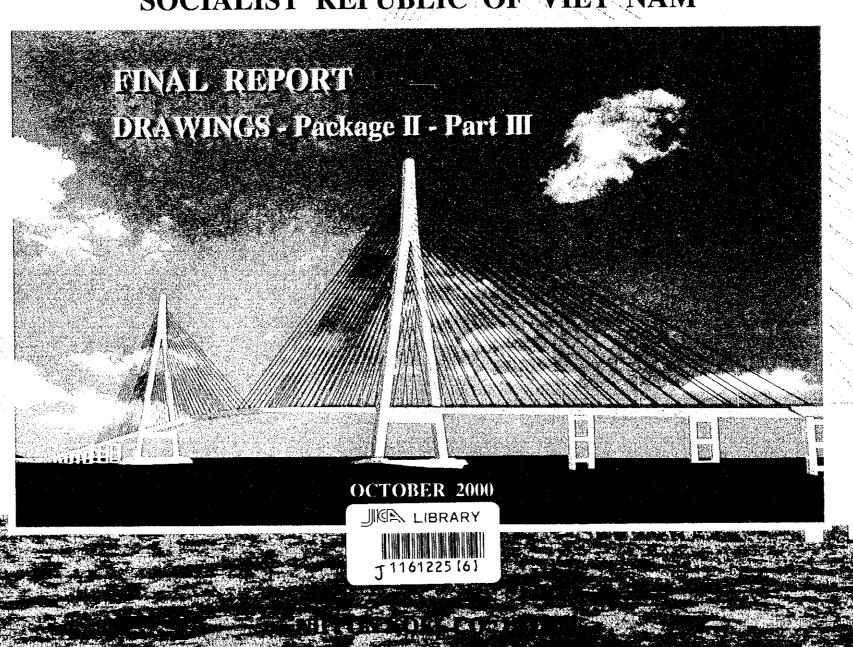
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
MINISTRY OF TRANSPORT
SOCIALIST REPUBLIC OF VIET NAM

THE DETAILED DESIGN ON THE CAN THO BRIDGE CONSTRUCTION IN SOCIALIST REPUBLIC OF VIET NAM



JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
MINISTRY OF TRANSPORT
SOCIALIST REPUBLIC OF VIET NAM

THE DETAILED DESIGN ON THE CAN THO BRIDGE CONSTRUCTION IN SOCIALIST REPUBLIC OF VIET NAM

FINAL REPORT

DRAWINGS - Package II - Part III

OCTOBER 2000

NIPPON KOEI CO., LTD.



THE DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT IN SOCIALIST REPUBLIC OF VIET NAM

CAN THO BRIDGE CONSTRUCTION PROJECT

PACKAGE2

SUPERTRUCTURE OF PC-I GIRDER

OCTOBER - 2000

NIPPON KOEI Co., Ltd.

in association with

TRANSPORT ENGINEERING DESIGN INC. SOUTH

DRAWING LIST(1)

| RAWING No. | DRAWING TITLE | | | | | |
|------------|-------------------------------------|--|--|--|--|--|
| | GENERAL | | | | | |
| P2/GE/0010 | DRAWING LIST(1) | | | | | |
| P2/GE/0020 | DRAWING LIST(2) | | | | | |
| P2/GE/0030 | LOCATION MAP | | | | | |
| P2/GE/0040 | STRUCTURAL NOTE | | | | | |
| P2/GE/0050 | GENERAL VIEW (1) | | | | | |
| P2/GE/0060 | GENERAL VIEW (2) | | | | | |
| P2/GE/0070 | GENERAL COORDINATE OF BRIDGE (1) | | | | | |
| P2/GE/0080 | GENERAL COORDINATE OF BRIDGE (2) | | | | | |
| P2/GE/0090 | GENERAL COORDINATE OF BRIDGE (3) | | | | | |
| | | | | | | |
| | SUPERSTRUCTURE | | | | | |
| APPRO | OACH BRIDGE (VINH LONG SIDE) | | | | | |
| | TMENT1~PIER12(PC I GIRDER) | | | | | |
| P2/AI/0010 | GENERAL ARRANGEMENT OF GIRDER (1) | | | | | |
| P2/AI/0020 | GENERAL ARRANGEMENT OF GIRDER (2) | | | | | |
| P2/AI/0030 | GENERAL ARRANGEMENT OF GIRDER (3) | | | | | |
| P2/A1/0040 | GENERAL ARRANGEMENT OF GIRDER (4) | | | | | |
| P2/AI/0050 | PC TENDON ARRANGEMENT OF GIRDER (1) | | | | | |
| P2/A1/0060 | PC TENDON ARRANGEMENT OF GIRDER (2) | | | | | |
| P2/A1/0070 | PC TENDON ARRANGEMENT OF GIRDER (3) | | | | | |
| P2/AI/0080 | PC TENDON ARRANGEMENT OF DIAPHRAGM | | | | | |
| P2/A1/0090 | BAR ARRANGEMENT OF GIRDER (1) | | | | | |
| P2/AI/0100 | BAR ARRANGEMENT OF GIRDER (2) | | | | | |
| P2/A1/0110 | BAR ARRANGEMENT OF DIAPHRAGM (1) | | | | | |
| P2/AI/0120 | BAR ARRANGEMENT OF DIAPHRAGM (2) | | | | | |
| P2/AI/0130 | BAR ARRANGEMENT OF DECK SLAB (1) | | | | | |
| P2/AI/0140 | BAR ARRANGEMENT OF DECK SLAB (2) | | | | | |
| P2/A1/0150 | BAR ARRANGEMENT OF DECK SLAB (3) | | | | | |
| | | | | | | |
| APPR | OACH BRIDGE (CAN THO SIDE 1) | | | | | |
|] | PIER17~PIER36(PC I GIRDER) | | | | | |
| P2/A1/0160 | GENERAL ARRANGEMENT OF GIRDER (1) | | | | | |
| P2/AI/0170 | GENERAL ARRANGEMENT OF GIRDER (2) | | | | | |
| P2/AI/0180 | GENERAL ARRANGEMENT OF GIRDER (3) | | | | | |
| P2/A1/0190 | GENERAL ARRANGEMENT OF GIRDER (4) | | | | | |
| P2/A1/0200 | GENERAL ARRANGEMENT OF GIRDER (5) | | | | | |
| P2/AI/0210 | GENERAL ARRANGEMENT OF GIRDER (6) | | | | | |
| P2/A1/0220 | GENERAL ARRANGEMENT OF GIRDER (7) | | | | | |
| P2/A1/0230 | GENERAL ARRANGEMENT OF GIRDER (8) | | | | | |

| DRAWING No. | DRAWING SCHEDULE | | | | |
|-------------|-------------------------------------|--|--|--|--|
| P2/A1/0240 | PC TENDON ARRANGEMENT OF GIRDER (1) | | | | |
| P2/AI/0250 | PC TENDON ARRANGEMENT OF GIRDER (2) | | | | |
| P2/A1/0260 | PC TENDON ARRANGEMENT OF GIRDER (3) | | | | |
| P2/A1/0270 | PC TENDON ARRANGEMENT OF GIRDER (4) | | | | |
| P2/AI/0280 | PC TENDON ARRANGEMENT OF GIRDER (5) | | | | |
| P2/A1/0290 | PC TENDON ARRANGEMENT OF GIRDER (6) | | | | |
| P2/AI/0300 | PC TENDON ARRANGEMENT OF GIRDER (7) | | | | |
| P2/AI/0310 | PC TENDON ARRANGEMENT OF GIRDER (8) | | | | |
| P2/A1/0320 | PC TENDON ARRANGEMENT OF DIAPHRAGM | | | | |
| P2/AI/0330 | BAR ARRANGEMENT OF GIRDER (1) | | | | |
| P2/A1/0340 | BAR ARRANGEMENT OF GIRDER (2) | | | | |
| P2/AI/0350 | BAR ARRANGEMENT OF GIRDER (3) | | | | |
| P2/A1/0360 | BAR ARRANGEMENT OF GIRDER (4) | | | | |
| P2/AI/0370 | BAR ARRANGEMENT OF DIAPHRAGM (1) | | | | |
| P2/A1/0380 | BAR ARRANGEMENT OF DIAPHRAGM (2) | | | | |
| P2/A1/0390 | BAR ARRANGEMENT OF DECK SLAB (1) | | | | |
| P2/AI/0400 | BAR ARRANGEMENT OF DECK SLAB (2) | | | | |
| P2/A1/0410 | BAR ARRANGEMENT OF DECK SLAB (3) | | | | |
| P2/AI/0420 | BAR ARRANGEMENT OF DECK SLAB (4) | | | | |
| P2/A1/0430 | BAR ARRANGEMENT OF DECK SLAB (5) | | | | |
| P2/AI/0440 | BAR ARRANGEMENT OF DECK SLAB (6) | | | | |
| | | | | | |
| APPF | OACH BRIDGE (CAN THO SIDE 2) | | | | |
| PIE | R41~ABUTMENT2(PC I GIRDER) | | | | |
| P2/AI/0450 | GENERAL ARRANGEMENT OF GIRDER (1) | | | | |
| P2/A1/0460 | GENERAL ARRANGEMENT OF GIRDER (2) | | | | |
| P2/AI/0470 | PC TENDON ARRANGEMENT OF GIRDER (1) | | | | |
| P2/A1/0480 | PC TENDON ARRANGEMENT OF GIRDER (2) | | | | |
| P2/AI/0490 | PC TENDON ARRANGEMENT OF DIAPHRAGM | | | | |
| P2/A1/0500 | BAR ARRANGEMENT OF GIRDER (1) | | | | |
| P2/AI/0510 | BAR ARRANGEMENT OF GIRDER (2) | | | | |
| P2/A1/0520 | BAR ARRANGEMENT OF DIAPHRAGM (1) | | | | |
| P2/AI/0530 | BAR ARRANGEMENT OF DIAPHRAGM (2) | | | | |
| P2/AI/0540 | BAR ARRANGEMENT OF DECK SLAB (1) | | | | |
| P2/A1/0550 | BAR ARRANGEMENT OF DECK SLAB (2) | | | | |
| P2/AI/0560 | BAR ARRANGEMENT OF DECK SLAB (3) | | | | |
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| DRAWING No. DRAWING TITLE | | | | | | |
|---------------------------|--|--|--|--|--|--|
| SUBSTRUCTURE | | | | | | |
| | ABUTMENT A1 (A2) | | | | | |
| P2/AC/0570 | GENERAL VIEW OF ABUTMENT | | | | | |
| P2/AC/0580 | ABUTMENT A2 REINFORCEMENT ARRANGESHEET 2 | | | | | |
| P2/AC/0590 | ABUTMENT A2 REINFORCEMENT ARRANGESHEET 1 | | | | | |
| P2/AC/0600 | ABUTMENT A2 DETAILD REINFORCEMENT BARS | | | | | |
| P2/AC/0610 | ABUTMENT A1 EARTHWORKS SLOPE PROTECTION | | | | | |
| P2/AC/0620 | ABUTMENT A2 EARTHWORKS SLOPE PROTECTION | | | | | |
| P2/AC/0630 | DETAILS OF APPROACH SLAB | | | | | |
| | PIER No.1 (29,31,34,42) | | | | | |
| P2/AC/0640 | GENERAL VIEW OF PIER No.1 (29,31,34,42) | | | | | |
| P2/AC/0650 | REINFORCEMENT ARRANGEMENT OF PIER No.1 | | | | | |
| P2/AC/0660 | DETAILS REINFORCEMENT BARS OF PIER No.1 | | | | | |
| - | PIER No.2 (3,27,28,30,32,33) | | | | | |
| P2/AC/0670 | GENERAL VIEW OF PIER No.2 (3,27,28,30,32,33) | | | | | |
| P2/AC/0680 | REINFORCEMENT ARRANGEMENT OF PIER No.2 | | | | | |
| P2/AC/0690 | DETAILED REINFORCEMENT BARS OF PIER No.2 | | | | | |
| | PIER No.5 (6,9,21,24,25,35) | | | | | |
| P2/AC/0700 | GENERAL VIEW OF PIER No.5 (6,9,21,24,25,35) | | | | | |
| P2/AC/0710 | REINFORCEMENT ARRANGEMENT OF PIER No.5 | | | | | |
| P2/AC/0720 | DETAILS REINFORCEMENT BARS OF PIER No.5 | | | | | |
| | PIER No.7 (8,22,23) | | | | | |
| P2/AC/0730 | GENERAL VIEW OF PIER No.7 (8,22,23) | | | | | |
| P2/AC/0740 | REINFORCEMENT ARRANGEMENT OF PIER No.7 | | | | | |
| P2/AC/0750 | DETAILS REINFORCEMENT BARS OF PIER No.7 | | | | | |
| | PIER No.10 (11,19,20) | | | | | |
| P2/AC/0760 | GENERAL VIEW OF PIER No.10 (11,19,20) | | | | | |
| P2/AC/0770 | REINFORCEMENT ARRANGEMENT OF PIER No.10 - 1 | | | | | |
| P2/AC/0780 | REINFORCEMENT ARRANGEMENT OF PIER No. 10 - 2 | | | | | |
| P2/AC/0790 | DETAILS REINFORCEMENT BARS OF PIER No.10 | | | | | |
| | PIER No.18 | | | | | |
| P2/AC/0800 | GENERAL VIEW OF PIER No.18 | | | | | |
| P2/AC/0810 | REINFORCEMENT ARRANGEMENT OF PIER No.18 - 1 | | | | | |
| P2/AC/0820 | REINFORCEMENT ARRANGEMENT OF PIER No.18 - 2 | | | | | |
| P2/AC/0830 | DETAILS REINFORCEMENT BARS OF PIER No.18 | | | | | |
| | PIER No.26 (4) | | | | | |
| P2/AC/0840 | GENERAL VIEW OF PIER No.26 (4) | | | | | |
| P2/AC/0850 | REINFORCEMENT ARRANGEMENT OF PIER No.26 | | | | | |
| P2/AC/0860 | DETAILS REINFORCEMENT BARS OF PIER No.26 | | | | | |
| | | | | | | |

| PROJECT NAME |
|----------------------|
| DETAILED DESIGN OF |
| THE CAN THO BRIDGE |
| CONSTRUCTION PROJECT |

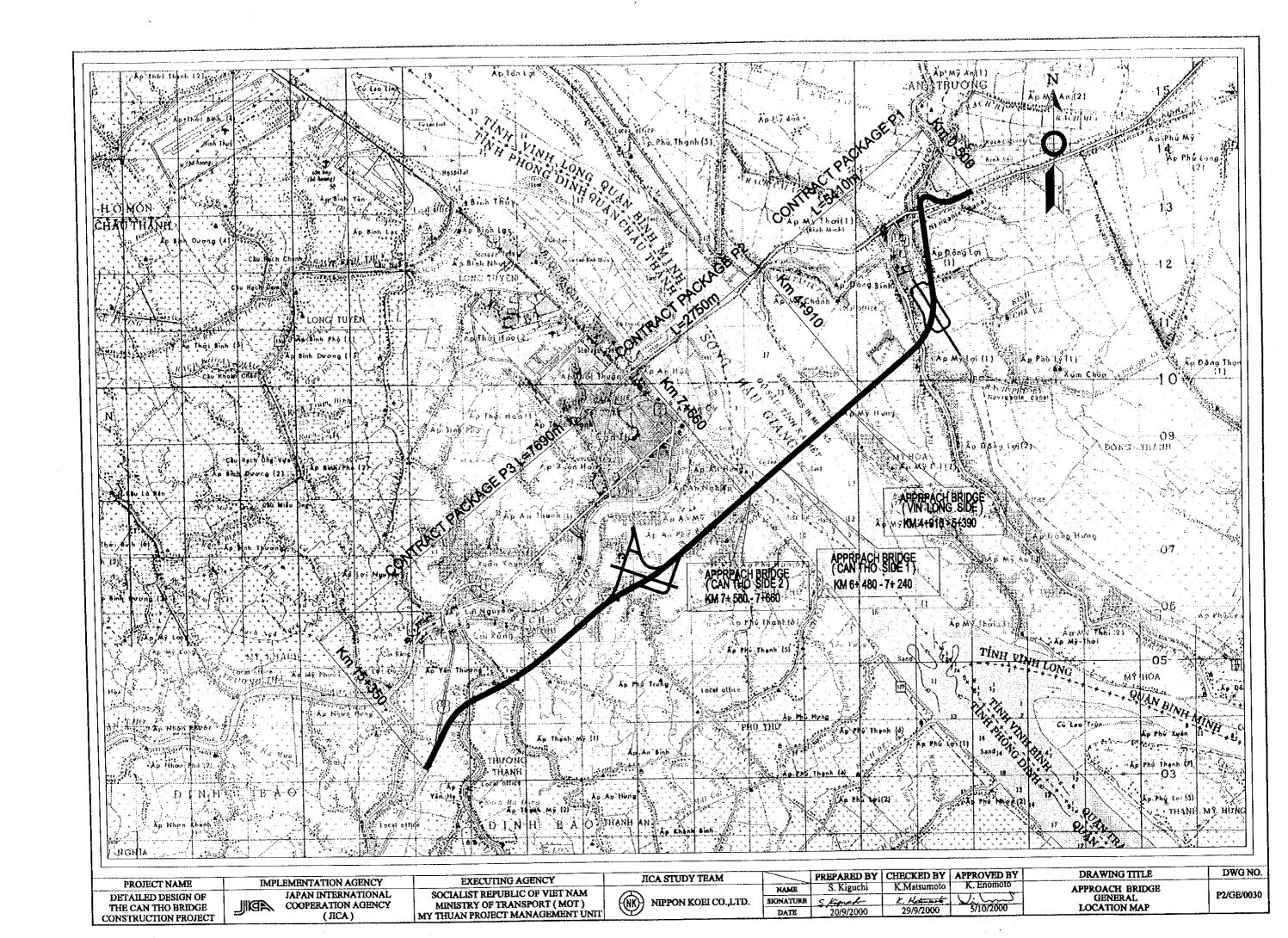
DRAWING LIST(2)

| DRAWING No. | DRAWING TITLE |
|-------------|---|
| | PILE |
| P2/AI/0870 | A - 1 BORED CAST-IN-SITU PILE |
| P2/A1/0880 | A - 2 BORED CAST-IN-SITU PILE \$ 1500mm-L=52m |
| P2/A1/0890 | P - 1 (10,11)BORED CAST-IN-SITU PILE φ 1500mm-L=57m |
| P2/AI/0900 | P - 2 (3,7,8)BORED CAST-IN-SITU PILE φ 1500mm-L=57m |
| P2/AI/0910 | P - 4 BORED CAST-IN-SITU PILE |
| P2/AI/0920 | P - 5 (6,9)BORED CAST-IN-SITU PILE \$1500mm-L=57m |
| P2/AI/0930 | P - 18 BORED CAST-IN-SITU PILE |
| P2/AI/0940 | P - 19 BORED CAST-IN-SITU PILE |
| P2/AI/0950 | P - 20 BORED CAST-IN-SITU PILE \$ 1500mm-L=64m |
| P2/AI/0960 | P - 21 BORED CAST-IN-SITU PILE \$ 1500mm-L=64m |
| P2/AI/0970 | P - 22 BORED CAST-IN-SITU PILE |
| P2/A1/0980 | P - 23 BORED CAST-IN-SITU PILE \$ 1500mm-L=68m |
| P2/AI/0990 | P - 24 BORED CAST-IN-SITU PILE \$ 1500:nm-L=69m |
| P2/AI/1000 | P - 25 BORED CAST-IN-SITU PILE |
| P2/AI/1010 | P - 26 BORED CAST-IN-SITU PILE \$ 1500mm-L=68m |
| P2/AI/1020 | P - 27 (28) BORED CAST-IN-SITU PILE & 1500mm-L=71m |
| P2/AI/1030 | P - 29 BORED CAST-IN-SITU PILE |
| P2/AI/1040 | P - 30 (32) BORED CAST-IN-SITU PILE |
| P2/A1/1050 | P - 31 BORED CAST-IN-SITU PILE |
| P2/AI/1060 | P - 33 BORED CAST-IN-SITU PILE |
| P2/A1/1070 | P - 34 BORED CAST-IN-SITU PILE φ 1500mm-L=75m |
| P2/A1/1080 | P - 35 BORED CAST-IN-SITU PILE \$ 1500mm-L=75m |
| P2/AI/1090 | P - 42 BORED CAST-IN-SITU PILE ¢ 1500mm-L=61m |
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| DRAWING No. | DRAWING SCHEDULE |
|-------------|--|
| | MISCELLANEOUS |
| P2/MC/0010 | DETAILS OF BEARING (1) |
| P2/MC/0020 | DETAILS OF BEARING (2) |
| P2/MC/0030 | DETAILS OF BEARING (3) |
| P2/MC/0040 | DETAILS OF BEARING (4) |
| P2/MC/0050 | DETAILS OF BEARING (5) |
| P2/MC/0060 | DETAILS OF BEARING (6) |
| P2/MC/0070 | DETAILS OF BEARING (7) |
| P2/MC/0080 | DETAIL OF EXPANSION JOINT |
| P2/MC/0090 | BAR ARRANGEMENT OF BARRIER (1) |
| P2/MC/0100 | BAR ARRANGEMENT OF BARRIER (2) |
| P2/MC/0110 | BAR ARRANGEMENT OF BARRIER (3) |
| P2/MC/0120 | BAR ARRANGEMENT OF BARRIER (4) |
| P2/MC/0130 | BAR ARRANGEMENT OF CENTRAL REVERSE |
| P2/MC/0140 | TEMPORARY NAVIGATION MARKER BUOYS SYSTEM |
| P2/MC/0150 | PERMANENT NAVIGATIONAL BRIDGE LIGHT AND |
| | MARKER BUOYS SYSTEM |
| P2/MC/0160 | ROAD LIGHTING |
| P2/MC/0170 | ROAD LIGHTING LAYOUT (1) |
| P2/MC/0180 | ROAD LIGHTING LAYOUT (2) |
| P2/MC/0190 | ROAD LIGHTING LAYOUT (3) |
| P2/MC/0200 | ROAD LIGHTING LAYOUT (4) |
| P2/MC/0210 | POWER RECEIVING SYSTEM |
| P2/MC/0220 | DETAIL OF POWER RECEIVING SYSTEM |
| P2/MC/0230 | LAYOUT OF DRAINAGE (1) |
| P2/MC/0240 | LAYOUT OF DRAINAGE (2) |
| P2/MC/0250 | LAYOUT OF DRAINAGE (3) |
| P2/MC/0260 | LAYOUT OF DRAINAGE (4) |
| P2/MC/0270 | DETAIL OF DRAINAGE FACILITY |
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| PROJECT NAME | |
|----------------------|---|
| DETAILED DESIGN OF | |
| THE CAN THO BRIDGE | l |
| CONSTRUCTION PROJECT | ı |

I.GENERAL



STRUCTURAL NOTES

1. GENERAL

- 1.1. UNLESS OTHERWISE NOTED THESE NOTES ARE APPLIED TO ALL DRAWINGS.
- 1.2. THE SCALE INDICATED IN DRAWINGS IS FOR 'A3' SIZE.
- 1.3. ALL CHAINAGES, COORDIANATES, ELEVATIONS ARE IN METRES.
 ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE INDICATED.
- 1.4. The elevation system is refered to the mean sea datum elevation at hondau do son. Coordinate refer to the national crid system.

2. DESIGN CRITERIA & LOADS

2.1. DESIGN STANDARDS:

AASHTO 1998 — LRFD BRIDGE DESIGN SPECIFICATIONS
 AASHTO GUIDE SPECIFICATIONS FOR DESIGN AND CONSTRUCTION

OF SEGMENTAL CONCRETE BRIDGES

- JAPANESE HICHWAY AND BRIDGE STANDARDS 1996

VIETNAMESE HIGHWAY BRIDGES STANDARDS 1979

2.2. DESIGN LOADS:

- B_LOADING IN ACCORDANCE WITH JAPANESE CODE

-- BASIC WIND VELOCITY : 160 KM/H -- AASHTO LRFD 98 -- LATERAL SEISMIC RESPONSE COEFFICIENT : 0.12

: ±15°C - UNIFORM TEMPERATURE - TEMPERATURE DIFFERENTIAL

3, CONCRETE

3.1. UNLESS OTHERWISE INDECATED CONCRETE SHALL BE OF THE FOLLOWING GRADES BASED ON

| CONCRETE CLASS | STRENGTH fc MPa | kind of structure in use |
|-------------------|--------------------|--|
| В | 40 | PC BOX GRDER, 1-GRDER |
| ¢ | 35 | DIAPHRACM FOR PC-I GIRDER |
| Ð | 30 | IN-SITU DECK SLAB, BORED PILE |
| E | 24 | PIER, ABUTMENT, PILE CAP, RETAINING WALL, PARAPET, BARRIER, KERB |
| G | 15 | LEAN CONCRETE |

- 3.2. WHEREVER FORMS ARE NOT USED REINFORCED CONCRETE SHALL BE PLACED AGAINST 100mm MINIMUM THICKNESS LEAN CONCRETE.
- 3.3. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 20x20mm UNLESS OTHERWISE NOTED.
- 3.4, ALL CONSTRUCTION JOINTS ARE TO BE LOCATED AS SHOWN ON THE DRAWINGS OR AS ENGINEER'S

4. REINFORCEMENT

- 4.1. REINFORCEMENT SHALL BE DEFORMED, EXCEPT THAT PLAIN BARS OR PLAIN WIRE MAY BE USED FOR SPIRALS, HOOPS, AND WIRE FABRIC.
- 4.2. REINFORCEMENT SHALL BE SD390 OR EQUIVALENT. PLAIN ROUND BAR WITH $f_X(min)$ 250 MPa and high yield deformed bars with yield strength not less than $f_X(min)$ 390 MPa shall be used.
- 4.3. REINFORCEMENT IS NOTED ON THE DRAWINGS AS FOLLOWS:

| • | (0) | D25 - | 25146 | | | |
|-------------|----------|-------|-------|--------|----|-----|
| NAME OF BAR | \equiv | J_ | | LENGTH | 0F | BAF |

4.4. ALL REINFORCEMENTS ARE SHOWN AS

4.5. SPLICES IN ADJACENT BARS SHALL BE STAGGERED EXCEPT WHERE NOTED ON THE DRAWNGS. SPLICES OTHER THAN THOSE SHOWN ON THE DRAWNGS MAY ONLY BE MADE WITH THE ENGINEER'S

4. REINFORCEMENT (CONTINUED)

- 4.6. REINFORCEMENTS INDECATED AS RANDOM LENGTH MAY BE LAP SPLICED AS NECESSARY SUBJECT TO THE FOLLOWING CONDITIONS:

 - A) LAP SPLICES IN ADJACENT BARS SHALL BE STAGGERED

 B) MINIMUM LAP LENGTHS SHALL BE IN ACCORDANCE WITH AASHTO LRFD 1998, EXCEPT

 BORED PILE SHALL BE 40 BAR DIAMETERS

 C) NOT MORE THAN ONE BAR PER LINE IS TO BE SHORTER THAN 12 METRES FOR ANY DIAMETER
- 4.7. UNLESS OTHERWISE INDECATED ON THE DRAWINGS, THE MINIMUM COVER TO ANY REINFORCEMENT SHALL BE AS FOLLOWS:

75mm Bored Pile, retaining wall & abutment 50mm Pile cap, deck slab, pier & abutment, parapet, kerb, approach slab, etc... Tolerance on cover is $\pm/-5$ mm

5. PRESTRESSING

5.1. NOMINAL DIAMETER, YIELD AND TENSILE STRENGTH OF PRESTRESSED TENDON ARE SPECIFIED AS FOLLOWS:

| UTILIZATION | HOMINAL DIAMETER (inm) | TENSILE Strength (MPQ) | YIELD Strength (MPa) | JACKING Force (kn) |
|------------------|--------------------------------|------------------------------|----------------------------|----------------------------|
| INTERNAL CABLE | 12\$12.7 | 1860 | 1570 | 1650 |
| transverse cable | 4\$12.7 | 1810 | 1570 | 550 |

- 5.2. PRESTRESSED TENDONS SHALL BE FORMED FROM THE STRANDS OF 12.7mm DIAMETER MADE BY 7 LOW RELAXATION WIRES GRADE 270 CORRESPONDING WITH ASTM A416M. THE ACTUAL TENDON SIZES AND INITIAL PRESTRESSED FORCE ARE GIVEN ON THE DETAIL DRAWINGS.
- 5.3. PRESTRESSED SYSTEMS TO BE ADOPTED SHALL BE IN ACCORDANCE WITH THE ENGINEER'S APPROVAL
- 5.4. DUCTS FOR INTERNAL TENDONS SHALL BE SEMI-RIGID GALVANISED SHEATHING UNLESS OTHERWSE NOTED AND SHALL BE RIGIDLY SUPPORTED AT NOT MORE THAN 750mm FROM CENTRES.
- 5.5. THE METHOD TO FIX THE DUCTS AND THE METHOD OF JOINTING AND SEALING OF DUCTS AT CONSTRUCTION
- 5.6. TENDON PROFILES ARE SPECIFIED TO THE CENTER OF SHEATHING. THE TENDON ARE TO BE PLACED TO SMOOTH PROFILES PASSING THROUGH THE SPECIFIED POINTS.
- 5.7. EACH TENDON SHALL BE KEPT STRAIGHT FOR A MINIMUM LENGTH OF 1000mm FROM ANCHORAGE FACES.
- 5.8. GROUTING POINTS SHALL BE PROVIDED AT ALL CROWN POINTS, SAG POINTS, ANCHORAGES AND DEVIATORS.

6. WATERPROOF

- 6.1. ALL REINFORCED CONCRETE SURFACES IN CONTACT WITH BACKFILL SHALL BE COATED WITH TWO COATS OF BITUMINOUS MEMBRANE.
- 6.2. THE BRIDGE DECK SHALL BE WATERPROOFED WITH APPROVED PROPRIETARY WATERPROOFING SYSTEM IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.

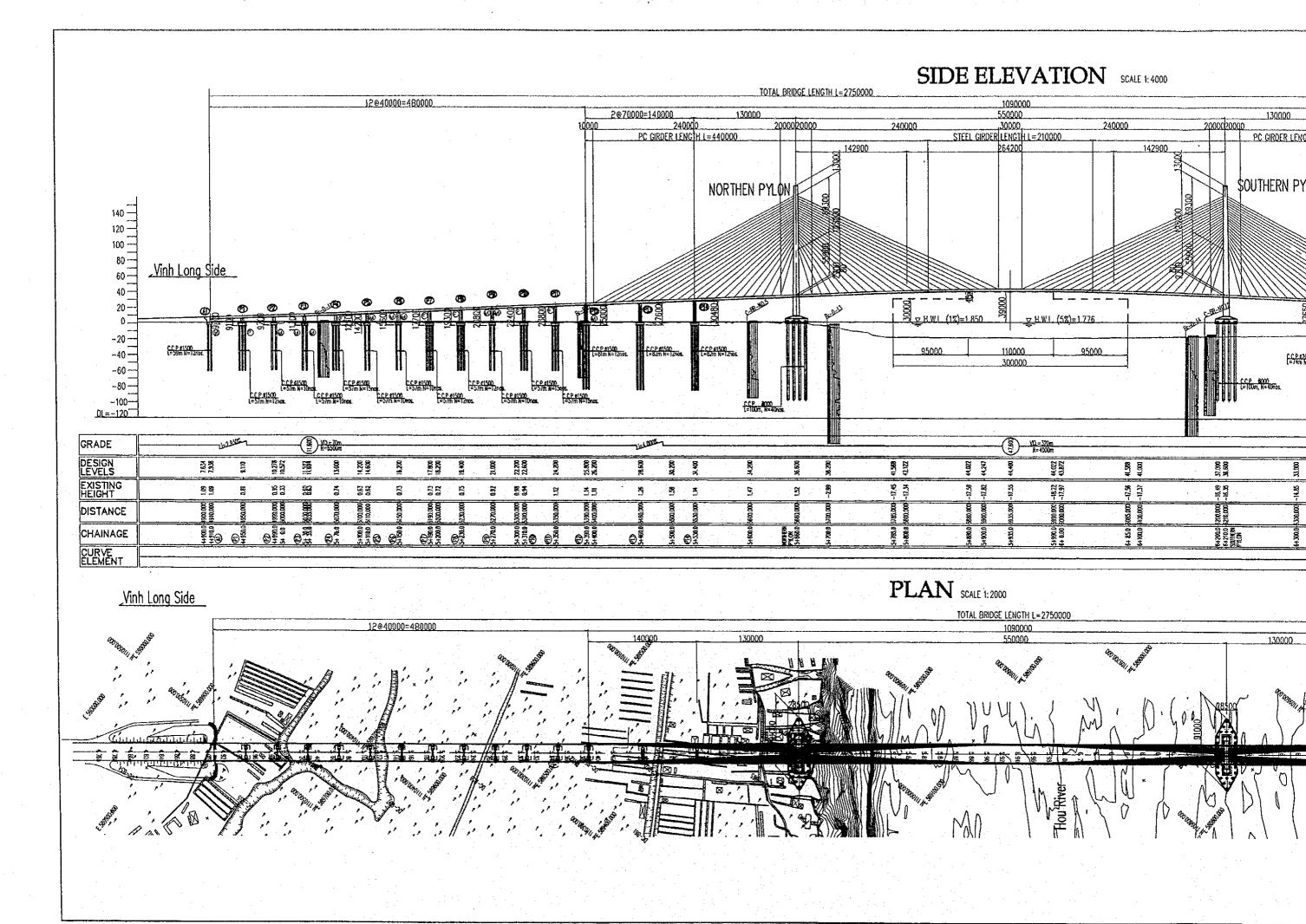
7. SUPERSTRUCTURE

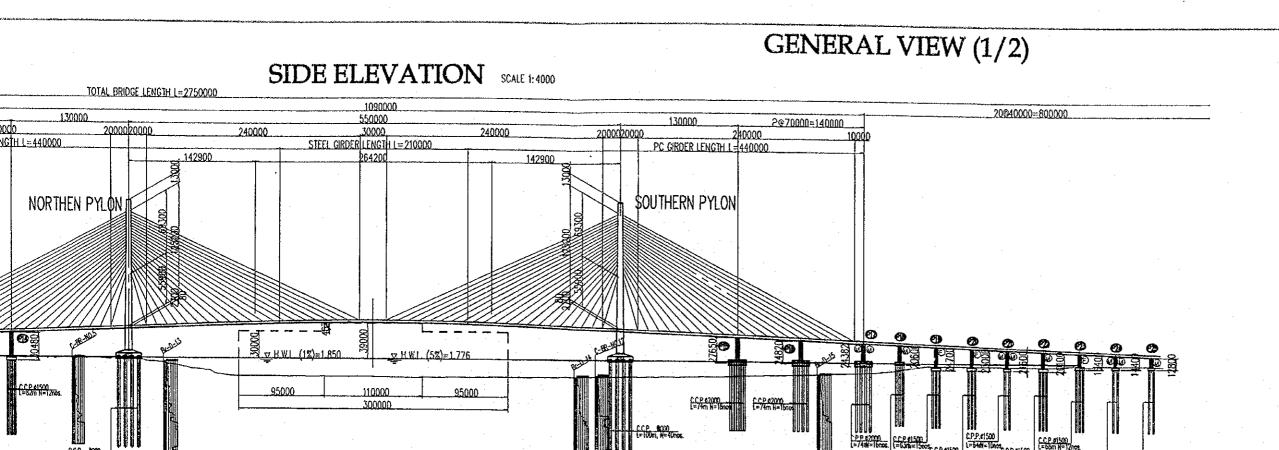
- 7.1. SUPERSTRUCTURE IS DESIGNED ON THE BASIS OF CONSTRUCTION SEQUENCE DETAILED ON THE DRAWINGS. ANY CHANGES TO THE CONSTRUCTION SEQUENCE WILL REQUIRE A RE-DESIGN OF THE BRIDGE.
- 7.2. THE SUPERSTRUCTURE DESIGN IS BASED ON THE USE OF INTERNAL PRESTRESSING WITH THE FOLLOWING PARAMETERS:

| COEFFICIENT OF FRICTION - 1/RAD | 0.25 |
|---|-------|
| WOBBLE FACTOR K - 1/m (FOR INTERNAL ONLY) | 0.004 |
| PULL-IN | 5 mm |
| RELATIVE HUMIDITY | 85% |

7.3. ANCHOR BAR SHALL BE CONFORMING TO THE REQUIREMENTS OF \$\$400 OF JIS G3101.

| Г | PROJECT NAME | IMPLEMENTATION AGENCY | EXECUTING AGENCY | JICA STUDY TEAM | | PREPARED BY | CHECKED BY | APPROVED BY | DRAWING TITLE | DWG NO. |
|---|----------------------|-----------------------|----------------------------------|---------------------------|-----------|-------------|-------------|-------------|------------------|------------|
| 上 | DETAILED DESIGN OF | JAPAN INTERNATIONAL | SOCIALIST REPUBLIC OF VIET NAM | A | NAME | S. Kiguchi | K.Matsumoto | K. Enomoto | APPROACH BRIDGE | |
| 1 | THE CAN THO BRIDGE | COOPERATION AGENCY | MINISTRY OF TRANSPORT (MOT) | (NK) NIPPON KOEI CO.,LTD. | SIGNATURE | 5 Kimah | K. Hatunst | Ulling | GENERAL | P2/GE/0040 |
| 1 | CONSTRUCTION PROJECT | (JICA) | MY THUAN PROJECT MANAGEMENT UNIT | 9) | DATE | 20/9/2000 | 29/9/2000 | 5/10/2000 | STRUCTURAL NOTES | |





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PLAN SCALE 1: 2000

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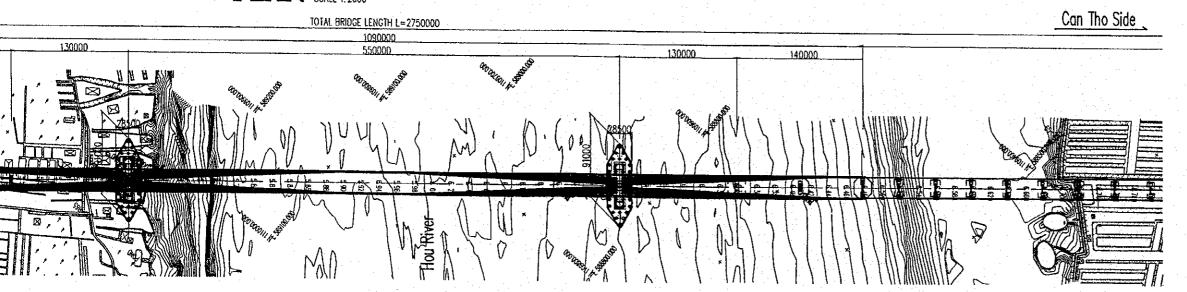
5

44,022

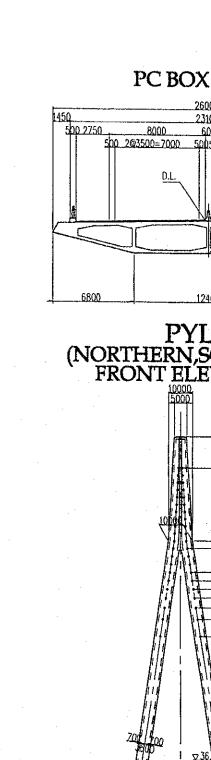
VO. = 120m R= 4000m

1,588

1000



5+200.0 5+210.0 00.016.80



PROJECT NAME
DETAILED DESIGN OF
THE CAN THO BRIDGE
CONSTRUCTION PROJECT

IMPLEMENTATION AGENCY

JAPAN INTERNATIONAL

COOPERATION AGENCY

(JICA)

된 보 1.776

SUPERSTRUCTURE SCALE 1: 300

MAIN BRIDGE

PC BOX GIRDER

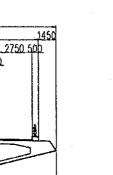
23100

600 8000 500500 293500=7000 500

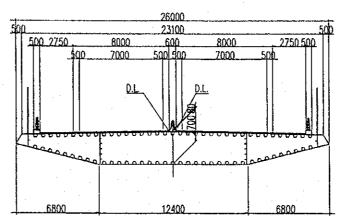
8000

500 2@3500=7000

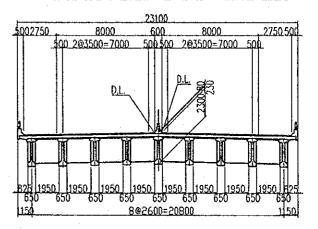
500.2750



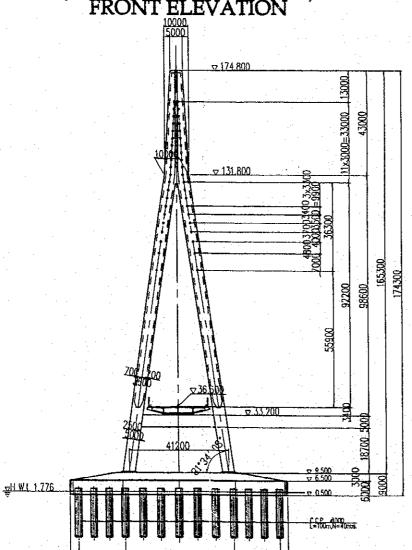
STEEL BOX GIRDER



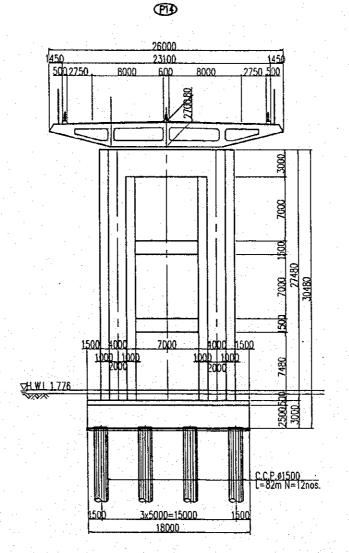
APPROACH BRIDGE CONNECTED PC I GIRDER



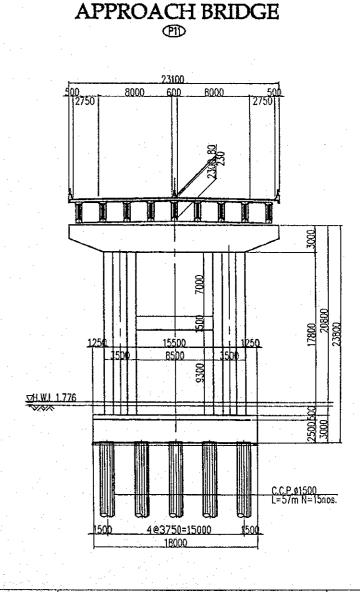
PYLON SCALE 1:1500 (NORTHERN, SOUTHERN) FRONT ELEVATION



MAIN BRIDGE



SUBSTRUCTURE SCALE 1:400



| PROJECT NAME |
|----------------------|
| DETAILED DESIGN OF |
| THE CAN THO BRIDGE |
| CONSTRUCTION PROJECT |

92

Can Tho Side

| IMP | EMENTATION AGENCY |
|-----|--|
| | JAPAN INTERNATIONAL COOPERATION AGENCY |
| J | (JICA) |

EXECUTING AGENCY
SOCIALIST REPUBLIC OF VIET NAM
MINISTRY OF TRANSPORT (MOT)
MY THUAN PROJECT MANAGEMENT UNIT

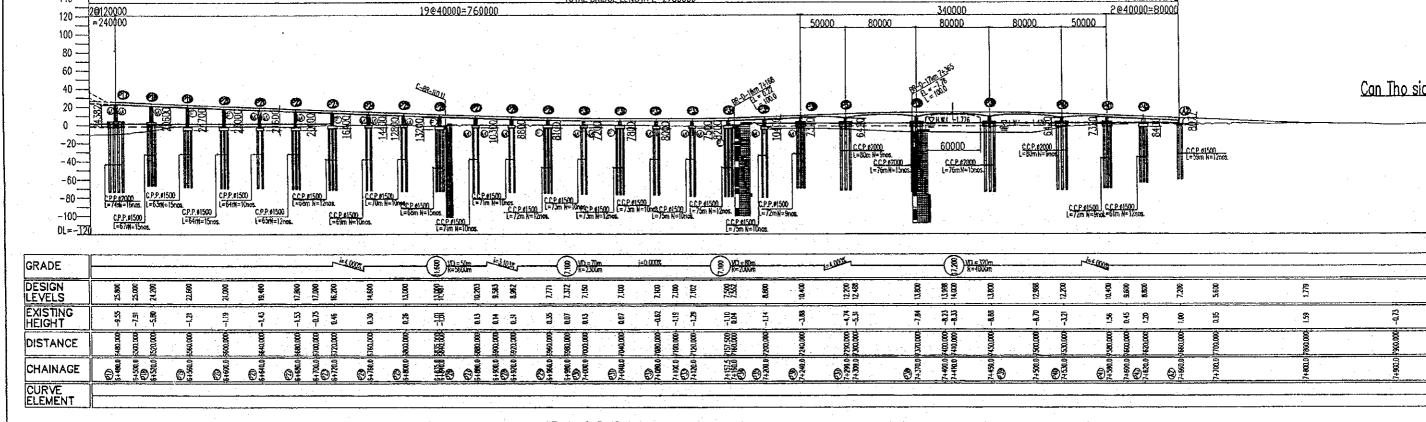
| . P | | | | |
|-----|-----|-----|------|---|
| NIP | PON | KOE | CO.L | T |
| | | | - 4 | |

JICA STUDY TEAM

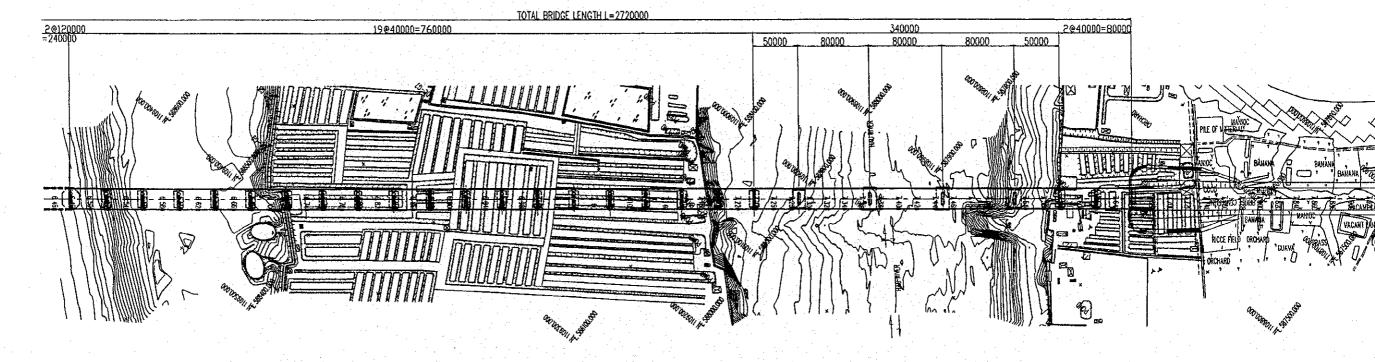
| | FREFARED DI | CURCKED DI | APPROVED 51 |
|--------|-------------|--------------|-------------|
| NAME | S. Kiguchi | K.Matsumoto | K. Enemote |
| NATURE | 5. Kinah | K. Hetrumoto | 1. |
| DATE | 20/9/2000 | 29/9/2000 | 5/10/2000 |
| | | | |

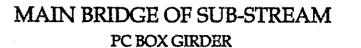
SIDE ELEVATION SCALE 1:4000

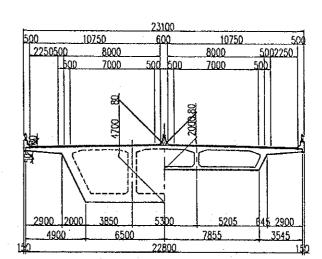
TOTAL BRIDGE LENGTH L=2750000

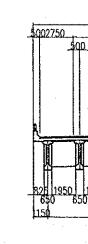


PLAN SCALE 1: 2000

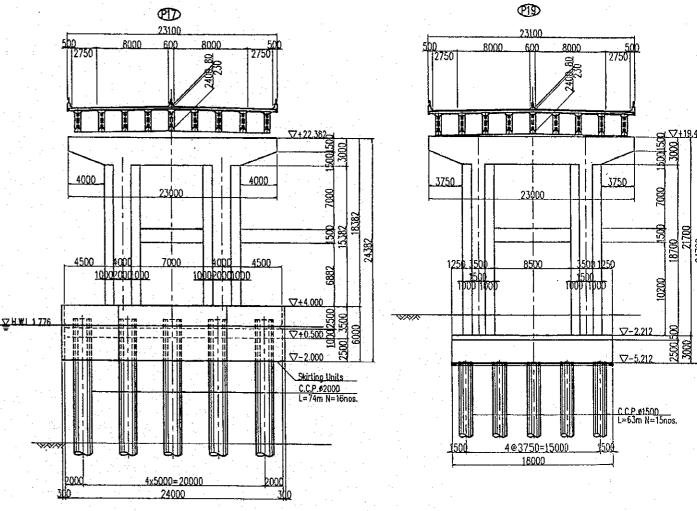








SUBSTRUCT



| | PROJECT NAME |
|---|----------------------|
| | DETAILED DESIGN OF |
| | THE CAN THO BRIDGE |
| - | CONSTRUCTION PROJECT |

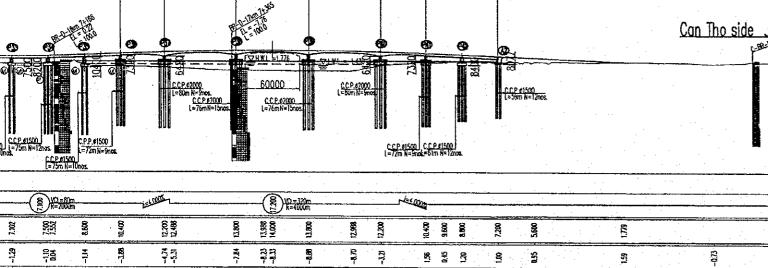
IMPLEMENTATION AGENCY
JAPAN INTERNATIONAL
COOPERATION AGENCY

EXECUTING AGENCY SOCIALIST REPUBLIC OF VIET NAM MINISTRY OF TRANSPORT (MOT) MY THUAN PROJECT MANAGEMENT UNIT

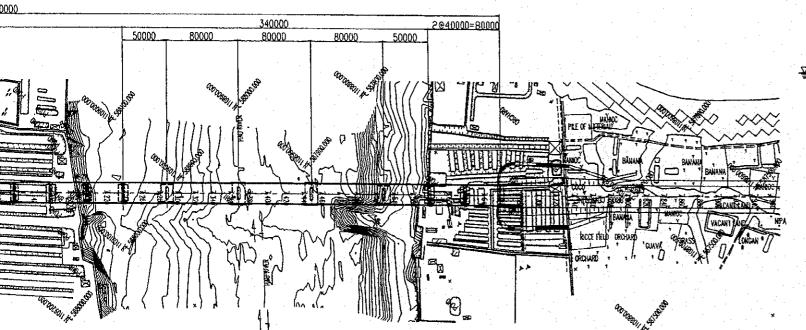
50000

80000

1:4000



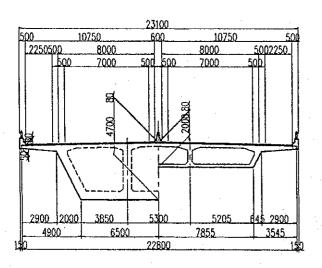
50000



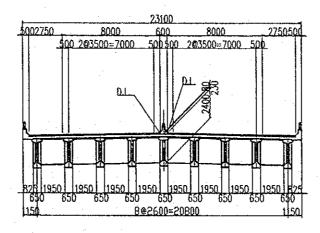
AL VIEW (2/2)

SUPERSTRUCTURE SCALE 1: 300

MAIN BRIDGE OF SUB-STREAM PC BOX GIRDER



APPROACH BRIDGE PC BOX GIRDER



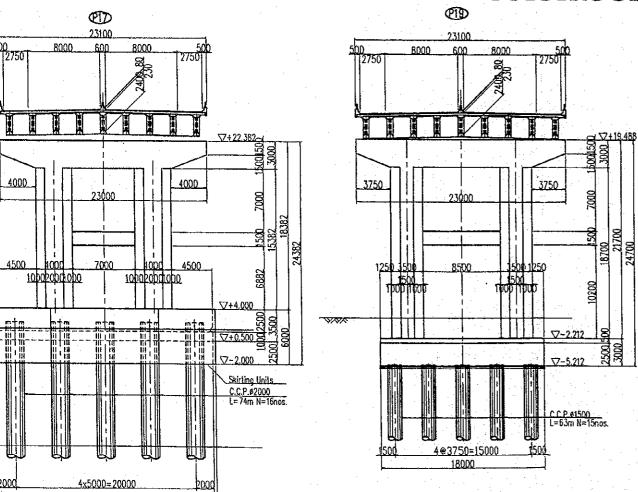
DESIGN CRITERIA

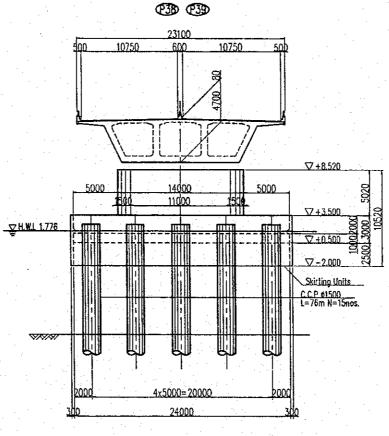
| HYBRID CABLE STAYED BRIDGE |
|--|
| L≈1090.000m |
| 2070m+130m+550m+130m+2@70m |
| CARRIAGE WAY WDTH=21.5m (10.75m+10.75m) |
| B-LIVE LOAD |
| i=20/(L+50) |
| Kh=0.12 |
| 90' 00'00' |
| R=∞ |
| 4.0% V.C.L.=320m |
| |

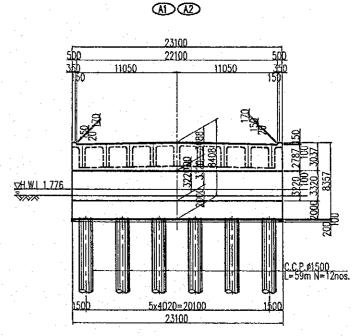
MATERIALS

| | TATU | | ريد |
|---|----------|------------------|----------------------------------|
| | | GIRDER | øck=50MPa |
| | | PYLON | ock=40MPa |
| į | CONCRETE | PILECAP OF PYLON | ock=30MPa |
| | | SUBSTRUCTURE | øck=25MPa |
| ĺ | | | ock=30MPa |
| | PC STEEL | GRDER | 12S15.2B(SWPR7B),PC Bar Dia.32mm |
| | ru Siere | STAY CABLE | 15.2B (SWPR7B) |
| | STEEL | GRDER | SS400,SMA400,SMA490 |
| | | | |

SUBSTRUCTURE SCALE 1:400







| PROJECT NAME | IMPI. | EMEN |
|--|-------|---------------|
| DETAILED DESIGN OF THE CAN THO BRIDGE CONSTRUCTION PROJECT | | JAPAN COOP |

IMPLEMENTATION AGENCY

JAPAN INTERNATIONAL

COOPERATION AGENCY

(JICA)

EXECUTING AGENCY
SOCIALIST REPUBLIC OF VIET NAM
MINISTRY OF TRANSPORT (MOT)
MY THUAN PROJECT MANAGEMENT UNIT

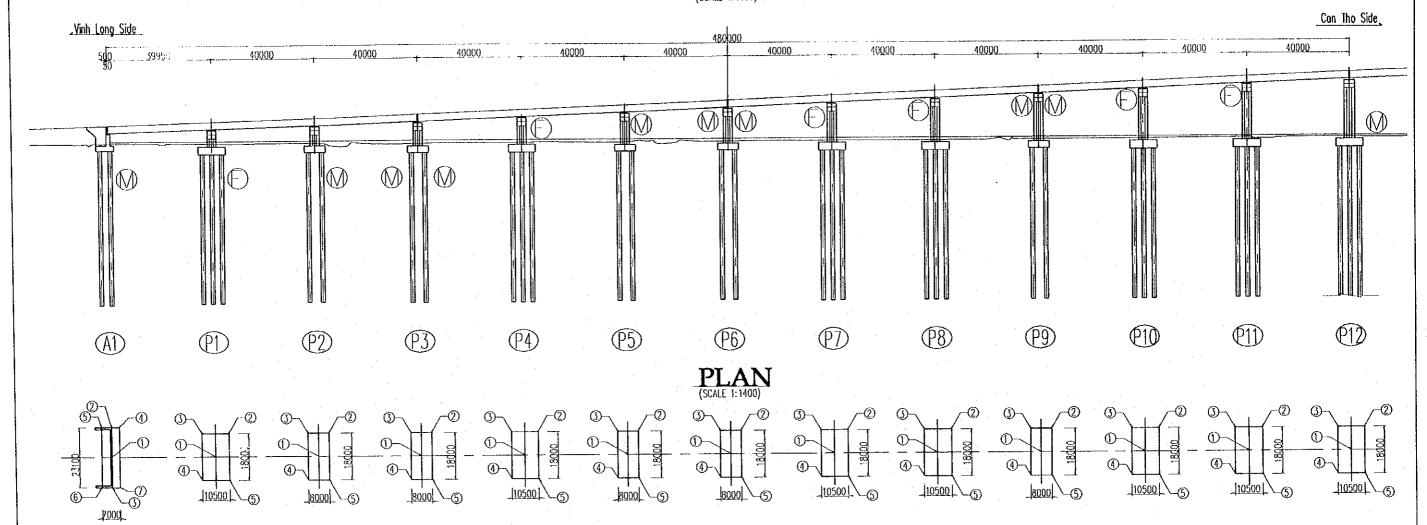
JICA STUDY TEAM

NIPPON KOEI CO.,LTD.

DRAWING TITLE DWG NO.

CABLE STAYED BRIDGE
GENERAL P2/GE/000
GENERAL VIEW (2)

SIDE ELEVATION (SCALE 1:1400)



COORDINATES TABLE

| F | T | ····· | . 0 | | Г | 2 | . ρ | 3 | 1 P | 4 | Р | 5 | P | 6 | ρ | 7 | P | 8' |
|---|-------------|------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|
| | NI NI | F | NI NI | F . | N | F | N N | Ĭ F | N | E | N · | £ | N | Ę | N | £ | N_ | E |
| 1 | 1110529 068 | 589844.755 | 1110503.777 | 589813.764 | 1110478.487 | 589782.774 | 1110453.197 | 589751.784 | 1110427.906 | 589720.794 | 1110402.616 | 589689.803 | 1110377.325 | 589658.813 | 1110352.035 | 589627.823 | 1110326.745 | 589596.833 |
| 7 | 1110520.119 | 589852.057 | 1110493.485 | 589815.387 | 1110468.985 | 589785.365 | 1110443.695 | 589754.375 | 1110417.614 | 589722.417 | 1110393.114 | 589692,395 | 1110367.824 | 589661.405 | 1110341.743 | 589629.446 | 1110316.452 | 589598.456 |
| 3 | 1110538.016 | 589837.452 | 1110500.124 | 589823.522 | 1110474.043 | 589791.564 | 1110448.753 | 589760.573 | 1110424.253 | 589730.551 | 1110398.172 | 589698,593 | 1110372.882 | 589667.603 | 1110348.382 | 589637,581 | 1110323,091 | 589606.591 |
| 1 | 1110518.223 | 589849.733 | 1110514.070 | 589812.141 | 1110487,989 | 589780.183 | 1110462.698 | 589749.193 | 1110438.198 | 589719.171 | 1110412.118 | 589687.212 | 1110386.827 | 589656.222 | 1110362.327 | 589626.200 | 1110337.037 | 589595.210 |
| 5 | 1110522.649 | 589855.156 | 1110507.431 | 589804.007 | 1110482.931 | 589773.985 | 1110457.640 | 589742.995 | 1110431.560 | 589711.036 | 1110407.050 | 589681.014 | 1110381,769 | 589650.024 | 1110355.688 | 589618,065 | 1110330.398 | 589587.075 |
| 6 | 1110540.545 | 589840.551 | | | | | | | | | · | | | · | | | | |
| 7 | 1110536.120 | 589835.128 | | | | | | | <u> </u> | | | ļ | <u> </u> | | | | ļ | <u></u> |

| | Р | P10 | | 0 | P1 | 1 . | P12 | | |
|---|-------------|------------|-------------|------------|-------------|------------|-------------|------------|--|
| | N | E | N | E | N | Ε | N | E | |
| 1 | 1110301.454 | 589565,843 | 1110276.164 | 589534.852 | 1110250.873 | 589503.862 | 1110225.583 | 589472.872 | |
| 2 | 1110291.952 | 589568,434 | 1110265.871 | 589536.475 | 1110240.581 | 589505.485 | 1110215.291 | 589474.495 | |
| 3 | 1110297.010 | 589574.632 | 1110272.510 | 589544.610 | 1110247.220 | 589513.620 | 1110221.929 | 589482.630 | |
| 4 | 1110310.956 | 589563.251 | 1110286.456 | 589533.229 | 1110261.165 | 589502.239 | 1110235.875 | 589471.249 | |
| 5 | 1110305.898 | 589557.053 | 1110279.817 | 589525.094 | 1110254.527 | 589494.104 | 1110229,236 | 589463.114 | |

| PROTECT NAME | IMPLEMENTATION AGENCY | EXECUTING AGENCY | JICA STUDY TEAM | | PREPARED BY | CHECKED BY APPROVED BY | DRAWING TITLE | DWG NO. |
|----------------------|-----------------------|----------------------------------|---------------------------|-----------|-------------|------------------------|---------------------------------|------------|
| DETAILED DESIGN OF | IAPAN INTERNATIONAL | SOCIALIST REPUBLIC OF VIET NAM | A | NAME | S. Kiguchi | K.Matsumoto K. Enomoto | APPROACH BRIDGE | |
| THE CAN THO BRIDGE | COOPERATION AGENCY | MINISTRY OF TRANSPORT (MOT) | (NK) NIPPON KOEI CO.,LTD. | SKINATURE | 5 Kienah | K. Hateret V. Lond | GENERAL COORDINATE OF BRIDGE(1) | P2/GE/0070 |
| CONSTRUCTION PROJECT | (JICA) | MY THUAN PROJECT MANAGEMENT UNIT | 9 | DATE | 20/9/2000 | 29/9/2000 5/10/2000 | | <u></u> |



Can Tho Side Vinh Long Side MM \bigcirc (P29 **P18** (PI) PLAN (SCALE 14400) 10500 110500 [_(5) 8000 8000 110500 L/S) 10500 **COORDINATES TABLE** | No.
 588442.447
 1109359.386
 588411.456
 1109334.095
 588380.466

 588444.070
 1109349.884
 588414.048
 1109324.594
 588383.057

 588452.204
 1109354.942
 588420.246
 1109329.652
 588389.256

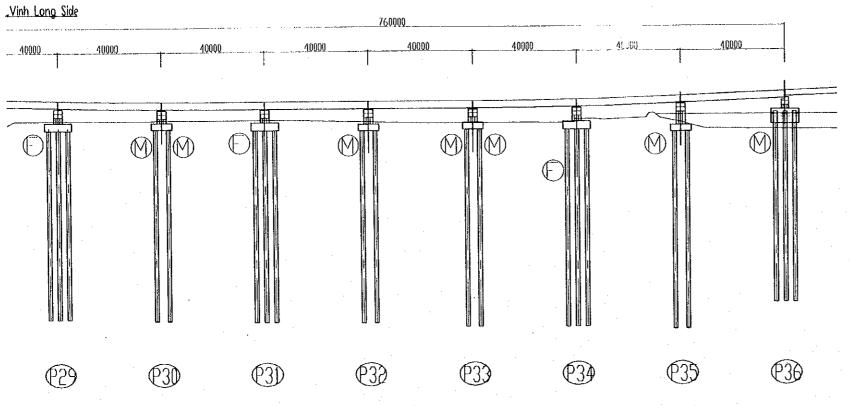
 588408.824
 1109368.888
 588408.865
 1109343.597
 588377.875

 588363.034
 588363.037
 588377.875
 588377.875
 588377.875
 1109536.419 588628.388 1109511.128 1109525.764 588624.821 1109500.836 1109524.909 588633.264 1109507.475 1109529.335 | 588638.687 1109521.420

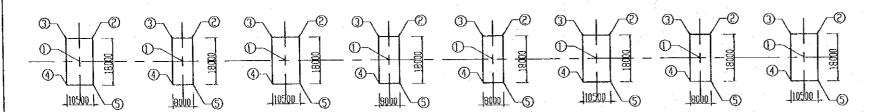
| PROTECT NAME | IMPLEMENTATION AGENCY | EXECUTING AGENCY | JICA STUDY TRAM | | PREPARED BY | CHECKED BY A | PPROVED BY | DRAWING TITLE | DWG NO. | 1 |
|----------------------|-------------------------|----------------------------------|----------------------------|-----------|-------------|--------------|------------|---------------------------------|------------|---|
| DETAILED DESIGN OF | IAPAN INTERNATIONAL | SOCIALIST REPUBLIC OF VIET NAM | <u> </u> | NAME | S. Kiguchi | K.Matsumoto | K. Enomoto | APPROACH BRIDGE | 1 | |
| THE CAN THO BRIDGE | JICE COOPERATION AGENCY | | (NK)) NIPPON KOEI CO.,LTD. | SICNATURE | S. Kienal | K. Hoterart | لسار | GENERAL COORDINATE OF BRIDGE(2) | P2/GE/0080 | |
| CONSTRUCTION PROTECT | (JICA) | MY THUAN PROJECT MANAGEMENT UNIT | | DATE | 20/9/2000 | 29/9/2000 | 5/10/2000 | | J | 1 |

SIDE ELEVATION

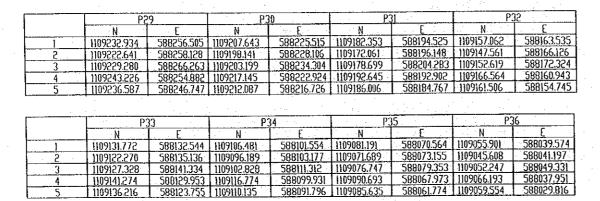




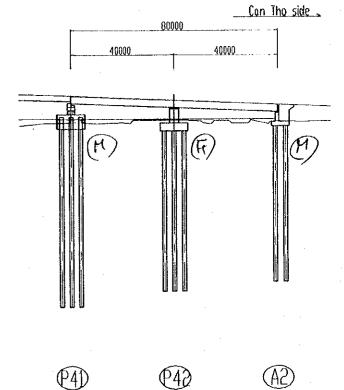
PLAN (SCALE 1:1400)

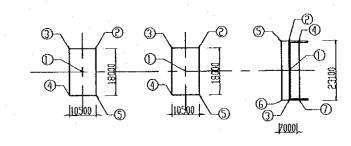


COORDINATES TABLE



P41-A2





| | P41 | | P | 12 | SA | | |
|-----|-------------|------------|-------------|------------|-------------|------------|--|
| | N | Ę | · N | £ | N | Ε | |
| 1 | 1108840.932 | 587776.157 | 1108815.642 | 587745.166 | 1108790.351 | 587714.176 | |
| . 5 | 1108830.640 | 587777.780 | 1108805.349 | 587746.789 | 1108781.403 | 587721.479 | |
| 3 | 1108837,279 | 587785.915 | 1108811.980 | 587754.924 | 1108799,300 | 587706.874 | |
| 4 | 1108851.224 | 587774.534 | 1108825.934 | 587743.544 | 110877B.B74 | 587718.380 | |
| 5 | 1108844.585 | 587766.399 | 1108819.295 | 587735.409 | 1108783.300 | 587723.803 | |
| 6 | | | | | 1108801.196 | 587709.198 | |
| 7 | | | | | 1108796.771 | 587703.775 | |

| ١ | PROJECT NAME | IMPL | EMENTATION AGENCY | EXECUTING AGENCY | JICA STUDY TRAM | | PREPARED BY | CHECKED BY | APPROVED BY | DRAWING TITLE | DWG NO. |
|---|----------------------|------|---------------------|----------------------------------|---------------------------|-----------|-------------|-------------|-------------|---------------------------------|------------|
| Ì | DETAILED DESIGN OF | | IAPAN INTERNATIONAL | SOCIALIST REPUBLIC OF VIET NAM | A | NAME | S. Kiguchi | K.Matsumoto | K. Enomoto | APPROACH BRIDGE | |
| | THE CAN THO BRIDGE | | COOPERATION AGENCY | MINISTRY OF TRANSPORT (MOT) | (NK) NIPPON KOEI CO,LITO. | SICNATURE | 5 Kipuah | K. Hatumot | Vilmes | GENERAL COORDINATE OF BRIDGE(3) | P2/GE/0090 |
| 1 | CONSTRUCTION PROJECT | | (JICA) | MY THUAN PROJECT MANAGEMENT UNIT | | DATE | 20/9/2000 | 29/9/2000 | 5/10/2000 | <u> </u> | |