



**Ministry of Jal Shakti
(A Government of India undertaking)**

**1st Floor, JP Krishna Building, Pallimukku, Pettah
Trivandrum - 695024**

TENDER DOCUMENT FOR

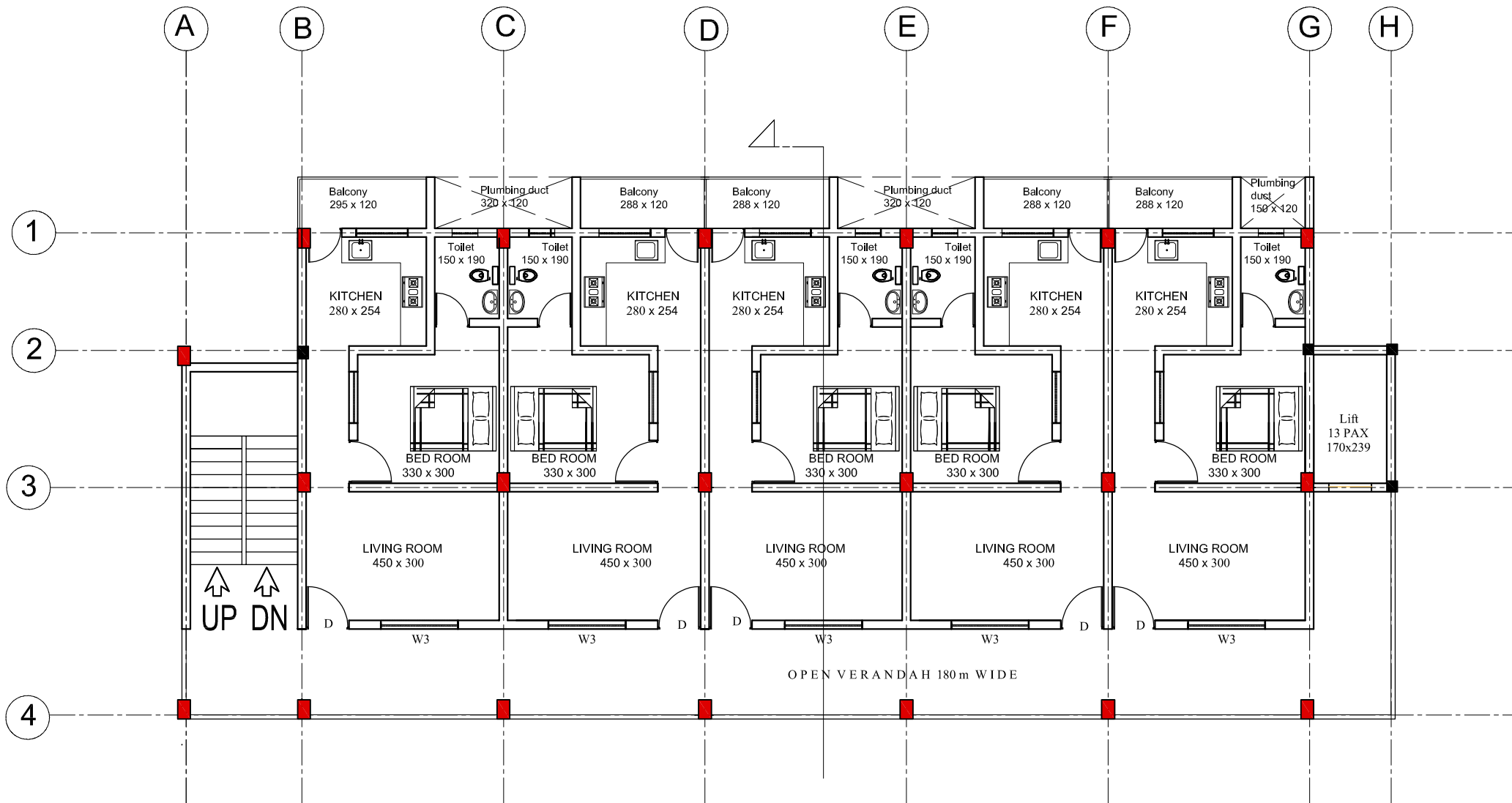
**Construction of Accommodation complex(Gents
Hostel,Ladies Hostel & Residential complex)
,Karyavattom Campus ,Trivandrum**

WAP/INFRA/KERALA/2025/KUB/508

Date: 29-03-2025

Volume-II DRAWINGS

ARCHITECTURAL



DOOR & WINDOW SCHEDULE			
SNO.	NAME	DESCRIPTION	SIZE
1.	D	Main door	2x2.4m
2.	TD	Double door	1.5x2.4m
3.	D1	Door	1.2x2.4m
4.	D2	Door/ toilet door	1x2.1m
5.	D3	Toilet door	0.8x2.1m
6.	W2	Window	1X1.5m
7.	W3	Window	1.5x1.5m
8.	V1	Ventilator	0.6x0.6m

AREA STATEMENT	
BASEMENT	157.20 SQM
GROUND FLOOR	338.97 SQM
FIRST FLOOR	329.33 SQM
TERRACE	25.70 SQM
TOTAL B/UP AREA	851.21 SQM

NOTES :

- ALL MEASUREMENTS ARE IN cm unless specified otherwise.
- This drawing should not be scaled.
- The measurements are to be checked on site before construction.



APPROVED BY -

CHECKED BY -

REVISIONS		
NO.	DESCRIPTION	DATE

PROJECT NAME : UNIVERSITY OF KERALA
PM-USHA PROJECT FOR MULTI-DISCIPLINARY
EDUCATION & RESEARCH UNIVERSITIES (MERU)

SHEET TITLE : PROPOSED RESIDENTIAL COMPLEX
FIRST FLOOR PLAN

DATE : 04/02/2025

SCALE : NTS

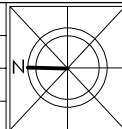
SHEET SIZE : A3

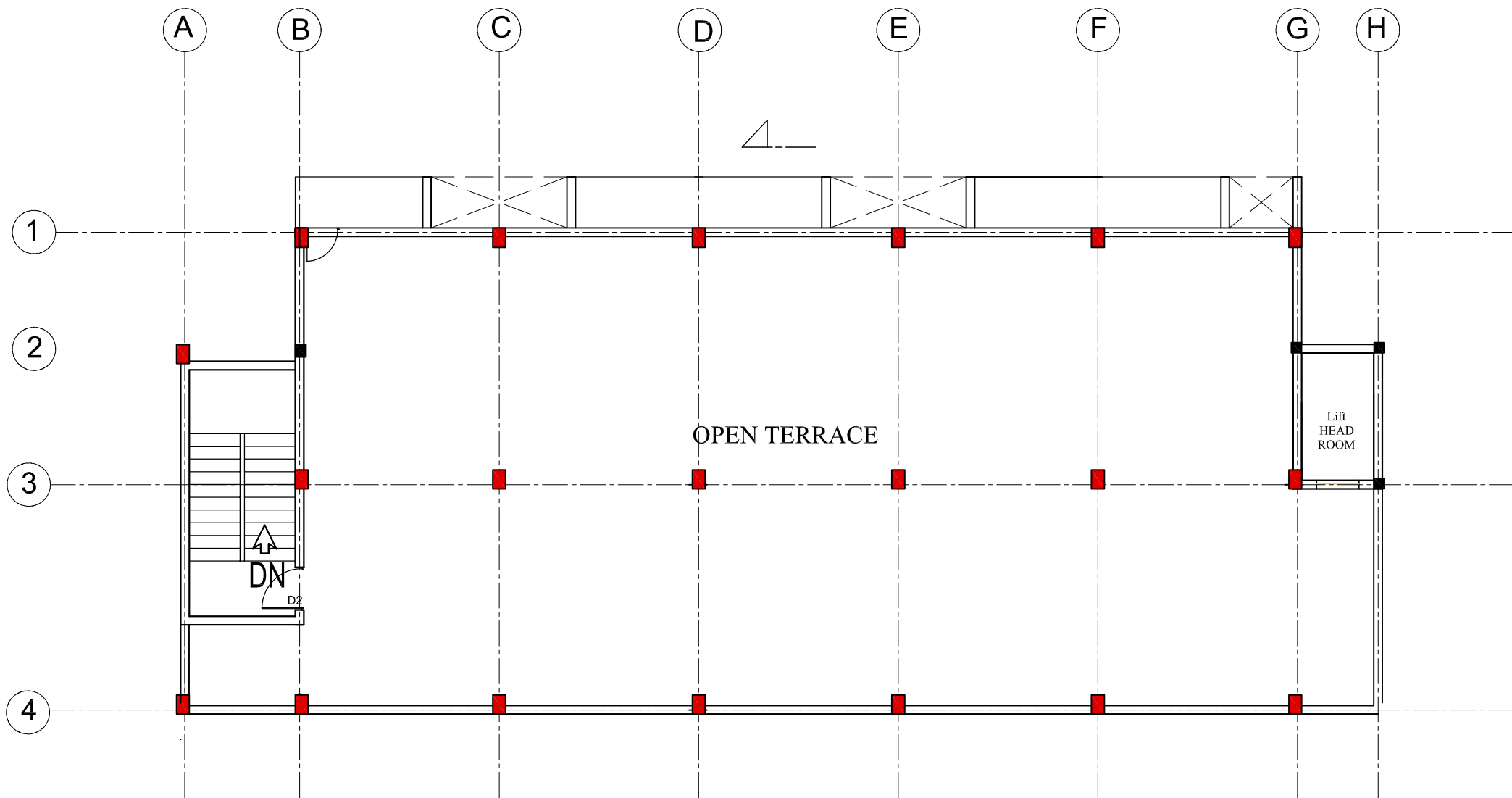
SHEET NO :

DRAWN BY :

DRAWING NO :

DRAWING STATUS : FOR TENDER





DOOR & WINDOW SCHEDULE			
SNO.	NAME	DESCRIPTION	SIZE
1.	D	Main door	2x2.4m
2.	TD	Double door	1.5x2.4m
3.	D1	Door	1.2x2.4m
4.	D2	Door/ toilet door	1x2.1m
5.	D3	Toilet door	0.8x2.1m
6.	W2	Window	1X1.5m
7.	W3	Window	1.5x1.5m
8.	V1	Ventilator	0.6x0.6m

AREA STATEMENT	
BASEMENT	157.20 SQM
GROUND FLOOR	338.97 SQM
FIRST FLOOR	329.33 SQM
TERRACE	25.70 SQM
TOTAL B/UP AREA	851.21 SQM

NOTES :

- ALL MEASUREMENTS ARE IN cm unless specified otherwise.
- This drawing should not be scaled.
- The measurements are to be checked on site before construction.



APPROVED BY -

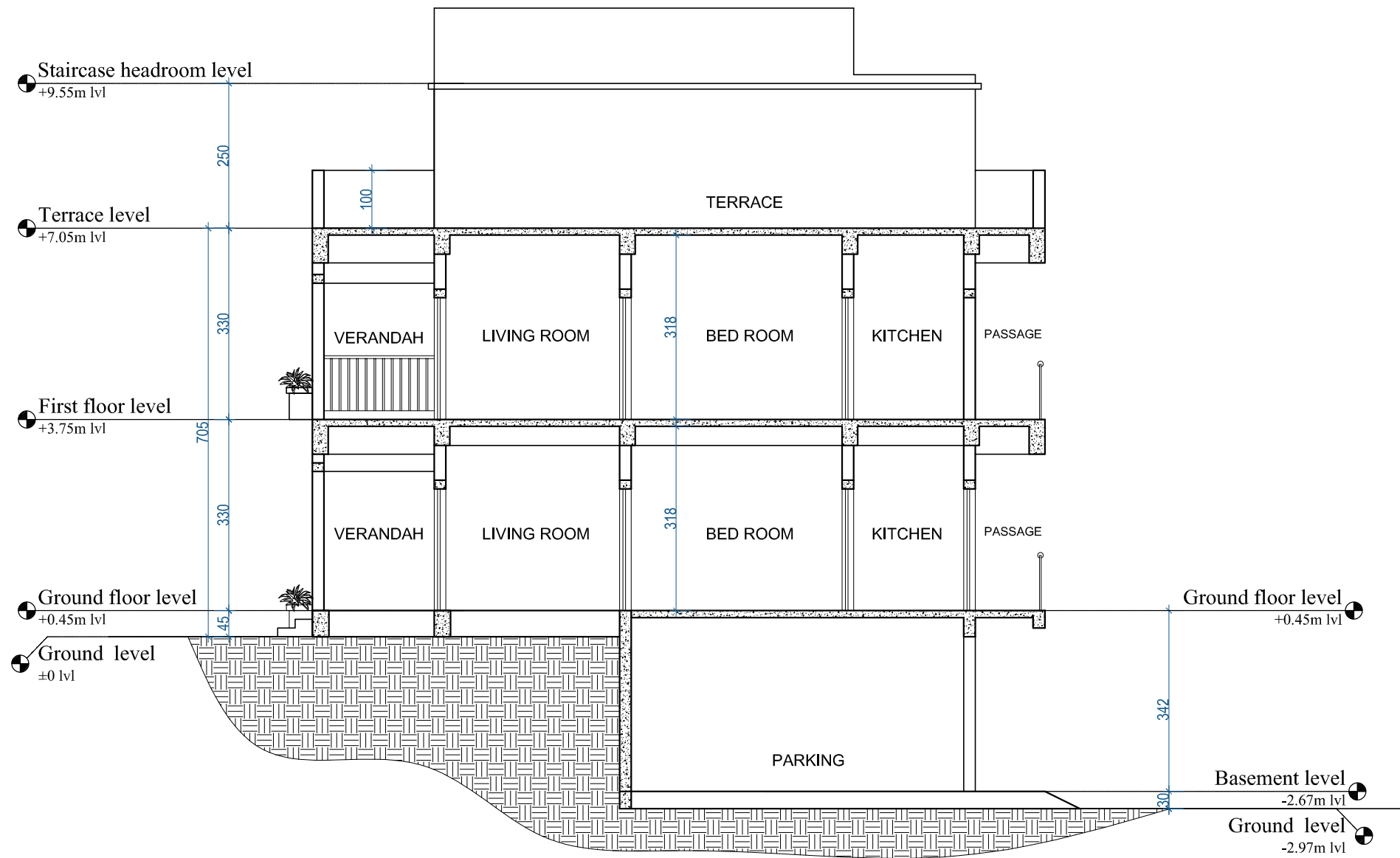
CHECKED BY -

REVISIONS		
NO.	DESCRIPTION	DATE

PROJECT NAME : UNIVERSITY OF KERALA
PM-USHA PROJECT FOR MULTI-DISCIPLINARY
EDUCATION & RESEARCH UNIVERSITIES (MERU)

SHEET TITLE : PROPOSED RESIDENTIAL COMPLEX
TERRACE PLAN

DATE : 04/02/2025	
SCALE : NTS	
SHEET SIZE : A3	
SHEET NO :	
DRAWN BY :	
DRAWING NO :	
DRAWING STATUS : FOR TENDER	

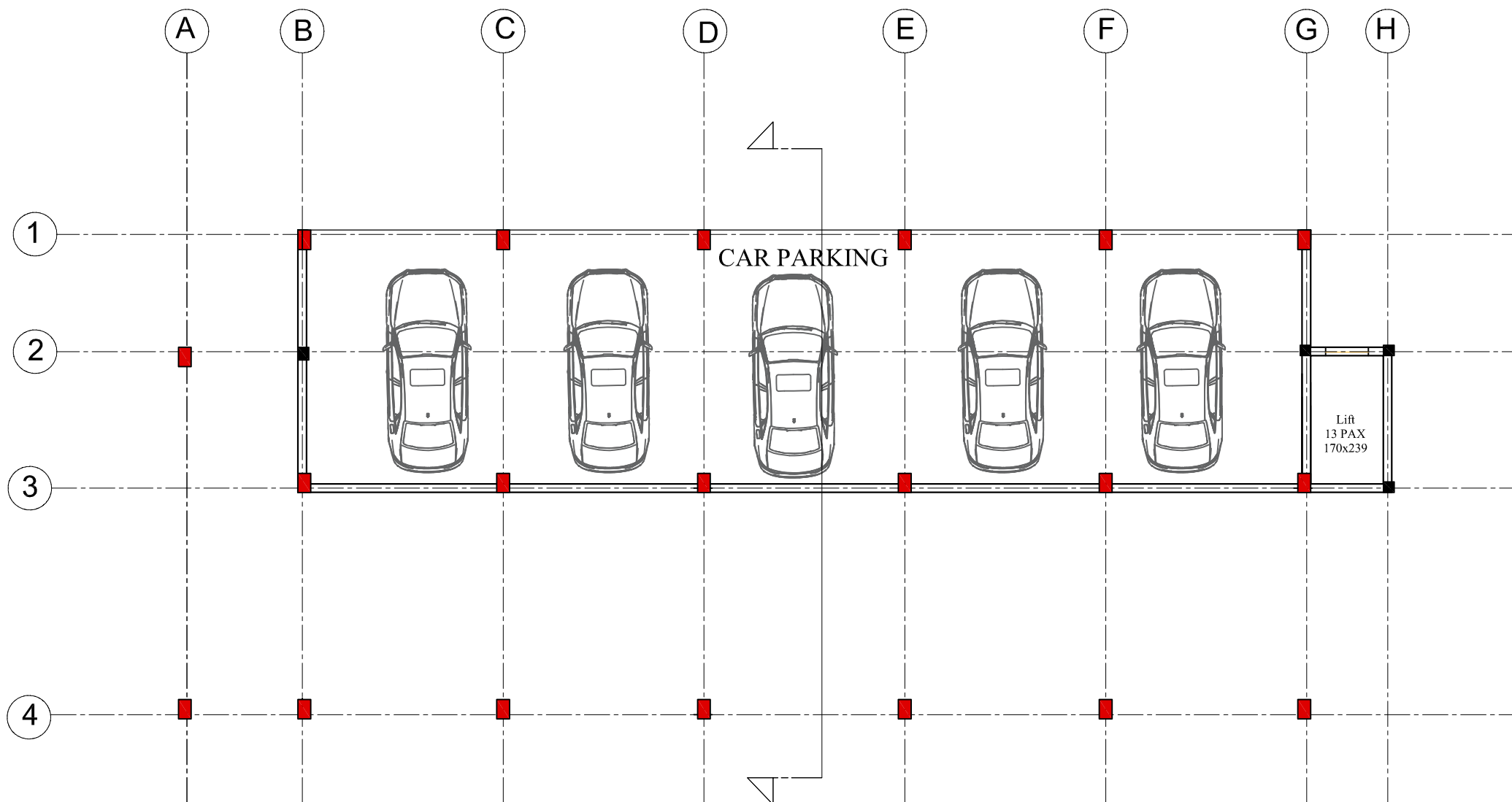


NOTES : • ALL MEASUREMENTS ARE IN cm unless specified otherwise. • This drawing should not be scaled. • The measurements are to be checked on site before construction.	 WAPCOS LIMITED (A Government of India Undertaking) Ministry of Jal Shakti Regional Office (Kerala) 1st Floor, JP Krishna Building Pollimukku, Pettah Trivandrum 695024, Kerala	APPROVED BY -	CHECKED BY -	REVISIONS			PROJECT NAME : UNIVERSITY OF KERALA PM-USHA PROJECT FOR MULTI-DISCIPLINARY EDUCATION & RESEARCH UNIVERSITIES (MERU)	DATE : 29/03/2025	
				NO.	DESCRIPTION	DATE		SCALE : NTS	
								SHEET SIZE : A3	
							SHEET NO :		
							SHEET TITLE : PROPOSED RESIDENTIAL COMPLEX SECTION	DRAWN BY :	
				DRAWING NO :					
				DRAWING STATUS : FOR TENDER					



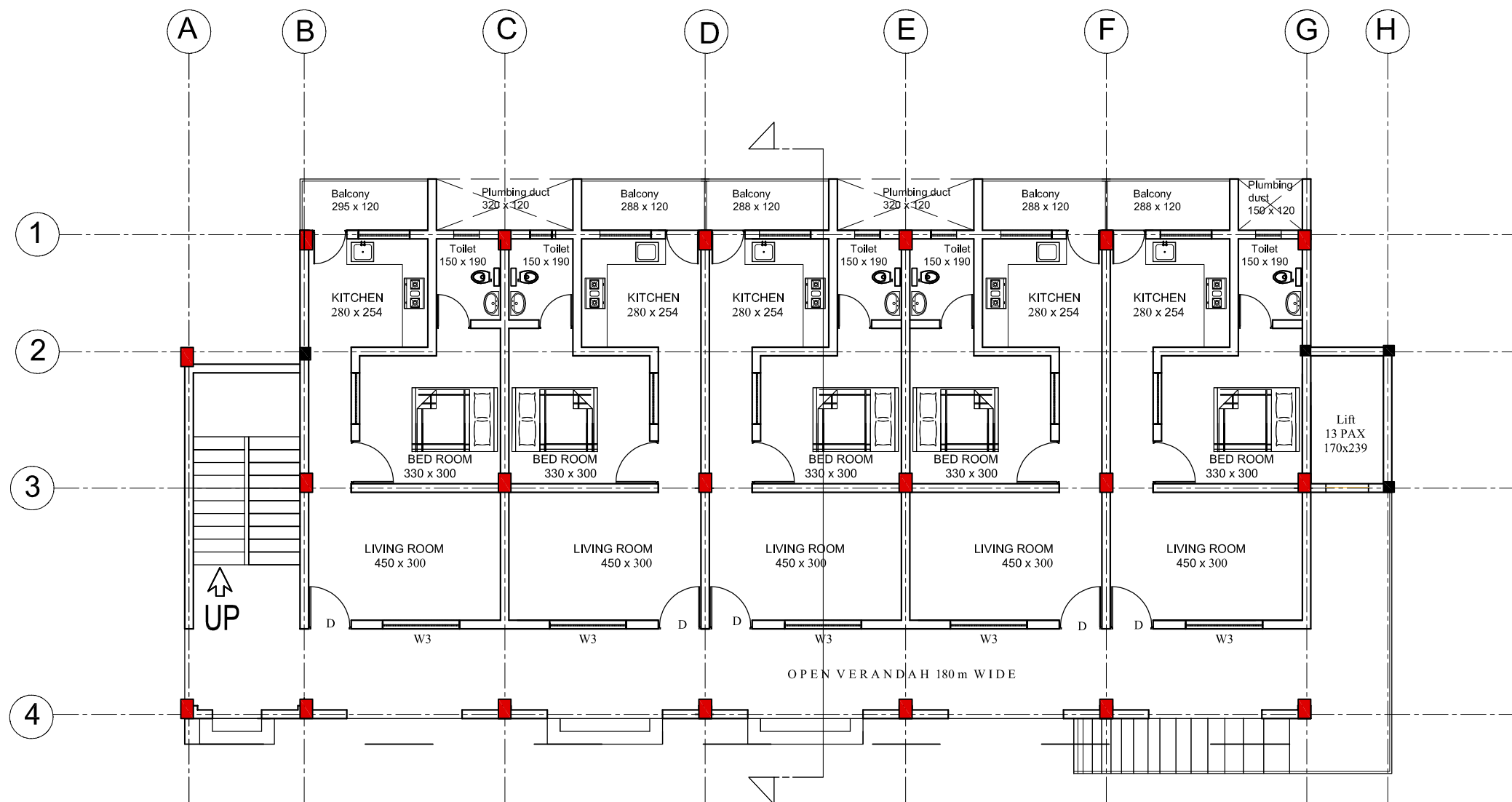
PROPOSED RESIDENTIAL COMPLEX - FRONT ELEVATION

NOTES : • ALL MEASUREMENTS ARE IN cm unless specified otherwise. • This drawing should not be scaled. • The measurements are to be checked on site before construction.	 WAPCOS LIMITED (A Government of India Undertaking) Ministry of Jal Shakti Regional Office (Kerala) 1st Floor, JP Krishna Building Pallimukku, Pettah Trivandrum 695024, Kerala	APPROVED BY -	CHECKED BY -	REVISIONS			PROJECT NAME : UNIVERSITY OF KERALA PM-USHA PROJECT FOR MULTI-DISCIPLINARY EDUCATION & RESEARCH UNIVERSITIES (MERU)	DATE : 29/03/2025		
				NO.	DESCRIPTION	DATE		SCALE : NTS		
							SHEET SIZE : A3			
							SHEET NO :			
							SHEET TITLE : PROPOSED RESIDENTIAL COMPLEX ELEVATION			DRAWN BY :
										DRAWING NO :
							DRAWING STATUS : FOR TENDER			



DOOR & WINDOW SCHEDULE			
SNO.	NAME	DESCRIPTION	SIZE
1.	D	Main door	2x2.4m
2.	TD	Double door	1.5x2.4m
3.	D1	Door	1.2x2.4m
4.	D2	Door/ toilet door	1x2.1m
5.	D3	Toilet door	0.8x2.1m
6.	W2	Window	1X1.5m
7.	W3	Window	1.5x1.5m
8.	V1	Ventilator	0.6x0.6m

AREA STATEMENT	
BASEMENT	157.20 SQM
GROUND FLOOR	338.97 SQM
FIRST FLOOR	329.33 SQM
TERRACE	25.70 SQM
TOTAL B/UP AREA	851.21 SQM



DOOR & WINDOW SCHEDULE		
SNO.	NAME	DESCRIPTION
1.	D	Main door
2.	TD	Double door
3.	D1	Door
4.	D2	Door/ toilet door
5.	D3	Toilet door
6.	W2	Window
7.	W3	Window
8.	V1	Ventilator

AREA STATEMENT	
BASEMENT	157.20 SQM
GROUND FLOOR	338.97 SQM
FIRST FLOOR	329.33 SQM
TERRACE	25.70 SQM
TOTAL B/UP AREA	851.21 SQM

NOTES :

- ALL MEASUREMENTS ARE IN cm unless specified otherwise.
- This drawing should not be scaled.
- The measurements are to be checked on site before construction.



APPROVED BY -

CHECKED BY -

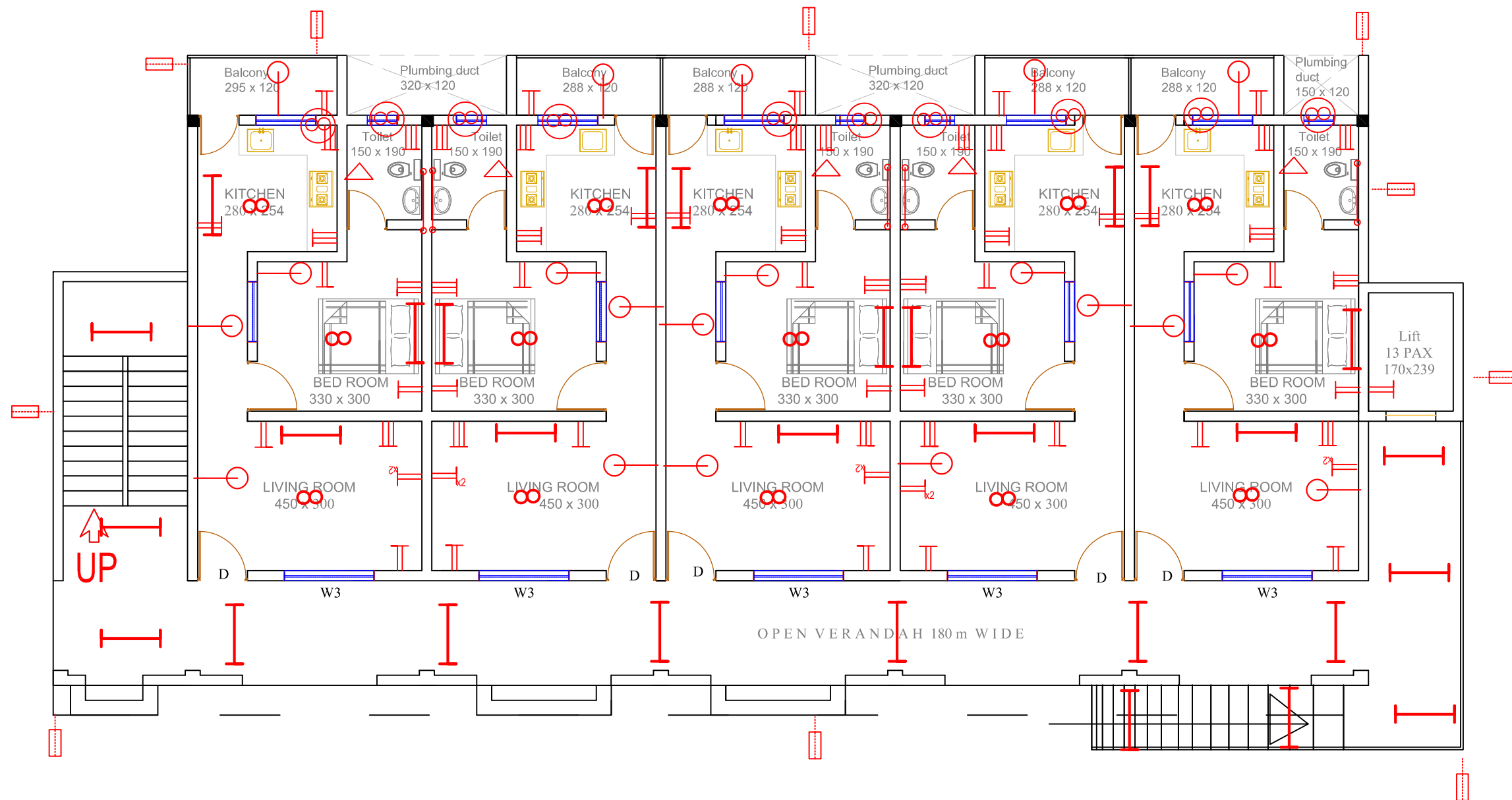
REVISIONS		
NO.	DESCRIPTION	DATE

PROJECT NAME : UNIVERSITY OF KERALA
PM-USHA PROJECT FOR MULTI-DISCIPLINARY
EDUCATION & RESEARCH UNIVERSITIES (MERU)

SHEET TITLE : PROPOSED RESIDENTIAL COMPLEX
GROUND FLOOR PLAN

DATE : 04/02/2025	
SCALE : NTS	
SHEET SIZE : A3	
SHEET NO :	
DRAWN BY :	
DRAWING NO :	
DRAWING STATUS : FOR TENDER	

ELECTRICAL



LEGEND	
	Tube light
	Mirror lamp
	Down light
	Bulk head
	Batten
	Ceiling fan
	Exhaust fan
	5A plug
	Set of plug
	15A plug
	D B
	SMB
	Street light

NOTES :

- ALL MEASUREMENTS ARE IN cm unless specified otherwise.
- This drawing should not be scaled.
- The measurements are to be checked on site before construction.



APPROVED BY -

CHECKED BY -

REVISIONS		
NO.	DESCRIPTION	DATE

PROJECT NAME : UNIVERSITY OF KERALA
PM-USHA PROJECT FOR MULTI-DISCIPLINARY
EDUCATION & RESEARCH UNIVERSITIES (MERU)

SHEET TITLE : PROPOSED RESIDENTIAL COMPLEX
-GROUND FLOOR ELECTRICAL LAYOUT

DATE : 10/03/2025

SCALE : NTS

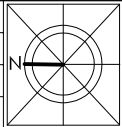
SHEET SIZE : A3

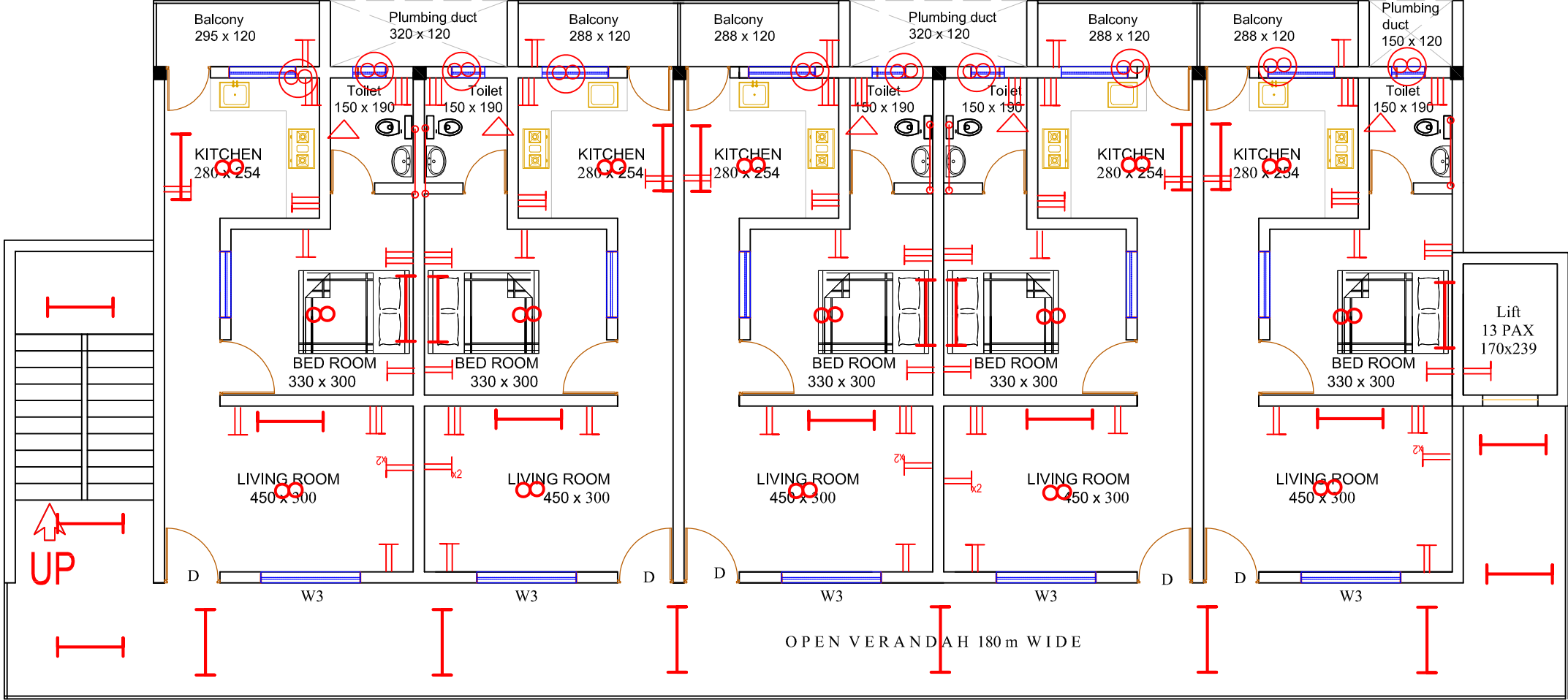
SHEET NO :

DRAWN BY :

DRAWING NO :

DRAWING STATUS :





LEGEND	
	Tube light
	Mirror lamp
	Down light
	Bulk head
	Batten
	Ceiling fan
	Exhaust fan
	5A plug
	Set of plug
	15A plug
	D/B
	SMB
	Street light

NOTES :

- ALL MEASUREMENTS ARE IN cm unless specified otherwise.
- This drawing should not be scaled.
- The measurements are to be checked on site before construction.



APPROVED BY -

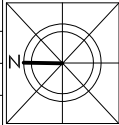
CHECKED BY -

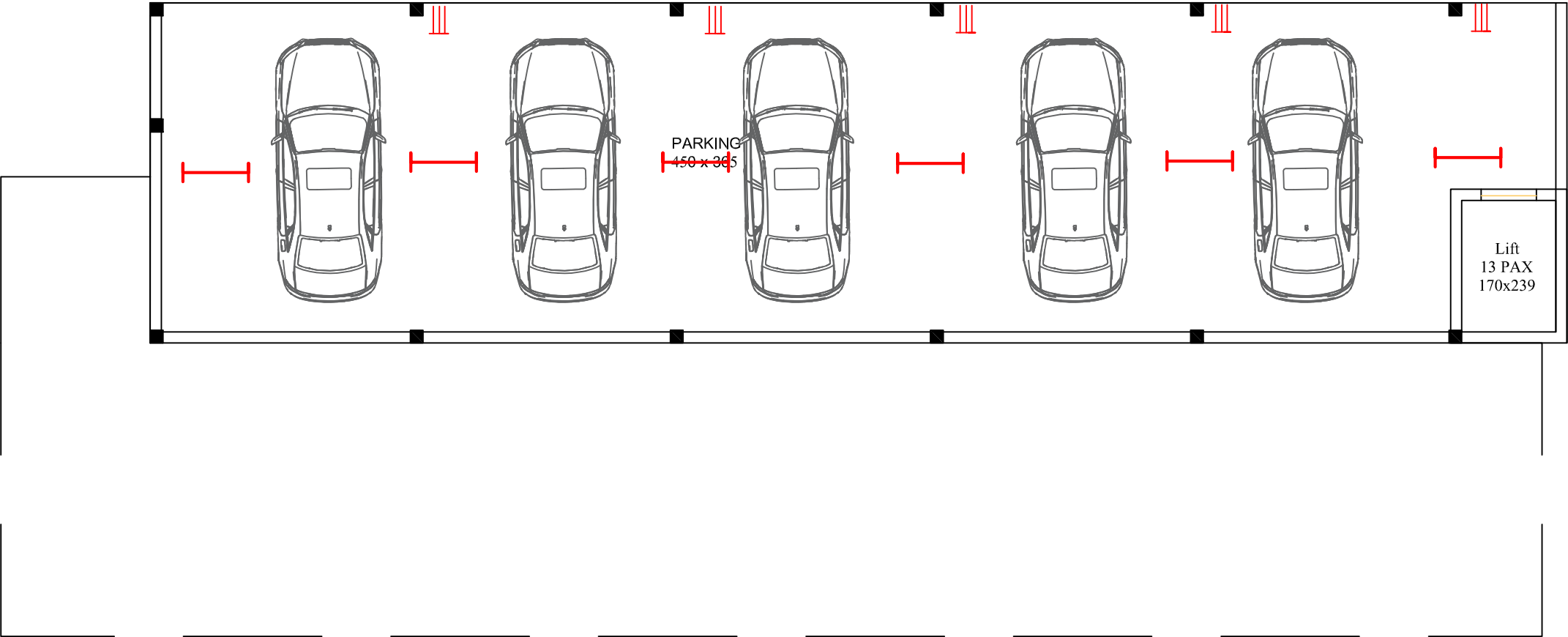
REVISIONS		
NO.	DESCRIPTION	DATE

PROJECT NAME : UNIVERSITY OF KERALA
PM-USHA PROJECT FOR MULTI-DISCIPLINARY
EDUCATION & RESEARCH UNIVERSITIES (MERU)

SHEET TITLE : PROPOSED RESIDENTIAL COMPLEX
-FIRST FLOOR ELECTRICAL LAYOUT

DATE : 10/03/2025
SCALE : NTS
SHEET SIZE : A3
SHEET NO :
DRAWN BY :
DRAWING NO :
DRAWING STATUS :





LEGEND	
	Tube light
	Mirror lamp
	Down light
	Bulk head
	Batten
	Ceiling fan
	Exhaust fan
	5A plug
	Set of plug
	15A plug
	D B
	SMB
	Street light

NOTES :
• ALL MEASUREMENTS ARE IN cm unless specified otherwise.
• This drawing should not be scaled.
• The measurements are to be checked on site before construction.



APPROVED BY -

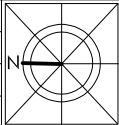
CHECKED BY -

REVISIONS		
NO.	DESCRIPTION	DATE

PROJECT NAME : UNIVERSITY OF KERALA
PM-USHA PROJECT FOR MULTI-DISCIPLINARY
EDUCATION & RESEARCH UNIVERSITIES (MERU)

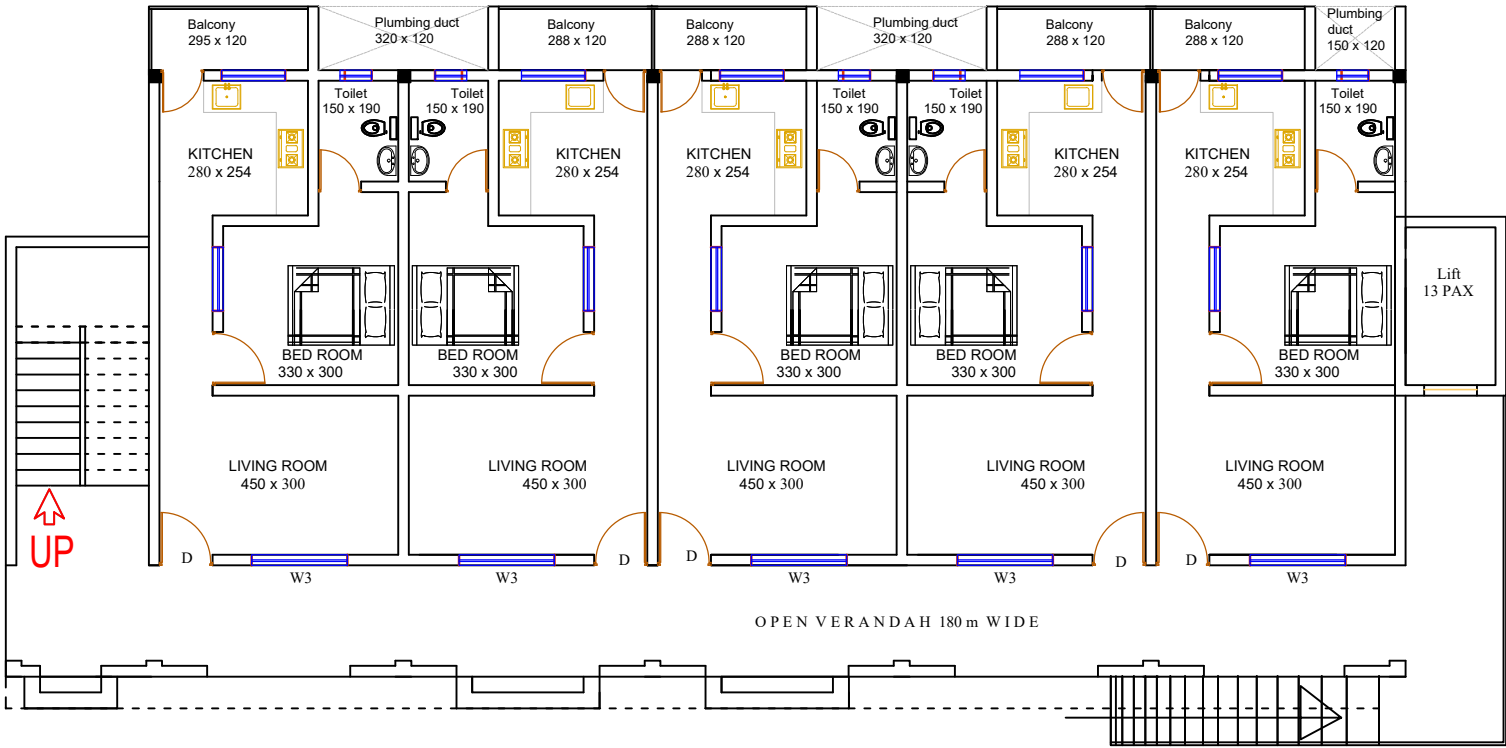
SHEET TITLE : PROPOSED RESIDENTIAL COMPLEX
-BASEMENT ELECTRICAL LAYOUT

DATE : 10/03/2025
SCALE : NTS
SHEET SIZE : A3
SHEET NO :
DRAWN BY :
DRAWING NO :
DRAWING STATUS :



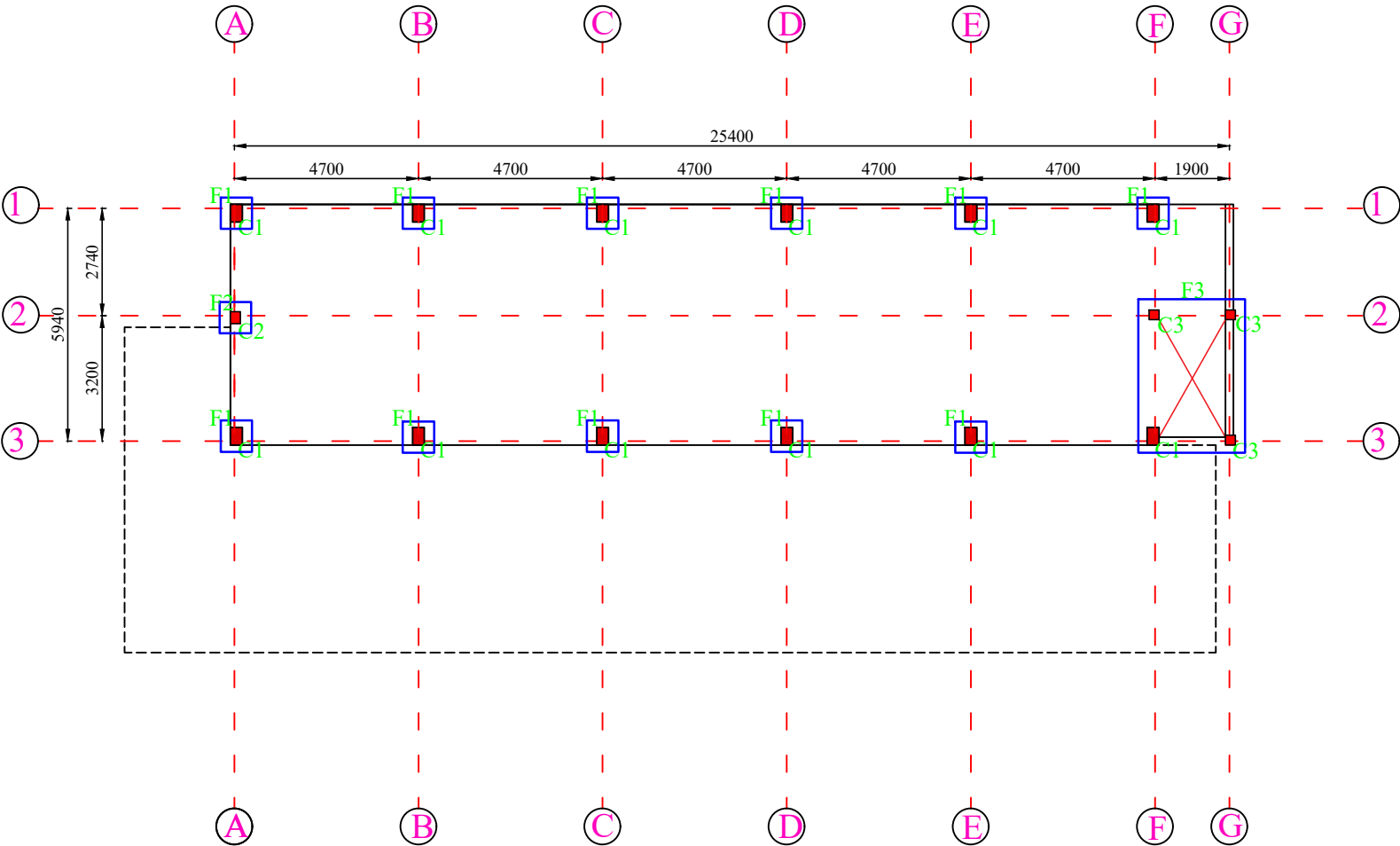
STRUCTURAL

1-A. STRUCTURAL DRAWINGS OF THE PROPOSED RESIDENTIAL COMPLEX BASEMENT+G+1 PROJECT AT KARIYAVATTOM CAMPUS					PROJECT
1.1 ARCHITECTURAL PLAN OF BASEMENT FLOOR PARKING 450 x 365 Lift 13 PAX 170x300 BASEMENT PLAN					PROPOSED RESIDENTIAL COMPLEX BASEMENT+G+1
					DELINEATION
					ARCHITECTURAL LAYOUT OF BASEMENT FLOOR
					CLIENT
					M/S WAPCOS LTD
					LOCATION
					KARIYAVATTOM CAMPUS UNIVERSITY OF KERALA, THIRUVANANTHAPURAM
					AREA : (sq.m)
					Basement Floor : 157 Sqm Ground Floor : 337.25 Sqm First Floor : 327.6 Sqm Total : 822 Sqm
					PROJECT NUMBER
					6
					GENERAL NOTE
					1.Do not Scale Dimensions govern in drawings 2.All Dimensions are in Millimeter unless noted otherwise. 3.All dimensions shall be verified at site before proceeding the work. 4.All Levels are in Meters unless noted otherwise.
					SIGNATURE
					CLIENTCONSULTANT
					STRUCTURAL CONSULTANT
					Y-Shakh Project Management & Consultancy Services Y- Shakh, Nalanda Nagar-97 Thirumullavaram P.O. Kollam - 12 e-mail: yshakhpmcs@gmail.com Ph: +91 9447126629 Office: 0474-2792700
Ref.No:	DATE :	DESIGNED:	DRAWN:	PLATE NO: 01	
YSCASE,194/2025	21- 03- 2025	Dr M.M KHAN. Ph.D	JASMINE.TOMY	SCALE-1:100,All Dimensions are in Centimeter	

1-B. STRUCTURAL DRAWINGS OF THE PROPOSED RESIDENTIAL COMPLEX					PROJECT
BASEMENT+G+1 PROJECT AT KARIYAVATTOM CAMPUS					PROPOSED RESIDENTIAL COMPLEX BASEMENT+G+1
1.1 ARCHITECTURAL PLAN OF GROUND FLOOR					DELINEATION
 GROUND FLOOR PLAN					ARCHITECTURAL LAYOUT OF GROUND FLOOR
					CLIENT
					M/S WAPCOS LTD
					LOCATION
					KARIYAVATTOM CAMPUS UNIVERSITY OF KERALA, THIRUVANANTHAPURAM
					AREA : (sq.m)
					Basement Floor : 157 Sqm Ground Floor : 337.25 Sqm First Floor : 327.6 Sqm Total : 822 Sqm
					PROJECT NUMBER
					6
					GENERAL NOTE
					1.Do not Scale Dimensions govern in drawings 2.All Dimensions are in Millimeter unless noted otherwise. 3.All dimensions shall be verified at site before proceeding the work. 4.All Levels are in Meters unless noted otherwise.
					SIGNATURE
		CLIENT	CONSULTANT		
					STRUCTURAL CONSULTANT
					 Y-Shakh Project Management & Consultancy Services Y- Shakh, Nalanda Nagar-97 Thirumullavaram P.O. Kollam - 12 e-mail: yshakhpmcs@gmail.com Ph: +91 9447126629 Office: 0474-2792700
Ref.No:	DATE :	DESIGNED:	DRAWN:	PLATE NO: 02	
YSCASE,194/2025	21- 03- 2025	Dr M.M KHAN. Ph.D	JASMINE.TOMY	SCALE-1:100,All Dimensions are in Centimeter	

2-A. STRUCTURAL LAYOUT PLAN OF SUB-STRUCTURE

2.1 FOUNDATION DETAILS



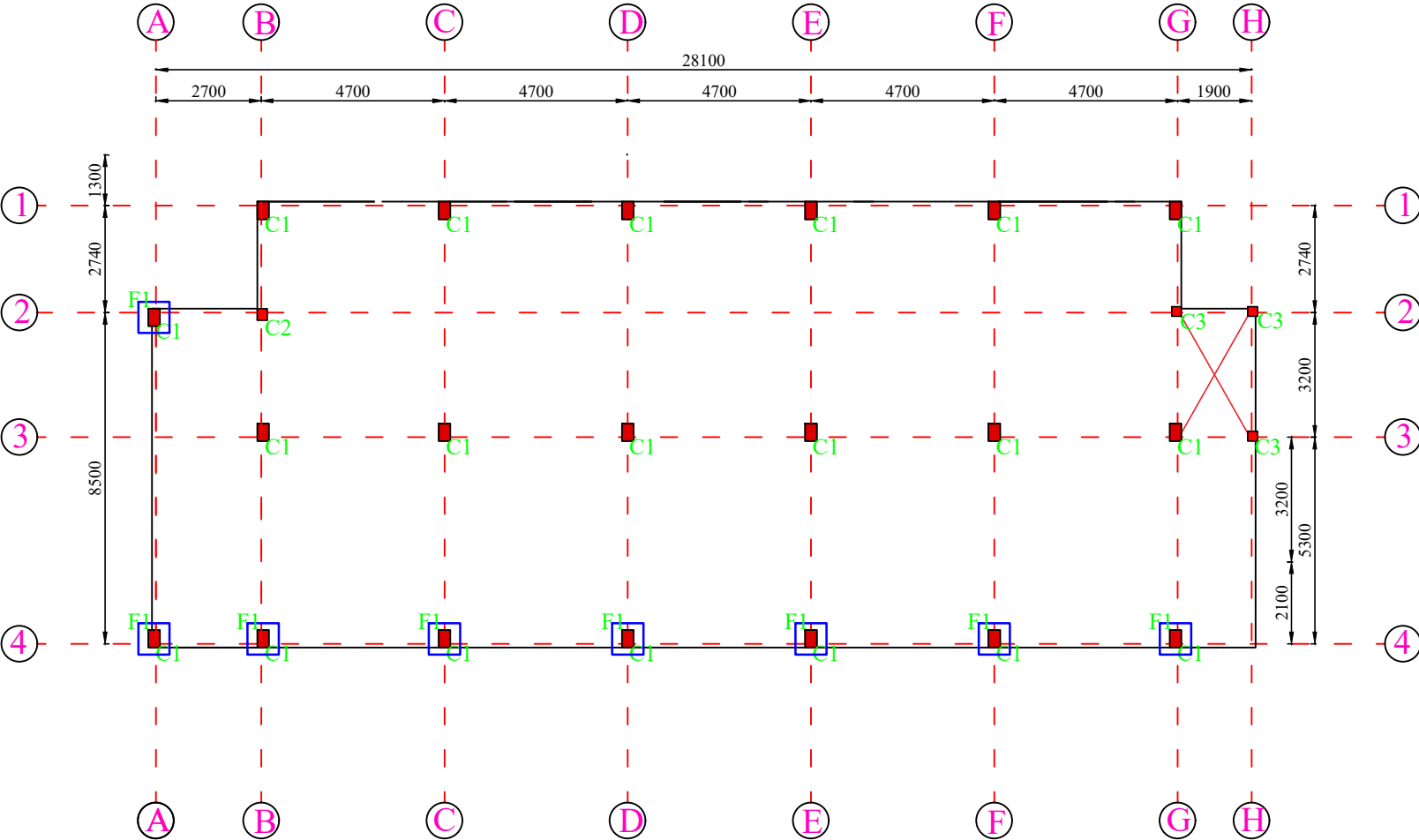
BASEMENT FLOOR

PROJECT	
PROPOSED RESIDENTIAL COMPLEX BASEMENT+G+1	
DELINEATION	
STRUCTURAL LAYOUT PLAN OF SUB-STRUCTURE FOUNDATION	
CLIENT	
M/S WAPCOS LTD	
LOCATION	
KARIYAVATTOM CAMPUS UNIVERSITY OF KERALA, THIRUVANANTHAPURAM	
AREA : (sq.m)	
Basement Floor : 157 Sqm Ground Floor : 337.25 Sqm First Floor : 327.6 Sqm Total : 822 Sqm	
PROJECT NUMBER	
6	
GENERAL NOTE	
1.Do not Scale Dimensions govern in drawings 2.All Dimensions are in Millimeter unless noted otherwise. 3.All dimensions shall be verified at site before proceeding the work. 4.All Levels are in Meters unless noted otherwise.	
SIGNATURE	
CLIENT	CONSULTANT
STRUCTURAL CONSULTANT	
 Y-Shakh Project Management & Consultancy Services Y- Shakh, Nalanda Nagar-97 Thirumullavaram P.O. Kollam - 12 e-mail: yshakhpms@gmail.com Ph: +91 9447126629 Office: 0474-2792700	

Ref.No:	DATE :	DESIGNED:	DRAWN:	PLATE NO: 03
YSCASE,194/2025	21- 03- 2025	Dr M.M KHAN. Ph.D	JASMINE.TOMY	SCALE-1:100,All Dimensions are in Millimeter

2-B. STRUCTURAL LAYOUT PLAN OF SUB-STRUCTURE

2.1 FOUNDATION DETAILS



GROUND FLOOR

PROJECT

PROPOSED RESIDENTIAL
COMPLEX BASEMENT+G+1

DELINEATION

STRUCTURAL LAYOUT PLAN
OF SUB-STRUCTURE
FOUNDATION

CLIENT

M/S WAPCOS LTD

LOCATION

KARIYAVATTOM CAMPUS
UNIVERSITY OF KERALA,
THIRUVANANTHAPURAM

AREA : (sq.m)

Basement Floor : 157 Sqm
Ground Floor : 337.25 Sqm
First Floor : 327.6 Sqm
Total : 822 Sqm

PROJECT NUMBER

6

GENERAL NOTE

- 1.Do not Scale Dimensions govern in drawings
- 2.All Dimensions are in Millimeter unless noted otherwise.
- 3.All dimensions shall be verified at site before proceeding the work.
- 4.All Levels are in Meters unless noted otherwise.

SIGNATURE

CLIENT

CONSULTANT

STRUCTURAL CONSULTANT



Y-Shakh
Project Management &
Consultancy Services

Y- Shakh, Nalanda Nagar-97
Thirumullavaram P.O. Kollam - 12
e-mail: yshakhpms@gmail.com
Ph: +91 9447126629
Office: 0474-2792700

Ref.No:

YSCASE,194/2025

DATE :

21- 03- 2025

DESIGNED:

Dr M.M KHAN. Ph.D

DRAWN:

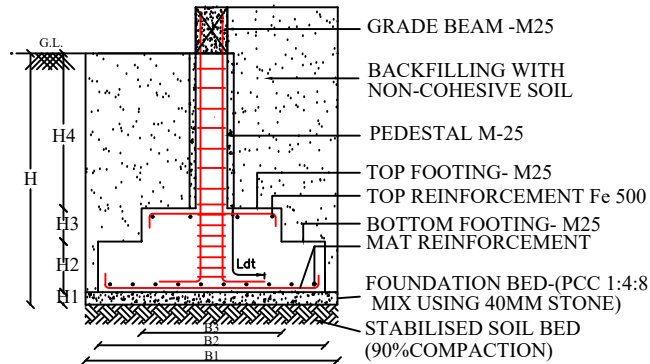
JASMINE.TOMY

PLATE NO: 04

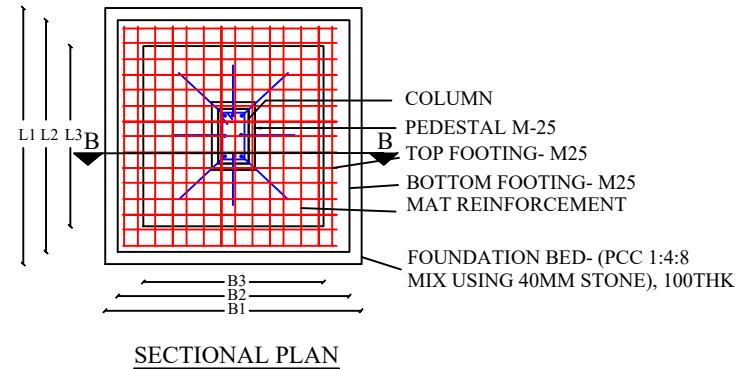
SCALE-1:100,All Dimensions are in Millimeter

3. STRUCTURAL DETAILS OF FOUNDATION

ISOLATED STEPPED FOOTING -TYPICAL DESIGN



MAT REINFORCEMENT DETAILS



SPECIAL NOTES

1. THE MINIMUM DEPTH OF FOUNDATION :2.0M BGL
2. S.B.C OF THE SOIL ASSUMED : 120 kN/M²
3. GRADE OF CONCRETE : M25
4. GRADE OF STEEL : Fe500
5. CLEAR COVER : 50mm

FOUNDATION DETAILS OF PROPOSED PROJECT

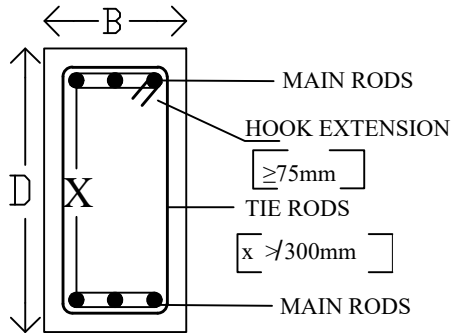
SL. NO	GROUP	FOUNDATION TRENCH			PCC BED			BOTTOM FOOTING			TOP FOOTING			REINFORCEMENT DETAILS			
		L1	B1	H	L1	B1	H1	L2	B2	H2	L3	B3	H3	MAT RODS	TOP RODS	DEV LENGTH Ld	LAP LENGTH Ls
1.	F1	2500	2500	2000	2500	2500	100	2000	2000	300	1700	1700	350	Y12 @ 150 C/C BOTH WAYS	Y10 @ 250 C/C BOTH WAYS	600 mm for Y12 & 500 mm for Y10	600 mm for Y12 & 500 mm for Y10
2.	F2	1800	1800	2000	1800	1800	100	1500	1500	250	1200	1200	350	Y12 @ 150 C/C BOTH WAYS	Y10 @ 250 C/C BOTH WAYS	600 mm for Y12 & 500 mm for Y10	600 mm for Y12 & 500 mm for Y10
3.	F3	5250	3950	2000	5250	3950	100	5000	3700	300	4800	3300	300	Y12 @ 150 C/C BOTH WAYS	Y10 @ 250 C/C BOTH WAYS	600 mm for Y12 & 500 mm for Y10	600 mm for Y12 & 500 mm for Y10

PROJECT :						STRUCTURAL CONSULTANT	
PROJECT NUMBER	CLIENT	AREA : (sq.m)		DESIGNED:		DRAWN:	DELINEATION
	M/S WAPCOS LTD	Basement Floor : 157 Sqm Ground Floor : 337.25 Sqm First Floor : 327.6 Sqm Total : 822 Sqm		Dr M.M KHAN. Ph.D		JASMINE.TOMY	STRUCTURAL DETAILS OF FOUNDATION
Ref.No: YSCASE,194/2025	DATE : 21- 03- 2025	DRAWING ARE NOT IN SCALE		ALL DIMENSIONS ARE IN MM			PLATE NO: 05


Y-Shakh
Project Management & Consultancy Services
 Y- Shakh, Nalanda Nagar-97
 Thirumullavaram P.O. Kollam - 12
 e-mail: yshakhpmcs@gmail.com
 Ph: +91 9447126629
 Office: 0474-2792700

4. STRUCTURAL DETAILS OF COLUMN

4.1 C.S DETAILS OF COLUMNS



NOTE	
GRADE OF CONCRETE :	M25
GRADE OF STEEL :	Fe500
CLEAR COVER :	40 mm

4.2 INDEX

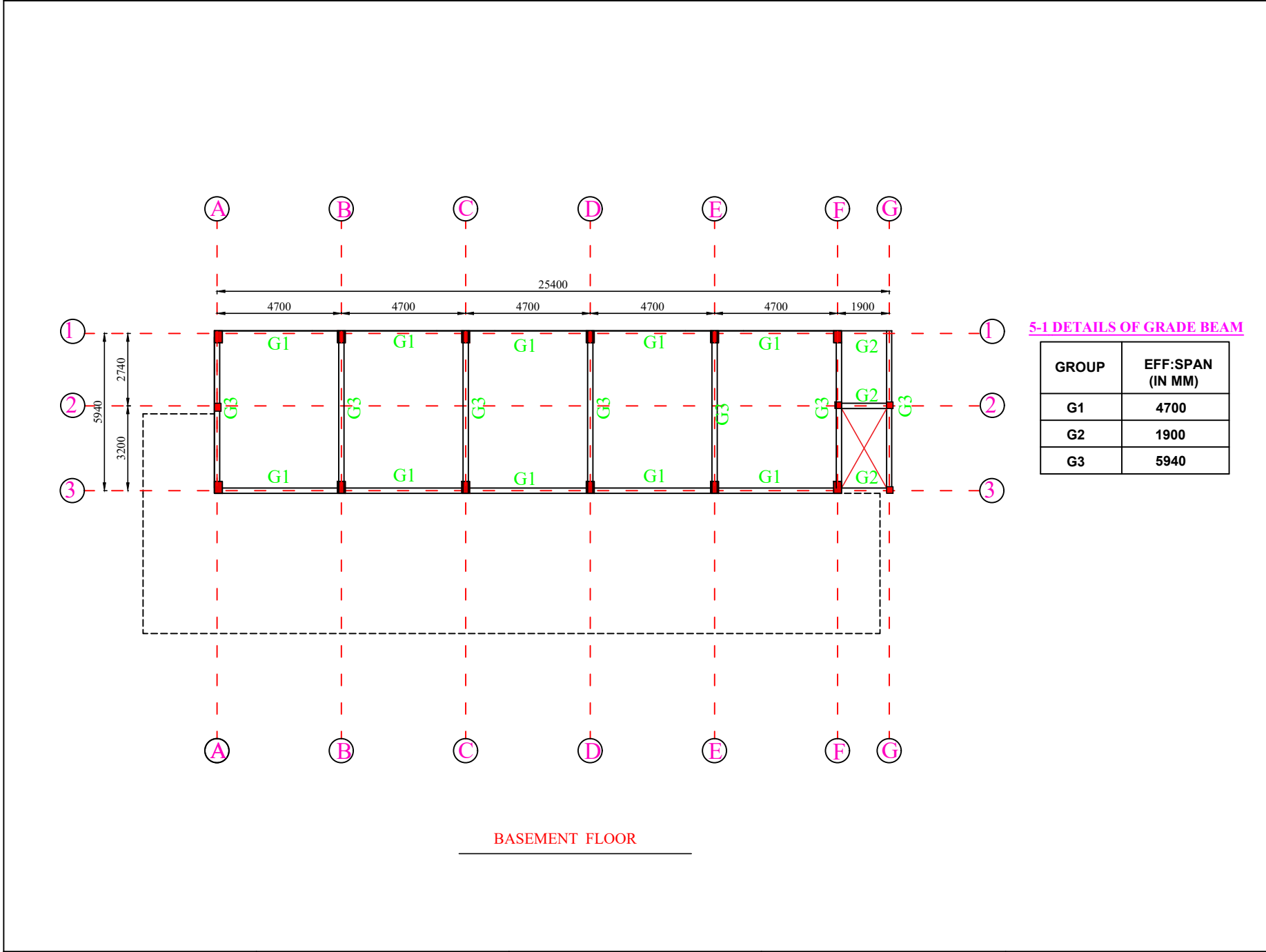
- Y = Diameter of reinforcement rods HYSD
 Ld = Development Length of rods 50d
 Ls = Splices/Lap length at joints of reinforcement rods 50 d for tension & 40 d for compression zone
 L0 = Confining region for ductility for seismic resistance
 H = Height of Column Between support faces
 H/4 = Region where joints of rods are to be avoided
 H/2 = Region where joints allowable but shall be restricted to maximum of 50 % of joints at a particular section
 S = Spacing of stirrups in region free from L0 & Ls
 S0 = Spacing of stirrups at L0 region
 Ss = Spacing of stirrups at Ls region
 X = Space between 2 adjacent main rods in column where shall not exceed 300 mm

4.3 STRUCTURAL DETAILS OF COLUMNS OF THE PROPOSED PROJECT

GROUP	C.S DIMENSION B X D	REINFORCEMENT		CRITICAL ZONES			SPACING OF TIES AT CRITICAL ZONE		CROSS SECTION DETAILS	TIE ARRANGEMENT
		MAIN	TIES	Dev: Length Ld (mm)	Lap length Ls (mm)	Confined Length L0 (mm)	Ss(mm)	SO(mm)		
C1	300 x 450	8 Y 16	Y 8 @ 150 C/C	800 mm for Y16	640 mm for Y16	N.A	Y8@ 100mm/ c/c	N.A		4 Legged
C2	300 x 300	4 Y 16 + 4 Y 12	Y 8 @ 150 C/C	800 mm for Y16 & 600 mm for Y12	640 mm for Y16 & 500 mm for Y12	N.A	Y8@ 100mm/ c/c	N.A		4 Legged
C3	250 x 250	6 Y 12	Y 8 @ 150 C/C	600 mm for Y12	500 mm for Y12	N.A	Y8@ 100mm/ c/c	N.A		2 Legged

PROJECT :						STRUCTURAL CONSULTANT
PROJECT NUMBER	CLIENT	AREA : (sq.m)	DESIGNED:	DRAWN:	DELINEATION	 Y-Shakh Project Management & Consultancy Services Y- Shakh, Nalanda Nagar-97 Thirumullavaram P.O. Kollam - 12 e-mail: yshakhpms@gmail.com Ph: +91 9447126629 Office: 0474-2792700
	M/S WAPCOS LTD	Basement Floor : 157 Sqm Ground Floor : 337.25 Sqm First Floor : 327.6 Sqm Total : 822 Sqm	Dr M.M KHAN. Ph.D	JASMINE.TOMY	STRUCTURAL DETAILS OF COLUMNS	
Ref.No: YSCASE,194/2025	DATE : 21- 03- 2025	DRAWING ARE NOT IN SCALE	ALL DIMENSIONS ARE IN MM		PLATE NO: 06	

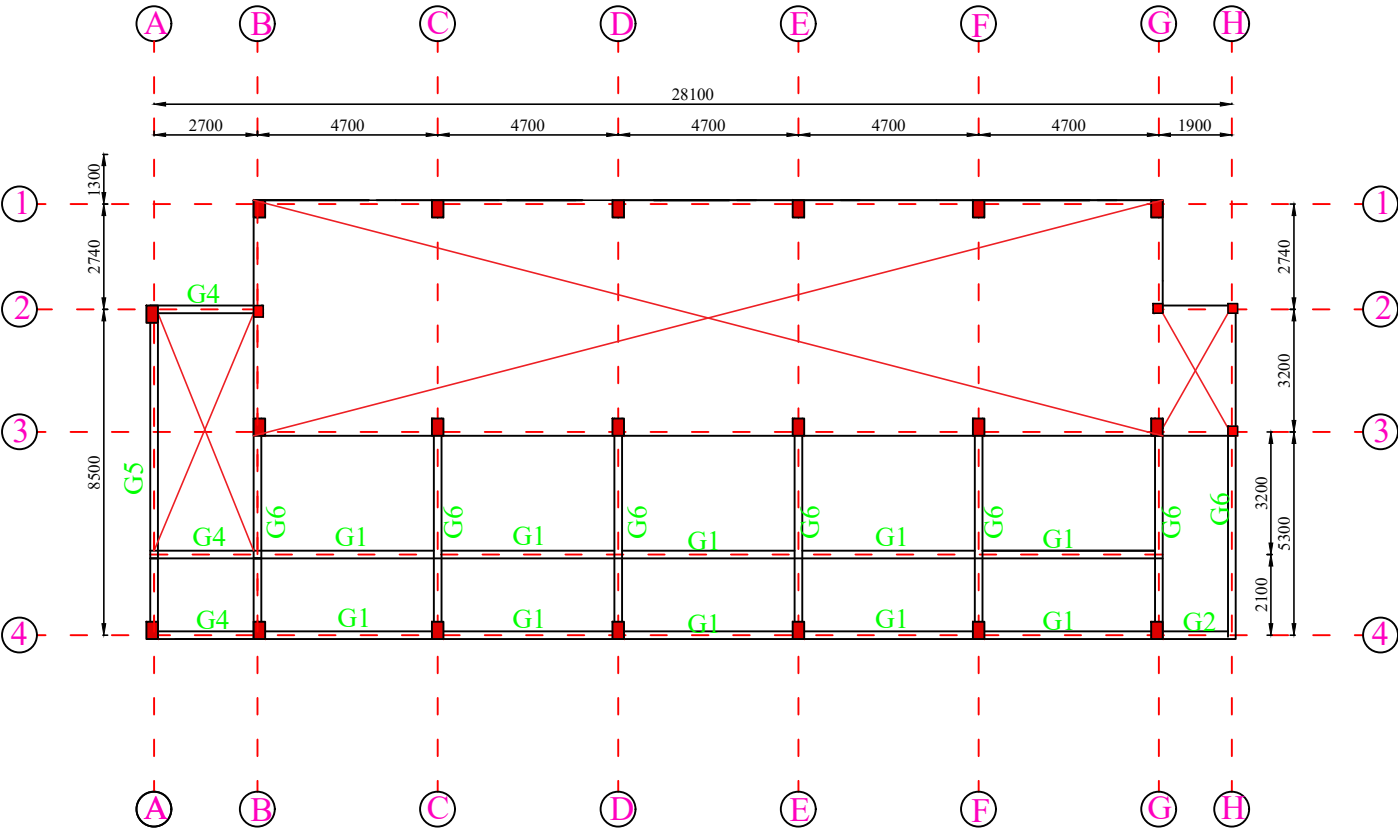
5-A. STRUCTURAL LAYOUT PLAN OF GRADE BEAMS



PROJECT	
PROPOSED RESIDENTIAL COMPLEX BASEMENT AT KARIYAVATTOM CAMPUS, STRUCTURAL DRAWING	
DELINEATION	
STRUCTURAL LAYOUT PLAN OF GRADE BEAMS	
CLIENT	
M/S WAPCOS LTD	
LOCATION	
KARIYAVATTOM CAMPUS UNIVERSITY OF KERALA, THIRUVANANTHAPURAM	
AREA : (sq.m)	
Basement Floor : 157 Sqm Ground Floor : 337.25 Sqm First Floor : 327.6 Sqm Total : 822 Sqm	
PROJECT NUMBER	
GENERAL NOTE	
1.Do not Scale Dimensions govern in drawings 2.All Dimensions are in Millimeter unless noted otherwise. 3.All dimensions shall be verified at site before proceeding the work. 4.All Levels are in Meters unless noted otherwise.	
SIGNATURE	
CLIENT	CONSULTANT
STRUCTURAL CONSULTANT	
Y-Shakh Project Management & Consultancy Services Y- Shakh, Nalanda Nagar-97 Thirumullavaram P.O. Kollam - 12 e-mail: yshakhpmcs@gmail.com Ph: +91 9447126629 Office: 0474-2792700	

Ref.No:	DATE :	DESIGNED:	DRAWN:	PLATE NO: 07
YSCASE,194/2025	21- 03- 2025	Dr M.M KHAN. Ph.D	JASMINE.TOMY	SCALE-1:100,All Dimensions are in Millimeter

5-B. STRUCTURAL LAYOUT PLAN OF GRADE BEAMS



5-1 DETAILS OF GRADE BEAM

GROUP	EFF:SPAN (IN MM)
G1	4700
G2	1900
G3	5940
G4	2700
G5	8500
G6	5300

GROUND FLOOR

PROJECT

PROPOSED RESIDENTIAL
COMPLEX BASEMENT AT
KARIYAVATTOM CAMPUS,
STRUCTURAL DRAWING

DELINEATION

STRUCTURAL LAYOUT
PLAN OF GRADE BEAMS

CLIENT

M/S WAPCOS LTD

LOCATION

KARIYAVATTOM CAMPUS
UNIVERSITY OF KERALA,
THIRUVANANTHAPURAM

AREA : (sq.m)

Basement Floor : 157 Sqm
Ground Floor : 337.25 Sqm
First Floor : 327.6 Sqm
Total : 822 Sqm

PROJECT NUMBER

GENERAL NOTE

1.Do not Scale Dimensions govern in
drawings
2.All Dimensions are in Millimeter
unless noted otherwise.
3.All dimensions shall be verified at
site before proceeding the work.
4.All Levels are in Meters unless
noted otherwise.

SIGNATURE

CLIENTCONSULTANT

STRUCTURAL CONSULTANT

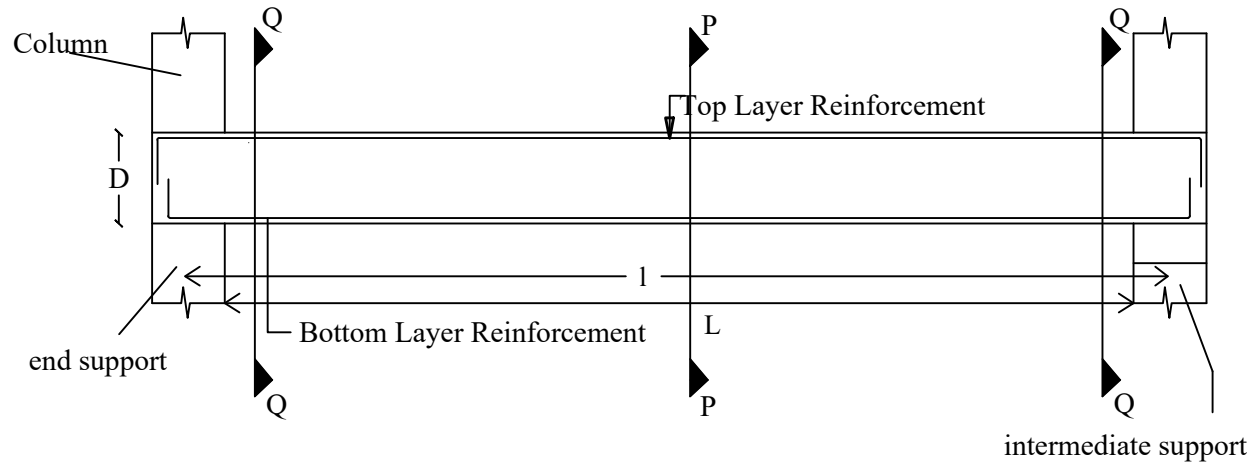


Y-Shakh
Project Management &
Consultancy Services

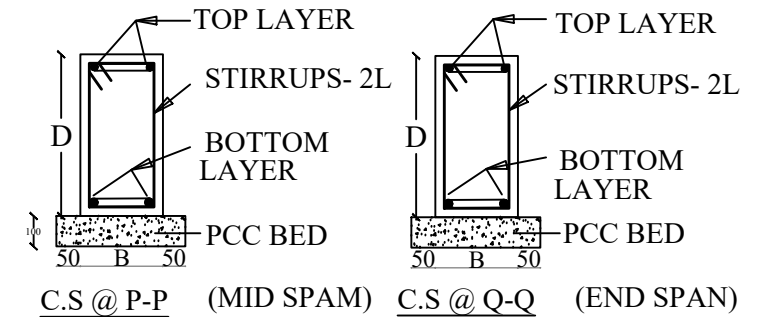
Y- Shakh, Nalanda Nagar-97
Thirumullavaram P.O. Kollam - 12
e-mail: yshakhpmcs@gmail.com
Ph: +91 9447126629
Office: 0474-2792700

6. STRUCTURAL DETAILS OF GRADE BEAMS - TYPICAL DESIGN CONCEPT

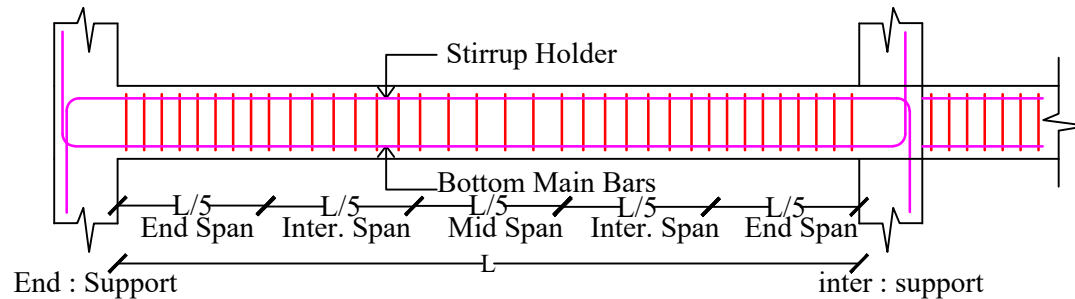
6.1 ARRANGEMENT OF MAIN BARS IN RAFT SLAB BEAMS



6.3 CROSS-SECTIONAL DETAILS



6.2 ARRANGEMENT OF STIRRUPS IN RAFT SLAB BEAMS



6.4 INDEX

L = CLEAR SPAN
l = EFFECTIVE SPAN
D = DEPTH OF BEAM
B = BREADTH OF BEAM
GRADE OF CONCRETE : M25
GRADE OF STEEL : Fe500
CLEAR COVER : 25mm

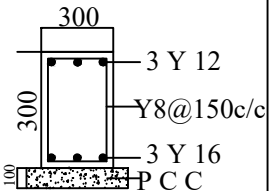
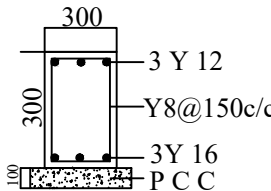
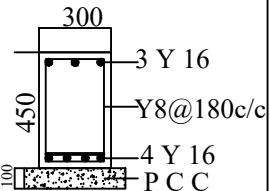
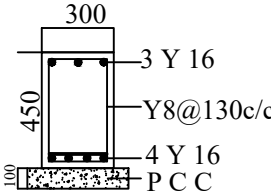
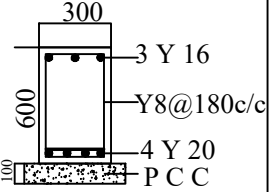
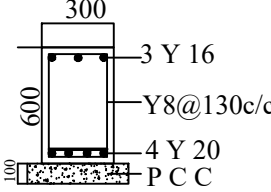
PROJECT : PROPOSED RESIDENTIAL COMPLEX BASEMENT+G+1 PROJECT AT KARIYAVATTOM CAMPUS. STRUCTURAL DRAWING

STRUCTURAL CONSULTANT

PROJECT NUMBER	CLIENT	AREA : (sq.m)	DESIGNED:	DRAWN:	DELINEATION
	M/S WAPCOS LTD	Basement Floor : 157 Sqm Ground Floor : 337.25 Sqm First Floor : 327.6 Sqm Total : 822 Sqm	Dr M.M KHAN. Ph.D	JASMINE.TOMY	STRUCTURAL DETAILS OF GRADE BEAMS
Ref.No: YSCASE,194/2025	DATE : 21- 03- 2025	DRAWING ARE NOT IN SCALE	ALL DIMENSIONS ARE IN MM		PLATE NO: 09

Y-Shakh
Project Management &
Consultancy Services
Y- Shakh, Nalanda Nagar-97
Thirumullavaram P.O. Kollam - 12
e-mail: yshakhpmcs@gmail.com
Ph: +91 9447126629
Office: 0474-2792700

7 -SCHEDULE OF GRADE BEAMS OF THE PROPOSED PROJECT (C.S SIZE & REINFORCEMENT DETAILS)

GROUP	CLEAR SPAN L	C.S DIMENSION BXD	REINFORCEMENT DETAILS			CRITICAL ZONES			TYPICAL SECTION	
			BOTTOM MAIN BARS	TOP MAIN BARS	STIRRUP (GENERAL)	LAP Ls	DEVP: Ld	CONFINED L0	MID SPAN SECTION CS @ P-P	END SPAN SECTION CS @ Q-Q
G2 G3 G4 G5	1900 to 3200	300 x 300	3 Y 16	3 Y 12	Y8@150 c/c	800mm for Y 16 600mm for Y12	800mm for Y 16 600mm for Y12	N.A		
G1 G7	4700 To 5940	300 x 450	4 Y 16	3 Y 16	Y8@180 to 130 c/c	800mm for Y 16	800mm for Y 16	N.A		
G6	8500	300 x 600	4 Y 20	3 Y 16	Y8@180 to 130 c/c	1000mm for Y20 800mm for Y 16	1000mm for Y20 800mm for Y 16	N.A		

PROJECT : PROPOSED RESIDENTIAL COMPLEX BASEMENT+G+1 PROJECT AT KARIYAVATTOM CAMPUS, UNIVERSITY OF KERALA, THIRUVANANTHAPURAM.
STRUCTURAL DRAWING

STRUCTURAL CONSULTANT

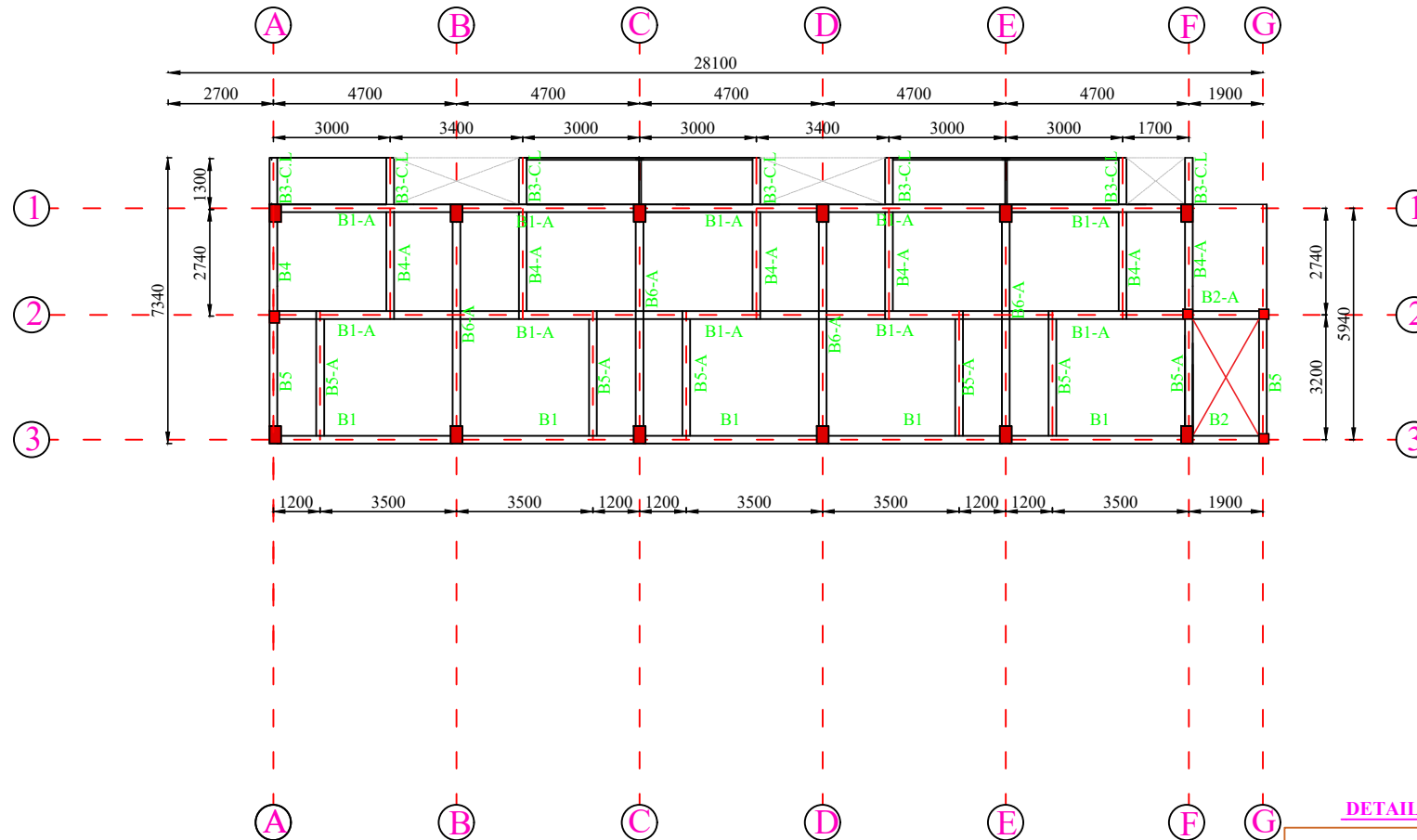
PROJECT NUMBER	CLIENT	AREA : (sq.m)	DESIGNED:	DRAWN:	DELINEATION
6	M/S WAPCOS LTD	Basement Floor : 157 Sqm Ground Floor : 337.25 Sqm First Floor : 327.6 Sqm Total : 822 Sqm	Dr M.M KHAN. Ph.D	JASMINE.TOMY	SCHEDULE OF GRADE BEAMS
Ref.No: YSCASE,194/2025	DATE : 21- 03- 2025	DRAWING ARE NOT IN SCALE	ALL DIMENSIONS ARE IN MM		PLATE NO: 10



**Y-Shakh
Project Management &
Consultancy Services**

Y- Shakh, Nalanda Nagar-97
Thirumullavaram P.O. Kollam - 12
e-mail: yshakhpmcs@gmail.com
Ph: +91 9447126629
Office: 0474-2792700

8-A.STRUCTURAL LAYOUT PLAN OF SUPERSTRUCTURE- (ROOF BEAMS - BASEMENT FLOOR)



BASEMENT PLAN

ROOF BEAM DETAILS

R.C.C	STEEL	COVER	STRIPPING TIME	CURING
M-25	Fe-500	20 mm	Roof beam - 14 Days	7 DAYS

SPECIAL NOTES:

1. BEAMS HAVE BEEN DESIGNED INDIVIDUALLY BASED ON THEIR STRUCTURAL BEHAVIOUR AND DIFFERENT SECTION ARE PROVIDED FOR EACH BEAM. FOR PRACTICAL PURPOSE BIGGEST SECTION MAY BE PROVIDED FOR CONTINUOUS BEAMS .

DETAILS OF ROOF BEAM

Group			EFF: Span (In mm)
1.	B1 L-Beam	B1-A T-Beam	4700
2.	B2 L-Beam	B2-A T-Beam	1900
3.	B3-C.L L-Beam		1300
4.	B4 L-Beam	B4-A T-Beam	2740
5.	B5 L-Beam	B5-A T-Beam	3200
6.		B6-A T-Beam	5940

C.L- CANTILEVER BEAM

PROJECT

PROPOSED RESIDENTIAL
COMPLEX BASEMENT+G+1

DELINEATION

STRUCTURAL LAYOUT
PLAN OF ROOF BEAMS

CLIENT

M/S WAPCOS LTD

LOCATION

KARIYAVATTOM CAMPUS
UNIVERSITY OF KERALA,
THIRUVANANTHAPURAM

AREA : (sq.m)

Basement Floor : 157 Sqm
Ground Floor : 337.25 Sqm
First Floor : 327.6 Sqm
Total : 822 Sqm

PROJECT NUMBER

GENERAL NOTE

- 1.Do not Scale Dimensions govern in drawings
- 2.All Dimensions are in Millimeter unless noted otherwise.
- 3.All dimensions shall be verified at site before proceeding the work.
- 4.All Levels are in Meters unless noted otherwise.

SIGNATURE

CLIENT CONSULTANT

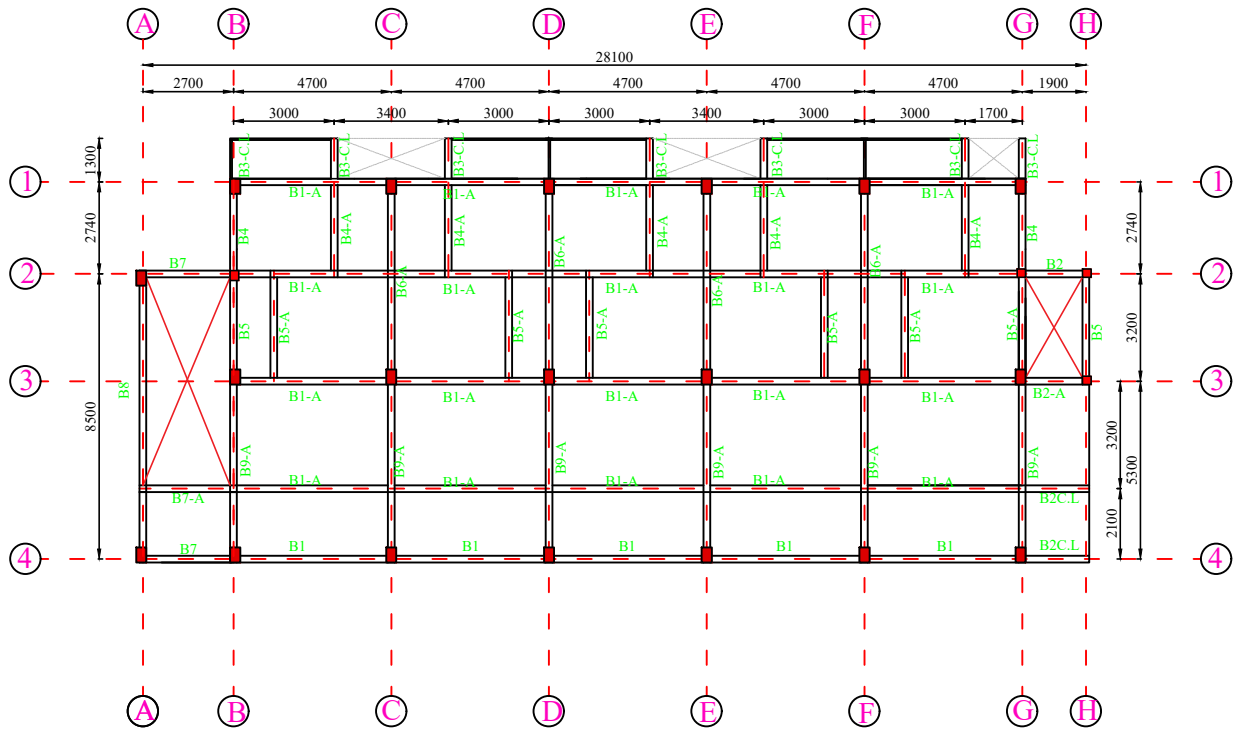
STRUCTURAL CONSULTANT

Y-Shakh
Project Management &
Consultancy Services

Y- Shakh, Nalanda Nagar-97
Thirumullavaram P.O. Kollam - 12
e-mail: yshakhpmcs@gmail.com
Ph: +91 9447126629
Office: 0474-2792700

Ref.No:	DATE :	DESIGNED:	DRAWN:	PLATE NO: 11
YSCASE,194/2025	21- 03- 2025	Dr M.M KHAN. Ph.D	JASMINE.TOMY	SCALE-1:100,All Dimensions are in Millimeter

8-B.STRUCTURAL LAYOUT PLAN OF SUPERSTRUCTURE-
(ROOF BEAMS - GROUND FLOOR)



DETAILS OF ROOF BEAM

Group			EFF: Span (In mm)
1.	B1 L-Beam	B1-A T-Beam	4700
2.	B2 L-Beam	B2-A T-Beam	1900
3.	B3-C.L L-Beam		1300
4.	B4 L-Beam	B4-A T-Beam	2740
5.	B5 L-Beam	B5-A T-Beam	3200
6.		B6-A T-Beam	5940
7.	B7 L-Beam	B7-A T-Beam	2700
8.	B8 L-Beam		8500
9.		B9-A T-Beam	5300

C.L - CANTILEVER BEAM

ROOF BEAM DETAILS

R.C.C	STEEL	COVER	STRIPPING TIME	CURING
M-25	Fe-500	20 mm	Roof beam - 14 Days	7 DAYS

SPECIAL NOTES:

1. BEAMS HAVE BEEN DESIGNED INDIVIDUALLY BASED ON THEIR STRUCTURAL BEHAVIOUR AND DIFFERENT SECTION ARE PROVIDED FOR EACH BEAM. FOR PRACTICAL PURPOSE BIGGEST SECTION MAY BE PROVIDED FOR CONTINUOUS BEAMS .

PROJECT

PROPOSED RESIDENTIAL
COMPLEX BASEMENT+G+1

DELINEATION

STRUCTURAL LAYOUT
PLAN OF ROOF BEAMS

CLIENT

M/S WAPCOS LTD

LOCATION

KARIYAVATTOM CAMPUS
UNIVERSITY OF KERALA,
THIRUVANANTHAPURAM

AREA : (sq.m)

Basement Floor : 157 Sqm
Ground Floor : 337.25 Sqm
First Floor : 327.6 Sqm
Total : 822 Sqm

PROJECT NUMBER

GENERAL NOTE

- 1.Do not Scale Dimensions govern in drawings
- 2.All Dimensions are in Millimeter unless noted otherwise.
- 3.All dimensions shall be verified at site before proceeding the work.
- 4.All Levels are in Meters unless noted otherwise.

SIGNATURE

CLIENT

CONSULTANT

STRUCTURAL CONSULTANT



Y-Shakh
Project Management &
Consultancy Services

Y- Shakh, Nalanda Nagar-97
Thirumullavaram P.O. Kollam - 12
e-mail: yshakhpmcs@gmail.com
Ph: +91 9447126629
Office: 0474-2792700

Ref.No:

YSCASE,194/2025

DATE :

21- 03- 2025

DESIGNED:

Dr M.M KHAN. Ph.D

DRAWN:

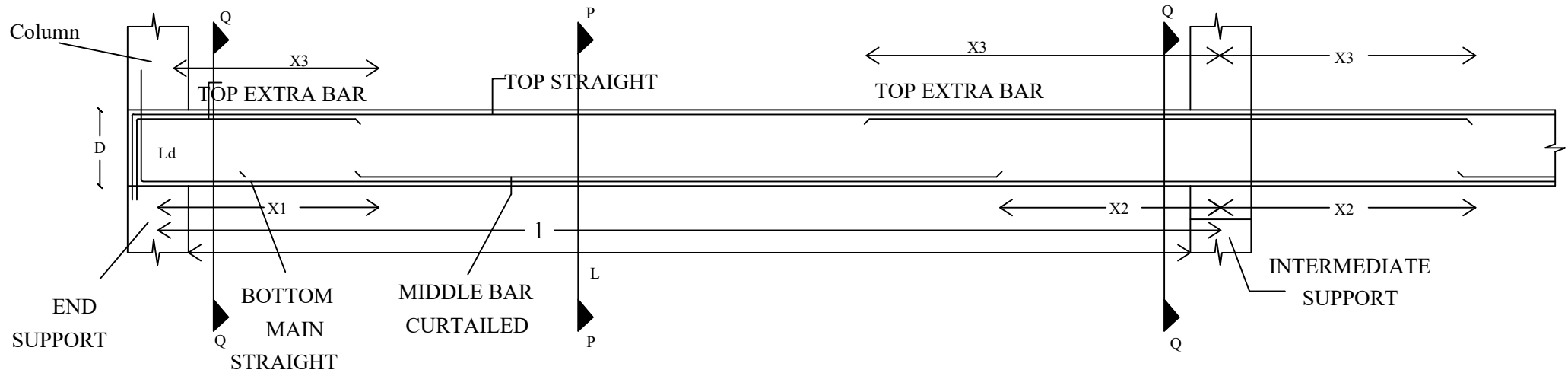
JASMINE.TOMY

PLATE NO: 12

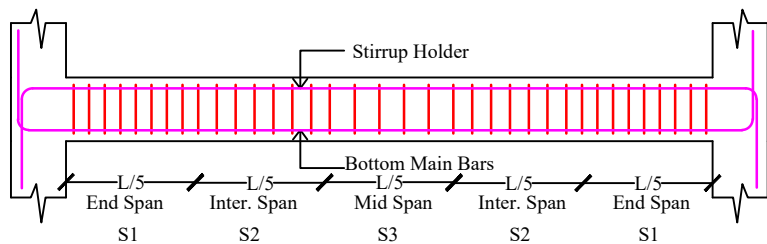
SCALE-1:100,All Dimensions are in Millimeter

9. STRUCTURAL DETAILS OF ROOF BEAMS - TYPICAL DESIGN CONCEPT

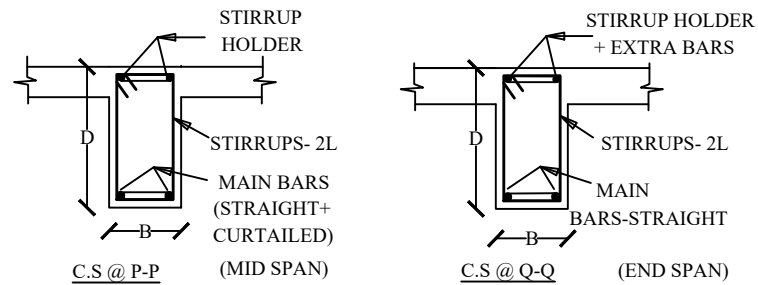
9-1 BEAMS - TYPICAL ARRANGEMENT OF REINFORCEMENTS IN BEAMS



9-2 ARRANGEMENT OF STIRRUPS IN BEAMS-TYPICAL



9-3. CROSS-SECTIONAL DETAIL



NOTE : For end beams the section shall be L- Beam as against T- Beam

9.4 INDEX

L = CLEAR SPAN OF BEAM
1 = EFFECTIVE SPAN OF BEAM
X1 = CURTAILED DISTANCE FROM END SUPPORT
X2 = CURTAILED DISTANCE FROM INTERMEDIATE SUPPORT
X3 = LENGTH OF EXTRA BARS AT SUPPORTS
Ls = LAP LENGTH AT JOINTS
Ld = DEVELOPMENT LENGTH
L0 = SPECIAL CONFINED LENGTH FOR SEISMIC LOAD
D = DEPTH OF BEAM
B = BREADTH OF BEAMS
GRADE OF CONCRETE : M25
GRADE OF STEEL : Fe500
CLEAR COVER : 25mm

PROJECT : PROPOSED RESIDENTIAL COMPLEX BASEMENT+G+1 PROJECT AT KARIYAVATTOM CAMPUS. STRUCTURAL DRAWING

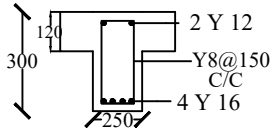
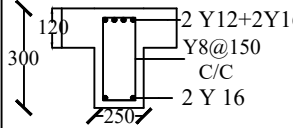
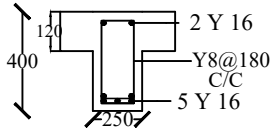
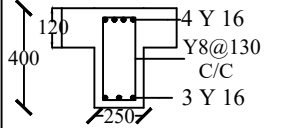
STRUCTURAL CONSULTANT

PROJECT NUMBER	CLIENT	AREA : (sq.m)	DESIGNED:	DRAWN:	DELINEATION
	M/S WAPCOS LTD	Basement Floor : 157 Sqm Ground Floor : 337.25 Sqm First Floor : 327.6 Sqm Total : 822 Sqm	Dr M.M KHAN. Ph.D	JASMINE.TOMY	REINFORCEMENT DETAILS OF ROOF BEAMS
Ref.No: YSCASE,194/2025	DATE : 21- 03- 2025	DRAWING ARE NOT IN SCALE	ALL DIMENSIONS ARE IN MM		PLATE NO: 13

Y-Shakh
Project Management &
Consultancy Services
Y- Shakh, Nalanda Nagar-97
Thirumullavaram P.O. Kollam - 12
e-mail: yshakhpms@gmail.com
Ph: +91 9447126629
Office: 0474-2792700

**10-A. SCHEDULE OF ROOF BEAMS OF THE PROPOSED PROJECT
(C.S & REINFORCEMENT DETAILS OF BASEMENT FLOOR)**

T - BEAM

GROUP	CLEAR SPAN L	C.S SIZE B X D	REINFORCEMENT DETAILS					CRITICAL ZONE			C.S @ P.P MID SPAN	C.S @ Q.Q END SPAN
			BOTTOM MIDDLE STRAIGHT	BOTTOM MIDDLE CURT:	TOP STRT: STIRRUP HOLDER	TOP EXTRA	STIRRUPS	LAPS Ls	DEVE: LENGTH Ld	CONFINED L0		
B2A B3- B4A B5-A B7-A	1300 to 3200	250 x 300	2 Y 16	2 Y 16	2 Y 12	2 Y 16	Y8@ 150 C/C	800 mm for Y 16 & 600 mm for Y 12	800 mm for Y 16 & 600 mm for Y 12	N.A		
B1-A B6-A B9-A	4700 To 5940	250 x 400	3 Y 16	2 Y 16	2 Y 16	2 Y 16	Y8@ 130 to 180 C/C	800 mm for Y 16	800 mm for Y 16	N.A		

PROJECT : PROPOSED RESIDENTIAL COMPLEX BASEMENT PROJECT AT KARIYAVATTOM CAMPUS, UNIVERSITY OF KERALA, THIRUVANANTHAPURAM.
STRUCTURAL DRAWING

STRUCTURAL CONSULTANT

PROJECT NUMBER

CLIENT

AREA : (sq.m)

DESIGNED:

DRAWN:

DELINEATION

6

M/S WAPCOS LTD

Basement Floor : 157 Sqm
Ground Floor : 337.25 Sqm
First Floor : 327.6 Sqm
Total : 822 Sqm

Dr M.M KHAN. Ph.D

JASMINE.TOMY

SCHEDULE
OF ROOF
BEAMS



**Y-Shakh
Project Management &
Consultancy Services**

Y- Shakh, Nalanda Nagar-97
Thirumullavaram P.O. Kollam - 12
e-mail: yshakhpms@gmail.com
Ph: +91 9447126629
Office: 0474-2792700

Ref.No: YSCASE,194/2025

DATE : 21- 03- 2025

DRAWING ARE NOT IN SCALE

ALL DIMENSIONS ARE IN MM

PLATE NO: 14

10-B. SCHEDULE OF ROOF BEAMS OF THE PROPOSED PROJECT
(C.S & REINFORCEMENT DETAILS OF BASEMENT FLOOR)

L - BEAM

GROUP	CLEAR SPAN L	C.S SIZE B X D	REINFORCEMENT DETAILS					CRITICAL ZONE			C.S @ P.P MID SPAN	C.S @ Q.Q END SPAN
			BOTTOM MIDDLE STRAIGHT	BOTTOM MIDDLE CURT:	TOP STRT: STIRRUP HOLDER	TOP EXTRA	STIRRUPS	LAPS Ls	DEVE: LENGTH Ld	CONFINED L0		
B2 B3- B4 B5 B7	1300 to 3200	250 x 300	2 Y 16	2 Y 16	2 Y 12	2 Y 16	Y8@150 C/C	800 mm for Y 16 & 600 mm for Y 12	800 mm for Y 16 & 600 mm for Y 12	N.A		
B1	4700 To 5940	250 x 400	3 Y 16	2 Y 16	2 Y 16	2 Y 16	Y8@130 to 180 C/C	800 mm for Y 16	800 mm for Y 16	N.A		
B8	8500	300 x 600	3 Y 20	2 Y 20	2 Y 16	2 Y 16	Y8@130 to 180 C/C	1000 mm for Y 20 & 800 mm for Y 16	1000 mm for Y 20 & 800 mm for Y 16	N.A		

PROJECT : PROPOSED RESIDENTIAL COMPLEX BASEMENT PROJECT AT KARIYAVATTOM CAMPUS, UNIVERSITY OF KERALA, THIRUVANANTHAPURAM.
STRUCTURAL DRAWING

PROJECT NUMBER	CLIENT	AREA : (sq.m)	DESIGNED:	DRAWN:	DELINEATION
6	M/S WAPCOS LTD	Basement Floor : 157 Sqm Ground Floor : 337.25 Sqm First Floor : 327.6 Sqm Total : 822 Sqm	Dr M.M KHAN. Ph.D	JASMINE.TOMY	SCHEDULE OF ROOF BEAMS
Ref.No: YSCASE,194/2025	DATE : 21- 03- 2025	DRAWING ARE NOT IN SCALE	ALL DIMENSIONS ARE IN MM		PLATE NO: 15

STRUCTURAL CONSULTANT

Y-Shakh
Project Management &
Consultancy Services
Y- Shakh, Nalanda Nagar-97
Thirumullavaram P.O. Kollam - 12
e-mail: yshakhpms@gmail.com
Ph: +91 9447126629
Office: 0474-2792700

11-A. STRUCTURAL DETAILS OF ROOF BEAM - SPACE MANAGEMENT OF REINFORCEMENT

GROUP	C.S SIZE BXD	SPAN		CURTAILMENT DETAILS OF MAIN BARS			STIRRUPS SPACING			STIRRUPS AT CRITICAL ZONE	
		CLEAR	EFFECTIVE	FROM END SUPPORT X1	FROM INT: SUPPORT X2	EXTRA BARS X3	END SPAN S1	INT: SPAN S2	MID SPAN S3	LAP ZONE Ss	CONFINING ZONE S0
B1,B1A	250 X 400	4500	4700	470	700	1130	Y8@ 130 mm C/C	Y8@ 160 mm C/C	Y8@ 180 mm C/C	Y8@ 100 mm C/C	Y8@ 80 mm C/C
B2, B2A	250 X 300	1700	1900	190	-	-	Y8@ 150 mm C/C	Y8@ 150 mm C/C	Y8@ 150 mm C/C	Y8@ 150 mm C/C	Y8@ 150 mm C/C
B3, B3A	250 X 300	1100	1300	130	-	-	Y8@ 150 mm C/C	Y8@ 150 mm C/C	Y8@ 150 mm C/C	Y8@ 150 mm C/C	Y8@ 150 mm C/C
B4, B4A	250 X 300	2540	2740	280	410	640	Y8@ 130 mm C/C	Y8@ 160 mm C/C	Y8@ 180 mm C/C	Y8@ 100 mm C/C	Y8@ 80 mm C/C
B5, B5A	250 X 400	3000	3200	320	480	750	Y8@ 130 mm C/C	Y8@ 160 mm C/C	Y8@ 180 mm C/C	Y8@ 100 mm C/C	Y8@ 80 mm C/C

PROJECT : PROPOSED RESIDENTIAL COMPLEX BASEMENT+G+1 PROJECT AT KARIYAVATTOM CAMPUS. STRUCTURAL DRAWING

STRUCTURAL CONSULTANT

PROJECT NUMBER	CLIENT	AREA : (sq.m)	DESIGNED:	DRAWN:	DELINEATION
	M/S WAPCOS LTD	Basement Floor : 157 Sqm Ground Floor : 337.25 Sqm First Floor : 327.6 Sqm Total : 822 Sqm	Dr M.M KHAN. Ph.D	JASMINE.TOMY	SCHEDULE OF ROOF BEAMS
Ref.No: YSCASE,194/2025	DATE : 21- 03- 2025	DRAWING ARE NOT IN SCALE	ALL DIMENSIONS ARE IN MM		PLATE NO: 16



**Y-Shakh
Project Management &
Consultancy Services**

Y- Shakh, Nalanda Nagar-97
Thirumullavaram P.O. Kollam - 12
e-mail: yshakhpms@gmail.com
Ph: +91 9447126629
Office: 0474-2792700

11-B. STRUCTURAL DETAILS OF ROOF BEAM - SPACE MANAGEMENT OF REINFORCEMENT

GROUP	C.S SIZE BXD	SPAN		CURTAILMENT DETAILS OF MAIN BARS			STIRRUPS SPACING			STIRRUPS AT CRITICAL ZONE	
		CLEAR	EFFECTIVE	FROM END SUPPORT X1	FROM INT: SUPPORT X2	EXTRA BARS X3	END SPAN S1	INT: SPAN S2	MID SPAN S3	LAP ZONE Ss	CONFINING ZONE S0
B6A	250 X 400	5740	5940	600	890	1440	Y8@ 130 mm C/C	Y8@ 160 mm C/C	Y8@ 180 mm C/C	Y8@ 100 mm C/C	Y8@ 80 mm C/C
B7, B7A	250 X 300	2500	2700	270	-	-	Y8@ 150 mm C/C	Y8@ 150 mm C/C	Y8@ 150 mm C/C	Y8@ 150 mm C/C	Y8@ 150 mm C/C
B8	300 X 600	8300	8500	850	1280	2080	Y8@ 130 mm C/C	Y8@ 160 mm C/C	Y8@ 180 mm C/C	Y8@ 100 mm C/C	Y8@ 80 mm C/C
B9, B9A	250 X 400	5100	5300	530	800	1280	Y8@ 130 mm C/C	Y8@ 160 mm C/C	Y8@ 180 mm C/C	Y8@ 100 mm C/C	Y8@ 80 mm C/C

PROJECT : PROPOSED RESIDENTIAL COMPLEX BASEMENT+G+1 PROJECT AT KARIYAVATTOM CAMPUS. STRUCTURAL DRAWING

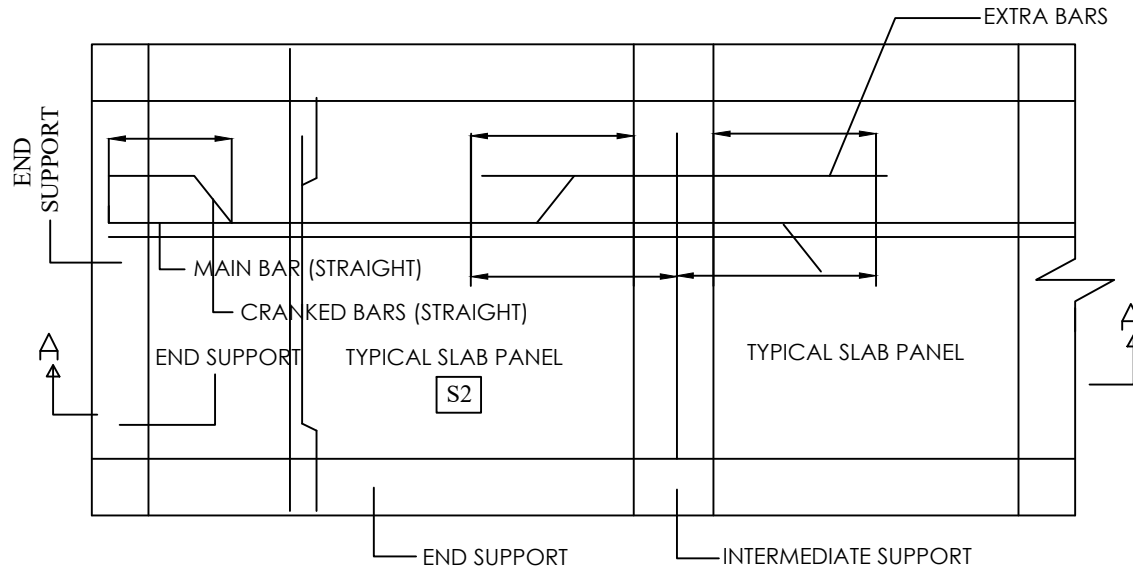
STRUCTURAL CONSULTANT

PROJECT NUMBER	CLIENT	AREA : (sq.m)	DESIGNED:	DRAWN:	DELINEATION
	M/S WAPCOS LTD	Basement Floor : 157 Sqm Ground Floor : 337.25 Sqm First Floor : 327.6 Sqm Total : 822 Sqm	Dr M.M KHAN. Ph.D	JASMINE.TOMY	SCHEDULE OF ROOF BEAMS
Ref.No: YSCASE,194/2025	DATE : 21- 03- 2025	DRAWING ARE NOT IN SCALE	ALL DIMENSIONS ARE IN MM		PLATE NO: 17

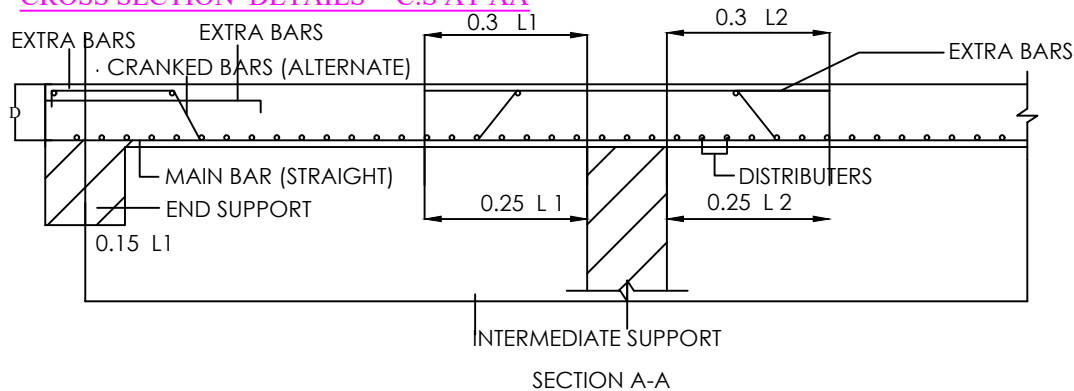

**Y-Shakh
Project Management &
Consultancy Services**
 Y- Shakh, Nalanda Nagar-97
 Thirumullavaram P.O. Kollam - 12
 e-mail: yshakhpmcs@gmail.com
 Ph: +91 9447126629
 Office: 0474-2792700

12 . STRUCTURAL DETAILS OF ROOF SLABS

12.1 STRUCTURAL DETAILS OF TWO WAY SLAB-TYPICAL



12.2 CROSS SECTION DETAILS - C.S AT AA



12.3 DESIGN DETAILS OF ROOF SLAB OF PROPOSED PROJECT

- | | |
|------------------------------|--|
| 1. THICKNESS OF SLAB | - 130 MM |
| 2. DESIGN MIX CONCRETE | - M25 |
| 3. GRADE OF REINFORCEMENT | - Fe - 500 D |
| 4. CLEAR COVER | - 25 mm |
| 8. CRANKED BARS | - EVERY ALTERNATE BARS |
| 9. CRANKED DISTANCE | - 0.05L FROM CENTER OF END SUPPORTS
&
0.25L FROM INTERMEDIATE SUPPORTS |
| 10. LENGTH OF EXTRA BARS TOP | - 0.3L FROM EACH SUPPORT |

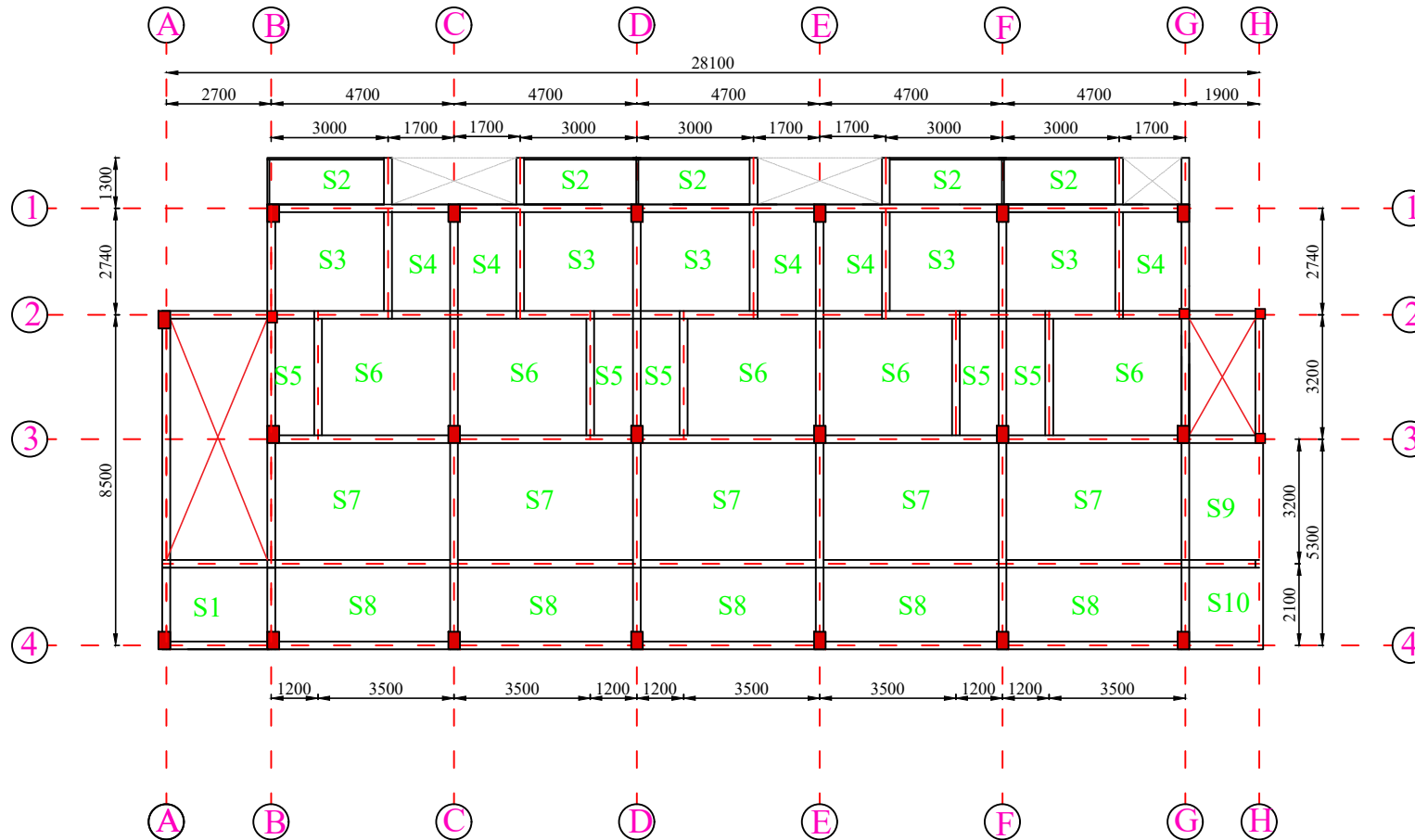
PROJECT : PROPOSED RESIDENTIAL COMPLEX BASEMENT+G+1 PROJECT AT KARIYAVATTOM CAMPUS. STRUCTURAL DRAWING

STRUCTURAL CONSULTANT

PROJECT NUMBER	CLIENT	AREA : (sq.m)	DESIGNED:	DRAWN:	DELINEATION
	M/S WAPCOS LTD	Basement Floor : 157 Sqm Ground Floor : 337.25 Sqm First Floor : 327.6 Sqm Total : 822 Sqm	Dr M.M KHAN. Ph.D	JASMINE.TOMY	SCHEDULE OF ROOF SLABS
Ref.No: YSCASE,194/2025	DATE : 21- 03- 2025	DRAWING ARE NOT IN SCALE	ALL DIMENSIONS ARE IN MM		PLATE NO: 18


Y-Shakh
Project Management & Consultancy Services
 Y- Shakh, Nalanda Nagar-97
 Thirumullavaram P.O. Kollam - 12
 e-mail: yshakhpmcs@gmail.com
 Ph: +91 9447126629
 Office: 0474-2792700

13.STRUCTURAL LAYOUT PLAN OF SUPERSTRUCTURE- (ROOF SLABS - GROUND FLOOR)



PROJECT	
PROPOSED UNDERGRADUATE. STRUCTURAL DRAWING	
DELINEATION	
STRUCTURAL LAYOUT PLAN OF ROOF SLAB	
CLIENT	
M/S WAPCOS LTD	
LOCATION	
KARIYAVATTOM CAMPUS UNIVERSITY OF KERALA, THIRUVANANTHAPURAM	
AREA : (sq.m)	
Basement Floor : 157 Sqm Ground Floor : 337.25 Sqm First Floor : 327.6 Sqm Total : 822 Sqm	
PROJECT NUMBER	
GENERAL NOTE	
1.Do not Scale Dimensions govern in drawings 2.All Dimensions are in Millimeter unless noted otherwise. 3.All dimensions shall be verified at site before proceeding the work. 4.All Levels are in Meters unless noted otherwise.	
SIGNATURE	
CLIENT	CONSULTANT
STRUCTURAL CONSULTANT	
 Y-Shakh Project Management & Consultancy Services Y- Shakh, Nalanda Nagar-97 Thirumullavaram P.O. Kollam - 12 e-mail: yshakhpmcs@gmail.com Ph: +91 9447126629 Office: 0474-2792700	

Ref.No:	DATE :	DESIGNED:	DRAWN:	PLATE NO: 19
YSCASE,194/2025	21- 03- 2025	Dr M.M KHAN. Ph.D	JASMINE.TOMY	SCALE-1:100,All Dimensions are in Millimeter

14-STRUCTURAL DETAILS OF ROOF SLAB - SPACE MANAGEMENT OF REINFORCEMENT

Sl.no	Size of the slab (L x B)	Catogory	Main Bar (Shorter span)	Distribution Bar (Longer Span)	Remarks
S1	2700 x 2100	Two Way Slab	8 Y @ 130 C/C	8 Y @ 150 C/C	
S2	3000 x 1300	One Way Slab	8 Y @ 130 C/C	8 Y @ 150 C/C	
S3	3000 x 2740	Two Way Slab	8 Y @ 130 C/C	8 Y @ 150 C/C	
S4	1700 x 2740	Two Way Slab	8 Y @ 130 C/C	8 Y @ 150 C/C	
S5	1200 x 3200	One Way Slab	8 Y @ 130 C/C	8 Y @ 150 C/C	
S6	3500 x 3200	Two Way Slab	8 Y @ 130 C/C	8 Y @ 150 C/C	
S7	4700 x 3200	Two Way Slab	8 Y @ 130 C/C	8 Y @ 150 C/C	
S8	4700 x 2100	One Way Slab	8 Y @ 130 C/C	8 Y @ 150 C/C	
S9	1900 x 3200	Two Way Slab	8 Y @ 130 C/C	8 Y @ 150 C/C	
S10	1900 x 2100	Two Way Slab	8 Y @ 130 C/C	8 Y @ 150 C/C	

PROJECT : PROPOSED RESIDENTIAL COMPLEX BASEMENT+G+1 PROJECT AT KARIYAVATTOM CAMPUS. STRUCTURAL DRAWING

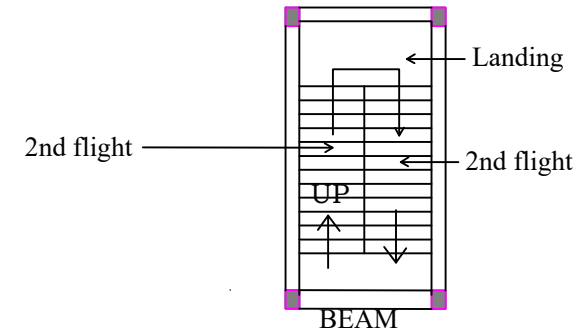
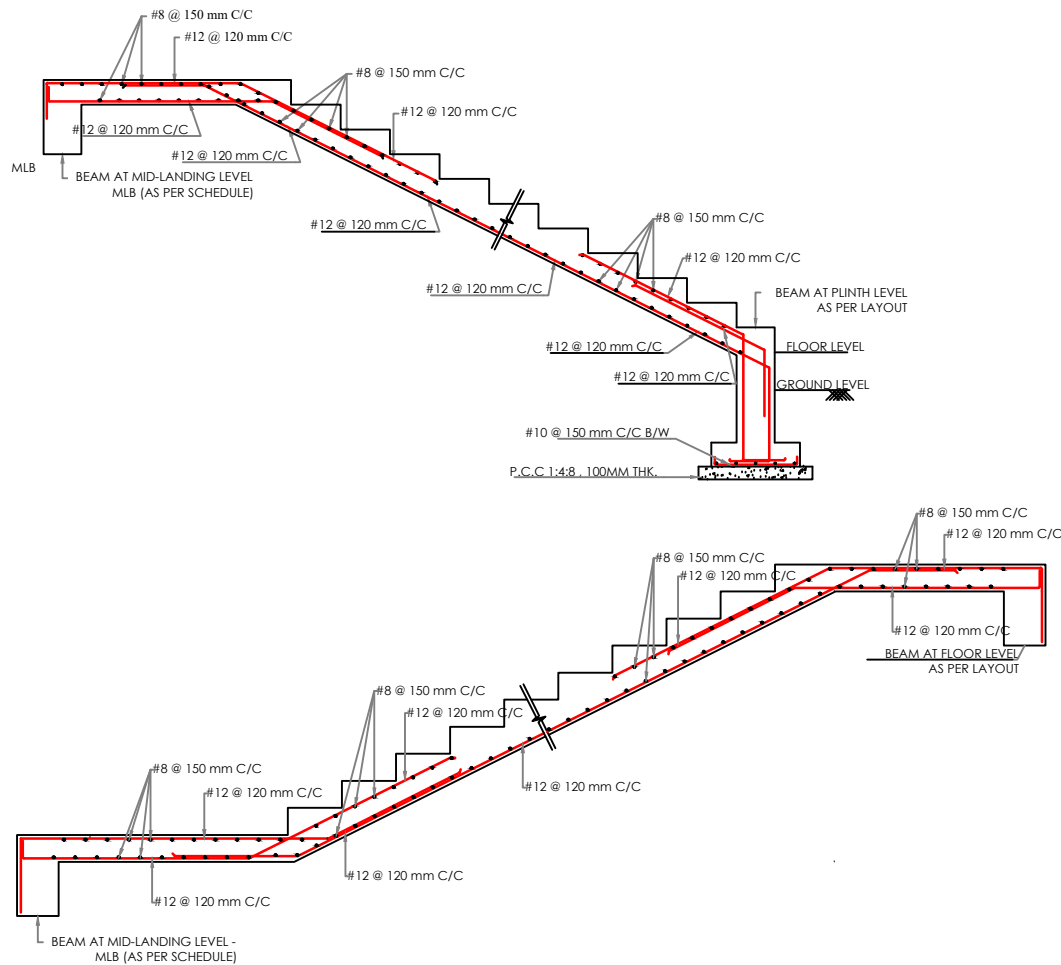
STRUCTURAL CONSULTANT

PROJECT NUMBER	CLIENT	AREA : (sq.m)	DESIGNED:	DRAWN:	DELINEATION	
	M/S WAPCOS LTD	Basement Floor : 157 Sqm Ground Floor : 337.25 Sqm First Floor : 327.6 Sqm Total : 822 Sqm	Dr M.M KHAN. Ph.D	JASMINE.TOMY	SCHEDULE OF ROOF SLABS	
Ref.No: YSCASE,194/2025	DATE : 21- 03- 2025	DRAWING ARE NOT IN SCALE	ALL DIMENSIONS ARE IN MM		PLATE NO: 20	

Y-Shakh
Project Management &
Consultancy Services
Y- Shakh, Nalanda Nagar-97
Thirumullavaram P.O. Kollam - 12
e-mail: yshakhpmcs@gmail.com
Ph: +91 9447126629
Office: 0474-2792700

15 . STRUCTURAL DETAILS OF DOG-LEGGED STAIR

STRUCTURAL DETAILS OF DOG-LEGGED STAIR



DESIGNED DETAILS

1. THICKNESS OF SLANDING SLAB	150 mm
2. THICKNESS OF LANDING SLAB	150 mm
3. RISE OF THREAD	150 mm
4. THREAD OF STEP	300 mm
5. WIDTH OF LANDING	1350 mm
6. GRADE OF CONCRETE	M-25
7. GRADE OF STEEL	Fe 500 D
8. CLEAR COVER	20 mm
9. TRAVEL	CLOCK WISE

PROJECT : PROPOSED RESIDENTIAL COMPLEX BASEMENT+G+1 PROJECT AT KARIYAVATTOM CAMPUS. STRUCTURAL DRAWING

STRUCTURAL CONSULTANT

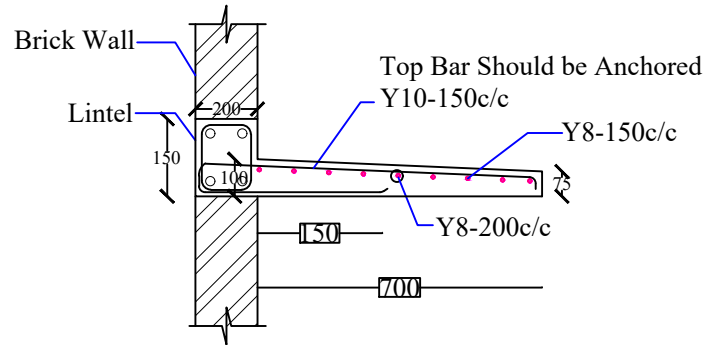
PROJECT NUMBER	CLIENT	AREA : (sq.m)	DESIGNED:	DRAWN:	DELINEATION
	M/S WAPCOS LTD	Basement Floor : 157 Sqm Ground Floor : 337.25 Sqm First Floor : 327.6 Sqm Total : 822 Sqm	Dr M.M KHAN. Ph.D	JASMINE.TOMY	SCHEDULE OF STAIR
Ref.No: YSCASE,194/2025	DATE : 21- 03- 2025	DRAWING ARE NOT IN SCALE	ALL DIMENSIONS ARE IN MM		PLATE NO: 21

Y-Shakh
Project Management &
Consultancy Services

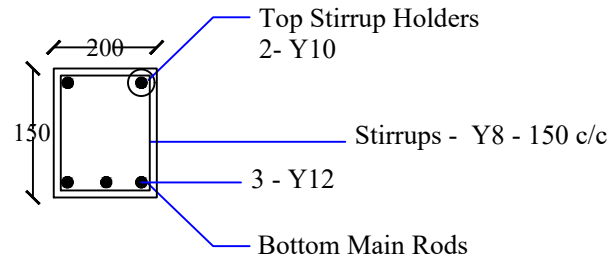
Y- Shakh, Nalanda Nagar-97
Thirumullavaram P.O. Kollam - 12
e-mail: yshakhpmcs@gmail.com
Ph: +91 9447126629
Office: 0474-2792700

16. STRUCTURAL DETAILS OF MISCELLANEOUS PARAMETERS

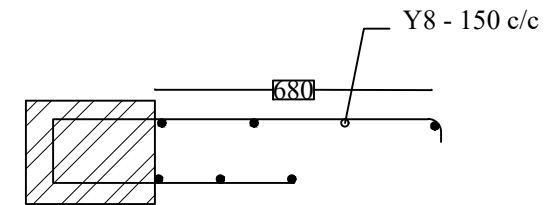
1 STRUCTURAL DETAILS OF SUN SHADE



2 STRUCTURAL DETAILS OF LINTEL



3 STRUCTURAL DETAILS OF SUN SHADE



SPECIAL NOTE

GRADE OF CONCRETE	- M25
GRADE OF STEEL	- Fe 500
CLEAR COVER	- 20 MM

PROJECT : PROPOSED RESIDENTIAL COMPLEX BASEMENT+G+1 PROJECT AT KARIYAVATTOM CAMPUS. STRUCTURAL DRAWING						STRUCTURAL CONSULTANT
PROJECT NUMBER	CLIENT	AREA : (sq.m)	DESIGNED:	DRAWN:	DELINEATION	 Y-Shakh Project Management & Consultancy Services Y- Shakh, Nalanda Nagar-97 Thirumullavaram P.O. Kollam - 12 e-mail: yshakhpmcs@gmail.com Ph: +91 9447126629 Office: 0474-2792700
	M/S WAPCOS LTD	Basement Floor : 157 Sqm Ground Floor : 337.25 Sqm First Floor : 327.6 Sqm Total : 822 Sqm	Dr M.M KHAN. Ph.D	JASMINE.TOMY	STRUCTURAL DETAILS OF SUNSHADE & LINTEL	
Ref.No: YSCASE,194/2025	DATE : 21- 03- 2025	DRAWING ARE NOT IN SCALE	ALL DIMENSIONS ARE IN MM		PLATE NO: 22	