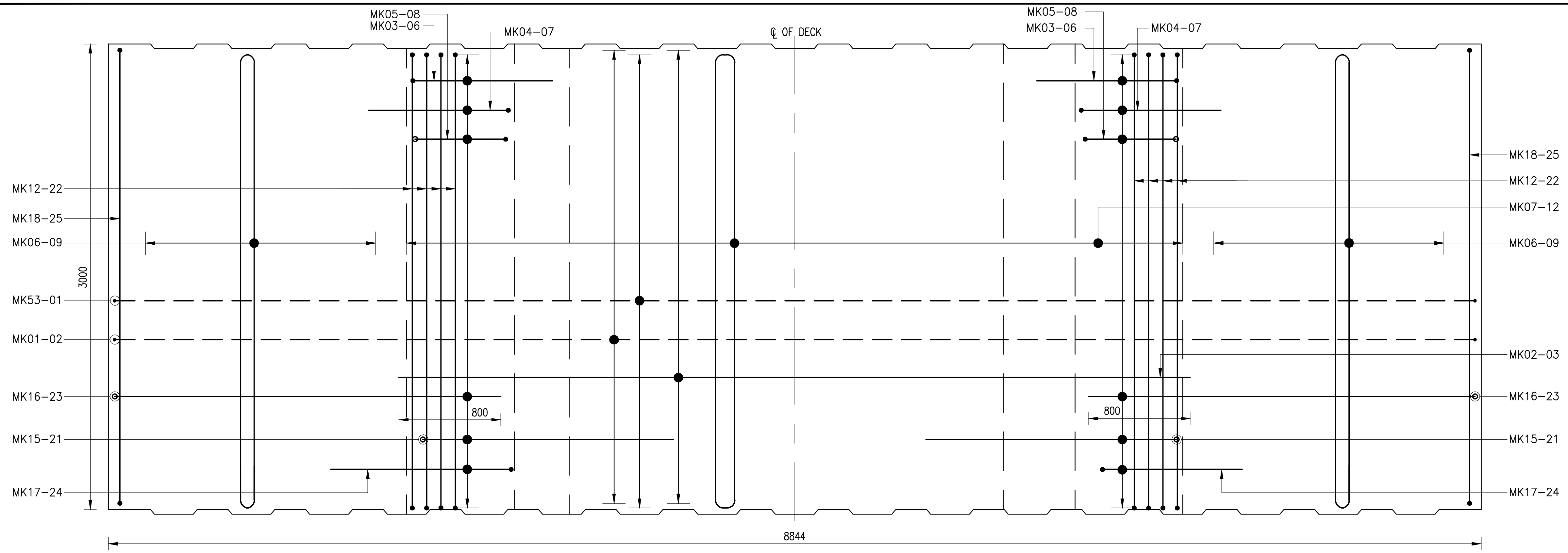
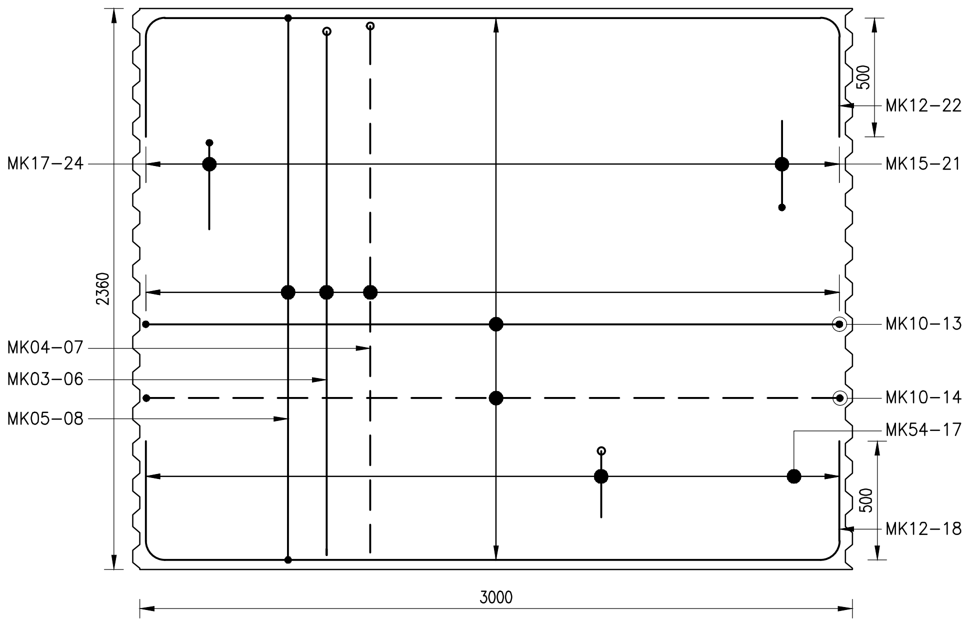
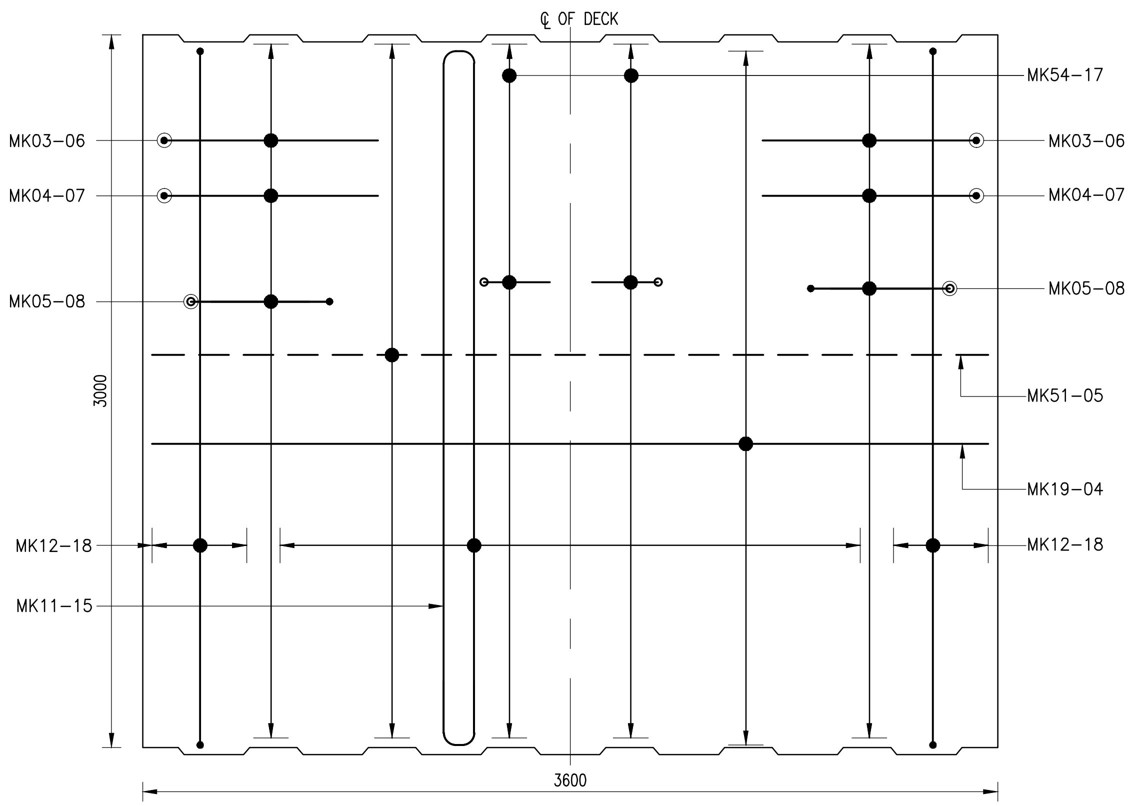


SECTION 1-1
PLAN AT TOP LEVEL
SCALE 1:20



SECTION 2-2
SCALE 1:20



SECTION 3-3
PLAN AT BOTTOM LEVEL
SCALE 1:20

MKD.	DATE	DESCRIPTION	APPROVED

R E V I S I O N S

SEGMENT-2

CONSULTANTS:

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DRAWN	STH	
CHECKED	BVI	
APPROVED	SAI	

TITLE:

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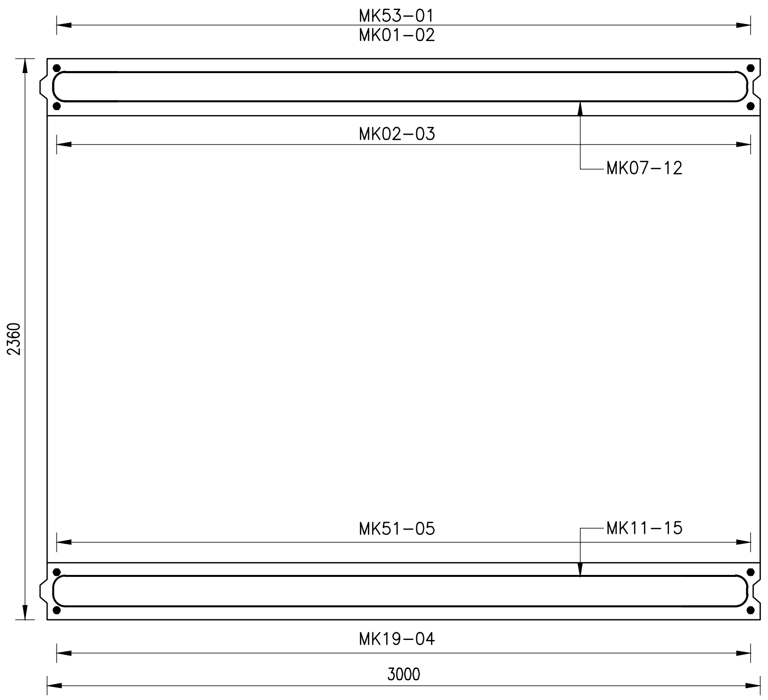
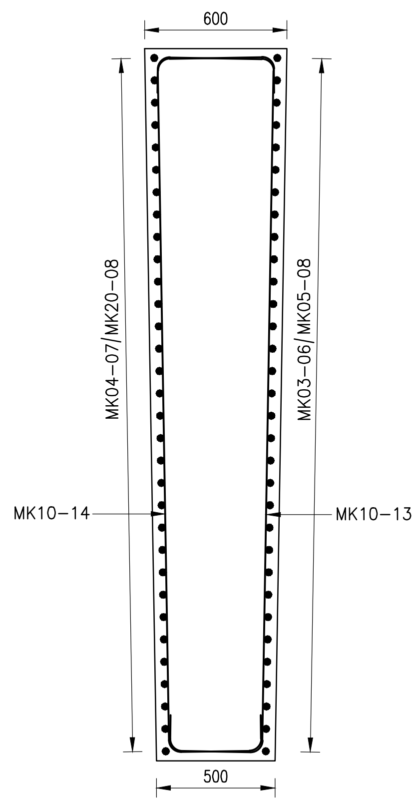
SCALE – AS SHOWN | DATE – | SHEET NO. 2 OF 3

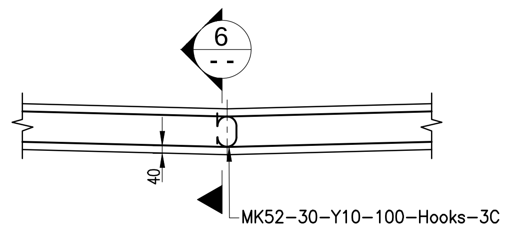
SEGMENT-3



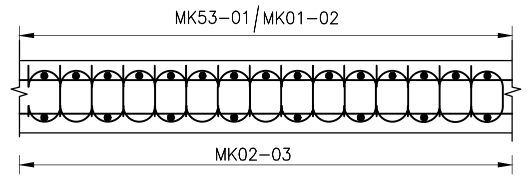
SECTION 4-4
SCALE 1:20



SECTION 5-5
SCALE 1:20



DETAIL - A
SCALE 1:25



SECTION 6-6
SCALE 1:15

MKD.	DATE	DESCRIPTION	APPROVED

REVISIONS

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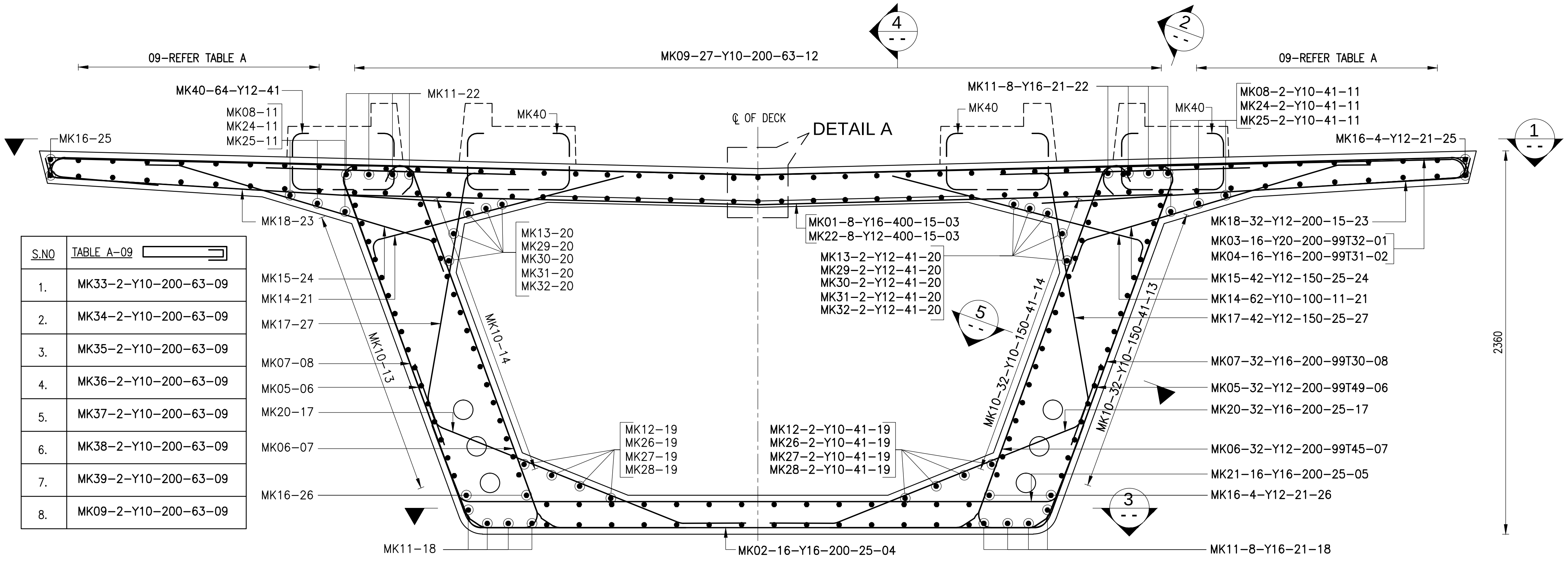
DRAWN	STH	
CHECKED	BVI	
APPROVED	SAI	

TITLE:

DRAWING NO.

SCALE - AS SHOWN | DATE | SHEET NO. 3 OF 3

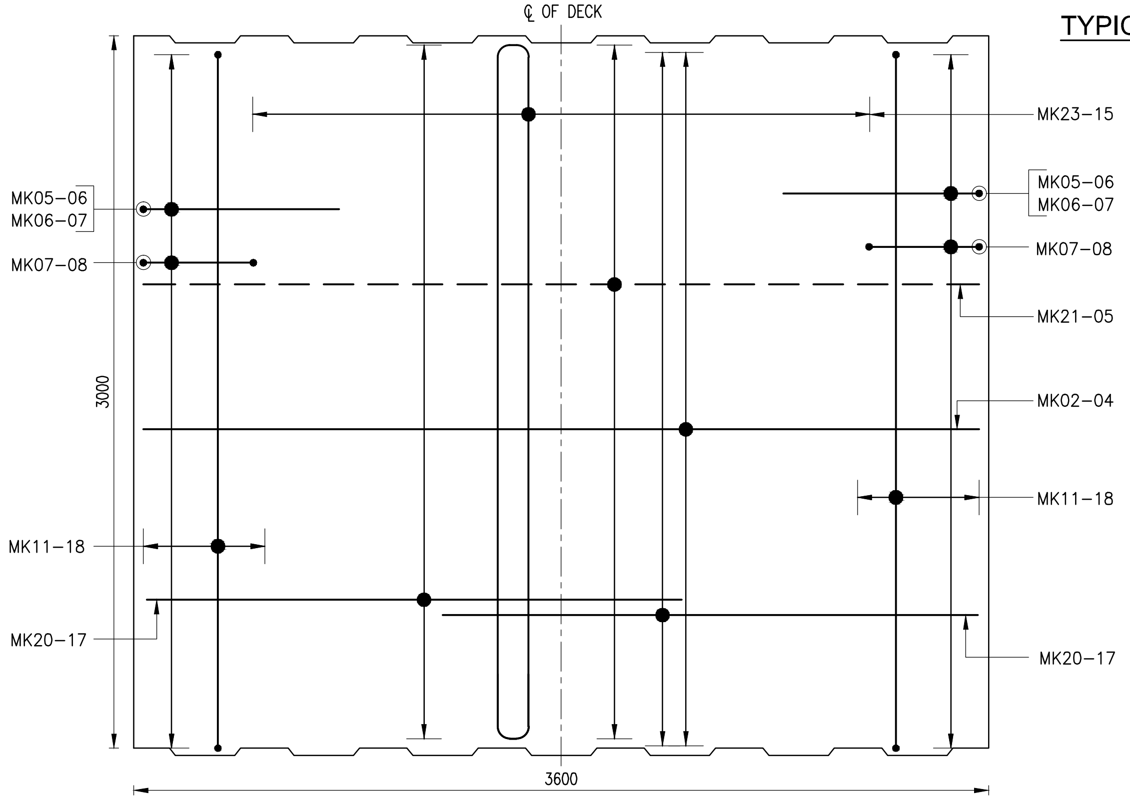


S.NO	TABLE A-09
1.	MK33-2-Y10-200-63-09
2.	MK34-2-Y10-200-63-09
3.	MK35-2-Y10-200-63-09
4.	MK36-2-Y10-200-63-09
5.	MK37-2-Y10-200-63-09
6.	MK38-2-Y10-200-63-09
7.	MK39-2-Y10-200-63-09
8.	MK09-2-Y10-200-63-09

TYPICAL CROSS SECTION

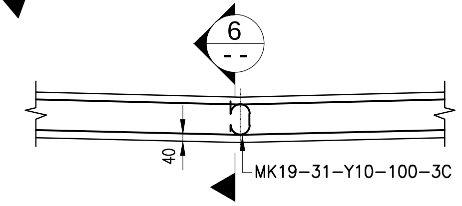
SCALE 1:20

SEGMENT-1



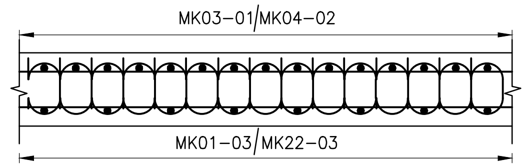
SECTION 3-3

SCALE 1:20



DETAIL A

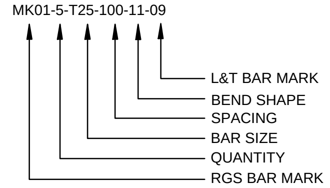
SCALE 1:25



SECTION 6-6

SCALE 1:15

CALLOUT FORMAT:



AT ANY PLACE WHERE REINFORCEMENT FOULS WITH CABLE LOCATION,REINFORCEMENT SHAPE SHALL BE SUITABLE MODIFIED BY CRANKING WHICH SHALL BE EFFECTED AT SLOPE NOT MORE THAN 1:8.

NOTES:-

1. ALL DIMENSIONS ARE TO BE READ AND NOT MEASURED.
2. ANY DISCREPANCIES MUST BE BROUGHT TO THE NOTICE OF THE CONSULTANT BEFORE EXECUTION OF WORK AT SITE.
3. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTURAL,STRUCTURAL,PLUMBING & FIRE FIGHTING,ELECTRICAL AND TRAFFIC MANAGEMENT DRAWINGS.
4. SHEAR KEYS AT ENDS OF SEGMENTS ARE NOT SHOWN.REINFORCEMENT DETAILS AT SEGMENT ENDS TO BE MODIFIED TO SUIT SHEAR KEYS.
5. COVER FOR SEGMENTAL BOX - 40mm.

REFERENCE DRAWINGS (LATEST REVISION):-

1. FOR GENERAL NOTES REFER DWG NO : 18.SS.101 & 102.
2. FOR GENERAL ARRANGEMENT REFER DWG NO : 18.SS.1205 TO 1207.
3. FOR CABLE PROFILE OF PRESTRESSING : 18.SS.1409 TO 1414.
4. FOR CONCRETEPROFILE, SHEAR KEY REFER DWG NO : 18.SS.1351 TO 1364.
5. FOR PARAPET PROFILE REFER DWG NO : 18.SS.602,603,604.
6. FOR REINF. DETAILS AROUND OPENING IN DECK SLAB (IF ANY) REFER DWG NO : 18.SS.1571.

MKD.	DATE	DESCRIPTION	APPROVED

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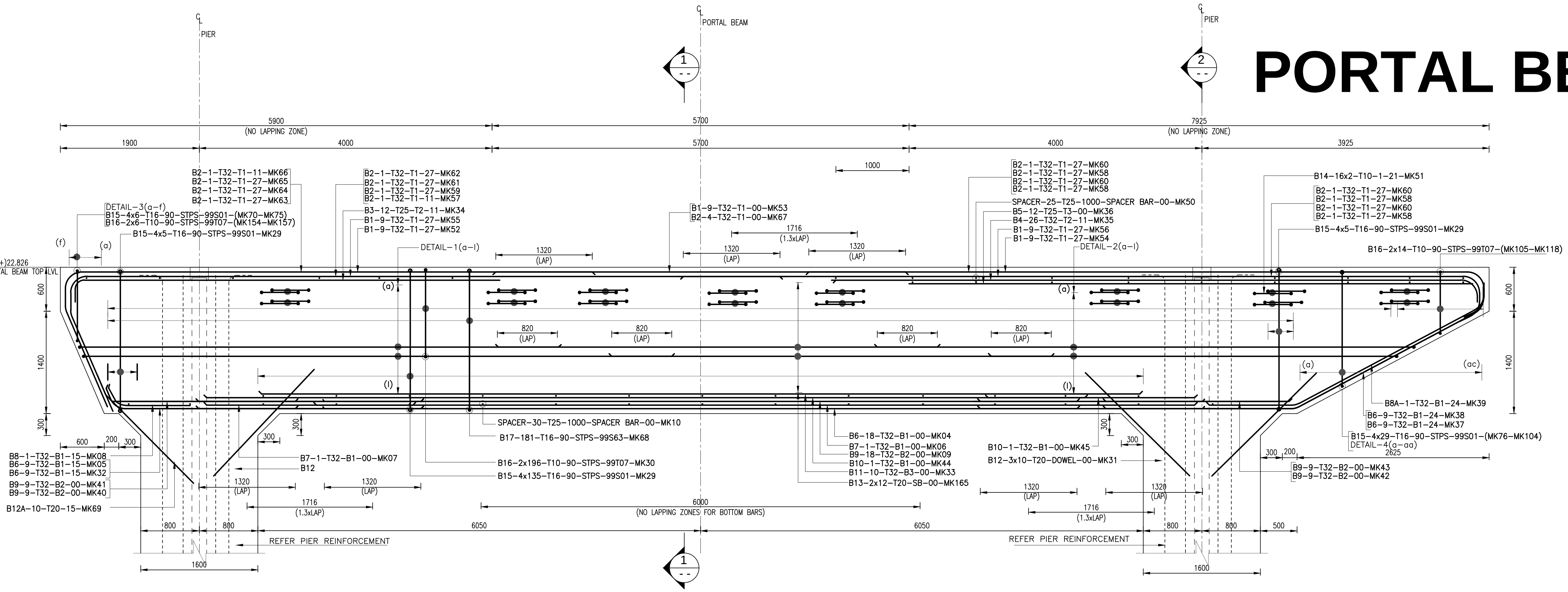
CHECKED	BVI
APPROVED	SAI

TITLE:

DRAWING NO.

SCALE - AS SHOWN | DATE | SHEET NO. 1 OF 2

PORTAL BEAM-1



REINFORCEMENT DETAILS OF PORTAL BEAM
FOR PIER ID - PP188

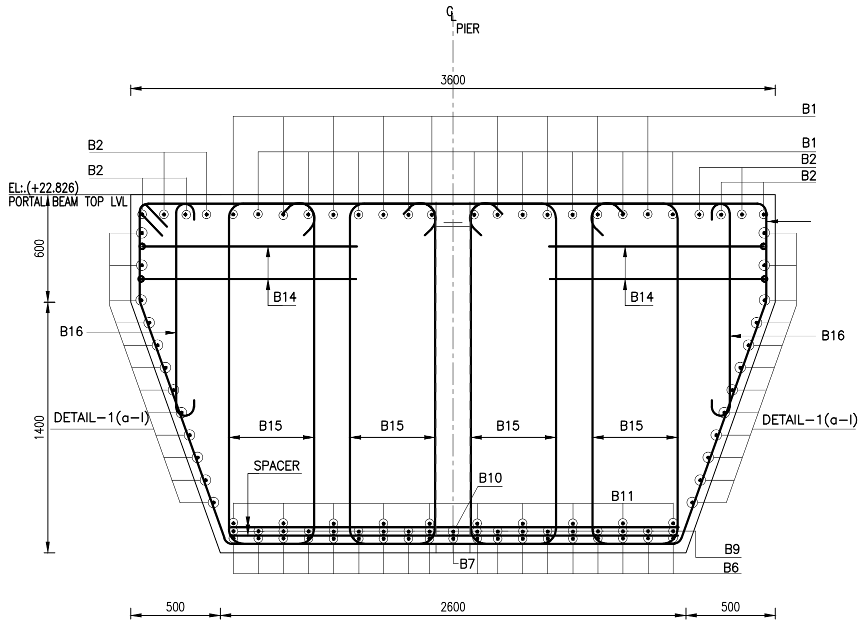
NO OF MEMBERS-1 NO
SCALE 1:30

	DETAIL-4
a	B17-1-T16-90-STPS-99S63-MK125
b	B17-1-T16-90-STPS-99S63-MK126
c	B17-1-T16-90-STPS-99S63-MK127
d	B17-1-T16-90-STPS-99S63-MK128
e	B17-1-T16-90-STPS-99S63-MK129
f	B17-1-T16-90-STPS-99S63-MK130
g	B17-1-T16-90-STPS-99S63-MK131
h	B17-1-T16-90-STPS-99S63-MK132
i	B17-1-T16-90-STPS-99S63-MK133
j	B17-1-T16-90-STPS-99S63-MK134
k	B17-1-T16-90-STPS-99S63-MK135
l	B17-1-T16-90-STPS-99S63-MK136
m	B17-1-T16-90-STPS-99S63-MK137
n	B17-1-T16-90-STPS-99S63-MK138
o	B17-1-T16-90-STPS-99S63-MK139
p	B17-1-T16-90-STPS-99S63-MK140
q	B17-1-T16-90-STPS-99S63-MK141
r	B17-1-T16-90-STPS-99S63-MK142
s	B17-1-T16-90-STPS-99S63-MK143
t	B17-1-T16-90-STPS-99S63-MK144
u	B17-1-T16-90-STPS-99S63-MK145
v	B17-1-T16-90-STPS-99S63-MK146
w	B17-1-T16-90-STPS-99S63-MK147
x	B17-1-T16-90-STPS-99S63-MK148
y	B17-1-T16-90-STPS-99S63-MK149
z	B17-1-T16-90-STPS-99S63-MK150
aa	B17-1-T16-90-STPS-99S01-MK151
ab	B17-1-T16-90-STPS-99S01-MK152
ac	B17-1-T16-90-STPS-99S01-MK153

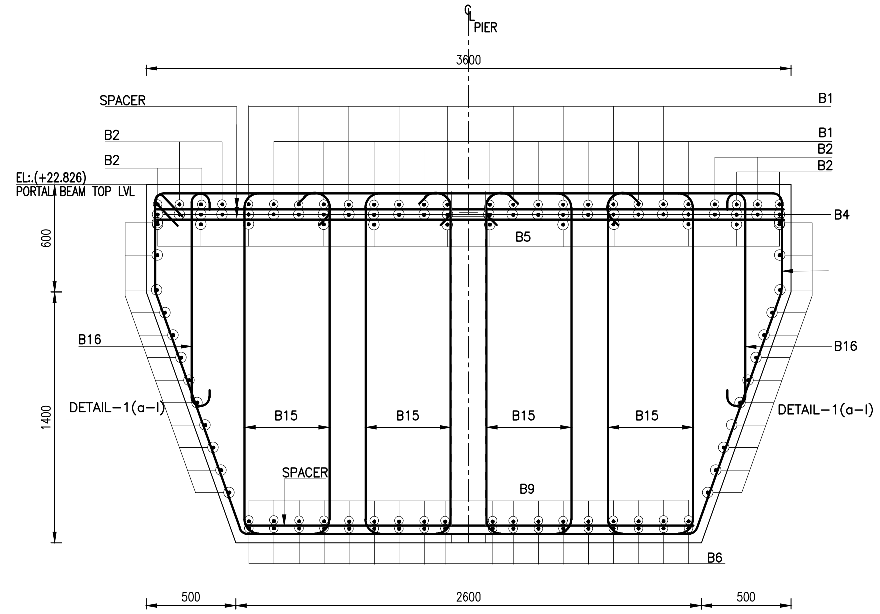
	DETAIL-1
a	B13-2x1-T20-SB-11-MK167
b	B13-2x1-T20-SB-11-MK196
c	B13-2x1-T20-SB-11-MK195
d	B13-2x1-T20-SB-11-MK174
e	B13-2x1-T20-SB-11-MK176
f	B13-2x1-T20-SB-11-MK178
g	B13-2x1-T20-SB-11-MK180
h	B13-2x1-T20-SB-11-MK183
i	B13-2x1-T20-SB-11-MK186
j	B13-2x1-T20-SB-11-MK188
k	B13-2x1-T20-SB-11-MK191
l	B13-2x1-T20-SB-11-MK193

	DETAIL-2
a	B13-2x1-T20-SB-11-MK168
b	B13-2x1-T20-SB-11-MK197
c	B13-2x1-T20-SB-11-MK198
d	B13-2x1-T20-SB-11-MK175
e	B13-2x1-T20-SB-11-MK177
f	B13-2x1-T20-SB-11-MK179
g	B13-2x1-T20-SB-11-MK181
h	B13-2x1-T20-SB-11-MK184
i	B13-2x1-T20-SB-11-MK185
j	B13-2x1-T20-SB-11-MK189
k	B13-2x1-T20-SB-11-MK192
l	B13-2x1-T20-SB-11-MK194

	DETAIL-3
a	B17-1-T16-90-STPS-99S63-MK124
b	B17-1-T16-90-STPS-99S63-MK123
c	B17-1-T16-90-STPS-99S63-MK122
d	B17-1-T16-90-STPS-99S63-MK121
e	B17-1-T16-90-STPS-99S63-MK120
f	B17-1-T16-90-STPS-99S63-MK119



SECTION 1-1
SCALE 1:20



SECTION 2-2
SCALE 1:20

NOTES:

1. ALL DIMENSIONS ARE IN MM AND LEVELS IN METERS, UNLESS NOTED OTHERWISE
2. DIMENSION ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3. ANY DISCREPANCIES MUST BE BROUGHT TO THE NOTICE OF THE CONSULTANT BEFORE EXECUTION OF WORK AT SITE.
4. CONCRETE SHALL BE OF GRADE M50 - PORTAL BEAM
5. REINFORCEMENT SHALL BE GRADE Fe 500D CONFORMING TO IS:1786
6. CLEAR COVER TO ANY REINFORCEMENT SHALL BE 50mm UNLESS NOTED OTHERWISE
7. MINIMUM ANCHORAGE LENGTH Ld FOR SINGLE BARS SHALL BE 41xd AND FOR BUNDLED BARS SHALL BE 54xd, WHERE 'd' IS THE DIAMETER OF THE BAR.
8. MINIMUM LAP LENGTH SHALL BE 41xd WHERE 'd' IS THE DIAMETER OF SMALLER BAR. NOT MORE THAN 50% OF BARS SHALL BE LAPPED AT A SECTION

LEGENDS:

1. STPS : STIRRUPS
2. T1 : TOP FIRST LAYER
3. B1 : BOTTOM FIRST LAYER
4. B2 : BOTTOM SECOND LAYER
5. B3 : BOTTOM THIRD LAYER
6. B4 : BOTTOM FOURTH LAYER
7. SB : SIDE BAR

CALLOUT FORMAT:

A1-2x3x5-T25-100-VER-00-MK01

- BAR MARK
- SHAPE CODE
- REMARK
- SPACING
- BAR TYPE & BAR SIZE
- QUANTITY
- LAYER
- NUMBER OF MEMBER
- BAR LOCATION

REFERENCE DRAWINGS:

1. EIST1KL001-DMRC-D-KC2-VD-FP-ST03775 — GENERAL ARRANGEMENT & DETAILS OF FOUNDATION FOR PORTAL PP188
2. EIST1KL001-DMRC-D-KC2-VD-FP-ST03776 — REINFORCEMENT DETAILS OF PORTAL PP188
3. EIST1KL001-DMRC-D-KC2-VD-GN-ST03029 — DETAILS OF SUPERSTRUCTURE SUBSTRUCTURE & FOUNDATION OF VIADUCT BETWEEN CH.4500.000 TO CH. 4980.000

MKD.	DATE	DESCRIPTION	APPROVED

R E V I S I O N S

CONTRACTOR:

CONSULTANTS:

REBAR VALUE ENGINEERING CONSULTANTS

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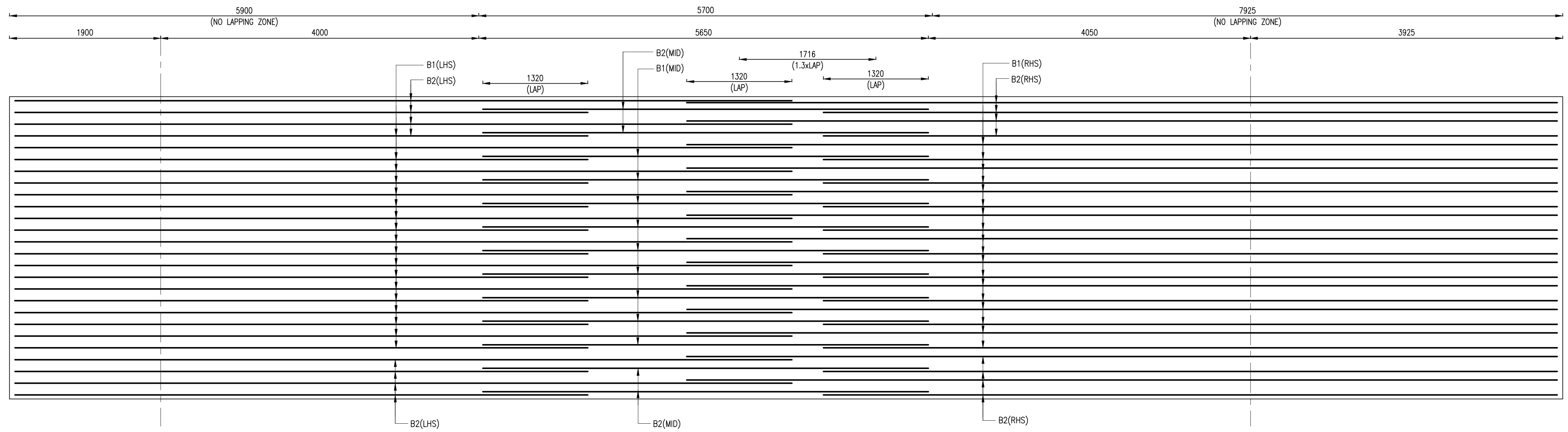
CHECKED	SPA
APPROVED	SAI

TITLE:

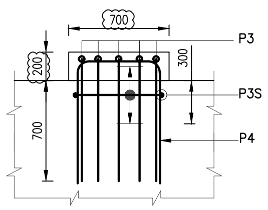
DRAWING NO.

SCALE -1 : 30 & 1: 20 | DATE - | SHEET NO. 1 OF 2

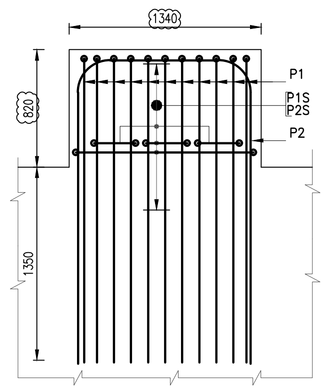


SHOWING TOP BARS ARRANGEMENT FOR PORTAL BEAM-PP188

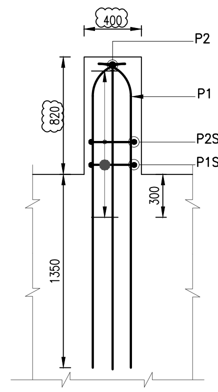
PORTAL BEAM-2



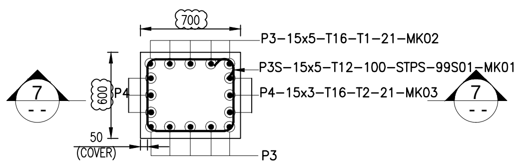
SECTION 7-7
SCALE 1:25



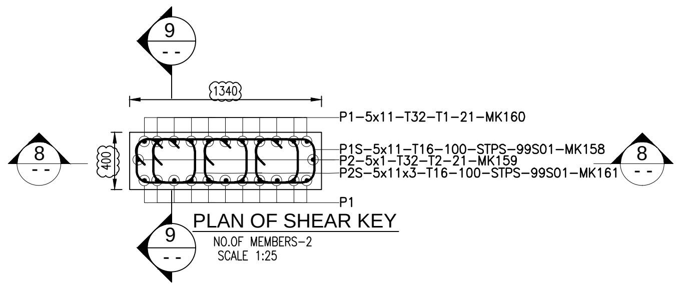
SECTION 8-8
SCALE 1:25



SECTION 9-9
SCALE 1:25



PLAN OF BEARING PEDESTAL
NO.OF MEMBERS-15
SCALE 1:25



PLAN OF SHEAR KEY
NO.OF MEMBERS-2
SCALE 1:25

ENGINEER PLEASE VERIFY THE CLOUDED AREA

NOTES:

1. ALL DIMENSIONS ARE IN MM AND LEVELS IN METERS, UNLESS NOTED OTHERWISE
2. DIMENSION ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3. ANY DISCREPANCIES MUST BE BROUGHT TO THE NOTICE OF THE CONSULTANT BEFORE EXECUTION OF WORK AT SITE.
4. CONCRETE SHALL BE OF GRADE M50 – PORTAL BEAM
5. REINFORCEMENT SHALL BE GRADE Fe 500D CONFORMING TO IS:1786
6. CLEAR COVER TO ANY REINFORCEMENT SHALL BE 50mm UNLESS NOTED OTHERWISE
7. MINIMUM ANCHORAGE LENGTH Ld FOR SINGLE BARS SHALL BE 41xd AND FOR BUNDLED BARS SHALL BE 54xd, WHERE 'd' IS THE DIAMETER OF THE BAR.
8. MINIMUM LAP LENGTH SHALL BE 41xd WHERE 'd' IS THE DIAMETER OF SMALLER BAR. NOT MORE THAN 50% OF BARS SHALL BE LAPPED AT A SECTION

LEGENDS:

1. STPS : STIRRUPS
2. T1 : TOP FIRST LAYER
3. B1 : BOTTOM FIRST LAYER
4. B2 : BOTTOM SECOND LAYER
5. B3 : BOTTOM THIRD LAYER
6. B4 : BOTTOM FOURTH LAYER
7. SB : SIDE BAR

CALLOUT FORMAT:

A1-2x3x5-T25-100-VER-00-MK01

- BAR MARK
- SHAPE CODE
- REMARK
- SPACING
- BAR TYPE & BAR SIZE
- QUANTITY
- LAYER
- NUMBER OF MEMBER
- BAR LOCATION

REFERENCE DRAWINGS:

1. EIST1KL001-DMRC-D-KC2-VD-FP-ST03775 – GENERAL ARRANGEMENT & DETAILS OF FOUNDATION FOR PORTAL PP188
2. EIST1KL001-DMRC-D-KC2-VD-FP-ST03776 – REINFORCEMENT DETAILS OF PORTAL PP188
3. EIST1KL001-DMRC-D-KC2-VD-GN-ST03029 – DETAILS OF SUPERSTRUCTURE SUBSTRUCTURE & FOUNDATION OF VIADUCT BETWEEN CH.4500.000 TO CH. 4980.000

MKD.	DATE	DESCRIPTION	APPROVED

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CONSULTANTS:

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APPROVED	SAI

TITLE:

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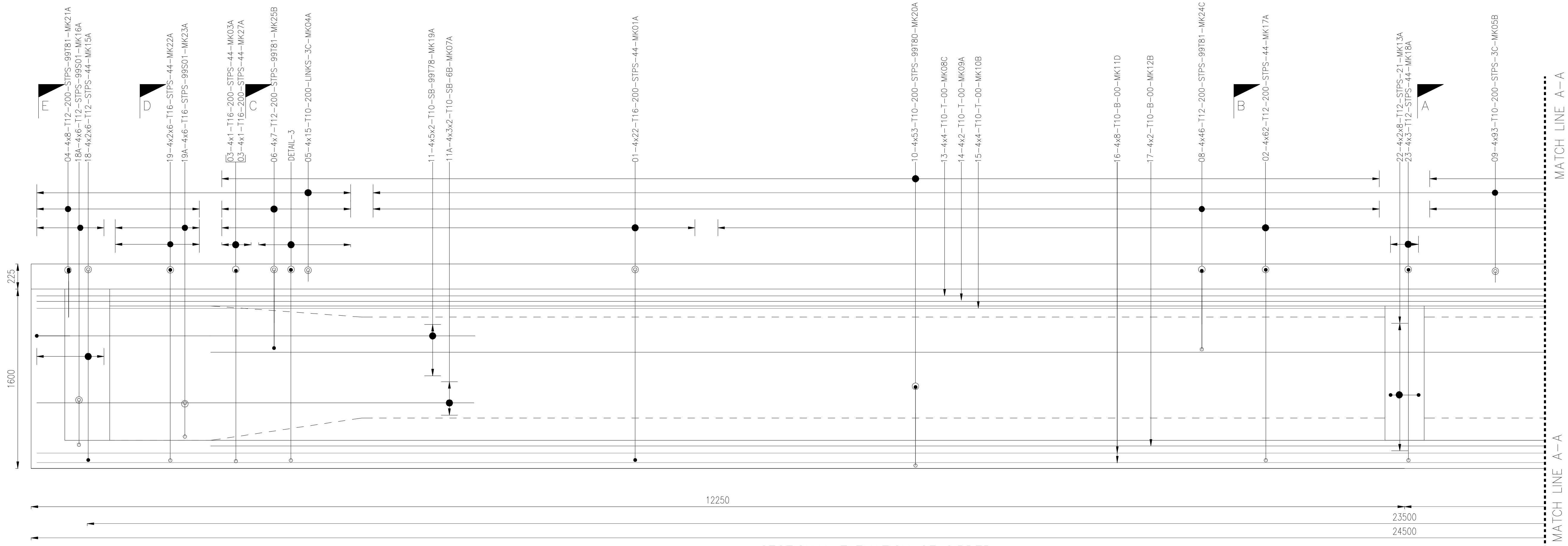
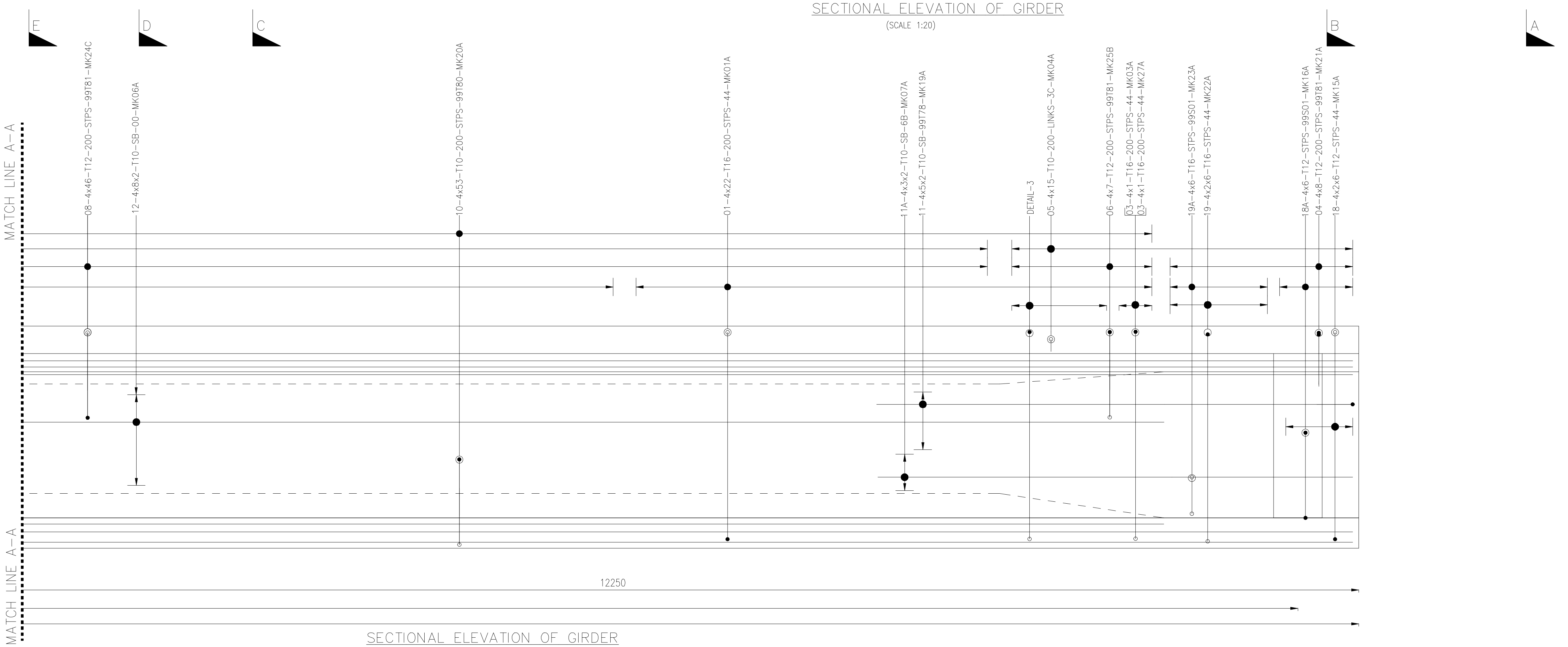
SCALE –1 : 25 | DATE – | SHEET NO. 2 OF 2



SECTIONAL ELEVATION OF GIRDER

(SCALE 1:20)

DETAIL-3
03-4x1-T16-200-STPS-99T91-MK27B
03-4x1-T16-200-STPS-99T91-MK27C
03-4x1-T16-200-STPS-99T91-MK27D
03-4x1-T16-200-STPS-99T91-MK27E
03-4x1-T16-200-STPS-99T91-MK27F



SECTIONAL ELEVATION OF GIRDER

(SCALE 1:20)

NOTES:

1. ALL DIMENSIONS ARE IN MM AND LEVELS IN METERS, UNLESS NOTED OTHERWISE
2. DIMENSION ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS.
3. ANY DISCREPANCIES MUST BE BROUGHT TO THE NOTICE OF THE CONSULTANT BEFORE EXECUTION OF WORK AT SITE.
4. CONCRETE SHALL BE OF GRADE M45
5. REINFORCEMENT SHALL BE GRADE Fe 500D CONFORMING TO IS:1786
6. CLEAR COVER TO ANY REINFORCEMENT SHALL BE 50mm UNLESS NOTED OTHERWISE
7. LAP LENGTH SHALL NOT BE 410mm WHERE 'd' IS THE DIAMETER OF SMALLER BAR. NOT MORE THAN 50% OF THE BARS SHALL BE LAPPED AT ANY SECTION.
8. MINIMUM ANCHORAGE LENGTH SHALL BE 41xd WHERE 'd' IS THE DIAMETER OF BAR.
9. LAPS SHALL BE SUITABLY STAGGERED AND MINIMUM C/C DISTANCE BETWEEN ADJACENT LAPS SHALL BE 1.3 TIME LAP LENGTH

LEGENDS:

1. T : TOP LAYERS
2. B : BOTTOM LAYERS
3. SB : SIDE BARS
4. STPS : STIRRUPS
5. SPR : SPIRAL REINFORCEMENT

CALLOUT FORMAT:

A1-2x3x5-T25-100-VER-00-MK01

- BAR MARK
- SHAPE CODE
- REMARK
- SPACING
- BAR TYPE & BAR SIZE
- QUANTITY
- LAYER
- NUMBER OF MEMBER
- BAR LOCATION

MKD.	DATE	DESCRIPTION	APPROVED

REVISIONS

CLIENT:

PROJECT:

CONTRACTOR:

GRIDER-1

CONSULTANTS:

RGS

DRAWN	RKN
CHECKED	SPA
APPROVED	SAI

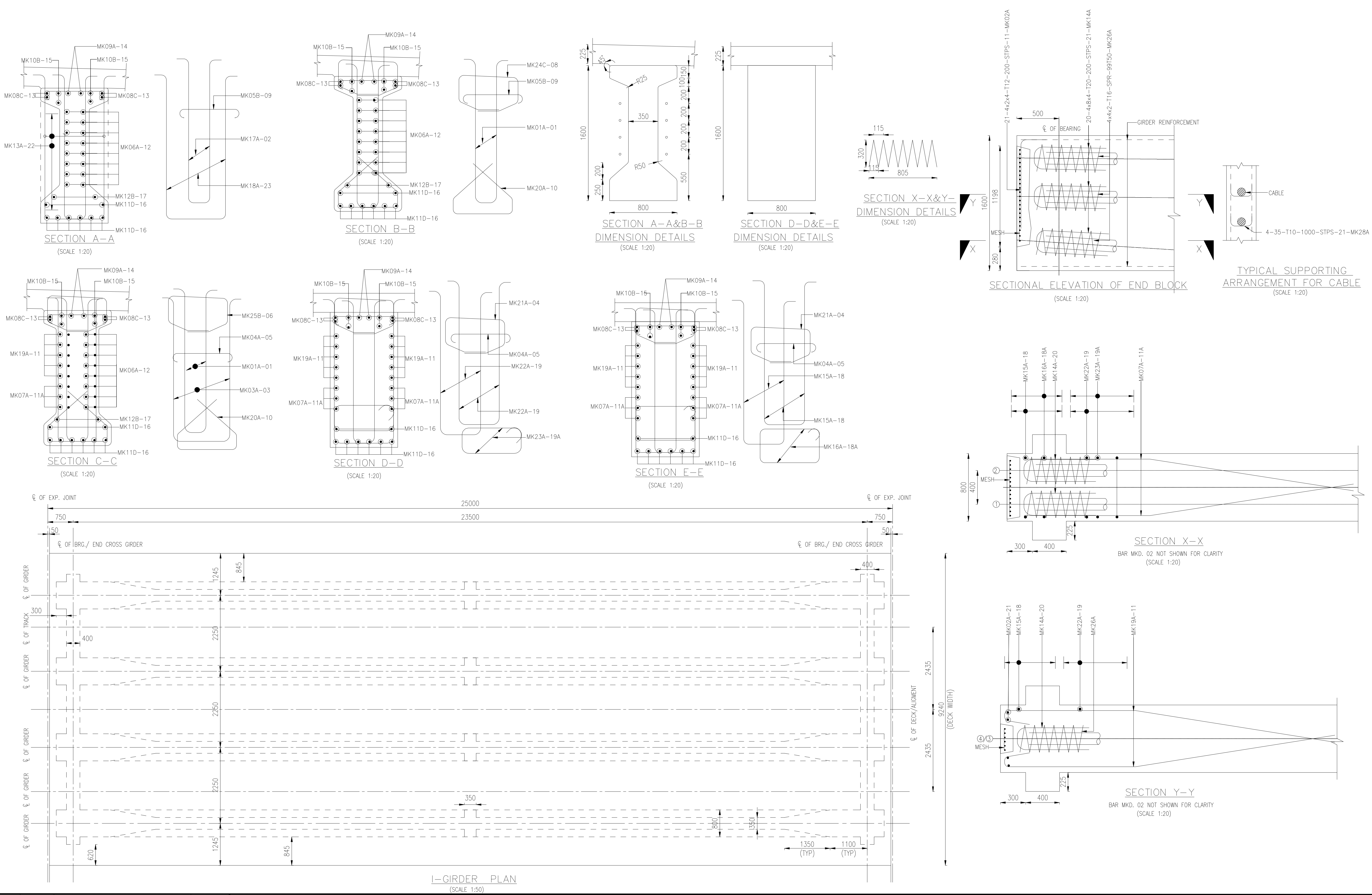
TITLE:

DRAWING NO.

R0

SCALE -1:20

SHEET NO. 1 OF 2



MKD.	DATE	DESCRIPTION	APPROVED
REVISIONS			

CLIENT:

PROJECT:

CONTRACTOR:

GRIDER-2

CONSULTANTS:

RGS

DRAWN	RKN	
CHECKED	SPA	
APPROVED	SAI	

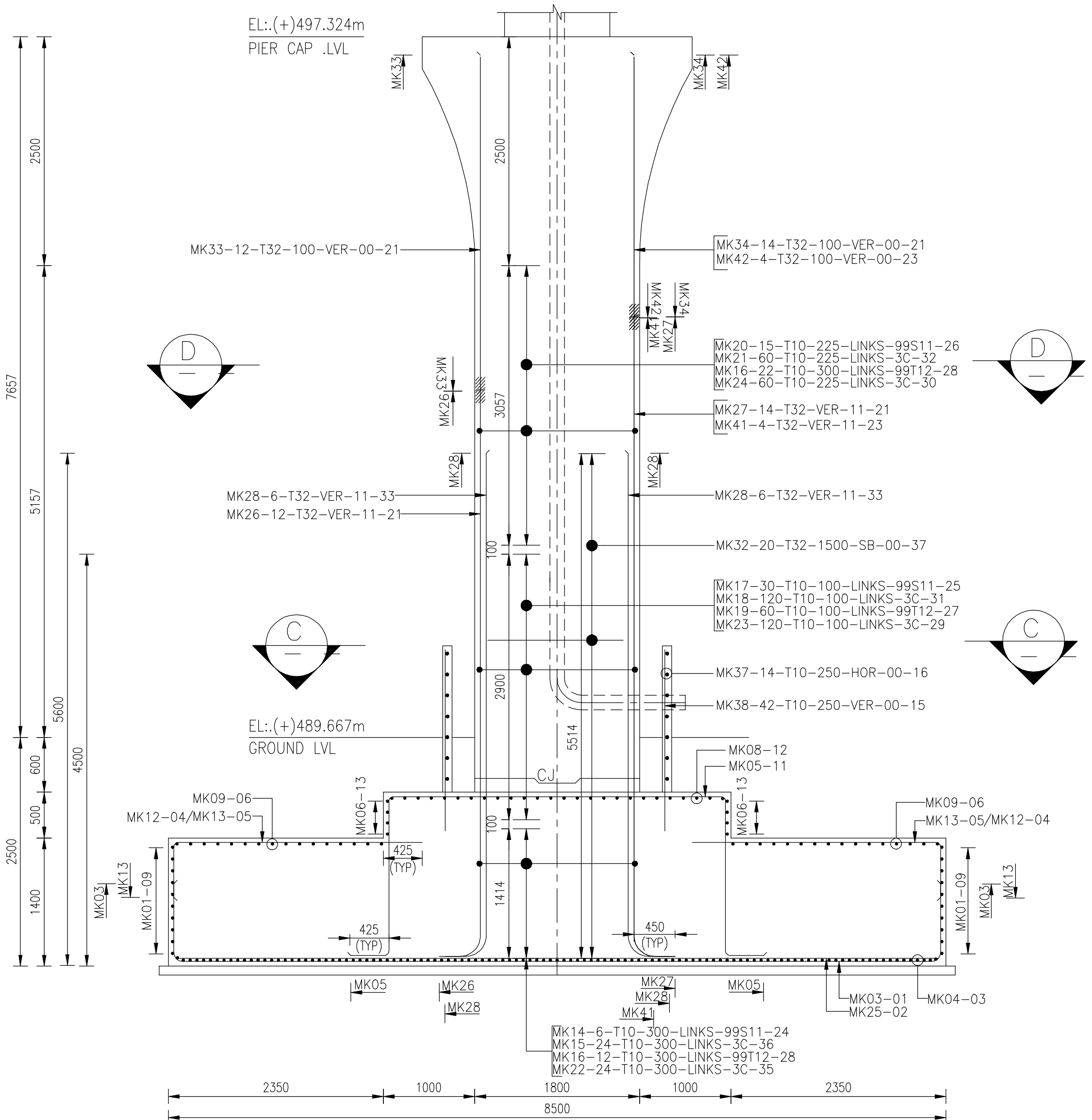
TITLE:

DRAWING NO.

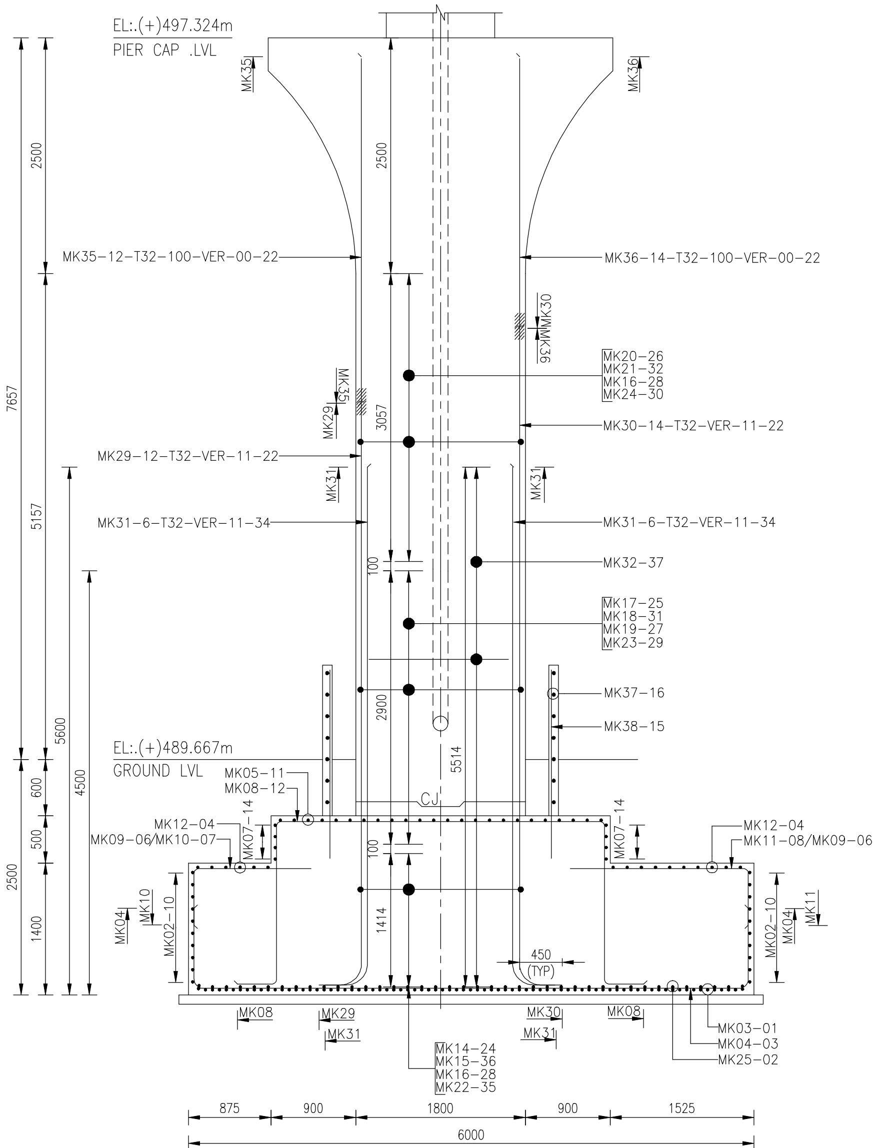
R0

SCALE -1:50,1:20 | DATE - 18.02.2014 | SHEET NO. 2 OF 2

PIER



SECTION A-A
SCALE 1:40



SECTION B-B
SCALE 1:40

MK39-28-T16-1000-CHAIR-98-A	
MK40-9-T16-1000-CHAIR-98-B	

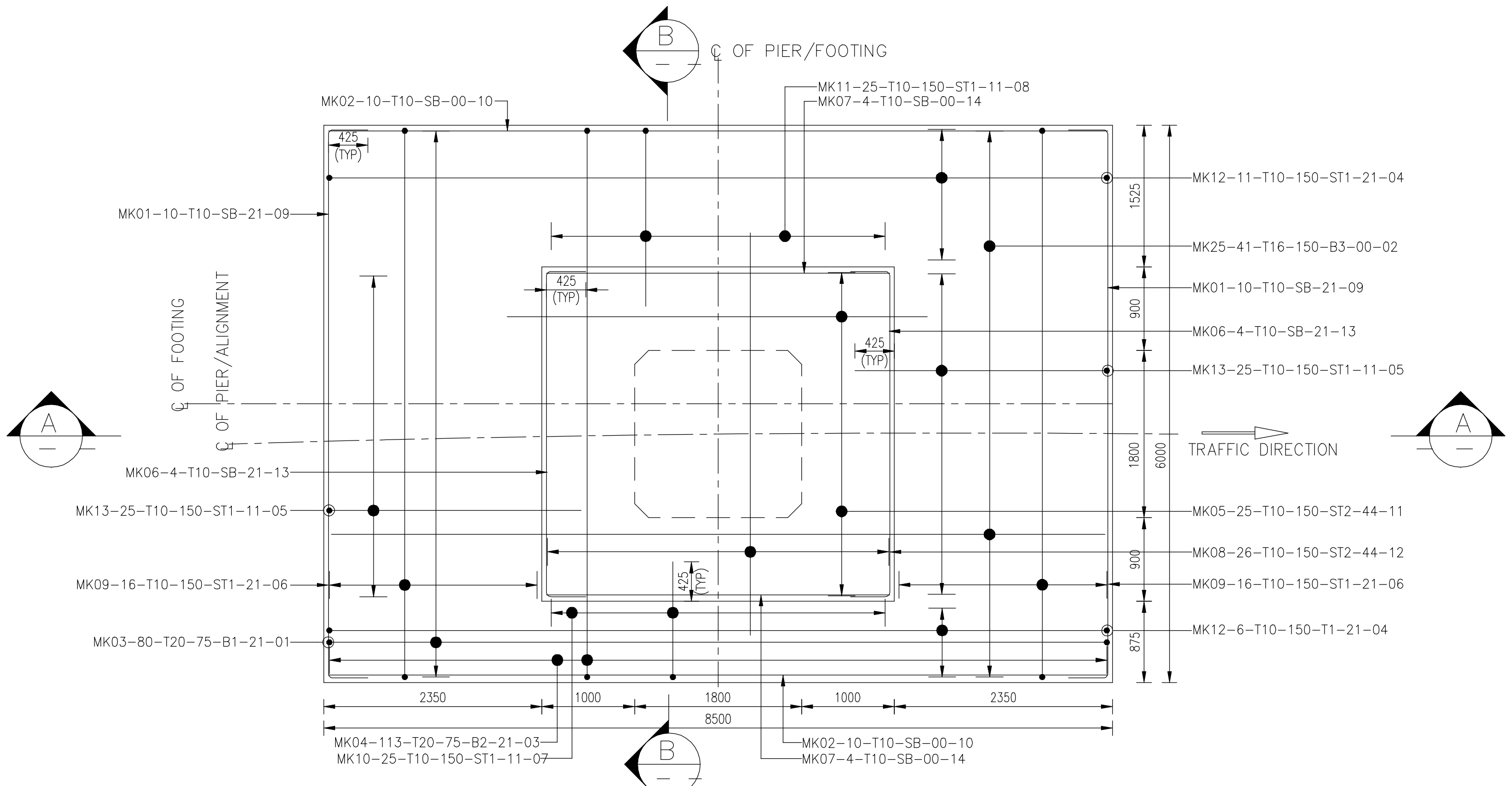
CALLOUT FORMAT:
(MK01-MK02)-4x5-T25-100-HOF-11-09
- L&T BAR MARK
- BEND SHAPE
- REMARK
- SPACING
- BAR SIZE
- QUANTITY
- NUMBER OF MEMBER
- BAR MARK

DRG. No: REV
DRG. No: REV
PROJECT : HYDERABAD METRO RAIL
GOVT. AUTHORITY :
CONCESSIONAIRE :
CONTRACTOR :
CONSULTANT :
Rebar Consultants :
RGS CONSTRUCTION TECHNOLOGIES INNOVATE DEVELOP
PACKAGE :
TITLE :

JOB No :				SIZE	RELEASED FOR
	NAME	SIGN	DATE	PROJECTION	☐ INFORMATION
DRWN					☐ REVIEW
CHKD					☐ TENDER
APPD				SCALE AS SHOWN	☑ CONSTRUCTION
					☐ ASBUILT

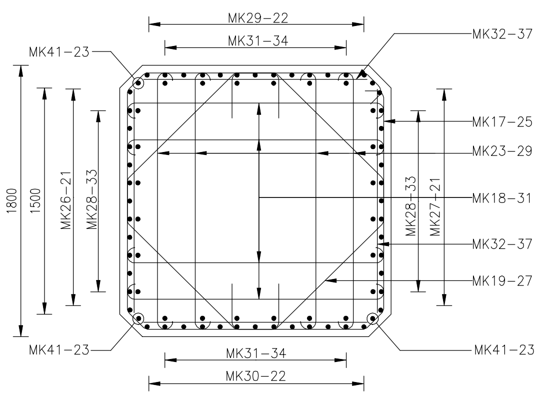
DRG. No: REV
SHEET NO.:

PIER FOUNDATION



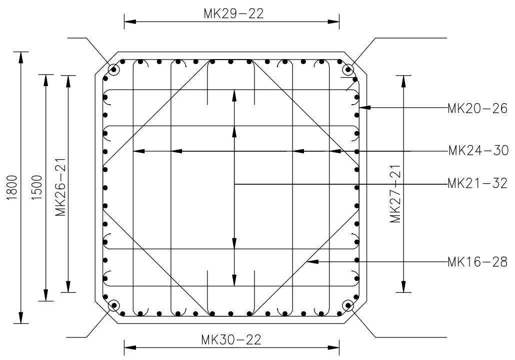
FOUNDATION REINFORCEMENT DETAIL – PLAN

SCALE 1:40



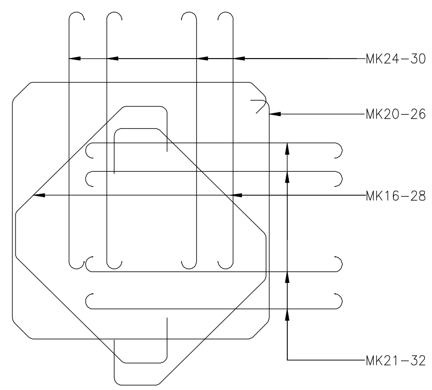
SECTION C–C

SCALE 1:25



SECTION D–D

SCALE 1:25



CALLOUT FORMAT:

(MK01–MK02)–4x5–T25–100–HOF–11–09

- L&T BAR MARK
- BEND SHAPE
- REMARK
- SPACING
- BAR SIZE
- QUANTITY
- NUMBER OF MEMBER
- BAR MARK

CALLOUT FORMAT:

(MK01–MK02)–4x5–T25–100–HOF–11–09

- L&T BAR MARK
- BEND SHAPE
- REMARK
- SPACING
- BAR SIZE
- QUANTITY
- NUMBER OF MEMBER
- BAR MARK

DRG. No: REV

DRG. No: REV

PROJECT : HYDERABAD METRO RAIL

GOVT. AUTHORITY :

CONCESSIONAIRE :

CONTRACTOR :

CONSULTANT :

Rebar Consultants :

RGS CONSTRUCTION TECHNOLOGIES INNOVATE DEVELOP

PACKAGE :

TITLE :

JOB No :

	NAME	SIGN	DATE
DRWN			
CHKD			
APPD			

SIZE

PROJECTION

FIRST ANGLE

SCALE AS SHOWN

RELEASED FOR

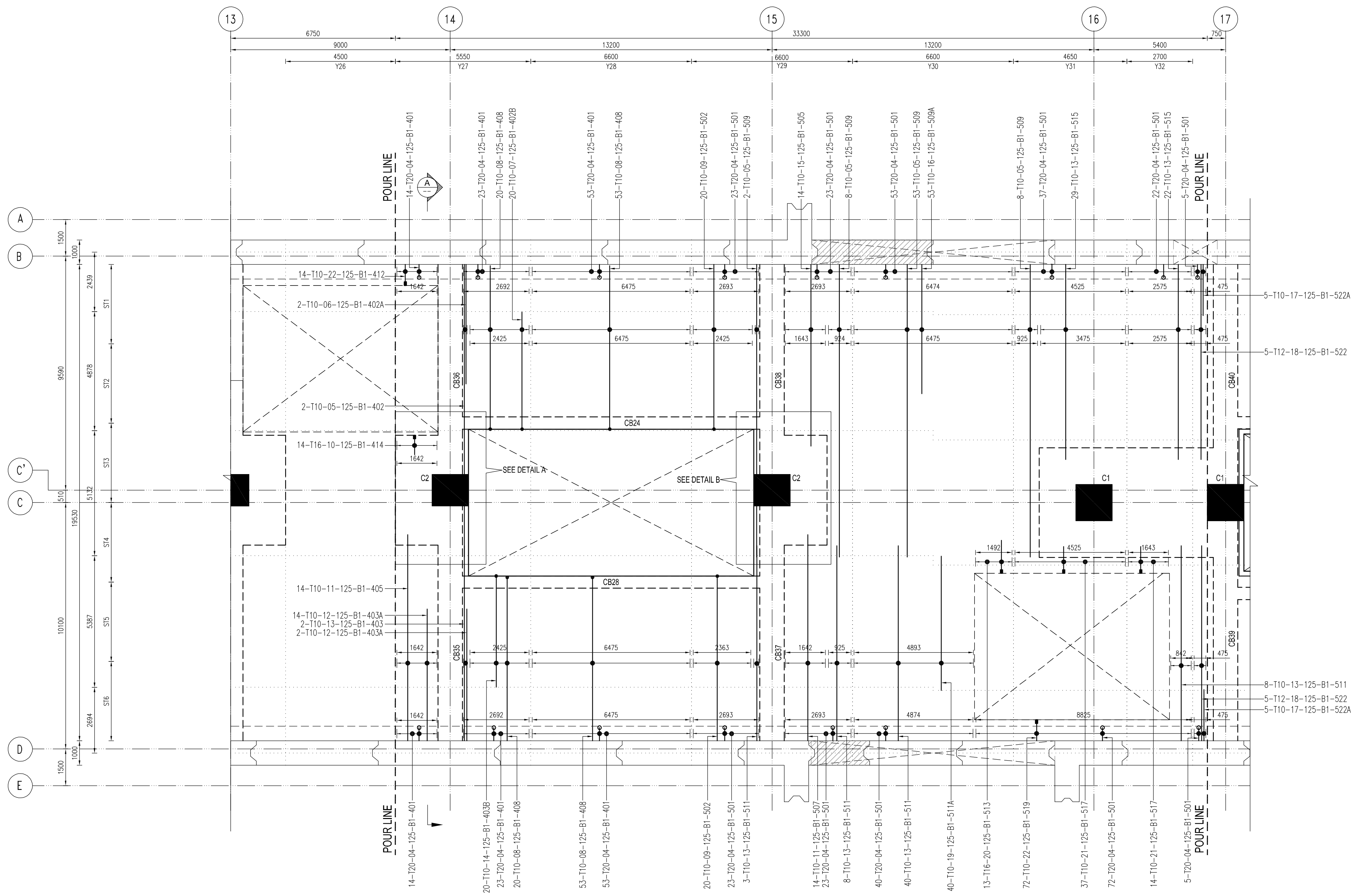
- ☐ INFORMATION
- ☐ REVIEW
- ☐ TENDER
- ☑ CONSTRUCTION
- ☐ ASBUILT

DRG. No: REV

SHEET NO.:

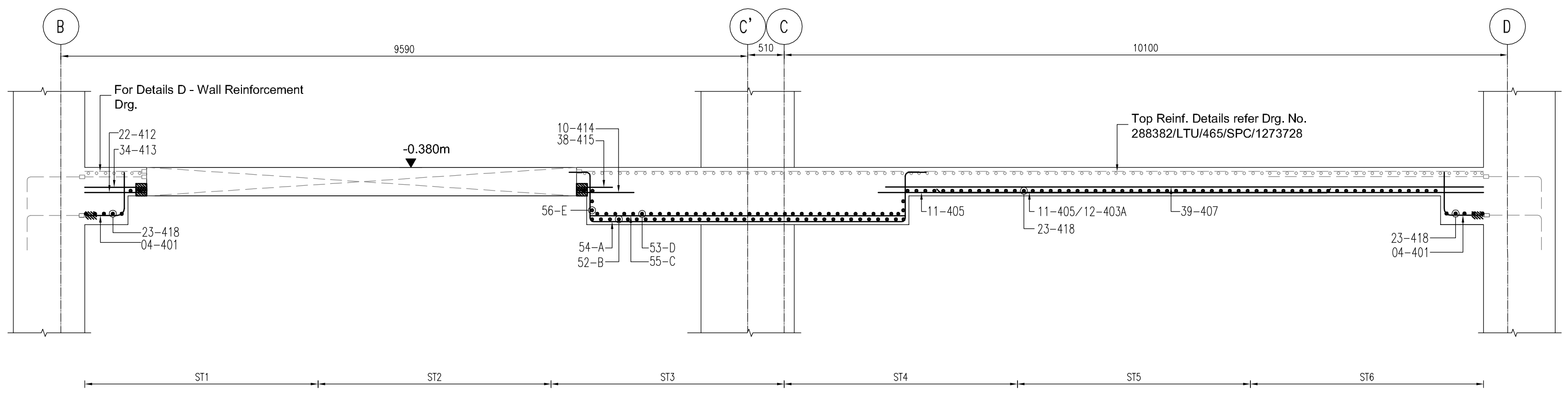
GN – ST – 33

SLAB



REINFORCEMENT DETAIL OF CONCOURSE SLAB BOTTOM BAR - B1 LAYER

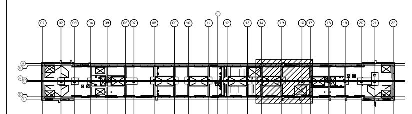
SCALE 1:100



A SECTION

SCALE 1:50

KEY PLAN :



NOTES :

1. All Dimensions are in Millimetres.
2. All Levels are in Meters, Indicating 'Top of Concrete' (TOC) Wherever Applicable.
3. Ground Levels, Where Shown, are Indicative; It Shall be Confirmed at Site.
4. All Minimum Internal Clearances are Mandatory.
5. Cover to outermost reinforcement shall 45mm Unless Otherwise Noted.
6. Concrete to be Grade M-35(Min.)
7. Read this Drawing in Conjunction with Relevant Architectural Drawings.
8. Scales Written on this Drawing are for A1 Size Drawing. For A3 Size Drawing the Scales will be Half those Written.
9. Development Length (L_d) shall be 40 times of Bar diameters.
10. Lap shall be staggered and not more than 50% of laps shall be spliced at a section. Laps shall be considered staggered if center to center distance of splices is 1.3 times lap length.

Legend:

B1	- Bottom Ist Layer
B2	- Bottom IInd Layer
B3	- Bottom IIIrd Layer
B4	- Bottom IVth Layer
ADDL	- Additional Bar

CALLOUT FORMAT:

5-T25-01-100-TIES-X

- L&T BAR MARK
- REMARK
- SPACING
- BAR MARK
- BAR TYPE & BAR SIZE
- QUANTITY

REFERENCE DWG NO :

1. 288382/LTU/467/SPC/1173103 - Concourse Level G.A
2. 288382/LTU/467/SPC/1173104 - Concourse Level G.A
3. 288382/LTU/467/SPC/1173121 - L.S Details
4. 288382/LTU/465/SPC/1273730 - Top Reinf. Details
5. 288382/LTU/465/SPC/1273771 - Column Reinf. Details
6. 288382/LTU/465/SPC/1273735 - Waler Beam Details
7. 288382/LTU/461/1170501 - General Notes.
8. 288382/LTU/465/SPC/1273733 & 1273734 - Temporary Opening Reinf. Detail
9. 288382/LTU/465/SPC/1273736 & 1273737 - Concourse Beam Details

REVISION :

REV.NO	DATE	DESCRIPTION	BY
00		FOR APPROVAL	MRF

	NAME	SIGN	DATE
APPROVED			
CHECKED			
DRAWN			

REBAR CONSULTANAT:

REBAR VALUE ENGINEERING CONSULTANTS
RGS CONSTRUCTION TECHNOLOGIES(P) LTD.
New No: 271, Old # 182, Ankur Manor, P.H Road, Kilpauk, Chennai 600 010. PH: +91-44-4903 4819
www.rgsrebar.com