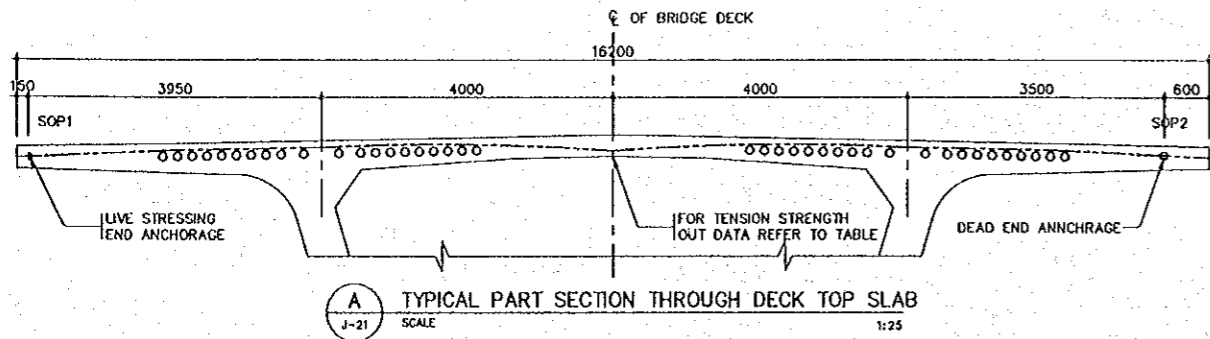


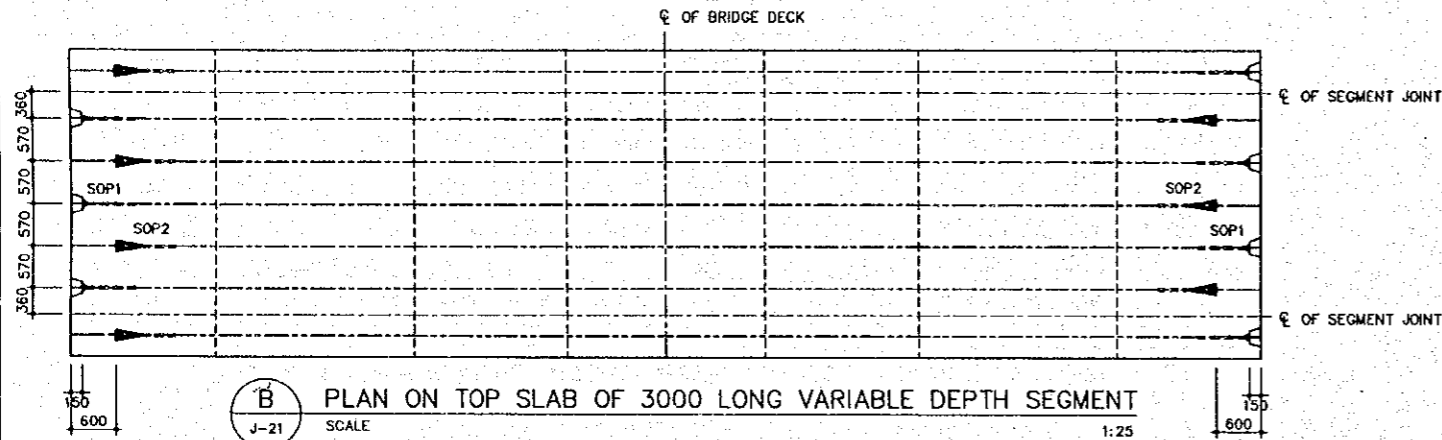
THE STUDY ON CONSTRUCTION OF THE BRIDGE  
OVER THE RIVER RUPSA IN KHULNA (PHASE 2)

TRANSVERSE PRESTRESSING  
LAYOUT AND DETAILS

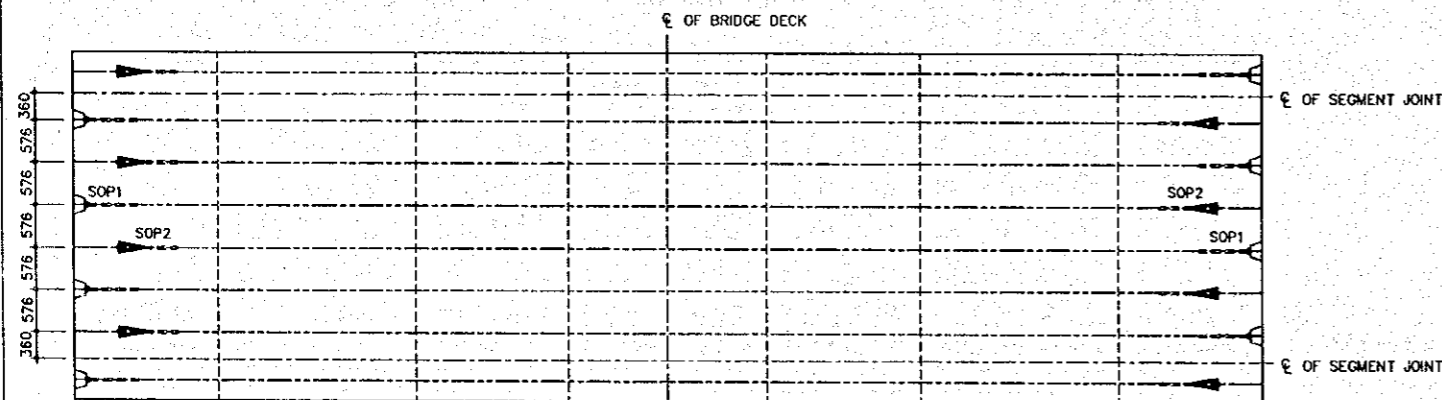
SCALE	SHEET NO.
AS SHOWN	J-21



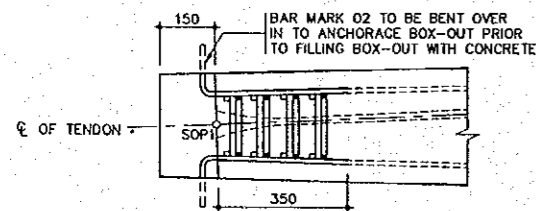
**A** TYPICAL PART SECTION THROUGH DECK TOP SLAB  
SCALE 1:25



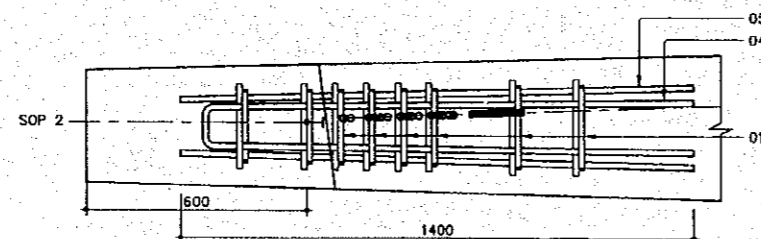
**B** PLAN ON TOP SLAB OF 3000 LONG VARIABLE DEPTH SEGMENT  
SCALE 1:25



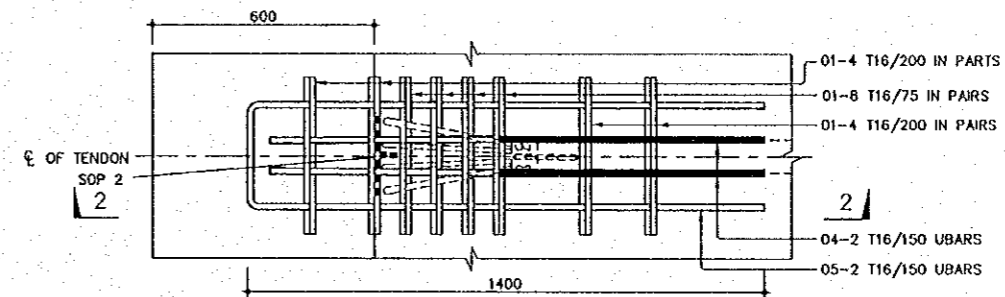
**C** PLAN ON TOP SLAB OF 3600 LONG CONSTANT DEPTH SEGMENT  
SCALE 1:25



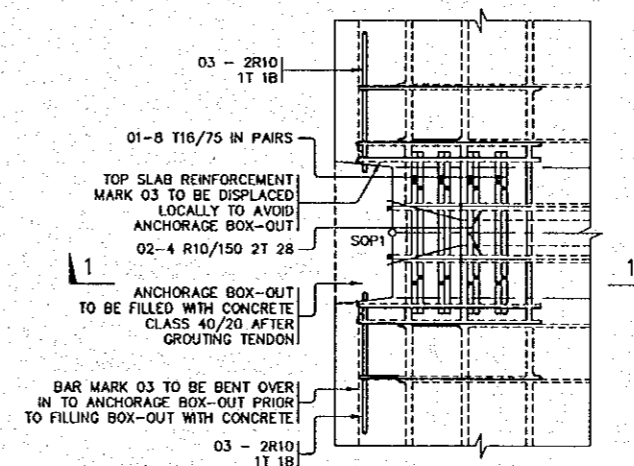
**D** SECTION 1-1  
(STANDARD DECK SEGMENT REINFORCEMENT SHOWN THUS) SCALE 1:10



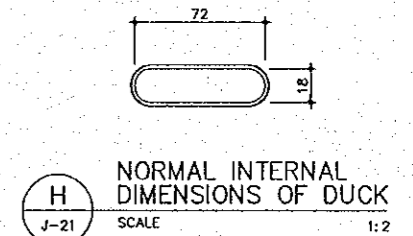
**E** SECTION 2-2  
(STANDARD DECK SEGMENT REINFORCEMENT SHOWN THUS) SCALE 1:10



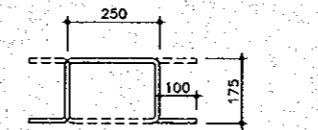
**F** PLAN ON TYPICAL DEAD END ANCHORAGE SHOWING ADDITIONAL REINFORCEMENT  
STANDARD DECK SEGMENT REINFORCEMENT OMITTED FOR CLARITY SCALE 1:10



**G** PLAN ON TYPICAL LIVE STRESSING END ANCHORAGE  
STANDARD DECK SEGMENT REINFORCEMENT SHOWN THUS SCALE 1:10



**H** NORMAL INTERNAL DIMENSIONS OF DUCK  
SCALE 1:2



**I** DETAIL OF REINFORCEMENT BAR MARK 01  
SCALE 1:10

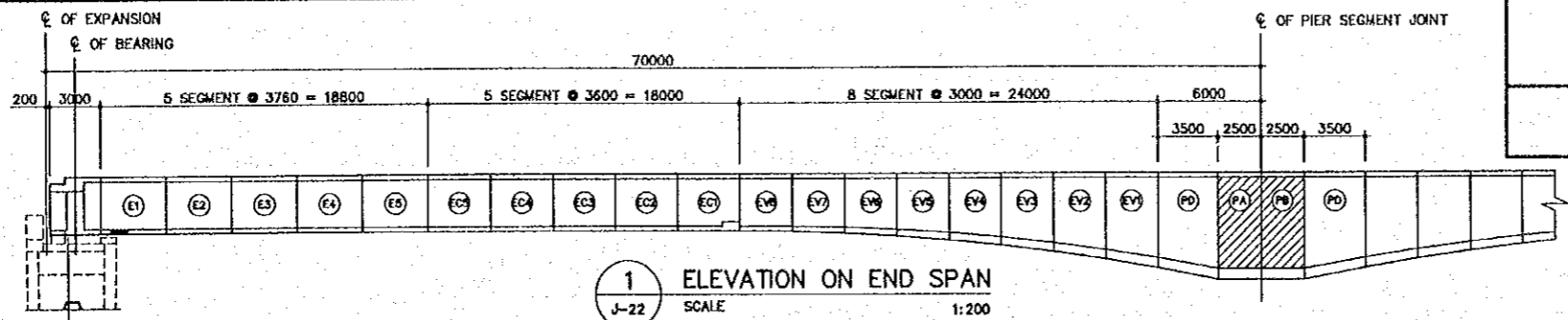
NOTES:

- THIS DRAWING TO BE READ IN CONJUNCTION WITH DRG. NO. J-01.
- EACH TRANSVERSE PRESTRESSING TENDON TO CONSIST OF 4 NO. 15.2mm NOMINAL DIAMETER UNCOATED SEVEN-WIRE STRANDS CONFORMING TO THE REQUIREMENTS OF AASHTO M203 (ASTM A 416) SUPPLEMENT S1 (LOW-RELAXATION)
- TENDON JACKING FORCE TO BE 730KN AFTER ALLOWING FOR FRICTION LOSSES IN JACK AND ANCHORAGE
- TENDON ELONGATION TO BE 112mm, BASED ON THE FOLLOWING DESIGN PARAMETERS:  
WOBBLE COEFFICIENT  $K=0.0066m^{-1}$   
FRICTION COEFFICIENT  $U=0.25$   
ANCHORAGE PULL-IN  $D=6.4mm$
- TRANSVERSE PRESTRESSING TENDON DUCTS TO CONSIST OF GALVANISED STEEL TUBE WITH NOMINAL DIMENSIONS AS SHOWN.
- MINIMUM CONCRETE STRENGTH AT TIME OF TRANSVERSE PRESTRESSING TO BE 15 N/mm<sup>2</sup> STRESSING TO BE CARRIED OUT PRIOR TO INSTALLATION OF SEGMENT IN BRIDGE DECK.
- GROUT VENTS TO BE PROVIDED AT ALL HIGH AND LOW SPOTS IN DUCT AND AT OTHER LOCATIONS IN ACCORDANCE WITH THE SPECIFICATION.
- FOR LOCATIONS OF TRANSVERSE PRESTRESSING TENDONS IN ABUTMENT DIAPHRAGMS AND PIER DIAPHRAGM SEGMENTS, REFER TO DRG. NO. J-27, J-30 RESPECTIVELY.
- TRANSVERSE PRESTRESSING TENDONS TO BE ARRANGED SUCH THAT THROUGHOUT STRUCTURE ADJACENT TENDONS ARE STRESSED FROM ALTERNATE ENDS.
- MINIMUM CONCRETE COVER TO REINFORCEMENT TO BE 50mm TO SURFACE OF DECK AND 40mm ELSEWHERE UNLESS NOTED OTHERWISE.
- MINIMUM LAP LENGTH TO BE AS SHOWN:  
32# = 1500mm    16# = 550mm  
25# = 950mm    12# = 400mm  
20# = 850mm  
BASED ON THE DIAMETER OF THE SMALLER LAPPING BAR, UNLESS SHOWN OTHERWISE

THE STUDY ON CONSTRUCTION OF THE BRIDGE  
OVER THE RIVER RUPSA IN KHULNA (PHASE 2)

RC DETAILS OF DECK

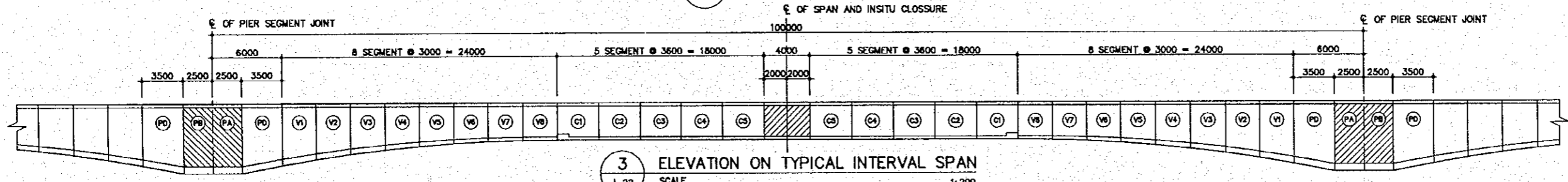
SCALE	SHEET NO.
AS SHOWN	J-22



1 ELEVATION ON END SPAN  
SCALE 1:200

SEGMENT TYPE	E1	E2	E3	E4	E5	EC5	EC4	EC3	EC2	EC1	EV8	EV7	EV6	EV5	EV4	EV3	EV2	EV1	PD
SEGMENT LENGTH	3760	3760	3760	3760	3760	3600	3600	3600	3600	3600	3000	3000	3000	3000	3000	3000	3000	3000	3500
NO. OF SETS OF TRANSVERSE BAR	30	30	30	30	30	30	29	29	29	29	23	23	23	23	23	23	23	23	29
SHEAR LINK REINFORCEMENT	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125
ANCHORAGE BUSTER TYPE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RC DETAILS DRAWING NO.																			

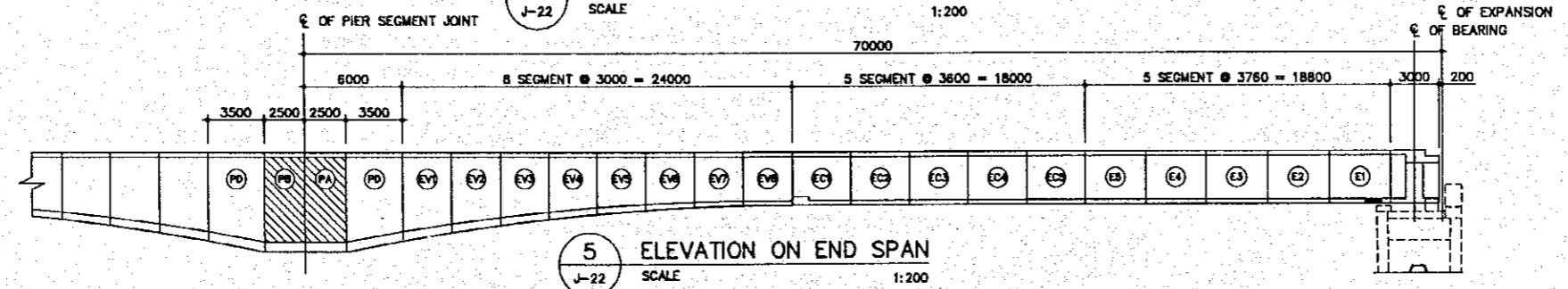
2 REINFORCEMENT SUMMARY TABLE  
SCALE 1:200



3 ELEVATION ON TYPICAL INTERVAL SPAN  
SCALE 1:200

SEGMENT TYPE	PD	V1	V2	V3	V4	V5	V6	V7	V8	C1	C2	C3	C4	C5	C5	C4	C3	C2	C1	V8	V7	V6	V5	V4	V3	V2	V1	PD
SEGMENT LENGTH	3500	3000	3000	3000	3000	3000	3000	3000	3000	3600	3600	3600	3600	3600	3600	3600	3600	3600	3000	3000	3000	3000	3000	3000	3000	3000	3500	
NO. OF SETS OF TRANSVERSE BAR	29	23	23	23	23	23	23	23	23	29	29	29	29	29	29	29	29	29	23	23	23	23	23	23	23	23	29	
SHEAR LINK REINFORCEMENT	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	
ANCHORAGE BUSTER TYPE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RC DETAILS DRAWING NO.																												

4 REINFORCEMENT SUMMARY TABLE  
SCALE 1:200



5 ELEVATION ON END SPAN  
SCALE 1:200

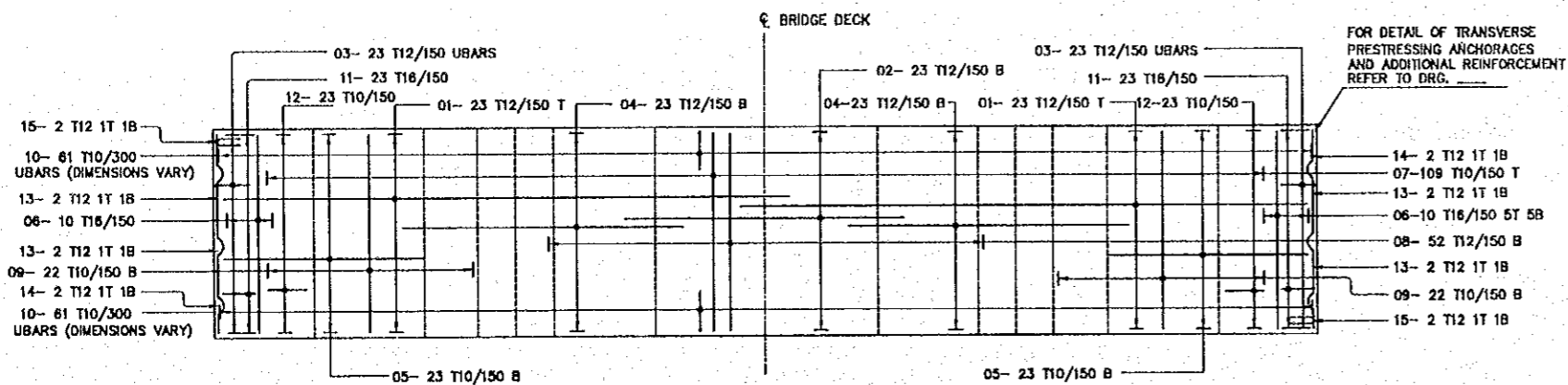
SEGMENT TYPE	PD	EV1	EV2	EV3	EV4	EV5	EV6	EV7	EV8	EC1	EC2	EC3	EC4	EC5	E5	E4	E3	E2	E1
SEGMENT LENGTH	3500	3000	3000	3000	3000	3000	3000	3000	3000	3600	3600	3600	3600	3600	3760	3760	3760	3760	3760
NO. OF SETS OF TRANSVERSE BAR	29	23	23	23	23	23	23	23	23	29	29	29	29	30	30	30	30	30	30
SHEAR LINK REINFORCEMENT	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125	T25/125
ANCHORAGE BUSTER TYPE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RC DETAILS DRAWING NO.																			

6 REINFORCEMENT SUMMARY TABLE  
SCALE 1:200

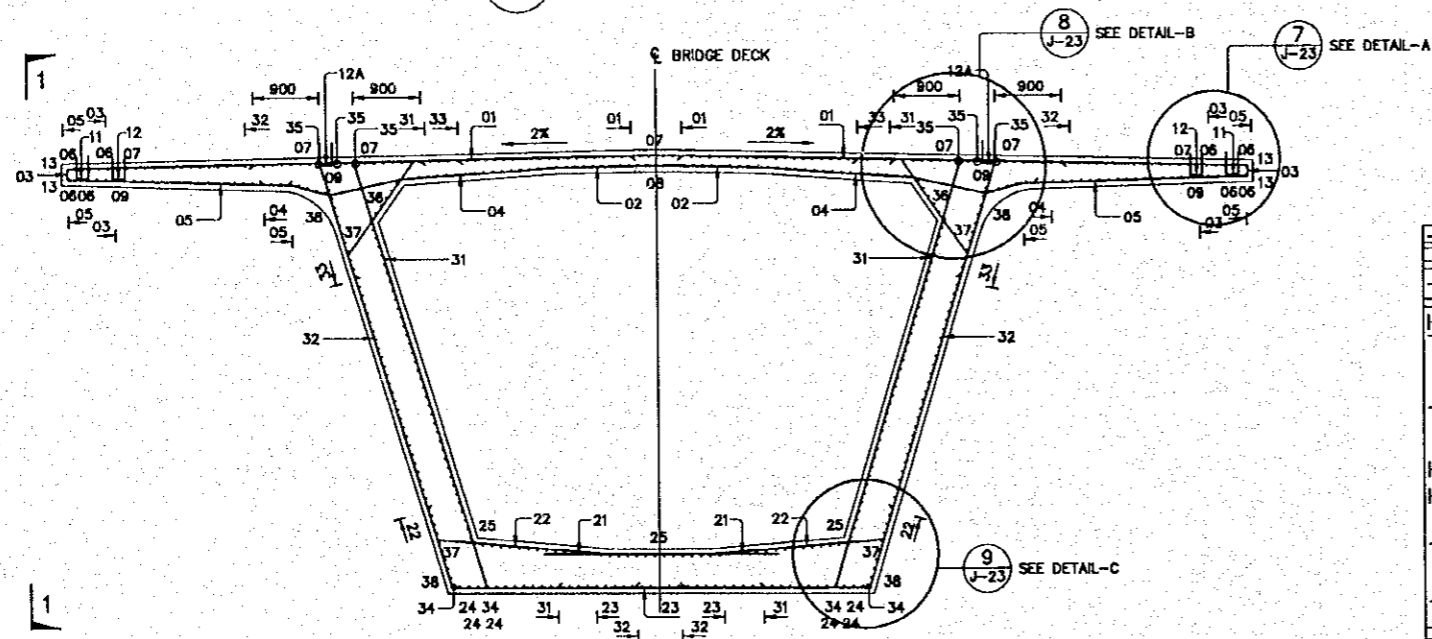
THE STUDY ON CONSTRUCTION OF THE BRIDGE  
OVER THE RIVER RUPSA IN KHULNA (PHASE 2)

RE DETAIL OF 3000  
LONG VARIABLE DEPTH SEGMENT

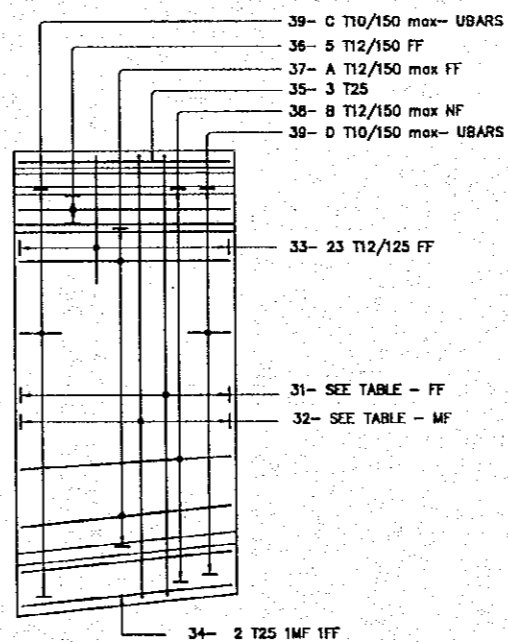
SCALE SHEET NO.  
AS SHOWN J-23



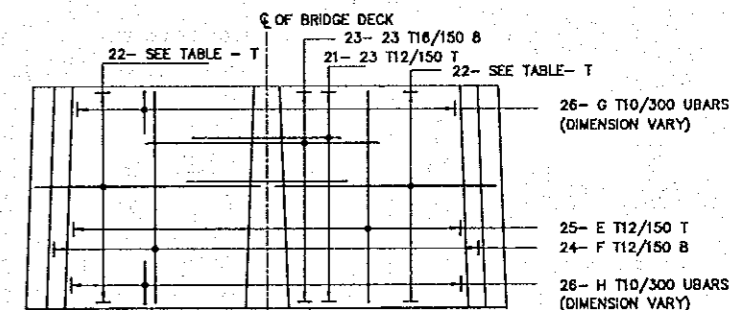
1 PLAN ON TOP SLAB  
SCALE 1:50



2 TYPICAL SECTION THROUGH SEGMENT  
SCALE 1:50



3 ELEVATION WEB 1-1  
SCALE 1:50



4 PLAN ON BOTTOM SLAB  
SCALE 1:50

SCHEDULE OF VARYING REINFORCEMENT

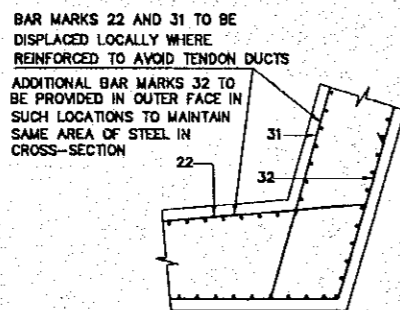
SEGMENT TYPE	A	B	C	D	E	F	G	H
V1.EV1	34	43	21	19	16	20	19	20
V2.EV2	30	38	18	17	41	45	20	21
V3.EV3	27	35	17	16	43	47	21	22
V4.EV4	25	32	16	14	45	49	22	23
V5.EV5	22	29	14	13	46	51	23	24
V6.EV6	20	28	13	12	47	52	24	25
V7.EV7	18	24	12	11	48	54	25	25
V8.EV8	16	21	11	10	50	55	25	26

N.B : QUANTITIES OF WEB REINFORCEMENT AREA FOR 1 No. WEB ONLY.

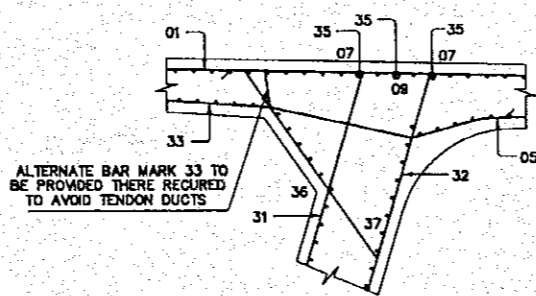
SCHEDULE OF VARYING REINFORCEMENT

SEGMENT TYPE	BAR MARK 22	BAR MARK 31	BAR MARK 32
V1.EV1	21 T20/125	23 T25/150	23 T25/150
V2.EV2	23 T20/150	23 T25/150	23 T25/150
V3.EV3	23 T20/150	23 T25/150	23 T25/150
V4.EV4	23 T20/150	28 T25/125	28 T25/125
V5.EV5	23 T20/150	28 T25/125	28 T25/125
V6.EV6	23 T20/150	28 T25/125	28 T25/125
V7.EV7	23 T20/150	28 T25/125	28 T25/125
V8.EV8	23 T20/150	28 T25/125	28 T25/125

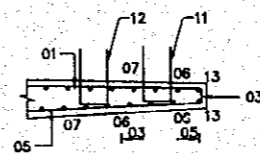
N.B : QUANTITIES OF WEB REINFORCEMENT AREA FOR 1 No. WEB ONLY.



7 DETAIL-C  
SCALE 1:25



6 DETAIL-B  
SCALE 1:25

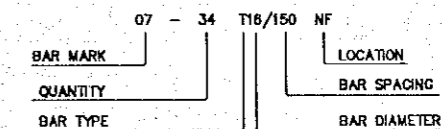


5 DETAIL-A  
SCALE 1:25

NOTES:

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRG. NO. J-22
  - REINFORCEMENT TO BE DEFORMED BAR TO AASHTO M31 (ASTM A615) GRADE 40 OR GRADE 60 AS NOTED.
  - MINIMUM CONCRETE COVER TO REINFORCEMENT TO BE 50mm TO TOP OF DECK 40mm ELSEWHERE, UNLESS NOTED OTHERWISE.
  - MINIMUM LAP LENGTHS TO BE AS FOLLOWS UNLESS SHOWN OTHERWISE:  
32# = 1500mm 16# = 550mm  
25# = 950mm 12# = 400mm  
20# = 650mm 10# = 350mm
- LAP LENGTHS BASED ON SMALLEST DIAMETER BAR AND CALCULATED IN ACCORDANCE WITH AASHTO ARTICLE 8.32, ASSUMING SMALLEST DIAMETER BAR TO BE FULLY STRESSED.
- REINFORCEMENT TO BE ANCHORED USING DEVELOPMENT LENGTHS CALCULATED IN ACCORDANCE WITH AASHTO ARTICLE 8.25, ASSUMING BAR TO BE FULLY STRESSED.

6. KEY TO REINFORCEMENT NAMENCALTURE:

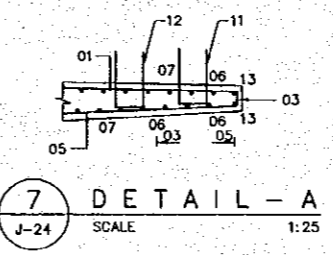
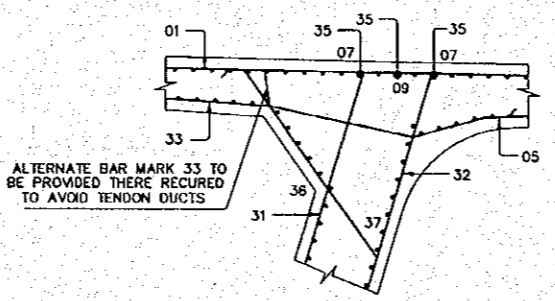
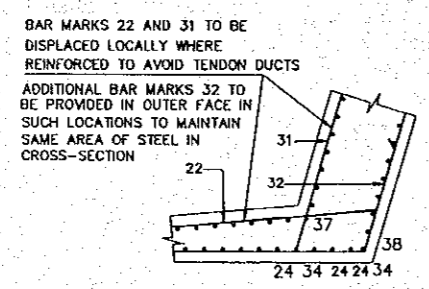
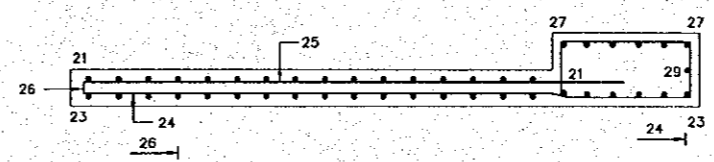
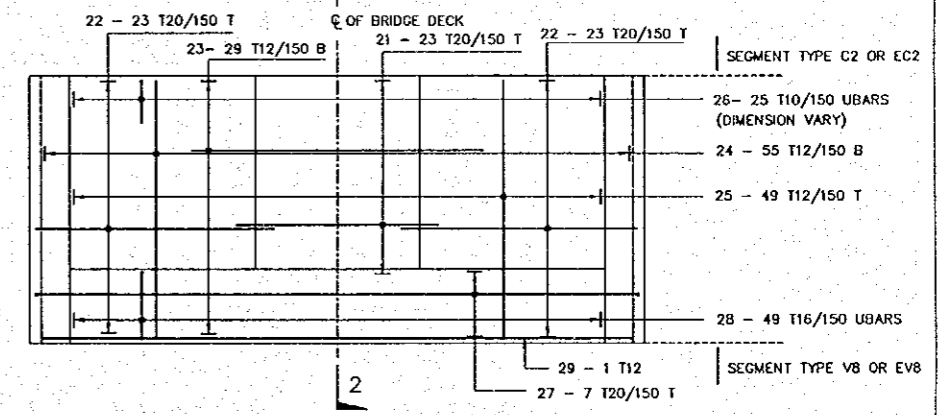
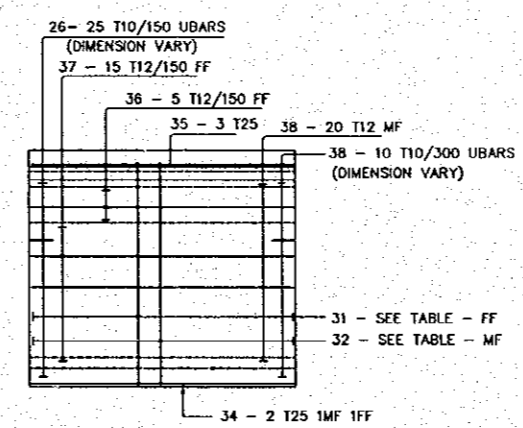
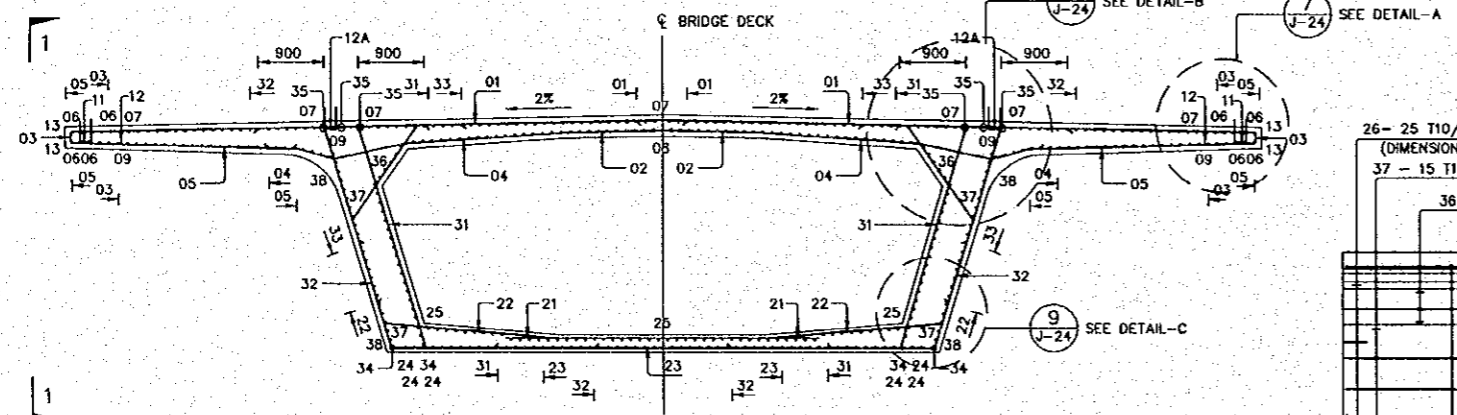
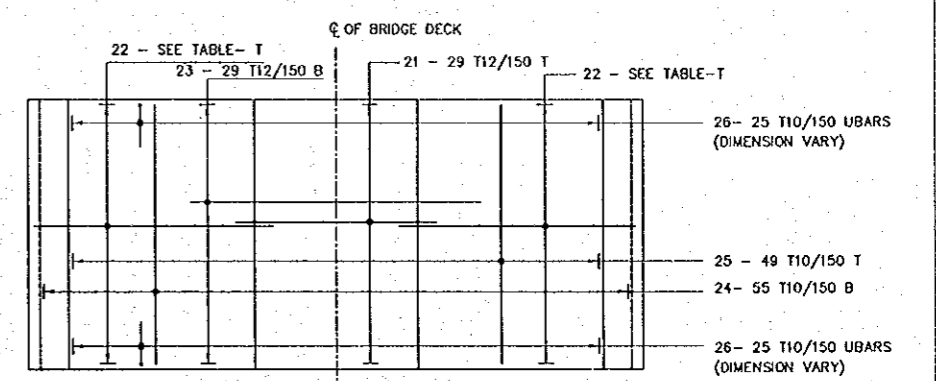
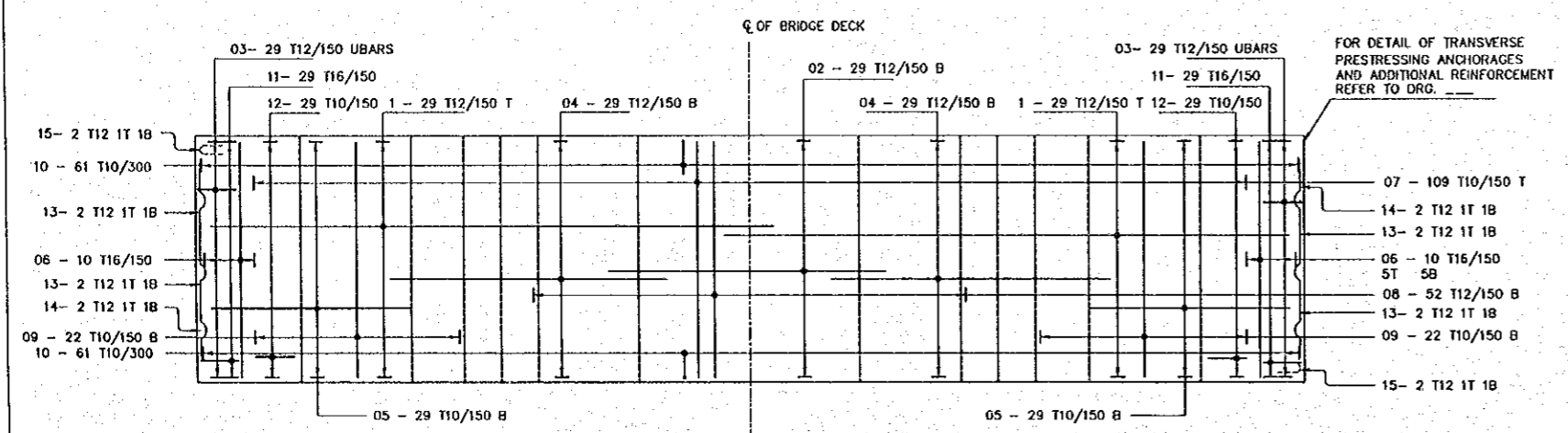


T = GRADE 60 BARS  
R = GRADE 40 BARS  
ABBREVIATIONS : - NF = NEAR FACE ; FF = FAR FACE ;  
EE = EACH FACE ; T = TOP ; B = BOTTOM ;  
STAGG = STAGGERED ; ALT = ALTERNATE SPACING ;  
ABR = ALTERNATE BARS REVERSED.

7. FOR DECK SEGMENT CONCRETE OUTLINES REFER TO DRG. NO. J-12

**THE STUDY ON CONSTRUCTION OF THE BRIDGE  
OVER THE RIVER RUPSA IN KHULNA (PHASE 2)**

<b>RE DETAIL OF 3600 LONG CONSTANT DEPTH SEGMENT</b>	SCALE AS SHOWN	SHEET NO. J-24
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**SCHEDULE OF VARYING REINFORCEMENT**

SEGMENT TYPE	BAR MARK 22	BAR MARK 31	BAR MARK 32
C1.EC1	23 T20/150	35 T25/125	35 T25/125
C2.EC2	29 T20/150	29 T25/150	29 T25/150
C3.EC3	29 T20/150	35 T20/125	35 T20/125
C4.EC4	35 T16/125	35 T20/125	35 T20/125
C5.EC5	35 T16/150	35 T16/125	35 T16/125
C6(A).EC6(A)	35 T12/125	35 T16/125	35 T16/125

N.B : QUANTITIES OF BARS FOR 1 No. WEB ONLY.

**NOTES:**

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRG. NO. J-22
- REINFORCEMENT TO BE DEFORMED BAR TO AASHTO M31 (ASTM A615) GRADE 40 OR GRADE 60 AS NOTED.
- MINIMUM CONCRETE COVER TO REINFORCEMENT TO BE 50mm TO TOP OF DECK 40mm ELSEWHERE, UNLESS NOTED OTHERWISE.
- MINIMUM LAP LENGTHS TO BE AS FOLLOWS UNLESS SHOWN OTHERWISE:  
 32# = 1500mm 16# = 550mm  
 25# = 950mm 12# = 400mm  
 20# = 850mm 10# = 350mm
- LAP LENGTHS BASED ON SMALLEST DIAMETER BAR AND CALCULATED IN ACCORDANCE WITH AASHTO ARTICLE 8.32, ASSUMING SMALLEST DIAMETER BAR TO BE FULLY STRESSED.
- REINFORCEMENT TO BE ANCHORED USING DEVELOPMENT LENGTHS CALCULATED IN ACCORDANCE WITH AASHTO ARTICLE 8.25, ASSUMING BAR TO BE FULLY STRESSED.
- KEY TO REINFORCEMENT Nomenclature:  
 07 - 34 T16/150 NF  
 BAR MARK LOCATION  
 QUANTITY BAR SPACING  
 BAR TYPE BAR DIAMETER

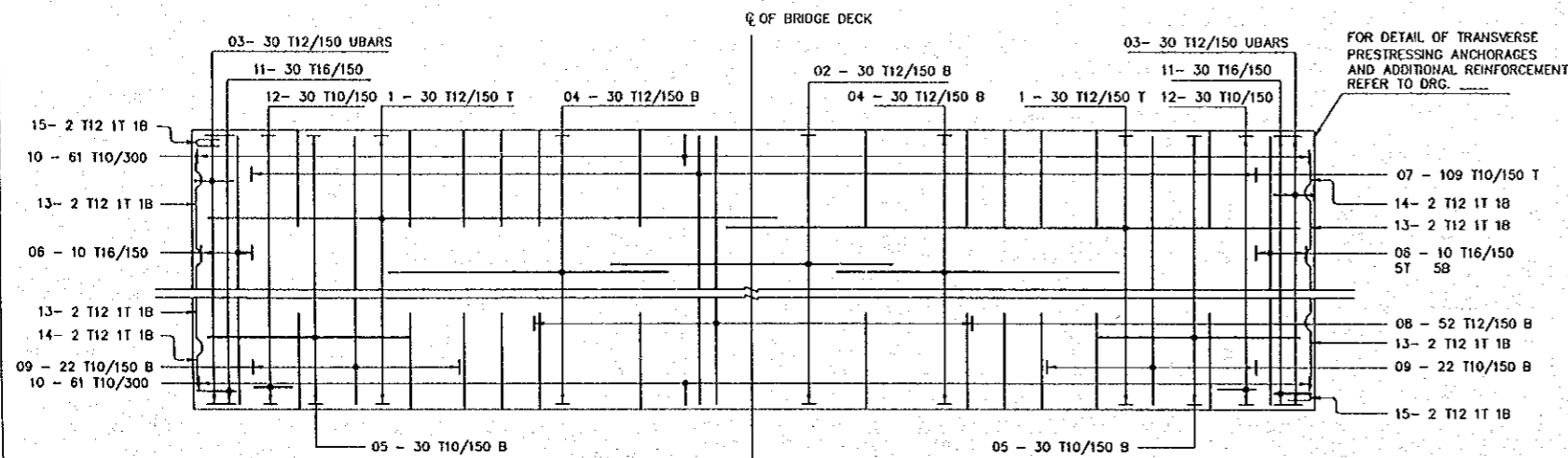
T = GRADE 60 BARS  
 R = GRADE 40 BARS  
 ABBREVIATIONS : - NF = NEAR FACE ; FF = FAR FACE ;  
 EE = EACH FACE ; T = TOP ; B = BOTTOM ;  
 STAGG = STAGGERED ; ALT = ALTERNATE SPACING ;  
 ABR = ALTERNATE BARS REVERSED.

7. FOR DECK SEGMENT CONCRETE OUTLINES REFER TO DRG. NO. J-12

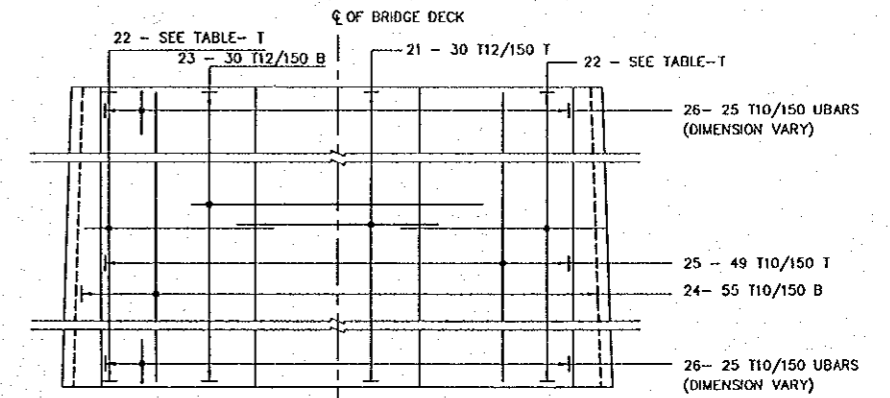
THE STUDY ON CONSTRUCTION OF THE BRIDGE  
OVER THE RIVER RUPSA IN KHULNA (PHASE 2)

RC DETAIL OF CONSTANT DEPTH  
END SPAN

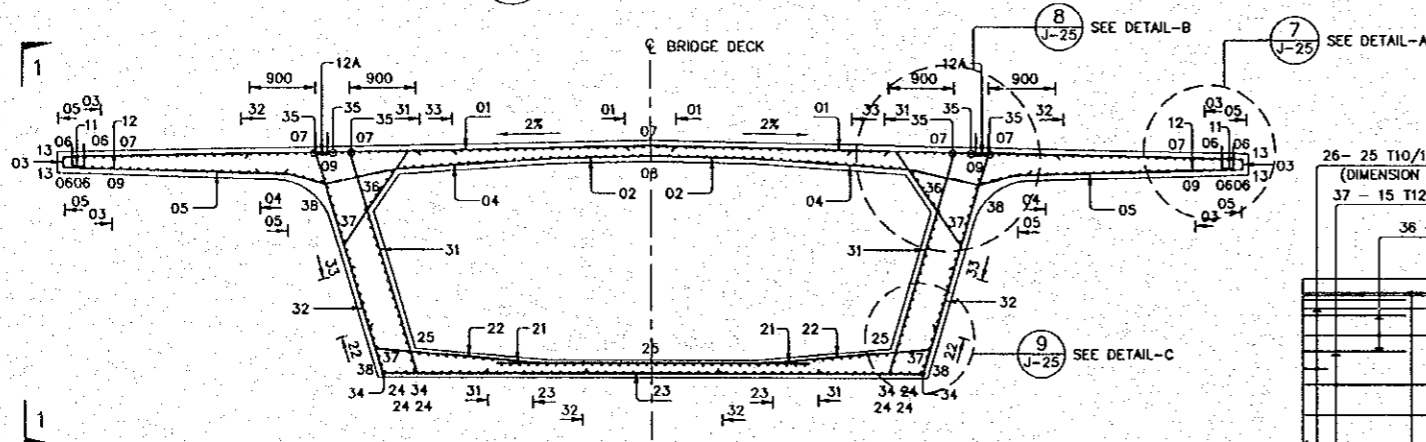
SCALE AS SHOWN SHEET NO. J-25



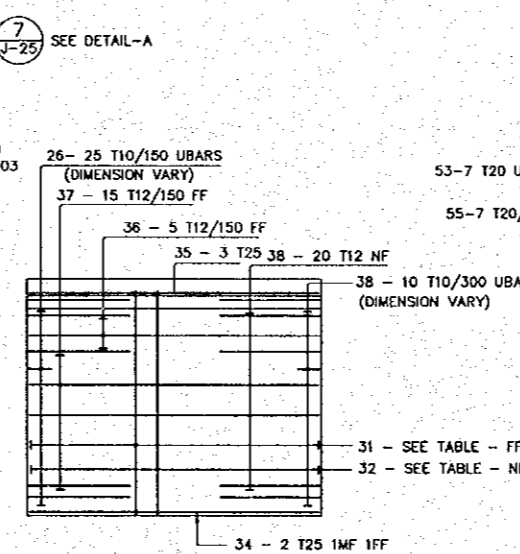
1 PLAN ON TOP SLAB  
J-25 SCALE 1:50



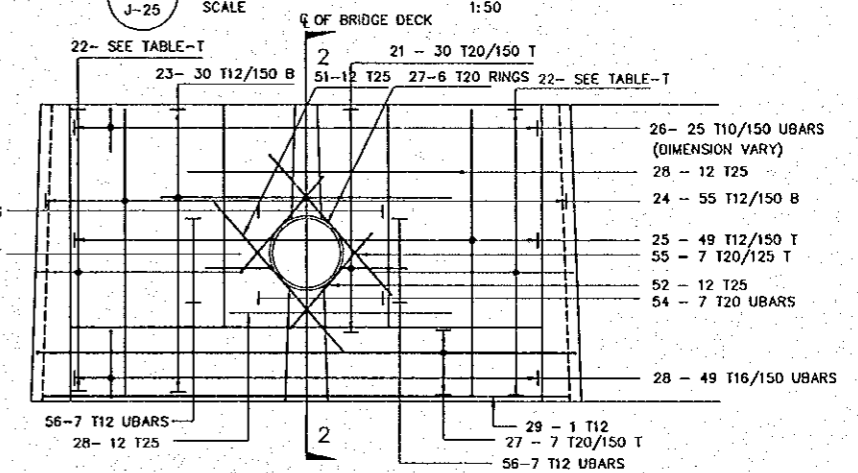
4 PLAN ON BOTTOM SLAB  
J-25 SCALE 1:50



2 TYPICAL SECTION THROUGH SEGMENT  
J-25 SCALE 1:50



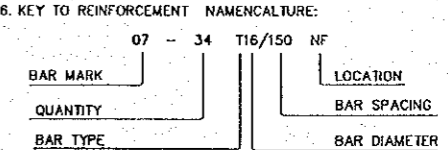
3 ELEVATION WEB 1-1  
J-25 OTHER WEB SEMILAR SCALE 1:50



5 PLAN ON BOTTOM SLAB  
J-25 SEGMENT TYPE E1 SCALE 1:50

NOTES:

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRG. NO. J-22
- REINFORCEMENT TO BE DEFORMED BAR TO AASHTO M31 (ASTM A615) GRADE 40 OR GRADE 60 AS NOTED.
- MINIMUM CONCRETE COVER TO REINFORCEMENT TO BE 50mm TO TOP OF DECK 40mm ELSEWHERE, UNLESS NOTED OTHERWISE.
- MINIMUM LAP LENGTHS TO BE AS FOLLOWS UNLESS SHOWN OTHERWISE:  
32# = 1500mm 16# = 550mm  
25# = 950mm 12# = 400mm  
20# = 650mm 10# = 350mm  
LAP LENGTHS BASED ON SMALLEST DIAMETER BAR AND CALCULATED IN ACCORDANCE WITH AASHTO ARTICLE B.32, ASSUMING SMALLEST DIAMETER BAR TO BE FULLY STRESSED.
- REINFORCEMENT TO BE ANCHORED USING DEVELOPMENT LENGTHS CALCULATED IN ACCORDANCE WITH AASHTO ARTICLE B.25, ASSUMING BAR TO BE FULLY STRESSED.
- KEY TO REINFORCEMENT Nomenclature:



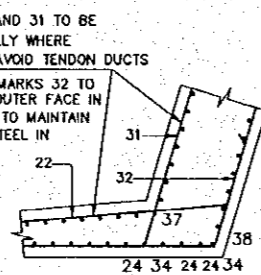
T = GRADE 60 BARS  
R = GRADE 40 BARS  
ABBREVIATIONS: - NF = NEAR FACE; FF = FAR FACE;  
EE = EACH FACE; T = TOP; B = BOTTOM;  
STAGG = STAGGERED; ALT = ALTERNATE SPACING;  
ABR = ALTERNATE BARS REVERSED.

7. FOR DECK SEGMENT CONCRETE OUTLINES REFER TO DRG. NO. J-12

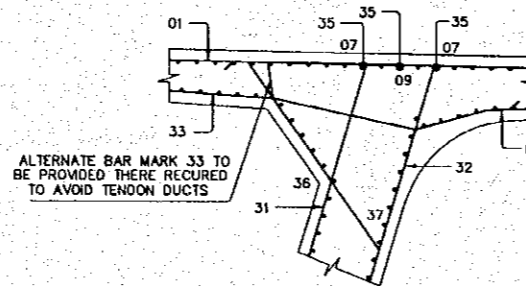
SCHEDULE OF VARYING REINFORCEMENT

SEGMENT TYPE	BAR MARK 22	BAR MARK 31	BAR MARK 32
E1	30 T16/150	40 T20/100	40 T20/100
E2	30 T16/150	28 T20/150	28 T20/150
E3	32 T12/125	32 T16/125	32 T16/125
E4	30 T12/150	32 T16/125	32 T16/125
E5	30 T12/150	32 T16/125	32 T16/125

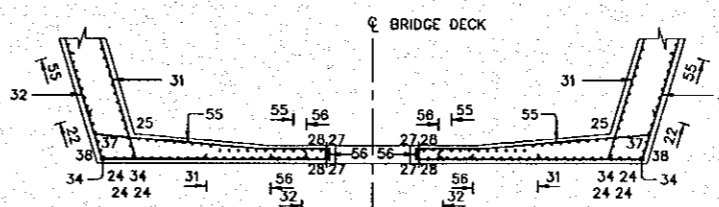
N.B : QUANTITIES OF BARS FOR 1 No. WEB ONLY .



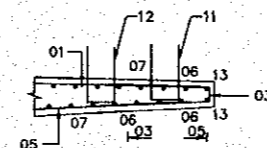
9 DETAIL-C  
J-25 SCALE 1:25



8 DETAIL-B  
J-25 SCALE 1:25



6 SECTION 2-2  
J-25 SEGMENT TYPES C1 & EC1 ONLY SCALE 1:50

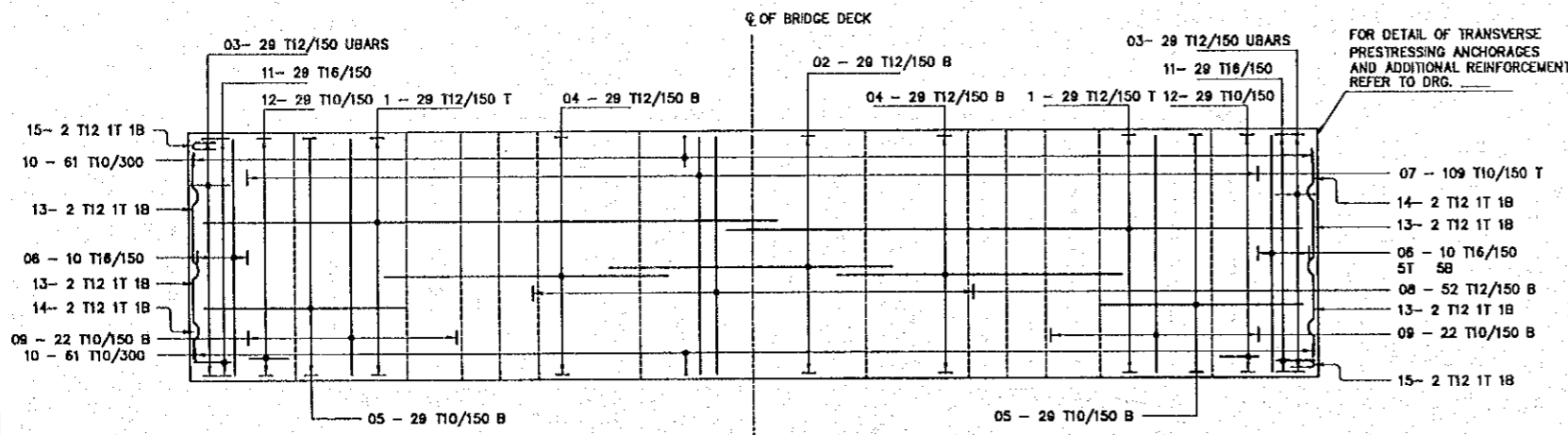


7 DETAIL-A  
J-25 SCALE 1:25

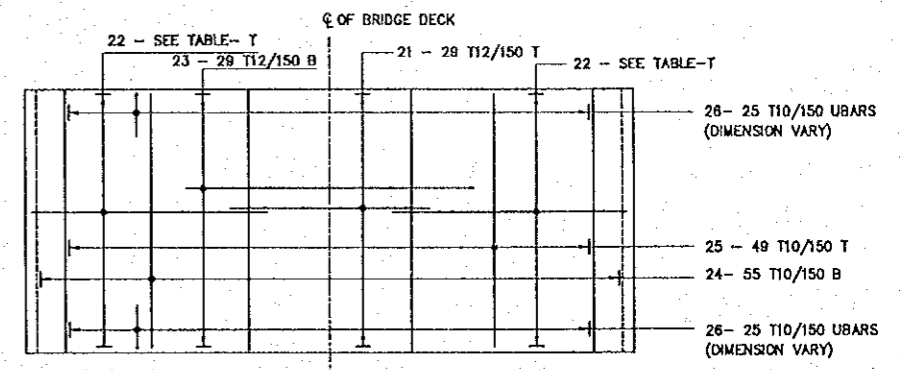
THE STUDY ON CONSTRUCTION OF THE BRIDGE  
OVER THE RIVER RUPSA IN KHULNA (PHASE 2)

RC DETAIL OF CLOSURE

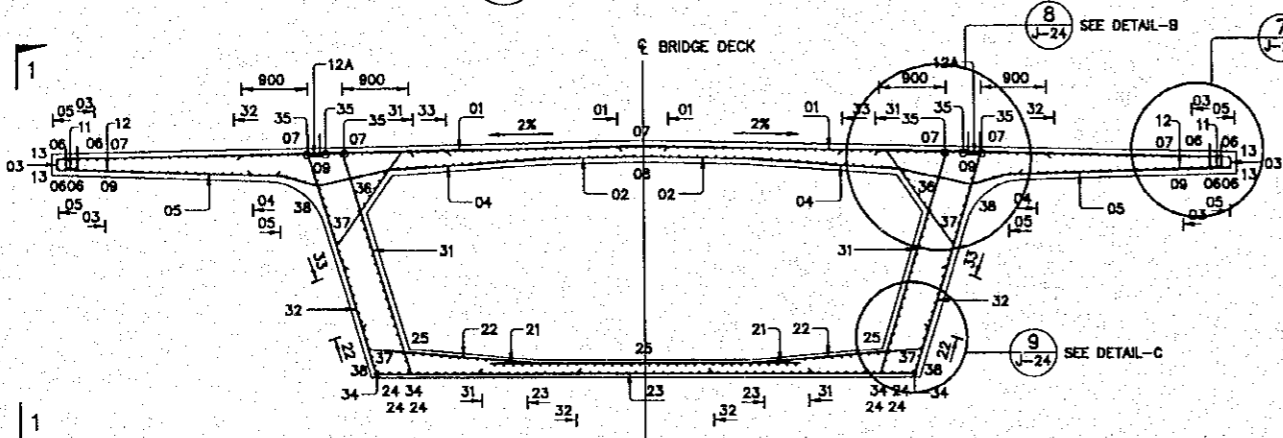
SCALE	SHEET NO.
AS SHOWN	J-26



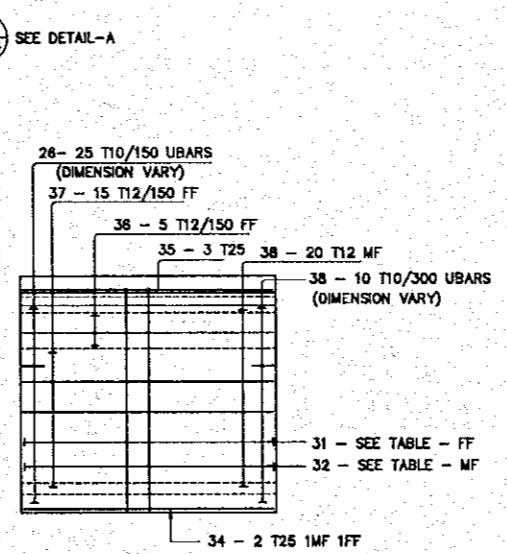
1 PLAN ON TOP SLAB  
J-24 SCALE 1:50



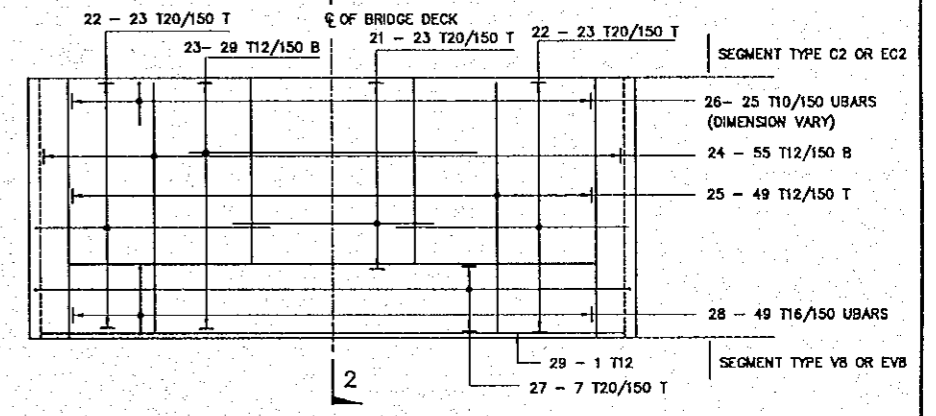
4 PLAN ON BOTTOM SLAB  
J-24 SCALE 1:50



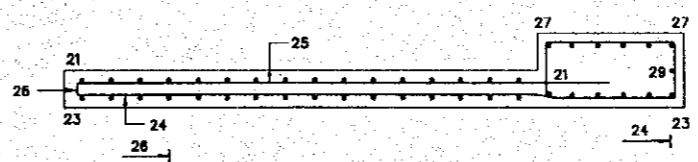
2 TYPICAL SECTION THROUGH SEGMENT  
J-24 SCALE 1:50



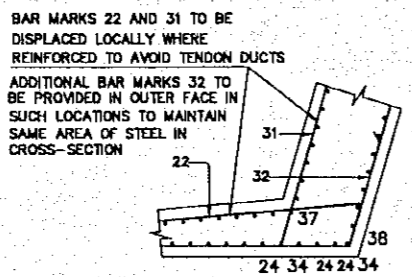
3 ELEVATION WEB 1-1  
OTHER WEB SEMILAR SCALE 1:50



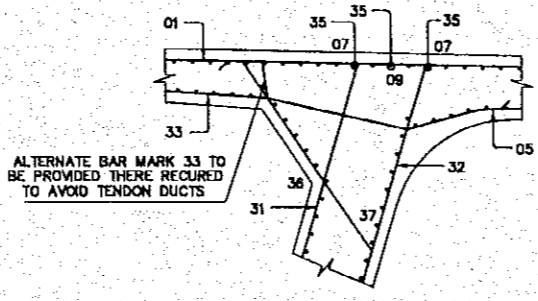
5 PLAN ON BOTTOM SLAB  
SEGMENT TYPE C1 AND EC1 SCALE 1:50



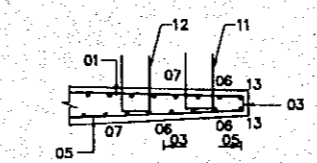
6 SECTION 2-2  
SEGMENT TYPES C1 & EC1 ONLY SCALE 1:25



9 DETAIL-C  
J-24 SCALE 1:25



8 DETAIL-B  
J-24 SCALE 1:25



7 DETAIL-A  
J-23 SCALE 1:25

SCHEDULE OF VARYING REINFORCEMENT

SEGMENT TYPE	BAR MARK 22	BAR MARK 31	BAR MARK 32
C1, EC1	23 T20/150	35 T25/125	35 T25/125
C2, EC2	29 T20/150	29 T25/125	29 T25/125
C3, EC3	29 T20/150	35 T20/125	35 T20/125
C4, EC4	35 T16/125	35 T16/125	35 T16/125
C5, EC5	35 T16/150	35 T16/125	35 T16/125
C6(A), EC6(A)	35 T12/125	35 T16/125	35 T16/125

N.B : QUANTITIES OF BARS FOR 1 No. WEB ONLY.

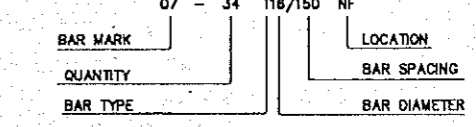
NOTES:

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRG. NO. J-22
- REINFORCEMENT TO BE DEFORMED BAR TO AASHTO M31 (ASTM A615) GRADE 40 OR GRADE 60 AS NOTED.
- MINIMUM CONCRETE COVER TO REINFORCEMENT TO BE 50mm TO TOP OF DECK 40mm ELSEWHERE, UNLESS NOTED OTHERWISE.
- MINIMUM LAP LENGTHS TO BE AS FOLLOWS UNLESS SHOWN OTHERWISE:  
32# = 1500mm 16# = 550mm  
25# = 950mm 12# = 400mm  
20# = 850mm 10# = 350mm

LAP LENGTHS BASED ON SMALLEST DIAMETER BAR AND CALCULATED IN ACCORDANCE WITH AASHTO ARTICLE 8.32, ASSUMING SMALLEST DIAMETER BAR TO BE FULLY STRESSED.

5. REINFORCEMENT TO BE ANCHORED USING DEVELOPMENT LENGTHS CALCULATED IN ACCORDANCE WITH AASHTO ARTICLE 8.25, ASSUMING BAR TO BE FULLY STRESSED.

6. KEY TO REINFORCEMENT Nomenclature:



T = GRADE 60 BARS  
R = GRADE 40 BARS  
ABBREVIATIONS : - NF = NEAR FACE ; FF = FAR FACE ;  
EE = EACH FACE ; T = TOP ; B = BOTTOM ;  
STAGG = STAGGERED ; ALT = ALTERNATE SPACING ;  
ABR = ALTERNATE BARS REVERSED.

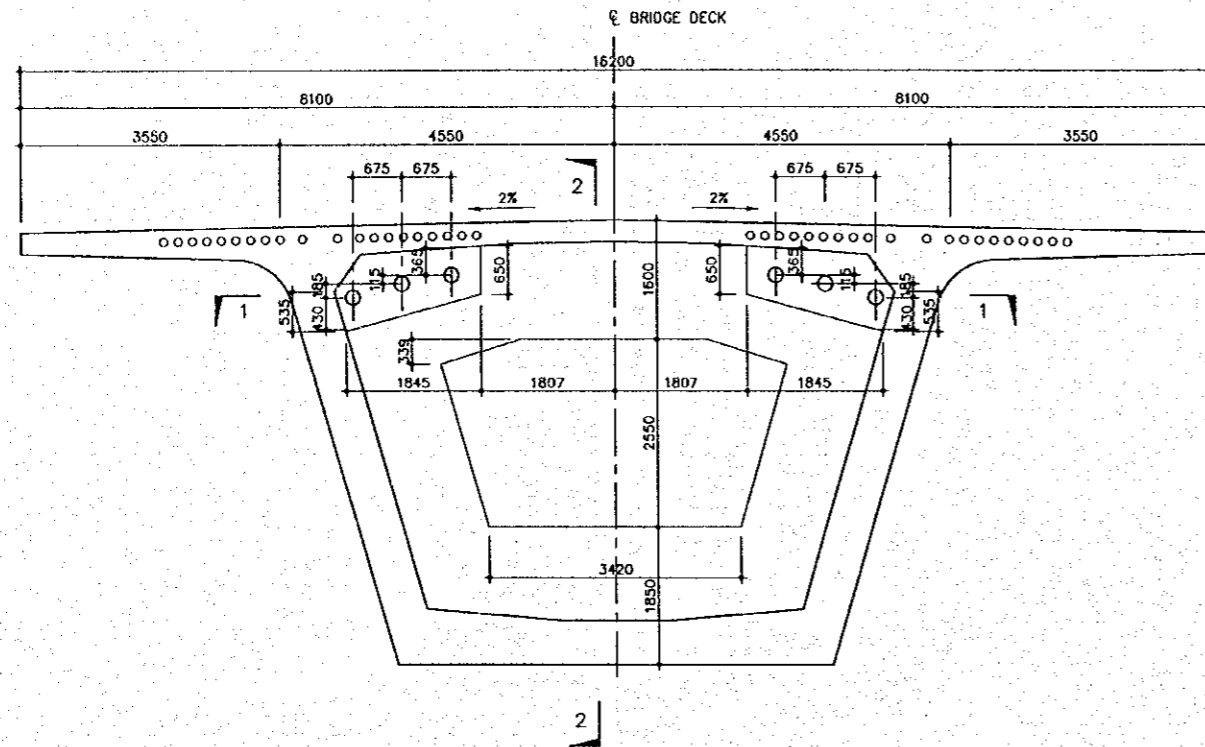
7. FOR DECK SEGMENT CONCRETE OUTLINES REFER TO DRG. NO. J-12

THE STUDY ON CONSTRUCTION OF THE BRIDGE  
OVER THE RIVER RUPSA IN KHULNA (PHASE 2)

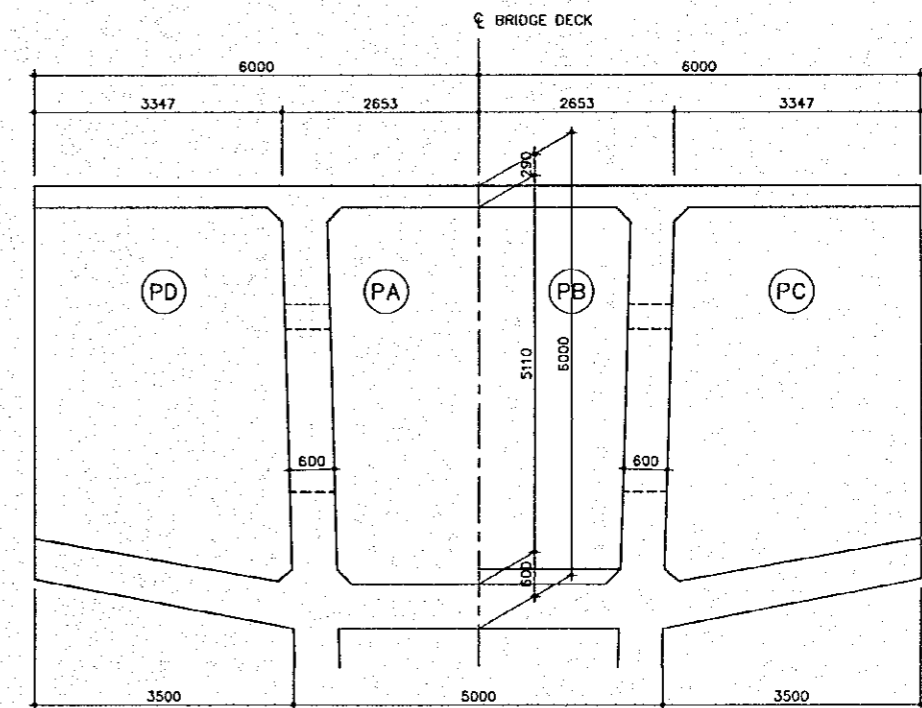
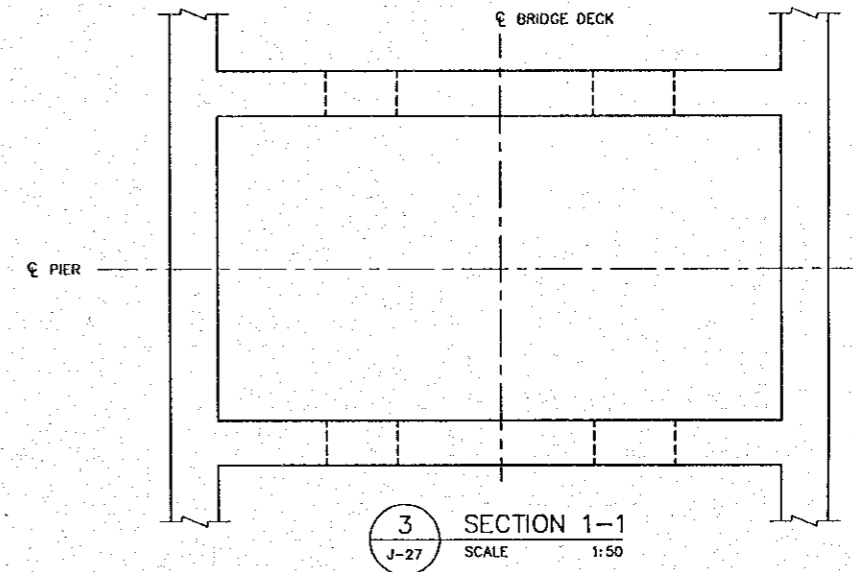
GENERAL ARRANGEMENT OF PIER  
DIAPHRAGM SEGMENT

SCALE  
AS SHOWN

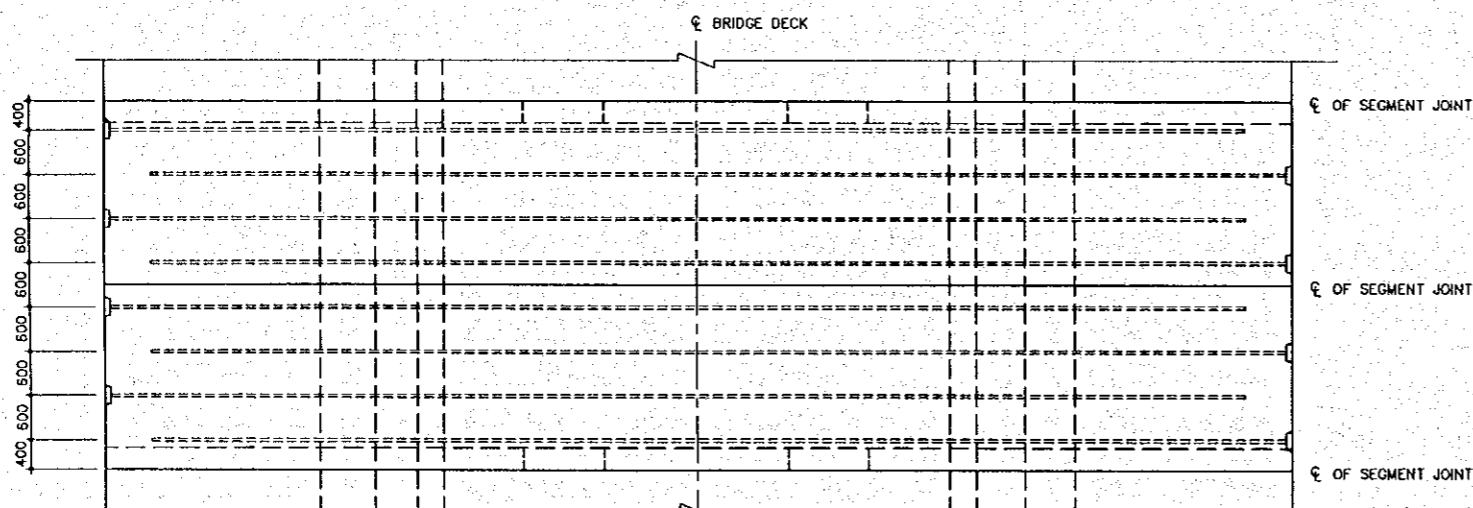
SHEET NO.  
J-27



1 ELEVATION ON TYPICAL PIER DIAPHRAGM SEGMENT  
SCALE 1:50



4 SECTION 2-2  
SCALE 1:50

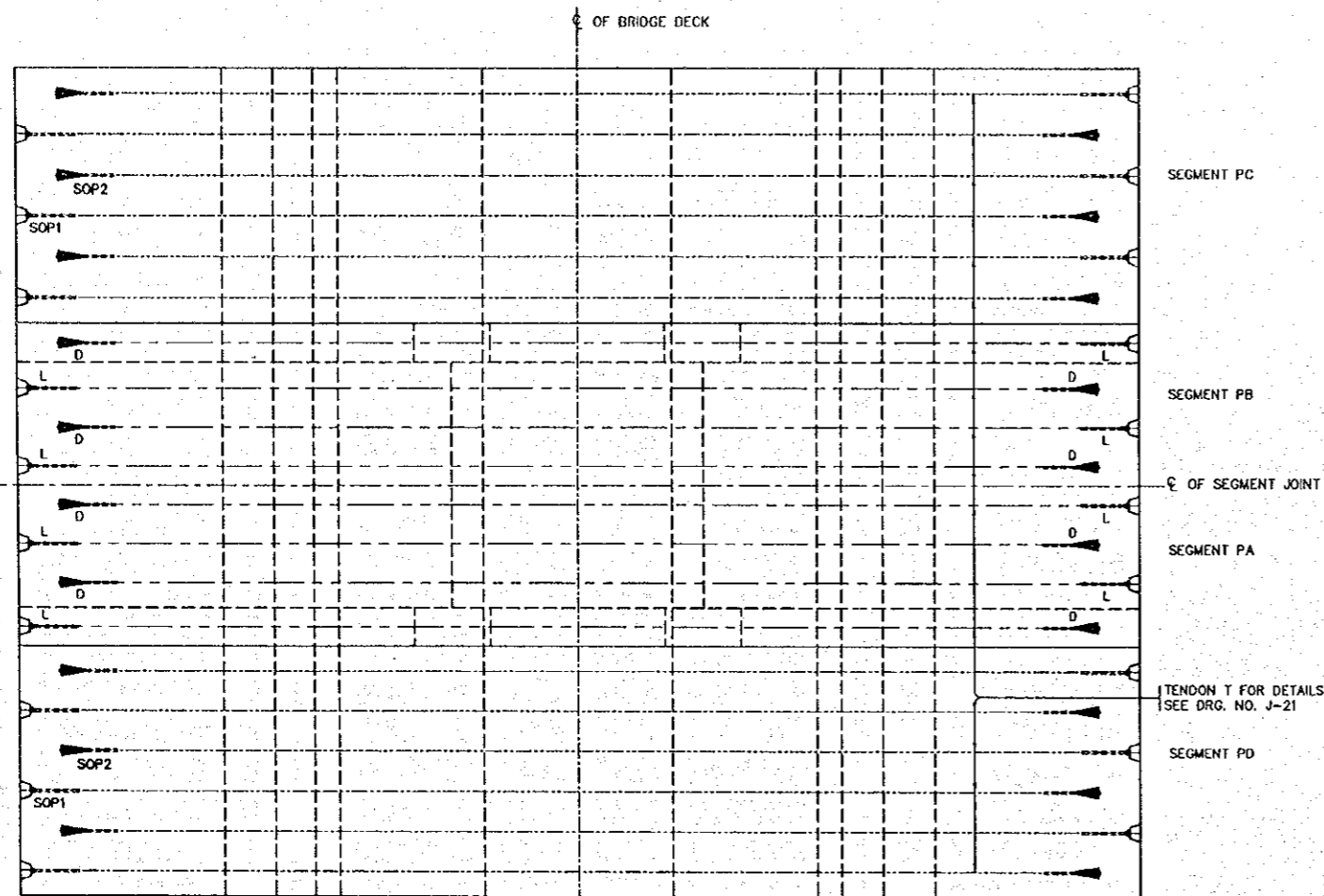


2 PLAN OF TOP SLAB  
SCALE 1:50

THE STUDY ON CONSTRUCTION OF THE BRIDGE  
OVER THE RIVER RUPSA IN KHULNA (PHASE 2)

PIER DIAPHRAGM SEGMENT  
PRESTRESSING LAYOUT & DETAILS

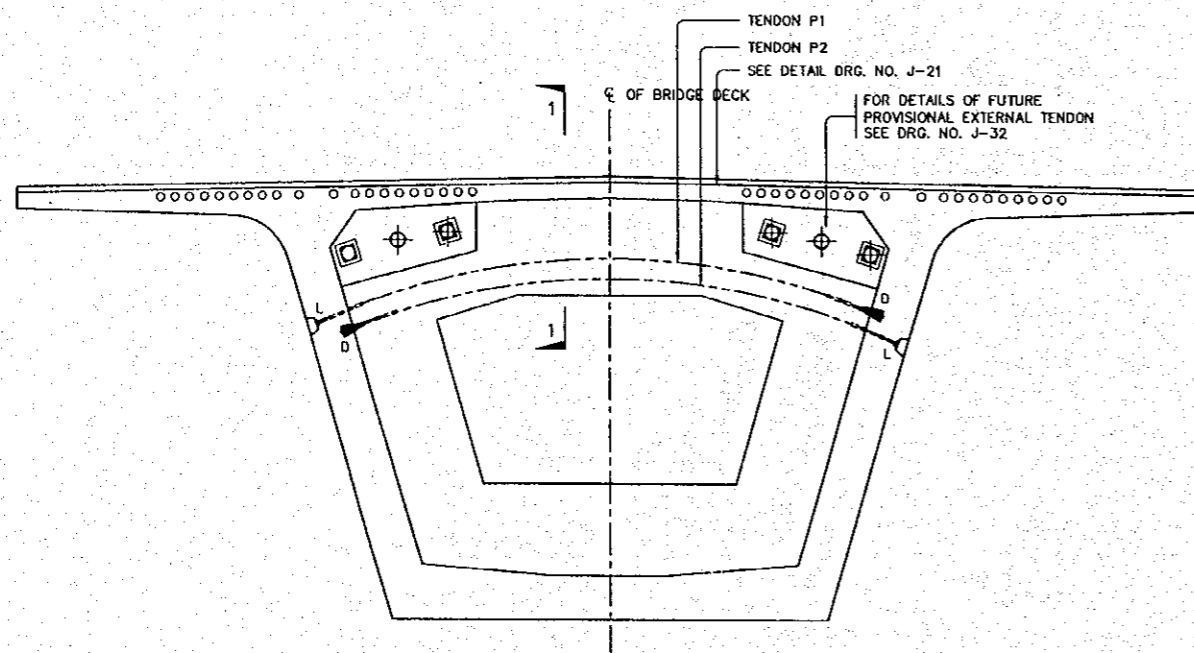
SCALE	SHEET NO.
AS SHOWN	J-28



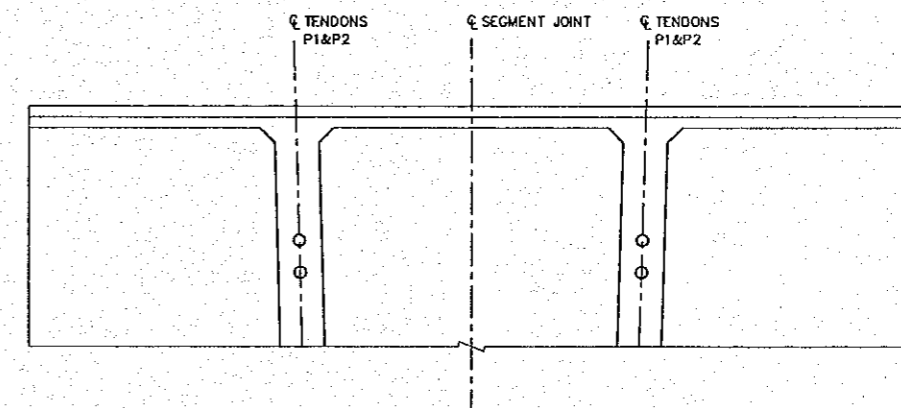
1 PLAN  
J-28 SCALE 1:50

NOTES :

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRAWING NO. J-01
2. ALL TENDONS SHALL CONSIST OF 15.2mm DIAMETER UNCOATED SEVEN- WIRE STRANDS CONFORMING TO THE REQUIREMENTS OF AASHTO M203 (ASTM A 416 ) SUPPLEMENT S1 (LOW RELAXATION)
3. THE SPECIFIED TENDON JACKING FORCES ARE AFTER ALLOWING FOR FRICTION LOSSES IN THE JACK AND ANCHORAGE. PARAMETERS USED IN THE DESIGN ARE:  
WOBBLE COEFFICIENT  $K=0.0066m^{-1}$   
FRICTION COEFFICIENT  $\mu=0.25$   
ANCHORAGE PULL-IN  $D=6.4mm$
4. TENDON DUCTS TO CONSIST OF SPIRALLY ROUND GALVANIZED STEEL TUBE IN ACCORDANCE WITH THE SPECIFICATION. PREBENT DUCTS TO BE USED FOR TENDONS WITH RADIUS LESS THAN 10m.
5. GROUT VENTS TO BE PROVIDED AT ALL HIGH AND LOW SPOTS IN DUCT AND AT OTHER LOCATIONS IN ACCORDANCE WITH THE SPECIFICATION.
6. ANCHORAGE RECESSES FOR TENDONS P1 AND P2 TO BE CONCRETED AFTER STRESSING AND GROUTING.
7. TENDONS TO BE FULLY STRESSED AND GROUTED PRIOR TO ERECTION.



2 TENDON LAYOUT OF TYPICAL PIER  
DIAPHRAGM SEGMENT TYPE PA & PB  
J-28 SCALE 1:50



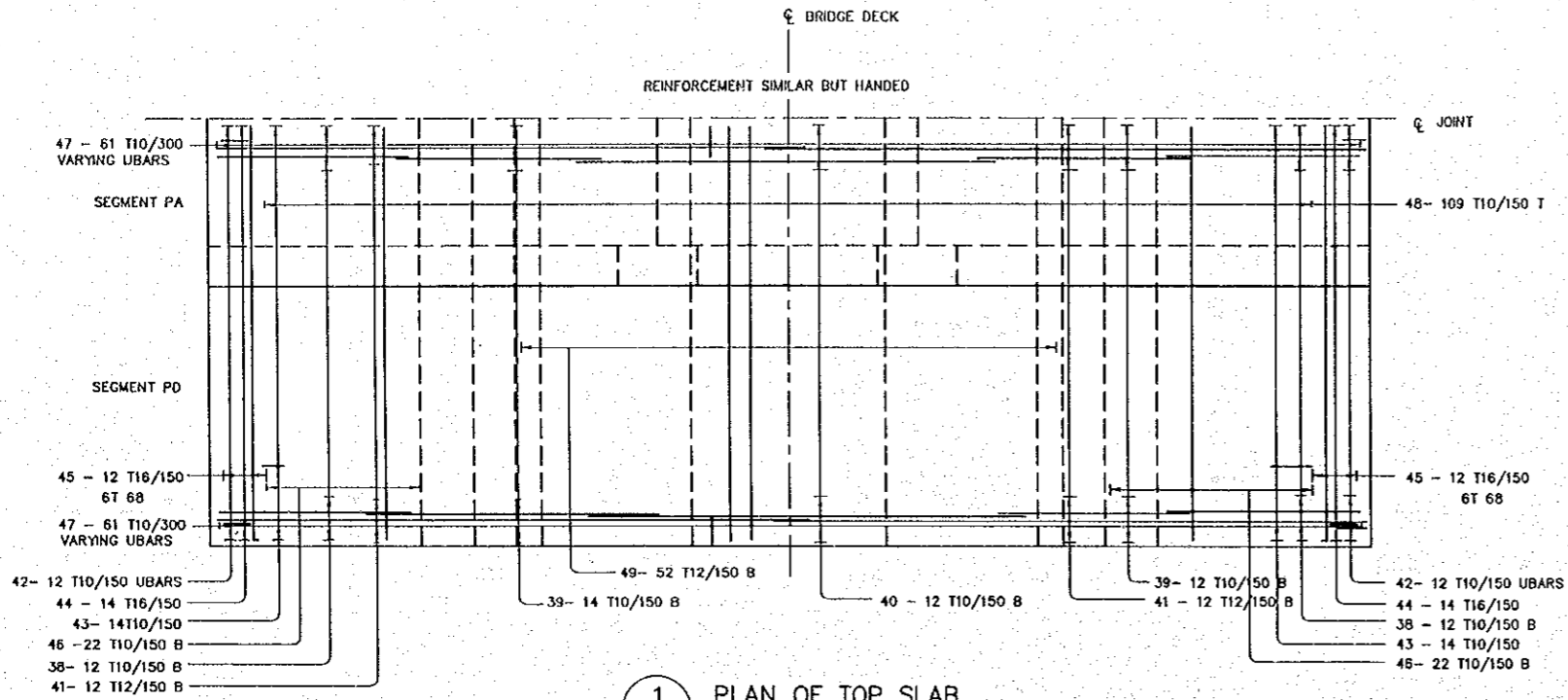
3 SECTION 1-1  
J-28 SCALE 1:50



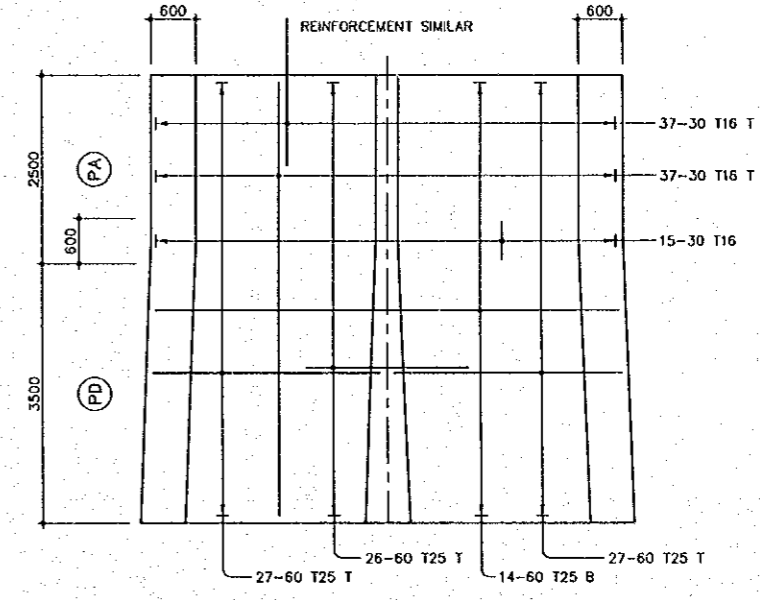
THE STUDY ON CONSTRUCTION OF THE BRIDGE  
OVER THE RIVER RUPSA IN KHULNA (PHASE 2)

GENERAL ARRANGEMENT OF PIER  
DIAPHRAGM SEGMENT

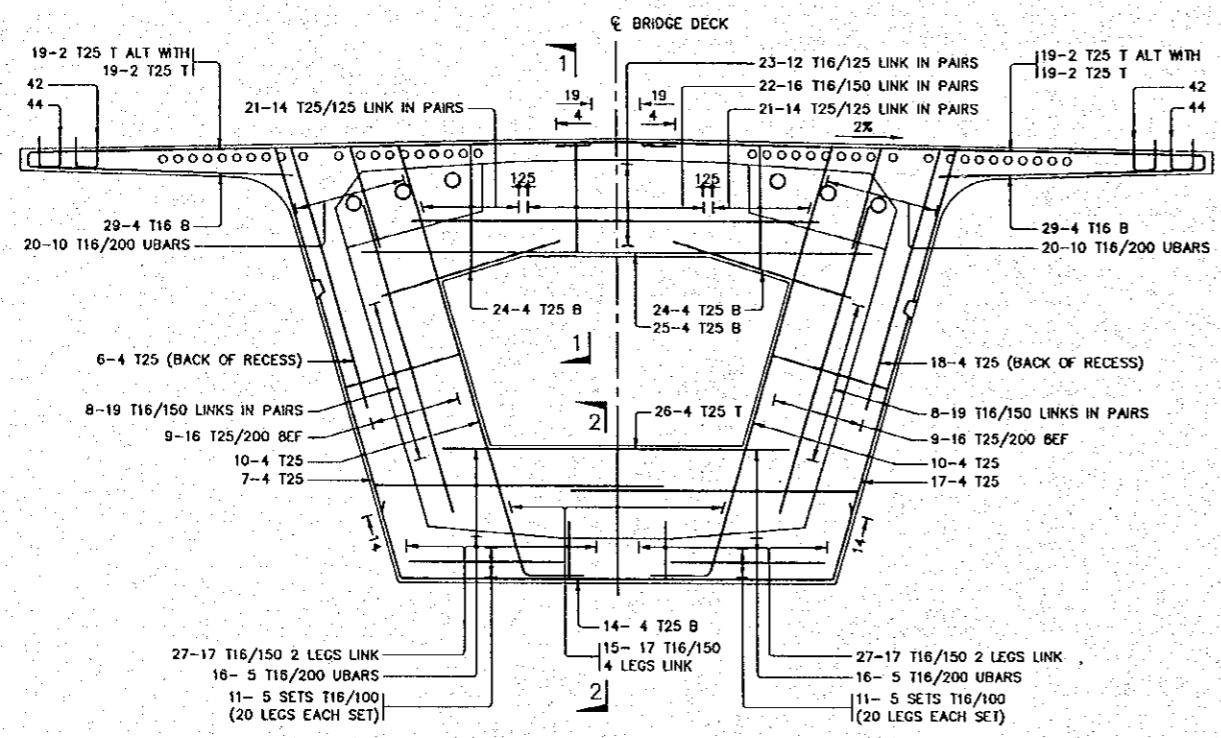
SCALE	SHEET NO.
AS SHOWN	J-29



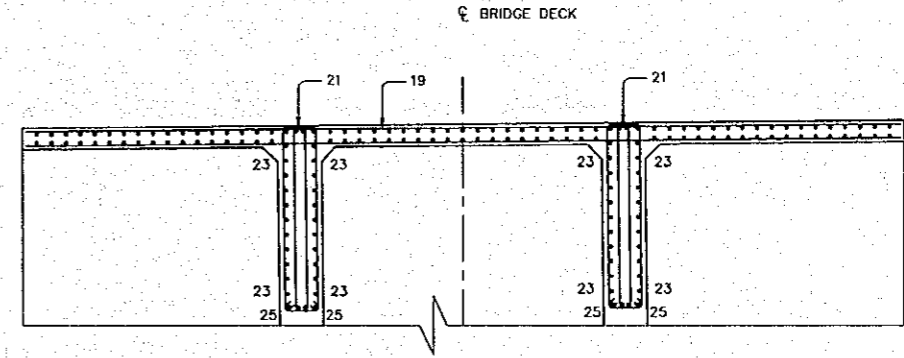
1 PLAN OF TOP SLAB  
J-29 SCALE 1:50



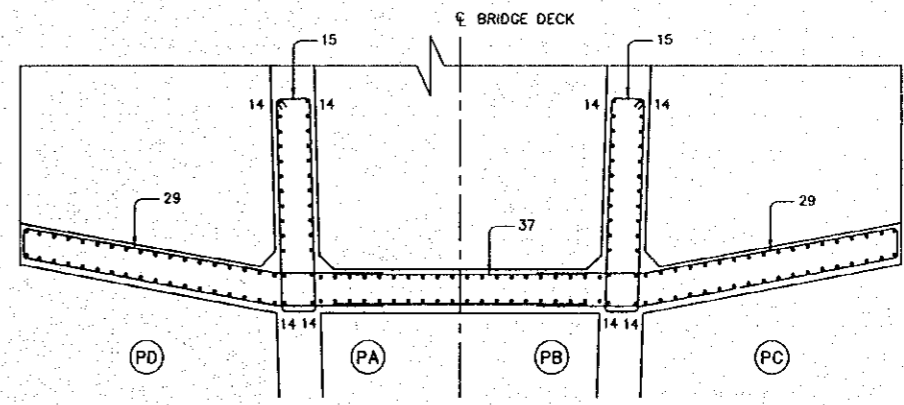
3 PLAN ON BOTTOM SLAB  
J-29 SCALE 1:50



2 ELEVATION OF PIER HEAD  
J-29 SCALE 1:50



4 SECTION 1-1  
J-29 SCALE 1:50

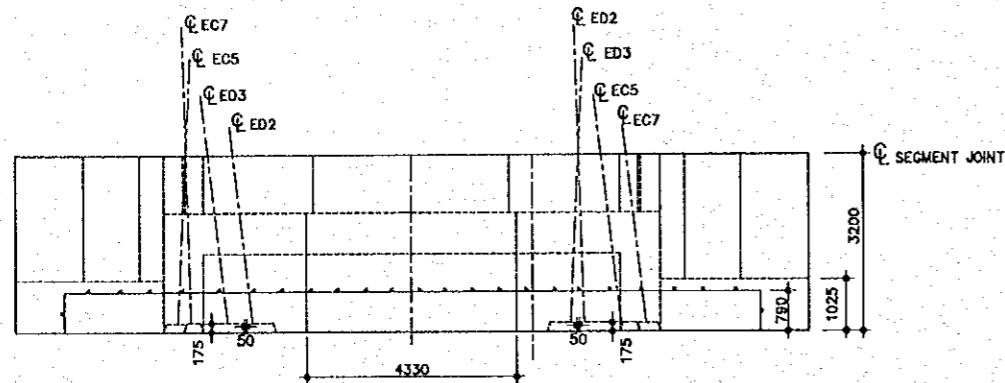


5 SECTION 2-2  
J-29 SCALE 1:50

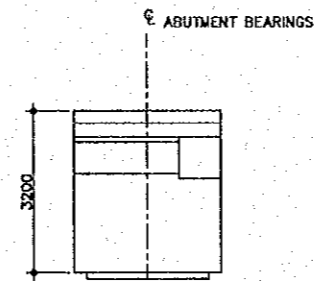
THE STUDY ON CONSTRUCTION OF THE BRIDGE  
OVER THE RIVER RUPSA IN KHULNA (PHASE 2)

GENERAL ARRANGEMENT OF MP1 & MP8  
AND DIAPHRAGM SEGMENT

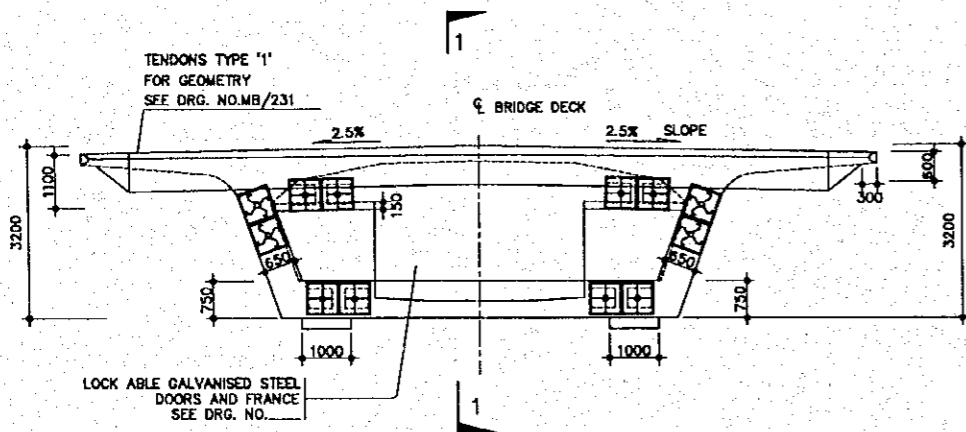
SCALE	SHEET NO.
AS SHOWN	J-30



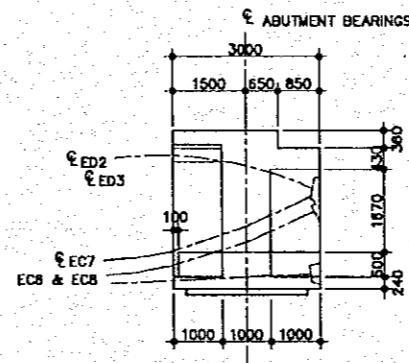
1 PLAN OF TOP SLAB  
SCALE 1:50



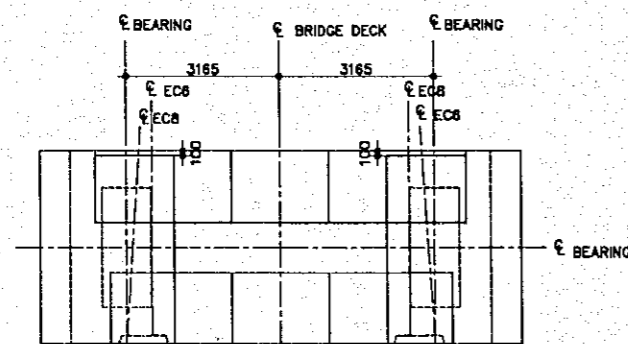
4 SIDE ELEVATION  
SCALE 1:50



2 ELEVATION ON MP1 & MP8 DIAPHRAGM  
SCALE 1:50



5 SECTION 1-1  
SCALE 1:50



3 PLAN OF BOTTOM SLAB  
SCALE 1:50

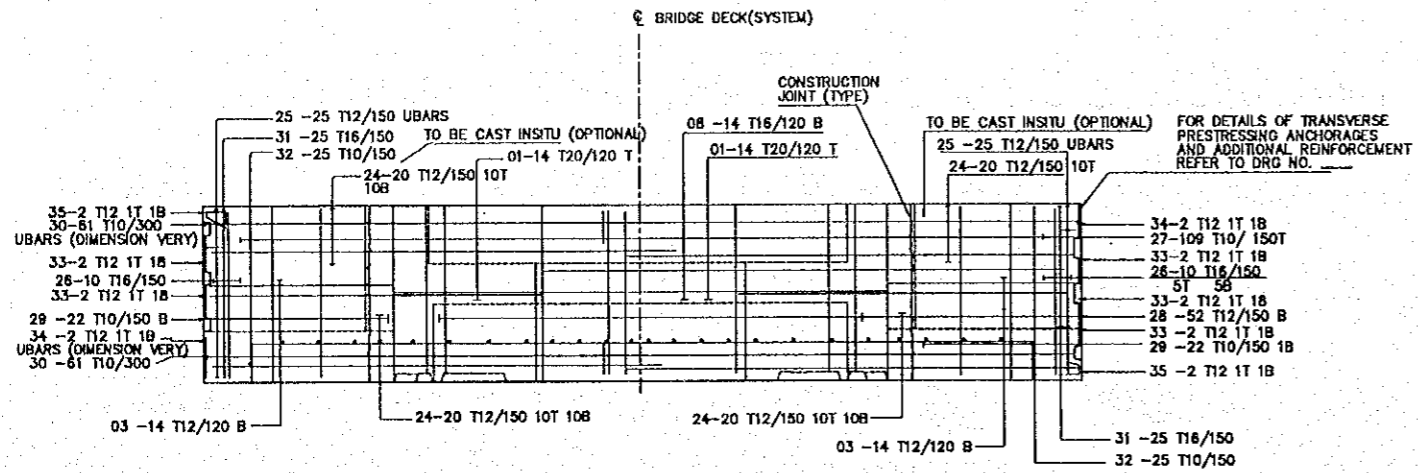
NOTES:

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRG. NO J-01
- ALL CONCRETE FINISHES TO BE:  
EXPOSED FORMED FOCES F4  
ALL FORMED INTERIOR FOCES F2  
EXPOSED UNFORMED FOCES F3  
UPPER SURFACE OF TOP SLAB U2 - BROOM FINISH
- ALL EXTERNAL EDGES TO HAVE 25X25 CHAMFER UNLESS NOTED OTHERWISE.
- ALL INTERNAL RE-ENTRANT CORNERS TO HAVE 50X50 CHAMFER UNLESS NOTED OTHERWISE.
- SEGMENTS TO BE EXOXY JOINED PRIOR TO STRESSING.
- PERMANENT PRESTRESSSD BARS SHALL BE 50mm NOMINAL DIAMETER WITH UNTIMATE TENSILE STRENGTH 1030 N/mm<sup>2</sup> TO BS 4486 OR AASHTO M275. JACKING LOAD SHALL BE 1415 kn. BORS SHALL BE STRESSED AND GROUTED AFTER THE IN SITU IN FILL CONCRETE HAS ATTAINED MINIMUM CYLINDER STRENGTH OF 30 N/mm<sup>2</sup> AND PRIOR TO ERECTION OF SEGMENTS ADJOCENT TO PA AND PB.
- THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND DETAILING OF ALL TEMPORARY PRESTRESSSD ERECTION BARS AND ANCHORAGES.

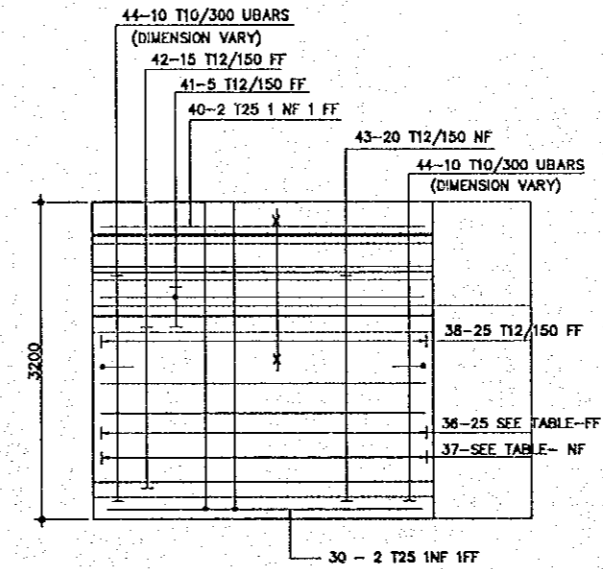
THE STUDY ON CONSTRUCTION OF THE BRIDGE  
OVER THE RIVER RUPSA IN KHULNA (PHASE 2)

RC DETAIL OF MP1 & MP8  
DIAPHRAGM SEGMENT

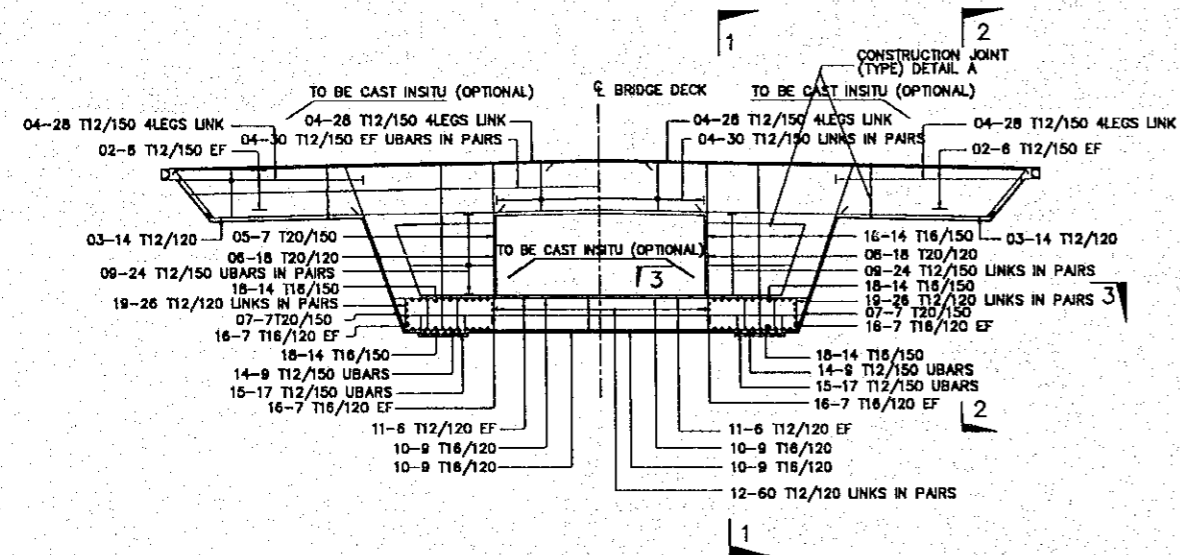
SCALE AS SHOWN  
SHEET NO. J-31



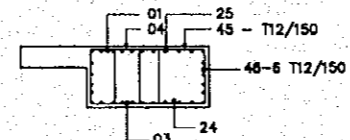
1 PLAN SHOWING TOP SLAB REINFORCEMENT  
SCALE 1:50



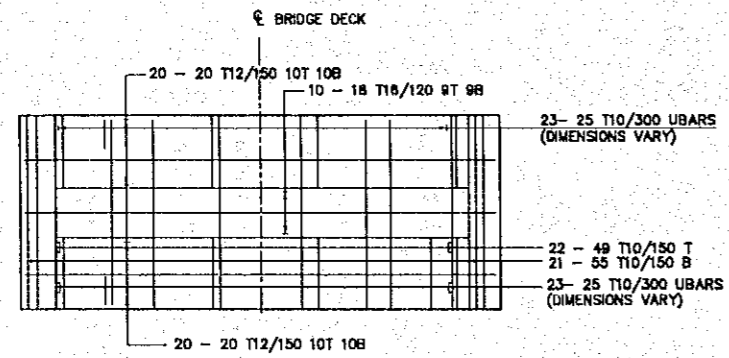
6 TYPICAL ELEVATION ON WEB  
SCALE 1:50



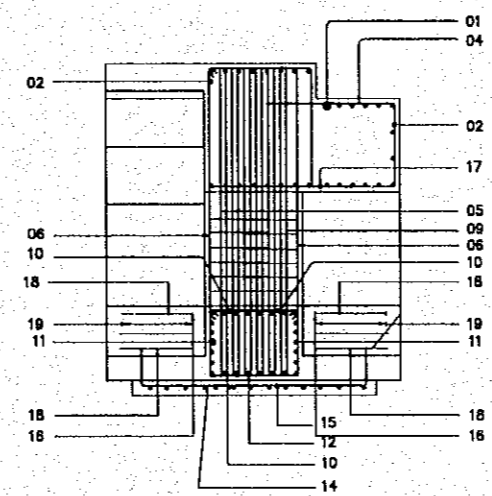
2 ELEVATION ON END SEGMENT  
SCALE 1:50



5 SECTION 2-2  
SCALE 1:25



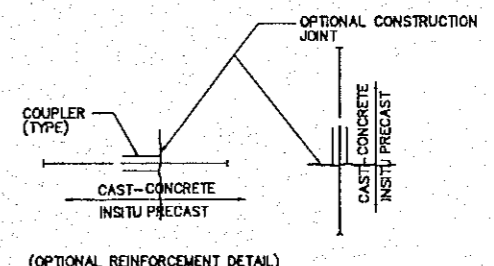
3 PLAN SHOWING BOTTOM SLAB REINFORCEMENT  
SCALE 1:50



4 SECTION 1-1  
SCALE 1:25

NOTES:

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRG. NO. MB/240
- REINFORCEMENT TO BE DEFORMED BAR TO AASHTO M31 (ASTM A615) GRADE 40 OR GRADE 60 AS NOTED.
- MINIMUM CONCRETE COVER TO REINFORCEMENT TO BE 50mm TO TOP OF DECK 40mm ELSEWHERE, UNLESS NOTED OTHERWISE.
- MINIMUM LAP LENGTHS TO BE AS FOLLOWS UNLESS SHOWN OTHERWISE:  
32# = 1500mm 16# = 550mm  
25# = 950mm 12# = 400mm  
20# = 650mm 10# = 350mm  
32# = 1500mm 16# = 550mm
- LAP LENGTHS BASED ON SMALLEST DIAMETER BAR AND CALCULATED IN ACCORDANCE WITH AASHTO ARTICLE 8.32, ASSUMING SMALLEST DIAMETER BAR TO BE FULLY STRESSED.
- REINFORCEMENT TO BE ANCHORED USING DEVELOPMENT LENGTHS CALCULATED IN ACCORDANCE WITH AASHTO ARTICLE 8.25, ASSUMING BAR TO BE FULLY STRESSED.
- KEY TO REINFORCEMENT Nomenclature:  
BAR MARK: 07 - 34 T16/150 NF  
QUANTITY: 36-25 SEE TABLE-FF  
BAR TYPE: 37-SEE TABLE- NF  
LOCATION: BAR SPACING  
BAR DIAMETER: BAR DIAMETER
- T = GRADE 60 BARS  
R = GRADE 40 BARS
- FOR DETAILS OF PRESTRESSING AND ADDITIONAL REINFORCEMENT REQUIRED THEREFOR REFER TO FOLLOWING DRAWING:  
TRANSVERSE PRESTRESSING MB/231
- IN-SITU CONCRETE PLACEMENT (OPTIONAL) TO KEEP THE MAXIMUM SEGMENT WEIGHT 1500 kn.

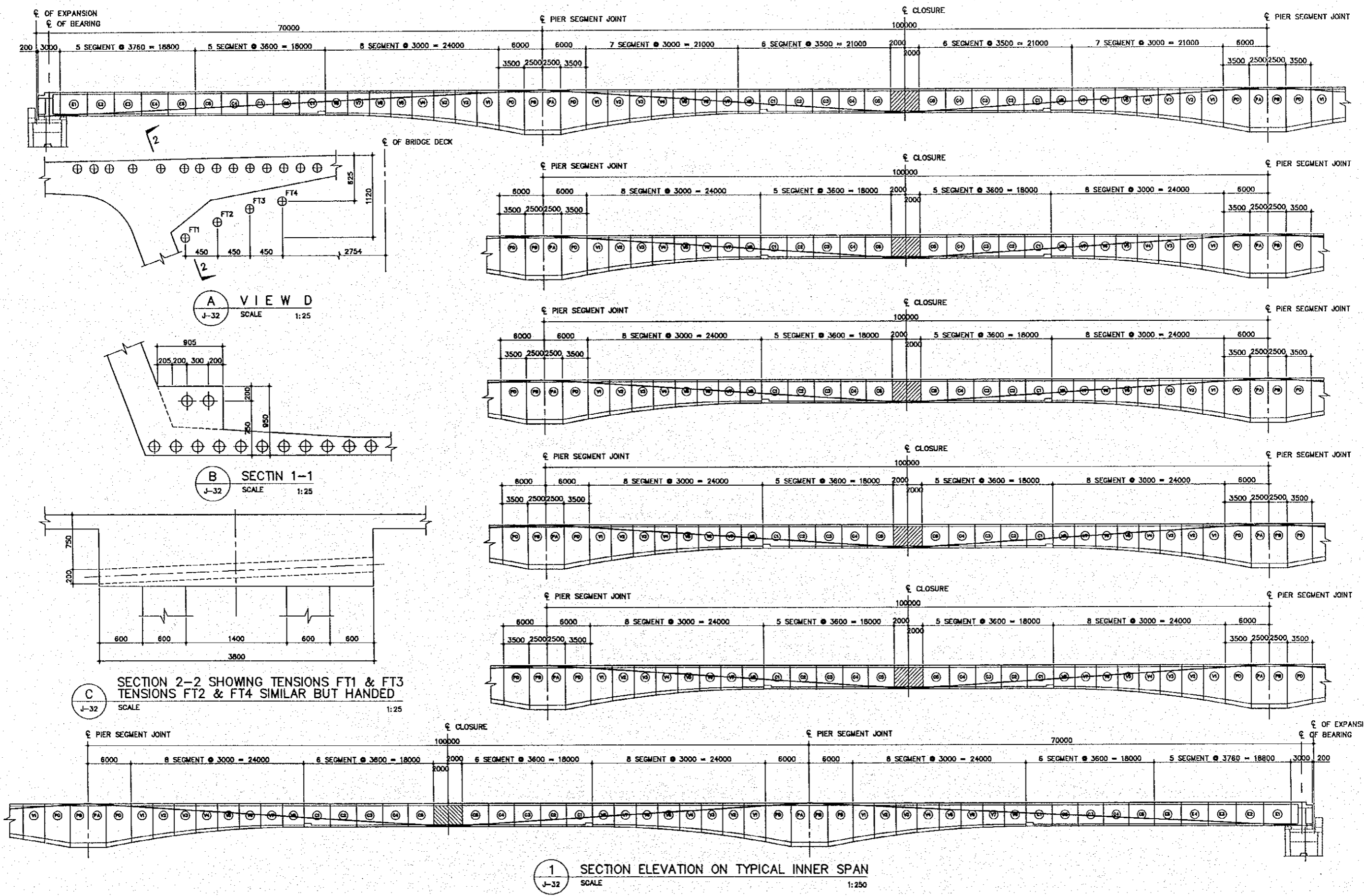


7 DETAIL - A  
SCALE NTS

THE STUDY ON CONSTRUCTION OF THE BRIDGE  
OVER THE RIVER RUPSA IN KHULNA (PHASE 2)

FUTURE PRESTRESSING  
LAYOUT AND DETAILS

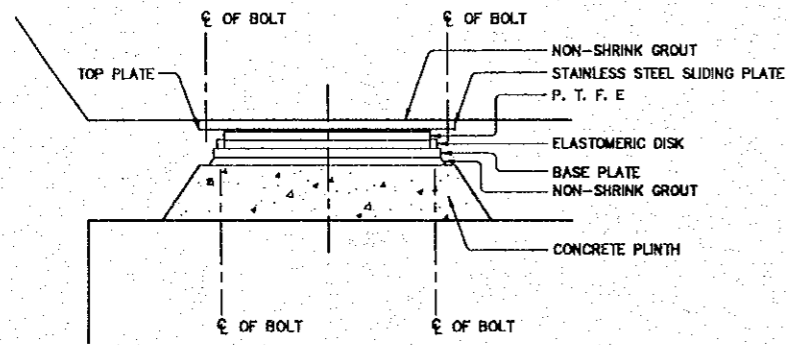
SCALE AS SHOWN SHEET NO. J-32



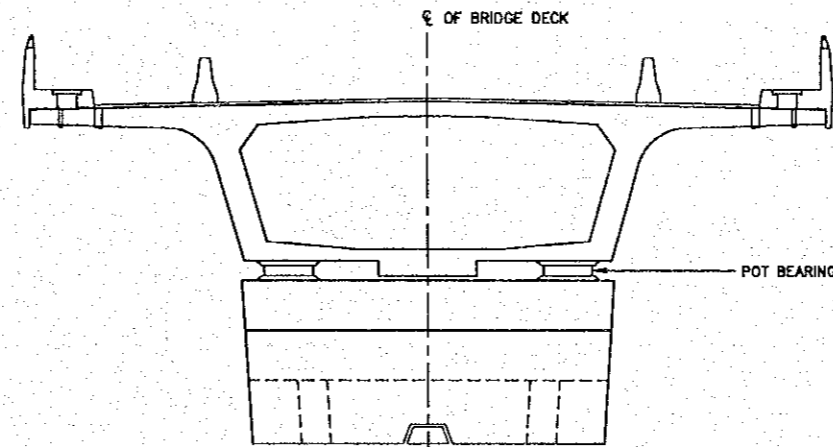
THE STUDY ON CONSTRUCTION OF THE BRIDGE  
OVER THE RIVER RUPSA IN KHULNA (PHASE 2)

BEARING AND STOPPER  
LAYOUT & DETAILS

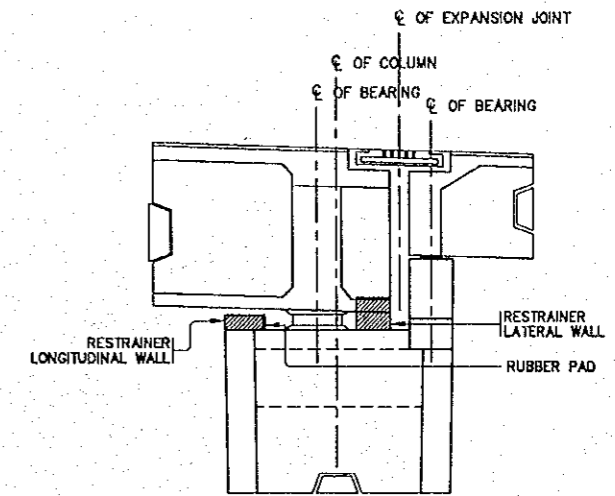
SCALE	SHEET NO.
AS SHOWN	J-33



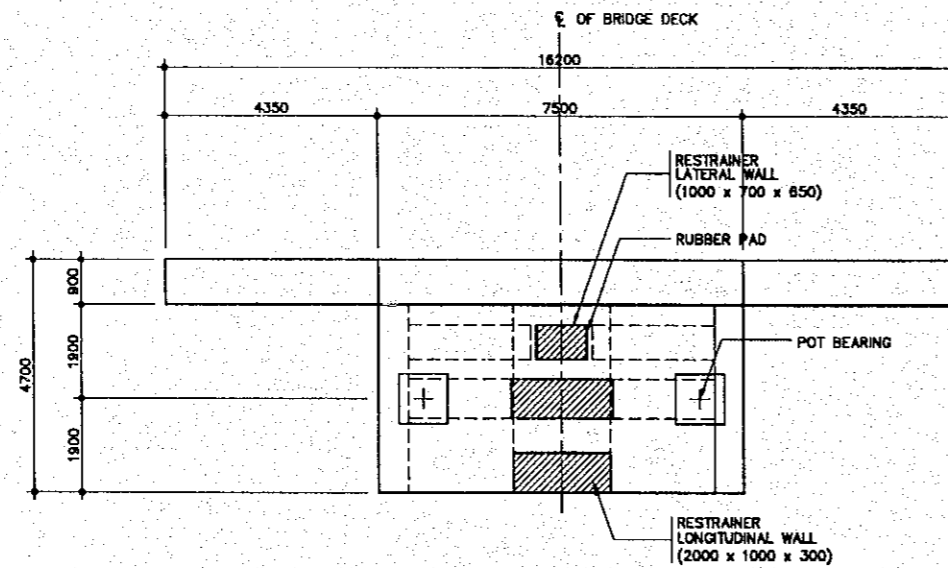
1 POT BEARING DETAILS  
J-33 SCALE NTS



2 ELEVATION  
J-33 SCALE 1:50



3 SIDE ELEVATION  
J-33 SCALE 1:50



4 PLAN  
J-33 SCALE 1:50

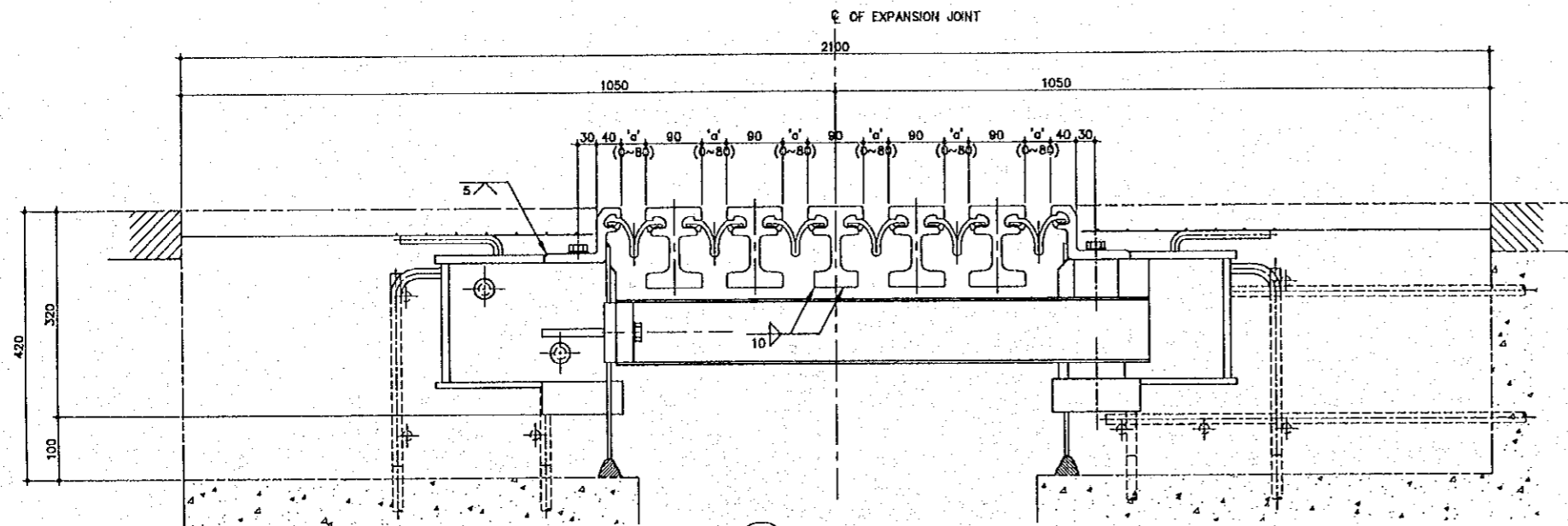
NOTES :

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRAWING NO. —
2. THE FOLLOWING ABBREVIATIONS HAVE BEEN USED TO INDICATE BEARING.
3. THE CONTRACTOR SHALL PREPARE AND SUBMIT WORKING DRAWINGS AND DESIGN CALCULATIONS FOR BEARINGS AND RESTRAINTS FOR THE ENGINEER IN ACCORDANCE WITH SECTION 18 OF THE SPECIFICATION. ALL DETAILS SHOWN ARE INDICATIVE ONLY.
4. BEARING AND RESTRAINT PRESENT TO BE FINALISED BY THE CONTRACTOR USING ACTUAL PARAMETERS FOR CONCRETE CREEP AND SHRINKAGE, AND DEPENDING ON THE ERECTION SEQUENCE AND PROGRAMME.
5. MAXIMUM PLAN BEARING DIMENSIONS ARE AS SHOWN ON RELEVANT SUBSTRUCTURE DRAWING. PLINTH HEIGHTS MAY BE ADJUSTED TO SUIT THE PARTICULAR BEARING USED, SUBJECT OF THE APPROVAL OF THE ENGINEERS.
6. THERMAL MOVEMENT ARE BASED ON MEAN TEMPERATURE 26°C AND SHALL BE ADJUSTED FOR DEFFERENT ERECTION TEMPERATURE ACCORDINGLY.

THE STUDY ON CONSTRUCTION OF THE BRIDGE  
OVER THE RIVER RUPSA IN KHULNA (PHASE 2)

EXPANSION JOINT LAYOUT & DETAILS

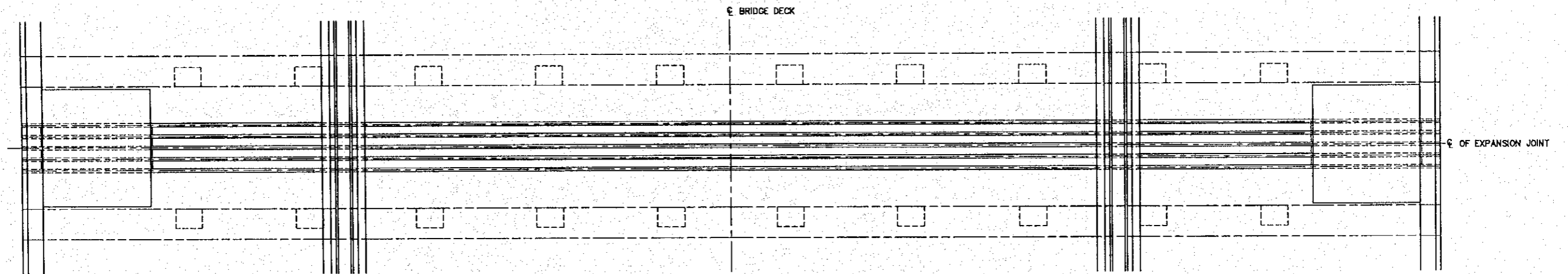
SCALE	SHEET NO.
AS SHOWN	J-35



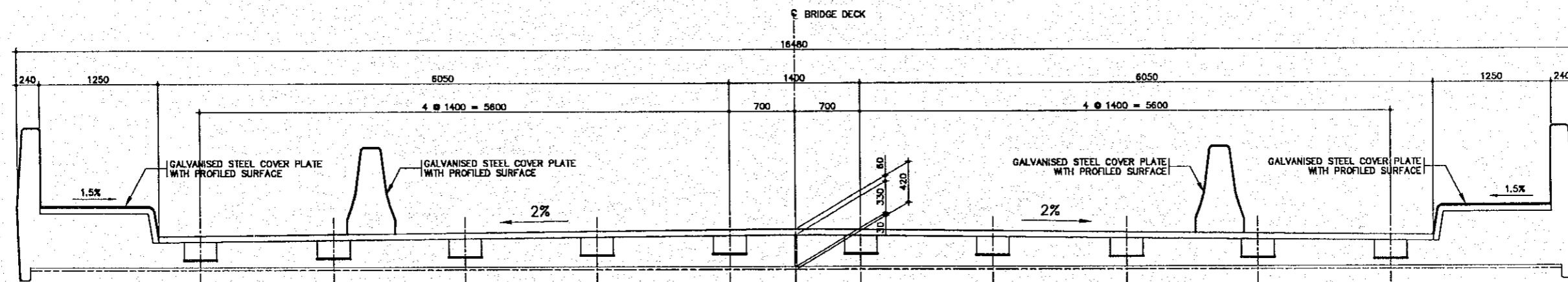
**A** DETAIL  
J-35 SCALE 1:5

NOTES :

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRAWING NO. J-05
2. ALL DETAILS SHOWN ARE INDICATIVE ONLY, THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND DETAILING OF ALL ELEMENTS OF ROADWAY, FOOTWAY AND PARAPET EXPANSION JOINTS. DESIGN SHALL BE IN ACCORDANCE WITH AASTHO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES.
3. THE FOOTWAY COVER PLANETS AND THEIR SUPPORTS SHALL BE DESIGNED FOR THE FOLLOWING :  
 DISTRIBUTED SIDEWALK LOADING 4 kN / SQM.  
 ACCIDENTAL WHEEL LOAD 70 kN PLUS IMPACT ALLOWANCE  
 THE ROADWAY JOINT SHALL BE DESIGNED FOR AASTHO HIGHWAY LOADING DESIGNATION HS20-44 PLUS 25%.
4. THE FOOTWAY TOP COVER PLATE TO HAVE PROFILED SKID RESISTANT SURFACE TO THE APPROVAL OF THE ENGINEER.
5. STEEL FOR PARAPET EXPANSION RAIL SHALL BE GALVANIZED STEEL AASTHO DESIGNATION M270 GRADE (ASTM A709 GRADE 50).
6. JOINTS TO BE SET AT NORMAL MEAN OPENING AT MEAN TEMPERATURE OF 26°C WITH DUE ALLOWANCE FOR CREEP AND SHRINKAGE.



**1** PLAN  
J-35 SCALE 1:25

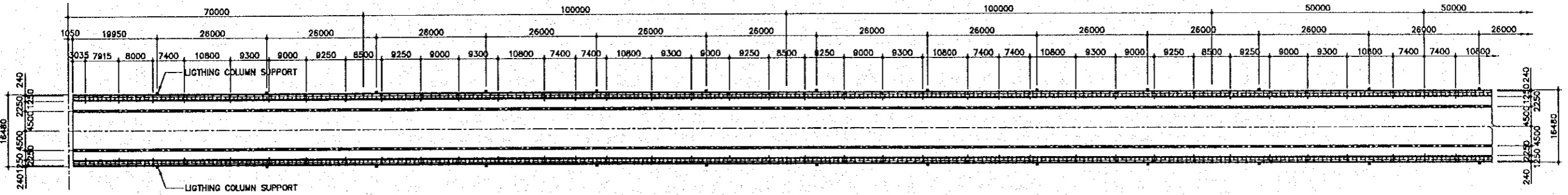


**2** ELEVATION ON TYPICAL EXPANSION JOINT  
J-35 SCALE 1:25

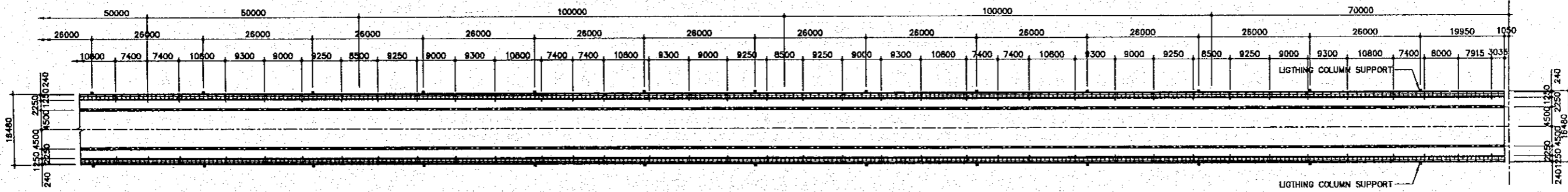
THE STUDY ON CONSTRUCTION OF THE BRIDGE  
OVER THE RIVER RUPSA IN KHULNA (PHASE 2)

LAYOUT OF DECK FINISHING  
(SHEET 1 OF 3)

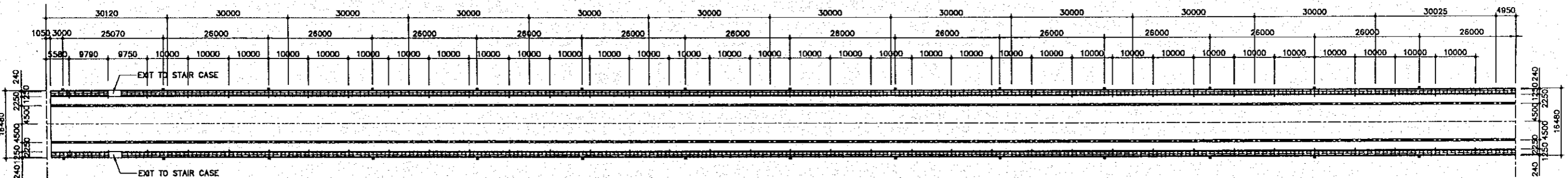
SCALE	SHEET NO.
AS SHOWN	J-36



A LAYOUT - 1  
J-36 SCALE 1:500



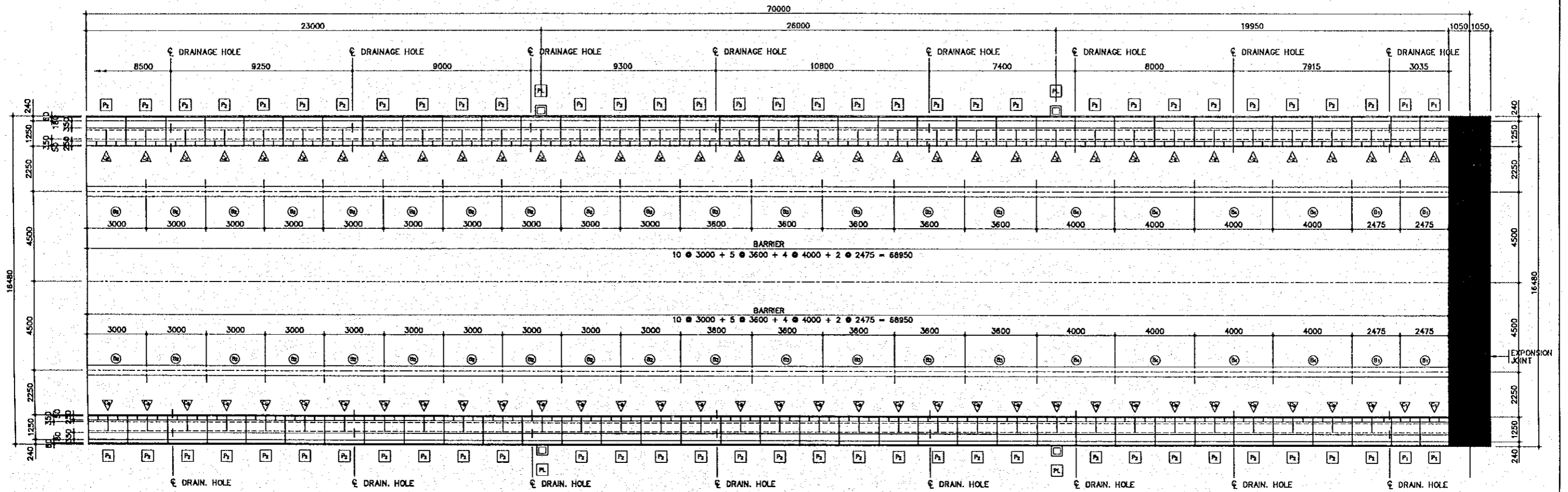
B LAYOUT - 2  
B-36 SCALE 1:500



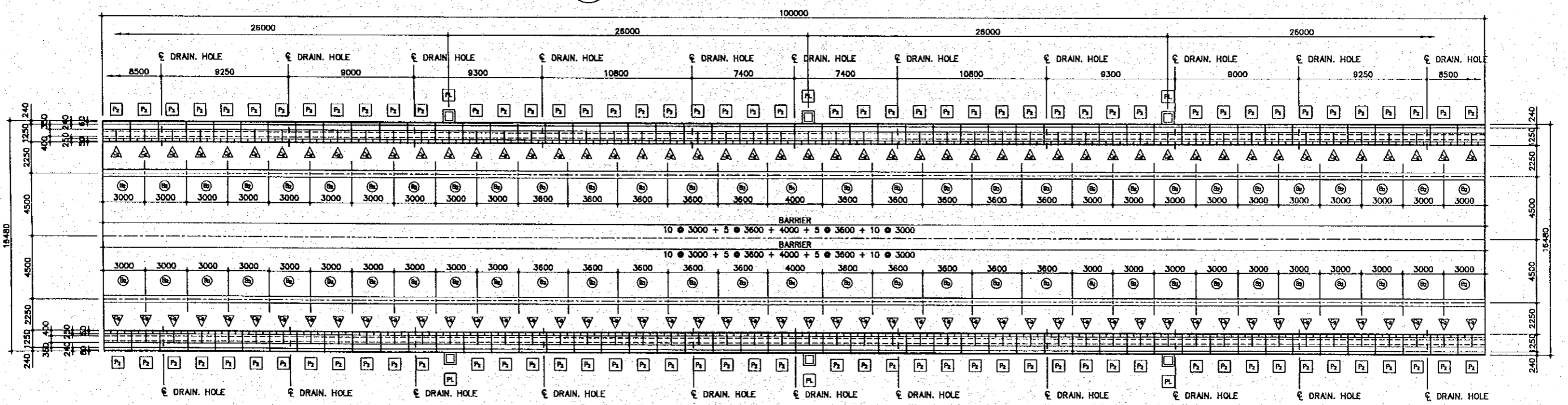
C LAYOUT - 3  
J-36 SCALE 1:500

THE STUDY ON CONSTRUCTION OF THE BRIDGE  
OVER THE RIVER RUPSA IN KHULNA (PHASE 2)  
LAYOUT OF DECK FINISHING  
(SHEET 2 OF 3)

SCALE AS SHOWN  
SHEET NO. J-37



D LAYOUT PLAN ON TYPICAL END SPAN OF MAIN BRIDGE  
SCALE 1:100



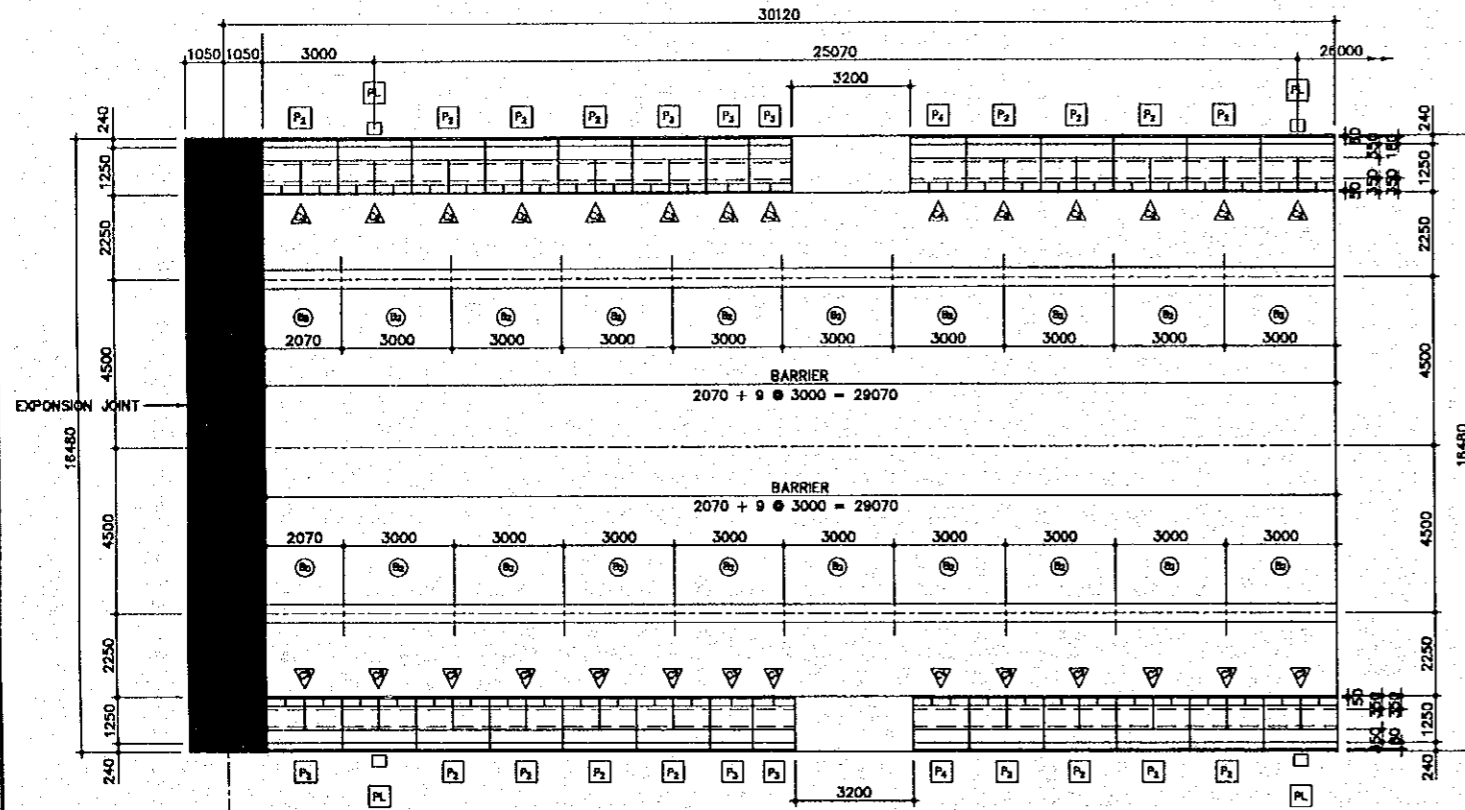
E LAYOUT PLAN ON TYPICAL INTERNAL SPAN OF MAIN BRIDGE  
SCALE 1:150



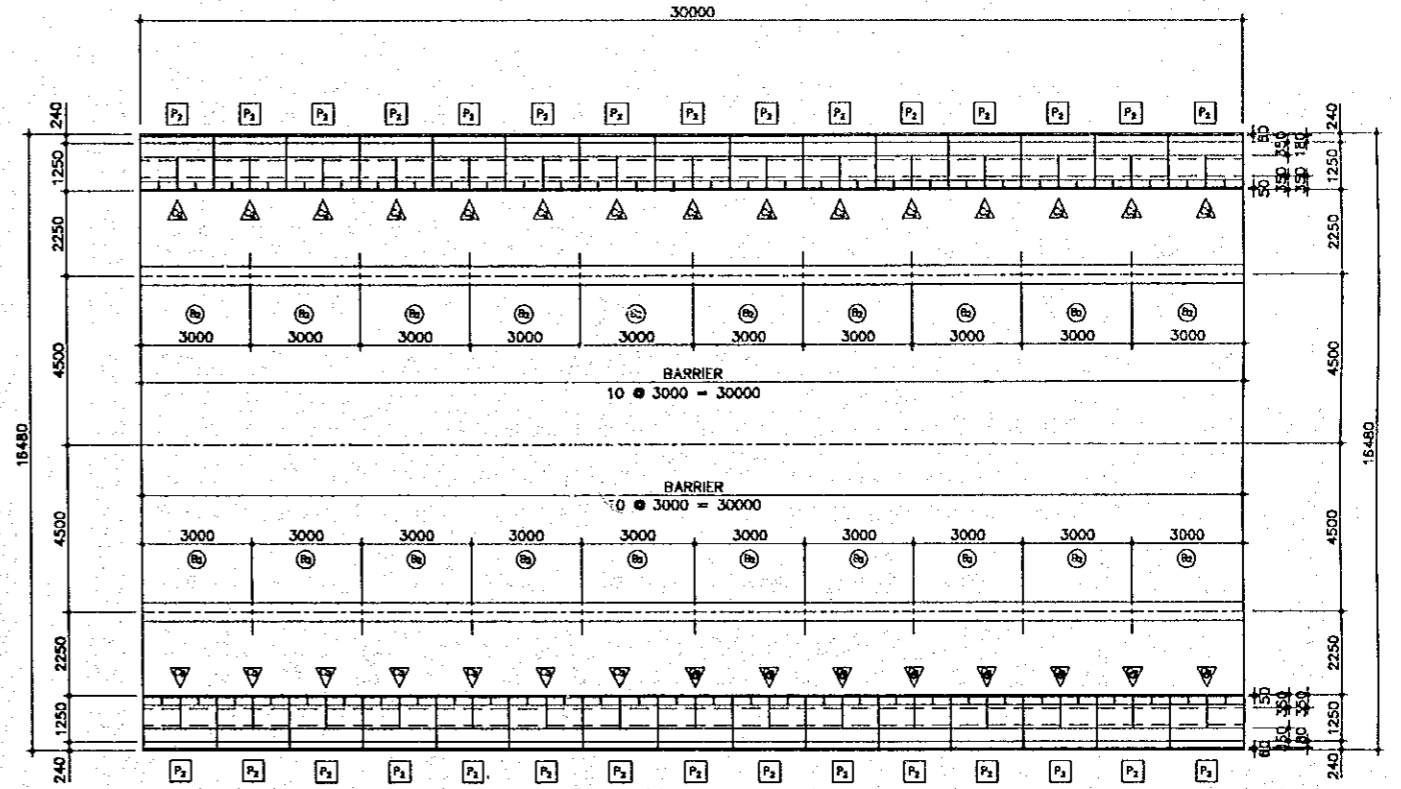
THE STUDY ON CONSTRUCTION OF THE BRIDGE  
OVER THE RIVER RUPSA IN KHULNA (PHASE 2)

LAYOUT OF DECK FINISHING  
(SHEET 3 OF 3)

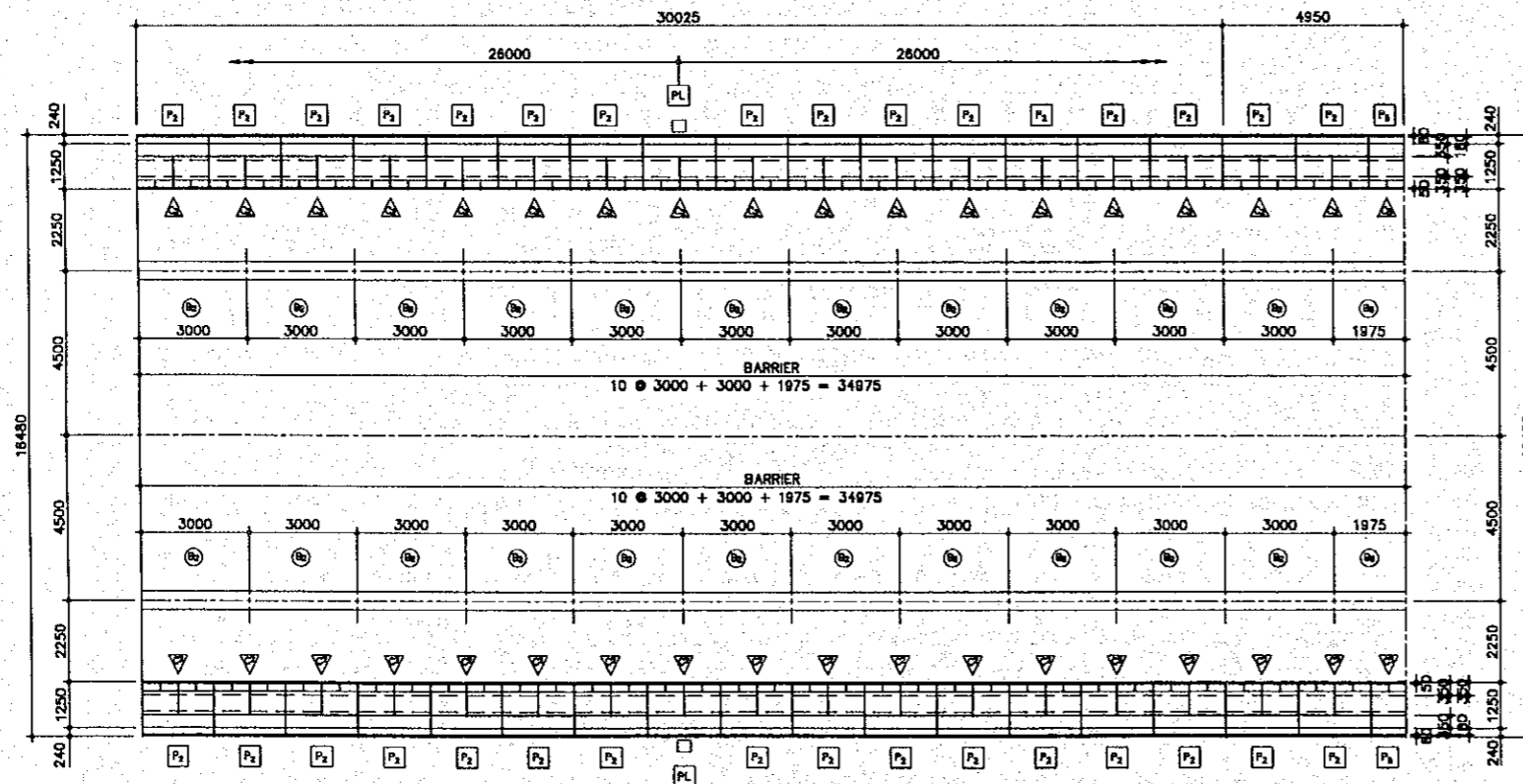
SCALE AS SHOWN SHEET NO. J-38



F LAYOUT PLAN ON TYPICAL END SPAN OF APPROACH BRIDGE  
SCALE 1:100



G LAYOUT PLAN ON TYPICAL INTERNAL SPAN OF APPROACH BRIDGE  
SCALE 1:100

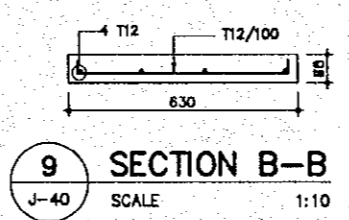
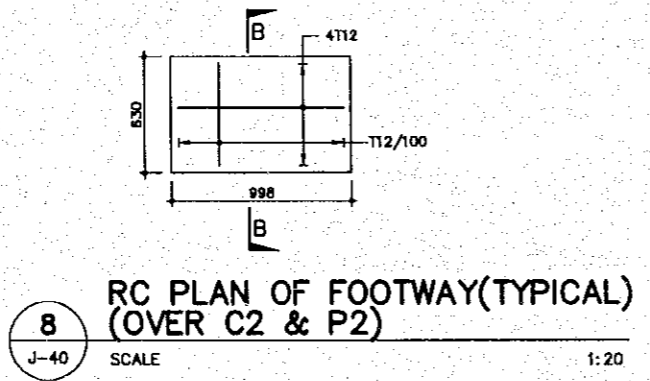
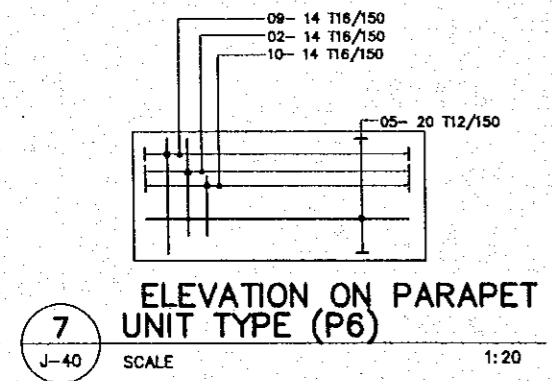
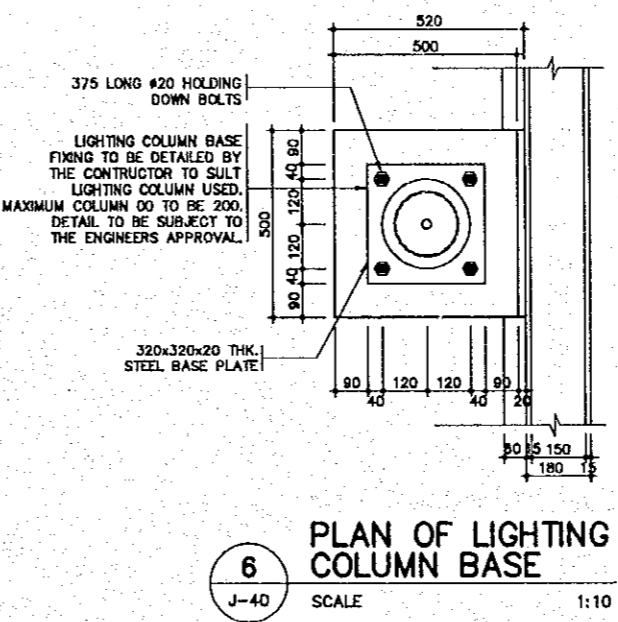
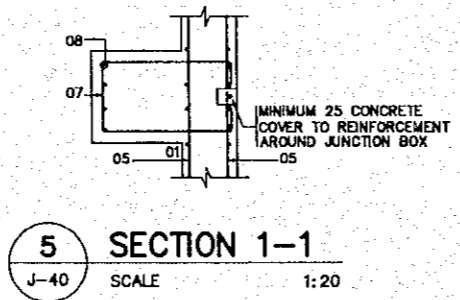
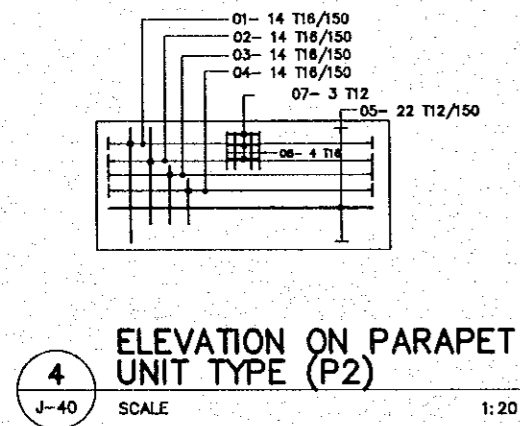
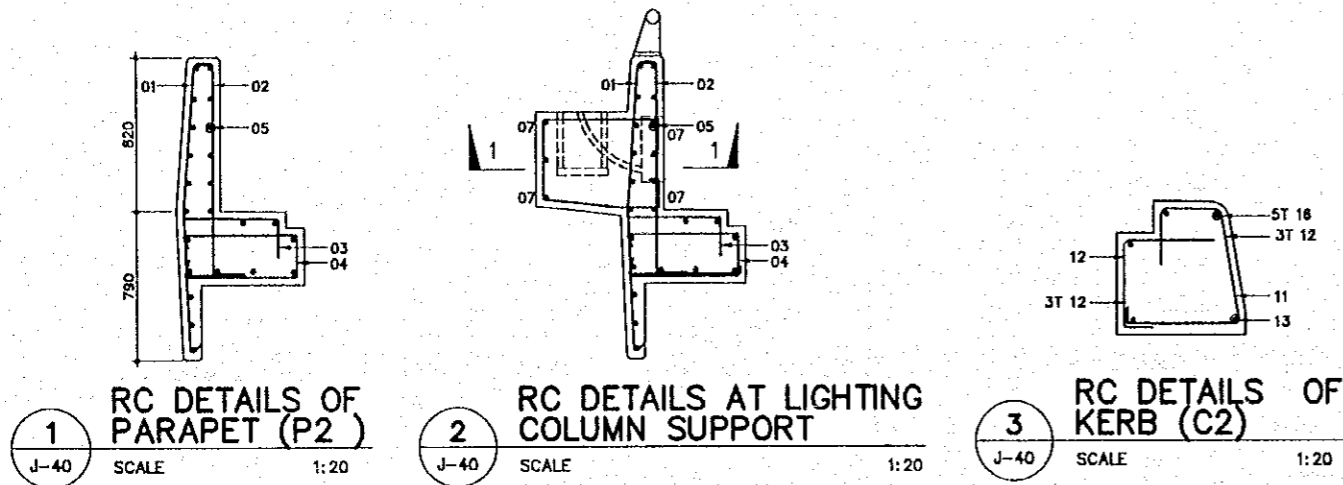


H LAYOUT PLAN ON TYPICAL END SPAN OF APPROACH BRIDGE  
SCALE 1:100

LEGEND :

- P PARAPET WITHOUT LIGHTING COLUMN SUPPORT
- P<sub>L</sub> PARAPET WITH LIGHTING COLUMN SUPPORT
- C CURB
- B BARRIER





- NOTES :**
- THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NO. J-01
  - UNLESS SHOWN OTHERWISE, GRADES OF CONCRETE TO BE  
PRECAST PARAPET AND KERB UNITS CLASS 40/20  
IN SITU CONCRETE CLASS 30/20
  - ALL EXTERNAL EDGES TO HAVE 15x15 CHAMFER UNLESS NOTED OTHERWISE.
  - CLEAR 20 NOMINAL GAP TO BE LEFT BETWEEN ADJACENT PARAPET UNITS. DRY JOINTS TO BE PROVIDED BETWEEN KERB UNITS WITHIN LENGTH OF PARAPET UNITS.
  - ALL STEELWORK TO BE AASHTO DESIGNATION M270 GRADE 50 (ASTM A 709 GRADE 50), GALVANIZED IN ACCORDANCE WITH THE SPECIFICATION.
  - ROLLING FIXING BOLTS TO BE IN ACCORDANCE WITH ASTM A 307, GALVANIZED IN ACCORDANCE WITH THE SPECIFICATION.
  - ALL HOLDING DOWN BOLTS TO BE HIGH STRENGTH TO AASHTO M164 (ASTM A 25), GALVANIZED IN ACCORDANCE WITH THE SPECIFICATION.
  - DIMENSIONS MARKED \* ARE PROVISIONAL ONLY AND SHOULD BE ADJUSTED TO SUIT DECK EXPANSION JOINT USED.
  - REINFORCEMENT TO BE DEFORMED BAR TO AASHTO M31 (ASTM A615) GRADE 40 OR 60 AS NOTED.
  - MINIMUM CONCRETE COVER TO REINFORCEMENT TO BE 30mm TO KERB UNITS AND 50mm ELSEWHERE, UNLESS NOTED OTHERWISE.
  - MINIMUM LAP LENGTH TO AS FOLLOWS UNLESS SHOWN OTHERWISE.  
32 # = 1500mm    16 # = 550mm  
25 # = 850mm    12 # = 400mm  
20 # = 650mm    10 # = 350mm  
LAP LENGTH BASED ON SMALLEST DIAMETER BAR AND CALCULATED IN ACCORDANCE WITH AASHTO ARTICLE 8.32, ASSUMING BAR TO BE FULLY STRESSED.
  - REINFORCEMENT TO BE ANCHORED USING DEVELOPMENT LENGTHS CALCULATED IN ACCORDANCE WITH AASHTO ARTICLE 8.25, ASSUMING BAR TO BE FULLY STRESSED.
  - KEY TO REINFORCEMENT NOMENCLATURE :  
BAR MARK    07 - 34 T16/150 NF  
QUANTITY    LOCATION  
                  BAR SPACING  
                  BAR DIAMETER  
                  BAR TYPE  
  
T = GRADE 60 BARS  
R = GRADE 40 BARS
- PARAPETS, KERB, FOOTWAYS ARE TYPICAL THEY ARE VARIED IN LENGTH.

THE STUDY ON CONSTRUCTION OF THE BRIDGE  
OVER THE RIVER RUPSA IN KHULNA (PHASE 2)

PRECAST BARRIER UNITS

SCALE	SHEET NO.
AS SHOWN	J-41

NOTES:

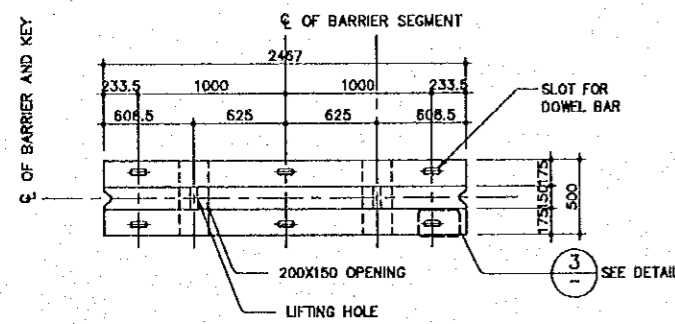
- THIS DRAWING TO BE READ IN CONJUNCTION WITH DRG. NO. J-01
- FOR LAYOUT OF DECK FINISHING REFER TO DRG. NO. J-37, J-38
- GRADE OF CONCRETE TO BE CLASS 30/20.
- ALL EXTERNAL EDGES TO HAVE 15x15 CHAMFER UNLESS NOTED OTHERWISE.
- REINFORCEMENT TO BE DEFORMED BAR TO AASTHO M31 (ASTM A615) GRADE 40 OR GRADE 60 AS NOTED.
- MINIMUM CONCRETE COVER TO REINFORCEMENT TO BE 40mm.
- MINIMUM LAP LENGTH TO AS FOLLOWS UNLESS SHOWN OTHERWISE.  

32 # = 1500mm	16 # = 550mm
25 # = 950mm	12 # = 400mm
20 # = 850mm	10 # = 350mm
- LAP LENGTH BASED ON SMALLEST DIAMETER BAR AND CALCULATED IN ACCORDANCE WITH AASHTO ARTICLE 8.32, ASSUMING BAR TO BE FULLY STRESSED.
- REINFORCEMENT TO BE ANCHORED USING DEVELOPMENT LENGTHS CALCULATED IN ACCORDANCE WITH AASHTO ARTICLE 8.25, ASSUMING BAR TO BE FULLY STRESSED.
- KEY TO REINFORCEMENT NOMENCLATURE :  

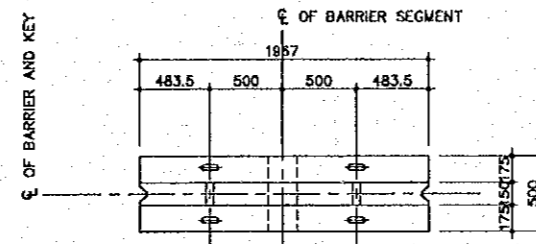
07 - 34	T16/150	NF
BAR MARK	QUANTITY	LOCATION
		BAR SPACING
		BAR DIAMETER
		BAR TYPE
- T = GRADE 60 BARS  
R = GRADE 40 BARS
- ABBREVIATIONS : - NF = NEAR FACE ; FF = FOR FACE ;  
EF = EACH FACE ; T = TOP ; B = BOTTOM ;  
STAGG = STAGGERED ; ALT = ALTERNATE SPACING ;  
ABR = ALTERNATE BARS REVERSED.
- JOINT BETWEEN BARRIER UNITS TO BE LEFT DRY.  
NOMINAL GAP WIDTH TO BE 8mm.

SCHEDULE OF VARYING  
REINFORCEMENT QUANTITIES

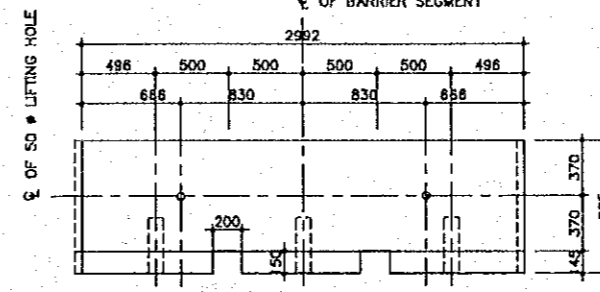
TYPE	A	B	C
B1	20	3	23
B2	25	3	28
B3	30	4	34
B4	33	4	37
B5	17	2	19
B6	17	2	19



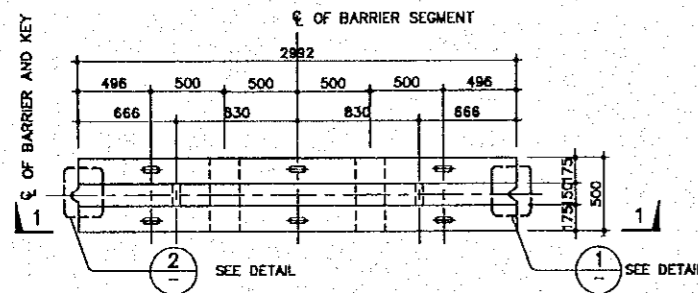
1 PLAN ON UNIT TYPE B1  
SCALE 1:25



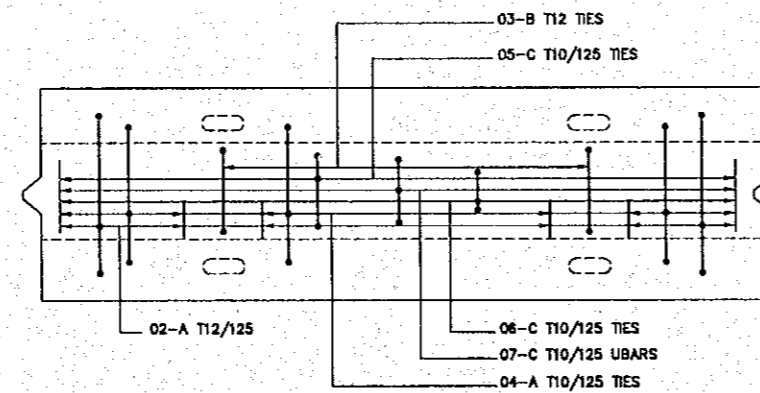
6 PLAN ON UNIT TYPE B6  
SCALE 1:25



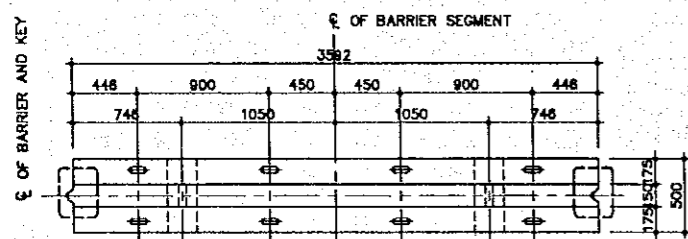
7 ELEVATION 1-1  
SCALE 1:25



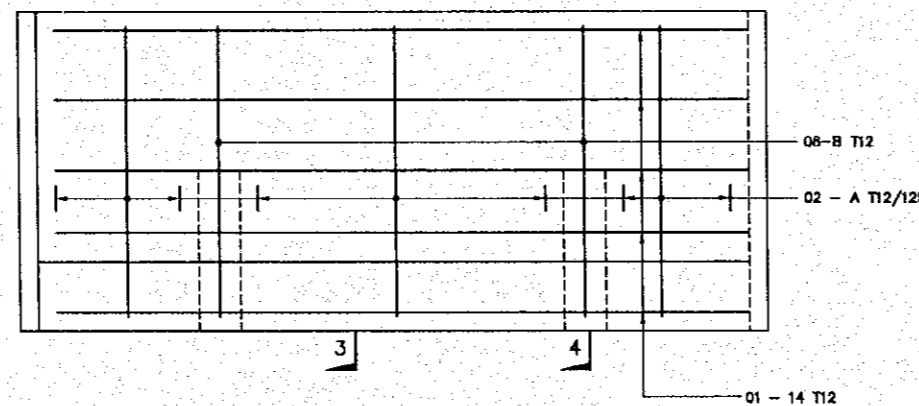
2 PLAN ON UNIT TYPE B2  
SCALE 1:25



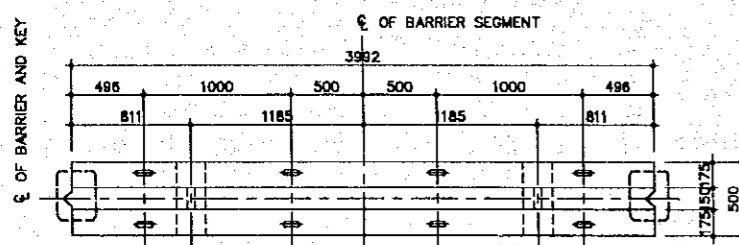
8 PLAN ON TYPICAL UNIT  
SHOWING RC DETAILS  
SCALE 1:10



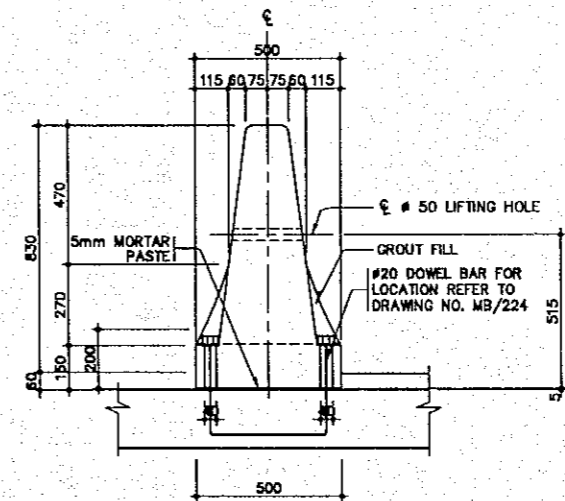
3 PLAN ON UNIT TYPE B3  
SCALE 1:25



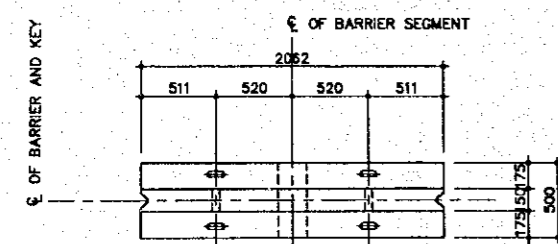
9 ELEVATION ON TYPICAL UNIT  
SHOWING RC DETAILS  
SCALE 1:10



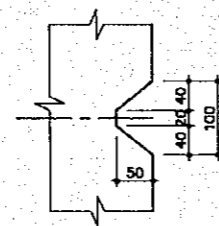
4 PLAN ON UNIT TYPE B4  
SCALE 1:25



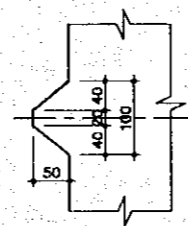
13 SECTION 2-2  
SCALE 1:12.5



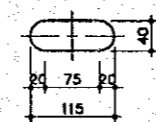
5 PLAN ON UNIT TYPE B5  
SCALE 1:25



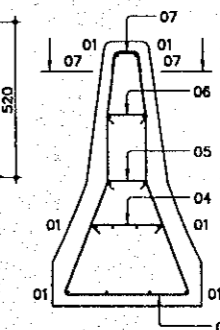
10 DETAIL - 1  
SCALE 1:5



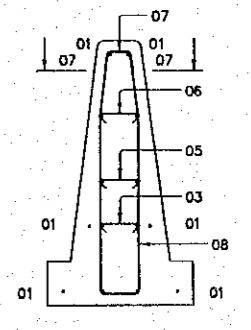
11 DETAIL - 2  
SCALE 1:5



12 DETAIL - 3  
SCALE 1:5



14 SECTION 3-3  
SCALE 1:12.5

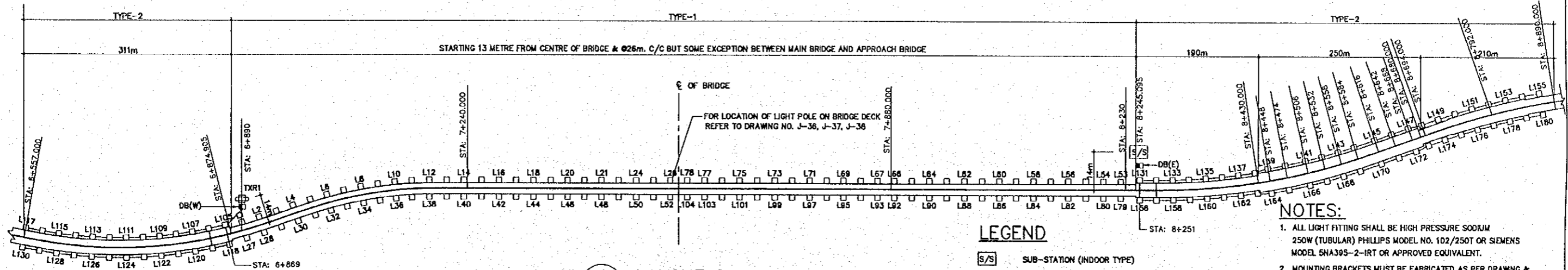


15 SECTION 4-4  
SCALE 1:12.5

THE STUDY ON CONSTRUCTION OF THE BRIDGE  
OVER THE RIVER RUPSA IN KHULNA (PHASE 2)

DETAILS OF LIGHTING (SHEET 1 OF 3)

SCALE AS SHOWN SHEET NO. J-42



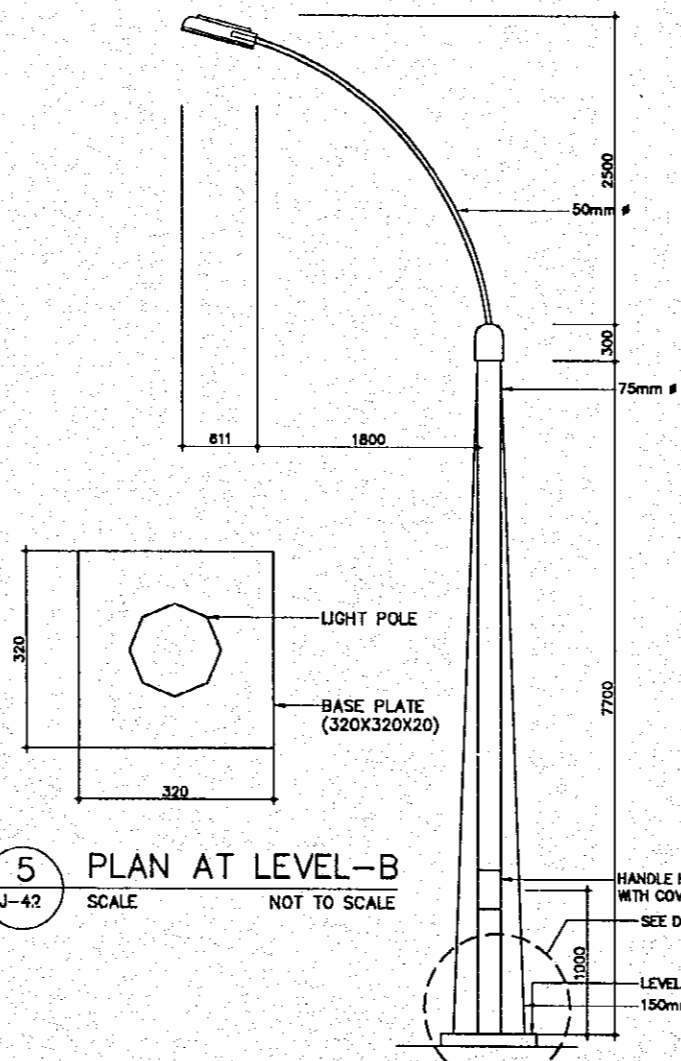
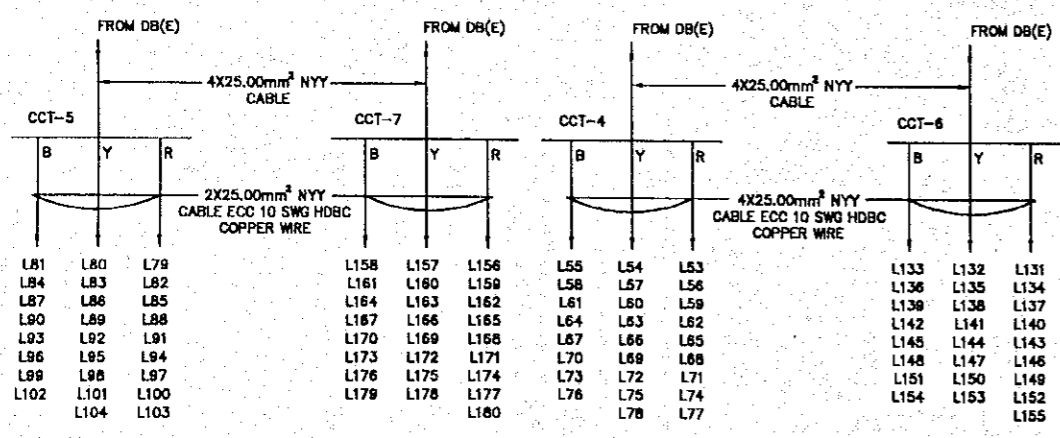
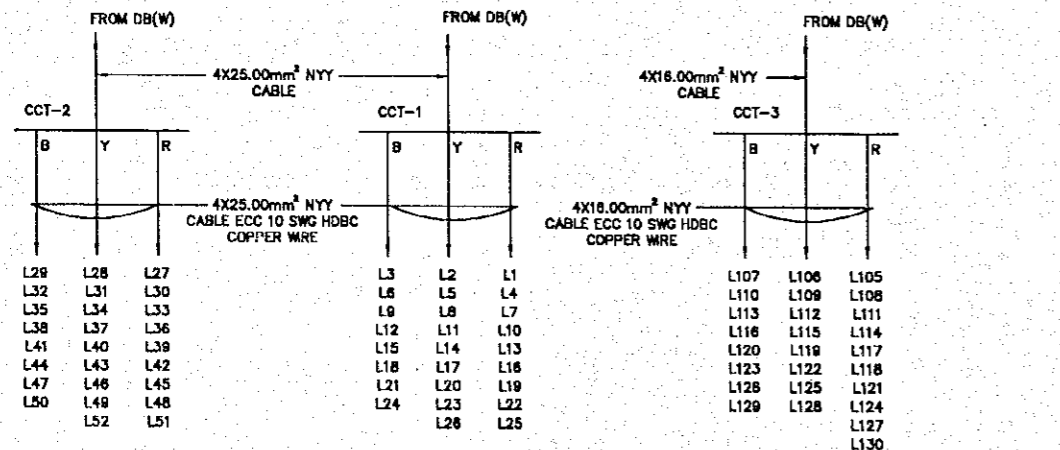
1 LAYOUT PLAN  
SCALE NOT TO SCALE

LEGEND

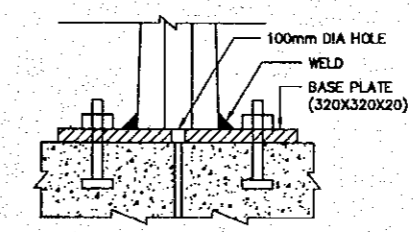
- S/S SUB-STATION (INDOOR TYPE)
  - DB(E) DISTRIBUTION BOARD OUTDOOR TYPE FOR EAST BANK
  - DB(W) DISTRIBUTION BOARD OUTDOOR TYPE FOR WEST BANK
  - TXR 11/0.4 KV 50 KVA TRANSFORMER
  - MCCB/MCB
  - U/G 11 KV CABLE ROUTE
  - LT. CABLE ROUTE
  - L LIGHT POLE
- TYPE-1, LIGHT POLES WITHOUT BASE FOUNDATION  
TYPE-2, LIGHT POLES WITH BASE FOUNDATION

NOTES:

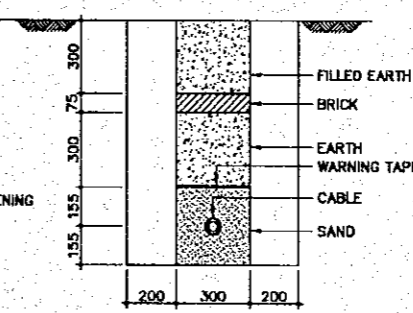
1. ALL LIGHT FITTING SHALL BE HIGH PRESSURE SODIUM 250W (TUBULAR) PHILLIPS MODEL NO. 102/250T OR SIEMENS MODEL SNA395-2-IRT OR APPROVED EQUIVALENT.
2. MOUNTING BRACKETS MUST BE FABRICATED AS PER DRAWING & STANDERD SPECIFICATION ACCORDING TO BS 5648 PART-2 1978.
3. FOR DETAILS OF POLE FOUNDATION (TYPE-2) REFERS TO DRG. NO. P-01
4. FOR DETAILS OF LIGHT POLE ON BRIDGE DECK REFER TO DRG. NO. J-36, J-37, J-38
5. ALL STEEL WORK TO BE HOT DIP GALVANIZED IN ACCORDING WITH THE SPECIFICATION.
6. FOR DETAILS OF LIGHT POLE (TYPE-2) REFER TO DRG. NO. J-43
7. FOR DETAILS OF LIGHT POLE FOUNDATION (TYPE-1) REFER TO DRG. NO. J-39, J-40
8. FOR DETAILS OF SUB-STATION REFER TO DRG. NO. J-43A



2 LIGHT COLUMN DETAIL (TYPE-1)  
SCALE NOT TO SCALE



4 DETAIL - A  
SCALE NOT TO SCALE



3 UNDER GROUND HT CABLE DETAIL  
SCALE NOT TO SCALE

CABLE SPECIFICATION AND QUANTITY			
ITEM NO.	DESCRIPTION	UNIT	QANT.
1.	2C-2.5mm <sup>2</sup> NYY EQUIVALENT TO EASTERN/PARADISE CABLE FOR LUMINAIRES TO JUNCTION BOX	km	-
2.	2X50mm <sup>2</sup> NYY EQUIVALENT TO EASTERN/PARADISE CABLE	km	-
3.	4X25mm <sup>2</sup> NYY EQUIVALENT TO EASTERN/PARADISE CABLE	km	-
4.	ECC CONDUCTOR NO. 10 SWG HDGC COPPER	km	-
5.	11 KV UNDERGROUND CABLE NYSEYFG9Y CABLE EASTERN OR EQUIVALENT	km	-
6.	HEAT SHRINK CABLE TERMINATION KIT.	SET.	-
7.	2C-4.0mm <sup>2</sup> NYY EASTERN/ PARADISE OR APPROVED EQUIVALENT	m	-
8.	2C-10mm <sup>2</sup> NYY EASTERN/ PARADISE OR APPROVED EQUIVALENT	m	-
9.	4X35mm <sup>2</sup> NYY EASTERN/ PARADISE OR APPROVED EQUIVALENT	m	-
10.	4X16mm <sup>2</sup> NYY EASTERN/ PARADISE OR APPROVED EQUIVALENT	m	-
11.	LT JUNCTION BOX MADE OF GALVANIZED STEEL FOR LIGHT POLE (350mmX250mmX125mm)	NOS.	-
12.	4X50mm <sup>2</sup> NYY EQUIVALENT TO EASTERN/PARADISE CABLE	km	-
13.	3X50mm <sup>2</sup> NYY EQUIVALENT TO EASTERN/PARADISE CABLE	km	-

LIGHT POST SPECIFICATION AND QUANTITY			
ITEM NO.	DESCRIPTION	UNIT	QANT.
1.	10.5 METRE LONG OCTAGONAL HOT DIP GALVANIZED POLE ON TYPE-1	NOS.	-
2.	9.75 METRE LONG TAPER ROUND/OCTAGONAL HOT DIP GALVANIZED POLE ON TYPE-2	NOS.	-
3.	8 METRE LONG TWO STEPPED HOT DIP GALVANIZED POLE FOR TRANSFORMER	NOS.	-