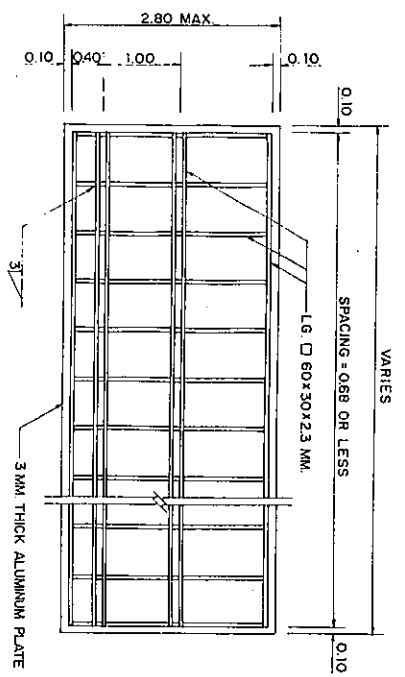
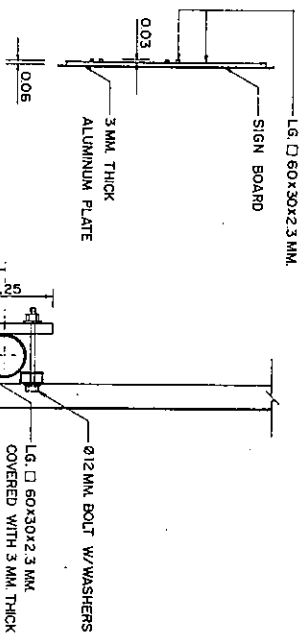


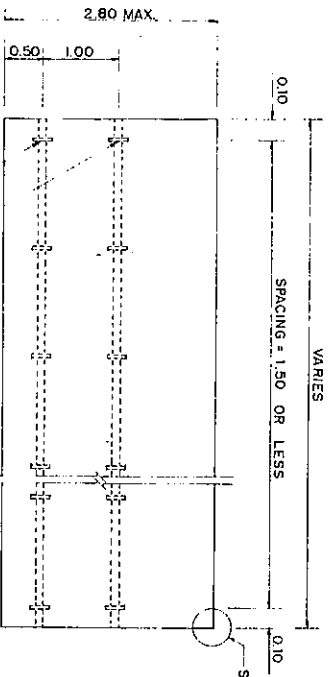
ชุดแบบมาตรฐานป้ายแขวนสูง **OVERHEAD&OVERHANG**



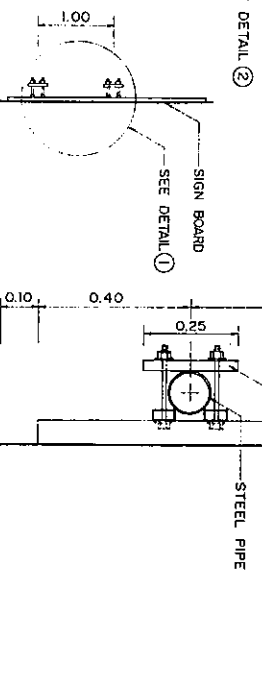
FRONT VIEW
TYPICAL SIGN FRAME
SCALE 1:1.50



SIDE VIEW

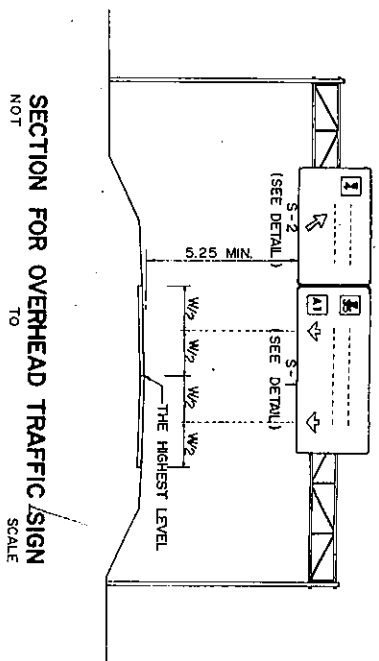


FRONT VIEW
ERECTION FOR SIGN BOARD
SCALE 1:1.50

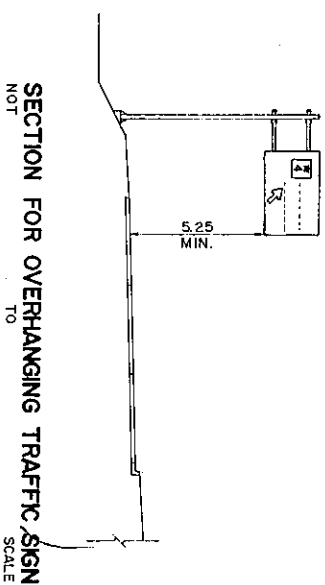


SIDE VIEW

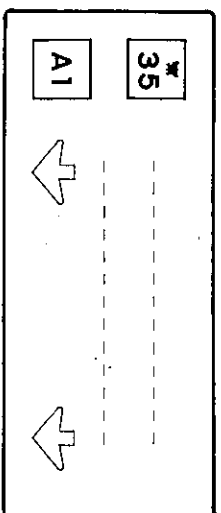
DETAIL 1
SCALE 1:1.10



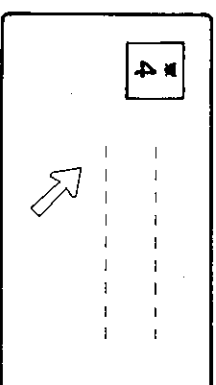
SECTION FOR OVERHEAD TRAFFIC SIGN
SCALE



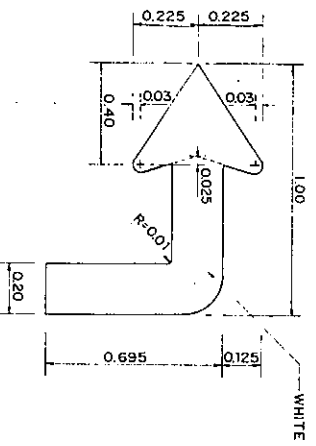
SECTION FOR OVERHANGING TRAFFIC SIGN
SCALE



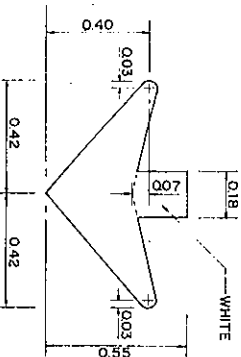
DETAIL "S-1"



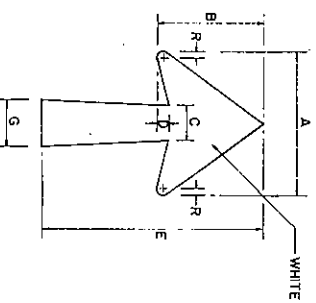
DETAIL "S-2"



TURN OFF ARROW
SCALE 1:1.15

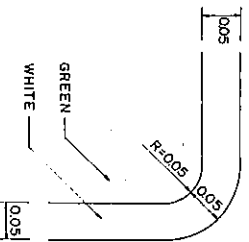


VERTICAL DOWN ARROW
SCALE 1:1.15

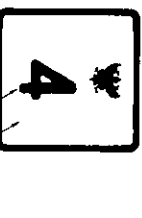


TURN OFF ARROW
SCALE 1:1.15

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



DETAIL 2
SCALE 1:1.5



WHITE
BLACK



GREEN
WHITE



BLUE
WHITE

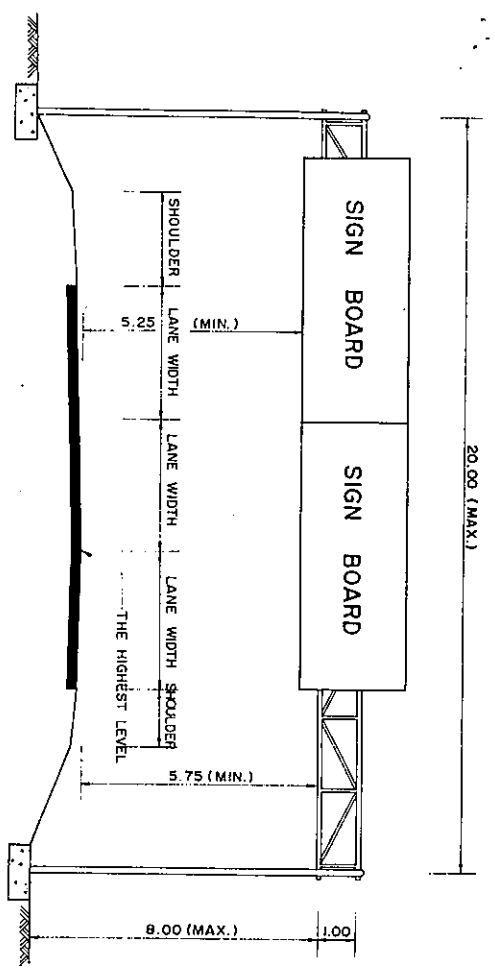
NOTES :

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

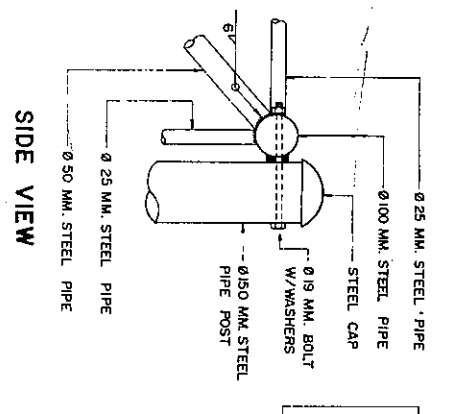
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

STANDARD DRAWING
OVERHEAD SIGN BOARD DETAILS

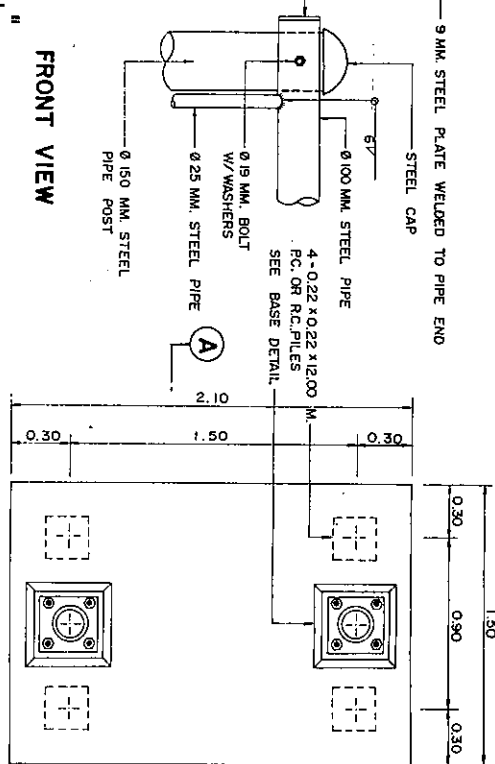
DESIGNED : D.O.H. & CONSULTANTS
CHECKED :
SUBMITTED :
APPROVED :
DATE JULY 1994
SCALE AS SHOWN
DWG. NO. RS-106
SHEET NO. 23



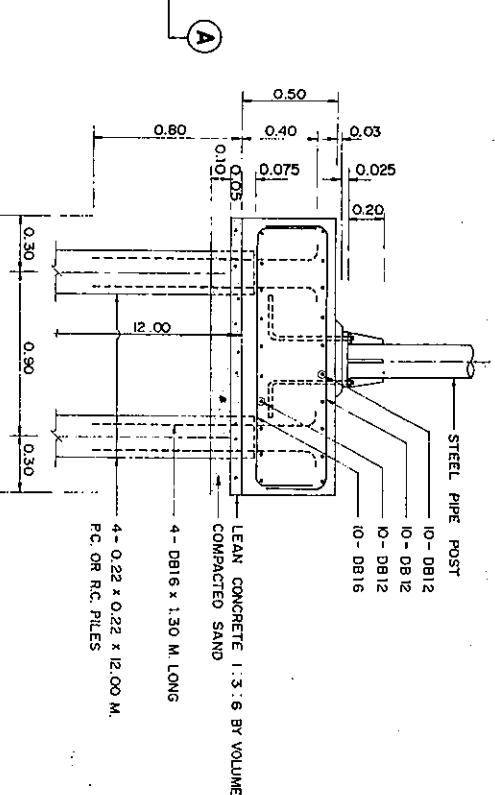
FRONT ELEVATION
SCALE 1:100



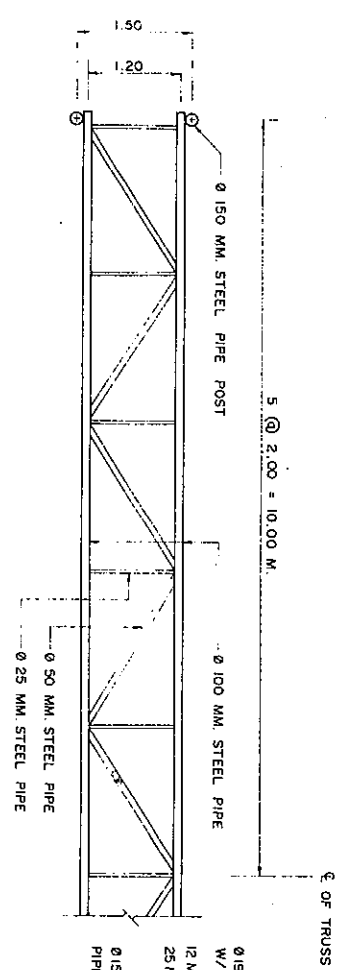
SIDE VIEW
SCALE 1:100



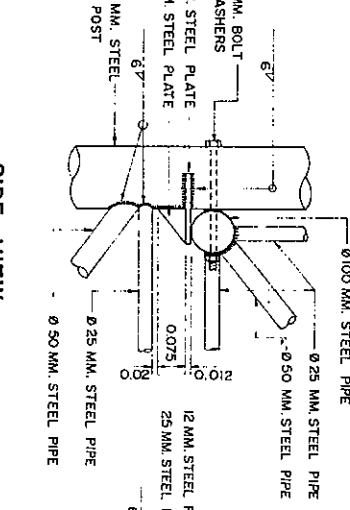
FRONT VIEW
SCALE 1:20



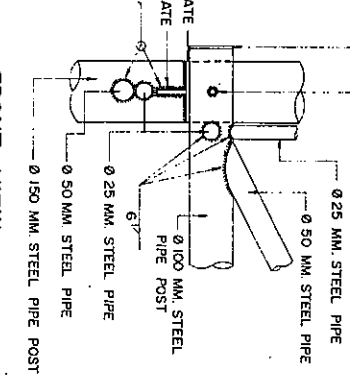
SECTION A-A
SCALE 1:20



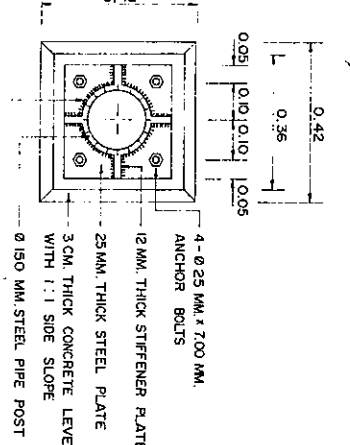
TRUSS PLAN
SCALE 1:50



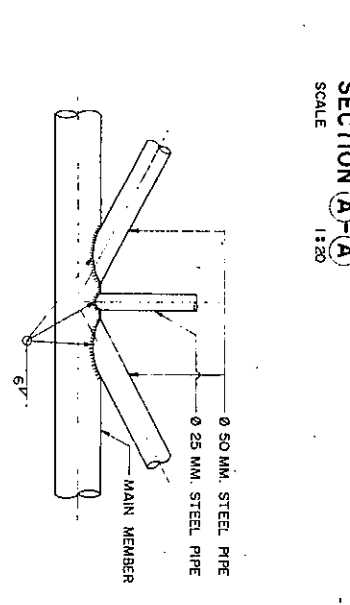
SIDE VIEW
SCALE 1:50



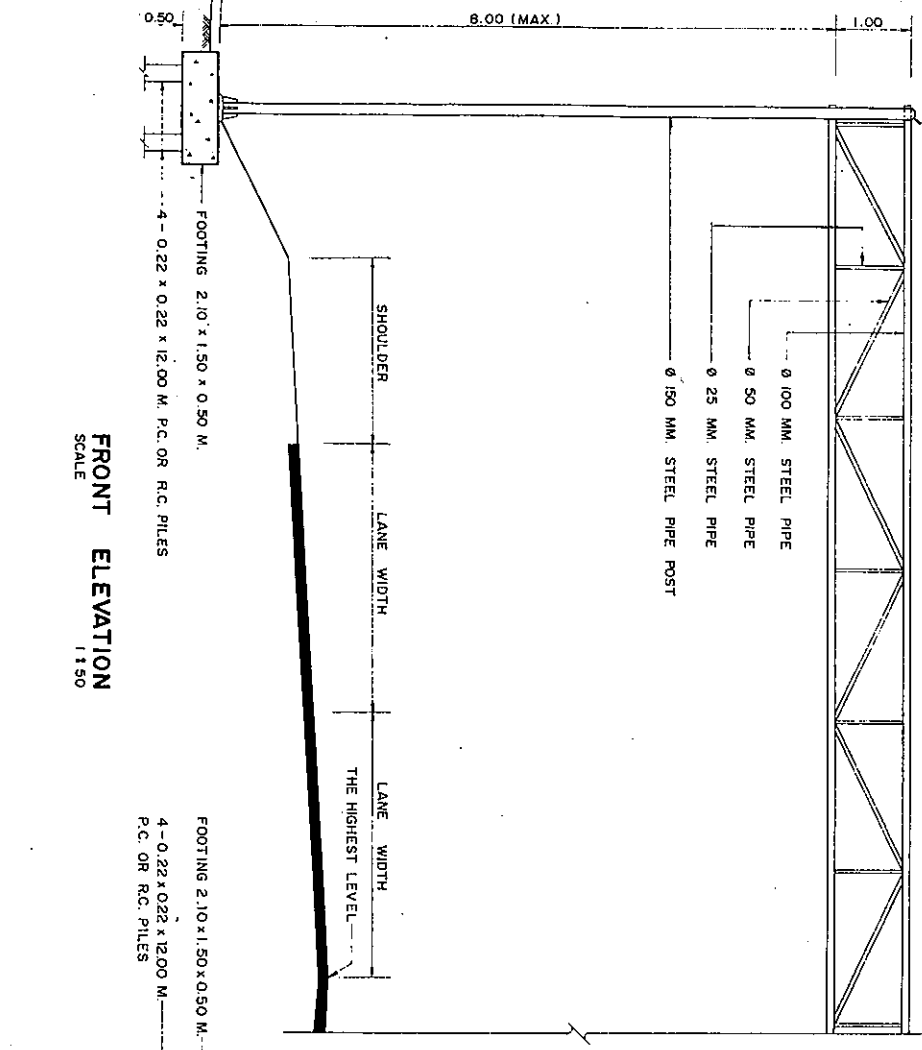
FRONT VIEW
SCALE 1:50



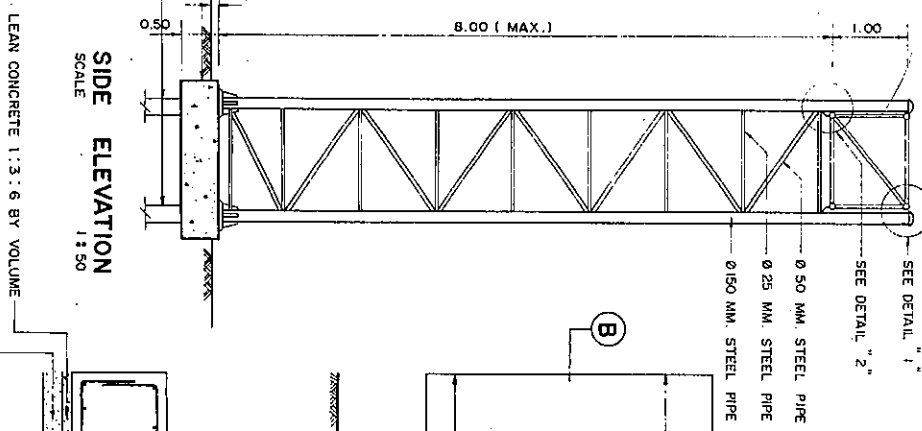
BASE DETAIL
SCALE 1:50



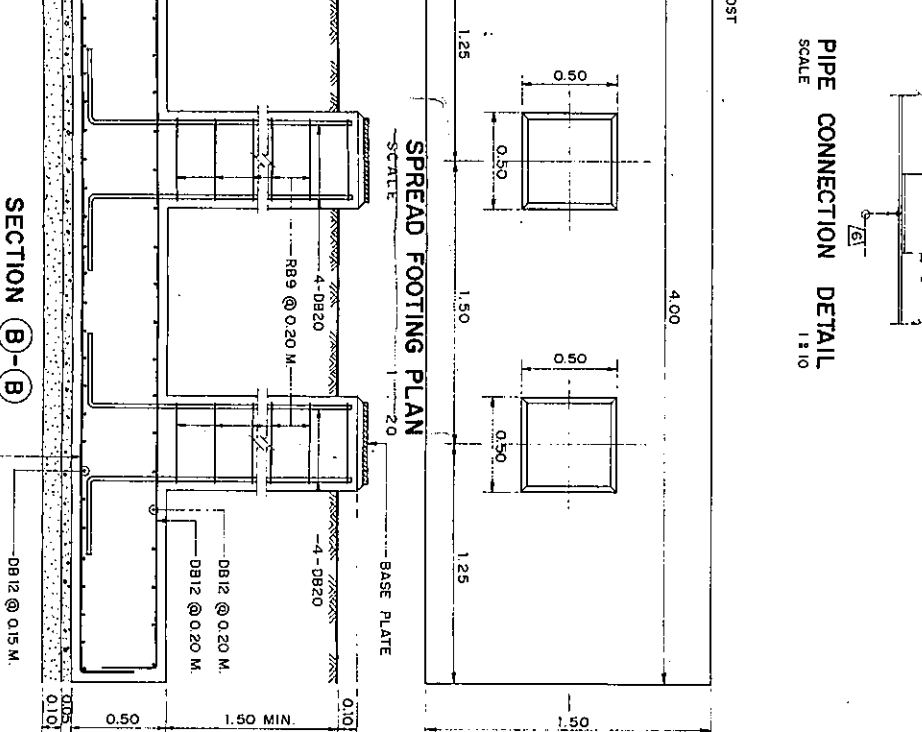
JOINT DETAIL
SCALE 1:10



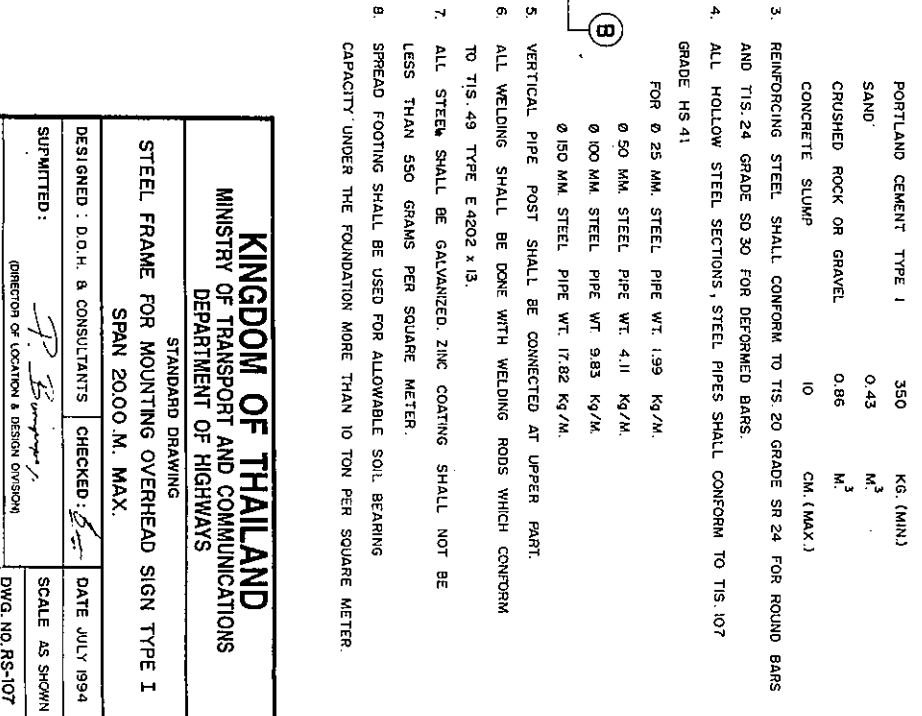
FRONT ELEVATION
SCALE 1:50



SIDE ELEVATION
SCALE 1:50



SPREAD FOOTING PLAN
SCALE 1:20



PIPE CONNECTION DETAIL
SCALE 1:10

NOTES:

- ALL DIMENSIONS ARE IN METERS EXCEPT WELDING SYMBOLS AND PIPE DIAMETER ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED.
- CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 210 KSC. FOR 15x15 CM CUBE AT 28 DAYS. AN APPROXIMATE MIX DESIGN PER CUBIC METER IS SUGGESTED AS FOLLOWS:

PORTLAND CEMENT TYPE 1	350	KG (MIN)
SAND	0.43	M ³
CRUSHED ROCK OR GRAVEL	0.86	M ³
CONCRETE SLUMP	10	CM (MAX.)
- REINFORCING STEEL SHALL CONFORM TO TIS 20 GRADE SR 24 FOR ROUND BARS AND TIS 24 GRADE SD 30 FOR DEFORMED BARS.
- ALL HOLLOW STEEL SECTIONS, STEEL PIPES SHALL CONFORM TO TIS 107 GRADE HS 41.

FOR 150 MM STEEL PIPE WT. 1.99	KG/M.
0 50 MM STEEL PIPE WT. 4.11	KG/M.
0 100 MM STEEL PIPE WT. 9.83	KG/M.
0 150 MM STEEL PIPE WT. 17.82	KG/M.
- VERTICAL PIPE POST SHALL BE CONNECTED AT UPPER PART.
- ALL WELDING SHALL BE DONE WITH WELDING RODS WHICH CONFORM TO TIS 49 TYPE E 4202 x 13.
- ALL STEEL SHALL BE GALVANIZED. ZINC COATING SHALL NOT BE LESS THAN 550 GRAMS PER SQUARE METER.
- SPREAD FOOTING SHALL BE USED FOR ALLOWABLE SOIL BEARING CAPACITY UNDER THE FOUNDATION MORE THAN 10 TON PER SQUARE METER.

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

STANDARD DRAWING
STEEL FRAME FOR MOUNTING OVERHEAD SIGN TYPE I
 SPAN 20.00 M. MAX.

DESIGNED: D.O.H. & CONSULTANTS	CHECKED:	DATE	JULY 1994
SUBMITTED:		SCALE	AS SHOWN
DIRECTION OF LOCATION & DESIGN DIVISION		DWG. NO.	RS-107
APPROVED:		SHEET NO.	24

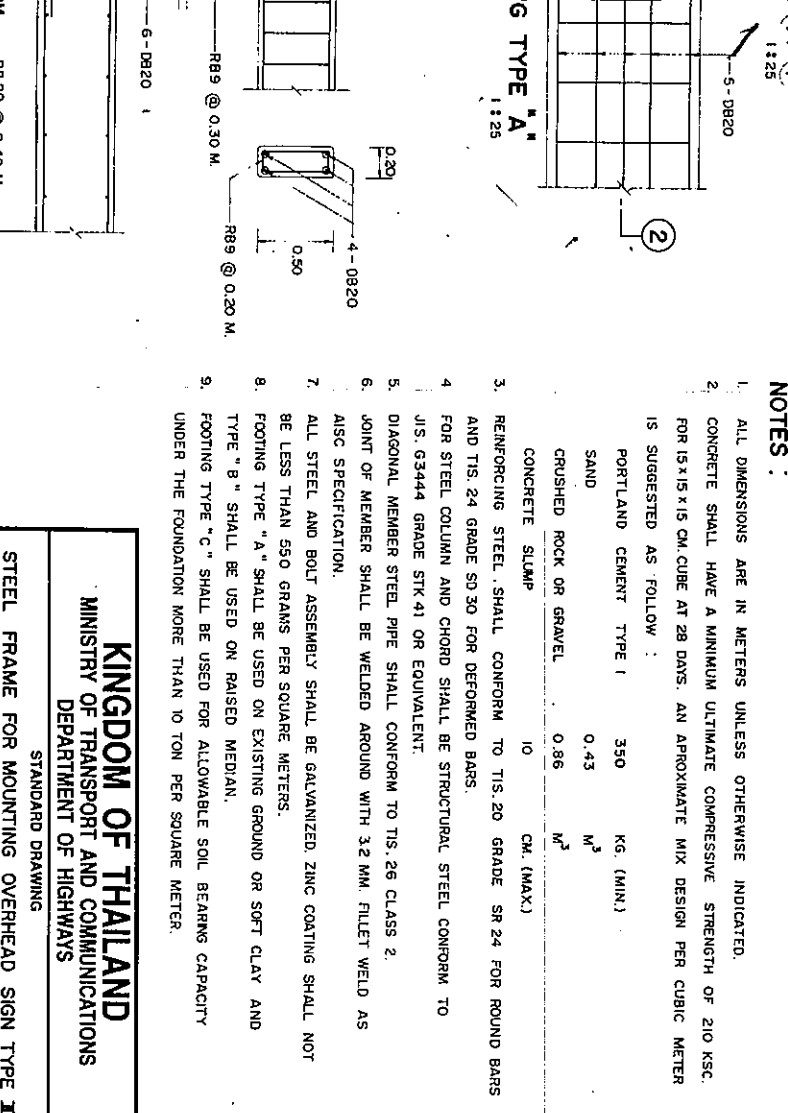
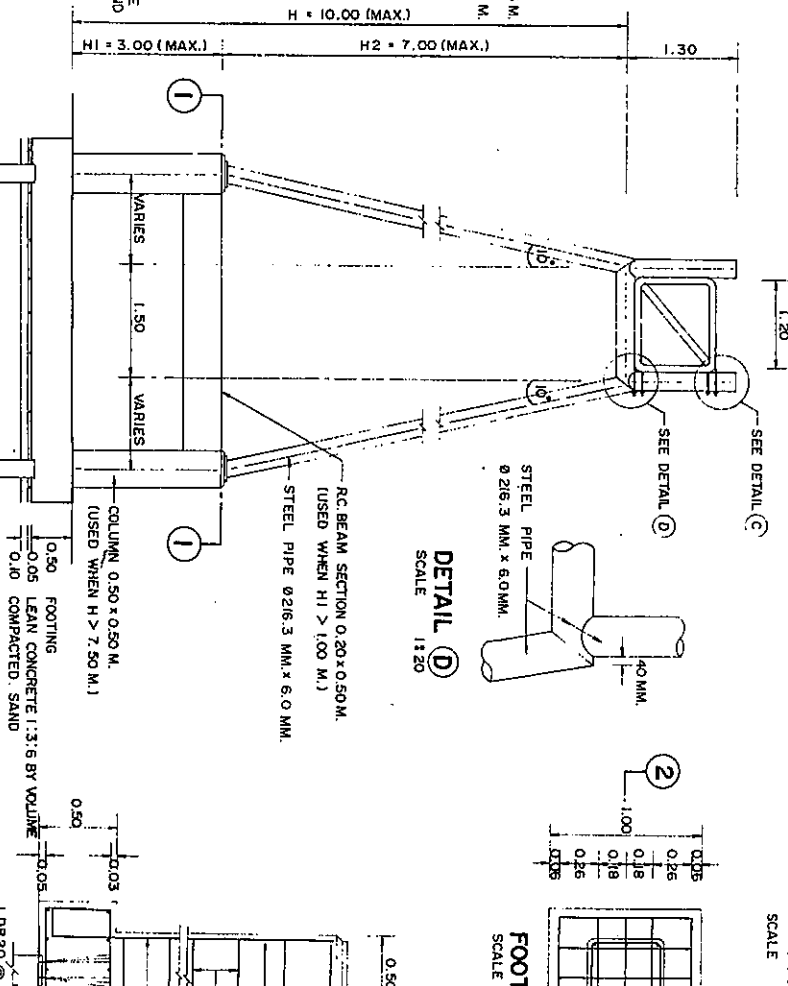
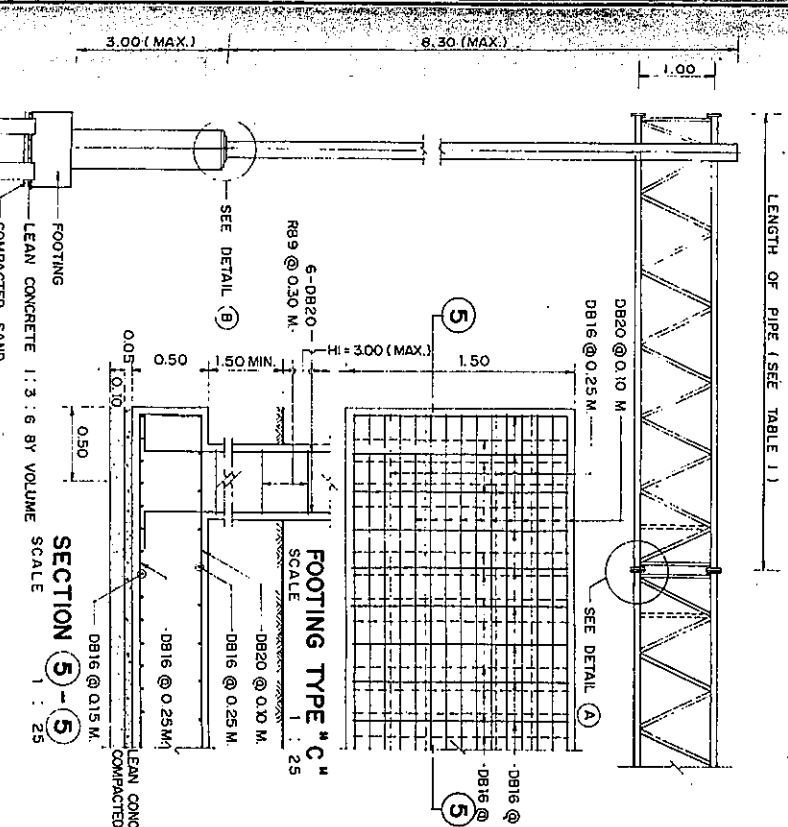
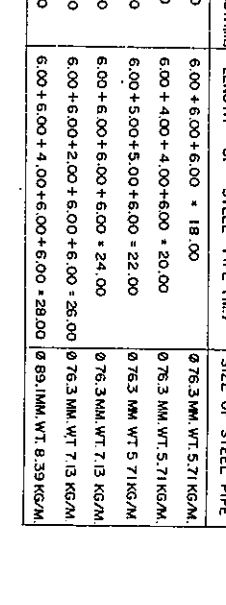
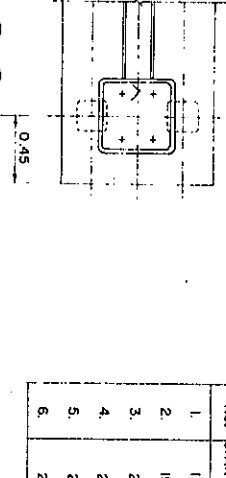
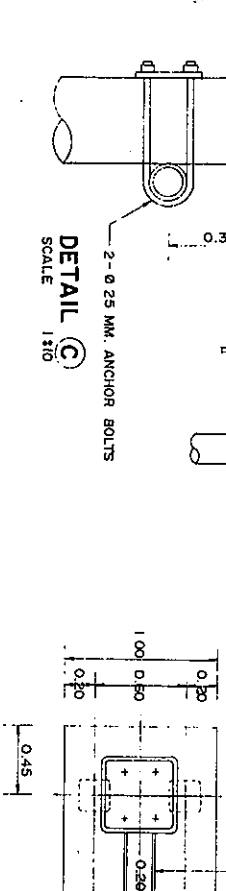
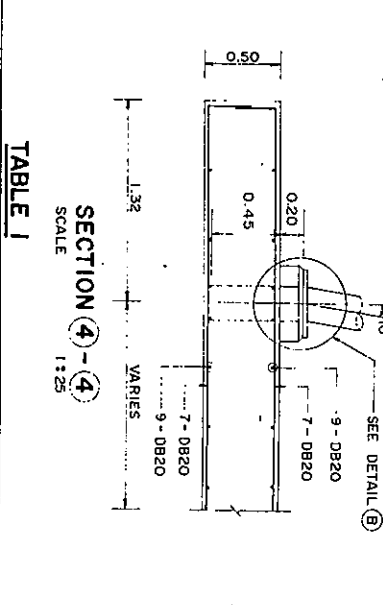
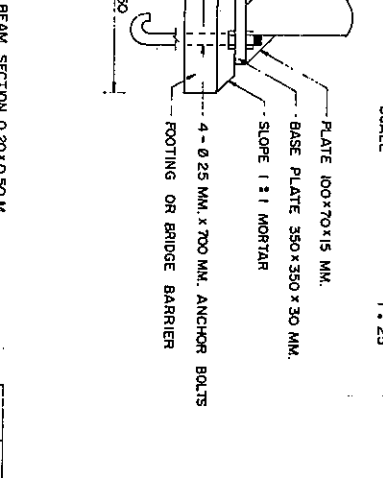
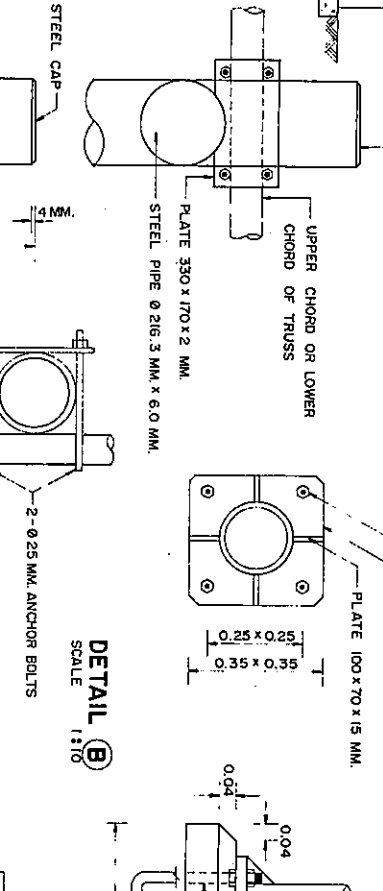
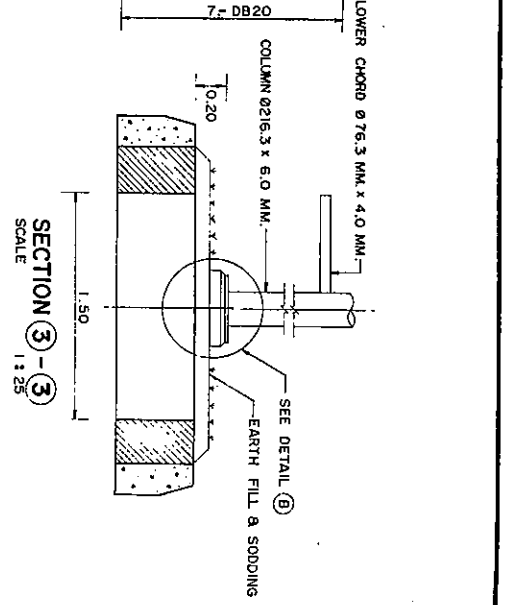
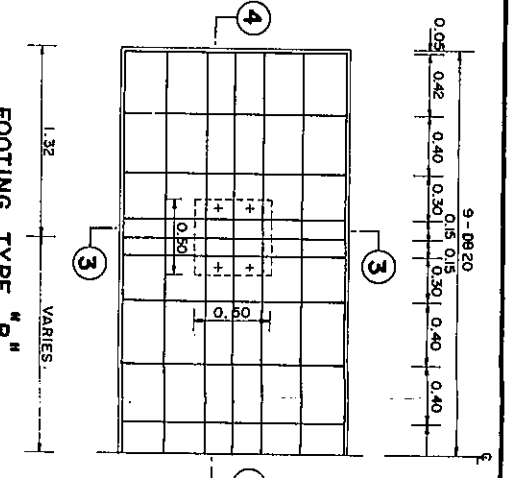
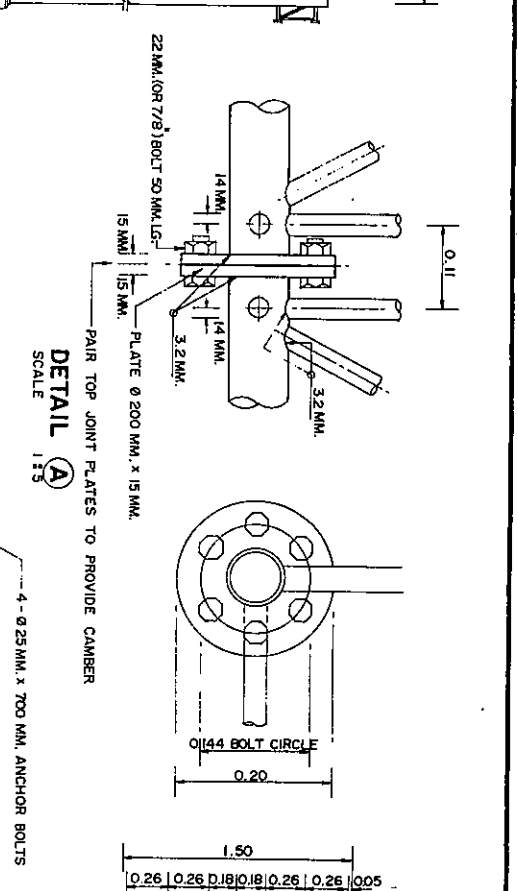
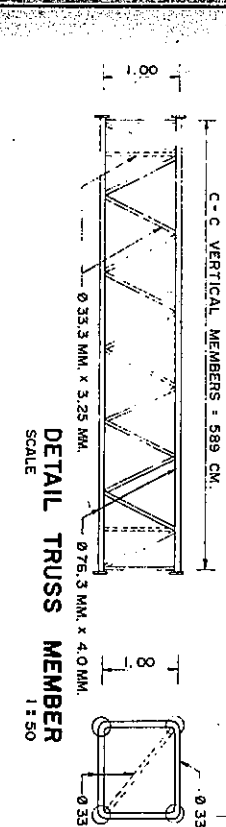
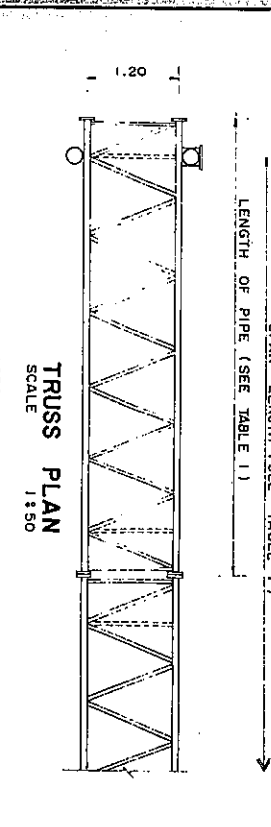
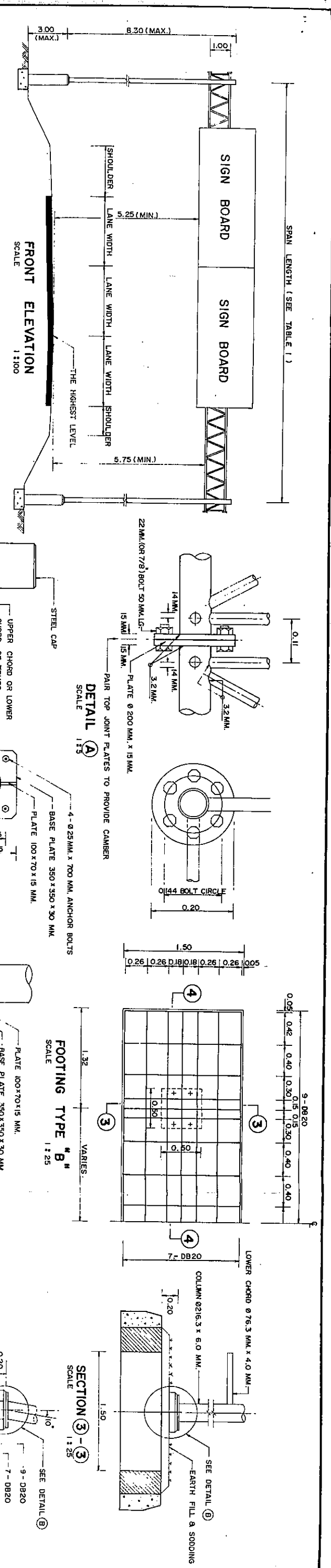


TABLE 1

NO.	SPAN LENGTH (M)	LENGTH OF STEEL PIPE (M.)	SIZE OF STEEL PIPE
1	17.00	6.00 + 6.00 + 6.00 = 18.00	Ø 76.3 MM, WT 5.71 KG/M
2	19.00	6.00 + 4.00 + 4.00 + 6.00 + 20.00	Ø 76.3 MM, WT 5.71 KG/M
3	21.00	6.00 + 5.00 + 5.00 + 6.00 + 22.00	Ø 76.3 MM, WT 5.71 KG/M
4	23.00	6.00 + 6.00 + 6.00 + 6.00 + 24.00	Ø 76.3 MM, WT 7.13 KG/M
5	25.00	6.00 + 6.00 + 2.00 + 6.00 + 6.00 + 26.00	Ø 76.3 MM, WT 7.13 KG/M
6	28.00	6.00 + 6.00 + 4.00 + 6.00 + 6.00 + 28.00	Ø 89.1 MM, WT 8.39 KG/M

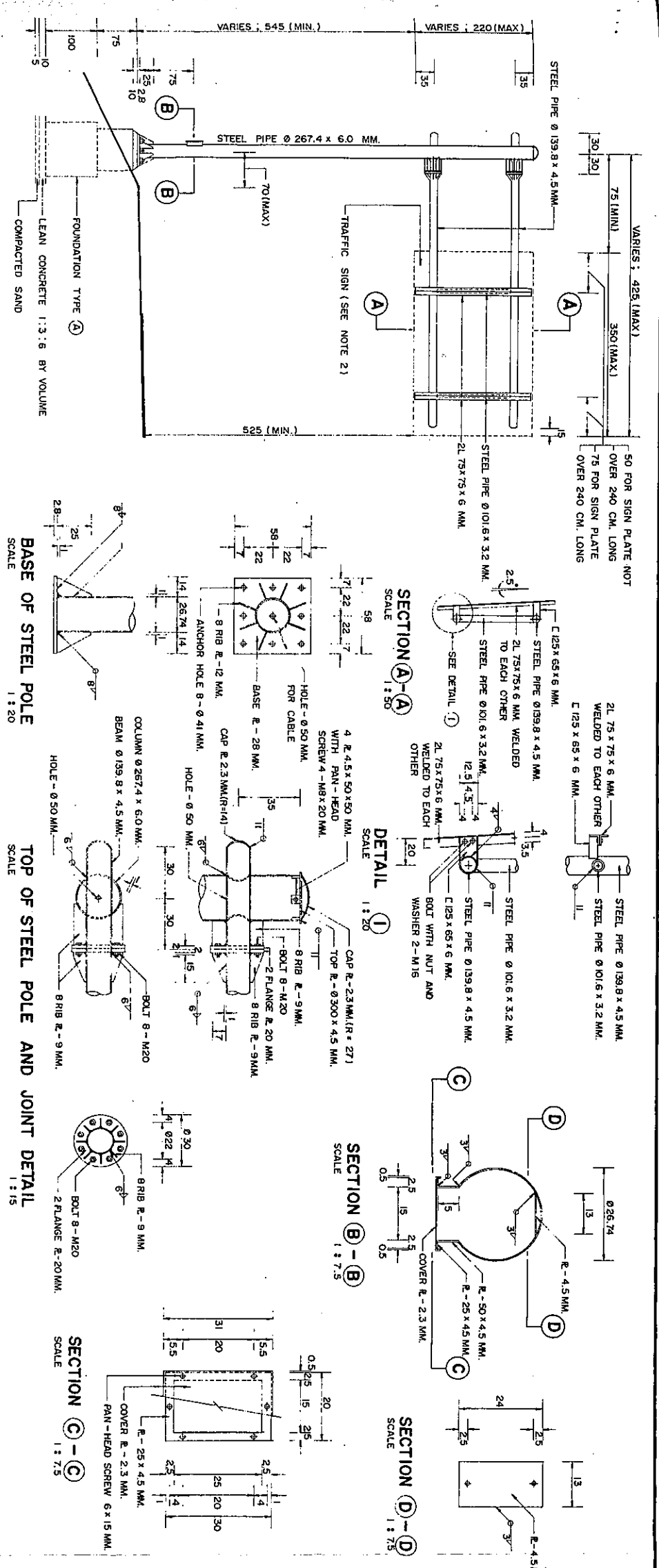
- NOTES:**
- ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE INDICATED.
 - CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 210 KSC FOR 15 x 15 CM CUBE AT 28 DAYS. AN APPROXIMATE MIX DESIGN PER CUBIC METER IS SUGGESTED AS FOLLOWS:
- | | PORTLAND CEMENT TYPE I | KG (MIN.) |
|--|------------------------|----------------|
| | 350 | |
| | SAND | M ³ |
| | 0.43 | |
| | CRUSHED ROCK OR GRAVEL | M ³ |
| | 0.86 | |
- REINFORCING STEEL SHALL CONFORM TO TIS. 20 GRADE SR 24 FOR ROUND BARS AND TIS. 24 GRADE SD 30 FOR DEFORMED BARS.
 - FOR STEEL COLUMN AND CHORD SHALL BE STRUCTURAL STEEL CONFORM TO JIS. G3444 GRADE STK 41 OR EQUIVALENT.
 - DIAGONAL MEMBER STEEL PIPE SHALL CONFORM TO TIS. 26 CLASS 2.
 - JOINT OF MEMBER SHALL BE WELDED AROUND WITH 3.2 MM FILLET WELD AS AISC SPECIFICATION.
 - ALL STEEL AND BOLT ASSEMBLY SHALL BE GALVANIZED ZINC COATING SHALL NOT BE LESS THAN 550 GRAMS PER SQUARE METERS.
 - FOOTING TYPE "A" SHALL BE USED ON EXISTING GROUND OR SOFT CLAY AND TYPE "B" SHALL BE USED ON RAISED MEDIAN.
 - FOOTING TYPE "C" SHALL BE USED FOR ALLOWABLE SOIL BEARING CAPACITY UNDER THE FOUNDATION MORE THAN 10 TON PER SQUARE METER.

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

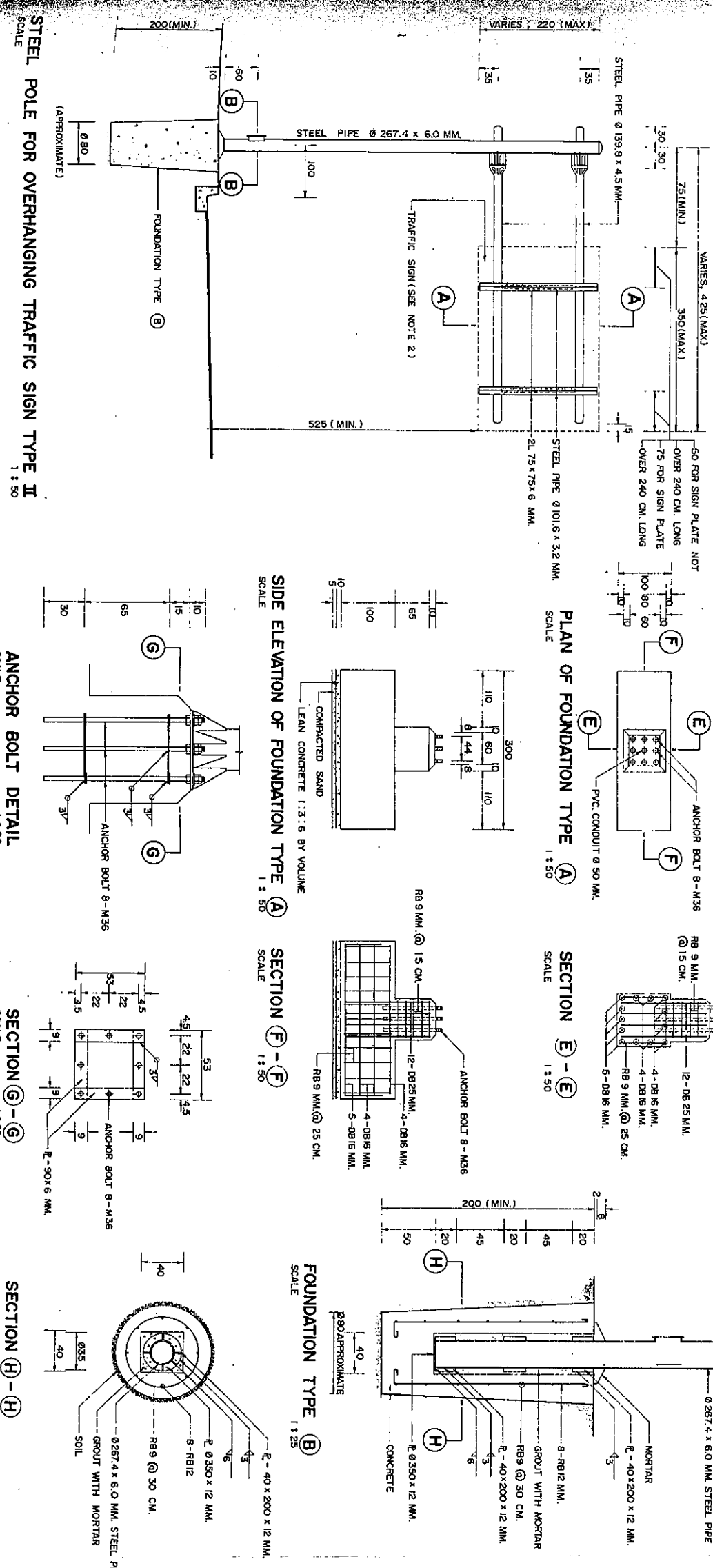
STANDARD DRAWING
STEEL FRAME FOR MOUNTING OVERHEAD SIGN TYPE II
 SPAN 17.00 - 28.00 M.

DESIGNED: D.O.H. & CONSULTANTS
 SUBMITTED: [Signature]
 APPROVED: [Signature]

DATE JULY 1994
 SCALE AS SHOWN
 DWG. NO. RS-108
 SHEET NO. 25



STEEL POLE FOR OVERHANGING TRAFFIC SIGN TYPE I
SCALE 1:50



STEEL POLE FOR OVERHANGING TRAFFIC SIGN TYPE II
SCALE 1:50

NOTES:

- DIMENSIONS FOR WELDING SYMBOLS ARE IN MILLIMETERS, ALL OTHER DIMENSIONS ARE IN CENTIMETERS UNLESS OTHERWISE INDICATED.
- THIS DRAWING SHALL BE USED FOR TRAFFIC SIGNS WHERE THE AREA OF THE SIGN INCLUDING THE GAPS BETWEEN PLATES IS NOT MORE THAN 52,800 SQ.CM. THE MAXIMUM LENGTH AND WIDTH OF THE SIGN SHALL NOT EXCEED 350 CM. AND 220 CM. RESPECTIVELY.
- THE FOUNDATION TYPE (A) SHALL BE USED IN A SIDE SLOPE AREA AND FOUNDATION TYPE (B) SHALL BE USED IN A SIDEWALK OR RAISED MEDIAN.
- THE ALLOWABLE SOIL BEARING CAPACITY UNDER THE FOUNDATION TYPE (A) SHALL BE MORE THAN 5 TONS PER SQ.M. EMBANKMENT AROUND FOUNDATION TYPE (B) SHALL BE COMPACTED TO 90 % OF THE MAXIMUM STANDARD DRY DENSITY.
- THE DIMENSIONS OF STEEL PIPE SHOWN ARE THE OUTER DIAMETER AND THE THICKNESS OF THE PIPE FOR EXAMPLE: $\varnothing 267.4 \times 6.0$ MM MEANS THE OUTER DIAMETER OF THE PIPE IS 267.4 MM AND THE THICKNESS IS 6.0 MM.
- STEEL PIPE SHALL CONFORM TO ONE OF THE FOLLOWING SPECIFICATIONS
 - 6.1 TIS 107 GRADE HS 41
 - 6.2 JIS G3444 GRADE STK 41
 - 6.3 ASTM A252 - 75 GRADE 2
- STRUCTURAL STEEL SECTION SHALL CONFORM TO TIS 116 GRADE FA 24. STEEL PIPE, STRUCTURAL STEEL SECTION, STEEL PLATE, BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED. ZINC COATING SHALL NOT BE LESS THAN 550 GRAMS PER SQUARE METER.
- ELECTRIC ARC WELDING WHICH CONFORMS TO AISC STANDARD SHALL BE USED FOR WELDING STEEL.
- CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 210 KSC. FOR 15 X 15 X 15 CM. CUBE AT 28 DAYS. AN APPROXIMATE MIX DESIGN PER CUBIC METER IS SUGGESTED AS FOLLOWS:

PORTLAND CEMENT TYPE 1	KG. (MIN.)
350	
SAND	M ³
0.43	
CRUSHED ROCK OR GRAVEL	M ³
0.86	
CONCRETE SLUMP	CM. (MAX.)
10	

- MORTAR SHALL BE COMPRISED OF PORTLAND CEMENT AND SAND IN THE PROPORTION 1 TO 1
- REINFORCING STEEL SHALL CONFORM TO TIS.20 GRADE SR 24 FOR ROUND BARS AND TIS.24 GRADE SD 30 FOR DEFORMED BARS.
- CANTILEVER BEAM SHALL BE INSTALLED PERPENDICULAR TO THE ROADWAY ALIGNMENT. CAMBER SHALL BE PROVIDED FOR BEAM DEFLECTION.
- WHERE SIGN LIGHTING IS REQUIRED, THE ELECTRICAL COMPONENTS SHALL CONFORM TO THE ELECTRICITY SUPPLY AUTHORITY'S REQUIREMENTS AND REGULATIONS.

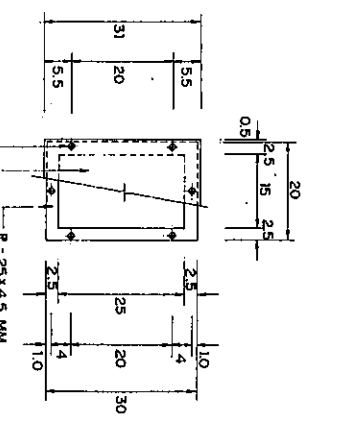
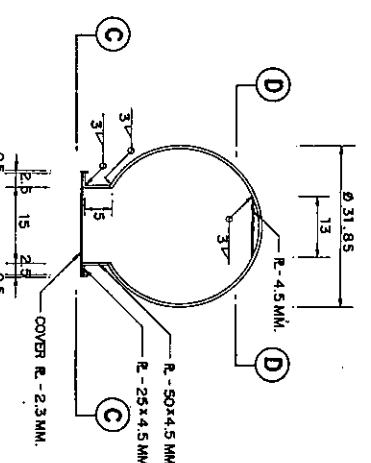
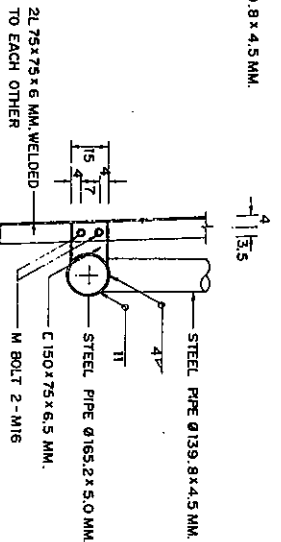
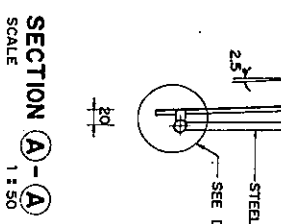
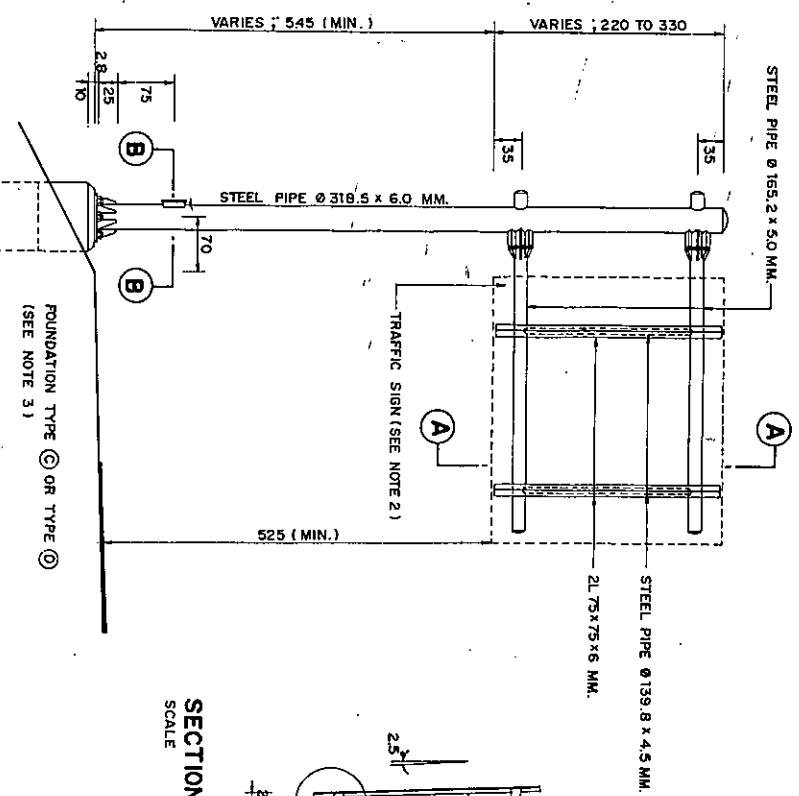
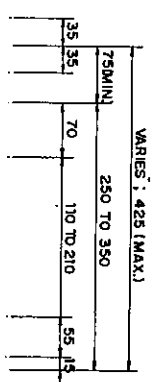
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

STANDARD DRAWING
STEEL POLE FOR OVERHANGING TRAFFIC SIGN
FOR SIGN PLATES NOT MORE THAN 52,800 SQ.CM.

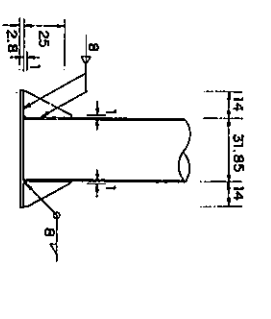
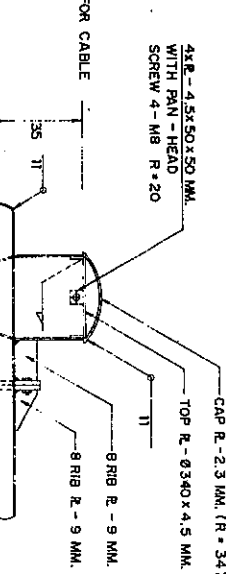
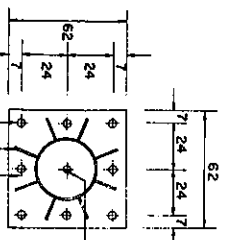
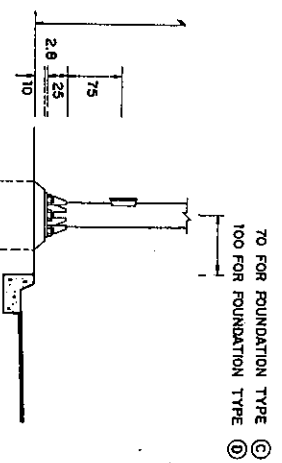
DESIGNED: D.O.H. & CONSULTANTS
CHECKED: *[Signature]*
DATE: JULY 1994

SUBMITTED: *[Signature]*
DIRECTION OF LOCATION & DESIGN DIVISION
APPROVED: *[Signature]*
GENERAL

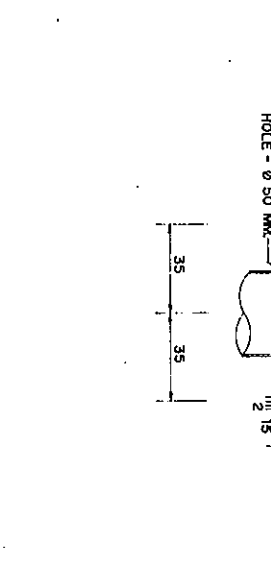
SCALE AS SHOWN
DWG. NO. RS-109
SHEET NO. 26



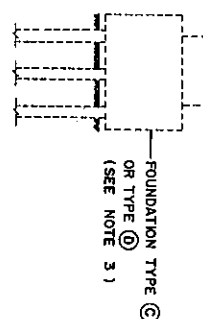
**STEEL POLE FOR OVERHANG
TRAFFIC SIGN TYPE 3 AT SIDE SLOPE**
SCALE 1:1.50



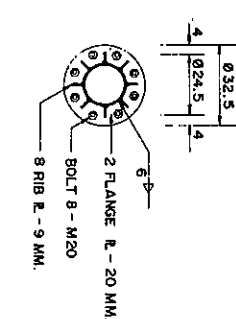
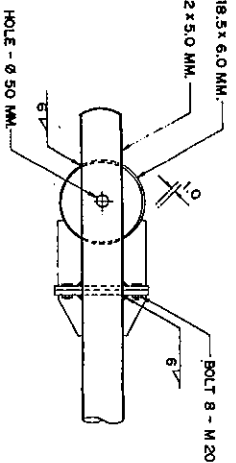
BASE OF STEEL POLE
SCALE 1:1.50



**STEEL POLE FOR OVERHANG
TRAFFIC SIGN TYPE 3 AT SIDEWALK OR RAISED MEDIAN**
SCALE 1:1.50



TOP OF STEEL POLE AND JOINT DETAIL
SCALE 1:1.15



NOTES :

1. DIMENSIONS FOR WELDING SYMBOLS ARE IN MILLIMETERS, ALL OTHER DIMENSIONS ARE IN CENTIMETERS UNLESS OTHERWISE INDICATED.
2. THIS DRAWING SHALL BE USED FOR TRAFFIC SIGNS, WHERE THE AREA OF THE SIGN IS NOT MORE THAN 108,000 SQ.CM. THE MAXIMUM LENGTH AND WIDTH OF THE SIGN SHALL NOT EXCEED 350 CM. AND 330 RESPECTIVELY.
3. GENERALLY THE FOUNDATION SHALL BE TYPE (C) OR TYPE (D). IN CASE OF THE PILES SHALL NOT BE DRIVEN TO THE SOIL OR THE ALLOWABLE SOIL BEARING CAPACITY UNDER THE FOUNDATION MORE THAN 10 TON PER SQUARE METER, THE FOUNDATION TYPE (C) WITH NO PILES SHALL BE USED.
4. THE DIMENSIONS OF STEEL PIPE SHOWN ARE THE OUTER DIAMETER AND THE THICKNESS OF THE PIPE FOR EXAMPLE: Ø 318.5 x 6.0 MM. MEANS THE OUTER DIAMETER OF THE PIPE IS 318.5 MM. AND THE THICKNESS IS 6.0 MM.
5. STEEL PIPE SHALL CONFORM TO ONE OF THE FOLLOWING SPECIFICATIONS:
 - 5.1 TIS 107 GRADE HS-41
 - 5.2 JIS.G3444 GRADE STK-41
 - 5.3 ASTM. A252-75 GRADE 2
6. STRUCTURAL STEEL SECTION SHALL CONFORM TO TIS. 118 GRADE F₂₄.
7. STEEL PIPE, STRUCTURAL STEEL SECTION, STEEL PLATE, BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. ZINC COATING SHALL NOT BE LESS THAN 550 GRAMS PER SQUARE METER.
8. ELECTRIC ARC WELDING WHICH CONFORMS TO AISI STANDARD SHALL BE USED FOR WELDING STEEL.
9. CONCRETE FOR REINFORCED CONCRETE PILE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 300 KSC. FOR 15x15x15 CM. CUBE AT 28 DAYS. AN APPROXIMATE MIX DESIGN PER CUBIC METER IS SUGGESTED AS FOLLOWS:
 - PORTLAND CEMENT TYPE 1 375 KG.(MIN.)
 - SAND 0.43 M.³
 - CRUSHED ROCK OR GRAVEL 0.96 M.³
 - CONCRETE SLUMP 10 CM.(MAX.)
10. CONCRETE FOR PRESTRESS CONCRETE PILE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 440 KSC. FOR 15x15x15 CM. CUBE AT 28 DAYS. AN APPROXIMATE MIX DESIGN PER CUBIC METER IS SUGGESTED AS FOLLOWS:
 - PORTLAND CEMENT TYPE 1 375 KG.(MIN.)
 - SAND 0.43 M.³
 - CRUSHED ROCK OR GRAVEL 0.96 M.³
 - CONCRETE SLUMP 9 CM.(MAX.)
11. CONCRETE FOR FOUNDATION SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 210 KSC. FOR 15x15x15 CM. CUBE AT 28 DAYS. AN APPROXIMATE MIX DESIGN PER CUBIC METER IS SUGGESTED AS FOLLOWS:
 - PORTLAND CEMENT TYPE 1 350 KG.(MIN.)
 - SAND 0.43 M.³
 - CRUSHED ROCK OR GRAVEL 0.96 M.³
 - CONCRETE SLUMP 10 CM.(MAX.)
12. REINFORCING STEEL SHALL CONFORM TO TIS.20 GRADE SR24 FOR ROUND BARS AND TIS.24 GRADE SD 30 FOR DEFORMED BARS.
13. PRESTRESSING WIRE SHALL CONFORM TO TIS.95.
14. NORMAL CLEAR CONCRETE COVER SHALL BE 5 CM. BUT FOR FOUNDATION SHALL BE 7.5 CM., UNLESS OTHERWISE INDICATED.
15. CANTILEVER BEAM SHALL BE INSTALLED PERPENDICULAR TO THE ROADWAY ALIGNMENT. CAMBER SHALL BE PROVIDED FOR BEAM DEFLECTION.
16. WHERE SIGN LIGHTING IS REQUIRED, THE ELECTRICAL COMPONENTS SHALL CONFORM TO THE ELECTRICITY SUPPLY AUTHORITY'S REQUIREMENTS AND REGULATIONS.
17. THIS DRAWING SHALL BE USED IN COMBINATION WITH DWG. NO.RS-111.

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

STANDARD DRAWING
STEEL POLE FOR OVERHANGING TRAFFIC SIGN
FOR SIGN PLATES NOT MORE THAN 108,000 SQ.CM. - I

DESIGNED : D.O.H. & CONSULTANTS	CHECKED : <i>[Signature]</i>	DATE : JULY 1994	SCALE : AS SHOWN
SUBMITTED :	<i>[Signature]</i>	DWG. NO. RS-110	
APPROVED : <i>[Signature]</i> DIRECTOR OF LOCATION & DESIGN DIVISION			
SHEET NO. 27			

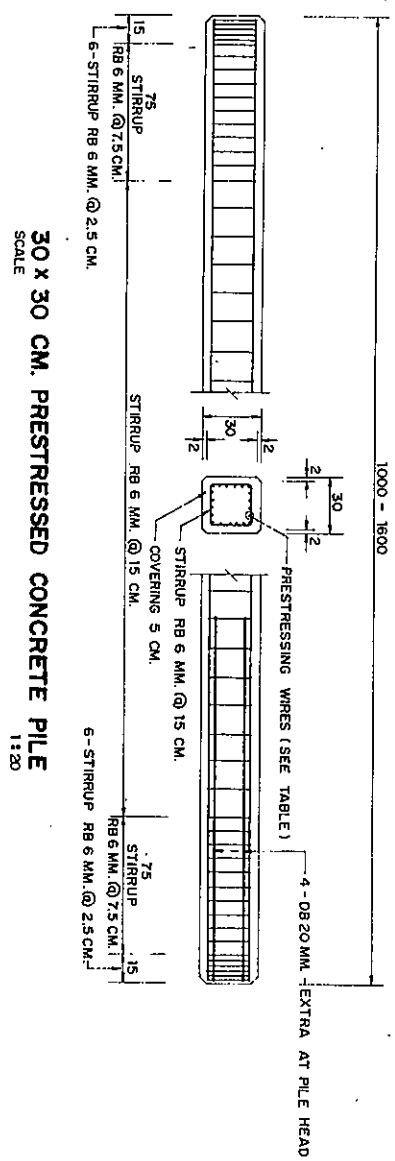
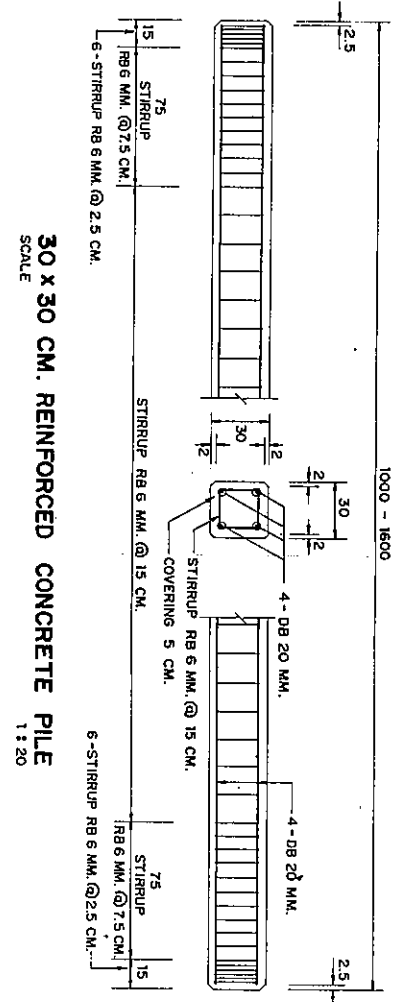
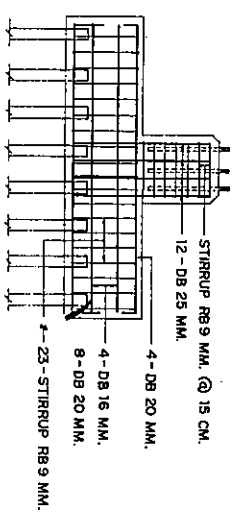
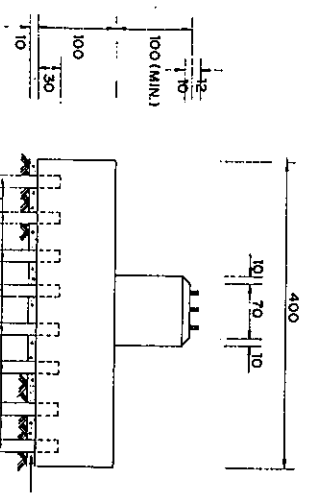
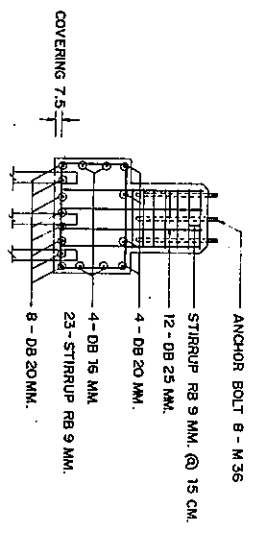
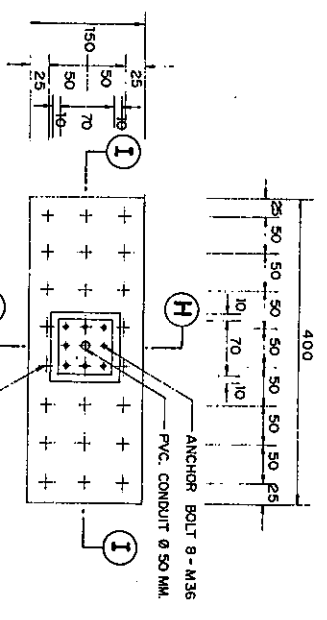
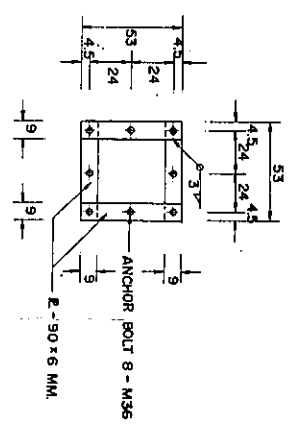
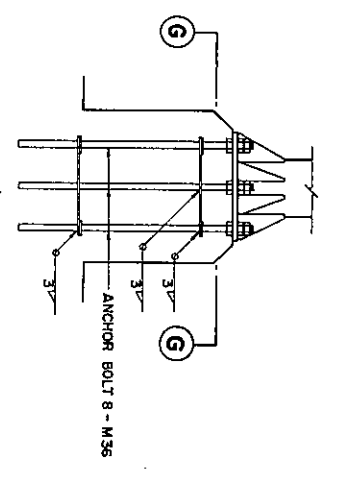
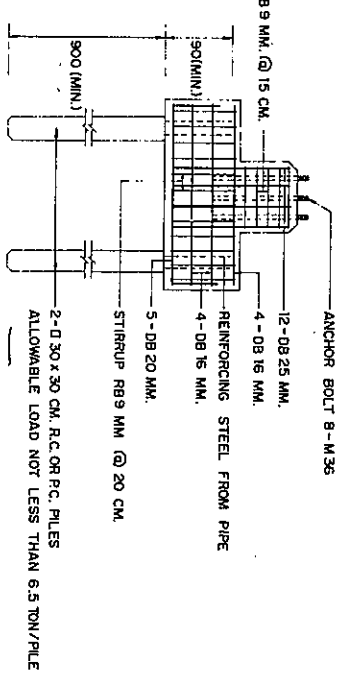
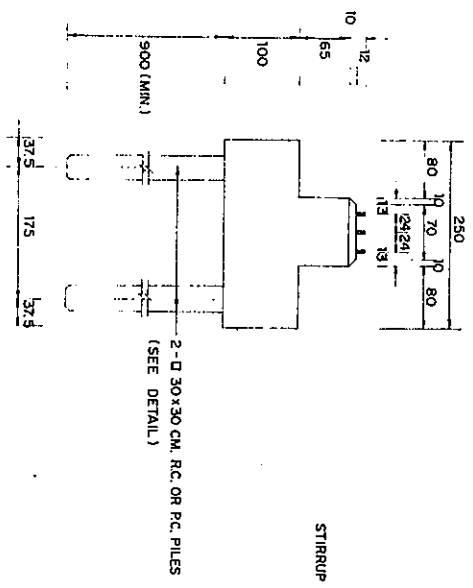
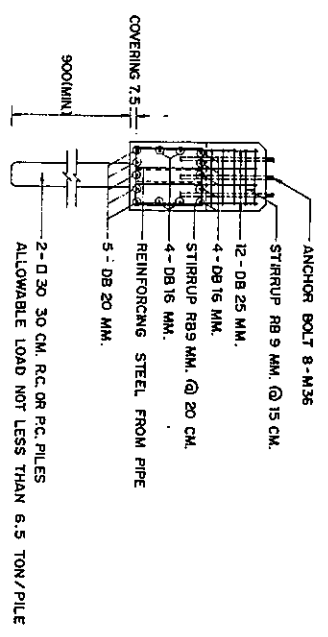
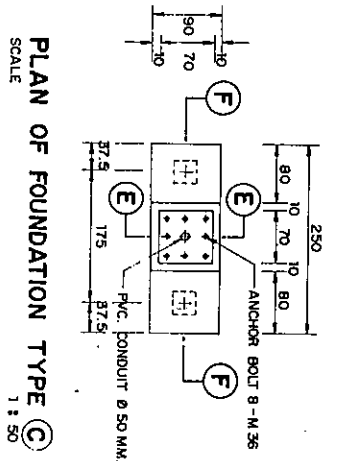


TABLE OF PRESTRESSING WIRES

AMOUNT AND DIMETER	ARRANGEMENT
28 - Ø 4 MM.	
18 - Ø 5 MM.	
9 - Ø 7 MM.	

NOTES :

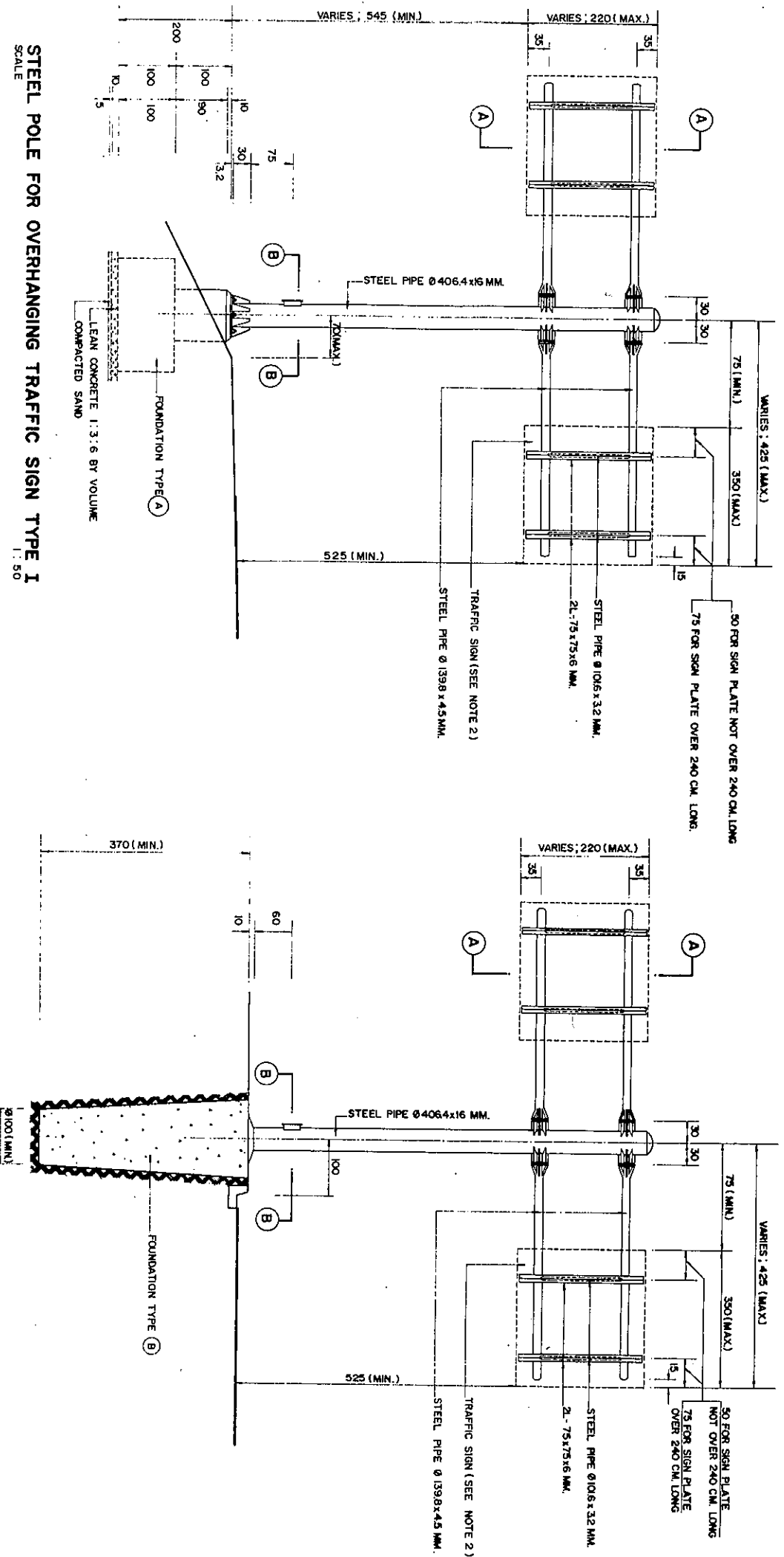
1. ALL DIMENSIONS ARE IN CENTIMETERS UNLESS OTHERWISE INDICATED.
2. PRE-CAST CONCRETE PILES 600 CM LONG WITH CIRCULAR, HEXAGON, OCTAGON, SQUARE OR I-SHAPE SECTIONS WHICH CONFORMING TO TIS. 395 OR TIS. 396 OR TIS. 397 OR TIS. 398 SHALL BE USED AS APPROVED BY THE ENGINEER.
3. IN CASE OF FOUNDATION ARE NOT CONSTRUCTED AS SPECIFIED IN THIS DRAWING, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADAPTATION TO CONSTRUCTION AS APPROVED BY THE ENGINEER.
4. THIS DRAWING SHALL BE USED IN COMBINATION WITH DWG. NO. RS-110.

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

STANDARD DRAWING
STEEL POLE FOR OVERHANGING TRAFFIC SIGN
FOR SIGN PLATE NOT MORE THAN 108,000 SQ. CM. - II

DESIGNED : D.O.H. & CONSULTANTS
CHECKED :
DATE JULY 1994
SCALE AS SHOWN
DWG. NO. RS-111
SHEET NO. 28

APPROVED :
DIRECTOR OF LOCATION & DESIGN DIVISION
APPL. (Assistant General)



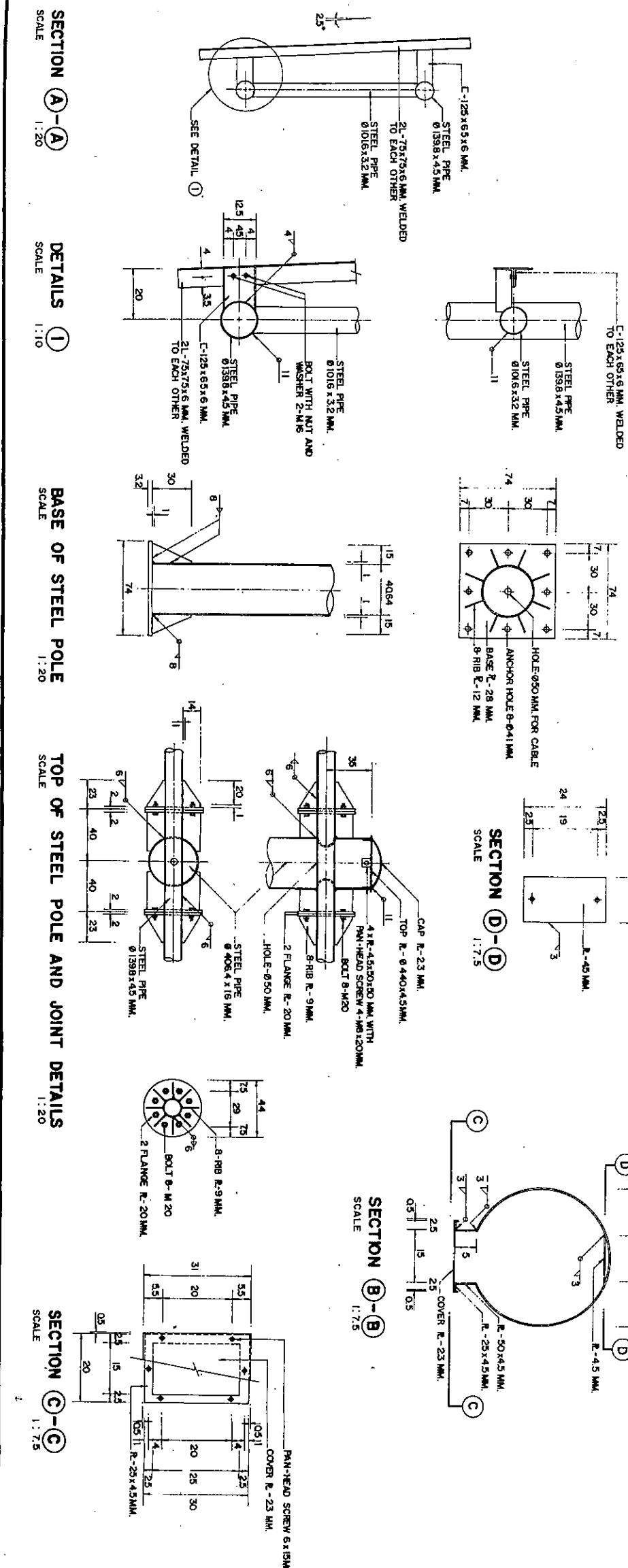
STEEL POLE FOR OVERHANGING TRAFFIC SIGN TYPE I
SCALE 1:50

STEEL POLE FOR OVERHANGING TRAFFIC SIGN TYPE I
SCALE 1:50

NOTES :

1. DIMENSIONS FOR WELDING SYMBOLS ARE IN MILLIMETERS, ALL OTHER DIMENSIONS ARE IN CENTIMETERS UNLESS OTHERWISE INDICATED.
2. THIS DRAWING SHALL BE USED FOR TRAFFIC SIGNS WHERE THE AREA OF THE SIGN INCLUDING THE GAPS BETWEEN PLATES IS NOT MORE THAN 2152,800 SQ.CM. THE MAXIMUM LENGTH AND WIDTH OF THE SIGN SHALL NOT EXCEED 350 CM. AND 220 CM. RESPECTIVELY.
3. THE FOUNDATION TYPE (A) SHALL BE USED IN A SIDE SLOPE AREA AND FOUNDATION TYPE (B) SHALL BE USED IN A SIDEWALK OR RAISED MEDIAN.
4. THE ALLOWABLE SOIL BEARING CAPACITY UNDER THE FOUNDATION TYPE (A) SHALL BE MORE THAN 5 TONS PER SQ. M. EMBANKMENT AROUND FOUNDATION TYPE (B) SHALL BE COMPACTED TO 90% OF THE MAXIMUM STANDARD DRY DENSITY.
5. THE DIMENSIONS OF STEEL PIPE SHOWN ARE THE OUTER DIAMETER AND THE THICKNESS OF THE PIPE. FOR EXAMPLE : Ø 406.4 x 16 MM. MEANS THE OUTER DIAMETER OF THE PIPE IS 406.4 MM. AND THE THICKNESS IS 16 MM.
6. STEEL PIPE SHALL CONFORM TO ONE OF THE FOLLOWING SPECIFICATIONS.
 - 5.1 TIS 107-2517 GRADE HS 41
 - 5.2 JIS. G3444 GRADE STK 41
 - 5.3 ASTM. A 252-75 GRADE 2
7. STRUCTURAL STEEL SECTION SHALL CONFORM TO TIS 116 GRADE F8 24.
8. STEEL PIPE STRUCTURAL STEEL SECTION, STEEL PLATE, BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED ZINC COATING SHALL NOT BE LESS THAN 550 GRAMS PER SQUARE METER.
9. ELECTRIC ARC WELDING WHICH CONFORMS TO AISC STANDARD SHALL BE USED FOR WELDING STEEL.
10. CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 210 KSC. FOR 15x15x15 CM. CUBE AT 28 DAYS. AN APPROXIMATE MIX DESIGN PER CUBIC METER IS SUGGESTED AS FOLLOWS :

PORTLAND CEMENT TYPE 1	350	KG. (MM.)
SAND	0.43	M ³
CRUSHED ROCK OR GRAVEL	0.96	M ³
CONCRETE SLUMP	10	CM. (MAX.)
11. MORTAR SHALL BE COMPRISED OF PORTLAND CEMENT AND SAND IN THE PROPORTION 1 TO 1.
12. REINFORCING STEEL SHALL CONFORM TO TIS. 20 GRADE SR 24 FOR ROUND BAR AND TIS. 24 GRADE SD 30 FOR DEFORMED BARS.
13. CANTILEVER BEAM SHALL BE INSTALLED PERPENDICULAR TO THE ROADWAY ALIGNMENT. CAMBER SHALL BE PROVIDED FOR BEAM DEFLECTION.
14. WHERE SIGN LIGHTING IS REQUIRED, THE ELECTRICAL COMPONENTS SHALL CONFORM TO THE ELECTRICITY SUPPLY AUTHORITY'S REQUIREMENTS AND REGULATIONS.
15. THIS DRAWING SHALL BE USED IN COMBINATION WITH DWG. NO. RS-113.



SECTION A-A
SCALE 1:20

DETAILS 1
SCALE 1:10

BASE OF STEEL POLE
SCALE 1:20

TOP OF STEEL POLE AND JOINT DETAILS
SCALE 1:20

SECTION B-B
SCALE 1:7.5

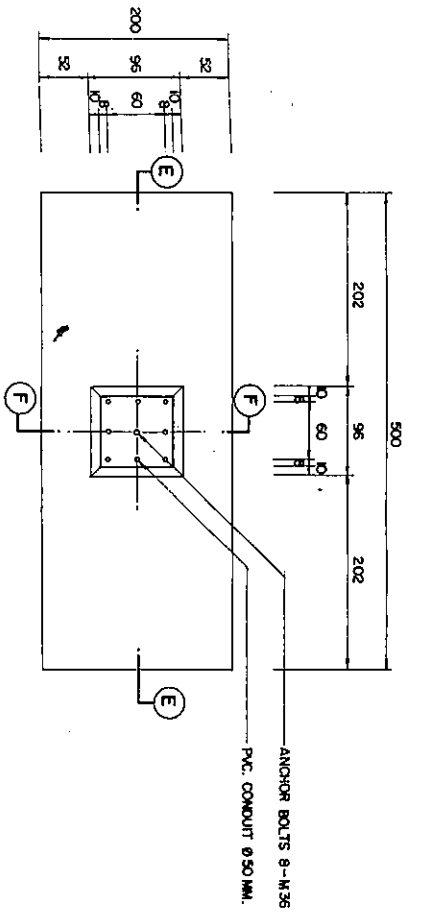
SECTION C-C
SCALE 1:7.5

SECTION D-D
SCALE 1:7.5

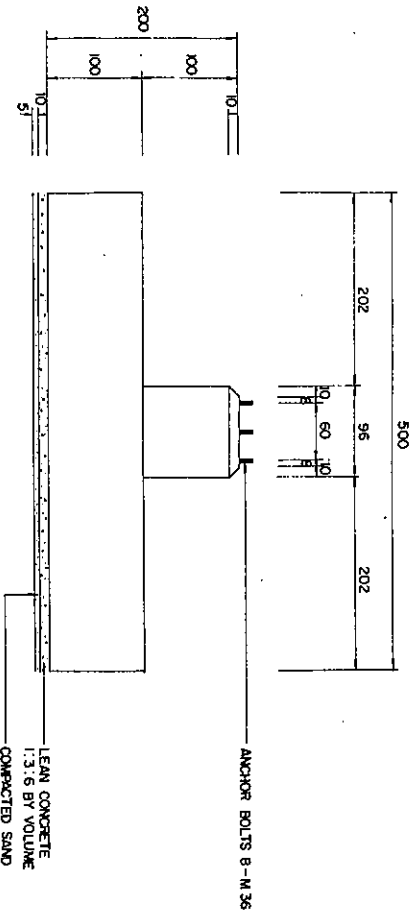
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

STANDARD DRAWING
STEEL POLE FOR TWO LEGS OVERHANGING TRAFFIC SIGN
FOR SIGN PLATES NOT MORE THAN 2 x 52,800 SQ.CM.-I

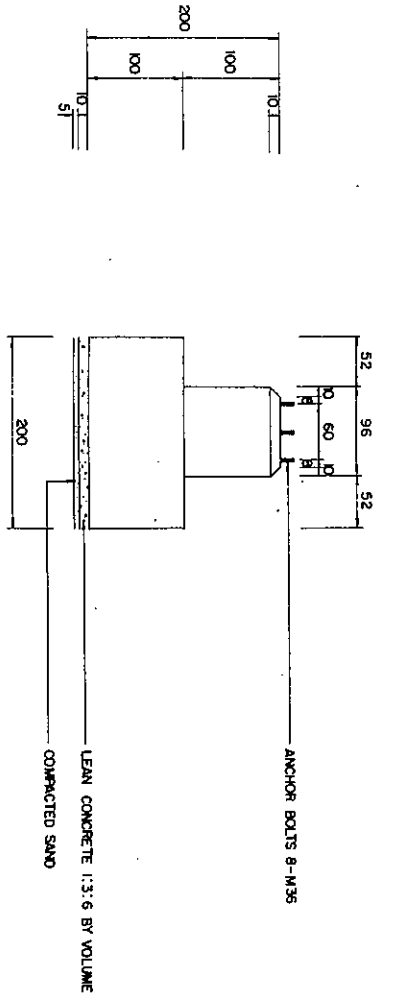
DESIGNED : D.O.H. & CONSULTANTS	CHECKED : <i>[Signature]</i>	DATE : JULY 1994
SUBMITTED : <i>[Signature]</i>	SCALE AS SHOWN	
(DIRECTOR OF LOCATION & DESIGN DIVISION)		
APPROVED : <i>[Signature]</i>	DWG. NO. RS-112	SHEET NO. 29



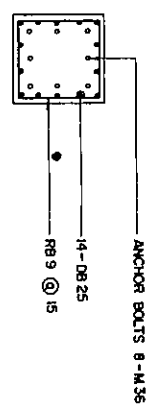
PLAN OF FOUNDATION TYPE (A)
SCALE 1:20



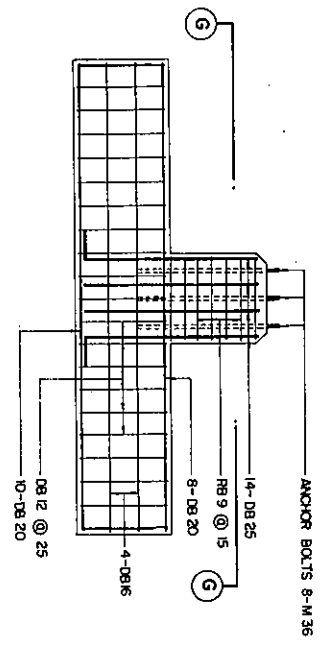
FRONT OF FOUNDATION TYPE (A)
SCALE 1:40



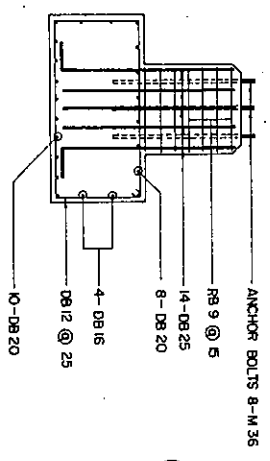
SIDE OF FOUNDATION TYPE (A)
SCALE 1:40



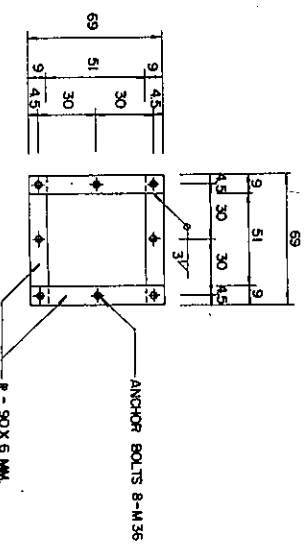
SECTION (G)-(G)
SCALE 1:40



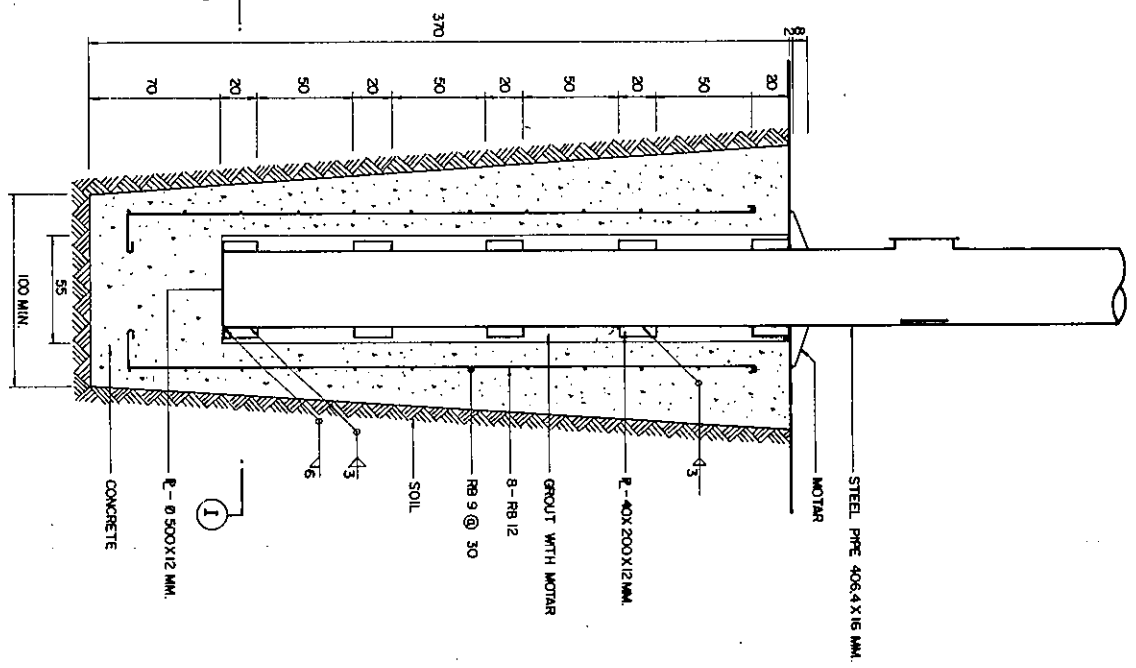
SECTION (E)-(E)
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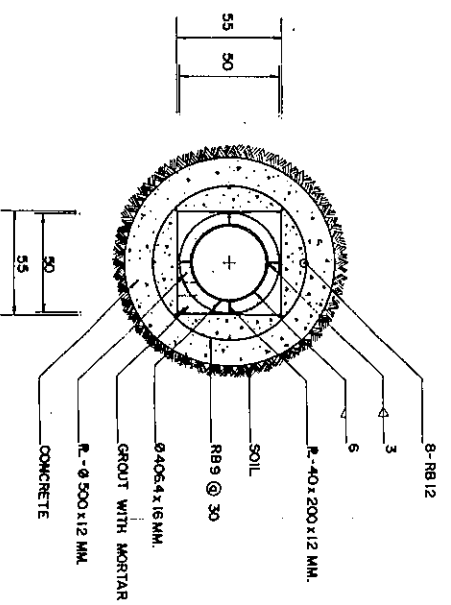
SECTION (F)-(F)
SCALE 1:40



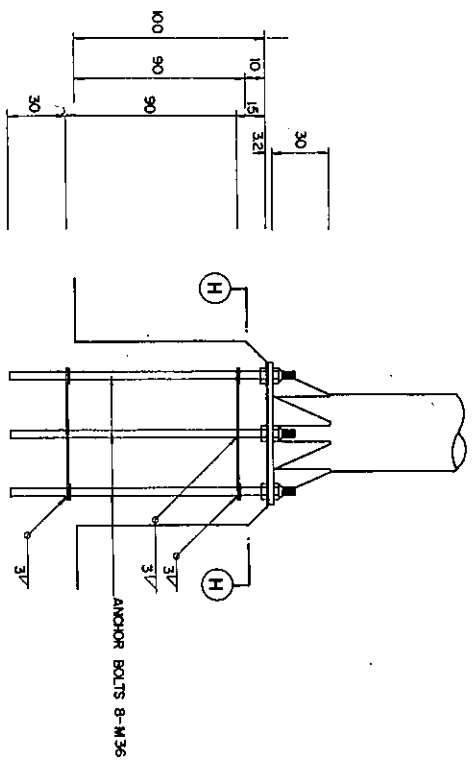
SECTION (H)-(H)
SCALE 1:20



FOUNDATION TYPE (B)
SCALE 1:20



SECTION (I)-(I)
SCALE 1:20

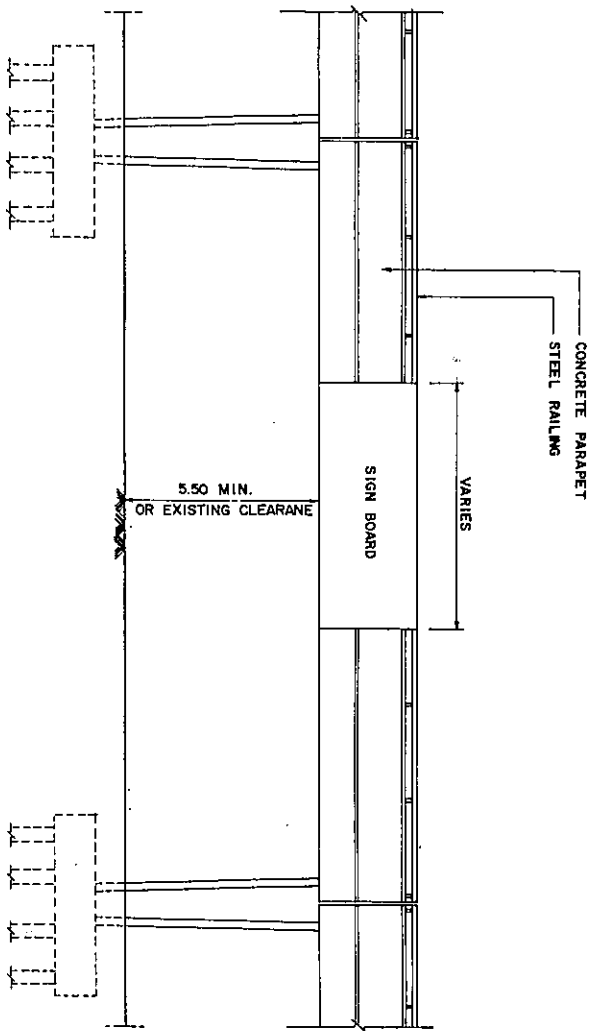


ANCHOR BOLT DETAILS
SCALE 1:20

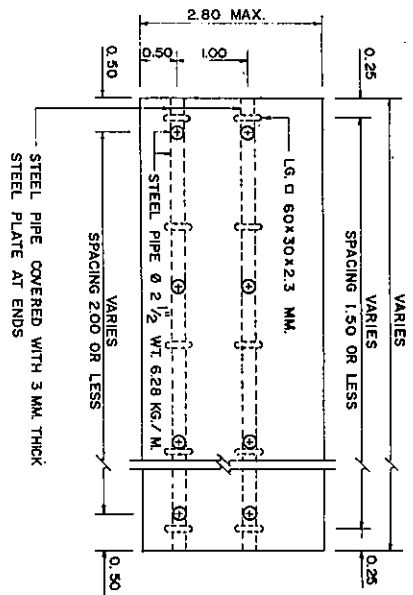
NOTES:

1. DIMENSIONS FOR WELDING SYMBOLS ARE IN MILLIMETERS, ALL OTHER DIMENSIONS ARE IN CENTIMETERS UNLESS OTHERWISE INDICATED.
2. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH DWG. NO. RS-112.

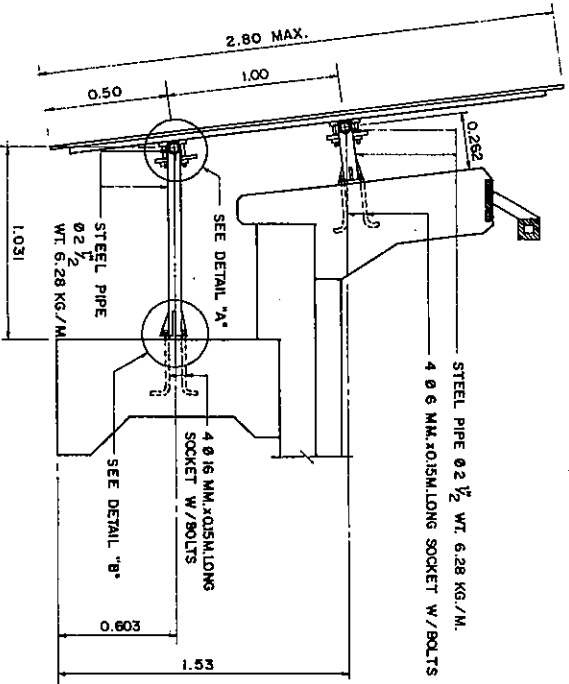
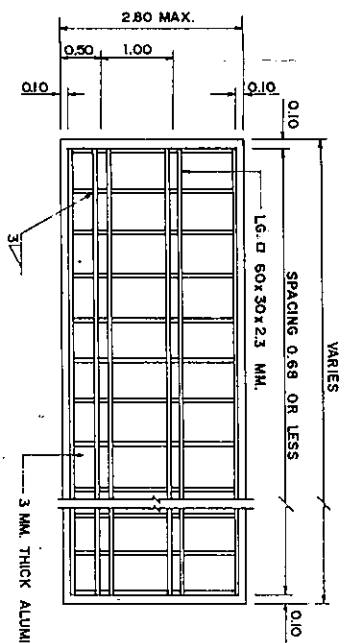
KINGDOM OF THAILAND	
MINISTRY OF TRANSPORT AND COMMUNICATIONS	
DEPARTMENT OF HIGHWAYS	
STANDARD DRAWING	
STEEL POLE FOR TWO LEGS OVERHANGING TRAFFIC SIGN FOR SIGN PLATES NOT MORE THAN 2x52,800 SQ.CM.-I	
DESIGNED: DO.H. & CONSULTANTS	CHECKED: [Signature]
SUBMITTED: [Signature]	DATE: JULY 1994
APPROVED: [Signature]	SCALE: AS SHOWN
(DIRECTOR OF LOCATION & DESIGN DIVISION)	DWG. NO. RS-113
(ART. DIRECTOR GENERAL)	SHEET NO. 30



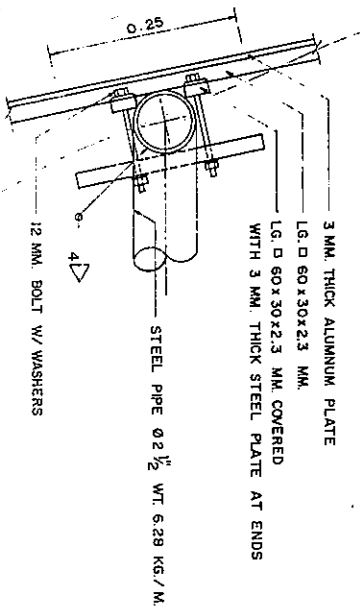
SIGN BOARD ERECTION ON BRIDGE DECK
SCALE 1 : 100



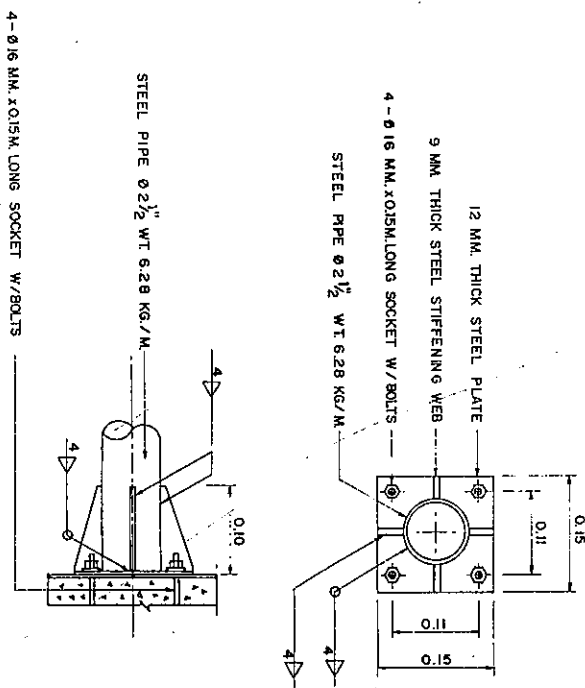
TYPICAL SIGN FRAME
SCALE 1 : 50



TYPICAL SIGN FRAME SUPPORT
SCALE 1 : 20



DETAIL "A"
SCALE 1 : 5



DETAIL "B"
SCALE 1 : 5

- NOTES**
- DIMENSIONS SHOWN ARE IN METERS EXCEPT WELDING SYMBOLS ARE IN MILLIMETERS, OR OTHERWISE INDICATED.
 - STRUCTURAL CARBON STEEL SHALL CONFORM TO T.S. 116 GRADE F₂₅₀.
 - STEEL PIPE SHALL BE PLAIN ENDS, MEDIUM CLASS CONFORM TO T.S. 107 GRADE HS 41.
 - VERTICAL PIPE POST SHALL BE CONNECTED AT UPPER PART.
 - LIGHT GAUGE STEEL (L.G.) OF SIGN FRAME SHALL BE CONNECTED TOGETHER WITH 3 MM. WELD.
 - ALL STEEL AND BOLT ASSEMBLY SHALL BE GALVANIZED, ZINC COATING SHALL NOT BE LESS THAN 550 GRAMS PER SQUARE METER.

KINGDOM OF THAILAND	
MINISTRY OF TRANSPORT AND COMMUNICATIONS	
DEPARTMENT OF HIGHWAYS	
STANDARD DRAWING	
STEEL FRAME FOR MOUNTING OVERHEAD SIGNS AT BRIDGE DECK	
DESIGNED: D.O.H. & CONSULTANTS	CHECKED: <i>[Signature]</i>
SUBMITTED: <i>[Signature]</i>	DATE: JULY 1994
DIRECTOR OF LOCALITY & DESIGN DIVISION	
APPROVED: <i>[Signature]</i>	SCALE AS SHOWN
HWK (DIRECTOR GENERAL)	
DWG. NO. RS-1112	
SHEET NO. 32	