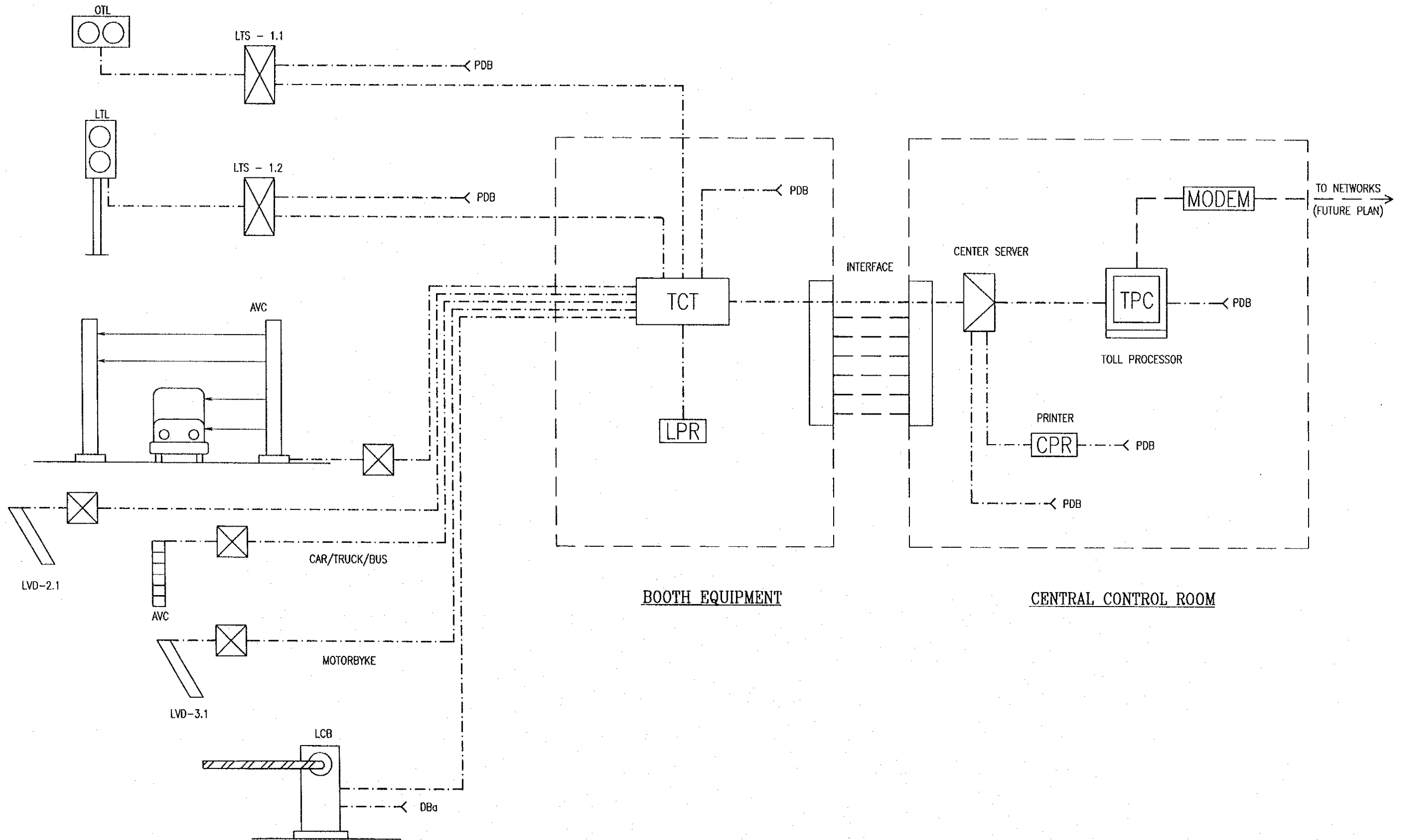
ABBREVIATION

SYMBOL	DISCRPTION
	TOLL COLLECTOR'S TERMINAL
	LANE PRINTER'S
	LANE TERMINAL AND SWITCH BOXES
	OVERHEAD TRAFFIC LIGHT
	LANE TRAFFIC LIGHT
	VIOLATION ALARM
	FIRST SLOT LOOP COIL VEHICLE DETECTOR
	SECOND SLOT LOOP COIL VEHICLE DETECTOR
	AUTOMATIC VEHICLE CLASSIFICATION SYSTEM
	LANE CLOSED BARRIER
	UNINTERRUPTIBLE POWER SUPPLY SYSTEM
	POWER DISTRIBUTION BOARD
	BOOTH COMMUNICATION SYSTEM
	CAR CALL SYSTEM
	TOLL PROCESSOR
	CENTRAL SAVER UNIT
	MODULATION AND DEMODULATION
	REAL TIME MONITORING CONSOLE WORK STATION
	CENTRAL PRINTER
	CLOSED CIRCUIT TELEVISION
	CAMERA UNIT
	CCTV MONITOR UNIT
	VIDEO UNIT
	TOLL BOOTH'S
	AUTOMATIC VEHICLE CLASSIFICATION SYSTEM (AVC)
	LANE TRAFFIC LIGHT (LTL)
	LANE CLOSED BARRIER (LCB)
	UNINTERRUPTIBLE POWER SUPPLY SYSTEM (UPS)
	POWER DISTRIBUTION BOARD (PDB)
	CCTV CAMERA (CAM)
	SPEAKER
	WARNING LIGHT
	LTS (n) LANE TERMINAL AND SWITCH BOX

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JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	DATE 2000.3.14
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 3	SCALE	DRAWING No. G-35	SHEET No.
TOLL COLLECTION SYSTEM DIAGRAM - 1a			

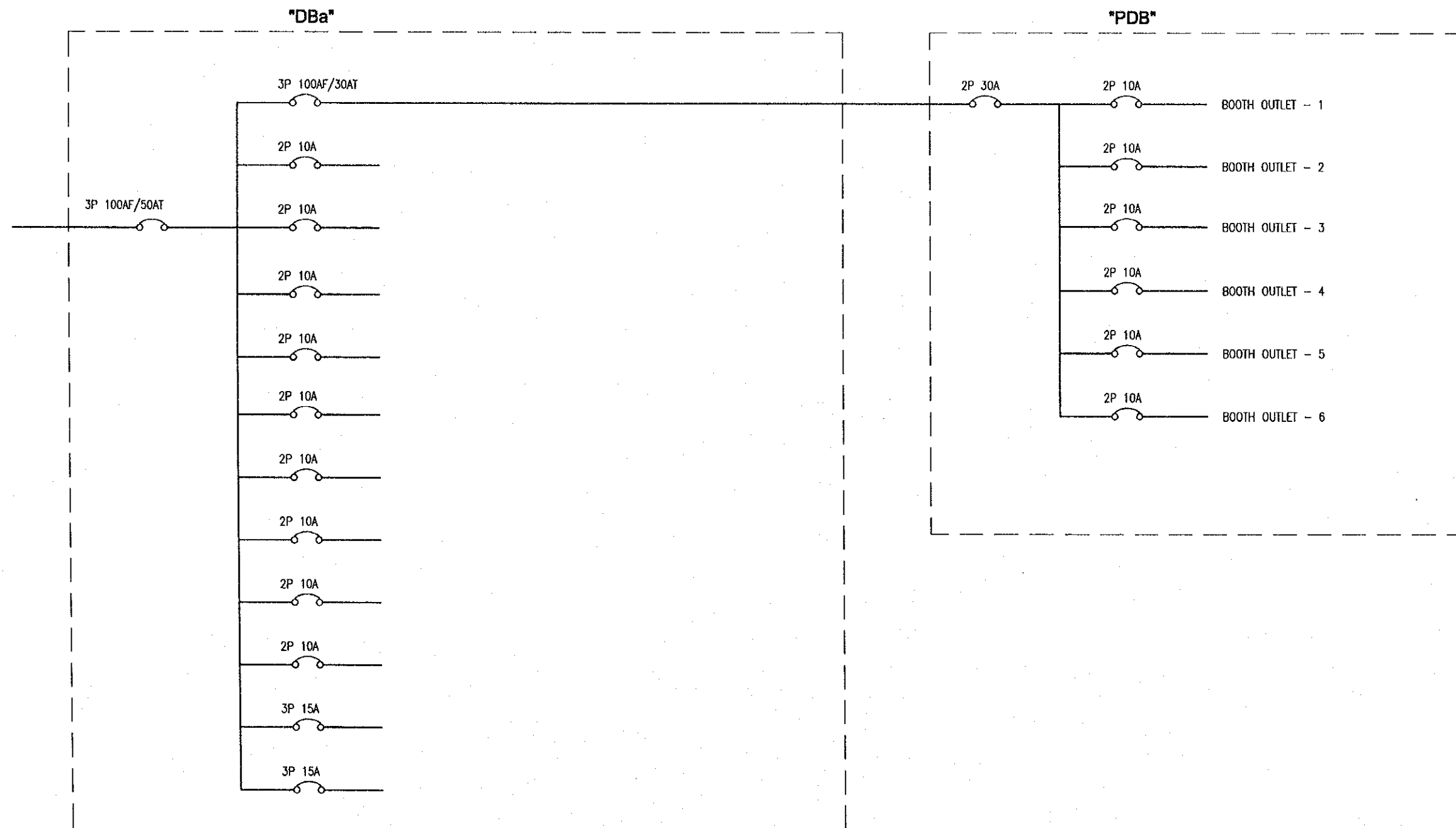
TOLL COLLECTION SYSTEM DIAGRAM - 1a



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 (HUANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000. 08. 17

PACKAGE	SCALE	DRAWING No.	SHEET No.
3		G-36	
POWER DISTRIBUTION DIAGRAM - 1a			

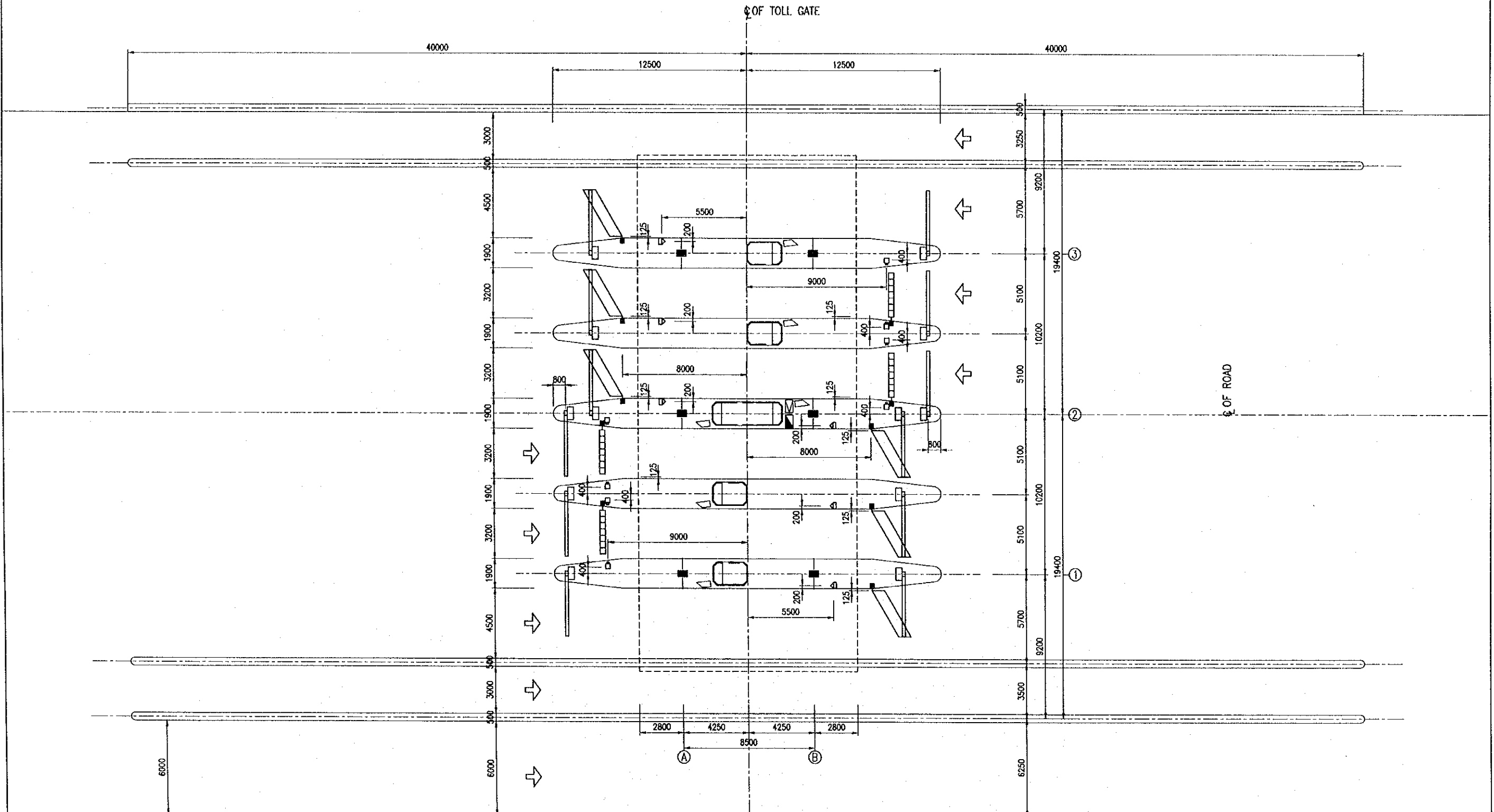
POWER DISTRIBUTION DIAGRAM - 1a



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 <i>[Signature]</i>	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.01.17	

PACKAGE 3	SCALE 1/250	DRAWING No. G-38	SHEET No.
TOLL EQUIPMENT LAYOUT - 3a			

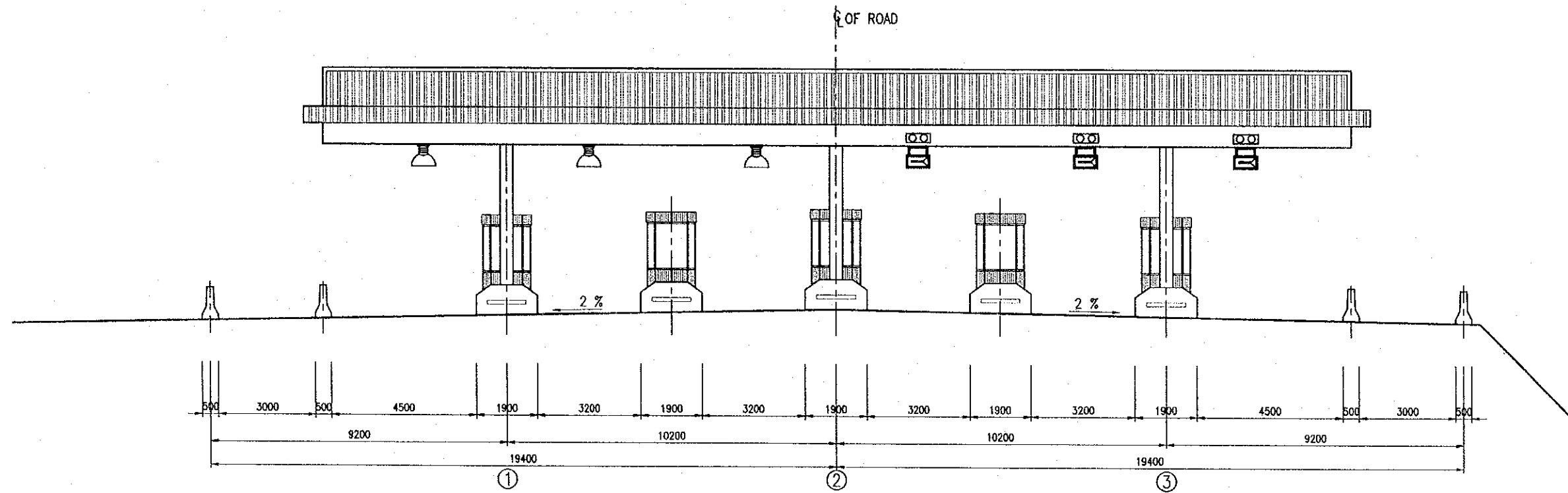
TOLL EQUIPMENT LAYOUT -3a



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 2000.05.14	

PACKAGE 3	SCALE 1/150	DRAWING No. G-39	SHEET No.
TOLL GATE SECTION PROFILE - 2			

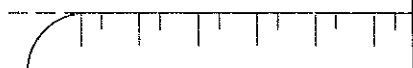
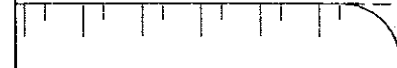
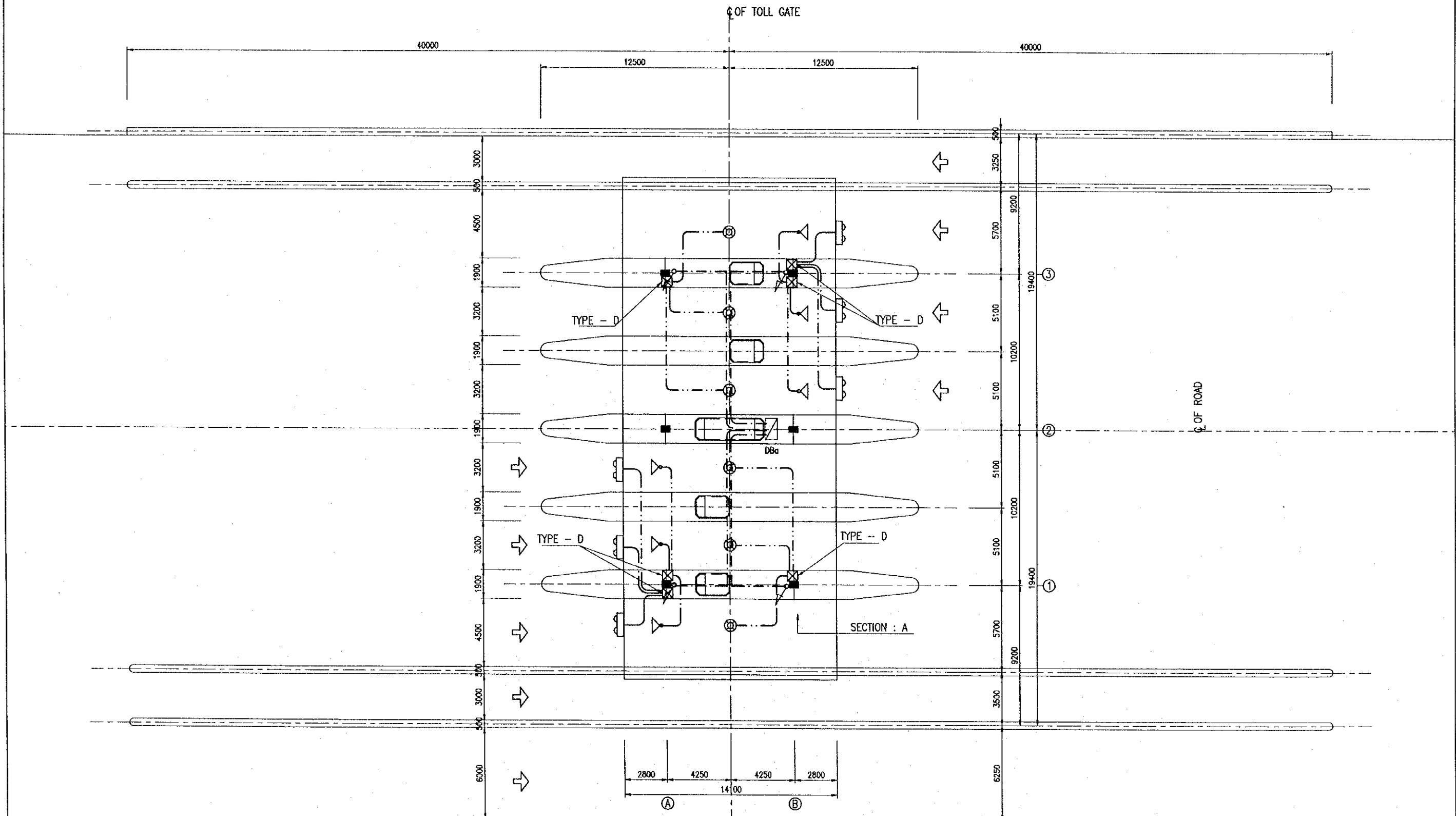
TOLL GATE SECTION PROFILE



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 (NHANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000. 3. 14	

PACKAGE 3	SCALE 1/250	DRAWING No. G-40	SHEET No.
LIGHTING LAYOUT -- 2			

TOLL CANOPY AND OVERHEAD TRAFFIC LIGHTING LAYOUT

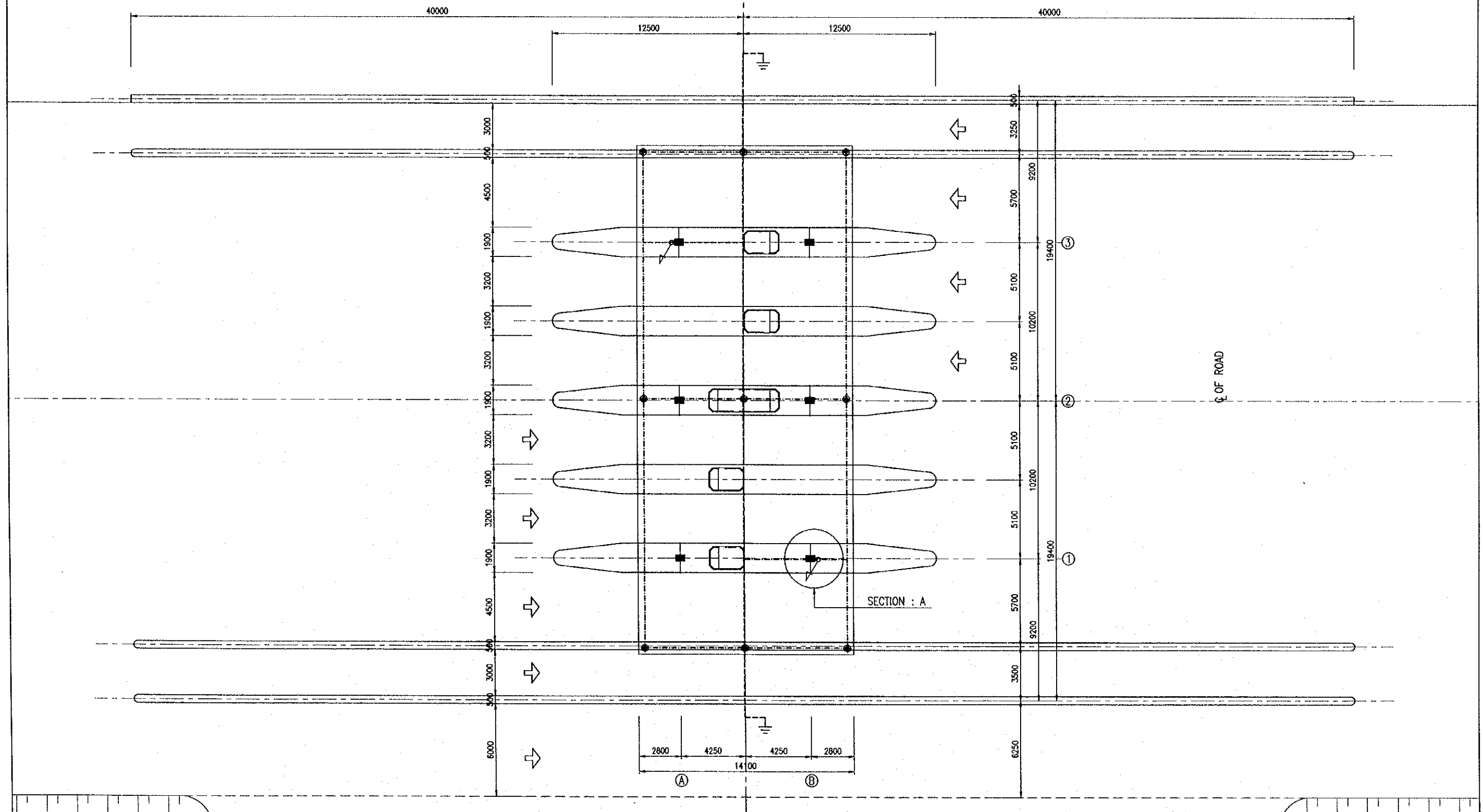


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000. 05. 14	

PACKAGE 3	SCALE 1/250	DRAWING No. G-41	SHEET No.
LIGHTNING PROTECTION SYSTEM - 4			

AIR TERMINATION LAYOUT

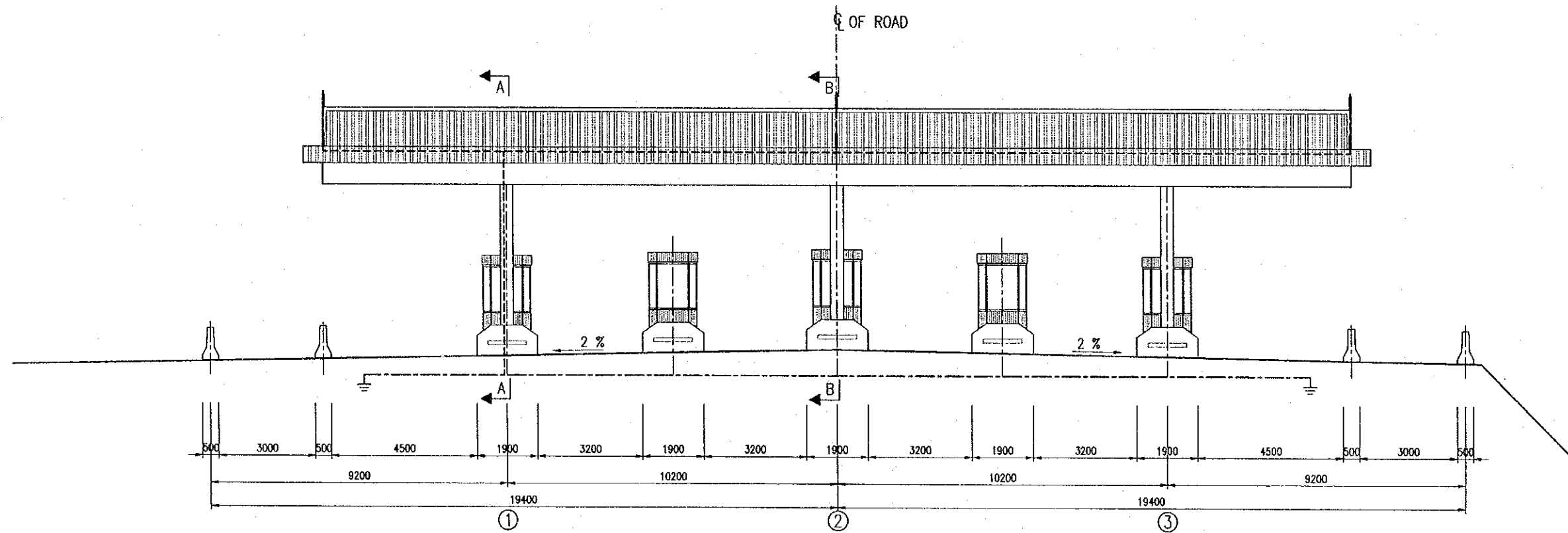
Q OF TOLL GATE



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 3	SCALE 1/150	DRAWING No. G-42	SHEET No.
LIGHTNING PROTECTION SYSTEM - 5			

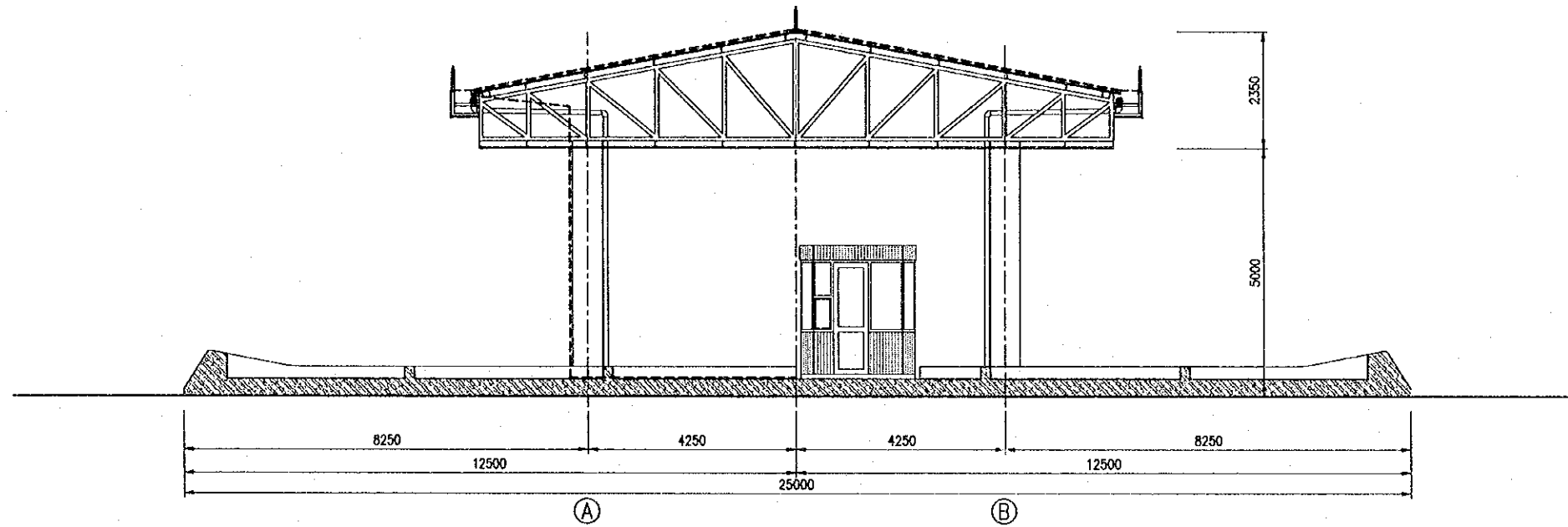
LIGHTNING PROTECTION SYSTEM - 5



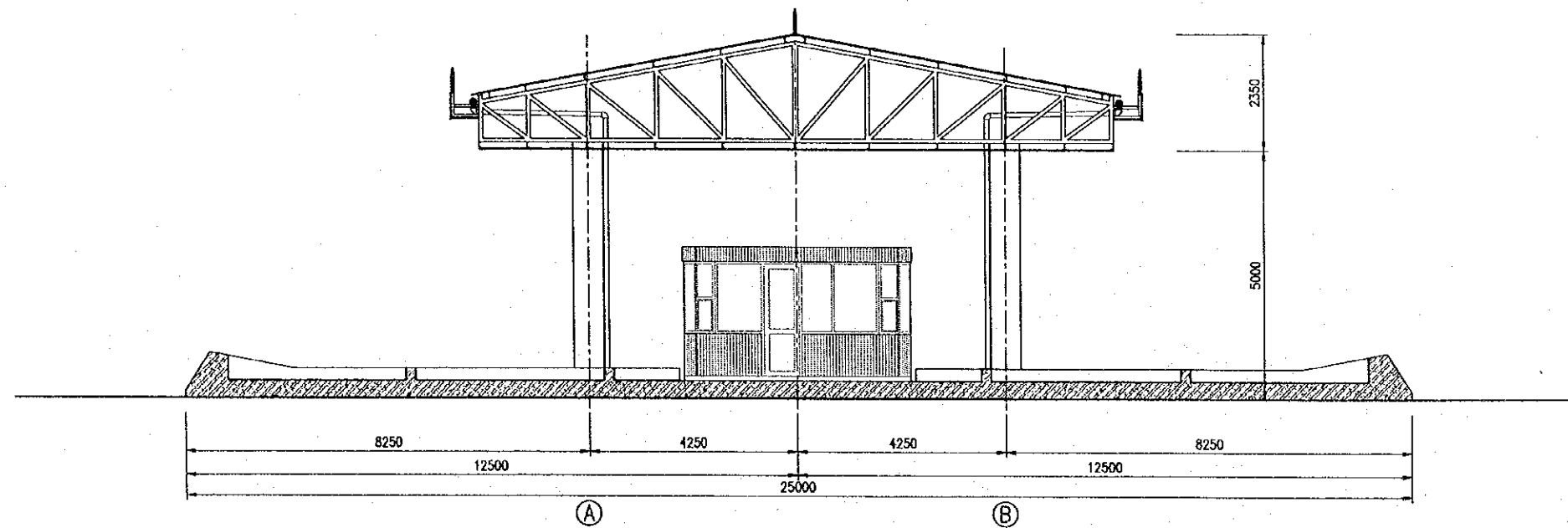
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY NAME S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		SIGNATURE <i>[Signature]</i>
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	DATE 2000. 5. 14	
COMPANY PACIFIC CONSULTANTS INTERNATIONAL		

PACKAGE 3	SCALE 1/125	DRAWING No. G-43	SHEET No.
LIGHTNING PROTECTION SYSTEM - 6			

SECTION A-A



SECTION B-B

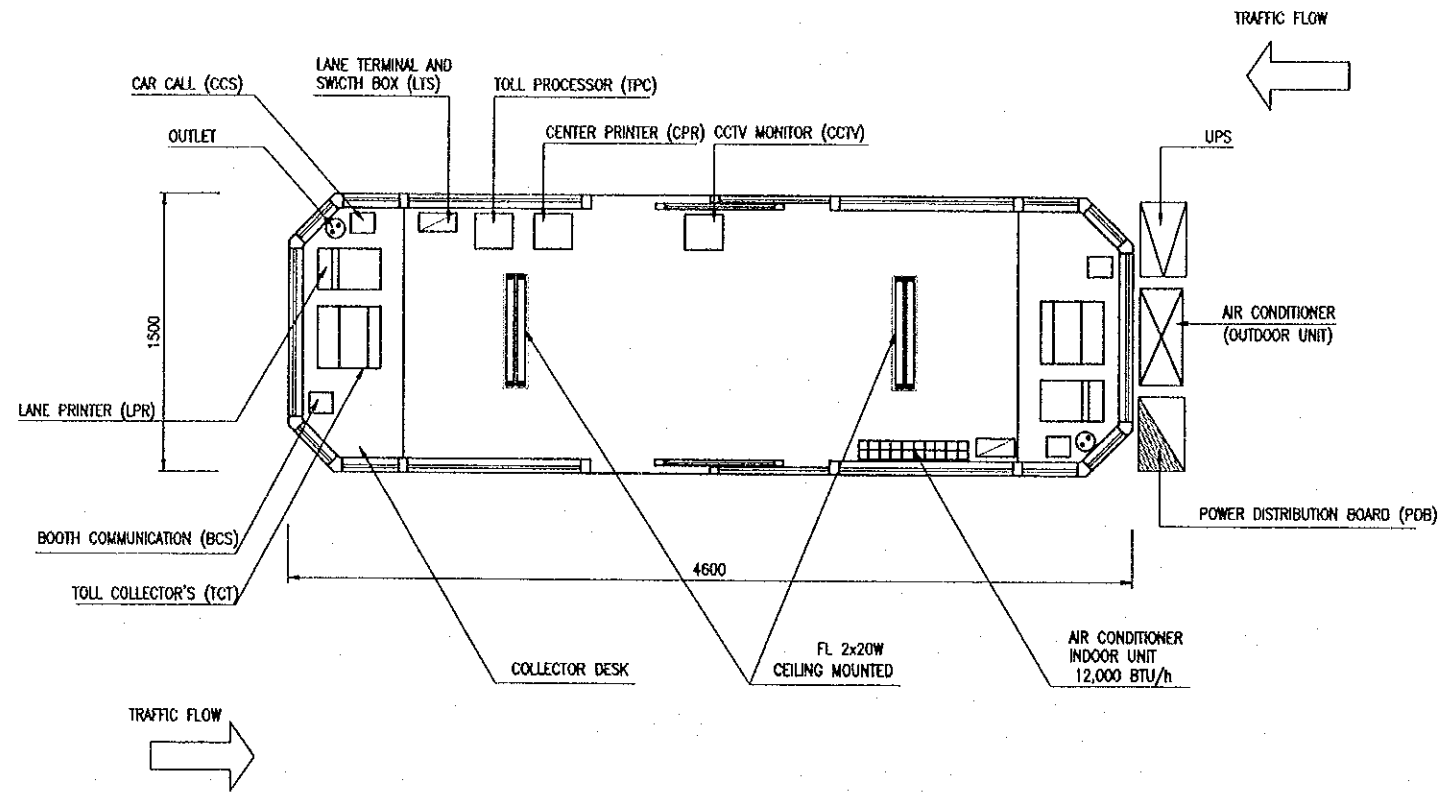


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
ORGANIZATION PACIFIC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

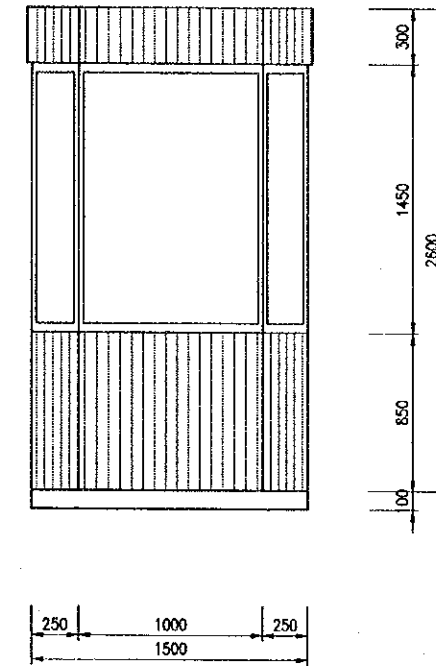
PACKAGE 3	SCALE 1/40	DRAWING No. G-44	SHEET No.
TOLL BOOTH EQUIPMENT LAYOUT - 3			

TOLL BOOTH EQUIPMENT LAYOUT - 3

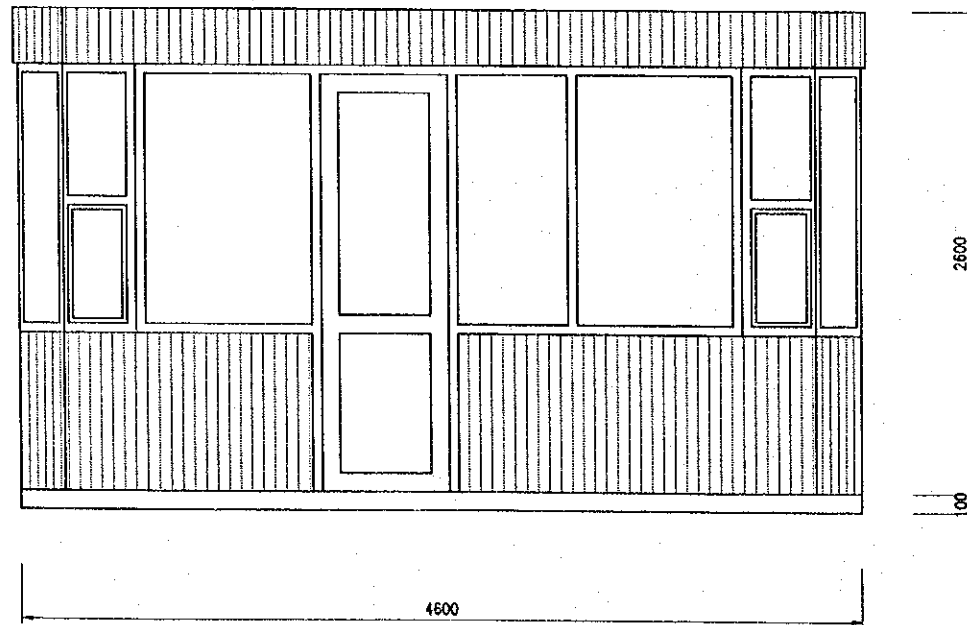
LAYOUT - TYPE B



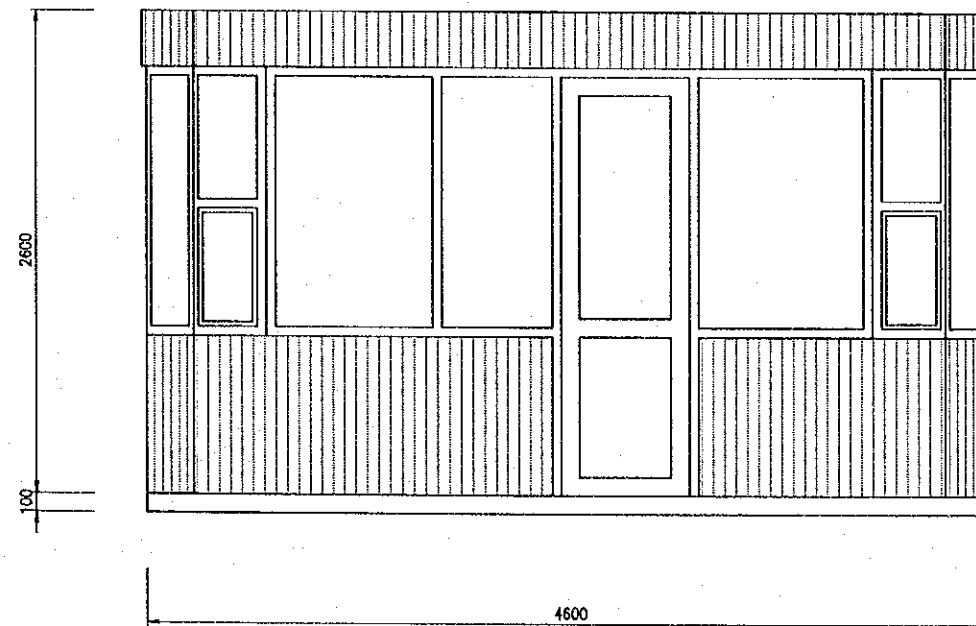
FRONT ELEVATION - TYPE B



RIGHT SIDE ELEVATION - TYPE B



LEFT SIDE ELEVATION - TYPE B

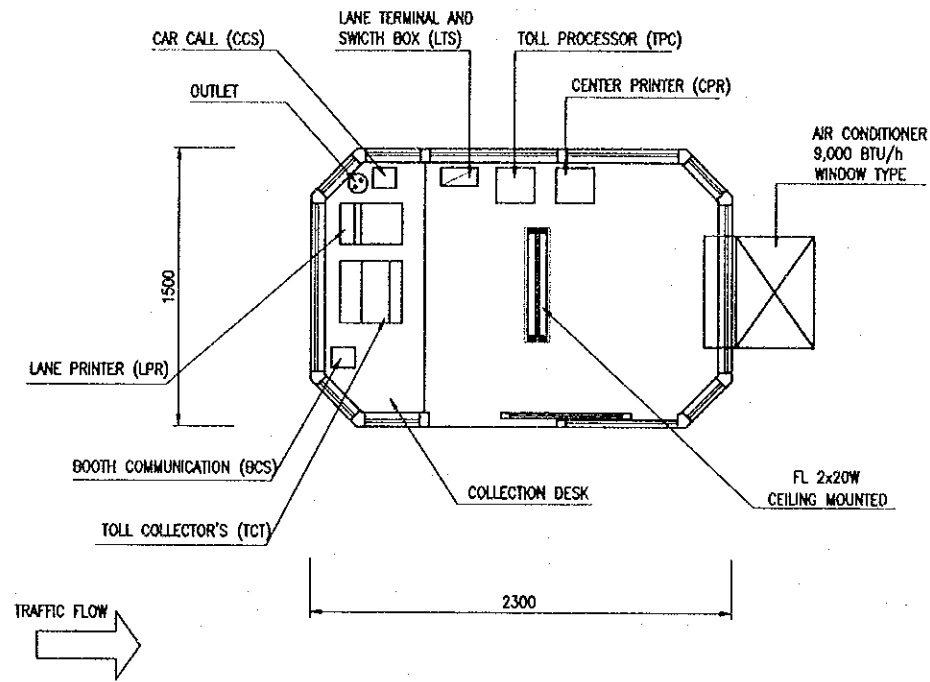


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2002.01.17	

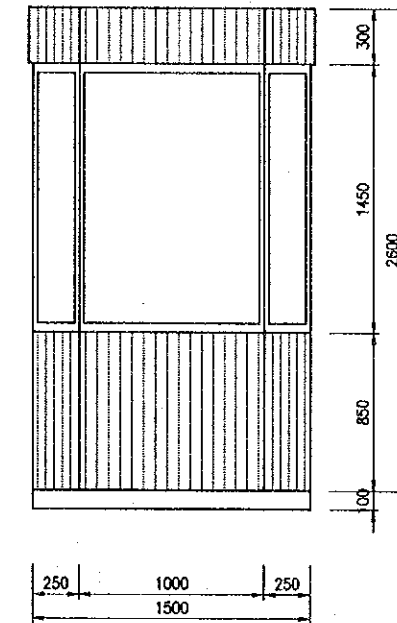
PACKAGE 3	SCALE 1/40	DRAWING No. G-45	SHEET No.
TOLL BOOTH EQUIPMENT LAYOUT - 4			

TOLL BOOTH EQUIPMENT LAYOUT - 4

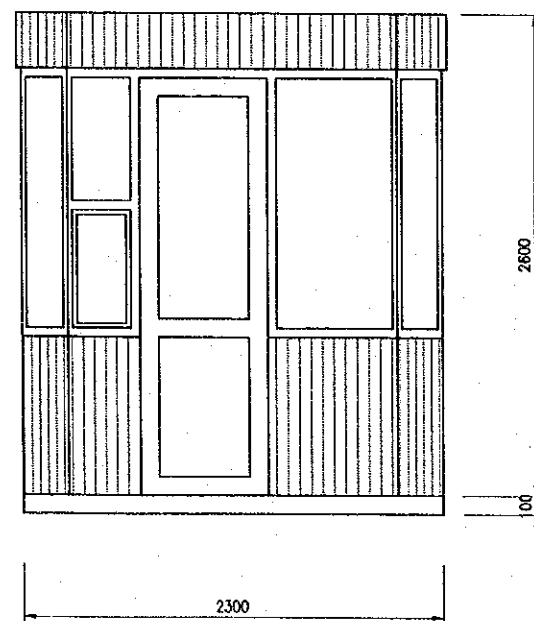
PLAN - TYPE A



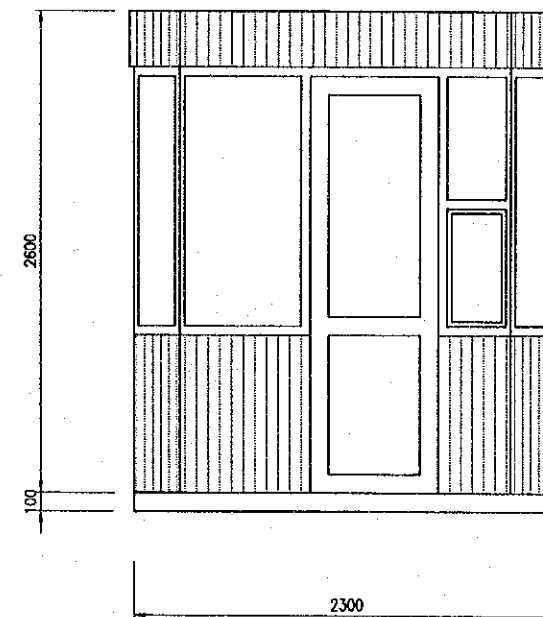
FRONT ELEVATION - TYPE A



RIGHT SIDE ELEVATION - TYPE A



LEFT SIDE ELEVATION - TYPE A

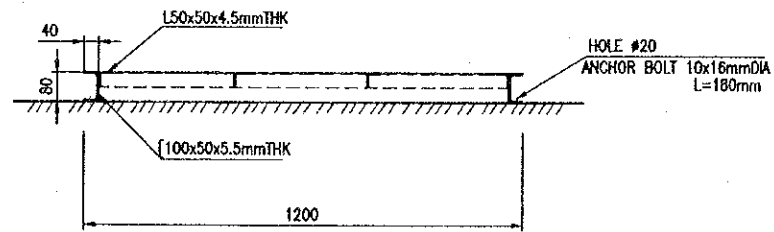


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANH LOANG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.03.14

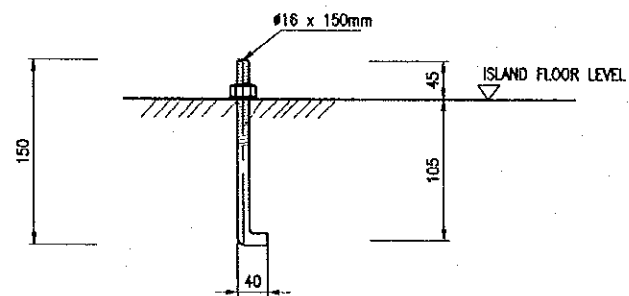
PACKAGE 3	SCALE 1/20	DRAWING No. G-46	SHEET No.
TOLL BOOTH DETAILS - 2			

TOLL BOOTH DETAILS

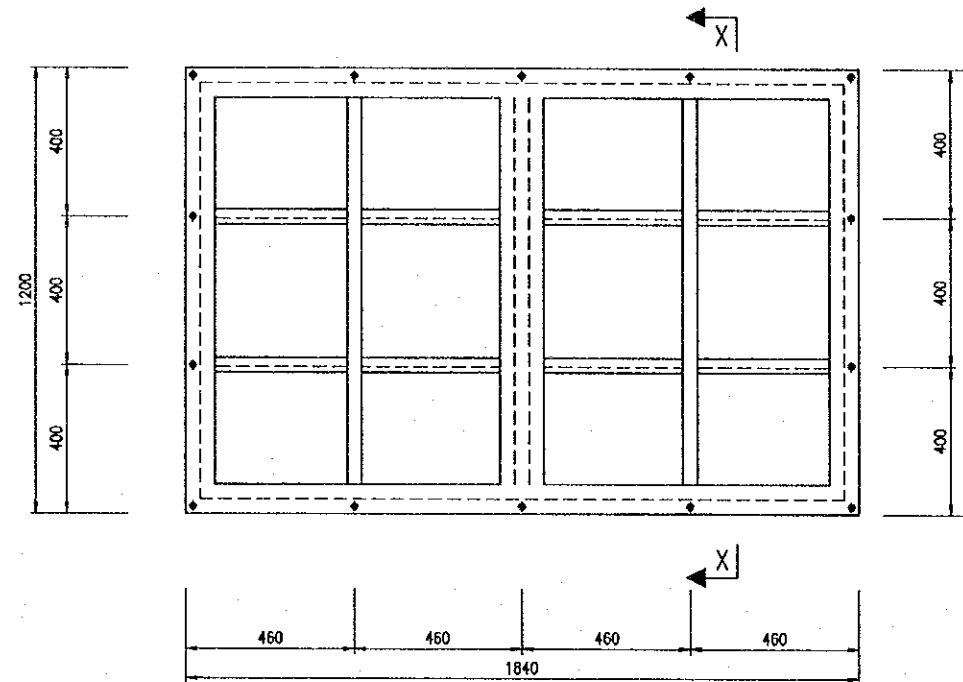
SECTION DETAIL X-X



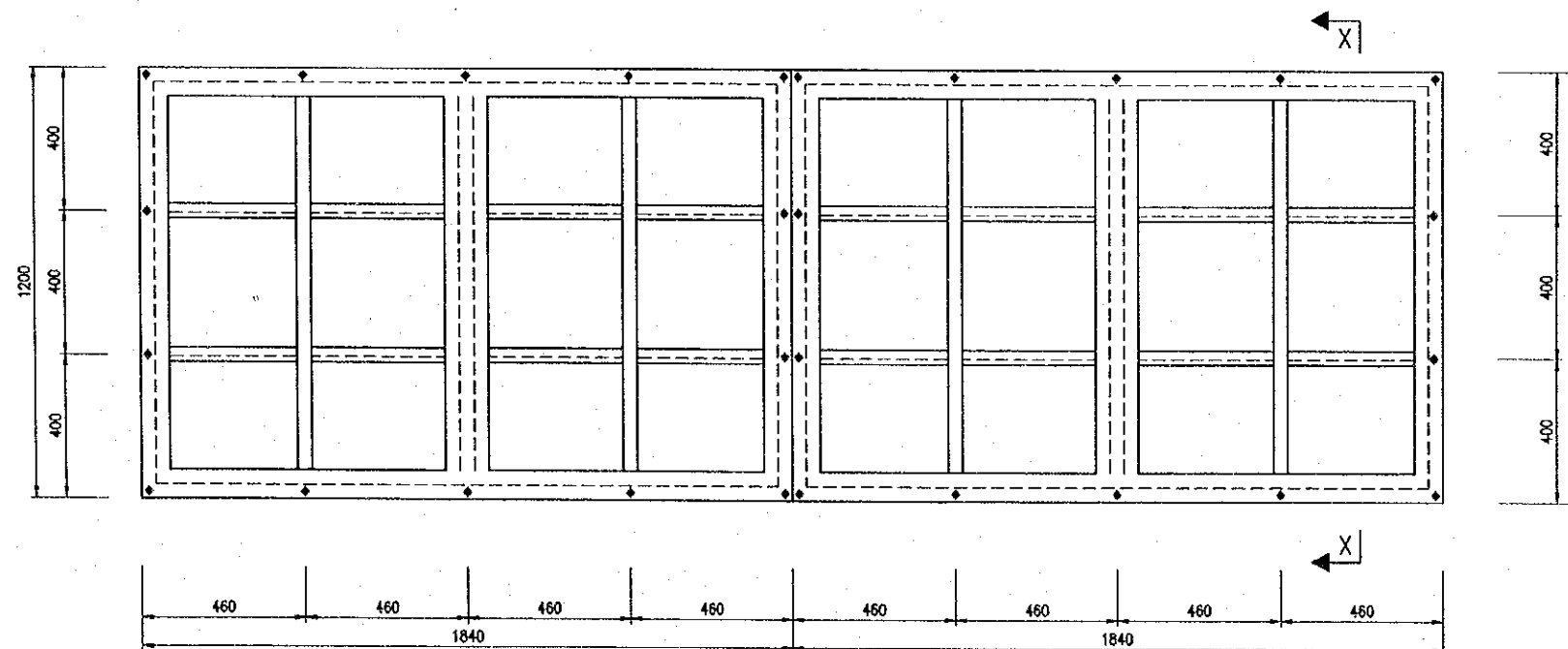
ANCHOR BOLT



BOOTH TYPE-A
MOUND BASE DETAIL



BOOTH TYPE-B
MOUND BASE DETAILS

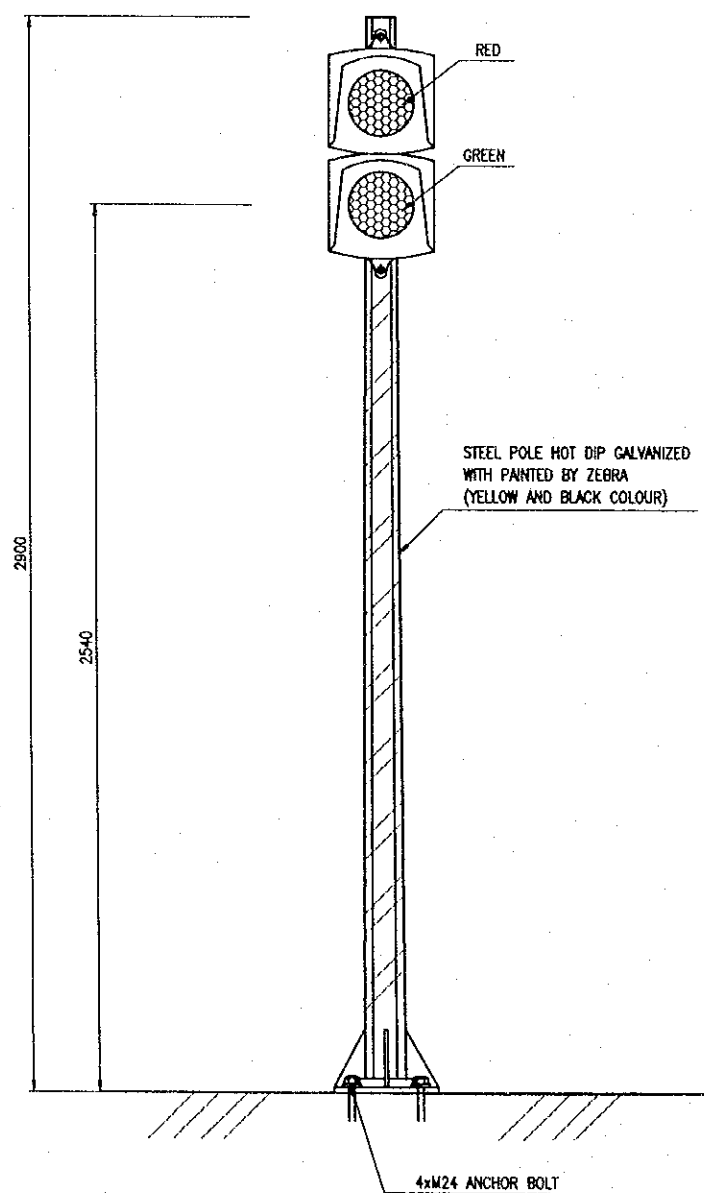


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	S. NATAKE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. NATAKE
PROJECT	RED RIVER BRIDGE (THANH TRU BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT	PACKIC CONSULTANTS INTERNATIONAL	DATE	2000.11.14

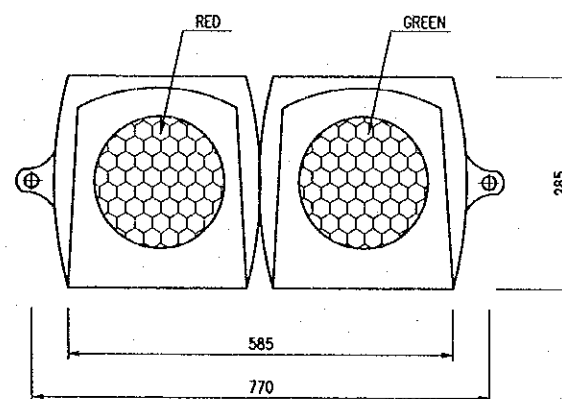
PACKAGE	SCALE	DRAWING No.	SHEET No.
3	AS SHOWN	G-47	
LIGHT DETAILS - 2			

LIGHT DETAILS

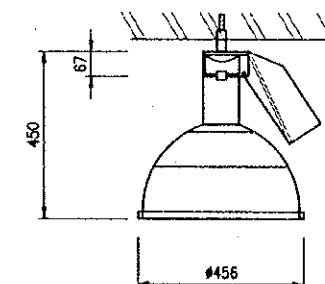
LANE TRAFFIC LIGHT TYPE - A
(WITHOUT CONCRETE FOUNDATION)
SCALE : 1/20



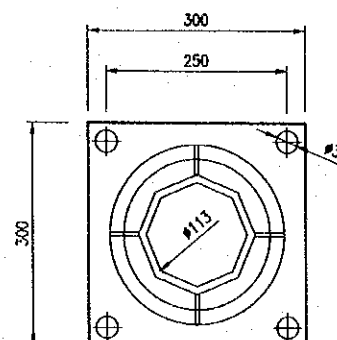
OVERHEAD TRAFFIC LIGHT TYPE - A
SCALE : 1/10



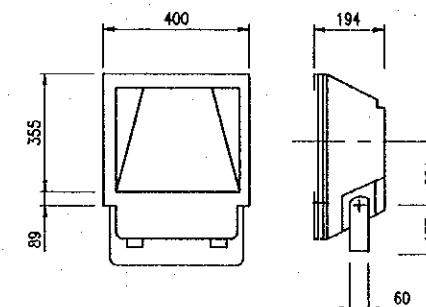
HIGH BAY LIGHT TYPE - E
SCALE : 1/20



POLE BASE PLATE DETAILS
SCALE : 1/10



FLOOD LIGHT TYPE - F
SCALE : 1/20

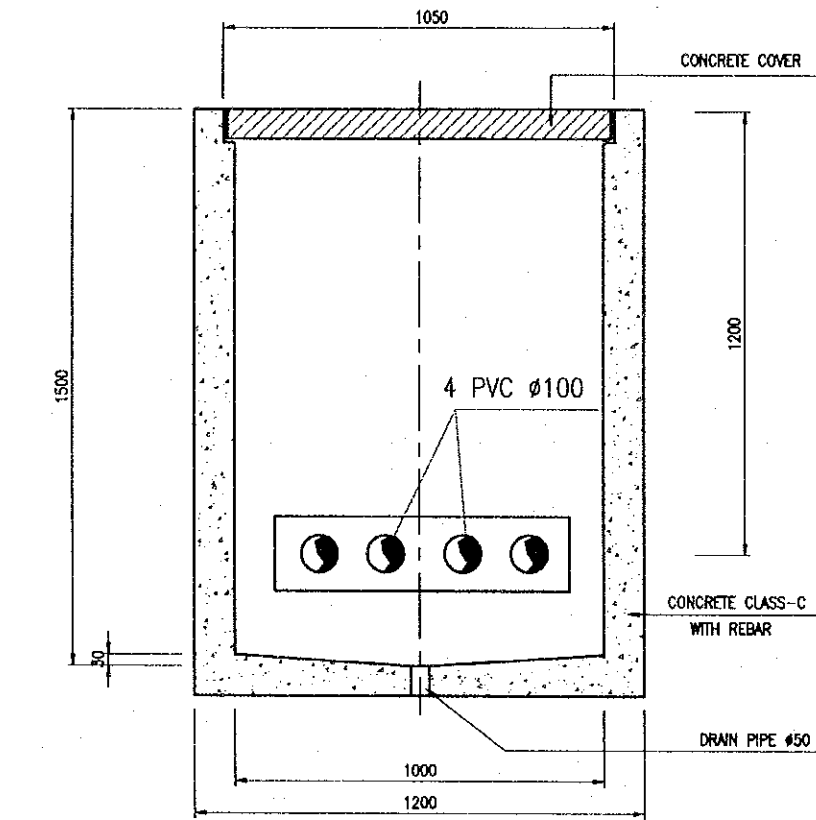


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. NATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS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

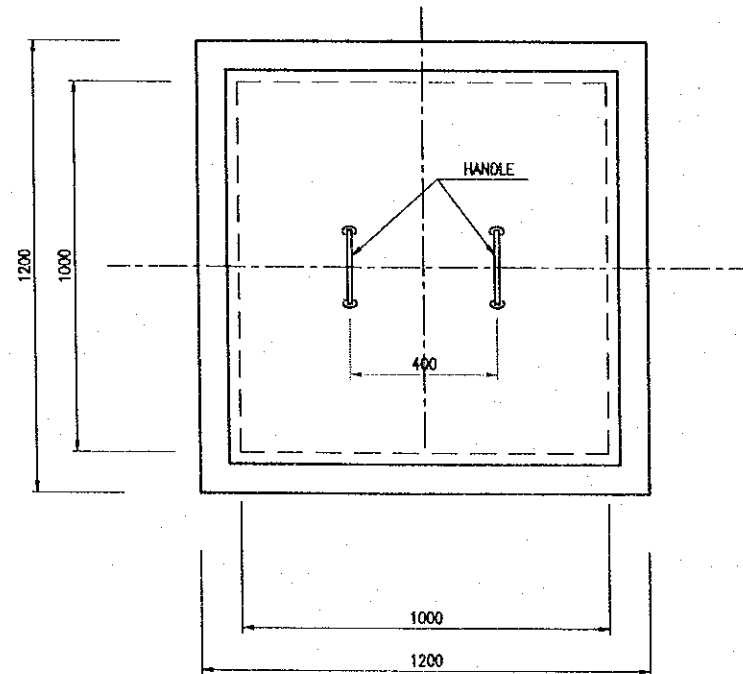
INSTALLATION DETAILS - 3

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/20	G-48	
INSTALLATION DETAILS - 3			

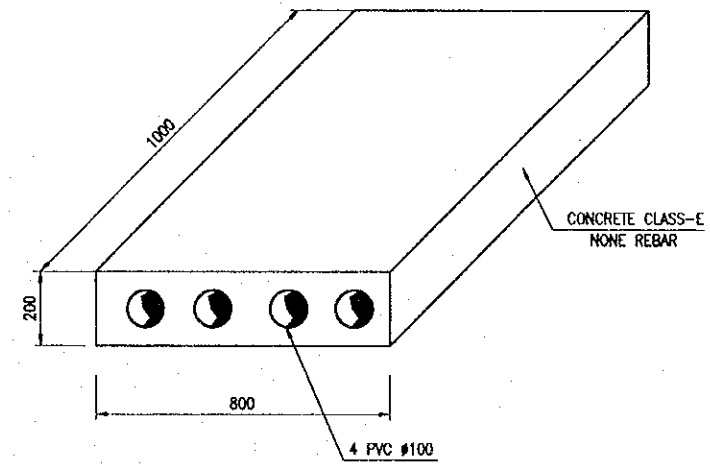
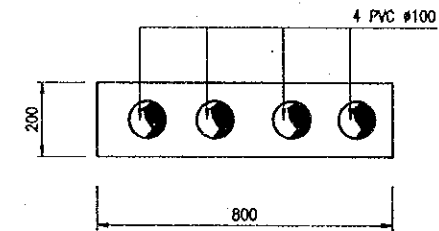
MANHOLE FOR TOLL GATE
SECTION



PLAN



DUCT BANK DETAIL FOR TOLL GATE
TYPE - B



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
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000. V. 17

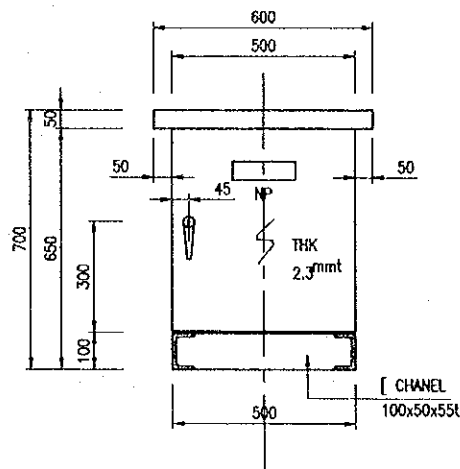
PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/20	G-49	
INSTALLATION DETAILS - 4			

INSTALLATION DETAILS - 4

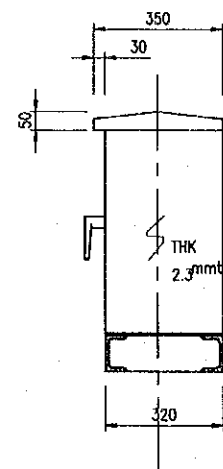
PANEL DETAIL

PANEL DBa

FRONT VIEW

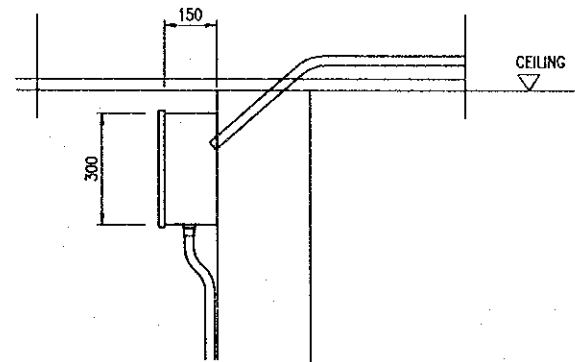


SIDE VIEW



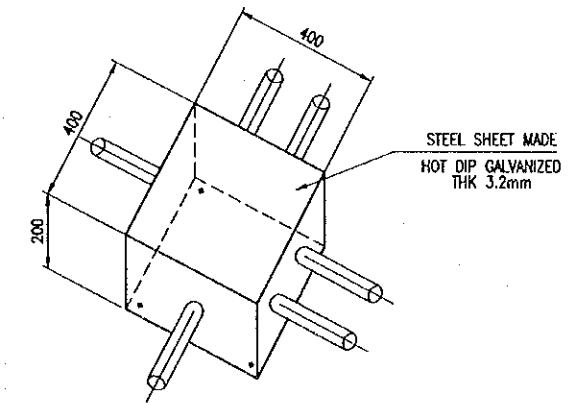
PULL BOX TYPE- D

OUTDOOR USED, EXPOSED MOUNTED IN CANOPY CEILING SECTION AND CONNECTED EXPOSED PVC CONDUIT TO DOWN FLOOR IN ISLANDS



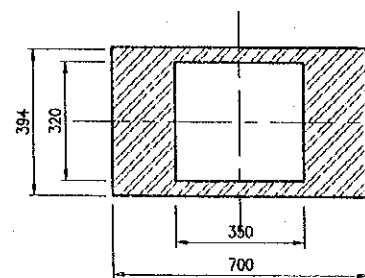
PULL BOX TYPE- E

EMBED IN CONCRETE SLAB OF CANOPY CEILING SECTION OUTDOOR USED TYPE

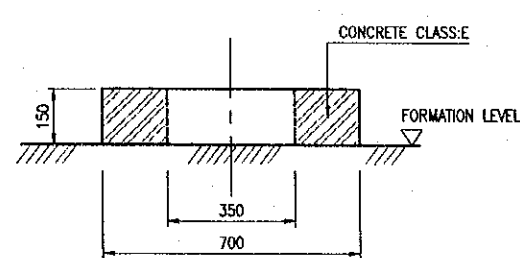


FOUNDATION

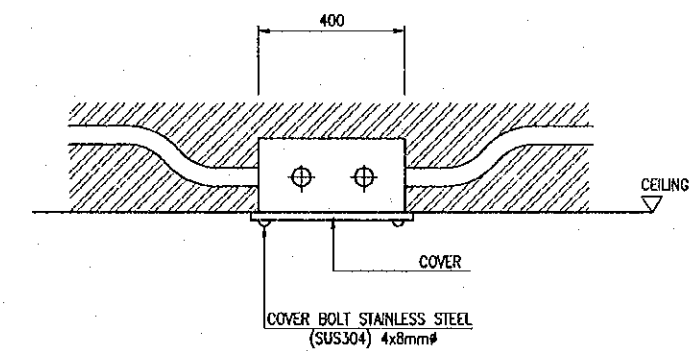
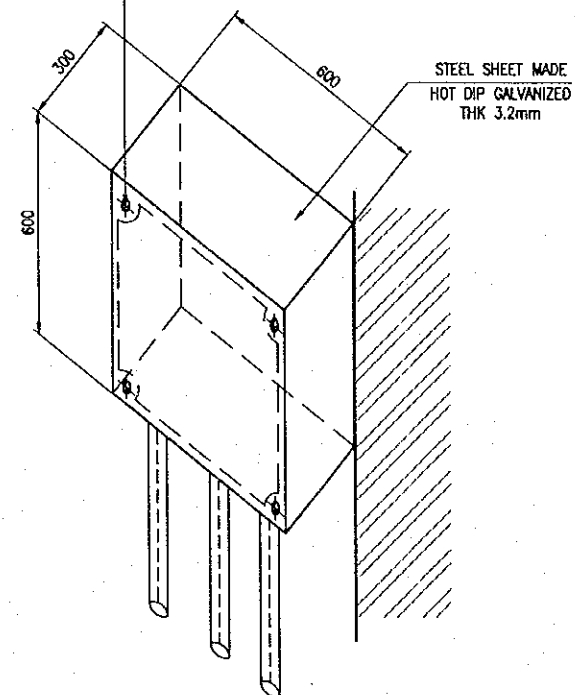
PLAN



SECTION

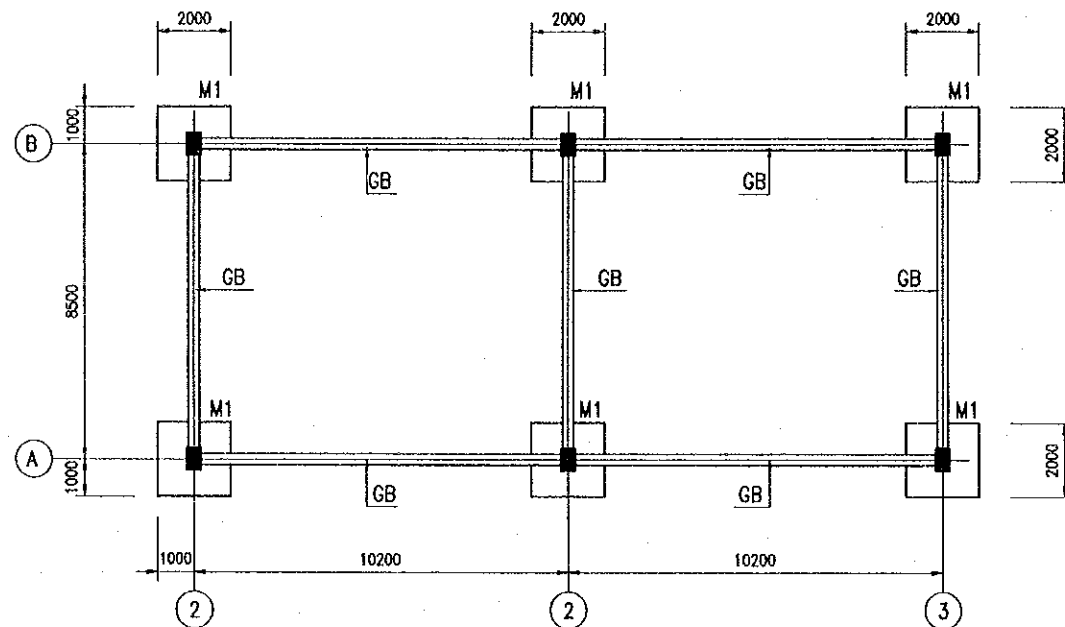


COVER BOLT STAINLESS STEEL (SUS304) 4x8mm#



THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. KATASE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRU BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.0.14

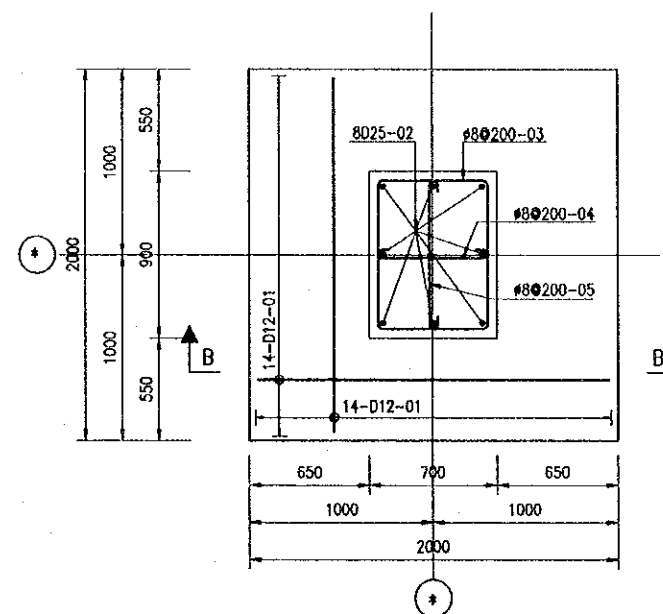
PACKAGE	SCALE	DRAWING No.	SHEET No.
3	AS SHOWN	G-50	
FOUNDATION PLAN - 1			



PLAN
SCALE 1:200

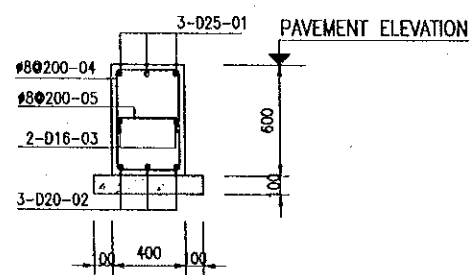
REBAR ARRANGEMENT FOR FOUNDATION M1

SCALE 1:40



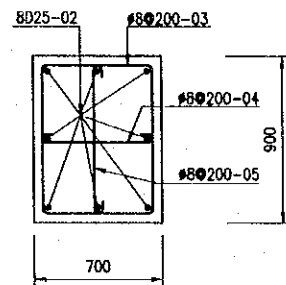
REBAR FOR TIE BEAM GB

SCALE 1:40



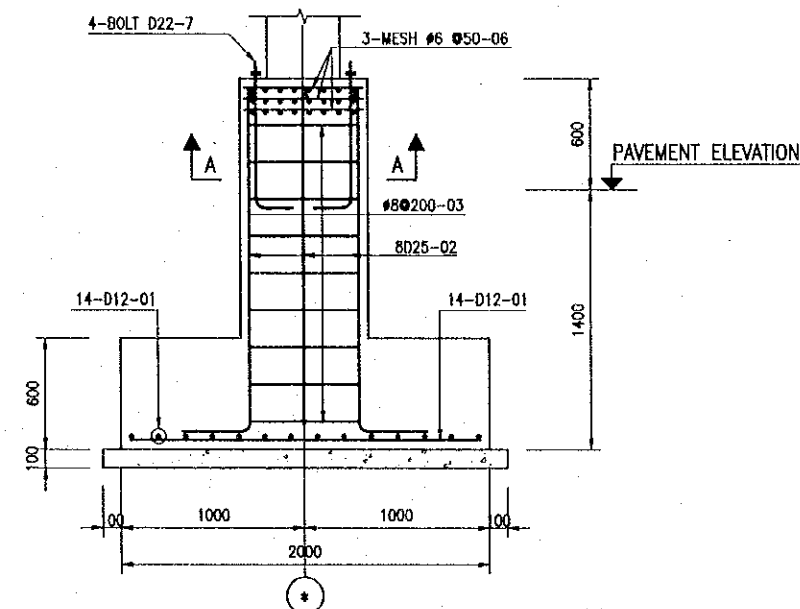
SECTION A-A

SCALE 1:40



SECTION A-A

SCALE 1:40



MATERIAL LIST FOR COLUMN AND FOUNDATION

ITEM	CONCRETE (m3)	HIGH STRENGTH STEEL (kg)	MILD STEEL (kg)	FORMWORK (m2)
FOUNDATION	19.69	792.79	139.85	58.46
COULUMN			7065.00	
TIE BEAM	15.10	900.61	168.51	79.25
SUB TOTAL	34.79	1693.40	7373.36	137.71

H. EMPLOYERS AND ENGINEERS SITE OFFICE

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANG 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	2000.8.17

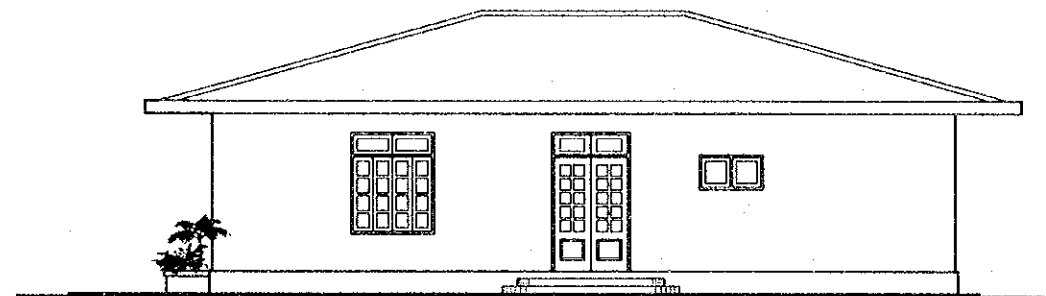
PACKAGE	SCALE	DRAWING No.	SHEET No.
3	AS SHOWN	H-01	
EMPLOYERS AND ENGINEERS SITE OFFICE (WITH ACCOMMODATION)			

TYPE-1

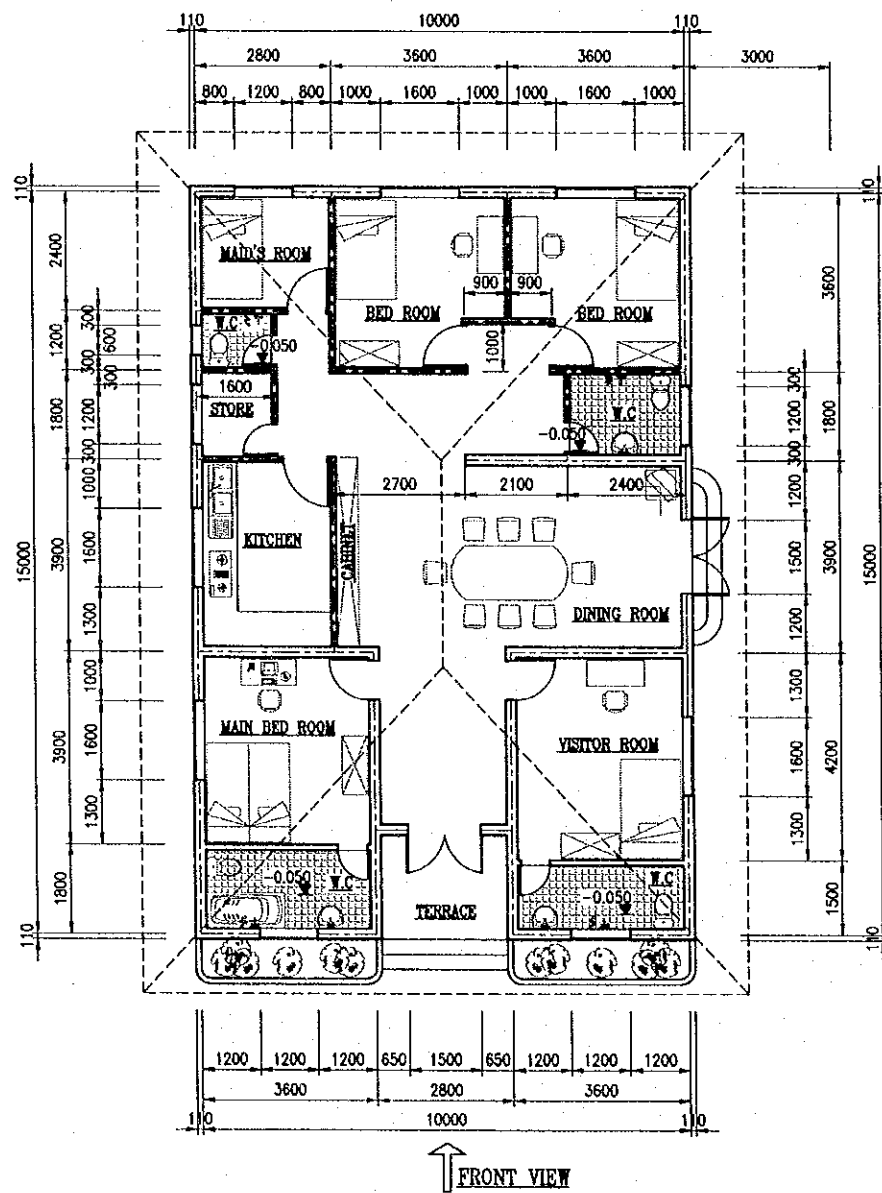
FRONT VIEW
SCALE : 1/150



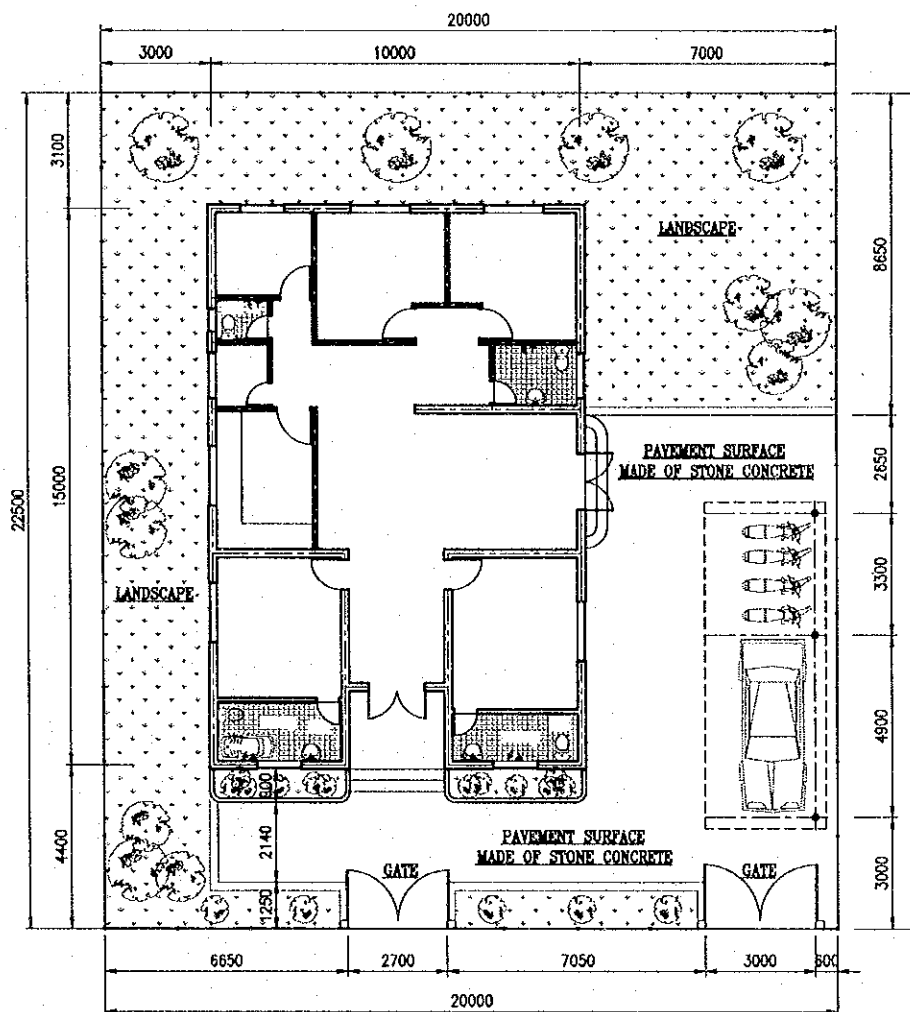
SIDE VIEW
SCALE : 1/150



PLAN
SCALE : 1/150



SITE PLAN
SCALE : 1/200

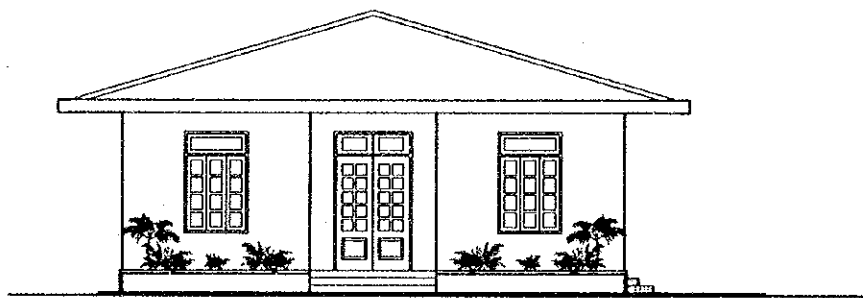


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. WATABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS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

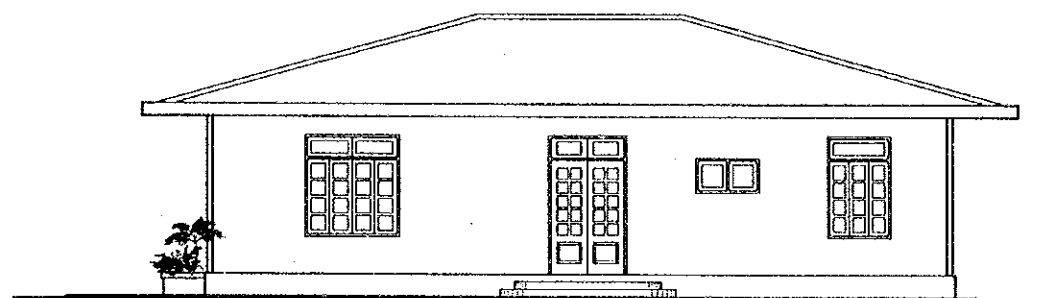
PACKAGE 3	SCALE AS SHOWN	DRAWING No. H-02	SHEET No.
EMPLOYERS AND ENGINEERS SITE OFFICE (WITHOUT ACCOMMODATION)			

TYPE-2

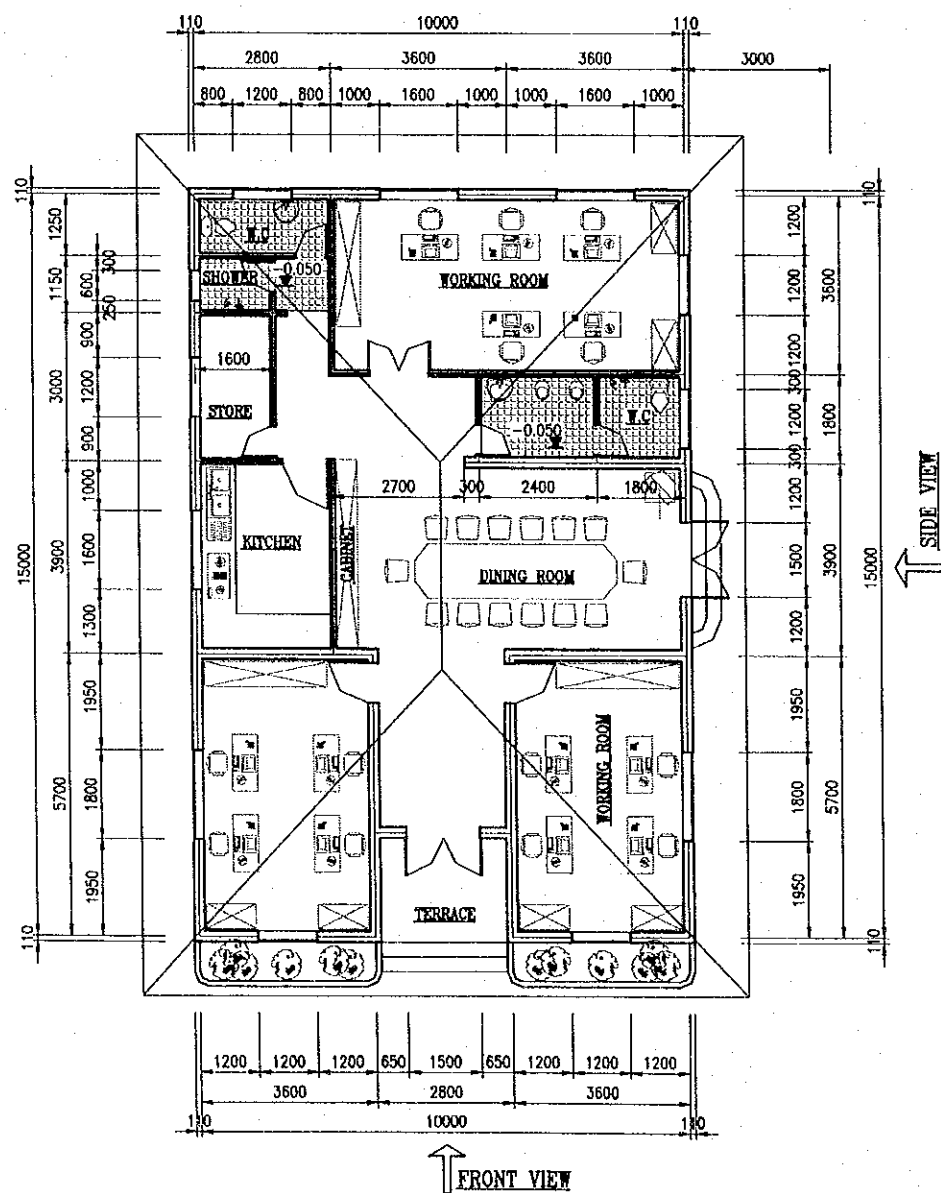
FRONT VIEW
SCALE : 1/150



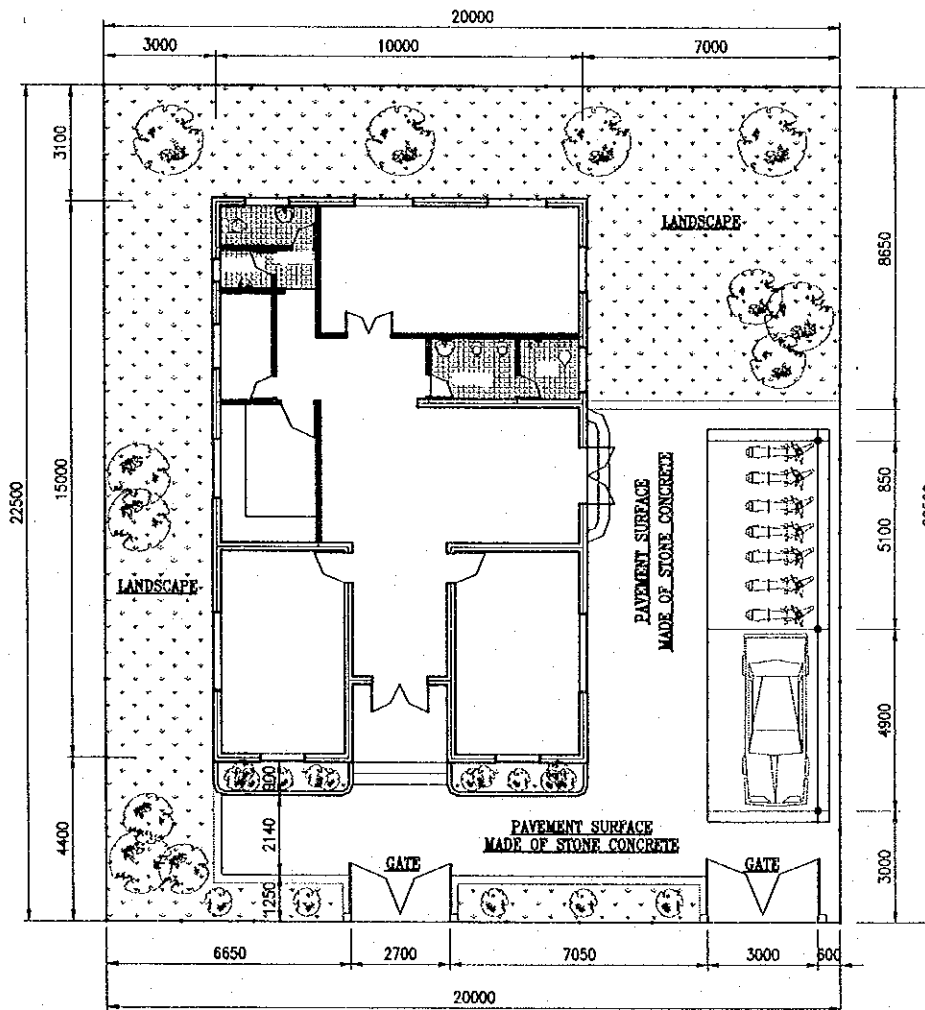
SIDE VIEW
SCALE : 1/150



PLAN
SCALE : 1/150



SITE PLAN
SCALE : 1/200

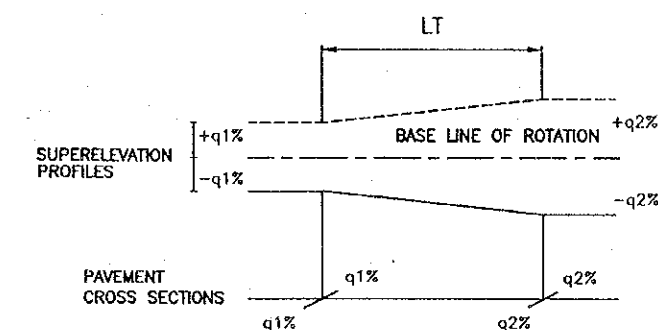
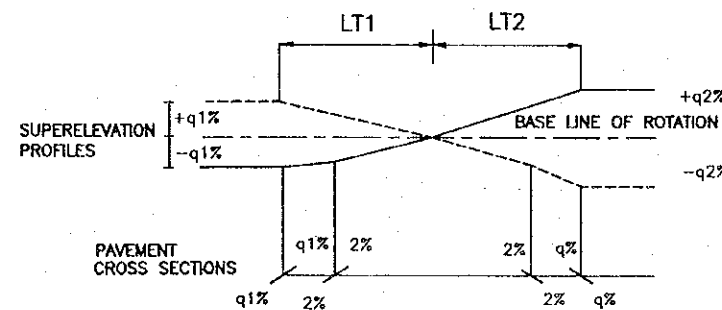
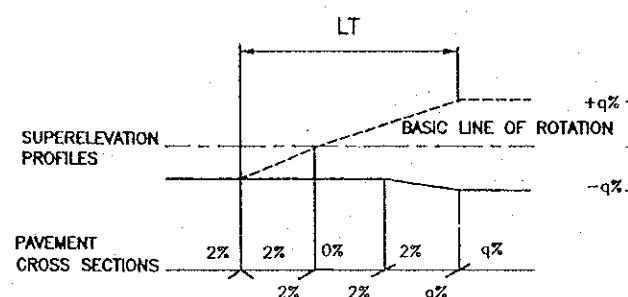
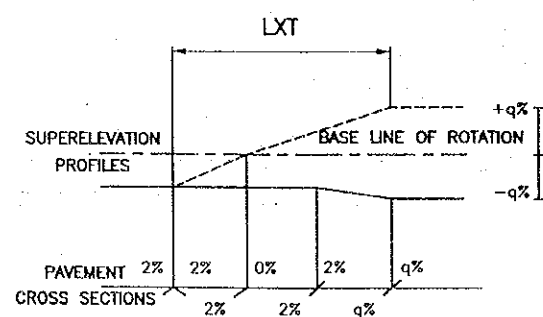
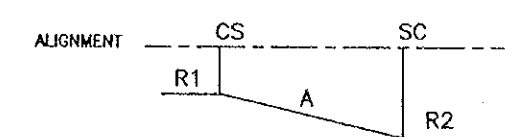
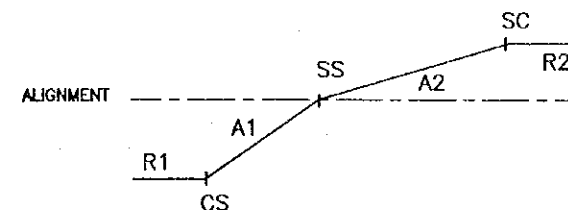
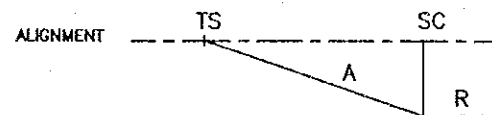
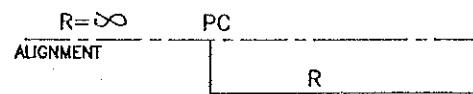
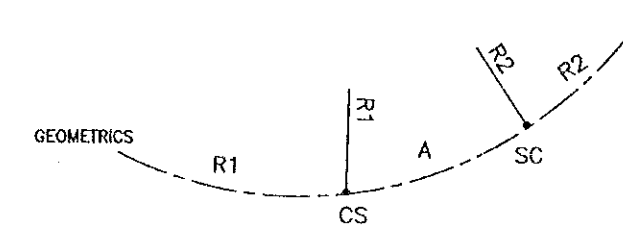
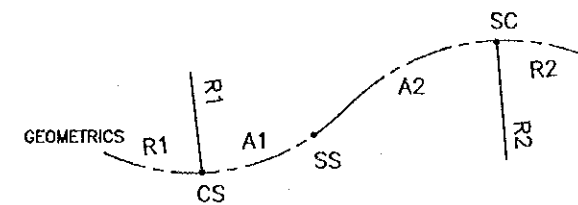
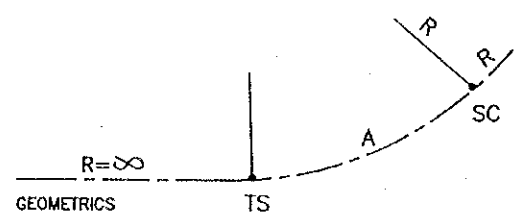
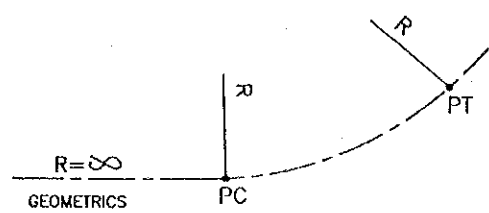


I. MISCELLANEOUS

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANH LOANG 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>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.11.14

PACKAGE	SCALE	DRAWING No.	SHEET No.
3		I-1	
SUPERELEVATION DIAGRAMS			

SUPERELEVATION DIAGRAMAS

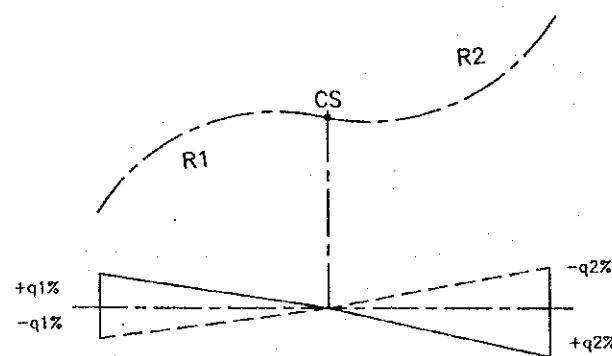


CASE 1. TANGENT-CIRCULAR
(WITHOUT TRANSITION CURVE)

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

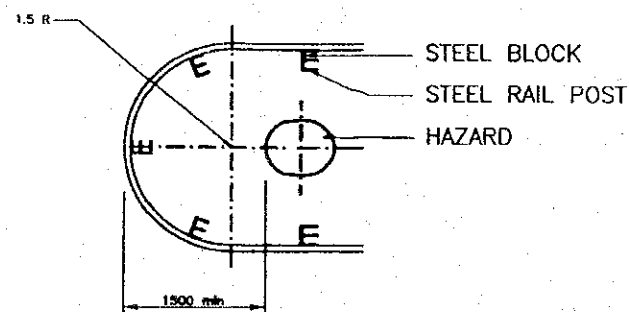
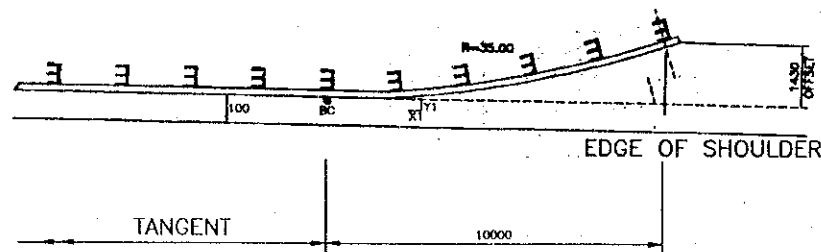
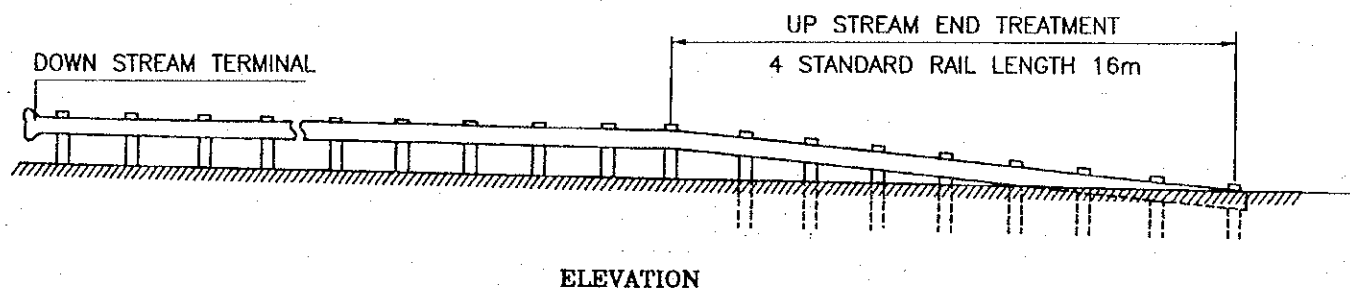
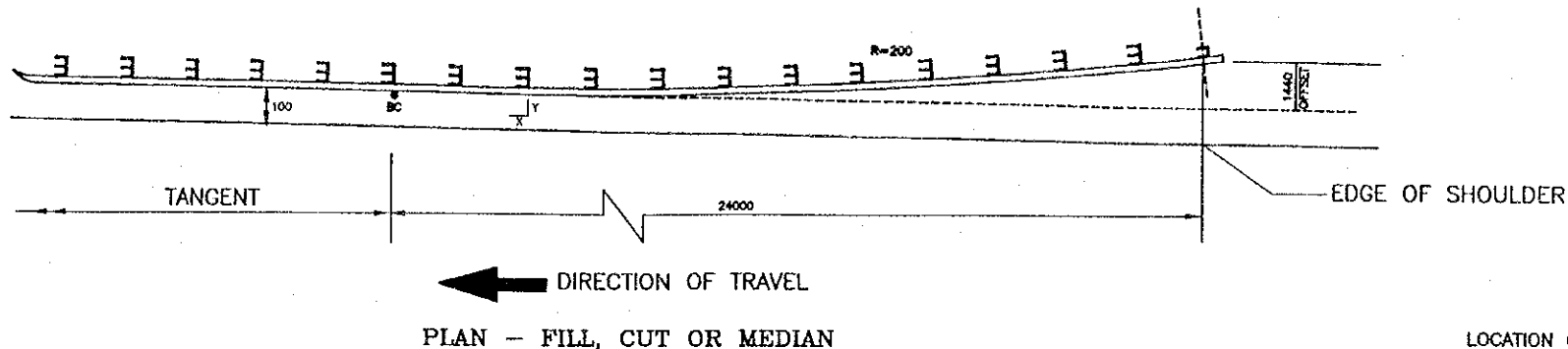
- : CENTER OF ROADWAY
- : LEFT SIDE EDGE OF CARRIAGEWAY LOOKING UP CHAINAGE
- : RIGHT SIDE EDGE OF CARRIAGEWAY LOOKING UP CHAINAGE
- LT(1,2) : LENGTH OF SUPERELEVATION RUNOUT & RUNOFF
- q : PERCENT OF FULLY SUPERELEVATION
- PC : TANGENT TO CIRCULAR CURVE
- TS : BEGINNING POINT OF TRANSITION CURVE
- ST : 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 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
COMRADE PACIFIC CONSULTANTS INTERNATIONAL	DATE 2002.11.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
3		I-2	
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.1+111.50 - KM.1+647.00	Both Side
2	KM.1+746.00 - KM.2+775.00	Both Side
3	KM.2+825.00 - KM.5+605.00	Both Side
Embankment		
1	KM.1+111.50 - KM.1+475.00	Both Side
2	KM.1+780.00 - KM.2+775.00	Both Side
3	KM.2+825.00 - KM.4+100.00	Both Side
4	KM.4+420.00 - KM.5+605.00	Both Side
5	KM.5+655.00 - KM.6+214.00	Both Side
FRONTAGE ROAD		
Right Side		
1	KM.0+400.00 - KM.0+840.00	One Side
2	KM.1+550.00 - KM.1+642.50	One Side
3	KM.1+741.15 - KM.1+840.00	One Side
4	KM.2+388.50 - KM.2+408.50	One Side
5	KM. 2+600.00 - KM.2+665.00	One Side
6	KM.4+620.00 - KM.4+800.00	One Side
Left Side		
1	KM.0+380.00 - KM.0+800.00	One Side
2	KM.1+570.00 - KM.1+663.00	One Side
3	KM.1+761.00 - KM.1+820.00	One Side
4	KM.2+390.00 - KM.2+410.00	One Side
RAMP ROAD		
Phap Van-Cau Gie IC		
Ramp A	KM.0+000.00 - KM.0+520.000	Both side
Ramp B	KM.0+520.00 - KM. 0+538.00	One side
Ramp C	KM.0+129.00 - KM.0+240.00	Both side
Ramp D	KM.0+131.211-KM.0+210.138	Both side
Ramp G	KM.0+000.00 - KM.0+290.00	One side
	KM.0+290.00 - KM.0+367.00	Both side
	KM.0+367.00 - KM.0+576.708	One side
Ramp H	KM.0+000.00 - KM.0+330.00	One side
	KM.0+330.00 - KM.0+410.00	Both side
	KM.0+410.00 - KM.0+760.00	One side
Nguyen Tam Trinh IC		
Ramp A	KM.0+069.675 - KM.0+276.895	One side
Ramp B	KM.0+089.631 - KM.0+270.944	One side
Linh Nam IC		
Ramp A	KM.0+070.025 - KM.0+241.705	One side
Ramp B	KM.0+090.016 - KM.0+256.65	One side
Ramp C	KM.0+092.809 - KM.0+250.809	One side
Ramp D	KM.0+050.00 - KM.0+250.00	One side

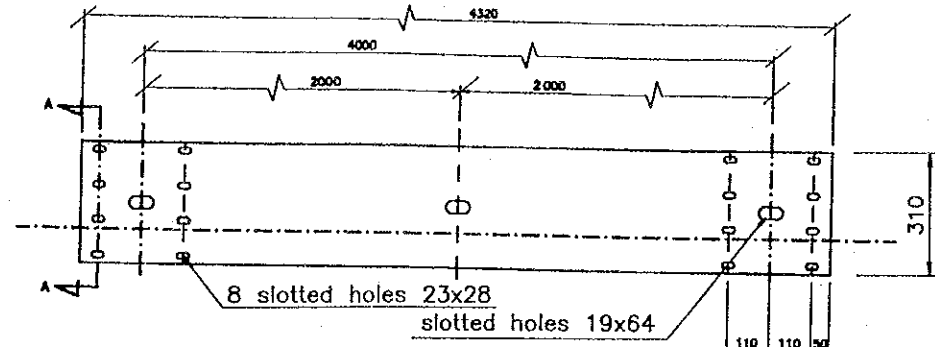
NOTES:

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.

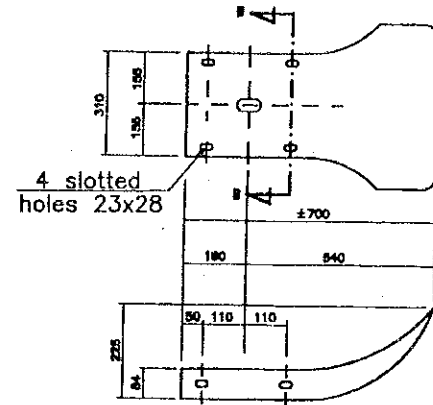
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANH LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT	DESIGNED BY S. SATADA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2006. 3. 17

PACKAGE 3	SCALE	DRAWING No. I-3	SHEET No.
STEEL BEAM GUARDRAIL GR-A (2)			

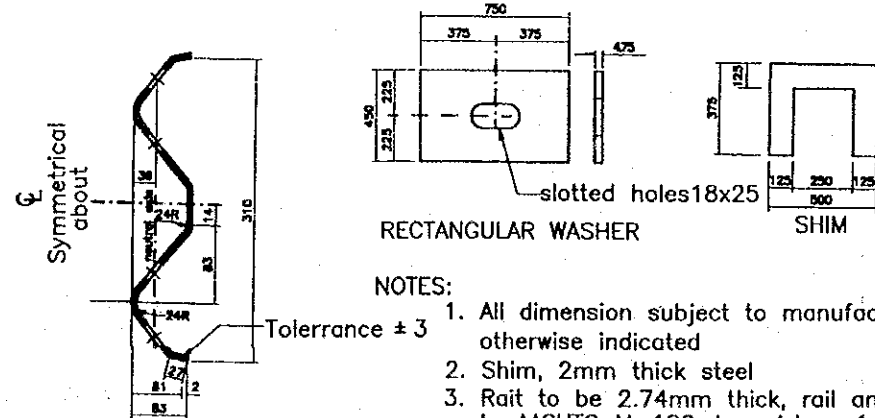
STEEL BEAM GUARDRAIL (TYPE GR-A)



FRONT ELEVATION



DOWN STREAM END TREATMENT



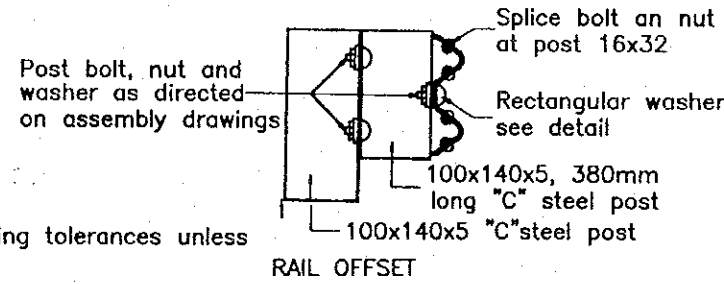
RECTANGULAR WASHER

SHIM

ENLARGED SECTION A-A
(Section B_B, similar)

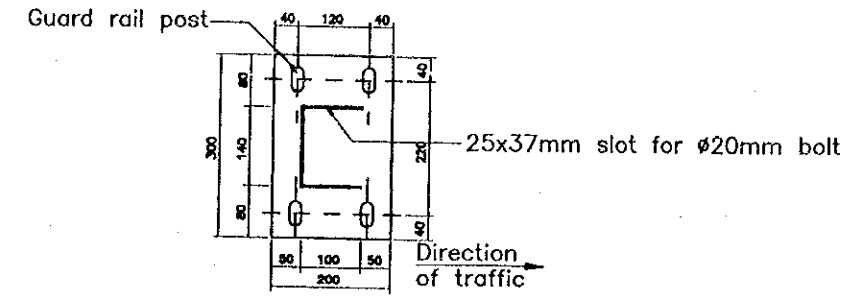
NOTES:

- 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 ack up plate 300mm in length must be placed rail elements at intermediate post (non splice posts)



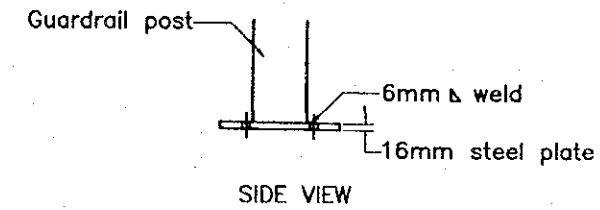
RAIL OFFSET

STEEL BASE FOR GUARDRAIL POST ON BRIDGES AND BOX CULVERTS



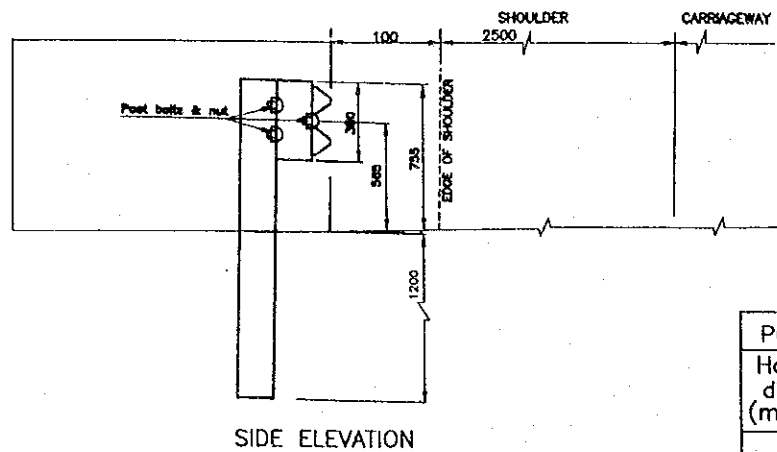
NOTES:

- Base shall be anchored into concrete using 4x22mm threaded cinch anchors and nut



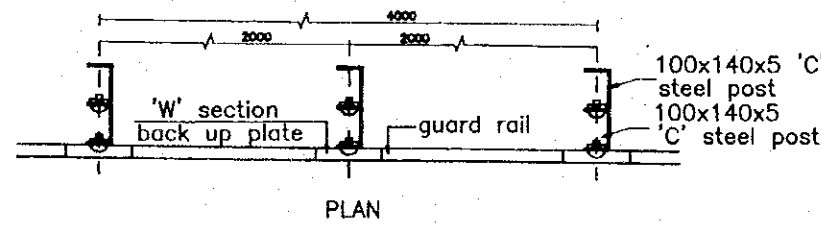
SIDE VIEW

STEEL BEAM GUARDRAIL ASSEMBLY DETAILS

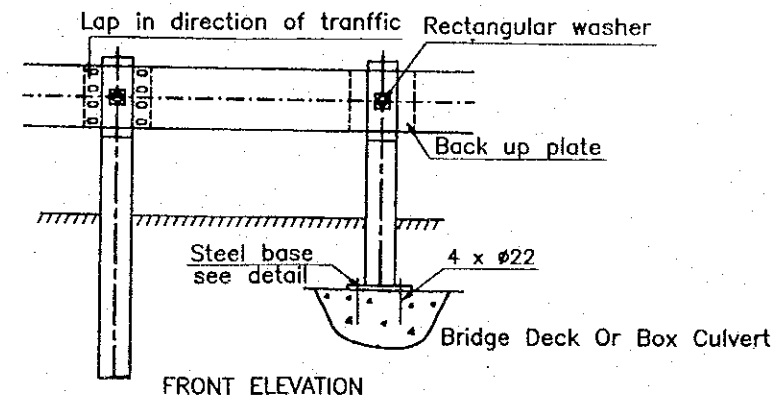


SIDE ELEVATION

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 at guardrail is 30cm or less beyond gutter line
- To produce an even alignment, provide shim where necessary.

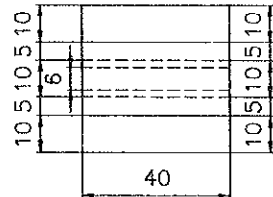
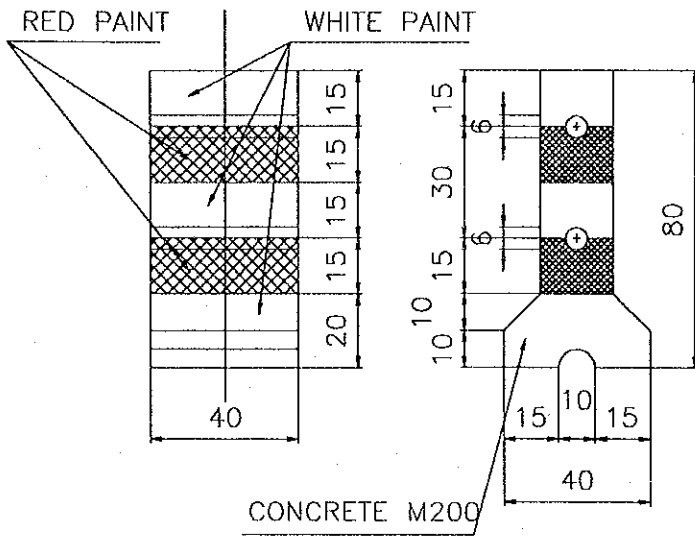
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THUAN LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. NAYASE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT: RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT: PACIFIC CONSULTANTS INTERNATIONAL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

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	AS SHOWN	1-4	
REMOVABLE GUARDRAIL GR-B			

REMOVABLE GUARDRAIL

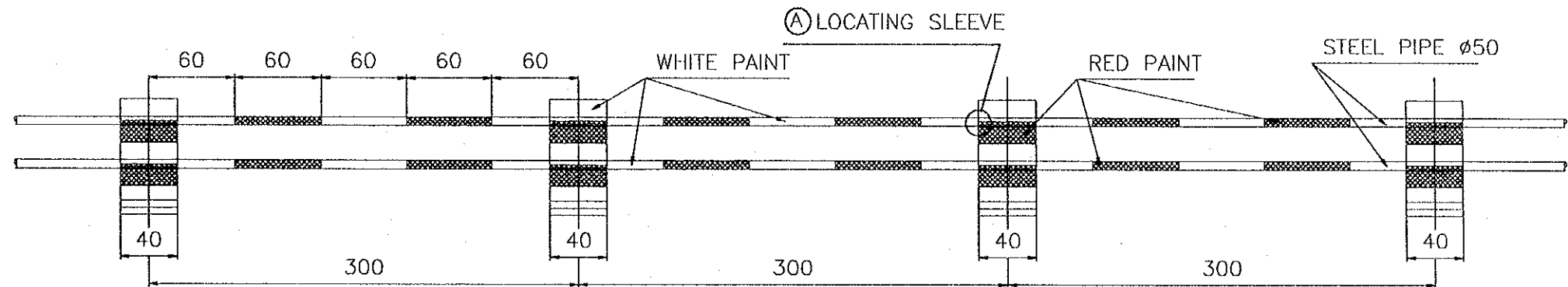
DETAIL OF PRECAST - CONCRETE POST

SCALE: 1/20



POST ARRANGEMENT

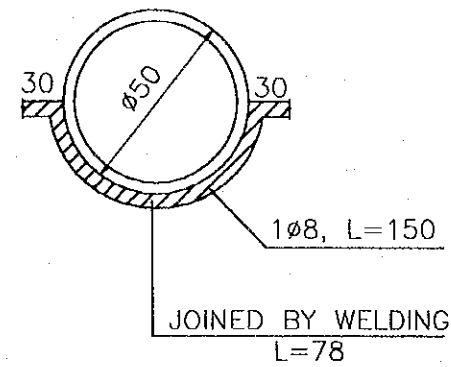
SCALE: 1/40



DETAIL A

SCALE: 1/2

(Dimensions are in millimeter)



LOCATION OF REMOVABLE GUARDRAIL

(Type GR-B)

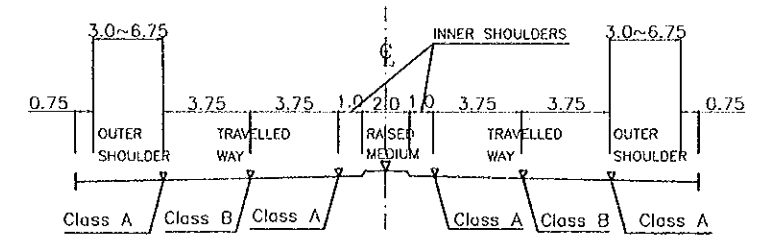
No	STATION	REMARKS
FRONTAGE ROAD		
1	KM.0+000 - KM.5+868.187	Right side
2	KM.0+000 - KM.6+142.627	Left side
RAMP ROAD		
Linh Nam Interchange		
1	KM.0+088.415 - KM.0+192.458	Ramp C
2	KM. 0+000 - KM. 0+225.407	Ramp D

NOTES:

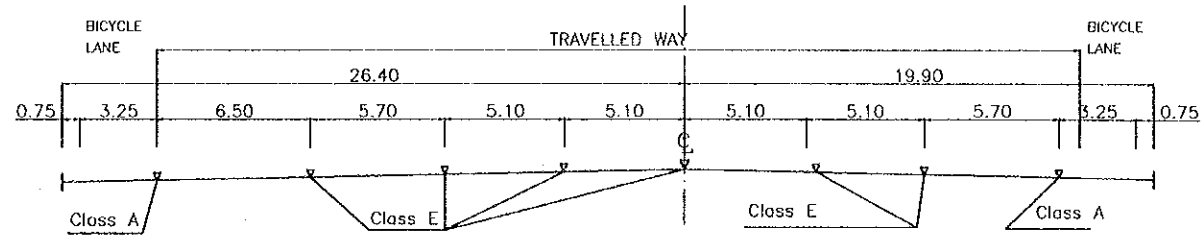
- DISTANCE BETWEEN PRECAST- CONCRETE POSTS SHALL BE 3.0m
- POST SHALL BE PAINTED ALTERNATELY RED WITH A COAT AND WHITE WITH TWO COATS OF APPROVED PAINT, AS DETAILED
- RAILING SHALL BE 50mm.NOM DIA.X3mm, THOROUGHLY CLEANED OF RUST AND TREATED WITH ANTI-RUST PRIMER BEFORE FINAL COATING
- EVERY SECOND POST SHALL BE PROVIDED WITH A LOCATING SLEEVE WELDED TO THE RAILING AND ALLOWANCE FOR EXPANSION IS TO BE MADE EVERY TEN POSTS BY MEANS OF AN GAP IN THE RAILS OF FROM 3 TO 7cm. THE PROVISION FOR EXPANSION SHALL BE LOCATED WITHIN THE TENTH POST.
- ALL DIMENSIONS ARE cm UNLESS OTHERWISE INDICATED.

CROSS SECTIONAL MARKING POSITION

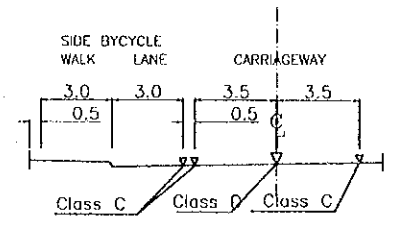
TYPICAL ROAD MARKING



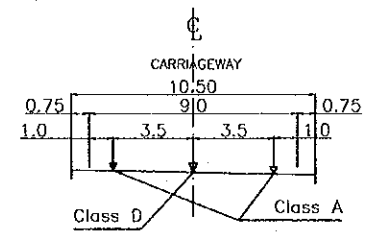
THROUGHWAY
 (Type T-1 & T-2)



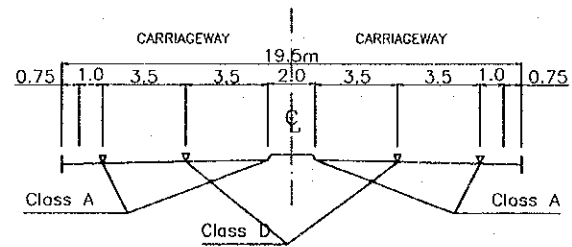
THROUGHWAY - TOLL GATE SECTION
 (Type T-7, T-8 & T-9) ~ *



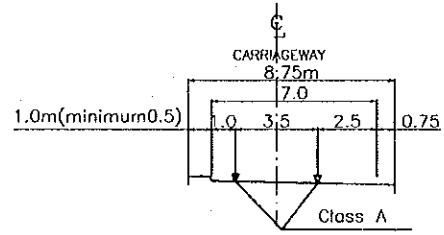
TWO-LANE, ONE-WAY FRONTAGE ROAD
 (Type F-1 & F-2)



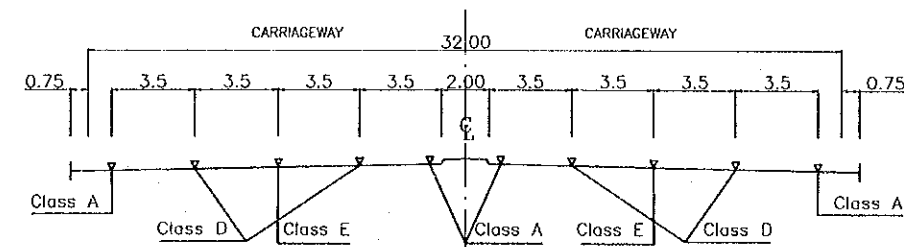
TWO-LANE, ONE-WAY RAMP
 (Type R-1)



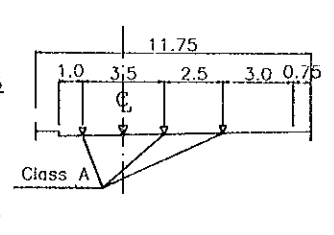
4-LANE, TWO-WAY RAMP (TYPE R-8)
 (Type R-7)



ONE-LANE, ONE-WAY RAMP
 (Type R-3)



8-LANE, TWO-WAY RAMP
 (Type R-6, R-8)



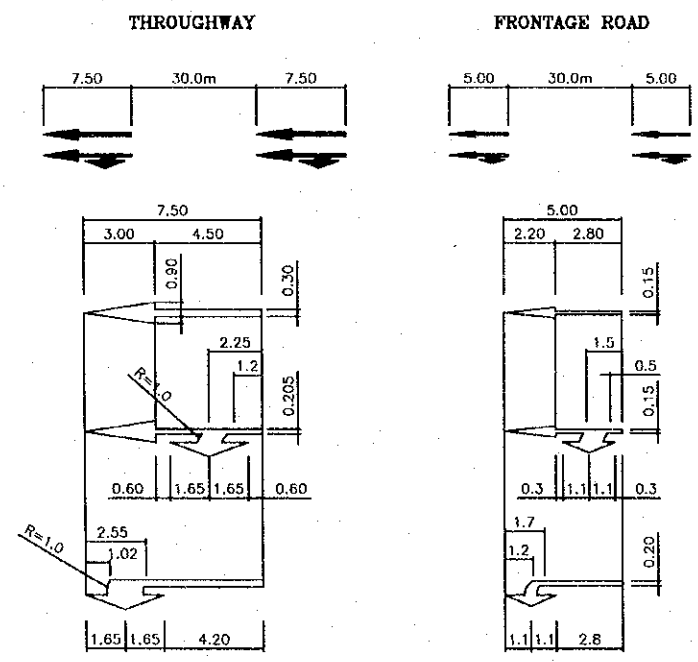
ONE LANE, ONE-WAY RAMP
 WITH BICYCLE LANE
 (Type R-4)

TYPICAL ROAD MARKING

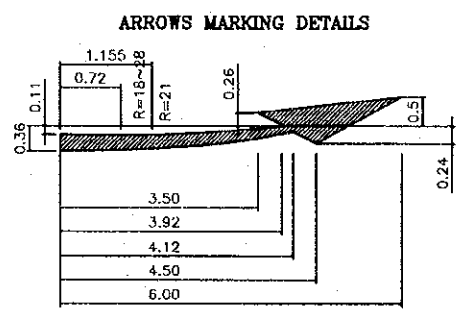
TYPES OF LANE MARKINGS

CLASS	LANE MARKINGS
A	THROUGHWAY RAMP WAY (SIDE LINES)
B	THROUGHWAY (LANE SEPARATION)
C	FRONTAGE ROAD (SIDE LINES AND CENTER LINE)
D	FRONTAGE ROAD AND RAMP WAY (LANE SEPARATION)
E	MERGING AND DIVERGING AREA (ON/OFF RAMP) TOLL GATE AREA

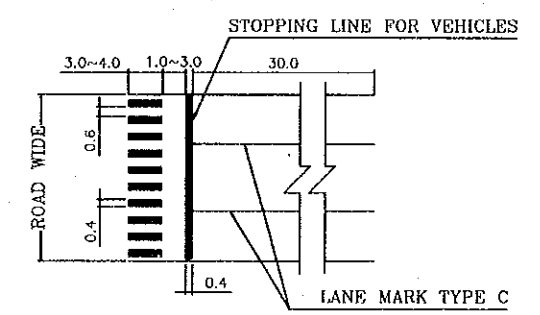
SPECIAL ROAD MARKING



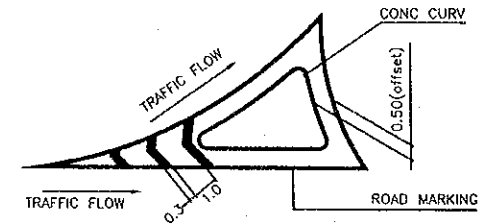
FOR LANE SHIFT



MARKING OF PEDESTRIAN CROSSING

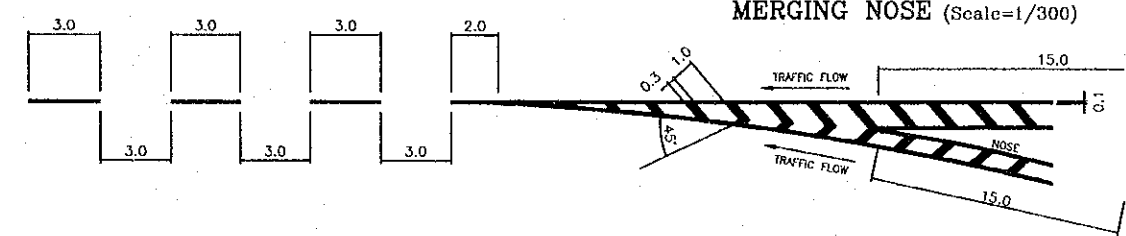


TRAFFIC ISLAND (STANDARD)

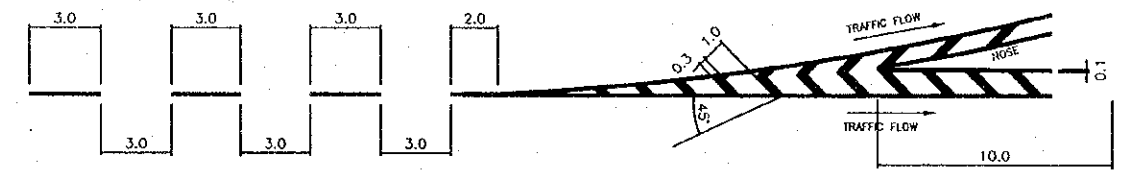


NOTE:
 1. MARKING AT ALL TRAFFIC ISLAND TO BE AS SHOWN ABOVE.
 2. ROAD MAKING ARE GENERALLY TO FOLLOW THE STANDARD GIVEN IN "ROAD TRAFFIC SIGNS 22TCN 237-97".

MERGING NOSE (Scale=1/300)



DIVERGING NOSE (Scale=1/300)



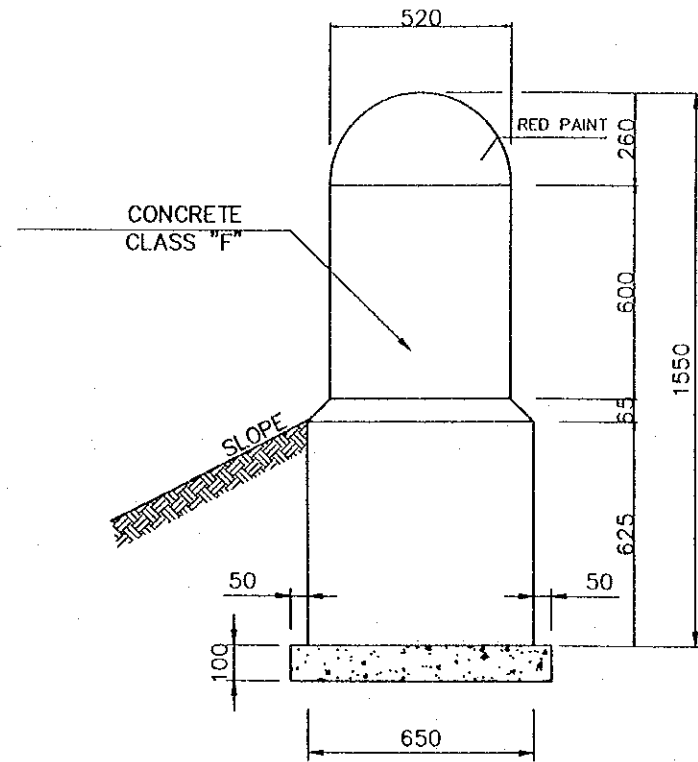
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MIYABE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	DATE 2000.3.14
CONSULTANT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

PACKAGE 3	SCALE	DRAWING No. 1-6	SHEET No.
KILOMETER POST			

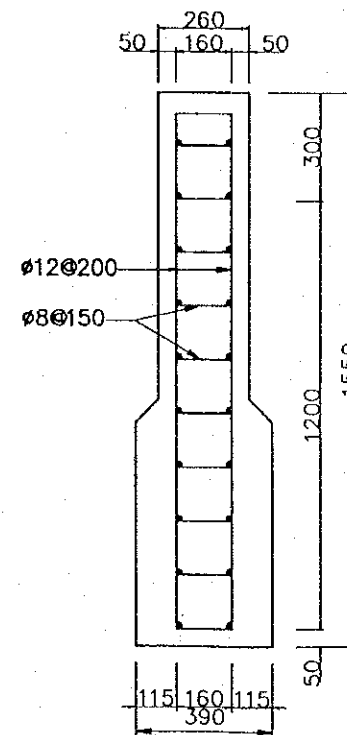
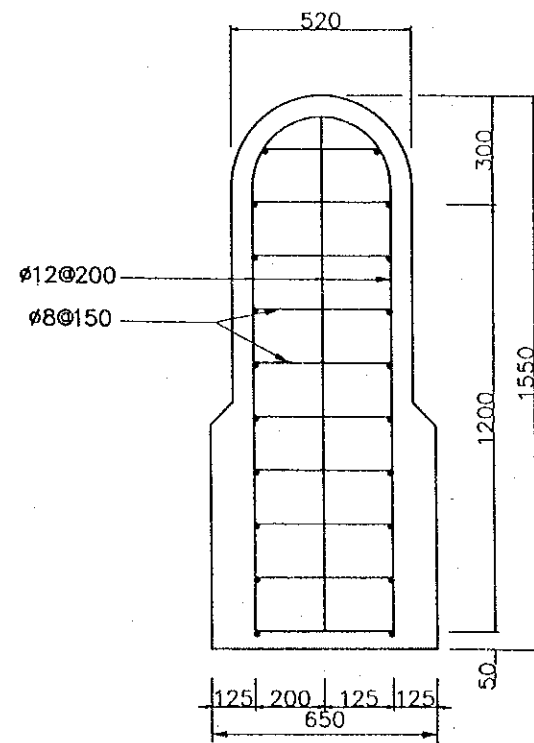
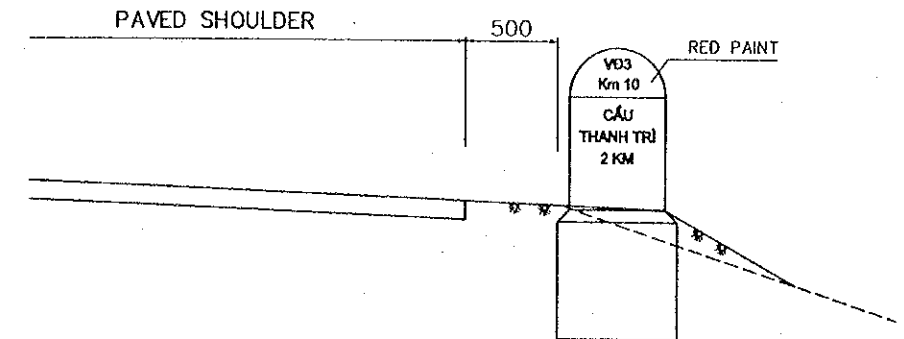
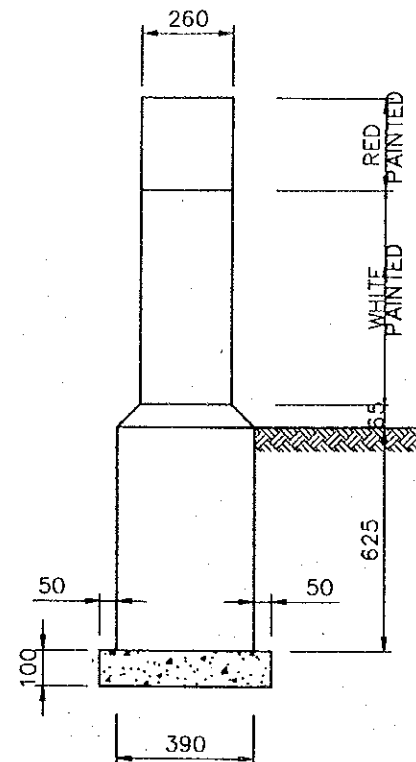
DETAIL OF KILOMETER POST

INSTALLATION OF KM POST

FRONT VIEW



SIDE VIEW



LOCATION OF KILOMETER POSTS

No.	STATION	REMARKS
	Throughway	
1	KM. 2 + 000.00	Both sides
2	KM. 3 + 000.00	Both sides
3	KM. 4 + 000.00	Both sides
4	KM. 5 + 000.00	Both sides
5	KM. 6 + 000.00	Both sides

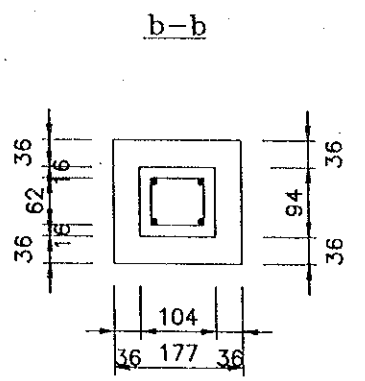
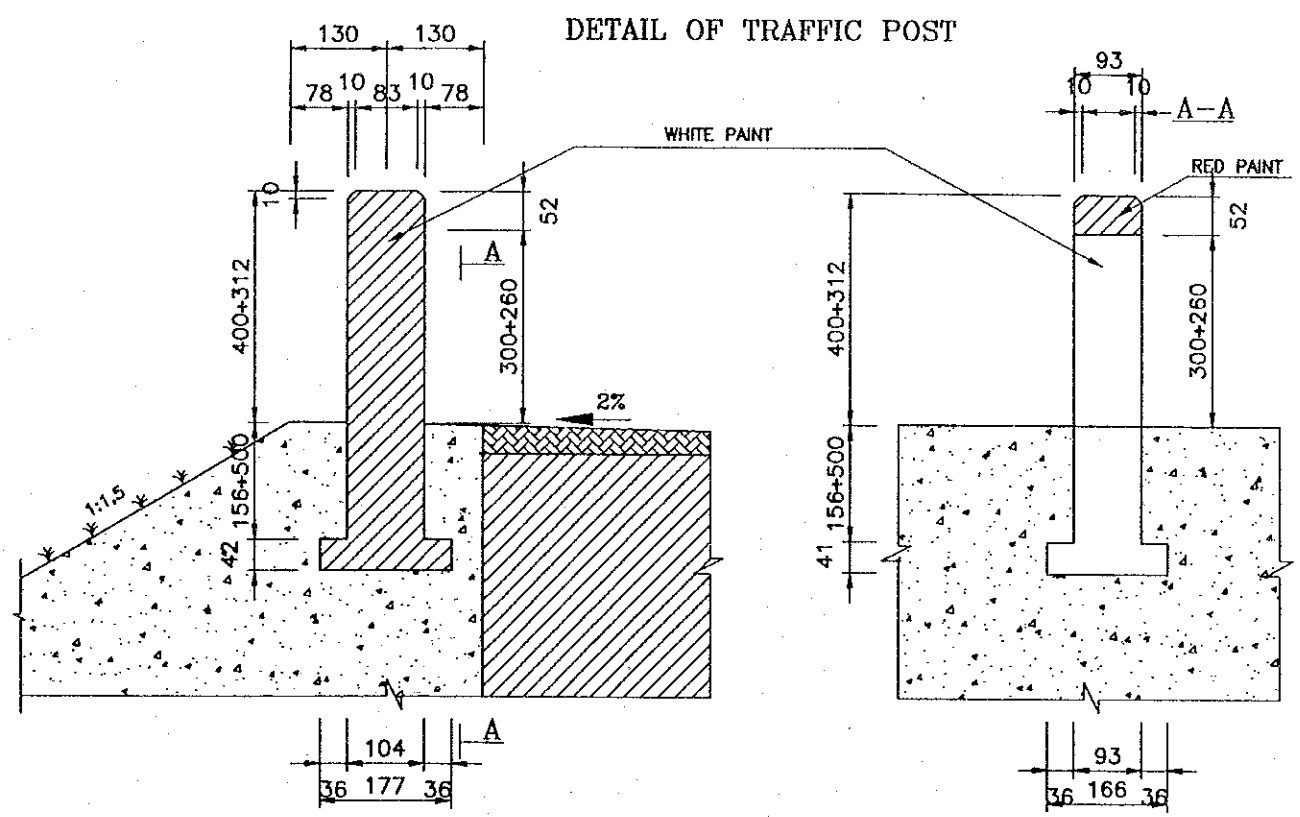
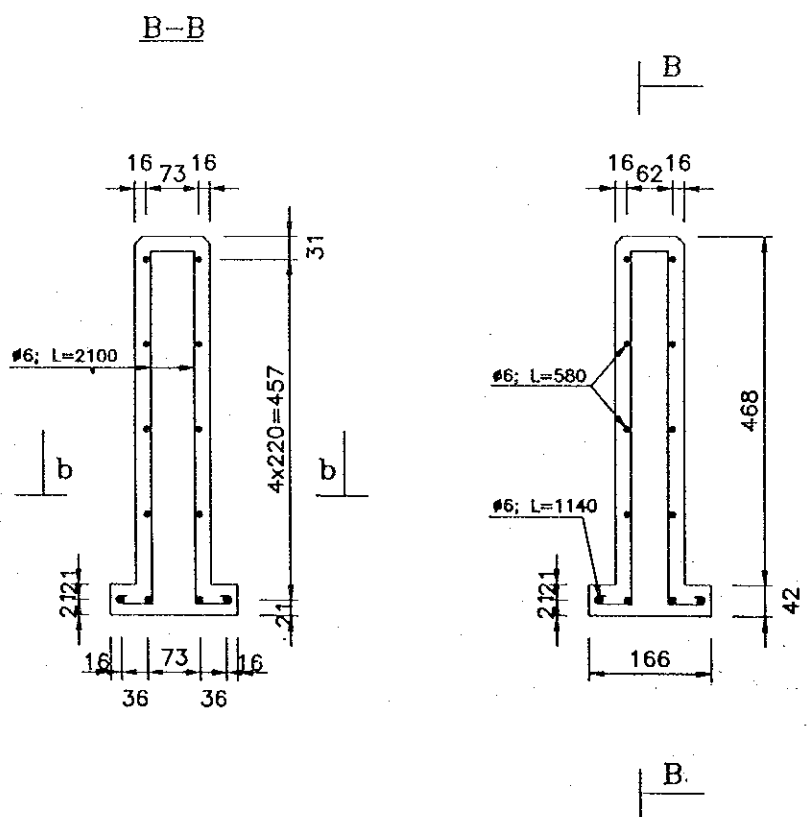
NOTES

1. NOT TO SCALE
2. ALL DIMENSIONS ARE IN MILLIMETERS
3. REFLECTIVE PAINT SHALL BE USED.

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANH LOANG 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	DATE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE	2000.3.17

PACKAGE 3	SCALE	DRAWING No. 1-7	SHEET No.
TRAFFIC POST			

TRAFFIC POST



LOCATION OF TRAFFIC POSTS

No.	STATION	REMARKS
Throughway		
1	KM.1+475.00 - KM.1+647.00	Both sides
2	KM.1+746.00 - KM.1+780.00	Both sides
3	KM.4+100.00 - KM.4+420.00	Both sides

No.	STATION	REMARKS
Frontage Road		
1	KM.1+920.00 - KM.2+210.00	Right side
2	KM.2+408.50 - KM.2+600.00	Right side
3	KM.2+810.00 - KM.3+102.78	Right side
4	KM.3+560.00 - KM.4+000.00	Right side
5	KM.5+120.00 - KM.5+350.00	Right side
6	KM.3+550.00 - KM.3+660.00	Left side
7	KM.3+680.00 - KM.3+760.00	Left side
8	KM.3+950.00 - KM.4+150.00	Left side
9	KM.5+200.00 - KM.5+520.00	Left side
10	KM.5+720.00 - KM.5+820.00	Left side

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	2000.3.17

PACKAGE	SCALE	DRAWING No.	SHEET No.
3		1-8	
STANDARDS OF TRAFFIC SIGNS(1)			

REGULATORY SIGNS

NOT TO SCALE

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 LAMBO RESTRICTED

111C TRICYCLE RESTRICTED

111D CYCLO RESTRICTED

119 TRUCK'S LENGTH LIMITED

120 TRAILER'S LENGTH LIMITED

121A MINIMUM CLEARANCE BETWEEN TWO VEHICLES

121B 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

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 OR 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 301l DIRECTION TO BE FOLLOWED

301d

301f

301h

301l

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:

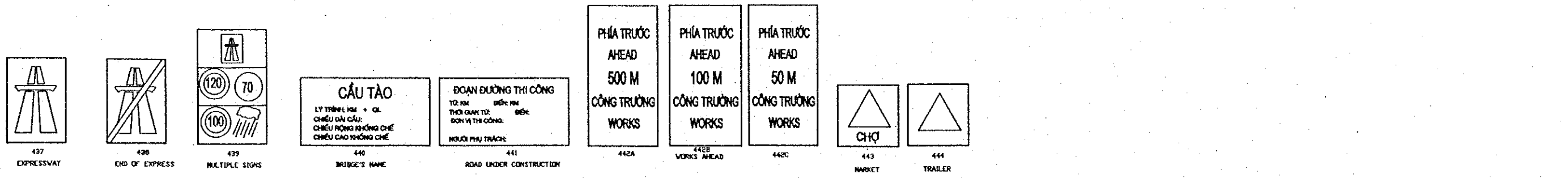
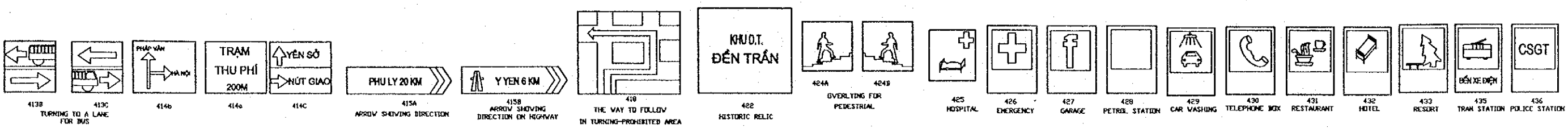
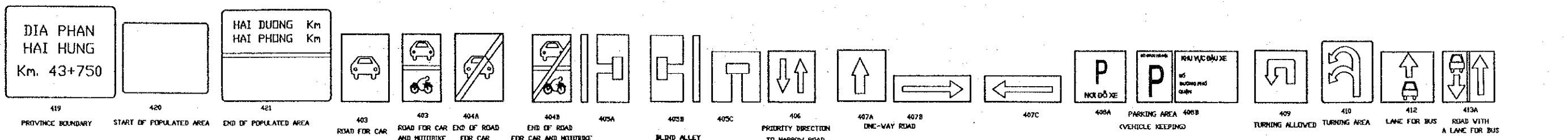
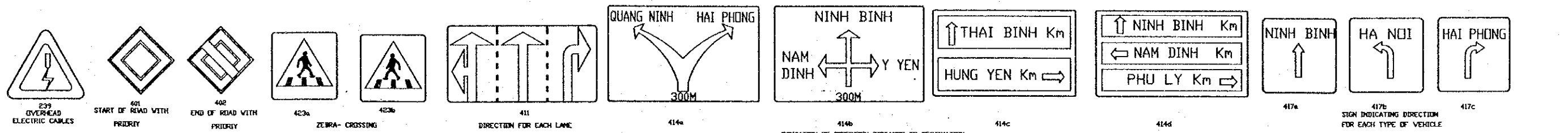
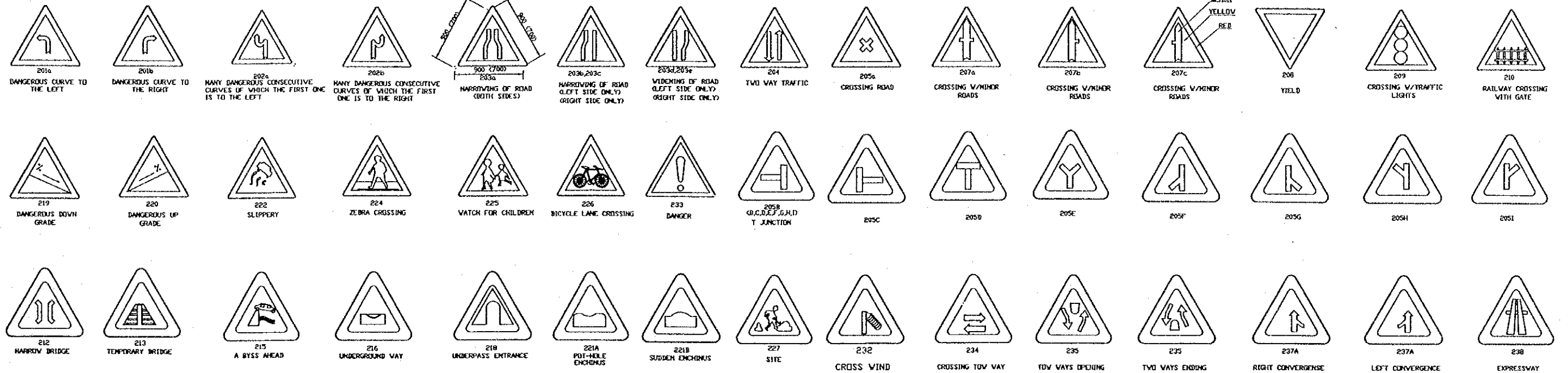
- All dimensions are in Millimeters (mm) unless otherwise indicated. Dimensions shown in the brackets are used for Frontage Road and Ramp Road.
- Materials, Dimensions, size of letters and numerals and color of all traffic signs are generally to follow Vietnamese Standards 22 TCN 237-97. Therefore, traffic signs used for Thoroughway are generally larger than that used for Highway 1.3 times or 1.5 times where necessary.
- 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.

THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. NITARE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT: RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT		SIGNATURE
CONSULTANT: PACIFIC CONSULTANTS INTERNATIONAL		DATE: 2010.01.14

WARNING SIGNS AND GUIDE SIGNS

PACKAGE	SCALE	DRAWING No.	SHEET No.
3		I-9	
WARNING SIGNS AND GUIDE SIGNS(2)			

NOT TO SCALE

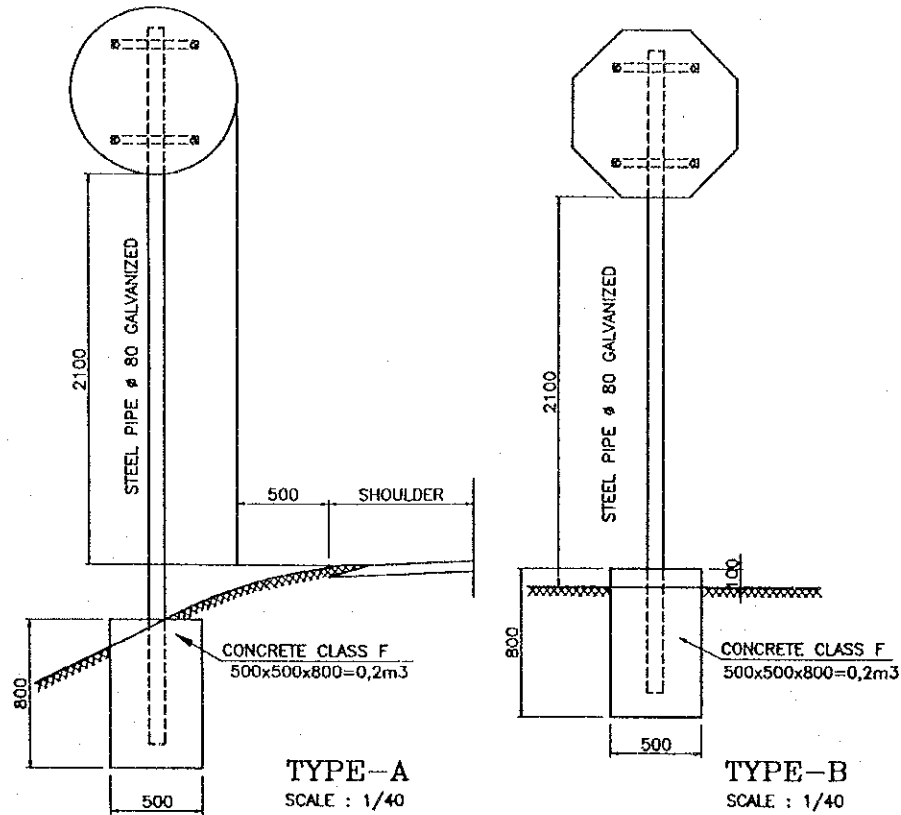


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM TRANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL	DATE 2000.11.14	

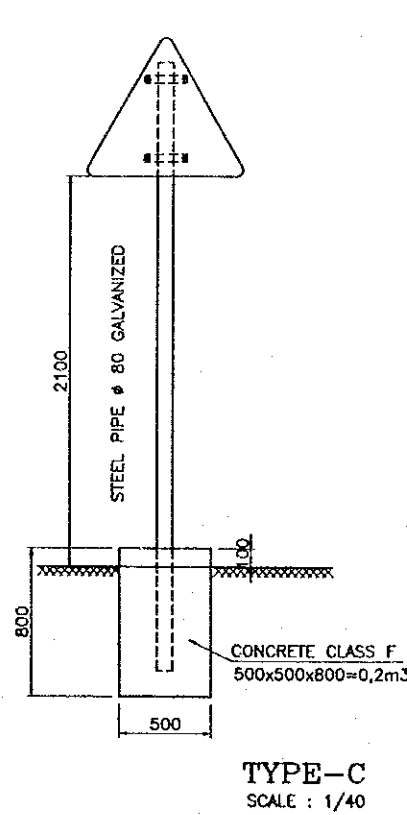
INSTALLATION OF TRAFFIC SIGNS

PACKAGE 3	SCALE AS SHOWN	DRAWING No. 1-10	SHEET No.
INSTALLATION OF TRAFFIC SIGNS			

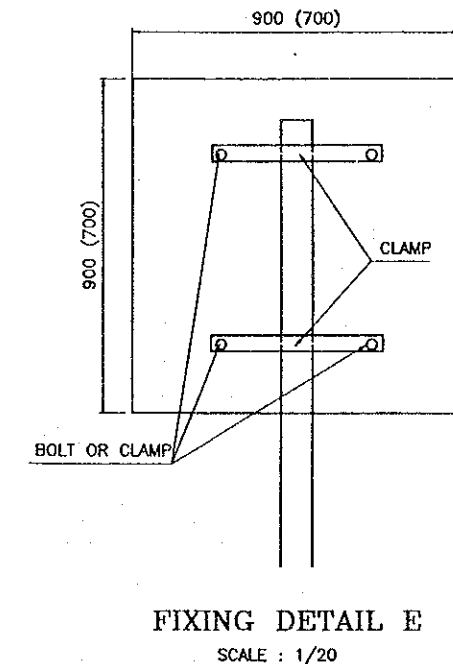
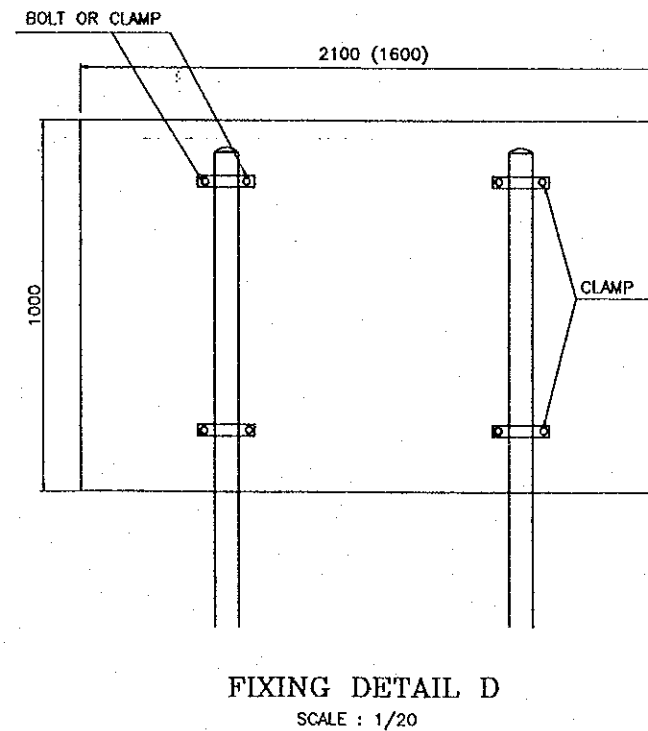
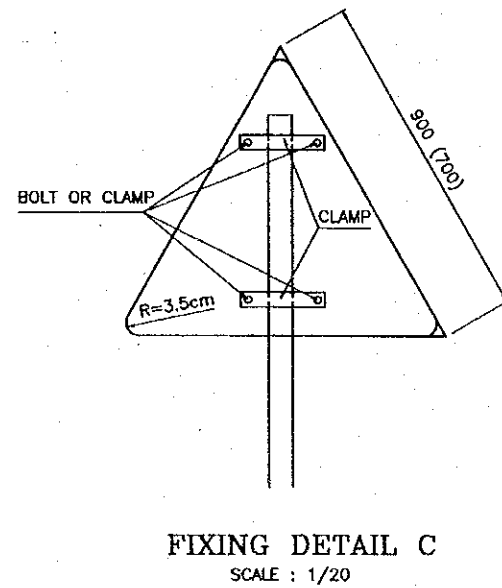
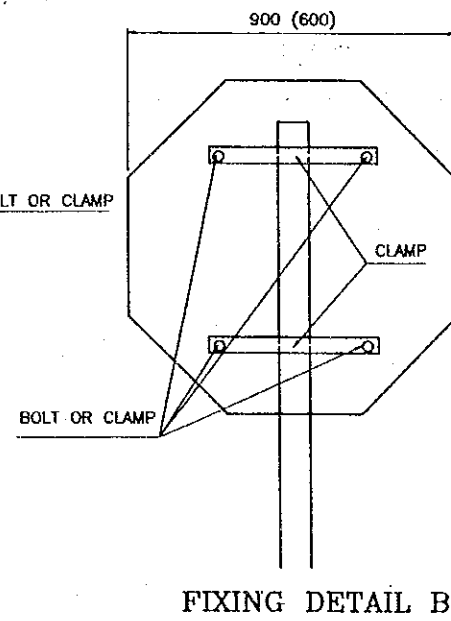
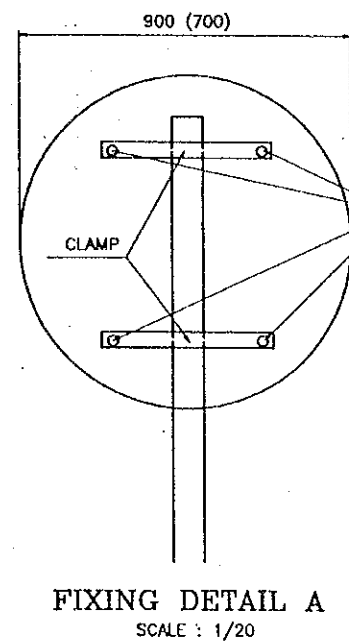
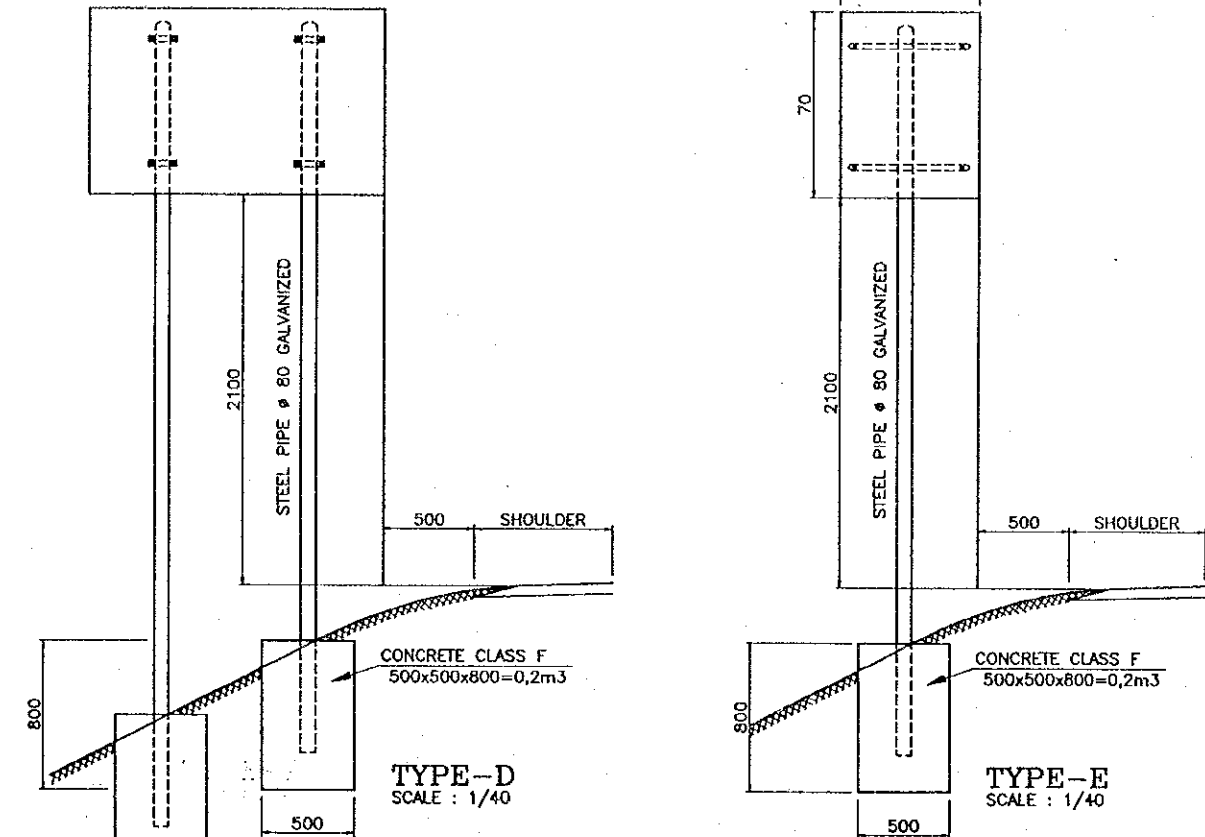
REGULATORY SIGNS



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.

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	<i>[Signature]</i>
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		DATE	2000.03.14

SUMMARY TABLES OF TRAFFIC SIGNS

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/2000	I-11	
SUMMARY TABLES OF TRAFFIC SIGNS			

REGULATORY SIGNS

No.	STATION	NAME OF SIGNS	LEFT	RIGHT	TYPE
Throughway					
1	Km.1+140	301f	●		A
2	Km.1+200	127	●		A
3	Km.2+000	127		●	A
4	Km.2+200	301a		●	A
5	Km.2+250	127	●		A
6	Km.2+370	127		●	A
7	Km.3+000	127x2	●	●	A
8	Km.4+100	127	●		A
9	Km.5+160	127	●		A
5	Km.5+230	127		●	A
6	Km.5+900	127x2	●	●	A
7	Km.5+960	127	●		A
8	Km.6+200	127x2	●	●	A
Frontage Road					
Left side FR					
1	Km.1+770	115	●		A
2	Km.2+580	301e	●		A
3	Km.2+680	127, 115		●	A
4	Km.2+800	117	●		A
5	Km.3+420	122x2, 301f, 117	●	●	B, A
6	Km.3+520	301e	●		A
7	Km.3+940	301f, 117, 122	●	●	A, B
8	Km.4+500	122	●		B
9	Km.4+820	122x2, 117, 301f	●	●	B, A
10	Km.5+120	122x2, 301e, 301f	●	●	B, A
11	Km.5+500	127, 115	●		A
12	Km.5+600	301f, 117	●		A
Right side FR					
1	Km.1+630	115		●	A
2	Km.2+600	301e		●	A
3	Km.2+700	301h	●		A
4	Km.2+800	117	●		A
4	Km.3+160	301e		●	A
5	Km.3+480	122x2, 117, 301f	●	●	B, A
6	Km.4+020	122, 117, 301f	●	●	B, A
7	Km.4+530	122	●		B
8	Km.4+840	122x2, 301f, 117	●	●	B, A
9	Km.4+940	301e		●	A
10	Km.5+140	122		●	B
11	Km.5+680	127, 301f, 115, 117	●	●	A
12	Km.6+540	117x2		●	A
Interchange's Ramp Roads					
Phap Van-Cau Gie IC					
1	Ramp A/B	127, 117x2	●	●	A
2	Ramp D	127		●	A
3	Ramp G	301fx2, 301a, 115, 102x3, 122x3	●	●	A
4	Ramp H	301d, 127x2, 301h 301f		●	A

(Continue)

At-grade Intersections					
1	NH No.1	122x5, 102x2, 117x2	●	●	B, A
		127, 304, 305	●	●	A
2	Phap Van-Cau Gie	122x5, 301x4, 123b, 127, 112, 114	●	●	B, A
			●	●	A
WARNING SIGNS					
No.	STATION	NAME OF SIGNS	LEFT	RIGHT	TYPE
Throughway					
1	Km.2+370	202b		●	C
2	Km.2+480	238	●		C
3	Km.2+660	212		●	C
4	Km.5+230	202b		●	C
5	Km.5+330	238	●		C
6	Km.5+450	212		●	C
Frontage Road					
Left side FR					
1	Km.0+840	202b, 233	●		C
2	Km.2+020	224	●		C
3	Km.2+420	224	●		C
4	Km.2+680	202a, 207b	●	●	C
5	Km.3+520	224	●		C
6	Km.3+650	207b	●		C
7	Km.4+080	224	●		C
8	Km.4+580	207a, 224	●		C
9	Km.4+920	224	●		C
10	Km.5+220	207a, 224	●		C
11	Km.5+500	202a		●	C
Right side FR					
1	Km.1+800	207b, 224		●	C
2	Km.2+200	224		●	C
3	Km.2+500	207b		●	C
4	Km.3+050	207b		●	C
5	Km.3+360	224		●	C
6	Km.3+900	224		●	C
7	Km.4+450	207b, 224		●	C
8	Km.4+720	224		●	C
9	Km.5+020	207b, 224		●	C
Interchange's Ramp Roads					
Phap Van-Cau Gie IC					
1	Ramp A/B	218x2, 233, 202bx2	●	●	C
2	Ramp D	201b, 233		●	C
3	Ramp G	238, 201b, 233, 202b	●	●	C
4	Ramp H	202a, 233		●	C
At-grade Intersections					
1	NH No.1	224x2	●	●	C
2	Phap Van-Cau Gie	224x3	●	●	C

GUIDE SIGNS

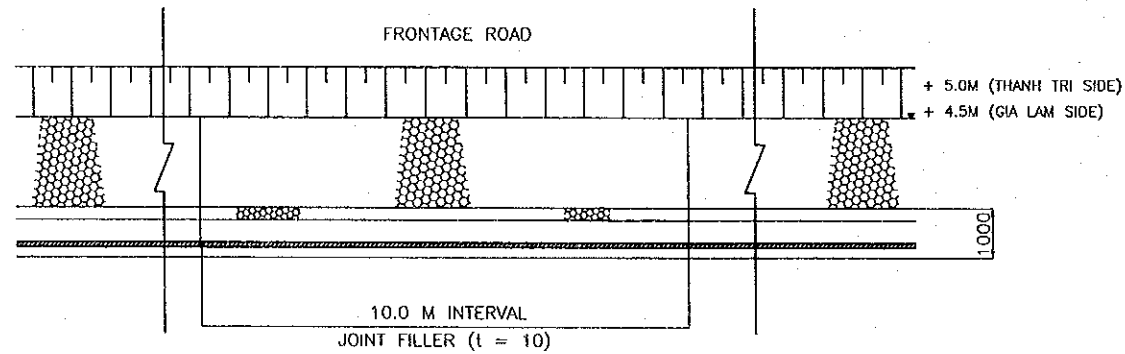
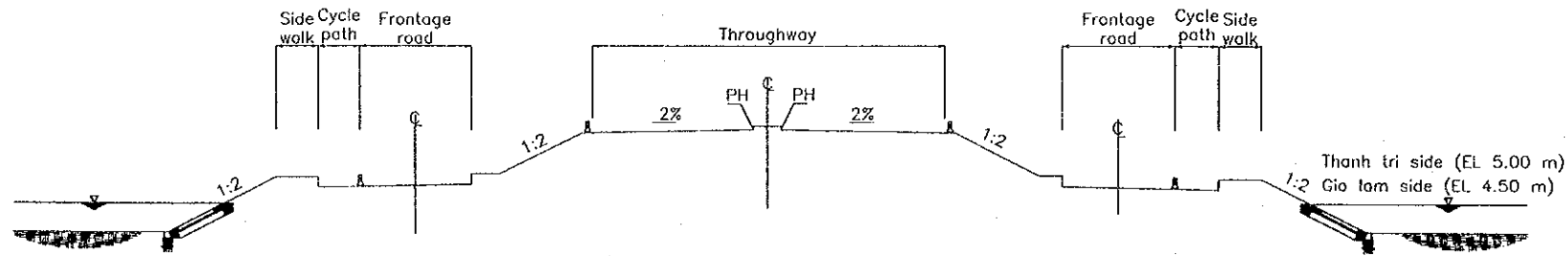
No.	STATION	NAME OF SIGNS	LEFT	RIGHT	TYPE
Throughway					
1	Km.1+140	440	●		D
2	Km.1+400	414b	●		D
3	Km.1+640	440		●	D
4	Km.1+760	440	●		D
5	Km.2+200	414b		●	D
6	Km.2+350	437	●		D
7	Km.2+760	440		●	D
8	Km.2+840	440	●		D
9	Km.3+100	414b	●		D
10	Km.4+750	414b		●	D
11	Km.5+000	439		●	D
12	Km.5+160	437	●		D
13	Km.5+600	440		●	D
14	Km.5+660	440	●		D
15	Km.5+800	414a		●	D
16	Km.6+210	440, 414a, 414bx2	●	●	D
Frontage Road					
Left side FR					
1	Km.1+770	440	●		D
2	Km.1+920	423b	●		E
3	Km.2+320	423b	●		E
4	Km.2+800	423bx3	●		E
5	Km.2+900	414b	●		D
6	Km.3+420	423ax2	●		E
7	Km.3+960	423b	●		E
8	Km.4+500	423b	●		E
9	Km.4+820	423bx2	●		E
10	Km.5+120	423ax2	●		E
11	Km.5+600	423bx3, 414b	●		D, E
Right side FR					
1	Km.1+630	440		●	D
2	Km.1+890	423b		●	E
3	Km.2+300	423b		●	E
4	Km.3+480	423a, 423b		●	E
5	Km.4+020	423b		●	E
6	Km.4+530	423b		●	E
7	Km.4+840	423bx2		●	E
8	Km.5+140	423b		●	E
9	Km.5+680	423ax3, 414b		●	E, D
Interchange's Ramp Roads					
Phap Van-Cau Gie IC					
1	Ramp D	437		●	D
2	Ramp G	414bx3, 411	●		D
3	Ramp H	414a		●	D
At-grade Intersections					
1	NH No.1	414a, 414bx2, 423ax5	●	●	D, E
2	Phap Van-Cau Gie	423ax5, 414bx3	●	●	E, D

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		NAME S. WATABE
CONSULTANT PACIFIC CONSULTANTS INTERNATIONAL		SIGNATURE <i>[Signature]</i>
DATE 2000.01.14		

PACKAGE 3	SCALE AS SHOWN	DRAWING No. 1-12	SHEET No.
SLOPE PROTECTION IN POND			

SLOPE PROTECTION IN POND (THANH TRI SIDE)

SCALE : 1/400

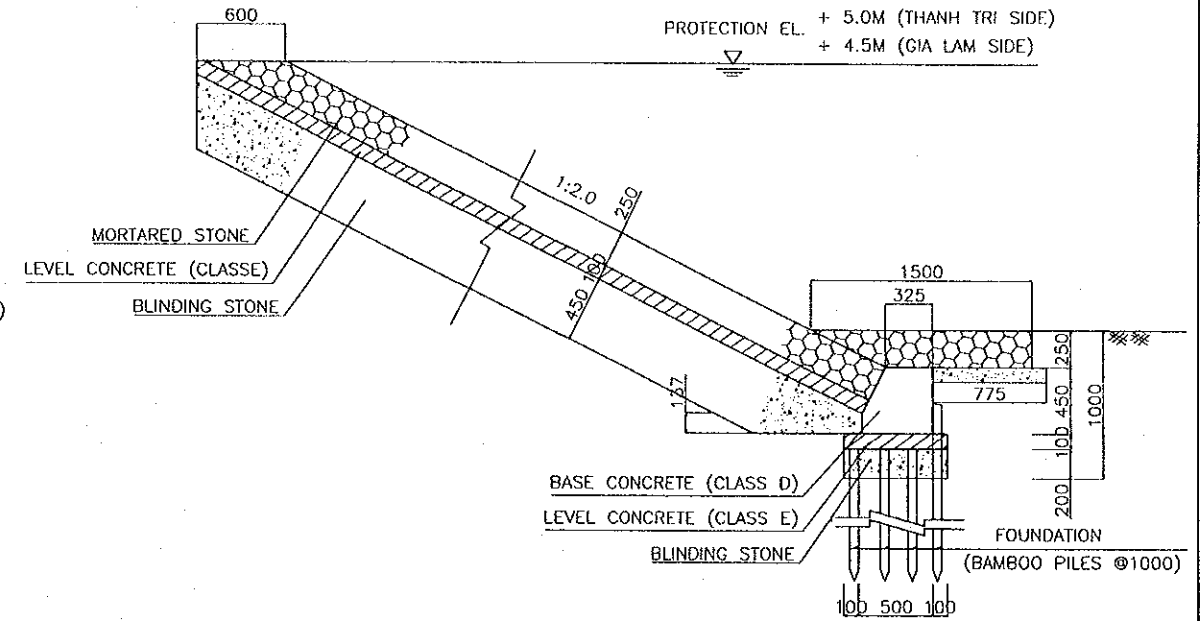


WORK QUANTITY (Per m)

Item	Unit	Quantity	
		H=2.0m	H=3.8m
Concrete (D)	m ³	0.198	0.198
Concrete (E)	m ³	0.610	1.020
Form	m ²	1.140	1.140
Mortared stone	m ³	1.730	2.680
Blinding stone	m ³	2.600	4.410
Bamboo	pieces	4	4
Joint filler	m ²	0.230	0.380

SLOPE PROTECTION DETAILS

SCALE: 1/20



LIST OF SLOPE PROTECTION

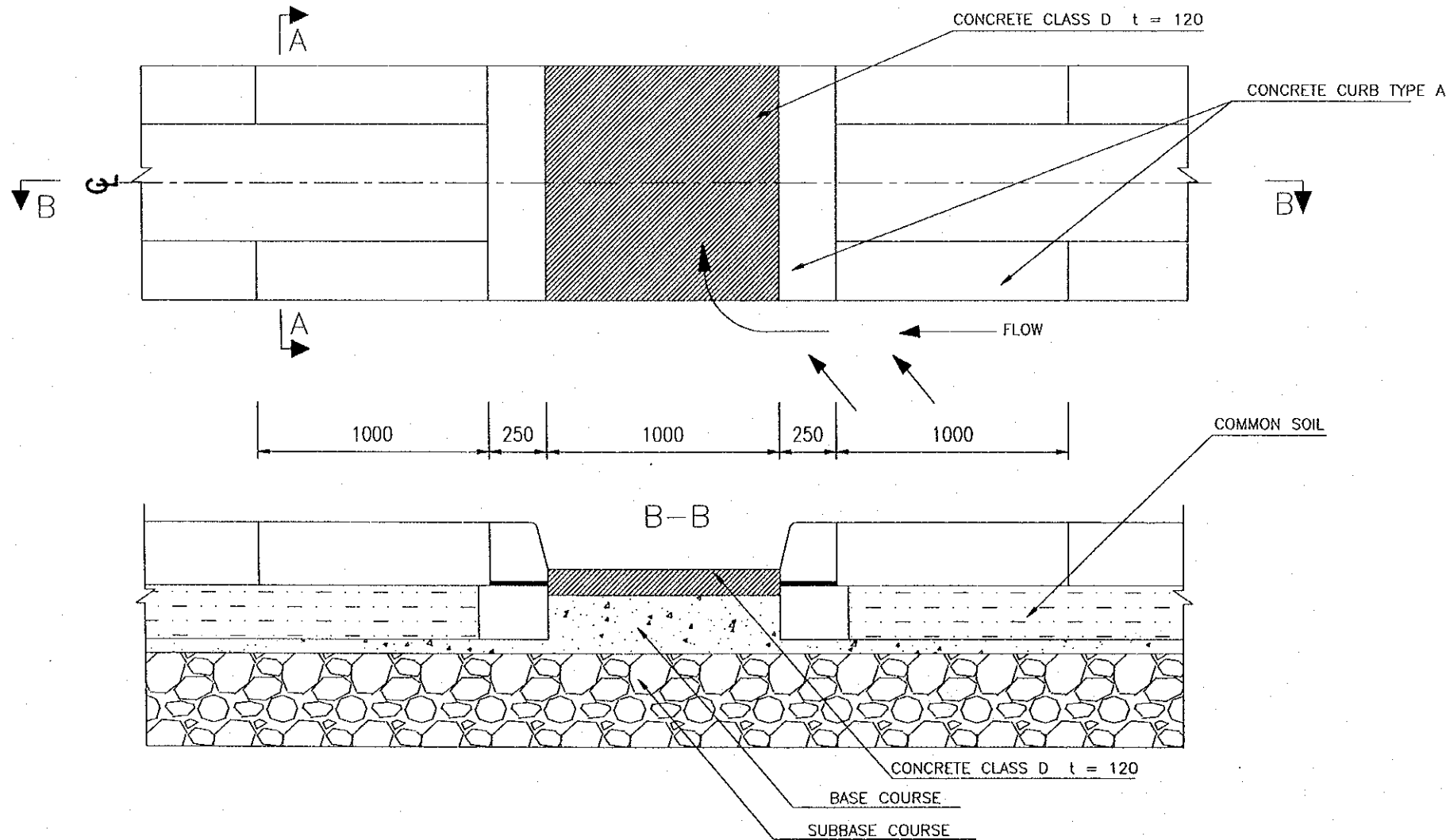
FRONTAGE ROAD STATION	Left or right	Length (m)	Height (m)	Remarks
0+240~0+350	Left	110	2.0	
2+820~3+080	Right	260	2.0	
3+560~3+960	Right	400	2.0	
3+560~3+760	Left	200	2.0	
3+970~4+150	Left	180	2.0	
4+640~4+770	Right	130	3.8	
5+100~5+260	Right	160	2.0	
5+240~5+500	Left	260	2.0	
Total		1.57m	H=2.0m	
		130m	H=3.8m	

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 3	SCALE 1/25	DRAWING No. 1-13	SHEET No.
DETAIL OF MEDIAN OPEN FOR DRAINAGE			

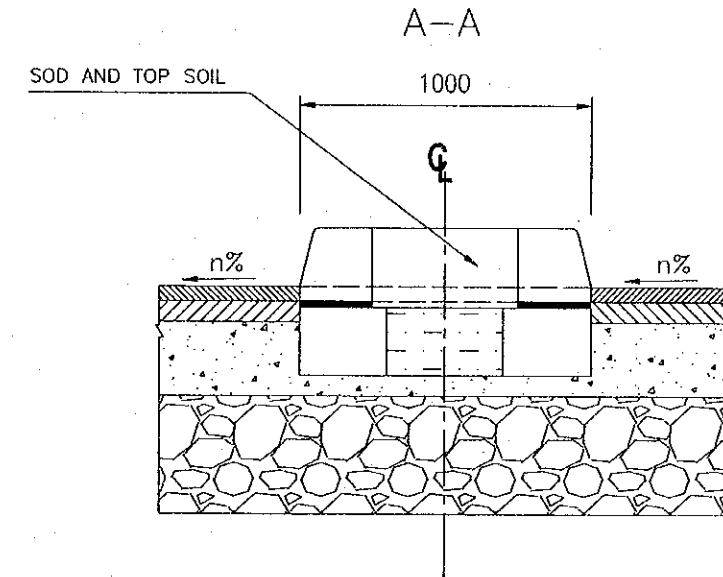
DETAIL OF MEDIAN OPEN FOR DRAINAGE

SCALE 1/25



LOCATION (Pham Van Cau Gie Interchange)

- | |
|--|
| (1) STA .Km 0+400 - 0+520 7 SPOTS (Ramp A, B)
0+400, 0+420, 0+440, 0+460, 0+480, 0+500, 0+520 |
| (2) STA .Km 0+120 - 0+320 11 SPOTS (Ramp E, F)
0+120, 0+140, 0+160, 0.180, 0+200, 0+220,
0+240, 0+260, 0+280, 0+300, 0+320 |

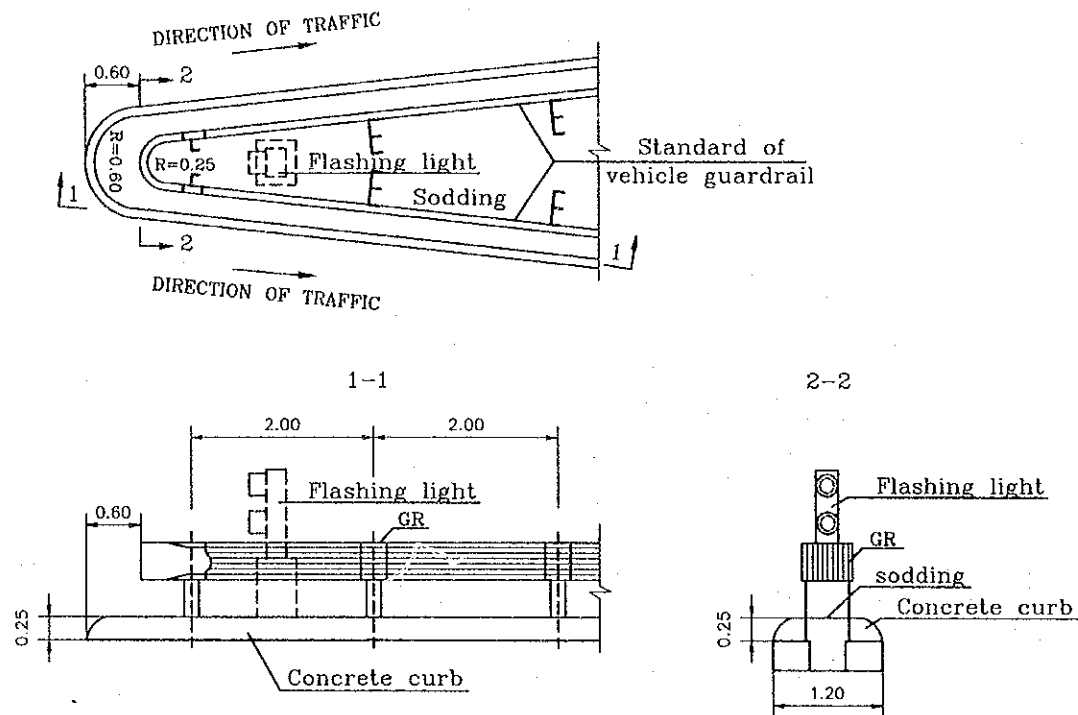


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY S. MATSUDA
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME
PROJECT RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE <i>[Signature]</i>	DATE 2000. 3. 17
CONSULTANT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

PACKAGE 3	SCALE 1/80	DRAWING No. I-14	SHEET No.
NOSE DETAILS			

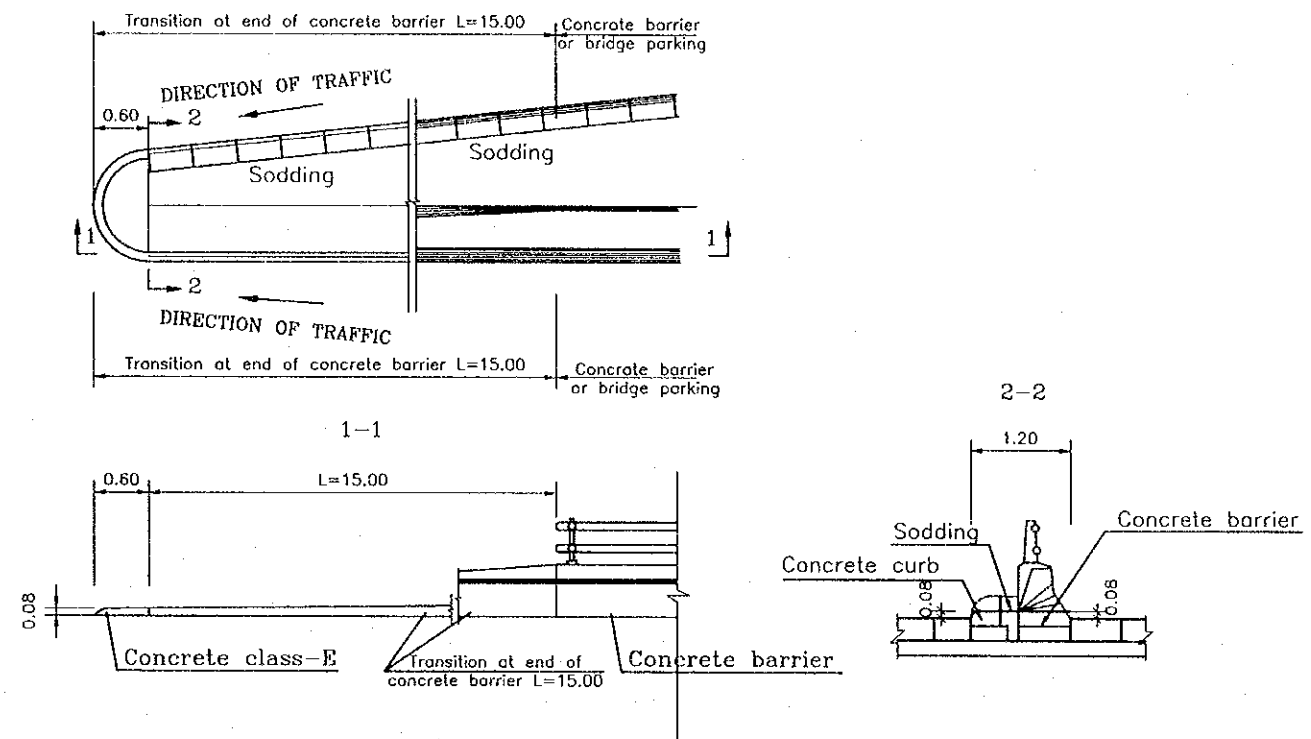
STANDARD OF DIVERGING NOSE

S= 1/80



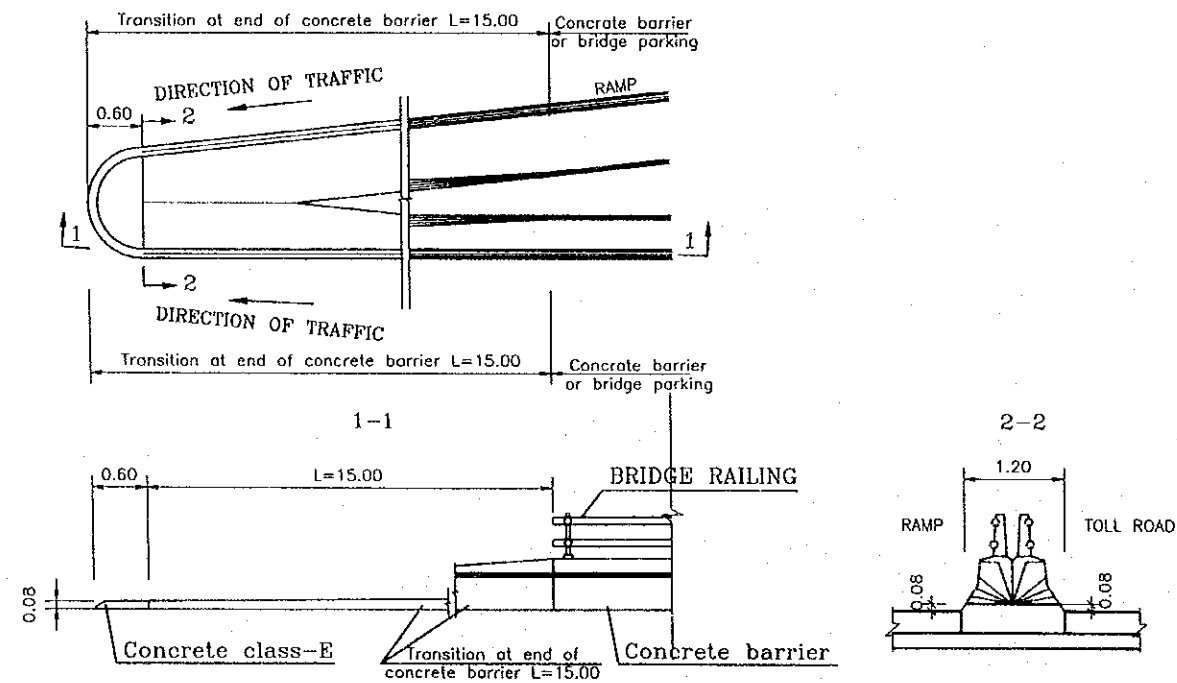
STANDARD OF MERGING NOSE

S= 1/80



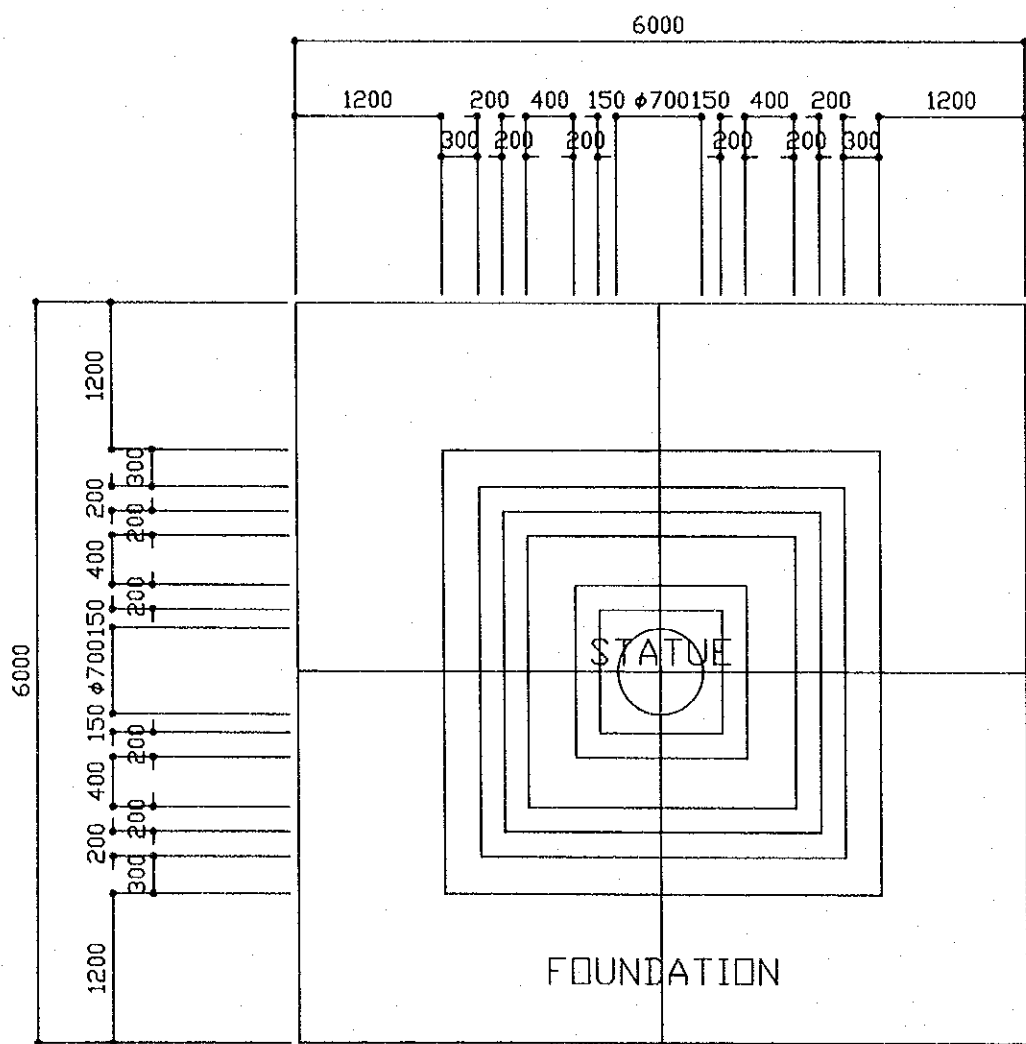
STANDARD OF MERGING NOSE

S= 1/80

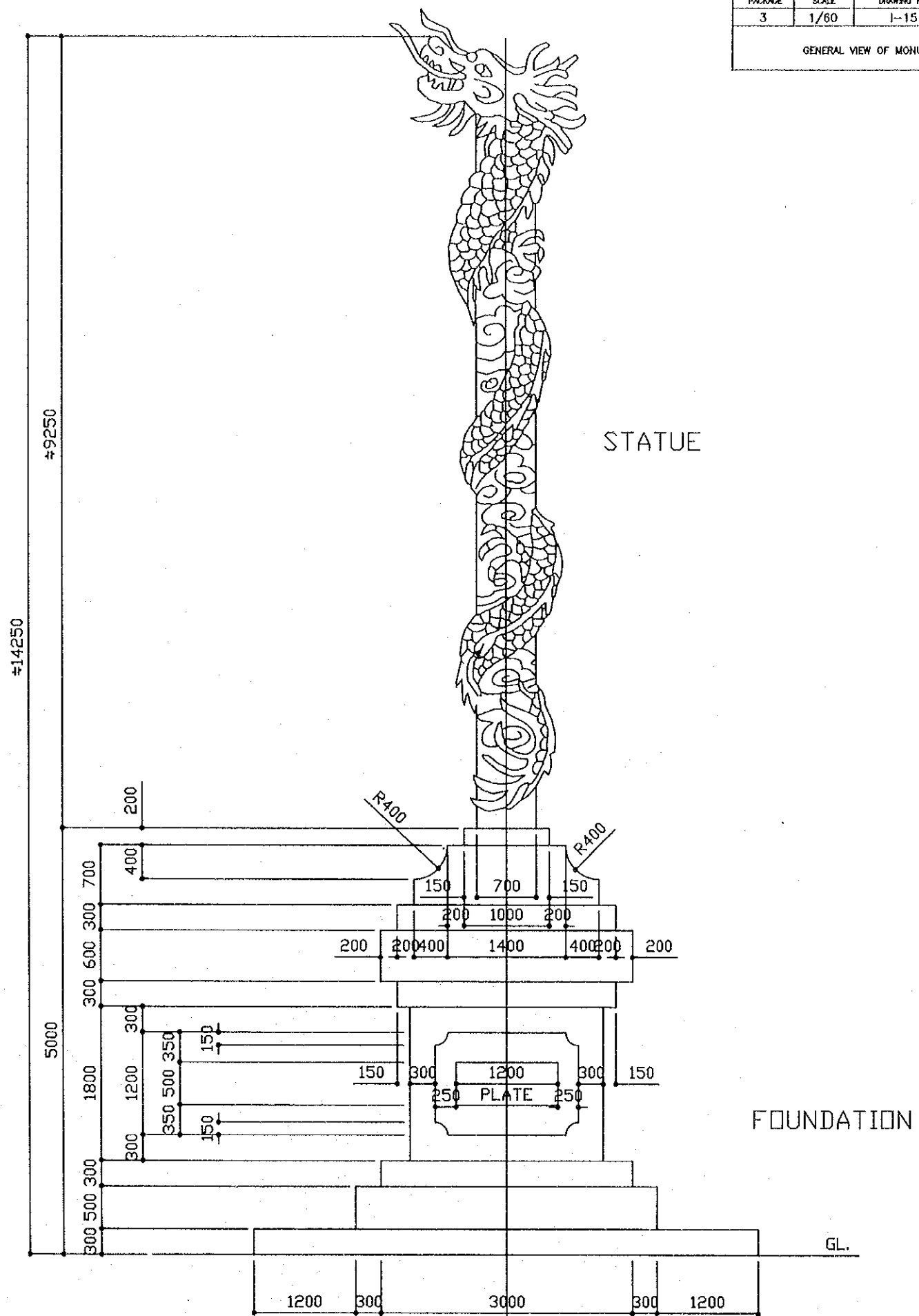


THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIETNAM THANG LONG PROJECTS MANAGEMENT UNIT, MINISTRY OF TRANSPORT		DESIGNED BY	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		NAME	S. WATABE
PROJECT	RED RIVER BRIDGE (THANH TRI BRIDGE) CONSTRUCTION PROJECT	SIGNATURE	<i>[Signature]</i>
COMPLAINT	PACIFIC CONSULTANTS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

PACKAGE	SCALE	DRAWING No.	SHEET No.
3	1/60	I-15	
GENERAL VIEW OF MONUMENT			



PLAN



ELEVATION

FOUNDATION

Vertical line on the left side of the page.

JICA