



STANDARD DRAWING NOTES

1. GENERAL

- a. DESCRIPTION OF STRUCTURE:– 3 SPAN RC CONCRETE BEAMS AND INSITU DECK
COLUMN TYPE PIERS AND WALL TYPE ABUTMENTS
- b. THE BRIDGE HAS BEEN DESIGNED BY ELASTIC METHODS AND CHECKED AT LIMIT STATES
- c. THE BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH TMH7 PARTS 1 AND 2 1988 AND TMH PART 3 1989

2. DESIGN LOADING

- a. LIVE LOADS
5kN/m²
- b. UNIT WEIGHTS
(ii) FILL MATERIAL = 18kN/m³
(ii) REINFORCED CONCRETE = 25kN/m³
(iii) ASPHALT = 21kN/m³
- c. EARTH PRESSURE ON RETAINING STRUCTURES:
(i) EARTH PRESSURE = 7.8kN/m² PER METRE DEPTH
(ii) INTERNAL ANGLE OF FRICTION OF BACKFILL MATERIAL = 30
- d. SUPPLEMENTARY ACTIONS WHERE APPLICABLE ARE IN ACCORDANCE WITH TMH7(PARTS 1&2)

4. CHARACTERISTIC STRENGTH OF MATERIALS

- a. CONCRETE: SULPHATE RESISTING CEMENT TO BE USED IN THE "W" DESIGNATED CONCRETE MIXES

ELEMENT	STRENGTH, MPa	CLASS
BLINDING	15	30/19
IN SITU STRUCTURE	30	30/19
PRECAST BEAMS	50	50/19
PRECAST PLANKS	40	40/19
SUB STRUCTURE	30	30/19

- b. REINFORCEMENT
- | DESCRIPTION | STRENGTH, MPa |
|--------------------|---------------|
| MILD STEEL | 250 |
| HIGH TENSILE STEEL | 450 |

5. FORMWORK AND CONCRETE SURFACE FINISH

- a. FOUNDATIONS: F1 , U1
b. CONCEALED SURFACES: F1 , U1
c. EXPOSED SURFACES: F2 , U2
d. PARAPETS & BEAMS: F3, U3
e. ALL SHARP EDGES TO HAVE A 25mmX25mm CHAMFER

6. CONCRETE COVER TO REINFORCEMENT

- a. MEMBERS IN CONTACT WITH SOIL: 50mm
b. ALL OTHER MEMBERS : 40mm MIN.

7. DESIGN PARAMETERS

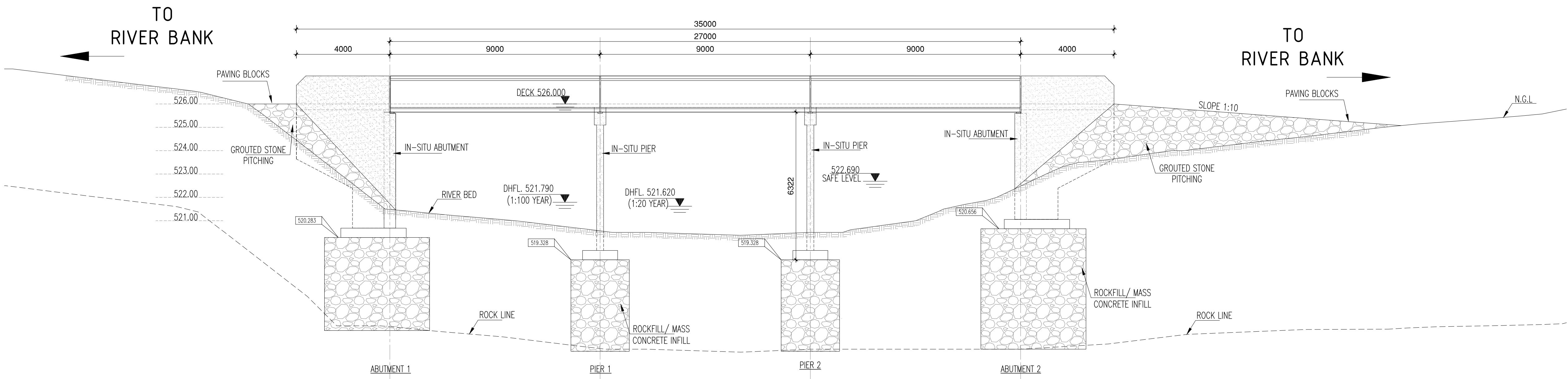
- a. YOUNG'S MODULUS FOR CLASS 30/19 CONCRETE 28kpa
b. YOUNG'S MODULUS STEEL 200Gpa
c. COEFFICIENT OF CONCRETE EXPANSION 12X10–6

8. FOUNDING

- a. TYPE OF FOUNDING = ROCK FILL

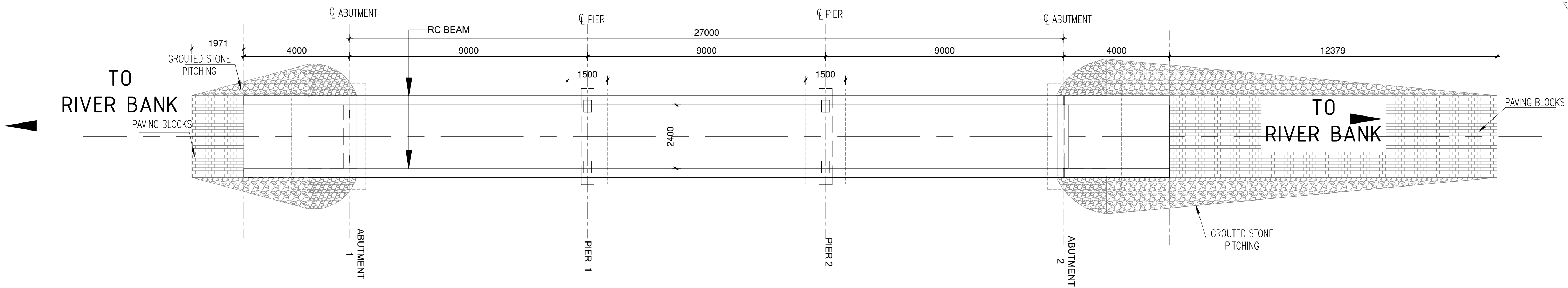
9. GENERAL NOTES

- a. DECK EXPANSION JOINTS – ASPHALT PLUG TYPE
- b. BEARINGS = LAMINATED ELASTOMERIC



ELEVATION OF BRIDGE

SCALE 1:100



PLAN VIEW: BRIDGE

SCALE 1:100

AMENDMENTS / REVISIONS

NR	DATE	APPROVED	DESCRIPTION
03	10/11/20	KJM	ISSUED FOR TENDER

CONSULTANT DETAIL



RSK3 CONSULTING ENGINEERS
53 OUTENIQUA STREET
WHITERIVER
1240
TEL : 013 750 0204
e-mail: admin@rsk3engineers.co.za

Drawn: AL

Designed: SZ

Checked: KJM

Approved: KJM

Date: NOV. 20

DEPARTMENT OF INFRASTRUCTURE / PMU
MBOMBELA LOCAL MUNICIPALITY

PROJECT NAME:

SILIGANE PEDESTRIAN BRIDGE



CITY OF MBOMBELA
P.O.Box 45
MBOMBELA
1200
TEL: 013 759 9111
Fax: 013 759 2070

DRAWING NAME

SILIGANE PEDESTRIAN BRIDGE

DRAWING DESCRIPTION

GENERAL ARRANGEMENT

PROJECT No.

59/2019

SHEET No.

1 of 1

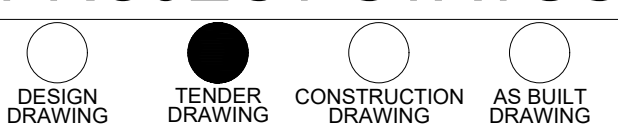
PAPER SIZE

A1

SCALE

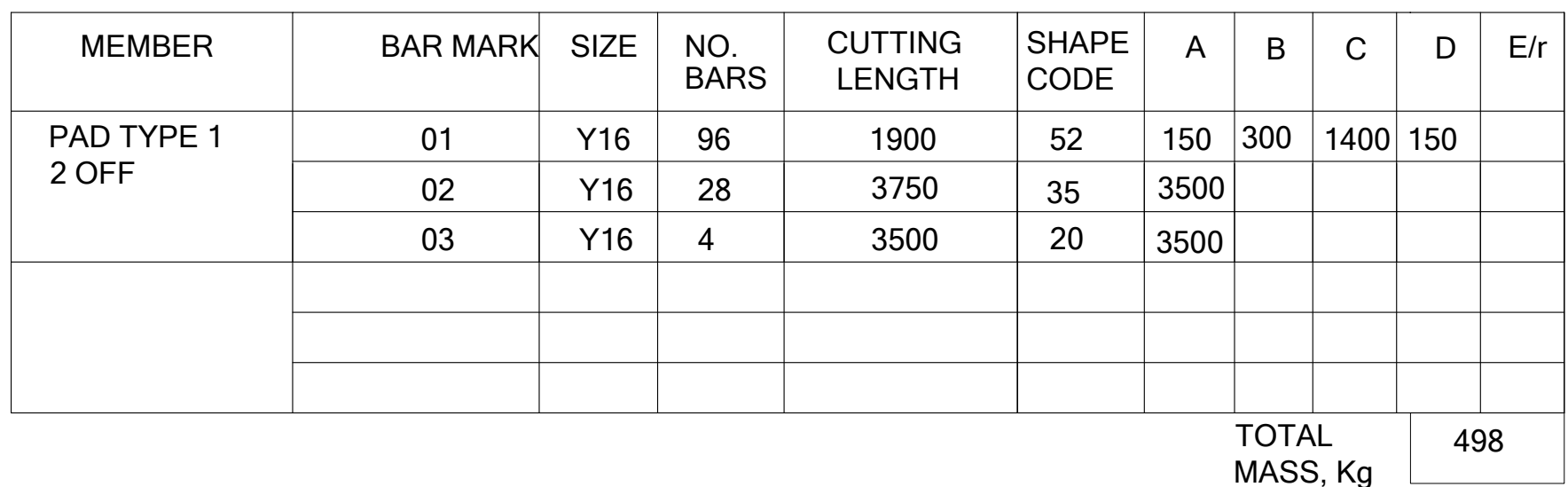
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PROJECT STATUS



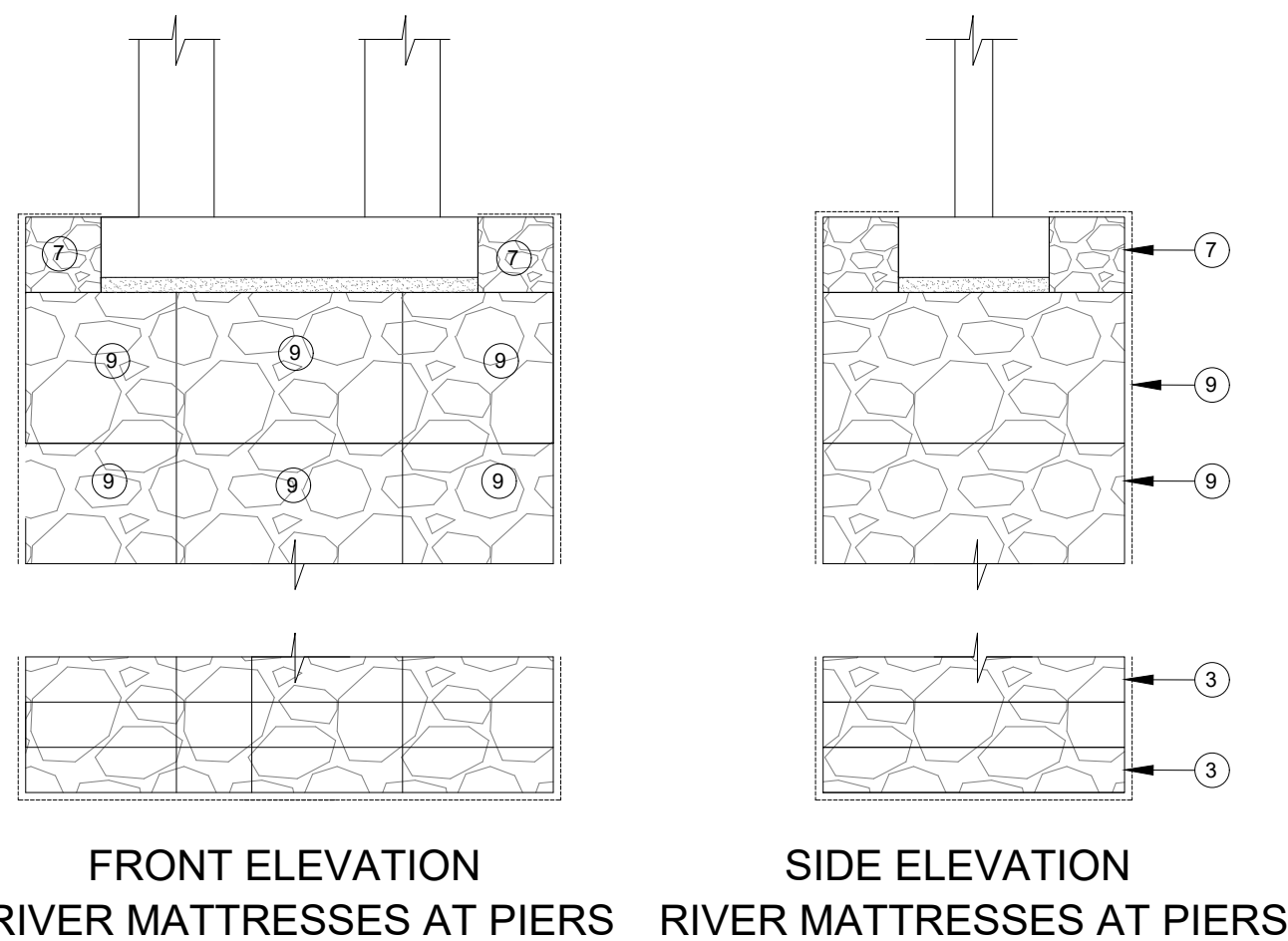
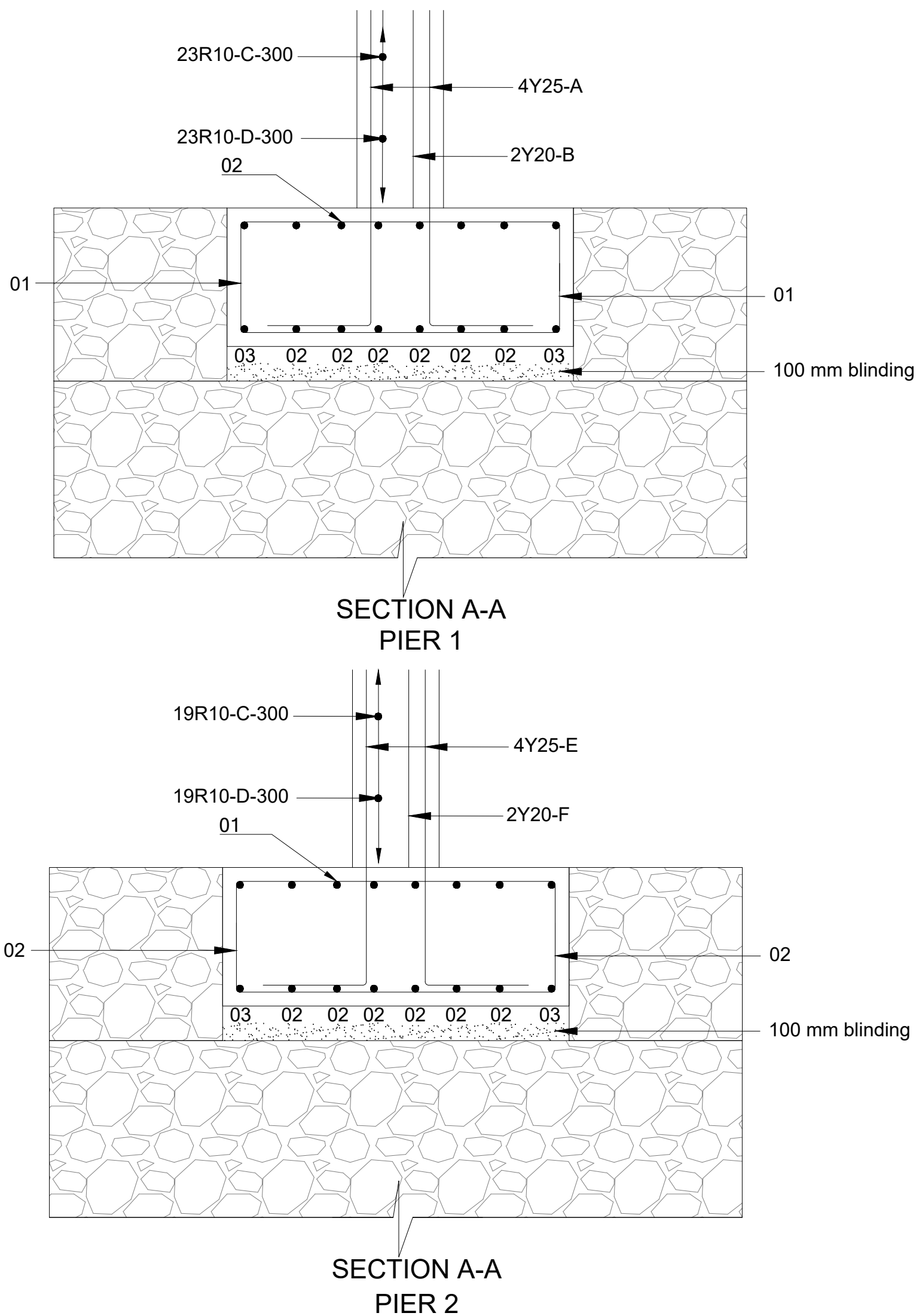
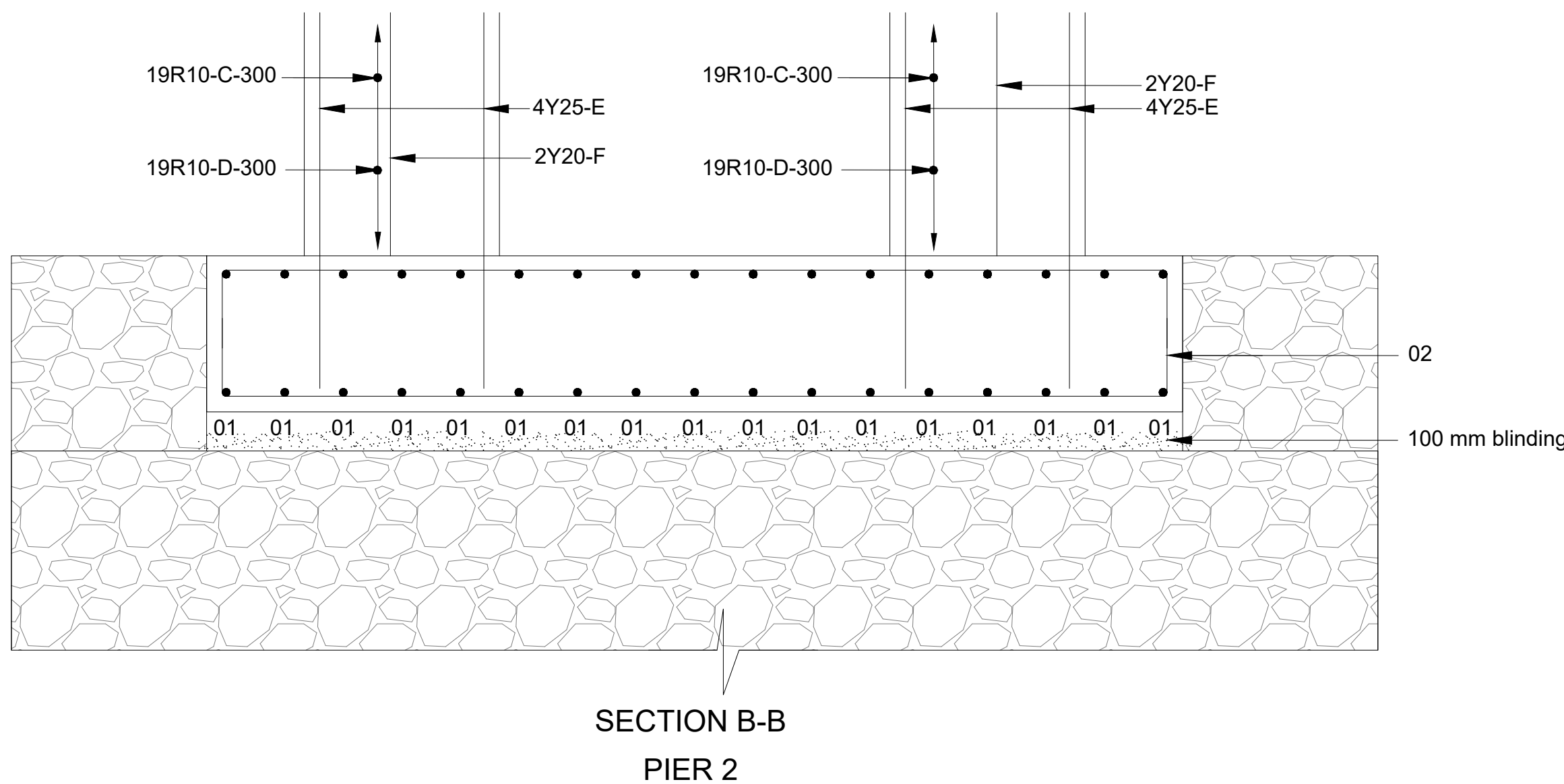
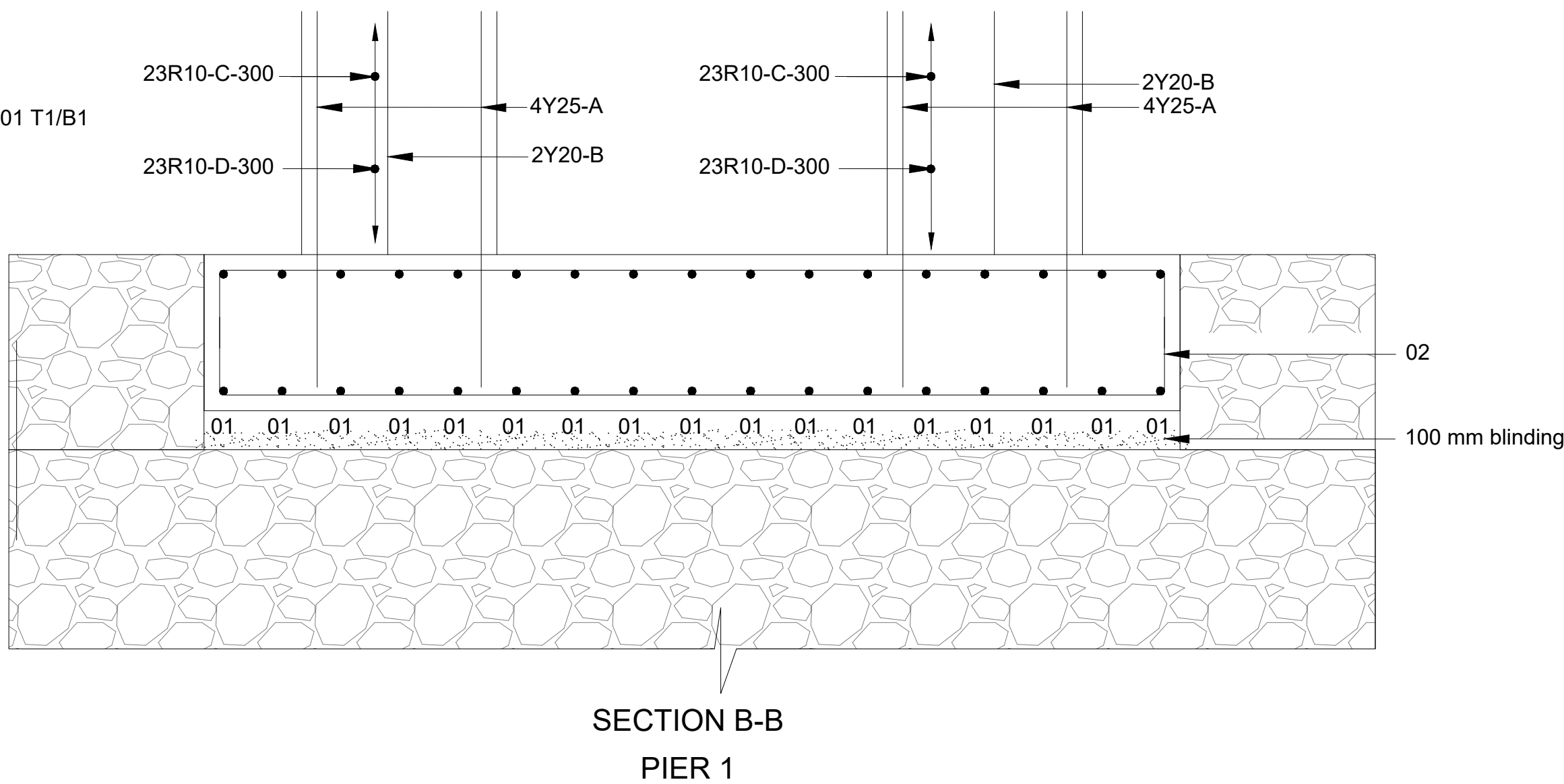
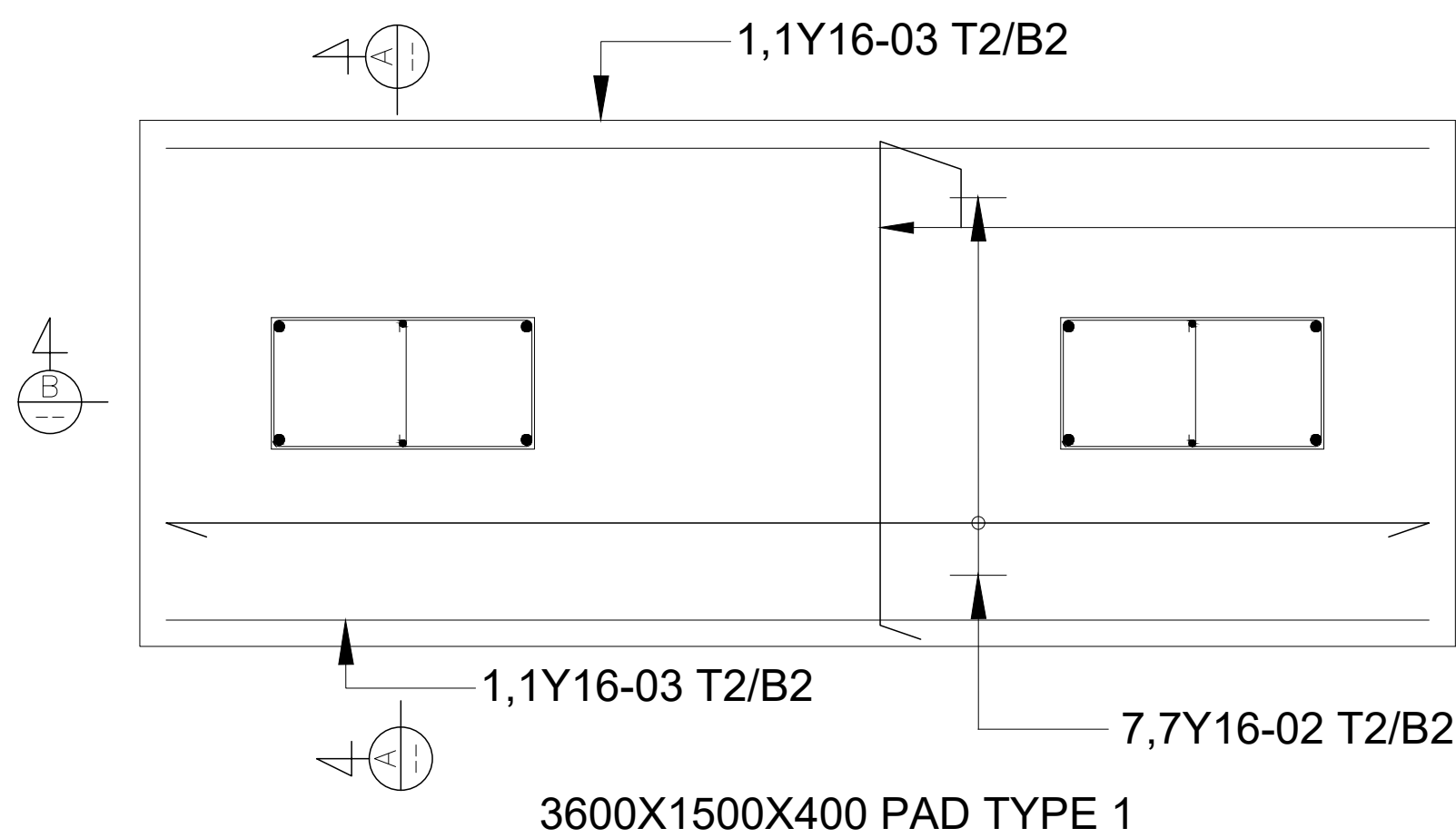
RSK3 DRAWING NUMBER

RSK3-SILB-002-03



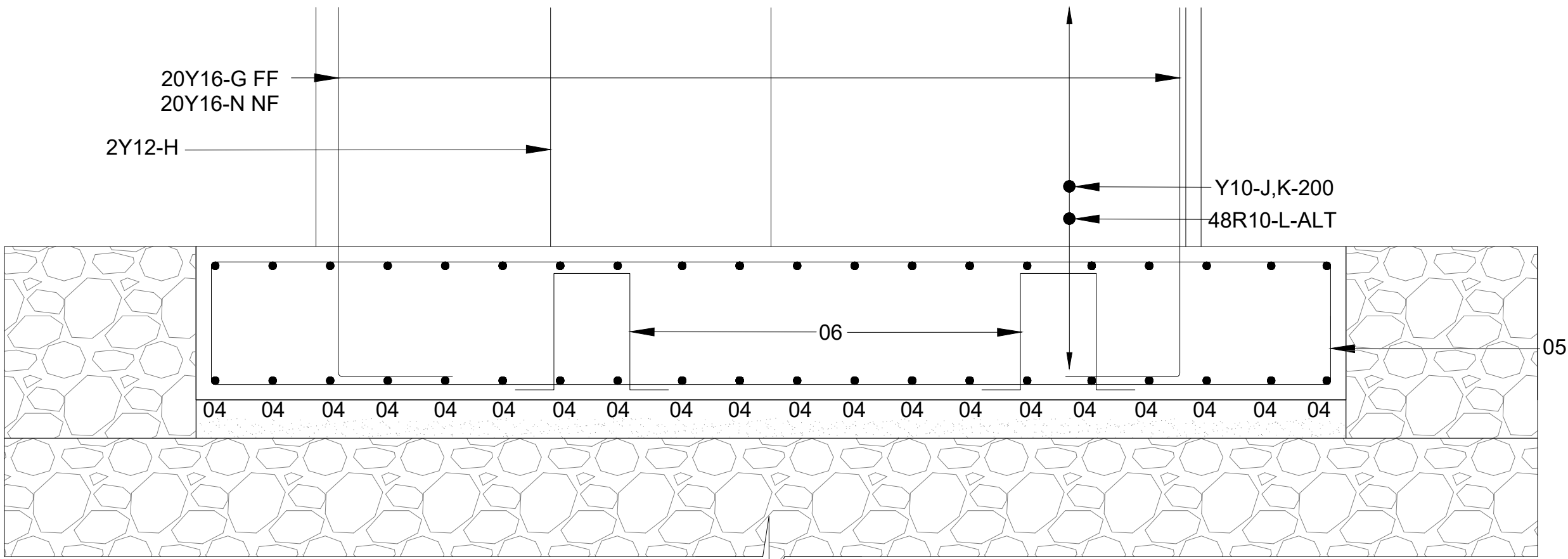
MEMBER	BAR MARK	SIZE	NO. BARS	CUTTING LENGTH	SHAPE CODE	A	B	C	D	E/r
PIER TYPE 1 2 OFF	A	Y25	8	6550	35	6200				
	B	Y20	4	6500	35	6200				
	C	R10	50	1350	60	370	220			
	D	R10	50	450	33	220				
PIER TYPE 2 2 OFF	E	Y25	8	6550	35	6200				
	F	Y20	4	6500	35	6200				
	C	R10	50	1350	60	370	220			
	D	R10	50	450	33	220				
							TOTAL MASS. Kg		643	

COORDINATE LIST		
L031		
FOUNDATION SETTING		OUT DETAILS
POINT	Y-COORD	X-COORD
CONST:		
A1	-17519.5389	2801222.7789
B1	-17521.9199	2801224.3451
C1	-17528.1504	2801228.6829
D1	-17529.4036	2801229.5073
E1	-17535.6694	2801233.6290
F1	-17536.9226	2801234.4533
G1	-17543.3729	2801238.4569
H1	-17545.7539	2801240.0232
A2	-17517.3406	2801226.1207
B2	-17519.7217	2801227.6869
C2	-17526.1720	2801231.6906
D2	-17527.4251	2801232.5149
E2	-17533.6910	2801236.6366
F2	-17534.9442	2801237.4610
G2	-17541.1746	2801241.7988
H2	-17543.5557	2801243.3650

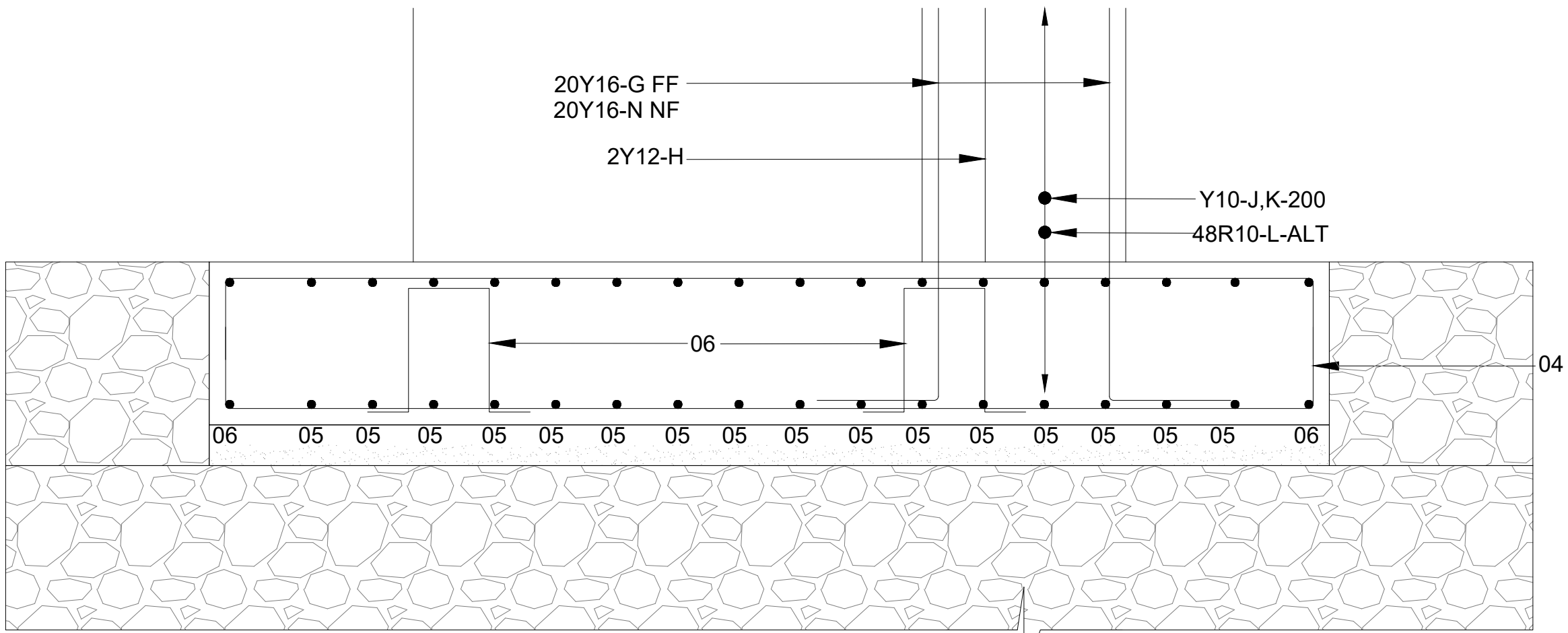


- | NOTES | |
|--|--|
| 80X100 Mesh aperture, with 2.7 mm dia wire and 3.4 mm salvage wire | |
| 1. 2x1x1 | |
| 2. 2x1x0.5 | |
| 3. 2x1x0.3 | |
| 4. 2x0.5x1 | |
| 5. 2x0.5x0.5 | |
| 6. 2x0.5x0.3 | |
| 7. 0.5x0.5x0.5 | |
| 8. U24 biddim geotextile | |
| 9. 2.5x1x1 | |
| 10. 4x1x1 | |
| 11. 6X1X0.3 | |

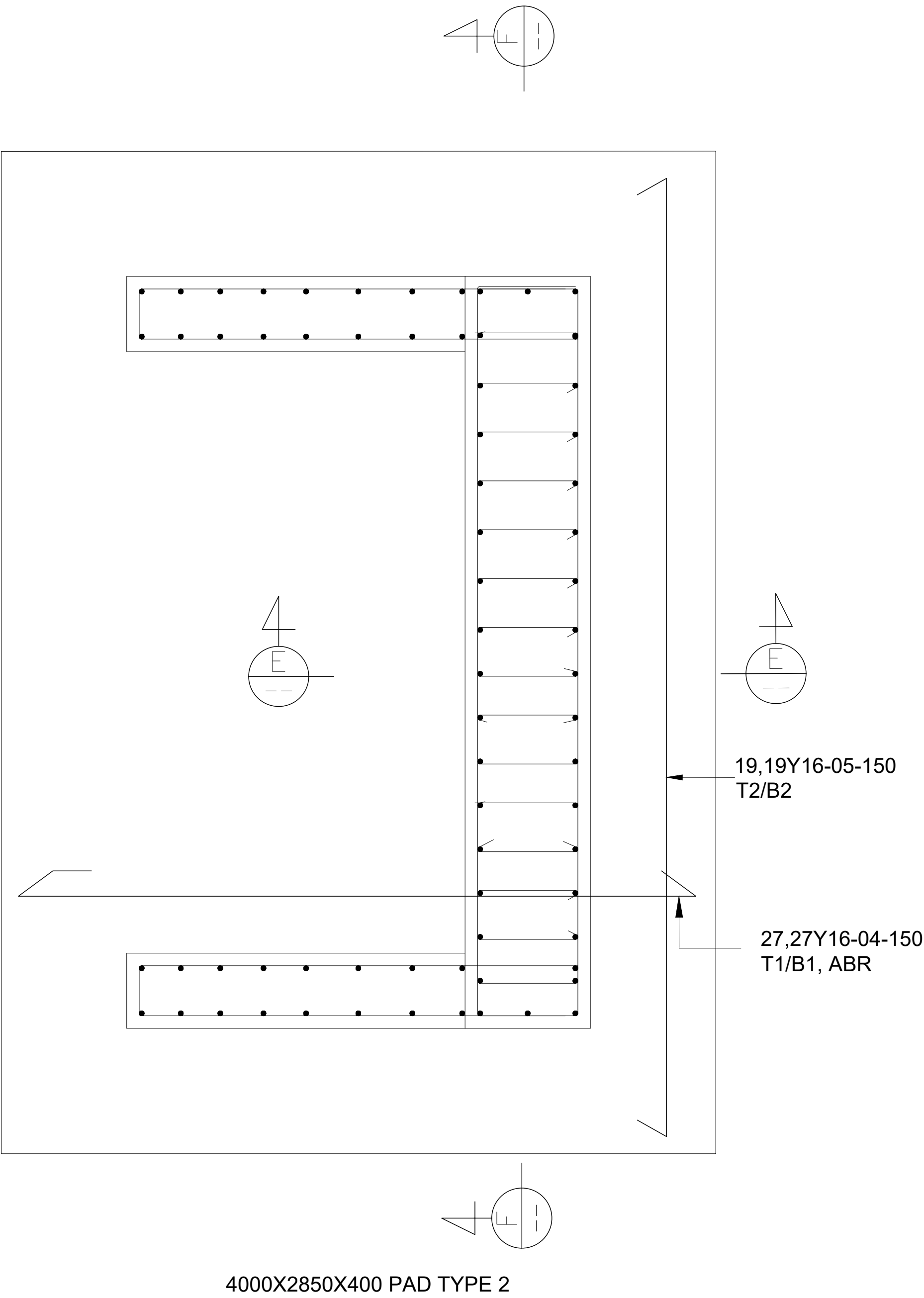
MEMBER	BAR MARK	SIZE	NO. BARS	CUTTING LENGTH	SHAPE CODE	A	B	C	D	E/r
ABUTMENT BASES	04	Y16	108	3250	52	150	300	2750	150	
	05	Y16	76	4150	35	3900				
	06	Y10	12	950	83	300	270	100	100	
TOTAL MASS, Kg									1059	



SECTION F-F
ABUTMENT 1



SECTION E-E
ABUTMENT 1



4000X2850X400 PAD TYPE 2

03	KJM	10/11/20	Issued for tender
02	KJM	04/12/19	
REV NO. APPROVER DATE AMENDMENT			

Client:



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Consultant:



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FOR TENDER USE

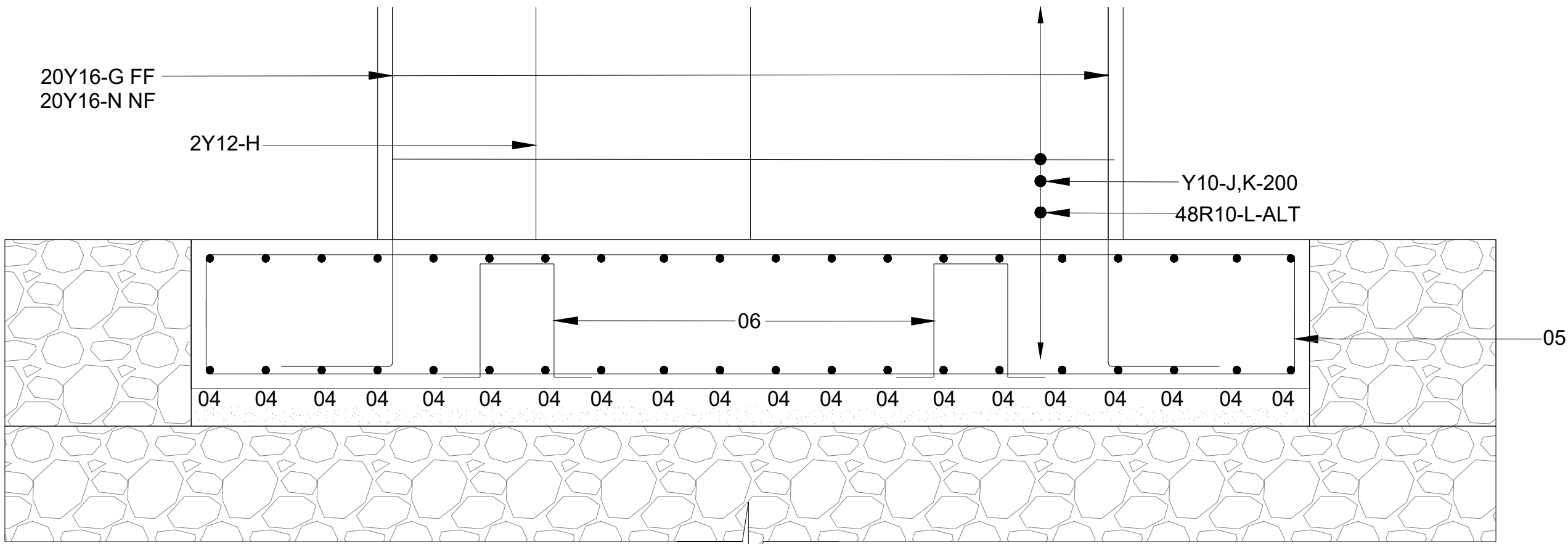
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ABUTMENT FOUNDATION DETAILS

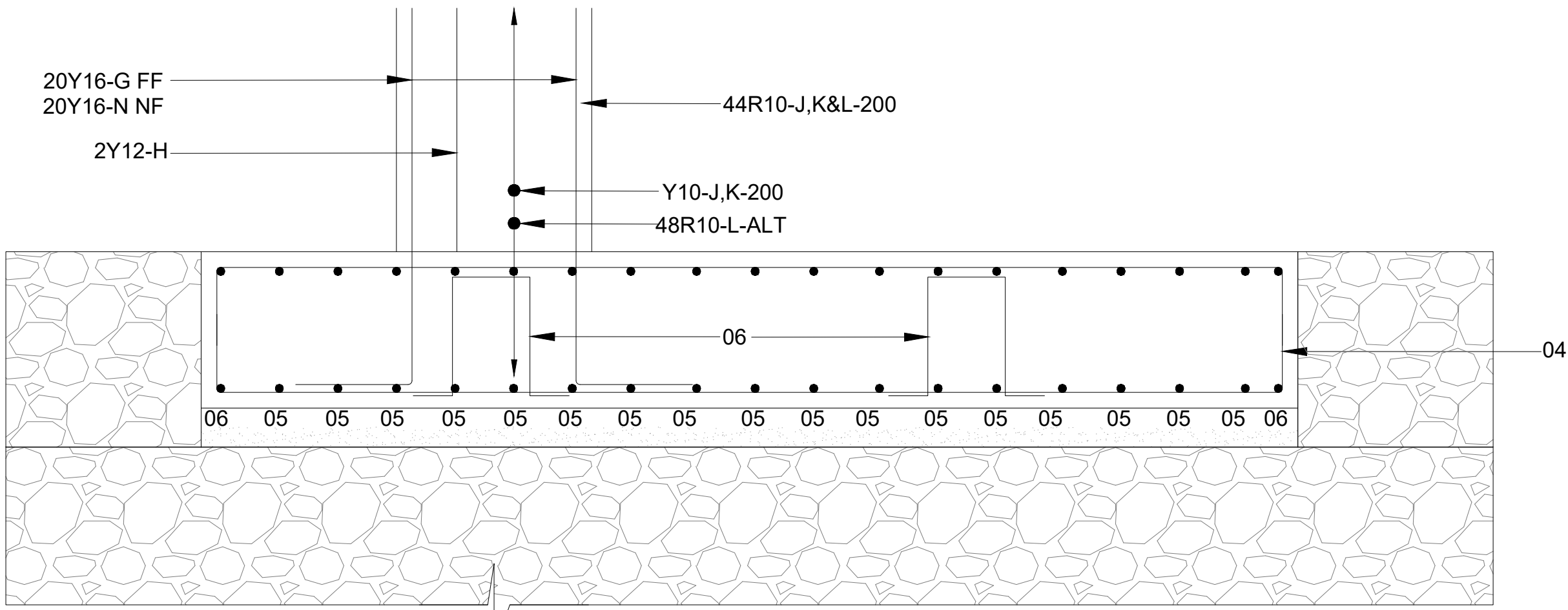
Project Name:

SILIGANE PEDESTRIAN BRIDGE

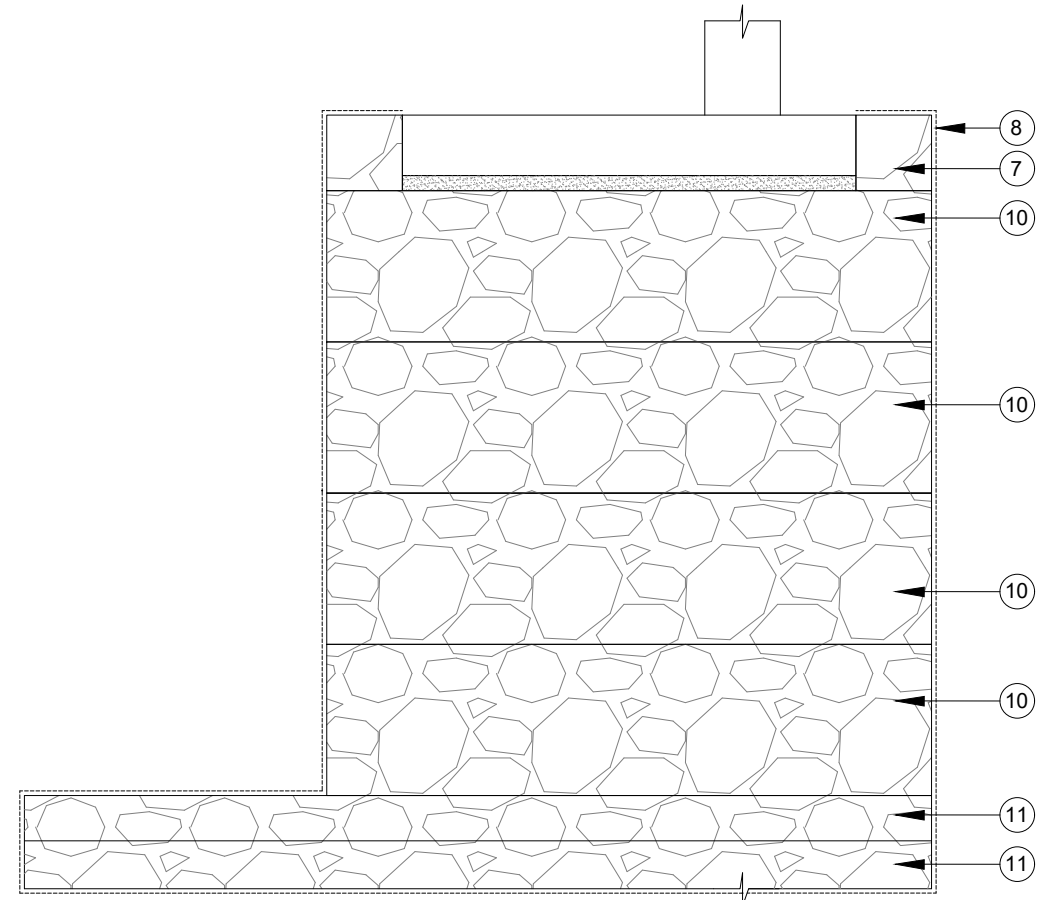
DRWN: AL	CHECKED: KJM	APPROVED: KJM
Scale (at A1) As Shown	DATE: 10 November 2020	
Dwg no. RSK3-SILB-004-03		Rev. 03



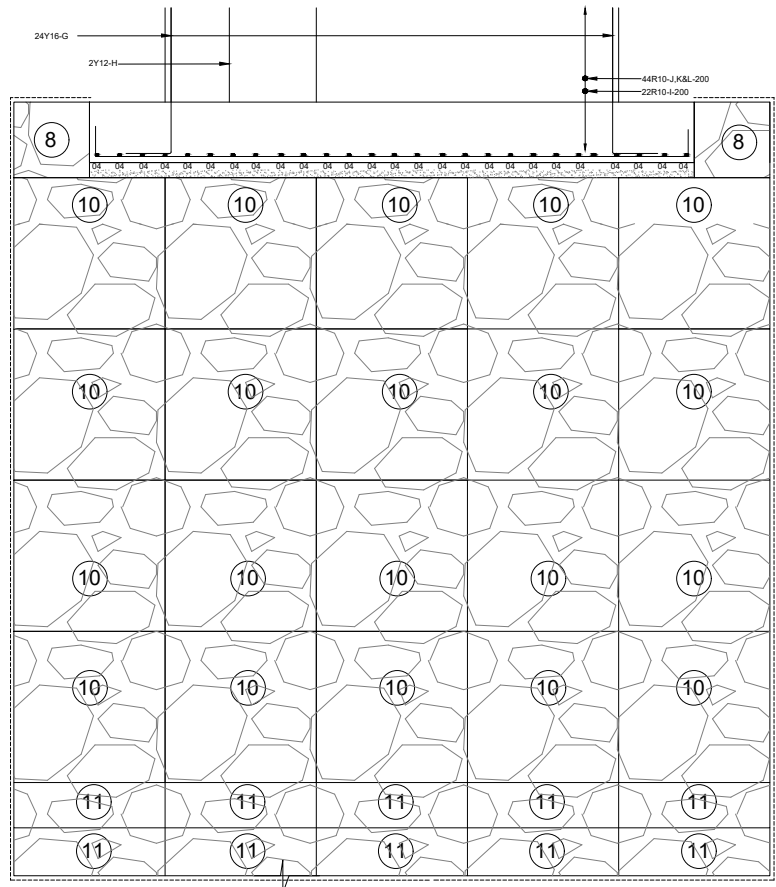
SECTION F-F
ABUTMENT 2



SECTION E-E
ABUTMENT 2



SIDE ELEVATION
RIVER MATTRESSES AT ABUTMENTS



FRONT ELEVATION
RIVER MATTRESSES AT ABUTMENTS

MEMBER	BAR MARK	SIZE	NO. BARS	CUTTING LENGTH	SHAPE CODE	A	B	C	D	E/r
ABUTMENT BASES	04	Y16	108	3250	52	150	300	2750	150	
	05	Y16	76	4150	35	3900				
	06	Y10	12	950	83	300	270	100	100	
TOTAL MASS, Kg									1059	

03	KJM	10.11.20	Issued for tender
02	N/A	04.12.19	
REV	NO	APPROVED	DATE
			AMENDMENT

Client:



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FOR TENDER USE

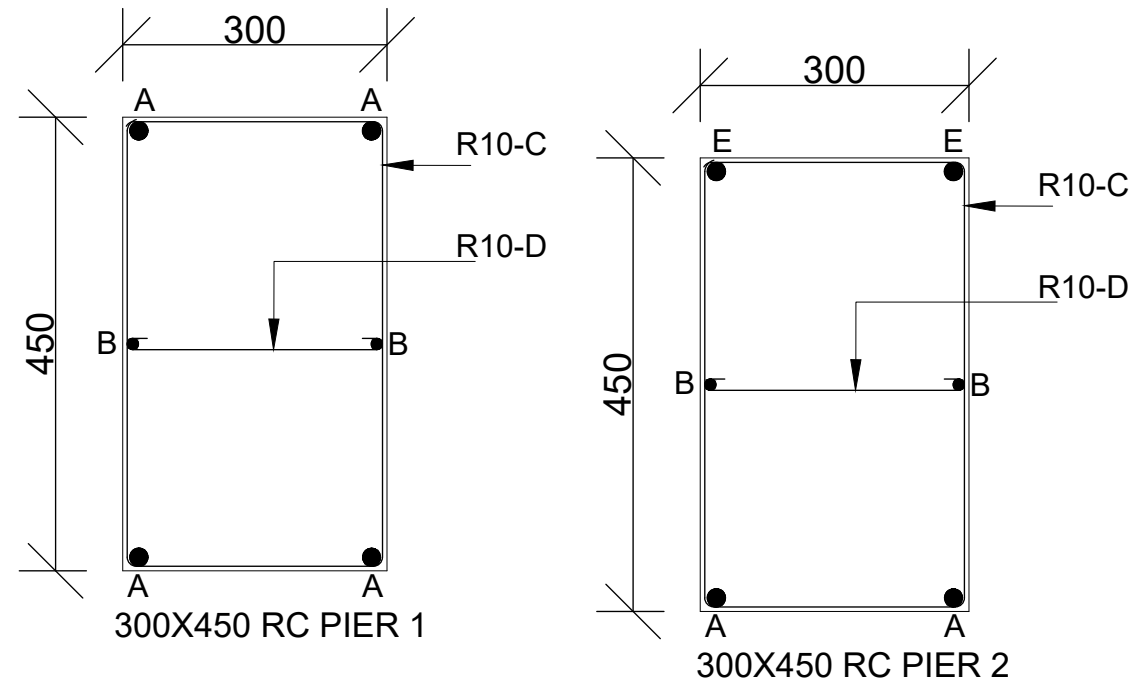
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ABUTMENT FOUNDATION DETAILS 2

Project Name:

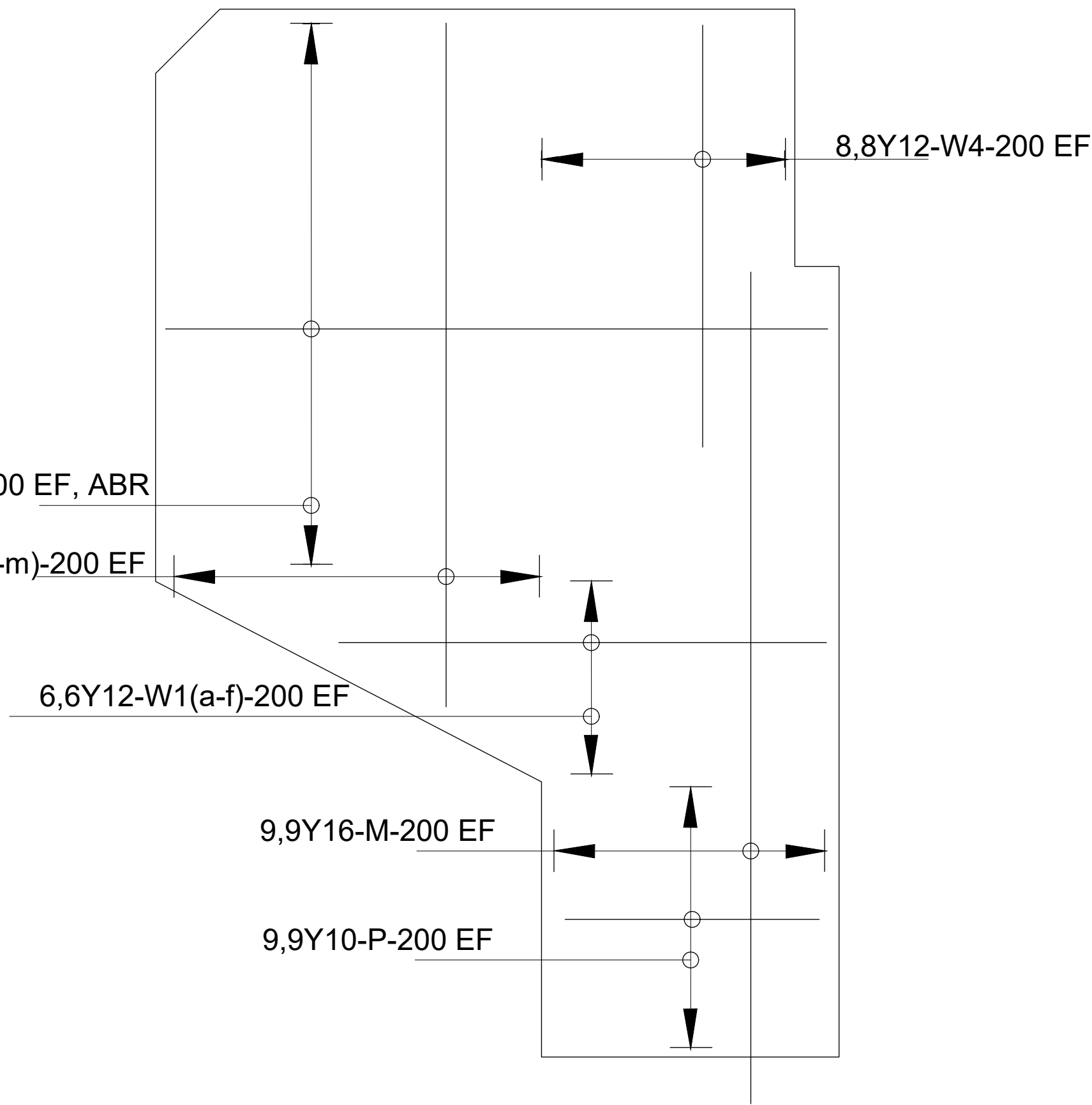
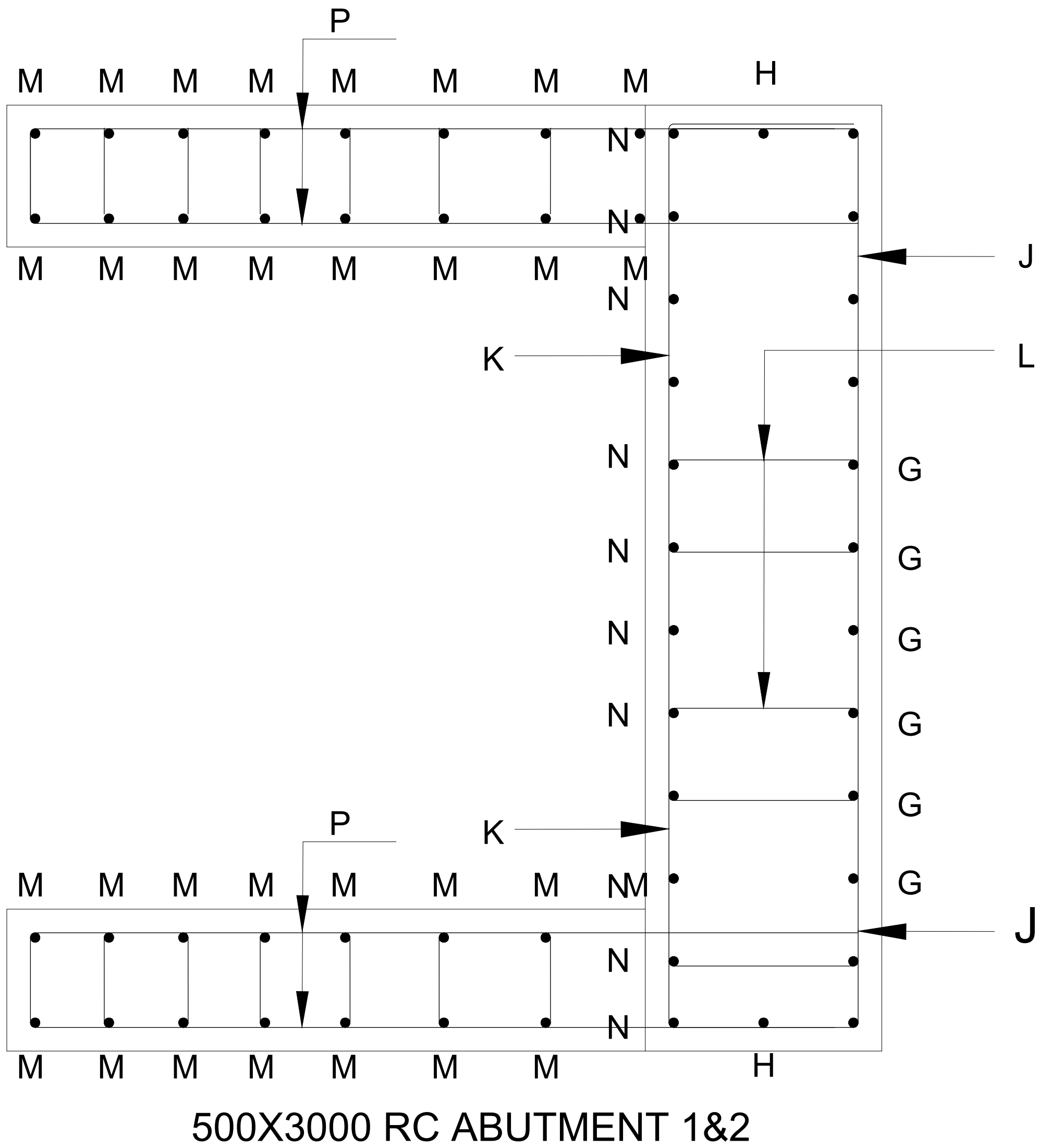
SILIGANE BRIDGE

DRWN: AL	CHECKED: KJM	APPROVED: KJM
Scale (at A1) As Shown	DATE: 10 November 2020	
RSK3-SILB-005-03		Rev 03



MEMBER	BAR MARK	SIZE	NO. BARS	CUTTING LENGTH	SHAPE CODE	A	B	C	D	E/r
PIER TYPE 1 2 OFF	A	Y25	8	6550	35	6200				
	B	Y20	4	6500	35	6200				
	C	R10	50	1350	60	370	220			
	D	R10	50	450	33	220				
PIER TYPE 2 2 OFF	E	Y25	8	6550	35	6200				
	F	Y20	4	6500	35	6200				
	C	R10	50	1350	60	370	220			
	D	R10	50	450	33	220				
TOTAL MASS, Kg						643				

MEMBER	No OF	BARS PER MEMB	DIA.	LENGTH	TOTAL NUM- BER	MARK	S C	B E N D I N G				
								A	B	C	D	E/r
ABUTMENTS	2	15	Y16	2650	30	W6	38	1150	400	(1150)	(150)	
		18	Y16	2450	36	W7	38	1150	200	(1150)		
		15	Y16	4250	30	G	34	4100				
		2	Y12	4200	4	H	34	4100				
		15	Y10	3900	30	J	55	150	400	2900		400
		15	Y10	3100	30	K	35	2900				
		48	R10	1450	96	L	60	230	420			
		36	Y16	5000	72	M	20	(5000)				
		15	Y16	5200	30	N	34	5050				
		36	Y10	1950	72	P	35	1750				
		44	R10	1050	88	Q	60	220	220			
		4	Y12	2350	8	W1a	35	2150				
		4	Y12	2750	8	W1b	35	2550				
		4	Y12	3100	8	W1c	35	2900				
		4	Y12	3500	8	W1d	35	3300				
		4	Y12	3900	8	W1e	35	3700				
		4	Y12	4300	8	W1f	35	4100				
		4	Y16	4900	8	W2a	35	4650				
		4	Y16	4800	8	W2b	35	4550				
		4	Y16	4700	8	W2c	35	4450				
		4	Y16	4600	8	W2d	35	4350				
		4	Y16	4450	8	W2e	35	4200				
		4	Y16	4350	8	W2f	35	4100				
		4	Y16	4250	8	W2g	35	4000				
		4	Y16	4150	8	W2h	35	3900				
		4	Y16	4050	8	W2i	35	3800				
		4	Y16	3950	8	W2j	35	3700				
		4	Y16	3650	8	W2k	35	3400				
		8	Y16	3350	16	W2l	35	3100				
		32	Y12	4400	64	W3a	35	4200				
		40	Y12	4150	80	W3b	35	3950				
		32	Y12	2300	64	W4	34	2200				
		15	Y10	1850	30	W5	38	900	100	(900)		
TOTAL MASS, Kg										3194		



ADDITIONAL ABUTMENT WINGWALL (4No)

03	KJM	10/11/20	Issued for tender
02	KJM	04/12/19	Issued for tender
REV NO. APPROVER DATE AMENDMENT			

Client:



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Consultant:



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FOR TENDER USE

Drawing Title:

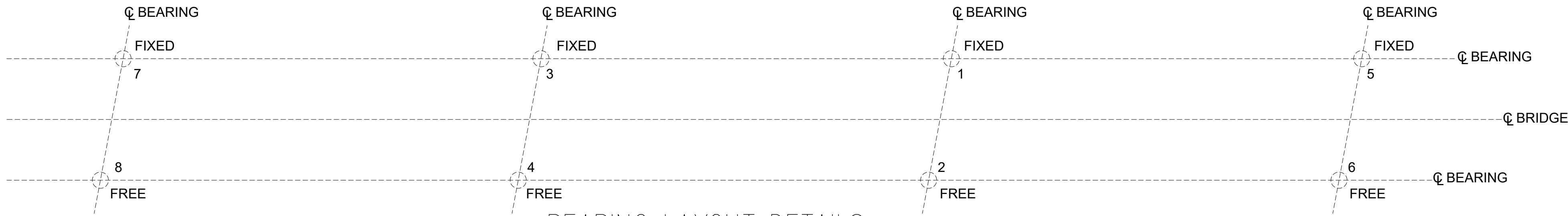
PIER & ABUTMENT REINFORCEMENT DETAILS

Project Name:

SILIGANE PEDESTRIAN BRIDGE

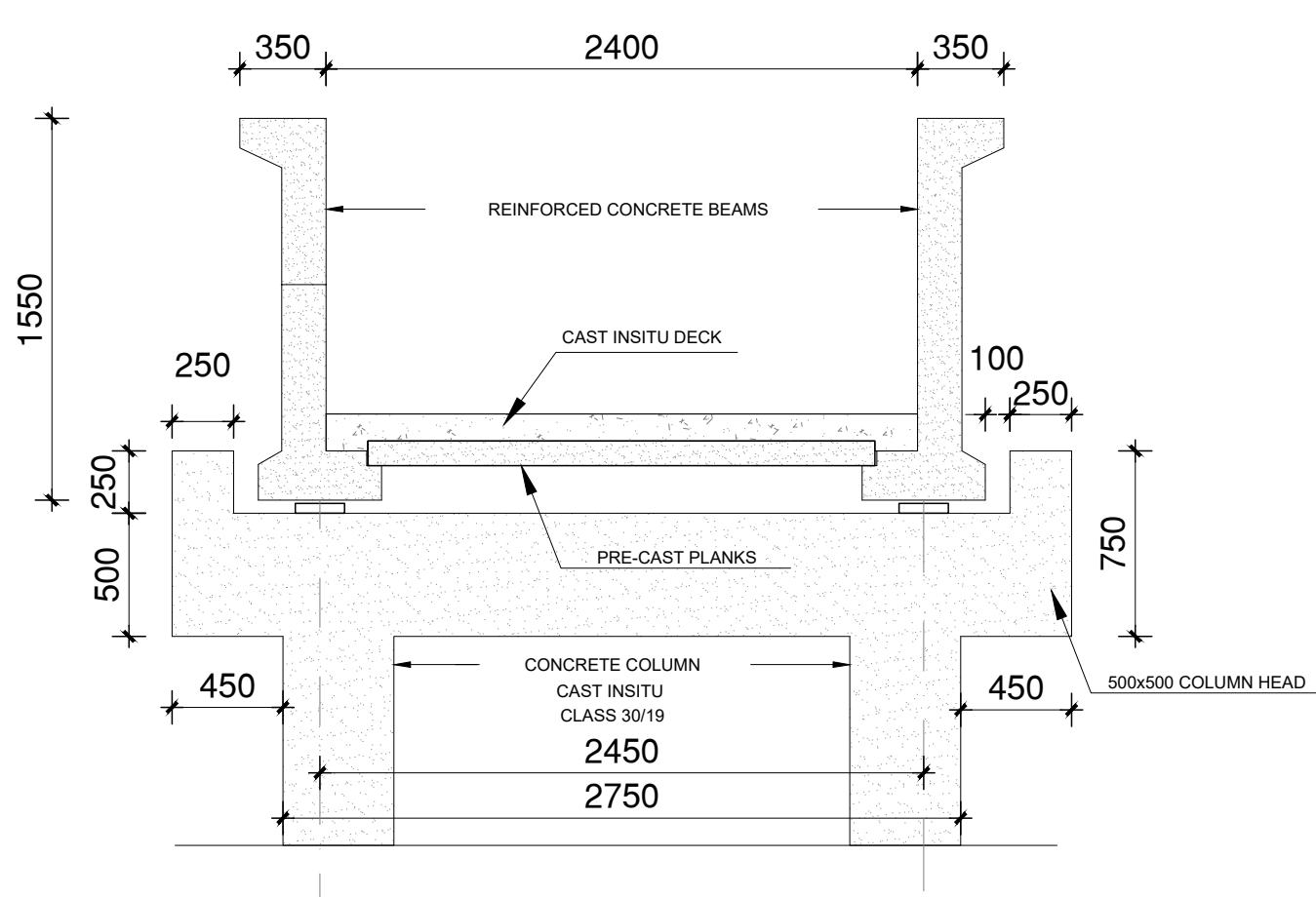
DRWN: AL	CHECKED: KJM	APPROVED: KJM
Scale (at A1) As Shown	DATE: 10 November 2020	Rev: 03
RSK3-SILB-006-03		

ORIGINAL DRAWING SIZE 841 X 594



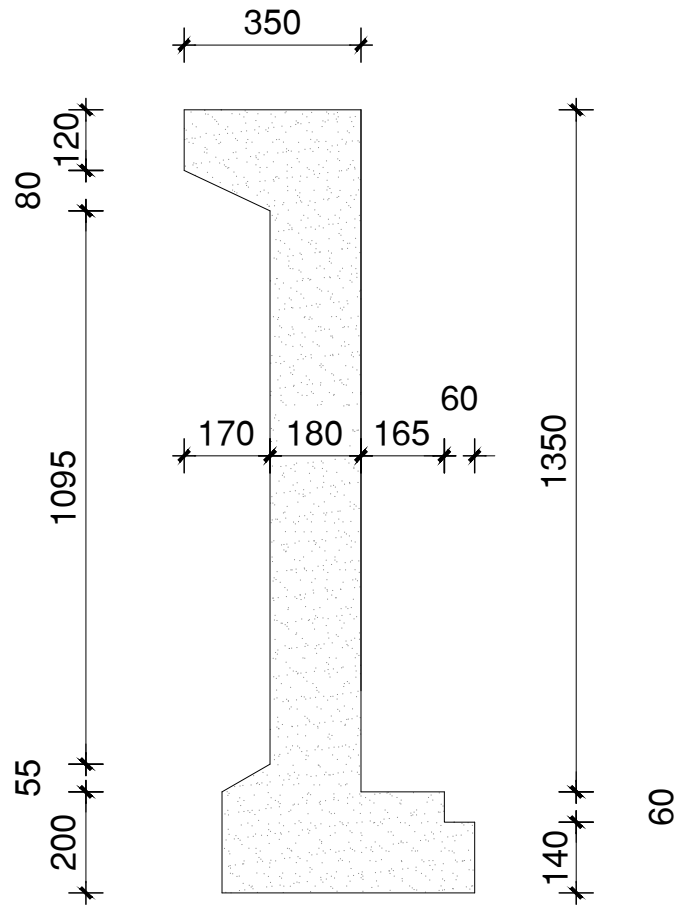
BEARING LAYOUT DETAILS

SCALE – NTS



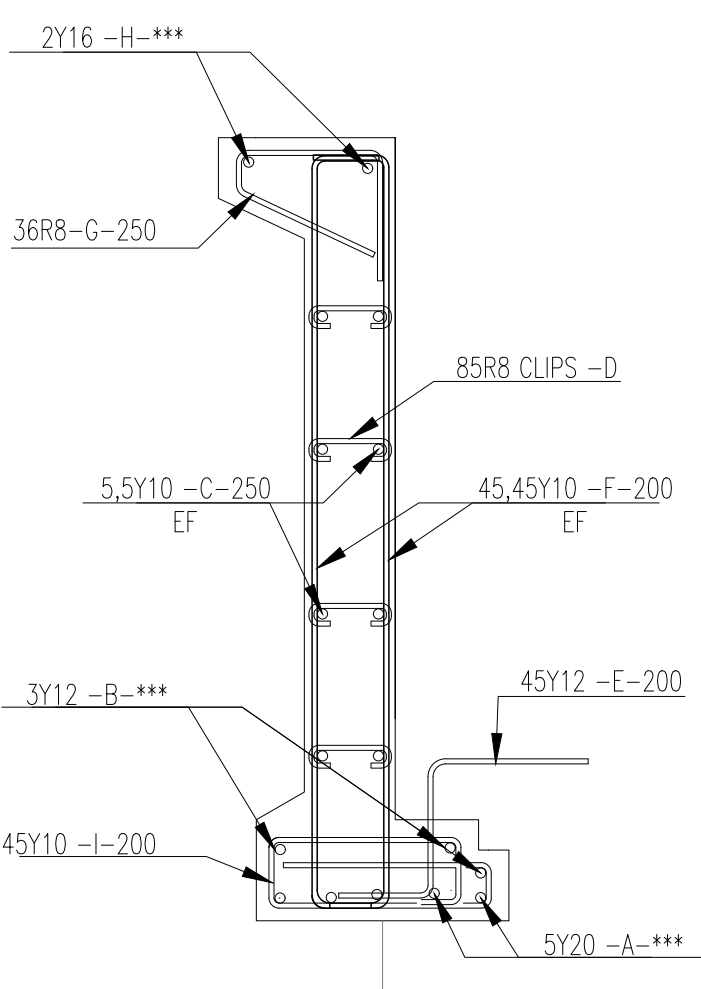
SECTION THROUGH DECK

SCALE 1:30



BEAM SECTION

SCALE 1:15



BEAM REINFORCEMENT DETAILS

SCALE 1:15

DESIGN DATA:

1.0 GENERAL

1.1) THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH TMH7 PARTS 1& 2

2.0 REINFORCEMENT

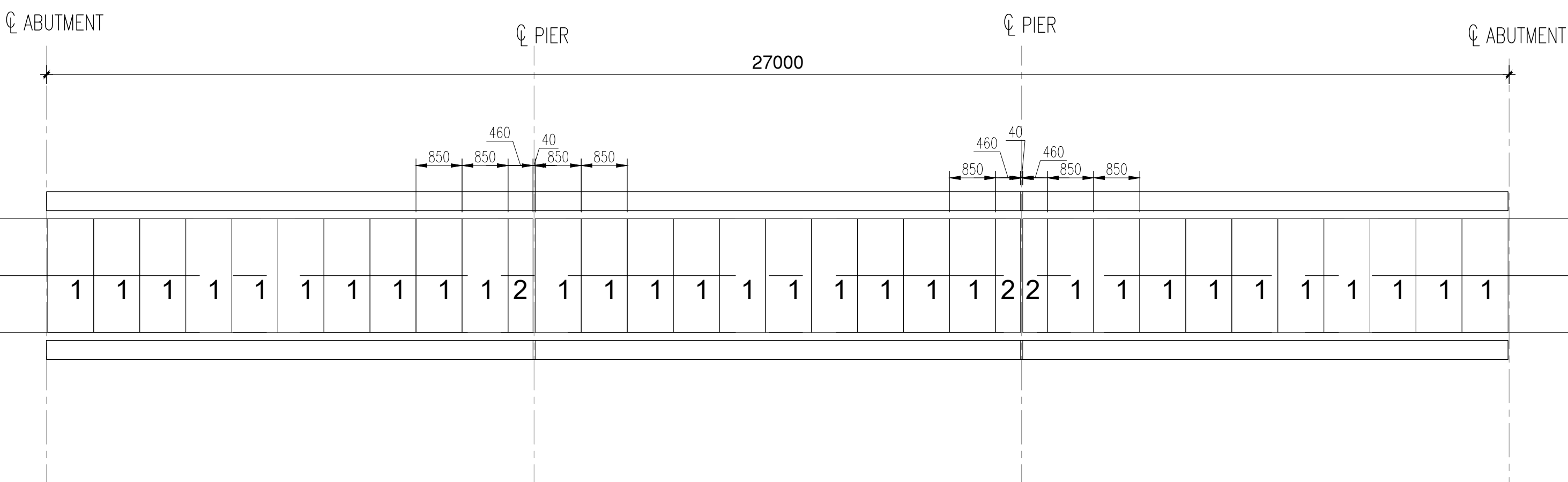
- 2.1) CONCRETE CLASS: 30/19
- 2.2) MINIMUM COVER OF REINFORCEMENT IN SUPERSTRUCTURE: 35mm EXCEPT AS SHOWN OTHERWISE.
- 2.3) LAP LENGTH: 50xDIA
- 2.4) SYMBOLS
- | | |
|------------------------------|------------------|
| ABR= ALTERNATE BARS REVERSED | ALT= ALTERNATELY |
| B = BOTTOM | EF = EACH FACE |
| EW = EACH WAY | FF = FAR FACE |
| NF= NEAR FACE | HOR= HORIZONTAL |
| NTS= NOT TO SCALE | STG= STAGGERED |
| T = TOP | TOG= TOGETHER |
| VER= VERTICAL | AS = AS SHOWN |

MEMBER	No OF	BARS PER MEMB	DIA	LENGTH	TOTAL NUM-BER	MARK	S C	B E N D I N G				
								A	B	C	D	E/r
BEAM	6	5 Y20	9200	30 A	35	8900						
		10 Y10	9100	18 B	35	8900						
		8 R	300	510 D	35	8900						
		45 Y12	800	270 E	54	300	250	(300)				
		90 Y10	1650	540 F	35	1450						
		36 R8	900	216 G	99A	300	280	50	300			
		2 Y16	9150	12 H	35	8900						
		45 Y10	1450	270 I	75	350	70	430	130	330		
		MESH REF: 617 = 7 SHEETS (622kg)										
R	137	10	12	16	20	25	32	40	TOT	Revision		
Y	1127	337	173	681					2318	Schedule No		
TOT	137	1127	337	173	681				2456			

BEAM BENDING SCHEDULE

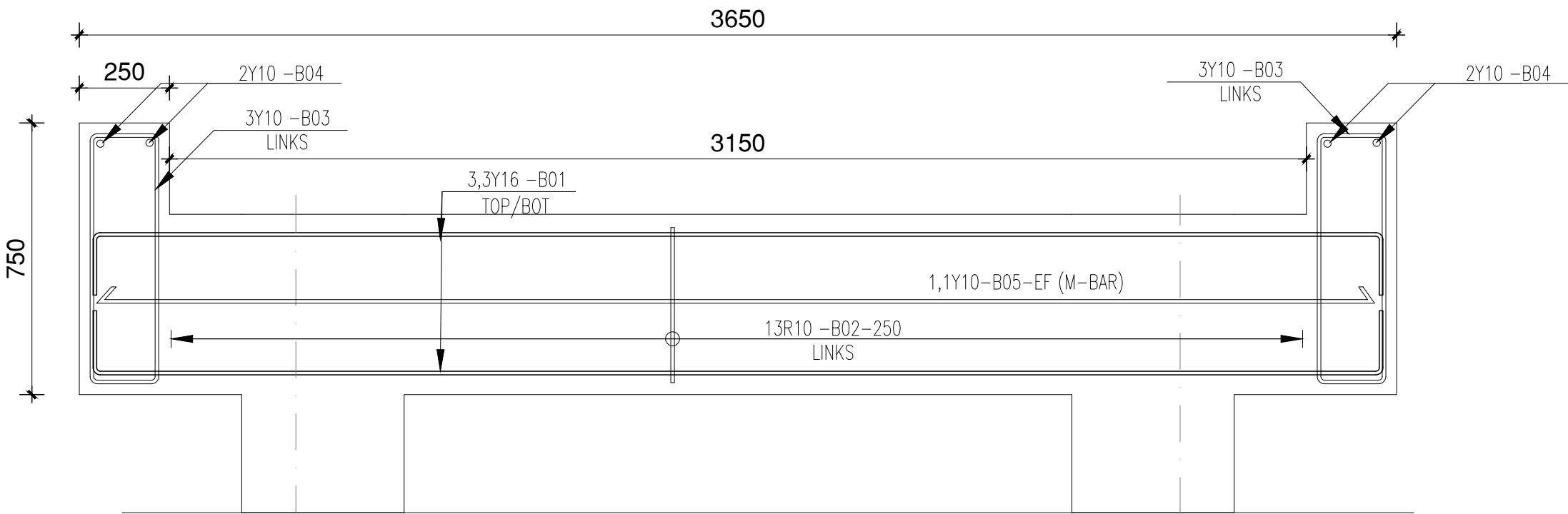
MEMBER	No OF	BARS PER MEMB	DIA	LENGTH	TOTAL NUM-BER	MARK	S C	B E N D I N G				
								A	B	C	D	E/r
COLUMN HEAD	2	6 Y16	4000	12 B01	38	250	3550	(250)				
		13 R10	2300	26 B02	74	430	430					
		6 Y10	2000	12 B03	74	680	180					
		4 Y10	550	8 B04	35	330						
		2 Y10	3750	4 B05	35	3550						
R	8	10	12	16	20	25	32	40	TOT	Revision	00	
Y		37	27	76					103	Schedule No		
TOT		64		76					139			

COLUMNHEAD BENDING SCHEDULE



PRECAST PLANKS LAYOUT

SCALE 1:75



COLUMN HEAD REINFORCEMENT DETAILS

SCALE 1:15

AMENDMENTS / REVISIONS

NR	DATE	APPROVED	DESCRIPTION
03	10/11/20	KJM	ISSUED FOR TENDER

CONSULTANT DETAIL



RSK3 CONSULTING ENGINEERS
53 OUTENIQUA STREET
WHITERIVER
1240
TEL : 013 750 0204
e-mail: admin@rsk3engineers.co.za

Drawn: AL
Designed: SZ
Checked: KJM
Approved: KJM
Date: NOV 20

DEPARTMENT OF INFRASTRUCTURE / PMU
MBOMBELA LOCAL MUNICIPALITY

PROJECT NAME:

SILIGANE PEDESTRIAN BRIDGE



CITY OF MBOMBELA
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1200
TEL:013 759 9111
Fax:013 759 2070

DRAWING NAME

SILIGANE PEDESTRIAN BRIDGE

DRAWING DESCRIPTION

BRIDGE DECK DETAILS

PROJECT No.

59/2019

SHEET No.

1 of 1

PAPER SIZE

A1

SCALE

AS

PROJECT STATUS

DESIGN DRAWING
TENDER DRAWING
CONSTRUCTION DRAWING
AS BUILT DRAWING

RSK3 DRAWING NUMBER

RSK3-SILB-007-03

