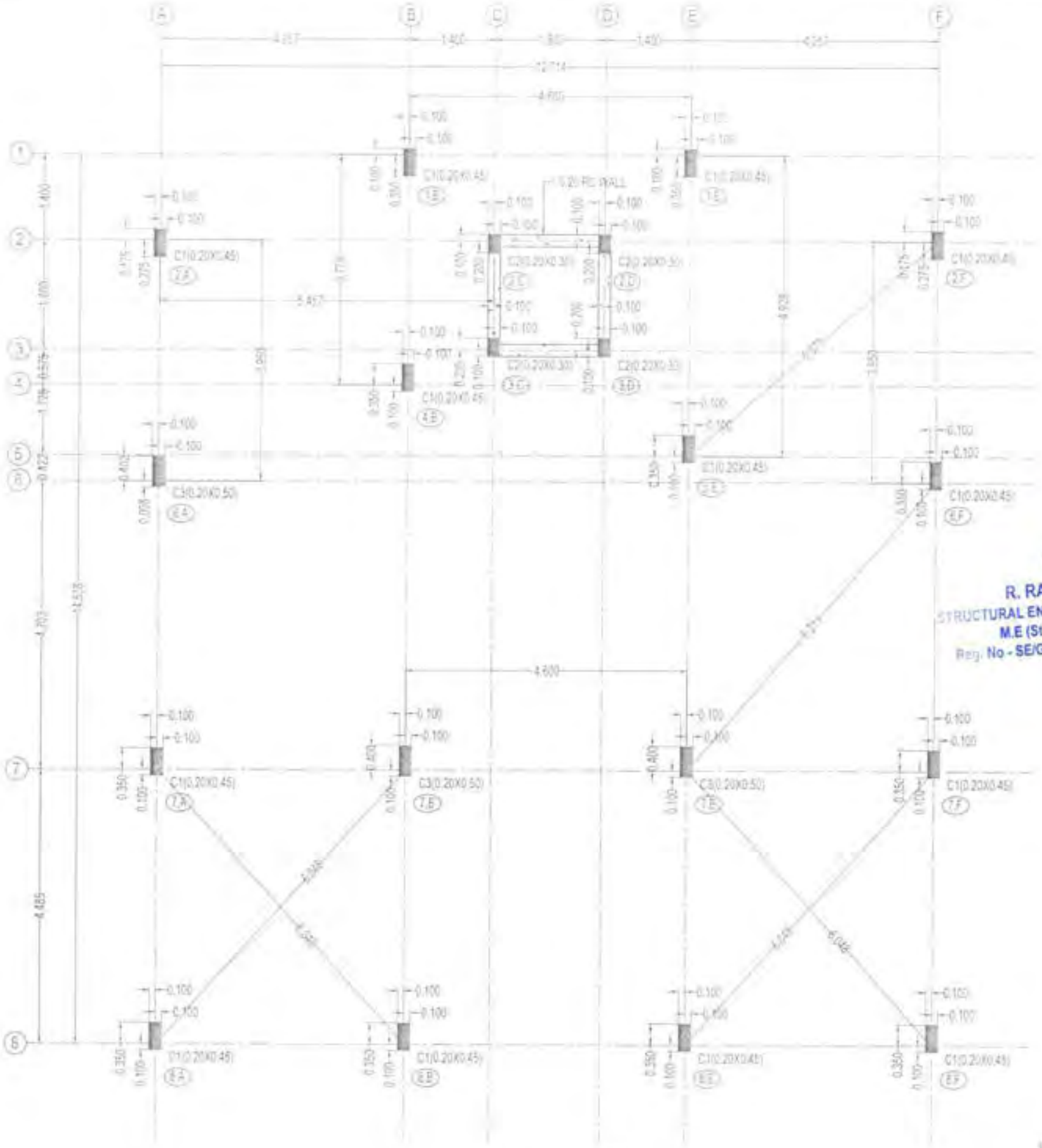


COLUMN MARKING LAYOUT

RK

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - 1 (S
M.E (Structural Engg)
Reg. No - SE/GR-1/19/12/231 (CMDA)

TECHNICAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
2. SHALL USE FIRST CLASS BRICKS FOR BUILDING.
3. USE OF ADMIXTURES IN CONCRETE SHALL BE APPROVED BY THE STRUCTURAL ENGINEER.
4. WORKMANSHIP SHALL CONFORM TO RELEVANT CODES OF PRACTICE. IN CASES OF DISCREPANCY, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN.
5. CONCRETE SHALL BE PROPORTIONED AND MIXED BY MECHANICAL MEANS.
6. IF TRENCH EXCAVATION EXCEEDS 1.5M IN DEPTH, SHORING AND BRACING SHALL BE PROVIDED.
7. CLEAR COVER TO REINFORCEMENT:
   - a) COLUMNS : 40MM
   - b) FOUNDATION : 50MM
   - c) GRADE BEAM : 40MM
   - d) FLOOR BEAM : 25MM
   - e) FLOOR SLAB : 20MM
8. THE BUILDING FOUNDATION HAS BEEN DESIGNED FOR SAFE BEARING PRESSURE CAPACITY OF SOIL AS PER THE GEOTECHNICAL REPORT. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THE BEARING CAPACITY MEETS OR EXCEEDS THIS VALUE BY CONSULTING WITH SOIL EXPERTS.
9. LEAN CONCRETE OF 75MM THICK SHALL BE PROVIDED BEFORE LAYING FOOTING.
10. THE DEPTH OF GRADE SLAB SHALL BE INCLUDING THE SLAB THICKNESS.

LAP JOINTS FOR REINFORCEMENT BARS

1. LAP AND CROSSING OF BARS OTHER THAN STIRRUPS AND TIES SHALL NOT BE MADE UNLESS THE LENGTH OF OVERLAP IS NOT LESS THAN THE DISTANCE BETWEEN THE BARS EXCEEDING 150MM, THE BARS SHALL BE BENT SO AS TO KEEP A MINIMUM DISTANCE OF 2 TIMES THE DIAMETER OF BAR BETWEEN THEM, OR ONE BAR SHALL BE BENT AWAY FROM THE OTHER.
2. LAPS IN COLUMNS SHALL BE PROVIDED AT MID HEIGHT OF FLOOR AND NOT AT SLAB LEVEL.
3. LAPS IN BEAMS AND SLABS SHALL BE PROVIDED AT THE MIDDLE OF CONTRACTION.

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY (VILLA 4)
AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

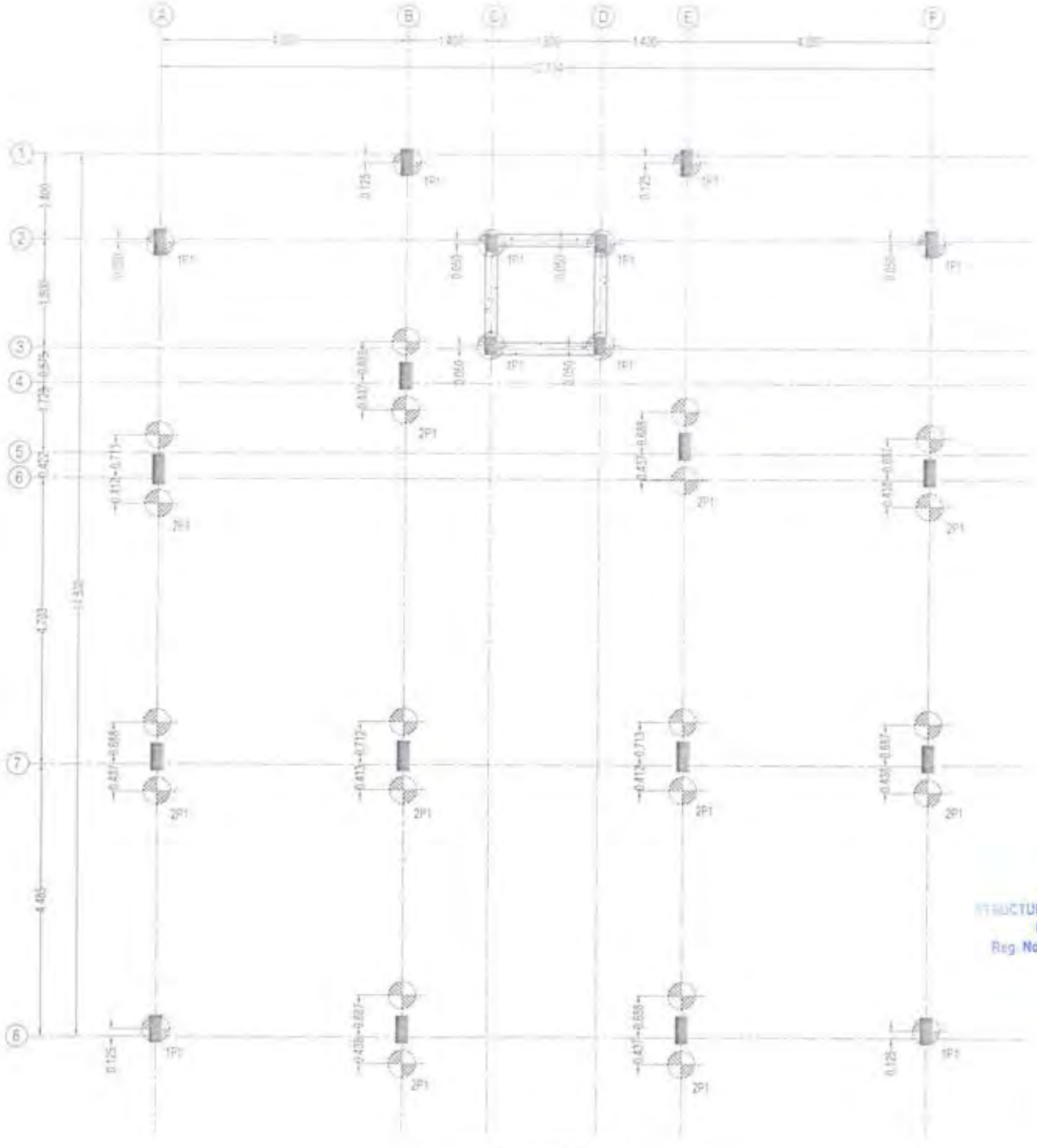
STRUCTURAL CONSULTANT

SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME
COLUMN MARKING LAYOUT

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-03	01



PILE MARKING LAYOUT

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - 1 (SE)
M.E (Structural Engg)
Reg. No - SE/GR-1/19/12/231 (CHN)A)

LEGENDS

0.450
P - PILE (0.450dia)

TECHNICAL NOTES

- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
- ALL DIMENSIONS TO BE VERIFIED AT SITE BEFORE CONSTRUCTION.
- ANY DISCREPANCIES NOTICED IN THE DRAWINGS SHALL BE BROUGHT TO THE NOTICE OF THE ENGINEER IMMEDIATELY.
- ALL DETAILS SHALL BE AS PER RELEVANT INDIAN STANDARD CODES OF PRACTICE.
- FOUNDATION SHALL BE CARRIED TO A DEPTH WHERE THE SOIL HAS ADEQUATE BEARING CAPACITY AS PER SOIL INVESTIGATION REPORT.
- ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT INDIAN STANDARD CODES OF PRACTICE.
- CLEAR COVER TO MAIN REINFORCEMENT:
  a. COLUMNS : 40MM
  b. FOUNDATION : 50MM
  c. GRADE BEAM : 40MM
  d. FLOOR SLAB : 20MM
  e. ROOF SLAB : 15MM
- THE PILE FOUNDATION HAS BEEN DESIGNED FOR SAFE BEARING CAPACITY OF SOIL AS PER SOIL INVESTIGATION REPORT. THE CONTRACTOR IS RESPONSIBLE FOR ATTAINING THE REQUIRED PILE CAPACITY OF SOIL AS PER THE SOIL INVESTIGATION REPORT. THE CONTRACTOR SHALL CONDUCT TEST PILES AS PER THE DIRECTIONS OF THE ENGINEER AND ENSURE THE PILE CAPACITY AS PER SOIL INVESTIGATION REPORT BEFORE COMMENCING THE WORKS.
- ALL PILES SHALL BE INSPECTED BY THE ENGINEER BEFORE CONCRETING.
- ALL CONCRETE WORKS SHALL BE CARRIED OUT AS PER IS 456:2000.
- ALL REINFORCEMENT BARS SHALL BE FREE FROM RUST, OIL, GREASE, LOOSE MILL SCALE AND OTHER DELETERIOUS MATERIALS.
- ALL REINFORCEMENT BARS SHALL BE BENT COLD AND SHALL NOT BE BENT AND STRAIGHTENED MORE THAN ONCE.
- ALL REINFORCEMENT BARS SHALL BE SECURELY TIED AT ALL JUNCTIONS WITH 16 GAUGE BINDING WIRE.
- THE DEPTH OF BEAMS SHALL BE INCLUSIVE OF SLAB THICKNESS.

LAP JOINTS FOR REINFORCEMENT BARS

- ALL LAPS SHALL BE STAGGERED AND NOT MORE THAN 50% OF THE REINFORCEMENT BARS SHALL BE LAPPED AT ANY ONE SECTION.
- LAPS IN COLUMNS SHALL BE PROVIDED AT MIDHEIGHT OF FLOOR AND NOT AT SLAB LEVEL.
- LAPS IN BEAMS AND SLABS SHALL BE PROVIDED AT THE POINT OF CONTRAFLEXURE.

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY, (VILLA 4)
AT ECR, CHENNAI.

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

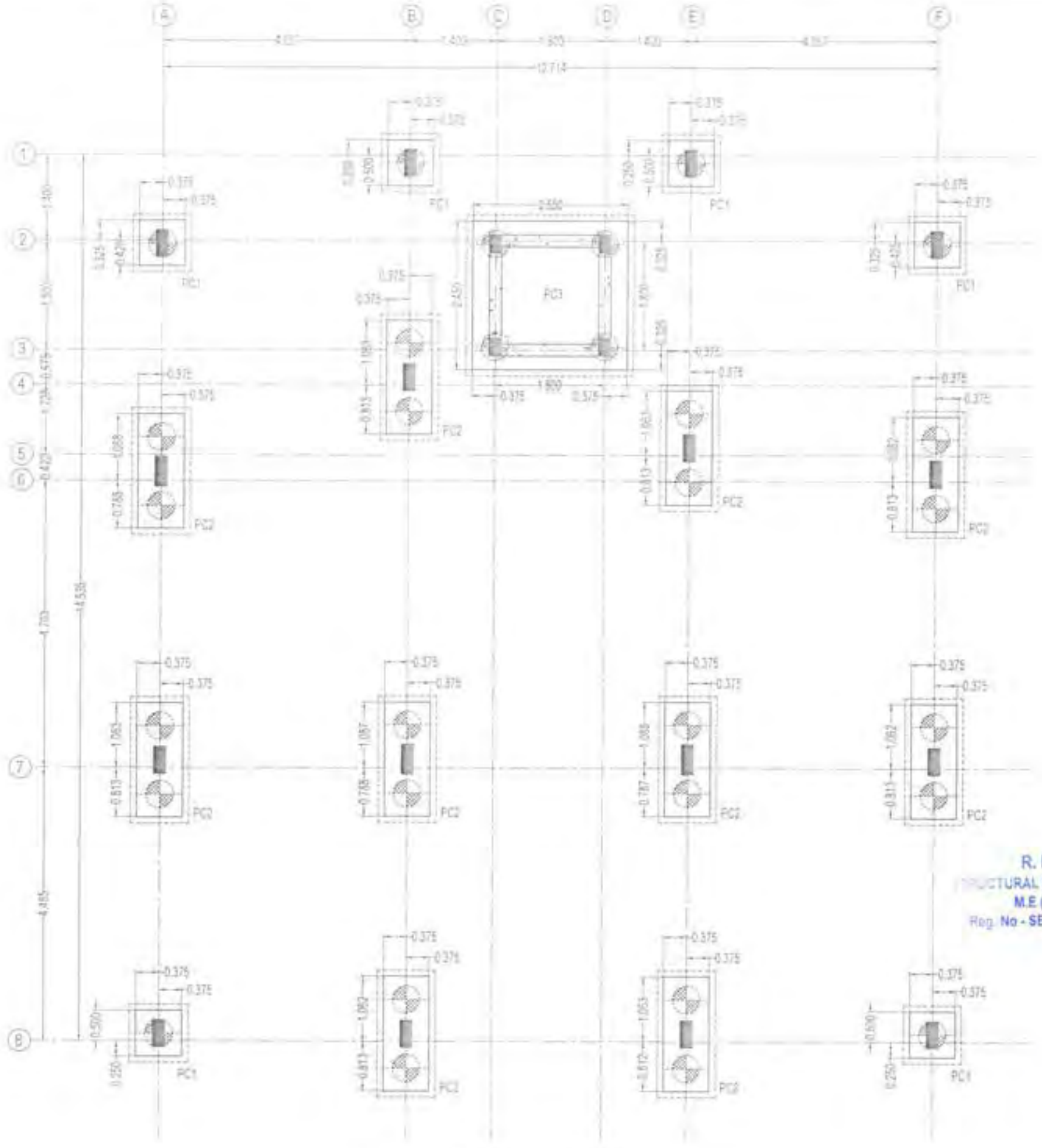
SAFE STRUCTURAL CONSULTANCY
Safe

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

PILE MARKING LAYOUT

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-03	02



PILE CAP MARKING LAYOUT

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - 1 (SE)
M.E (Structural Engg)
Reg. No - SE/GR-1/19/12/231 (CMDA)

LEGENDS:
PC - PILE CAPE

TECHNICAL NOTES

LAP JOINTS FOR REINFORCEMENT BARS

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY, (VILLA 4)
AT EGR, CHENNAI.

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

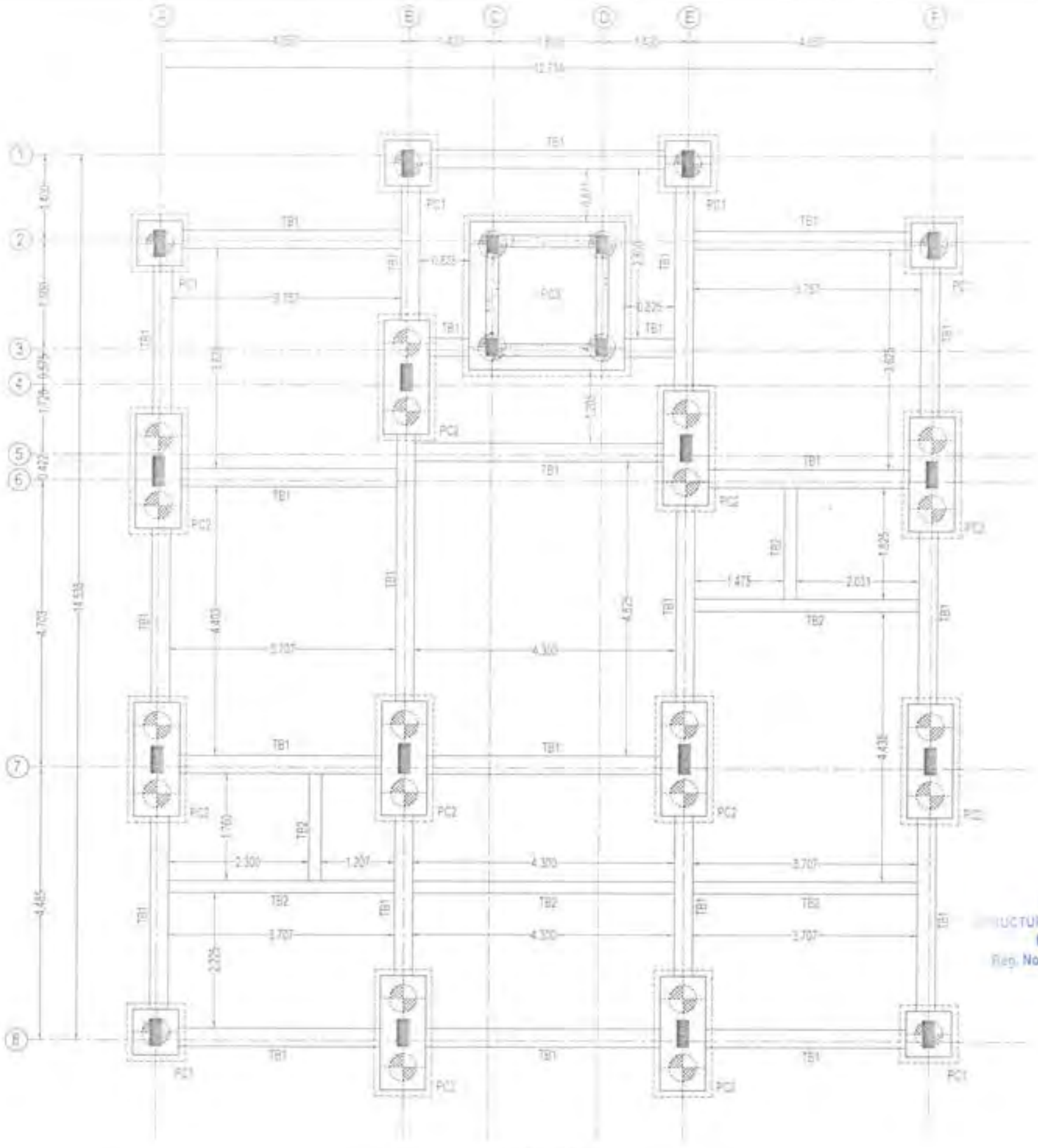
SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR:
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

PILE CAP(PC) MARKING LAYOUT

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-03	03



TIE BEAM(TB) LAYOUT

LEGENDS
TB - TIE BEAM

R.K
R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I
M.E (Structural Engg)
Reg. No - SE/GR-1/19112/231 (C)

TECHNICAL NOTES

- ALL DIMENSIONS ARE IN MILLIMETRES & ELEVATIONS IN METRES UNLESS OTHERWISE SPECIFIED.
- ALL UNITS IN SI UNITS UNLESS OTHERWISE SPECIFIED.
- ALL WORKMANSHIP AND MATERIALS SHALL BE AS PER LATEST RELEVANT INDIAN STANDARDS.
- CARE SHALL BE TAKEN TO AVOID CHASING OF CONCRETE AFTER CONCRETE HAS SET. ALL CHASING SHALL BE DONE BEFORE CONCRETE SETS.
- DRAWINGS IN CONJUNCTION WITH ARCHITECTURAL, STRUCTURAL, SERVICES AND OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS.
- ALL DISCREPANCIES SHALL BE BROUGHT TO THE NOTICE OF THE ARCHITECT/STRUCTURAL CONSULTANT BEFORE EXECUTION OF THE WORKS.
- CONCRETE GRADE AND CLEAR COVER TO REINFORCEMENT:
  - A. FOUNDATION : AS PER SOIL REPORT
  - B. FOUNDATION : 50MM
  - C. COLUMN : 40MM
  - D. BEAM : 25MM
  - E. SLAB : 20MM
  - F. STAIR : 20MM
- THE BUILDING FOUNDATION HAS BEEN DESIGNED FOR SBC OF SOIL AS PER SOIL INVESTIGATION REPORT. THE CONTRACTOR IS RESPONSIBLE FOR ATTAINING THE REQUIRED PILE CAPACITY. WORKS IN CONFLICTING WITH SOIL REPORT SHALL BE BROUGHT TO THE NOTICE OF THE ENGINEER.
- LEVELS FOR SLAB SHALL BE VERIFIED BEFORE LAYING FOUNDATION.
- THE DEPTH OF BEAM SHALL BE INCLUSIVE OF THE SLAB THICKNESS.

LAP JOINTS FOR REINFORCEMENT BARS

- LAP PROVISION SHALL NOT BE MADE IN MORE THAN 50% OF THE BARS AT ANY ONE SECTION. REMAINING BARS SHALL BE LAPPED AT A DISTANCE OF 1.3 TIMES THE LAP LENGTH FROM THE FIRST LAP.
- LAPS IN COLUMNS SHALL BE PROVIDED AT MID HEIGHT OF FLOOR AND NOT AT JUNCTIONS.
- LAPS IN BEAMS AND SLABS SHALL BE PROVIDED AT THE POINT OF CONTRAFLEXURE.

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY (VILLA 4) AT ECR, CHENNAI.

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

SAFE STRUCTURAL CONSULTANCY

Safe

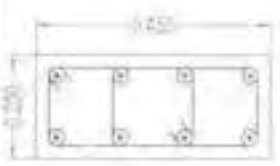
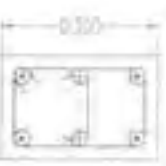
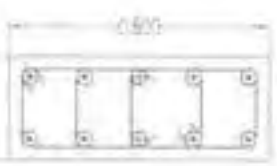
DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

PILE CAP(PC) & TIE BEAM(TB) LAYOUT

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-03	04

COLUMN REINFORCEMENT SCHEDULE

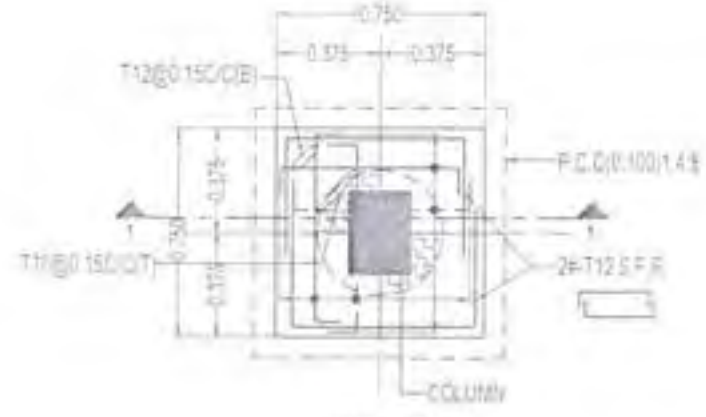
TERRACE LEVEL			
TIES	H=T8@150C/C	H=T8@150C/C	H=T8@125C/C
	H=T8@150C/C	H=T8@150C/C	H=T8@125C/C
FOOTING MARKED @ -1.5T @ -1.7T			
	8-T16	4-T16 + 2-T12	6-T16 + 2-T12
COLUMN MARKED	C1	C2	C3

PILE (P1) - PLAN

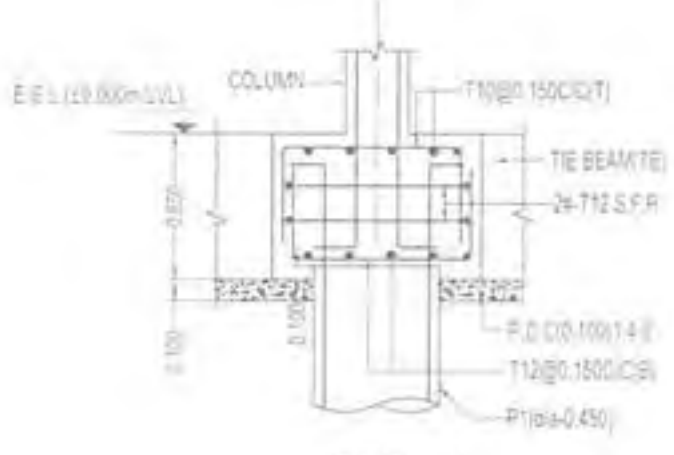
** S.F.R - SIDE FACE REINFORCEMENT

LEGENDS

B.L - BASEMENT LEVEL
G.F.R.L - GROUND FLOOR ROOF LEVEL
E.G.L - EXISTING GROUND LEVEL

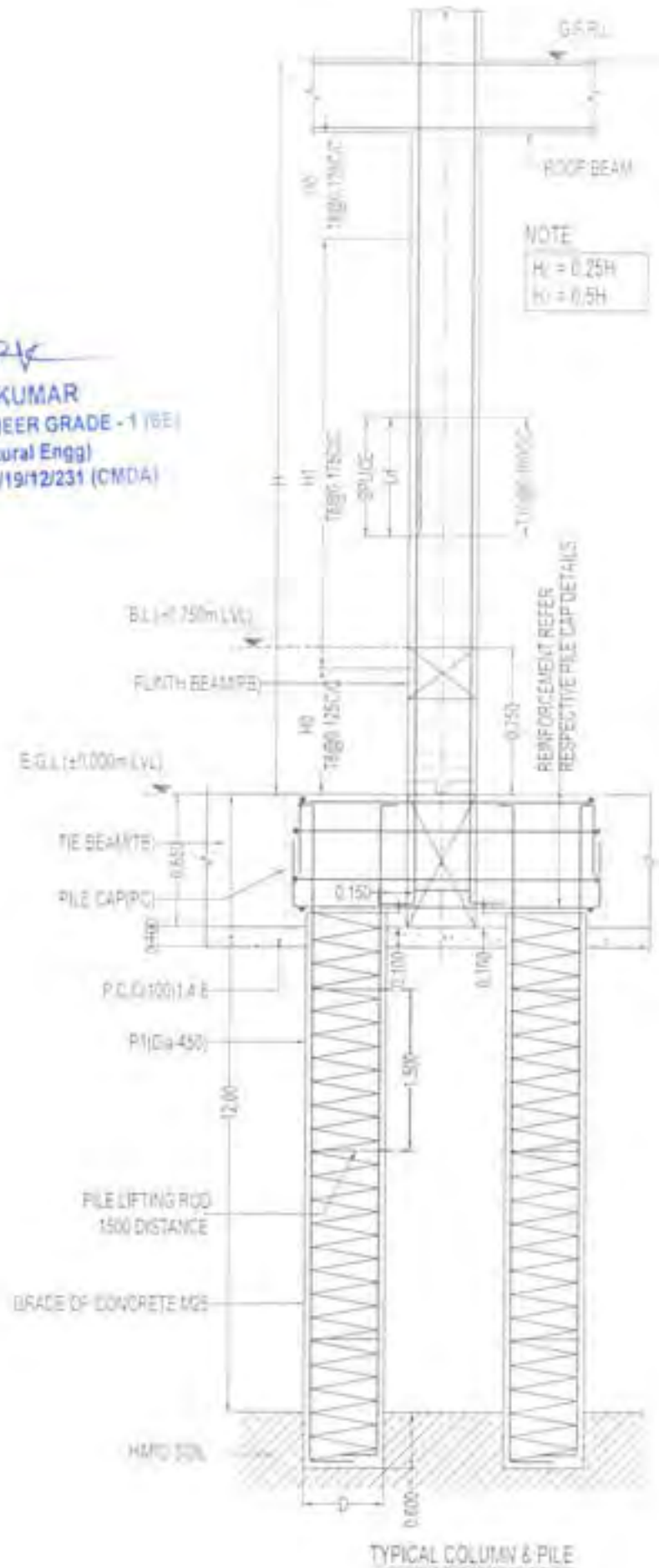


PC1 - PLAN



SECTION - 1 - 1

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - 1 (SE)
M.E (Structural Engg)
Reg. No - SE/GR-1/19/12/231 (CMDA)



TYPICAL COLUMN & PILE CONFINING DETAILS

TECHNICAL NOTES

LAP JOINTS FOR REINFORCEMENT BARS :

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY (VILLA 4) AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

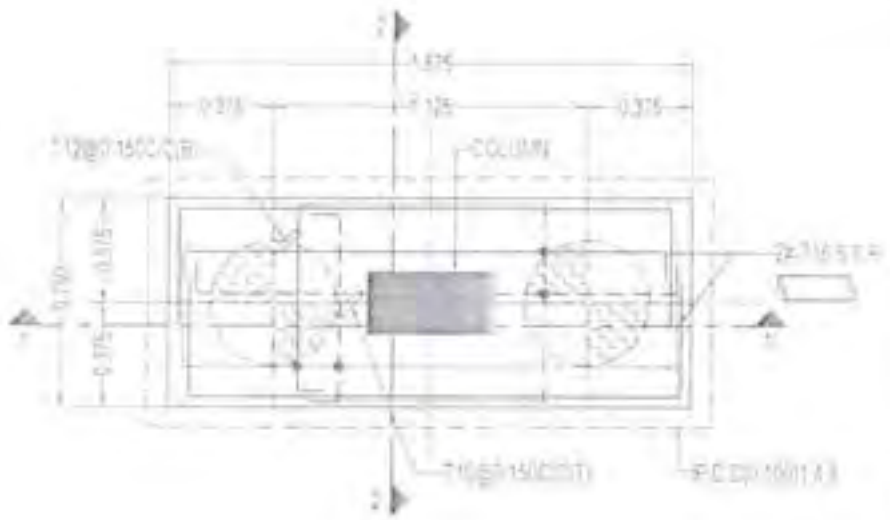
SAFE STRUCTURAL CONSULTANCY
Safe

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

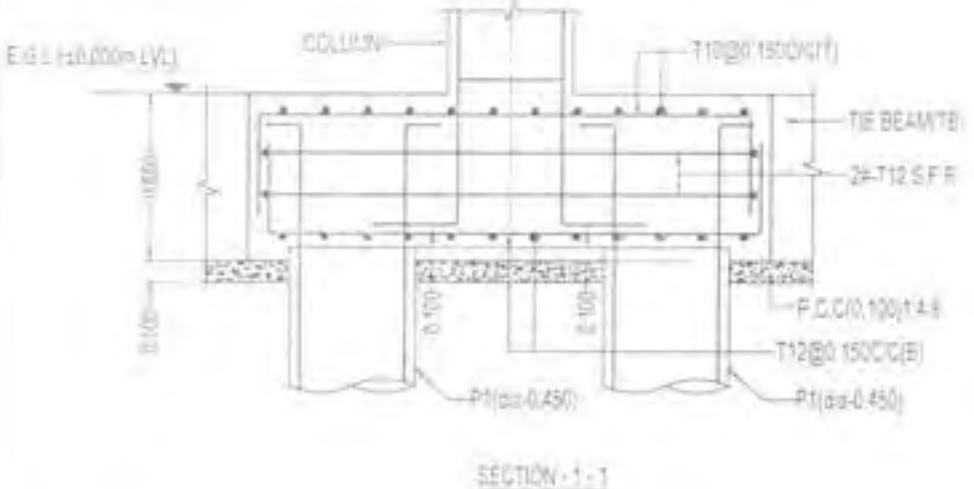
DRAWING NAME

COLUMN, PILE & PILE CAP DETAILS

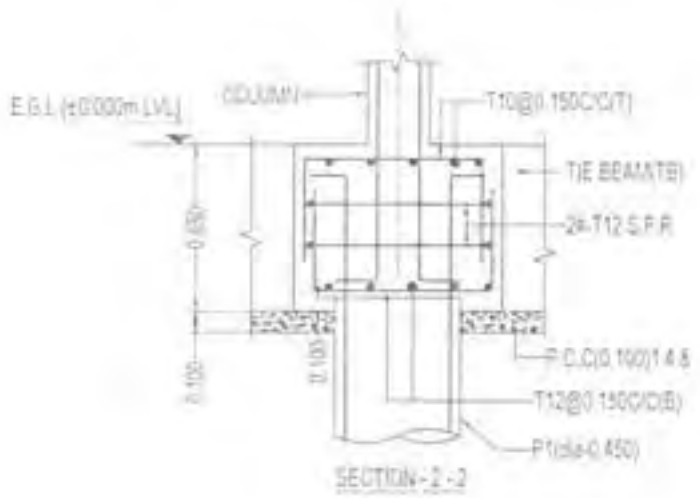
REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-03	05



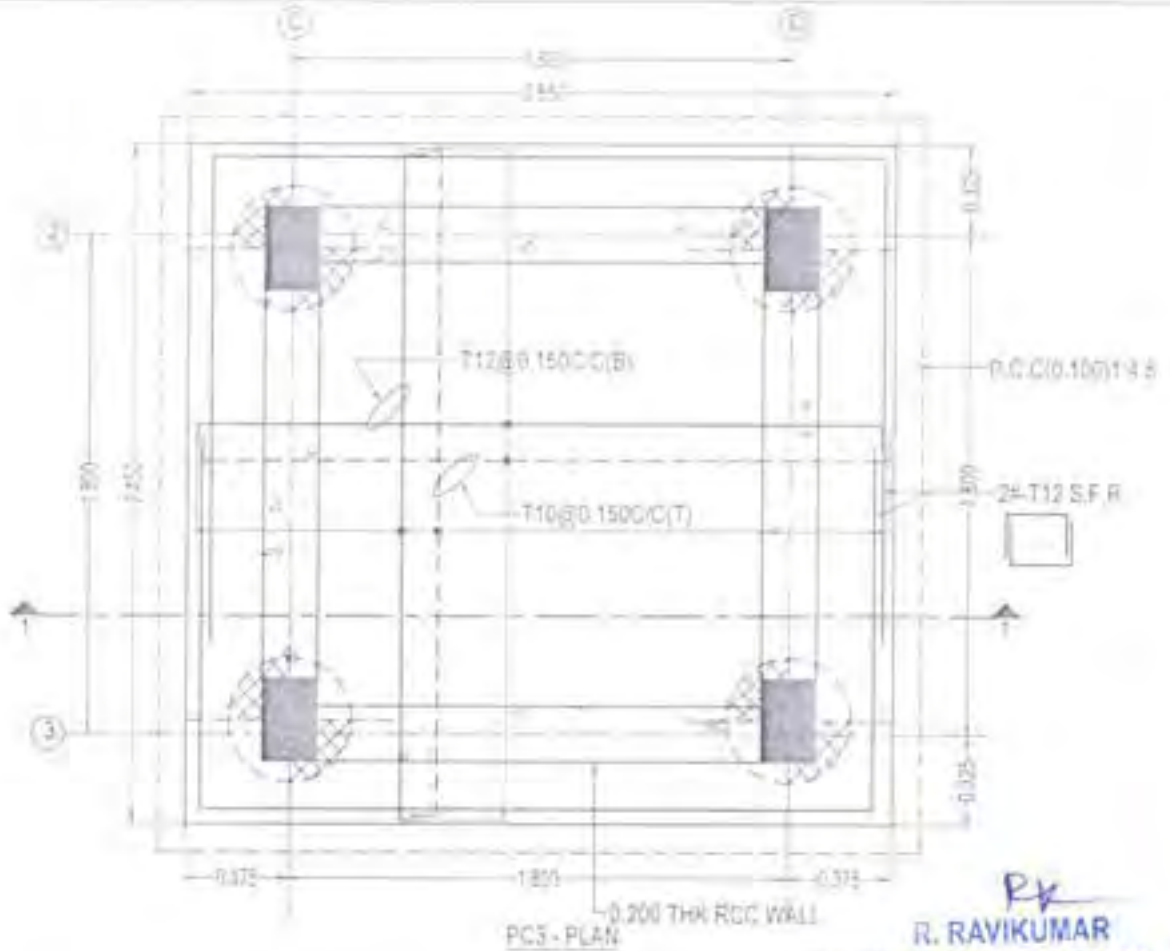
PC2 - PLAN



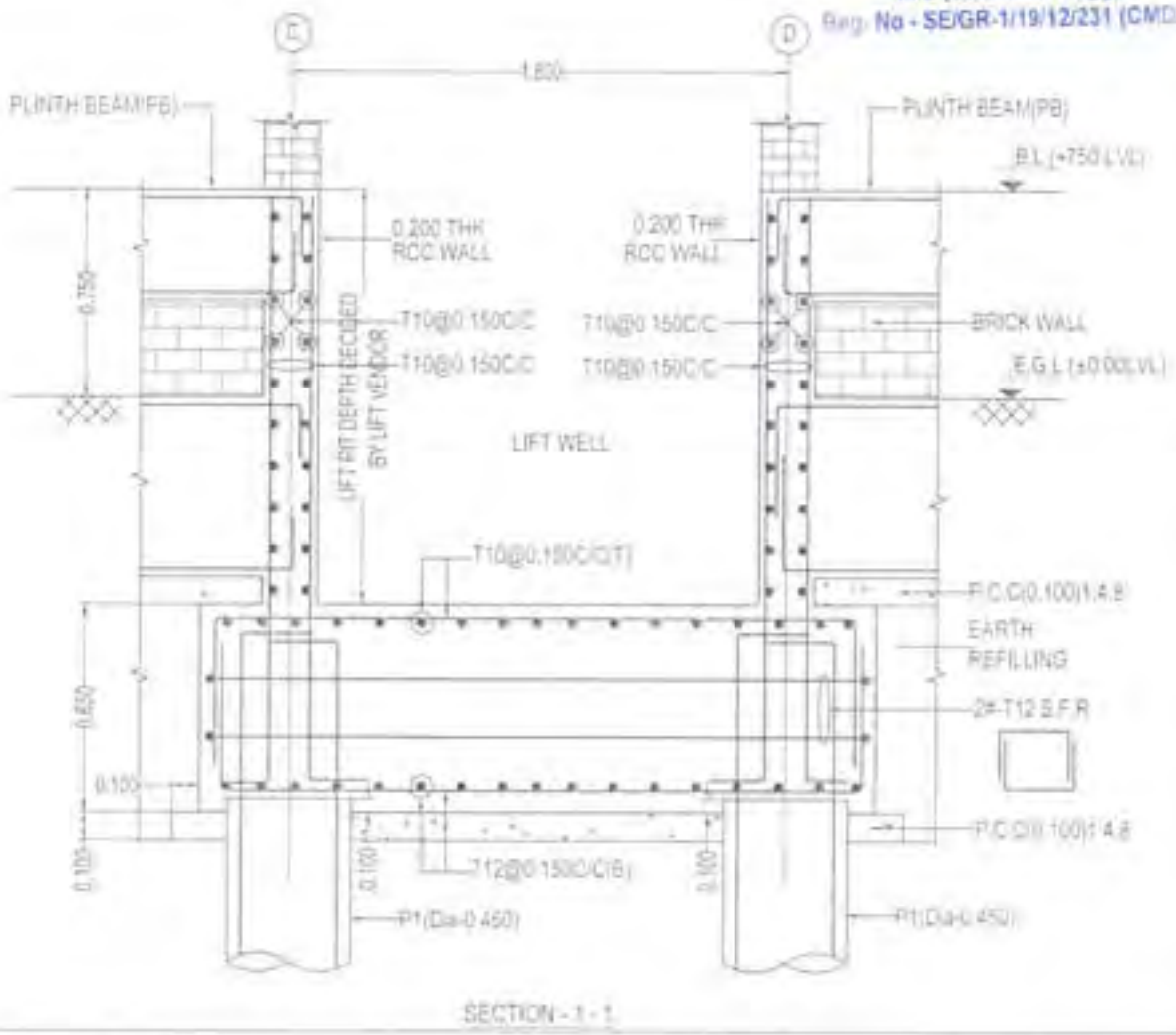
SECTION - 1 - 1



SECTION - 2 - 2



PC3 - PLAN



SECTION - 1 - 1

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - 1
M.E (Structural Engg)
Reg. No - SE/GR-1/19/12/231 (CMDA)

TECHNICAL NOTES

LAP JOINTS FOR REINFORCEMENT BARS :

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY (VILLA 4)
AT EGR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

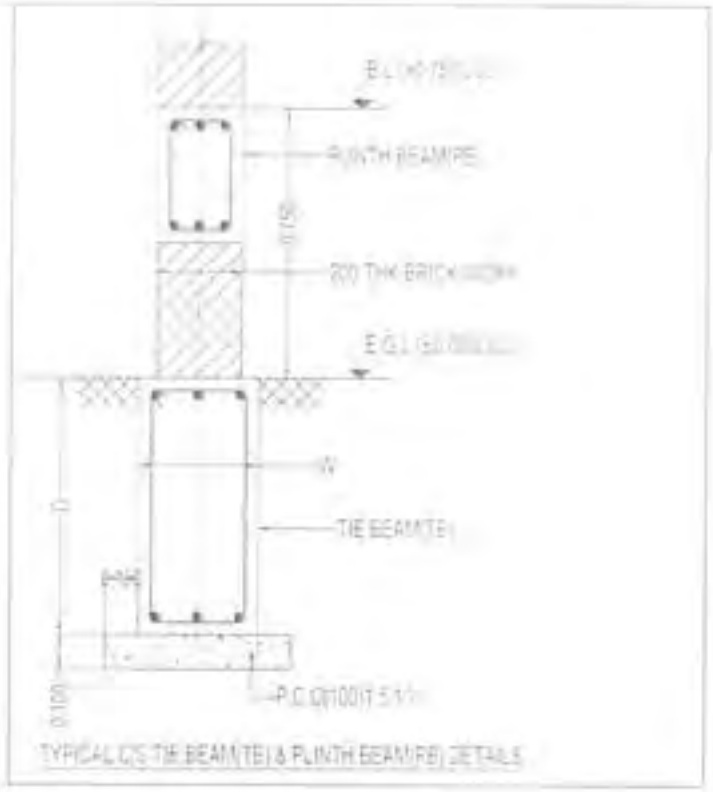
DRAWING NAME

FILE & PILE CAP DETAILS

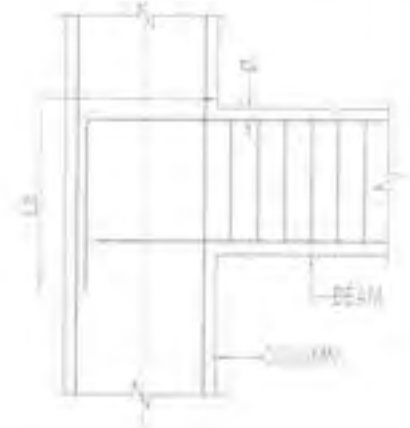
REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-03	06

TIE BEAM (TB) REINFORCEMENT SCHEDULE

BEAM SIZE (B X D)	DETAIL @ LEFT SUPPORT	DETAIL @ MIDDLE	DETAIL @ RIGHT SUPPORT
(0.300 X 0.600) TB1	3-T16(C), T10@150 C/C, P.C.C, 3-T16(C)	3-T16(C), T10@150 C/C, P.C.C, 3-T16(C)	3-T16(C), T10@150 C/C, P.C.C, 3-T16(C)
(0.200 X 0.600) TB2	2-T16(C), T10@150 C/C, P.C.C, 2-T16(C)	2-T16(C), T10@150 C/C, P.C.C, 2-T16(C)	2-T16(C), T10@150 C/C, P.C.C, 2-T16(C)



TYPICAL G/S TIE BEAM(TB) & PLINTH BEAM(PB) DETAILS

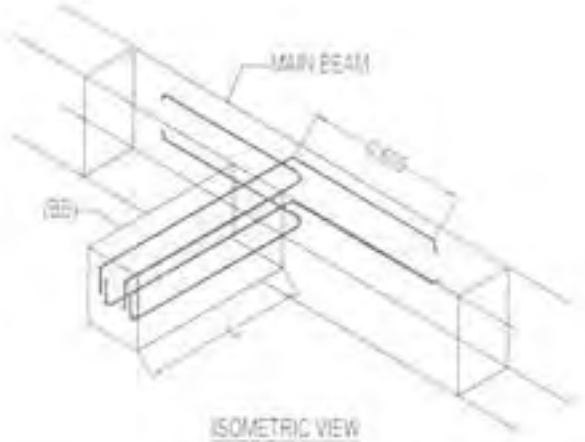


TYPICAL ANCHORAGE OF BEAM BARS IN AN EXTERNAL JOINT

** Ld=45 TIMES DIA OF BAR

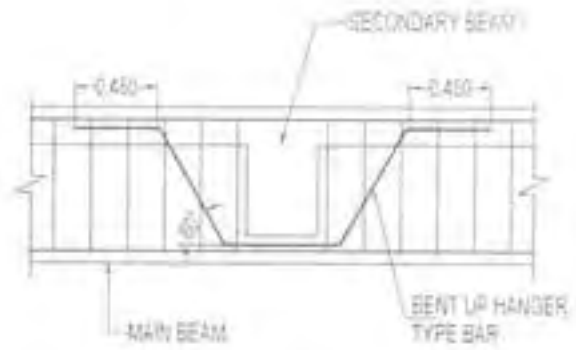
LEGENDS

E.G.L - EXISTING GROUND LEVEL
T.B - TIE BEAM
P.B - PLINTH BEAM
B.L - BASEMENT LEVEL



ISOMETRIC VIEW

OF (TYP) BRACKET BEAM REST ON BEAM DETAIL



WHERE CROSS BEAM SHEAR ROD SHOULD BE PROVIDED AT 2-T16

S.F.R - SIDE FACE REINFORCEMENT
E.F - EACH FACE

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I
M E (Structural Engg)
Regn. No - SE/GR-1/19/12/231 (CMDA)

TECHNICAL NOTES

LAP JOINTS FOR REINFORCEMENT BARS

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY, (VILLA 4) AT ECR, CHENNAI.

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

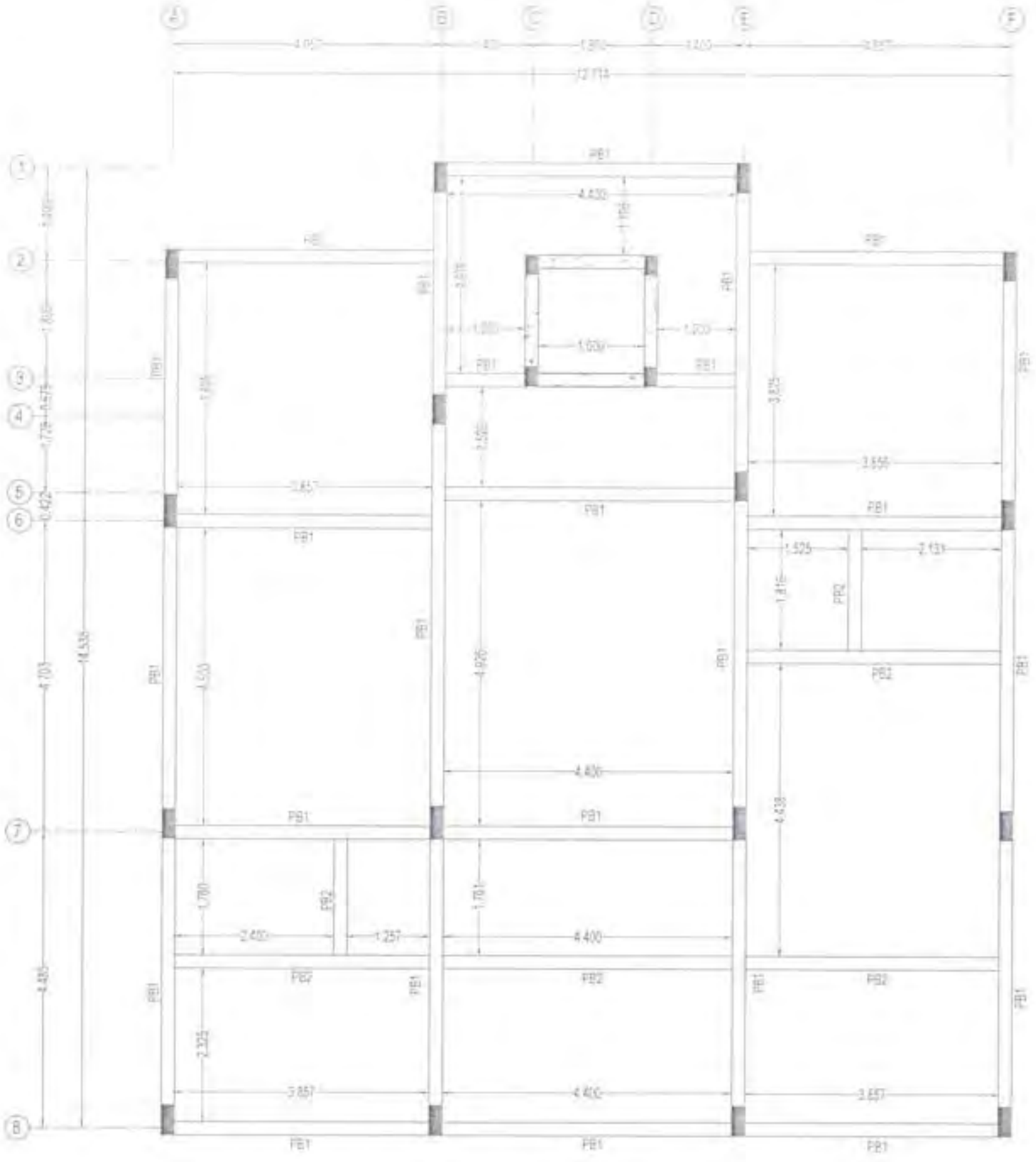
SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

TIE BEAM (TB) REINFORCEMENT DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-03	07



PLINTH BEAM(PB) LAYOUT

TOP OF PLINTH BEAM AT +0.150m LVL

PB1 - 300 X 400
C/S DETAILS

PB2 - 200 X 300
C/S DETAILS

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I (PEB)
M.E (Structural Engg)
Reg. No - SE/GR-1/19/12/231 (CHN-3)

LEGENDS

PB - PLINTH BEAM

TECHNICAL NOTES

LAP JOINTS FOR REINFORCEMENT BARS

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY, (VILLA 4)
AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

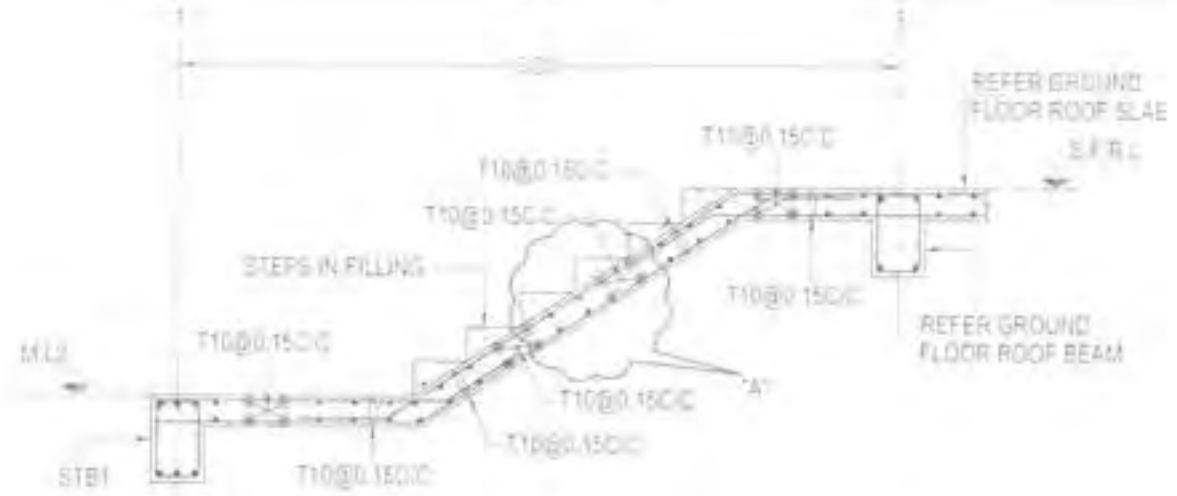
SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

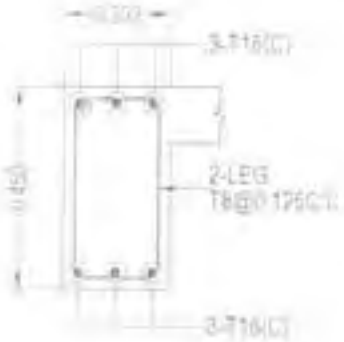
PLINTH BEAM(PB) LAYOUT & DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-03	08



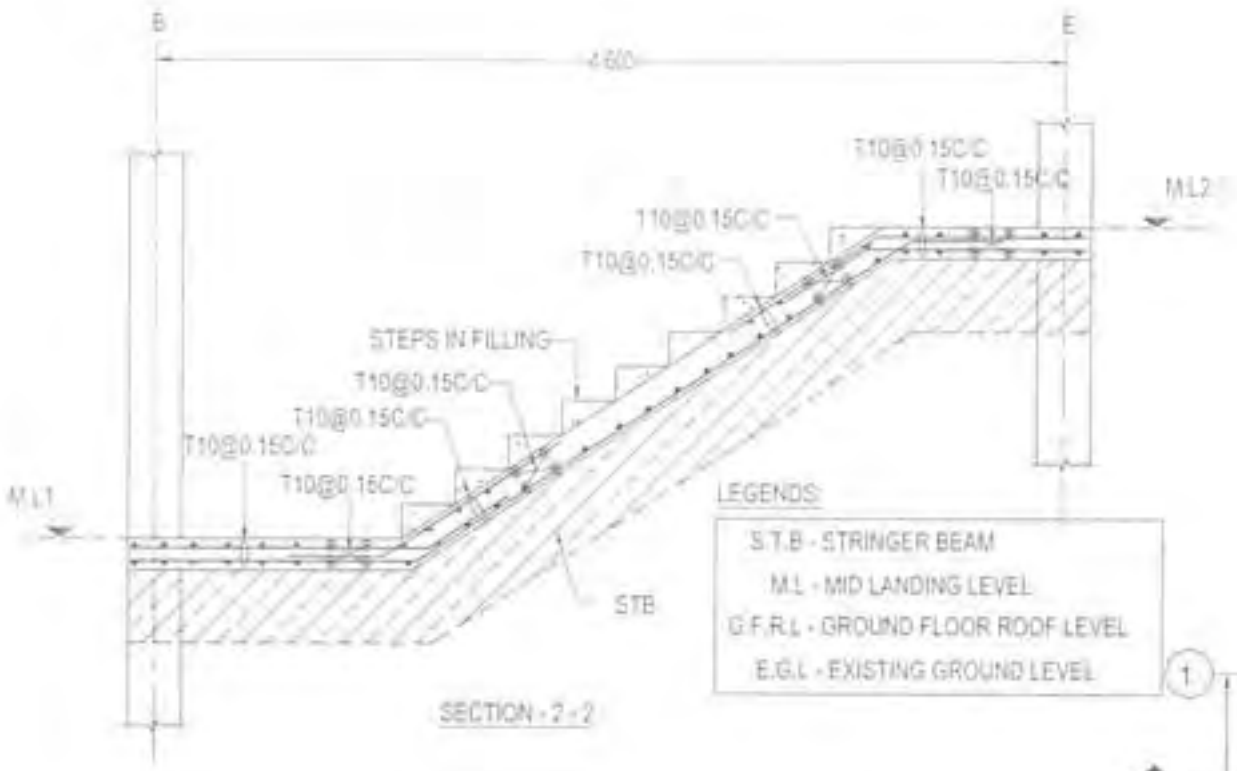
SECTION - 3 - 3

DETAIL - 'A'

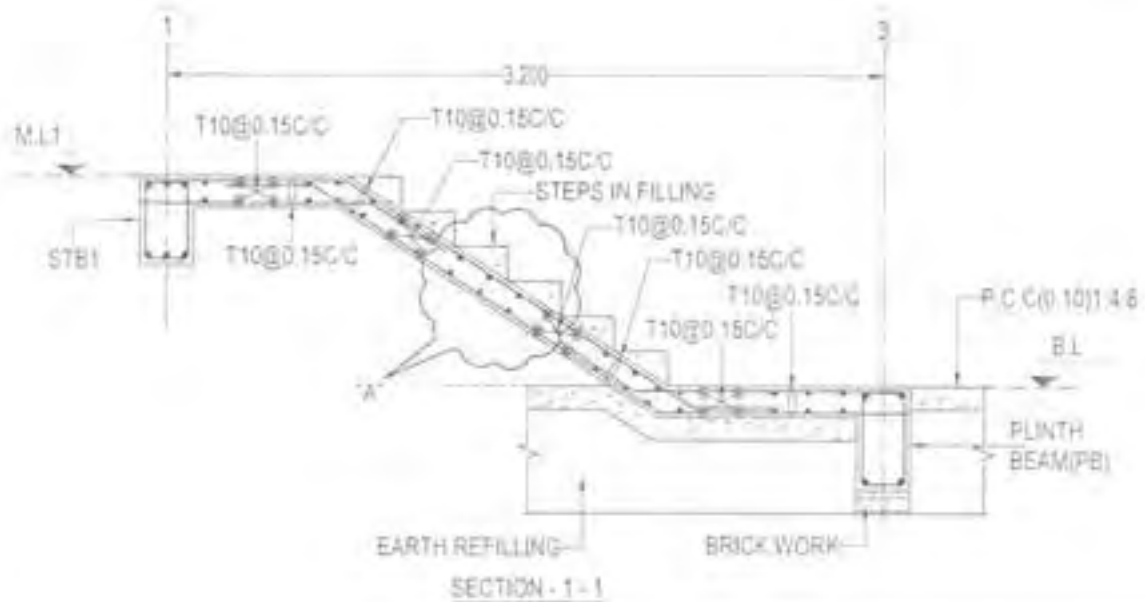


STE - 0.230 X 0.450
C.S DETAILS

** NO OF STEPS & LEVELS REFER LATEST ARCHITECTURAL DRAWING



SECTION - 2 - 2



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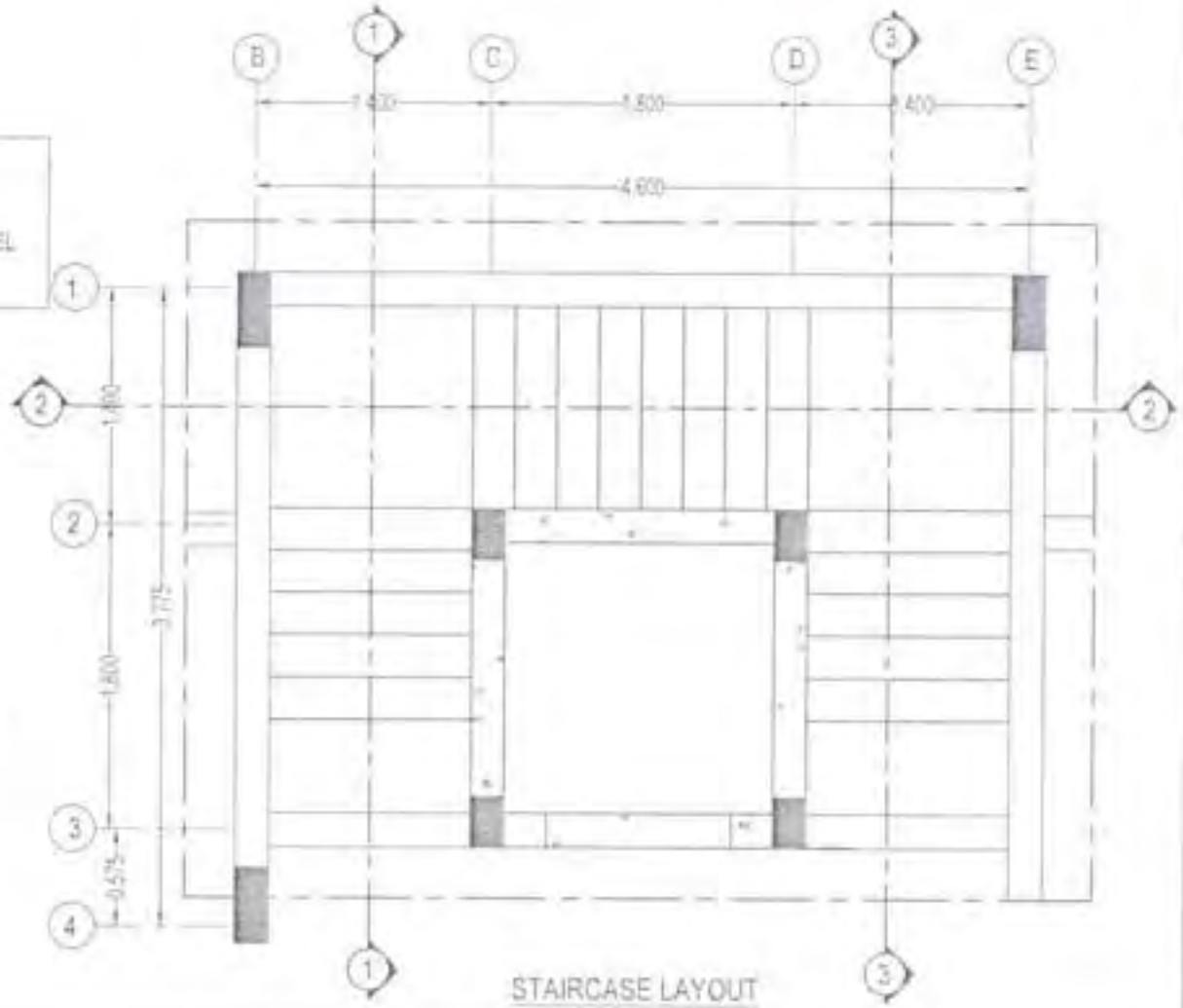


STAIRCASE LAYOUT

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - 1
M.E (Structural Engg)
Reg. No - SE/GR-1/19/12/231 (CMDA)

TECHNICAL NOTES

LAP JOINTS FOR REINFORCEMENT BARS

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY, (VILLA 4)
AT ECR, CHENNAI.

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

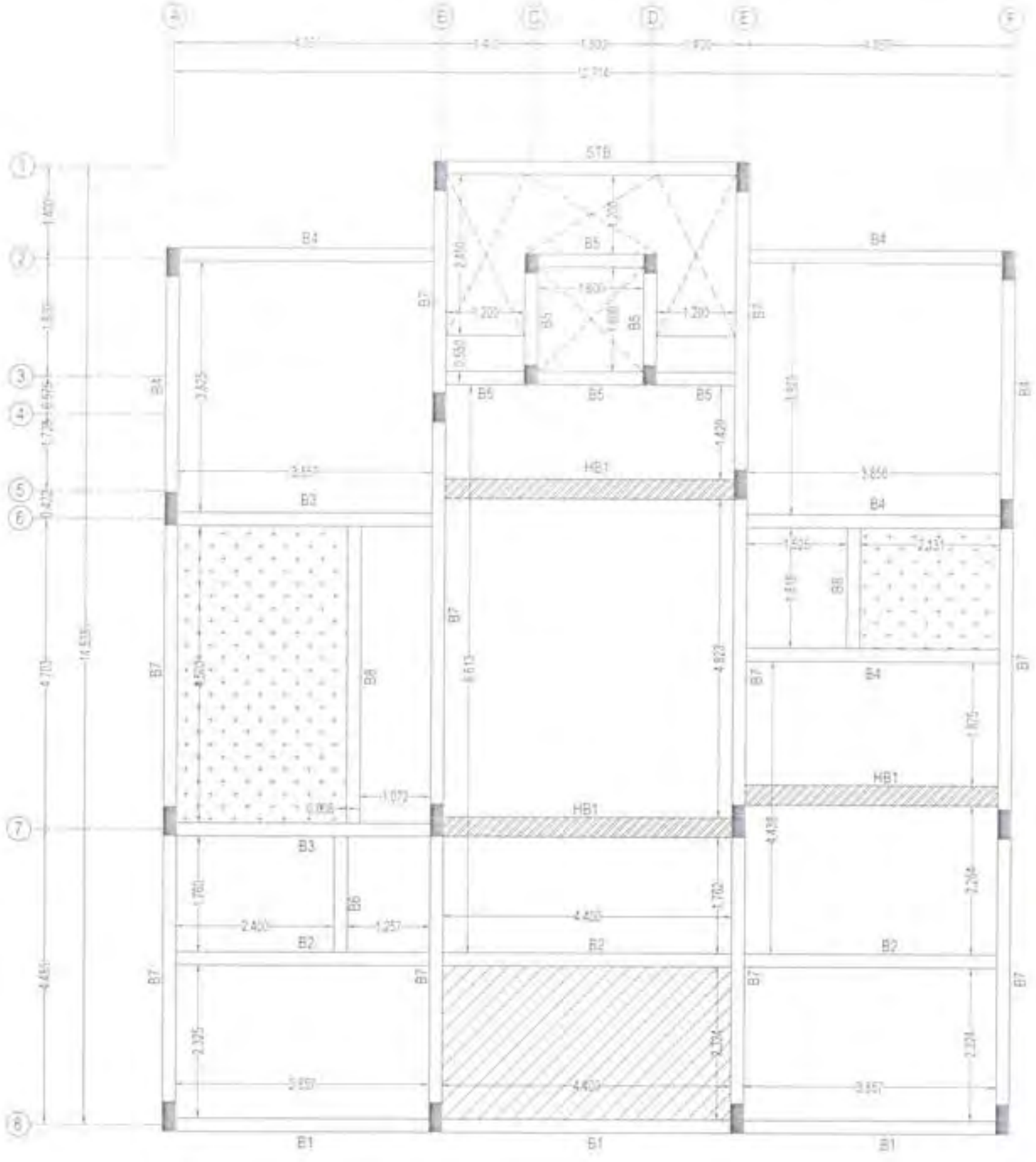
SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

STAIRCASE LAYOUT & DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-03	08A



GROUND FLOOR ROOF BEAM LAYOUT

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I
M.E (Structural Engg)
Reg. No - SE/GR-1/19/12/231 (CHN)

LEGENDS:
- TOILET SUNKEN
- HB - HIDDEN BEAM
- OPENING

TECHNICAL NOTES

- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
- ALL DIMENSIONS SHALL BE VERIFIED AT SITE BEFORE CONSTRUCTION.
- REFER ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.
- FOR COLUMN SIZES REFER COLUMN SCHEDULE.
- REFER ARCHITECTURAL DRAWINGS FOR SUNKEN SLAB DETAILS.
- FOR DETAILS OF SLOPES, CHAMFERS, GROOVES, ETC. REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF OPENINGS IN SLABS REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF SUNKEN SLABS REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF SHEAR WALLS REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF STAIRCASE REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF LIFT WELL REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF SUMP REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF OHT REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF LIFT MACHINE ROOM REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF PARAPET REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF FALSE CEILING REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF FLOORING REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF DOORS REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF WINDOWS REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF VENTILATORS REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF GRILLS REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF RAILINGS REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF HANDRAILS REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF SIGNAGES REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF LIGHTING REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF FIRE FIGHTING REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF PLUMBING REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF ELECTRICAL REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF HVAC REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF ACOUSTICS REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF WATERPROOFING REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF THERMAL INSULATION REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF FIRE RATING REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF EARTHQUAKE RESISTANCE REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF WIND RESISTANCE REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF FLOOD RESISTANCE REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF SEISMIC RESISTANCE REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF WIND RESISTANCE REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF FLOOD RESISTANCE REFER ARCHITECTURAL DRAWINGS.
- FOR DETAILS OF SEISMIC RESISTANCE REFER ARCHITECTURAL DRAWINGS.

LAP JOINTS FOR REINFORCEMENT BARS

- ALL LAP JOINTS SHALL BE STAGGERED AT MINIMUM DISTANCE OF 2 BAR DIAMETERS.
- LAPS IN COLUMNS SHALL BE PROVIDED AT MID HEIGHT OF FLOOR AND NOT AT JUNCTIONS.
- LAPS IN BEAMS AND SLABS SHALL BE PROVIDED AT THE POINT OF CONTRAFLEXURE.

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY, (VILLA 4)
AT ECR, CHENNAI.

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

SAFE STRUCTURAL CONSULTANCY
Safe

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

GROUND FLOOR ROOF BEAM LAYOUT

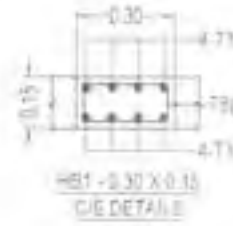
REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-03	09

GROUND FLOOR ROOF BEAM REINFORCEMENT SCHEDULE

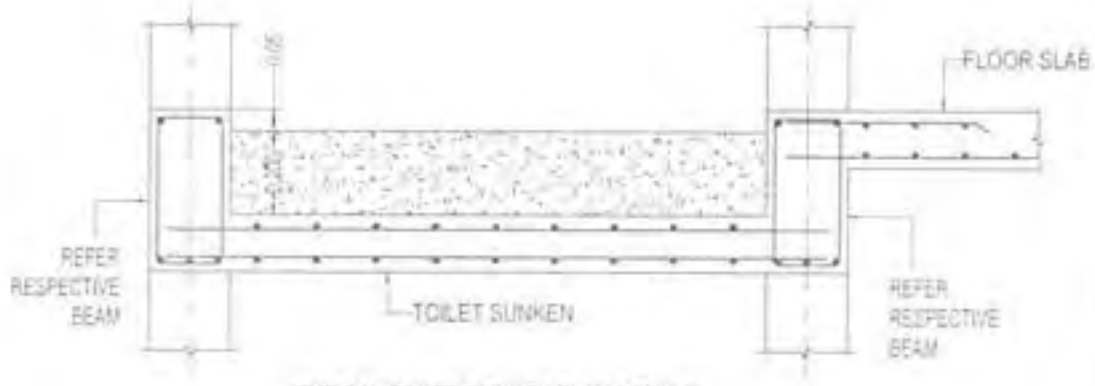
BEAM SIZE & NO.	DETAIL @ LEFT SUPPORT	DETAIL @ MIDDLE	DETAIL @ RIGHT SUPPORT	DETAIL @ CANTILEVER BEAM
(0.23 X 0.45)	2-T16(C)	2-T16(C)	2-T16(C)	
B1	2-T12(C) T8@0.125C/C 2-T12(C) 2-T16(C)	2-T12(C) T8@0.125C/C 2-T12(C) 2-T16(C)	2-T12(C) T8@0.125C/C 2-T12(C) 2-T16(C)	
(0.23 X 0.45)	2-T16(C)	2-T16(C)	2-T16(C)	
B2	2-T16(C) T8@0.125C/C 2-T16(C) 2-T16(C)	2-T16(C) T8@0.125C/C 2-T16(C) 2-T16(C)	2-T16(C) T8@0.125C/C 2-T16(C) 2-T16(C)	
(0.23 X 0.45)	2-T16(C)	2-T16(C)	2-T16(C)	
B3	2-T12(C) T10@0.10C/C 2-T16(C) 2-T16(C)	2-T12(C) T10@0.10C/C 2-T16(C) 2-T16(C)	2-T12(C) T10@0.10C/C 2-T16(C) 2-T16(C)	
(0.23 X 0.45)	2-T16(C)	2-T16(C)	2-T16(C)	
B4	2-T12(C) T8@0.15C/C 2-T12(C) 2-T16(C)	2-T12(C) T8@0.15C/C 2-T12(C) 2-T16(C)	2-T12(C) T8@0.15C/C 2-T12(C) 2-T16(C)	
(0.23 X 0.45)	2-T16(C)	2-T16(C)	2-T16(C)	
B5	T8@0.15C/C 2-T16(C)	T8@0.15C/C 2-T16(C)	T8@0.15C/C 2-T16(C)	
(0.23 X 0.45)	2-T12(C)	2-T12(C)	2-T12(C)	
B6	T8@0.15C/C 2-T16(C)	T8@0.15C/C 2-T16(C)	T8@0.15C/C 2-T16(C)	
(0.20 X 0.50)	2-T16(C)	2-T16(C)	2-T16(C)	
B7	2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	

GROUND FLOOR ROOF BEAM REINFORCEMENT SCHEDULE

BEAM SIZE & NO.	DETAIL @ LEFT SUPPORT	DETAIL @ MIDDLE	DETAIL @ RIGHT SUPPORT	DETAIL @ CANTILEVER BEAM
(0.23 X 0.45)	2-T16(C)	2-T16(C)	2-T16(C)	
B8	T8@0.15C/C 2-T16(C)	T8@0.15C/C 2-T16(C)	T8@0.15C/C 2-T16(C)	
(0.20 X 0.45)	2-T16(C)	2-T16(C)	2-T16(C)	
STR	T8@0.15C/C 2-T16(C)	T8@0.15C/C 2-T16(C)	T8@0.15C/C 2-T16(C)	



HB1 - 0.30 X 0.15
C/E DETAILS



TYPICAL TOILET SUNKEN SLAB DETAILS

LEGEND:
HB - HIDDEN BEAM
C - CONTINUOUS ROD
E - EXTRA ROD

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I (SE)
M.E (Structural Engg)
Reg. No - SE/GR-1/19/12/231 (CMDA)

TECHNICAL NOTES

LAP JOINTS FOR REINFORCEMENT BARS

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY, (VILLA 4)
AT ECR, CHENNAI.

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

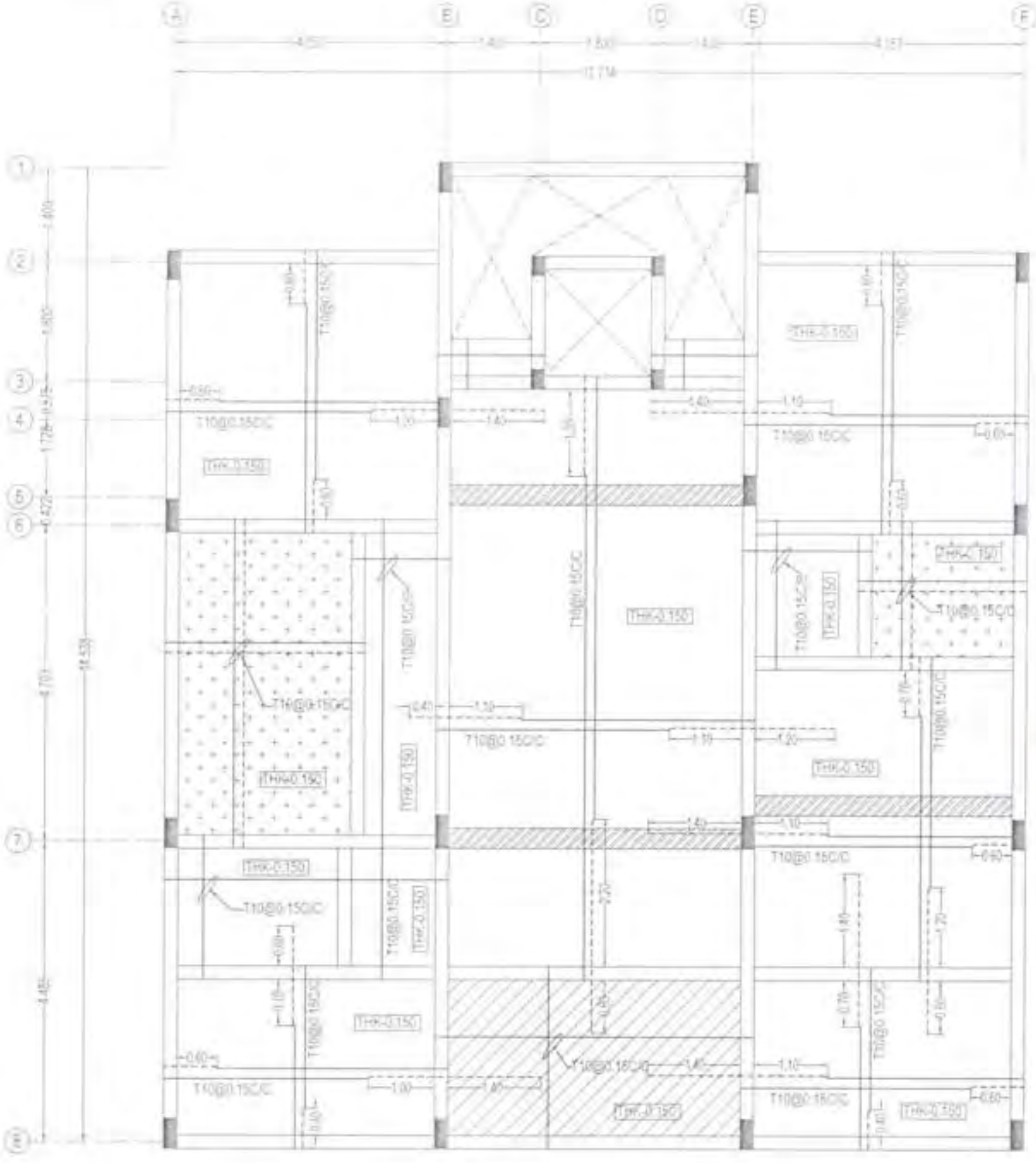
SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

GROUND FLOOR ROOF BEAM DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-08-03	10



GROUND FLOOR ROOF SLAB LAYOUT & DETAILS

LEGENDS

- - - - - TOP ROD
—— BOTTOM ROD
THK-THICKNESS

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I (SE)
M.E (Structural Engg)
Reg. No - SE/GR-I/19/12/231 (CHN)

TECHNICAL NOTES

1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS.
3. ALL DIMENSIONS SHALL BE VERIFIED AT SITE BEFORE CONSTRUCTION.
4. ANY DISCREPANCY SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
5. DO NOT SCALE DIMENSIONS FROM THIS DRAWING.
6. ALL DIMENSIONS ARE TO FACE OF CONCRETE UNLESS NOTED OTHERWISE.
7. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED.
8. CONCRETE GRADE:
   - A. FOOTING - M30
   - B. FOOTING - M30
   - C. GRADE SLAB - M30
   - D. FLOOR SLAB - M30
   - E. FLOOR SLAB - M30
9. THE ESSENTIAL FOUNDATION WORK SHALL BE DESIGNED FOR
   (i) A THE RECOMMENDED CAPACITY OF SOIL IS 400KN/SQ.M.
   THE CONTRACTOR IS RESPONSIBLE FOR ATTAINING THE CAPACITY ASSESSED BY CONSULTING ENGINEERS EXPERTS.
10. CLEAR COVER SHALL BE PROVIDED BEFORE CASTING CONCRETE.
11. THE DEPTH OF BEAMS SHALL BE INCLUDING THE SLAB THICKNESS.

LAP JOINTS FOR REINFORCEMENT BARS

(i) IN ANY CROSS SECTION OF THE REINFORCEMENT NOT MORE THAN HALF OF THE BARS SHALL BE SPLICED.

(ii) APPLICABLE LAPS SHALL BE PROVIDED AT AND ABOUT THE MID SPAN AND NOT AT SUPPORTS.

(iii) CARE IS TO BE TAKEN TO ENSURE THAT ADEQUATE LAPS ARE PROVIDED AT THE POINT OF CONTRAFLEXURE.

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY, (VILLA 4)
AT ECR, CHENNAI.

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

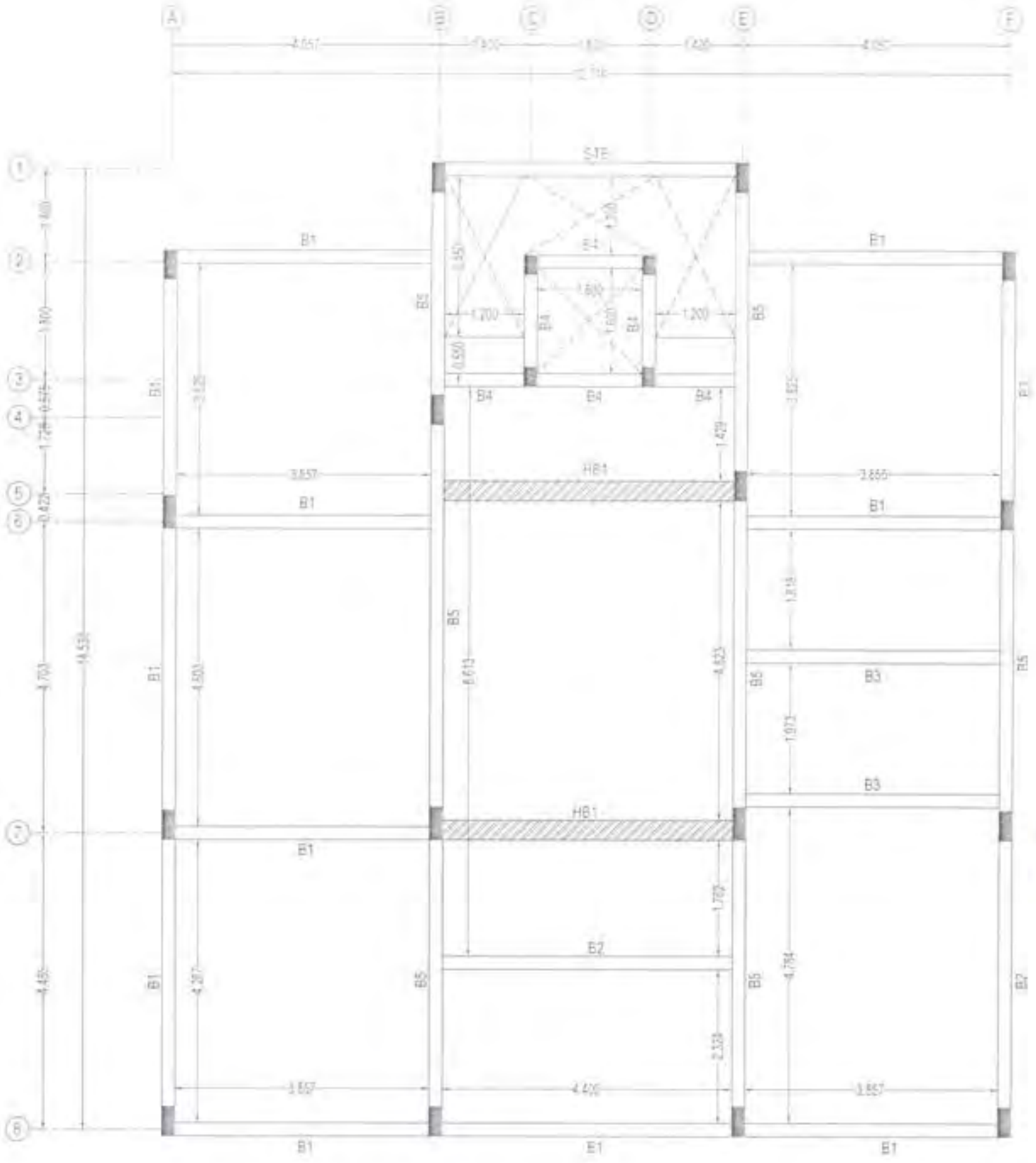
SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

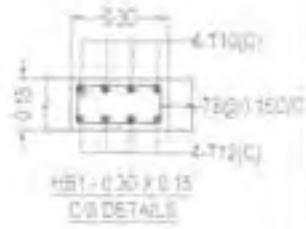
GROUND FLOOR ROOF SLAB DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-03	11



TERRACE BEAM LAYOUT

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I (VII)
M.E (Structural Engg)
Reg. No - SE/GR-I/10/12/231 (CMDA)



LEGENDS

HB - HIDDEN BEAM
OPENING

TECHNICAL NOTES

LAP JOINTS FOR REINFORCEMENT BARS

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY, (VILLA 4)
AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

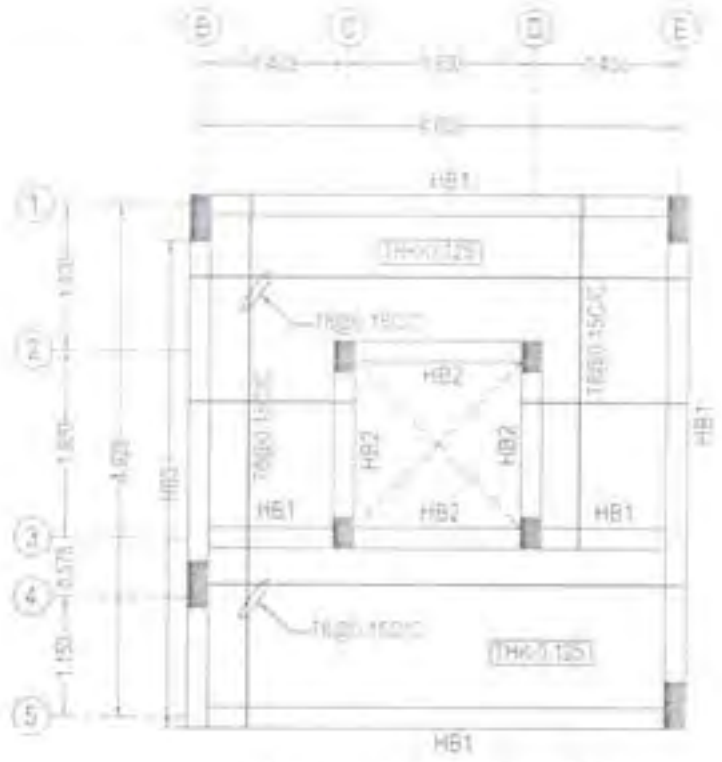
DRAWING NAME

TERRACE BEAM LAYOUT

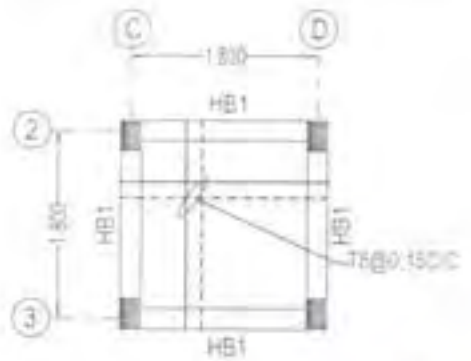
REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-05-03	12

TERRACE BEAM REINFORCEMENT SCHEDULE

BEAM MARK & SIZE	DETAIL @ LEFT SUPPORT	DETAIL @ MIDDLE	DETAIL @ RIGHT SUPPORT	DETAIL @ CANTILEVER BEAM
(0.23 X 0.45) B1	2-T16(C) 2-T12(C) T8@0.15C/C 2-T12(C) 2-T16(C)	2-T16(C) 2-T12(C) T8@0.15C/C 2-T12(C) 2-T16(C)	2-T16(C) 2-T12(C) T8@0.15C/C 2-T12(C) 2-T16(C)	
(0.23 X 0.45) B2	2-T16(C) T8@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) T8@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) T8@0.15C/C 2-T16(C) 2-T16(C)	
(0.23 X 0.45) B3	2-T16(C) T8@0.15C/C 2-T12(C) 2-T16(C)	2-T16(C) T8@0.15C/C 2-T12(C) 2-T16(C)	2-T16(C) T8@0.15C/C 2-T12(C) 2-T16(C)	
(0.23 X 0.45) B4	2-T16(C) T8@0.15C/C 2-T16(C)	2-T16(C) T8@0.15C/C 2-T16(C)	2-T16(C) T8@0.15C/C 2-T16(C)	
(0.20 X 0.50) B5	2-T16(C) 2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	

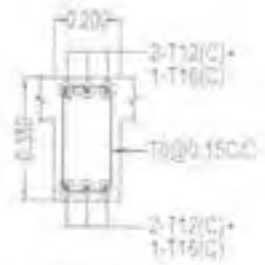


STAIRCASE HEADROOM LAYOUT & DETAILS

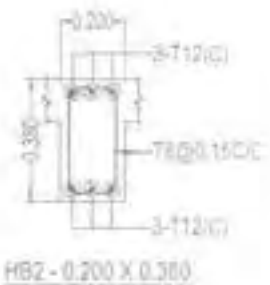


LIFT MACHINE ROOM LAYOUT & DETAILS

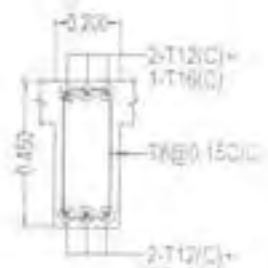
R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I
M.E (Structural Engg)
Reg. No - SE/GR-1/19/12/231 (CMDA)



HB1 - 0.200 X 0.380
C/S DETAILS



HB2 - 0.200 X 0.380
C/S DETAILS



HB3 - 0.200 X 0.450
C/S DETAILS

LEGEND

HB - HIDDEN BEAM
C - CONTINUOUS ROD
E - EXTRA ROD

TECHNICAL NOTES

LAP JOINTS FOR REINFORCEMENT BARS

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY, (VILLA 4)
AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

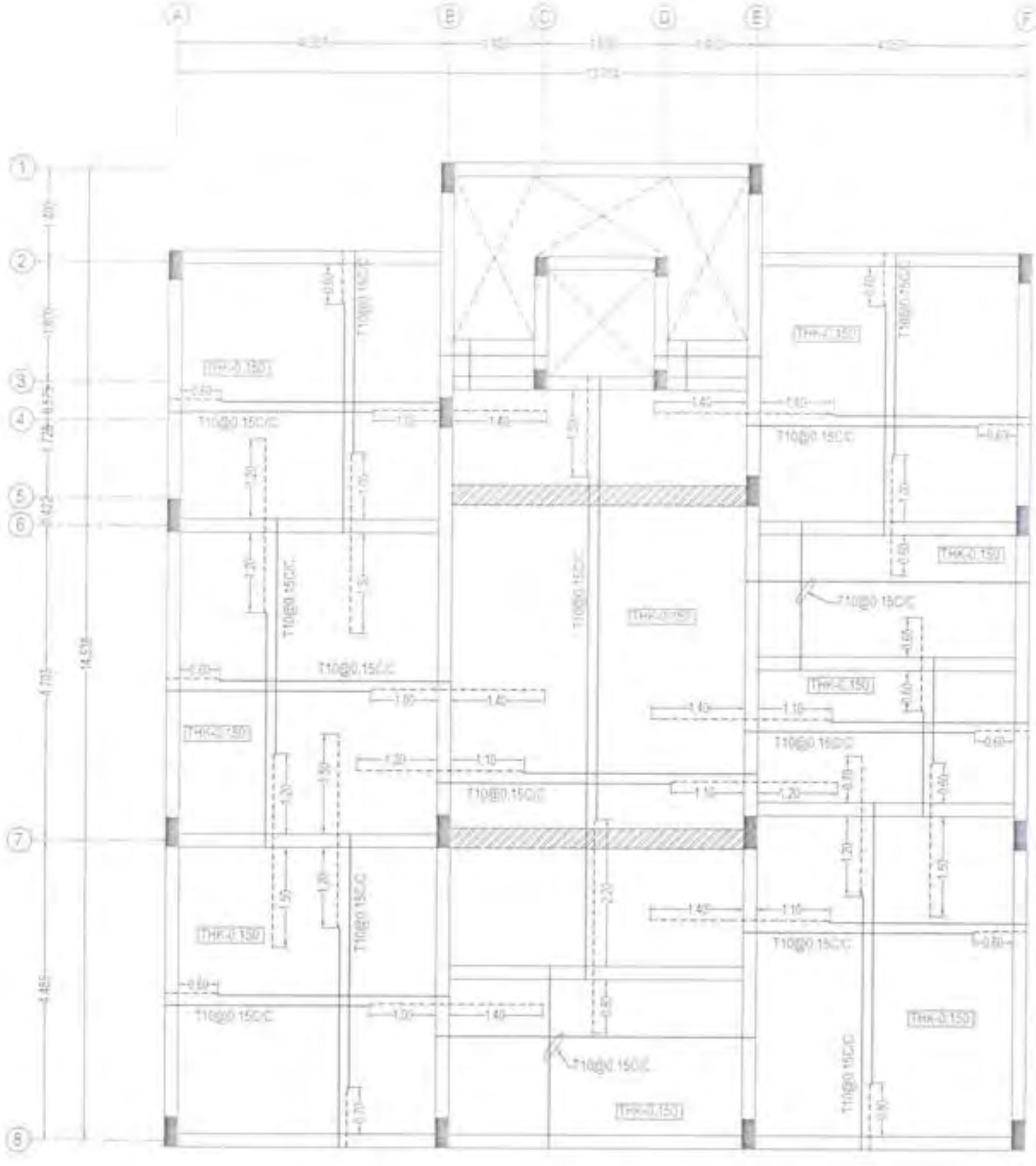
SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

TERRACE BEAM DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-03	13



TERRACE SLAB LAYOUT & DETAILS

LEGENDS:
—— : TOP ROD
—— : BOTTOM ROD
THK-THICKNESS

TECHNICAL NOTES

LAP JOINTS FOR REINFORCEMENT BARS

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY, (VILLA 4)
AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE -
M.E (Structural Engg)
Reg. No - SE/GR-1/19/12/231 (CIVIL)

STRUCTURAL CONSULTANT

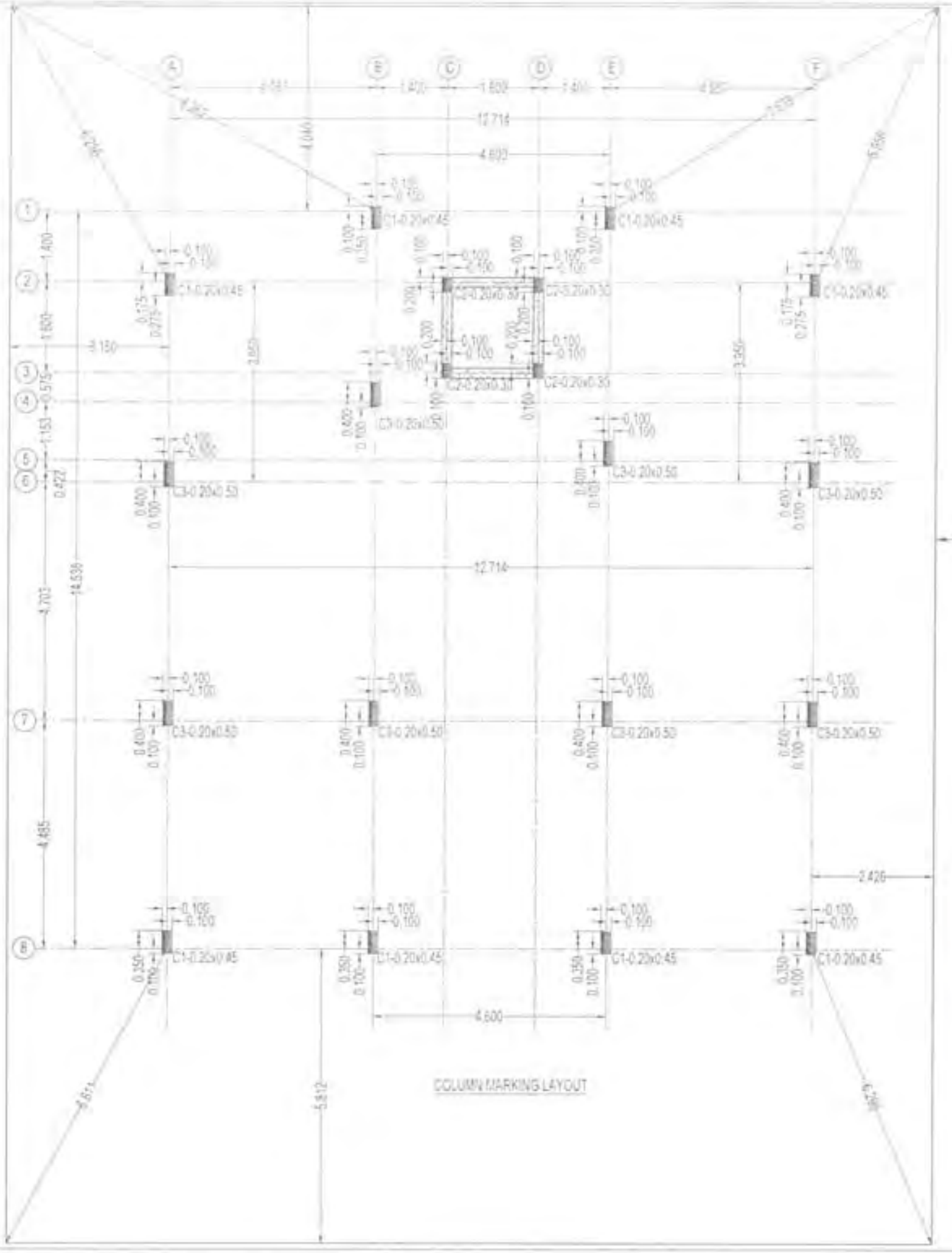
SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

TERRACE SLAB DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-03	14



LEGENDS

C - COLUMN

R, RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I
M.E (Structural Engg)
Reg. No - SE/GR-1/19/12/231

TECHNICAL NOTES

- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
- ALL LETTER DIMENSIONS TO BE ADJUSTED.
- ALL DIMENSIONS NOTED IN METRIC UNITS SHALL BE ADJUSTED TO CUBE NOTED ARROW (C).
- CONTRACTOR SHALL CHECK ALL DIMENSIONS AT SITE BEFORE EXECUTION OF WORK.
- ENGINEER IN CHARGE TO BE INFORMED IMMEDIATELY IN CASE OF ANY DISCREPANCY IN THE FIGURED DIMENSIONS AND ACTUAL SITE CONDITIONS BEFORE EXECUTION OF THE WORK.
- ENGINEER IN CHARGE SHALL APPROVE ANY CHANGE IN DESIGN AND DRAWINGS.
- IF ANY DISCREPANCY IN THE DRAWINGS OR BETWEEN DRAWINGS AND SITE CONDITIONS, IMMEDIATELY BRING TO THE NOTICE OF THE ENGINEER IN CHARGE.
- CLEAR COVER TO REINFORCEMENT:
  - COLUMNS : 40MM
  - RAFT FOUNDATION : 50MM
  - GRADE BEAMS : 40MM
  - PLINTH BEAMS : 25MM
  - LINTEL BEAMS : 20MM
- THE RAFT FOUNDATION HAS BEEN DESIGNED FOR SAFE BEARING PRESSURE OF 10T/SQ.M AS PER SOIL INVESTIGATION REPORT. THE CONTRACTOR IS RESPONSIBLE FOR ACHIEVING THE BEARING CAPACITY AS MENTIONED IN THE REPORT. IN CASE OF ANY DISCREPANCY, CONSULTING STRUCTURAL ENGINEER SHALL BE INFORMED BEFORE EXECUTION.
- EXISTING SOIL UP TO 1.5M BELOW FOUNDATION SHALL BE REMOVED BEFORE LAYING FOUNDATION.
- THE SIZE OF COLUMNS SHOWN IN THE DRAWING ARE CLEAR DIMENSIONS. THE THICKNESS OF PLASTER SHALL BE INCLUDED.

LAP JOINTS FOR REINFORCEMENT BARS

- LAP AND CROSS SECTIONS OF THE REINFORCEMENT BARS SHALL BE LAPPED.
- LAPS IN COLUMNS SHALL BE PROVIDED AT A DISTANCE OF 1/3 OF FLOOR HEIGHT FROM NOT AT SLAB LEVEL.
- LAPS IN BEAMS AND SLABS SHALL BE PROVIDED AT THE POINT OF CONTRAFLEXURE.

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY, (VILLA 5) AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

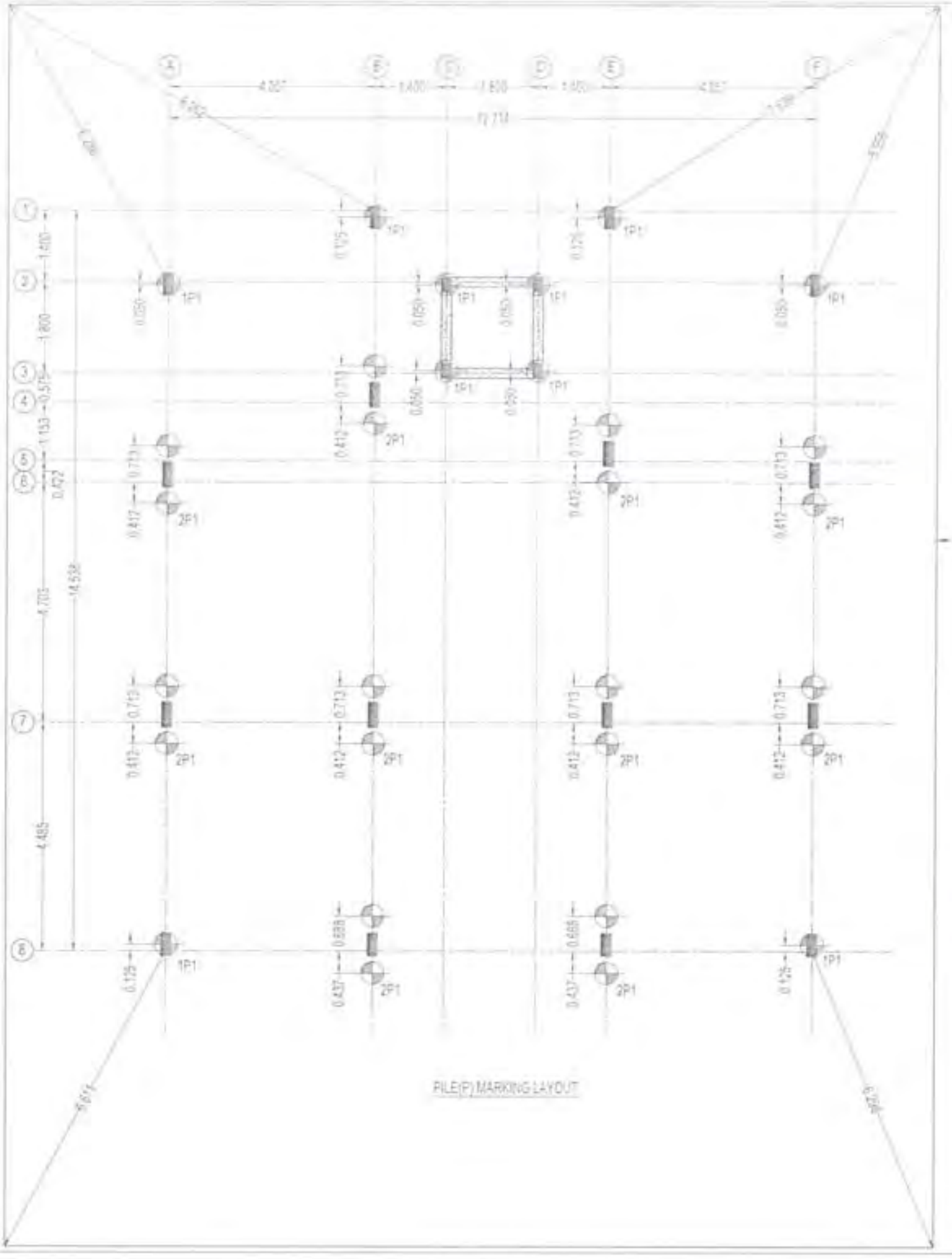
SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

COLUMN MARKING LAYOUT

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-04	01



TECHNICAL NOTES

- ALL DIMENSIONS ARE IN MILLIMETRES & RELATED DRAWINGS UNLESS SPECIFIED
- ONLY FIGURED DIMENSIONS TO BE TAKEN
- ANY DISCREPANCIES NOTED ON SITE OR DRAWINGS SHALL BE BROUGHT TO OUR NOTICE BEFORE ANY WORK IS DONE
- ANY DEVIATION FROM DRAWINGS, SPECIFICATIONS, CODES AND EXECUTION SHALL
- ENSURE PROPER CURING OF CONCRETE FOR ADEQUATE PERIOD AS PER IS 456. COMPREHENSIVE ARRANGEMENTS TO BE MADE TO MAINTAIN DESIRED CONDITIONS EVERYWHERE
- GRADE OF CONCRETE USED, CONSTRUCTION JOINTS AND ALL STRUCTURAL COMPONENTS SHALL CONFORM TO IS 456
- ALL REINFORCEMENT SHALL CONFORM TO IS 1786 GRADE Fe500 UNLESS OTHERWISE NOTED
- SAFE BEARING CAPACITY OF SOIL CONSIDERED FOR DESIGN:
  - A. COLUMN - 1 KN/M²
  - B. PILE FOUNDATION - 1 KN/M²
  - C. GRADE BEAM - 1 KN/M²
  - D. FLOOR SLAB - 1 KN/M²
  - E. FLOOR SLAB - 1 KN/M²
- THE BUILDING FOUNDATION SYSTEM DESIGNED FOR THE RECOMMENDED SAFE BEARING CAPACITY OF SOIL IS MENTIONED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING THE CAPACITY BY CONSULTING WITH SOIL EXPERTS
- LOOSE SOIL IF ANY SHALL BE REMOVED BEFORE LAYING FOUNDATION
- THE DEPTH OF BEAM SHALL BE INCLUDING THE SLAB THICKNESS

LAP JOINTS FOR REINFORCEMENT BARS

- LAP AND CROSS SECTION OF THE MEMBER NOT MORE THAN 50% OF THE BARS SHALL BE LAPPED
- LAPS IN COLUMNS SHALL BE PROVIDED AT MID HEIGHT OF FLOOR AND NOT AT SLAB LEVEL
- LAPS IN BEAMS AND SLAB SHALL BE PROVIDED AT THE POINT OF CONTRAFLEXURE

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I, (SE)
M.E (Structural Engg)
Reg. No - SE/GR-I/19/12/231 (CMDA)

LEGENDS:

P - PILE(1'-6" dia)

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY, (VILLA 5) AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

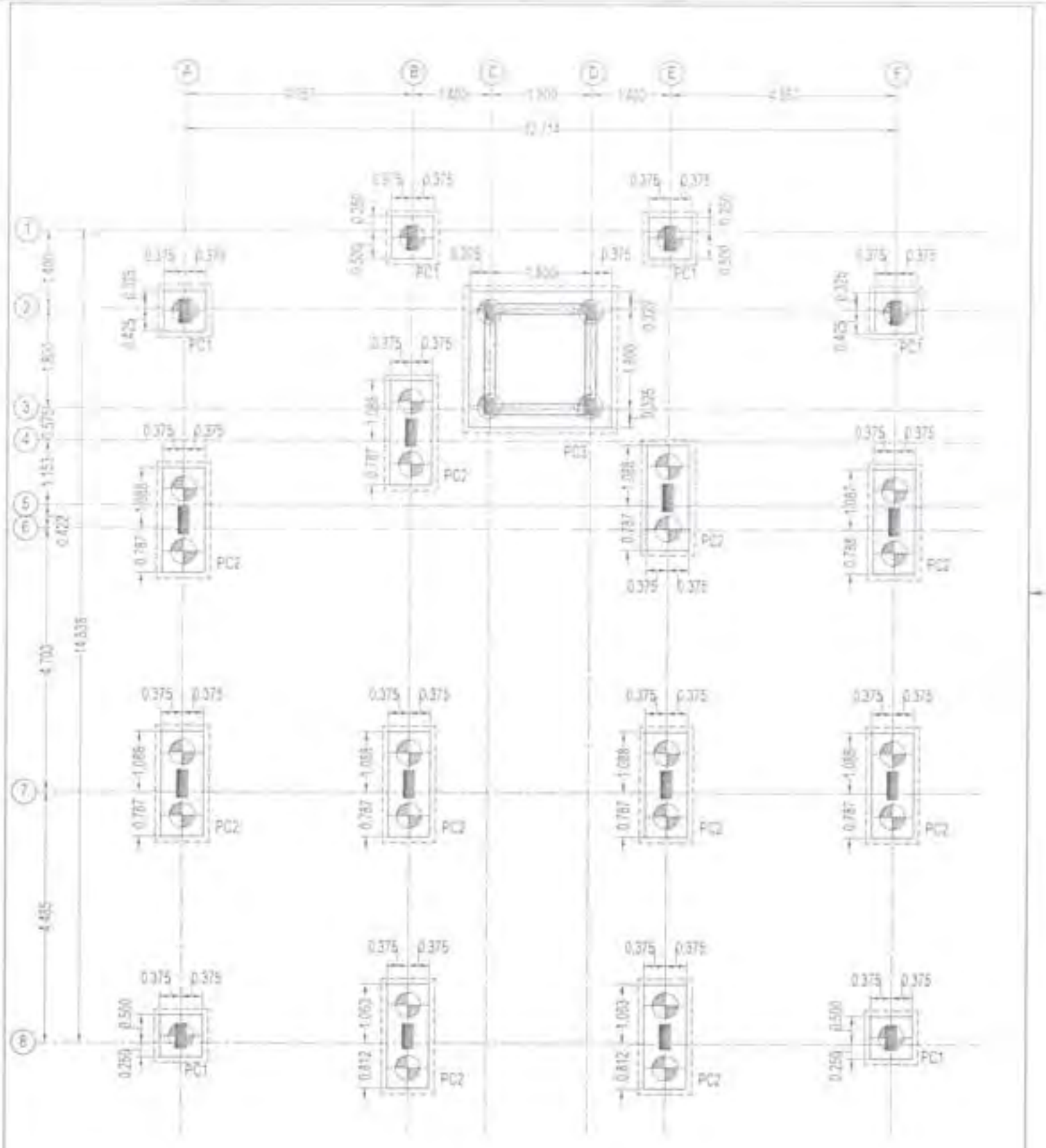
SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

PILE(P) MARKING LAYOUT

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-04	02



PILE CAP(PC) MARKING LAYOUT

R. RAVIKUMAR
M.E (Structural Engg)

LEGENDS:
PC - PILE CAP

TECHNICAL NOTES

LAP JOINTS FOR REINFORCEMENT BARS

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY, (VILLA 5)
AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

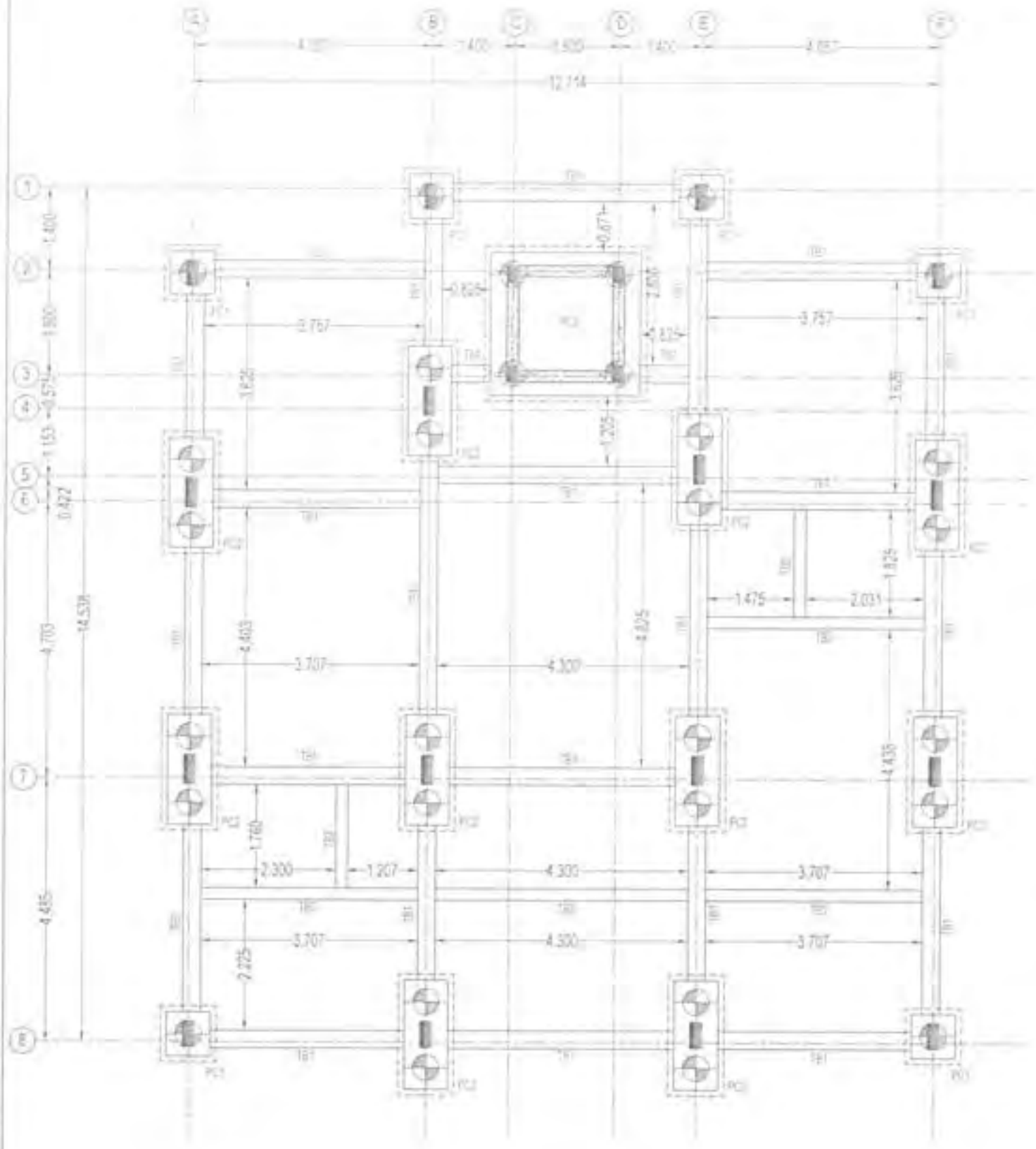
SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

PILE CAP(PC) MARKING LAYOUT

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-04	03



GRADE BEAM(GB) LAYOUT

TOP OF TIE BEAM AT +0.000m LVL

BOUNCARY WALL

R. RAVIKUMAR

STRUCTURAL ENGINEER GRADE - I

M.E (Structural Engg)

Reg. No - SE/GR-I/19/12/231 (CMDA)

LEGENDS

TB - TIE BEAM

TECHNICAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETER & ALL LEVELS IN METER UNLESS OTHERWISE SPECIFIED.
2. DO NOT SCALE DRAWING TO GET DIMENSIONS.
3. ANY DISCREPANCIES NOTICED IN THE DRAWING SHALL BE BROUGHT TO OUR NOTICE IMMEDIATELY.
4. ALL CONCRETE SHALL CONFORM TO M25 GRADE CONCRETE UNLESS OTHERWISE NOTED.
5. REINFORCEMENT SHALL CONFORM TO FE 500 GRADE HYSD BARS CONFORMING TO IS 1786 : 1985.
6. CLEAR COVER TO REINFORCEMENT:
   - A. COLUMNS = 40MM
   - B. PILE FOUNDATION = 60MM
   - C. TIE BEAM & RAFT = 40MM
   - D. FLOOR SLAB = 25MM
   - E. FLOOR SUNK = 20MM
7. THE BUILDING FOUNDATION HAS BEEN DESIGNED FOR SAFE BEARING CAPACITY OF SOIL IS 15T/SQ.M. THE CONTRACTOR IS RESPONSIBLE FOR ACHIEVING THE CAPACITY BY CARRYING OUT SOIL INVESTIGATION.
8. WOOD SCRAP ANY SHALL BE REMOVED BEFORE LAYING FOUNDATION.
9. THE DEPTH OF BEAMS SHALL BE INCLUDING THE SLAB THICKNESS.

LAP JOINTS FOR REINFORCEMENT BARS

1. LAP JOINTS FOR TENSION REINFORCEMENT BARS, THAT ONLY ONE BARS SHALL BE LAPPED.
2. LAP IN COLUMNS SHALL BE PROVIDED AT MIDNIGHT OF FLOOR AND NOT AT FLOOR LEVEL.
3. LAPS IN BEAMS AND SLABS SHALL BE PROVIDED AT THE POINT OF CONTRARY MOMENT.

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY, (VILLA 5) AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

SAFE STRUCTURAL CONSULTANCY

Safe

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

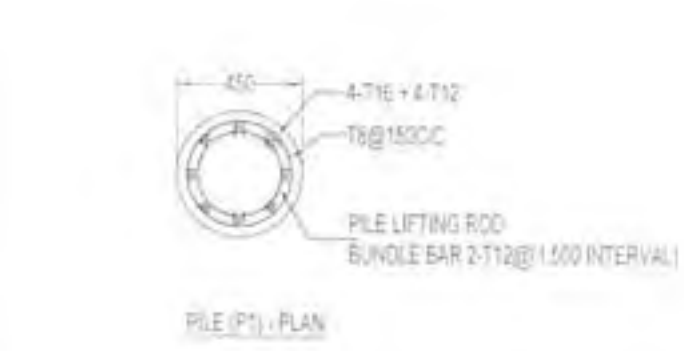
DRAWING NAME

GRADE BEAM(GB) LAYOUT

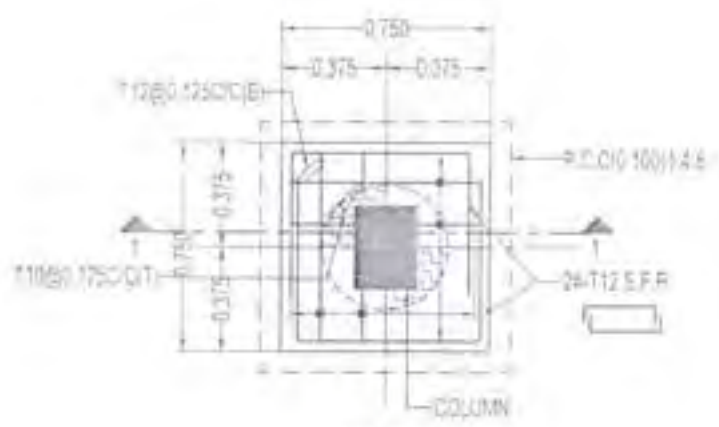
REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-05-04	04

COLUMN REINFORCEMENT SCHEDULE

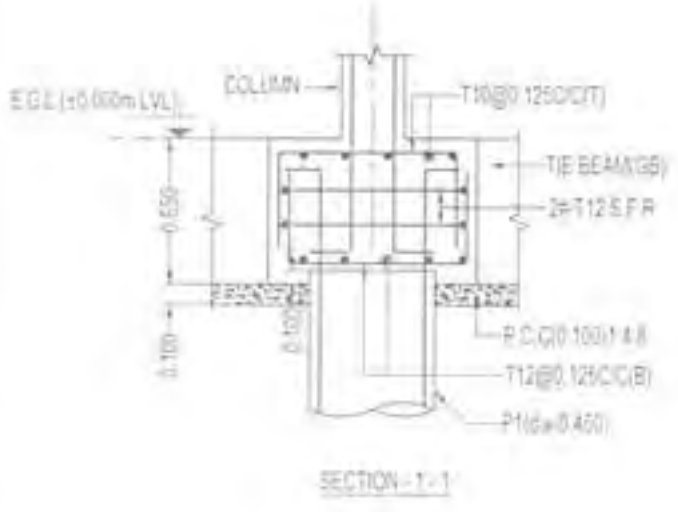
TERRACE (B+G)			
TO	H=T8@0.125C/C	H=T8@0.125C/C	H=T8@0.125C/C
	H=T8@0.175C/C	H=T8@0.175C/C	H=T8@0.175C/C
FOOTING MARKING @ T16 @ T12	0.450, 0.200	0.300, 0.200	0.350, 0.200
	6-T16	4-T16 + 2-T12	10-T16
COLUMN MARKED	C1	C2	C3



PILE (P1) - PLAN



PC1 - PLAN

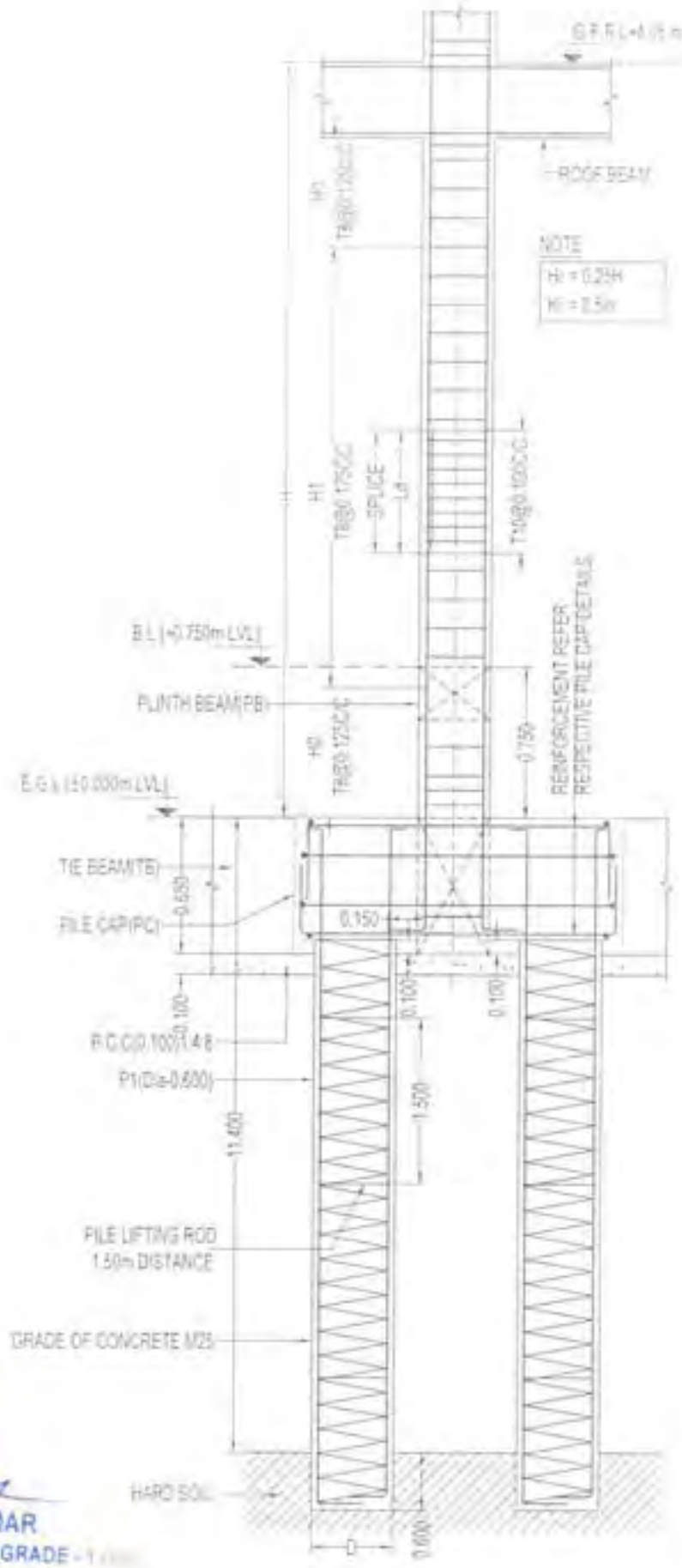


SECTION - 1 - 1

** S.F.R - SIDE FACE REINFORCEMENT

LEGENDS

B.L - BASEMENT LEVEL
G.F.R.L - GROUND FLOOR ROOF LEVEL
E.G.L - EXISTING GROUND LEVEL



TYPICAL COLUMN & PILE CONFINING DETAILS

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Reg. No - SE/GR-I/19/12/231

TECHNICAL NOTES

1. ALL DIMENSIONS ARE INDICATED IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
2. ONLY WRITTEN DIMENSIONS TO BE FOLLOWED.
3. ANY DISCREPANCIES NOTED IN THE DRAWINGS SHALL BE BROUGHT TO THE NOTICE IMMEDIATELY.
4. ALL LEVELS SHALL CHECK WITH SITE CONDITIONS BEFORE EXECUTION WORK.
5. CHANGES IN DIMENSIONS DURING SITE WORK SHALL NOT BE MADE WITHOUT CONSULTING THE ENGINEER.
6. GRADE OF CONCRETE AND STEEL USED SHALL CONFORM TO THE RELEVANT IS CODES.
7. IF OBSTACLES ARE ENCOUNTERED DURING EXCAVATION, THE SAME SHALL BE REMOVED CONFORMING TO IS 1786 - 1985.
8. LAP LENGTH FOR REINFORCEMENT:
   a. COLUMN - 40Ø
   b. PILE FOUNDATION - 50Ø
   c. BEAM - 40Ø
   d. FOOTING - 40Ø
   e. FLOOR SLAB - 30Ø
9. THE BEARING PRESSURE HAS BEEN CONSIDERED AS THE REQUIRED PILE CAPACITY OF SOIL IS GIVEN. THE CONTRACTOR IS RESPONSIBLE FOR A TRAINING AND VERIFICATION BY CONSULTING WITH SOIL EXPERTS.
10. LOOSE SOIL IF ANY SHALL BE REMOVED DESTROY AS PER FOUNDATION.
11. THE DEPTH OF BEAM SHALL BE INCLUDING THE SLAB THICKNESS.

LAP JOINTS FOR REINFORCEMENT BARS

LAP AND CROSS ACTIONS "UNDERSTANDING" WORK SHALL BE AS PER THE PART SHALL BE LAPPED.

i) LAP IN COLUMNS SHALL BE PROVIDED AT FOOTING OR FLOOR LEVEL NOT AT SLAB LEVEL.

ii) LAP IN BEAMS AND SLABS SHALL BE PROVIDED AT THE MIDDLE OF CONTINUOUS BEAMS.

CLIENT

.....

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY, (VILLA 5) AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

SAFE STRUCTURAL CONSULTANCY

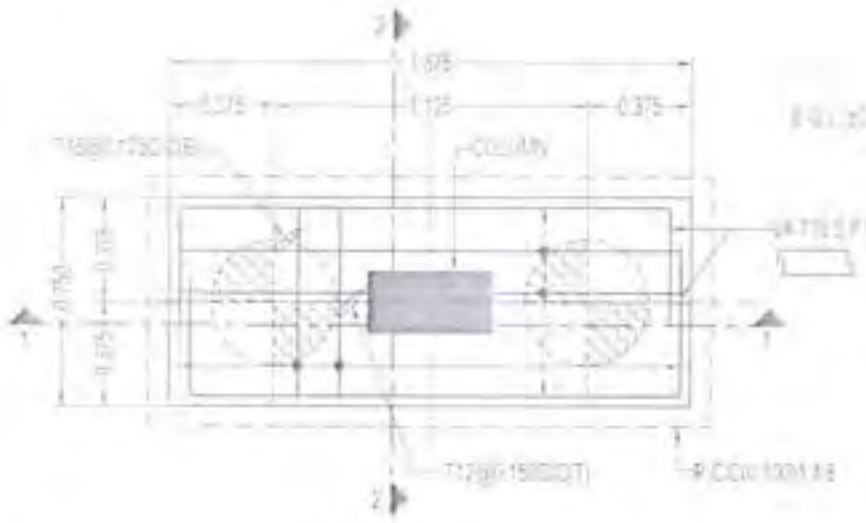
Safe

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

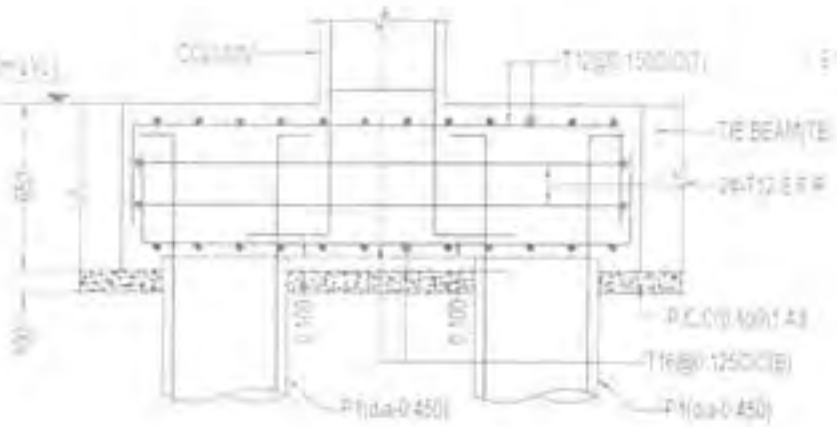
DRAWING NAME

COLUMN , PILE & PILE CAP DETAILS

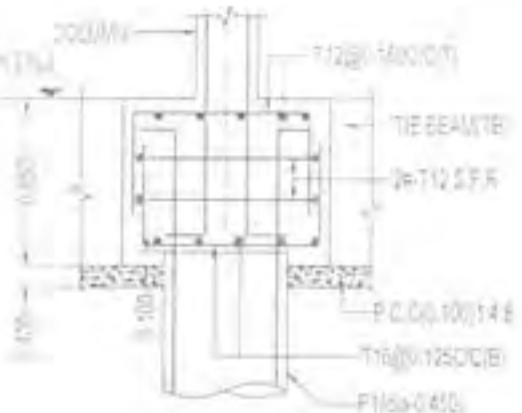
REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-05-04	05



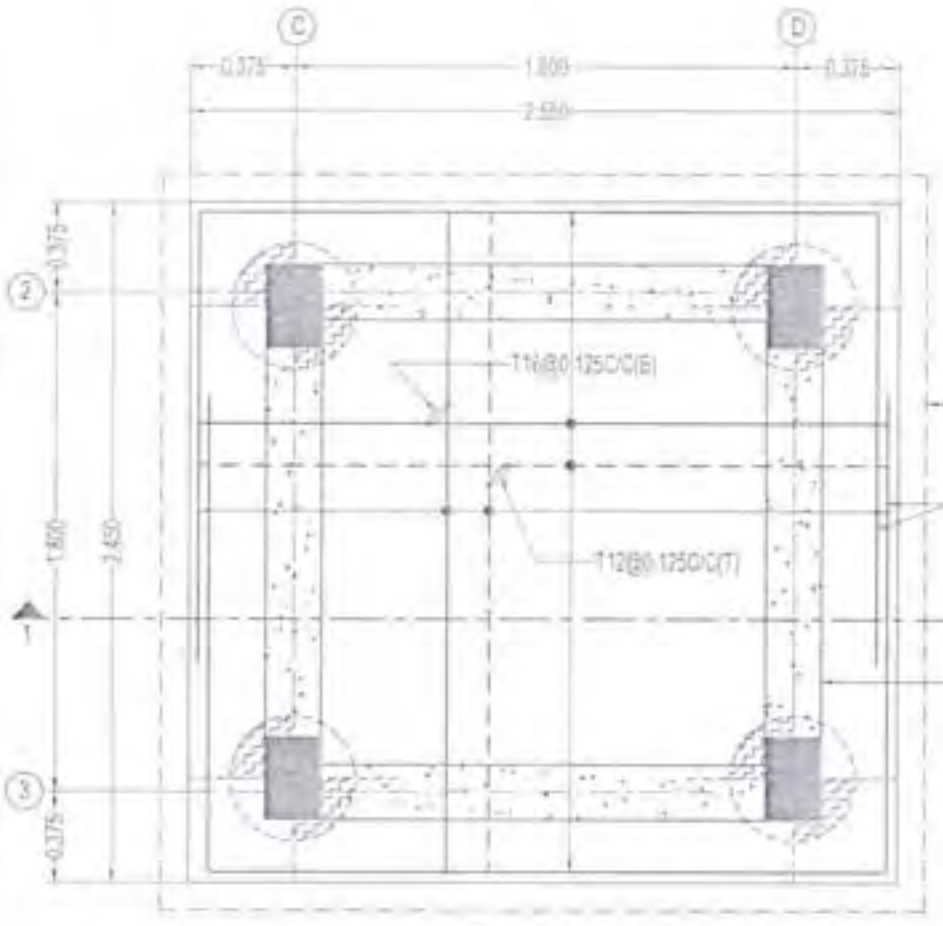
PC2 - PLAN



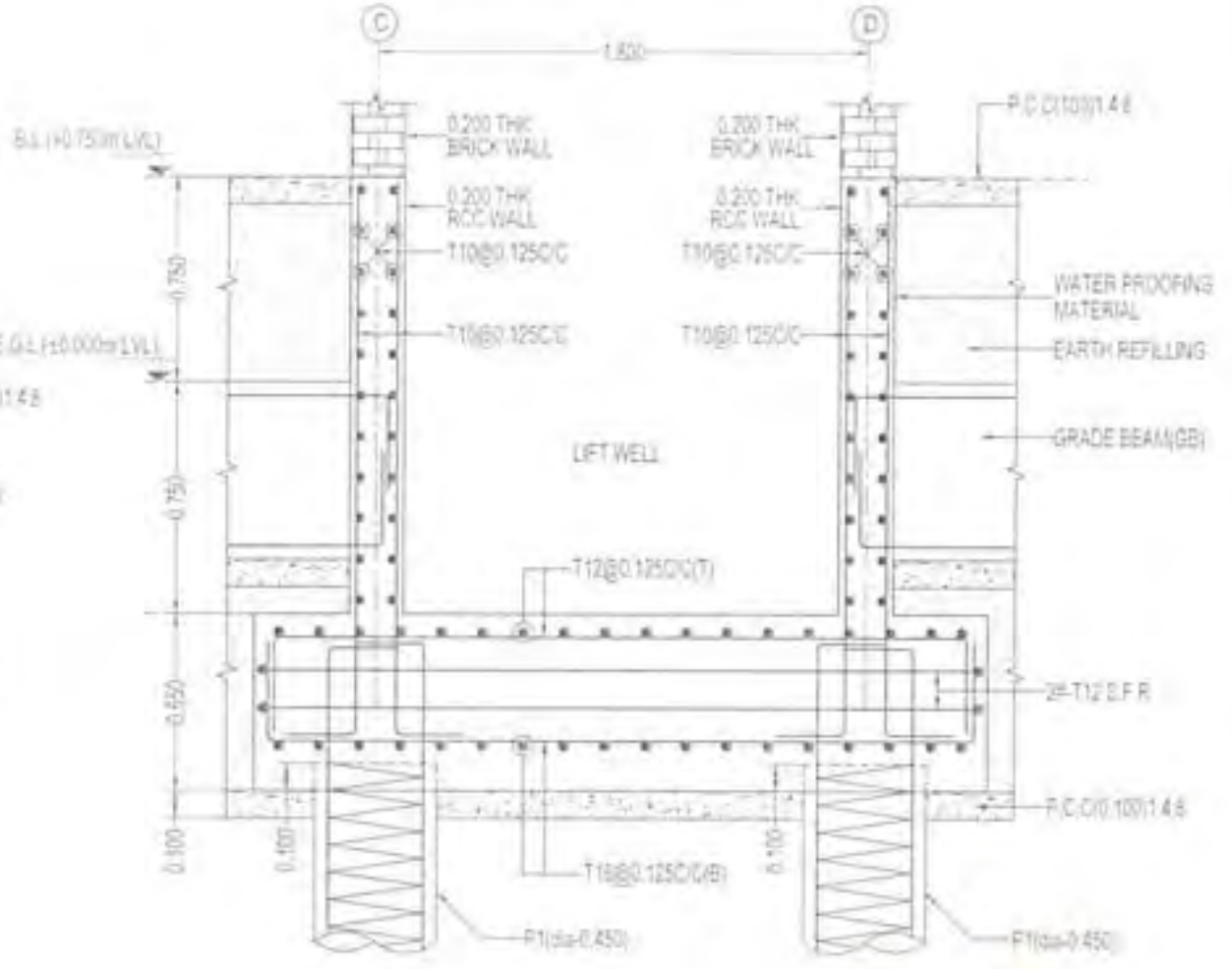
SECTION - 1 - 1



SECTION - 2 - 2



PC3 - PLAN
LIFT PIT DETAILS



SECTION - 1 - 1
LIFT WELL DETAILS

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TECHNICAL NOTES

LAP JOINTS FOR REINFORCEMENT BARS

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY, (VILLA 5) AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

PILE CAP SECTION DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-04	06

TIE BEAM (TB) REINFORCEMENT SCHEDULE

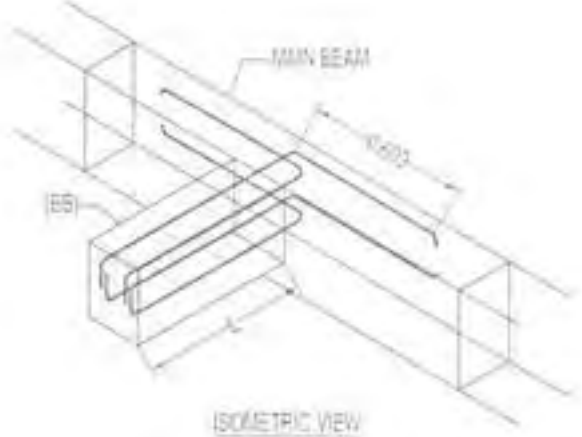
BEAM SIZE & NO	DETAIL @ LEFT SUPPORT	DETAIL @ MIDDLE	DETAIL @ RIGHT SUPPORT
(0.230X0.750)	3-T16(C)	3-T16(C)	3-T16(C)
TB1	T8@0.150C/C 2-T12(C) S.F.R.E.F P.C.C 3-T16(C)	T8@0.150C/C 2-T12(C) S.F.R.E.F P.C.C 3-T16(C)	T8@0.150C/C 2-T12(C) S.F.R.E.F P.C.C 3-T16(C)
(0.230X0.750)	2-T16(C)	2-T16(C)	2-T16(C)
TB2	T8@0.150C/C 2-T12(C) S.F.R.E.F P.C.C 2-T16(C)	T8@0.150C/C 2-T12(C) S.F.R.E.F P.C.C 2-T16(C)	T8@0.150C/C 2-T12(C) S.F.R.E.F P.C.C 2-T16(C)

TYPICAL C/S TIE BEAM(TB) & PLINTH BEAM(PB) DETAILS

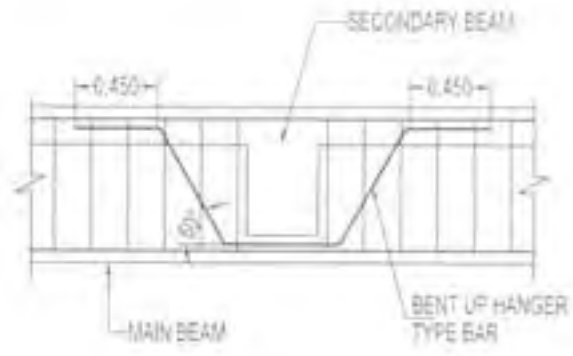
TYPICAL ANCHORAGE OF BEAM BARS IN AN EXTERNAL JOINT
**L/46 TIMES DIA OF BAR

LEGENDS

E.G.L - EXISTING GROUND LEVEL
T.B - TIE BEAM
P.B - PLINTH BEAM
B.L - BASEMENT LEVEL



ISOMETRIC VIEW
OF (TYP) BRACKET BEAM REST ON BEAM DETAIL



WHERE CROSS BEAM, SHEAR ROD SHOULD BE PROVIDED AT 2-T16

S.F.R - SIDE FACE REINFORCEMENT
E.F - EACH FACE

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I
M.E (Structural Engg)
Reg. No - SE/GR-1/19/12/231 (CMDA)

TECHNICAL NOTES

1. ALL DIMENSIONS ARE IN CENTIMETERS & REDUCED TO SCALE.
2. ALL LEVELS ARE IN METERS.
3. ALL DIMENSIONS SHOULD BE CHECKED AT SITE BEFORE CONSTRUCTION.
4. ANY DISCREPANCIES NOTED IN THE DRAWINGS SHOULD BE BROUGHT TO THE NOTICE OF THE ARCHITECT IMMEDIATELY.
5. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS.
6. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED.
7. ALL CONCRETE WORKS SHALL BE IN ACCORDANCE WITH IS 456-2000.
8. GRADE OF CONCRETE USED FOR DIFFERENT ELEMENTS ARE AS FOLLOWS:
   a. COLUMNS - M 40
   b. PILE FOUNDATION - M 40
   c. TIE BEAM - M 40
   d. PLINTH BEAM - M 40
   e. FLOOR SLAB - M 40
   f. ROOF SLAB - M 40
9. THE BUILDING FOUNDATION HAS BEEN DESIGNED FOR 200 KN/SQ.M SAFE BEARING CAPACITY OF SOIL AT 1.5M BELOW EXISTING GROUND LEVEL. THE CONTRACTOR IS RESPONSIBLE FOR ASCERTAINING THE SAFE BEARING CAPACITY OF SOIL BY CONSULTING WITH SOIL EXPERTS.
10. LOOSE SOIL IF ANY SHALL BE REMOVED BEFORE CONSTRUCTION.
11. THE DEPTH OF BEAM SHALL BE INCLUDING THE SLAB THICKNESS.

LAP JOINTS FOR REINFORCEMENT BARS

1. LAP JOINTS SECTION OF THE MEMBER SHALL BE AS FAR AS POSSIBLE FROM THE MAXIMUM BENDING MOMENT LOCATIONS. THE LAP JOINTS SHALL BE STAGGERED.
2. LAP FOR COLUMNS SHALL BE PROVIDED AT MID HEIGHT OF FLOOR AND NOT AT FLOOR LEVEL.
3. LAP IN BEAMS AND SLABS SHALL BE PROVIDED AT 1/3RD SPAN OF CENTRE OF FLEXURE.

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY, (VILLA 5) AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

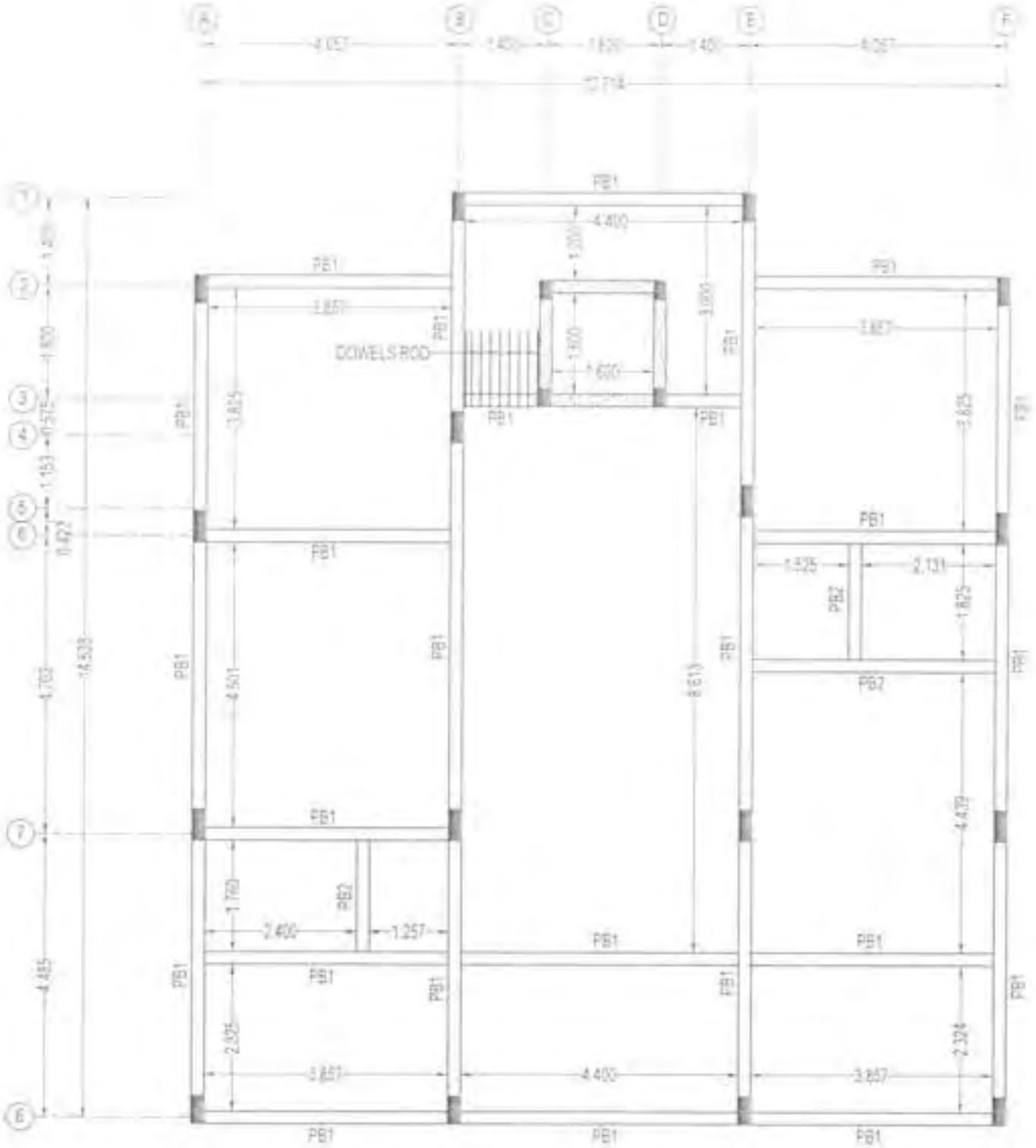
SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

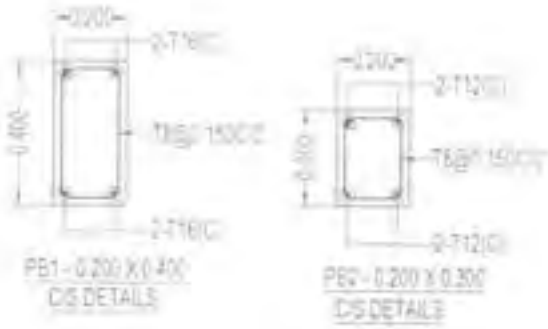
TIE BEAM (TB) REINFORCEMENT DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-05-04	07



PLINTH BEAM(PB) LAYOUT

TOP OF PLINTH BEAM AT +0.750m LVL



LEGENDS

PB - PLINTH BEAM

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I
M.E (Structural Engg)
Reg. No - SE/GR-1/19/12/231 (Chennai)

TECHNICAL NOTES

1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED.
2. ALL DIMENSIONS SHALL BE VERIFIED AT SITE BEFORE EXECUTION OF WORKS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE NOTICE OF THE STRUCTURAL CONSULTANT BEFORE PROCEEDING WITH THE WORK.
3. ALL DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL OTHER ARCHITECTURAL AND STRUCTURAL DRAWINGS.
4. ANY DISCREPANCIES OR OMISSIONS IN THE DRAWINGS SHALL BE REPORTED TO THE STRUCTURAL CONSULTANT FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
5. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE RELEVANT INDIAN STANDARD CODES OF PRACTICE (LATEST EDITION).
6. CLEAR COVER TO MAIN REINFORCEMENT:
   - a) COLUMNS : 40 mm
   - b) RAFT FOUNDATION : 75 mm
   - c) GRADE BEAM : 40 mm
   - d) FLOOR BEAM : 25 mm
   - e) FLOOR SLAB : 20 mm
7. THE BUILDING FOUNDATION HAS BEEN DESIGNED FOR (1) THE REQUIRED NET BEARING CAPACITY OF SOIL AS GIVEN IN THE SOIL INVESTIGATION REPORT. THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING THE SOIL INVESTIGATION AS PER CLAUSE 6.2.1 OF IS 1904 BY SOIL EXPERTS.
8. LOOSE SOIL IF ANY SHALL BE REMOVED BEFORE LAYING FOUNDATION.
9. THE DEPTH OF BEAM SHALL BE INCLUSIVE OF SLAB THICKNESS.

LAP JOINTS FOR REINFORCEMENT BARS

1. AT ANY GIVEN SECTION, THE MAXIMUM NO OF MORE THAN 50% OF THE BARS SHALL BE LAPPED.
2. LAPS IN COLUMNS SHALL BE PROVIDED AT THE MID HEIGHT OF FLOOR AND NOT AT FLOOR LEVEL.
3. LAPS IN BEAMS ARE TO BE AVOIDED AT THE POINT OF CONTRAFLEXURE.

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY, (VILLA 5) AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

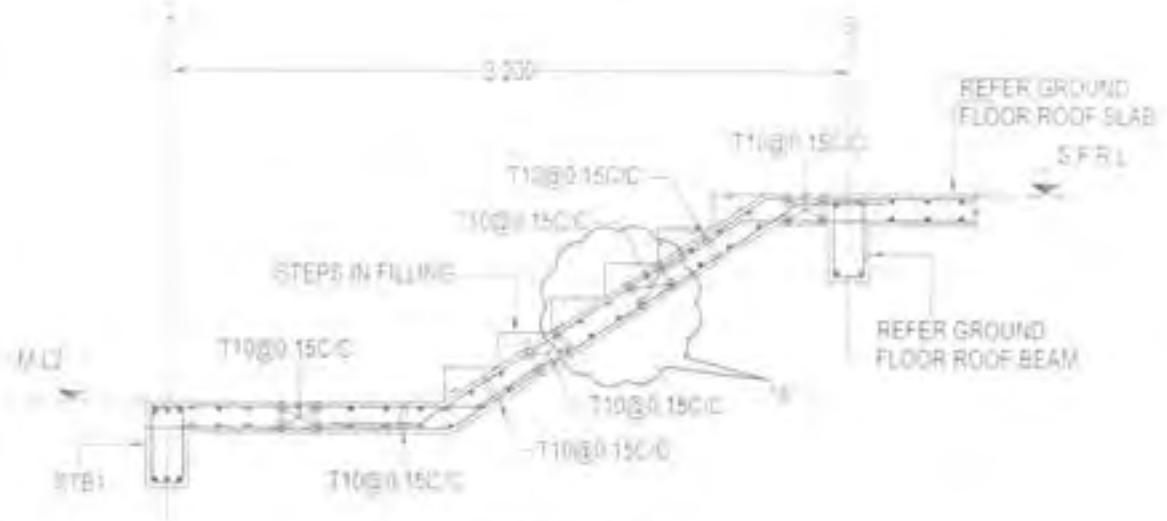
SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

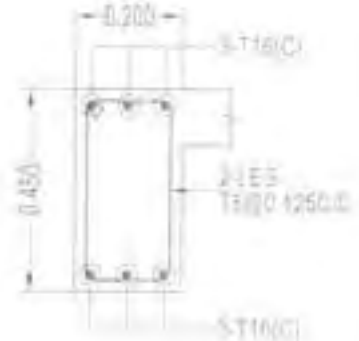
PLINTH BEAM(PB) LAYOUT & DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-04	08



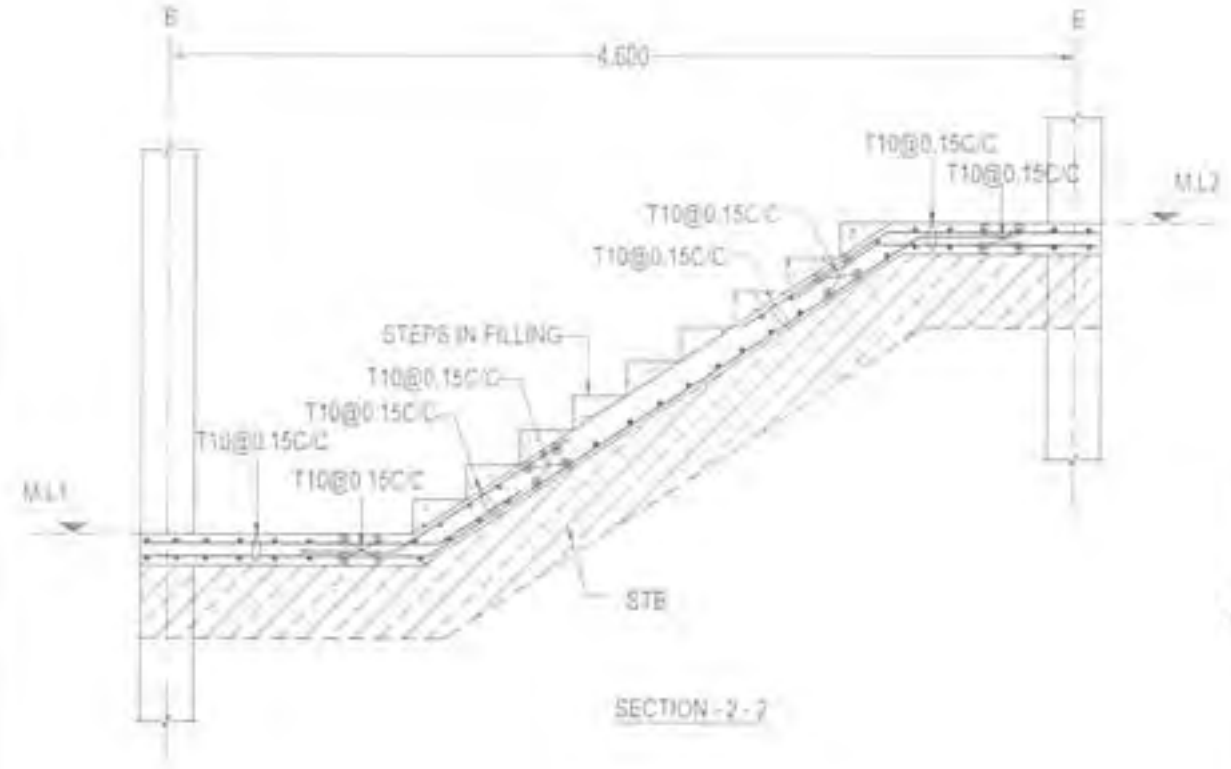
SECTION - 3 - 3

DETAIL - 'A'

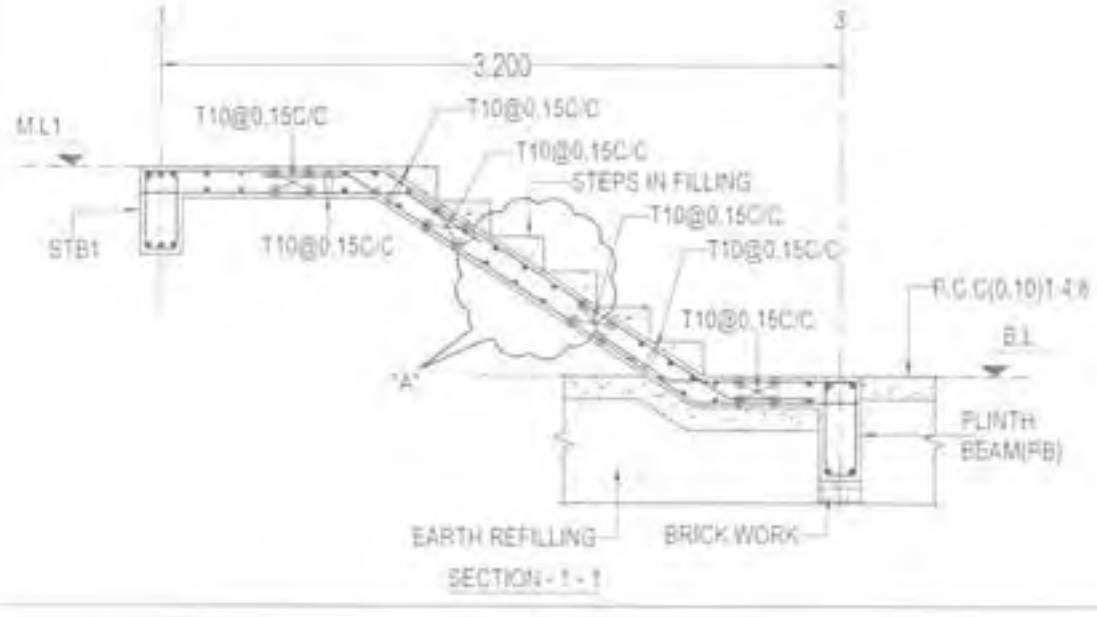


ST5 - 0.230 X 0.450
C/S DETAILS

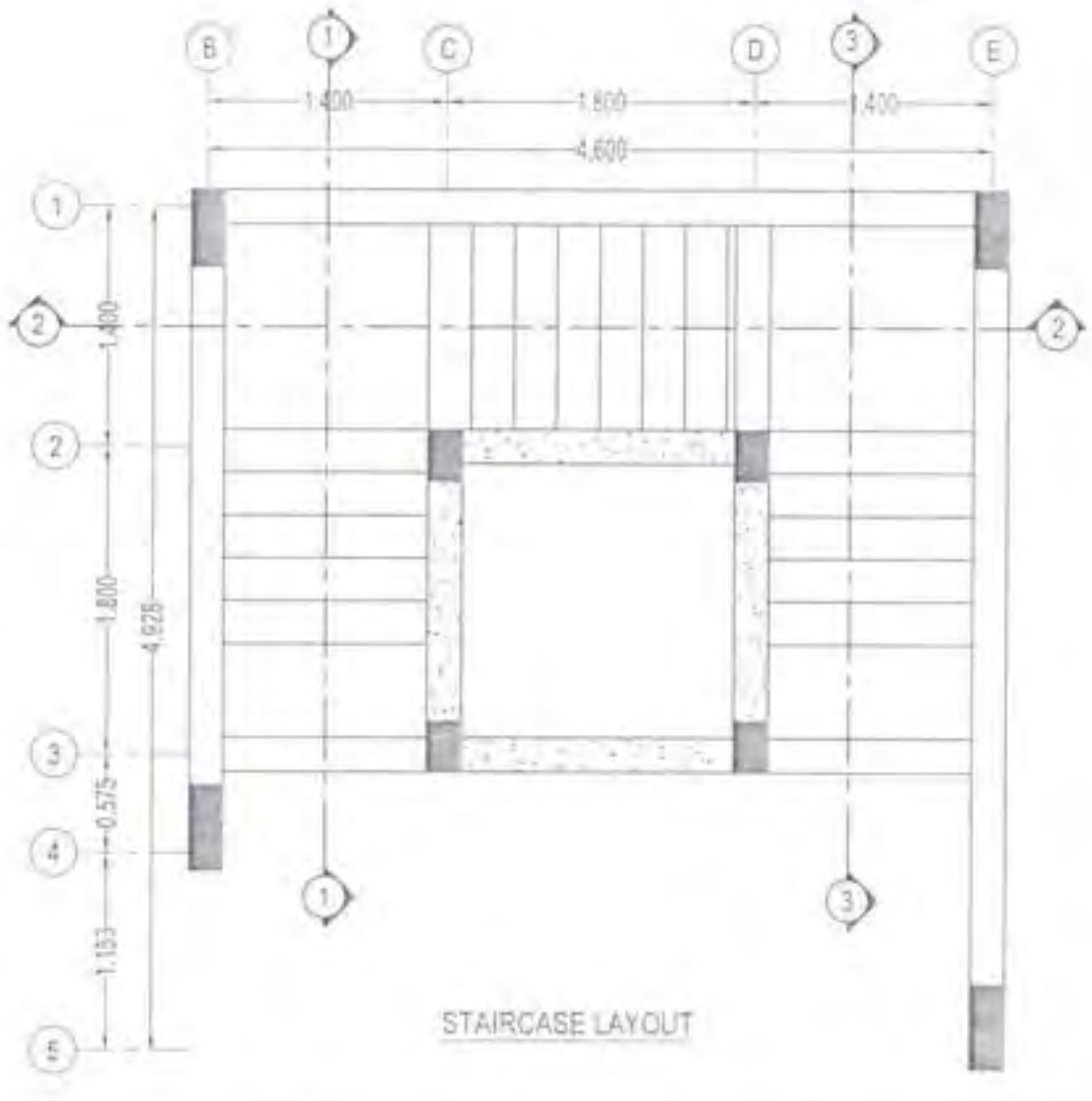
** NO OF STEPS & LEVELS REFER LATEST ARCHITECTURAL DRAWING



SECTION - 2 - 2



SECTION - 1 - 1



STAIRCASE LAYOUT

RK
V.MUKUMAR
DIRECTOR GRADE - I
(Structural Engg)
SE/GR-I/19/12/231 (C-604)

TECHNICAL NOTES

1. ALL DIMENSIONS ARE IN MM & LEVELS IN METERS UNLESS OTHERWISE STATED.
2. DO NOT SCALE DRAWINGS.
3. ANY DISCREPANCY SHALL BE BROUGHT TO THE NOTICE OF THE ENGINEER BEFORE EXECUTION OF WORKS.
4. ALL DIMENSIONS SHALL BE CHECKED AT SITE BEFORE EXECUTION OF WORKS.
5. ANY DEVIATION FROM THE DRAWINGS SHALL BE APPROVED BY THE ENGINEER.
6. ALL LEVELS ARE TO BE CONFIRMED AT SITE BEFORE CONSTRUCTION.
7. ALL CONCRETE WORKS SHALL BE CARRIED OUT AS PER IS 456:2000.
8. CLEAR COVER TO REINFORCEMENT:
   - a) FOOTINGS : 40MM
   - b) PCC FOUNDATION : 75MM
   - c) GRADE BEAM : 40MM
   - d) FLOOR BEAM : 25MM
   - e) FLOOR SLAB : 20MM
   - f) ROOF SLAB : 20MM
9. THE SAFE BEARING CAPACITY OF SOIL IS ASSUMED AS 20 T/SQ.M. THE CONTRACTOR IS TO ARRANGE FOR A TRIAL PIT TO CONFIRM THE CAPACITY BEFORE COMMENCEMENT OF FOUNDATION WORKS.
10. LOOSE SOIL IF ANY SHALL BE REMOVED BEFORE LAYING FOUNDATION.
11. THE PLINTH HEIGHT SHALL BE MAINTAINED AS PER THE PLAN.

LAP JOINTS FOR REINFORCEMENT BARS

i) LAP AND SPLICE DETAILS OF THE REINFORCEMENT BARS SHALL BE AS PER IS 456:2000.

ii) LAPS IN COLUMNS SHALL BE PROVIDED AT MID HEIGHT OF FLOOR AND NOT AT SLAB LEVEL.

iii) LAPS IN BEAMS AND SLABS SHALL BE PROVIDED AT THE MIDDLE OF CONTINUOUS SPAN.

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY, (VILLA 5) AT ECR, CHENNAI.

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

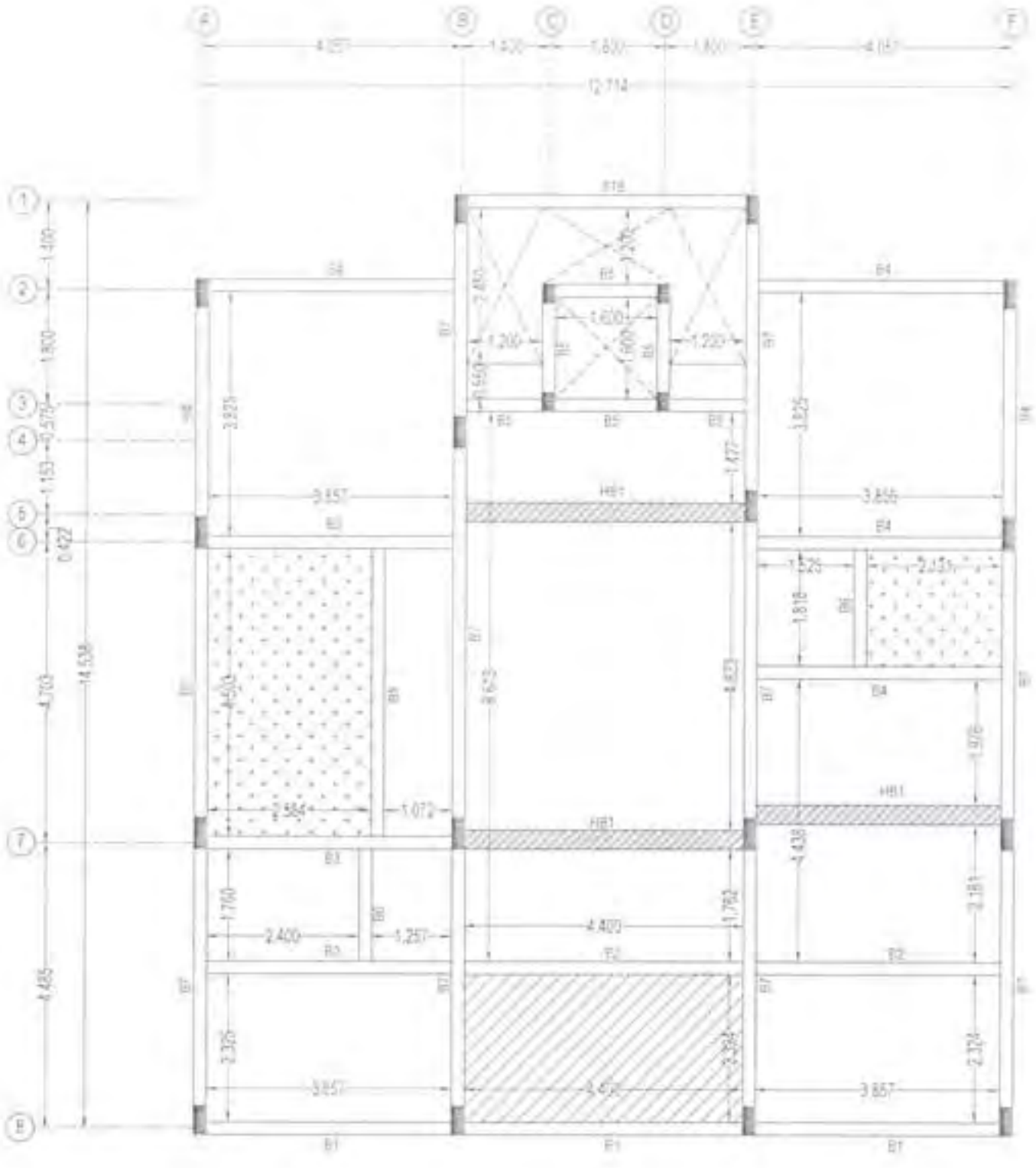
SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

STAIRCASE LAYOUT & DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-04	08A



GROUND FLOOR ROOF BEAM LAYOUT

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I
M.E (Structural Engg)
Reg. No - SE/GR-I/19/12/231

LEGENDS:
- TOILET SUNKEN
- BALCONY SUNKEN
- HB - HIDDEN BEAM
- OPENING

TECHNICAL NOTES

- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
- ALL DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE VERIFIED BY THE CONTRACTOR BEFORE THE COMMENCEMENT OF WORK.
- ANY DISCREPANCIES OR OMISSIONS IN THE DRAWINGS SHALL BE REPORTED TO THE ARCHITECT/ENGINEER FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
- THE CONTRACTOR SHALL CHECK ALL DIMENSIONS AT SITE BEFORE FABRICATION OR CONSTRUCTION. NO SCALING OF DRAWINGS SHALL BE DONE.
- THE CONTRACTOR SHALL ENSURE THAT CONSTRUCTION LOADS DO NOT EXCEED THE DESIGN LOADS OF THE STRUCTURE AT ANY STAGE. TEMPORARY SUPPORTS SHALL BE PROVIDED WHERE NECESSARY.
- ALL MATERIALS SHALL CONFORM TO RELEVANT INDIAN STANDARDS (IS CODES) UNLESS OTHERWISE SPECIFIED.
- CONCRETE GRADES TO BE ADOPTED AS PER:
  - A. COLUMNS - M30
  - B. PILE FOUNDATION - M30
  - C. GRADE BEAM - M30
  - D. FLOOR BEAM - M30
  - E. FLOOR SLAB - M30
- THE BUILDING FOUNDATION HAS BEEN DESIGNED FOR SAFE BEARING CAPACITY OF SOIL AS PER SOIL INVESTIGATION REPORT. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE BEARING CAPACITY OF SOIL AT SITE BEFORE CASTING OF FOUNDATION. ANY DEVIATION SHALL BE REPORTED TO THE CONSULTANT IMMEDIATELY.
- FOOTING SUBGRADE SHALL BE PROTECTED FROM WATER AND DISTURBANCE BEFORE PLACING CONCRETE. ANY LOOSE OR SOFT MATERIAL SHALL BE REMOVED AND REPLACED WITH LEAN CONCRETE.
- THE DEPTH OF BEAMS SHALL BE INCLUSIVE OF SLAB THICKNESS.

LAP JOINTS FOR REINFORCEMENT BARS

- AT ANY GIVEN SECTION, THE ADDITIONAL REINFORCEMENT PROVIDED BY LAP BARS SHALL NOT EXCEED 50% OF THE TOTAL REINFORCEMENT AT THAT SECTION.
- LAPS IN COLUMNS SHALL BE PROVIDED AT MID HEIGHT OF FLOOR AND NOT AT SLAB LEVEL.
- LAPS IN BEAMS AND SLABS SHALL BE STAGGERED AT THE ADJACENT OR CONTINUOUS BARS.

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY, (VILLA 5) AT ECR, CHENNAI.

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

SAFE STRUCTURAL CONSULTANCY

Safe

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

GROUND FLOOR ROOF BEAM LAYOUT

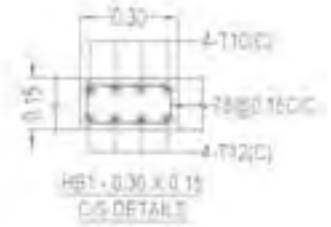
REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-04	09

GROUND FLOOR ROOF BEAM REINFORCEMENT SCHEDULE

BEAM SIZE & NO	DETAIL @ LEFT SUPPORT	DETAIL @ MIDDLE	DETAIL @ RIGHT SUPPORT	DETAIL @ CANTILEVER BEAM
(0.20 X 0.45) B1	2-T16(C) 2-T12(C) T8@0.125C/C 2-T12(C) 2-T16(C)	2-T16(C) 2-T12(C) T8@0.125C/C 2-T12(C) 2-T16(C)	2-T16(C) 2-T12(C) T8@0.125C/C 2-T12(C) 2-T16(C)	------
(0.20 X 0.45) B2	2-T16(C) 2-T16(C) T8@0.125C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T16(C) T8@0.125C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T16(C) T8@0.125C/C 2-T16(C) 2-T16(C)	------
(0.20 X 0.50) B3	2-T16(C) 2-T12(C) T10@0.10C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T12(C) T10@0.10C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T12(C) T10@0.10C/C 2-T16(C) 2-T16(C)	------
(0.20 X 0.45) B4	2-T16(C) T8@0.150C/C 2-T12(C) 2-T16(C)	2-T16(C) T8@0.150C/C 2-T12(C) 2-T16(C)	2-T16(C) T8@0.150C/C 2-T12(C) 2-T16(C)	------
(0.20 X 0.45) B5	2-T16(C) T8@0.150C/C 2-T16(C)	2-T16(C) T8@0.150C/C 2-T10(C)	2-T16(C) T8@0.150C/C 2-T16(C)	------
(0.20 X 0.45) B6	2-T12(C) T8@0.150C/C 2-T16(C)	2-T12(C) T8@0.150C/C 2-T16(C)	2-T12(C) T8@0.150C/C 2-T16(C)	------
(0.20 X 0.50) B7	2-T16(C) 2-T16(C) T10@0.150C/C 2-T16(C) 2-T16(C)	2-T16(C) 3-T16(C) T10@0.150C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T16(C) T10@0.150C/C 2-T16(C) 2-T16(C)	------

GROUND FLOOR ROOF BEAM REINFORCEMENT SCHEDULE

BEAM SIZE & NO	DETAIL @ LEFT SUPPORT	DETAIL @ MIDDLE	DETAIL @ RIGHT SUPPORT	DETAIL @ CANTILEVER BEAM
(0.20 X 0.45) B8	2-T16(C) T8@0.150C/C 2-T16(C) 2-T16(C)	2-T16(C) T8@0.150C/C 2-T16(C) 2-T16(C)	2-T16(C) T8@0.150C/C 2-T16(C) 2-T16(C)	------
(0.20 X 0.45) STE	2-T16(C) T8@0.150C/C 2-T16(C)	2-T16(C) T8@0.150C/C 2-T16(C)	2-T16(C) T8@0.150C/C 2-T16(C)	------



HB1 - 0.30 X 0.15
C/S DETAILS

TYPICAL TOILET SUNKEN SLAB DETAILS

LEGEND:

HB - HIDDEN BEAM
C - CONTINUOUS ROD
E - EXTRA ROD

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I
M.E (Structural Engg)
Reg. No - SE/GR-1/19/12/231

TECHNICAL NOTES

1. ALL DIMENSIONS ARE IN CM UNLESS OTHERWISE NOTED.
2. ONLY WRITTEN DIMENSIONS TO BE FOLLOWED.
3. ANY DISCREPANCIES NOTED ON THESE DRAWINGS SHALL BE BROUGHT TO OUR NOTICE IMMEDIATELY.
4. ALL STRUCTURES SHALL COMPLY WITH [illegible] CODE.
5. ENGINEER IS NOT RESPONSIBLE FOR ANY CONSTRUCTION DONE BY OTHERS.
6. ENGINEER SHALL BE INFORMED IN ADVANCE FOR ANY CHANGES.
7. GRADE OF CONCRETE USED FOR VARIOUS MEMBERS SHALL BE AS FOLLOWS:
   A. COLUMNS : M30
   B. RCC FOUNDATION : M30
   C. GRADE BEAM : M30
   D. PLINTH BEAM : M30
   E. FLOOR SLAB : M30
8. THE BUILDING FOUNDATION HAS BEEN DESIGNED FOR SAFE BEARING CAPACITY OF SOIL IS XX KN/M2. THE CONTRACTOR IS RESPONSIBLE FOR ATTAINING THE CAPACITY AS MENTIONED BY CONSULTING GEOTECHNICAL EXPERTS.
9. LOOSE SOIL IF ANY SHALL BE REMOVED BEFORE LAYING FOUNDATION.
10. THE DEPTH OF BEAMS SHALL BE EXCLUDING THE SLAB THICKNESS.

LAP JOINTS FOR REINFORCEMENT BARS

1. LAP JOINTS SHALL BE STAGGERED AND NOT MORE THAN 50% OF THE BARS SHALL BE LAPPED.
2. LAP FOR COLUMNS SHALL BE PROVIDED AT MID HEIGHT OF FLOOR AND NOT AT SLAB LEVEL.
3. LAPS IN REINFORCEMENT BARS SHALL BE PROVIDED AT THE RISK OF CONTRACTORS.

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY, (VILLA 5) AT ECR, CHENNAI.

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

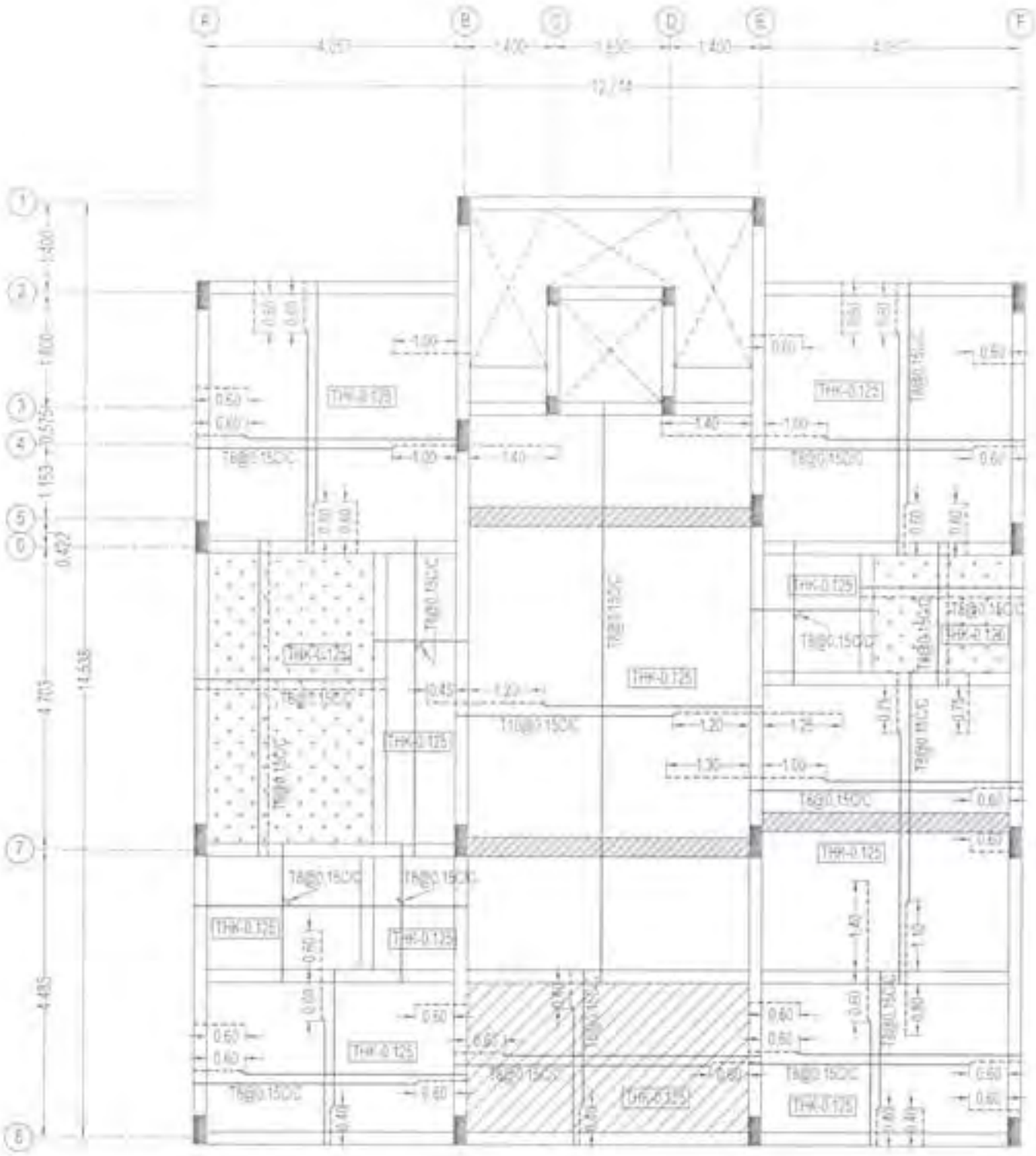
SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

GROUND FLOOR ROOF BEAM DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-04	10



GROUND FLOOR ROOF SLAB LAYOUT & DETAILS

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I
M.E (Structural Engg)
Reg. No - SE/GR-1/19/12/231 (CYIA)

LEGEND

TOP R/D
BOTTOM R/D
THK - THICKNESS

TECHNICAL NOTES

1. ALL DIMENSIONS ARE IN CENTIMETERS UNLESS OTHERWISE NOTED.
2. ALL LINTEL DIMENSIONS TO BE INCLUDED.
3. ANY DISCREPANCIES IN THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
4. CONTRACTOR SHALL CHECK ALL DIMENSIONS ON SITE BEFORE COMMENCING ANY WORK.
5. ENGINEER'S APPROVAL MUST BE OBTAINED FOR ANY CHANGES OR DEVIATIONS FROM THE APPROVED DRAWINGS.
6. ALL WORKMANSHIP SHALL CONFORM TO THE HIGHEST STANDARDS OF QUALITY AND CRAFTSMANSHIP.
7. IF ANY DISCREPANCIES ARE FOUND BETWEEN THE DRAWINGS AND SITE CONDITIONS, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
8. ALL MATERIALS SHALL BE OF APPROVED QUALITY AND SHALL BE TESTED AS PER RELEVANT STANDARDS.
9. THE SAFE BEARING CAPACITY OF SOIL IS ASSUMED AS 15 T/M2 AT 1.5M DEPTH. THE CONTRACTOR IS RESPONSIBLE FOR ATTAINING THIS BEARING CAPACITY BY CONSULTING WITH SOIL EXPERTS.
10. ALL DIMENSIONS ARE APPROXIMATE AND SHALL BE VERIFIED BEFORE LAYING FOUNDATION.
11. THE DEPTH OF FOUNDATION SHALL BE INCLUDING THE SLAB THICKNESS.

LAP JOINTS FOR REINFORCEMENT BARS

1. LAP SHALL BE PROVIDED AT THE MIDDLE THIRD OF THE SPAN FOR TOP BARS AND AT THE END THIRD OF THE SPAN FOR BOTTOM BARS.
2. LAP IN COLUMNS SHALL BE PROVIDED AT MID HEIGHT OF FLOOR AND NOT AT SLAB LEVEL.
3. LAP LENGTH AS PER IS 456 CODE SHALL BE PROVIDED AT THE POINT OF CONTINUITY.

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY (VILLA 5) AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

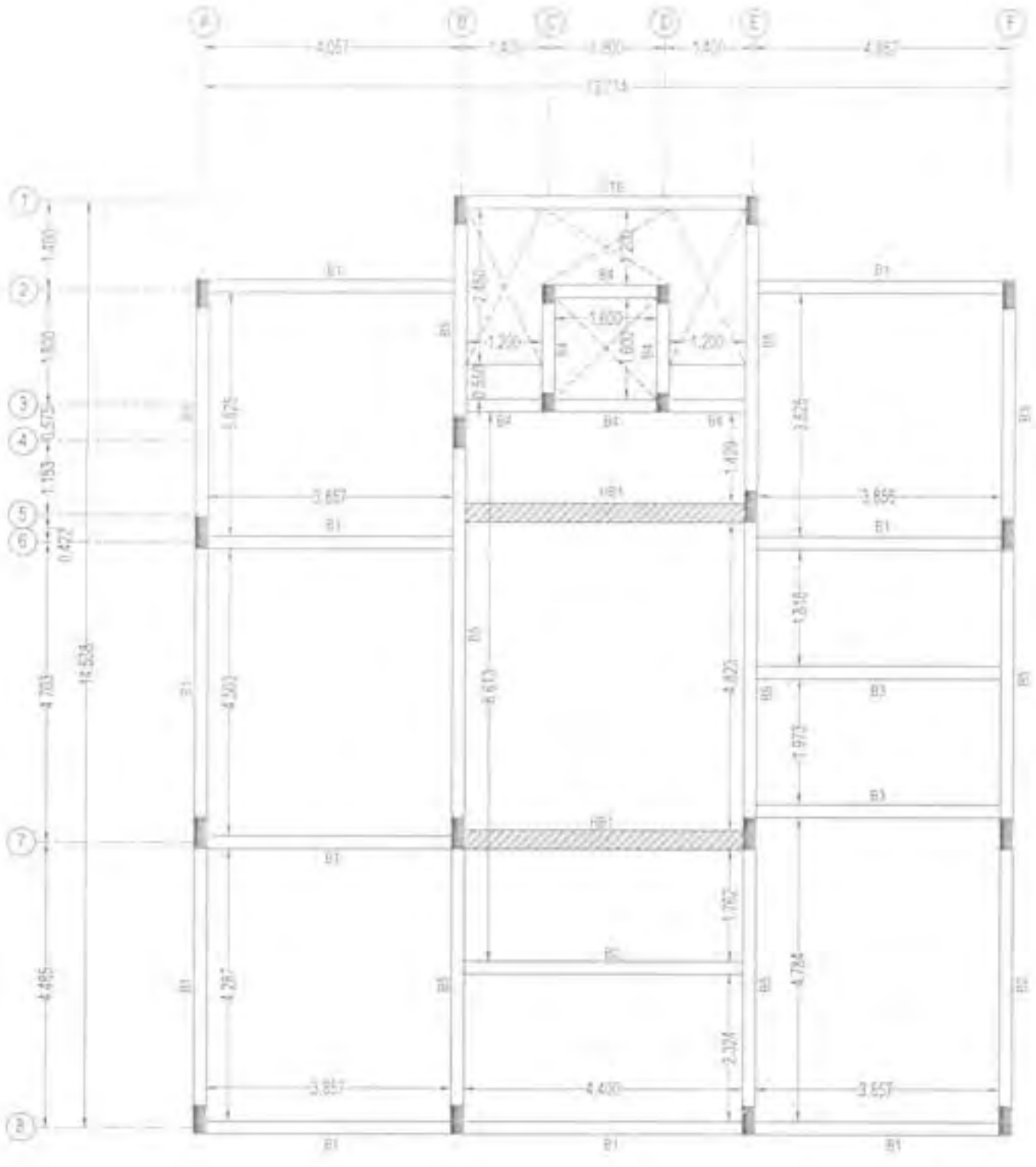
SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

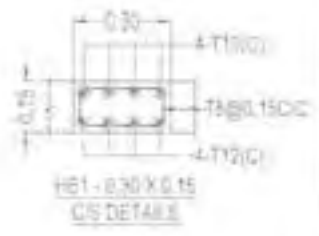
GROUND FLOOR ROOF SLAB DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-04	11



TERRACE BEAM LAYOUT

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I (I/C)
M.E (Structural Engg)
Reg. No : SE/GR-1/19/13/231 (I/C)



HB1 - 0.30 X 0.15
C/S DETAILS

LEGENDS:
HB - HIDDEN BEAM
OPENING

TECHNICAL NOTES

LAP JOINTS FOR REINFORCEMENT BARS

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY, (VILLA 5)
AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

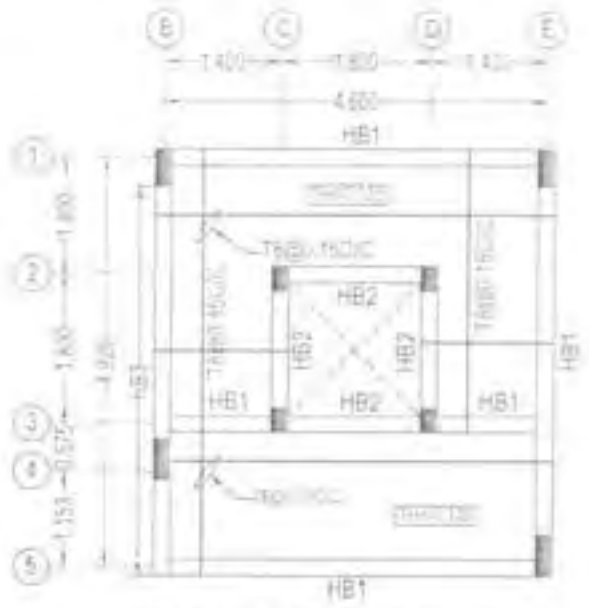
DRAWING NAME

TERRACE BEAM LAYOUT

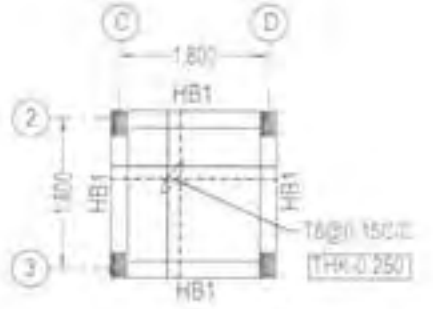
REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-04	12

TERRACE BEAM REINFORCEMENT SCHEDULE

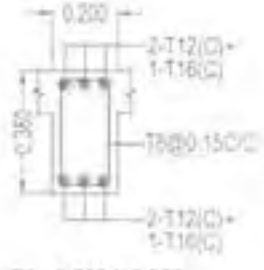
BEAM SIZE & NO.	DETAIL @ LEFT SUPPORT	DETAIL @ MIDDLE	DETAIL @ RIGHT SUPPORT	DETAIL @ CANTILEVER BEAM
(0.20 X 0.45) B1	2-T16(C) 2-T12(C) T8@0.15C/C 2-T12(C) 2-T16(C)	2-T16(C) 2-T12(C) T8@0.15C/C 2-T12(C) 2-T16(C)	2-T16(C) 2-T12(C) T8@0.15C/C 2-T12(C) 2-T16(C)	
(0.20 X 0.45) B2	2-T16(C) T8@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) T8@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) T8@0.15C/C 2-T16(C) 2-T16(C)	
(0.20 X 0.45) B3	2-T16(C) T8@0.15C/C 2-T12(C) 2-T16(C)	2-T16(C) T8@0.15C/C 2-T12(C) 2-T16(C)	2-T16(C) T8@0.15C/C 2-T12(C) 2-T16(C)	
(0.20 X 0.45) B4	2-T16(C) T8@0.15C/C 2-T16(C)	2-T16(C) T8@0.15C/C 2-T16(C)	2-T16(C) T8@0.15C/C 2-T16(C)	
(0.20 X 0.50) B5	2-T16(C) 2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	



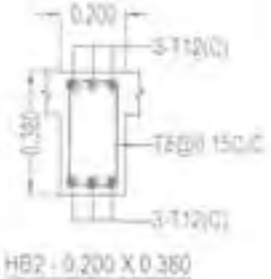
STAIRCASE HEADROOM LAYOUT & DETAILS



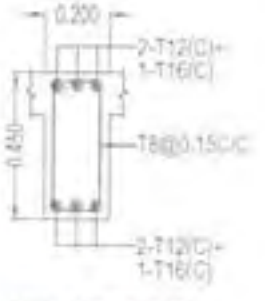
STAIRCASE HEADROOM LAYOUT & DETAILS



HB1 - 0.200 X 0.380
C/S DETAILS



HB2 - 0.200 X 0.380
C/S DETAILS



HB3 - 0.200 X 0.450
C/S DETAILS

LEGEND

HB - HIDDEN BEAM
C - CONTINUOUS ROD
E - EXTRA ROD

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I
M.E (Structural Engg)
Reg. No - SE/GR-I/19/12/231 (CHN)

TECHNICAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES & ALL LEVELS ARE IN METRES UNLESS OTHERWISE STATED.
2. FOUR SHORT BARS WITH EQUAL TO THE TWO BARS OF SMALLEST DIAMETER OF MAIN BARS ARE PROVIDED AT CORNERS OF COLUMNS.
3. ALL TIES SHALL BE PROVIDED AT 135° HOOKS WITH 10 DIA EXTENSION AT FREE ENDS.
4. ALL DIMENSIONS SHOWN IN FOUNDATION PLAN ARE CENTRE TO CENTRE OF COLUMNS UNLESS OTHERWISE NOTED.
5. ALL CONCRETE SHALL BE OF GRADE M30 UNLESS OTHERWISE NOTED.
6. CONCRETE MIX DESIGN SHALL BE DONE AS PER IS 10262 : 2019 AND IS 456 : 2000.
7. THE MINIMUM CONCRETE GRADE FOR VARIOUS ELEMENTS SHALL BE AS FOLLOWS:
   - RCC COLUMNS - M 30 N/mm²
   - RCC FOUNDATION - M 30 N/mm²
   - RCC SLAB - M 30 N/mm²
   - RCC BEAMS - M 30 N/mm²
   - RCC RETAINING WALL - M 30 N/mm²
   - RCC CURTAIN WALL - M 30 N/mm²
8. THE BUILDING FOUNDATION HAS BEEN DESIGNED FOR SAFE BEARING CAPACITY OF 20T/SQ.M/M. THE CONTRACTOR IS RESPONSIBLE FOR ATTAINING THIS CAPACITY EITHER BY CONSULTING WITH SOIL EXPERTS.
9. FLOOR SLAB SHALL BE CASTED BEFORE LAYING OF WALLS.
10. THE DEPTH OF BEAMS SHALL BE INCLUDING THE SLAB THICKNESS.

LAP JOINTS FOR REINFORCEMENT BARS

1. AT ANY CROSS SECTION NOT MORE THAN 50% OF THE BARS SHALL BE LAPPED.
2. LAPS IN COLUMNS SHALL BE PROVIDED AT MID HEIGHT OF FLOOR AND NOT AT SLAB LEVEL.
3. ALL BEAMS AND SLABS SHALL BE PROVIDED AT 1/3 E FROM CONTINUOUS BARS.

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY (VILLA 5) AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

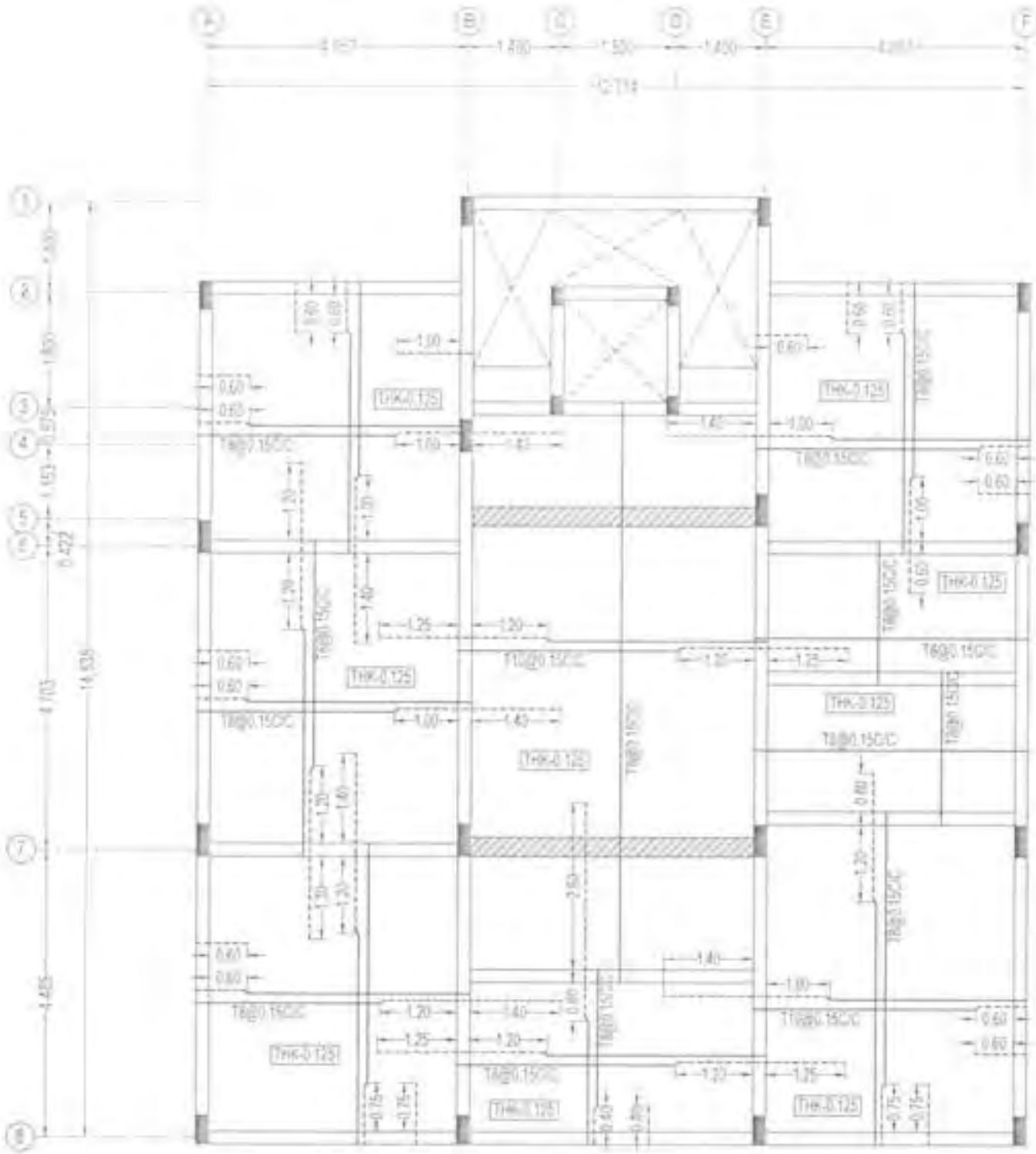
SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

TERRACE BEAM DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-04	13



TERRACE SLAB LAYOUT & DETAILS

LEGEND

TOP ROD
BOTTUM ROD
THK : THICKNESS

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I
M.E (Structural Engg)
Reg. No - SE/GR-I/19/12/231

TECHNICAL NOTES

LAP JOINTS FOR REINFORCEMENT BARS :

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY, (VILLA 5)
AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

SAFE STRUCTURAL CONSULTANCY

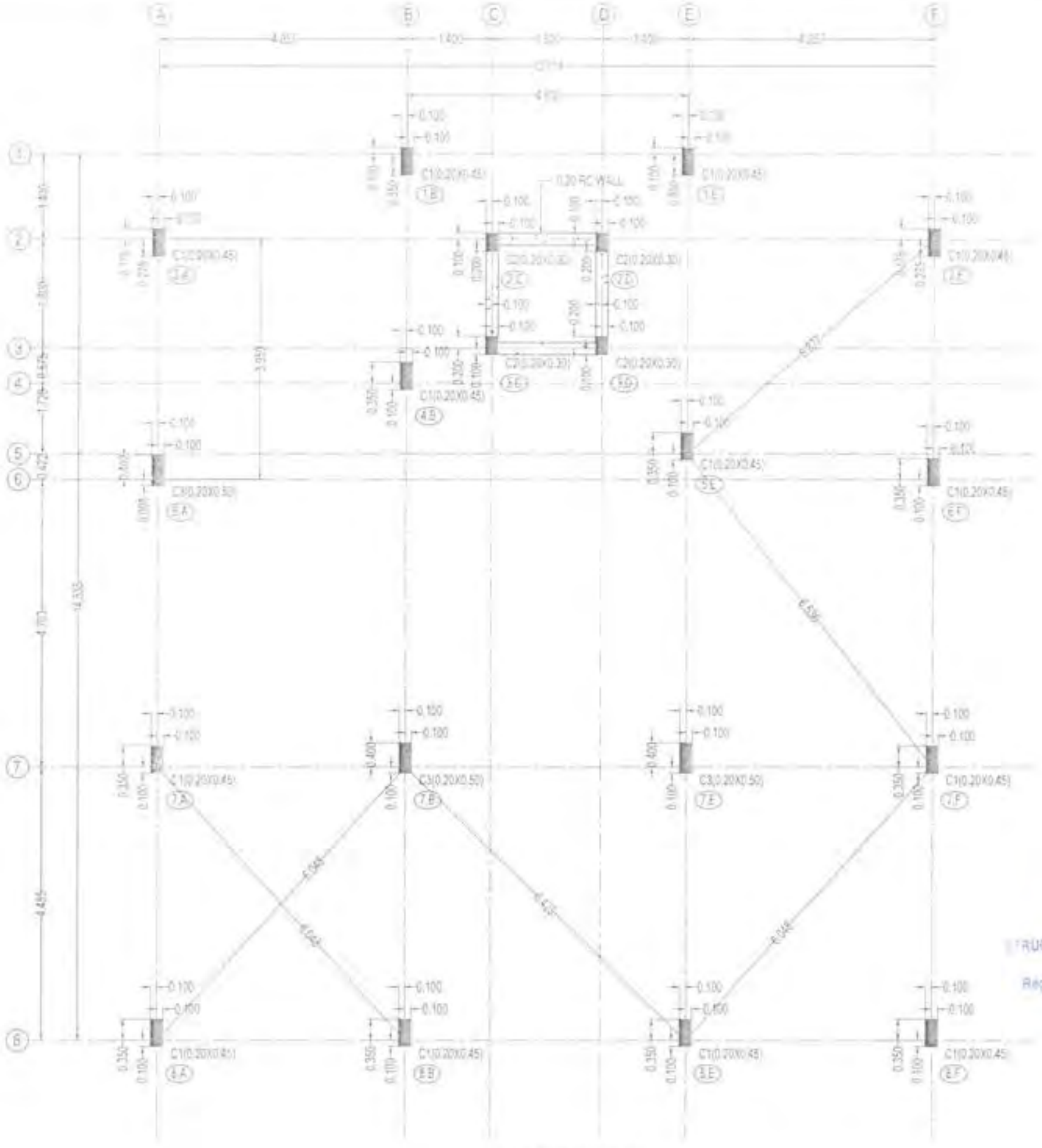
Safe

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

TERRACE SLAB LAYOUT & DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-04	14



COLUMN MARKING LAYOUT

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - 1 (SE)
M.E (Structural Engg)
Reg. No - SE/GR-1/19/12/231 (CMDA)

LEGENDS:
C - COLUMN

TECHNICAL NOTES

LAP JOINTS FOR REINFORCEMENT BARS

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY (VILLA 6)
AT ECR, CHENNAI.

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

SAFE STRUCTURAL CONSULTANCY

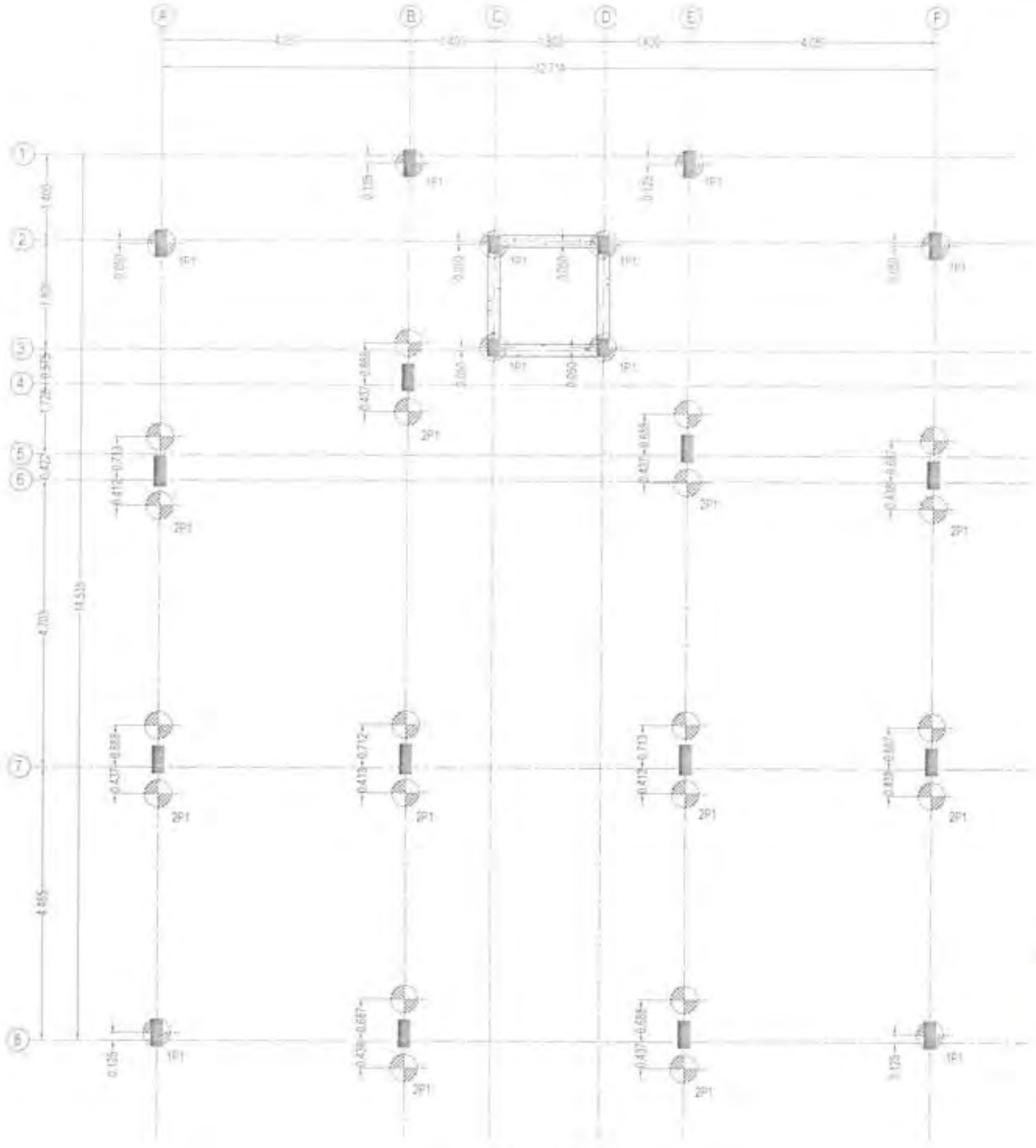
Safe

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

COLUMN MARKING LAYOUT

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-05	01



PILE MARKING LAYOUT

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE-I
M.E (Structural Engg)
Reg. No - SE/GR-1/19/12/231 (CMDA)

LEGENDS:

0.450
P - PILE (0.450dia)

TECHNICAL NOTES

1. ALL DIMENSIONS IN MILLIMETRES & ALL LEVELS IN METRES UNLESS OTHERWISE SPECIFIED.
2. NO WRITTEN DIMENSIONS TO BE SCALED.
3. ANY DISCREPANCIES NOTICED IN THE DRAWINGS SHALL BE BROUGHT TO OUR NOTICE IMMEDIATELY.
4. CALCULATIONS SHALL CARRY ALL DRAWING REVISIONS. SAMPLE EXECUTION IN HAND.
5. ENGINEER IN CHARGE TO ENSURE THAT CONSTRUCTION LOADS DO NOT EXCEED LIVE LOAD APPROPRIATE APPROACHES TO BE MADE TO DISTRIBUTE CONSTRUCTION LOADS EVENLY.
6. GRADE OF CONCRETE AND CONCRETE MIX AS PER IS456:2000. CONFIRMATORY TEST TO BE CONDUCTED.
7. 12 DIAMETER HIGH STRENGTH DEFORMED BARS OF FE500 GRADE CONFORMING TO IS1786:1985.
8. CLEAR COVER TO REINFORCEMENT:
   A. COLUMNS = 40MM
   B. FOUNDATION = 50MM
   C. GRADE BEAMS = 40MM
   D. FLOOR BEAMS = 25MM
   E. FLOOR SLAB = 20MM
9. THE BUILDING FOUNDATION HAS BEEN DESIGNED FOR SBC OF 150 KN/M2. THE REQUIRED PILE CAPACITY OF SOIL IS 400 KN. THE CONTRACTOR IS RESPONSIBLE FOR ATTAINING THE CAPACITY 400 KN BY CONSULTING WITH SOIL EXPERTS.
10. LOOSE SOIL IF ANY SHALL BE REMOVED BEFORE LAYING FOUNDATION.
11. THE DEPTH OF BEAMS SHALL BE INCLUDING THE SLAB THICKNESS.

AF: JOINTS FOR REINFORCEMENT BARS

1. AT ANY GIVEN SECTION ONLY ALTERNATE BARS SHALL BE LAPPED.
2. LAPS IN COLUMNS SHALL BE PROVIDED AT MID HEIGHT OF FLOOR AND NOT AT SLAB LEVEL.
3. LAPS IN BEAMS AND SLABS SHALL BE PROVIDED AT THE POINT OF CONTRAFLEXURE.

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY, (VILLA 6)
AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

SAFE STRUCTURAL CONSULTANCY

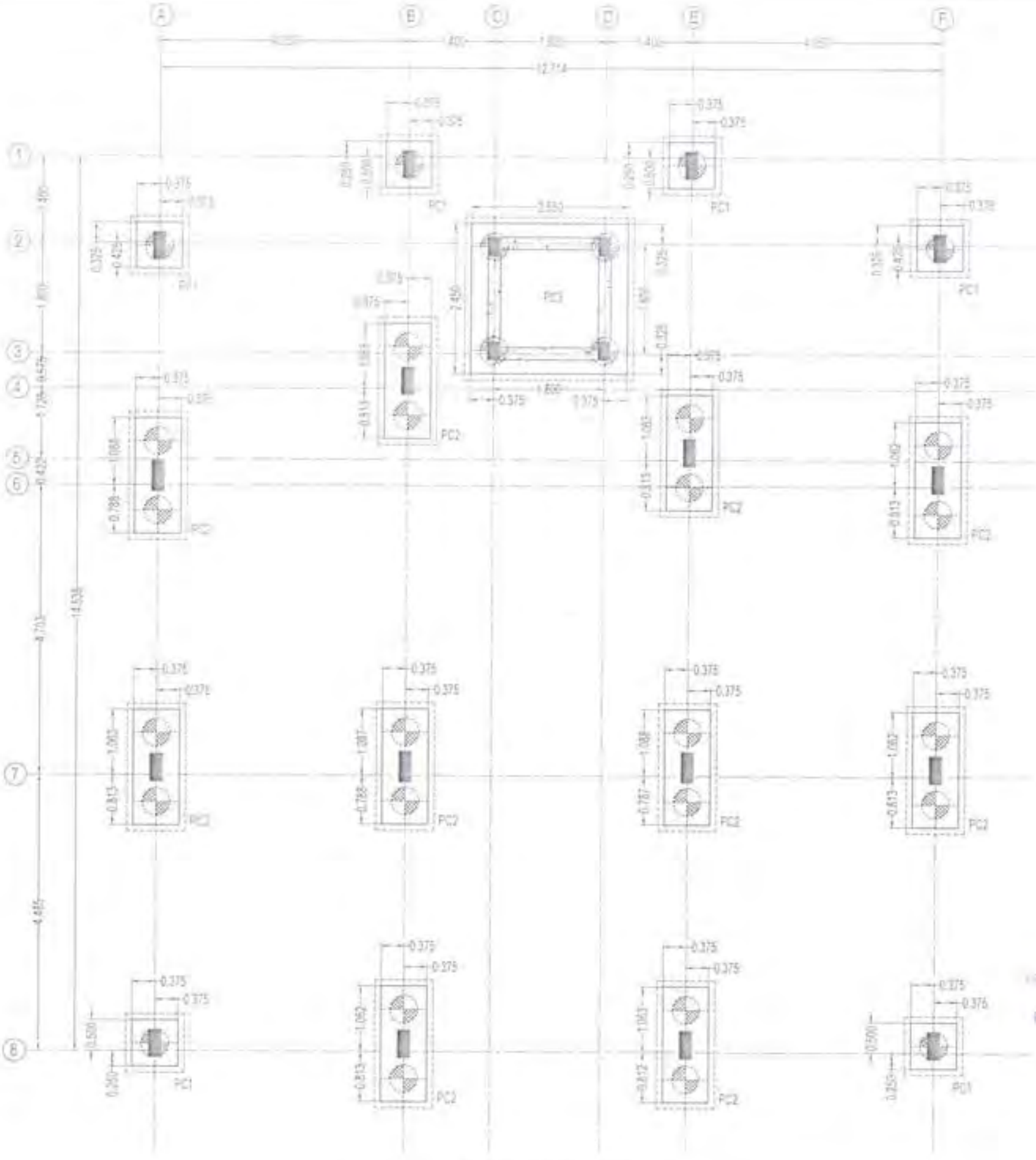
Safe

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

FILE MARKING LAYOUT

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-05	02



PILE CAP MARKING LAYOUT

TECHNICAL NOTES

LAP JOINTS FOR REINFORCEMENT BARS

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY, (VILLA 6)
AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

SAFE STRUCTURAL CONSULTANCY

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I
M.E (Structural Engg)
Reg. No - SE/GR-I/19/12/231 (CHN)

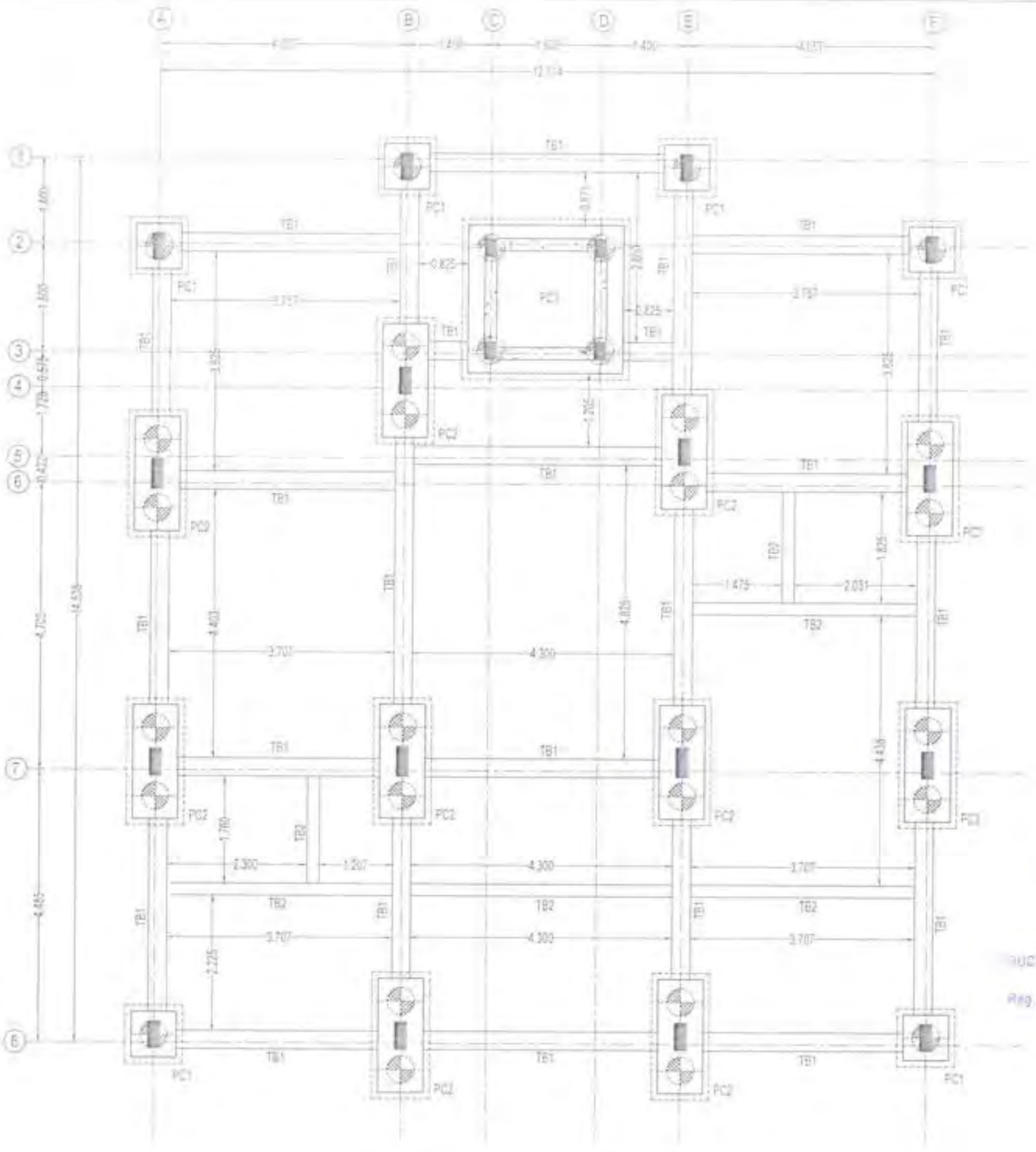
LEGENDS:
PC - PILE CAPE

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

PILE CAP(PC) MARKING LAYOUT

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-05	03



TIE BEAM(TB) LAYOUT

LEGENDS

TB - TIE BEAM

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I
M.E (Structural Engg)
Reg. No - SE/GR-1/19/12/231 (CMDA)

TECHNICAL NOTES

4. CLEAR COVER TO REINFORCEMENT
   - a. FOOTING : 40MM
   - b. FOUNDATION : 40MM
   - c. COLUMN (EXP) : 40MM
   - d. FLOOR BEAM : 25MM
   - e. FLOOR SLAB : 20MM

7. THE BUILDING FOUNDATION HAS BEEN DESIGNED FOR SAFE BEARING PRESSURE CAPACITY OF SOIL IS 30KPA. THE CONTRACTOR IS RESPONSIBLE FOR ATTAINING THIS CAPACITY AS PER SOIL CONSULTING WITH SOIL EXPERTS.

8. LOOSE SOIL IF ANY SHALL BE REMOVED BEFORE LAYING FOOTING.

9. THE CENTRE LINE BEAMS SHALL BE INCLUDING THE SLAB THICKNESS.

LAP JOINTS FOR REINFORCEMENT BARS

i) NOT MORE THAN 50% OF THE REINFORCEMENT BARS AT ANY ONE SECTION OF THE MEMBER AND MORE THAN 50% OF THE BARS SHALL BE LAPPED.

ii) LAPS IN COLUMNS SHALL BE PROVIDED AT MID HEIGHT OF FLOOR AND NOT AT SLAB LEVELS.

iii) LAPS IN BEAMS AND SLABS SHALL BE PROVIDED AT THE POINT OF CONTRAFLEXURE.

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY, (VILLA 6)
AT ECR, CHENNAI.

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

SAFE STRUCTURAL CONSULTANCY

Safe

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

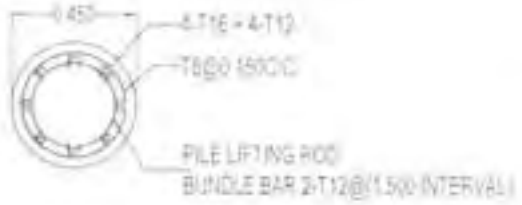
DRAWING NAME

PILE CAP(PC) & TIE BEAM(TB) LAYOUT

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-05	04

COLUMN REINFORCEMENT SCHEDULE

TERRACE LEVEL			
T/O	H=T16@ 125C/C	H=T16@ 125C/C	H=T16@ 150C/C
	H=T16@ 150C/C	H=T16@ 175C/C	H=T16@ 175C/C
FOOTING MIN ASC @ - T16 @ - T12	0.450 / 0.450	0.300 / 0.300	0.500 / 0.500
	8-T16	4-T16 + 2-T12	8-T16 + 2-T12
COLUMN MARKED	C1	C2	C3

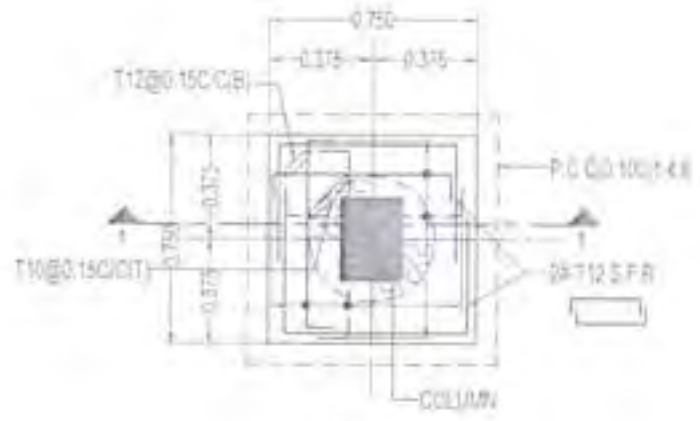


PILE (P1) - PLAN

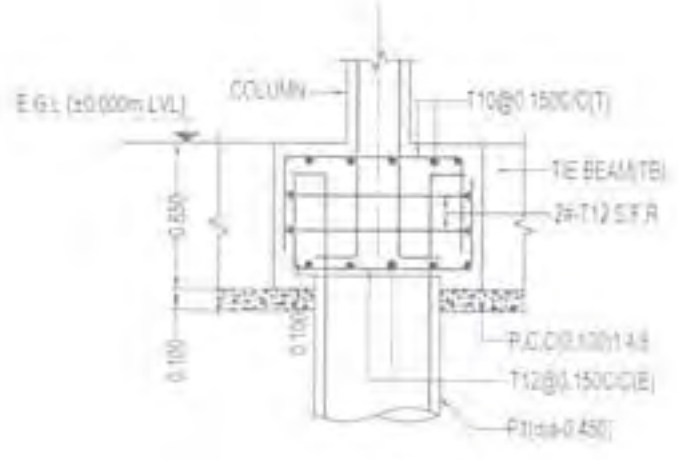
** S.F.R - SIDE FACE REINFORCEMENT

LEGENDS

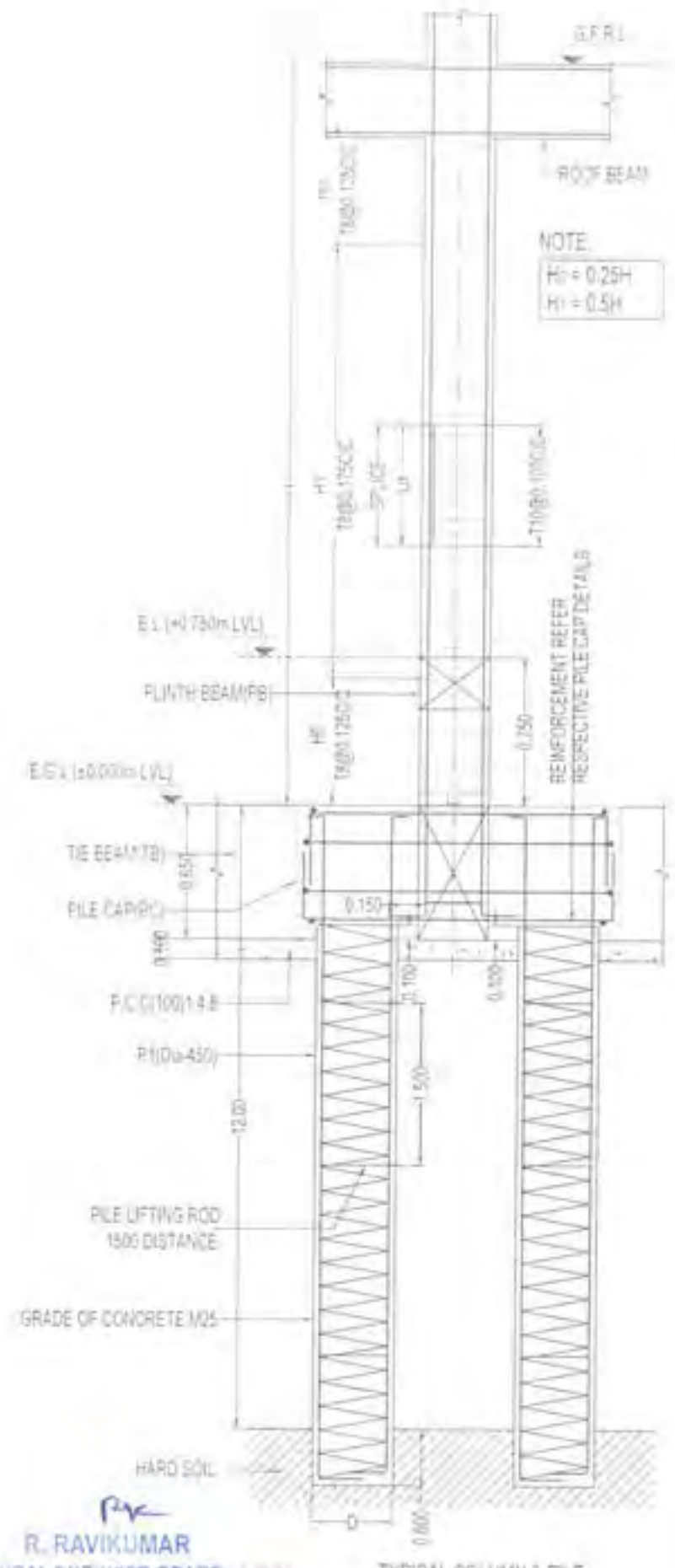
B.L - BASEMENT LEVEL
G.F.R.L - GROUND FLOOR ROOF LEVEL
E.G.L - EXISTING GROUND LEVEL



PC1 - PLAN



SECTION - 1 - 1



TYPICAL COLUMN & PILE CONFINING DETAILS

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I (M.E)
M.E (Structural Engg)
Reg. No - SE/GR-I/19/12/231 (Chn.6)

TECHNICAL NOTES

- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.
- ALL CONCRETE SHALL BE OF GRADE M25 UNLESS OTHERWISE NOTED.
- ALL REINFORCEMENT SHALL CONFORM TO Fe 500 GRADE UNLESS OTHERWISE NOTED.
- ALL CONCRETE SHALL BE VIBRATED.
- FOUNDATION SHALL BE LAID ON UNDISTURBED SOIL OF ADEQUATE BEARING CAPACITY AS PER SOIL INVESTIGATION REPORT.
- MINIMUM CLEAR COVER TO REINFORCEMENT:
  - a) COLUMNS : 40MM
  - b) FOUNDATIONS : 50MM
  - c) GRADE SLAB : 40MM
  - d) FLOOR SLAB : 25MM
  - e) FLOOR BEAM : 25MM
- THE BUILDING FOUNDATION HAS BEEN DESIGNED FOR 1) THE REQUIRED PILE CAPACITY OF SOIL IS 60 MT. THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING THE CAPACITY AS PER IS FOR PILE TESTING AND SUBMIT THE REPORTS.
- ALL COLUMNS SHALL BE DESIGNED FOR BIAXIAL BENDING.
- THE GRADE SLAB SHALL BE MINIMUM 100 MM THICKNESS.

LAP JOINTS FOR REINFORCEMENT BARS

- LAP JOINTS SHALL BE STAGGERED AND NOT MORE THAN 50% OF THE BARS SHALL BE LAPPED AT ANY ONE SECTION.
- LAPPED BARS SHALL BE PROVIDED AT THE MIDDLE THIRD OF SLAB AND NOT AT SUPPORTS.
- LAPPED BARS SHALL BE SUITABLY STAGGERED SO THAT THE BOND STRENGTH IS NOT IMPAIRED.

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY (VILLA 6) AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

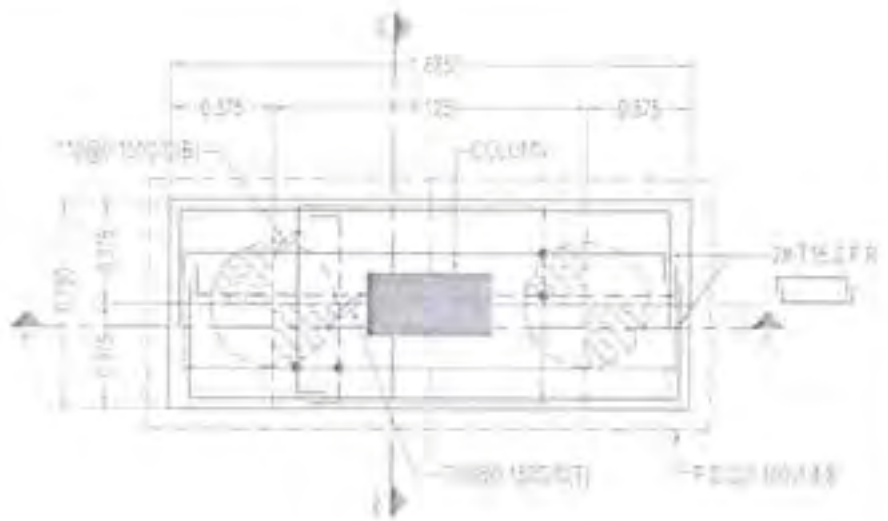
SAFE STRUCTURAL CONSULTANCY
Safe

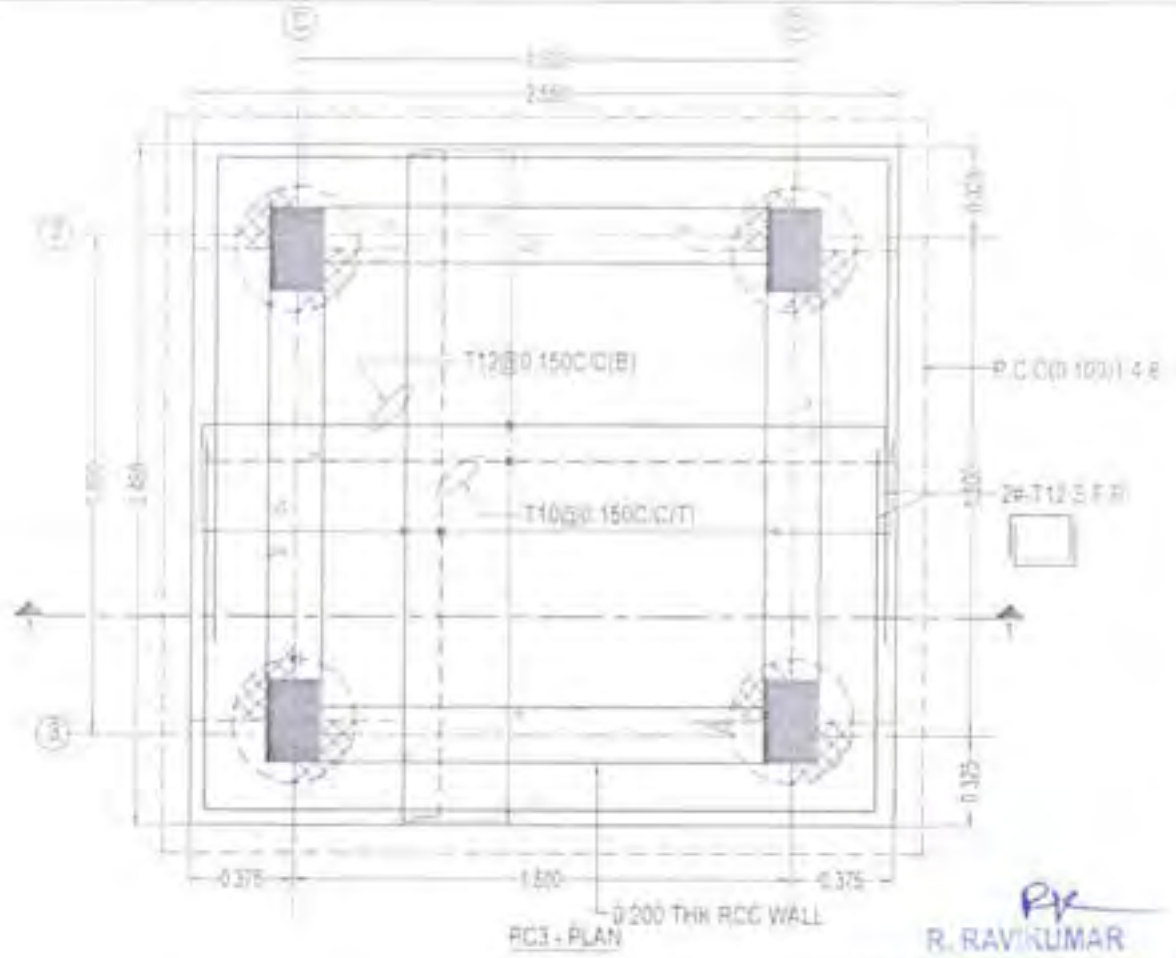
DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

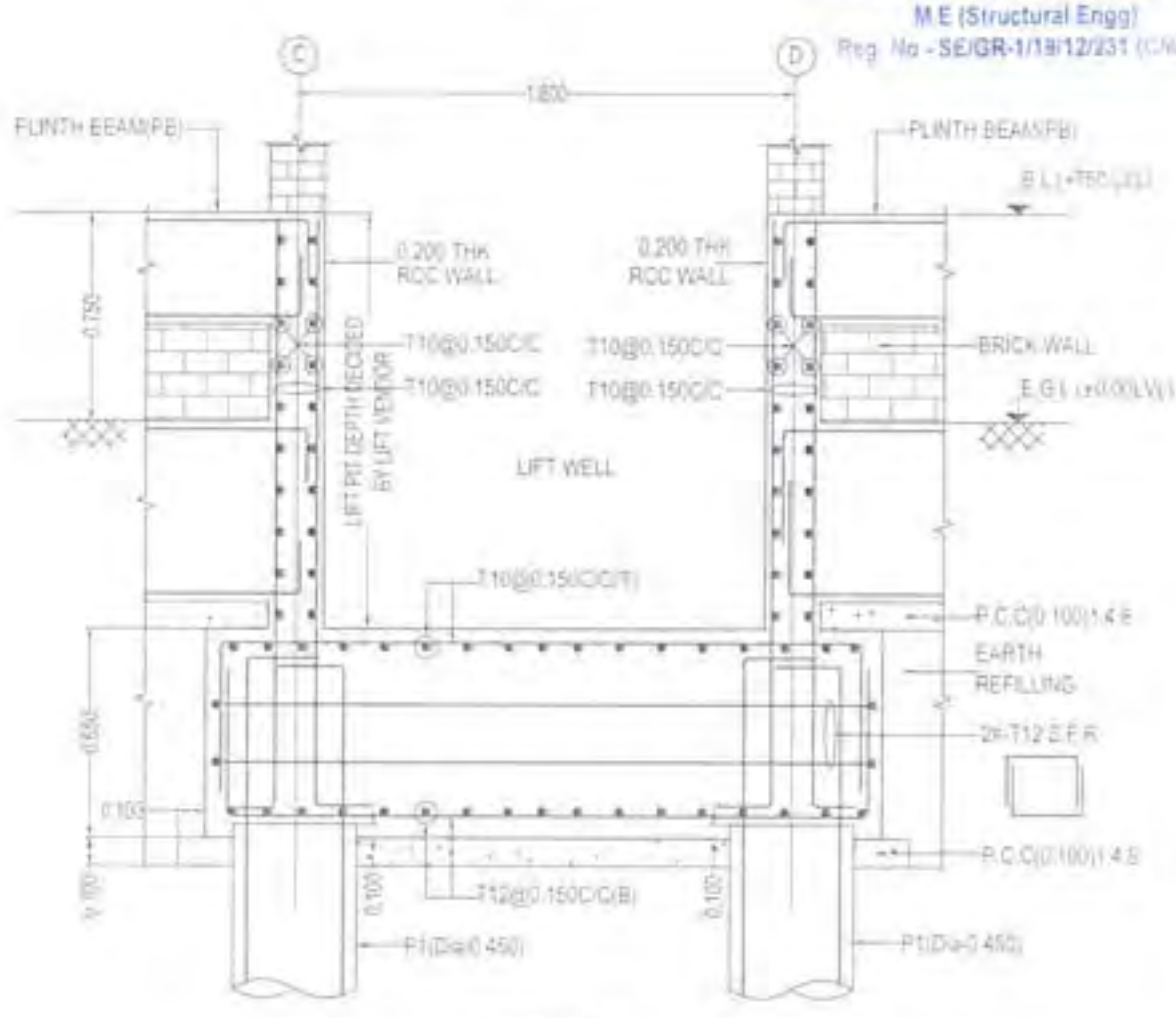
DRAWING NAME

COLUMN, PILE & PILE CAP DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-05	05







R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I
M E (Structural Engg)
Reg. No - SE/GR-1/19/12/231 (CMDA)

TECHNICAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ONLY FIGURED DIMENSIONS TO BE USED.
3. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
4. ALL LEVELS SHALL BE CHECKED ON SITE BEFORE COMMENCING WORK.
5. ENGINEER IN CHARGE TO BE INFORMED BEFORE COMMENCING ANY PORTION OF WORK NOT SHOWN IN DETAIL.
6. GRADE OF CONCRETE USED FOR VARIOUS ELEMENTS SHALL BE AS PER CONFORMING TO IS 456 - 2000.
7. 'Fe' GRADE OF REINFORCEMENT SHALL CONFORM TO IS 1786 - 2008.
8. CLEAR COVER TO REINFORCEMENT
   - a) COLUMNS : 40MM
   - b) FOUNDATION : 75MM
   - c) GRADE BEAMS : 40MM
   - d) SUSPENDED : 25MM
   - e) SLABS (Top) : 25MM
9. THE BUILDING IS ANALYSED AND DESIGNED FOR SAFE BEARING CAPACITY OF 30T/M². IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ARRANGE FOR ADDITIONAL PILES IF THE SOIL CAPACITY IS LESS THAN 30T/M².
10. LOOSE SOIL IF ANY SHALL BE REMOVED BEFORE LAYING FOUNDATION.
11. THE DEPTH OF BEAMS SHALL BE INCLUSIVE THE SLAB THICKNESS.

LAP JOINTS FOR REINFORCEMENT BARS

a) LAP AND TRANSVERSE SPLICE FOR REINFORCEMENT BARS SHALL BE AS PER IS 456 - 2000.
b) LAPS IN COLUMNS SHALL BE PROVIDED AT MIDDLE OF FLOOR AND NOT AT SLAB LEVEL.
c) LAPS IN BEAMS AND SLABS SHALL BE PROVIDED AT THE POINT OF CONTRAFLEXURE.

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY, (VILLA 6)
AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

SAFE STRUCTURAL CONSULTANCY
Safe

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

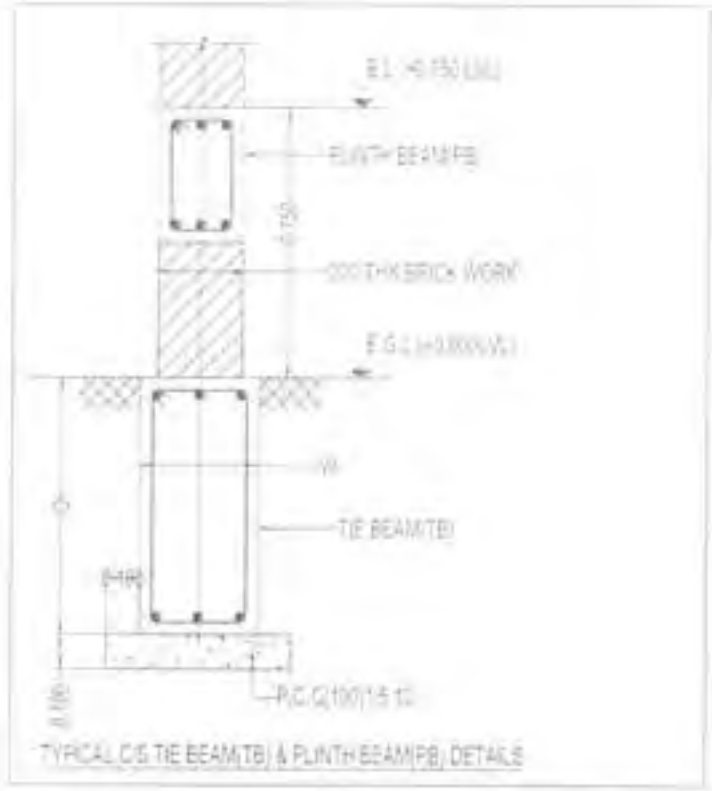
PILE & PILE CAP DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-05	06

TIE BEAM (TB) REINFORCEMENT SCHEDULE

BEAM SIZE A (W)	DETAIL @ LEFT SUPPORT	DETAIL @ MIDDLE	DETAIL @ RIGHT SUPPORT
(0.300 X 0.600)	3-T16(C)	2-T16(C)	3-T16(C)
TB1	T10@0.150C/C; P.C.C; 3-T16(C)	T10@0.150C/C; P.C.C; 3-T16(C)	T10@0.150C/C; P.C.C; 3-T16(C)
(0.200 X 0.600)	2-T16(C)	2-T16(C)	2-T16(C)
TB2	T10@0.150C/C; P.C.C; 2-T16(C)	T10@0.150C/C; P.C.C; 2-T16(C)	T10@0.150C/C; P.C.C; 2-T16(C)

S.F.R - SIDE FACE REINFORCEMENT
E.F - EACH FACE

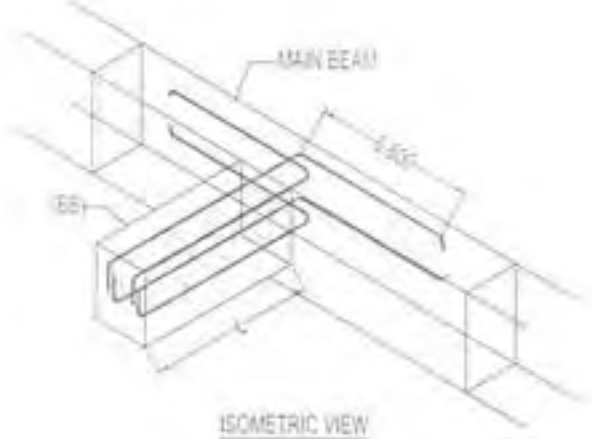


TYPICAL C/S TIE BEAM (TB) & PLINTH BEAM (PB) DETAILS

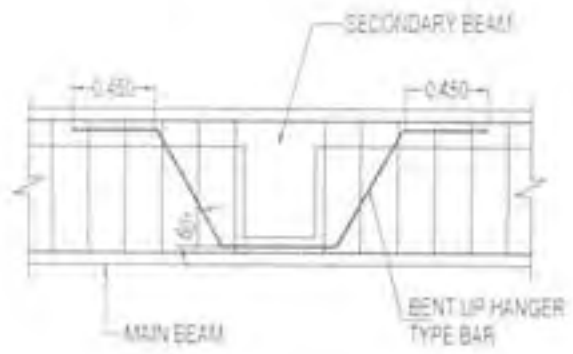
TYPICAL ANCHORAGE OF BEAM BARS IN AN EXTERNAL JOINT
** Ld=45 TIMES DIA OF BAR

LEGENDS

E.G.L - EXISTING GROUND LEVEL
T.B - TIE BEAM
P.B - PLINTH BEAM
B.L - BASEMENT LEVEL



ISOMETRIC VIEW
OF (TYP) BRACKET BEAM REST ON BEAM DETAIL



WHERE CROSS BEAM, SHEAR ROD SHOULD BE PROVIDED AT 2-T16

R. RAVIKUMAR
CIVIL ENGINEER GRADE - I
M.E (Structural Engg)
Lic No - SE/GR-I/19/12/231 (CMDA)

TECHNICAL NOTES

LAP JOINTS FOR REINFORCEMENT BARS

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY, (VILLA 6)
AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

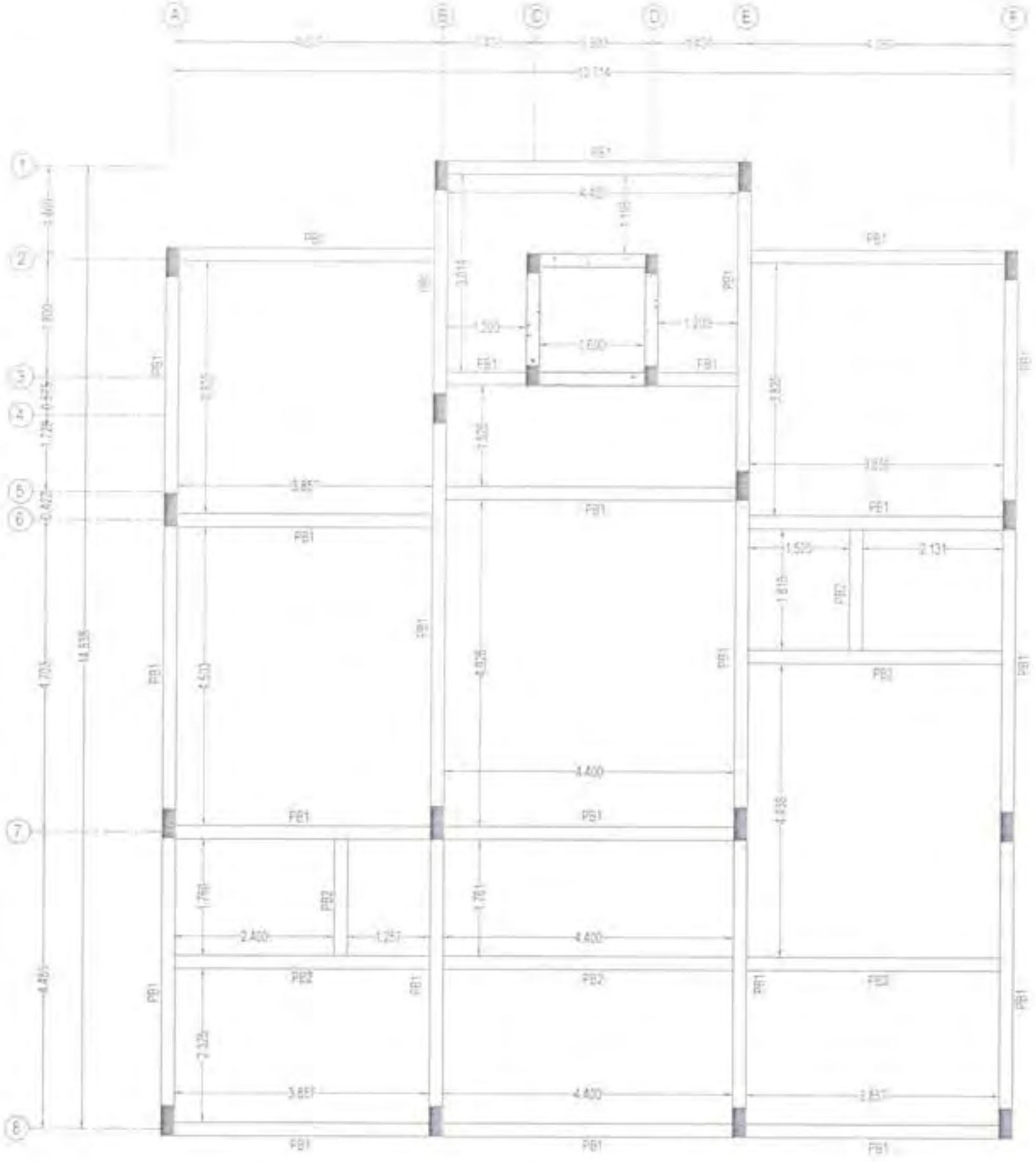
SAFE STRUCTURAL CONSULTANCY
Safe

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

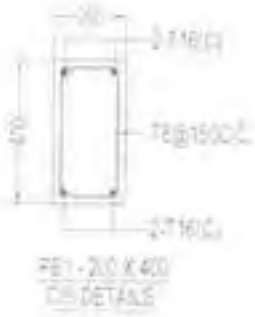
TIE BEAM (TB) REINFORCEMENT DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-05	07

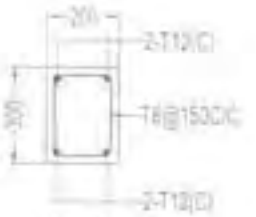


PLINTH BEAM(PB) LAYOUT

TOP OF PLINTH BEAM AT +0.750m LVL



PB1 - 200 X 400
C/S DETAILS



PB2 - 200 X 300
C/S DETAILS

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I
M.E (Structural Engg)
Reg. No - SE/GR-I/19/12/231 (CMDA)

LEGENDS

PB - PLINTH BEAM

TECHNICAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
2. ALL FIGURED DIMENSIONS TO BE FOLLOWED.
3. ANY DISCREPANCIES SHOULD BE FOR THE ARCHITECT'S DECISION BEFORE YOUR WORK IS EXECUTED.
4. CONTRACTOR SHALL CHECK ALL DIMENSIONS AT SITE BEFORE EXECUTION PLANNING.
5. ENGINEER IN CHARGE TO ENSURE THAT ALL CONSTRUCTION WORKS DO NOT AFFECT OR DAMAGE ADJACENT PROPERTY. CONTRACTOR SHALL ARRANGE FOR ADEQUATE SHORING AND PROTECTION WORKS WHERE NECESSARY.
6. MINIMUM CONCRETE GRADE IS M25 FOR ALL RCC WORKS UNLESS OTHERWISE NOTED IN DRAWINGS.
7. ALL REBARS SHALL CONFORM TO IS 1786 : 2008 GRADE Fe 500 UNLESS OTHERWISE NOTED IN DRAWINGS.
8. CLEAR COVER TO REINFORCEMENT
   a. COLUMNS = 40MM
   b. FOUNDATION = 50MM
   c. GRADE BEAM = 40MM
   d. FLOOR BEAM = 25MM
   e. FLOOR SLAB = 20MM
9. THE BUILDING FOUNDATION HAS BEEN DESIGNED FOR SAFE BEARING CAPACITY OF SOIL IS 150 KN/M2. THE CONTRACTOR IS RESPONSIBLE FOR ACHIEVING THIS CAPACITY 150 KN/M2 BY CONSULTING WITH SOIL EXPERTS.
10. 1:1000 SOIL IF ANY SHALL BE REMOVED BEFORE LAYING FOUNDATION.
11. THE DEPTH OF BEAMS SHALL BE INCLUDING THE SLAB THICKNESS.

LAP JOINTS FOR REINFORCEMENT BARS

1. NOT MORE THAN 50% OF REINFORCEMENT BARS AT ANY CROSS SECTION OF A MEMBER SHALL BE LAPPED.
2. LAPS IN COLUMNS SHALL BE PROVIDED AT MID HEIGHT OF FLOOR AND NOT AT SLAB LEVEL.
3. LAPS IN BEAMS AND SLABS SHALL BE PROVIDED AT THE POINT OF CONTRAFLEXURE.

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY, (VILLA 6)
AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

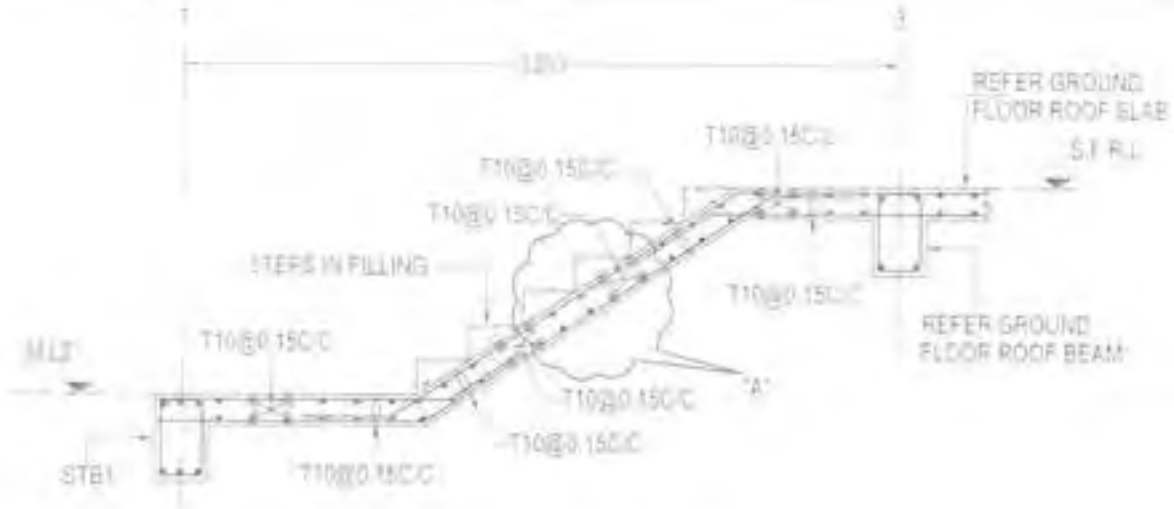
SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

PLINTH BEAM(PB) LAYOUT & DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-05	08



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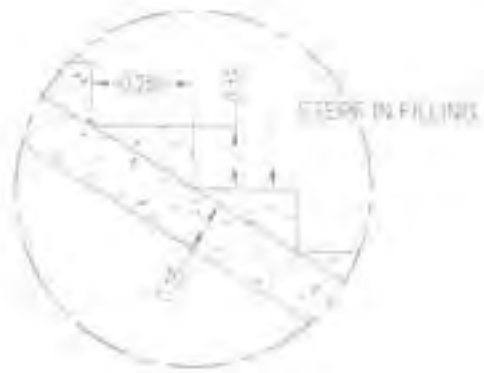
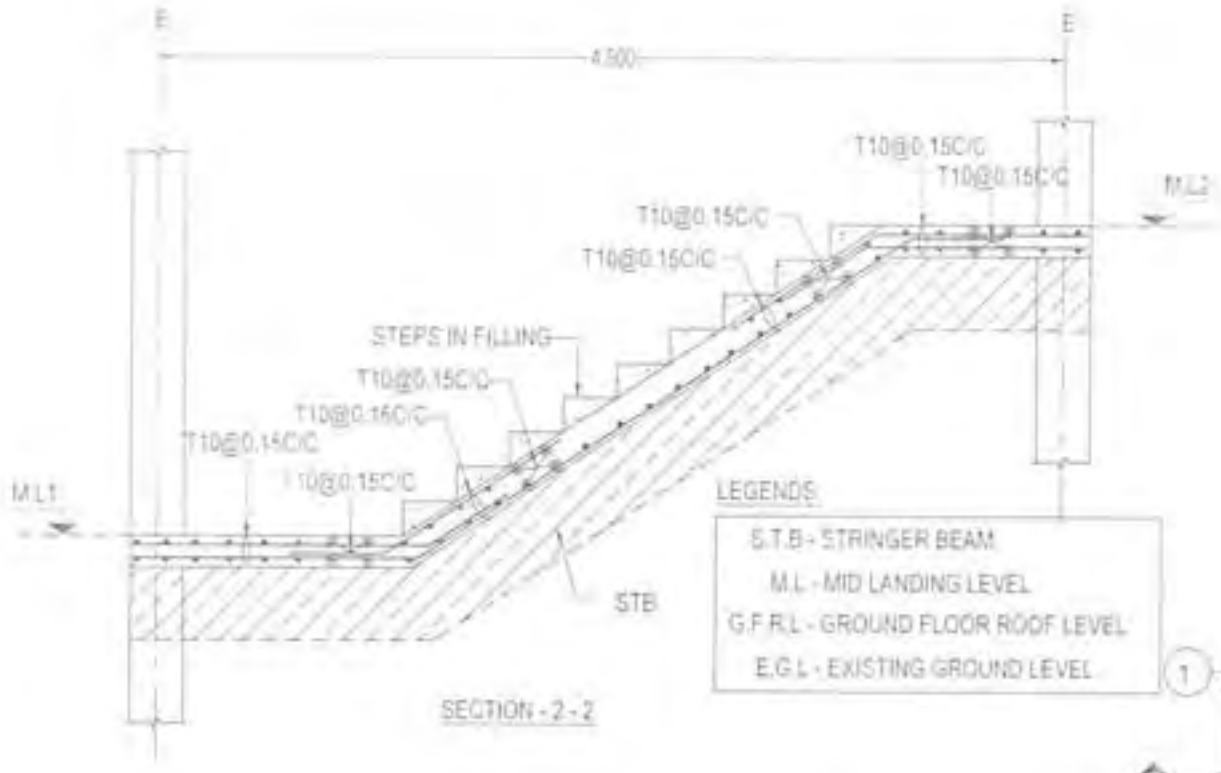


DETAIL - 'A'

STB - 0.230 X 0.450
C/S DETAILS

** NO OF STEPS & LEVELS REFER LATEST ARCHITECTURAL DRAWING



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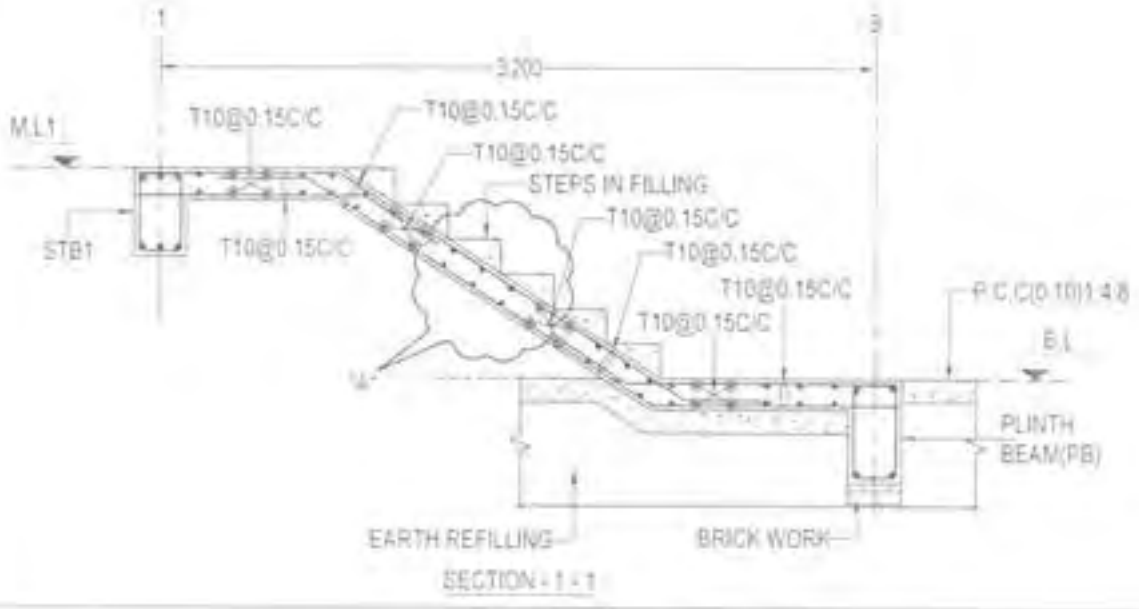

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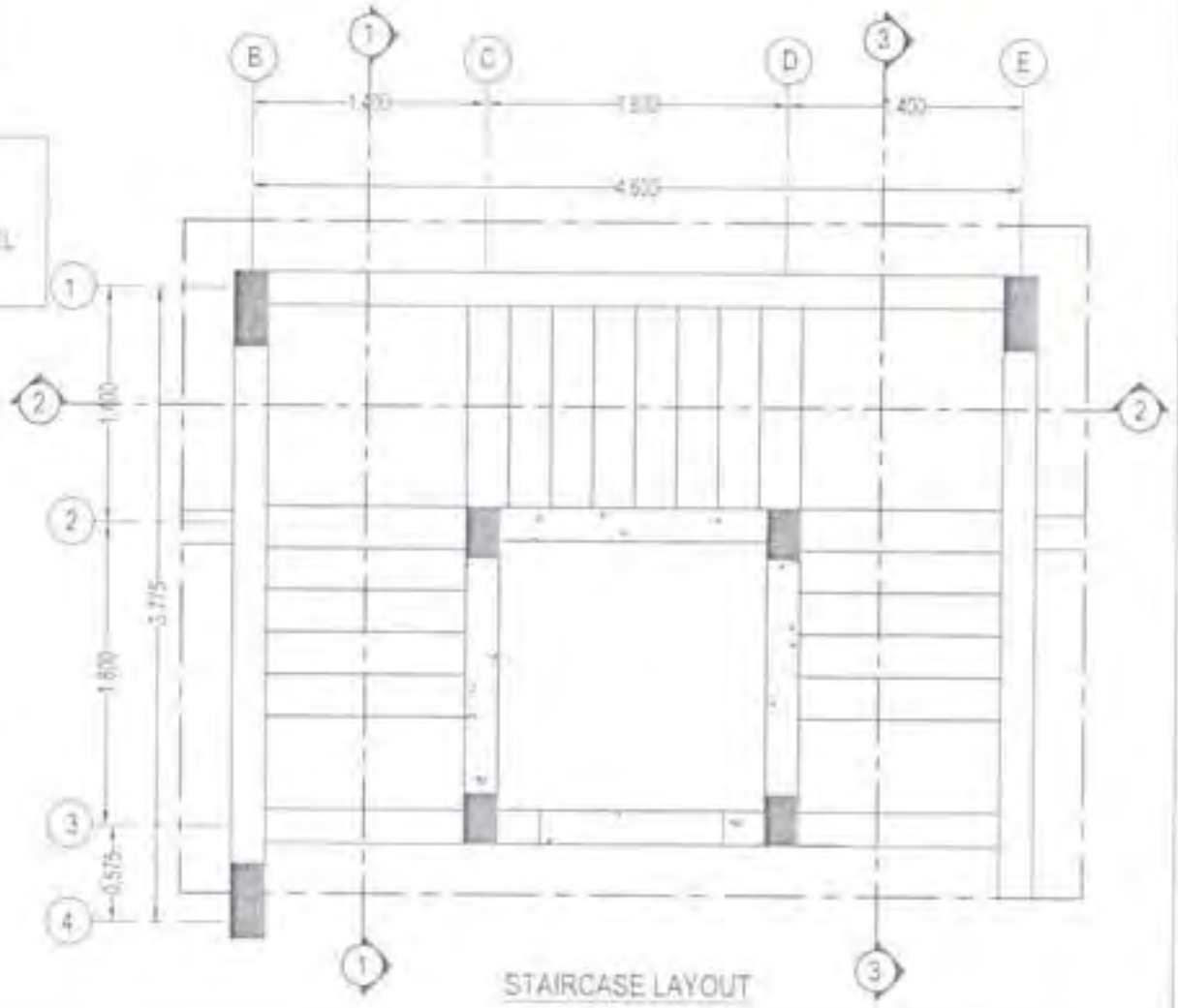


R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I
M.E (Structural Engg)
Reg. No - SE/GR-I/18/12/231 (CMDA)

TECHNICAL NOTES

- ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED.
- DO NOT SCALE DRAWINGS.
- ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
- ALL WORKMANSHIP AND MATERIALS SHALL CONFORM TO RELEVANT IS CODES AND STANDARDS.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING FABRICATION.
- ANY DISCREPANCIES BETWEEN DRAWINGS SHALL BE REPORTED TO THE ENGINEER FOR CLARIFICATION.
- DO NOT SCALE DIMENSIONS FROM THE DRAWINGS.
- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
- CLEAR COVER TO REINFORCEMENT:
  - a. COLUMNS : 40MM
  - b. FOUNDATION : 50MM
  - c. SHOE BEAM : 40MM
  - d. FLOOR SLAB : 20MM
  - e. FLOOR BEAM : 25MM
- THE BUILDING FOUNDATION HAS BEEN DESIGNED FOR SAFE BEARING CAPACITY OF SOIL AS PER THE GEOTECHNICAL INVESTIGATION REPORT. THE CONTRACTOR IS RESPONSIBLE FOR ATTAINING THIS CAPACITY AS PER CONDITIONS MENTIONED IN REPORT.
- CHOICE OF PILE IF ANY, SHALL BE MADE BY THE CONSULTANT BEFORE LAYING FOUNDATION.
- THE GEOTHICK BEAM SHALL BE RESTING THE SLAB THICKNESS.

LAP JOINTS FOR REINFORCEMENT BARS

- LAP AND CROSS SECTIONAL AREA OF THE LAP SHALL NOT BE LESS THAN THE CROSS SECTIONAL AREA OF THE BARS SHALL BE GIVEN.
- LAP LENGTH OF THE BARS SHALL BE PROVIDED AS GIVEN IN THE CODE BUT SHALL NOT BE LESS THAN 30 DIA OR 300MM WHICHEVER IS GREATER.
- LAPS IN ADJACENT BARS SHALL BE STAGGERED AND NOT MORE THAN 50% OF THE BARS SHALL BE LAPPED AT ANY ONE SECTION.

CLIENT

.....

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY, (VILLA 6) AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

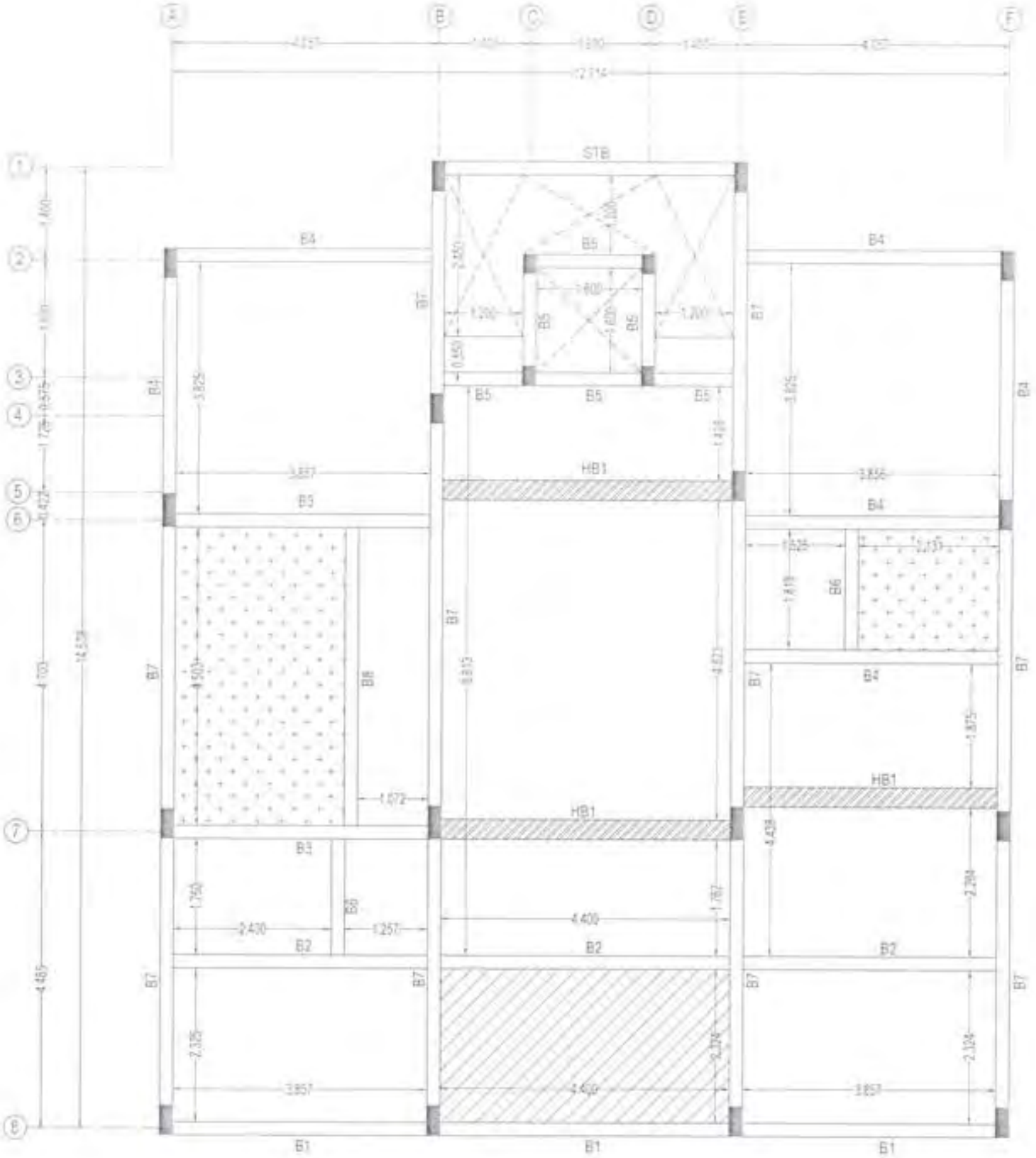
SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

STAIRCASE LAYOUT & DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-05	08A



TECHNICAL NOTES

LAP JOINTS FOR REINFORCEMENT BARS

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Reg. No - SE/GR-1/19/12/231 (CMDA)

LEGENDS
- TOILET SUNKEN
- BALCONY SUNKEN
- HB - HIDDEN BEAM
- OPENING

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY, (VILLA 6)
AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

GROUND FLOOR ROOF BEAM LAYOUT

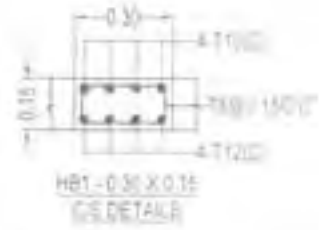
REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-05	09

GROUND FLOOR ROOF BEAM REINFORCEMENT SCHEDULE

BEAM SIZE & NO	DETAIL @ LEFT SUPPORT	DETAIL @ MIDDLE	DETAIL @ RIGHT SUPPORT	DETAIL @ CANTILEVER BEAM
(0.30 X 0.45) B1	2-T16(C) 2-T12(C) T8@0.125C/C 2-T12(C) 2-T16(C)	2-T16(C) 2-T12(C) T8@0.125C/C 2-T12(C) 2-T16(C)	2-T16(C) 2-T12(C) T8@0.125C/C 2-T12(C) 2-T16(C)	- - -
(0.30 X 0.45) B2	2-T16(C) 2-T16(C) T8@0.125C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T16(C) T8@0.125C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T16(C) T8@0.125C/C 2-T16(C) 2-T16(C)	- - -
(0.20 X 0.50) B3	2-T16(C) 2-T12(C) T10@0.10C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T12(C) T10@0.10C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T12(C) T10@0.10C/C 2-T16(C) 2-T16(C)	- - -
(0.20 X 0.45) B4	2-T16(C) T8@0.15C/C 2-T12(C) 2-T16(C)	2-T16(C) T8@0.15C/C 2-T12(C) 2-T16(C)	2-T16(C) T8@0.15C/C 2-T12(C) 2-T16(C)	- - -
(0.20 X 0.45) B5	2-T16(C) T8@0.15C/C 2-T16(C)	2-T16(C) T8@0.15C/C 2-T16(C)	2-T16(C) T8@0.15C/C 2-T16(C)	- - -
(0.20 X 0.45) B6	2-T12(C) T8@0.15C/C 2-T16(C)	2-T12(C) T8@0.15C/C 2-T16(C)	2-T12(C) T8@0.15C/C 2-T16(C)	- - -
(0.20 X 0.50) B7	2-T16(C) 2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	- - -

GROUND FLOOR ROOF BEAM REINFORCEMENT SCHEDULE

BEAM SIZE & NO	DETAIL @ LEFT SUPPORT	DETAIL @ MIDDLE	DETAIL @ RIGHT SUPPORT	DETAIL @ CANTILEVER BEAM
(0.25 X 0.45) SB	2-T16(C) T8@0.150C/C 2-T16(C) 2-T16(C)	2-T16(C) T8@0.150C/C 2-T16(C) 2-T16(C)	2-T16(C) T8@0.150C/C 2-T16(C) 2-T16(C)	- - -
(0.23 X 0.45) STB	2-T16(C) T8@0.150C/C 2-T16(C)	2-T16(C) T8@0.150C/C 2-T16(C)	2-T16(C) T8@0.150C/C 2-T16(C)	- - -



HB1 - 0.30 X 0.15
G/S DETAILS

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TYPICAL TOILET SUNKEN SLAB DETAILS

LEGEND:
HB : HIDDEN BEAM
C : CONTINUOUS ROD
E : EXTRA ROD

TECHNICAL NOTES

- ALL DIMENSIONS ARE IN MILLIMETERS & ELEVATIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.
- THIS PLAN SHOULD BE READ IN CONJUNCTION WITH ALL OTHER ARCHITECTURAL & STRUCTURAL DRAWINGS.
- ALL DIMENSIONS SHOULD BE CHECKED AT SITE BEFORE EXECUTION OF WORKS. ANY DISCREPANCY SHOULD BE BROUGHT TO THE NOTICE OF THE ARCHITECT & STRUCTURAL CONSULTANT IMMEDIATELY.
- ALL DIMENSIONS ARE TO BE FOLLOWED AND NOT TO BE SCALED.
- ANY DEVIATION FROM THE DRAWINGS SHOULD BE DISCUSSED WITH THE ARCHITECT & STRUCTURAL CONSULTANT BEFORE EXECUTION.
- ALL DIMENSIONS ARE TO BE CHECKED WITH RESPECT TO ARCHITECTURAL DRAWINGS BEFORE CASTING OF CONCRETE.
- ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED.
- ALL CONCRETE WORKS SHALL BE DONE AS PER IS 456-2000 CODE OF PRACTICE FOR PLAIN & REINFORCED CONCRETE.
- ALL REINFORCEMENT BARS SHALL CONFORM TO IS 1786-2008 SPECIFICATION FOR HIGH STRENGTH DEFORMED STEEL BARS & WIRES FOR CONCRETE REINFORCEMENT.
- CONCRETE GRADE TO BE USED AS BELOW:
  - R.C.C. FOOTING - M30
  - R.C.C. PLINTH BEAM - M30
  - R.C.C. COLUMNS - M30
  - R.C.C. SLAB - M30
  - R.C.C. FLOOR BEAM - M30
  - R.C.C. ROOF SLAB - M30
  - R.C.C. ROOF BEAM - M30
- THE BUILDING FOUNDATION HAS BEEN DESIGNED FOR SAFE BEARING CAPACITY OF SOIL IS 20 T/SQ.M. IF THE ACTUAL SOIL BEARING CAPACITY OF SOIL IS BELOW THE SAFE BEARING CAPACITY OF SOIL IS BELOW THE DESIGNED VALUE, THE CONTRACTOR IS RESPONSIBLE FOR ATTAINING THE CAPACITY EITHER BY CONSULTING WITH SOIL EXPERTS OR BY INCREASING THE FOOTING SIZE.
- ALL FORMWORKS SHALL BE REMOVED BEFORE LAYING FOUNDATION.
- THICKNESS OF BRICK WALL IS INCLUDING THE SLAB THICKNESS.

LAP JOINTS FOR REINFORCEMENT BARS

- NOT MORE THAN 50% OF THE TENSION REINFORCEMENT SHALL BE LAPPED AT ANY SECTION.
- LAPS IN COMPRESSION SHALL BE PROVIDED AT MID-HEIGHT OF FLOOR AND NOT AT SUPPORTS.
- LAPPING BARS AND SUBSTITUTES SHALL BE PROVIDED AT THE SAME TIME.

CLIENT

- - - - -

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY (VILLA 6)
AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

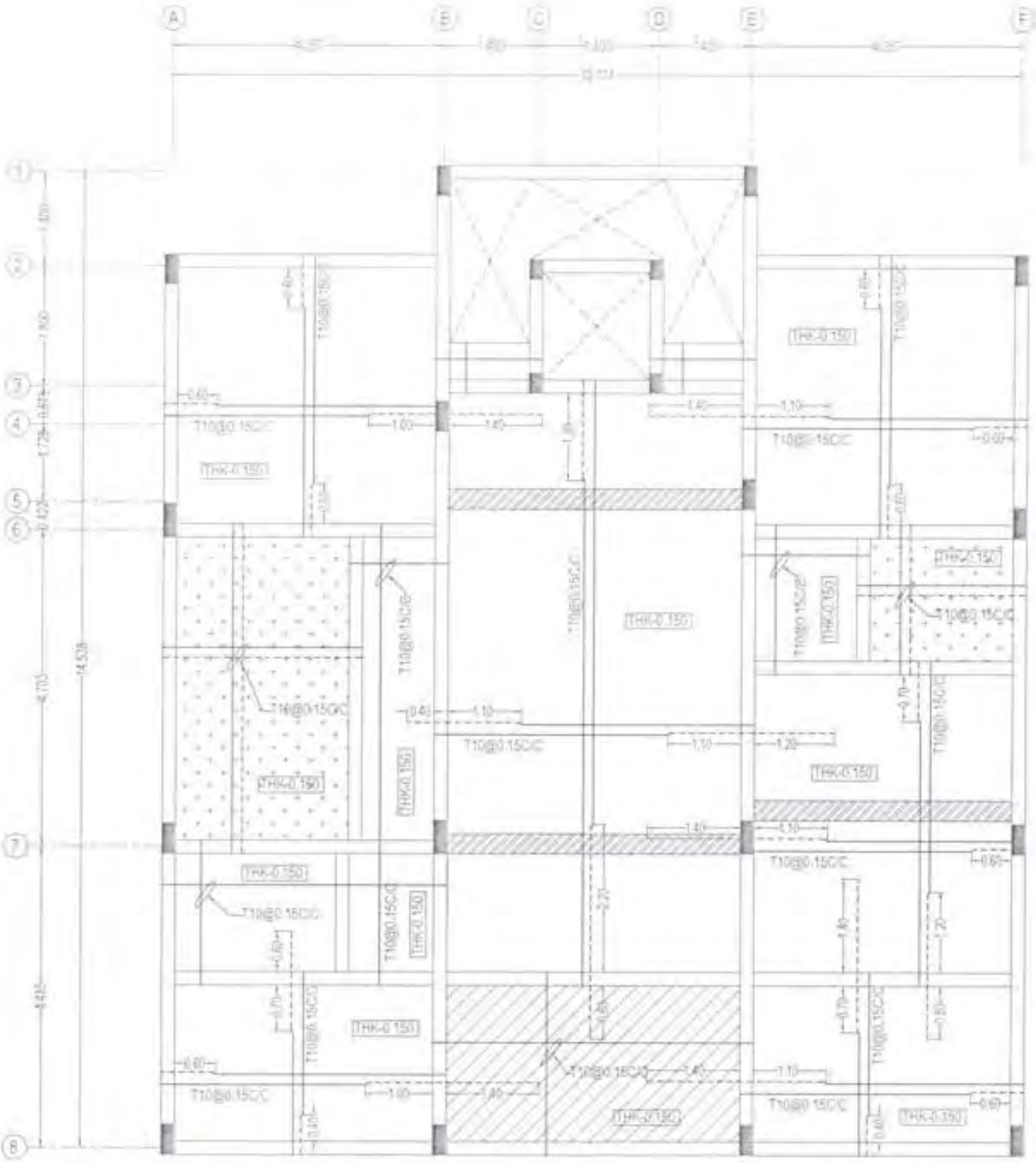
SAFE STRUCTURAL CONSULTANCY
Safe

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

GROUND FLOOR ROOF BEAM DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-05	10



GROUND FLOOR ROOF SLAB LAYOUT & DETAILS

TECHNICAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS AND ALL LEVELS IN METERS UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE CONSTRUCTION.
3. ANY DISCREPANCIES NOTED ON SITE MUST BE REPORTED TO THE ARCHITECT IMMEDIATELY.
4. FIGURED DIMENSIONS SHALL ALWAYS TAKE PRECEDENCE OVER SCALED MEASUREMENTS.
5. ENGINEER IN CHARGE TO BE INFORMED AT LEAST 24 HOURS IN ADVANCE BEFORE ANY CONCRETING WORK IS COMMENCED.
6. ALL CONCRETE SHALL BE OF GRADE M25 UNLESS OTHERWISE SPECIFIED.
7. ALL REINFORCEMENT SHALL CONFORM TO Fe 500 GRADE HYSD BARS UNLESS OTHERWISE SPECIFIED.
8. MINIMUM CONCRETE COVER SHALL BE AS FOLLOWS:
   - COLUMNS : 40MM
   - FOUNDATION : 50MM
   - SPANDREL BEAM : 40MM
   - 1 FLOOR SLAB : 20MM
   - T FLOOR SLAB : 20MM
9. THE BUILDING FOUNDATION HAS BEEN DESIGNED FOR SAFE BEARING CAPACITY OF SOIL. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM THE SAFE BEARING CAPACITY BEFORE CASTING FOOTINGS. ANY DEVIATION SHALL BE REPORTED TO THE ENGINEER IN CHARGE.
10. ALL LOOSE SOIL AND DEBRIS SHALL BE REMOVED BEFORE LAYING FOUNDATION CONCRETE.
11. THE DEPTH OF FOOTINGS SHALL BE AS SHOWN IN THE DRAWINGS OR AS DIRECTED BY THE ENGINEER IN CHARGE.

LAP JOINTS FOR REINFORCEMENT BARS

i) LAPS SHALL BE STAGGERED AND NOT MORE THAN 50% OF THE BARS SHALL BE LAPPED AT ANY ONE SECTION.

ii) LAPS IN COLUMNS SHALL BE PROVIDED JUST ABOVE THE FLOOR LEVEL AND NOT AT SLAB LEVEL.

iii) LAPS IN BEAMS AND SLABS SHALL BE PROVIDED AT THE POINT OF CONTRAFLEXURE.

R. RAVIKUMAR
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LEGENDS:
- TOP ROD
- BOTTOM ROD
- THK-THICKNESS

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY (VILLA 6)
AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

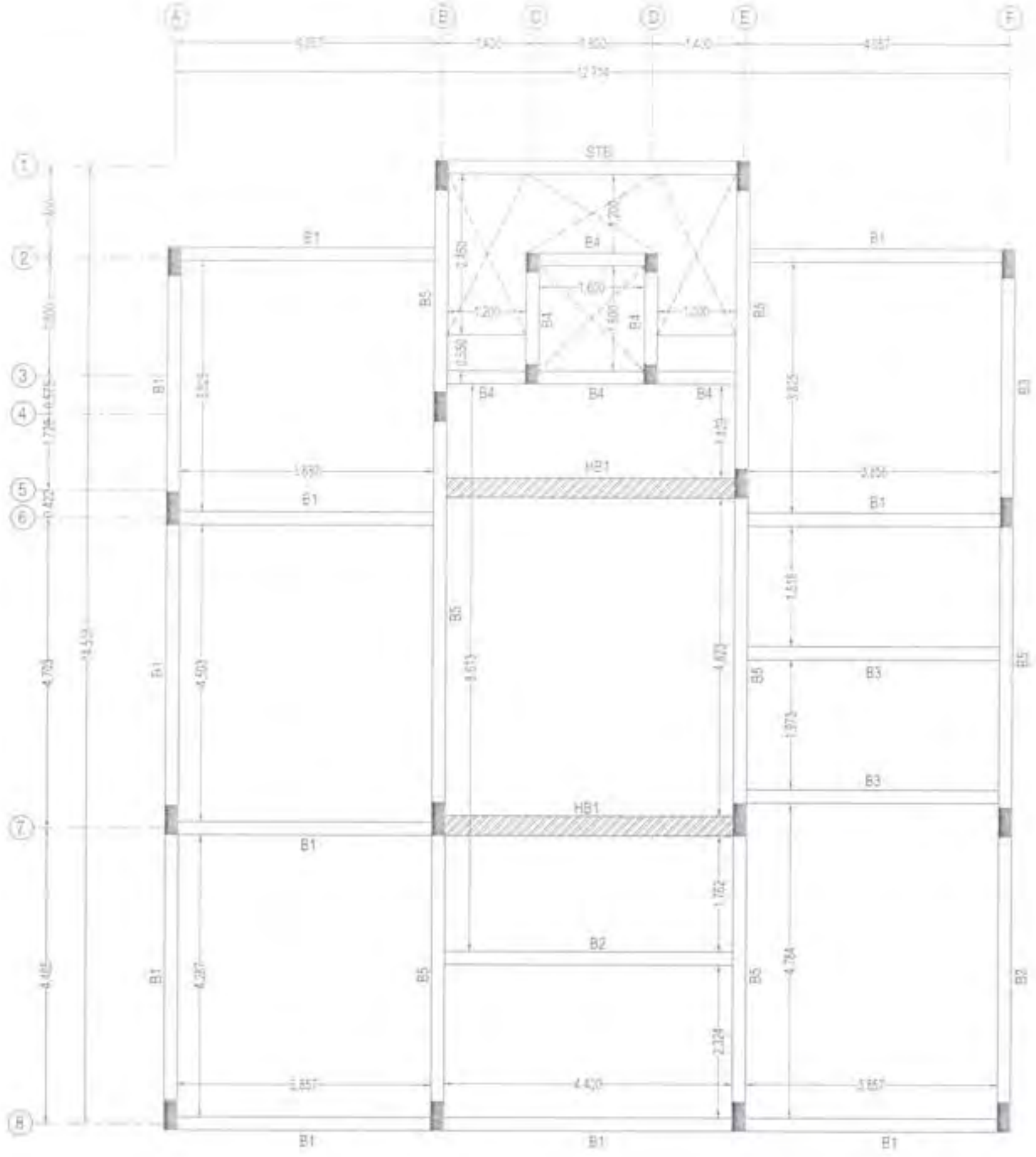
SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

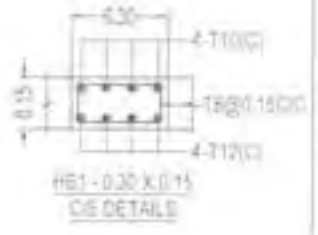
GROUND FLOOR ROOF SLAB DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-05	11



TERRACE BEAM LAYOUT

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I (SG)
M.E (Structural Engg)
Reg. No - SE/GR-I/19/12/231 (CMDA)



LEGENDS:
- HB - HIDDEN BEAM
- OPENING

TECHNICAL NOTES

LAP JOINTS FOR REINFORCEMENT BARS

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY, (VILLA 6)
AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

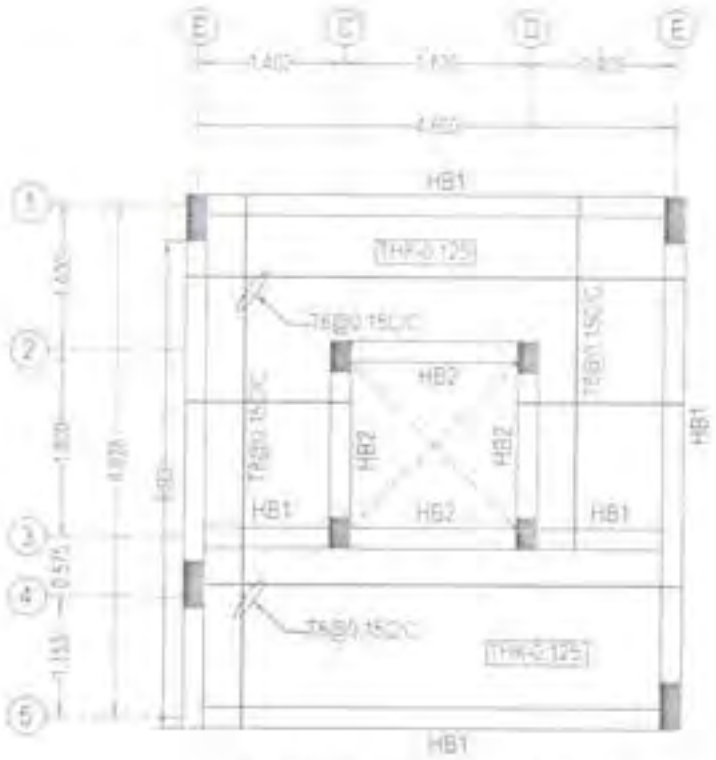
DRAWING NAME

TERRACE BEAM LAYOUT

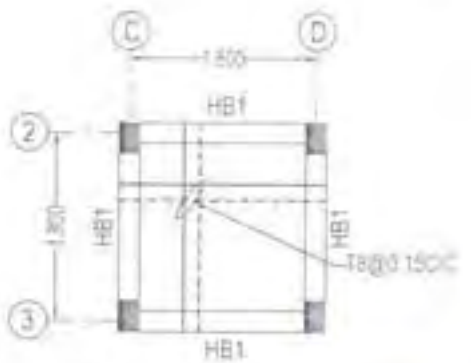
REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-05-05	12

TERRACE BEAM REINFORCEMENT SCHEDULE

BEAM SIZE (B X D)	DETAIL @ LEFT SUPPORT	DETAIL @ MIDDLE	DETAIL @ RIGHT SUPPORT	DETAIL @ CANTILEVER BEAM
(0.20 X 0.45)	2-T16(C)	2-T16(C)	2-T16(C)	
B1	2-T12(C) T8@0.150C/C 2-T12(C)	2-T12(C) T8@0.150C/C 2-T12(C)	2-T12(C) T8@0.150C/C 2-T12(C)	
	2-T16(C)	2-T16(C)	2-T16(C)	
(0.20 X 0.45)	2-T16(C)	2-T16(C)	2-T16(C)	
B2	T8@0.150C/C 2-T16(C)	T8@0.150C/C 2-T16(C)	T8@0.150C/C 2-T16(C)	
	2-T16(C)	2-T16(C)	2-T16(C)	
(0.20 X 0.45)	2-T16(C)	2-T16(C)	2-T16(C)	
B3	T8@0.150C/C 2-T12(C)	T8@0.150C/C 2-T12(C)	T8@0.150C/C 2-T12(C)	
	2-T16(C)	2-T16(C)	2-T16(C)	
(0.20 X 0.45)	2-T16(C)	2-T16(C)	2-T16(C)	
B4	T8@0.150C/C	T8@0.150C/C	T8@0.150C/C	
	2-T16(C)	2-T16(C)	2-T16(C)	
(0.20 X 0.50)	2-T16(C)	2-T16(C)	2-T16(C)	
B5	2-T16(C) T10@0.150C/C 2-T16(C)	2-T16(C) T10@0.150C/C 2-T16(C)	2-T16(C) T10@0.150C/C 2-T16(C)	
	2-T16(C)	2-T16(C)	2-T16(C)	

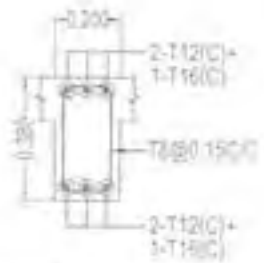


STAIRCASE HEADROOM LAYOUT & DETAILS

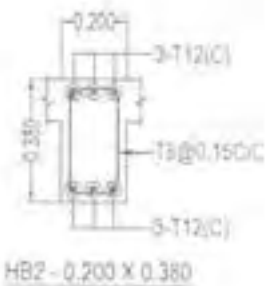


LIFT MACHINE ROOM LAYOUT & DETAILS

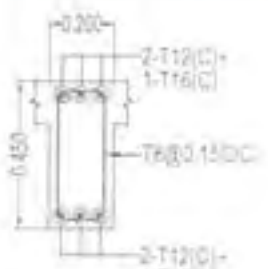
R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I
M.E (Structural Engg)
Reg. No - SE/GR-I/19/12/231 (CMDA)



HB1 - 0.200 X 0.380
C/S DETAILS



HB2 - 0.200 X 0.380
C/S DETAILS



HB3 - 0.200 X 0.450
C/S DETAILS

LEGEND

HB - HIDDEN BEAM
C - CONTINUOUS ROD
E - EXTRA ROD

TECHNICAL NOTES

- ACCORDANCE WITH CONSTRUCTION EXCEPTION AS PER OTHER VIEW DRAWINGS.
- ONLY WRITTEN DIMENSION TO BE FOLLOWED.
- ADDITIONAL WORKS BEFORE INSTRUCTIONS SHALL BE OBTAINED FROM OUR NOTICE WHENEVER IS...
- EARTHWORKS SHALL ... & EXCAVATION IN SOIL.
- EXCAVATION IN ... SHALL BE CARRIED OUT WITH ... NOT PERMITTED ... UNDERMINING ... DISTURBANCE ... FOUNDATION.
- GRADE OF CONCRETE ... COMPONENTS IS AS PER ...
- ... REMARKS ... UNDERMINING ...
- CLEAR COVER TO REINFORCEMENT
  - a. SLAB & BEAM ... MIN.
  - b. FOUNDATION ... MIN.
  - c. COLUMN & RCC ... MIN.
  - d. RAFT SLAB ... MIN.
  - e. CUTTING & ... CLEAR.
- THE BUILDING FOUNDATION HAS BEEN DESIGNED FOR ... THE REQUIRED SAFE CAPACITY OF SOIL IS ... KN/SQ.M. THE CONTRACTOR IS RESPONSIBLE FOR ATTAINING THIS CAPACITY MEANS BY CONSULTING APPROVED EXPERTS.
- LOOSE SOIL IF ANY SHALL BE REMOVED BEFORE LAYING FOUNDATION.
- THE DEPTH OF FOUNDATION SHALL BE AS PER THE EARTHWORKS.

LAP JOINTS FOR REINFORCEMENT BARS

- ... ANY CROSS SECTION OF THE REINFORCEMENT MORE THAN ... OF THE BARS SHALL BE LAPPED.
- LAPS IN COLUMNS SHALL BE PROVIDED AT MID HEIGHT OF FLOOR AND NOT AT FLOOR LEVEL.
- LAPS IN BEAMS AND SLABS SHALL BE PROVIDED AT THE POINT OF CONTRAFLEXURE.

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY, (VILLA 6)
AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

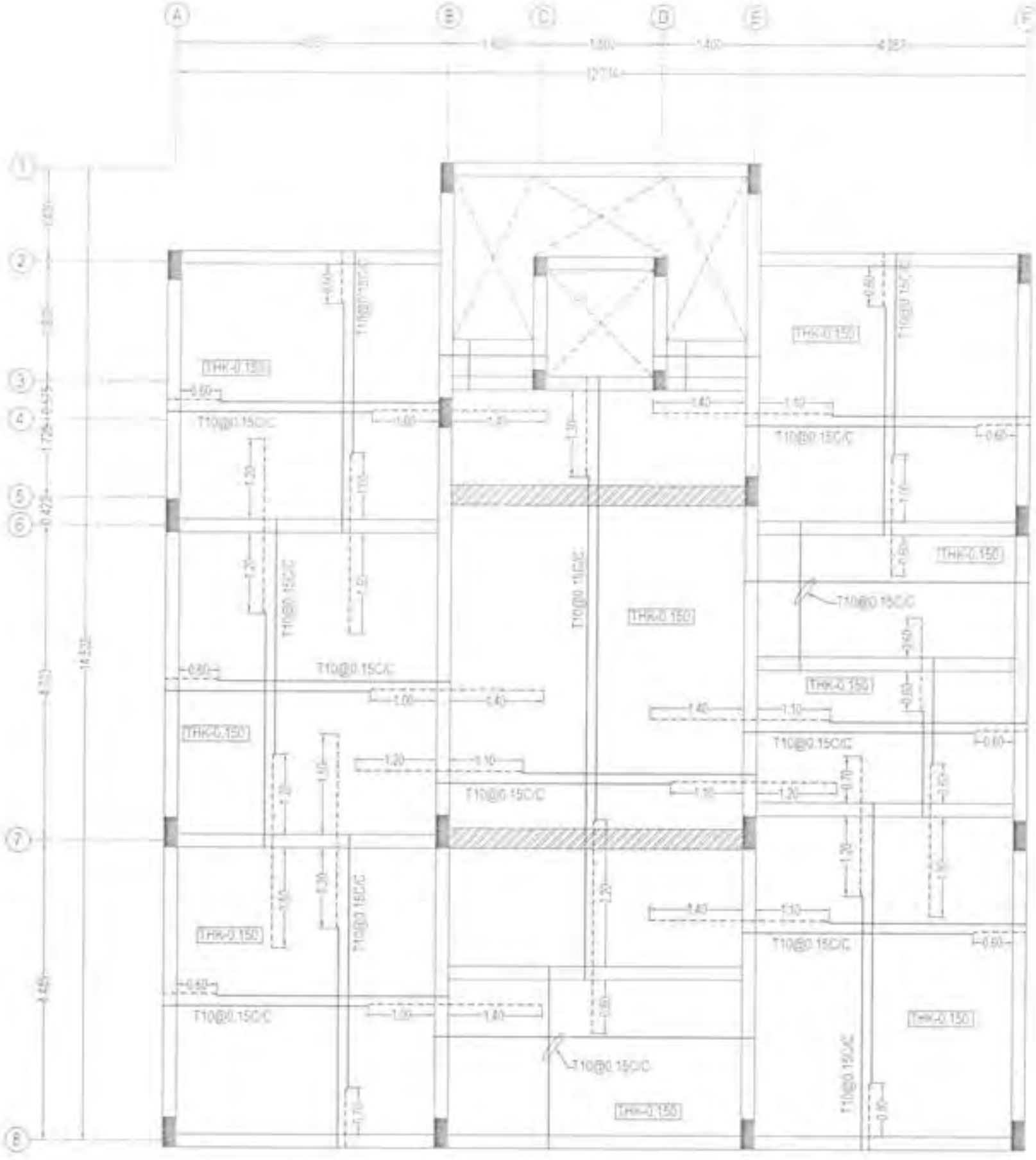
SAFE STRUCTURAL CONSULTANCY
Safe

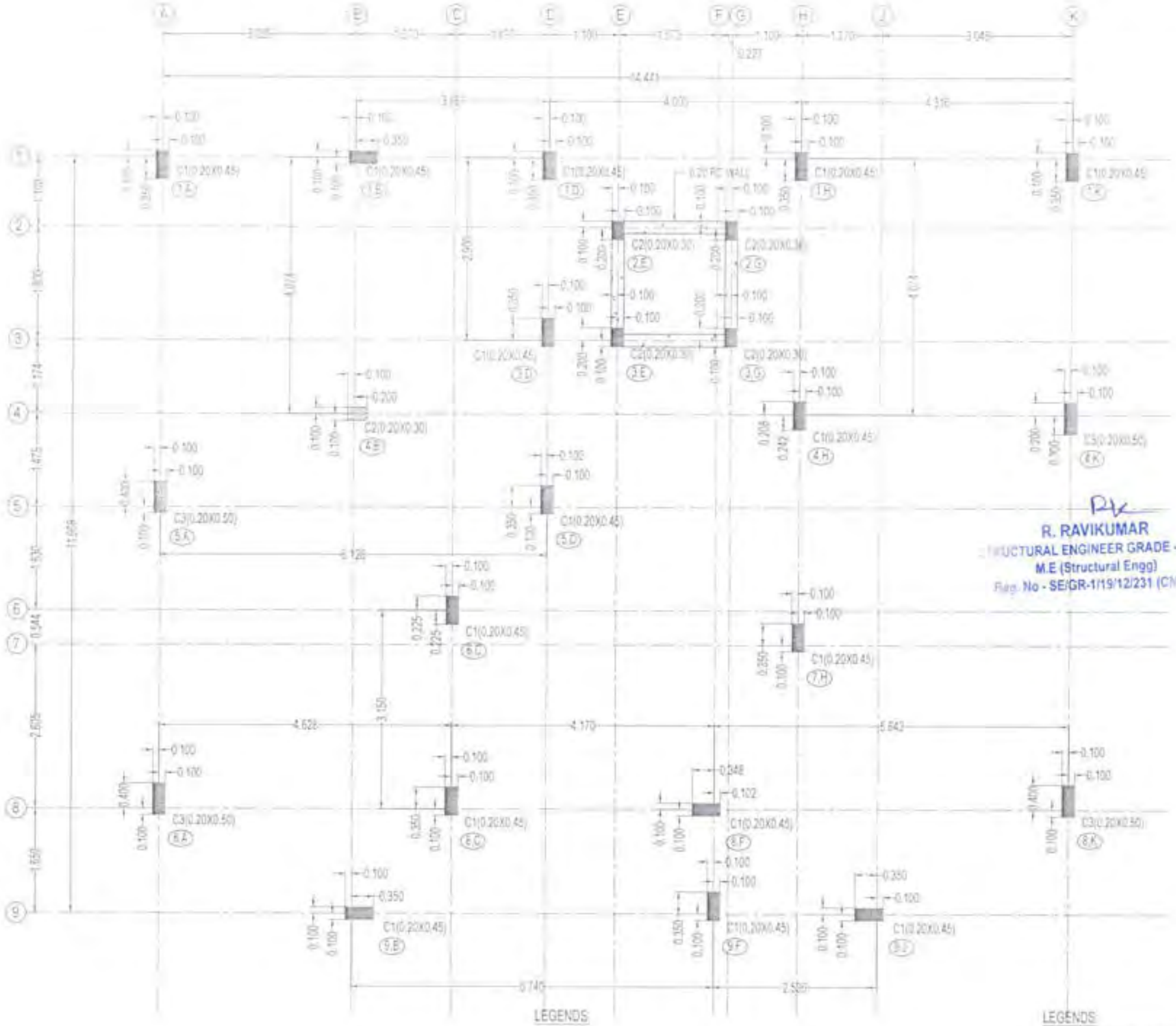
DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

TERRACE BEAM DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	25/04/2026	ST-2026-06-05	13


A
B
C
D
E
F
1
2
3
4
5
6
7
8
12714
THK-0.150
T10@0.15C/C
T10@0.15C/C
T10@0.15C/C



LEGENDS

COLUMN MARKING LAYOUT

LEGENDS

- CONTINUOUS COLUMN
- COLUMN CUT @ GROUND FLOOR ROOF LEVEL

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - 1 (SE)
M.E (Structural Engg)
Reg. No - SE/GR-1/19/12/231 (CMDA)

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TECHNICAL NOTES

1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE MENTIONED.
2. ALL UNITS IN DRAWING TO BE FOLLOWED.
3. ANY DISCREPANCIES NOTICED IN THE DRG. SHALL BE BROUGHT TO OUR NOTICE IMMEDIATELY.
4. CONTRACTOR SHALL CHECK ALL DIMENSIONS ON SITE BEFORE EXECUTING WORKS.
5. PROVISION IN CHARGE TO ENSURE THAT CONSTRUCTION MATERIALS NOT EXCEED THE LOAD BEARING CAPACITY OF ANY ELEMENT TO AVOID ANY DISTRESS FOR THE DURATION OF WORKS.
6. GRADE OF CONCRETE SHALL BE AS PER DRG. (UNLESS OTHERWISE NOTED) AS PER I.S. CODE.
7. REINFORCEMENT SHALL CONFORM TO Fe 500 GRADE HYSD BARS AS PER I.S. 1786 - 1985.
8. CLEAR COVER TO REINFORCEMENT
   a. COLUMNS : 40MM
   b. FOUNDATION : 40MM
   c. GRADE SLAB : 40MM
   d. FLOOR SLAB : 25MM
   e. FLOOR BEAM : 25MM
9. THE BUILDING FOUNDATION HAS BEEN DESIGNED FOR SAFE BEARING CAPACITY OF SOIL AS PER GEOTECHNICAL INVESTIGATION REPORT. THE CONTRACTOR IS RESPONSIBLE FOR ATTAINING THE SAFE BEARING CAPACITY BY CONSULTING WITH SOIL EXPERTS.
10. LOOSE SOIL IF ANY SHALL BE REMOVED BEFORE LAYING FOUNDATION.
11. THE DEPTH OF BEAMS SHALL BE INCLUDING THE SLAB THICKNESS.

LAP JOINTS FOR REINFORCEMENT BARS

1. IN ANY GIVEN SECTION OF THE MEMBER NOT MORE THAN 50% OF THE BARS SHALL BE LAPPED.
2. LAPS IN COLUMNS SHALL BE PROVIDED AT 1/3rd HEIGHT OF FLOOR AND NOT AT SLAB LEVEL.
3. LAPS IN BEAMS AND SLABS SHALL BE PROVIDED AT THE DISCRETION OF CONSTRUCTION.

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY, (VILLA 17 & 18) AT ECR, CHENNAI.

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

SAFE STRUCTURAL CONSULTANCY

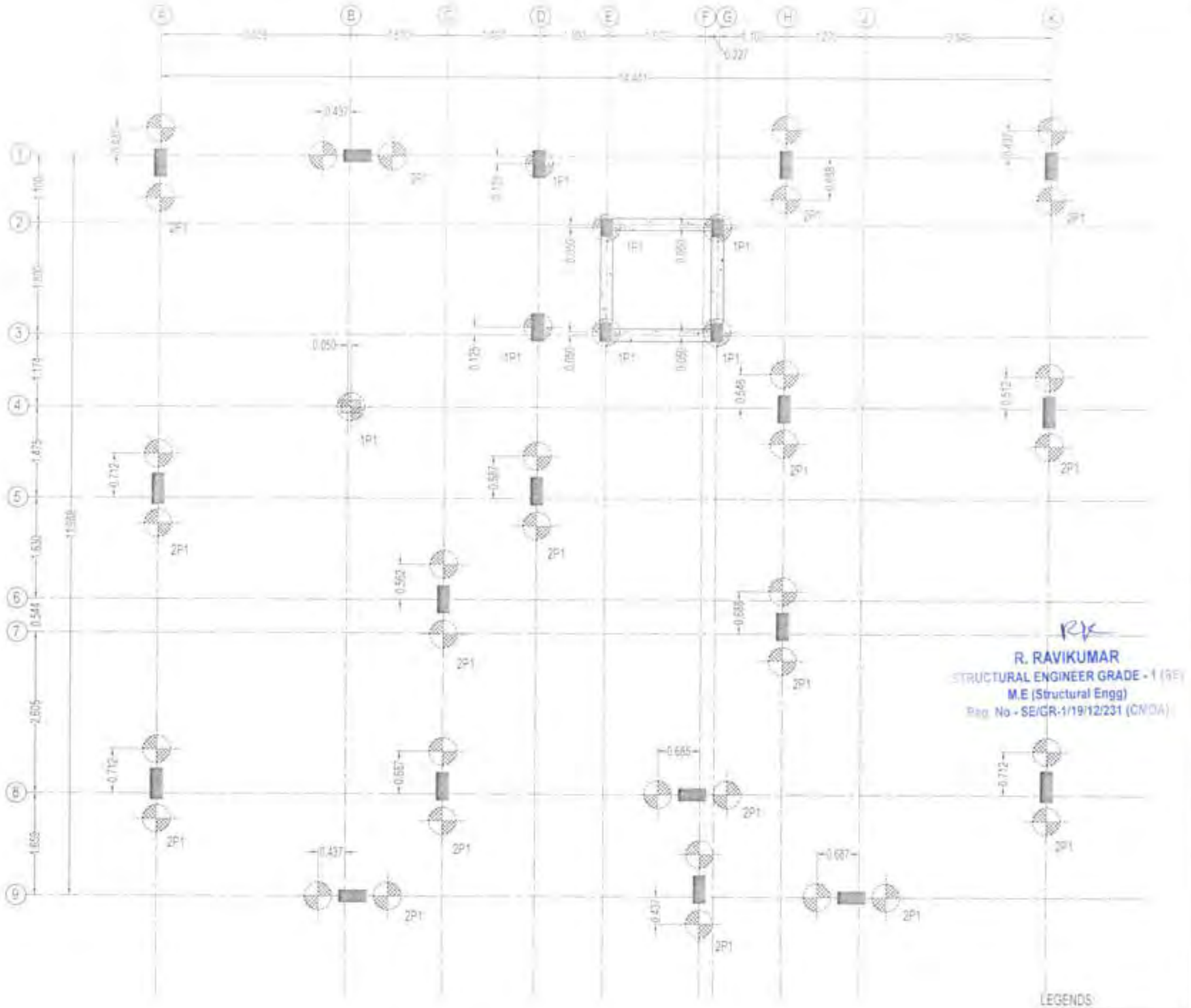
Safe

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

COLUMN MARKING LAYOUT

REV	DATE	PROJECT NO	SHEET NO
R0	05/05/2026	ST-2026-06-06	01



PILE MARKING LAYOUT

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I (SE)
M.E (Structural Engg)
Reg. No - SE/GR-1/19/12/231 (CMDA)

LEGENDS

0.450

P - PILE (0.450dia)

TECHNICAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED.
2. ALL LEVELS ARE IN METERS.
3. ALL DIMENSIONS SHALL BE VERIFIED AT SITE BEFORE THE COMMENCEMENT OF WORK. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
4. ALL CONCRETE SHALL BE OF M 35 GRADE CONCRETE UNLESS OTHERWISE STATED.
5. ALL REINFORCEMENT SHALL BE OF FE 500 GRADE TMT BARS CONFORMING TO IS 1786.
6. ALL CONCRETE WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH IS 456:2000.
7. CLEAR COVER TO REINFORCEMENT:
   - A. COLUMNS : 40MM
   - B. FOUNDATION : 50MM
   - C. GRADE BEAM : 40MM
   - D. FLOOR BEAM : 25MM
   - E. FLOOR SLAB : 20MM
8. THE BUILDING FOUNDATION HAS BEEN DESIGNED FOR SAFE BEARING PILE CAPACITY OF 450 KN/PILE. THE CONTRACTOR IS RESPONSIBLE FOR ATTAINING THE CAPACITY WORK BY CONSULTING WITH GEO EXPERTS.
9. LEAN CONCRETE SHALL BE PROVIDED BEFORE LAYING FOUNDATION.
10. THE KEY FOOTER BEAMS SHALL BE INCLUDING THE SLAB THICKNESS.

LAP JOINTS FOR REINFORCEMENT BARS

1. NOT MORE THAN ALTERNATE REINFORCEMENT BARS SHALL BE LAPPED AT ANY ONE SECTION.
2. LAPS IN COLUMNS SHALL BE PROVIDED JUST ABOVE THE FLOOR LEVEL AND NOT AT SLAB LEVEL.
3. LAPS IN BEAMS AND SLABS SHALL BE PROVIDED AT THE POINT OF CONTRAFLEXURE.

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY, (VILLA 17 & 18) AT ECR, CHENNAI.

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

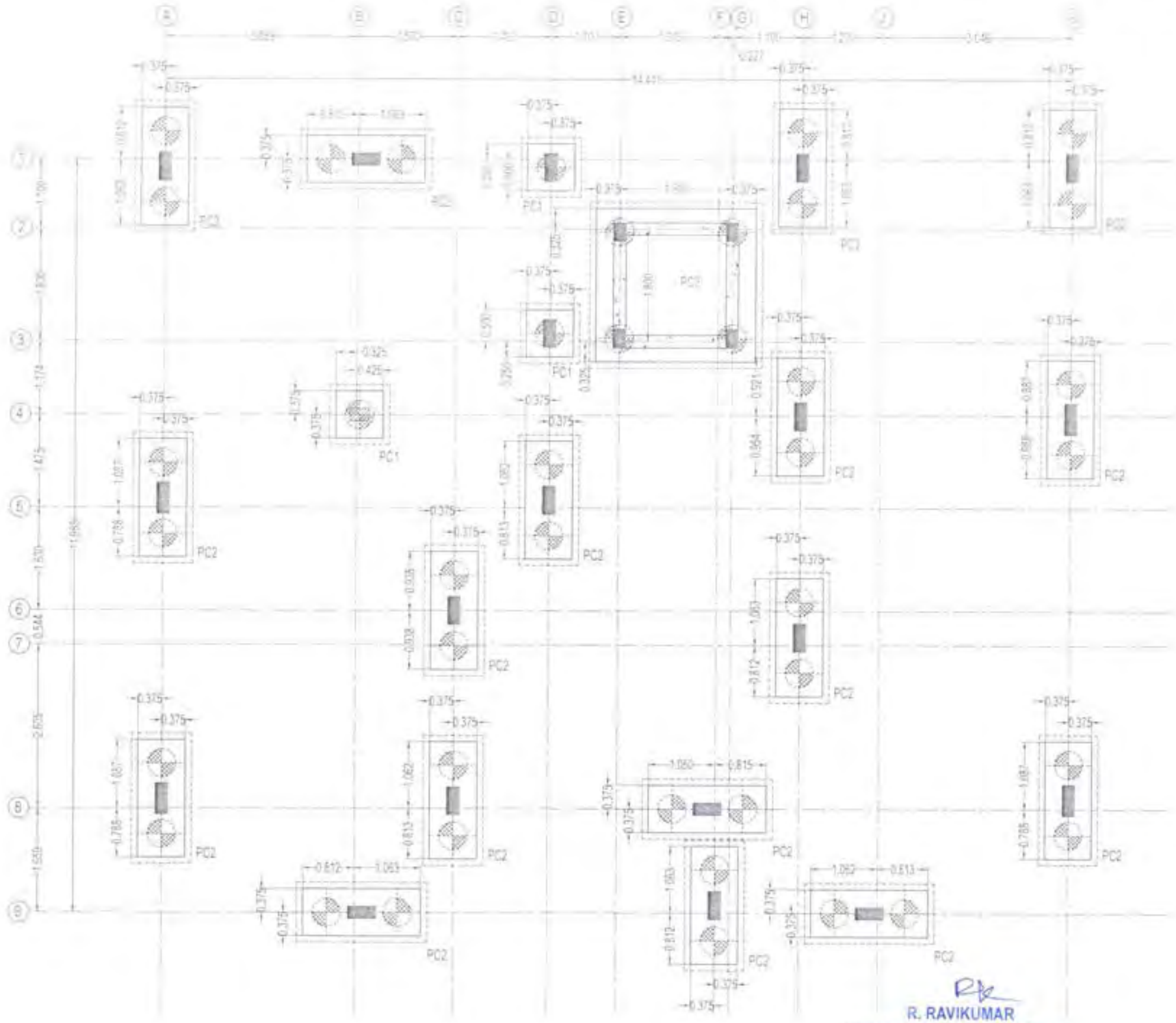
SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

PILE MARKING LAYOUT

REV	DATE	PROJECT NO	SHEET NO
R0	05/05/2026	ST-2026-06-06	02



PILE CAP MARKING LAYOUT

TECHNICAL NOTES

LAP JOINTS FOR REINFORCEMENT BARS

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY, (VILLA 17 & 18)
AT ECR, CHENNAI.

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

SAFE STRUCTURAL CONSULTANCY

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - 1
M.E (Structural Engg)
Reg. No - SE/GR-1/19/12/231

LEGENDS
PC - PILE CAPS

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

PILE CAP(PC) MARKING LAYOUT

REV	DATE	PROJECT NO	SHEET NO
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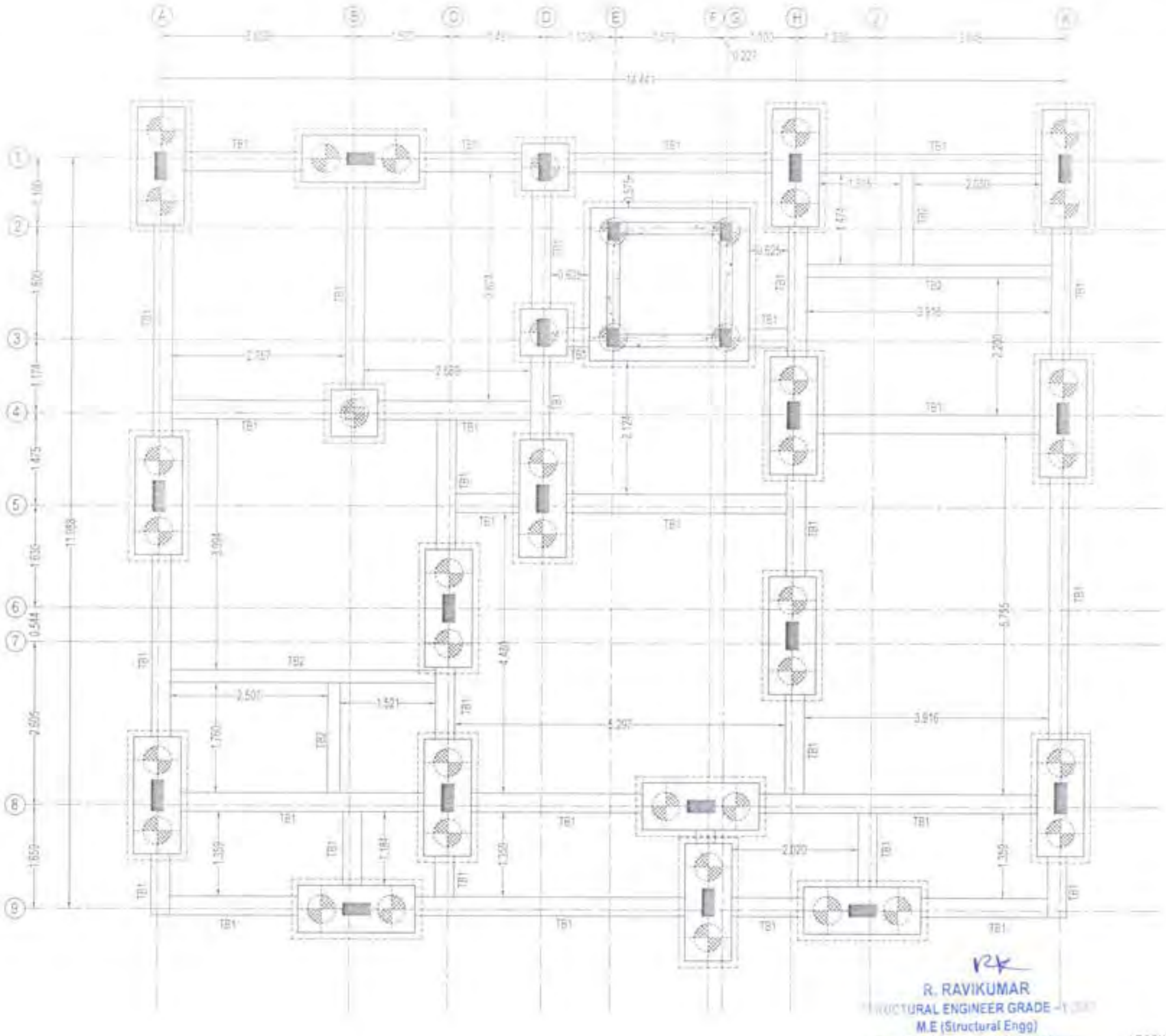


TIE BEAM(TB) LAYOUT

LEGENDS

TB - TIE BEAM

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE -I
M.E (Structural Engg)
Reg. No - SE/GR-1/19/12/231 (CMC/AE)

TECHNICAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. ONLY WRITTEN DIMENSIONS TO BE USED.
3. ALL DISCREPANCIES NOTICED BETWEEN DRAWINGS AND SITE CONDITIONS SHALL BE BROUGHT TO THE NOTICE IMMEDIATELY.
4. EXCAVATION SHALL BE CARRIED OUT TO REQUIRED LEVELS AND DIMENSIONS AS PER DRAWINGS.
5. CONCRETE GRADE USED FOR VARIOUS STRUCTURAL ELEMENTS SHALL BE AS FOLLOWS:
   - PCC - M10
   - FOOTING - M25
   - PEDESTAL - M30
   - GRADE BEAM - M25
   - PLINTH BEAM - M25
   - FLOOR BEAM - M25
   - FLOOR SLAB - M25
6. THE BUILDING FUNCTION HAS NOT BEEN CHANGED FOR 50+ THE REQUIRED SBC CAPACITY OF SOIL IS 40KN/M². THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THE CAPACITY. MAKE BY CONSULTING WITH SOIL EXPERTS.
7. COLLOGE PLANK SHALL BE REMOVED BEFORE LIVING FUNCTION.
8. THICKNESS OF BEAMS SHALL BE INCLUDING THE PLASTERING.

LAP JOINTS FOR REINFORCEMENT BARS

1. AT ANY CROSS SECTION OF THE MEMBER MAXIMUM NUMBER OF THE BARS SHALL BE LAPPED.
2. LAPS IN COLUMNS SHALL BE PROVIDED AT MIDHEIGHT OF FLOOR AND NOT AT FLOOR LEVEL.
3. LAPS IN BEAMS AND SLABS SHALL BE PROVIDED AT THE POINT OF CONTRAFLEXURE.

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY (VILLA 17 & 18) AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

SAFE STRUCTURAL CONSULTANCY

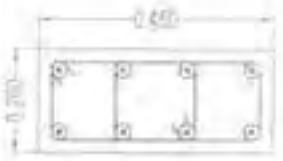
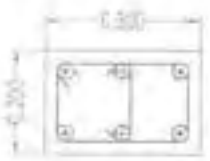
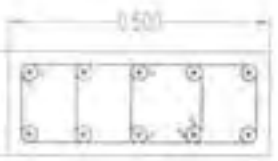
DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

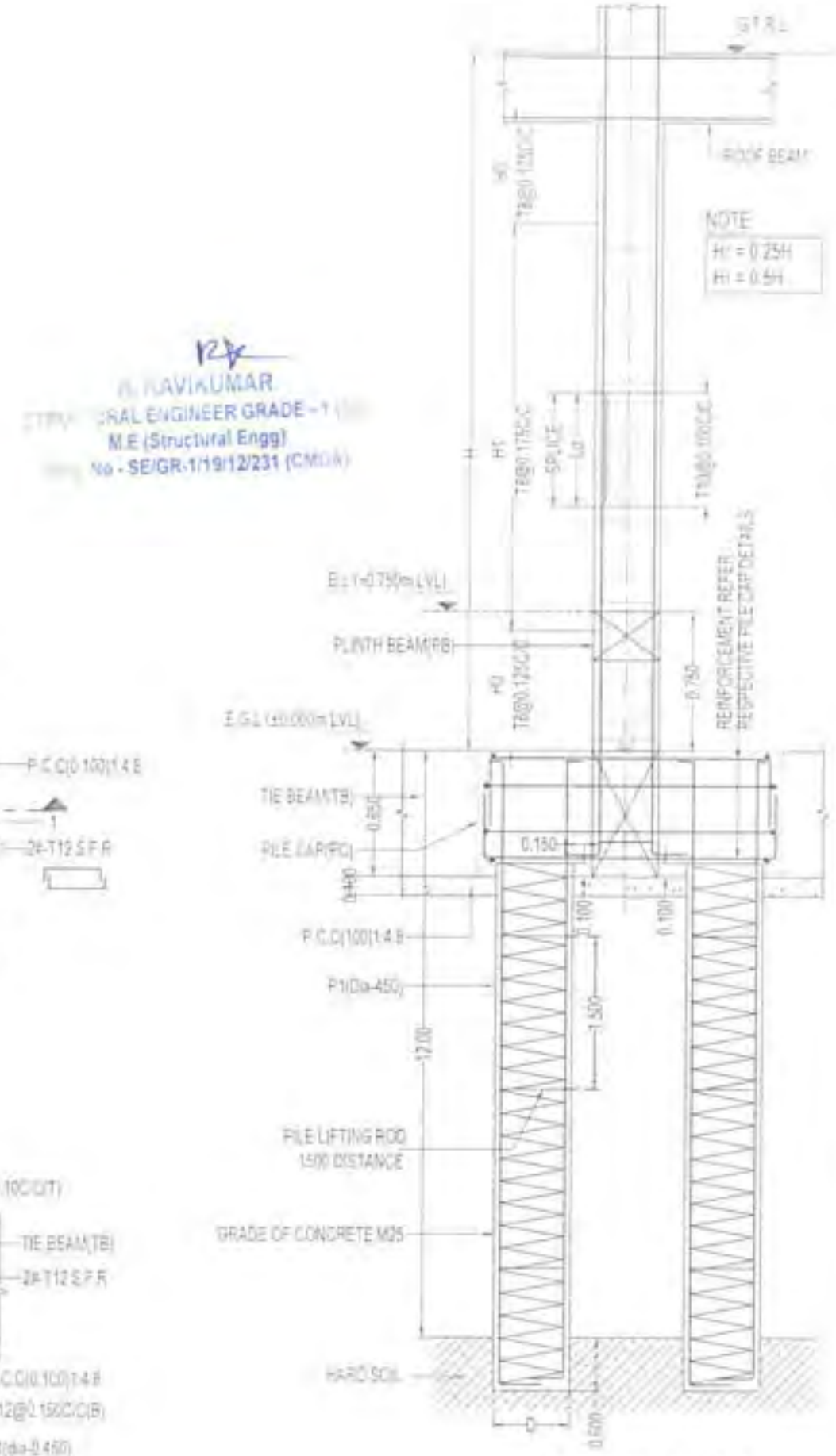
DRAWING NAME

PILE CAP(PC) & TIE BEAM(TB) LAYOUT

REV	DATE	PROJECT NO	SHEET NO
R0	05/05/2026	ST-2026-06-06	04

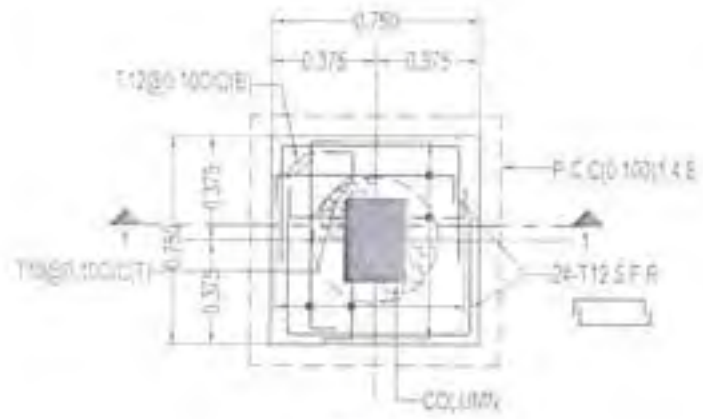
COLUMN REINFORCEMENT SCHEDULE

TERRACE LEVEL			
T/F	H=T8@125C/C	H=T8@125C/C	H=T8@125C/C
	H=T8@175C/C	H=T8@175C/C	H=T8@175C/C
FOOTING MIX M25 @ - T10 @ - T12			
	8-T16	4-T16 + 2-T12	10-T16
COLUMN MARKED	C1	C2	C3

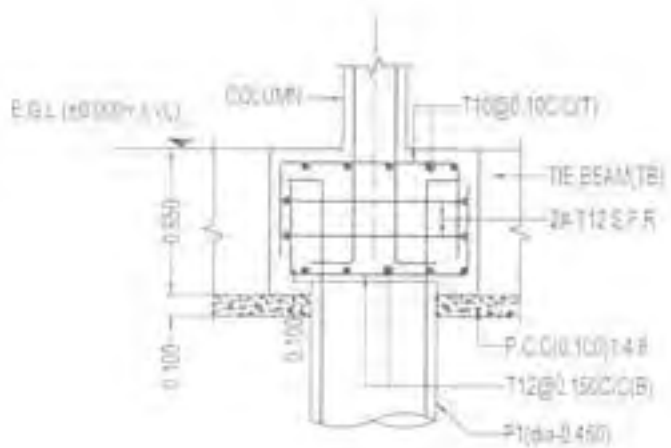


TYPICAL COLUMN & PILE CONFINING DETAILS

PILE (P1) - PLAN



PC1 - PLAN



SECTION - 1 - 1

** S.F.R - SIDE FACE REINFORCEMENT

LEGENDS

B.L - BASEMENT LEVEL
G.F.R.L - GROUND FLOOR ROOF LEVEL
E.G.L - EXISTING GROUND LEVEL

A. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I
M.E (Structural Engg)
No - SE/GR-1/19/12/231 (CMDA)

TECHNICAL NOTES

- ALL WORKMANSHIP & MATERIALS SHALL CONFORM TO LATEST I.S. CODES AND SPECIFICATIONS.
- ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED.
- DO NOT SCALE DRAWINGS. REFER TO FIGURED DIMENSIONS. VERIFY ALL DIMENSIONS AT SITE BEFORE EXECUTION OF WORKS.
- ALL CONSTRUCTION SHALL CONFORM TO APPROVED BUILDING PERMIT DRAWINGS AND SPECIFICATIONS.
- ANY DISCREPANCIES BETWEEN DRAWINGS, SPECIFICATIONS AND SITE CONDITIONS SHALL BE REPORTED TO THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE AFFECTED WORK.
- ALL CONCRETE SHALL BE OF GRADE AS SPECIFIED IN THE STRUCTURAL DRAWINGS AND SHALL ACHIEVE THE SPECIFIED CHARACTERISTIC STRENGTH AT 28 DAYS.
- MINIMUM CONCRETE COVER TO REINFORCEMENT SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:
  - a. COLUMNS : 40MM
  - b. FOOTINGS : 50MM
  - c. BEAMS : 40MM
  - d. SLABS : 25MM
  - e. FLOOR SLAB : 20MM
- THE BUILDING FOUNDATION HAS BEEN DESIGNED FOR SBC. THE ENGINEER/SITE CAPACITY NOT LESS THAN THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING THE CAPACITY TESTING BY CONSULTING WITH SOIL EXPERTS.
- CONTRACTOR SHALL OBTAIN ALL STATUTORY APPROVALS BEFORE STARTING WORKS.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AT SITE BEFORE PROCEEDING WITH ANY WORK.

LAP JOINTS FOR REINFORCEMENT BARS

- NOT MORE THAN 50% OF THE REINFORCEMENT BARS AT A SECTION SHALL BE SPLICED.
- LAPS IN COLUMNS SHALL BE PROVIDED AT MID HEIGHT OF FLOOR AND NOT AT SLAB LEVEL.
- LAPS IN BEAMS AND SLABS SHALL BE PROVIDED AT THE POINT OF CONTRAFLEXURE.

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY, (VILLA 17 & 18) AT ECR, CHENNAI.

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

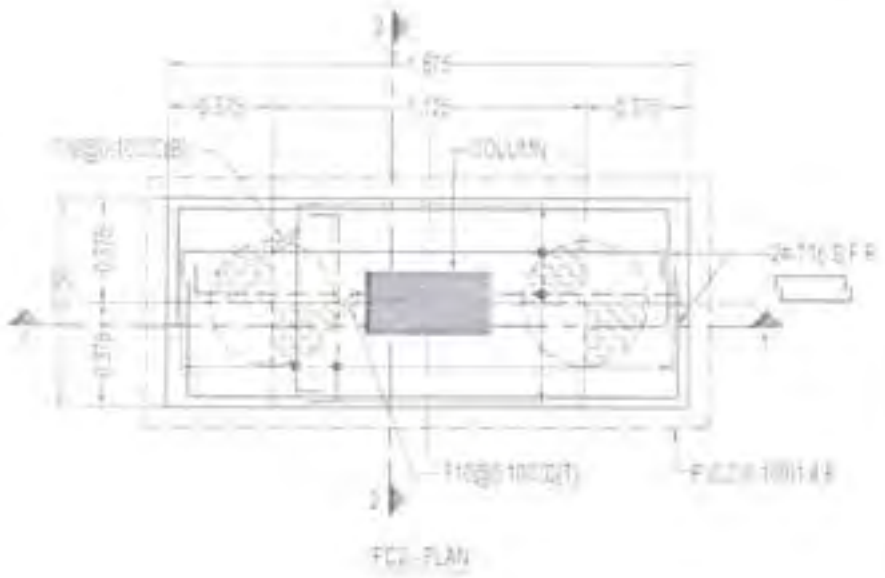
SAFE STRUCTURAL CONSULTANCY

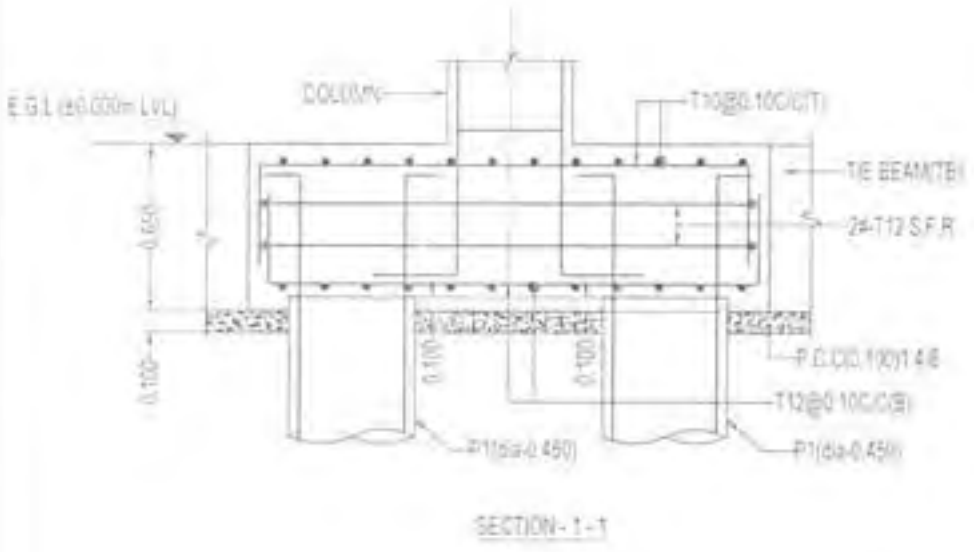
DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

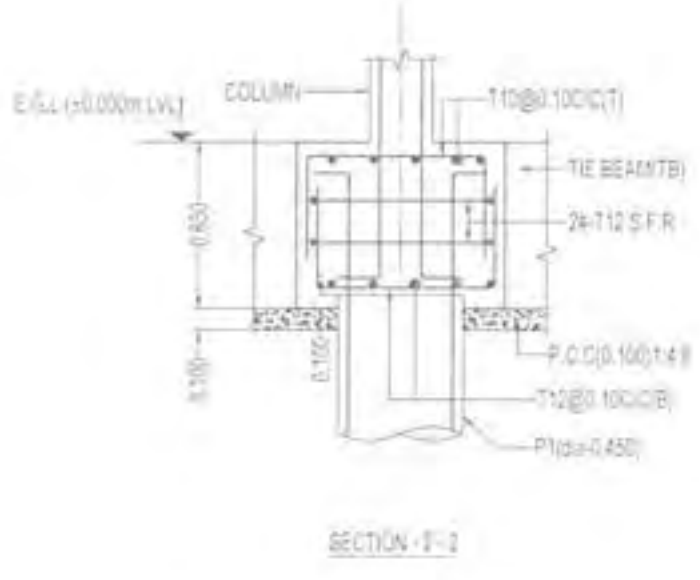
DRAWING NAME

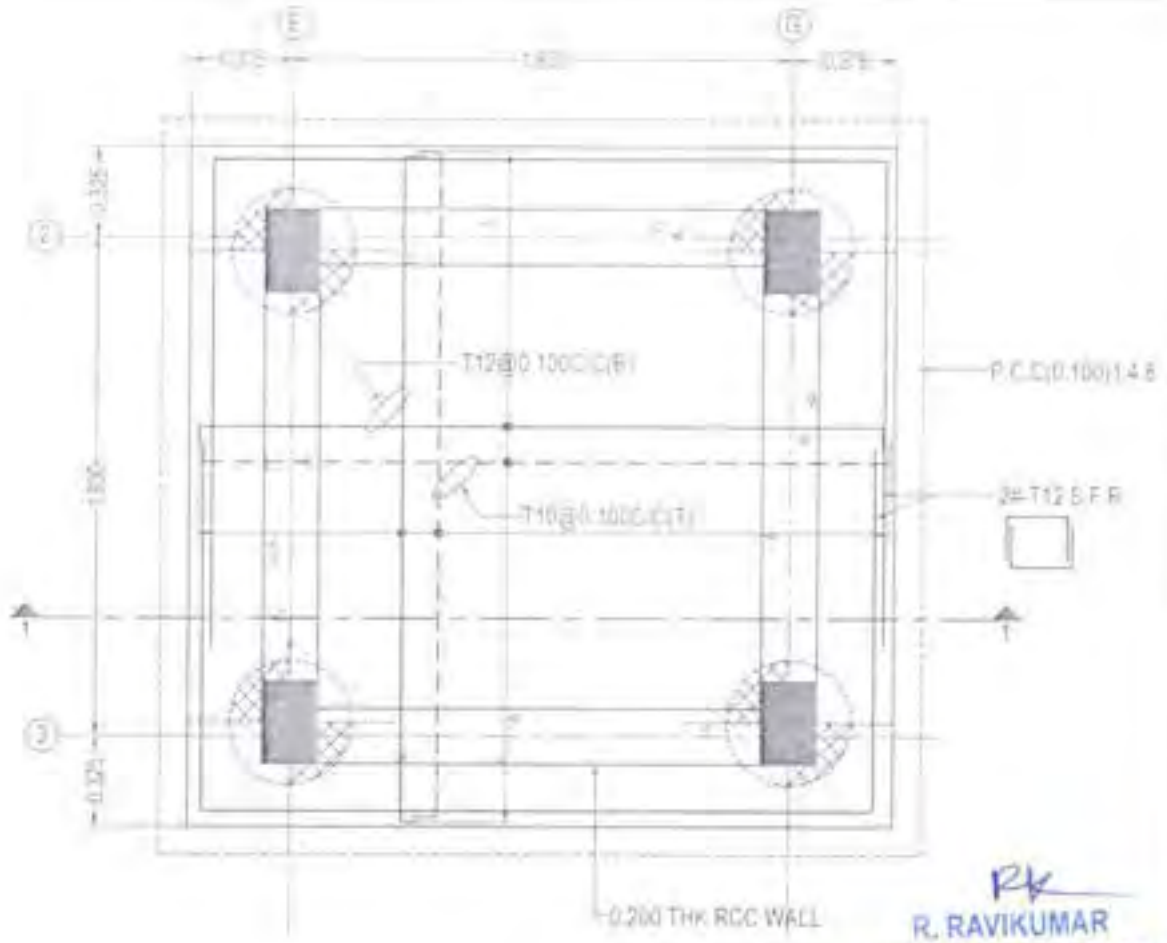
COLUMN, PILE & PILE CAP DETAILS

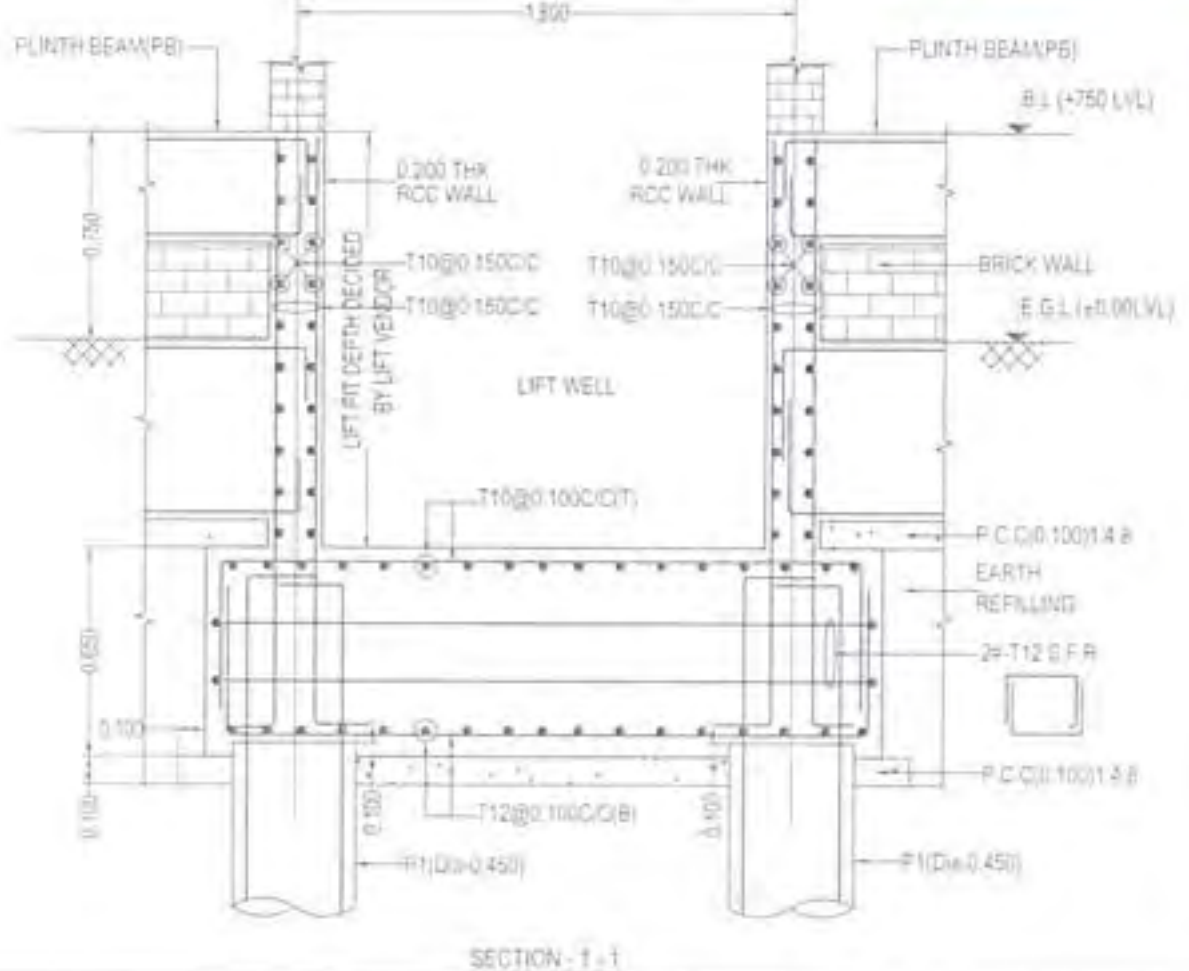
REV	DATE	PROJECT NO	SHEET NO
R0	05/05/2026	ST-2026-05-06	05











R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I
M.E (Structural Engg)
Reg No - SE/GR-1/19/12/231

TECHNICAL NOTES

LAP JOINTS FOR REINFORCEMENT BARS

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY, (VILLA 17 & 18) AT EGR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

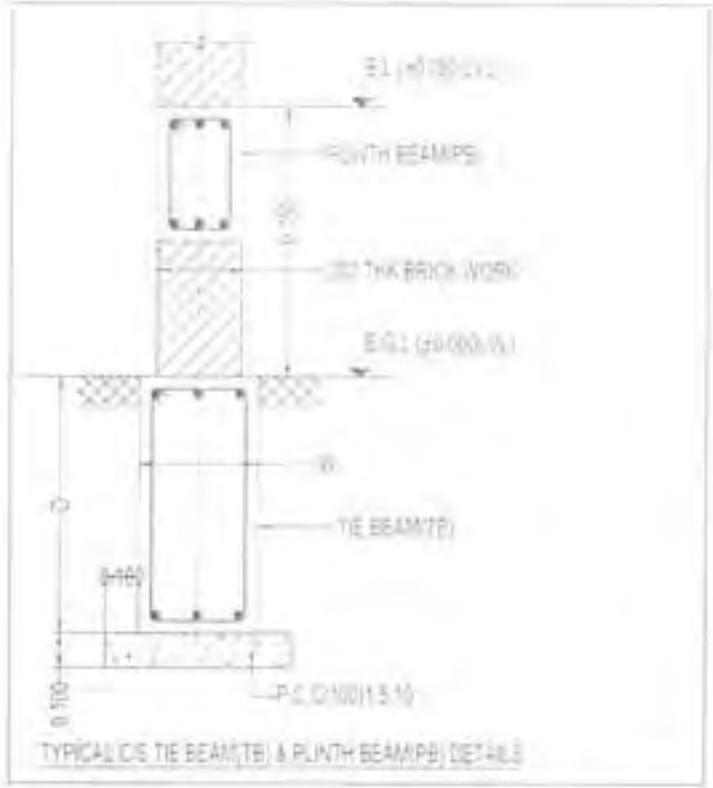
DRAWING NAME

PILE & PILE CAP DETAILS

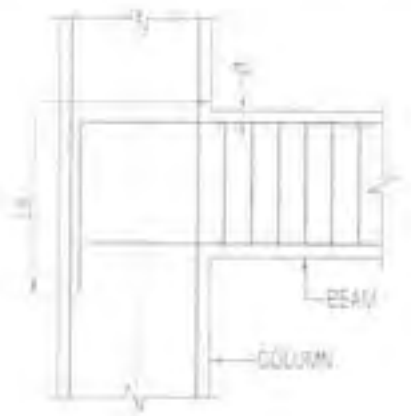
REV	DATE	PROJECT NO	SHEET NO
R0	06/05/2026	ST-2026-06-06	06

TIE BEAM (TB) REINFORCEMENT SCHEDULE

BEAM SIZE & NO.	DETAIL @ LEFT SUPPORT	DETAIL @ MIDDLE	DETAIL @ RIGHT SUPPORT
(0.300 X 0.600)	2-T16(C)	3-T16(C)	3-T16(C)
TB1	T10@0.150 C/C; P.C.C; 3-T16(C)	T10@0.150 C/C; P.C.C; 3-T16(C)	T10@0.150 C/C; P.C.C; 3-T16(C)
(0.300 X 0.650)	2-T16(C)	2-T16(C)	2-T16(C)
TB2	T10@0.150 C/C; P.C.C; 2-T16(C)	T10@0.150 C/C; P.C.C; 2-T16(C)	T10@0.150 C/C; P.C.C; 2-T16(C)



TYPICAL C/S TIE BEAM(TB) & PLINTH BEAM(PB) DETAILS

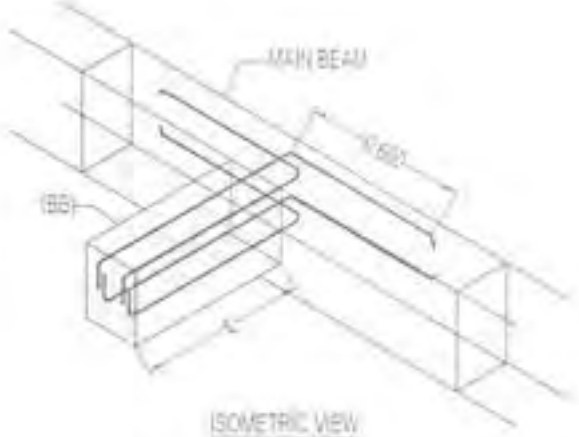


TYPICAL ANCHORAGE OF BEAM BARS IN AN EXTERNAL JOINT

** L/45 TIMES DIA OF BAR

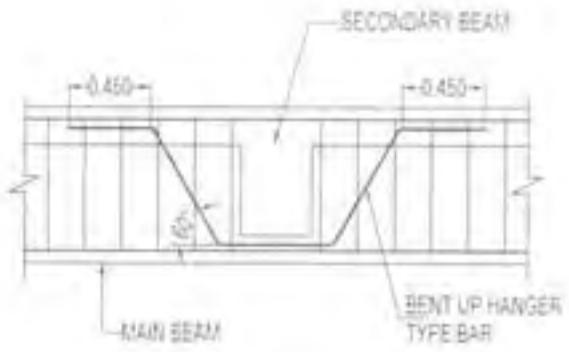
LEGENDS

E.G.L - EXISTING GROUND LEVEL
T.B - TIE BEAM
P.B - PLINTH BEAM
B.L - BASEMENT LEVEL



ISOMETRIC VIEW

OF (TYP) BRACKET BEAM REST ON BEAM DETAIL



WHERE CROSS BEAM SHEAR ROD SHOULD BE PROVIDED AT 2-T16

S.F.R - SIDE FACE REINFORCEMENT
B.F - BACH FACE

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I (SE)
M.E (Structural Engg)
Regn No - SE/GR-1/19/12/231 (Chennai)

TECHNICAL NOTES

LAP JOINTS FOR REINFORCEMENT BARS

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY, (VILLA 17 & 18) AT EGR, CHENNAI.

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

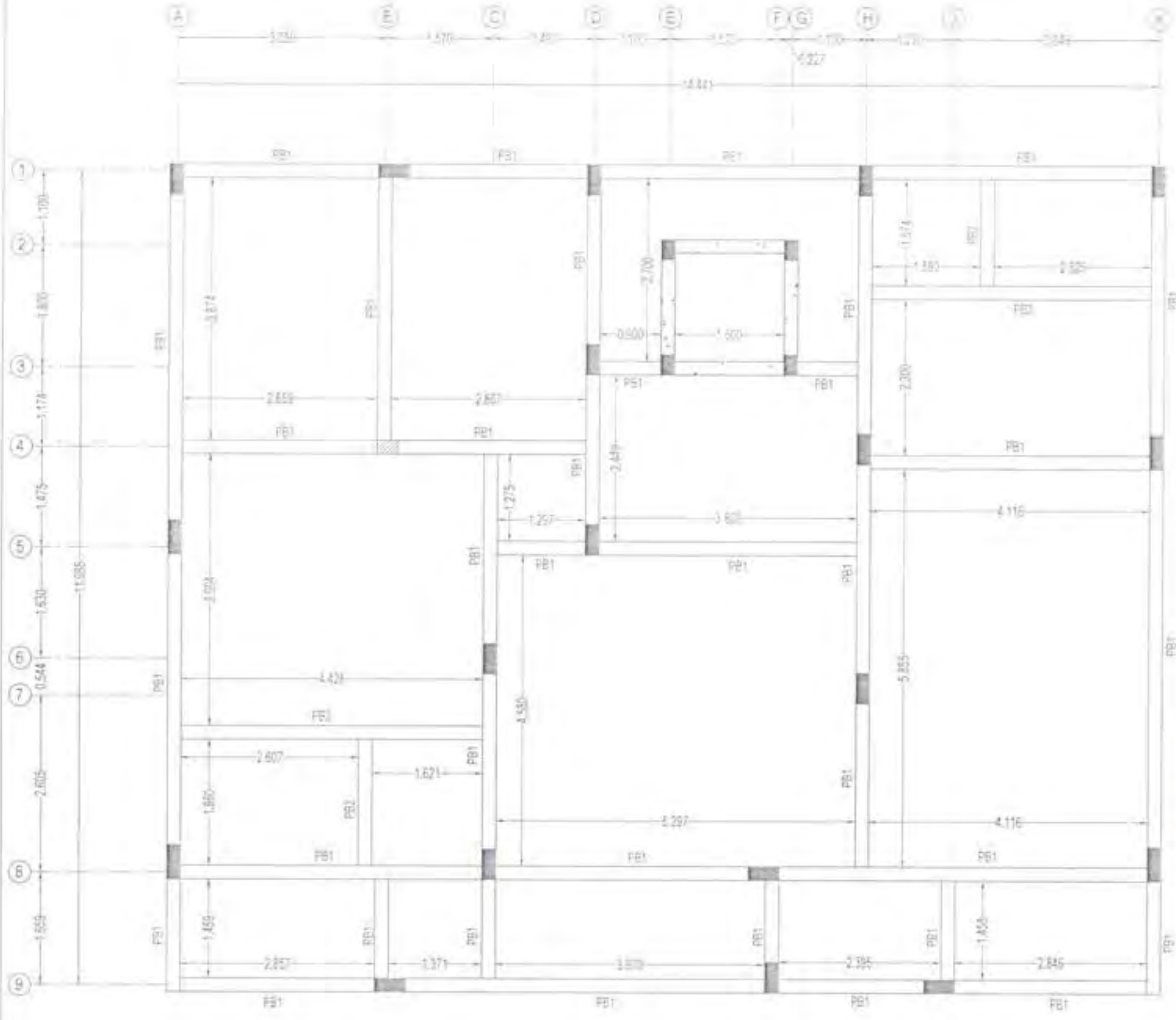
SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

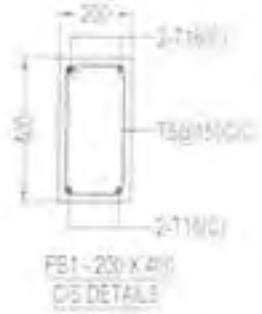
TIE BEAM (TB) REINFORCEMENT DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	05/05/2026	ST-2026-06-06	07

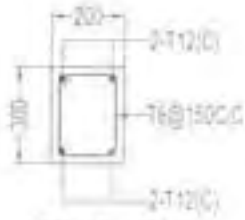


PLINTH BEAM(PB) LAYOUT

TOP OF PLINTH BEAM AT +0.750m LVL



FB1 - 200 X 400
C/S DETAILS



FB2 - 200 X 300
C/S DETAILS

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I
M.E (Structural Engg)
Reg. No - SE/GR-1/19/12/231 (CMDA)

LEGENDS

PB - PLINTH BEAM

TECHNICAL NOTES

LAP JOINTS FOR REINFORCEMENT BARS

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY, (VILLA 17 & 18)
AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

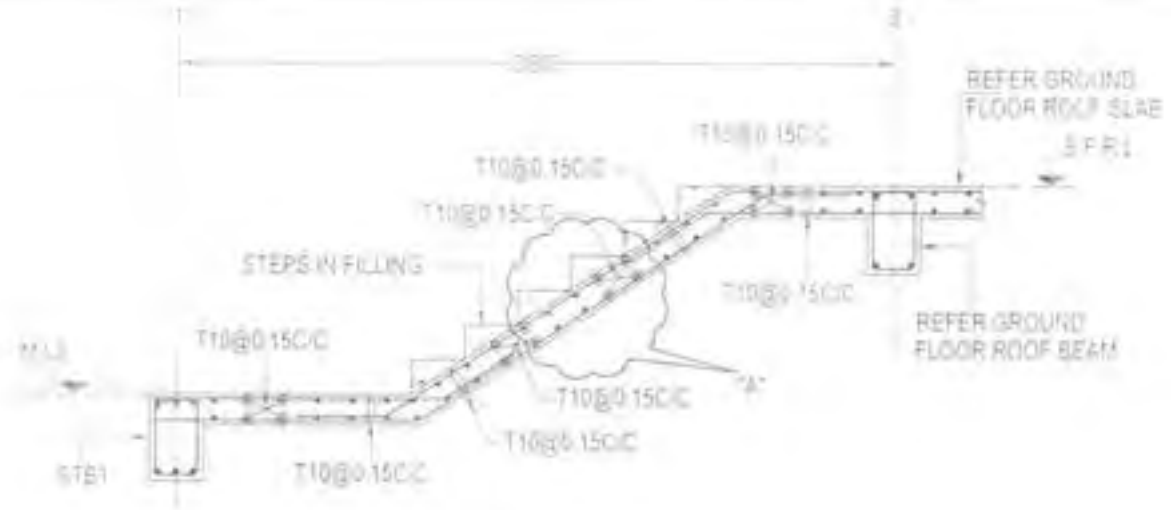
SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

PLINTH BEAM(PB) LAYOUT & DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	05/05/2026	ST-2026-06-06	08



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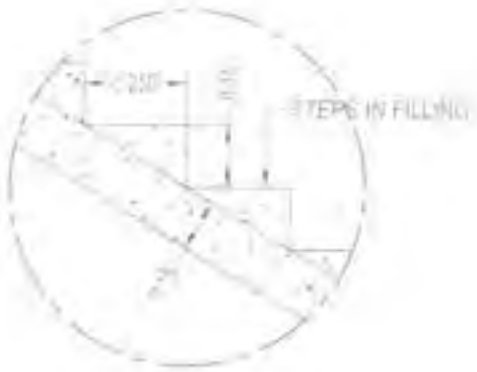
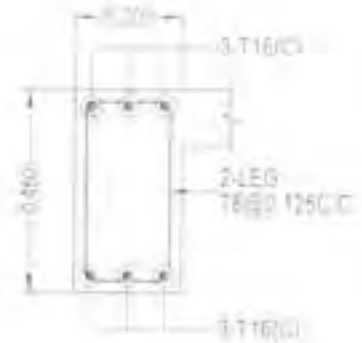




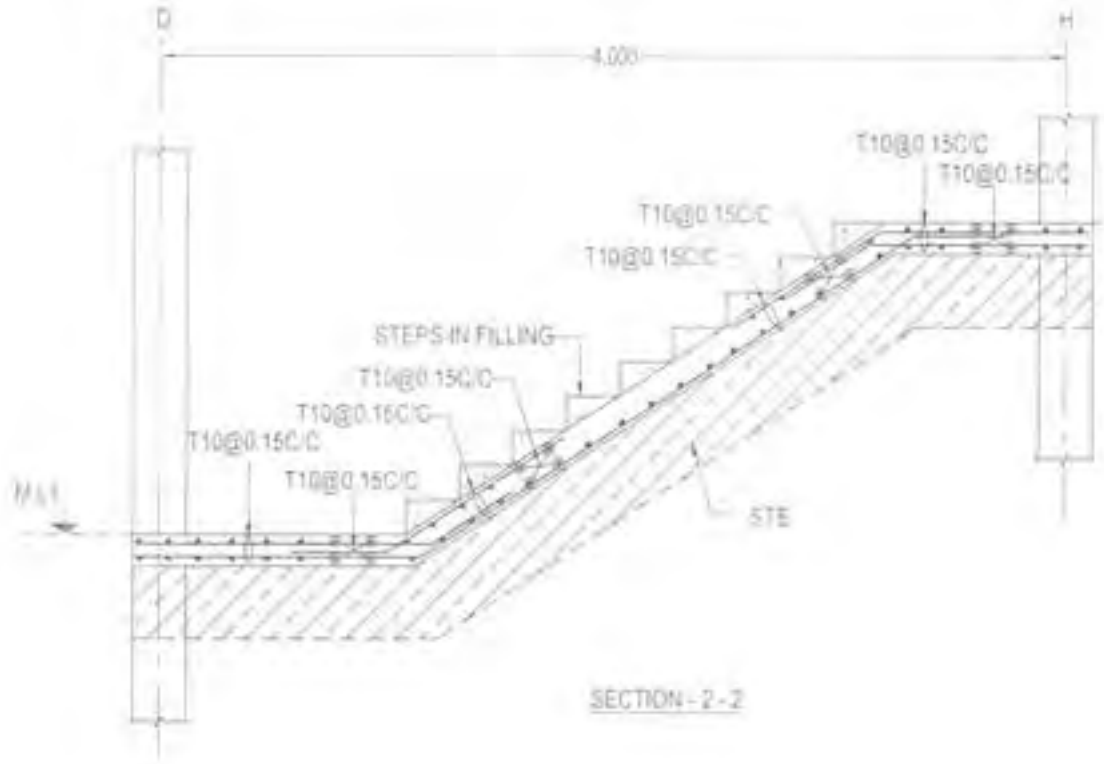
STB - 0.230 X 0.450
BS DETAILS

** NCLOF STEPS & LEVELS REFER LATEST ARCHITECTURAL DRAWING

LEGENDS

S.T.B - STRINGER BEAM
M.L - MID LANDING LEVEL
G.F.R.L - GROUND FLOOR ROOF LEVEL
E.G.L - EXISTING GROUND LEVEL

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I
M.E (Structural Engg)
Regn. No - SE/GR-I/19/12/231 (C)



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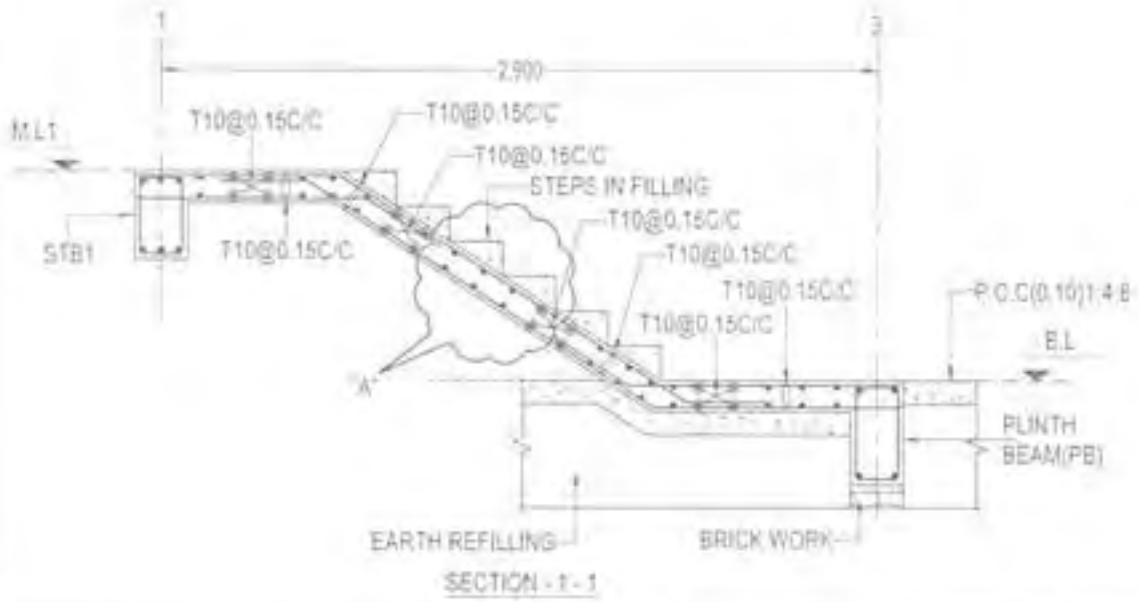

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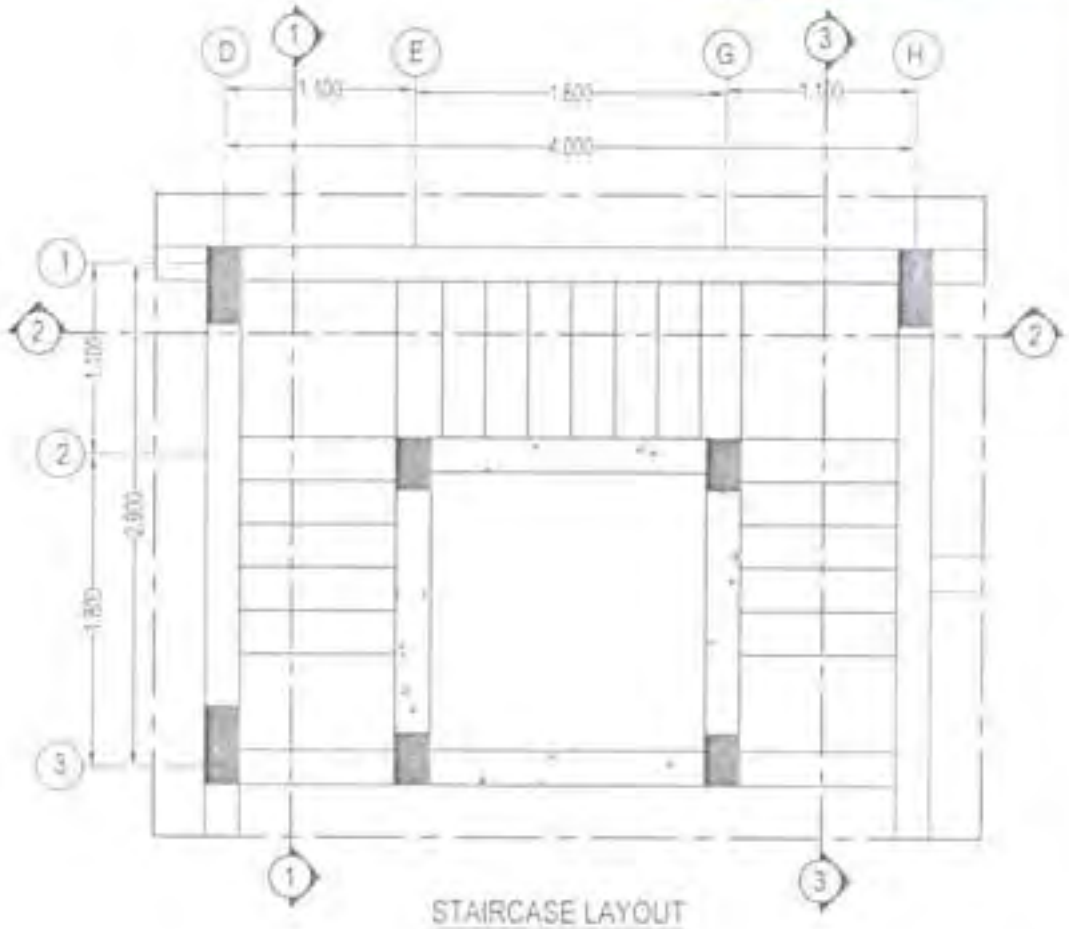

STAIRCASE LAYOUT

TECHNICAL NOTES

LAP JOINTS FOR REINFORCEMENT BARS

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY (VILLA 17 & 18) AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

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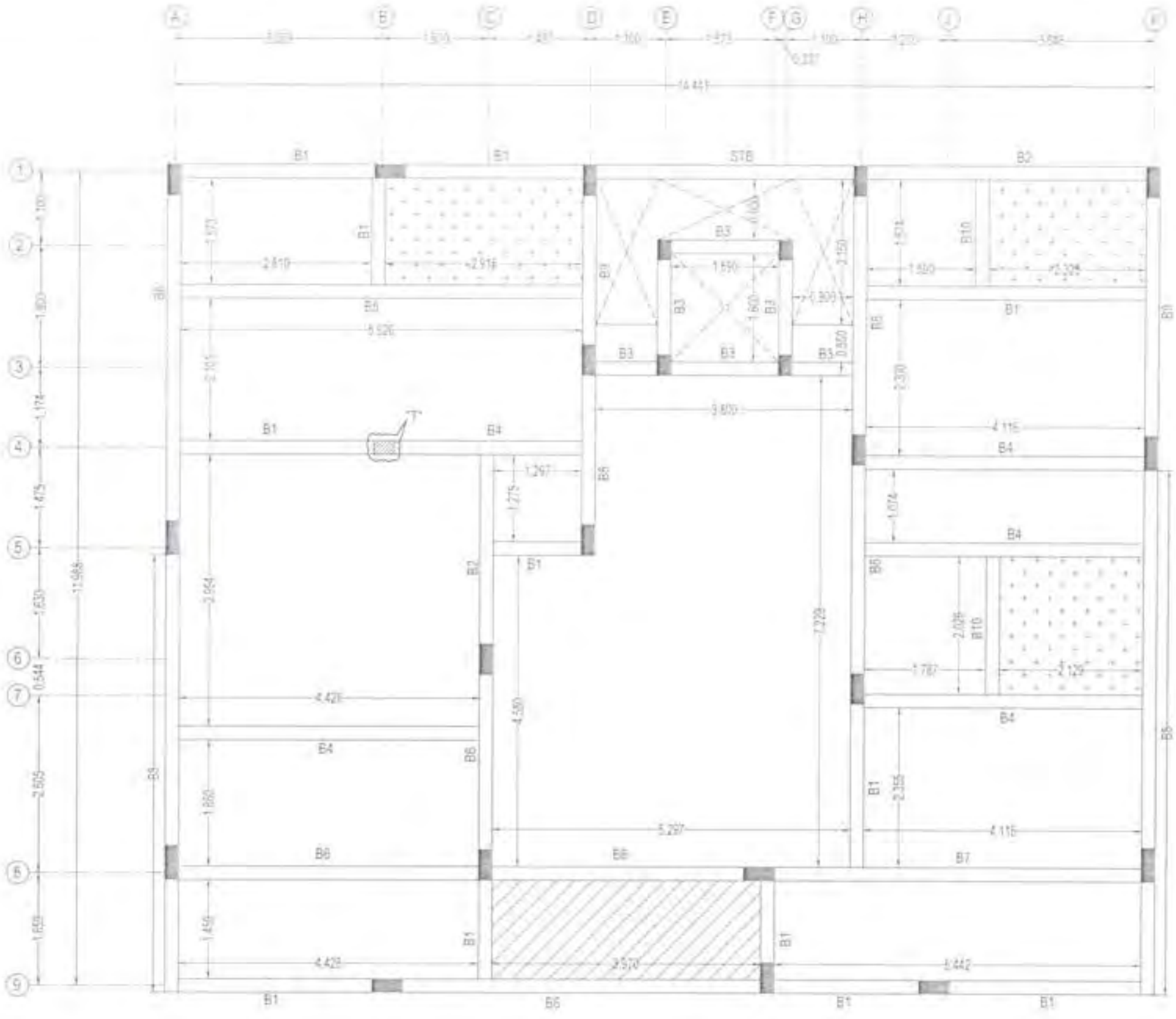
SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR:
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

STAIRCASE LAYOUT & DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	05/05/2026	ST-2026-06-06	08A



GROUND FLOOR ROOF BEAM LAYOUT

LEGENDS:

- TOILET SUNKEN
- BALCONY SUNKEN
- OPENING
- T - COLUMN CUT @ GROUND FLOOR ROOF LEVEL

TECHNICAL NOTES

LAP JOINTS FOR REINFORCEMENT BARS

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY, (VILLA 17 & 18)
AT ECR CHENNAI

ARCHITECT

ADITYARAM GROUP

R. RAVIKUMAR
M.E (Structural Engg)

STRUCTURAL CONSULTANT

SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

GROUND FLOOR ROOF BEAM LAYOUT

REV	DATE	PROJECT NO	SHEET NO
R0	05/05/2026	ST-2026-06-06	09

GROUND FLOOR ROOF BEAM REINFORCEMENT SCHEDULE

BEAM SIZE & MK	DETAIL @ LEFT SUPPORT	DETAIL @ MIDDLE	DETAIL @ RIGHT SUPPORT	DETAIL @ CANTILEVER BEAM
(0.20 X 0.45) B1	2-T16(C), T8@0.15C/C, 2-T16(C)	2-T16(C), T8@0.15C/C, 2-T16(C)	2-T16(C), T8@0.15C/C, 2-T16(C)	- - - - -
(0.20 X 0.45) B2	2-T16(C), T8@0.15C/C, 2-T12(C), 2-T16(C)	2-T16(C), T8@0.15C/C, 2-T12(C), 2-T16(C)	2-T16(C), T8@0.15C/C, 2-T12(C), 2-T16(C)	- - - - -
(0.20 X 0.45) B3	2-T16(C), T10@0.15C/C, 2-T16(C)	2-T16(C), T10@0.15C/C, 2-T16(C)	2-T16(C), T10@0.15C/C, 2-T16(C)	- - - - -
(0.20 X 0.45) B4	2-T16(C), T10@0.15C/C, 2-T16(C), 2-T16(C)	2-T16(C), T10@0.15C/C, 2-T16(C), 2-T16(C)	2-T16(C), T10@0.15C/C, 2-T16(C), 2-T16(C)	- - - - -
(0.20 X 0.60) B5	2-T16(C), 2-T12(C), T10@0.15C/C, 2-T16(C), 2-T16(C)	2-T16(C), 2-T12(C), T10@0.15C/C, 2-T16(C), 2-T16(C)	2-T16(C), 2-T12(C), T10@0.15C/C, 2-T16(C), 2-T16(C)	- - - - -
(0.20 X 0.45) B6	2-T16(C), 2-T16(C), T8@0.15C/C, 2-T16(C), 2-T16(C)	2-T16(C), 2-T16(C), T8@0.15C/C, 2-T16(C), 2-T16(C)	2-T16(C), 2-T16(C), T8@0.15C/C, 2-T16(C), 2-T16(C)	- - - - -
(0.20 X 0.60) B7	2-T16(C), 2-T16(C), T10@0.15C/C, 2-T16(C), 2-T16(C)	2-T16(C), 2-T16(C), T10@0.15C/C, 2-T16(C), 2-T16(C)	2-T16(C), 2-T16(C), T10@0.15C/C, 2-T16(C), 2-T16(C)	- - - - -

GROUND FLOOR ROOF BEAM REINFORCEMENT SCHEDULE

BEAM SIZE & MK	DETAIL @ LEFT SUPPORT	DETAIL @ MIDDLE	DETAIL @ RIGHT SUPPORT	DETAIL @ CANTILEVER BEAM
(0.20 X 0.45) B1	2-T16(C), 2-T16(C), T10@0.15C/C, 2-T16(C), 2-T16(C)	2-T16(C), 2-T16(C), T10@0.15C/C, 2-T16(C), 2-T16(C)	2-T16(C), 2-T16(C), T10@0.15C/C, 2-T16(C), 2-T16(C)	
(0.20 X 0.60) B5	2-T16(C), 2-T12(C), T10@0.15C/C, 2-T16(C), 2-T16(C)	2-T16(C), 2-T12(C), T10@0.15C/C, 2-T16(C), 2-T16(C)	2-T16(C), 2-T12(C), T10@0.15C/C, 2-T16(C), 2-T16(C)	- - - - -
(0.20 X 0.45) B6	2-T12(C), T8@0.15C/C, 2-T16(C)	2-T12(C), T8@0.15C/C, 2-T16(C)	2-T12(C), T8@0.15C/C, 2-T16(C)	
(0.20 X 0.45) STB	2-T16(C), T8@0.15C/C, 2-T16(C)	2-T16(C), T8@0.15C/C, 2-T16(C)	2-T16(C), T8@0.15C/C, 2-T16(C)	

LEGEND:
C - CONTINUOUS ROD
E - EXTRA ROD

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I
M.E (Structural Engg)
Reg. No - SE/GR-1/19/12/231

TYPICAL TOILET SUNKEN SLAB DETAILS

TECHNICAL NOTES

1. ALL DIMENSIONS ARE IN CENTIMETERS & MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. THE FOUNDATION DESIGN IS TO BE DONE.
3. ANY DISCREPANCIES FOUND ON THE SITE SHALL BE BROUGHT TO OUR NOTICE IMMEDIATELY.
4. THE CONTRACTOR SHALL CONFIRM ALL DIMENSIONS AT SITE BEFORE EXECUTION OF WORK.
5. UNDERSIDE OF FOOTING, TOP LEVEL OF PLINTH BEAM & FLOOR LEVELS ARE NOT BASED UPON ALL APPROVED DRAWINGS. THESE HAVE TO BE CONFIRMED FROM CONSTRUCTION DRAWINGS.
6. GRADE OF CONCRETE FOR ALL CONSTRUCTION ARE AS FOLLOWS FOR ALL RCC COMPONENTS IN ABOVE GROUND LEVEL.
7. ALL CONCRETE TO BE MACHINE MIXED AND VIBRATED UNLESS OTHERWISE SPECIFIED.
8. CONCRETE TO BE USED FOR
   a. COLUMNS - M40
   b. FOUNDATION - M40
   c. GRADE BEAM - M40
   d. FLOOR BEAM - M40
   e. FLOOR SLAB - M40
9. THE BUILDING FOUNDATION HAS BEEN DESIGNED FOR SAFE BEARING CAPACITY OF 10 T/SQ.M. THE CONTRACTOR IS RESPONSIBLE FOR ATTAINING THE CAPACITY AS MENTIONED ABOVE BEFORE CASTING THE FOOTING.
10. COVER BLOCK IS TO BE USED AS PRECAUTIONS AGAINST CORROSION.
11. THE DEPTH OF BEAMS SHALL BE INCLUDING THE SLAB THICKNESS.

LAP JOINTS FOR REINFORCEMENT BARS

1. AT ANY CROSS SECTION OF THE MEMBER NOT MORE THAN 50% OF THE BARS SHALL BE LAPPED.
2. LAPS IN COLUMNS SHALL BE PROVIDED AT MID HEIGHT OF FLOOR AND NOT AT SLAB LEVEL.
3. LAPS IN BEAMS AND SLABS SHALL BE PROVIDED AT THE POINT OF CONTRAFLEXURE.

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY, (VILLA 17 & 18) AT EGR, CHENNAI.

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

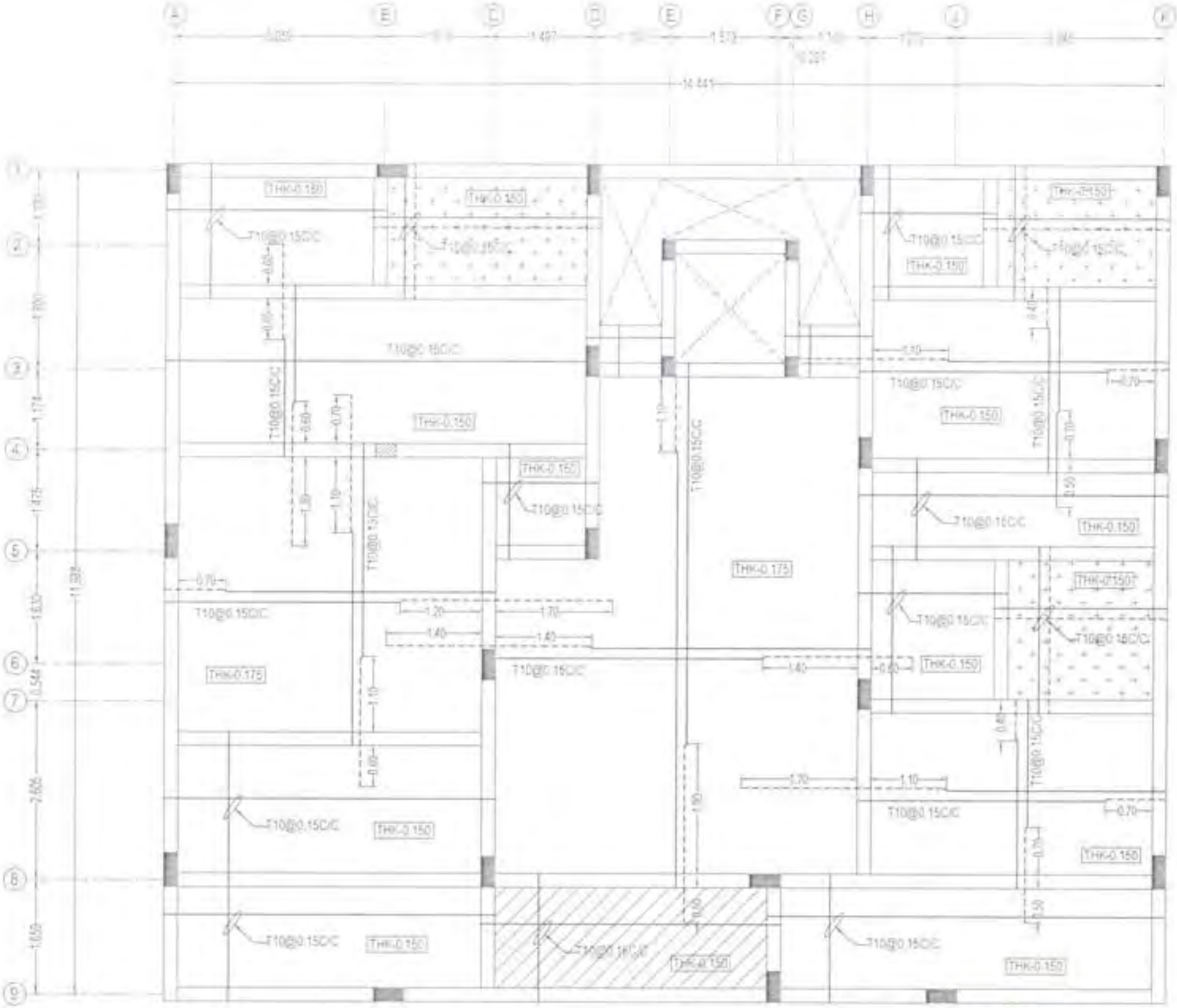
SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

GROUND FLOOR ROOF BEAM DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	05/05/2026	ST-2026-06-06	10



GROUND FLOOR ROOF SLAB LAYOUT & DETAILS

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I (SE)
M.E (Structural Engg)
Reg. No - SE/GR-I/19/12/231 (CMA)

LEGENDS
TOP RUC
BOTTOM RUC
THK-THICKNESS

TECHNICAL NOTES

1. ALL DIMENSIONS ARE IN CENTIMETER UNLESS MENTIONED OTHERWISE.
2. ONLY FIGURED DIMENSIONS TO BE TAKEN.
3. ANY DISCREPANCIES IN THE DRAWINGS SHALL BE BROUGHT TO THE NOTICE IMMEDIATELY.
4. ENGINEER'S DECISION IS FINAL.
5. ENGINEER IS ENTITLED TO MAKE ANY CHANGES FROM THE DRAWINGS AND SPECIFICATIONS WHICH HE CONSIDERS NECESSARY.
6. ENGINEER IS ENTITLED TO REJECT ANY CONSTRUCTION WORK WHICH HE FEELS IS NOT UP TO THE SPECIFICATIONS AND TO ORDER ITS REMOVAL AND RECONSTRUCTION AT THE CONTRACTOR'S EXPENSE.
7. THESE DRAWINGS SHALL COMPLY WITH ANY AND ALL BYE-LAWS AND COMMON REGULATIONS.
8. ALL WORKS SHALL CONFORM TO THE RELEVANT INDIAN STANDARD CODES OF PRACTICE.
9. CONCRETE GRADE USED:
   - A COLUMN - M30
   - B FOUNDATION - M30
   - C GROUND BEAM - M30
   - D PLINTH BEAM - M30
   - E FLOOR BEAM - M30
   - F FLOOR SLAB - M30
10. THE BUILDING FOUNDATION HAS BEEN DESIGNED FOR SAFE BEARING CAPACITY OF SOIL @ 40KN/M². THE CONTRACTOR IS TO RESPONSIBLE FOR ATTAINING THE SAFE BEARING CAPACITY AS SHOWN BY CONSULTING WITH SOIL EXPERTS.
11. LEAN CONCRETE OF 100MM SHALL BE PROVIDED BEFORE LAYING FOUNDATION CONCRETE.
12. THE DEPTH OF FOUNDATION IS TO BE MEASURED FROM THE GROUND LEVEL.

LAP JOINTS FOR REINFORCEMENT BARS

1. LAP JOINTS SHALL NOT BE MADE IN MEMBERS WHERE THE STRESS IN THE BARS EXCEEDS 80% OF THE PERMISSIBLE STRESS.
2. LAP JOINTS SHALL BE STAGGERED AND NOT MORE THAN 50% OF THE BARS SHALL BE LAPPED AT ANY ONE SECTION.
3. LAP JOINTS SHALL BE PROVIDED AT MID HEIGHT OF COLUMNS AND NOT AT FLOOR LEVEL.
4. LAPPED BARS SHALL BE TIED WITH 18 GAUGE ANNEALED BINDING WIRE.
5. LAPS IN BEAMS AND SLABS SHALL BE ENSURED AT THE SOLE DISCRETION OF THE CONTRACTOR'S ENGINEER.

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PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY, (VILLA 17 & 18) AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

SAFE STRUCTURAL CONSULTANCY

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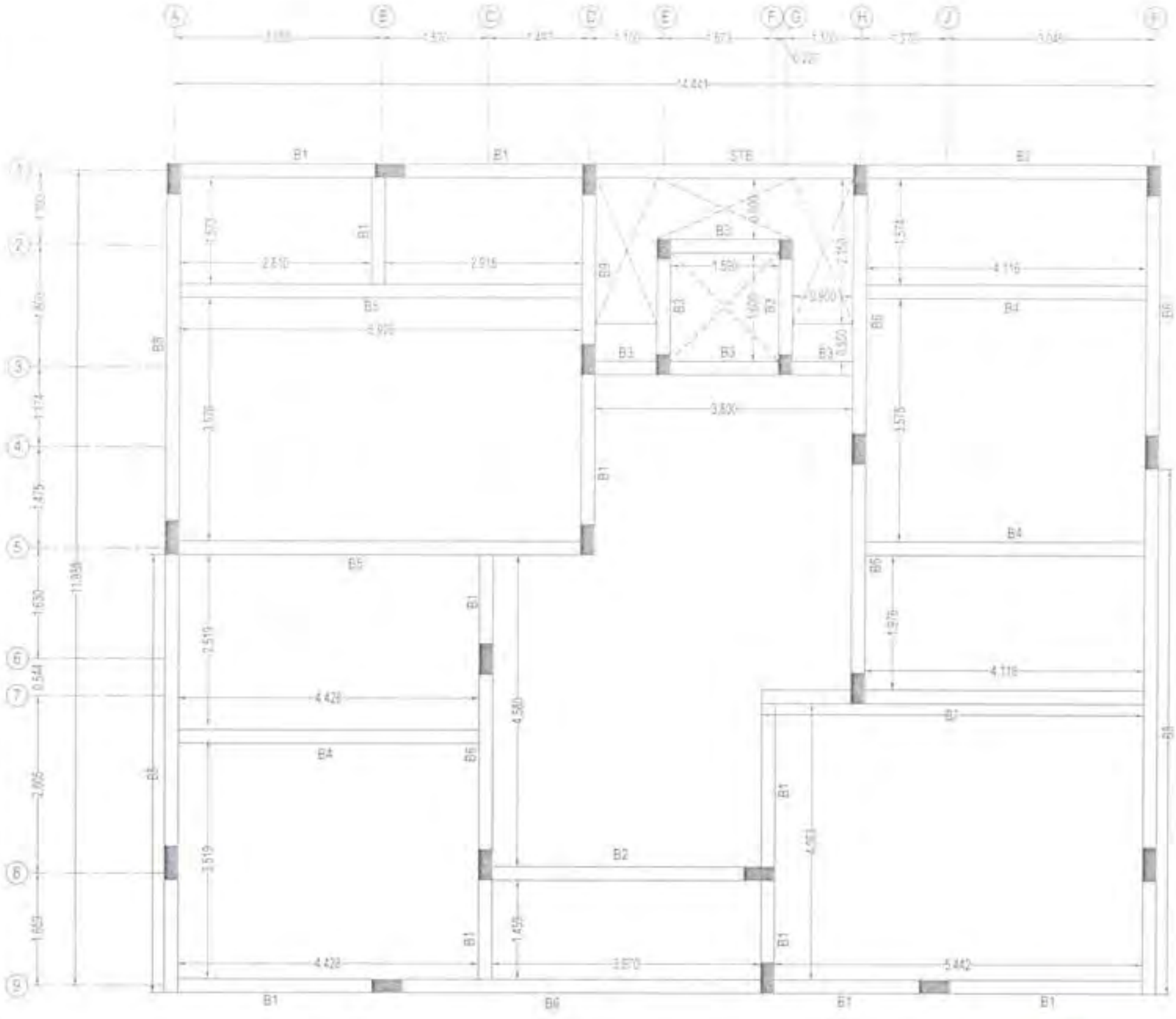
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

GROUND FLOOR ROOF SLAB DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	05/05/2026	ST-2026-06-06	11



TERRACE BEAM LAYOUT

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I
M.E (Structural Engg)
Reg. No - SE/GR-I/19/12/231

LEGENDS:
OPENING

TECHNICAL NOTES

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

DO NOT SCALE DRAWINGS TO GET THE DIMENSIONS.

ANY DISCREPANCIES NOTED ON THE DRAWINGS SHALL BE BROUGHT TO OUR NOTICE IMMEDIATELY.

CHECK ALL DIMENSIONS BEFORE CASTING ANY ELEMENT.

ENGINEER IN CHARGE TO BE NOTIFIED FOR INSPECTION BEFORE CASTING ANY ELEMENT.

CONCRETE GRADE AND REINFORCEMENT DETAILS AS PER STRUCTURAL DRAWINGS.

CLEAR COVER TO REINFORCEMENT:
- A. COLUMN = 40MM
- B. FOUNDATION = 50MM
- C. GRADE BEAM = 40MM
- D. TOP SLAB = 15MM
- E. BOTTOM SLAB = 20MM

THE BEARING FOUNDATION HAS BEEN DESIGNED FOR
(a) THE REQUIRED PILE CAPACITY OF 150 T/ PILE
FOR FOUNDATION NOT RESPONSIBLE FOR ULTIMATE PILE CAPACITY GIVEN BY CONSULTING GEOTECH ENGINEER

LOOSE SOIL IF ANY SHALL BE REMOVED BEFORE LAYING FOUNDATION.

THE DEPTH OF BEAMS SHALL BE INCLUSIVE THE SLAB THICKNESS.

LAP JOINTS FOR REINFORCEMENT BARS

(a) ANY CROSS SECTION OF THE BARS IN BOTTOM THIRD OF THE BARS SHALL BE LAPPED.

(b) LAPS IN COLUMNS SHALL BE PROVIDED NOT NEAR TO FLOOR BUT NOT A FEW LEVEL.

(c) LAPS IN BEAMS AND SLABS SHALL BE PROVIDED AT THE POINT OF CONTRAFLEXURE.

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SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

TERRACE BEAM LAYOUT

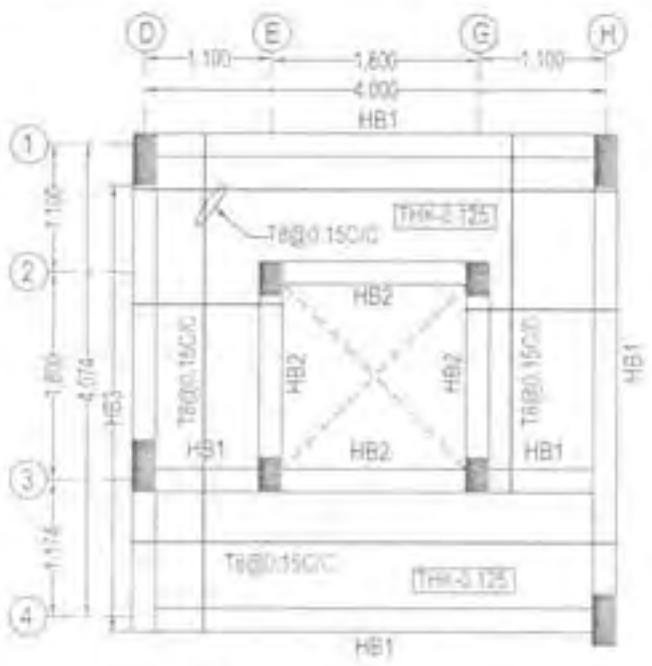
REV	DATE	PROJECT NO	SHEET NO
R0	06/05/2026	ST-2026-06-08	12

TERRACE BEAM REINFORCEMENT SCHEDULE

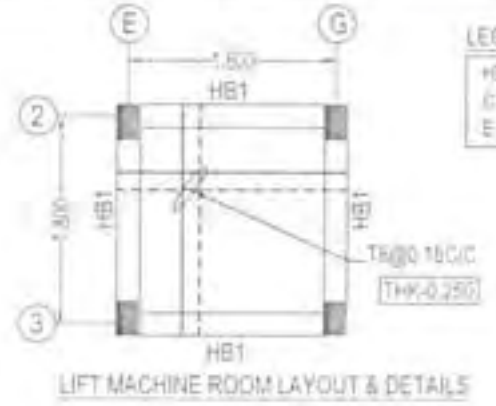
BEAM SIZE & NO	DETAIL @ LEFT SUPPORT	DETAIL @ MIDDLE	DETAIL @ RIGHT SUPPORT
(0.20 X 0.45) B1	2-T16(C) T8@0.15C/C 2-T16(C)	2-T16(C) T8@0.15C/C 2-T16(C)	2-T16(C) T8@0.15C/C 2-T16(C)
(0.20 X 0.45) B2	2-T16(C) T8@0.15C/C 2-T12(C) 2-T16(C)	2-T16(C) T8@0.15C/C 2-T12(C) 2-T16(C)	2-T16(C) T8@0.15C/C 2-T12(C) 2-T16(C)
(0.20 X 0.45) B3	2-T16(C) T10@0.15C/C 2-T16(C)	2-T16(C) T10@0.15C/C 2-T16(C)	2-T16(C) T10@0.15C/C 2-T16(C)
(0.20 X 0.45) B4	2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)
(0.20 X 0.60) B5	2-T16(C) 2-T12(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T12(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T12(C) T10@0.15C/C 2-T16(C) 2-T16(C)
(0.20 X 0.45) B6	2-T16(C) T8@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) T8@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) T8@0.15C/C 2-T16(C) 2-T16(C)
(0.20 X 0.60) B7	2-T16(C) 2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)

TERRACE BEAM REINFORCEMENT SCHEDULE

BEAM SIZE & NO	DETAIL @ LEFT SUPPORT	DETAIL @ MIDDLE	DETAIL @ RIGHT SUPPORT	DETAIL @ CANTILEVER BEAM
(0.20 X 0.45) B8	2-T16(C) 2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	- - -
(0.20 X 0.45) ER	2-T16(C) 2-T12(C) T10@0.10C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T12(C) T10@0.10C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T12(C) T10@0.10C/C 2-T16(C) 2-T16(C)	- - -
(0.20 X 0.45) B9	2-T12(C) T8@0.150C/C 2-T16(C)	2-T12(C) T8@0.15C/C 2-T16(C)	2-T12(C) T8@0.15C/C 2-T16(C)	- - -
(0.20 X 0.45) STB	2-T16(C) T8@0.15C/C 2-T16(C)	2-T16(C) T8@0.15C/C 2-T16(C)	2-T16(C) T8@0.15C/C 2-T16(C)	- - -

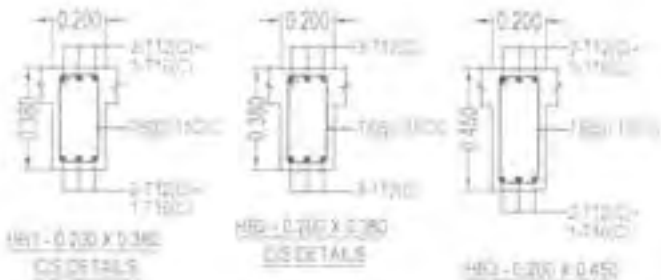


STAIRCASE HEADROOM LAYOUT & DETAILS



LIFT MACHINE ROOM LAYOUT & DETAILS

LEGEND
HB - HEADROOM BEAM
C - CONTINUOUS ROD
E - EXTRA ROD



HB1 - 0.200 X 0.380 C/S DETAILS
HB2 - 0.200 X 0.380 C/S DETAILS
HB3 - 0.200 X 0.450 C/S DETAILS

TECHNICAL NOTES

LAP JOINTS FOR REINFORCEMENT BARS :

CLIENT

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I
M.E (Structural Engg)
Reg. No - SE/GR-I/19/12/231 (CMDA)

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY (VILLA 17 & 18) AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

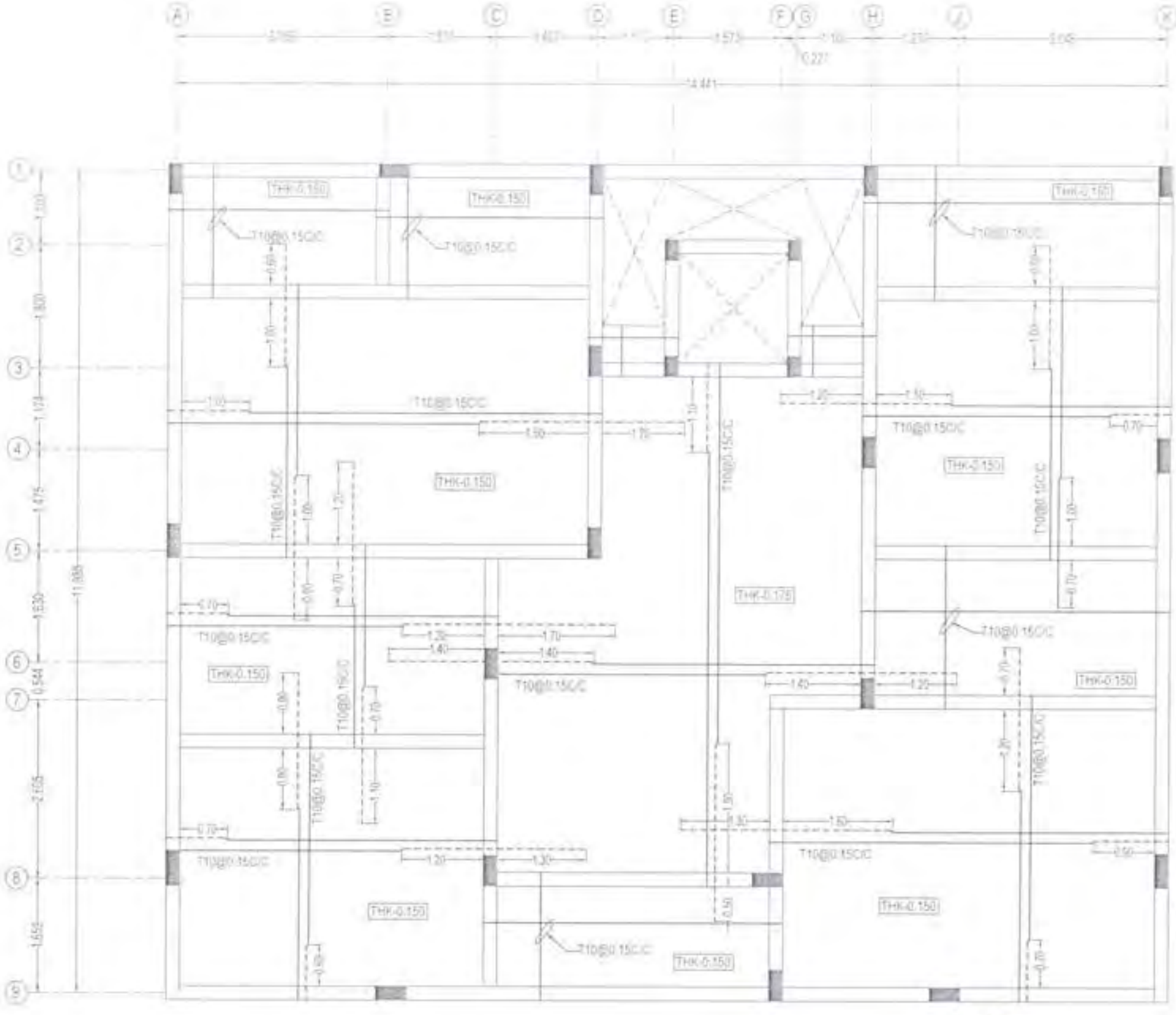
SAFE STRUCTURAL CONSULTANCY
Safe

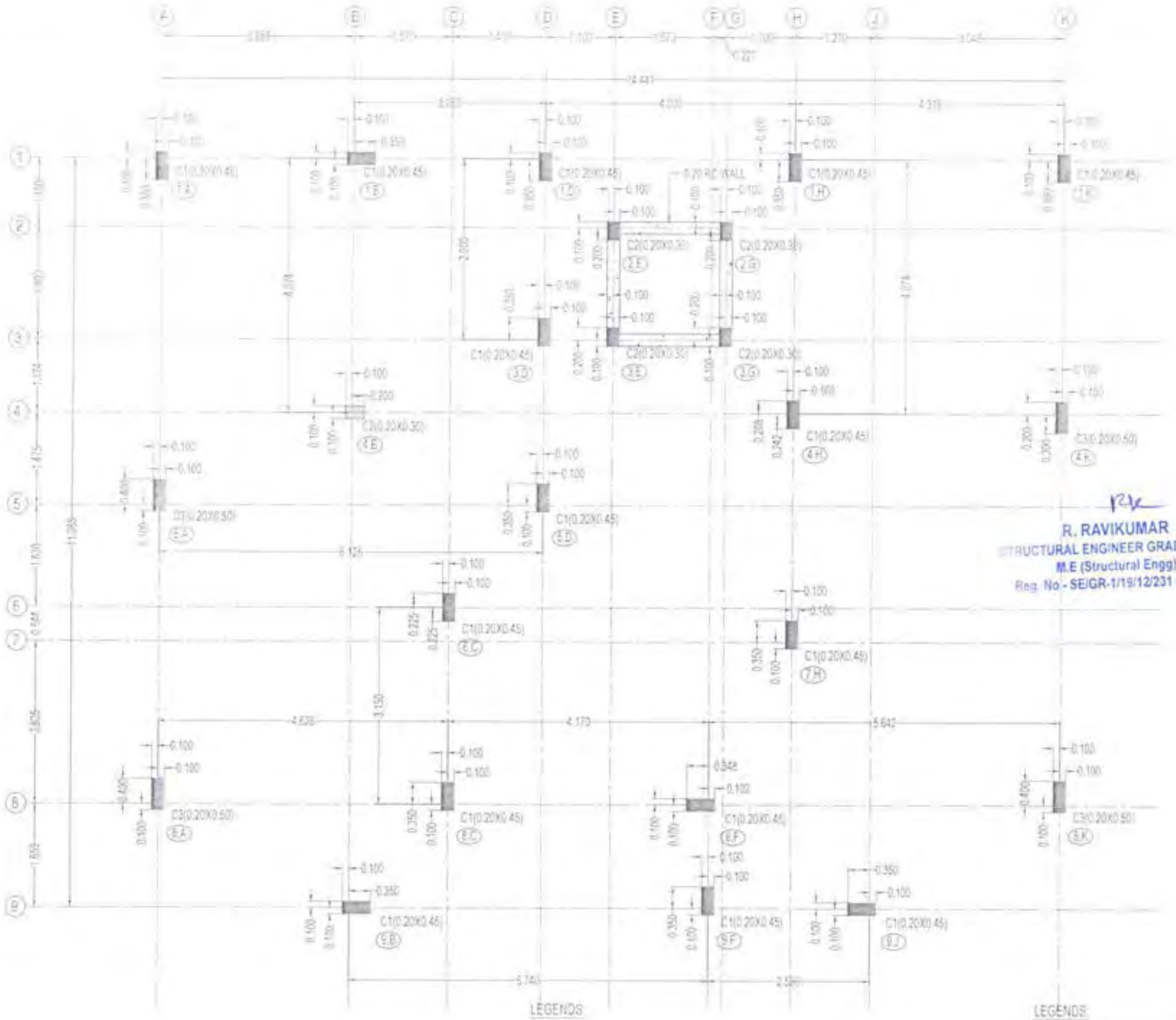
DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

TERRACE BEAM DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	05/05/2026	ST-2026-06-06	13


A
B
C
D
E
F
G
H
J
K
14,441
THK-0.150
T10@0.15C/C
T10@0.15C/C
T10@0.15C/C
T10@0.15C/C
T10@0.15C/C
T10@0.15C/C
T10@0.15C/C
T10@0.15C/C
T10@0.15C/C
T10@0.15C/C
T10@0.15C/C
THK-0.175
THK-0.150
THK-0.150
THK-0.150



THESE PLANS ARE THE PROPERTY OF SAFE STRUCTURAL CONSULTANCY AND ARE NOT TO BE USED IN ANY MANNER AS A WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION. THE DETAILS FURNISHED IN THESE DRG. ARE FOR THIS PROJECT ONLY.

TECHNICAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS & RELATIONSHIP IN ACCORDANCE WITH APPROVED SPECIFICATION.
2. SPECIFIED DIMENSION TO BE FOLLOWED.
3. ANY DISCREPANCIES NOTICED IN THE DRG. SHALL BE BROUGHT TO OUR NOTICE IMMEDIATELY.
4. CONTRACTOR SHALL CHECK ALL DRAWING BEFORE TAKING EXECUTION PLANNING.
5. ENGINEER IN CHARGE TO ENSURE THAT CONSTRUCTION LOADS DO NOT EXCEED LIVE LOADS FOR WHICH SLABS AND BEAMS ARE DESIGNED. TO AVOID THIS, CONSTRUCTION LOAD EVENLY.
6. GRADE OF CONCRETE USED SHOWN FOR RCC WORK AS PER CONFORM RTE IS 456:2000 CLAUSE.
7. 'Fe' DENOTES HIGH STRENGTH DEFORMED BARS OF GRADE FE500 CONFORMING TO IS 1786 : 1985.
8. CLEAR COVER TO MAIN REINFORCEMENT
   i. COLUMNS : 40MM
   ii. FOUNDATION : 50MM
   iii. TANK WALL : 40MM
   iv. FLOOR SLAB : 25MM
   v. FLOOR SUNK : 25MM
9. THE BEARING PRESSURE HAS BEEN DESIGNED FOR SAFE BEARING CAPACITY OF SOIL AS PER SOIL INVESTIGATION REPORT. THE CONTRACTOR IS RESPONSIBLE FOR ATTAINING THE BEARING CAPACITY AS MENTIONED IN THE REPORT.
10. LOOSE SOIL IF ANY SHALL BE REMOVED BEFORE LAYING FOUNDATION CONCRETE.
11. THE DEPTH OF BEAMS SHALL BE INCLUDING THE SLAB THICKNESS.

LAP JOINTS FOR REINFORCEMENT BARS

i) ANY TWO BARS SPLICED OF THE MINIMUM SPECIFIED DIAMETER OF THE BARS SHALL BE LAPPED.

ii) LAPS IN COLUMNS SHALL BE PROVIDED AT THE MIDDLE OF FLOOR AND NOT AT SLAB LEVEL.

iii) LAPS IN BEAMS AND SLABS SHALL BE PROVIDED AT THE POINT OF CONTRAFLEXURE.

CLIENT

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - 1 (SE)
M.E (Structural Engg)
Reg. No - SE/GR-1/19/12/231 (CMDA)

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY, (VILLA 19 & 20) AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

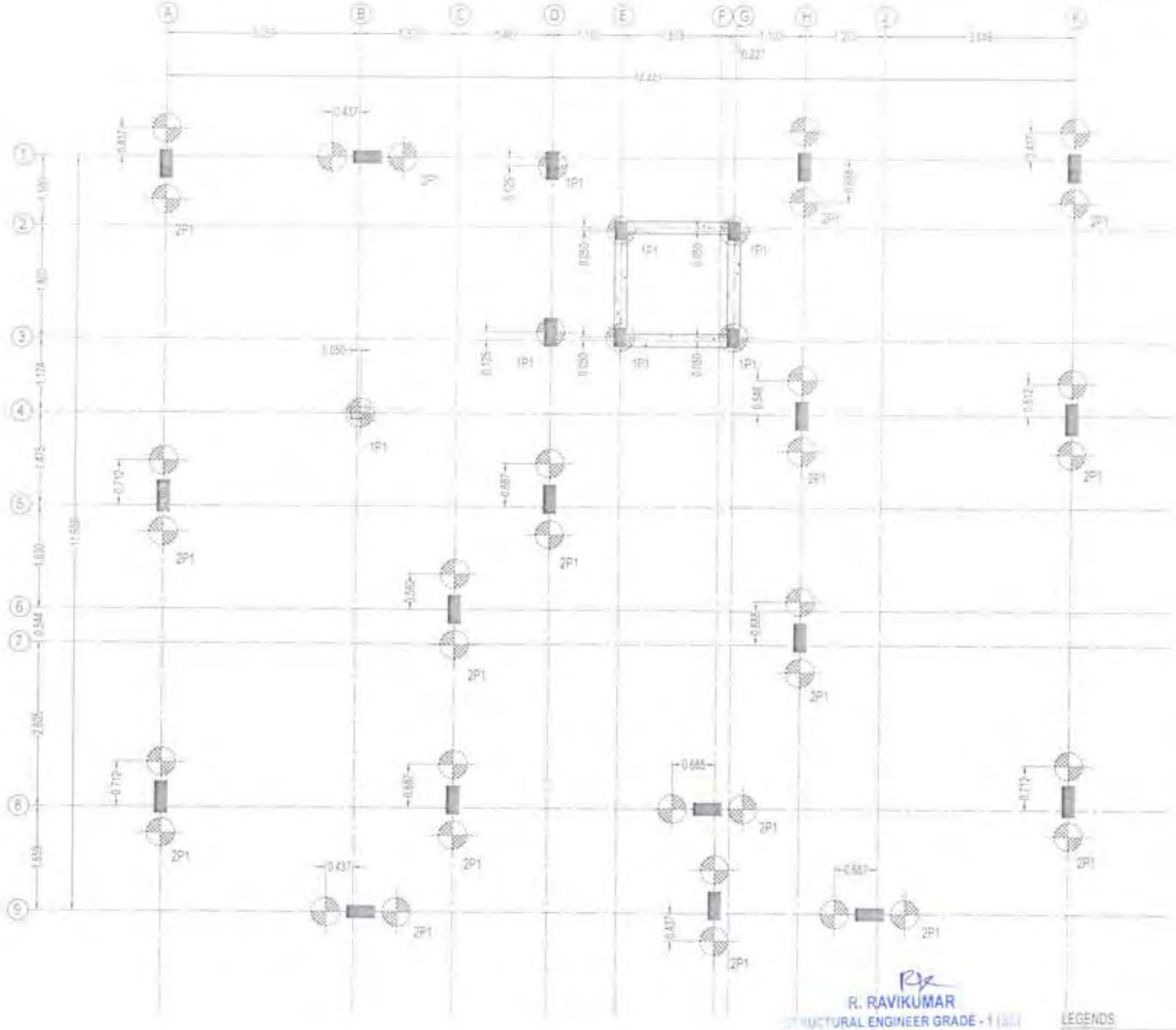
SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

COLUMN MARKING LAYOUT

REV	DATE	PROJECT NO	SHEET NO
R0	05/05/2026	ST-2026-06-07	01



PILE MARKING LAYOUT

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I (SE)
M.E (Structural Engg)
Reg. No - SE/GR-I/19'12/231 (CMDA)

LEGENDS

0.450 — P - PILE (0.450dia)

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TECHNICAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ONLY WRITTEN DIMENSIONS TO BE FOLLOWED.
3. ANY DISCREPANCIES IN DIMENSIONS ON SITE SHALL BE ... BEFORE ANY WORK IS DONE.
4. ALL DETAILS SHALL CONFORM TO ... UNLESS OTHERWISE STATED.
5. ENGINEER IN CHARGE TO BE INFORMED ... NOTICE IS GIVEN AND LABOUR ... CONTRACTOR TO BE MADE TO ... WITHOUT CONSTRUCTION ...
6. GRADE OF CONCRETE ... CONFORMITY IN ACCORDANCE WITH ...
7. 'X' DENOTES HIGH STRENGTH ... CONFORMING TO IS 1786 : ...
8. CLEAR COVER TO REINFORCEMENT:
   A. COLUMNS : 40mm
   B. FOUNDATION : 50mm
   C. GRADE BEAM : 40mm
   D. FLOOR BEAM : 25mm
   E. FLOOR SLAB : 20mm
9. THE BUILDING FOUNDATION HAS BEEN DESIGNED FOR ... THE REQUIRED PILE CAPACITY OF ... IS ... THE CONTRACTOR IS RESPONSIBLE FOR ATTAINING THE CAPACITY ... BY CONDUCTING ... TESTS.
10. LOOSE SOIL IF ANY SHALL BE REMOVED BEFORE LAYING FOUNDATION.
11. THE DEPTH OF BEAMS SHALL BE INCLUSIVE THE SLAB THICKNESS.

LAP JOINTS FOR REINFORCEMENT BARS

i) AT ANY CROSS SECTION OF THE MEMBER NOT MORE THAN ... OF THE BARS SHALL BE LAPPED.

ii) LAPS IN COLUMNS SHALL BE PROVIDED AT MID HEIGHT OF FLOOR AND NOT AT SLAB LEVEL.

iii) LAPS IN BEAMS AND SLABS SHALL BE PROVIDED AT THE POINT OF CONTRAFLEXURE.

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY, (VILLA 19 & 20)
AT ECR, CHENNAI.

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

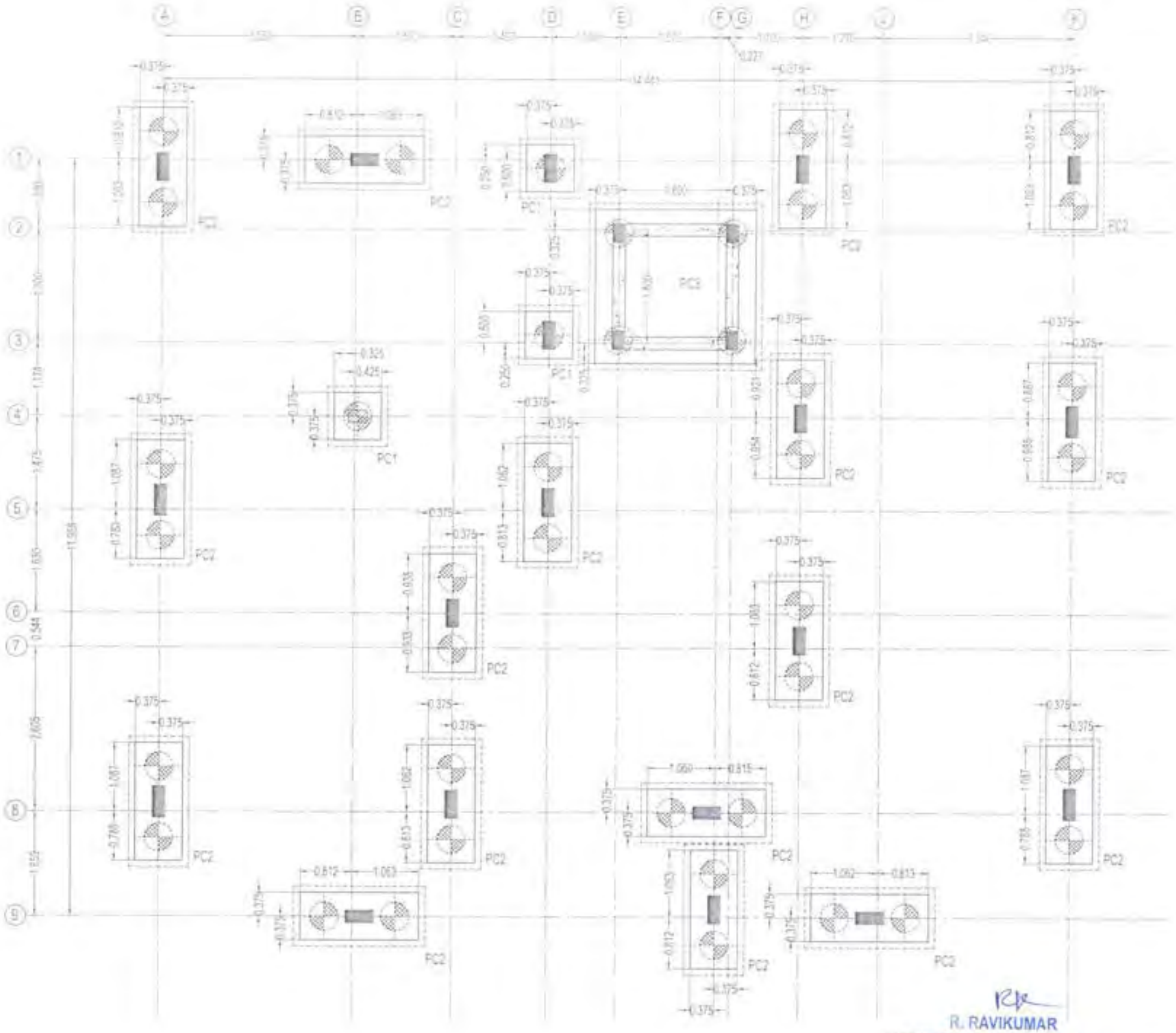
SAFE STRUCTURAL CONSULTANCY
Safe

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

PILE MARKING LAYOUT

REV	DATE	PROJECT NO	SHEET NO
R0	05/05/2026	ST-2026-06-07	02



PILE CAP MARKING LAYOUT

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I
M E (Structural Engg)
Reg. No - SE/GR-I/19/12/231 (CMDA)

LEGENDS:
PC - PILE CAPS

TECHNICAL NOTES

LAP JOINTS FOR REINFORCEMENT BARS

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY, (VILLA 19 & 20)
AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

SAFE STRUCTURAL CONSULTANCY

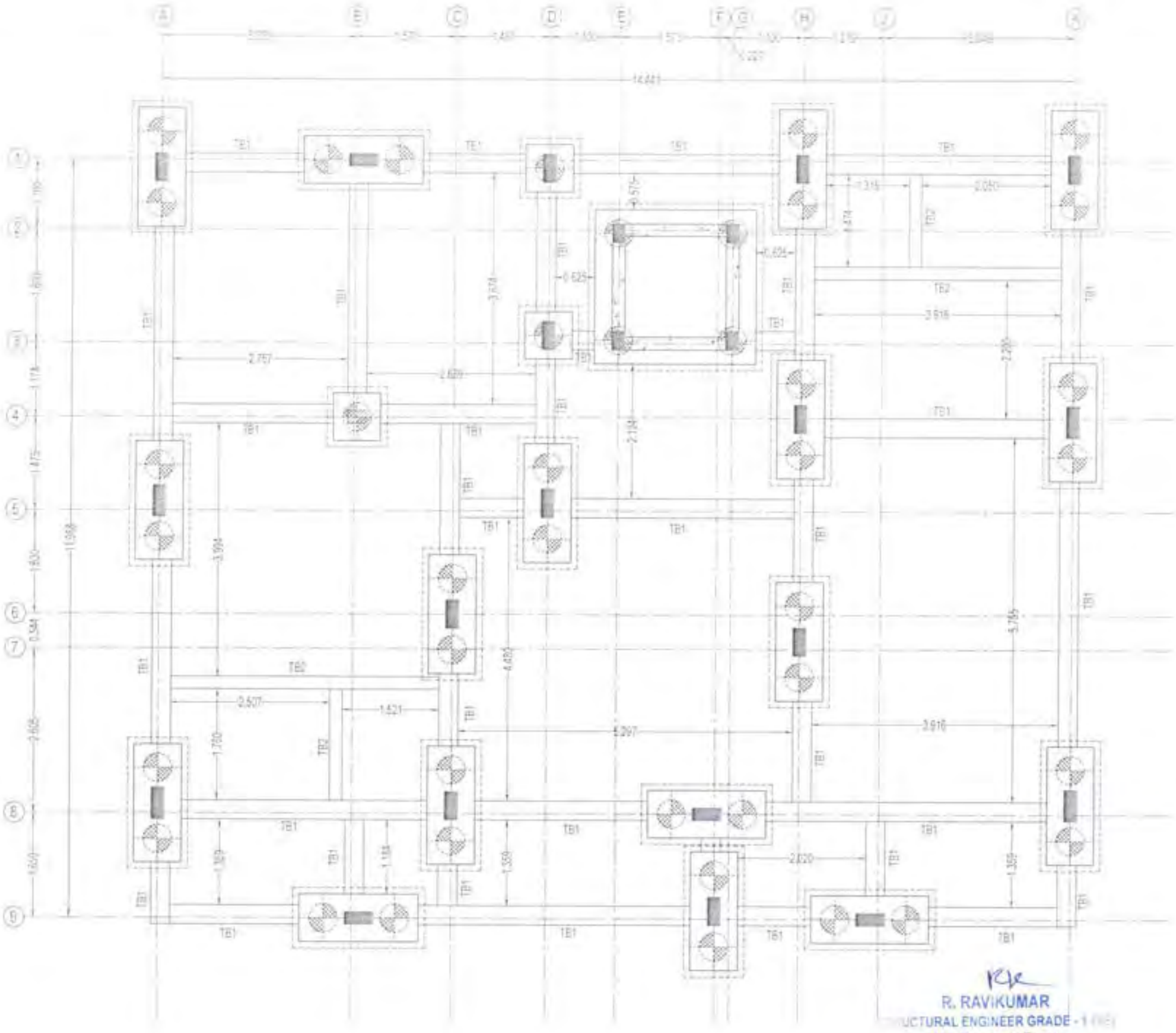
Safe

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

PILE CAP(PC) MARKING LAYOUT

REV	DATE	PROJECT NO	SHEET NO
R0	05/05/2026	ST-2026-06-07	03



TIE BEAM (TB) LAYOUT

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - 1 (SE)
M.E (Structural Engg)
Reg. No - SE/GR-1/19/12/231 (CMDA)

LEGENDS
TB - TIE BEAM

TECHNICAL NOTES

- ALL DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED.
- DO NOT SCALE DRAWINGS.
- ALL DISCREPANCIES NOTICED IN THE DRAWINGS SHALL BE BROUGHT TO OUR NOTICE IMMEDIATELY.
- EXCAVATION SHALL CONFORM ALL DRAWINGS & CODE. UNDER EXCEPTIONAL CIRCUMSTANCES, WHERE ANY CHANGES IN DESIGN ARE CONSIDERED NECESSARY, THE SAME SHALL BE DONE ONLY AFTER OBTAINING WRITTEN APPROVAL FROM THE STRUCTURAL CONSULTANT.
- ALL USE OF CONCRETE SHALL CONFORM TO IS 456 : 2000 CODE OF PRACTICE FOR PLAIN AND REINFORCED CONCRETE.
- ALL CONCRETE SHALL BE OF M25 GRADE CONFORMING TO IS 456 : 2000.
- CLEAR COVER TO REINFORCEMENT :
  - a. COLUMNS : 40MM
  - b. FOUNDATION : 60MM
  - c. PLINTH BEAM : 30MM
  - d. FLOOR BEAM : 25MM
  - e. FLOOR SLAB : 20MM
- THE BUILDING FOUNDATION HAS BEEN DESIGNED FOR SAFE BEARING CAPACITY OF 30t/ft² AS PER SOIL INVESTIGATION REPORT. THE CONTRACTOR IS RESPONSIBLE FOR ATTAINING THE REQUIRED SAFE BEARING CAPACITY BY CONSULTING WITH GEOTECHNICAL CONSULTANTS.
- LEAN CONCRETE 75 MM THICK SHALL BE PROVIDED BELOW ALL FOOTINGS.
- THE DEPTH OF BEAMS SHALL BE INCLUSIVE OF THE SLAB THICKNESS.

LAP JOINTS FOR REINFORCEMENT BARS

- AT ANY CROSS SECTION OF THE MEMBER NOT MORE THAN 50% OF THE BARS SHALL BE LAPPED.
- LAPS IN COLUMNS SHALL BE PROVIDED AT MIDHEIGHT OF FLOOR (OR NOT AT CEILING LEVEL).
- LAPS IN BEAMS AND SLABS SHALL BE PROVIDED AT THE POINT OF CONTRAFLEXURE.

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY, (VILLA 19 & 20) AT ECR, CHENNAI.

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

SAFE STRUCTURAL CONSULTANCY

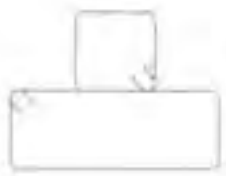
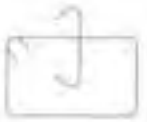
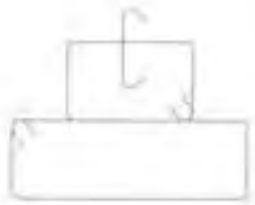
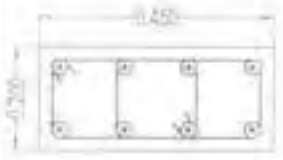
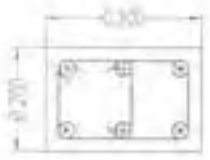
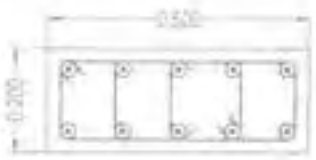
DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

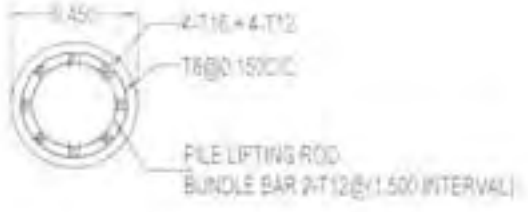
DRAWING NAME

PILE CAP(PC) & TIE BEAM(TB) LAYOUT

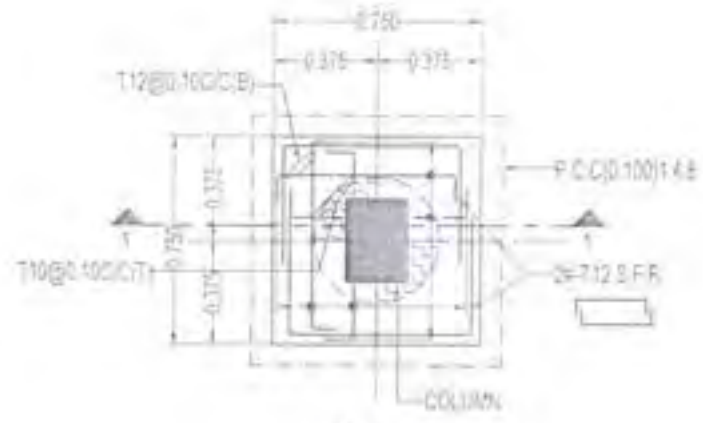
REV	DATE	PROJECT NO	SHEET NO
R0	05/05/2026	ST-2026-06-07	04

COLUMN REINFORCEMENT SCHEDULE

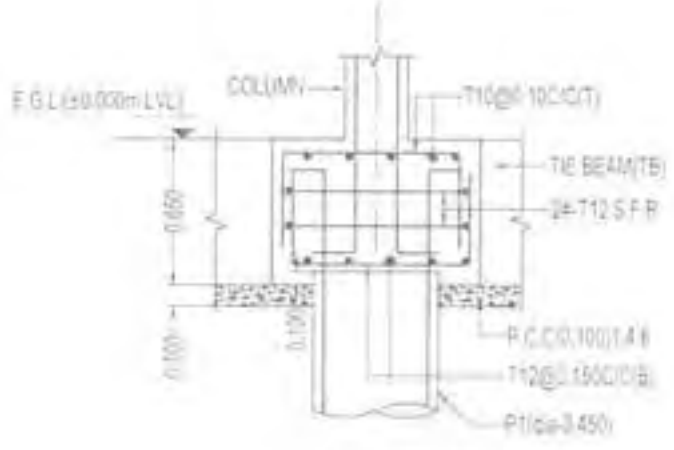
TERRACE LEVEL			
TO	H=T8@0.125CC	H=T8@0.125CC	H=T8@0.125CC
	H=T8@0.175CC	H=T8@0.175CC	H=T8@0.175CC
FOOTING BEAMS ⊕-T16 ⊕-T12			
	6-T16	4-T16 + 2-T12	8-T16
COLUMN MARKED	C1	C2	C3



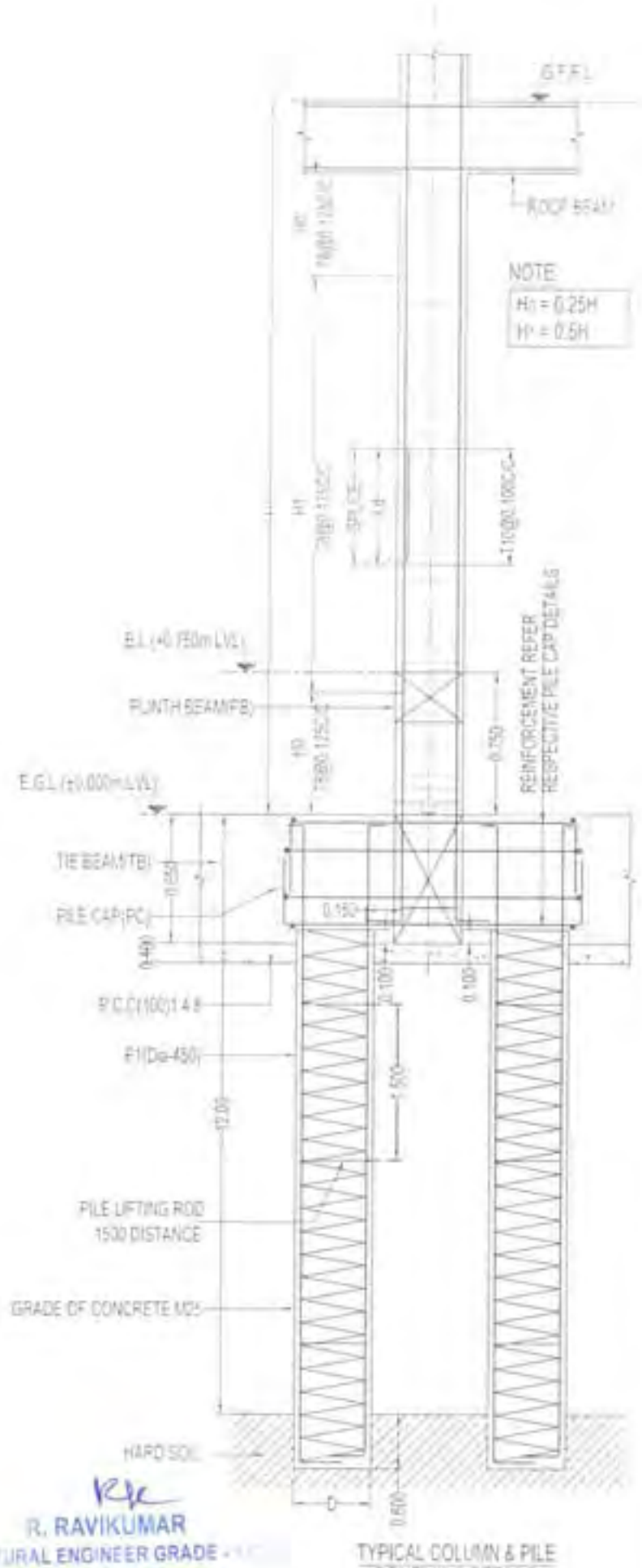
PILE (P1) - PLAN



PC1 - PLAN



SECTION - 1 - 1



TYPICAL COLUMN & PILE CONFINING DETAILS

* S.F.R - SIDE FACE REINFORCEMENT

LEGENDS:

B.L - BASEMENT LEVEL
G.F.R.L - GROUND FLOOR ROOF LEVEL
E.G.L - EXISTING GROUND LEVEL

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Reg. No - SE/GR-1/19/12/231 (CHENNAI)

TECHNICAL NOTES

LAP JOINTS FOR REINFORCEMENT BARS

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY (VILLA 19 & 20)
AT ECR CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

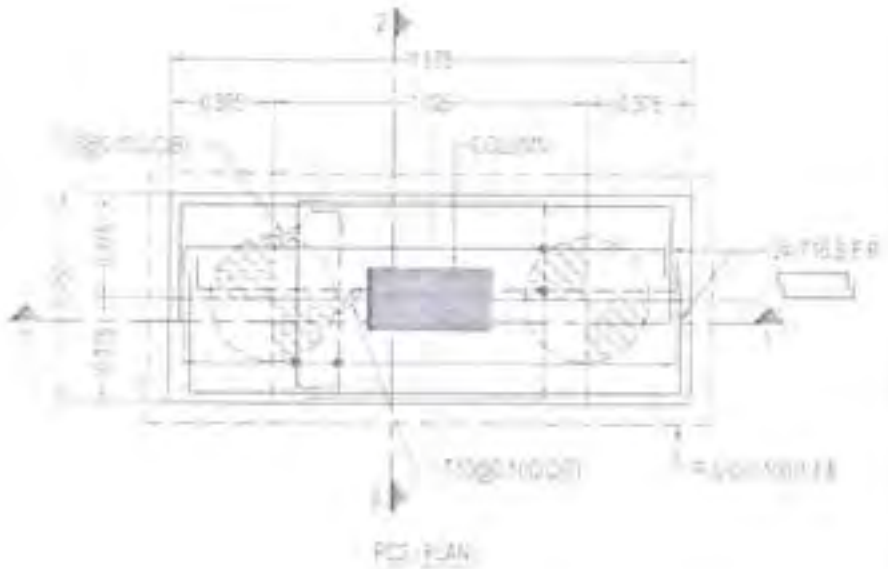
SAFE STRUCTURAL CONSULTANCY

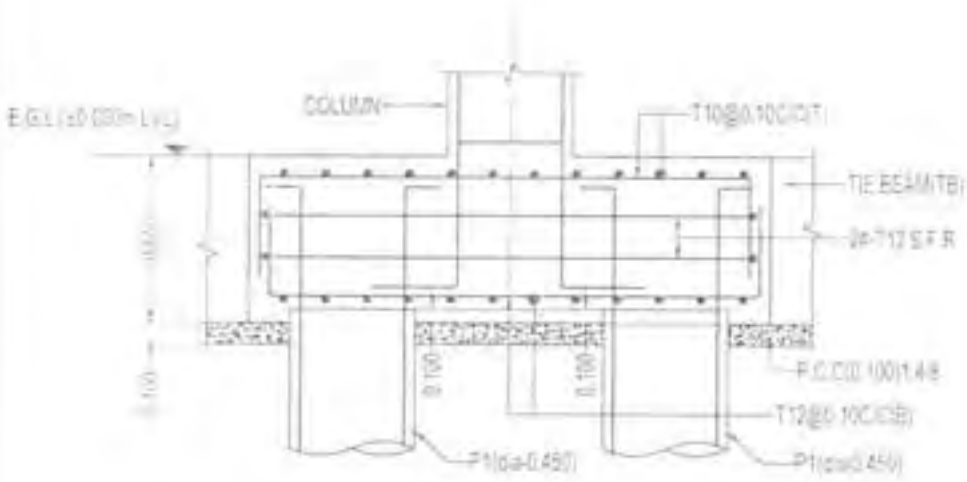
DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

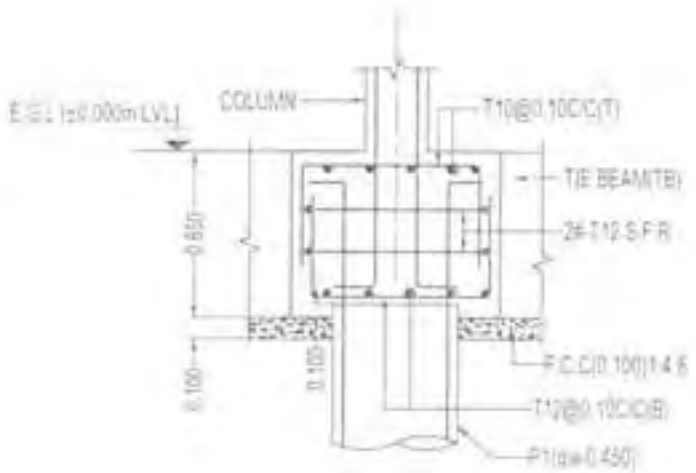
COLUMN, PILE & PILE CAP DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	05/05/2026	ST-2026-06-07	05

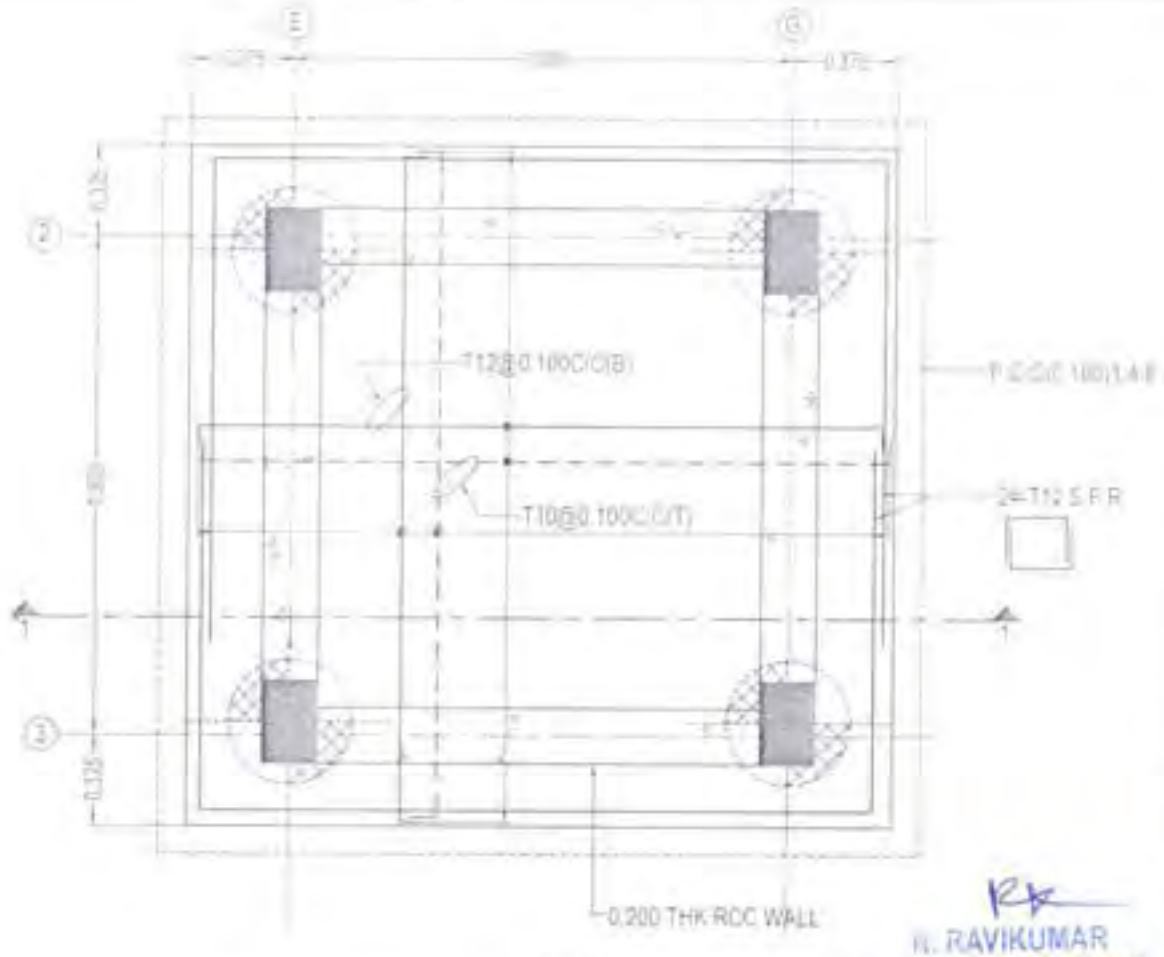




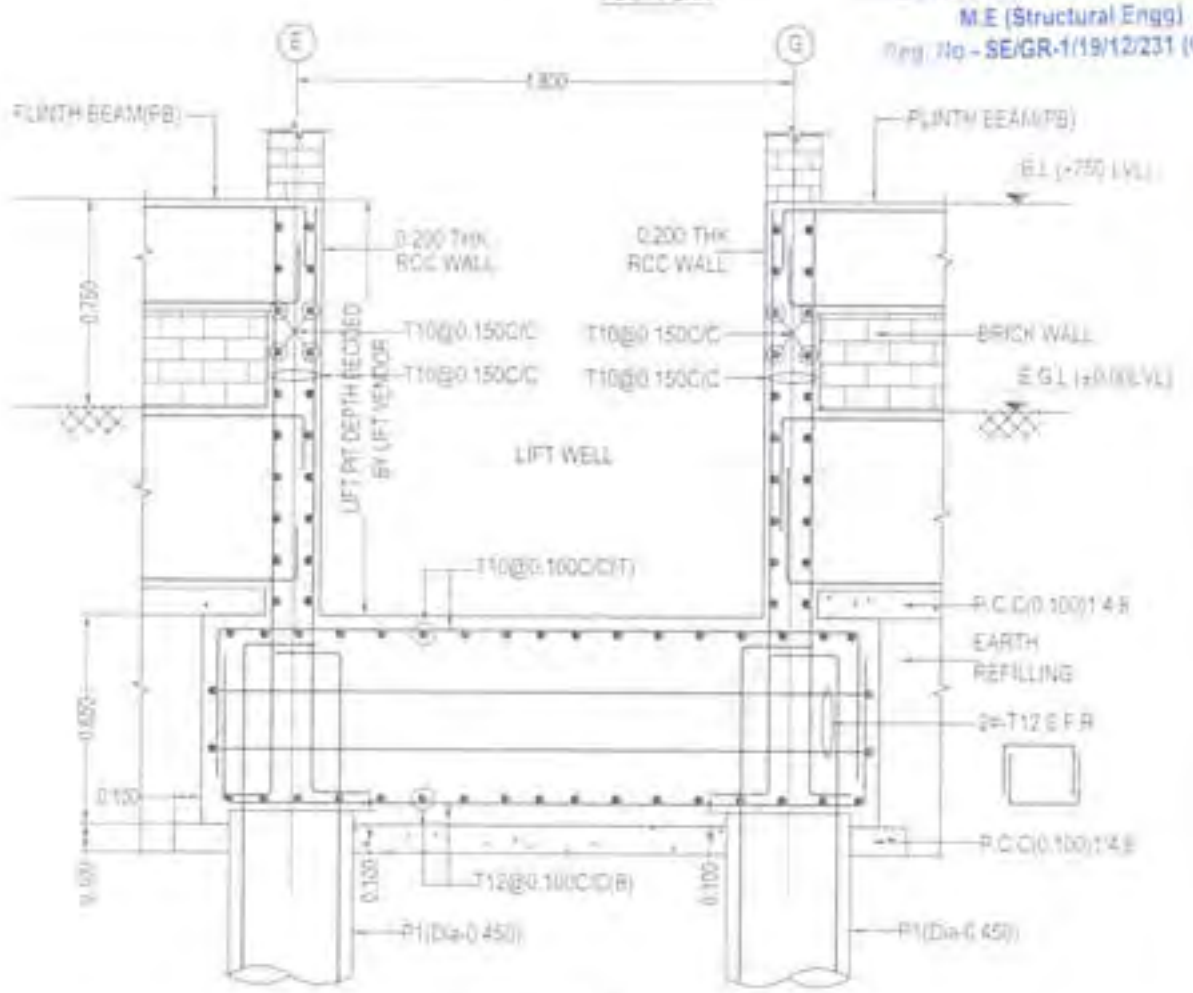
SECTION - 1 - 1



SECTION - 2 - 2



PC3 - PLAN



SECTION - 1 - 1

TECHNICAL NOTES

LAP JOINTS FOR REINFORCEMENT BARS

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY, (VILLA 19 & 20) AT ECR, CHENNAI.

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

SAFE STRUCTURAL CONSULTANCY

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I
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DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

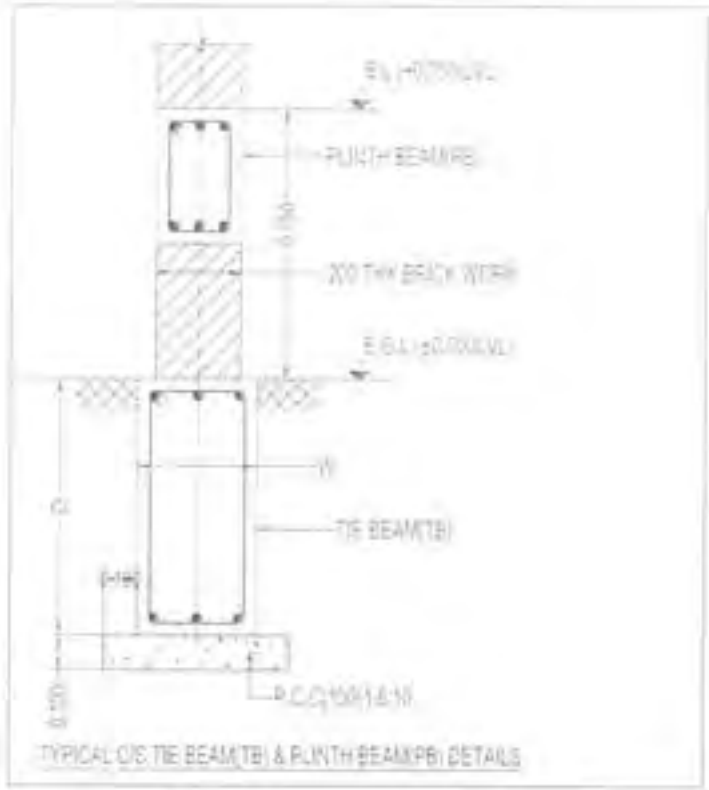
DRAWING NAME

PILE & PILE CAP DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	05/05/2026	ST-2026-06-07	06

TIE BEAM (TB) REINFORCEMENT SCHEDULE

BEAM SIZE & NO.	DETAIL @ LEFT SUPPORT	DETAIL @ MIDDLE	DETAIL @ RIGHT SUPPORT
(230 X 600)	3-T16(C)	3-T16(C)	3-T16(C)
TB1	T10@150 C/C P.C.C 3-T16(C)	T10@150 C/C P.C.C 3-T16(C)	T10@150 C/C P.C.C 3-T16(C)
(230 X 750)	2-T16(C)	2-T16(C)	2-T16(C)
TB2	T10@150 C/C P.C.C 2-T16(C)	T10@150 C/C P.C.C 2-T16(C)	T10@150 C/C P.C.C 2-T16(C)



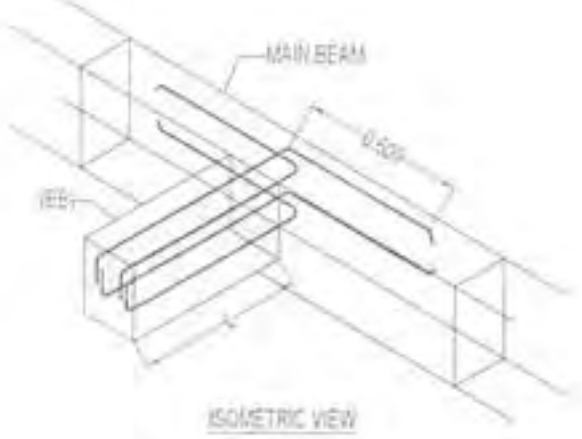
TYPICAL C/S TIE BEAM(TB) & PLINTH BEAM(PB) DETAILS

TYPICAL ANCHORAGE OF BEAM BARS IN AN EXTERNAL JOINT
** Ld=45 TIMES DIA OF BAR

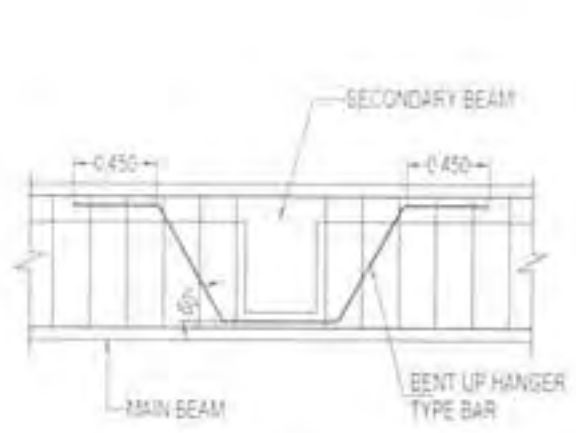
LEGENDS

E.G.L - EXISTING GROUND LEVEL
T.B - TIE BEAM
P.B - PLINTH BEAM
B.L - BASEMENT LEVEL

S.F.R - SIDE FACE REINFORCEMENT
E.F - EACH FACE



ISOMETRIC VIEW
OF (TYP) BRACKET BEAM REST ON BEAM DETAIL



WHERE CROSS BEAM SHEAR ROD SHOULD BE PROVIDED AT 2-T16

R. RAVIKUMAR
URAL ENGINEER GRADE - I
M.E (Structural Engg)
No - SE/GR-I/19/12/231

TECHNICAL NOTES

LAP JOINTS FOR REINFORCEMENT BARS

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY (VILLA 19 & 20) AT ECR, CHENNAI.

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

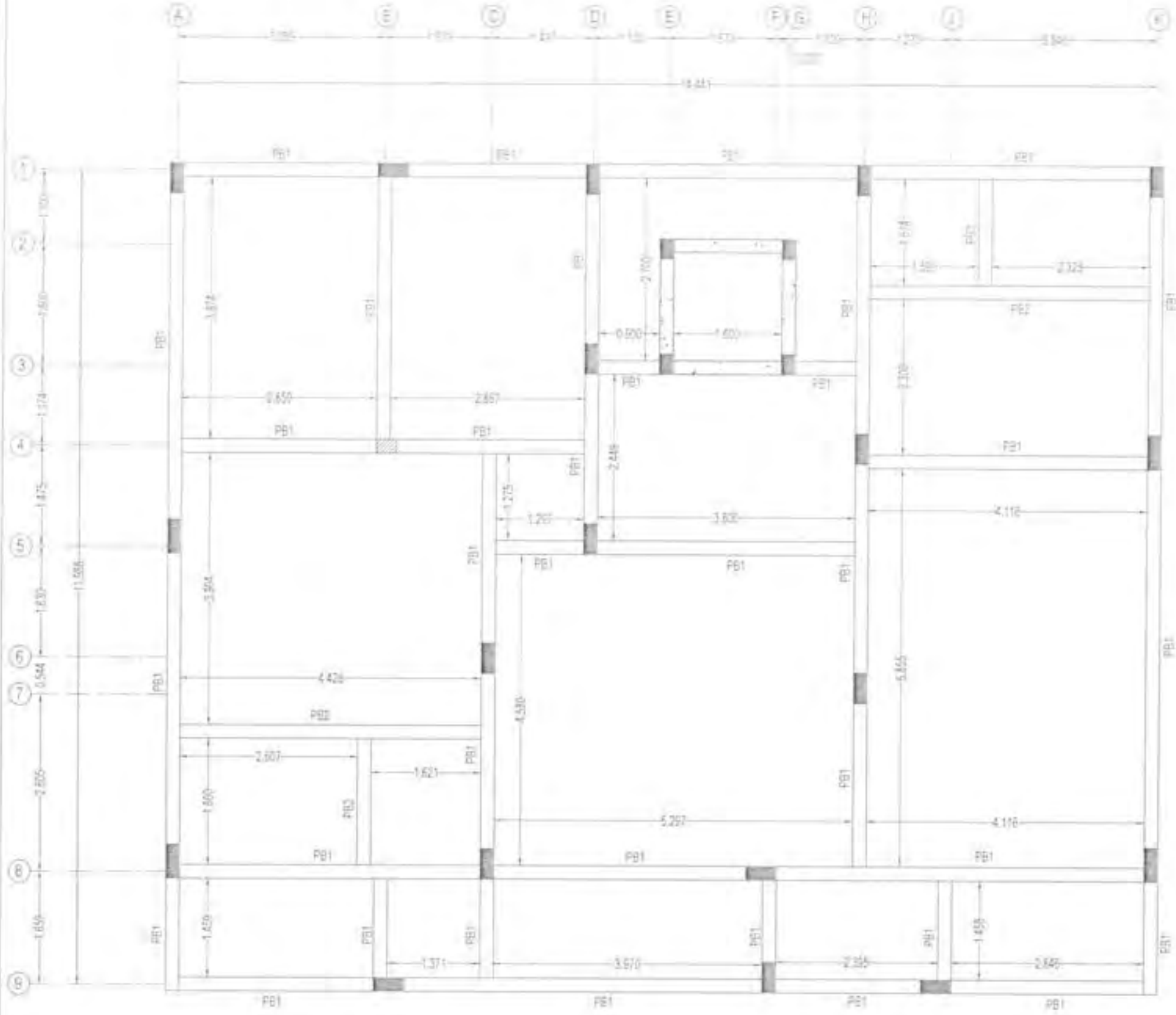
SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

TIE BEAM (TB) REINFORCEMENT DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	05/05/2026	ST-2026-06-07	07


A
B
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D1
E
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5
6
7
8
9
PB1
PB2
PB3
9,441
3,674
2,857
2,446
2,700
1,400
1,200
3,805
4,116
2,324
4,428
2,607
1,621
5,297
5,455
4,530
3,670
2,395
2,845
1,371
1,459
1,445
1,425
1,200
1,500
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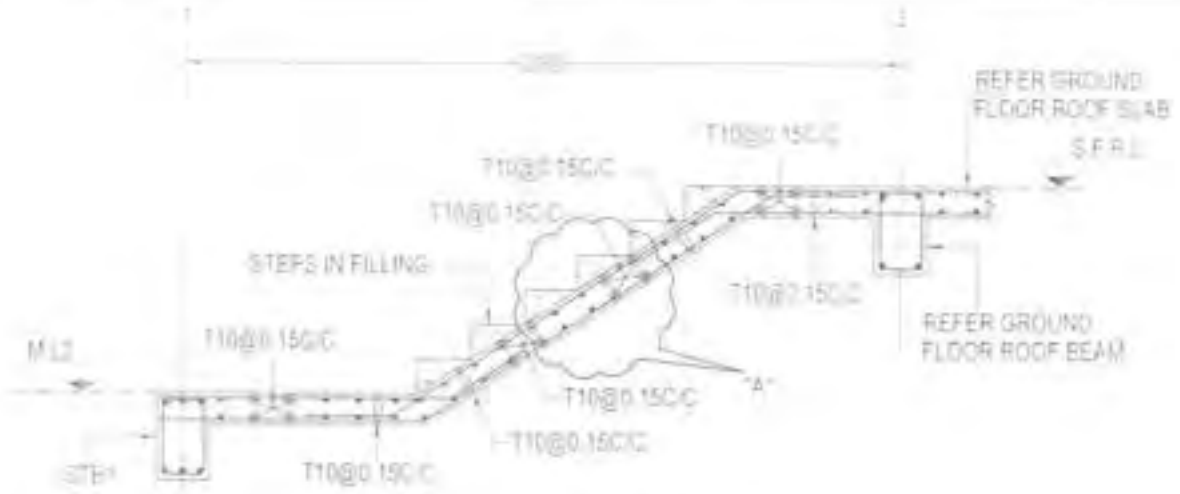
1,350
1,425



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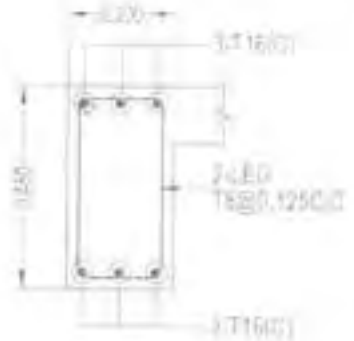
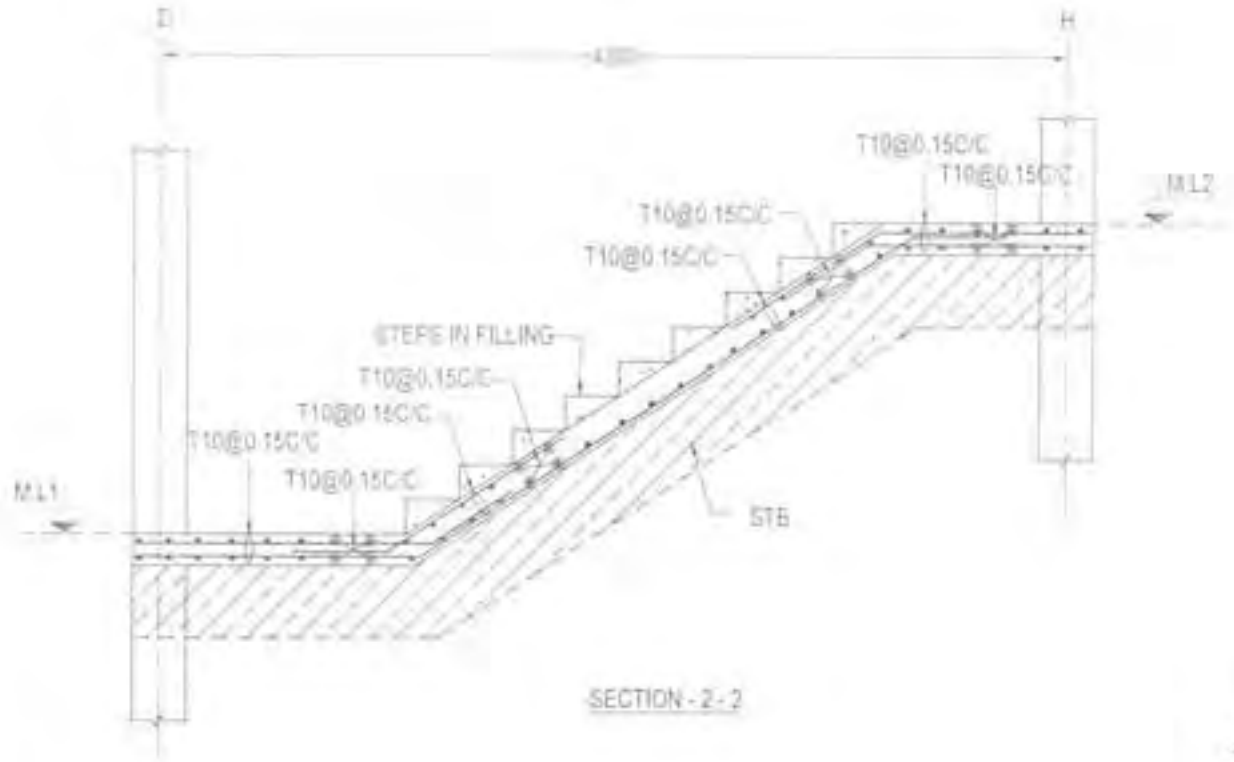


** NO OF STEPS & LEVELS REFER LATEST ARCHITECTURAL DRAWING

LEGENDS

S.T.B - STRINGER BEAM
M.L - MID LANDING LEVEL
G.F.R.L - GROUND FLOOR ROOF LEVEL
E.G.L - EXISTING GROUND LEVEL



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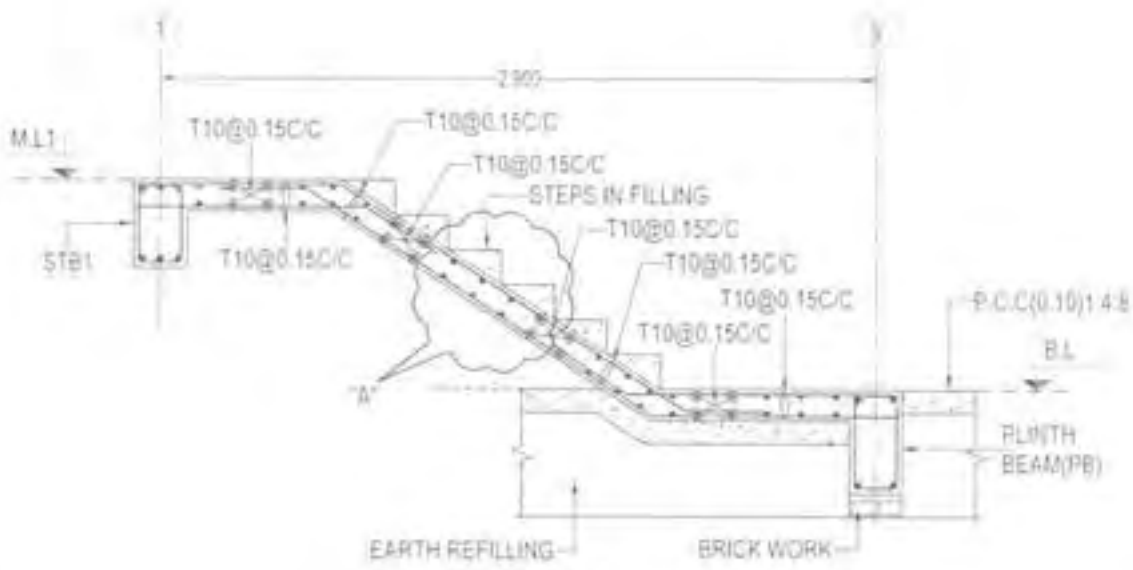
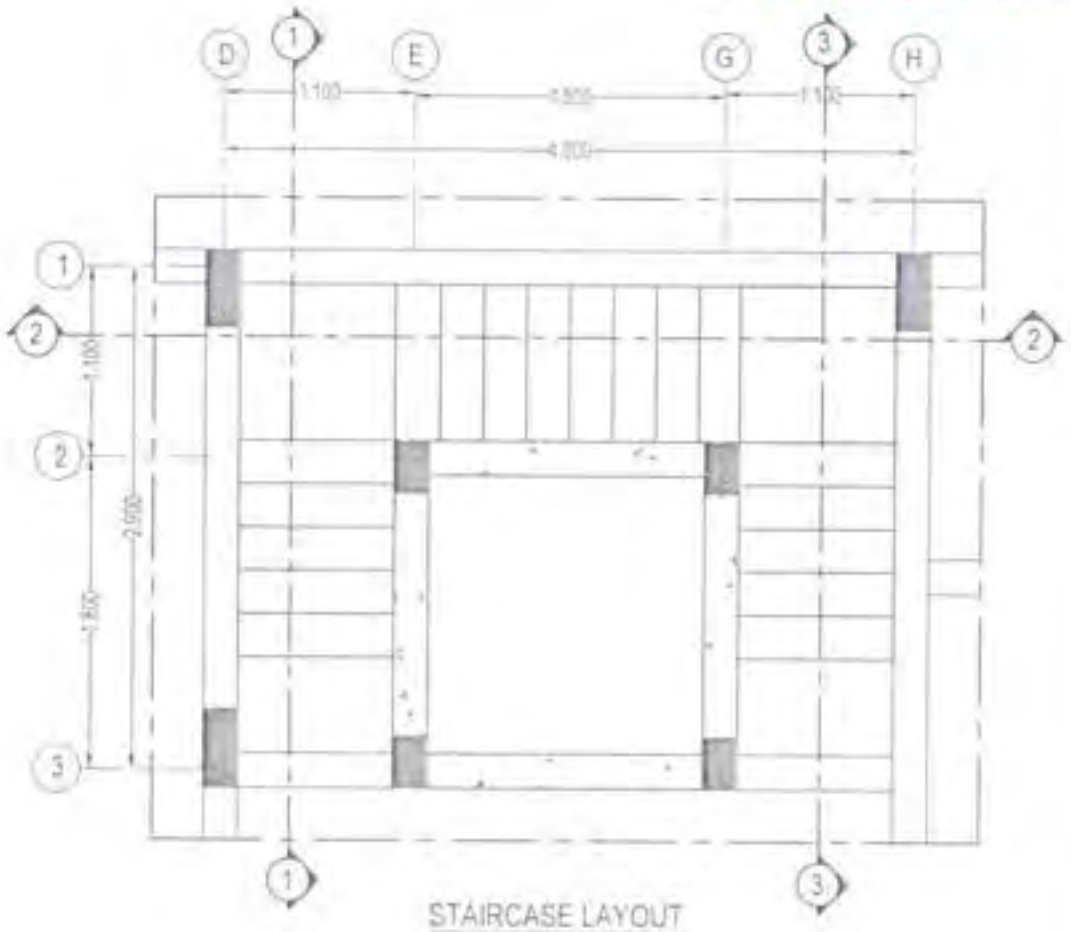


SECTION - 1 - 1



STAIRCASE LAYOUT

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I (I/C)
M.E (Structural Engg)
Reg. No - SE/GR-1/19/12/231 (CMDA)

TECHNICAL NOTES

LAP JOINTS FOR REINFORCEMENT BARS

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY (VILLA 19 & 20)
AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

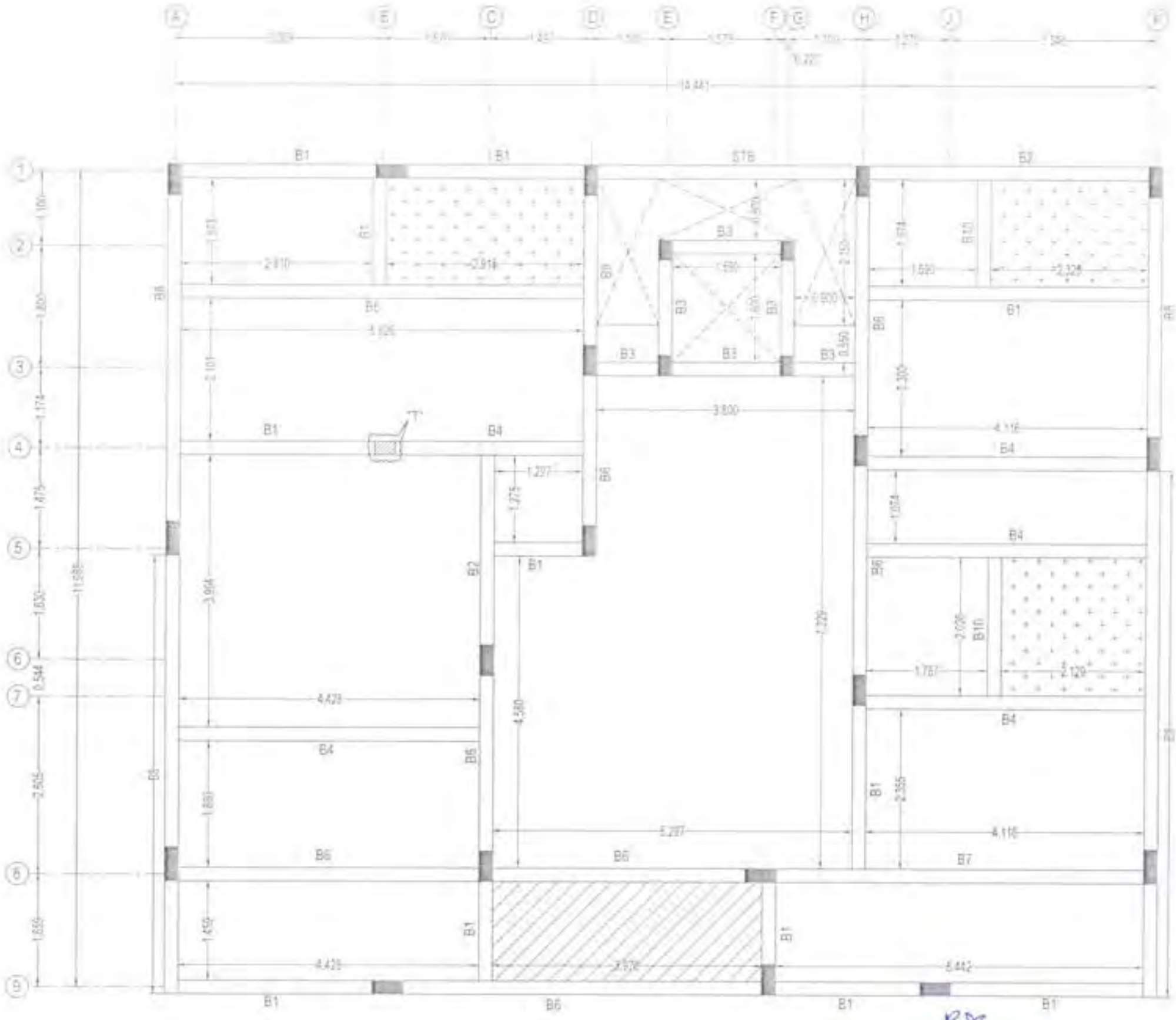
SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

STAIRCASE LAYOUT & DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	05/05/2026	ST-2026-06-07	08A



GROUND FLOOR ROOF BEAM LAYOUT

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I (SE)
M.E (Structural Engg)
Regn No - SE/GR-1/19/12/231 (CMDA)

LEGENDS

- TOILET SUNKEN
- BALCONY SUNKEN
- OPENING
- T - COLUMN CUT @ GROUND FLOOR ROOF LEVEL

TECHNICAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
2. ANY VARIATION FROM THESE NOTES AND DRAWINGS SHALL BE REFERRED TO THE ENGINEER IN WRITING.
3. THE CONTRACTOR SHALL CHECK ALL DIMENSIONS ON SITE BEFORE COMMENCING ANY WORK OR SHOP DRAWINGS.
4. FIGURED DIMENSIONS SHALL GENERALLY BE TAKEN IN PREFERENCE TO SCALED DIMENSIONS.
5. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
6. CLEAR COVER TO REINFORCEMENT:
   - A. COLUMNS = 40MM
   - B. FOUNDATION = 40MM
   - C. SLAB = 20MM
   - D. FLOOR SLAB = 20MM
   - E. BEAMS = 25MM
7. THE BUILDING FOUNDATION HAS BEEN DESIGNED FOR SAFE BEARING CAPACITY OF 30T/SQ.M. THE CONTRACTOR IS RESPONSIBLE FOR ATTAINING THIS CAPACITY BEFORE CONSULTING WITH SOIL EXPERTS.
8. CHASE SHALL NOT BE PERMITTED IN BEAMS AND COLUMNS.
9. THE DEPTH OF BEAMS SHALL BE EQUAL TO THE WALL THICKNESS.

LAP JOINTS FOR REINFORCEMENT BARS

1. LAP JOINTS SHALL BE STAGGERED AND NOT MORE THAN 50% OF THE BARS SHALL BE LAPPED.
2. LAPS IN COLUMNS SHALL BE PROVIDED AT MID HEIGHT OF FLOOR AND NOT AT SLAB LEVEL.
3. LAPS IN BEAMS AND SLABS SHALL BE PROVIDED AT THE POINT OF CONTRAFLEXURE.

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY, (VILLA 19 & 20) AT ECR, CHENNAI.

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

GROUND FLOOR ROOF BEAM LAYOUT

REV	DATE	PROJECT NO	SHEET NO
R0	05/05/2026	ST-2026-06-07	09

GROUND FLOOR ROOF BEAM REINFORCEMENT SCHEDULE

BEAM SIZE & NO	DETAIL @ LEFT SUPPORT	DETAIL @ MIDDLE	DETAIL @ RIGHT SUPPORT	DETAIL @ CANTILEVER BEAM
(0.20 X 0.45) B4	2-T16(C) T8@0.15C/C 2-T16(C)	2-T16(C) T8@0.15C/C 2-T16(C)	2-T16(C) T8@0.15C/C 2-T16(C)	
(0.20 X 0.60) B2	2-T16(C) T8@0.15C/C 2-T12(C) 2-T16(C)	2-T16(C) T8@0.15C/C 2-T12(C) 2-T16(C)	2-T16(C) T8@0.15C/C 2-T12(C) 2-T16(C)	
(0.20 X 0.45) B3	2-T16(C) T10@0.15C/C 2-T16(C)	2-T16(C) T10@0.15C/C 2-T16(C)	2-T16(C) T10@0.15C/C 2-T16(C)	
(0.20 X 0.45) B8	2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	
(0.20 X 0.60) B5	2-T16(C) 2-T12(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T12(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T12(C) T10@0.15C/C 2-T16(C) 2-T16(C)	
(0.20 X 0.45) B6	2-T16(C) 2-T16(C) T8@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T16(C) T8@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T16(C) T8@0.15C/C 2-T16(C) 2-T16(C)	
(0.20 X 0.60) B1	2-T16(C) 2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	

GROUND FLOOR ROOF BEAM REINFORCEMENT SCHEDULE

BEAM SIZE & NO	DETAIL @ LEFT SUPPORT	DETAIL @ MIDDLE	DETAIL @ RIGHT SUPPORT	DETAIL @ CANTILEVER BEAM
(0.20 X 0.60) B4	2-T16(C) 2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	
(0.20 X 0.60) B9	2-T16(C) 2-T12(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T12(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T12(C) T10@0.15C/C 2-T16(C) 2-T16(C)	
(0.20 X 0.45) B6	2-T12(C) T8@0.15C/C 2-T16(C)	2-T12(C) T8@0.15C/C 2-T16(C)	2-T12(C) T8@0.15C/C 2-T16(C)	
(0.20 X 0.45) STB	2-T16(C) T8@0.15C/C 2-T16(C)	2-T16(C) T8@0.15C/C 2-T16(C)	2-T16(C) T8@0.15C/C 2-T16(C)	

LEGEND

C - CONTINUOUS ROD
E - EXTRA ROD

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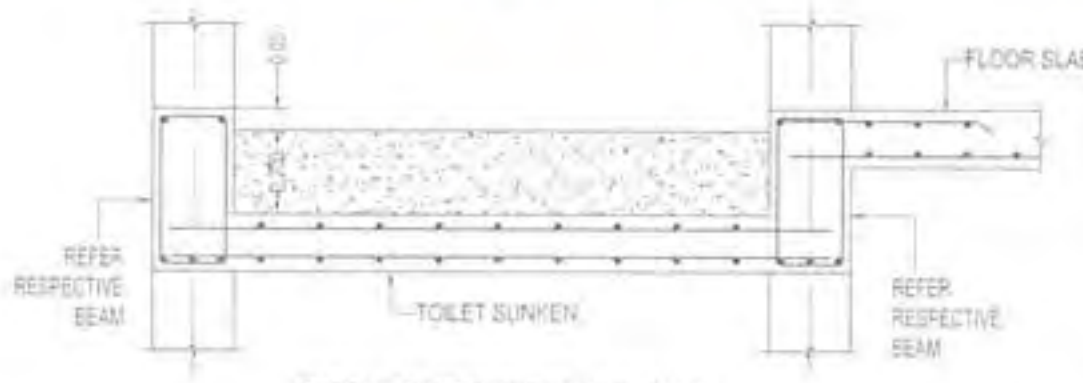


TYPICAL TOILET SUNKEN SLAB DETAILS

TECHNICAL NOTES

- ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED.
- DIMENSIONS SHALL NOT BE SCALED FROM DRAWINGS.
- ANY DISCREPANCIES BETWEEN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS SHALL BE REPORTED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
- CONCRETE GRADE SHALL BE AS PER THE STRUCTURAL DESIGN CRITERIA.
- REINFORCEMENT SHALL CONFORM TO IS 1786 : 2008 (FE 500 GRADE).
- ALL REINFORCEMENT SHALL BE FREE FROM RUST, OIL, GREASE, MUD, LOOSE MILL SCALE AND OTHER DELETERIOUS MATERIALS THAT MAY REDUCE BOND.
- MINIMUM CLEAR COVER TO REINFORCEMENT:
  a. COLUMNS : 40 MM
  b. FOUNDATIONS : 50 MM
  c. GRADE SLAB : 40 MM
  d. FLOOR BEAM : 25 MM
  e. FLOOR SLAB : 15 MM
- THE BUILDING FOUNDATION IS DESIGNED BASED ON
  a) THE REQUIRED SAFE CAPACITY OF SOIL AS GIVEN BY THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING THE SOIL INVESTIGATION BY CONSULTING AGENCIES / SOIL EXPERTS.
  b) CROSS AND LAP MAY SHALL BE AVOIDED AS PER LAYING FOUNDATION.
- THE DEPTH OF BEAMS SHALL BE INCLUDING THE SLAB THICKNESS.

LAP JOINTS FOR REINFORCEMENT BARS

- LAP JOINTS OF TENSION BARS SHALL NOT BE MORE THAN 50% OF THE BARS SHALL BE LAPPED.
- LAPS IN COLUMNS SHALL BE PROVIDED AT MID HEIGHT OF FLOOR AND NOT AT SLAB LEVEL.
- LAPS IN BEAMS AND SLABS SHALL BE PROVIDED AT THE END OF CENTRE LINE AXIS.

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY, (VILLA 19 & 20) AT ECR, CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

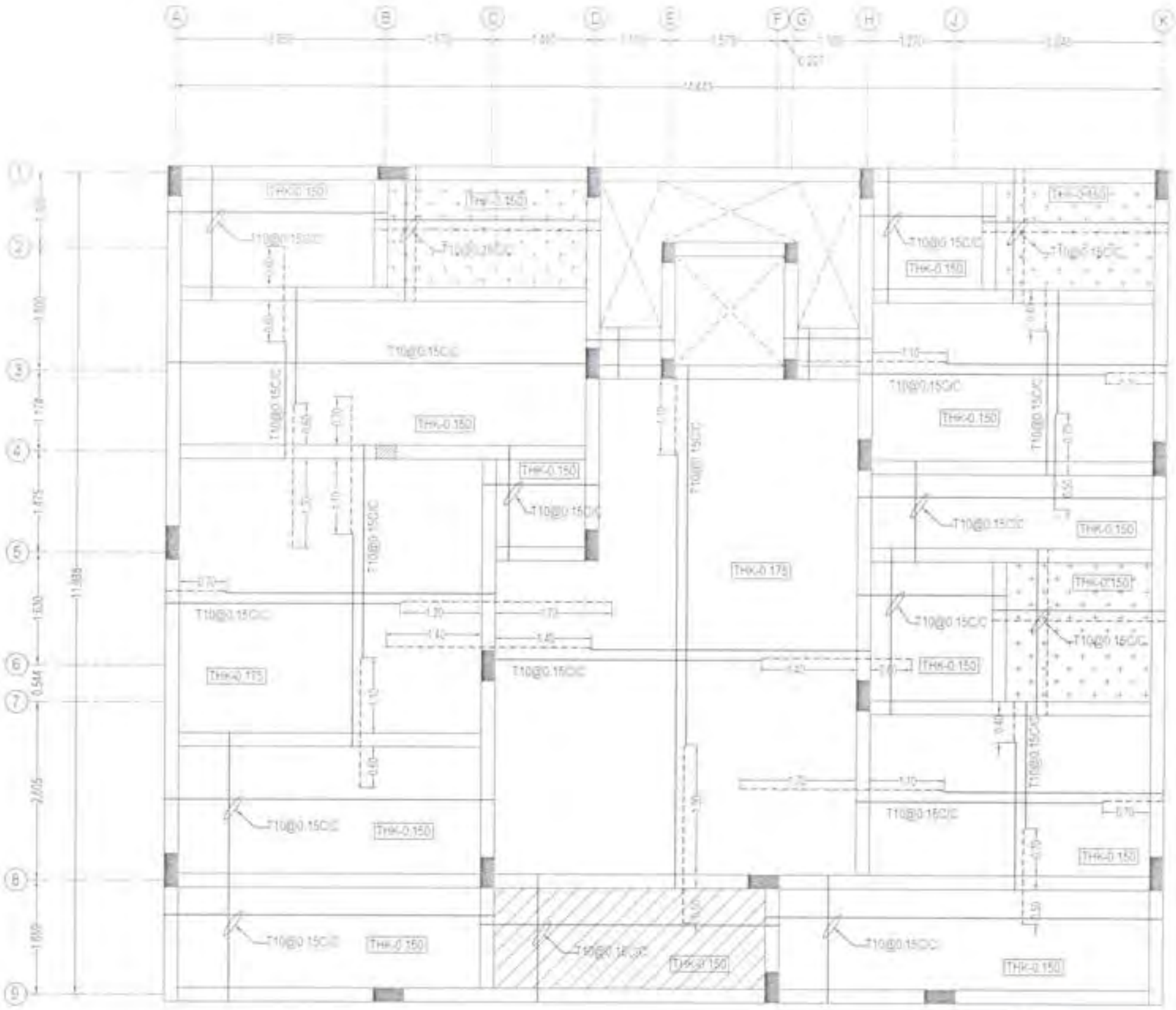
SAFE STRUCTURAL CONSULTANCY

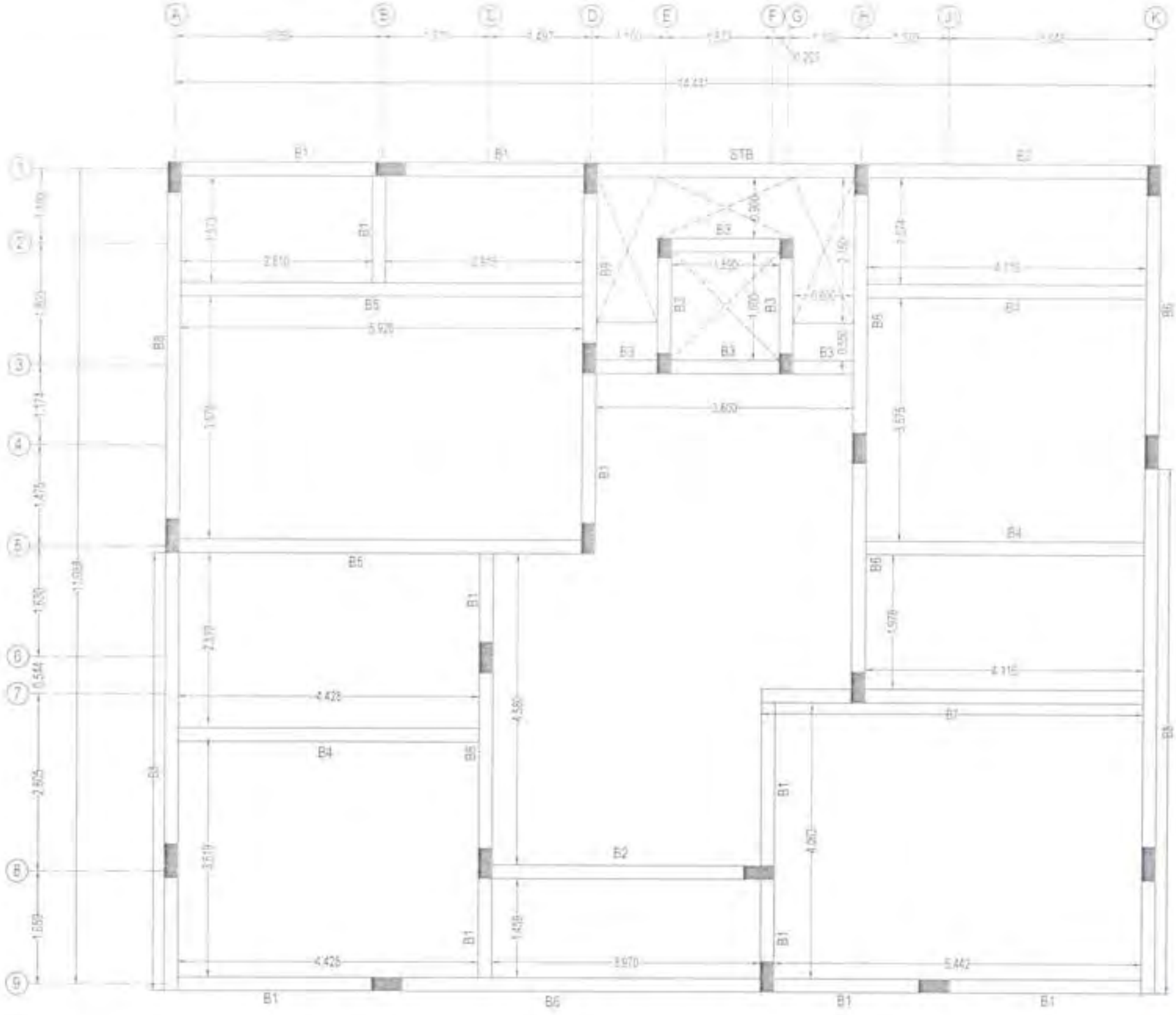
DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

GROUND FLOOR ROOF BEAM DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	05/05/2026	ST-2026-06-07	10


A
B
C
D
E
F G
H
J
K
1
2
3
4
5
6
7
8
9
THK-0.150
THK-0.175
T10@0.15C/C
T10@0.15C/C
T10@0.15C/C



TERRACE BEAM LAYOUT

LEGENDS

OPENING

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I
M.E (Structural Engg)
Reg. No - SE/GR-1/19/12/231 (CMDA)

TECHNICAL NOTES

1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
2. ALL LEVELS TO BE VERIFIED BEFORE CONSTRUCTION.
3. ANY DISCREPANCIES BETWEEN DRAWINGS SHALL BE REPORTED TO THE ARCHITECT IMMEDIATELY.
4. THIS PLAN SHALL BE READ IN CONJUNCTION WITH ALL OTHER ARCHITECTURAL AND STRUCTURAL DRAWINGS.
5. ALL DIMENSIONS SHALL BE CHECKED ON SITE BEFORE FABRICATION OR CONSTRUCTION.
6. FOUNDATION & SLABS TO BE LAID ON UNDISTURBED SOIL OF ADEQUATE BEARING CAPACITY AS PER SOIL REPORT RECOMMENDATIONS.
7. GRADE OF CONCRETE SHALL CONFORM TO M25 (1:1:2) UNLESS OTHERWISE NOTED.
8. REINFORCEMENT SHALL CONFORM TO Fe 500 GRADE TMT BARS.
9. CLEAR COVER TO REINFORCEMENT:
   - COLUMNS = 40MM
   - FOUNDATION = 50MM
   - SLABS & BEAMS = 25MM
   - LINTEL BEAMS = 25MM
   - CHAJJA & SUNSHADES = 20MM
10. THE SUBJECT APPLICATION HAS BEEN DESIGNED FOR 12 T/SQ.M THE REQUIRED PILE CAPACITY OF SOIL IS 12 T/SQ.M. THE CONTRACTOR IS RESPONSIBLE FOR ATTAINING THIS CAPACITY BY PILE TESTING AND CONSULTING WITH SOIL EXPERTS.
11. LOOSE SOIL IF ANY SHALL BE REMOVED BEFORE LAYING FOUNDATION.
12. THE DEPTH OF BEAMS SHALL BE INCLUDING THE SLAB THICKNESS.

LAP JOINTS FOR REINFORCEMENT BARS

1. ALL THE CROSS SECTIONS OF THE MEMBERS AT EVERY SECTION, 50% OF THE BARS SHALL BE LAPPED.
2. LAPS IN COLUMNS SHALL BE PROVIDED AT MID HEIGHT OF FLOOR AND NOT AT SLAB LEVEL.
3. LAPS IN BEAMS AND SLABS SHALL BE PROVIDED AT THE MIDDLE OF CONTAINED SPAN.

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY, (VILLA 19 & 20)
AT ECR, CHENNAI.

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

TERRACE BEAM LAYOUT

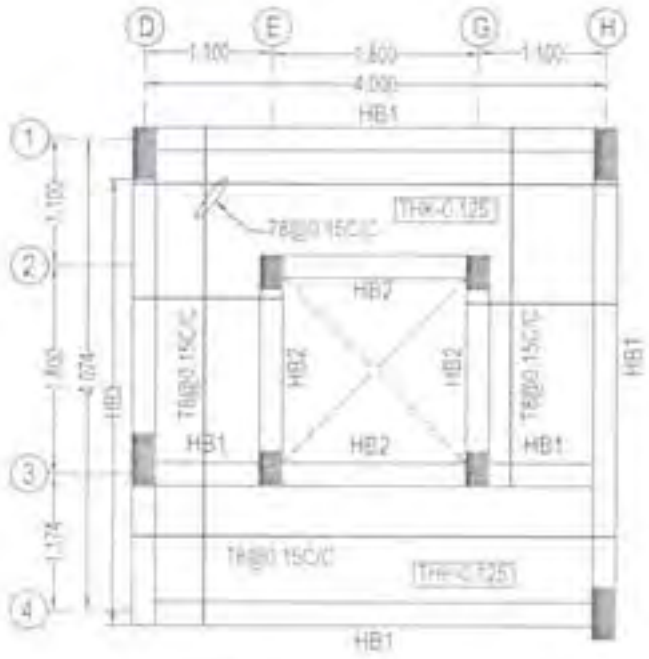
REV	DATE	PROJECT NO	SHEET NO
R0	05/05/2026	ST-2026-05-07	12

TERRACE BEAM REINFORCEMENT SCHEDULE

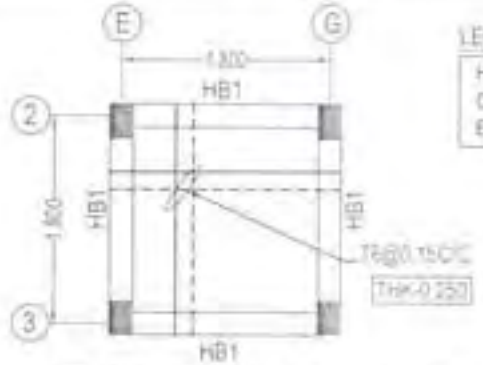
BEAM SIZE & MK	DETAIL @ LEFT SUPPORT	DETAIL @ MIDDLE	DETAIL @ RIGHT SUPPORT
(0.20 X 0.45) B1	2-T16(C) T8@0.15C/C 2-T16(C)	2-T16(C) T8@0.15C/C 2-T16(C)	2-T16(C) T8@0.15C/C 2-T16(C)
(0.20 X 0.45) B2	2-T16(C) T8@0.15C/C 2-T12(C) 2-T16(C)	2-T16(C) T8@0.15C/C 2-T12(C) 2-T16(C)	2-T16(C) T8@0.15C/C 2-T12(C) 2-T16(C)
(0.20 X 0.45) B3	2-T16(C) T10@0.15C/C 2-T16(C)	2-T16(C) T10@0.15C/C 2-T16(C)	2-T16(C) T10@0.15C/C 2-T16(C)
(0.20 X 0.45) B4	2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)
(0.20 X 0.60) B6	2-T16(C) 2-T12(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T12(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T12(C) T10@0.15C/C 2-T16(C) 2-T16(C)
(0.20 X 0.45) B8	2-T16(C) 2-T16(C) T8@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T16(C) T8@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T16(C) T8@0.15C/C 2-T16(C) 2-T16(C)
(0.20 X 0.60) B7	2-T16(C) 2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)

TERRACE BEAM REINFORCEMENT SCHEDULE

BEAM SIZE & MK	DETAIL @ LEFT SUPPORT	DETAIL @ MIDDLE	DETAIL @ RIGHT SUPPORT	DETAIL @ CANTILEVER BEAM
(0.20 X 0.60) B3	2-T16(C) 2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T16(C) T10@0.15C/C 2-T16(C) 2-T16(C)	
(0.20 X 0.60) B5	2-T16(C) 2-T12(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T12(C) T10@0.15C/C 2-T16(C) 2-T16(C)	2-T16(C) 2-T12(C) T10@0.15C/C 2-T16(C) 2-T16(C)	
(0.20 X 0.45) B6	2-T12(C) T8@0.15C/C 2-T16(C)	2-T12(C) T8@0.15C/C 2-T16(C)	2-T12(C) T8@0.15C/C 2-T16(C)	
(0.20 X 0.45) STB	2-T16(C) T8@0.15C/C 2-T16(C)	2-T16(C) T8@0.15C/C 2-T16(C)	2-T16(C) T8@0.15C/C 2-T16(C)	



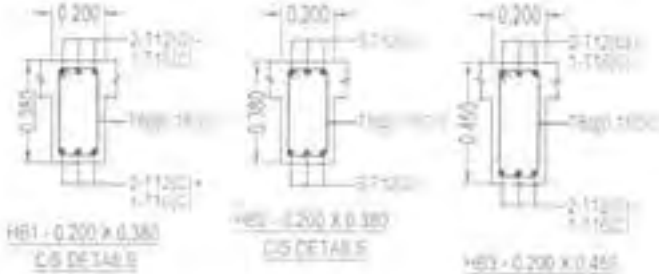
STAIRCASE HEADROOM LAYOUT & DETAILS



LIFT MACHINE ROOM LAYOUT & DETAILS

LEGEND

HB - HEADROOM BEAM
C - CONTINUOUS ROD
E - EXTRA ROD



HB1 - 0.200 X 0.380 C/S DETAILS

HB2 - 0.200 X 0.380 C/S DETAILS

HB3 - 0.200 X 0.455 C/S DETAILS

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I
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Reg. No - SE/GR-I/19/12/231

TECHNICAL NOTES

- ALL DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE NOTED.
- ALL LEVELS ARE IN METERS.
- DO NOT SCALE DRAWINGS.
- ANY DISCREPANCIES NOTED IN THE DRAWINGS SHALL BE BROUGHT TO THE NOTICE IMMEDIATELY.
- ENSURE THAT SHEAR WALL, COLUMN, BEAM, SLAB, STAIRCASE, LIFT WELL & PLUMBING WORKS.
- ENGINEER IN CHARGE TO BE INFORMED BEFORE COMMENCEMENT OF ANY WORK. NO EXTRA WORK SHALL BE CARRIED OUT WITHOUT WRITTEN APPROVAL OF ENGINEER IN CHARGE.
- GRADE OF CONCRETE SHALL BE AS PER STRUCTURAL DRAWINGS.
- IF CONCRETE STRENGTH CONFIRMED WITH CUBE TEST IS LESS THAN SPECIFIED STRENGTH IN ANY ELEMENT, THE CONTRACTOR SHALL REMOVE THE CONCRETE AT HIS OWN COST.
- MINIMUM COVER TO REINFORCEMENT:
  - A. COLUMNS = 40MM
  - B. FOUNDATION = 50MM
  - C. GRADE BEAM = 40MM
  - D. FLOOR SLAB = 25MM
  - E. FLOOR SLAB = 20MM
- THE BUILDING FOUNDATIONS HAVE BEEN DESIGNED FOR SAFE BEARING CAPACITY OF SOIL IS 150 KN/M2. THE CONTRACTOR IS RESPONSIBLE FOR ACHIEVING THE SAFE BEARING CAPACITY BY CONSULTING A PROFESSIONAL EARTH'S.
- CLOSE SOIL IF ANY SHALL BE REMOVED BEFORE LAYING FOUNDATION.
- THE DEPTH OF BEAMS SHALL BE INCLUDING THE SLAB THICKNESS.

LAP JOINTS FOR REINFORCEMENT BARS

- AT ANY CROSS SECTION OF THE MEMBER NOT MORE THAN HALF OF THE BARS SHALL BE LAPPED.
- LAPS IN COLUMNS SHALL BE PROVIDED AT BOTTOM OF FLOOR BEAMS NOT AT SLAB LEVEL.
- LAPS IN BEAMS AND SLABS SHALL BE PROVIDED AT THE MIDDLE OF CENTRE SPAN.

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @ ADITYARAM PALACE CITY, (VILLA 19 & 20) AT ECR, CHENNAI.

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

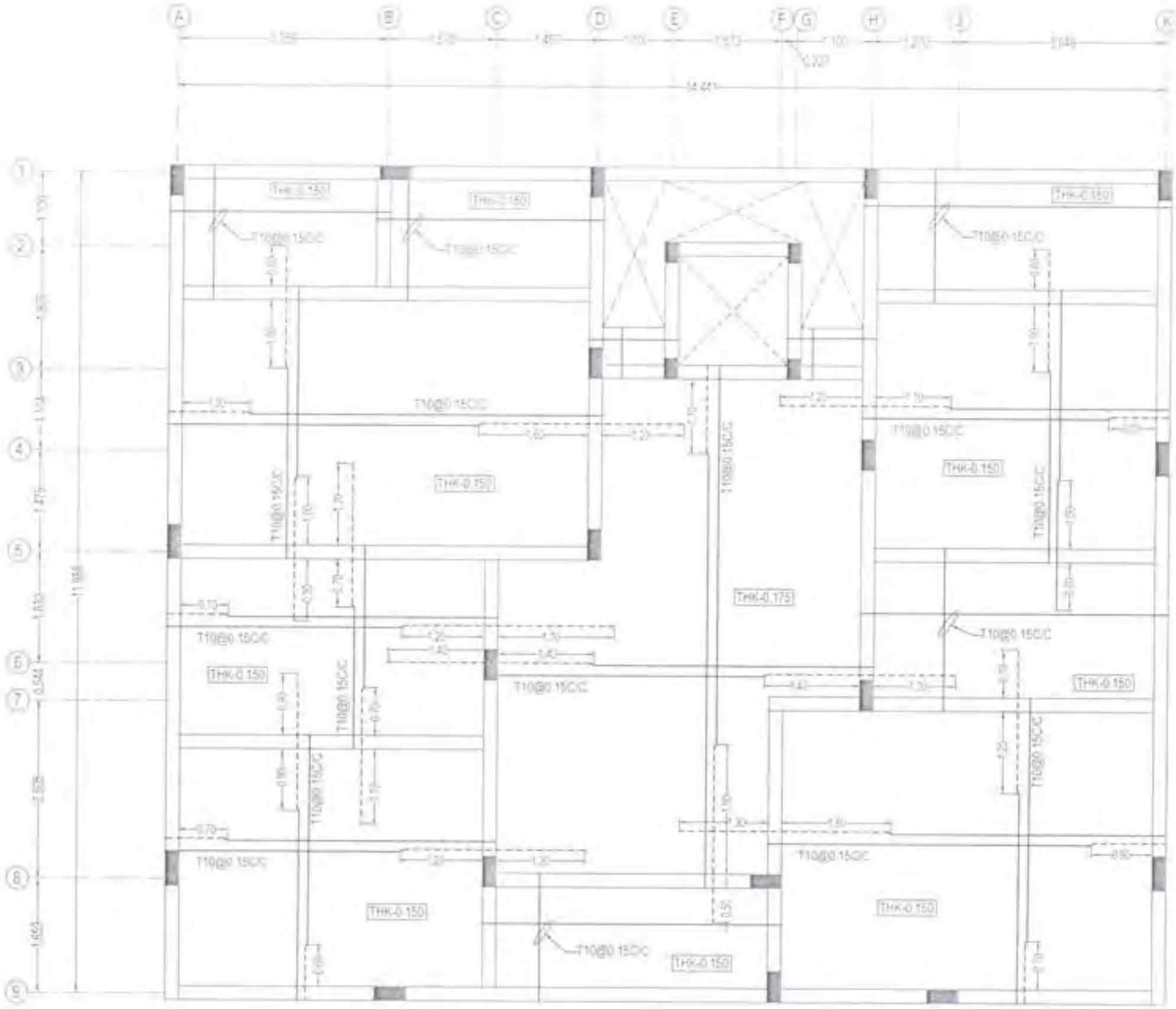
SAFE STRUCTURAL CONSULTANCY

DESIGNED	RK	RELEASED FOR:
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

TERRACE BEAM DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	05/05/2026	ST-2026-06-07	13



TERRACE SLAB LAYOUT & DETAILS

R. RAVIKUMAR
STRUCTURAL ENGINEER GRADE - I
M.E (Structural Engg)
Reg. No - SE/GR-1/19/12/231

LEGENDS:
T - TOP R/C
B - BOTTOM R/D
THK - THICKNESS

TECHNICAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS & ALL LEVELS IN METERS UNLESS OTHERWISE SPECIFIED.
2. USE FIGURED DIMENSIONS ONLY.
3. ANY DISCREPANCIES NOTICED IN THE PLANS SHALL BE BROUGHT TO OUR NOTICE IMMEDIATELY.
4. ALL DETAILS SHALL BE READ IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS.
5. DIMENSIONS SHALL NOT BE SCALED FROM DRAWINGS. WORKING DRAWINGS NOT SUITABLE FOR CONSTRUCTION PURPOSES ARE ISSUED FOR ESTIMATION ONLY.
6. DESIGN OF STRUCTURE SHALL CONFORM TO IS 456: 2000 ALL RELEVANT CODES & BIS SPECIFICATIONS.
7. IF DISCREPANCY EXISTS BETWEEN DRAWINGS AND SITE CONDITIONS, IMMEDIATELY INFORM THE ENGINEER.
8. CLEAR COVER TO REINFORCEMENT:
   a. COLUMNS - 40MM
   b. FOUNDATION - 50MM
   c. FLOOR SLAB - 40MM
   d. FLOOR BEAM - 25MM
   e. FLOOR SLAB - 20MM
9. THE BEARING CAPACITY OF SOIL IS ASSUMED AS 20 T/SQ.M. THE CONTRACTOR IS RESPONSIBLE FOR ESTIMATING THE BEARING CAPACITY OF SOIL BY CONSULTING WITH SOIL EXPERTS.
10. LOOSE SOIL IF ANY SHALL BE REMOVED BEFORE LAYING FOUNDATION.
11. THE DEPTH OF BEAM SHALL BE INCLUDING THE SLAB THICKNESS.

LAP JOINTS FOR REINFORCEMENT BARS

a) LAP AND CONNECTION OF THE REINFORCED WORK PARTICULARS OF THE BARS SHALL BE CARRIED.

b) LAPS IN COLUMNS SHALL BE PROVIDED STARTING HEIGHT OF FLOOR AND NOT AT SLAB LEVEL.

c) LAPS IN BEAMS AND SLABS SHALL BE PROVIDED AT THE MIDDLE OF CONTRAFLEXURE.

CLIENT

PROJECT

PROPOSED RESIDENTIAL BUILDING @
ADITYARAM PALACE CITY (VILLA 19 & 20)
AT ECR CHENNAI

ARCHITECT

ADITYARAM GROUP

STRUCTURAL CONSULTANT

SAFE STRUCTURAL CONSULTANCY
Safe

DESIGNED	RK	RELEASED FOR
DETAILED	SG	☐ TENDER
SCALE	1:100	☑ APPROVAL
SHEET	A3	☐ CONSTRUCTION

DRAWING NAME

TERRACE SLAB DETAILS

REV	DATE	PROJECT NO	SHEET NO
R0	05/05/2026	ST-2026-06-07	14