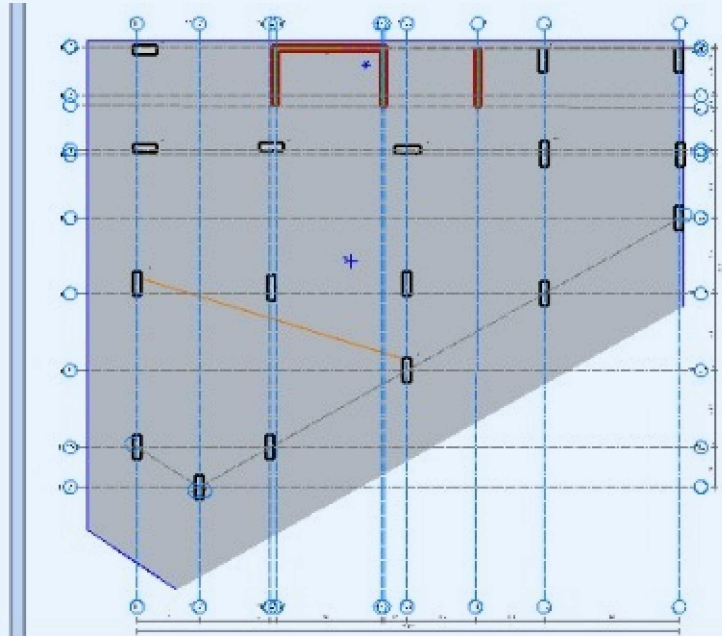
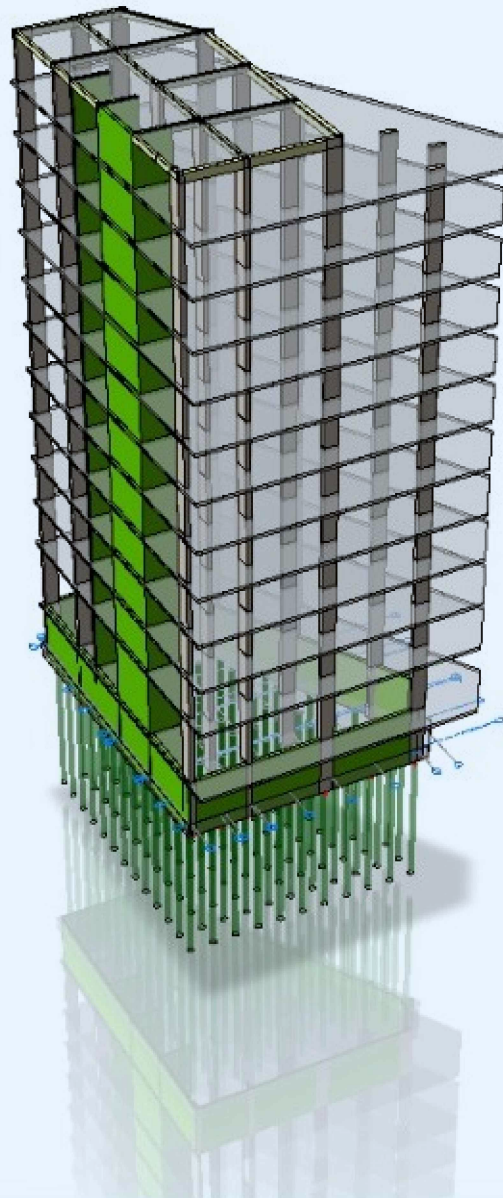
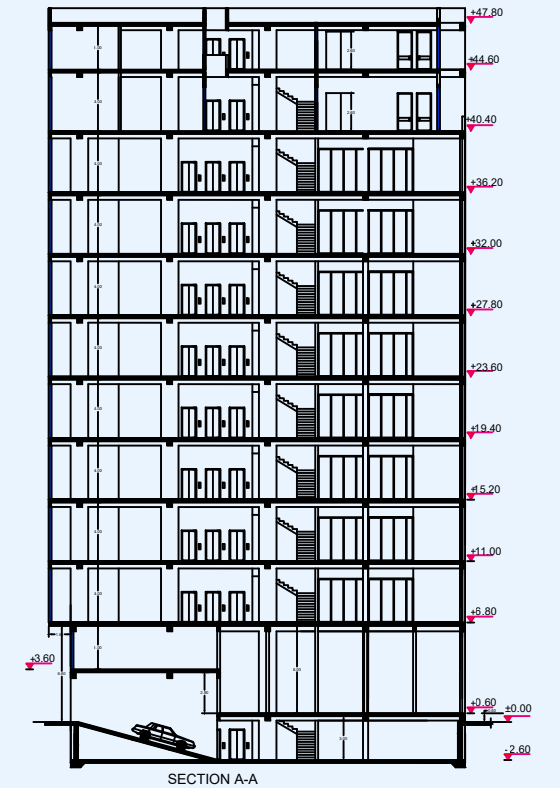
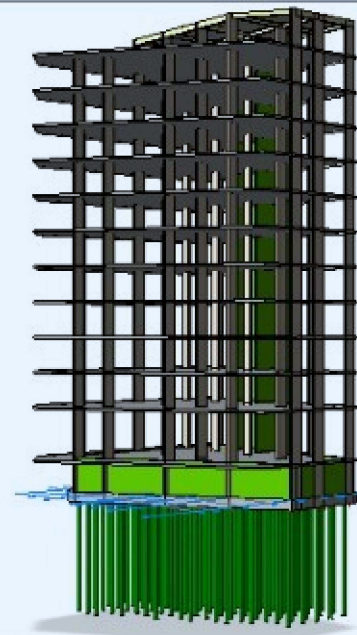


THE COPYRIGHTS OF THESE PLANS AND DRAWINGS ARE RESERVED
FOR
DR-MAJID AL BANA



Storey: 0 (3D) X



Notes

THE BUILDING SYSTEM WILL BE CONSIDER AS SHEAR WALL BUILDING WITH COLUMNS AND THE SLAB WILL BE AS FLAT SLAB WITH DROP PANEL & M. BEAMS. THE SOFTWARE USED IN DESIGN (CSI ETABS 2022, AND CSI SAFE 2022&PROKON) IS THE GENERAL PROGRAM USED IN THIS DESIGN

job title

COMMERCIAL BUILDING

Structural Drawings

DRWG. TITLE:

DESIGNED BY **DR-Majid Albana**

CHECKED BY

SCALE As Shown

DATE **6/2025**

SHEET NO. Str. **1**



GENERAL :-

- ALL DIMENSIONS TO TAKE PRECEDENCE OVER SCALE SHOWN ON PLANS, SECTIONS AND DETAILS, (DO NOT SCALE FROM DRAWINGS).
- ALL DIMENSIONS ARE IN MILLIMETRES AND ALL LEVELS IN METRES (UNO).
- THE STRUCTURAL DRAWINGS SHOULD BE USED IN CONJUNCTION WITH THE ARCHITECTURAL, MECHANICAL, CIVIL, PLUMBING AND ELECTRICAL DRAWINGS.
- ALL OPENINGS SIZE AND LOCATION SHOULD BE VERIFIED AND CHECKED WITH SERVICES DRAWINGS, WHERE OPENINGS SIZES ARE NOT SHOWN ON THE STRUCTURAL DRAWINGS, SITE ENGINEER SHALL INTRODUCE SUCH OPENINGS WITH PROPER FRAMING INCLUDING ANY REVISION TO THE SIZES SHOWN ON THE DRAWINGS.
- DESIGN STANDARD & LOADS :-
 - DESIGN & CONSTRUCTION OF REINFORCED CONCRETE STRUCTURES MEMBERS SHALL IN ACCORDANCE WITH ACI-318-95 (ULTIMATE STRENGTH DESIGN METHOD).
 - ALL RETAINING WALL STRUCTURE SHOULD BE AS BRITISH 8 97- 110 or ACI - 93 - 318.
 - MASONARY BRICK OR CONCRETE BLOCK ACCORDING TO B.S - 5628.
- LOADING :-
 - MINIMUM DESIGN LOAD (LIVE LOAD) ACCORDING TO IBC-09.
 - SEISMIC LOAD ACCORDING TO IRAQI SEISMIC CODE 1997.
 - WIND LOAD ACCORDING TO ASCE-05.
- FOR TYP. SECTIONS & DETAILS SEE ST-G2.

FOUNDATION AND EARTH WORK :-

- FOUNDATION DESIGN BASED ACCORDING TO THE SOIL REPORT **PREPARED BY THE & RESEARCH () () ()**.
- BEARING CAPACITY ACCORDING TO THE SOIL REPORT IS (**90K/m²**) AT DEPTH OF (**4.00m**) BELOW THE EXISTING N.G.L.
- A WELL COMPACTED SUB-BASE LAYERS OF A TOTAL THICK AS INDICATED IN THE DWG. SHOULD BE USED UNDER FOOTING WITH FOLLOWING SPECIFICATIONS :-
 - THE DIMENSION OF THE SUB-BASE LAYERS SHOULD BE LARGER THAN THE DIMENSIONS OF THE FOUNDATION FROM ALL SIDES BY 0.25m.
 - THE VALUE OF CALIFORNIA BEARING RATIO (C.B.R) SHALL NOT BE LESS THAN (35% ASTM D) 1883 AT 95% OF THE MAXIMUM DRY DENSITY ESTABLISHED ACCORDING TO (ASTM D)1557.
 - LIQUID LIMIT \leq 25%.
 - PLASTICITY INDEX \leq 6%.
 - ORGANIC MATERIAL \leq 2%.
 - $SO_3 \leq$ 5%.
 - TOTAL SOLUBLE SALTS \leq 5%.
 - GYPSUM CONTENT \leq 10.75%.
 - RELATIVE COMPACTION 95% (MODIFIED PROCTOR).
- SULPHATE RESISTANT CEMENT TYPE 5 SHOULD BE USED IN ALL CONCRET WORK IN CONTACT WITH EARTH OR BELOW D.P.C. LEVEL.
- BACKFILL AROUND FOOTINGS AND UTILITY TRENCH WITHIN THE BUILDING AREA SHOULD BE DONE WITH APPROVED SELECTED CLASSIFIED MATERIAL FREE OF CLAY AND SHOULD BE MECHANICALLY COMPACTED IN LAYERS, NOT EXCEEDING 250mm LOOSE THICKNESS TO 90% OF MAXIMUM PROCTOR DENSITY.

CONSTRUCTION JOINT AND WATERPROOFING :-

- CONSTRUCTION JOINT :-
 - CONSTRUCTION JOINT IN FLOORS SHOULD BE LOCATED WITHIN THE MIDDLE THIRD OF SPANS OF SLABS, BEAMS & GIRDERS, JOINT IN GIRDER SHOULD BE OFFSET A MINIMUM DISTANCE OF TWO TIMES THE WIDTH OF INTERSECTING BEAMS.
 - AT CONSTRUCTION JOINTS SURFACES SHOULD BE ROUGHENED BY BROOMING OUT MORTAR, EXPOSING 12mm OF COARSE AGGREGATE TWO HOURS AFTER PLACING CONCRETE.
 - CONSTRUCTION JOINTS FOR STRUCTURAL SLAB / FOUNDATION / WALLS ETC. AND VOLUME OF CASTING IN A POUR SHOULD BE APPROVED BY THE ENGINEER.
 - CONSTRUCTION JOINTS SHOULD BE DOWELED, KEYED AND THOROUGHLY CLEANED, ALL CONSTRUCTION JOINTS SHOULD BE CONSTRUCTED IN ACCORDANCE WITH THE TYPICAL CONSTRUCTION JOINT DETAILS SHOWN ON THE STRUCTURAL DRAWINGS CONTRACTOR HAVE TO PREPARE ANY MISSING DETAILS NOT COVERED IN THE STRUCTURAL DRAWINGS AND SUBMIT FOR ENGINEER'S APPROVAL.
- WATERPROOFING :-
 - WATER STOPS SHOULD BE USED AT ALL CONSTRUCTION, CONTRACTION & EXPANSION JOINTS, WHERE WATERPROOFING SYSTEM IS APPLIED ALL INTERSECTION PIECES OF WATER STOPS SHOULD BE FACTORY MOLDED.
 - ALL CONCRETE WORKS IN CONTACT WITH SOIL FOR NORMAL STRUCTURE SHOULD BE COATED WITH PROTECTIVE LAYER.

. all dim. from ARCH D.W.G.

REINFORCED CONCRETE :-

1. COMPRESIVE STRENGTH OF CONCRETE SHOULD BE DETERMIND BY THE TABLE BELOW :-

MEMBER TYPE	LOCATIONS	MINIMUM 28 DAYS CUBE COMPRESIVE STRENGTH (Fcu) (MPa)	AGGREGATE MAX. SIZE
SCREED		20	10 mm
BLINDING OR LEAN CONCRETE		20	20 mm
SLABS		40	20 mm
PILES		-	20-38 mm
FOUNDATIONS		40	20 mm
COLUMNS AND SHEAR WALLS		50	20 mm
SUSPENDED SLAB, BEAMS AND WALLS		40	20 mm
WATER RETAINING STRUCTURES		-	20 mm
PLAIN CONCRETE		25	20 mm

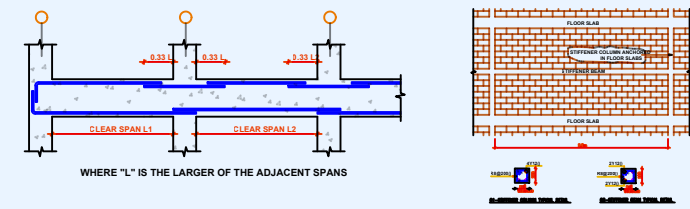
- SULPHATE RESISTANT CEMENT TYPE 5 SHOULD BE USED IN ALL CONCRET WORK IN CONTACT WITH EARTH OR BELOW D.P.C LEVEL.
- REINFORCEMENT STEEL CONFORM TO ASTM A615 & A616 OR A617 BARS SHOULD BE GRADE 400 FY=410N/mm (60000psi).
- PLACING OF REINFORCEMENT SHOULD BE ACCORDING TO ACI-315 DETAILING MANUAL.
- MINIMUM BARS COVER :-

MEMBER	(mm)
SLABS	25
BEAMS & GIRDERS	40
COLUMNS	40
INTERIOR WALLS	25
EXTERIOR FACE OF WALL	40
FORMED FOUNDATION	50
NON-FORMED FOUNDATION	75

- MINIMUM BARS SPACING :-
 - CLEAR SPACING BETWEEN PARALLEL BARS SHALL NOT BE LESS THAN BAR DIAMETER OR 4/3 OF MAXIMUM AGGREGATE SIZE BUT NOT LESS THAN 25mm.
 - CLEAR SPACING BETWEEN LAYERS OF BARS TO BE NOT LESS THAN 25mm AND THE UPPER BARS SHOULD BE OVER THE LOWER BARS .
 - IN COLUMNS CLEAR DISTANCE BETWEEN LONGITUDINAL BARS SHOULD BE NOT LESS THAN 1.5 BAR DIAMETER NOR LESS THAN 40mm.
- MINIMUM LAP LENGTH (UNLESS NOTED ON DRAWINGS) SHOULD BE AS TABLE BELWO :-

BAR DIA. (mm)	10	12	16	18	20	22	25
LAP LENGTH (mm) IN COLUMNS	400	500	600	650	700	800	900
LAP LENGTH (mm) IN ELSE WHERE	400	600	700	800	900	1000	1250

- LAP LOCATION IN SLABS AND BEAMS :-
 - AT SUPPORT FOR BOTTOM BARS.
 - AT MID SPAN FOR TOP BARS.
- LAP LOCATION IN FOUNDATION :-
 - AT SUPPORT FOR TOP BARS.
 - AT MID SPAN FOR BOTTOM BARS.
- VERTICAL REINFORCEMENT IN COLUMN :-
 - WHERE COLUMN FACE ARE OFFSET 75mm OR MORE SPLICE OF VERTICAL BARS TO THE OFFSET FACE SHOULD BE MADE BY SEPARATE DOWELS OVER LAP AS SPECIFIED ABOVE.
 - WHERE A LONGITUDINAL BARS ARE OFFSET AT SPLICE THE SLOPE OF INCLINED ADJACENT PORTION SHALL NOT EXCEED 1:6 (HORIZONTAL:VERTICAL).
 - CHANGING OF REINFORCEMENT BETWEEN FLOORS WHERE SUCH SITUATION OCCURS THE REINFORCEMENT OFF SHOULD BE CUT OFF AT DISTANCE 75mm BELOW FLOOR LEVEL SPACED 100mm AND PLACED BEFORE THE POINT OF BEND.
 - WHERE LONGITUDINAL BARS OFFSET, PROVIDE 4TIES.
- HOT & COLD WETHERING SHOULD BE ACCORDING TO ACI-305R-99.
- ALL REINFORCING BAR BENDS TO BE MADE COLD.
- IN ONE-WAY SLAB, SHRINKAGE & TEMPERATURE REINF. STEEL EXTENDING IN THE LONG DIRECTION SHALL BE PLACED IN THE PLACE OF, AND TIED TO THE MAIN REINF. EXTENDING IN THE SHORT DIRECTION.
- MIXING & PLACING CONCRETE SHOULD BE DONE ACCORDING TO ACI - 318M - 95 (CHAPTER 5) CONDUIT OR PIPE SIZE SHALL NOT EXCEED 30% OF SLAB THICKNESS UNLESS SPECIFICALLY DETAILED. OTHERWISE CONCENTRATIONS OF CONDUITS OR PIPES SHOULD BE AVOIDED EXCEPT WHERE DETAILED OPENINGS ARE PROVIDED, ALL SUBJECTED TO ENGINEER'S APPROVAL.



THE DESIGN LOADS

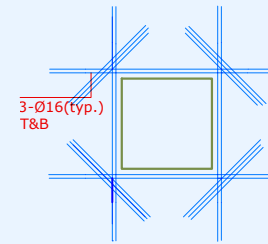
1) SUPER IMPOSED DEAD LOAD (SDL) :

FLOOR SCREED	0.80 KN/m ²
TILES	0.20 KN/m ²
False Ceiling & MECHANICAL DIVISIONS	0.50 KN/m ²
EXTERNAL & INTERNAL PARTITION WALL Bricks	2.5 KN/m ²
TOTAL	4.00 KN/m²

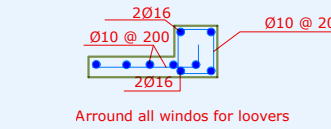
2) LIVE LOADS:

RESIDENTIAL AREAS	3.0 KN/m ²
STAIRCASE	4.0 KN/m ²

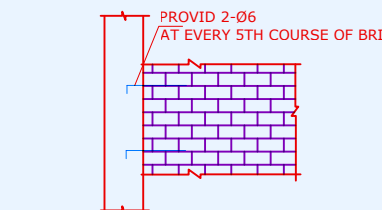
provid construction joint for max. (5mx5m)



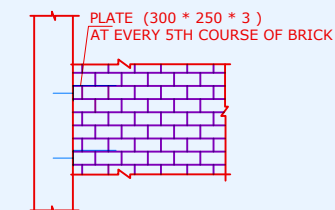
TYPICAL REINF. AROUND OPENNINGS UP TO 600



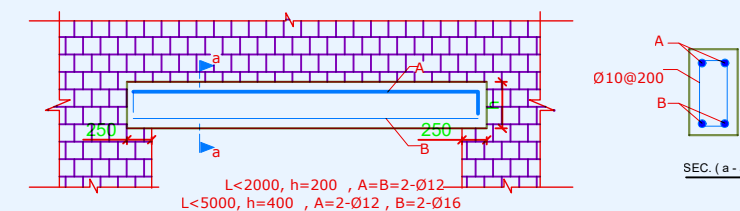
TYPICAL UP STAND DETAIL ROOF OPENNINGS



CONECTION BETWEEN BRICK WALL AND R.C. COLUMN proposal 1



CONECTION BETWEEN BRICK WALL AND R.C. COLUMN proposal 2



LINTEL REINFORCEMENT

ABBREVIATIONS :-

ADD	ADDITIONAL
ARCH	ARCHITECTURAL
B	BEAM
BOTT	BOTTOM
C1	COLUMN TYP C1
CANT	CANTILEVER
C.J	CONSTRUCTION JOIN
CL	CENTRE
C	COULMN
CONC	CONCRETE
DET	DETAIL
DIM	DIMENSION
DWG	DRAWING
D	DEPTH
E.A	EACH
E.F	EACH FACE
E.J	EXPANSION JOINT
ELEV	ELEVATION
E.W	EACH WAY
EXP	EXPANSION
F	FOOTING
F1	FOOTING TYPE-1
FDN	FOUNDATION
F.F.L	FINISH FLOOR LEVEL
GEN	GENERAL
GL	GRID LINE
LL	LIVE LOAD
MAX	MAXIMUM
MECH	MECHANICAL
MIN	MINIMUM
mm	MILLIMETRES
SEC	SECTION

no.	date	initials	revision

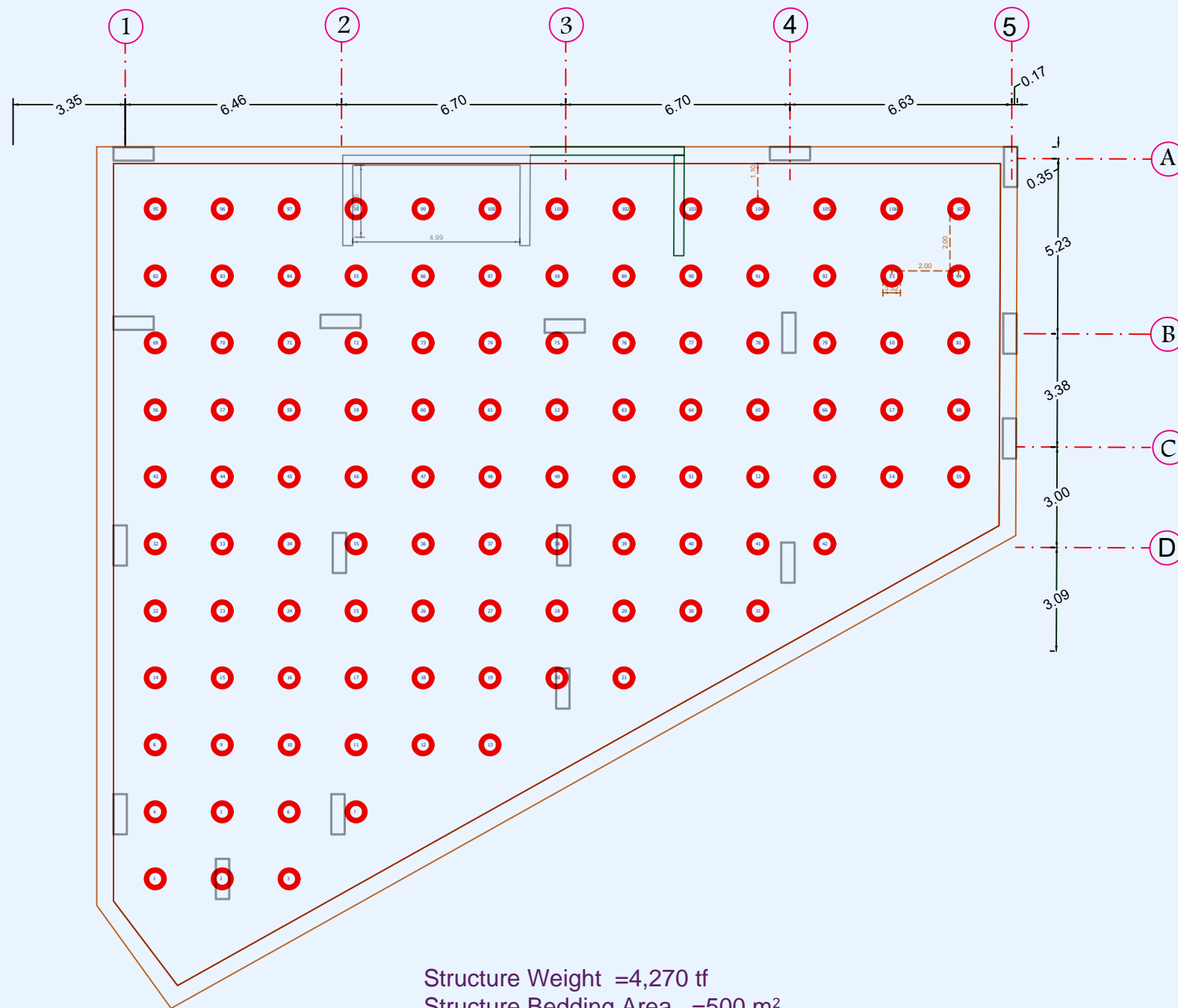
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(A)

drawing title

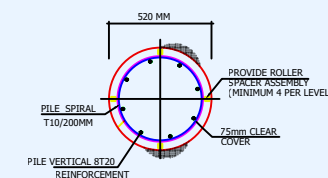
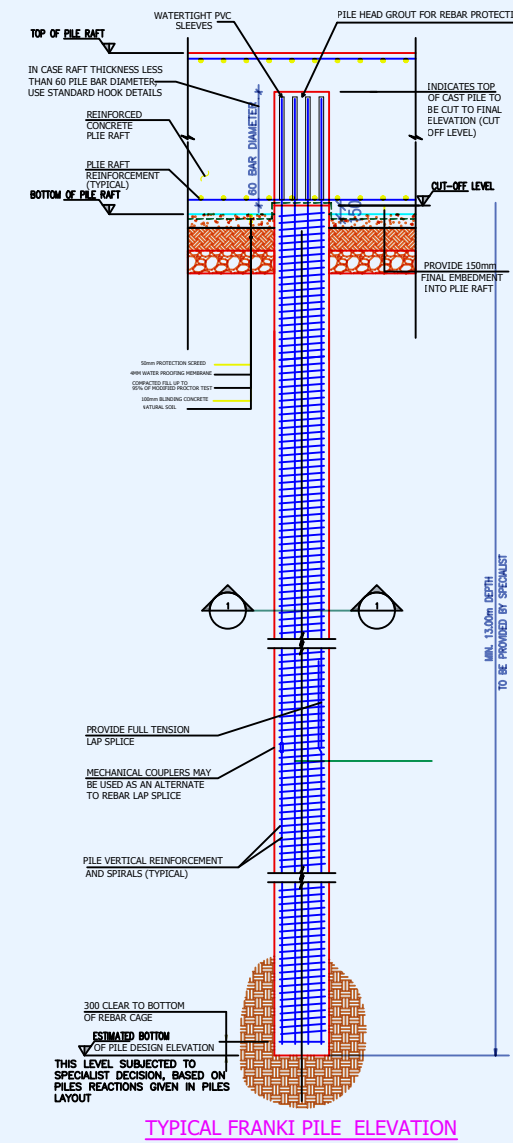
GENERAL NOTES

designed	ENG: DR. Majid Albarba	project manager	
checked		scale	date
drawn		job no.	sheet no.
approved			

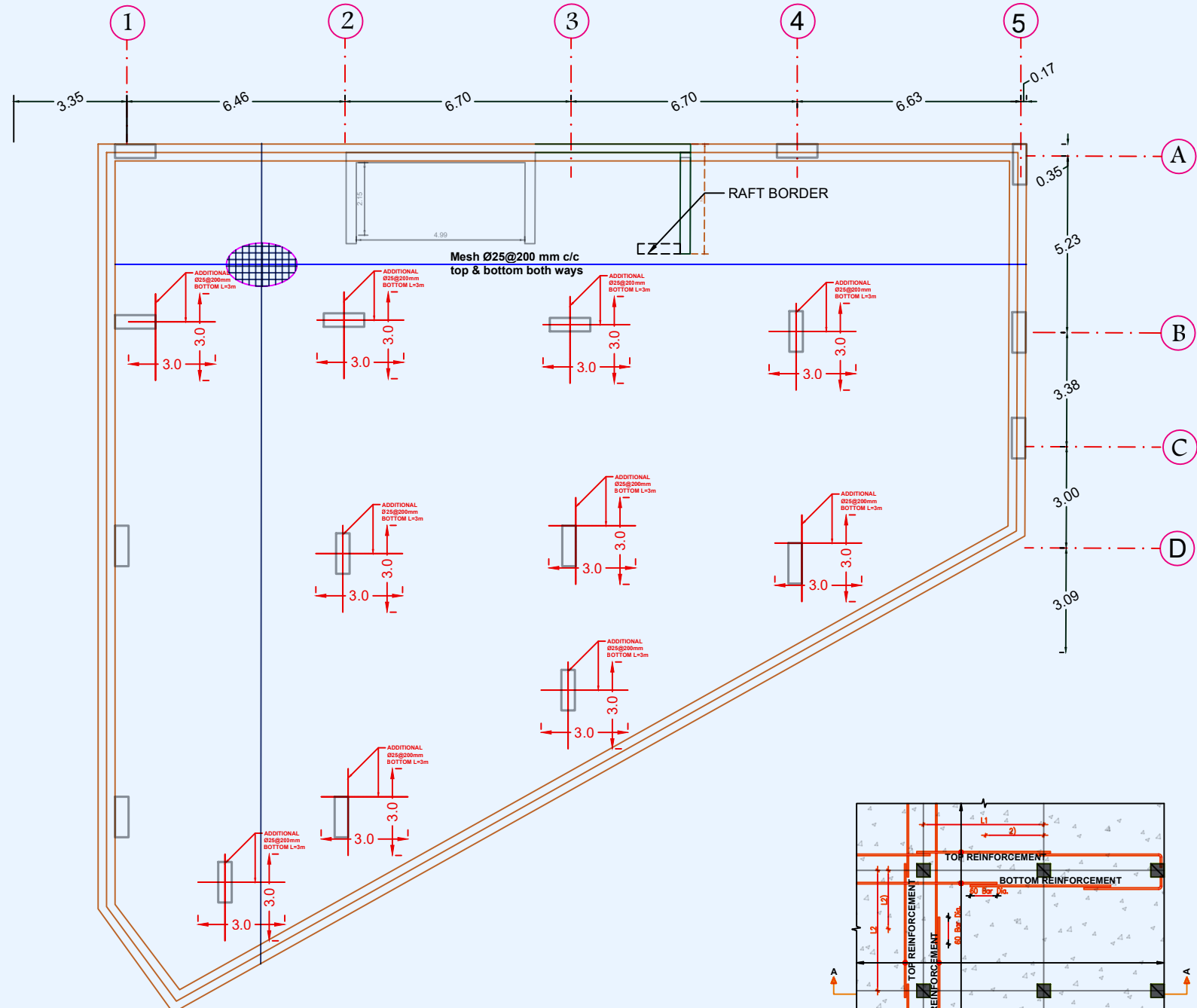
2



PILES KEY PLAN



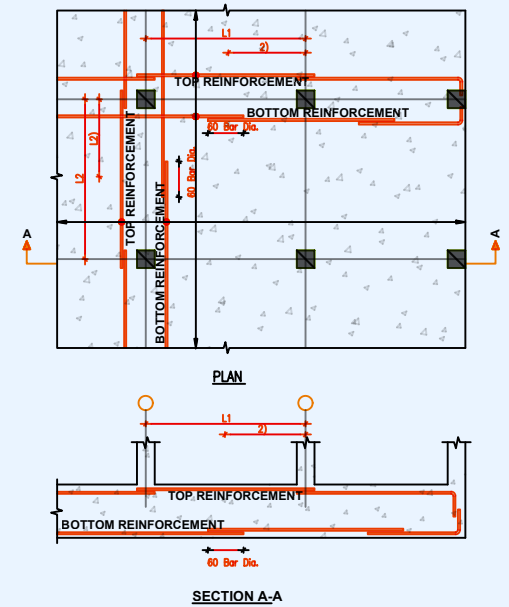
no.	date	initials	revision
job title			
(A)			
drawing title			
PILES KEY PLAN			
designed	project manager		
ENG : DR-Majid Albana	scale	1-100	date 11 /2024
checked	sheet no. 3		
drawn	ST/D/06		
approved			



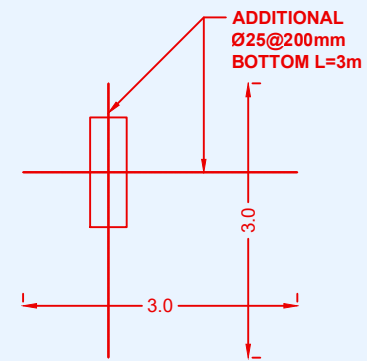
-Fcu = 40 N/mm2
-Fy = 420 N/mm2.

CONCRETE COVERS

- SLABS = 25 mm
- BEAMS = 40 mm
- COLUMNS = 40 mm
- WALLS = 25 mm
- SLAB ON GRADE = 50 mm
- RAFT FOUNDATION = 75 mm



L-TYPICAL RAFT REINFORCEMENT DETAIL



FOR ALL INT. COLUMN

. all dim. from ARCH D.W.G.

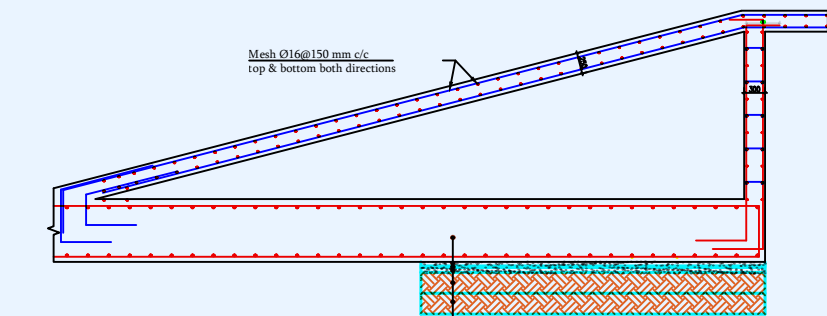
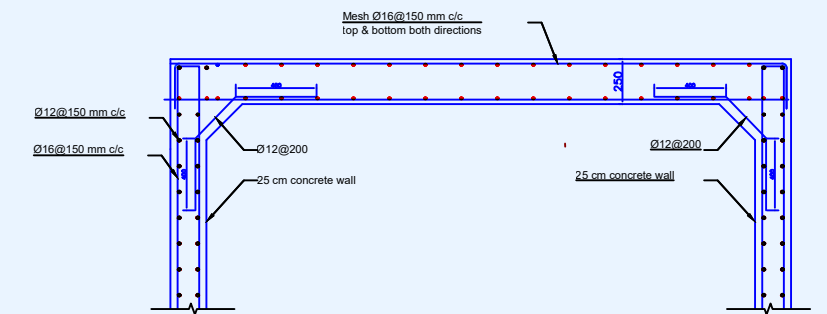
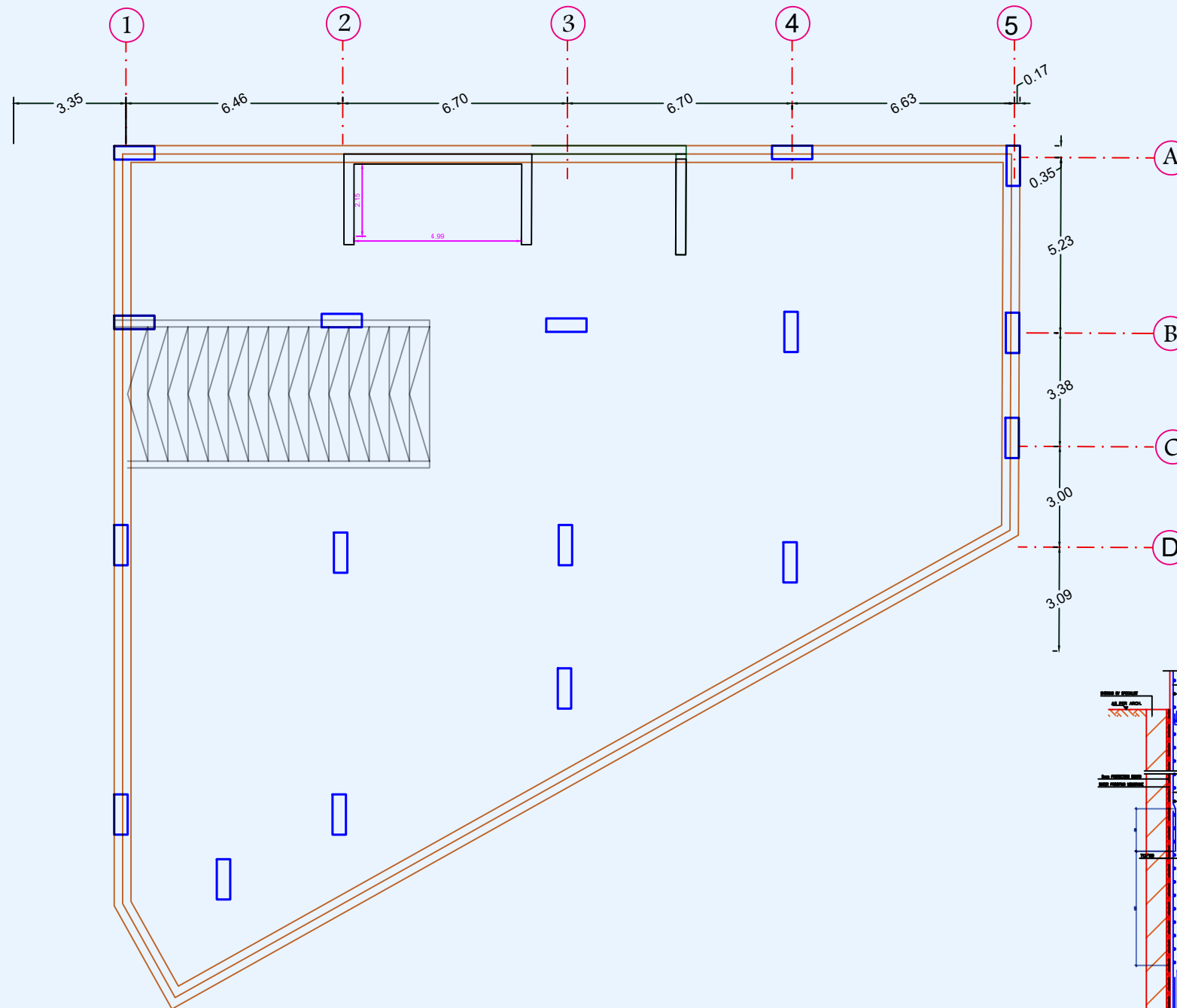
no.	date	initials	revision
job title			
(A)			
drawing title			
PLAN OF FOUNDATION REINFORCEMENT&SEC.			
designed	ENG - DR-Majid Albana	project manager	
checked		scale	1-100
		date	8/2025
drawn		job no.	4
		sheet no.	ST/D/04
approved			

Foundation Plan

THICK. = 1100 mm

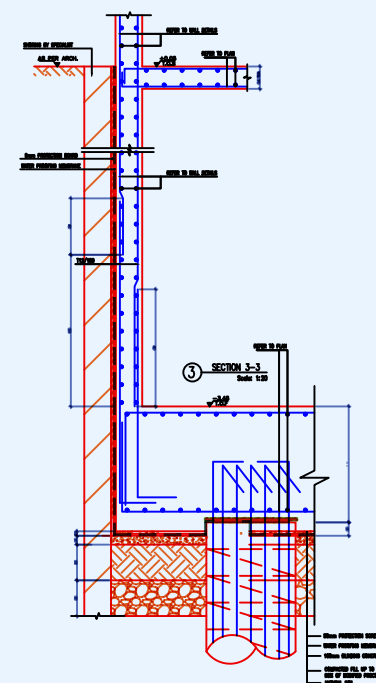

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RAMP DETAILS

- 1100mm RC raft
- Screed 50 mm
- 4mm membrane waterproofing
- Blinding concrete 100mm thick
- polythene sheet gage 1000
- 250mm compacted road base layer 95%
- 250mm compacted road base layer 95%



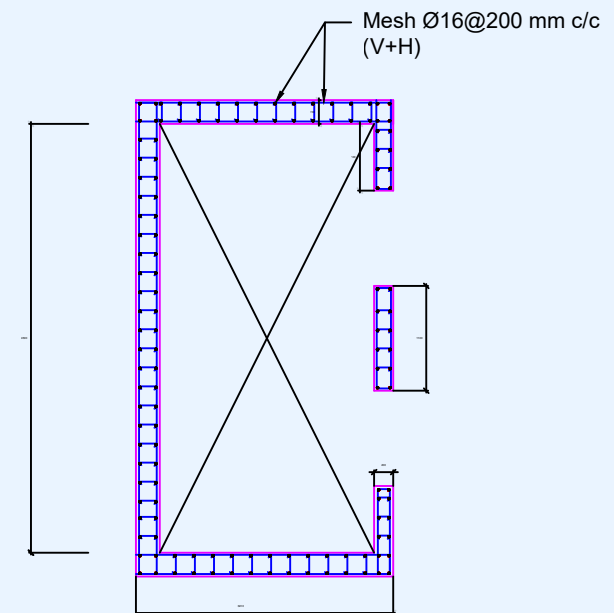
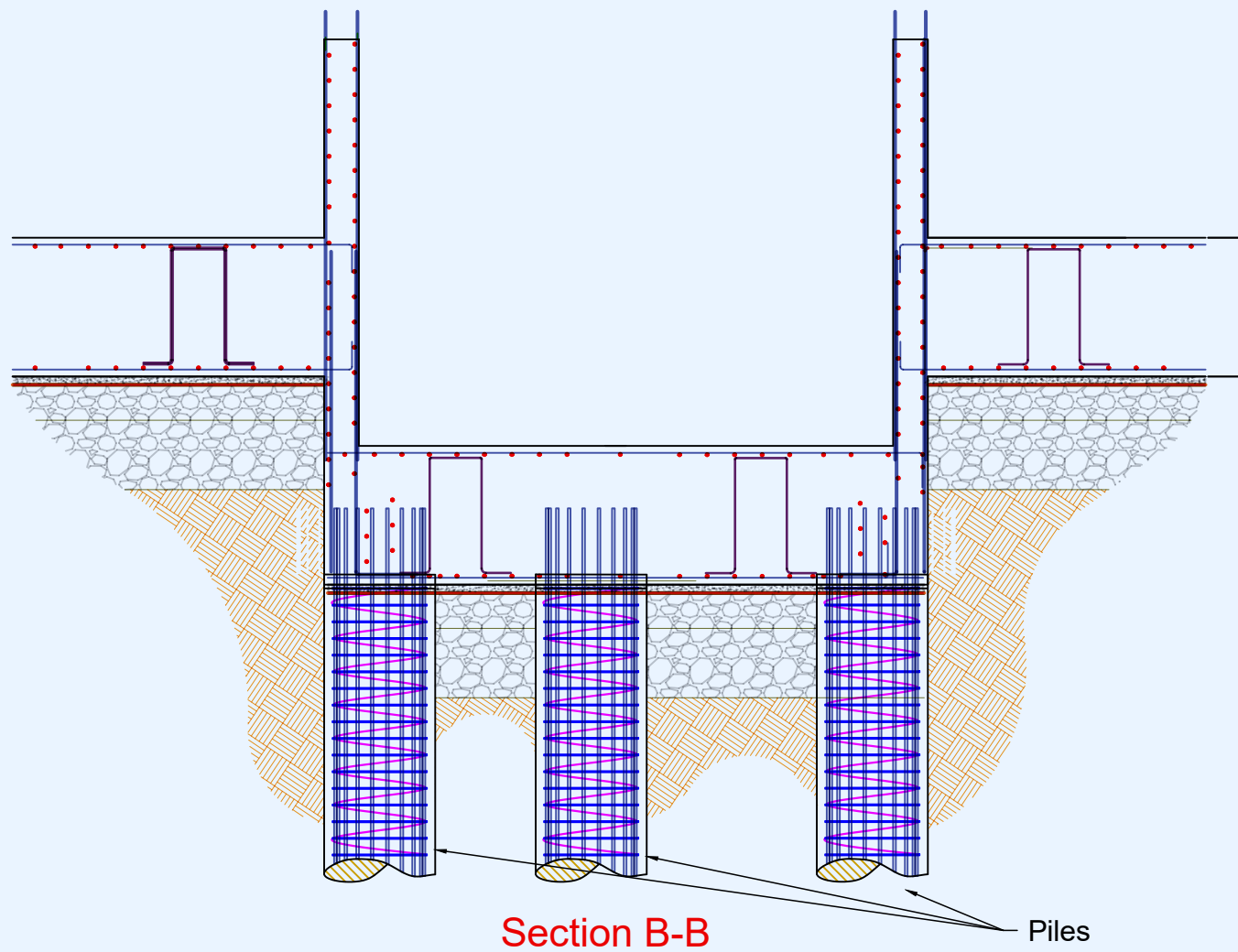
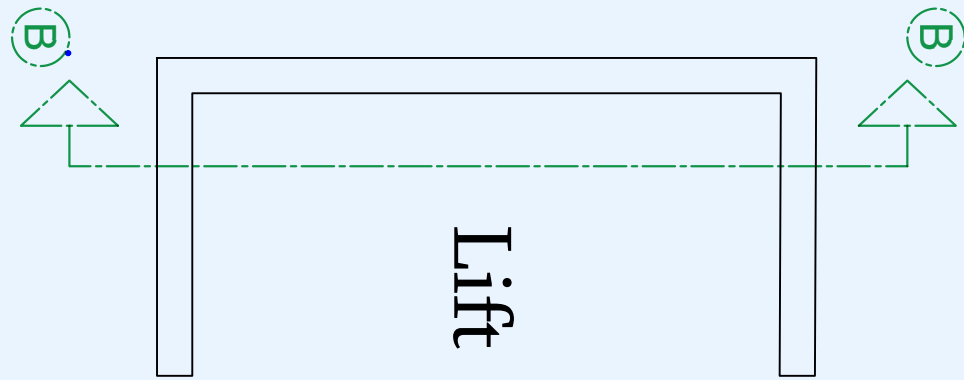
Section A-A
in Foundation

Foundation Plan

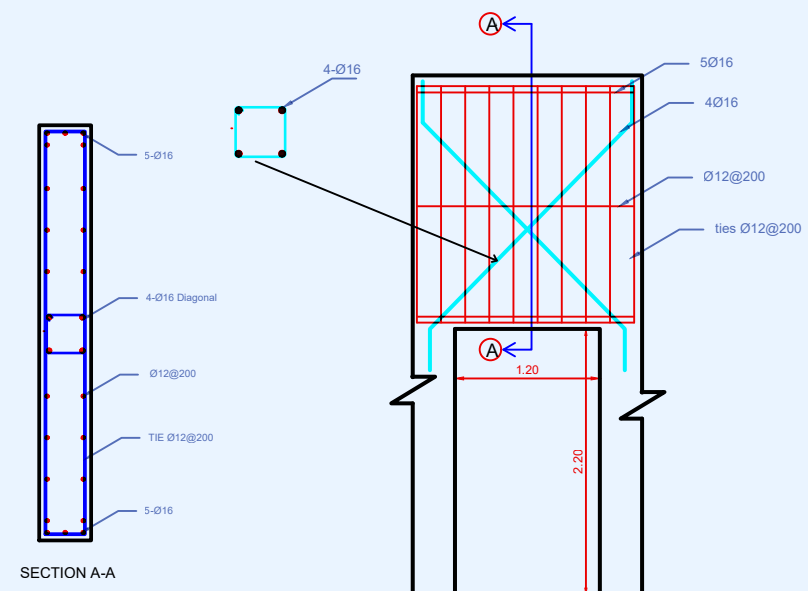
THICK. = 1100 mm

. all dim. from ARCH D.W.G.

no.	date	initials	revision
job title		(A)	
drawing title PLAN OF FOUNDATION REINFORCEMENT&SEC.			
designed ENG : DR-Majid Albana	project manager	scale 1-100	date 6 / 2025
checked	job no. 5	sheet no. ST/D/05	
drawn	approved		

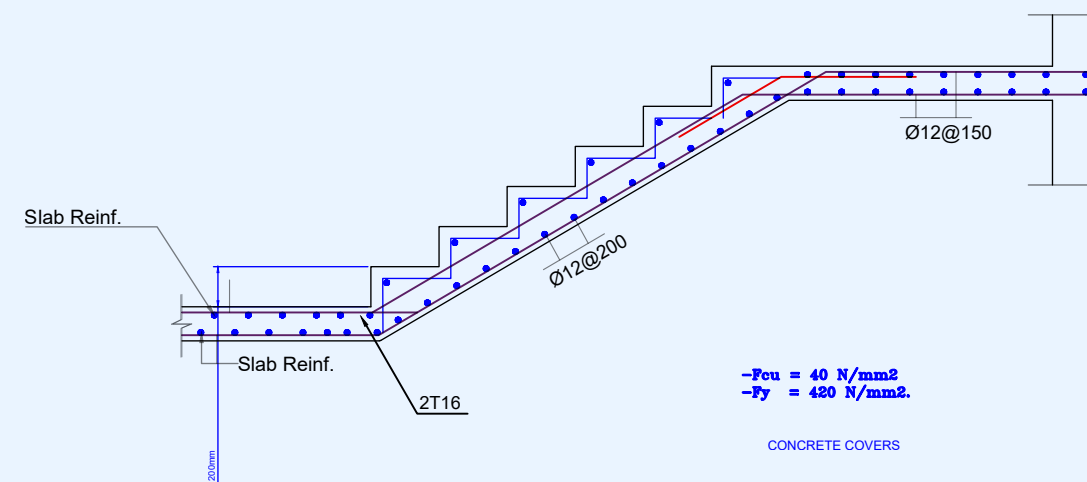
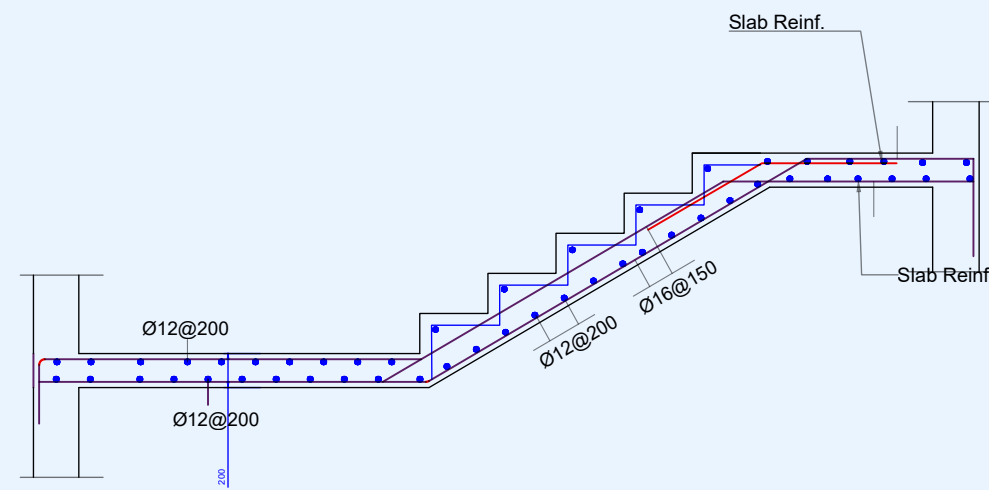
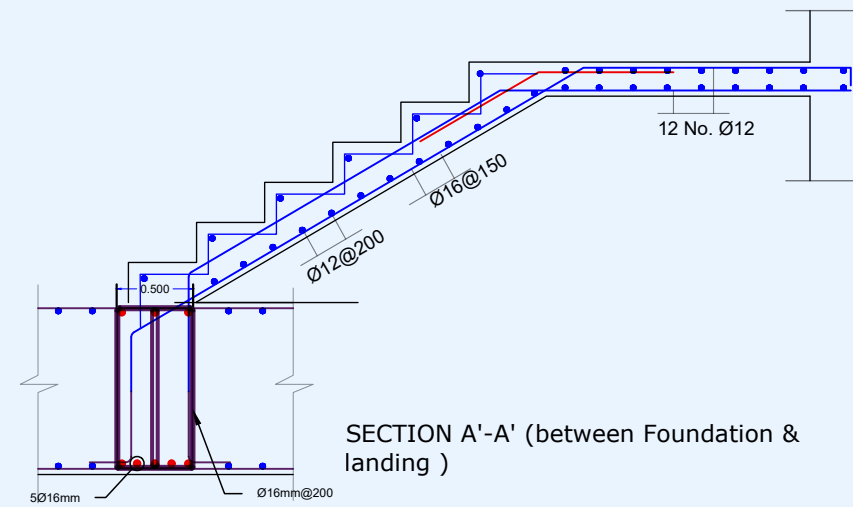
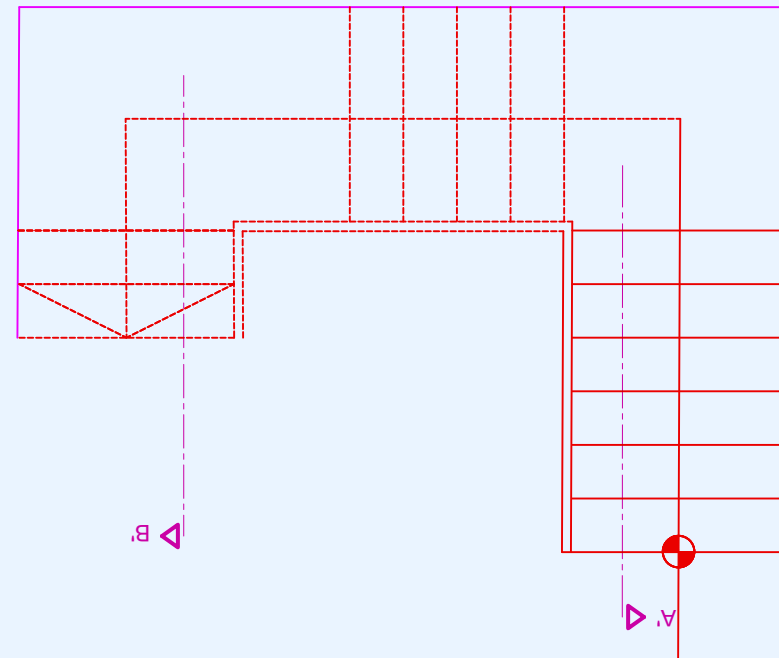


Shear wall details



1 F4/ SPANDREL BEAM DETAILS

no.	date	initials	revision
job title			
(A)			
drawing title			
Section A'-A' lift detail			
designed	ENG : Majid Albana	project manager	
checked	ENG : Majid Albana	scale	1-100
drawn	ENG : Majid Albana	date	8 / 2025
approved		job no.	
		sheet no.	5
			ST/D/06



-F_{cu} = 40 N/mm²
-F_y = 420 N/mm².

CONCRETE COVERS

-SLABS	= 25 mm
-BEAMS	= 40 mm
-COLUMNS	= 40 mm
-WALLS	= 25 mm
-SLAB ON GRADE	= 50 mm
-RAFT FOUNDATION	= 75 mm

-THE BUILDING IS DESIGNED FOR
 BASEMENT + GROUND FLOOR + 9
 FLOORS + PENT-HOUSE

. all dim. from ARCH D.W.G.

no.	date	initials	revision
job title			
(A)			
drawing title			
Stairs detail			
designed	project manager		
ENG - DR-Majid Albana			
checked	scale	date	
	1-100	8/2025	
drawn	job no.	sheet no.	
approved	7	ST/D/07	



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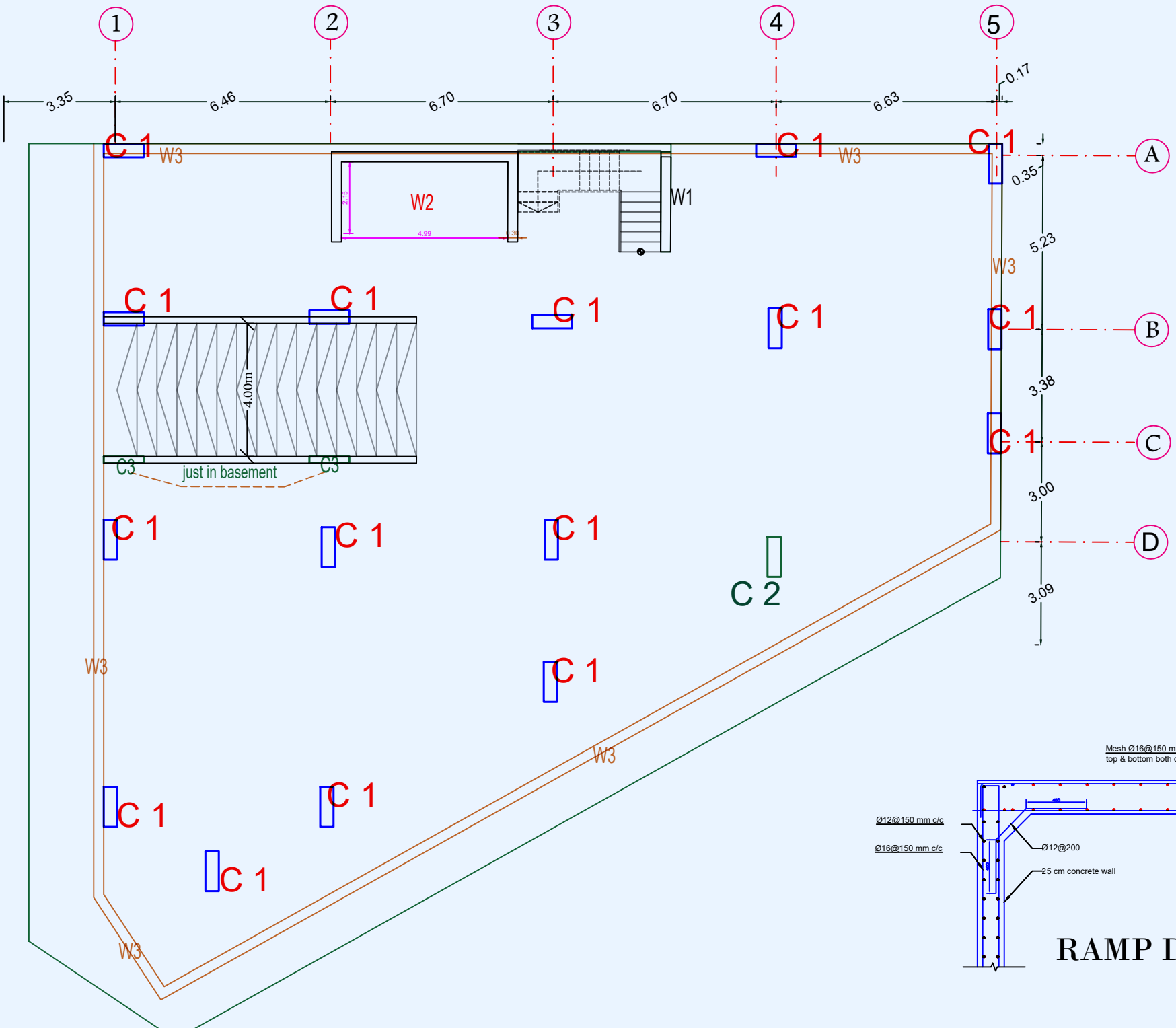
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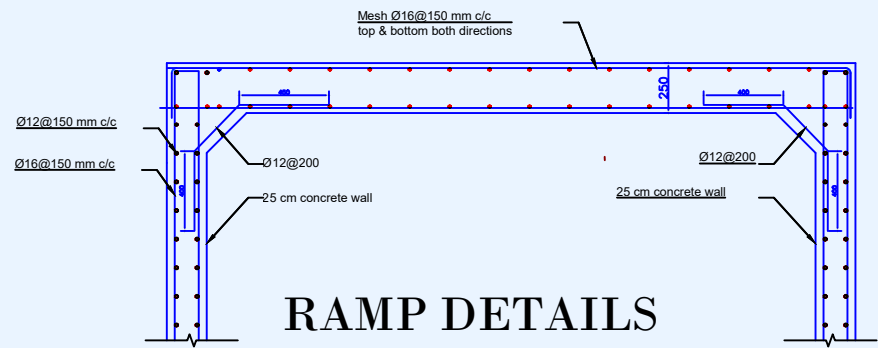
 majdalbana@hotmail.com

SCHEDULE OF COLUMNS AND WALLS

COLUMNS OR WALLS ID	SIZE		REMARK
	LENGTH (mm)	WIDTH (mm)	
C1	1200	400	
C2	1200	400	
C3	1000	250	just in basement
W1	3000	250	
W2	300		lift 
W3	300		just in basement



COLUMNS & WALL KEY PLAN



RAMP DETAILS

Notes

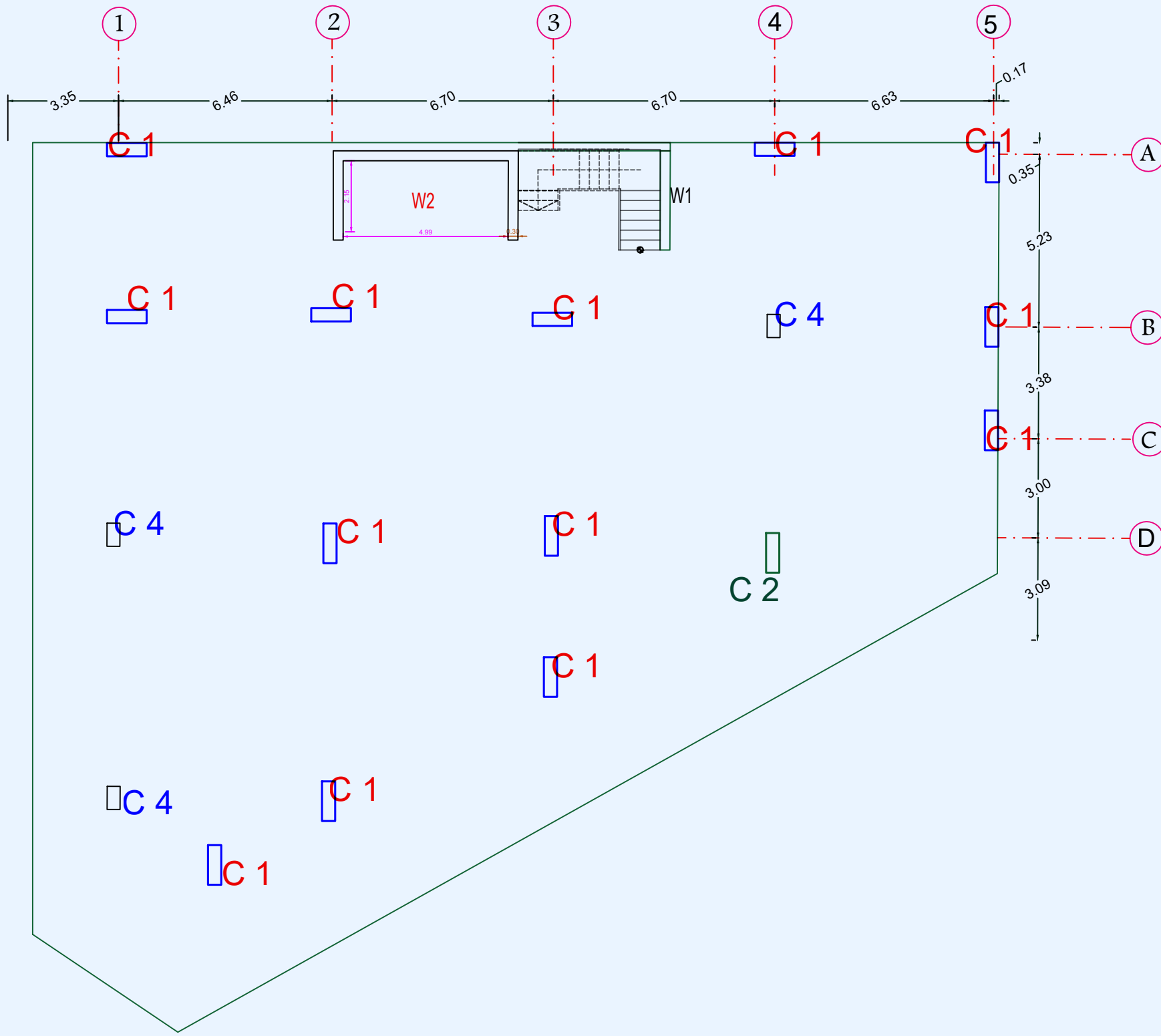
- Fcu = 50 N/mm²
- Fy = 420 N/mm².
- CONCRETE COVERS**
- SLABS = 25 mm
- BEAMS = 40 mm
- COLUMNS = 40 mm
- WALLS = 25 mm
- SLAB ON GRADE = 50 mm
- RAFT FOUNDATION = 75 mm

no.	date	initials	revision

job title
 (A)
 drawing title
COLUMNS & WALL KEY PLAN

designed ENG - DR-Majid Albana	project manager
checked	scale: 1-100 date: 8/2025
drawn	job no. 8 sheet no.
approved	ST/D/08

. all dim. from ARCH D.W.G.



SCHEDULE OF COLUMNS AND WALLS

COLUMNS OR WALLS ID	SIZE		REMARK
	LENGTH (mm)	WIDTH (mm)	
C1	1200	400	
C2	1200	400	
C4	600	400	
W1	3000	250	
W2	300		lift

- Notes
- F_{cu} =50 N/mm²
 - F_y = 420 N/mm².
 - CONCRETE COVERS
 - SLABS = 25 mm
 - BEAMS = 40 mm
 - COLUMNS = 40 mm
 - WALLS = 25 mm
 - SLAB ON GRADE = 50 mm
 - RAFT FOUNDATION = 75 mm

COLUMNS & WALL KEY PLAN 9TH TO 10TH FLOOR

. all dim. from ARCH D.W.G.

no.	date	initials	revision

job title

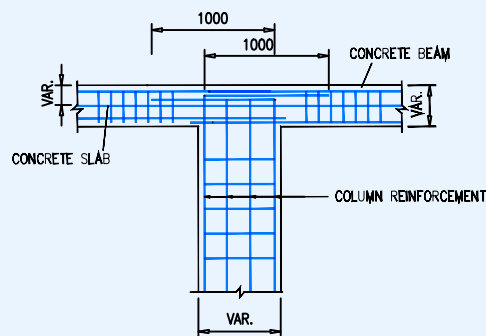
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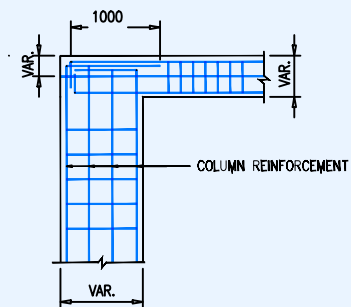
COLUMNS & WALL KEY PLAN

designed	ENG : DR-Majid Albana	project manager	
checked		scale	1-100
		date	8/2025
drawn		job no.	
approved		sheet no.	8a
			ST/D/08

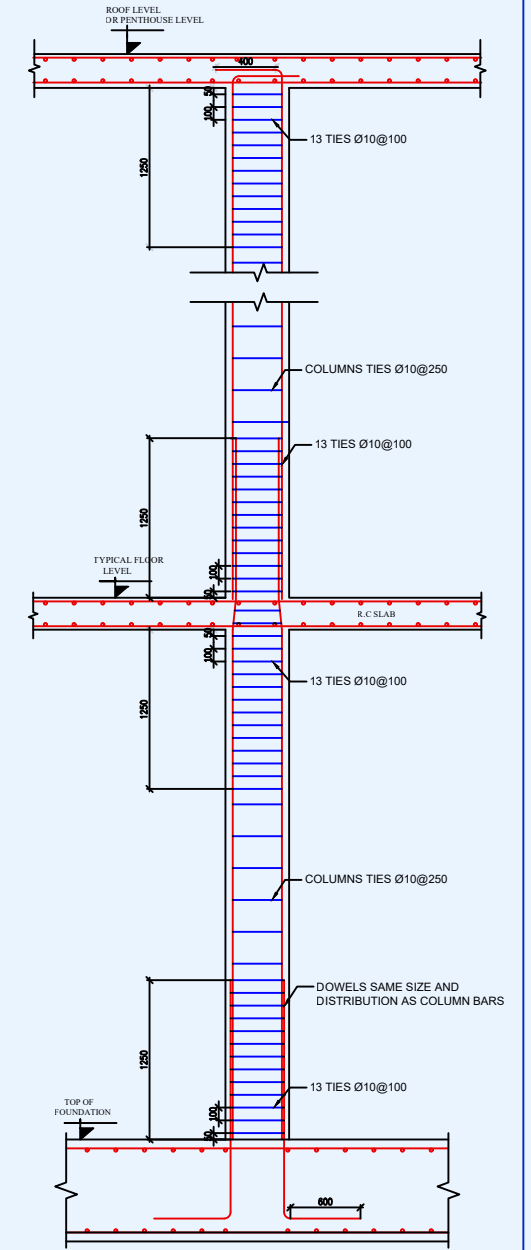
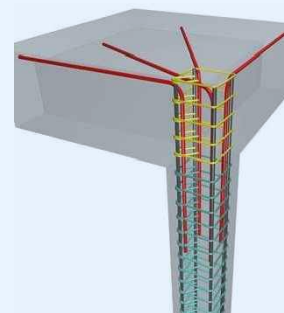
Main Bar		Fcu	22- Ø20	8Ø25+16 Ø20	12- Ø25
Ties			Ø10@250 3Ties/Set	Ø10@250 3Ties/Set	Ø10@250 3Ties/Set
Section	Roof Floor	C 50			
	3rd Floor				
	9th Floor				
Main Bar	2 nd Floor		22- Ø25	8Ø32+16 Ø25	12- Ø25
Ties			Ø10@250 3Ties/Set	Ø10@250 3Ties/Set	Ø10@250 3Ties/Set
Section	BASEMENT Level foundation level	C 50			
Dowels			22 - Ø25 C 1	8Ø32+16 Ø25 C 2	



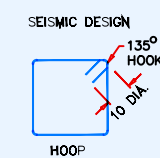
TYPICAL INTERNAL COLUMN TO BEAM DETAIL



TYPICAL EDGE COLUMN TO BEAM DETAIL



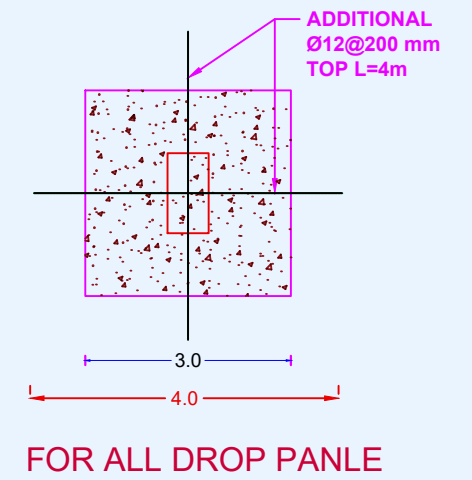
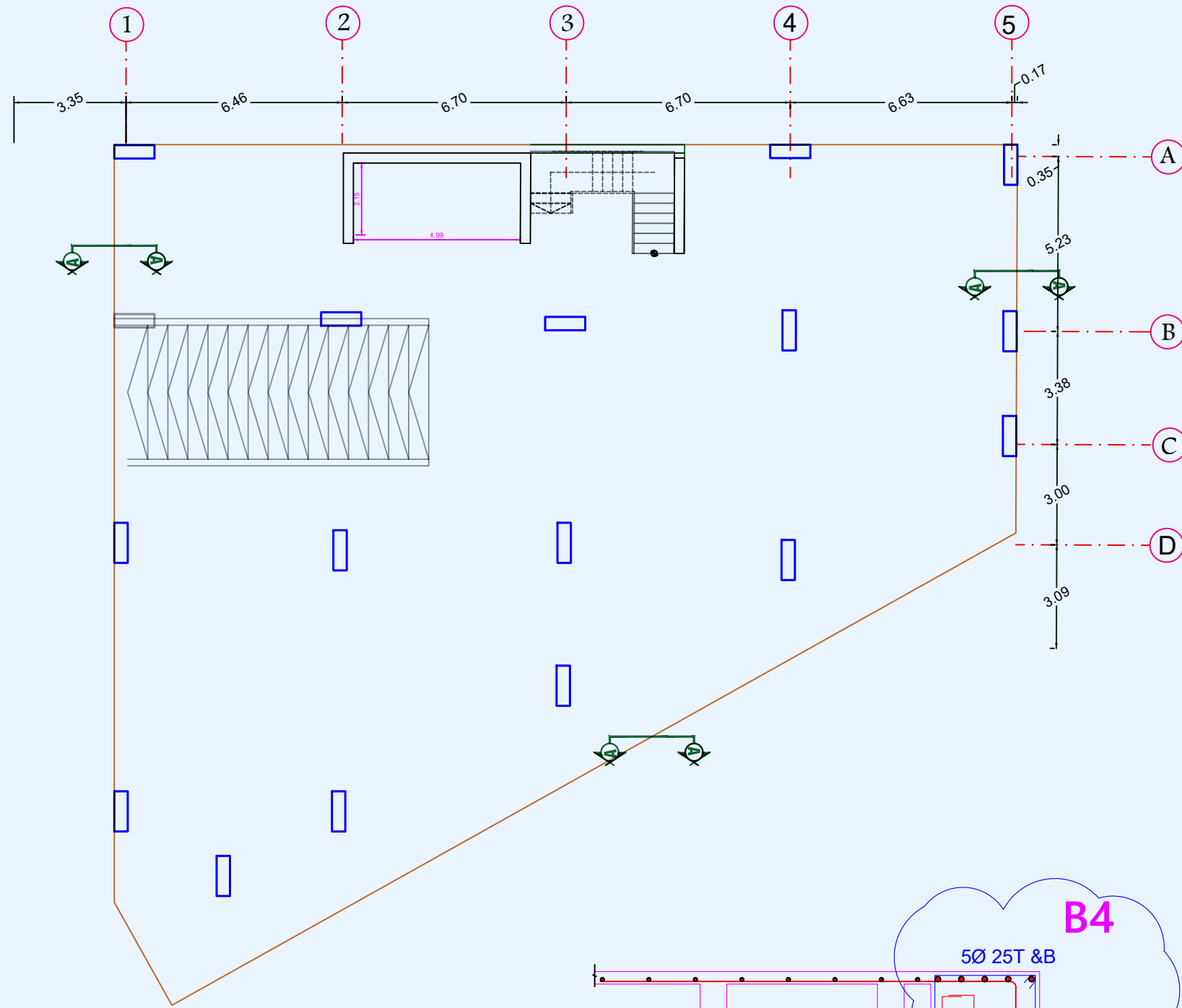
COLUMN LONGITUDINAL SECTION



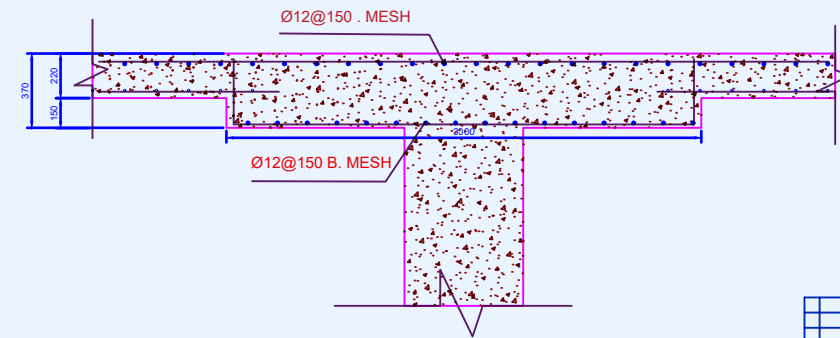
SCHEDULE OF COLUMN			
ENG : DR-Majid Albana	project manager	scale:	date:
Drawn	job no. 9	1-100	8 / 2025
approved			sheet no.

. all dim. from ARCH D.W.G.

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**25 mm
 Camber** slab camber 25 mm



MINIMUM LAP LENGTH (UNLESS NOTED ON DRAWINGS) SHOULD BE AS TABLE BELWO -

BAR DIA (mm)	10	12	16	18	20	22	25
LAP LENGTH (mm) IN COLUMNS	400	500	500	650	700	800	900
LAP LENGTH (mm) IN SLAB & BEAMS	400	500	700	800	900	1000	1250

no.	date	initials	revision
job title			
(A)			
drawing title			
PLAN OF SLAB			
REINFORCEMENT&SEC.			
designed	ENG - DR-Majid Albana	project manager	
checked		scale	1-100
		date	8 / 2025
drawn		job no.	
approved		sheet no.	10
			ST/D/08

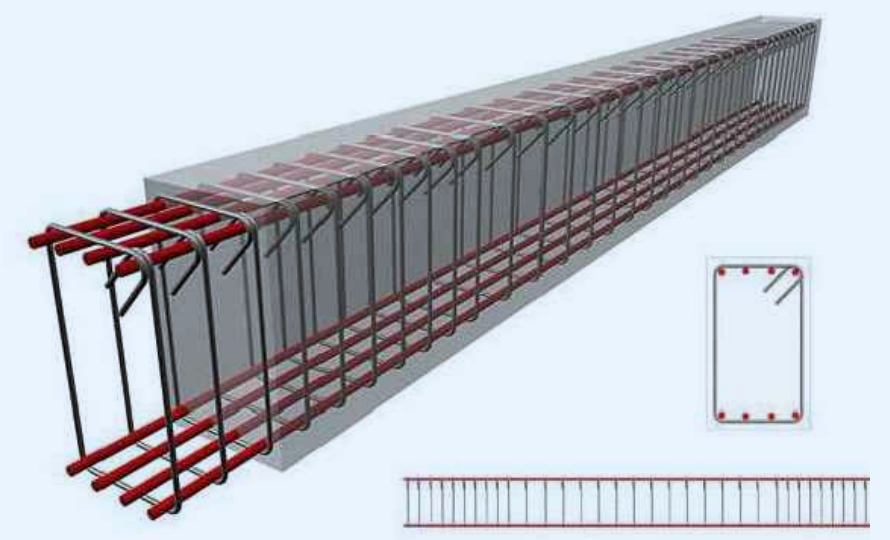
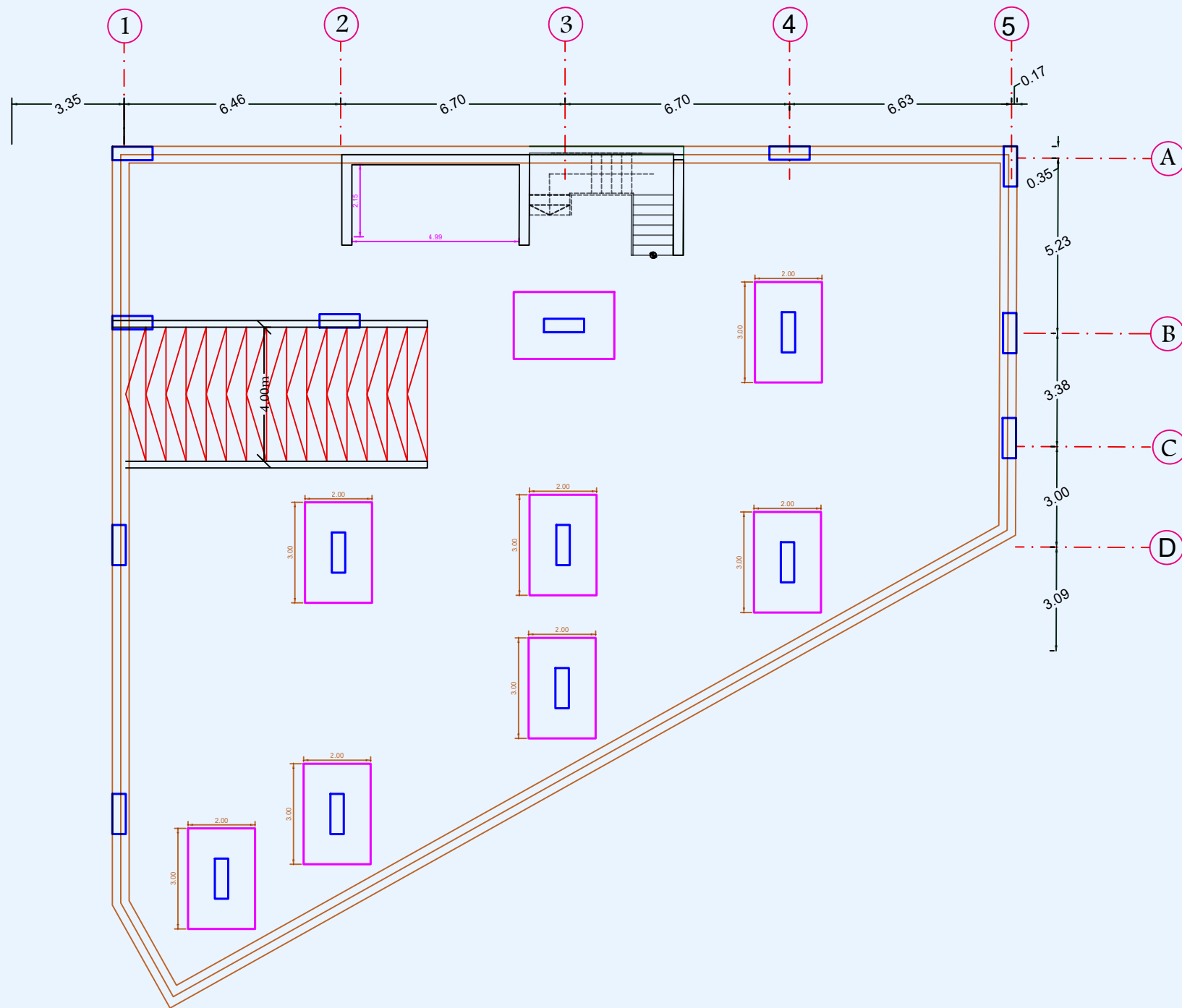
SLAB REINFORCEMENT (BASEMENT FLOOR)

SLAB THICKNESS = 220 mm

. all dim. from ARCH D.W.G.

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 المصمم الاستشاري
 د. ماجد البنا

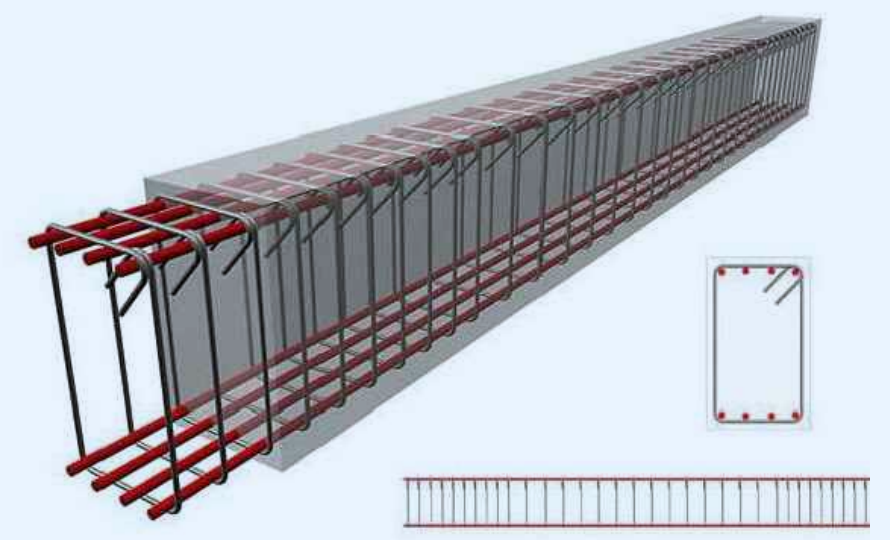
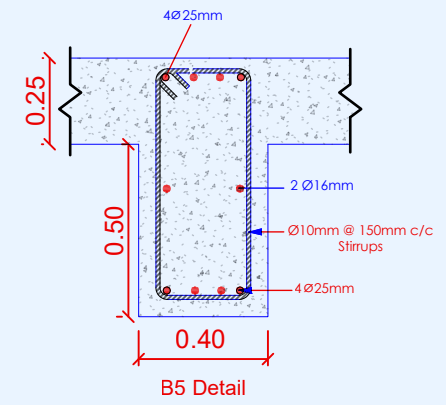
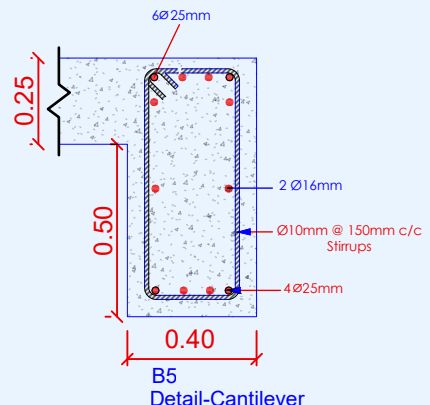
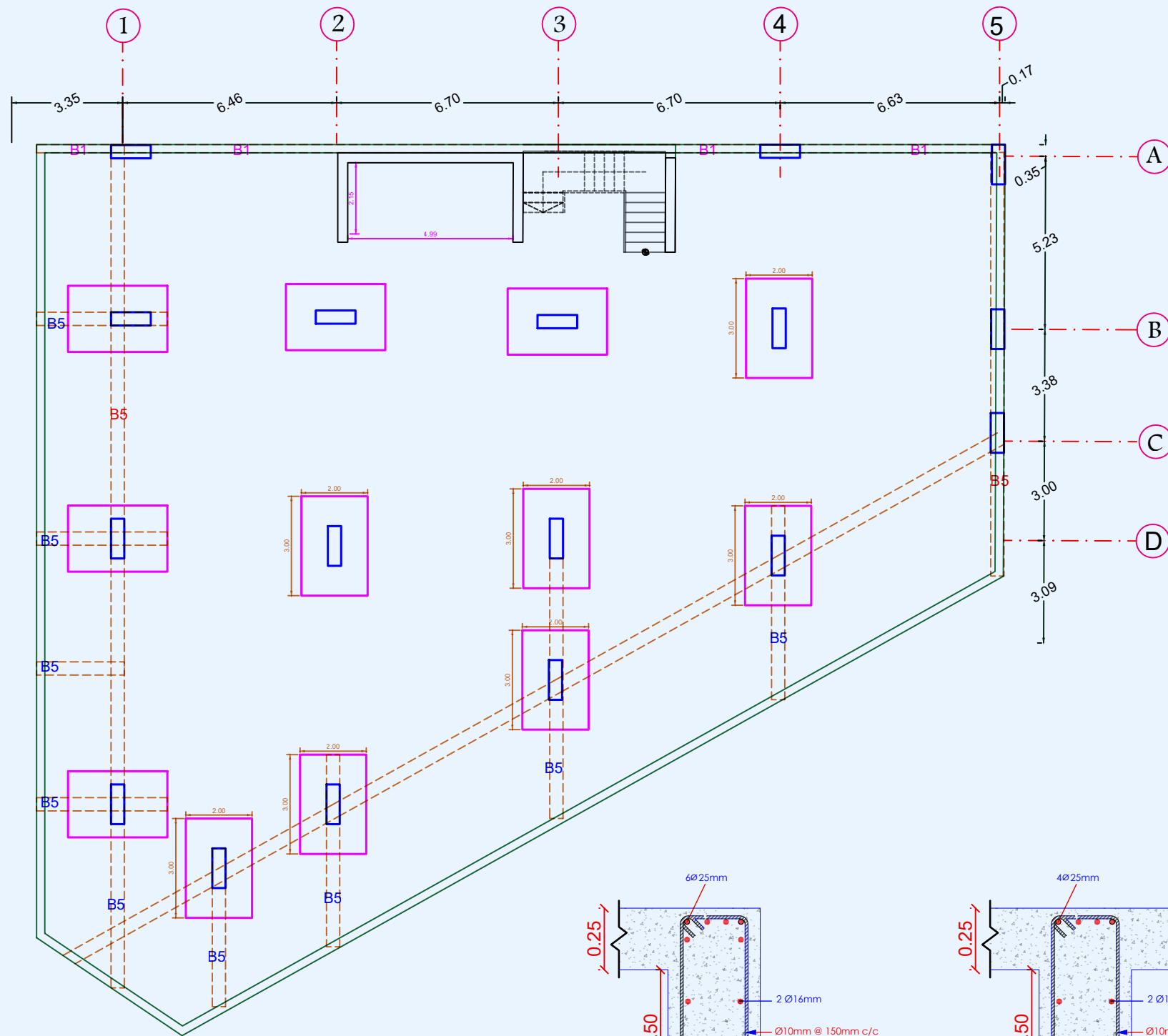
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 majdalbana@hotmail.com



BEAM KEY PLAN

job title	
(A)	
drawing title	
BEAM KEY PLAN	
designed	project manager
ENG - DR-Majid Albana	
checked	scale: 1-100 date: 6/2025
drawn	job no. 11
approved	sheet no. ST/D/08

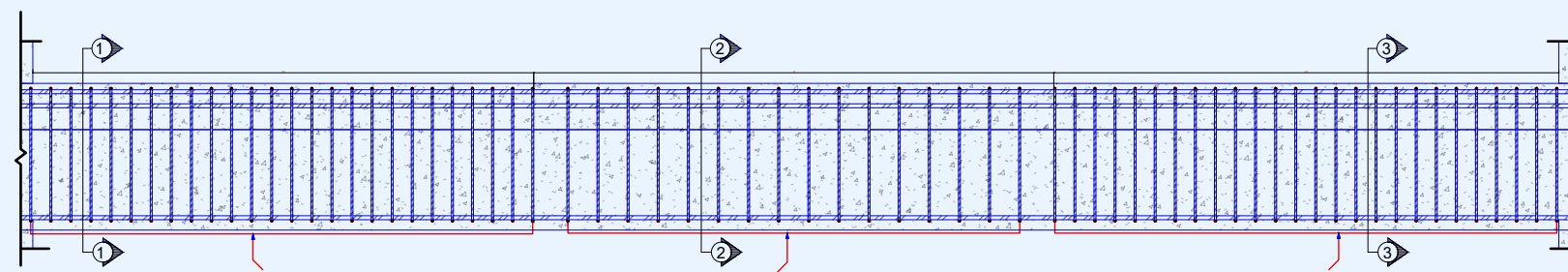
. all dim. from ARCH D.W.G.



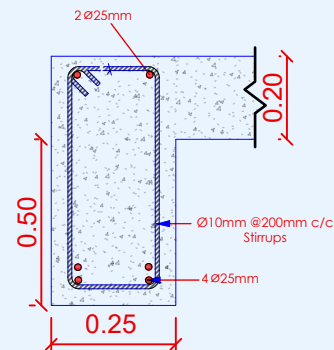
BEAM KEY PLAN

. all dim. from ARCH D.W.G.

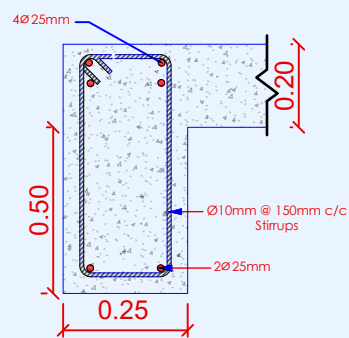
job title	
(A)	
drawing title	
BEAM KEY PLAN	
designed	project manager
ENG - DR-Majid Albana	
checked	scale: 1-100 date: 6/2025
drawn	job no.
approved	12 sheet no. ST/D/08



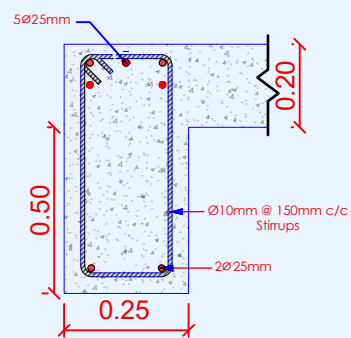
Beam 1 - Longitudinal Section



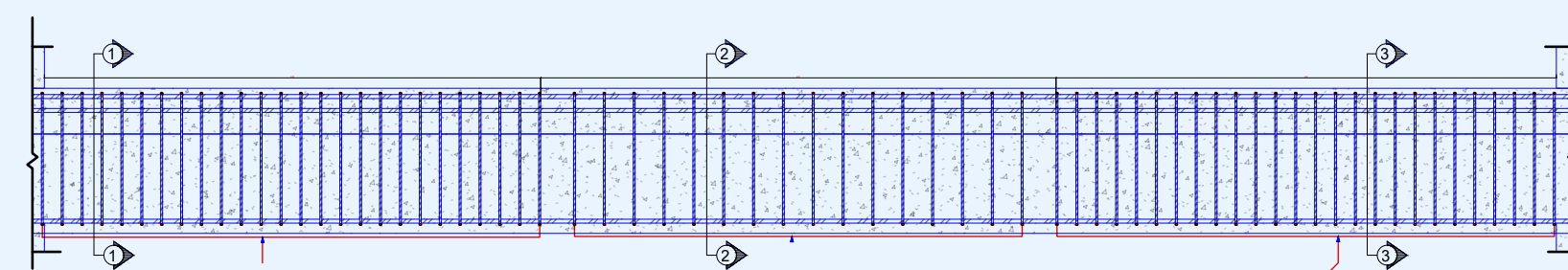
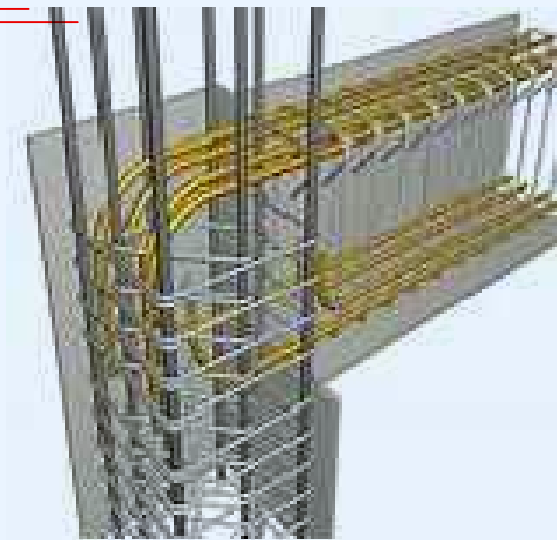
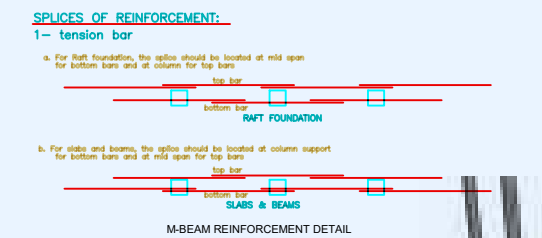
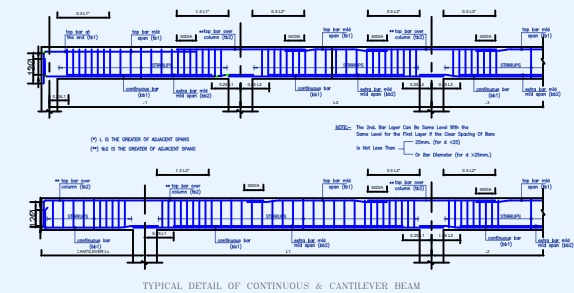
B1 Detail - at mid span



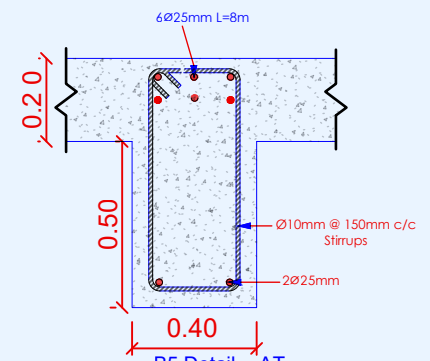
B1 Detail - at supports



B1 Detail - at cantilever



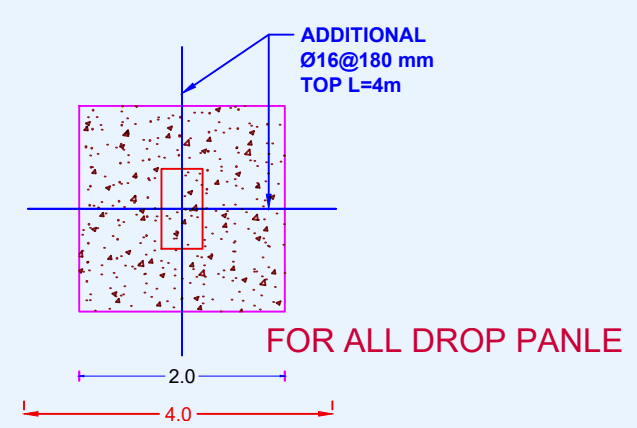
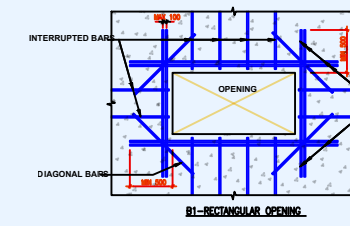
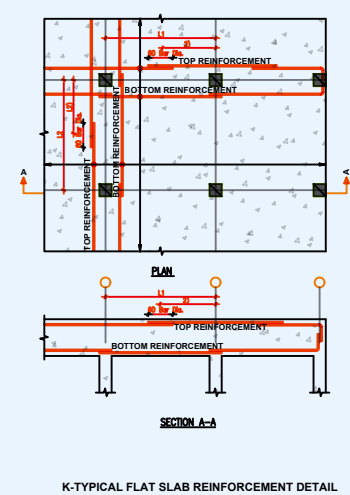
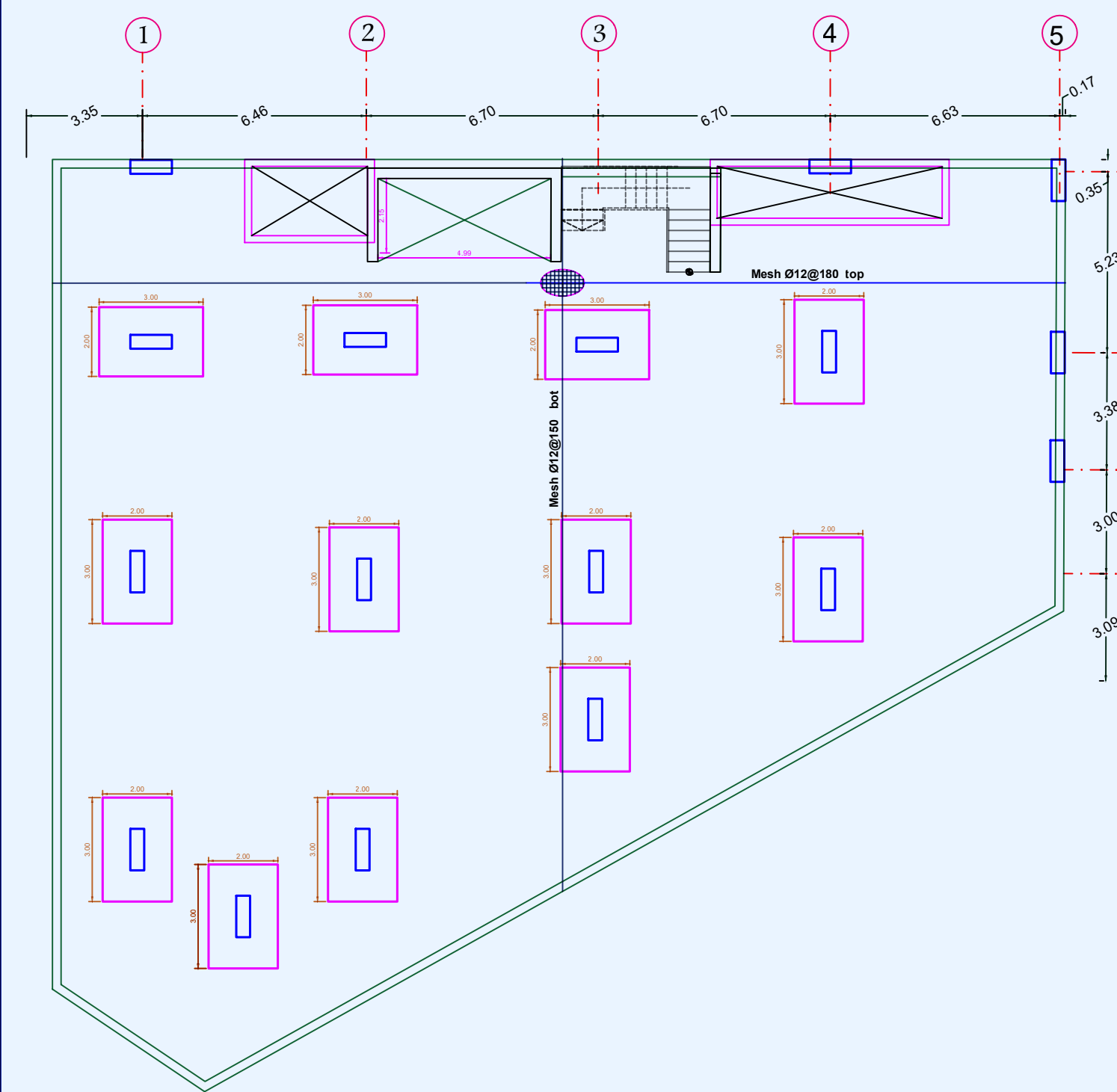
Beam 5 - Longitudinal Section



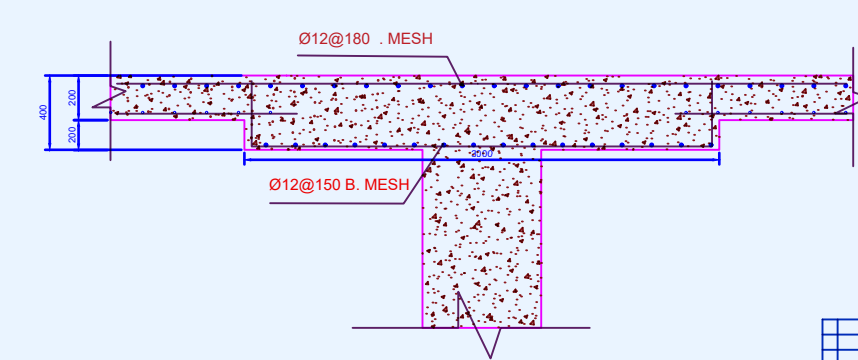
B5 Detail - AT CANTILEVER

No.	Date	Initials	Revision
Job title			
(A)			
Drawing title			
BEAM REINFORCEMENT&SEC.			
designed	ENG : DR-Majid Albana	project manager	
checked		scale	1-100
drawn		date	8 / 2025
approved		job no.	
			sheet no.
			13

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25 mm Camber
 slab camber 25 mm



MINIMUM LAP LENGTH (UNLESS NOTED ON DRAWINGS) SHOULD BE AS TABLE BELWO :-

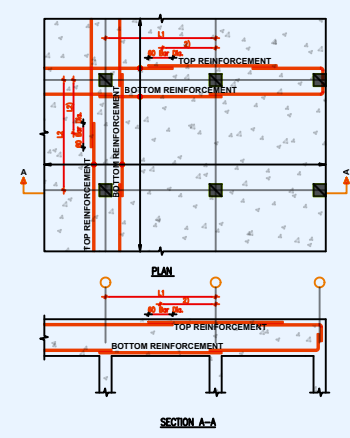
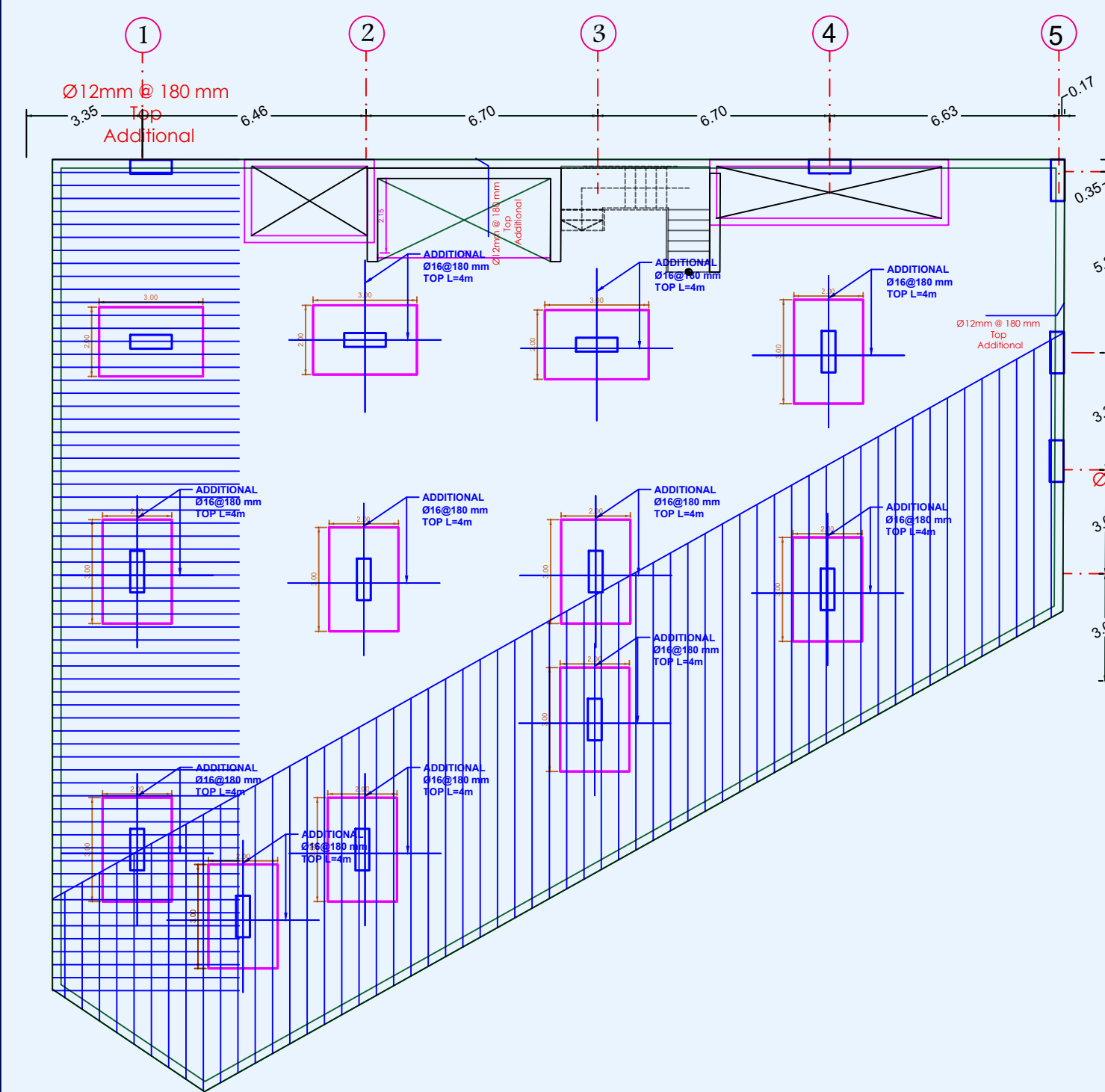
BAR DIA.(mm)	10	12	16	18	20	22	25
LAP LENGTH (mm) IN COLUMNS	400	500	600	650	700	800	900
LAP LENGTH (mm) IN SLAB & BEAMS	400	600	700	800	900	1000	1250

SLAB REINFORCEMENT (G+1ST TO 8TH FLOOR)
 SLAB THICKNESS = 200 mm

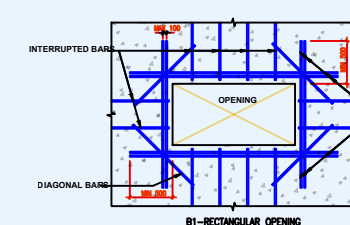
. all dim. from ARCH D.W.G.

No.	date	Initials	revision

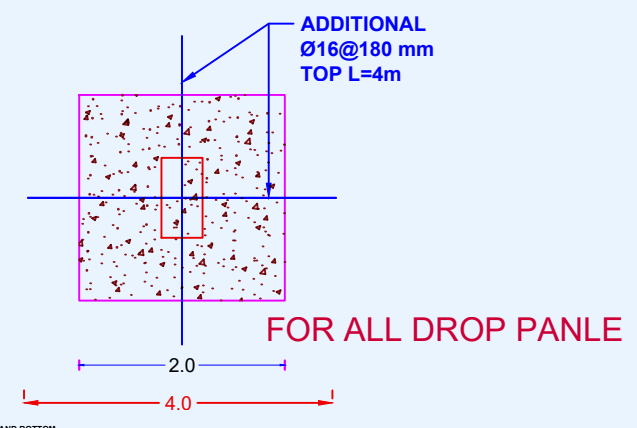
Job title: (A)
 drawing title: PLAN OF SLAB REINFORCEMENT&SEC.
 designed: ENG - DR-Majid Albana
 checked: 1-100
 scale: 1-100
 date: 8 / 2025
 drawn: 14
 approved: ST/D/08



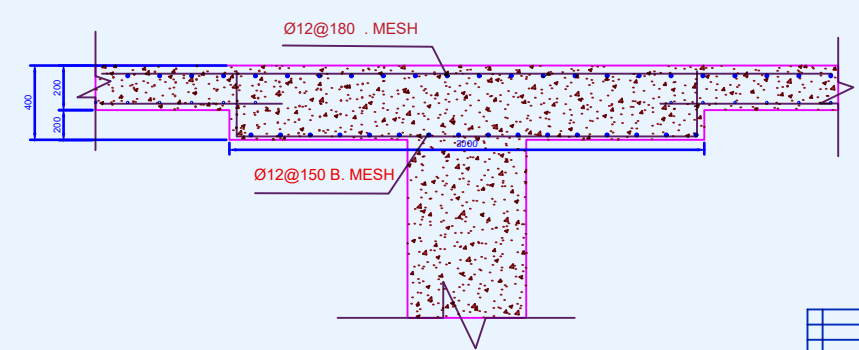
K-TYPICAL FLAT SLAB REINFORCEMENT DETAIL



DI-RECTANGULAR OPENING



25 mm Camber
slab camber 25 mm



ADDITIONAL DIR. X & Y

SLAB REINFORCEMENT (G+1ST TO 8TH FLOOR)
SLAB THICKNESS = 200 mm

MINIMUM LAP LENGTH (UNLESS NOTED ON DRAWINGS) SHOULD BE AS TABLE BELWO :-

BAR DIA.(mm)	10	12	16	18	20	22	25
LAP LENGTH (mm) IN COLUMNS	400	500	600	650	700	800	900
LAP LENGTH (mm) IN SLAB & BEAMS	400	600	700	800	900	1000	1250

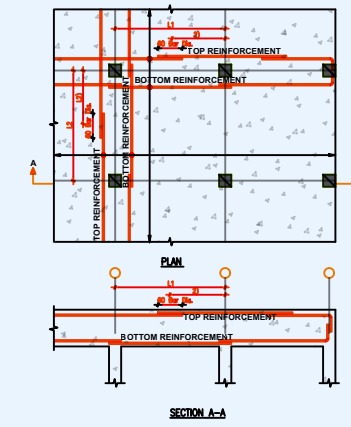
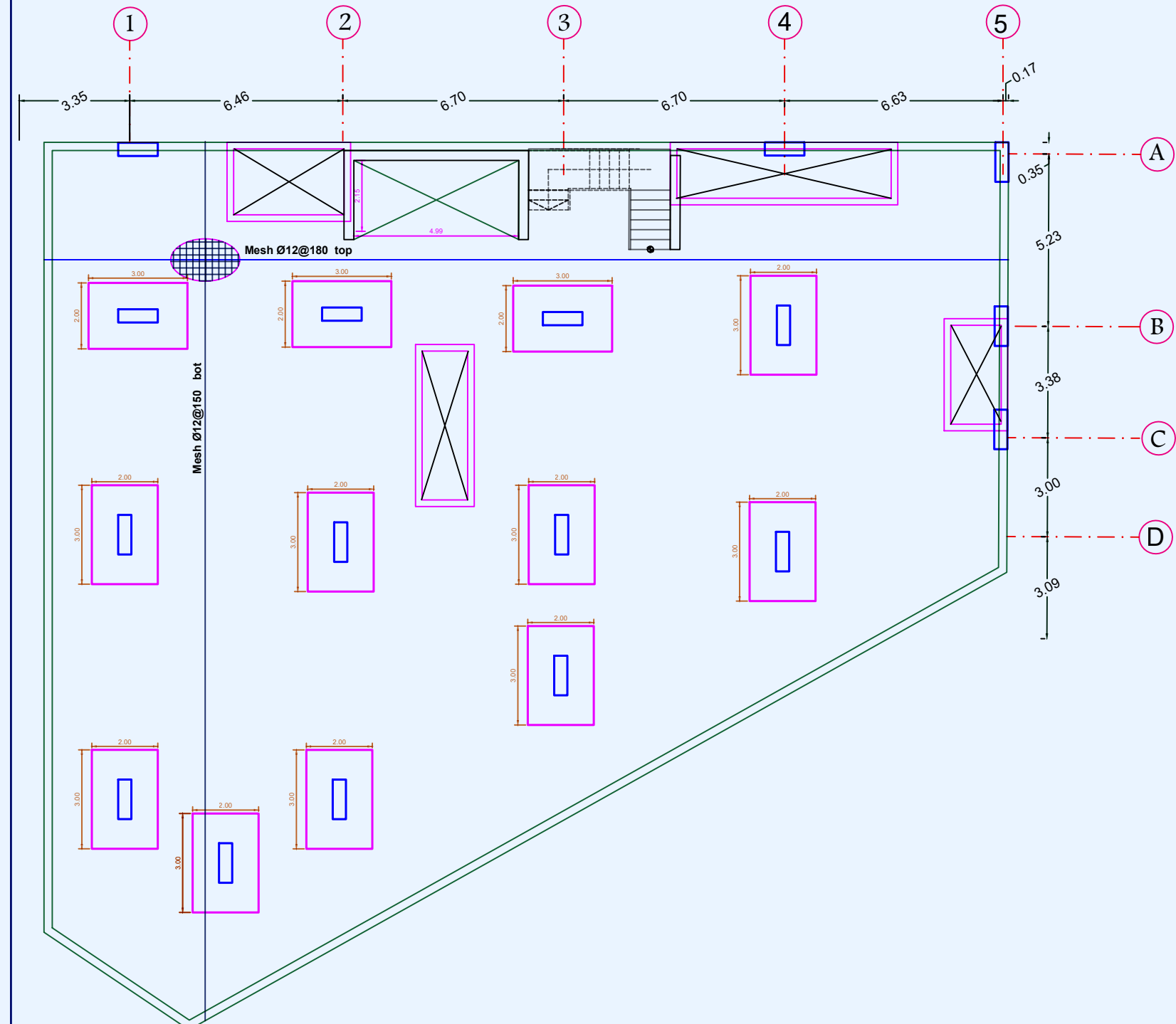
. all dim. from ARCH D.W.G.

no.	date	initials	revision

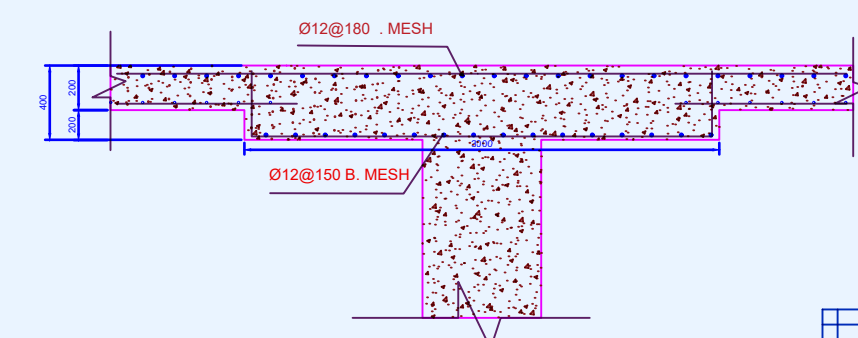
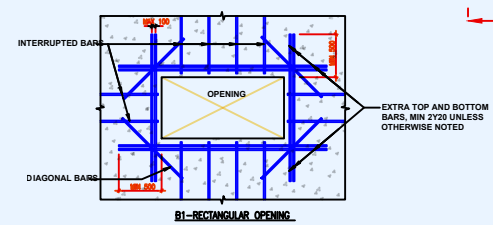
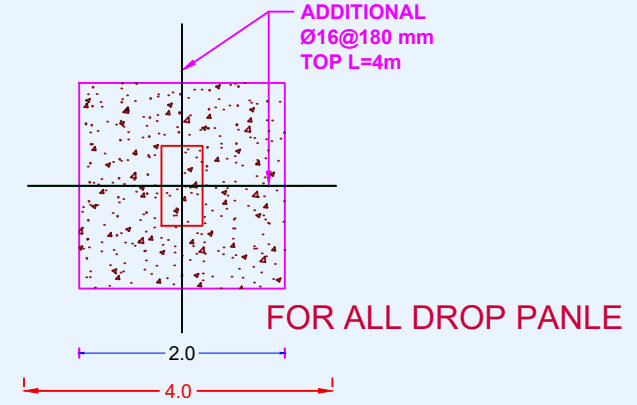
job title
(A)

drawing title
PLAN OF SLAB REINFORCEMENT & SEC.

designed: ENG. DR-Majid Albana project manager
checked: scale: 1-100 date: 8/2025
drawn: job no. 15 sheet no.
approved: 15 ST/D/08



K-TYPICAL FLAT SLAB REINFORCEMENT DETAIL



MINIMUM LAP LENGTH (UNLESS NOTED ON DRAWINGS) SHOULD BE AS TABLE BELWO :-

BAR DIA.(mm)	10	12	16	18	20	22	25
LAP LENGTH (mm) IN COLUMNS	400	500	600	650	700	800	900
LAP LENGTH (mm) IN SLAB & BEAMS	400	600	700	800	900	1000	1250

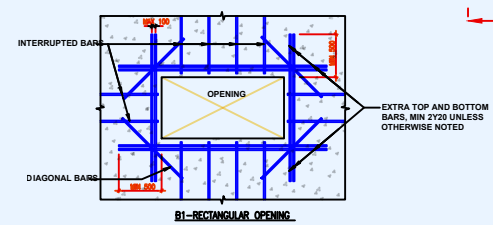
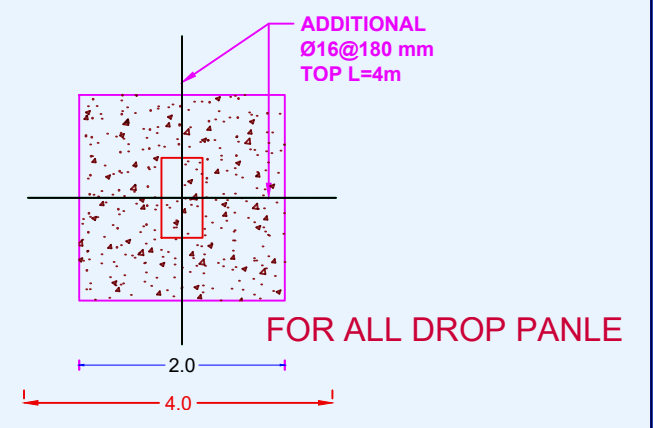
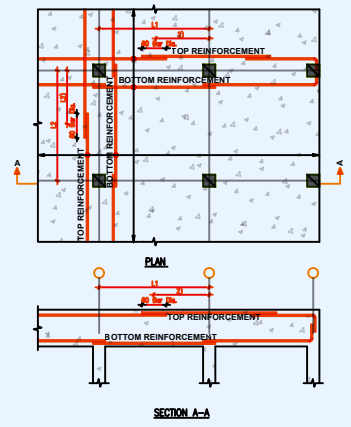
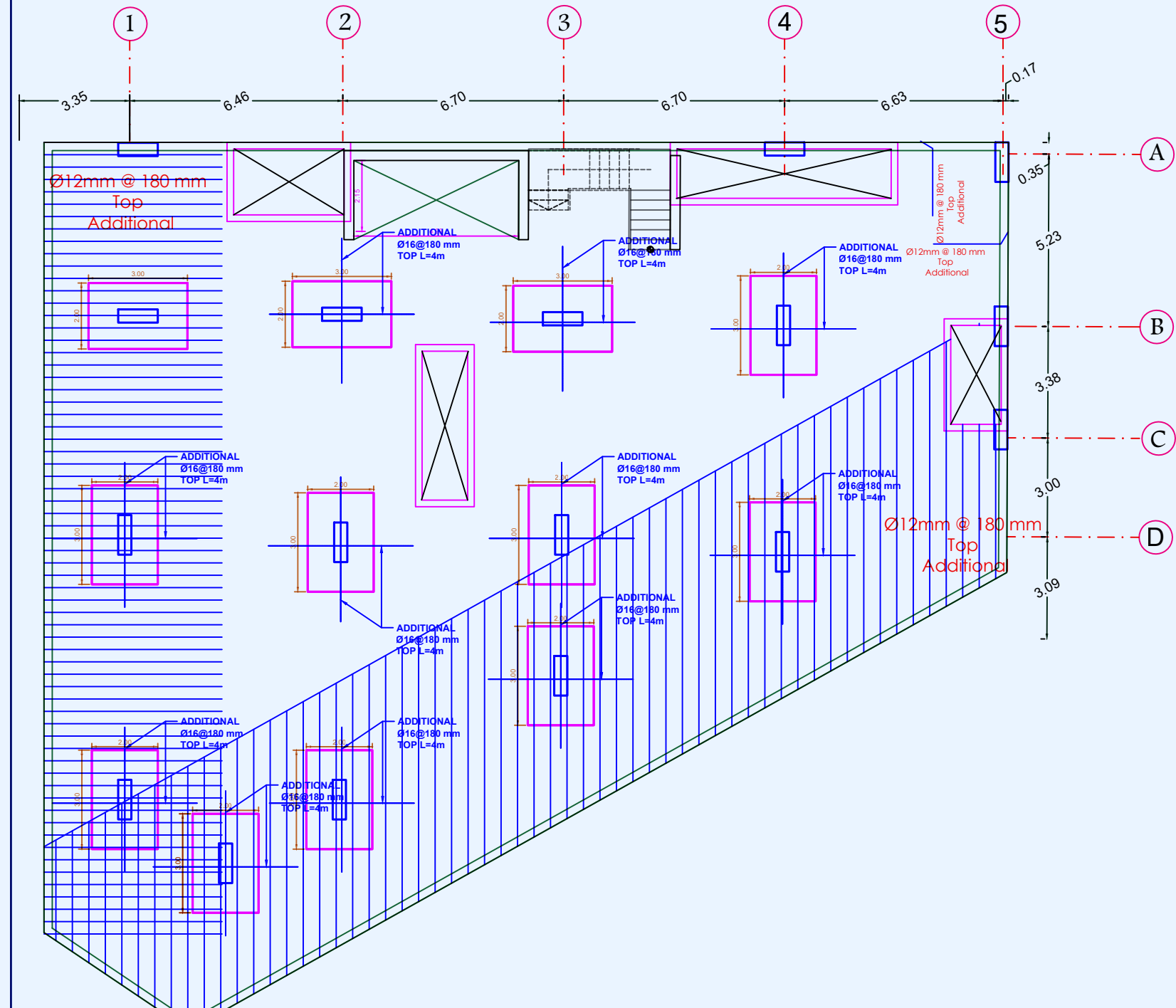
SLAB REINFORCEMENT (9TH+10TH FLOOR)

SLAB THICKNESS = 200 mm

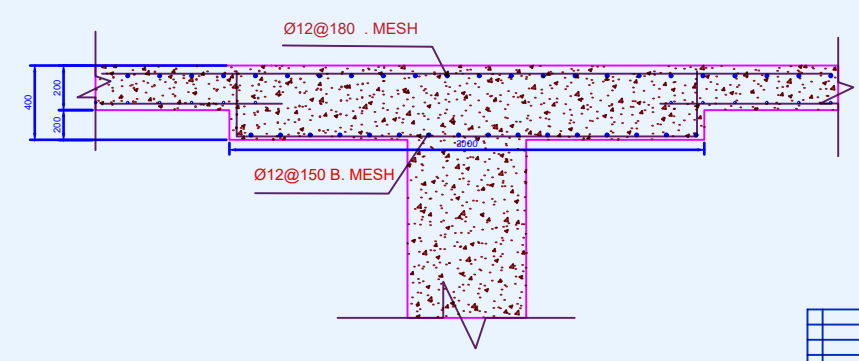
. all dim. from ARCH D.W.G.

No.	date	Initials	revision

job title	(A)
drawing title	PLAN OF SLAB REINFORCEMENT&SEC.
designed	ENG : DR-Majid Albana
checked	
drawn	
approved	
project manager	
scale	1-100
date	8 / 2025
sheet no.	16
	ST/D/08



25 mm Camber slab camber 25 mm



Ø12mm @ 180 mm
Top
Additional

ADDITIONAL DIR. X & Y

SLAB REINFORCEMENT (9TH+10TH FLOOR)

SLAB THICKNESS = 200 mm

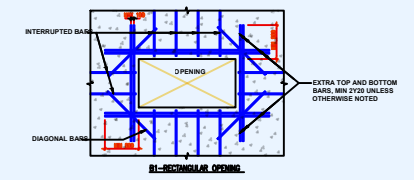
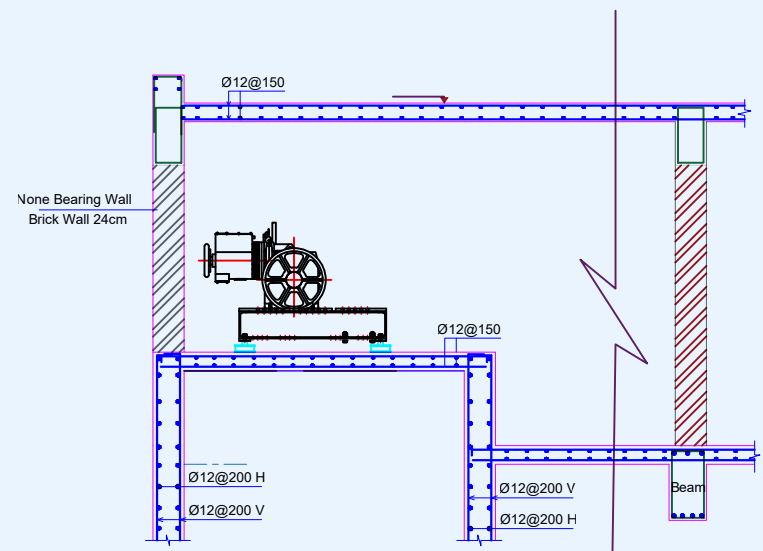
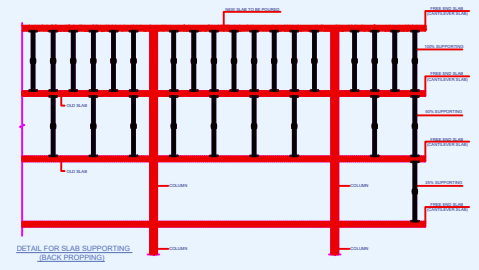
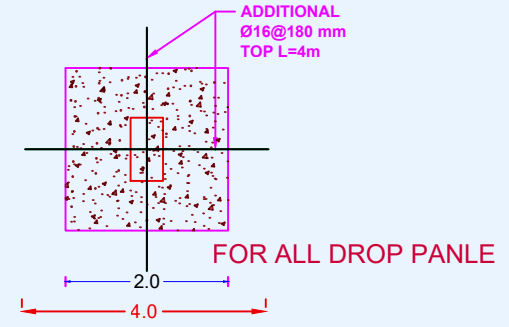
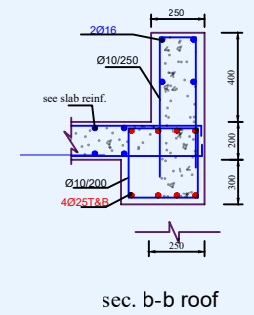
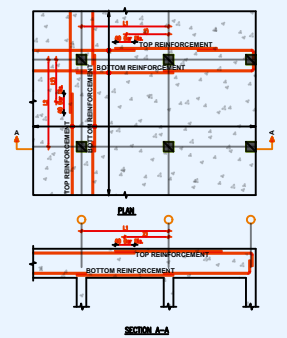
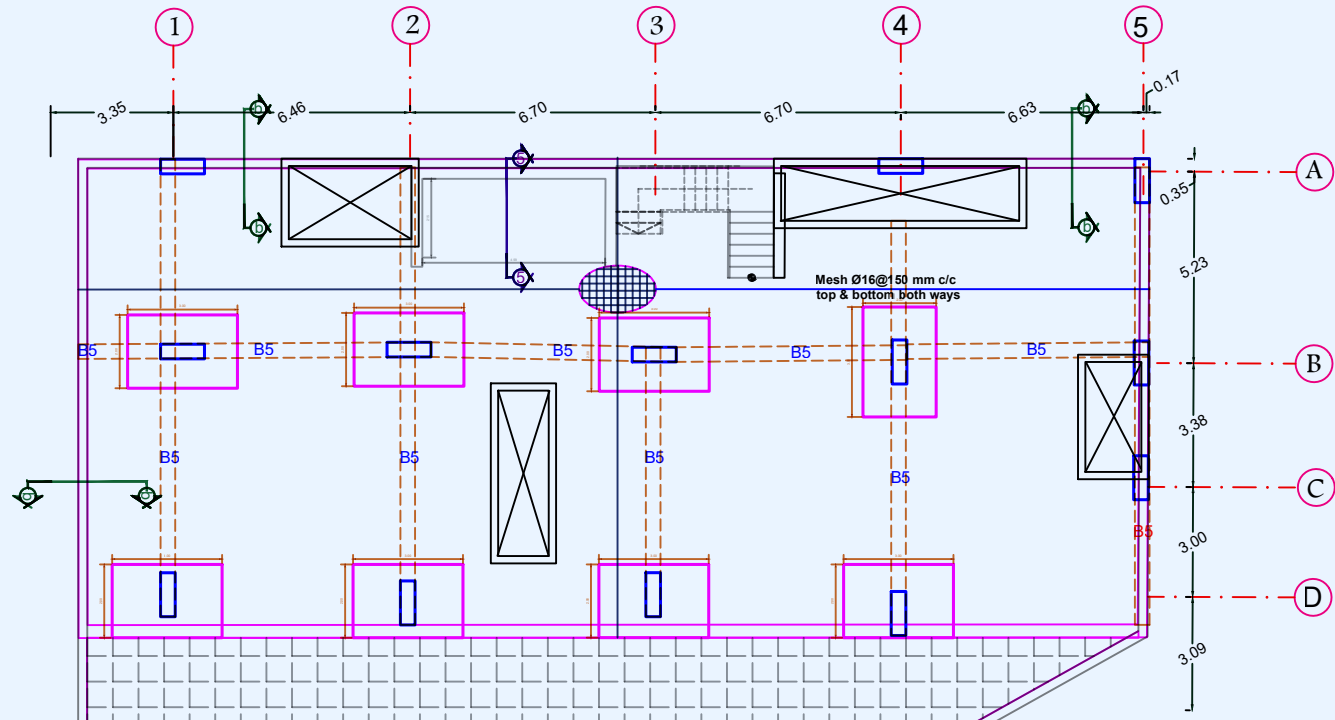
MINIMUM LAP LENGTH (UNLESS NOTED ON DRAWINGS) SHOULD BE AS TABLE BELWO :-

BAR DIA.(mm)	10	12	16	18	20	22	25
LAP LENGTH (mm) IN COLUMNS	400	500	600	650	700	800	900
LAP LENGTH (mm) IN SLAB & BEAMS	400	600	700	800	900	1000	1250

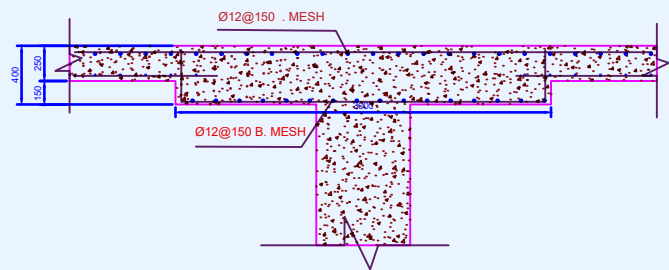
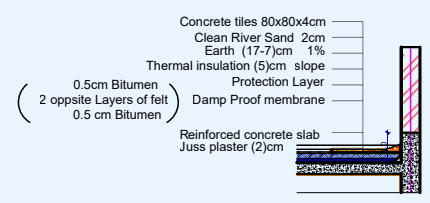
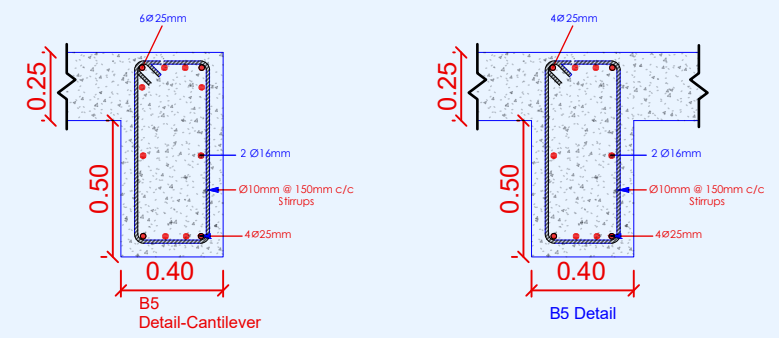
. all dim. from ARCH D.W.G.

No.	date	initials	revision

job title	project manager
(A)	
drawing title	
PLAN OF SLAB REINFORCEMENT & SEC.	
designed ENG : DR-Majid Albana	project manager
checked	scale: 1-100 date: 8/2025
drawn	job no. 17
approved	sheet no. ST/D/08



25 mm Camber slab camber 25 mm



MINIMUM LAP LENGTH (UNLESS NOTED ON DRAWINGS) SHOULD BE AS TABLE BELOW :-

BAR DIA.(mm)	10	12	16	18	20	22	25
LAP LENGTH (mm) IN COLUMNS	400	500	600	650	700	800	900
LAP LENGTH (mm) IN SLAB & BEAMS	400	600	700	800	900	1000	1250

SLAB REINFORCEMENT (PENTHOUSE floor)

SLAB THICKNESS = 250 mm

. all dim. from ARCH D.W.G.

No.	date	Initials	revision

job title: (A)
 drawing title: SIXTH FLOOR (ROOF) PLAN REINFORCEMENT&SEC.
 designed: ENG - DR-Majid Albana
 checked: 1-100 scale, 6/2025 date
 drawn: job no. 18
 approved: sheet no. ST/D/12