

مكتب المهندس بسام عباس - استشارات هندسية

HARBATA ONE DAY SURGERY HOSPITAL

مستشفى حربتا لجراحة اليوم الواحد

الخـرائط التنفيذـية الانشائية

حربتا - محافظة بعلبك الهرمل



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No.

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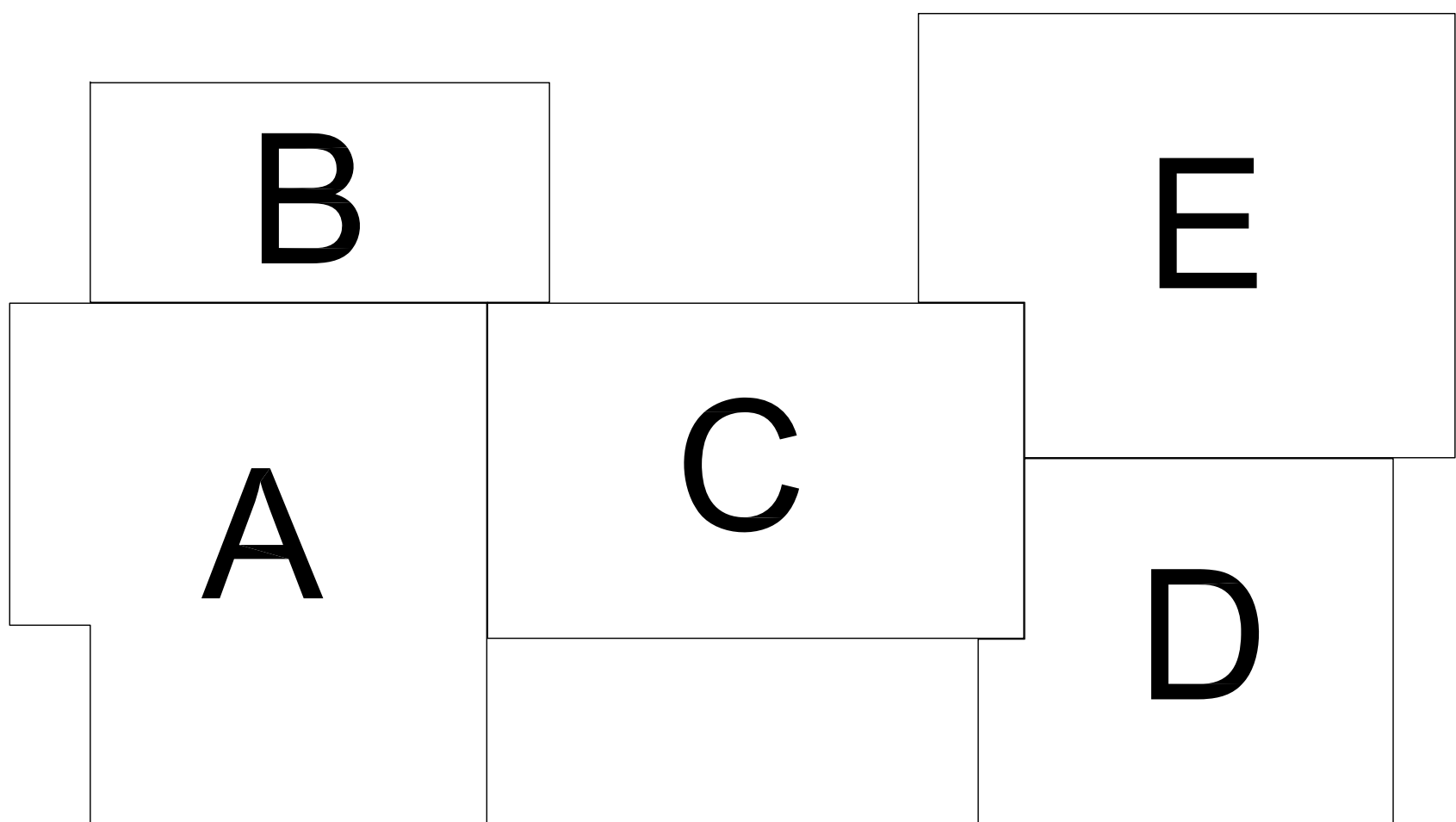
S501

STRUCTURAL NOTES

1. General:
 - All dimensions must not be scaled and shall be read carefully or computed from the drawings & should be verified on site by the contractor.
 - All dimensions are in cm, bar diameter in mms & levels in ms except indicated.
 - All the shown plan levels are at the top surface of the indicated member.
 - Each of the structural drawings shall be read carefully in conjunction with all other architectural, electrical, and mechanical drawings then any contradictions must be reviewed with the engineer before execution.
2. Concrete:
 - Ready mix concrete should be used, placed in the forms and compacted using mechanical vibrators within a period of not more than 40 minutes in ordinary weather and 30 minutes in hot weather.
 - Fresh concrete should not be subjected to any disturbance, vibration or rain water until it harden enough.
 - Fresh concrete must be kept wet and cured with potable water for not less than 7 days. Any other curing compound can be used after the approval of the engineer.
 - The compressive cylinder strength of concrete after 28 days (f_c' 28) should not be less than:
 - 300 kg/cm² for columns & shear walls; with a minimum cement content of 400 kg per one m³ of concrete
 - 250 kg/cm² for slabs, beams and other members; with a minimum cement content of 350 kg per one m³ of concrete
 - 150 kg/cm² for plain concrete; with minimum cement content of 250 kg per one m³ of concrete
 - All under ground concrete surfaces should be well water proofed and protected.
 - All hardened slabs and beams must be remained partially propped during construction in order to carry the weight of the above unhardened slab supported on it.
 - Unless otherwise noted, the bottom side of the beam forms should be given a camber of:
 - span/500 for beam span > 5m
 - span/200 for cantilevers.
 - In the case of ordinary loading and normal temperature, concrete forms cannot be removed before:
 - 2 days for columns and walls.
 - 2x(span+2) days for slabs and beams but not less than14 days.
 - The minimum concrete clear cover for steel reinforcement:
 - 7.5 cm for footings if exposed and 5cm if not
 - 4 cm for columns & drop beams
 - 2 cm for slabs
4. Steel Reinforcement:
 - All reinforcing steel bars designated by (T) should be high tensile deformed steel having a minimum yield strength of f_y =4,200 kg/cm².
 - All reinforcing steel bars designated by (Ø) should have a minimum yield strength of f_y =3,000 kg/cm².
 - Reinforcement hook details, lap splices, development length and concrete cover should be done according to the ACI318–08 code except indicated in the drawings.
 - Label "(+)top:" stands for additional reinforcement in slab at top layer.
 - Label "(+)bot:" stands for additional reinforcement in slab at bottom layer.

DESIGN CRITERIA

1. Design Codes:
 - Structural Codes: ACI 318–08 ; AISC 360–05
 - Building Codes: ASCE7–05 ; UBC–97
2. Gravity Loads:
 - Covering Tiles = 250 kg/m² for slabs
 - Internal Partition = 220 kg/m² of wall (TH=12cm)
 - Internal Partition = 270 kg/m² of wall (TH=15cm)
 - External Partition = 410 kg/m² of wall (TH=22cm)
 - Live Load = 250 kg/m²
 - Roof Live Load = 100 kg/m²
 - Snow Load on roof = 120 kg/m²
 - Water Load on roof = 100 kg/m²
 - Water Load on staircase = 650 kg/m² (40m³)
3. Seismicity of the Site:
 - Seismic zone 2B
 - Peak acceleration a_h =0.25g
 - Soil profile S_c
 - Seismic coefficients C_s =0.29; C_v =0.39
 - Importance factor I =1.25 (essential building: surgery & emergency treatment area)
 - Strength reduction factor R =5.5
4. Bearing Capacity:
 - Modulus of sub–grade reaction: K_s =4000 t/m³
 - Allowable Bearing Capacity (gravity design): q_{all} =2.75 kg/cm²
 - Allowable Bearing Capacity (seismic design): q_{all} =3.50 kg/cm²
 - Depth of foundation D_f =1.5m
5. Number of Structural Blocks:
 - 5 adjacent blocks separated by expansion joints.
6. Number of Stories Consider in Study
 - Block A, B, D & E: 2 stories (GF, 1st)
 - Block C: 4 stories (GF, 1st, 2nd, staircase)
 - that means: building structure was studied to carry only one additional story.



Client: **HARBATA MUNICIPALITY**

CONCISE STRUCTURAL NOTES

1. Dimensions are in cm except indicated, bar diameter in mm & levels in m.

2. Concrete Rate:

- f_c' =300kg/cm² for columns & shear walls.
- f_c' =250kg/cm² for other members.

3. Steel Reinf.:

- f_y =4,200kg/cm² for rebars, indicated as (T).
- f_y =3,000kg/cm² for stirrups, indicated as (Ø).

4. Soil Bearing Capacity:
 q_{all} =2.75 kg/cm².

5. for more detailed notes see: sheet S001.

REV3	BY: J	APP: J	REV3-DESC	REV3-DESC
REV2	BY: Z	APP: Z	REV2-DESC	REV2-DESC
REV1	BY: I	APP: I	REV1-DESC	REV1-DESC
REV	BY	APP	DESCRIPTION	DATE

Revisions

Project Information

Project:

Project Title:

HARBATA ONE DAY SURGERY HOSPITAL

Country: LEBANON Region: HARBATA BEQAA Plot No: 705

Contractor:

Sheet title:

List of Drawings & Structural Notes

Sheet Information	
PROJECT NBR.	00, 00, 0, 0, 25, 03
PROJECT PHASE	EXECUTION
DESIGNED	M.T.
DRAWN	M.T.
CHECKED	B.A.
APPROVED	
DATE	05/08/2024
SCALE	-
SHEET TYPE	STRUCTURAL

Sheet Number

S 001

- CONCISE STRUCTURAL NOTES
- Dimensions are in cm except indicated, bar diameter in mm & levels in m.
 - Concrete Rate:
 - $f_c=300\text{kg/cm}^2$ for columns & shear walls.
 - $f_c=250\text{kg/cm}^2$ for other members.
 - Steel Reinf.:
 - $f_y=4,200\text{kg/cm}^2$ for rebars, indicated as (T).
 - $f_y=3,000\text{kg/cm}^2$ for stirrups, indicated as ($\emptyset$).
 - Soil Bearing Capacity:
 $q_{all}=2.75\text{ kg/cm}^2$.
 - For more detailed notes see: sheet S001.

REV3	BY: J	APP: 3	REV3-DESC	REV3-DESC
REV2	BY: Z	APP: 2	REV2-DESC	REV2-DESC
REV1	BY: I	APP: 1	REV1-DESC	REV1-DESC
REV	BY	APP	DESCRIPTION	DATE

Revisions

Project Information

Project:

Project Title: HARBATA ONE DAY SURGERY HOSPITAL

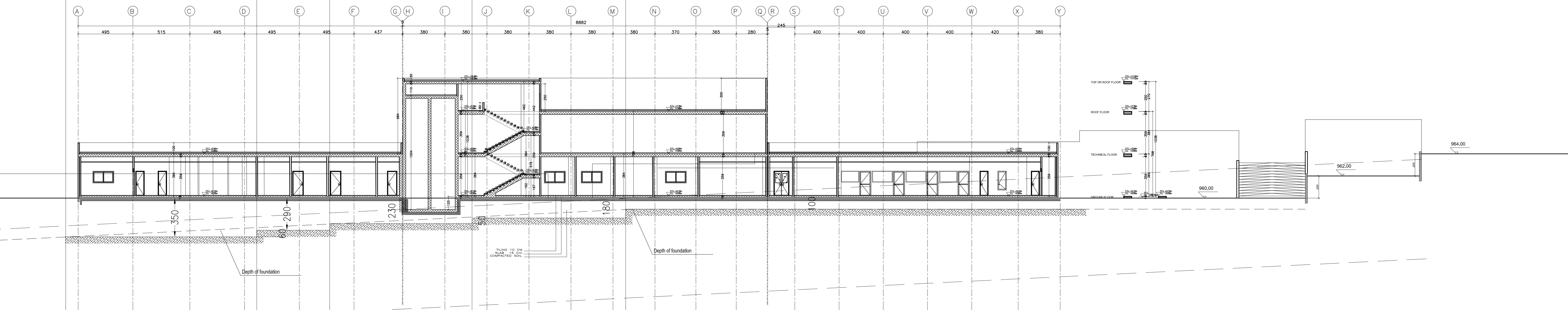
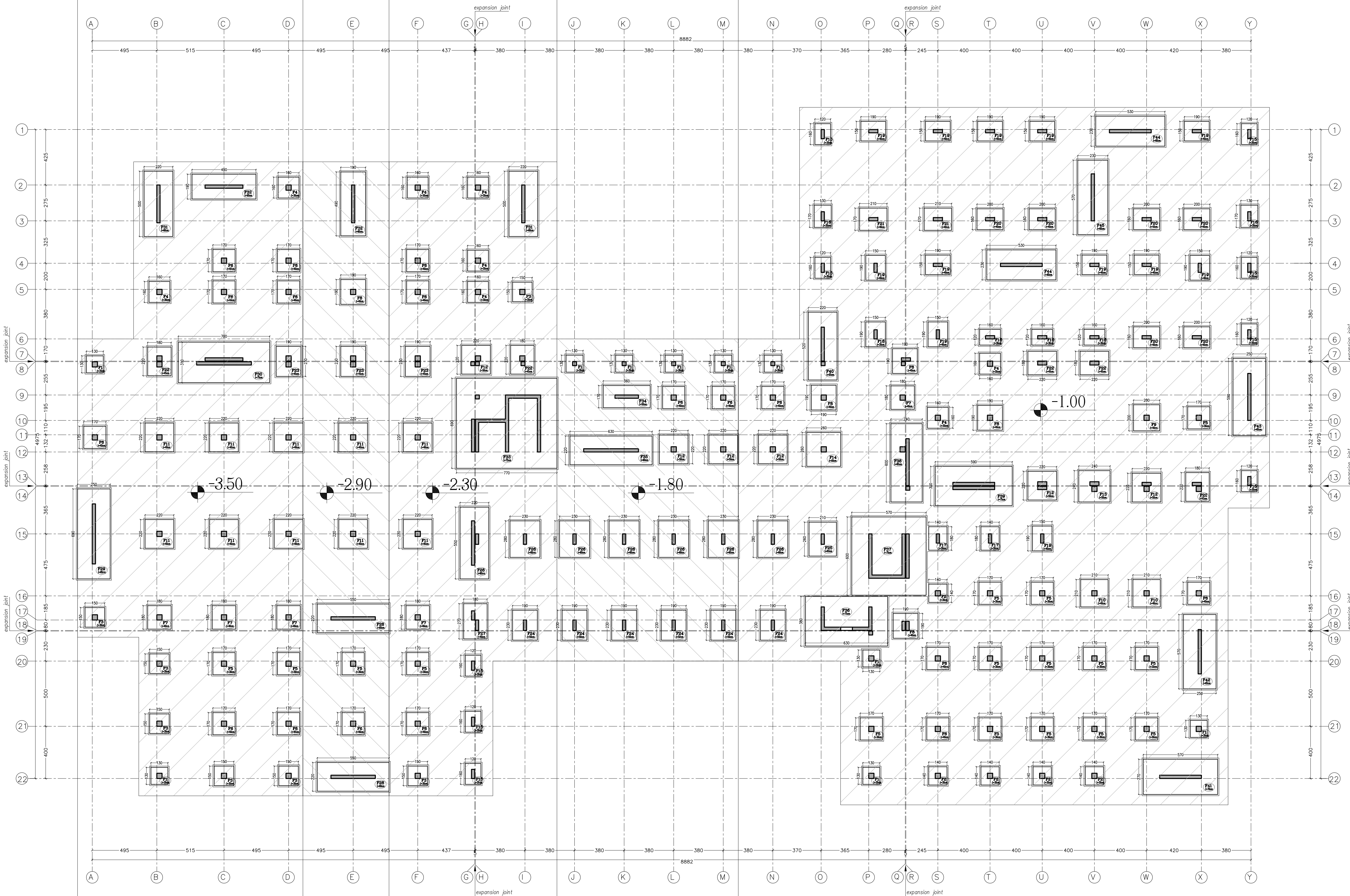
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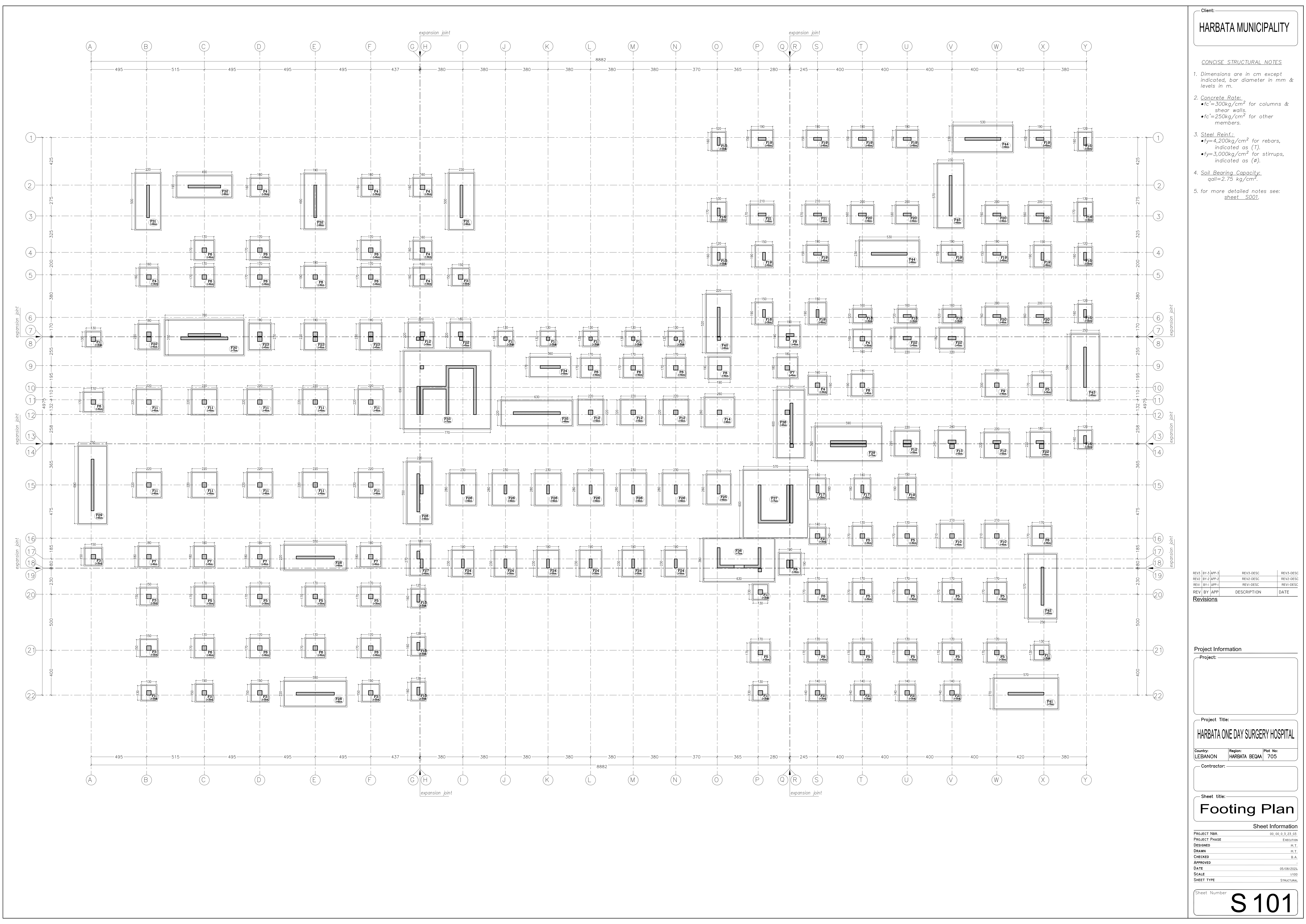
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Sheet title: Excavation Plan

PROJECT NBR.	00.00.0.5.25.03
PROJECT PHASE	EXECUTION
DESIGNED	M.T.
DRAWN	M.T.
CHECKED	B.A.
APPROVED	
DATE	05/08/2024
SCALE	1/50
SHEET TYPE	STRUCTURAL

Sheet Number S 002





- Client: **HARBATA MUNICIPALITY**
- CONCISE STRUCTURAL NOTES**
- Dimensions are in cm except indicated, bar diameter in mm & levels in m.
 - Concrete Rate:
 - $f_c = 300 \text{ kg/cm}^2$ for columns & shear walls.
 - $f_c = 250 \text{ kg/cm}^2$ for other members.
 - Steel Reinf.:
 - $f_y = 4,200 \text{ kg/cm}^2$ for rebars, indicated as (T).
 - $f_y = 3,000 \text{ kg/cm}^2$ for stirrups, indicated as ($\emptyset$).
 - Soil Bearing Capacity:
qall = 2.75 kg/cm².
 - For more detailed notes see: sheet S001.

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REV1	BY: JAP-1	REV1-DESC	REV1-DESC
REV	BY: APP	DESCRIPTION	DATE

Revisions

Project Information

Project:

Project Title: **HARBATA ONE DAY SURGERY HOSPITAL**

Country: **LEBANON** Region: **HARBATA BEQAA** Plot No: **705**

Contractor:

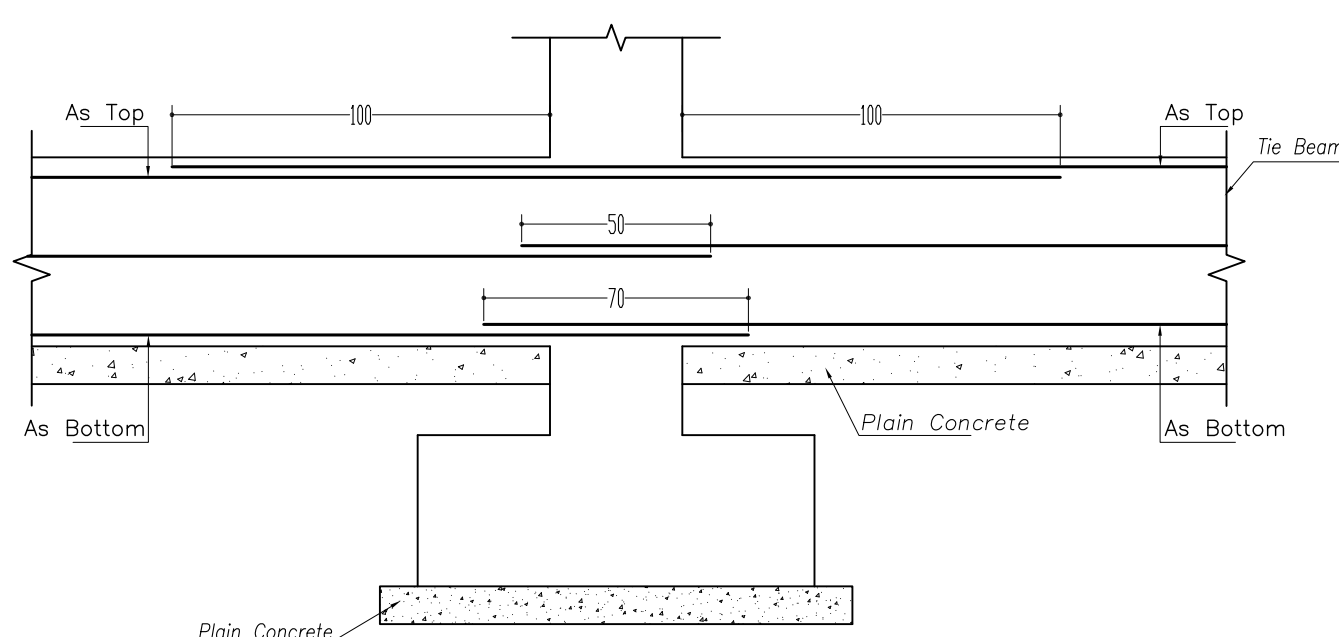
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PROJECT PHASE	EXECUTION
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DRAWN	M.T.
CHECKED	B.A.
APPROVED	
DATE	05/08/2024
SCALE	1/100
SHEET TYPE	STRUCTURAL

Sheet Number **S 101**

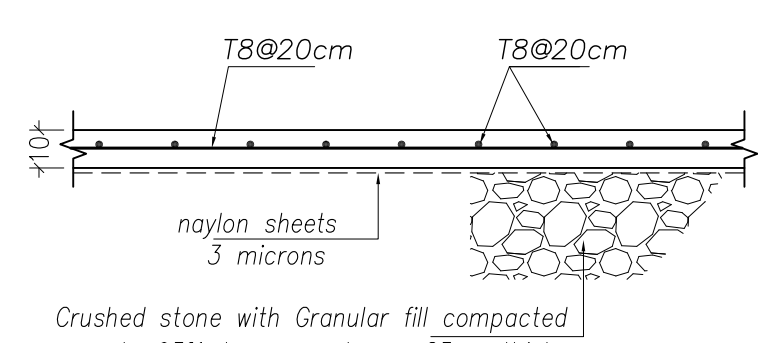
FOOTING SCHEDULE							
TYPE	DIMENSION			Bottom Reinforcement		Top Reinforcement	
	B	L	H	As (short)	As (long)	As (short)	As (long)
F1	130	130	30				
F2	140	140	30				
F3	150	150	30				
F4	160	160	30				
F5	170	170	30				
F6	170	170	40				
F7	180	180	40				
F8	190	190	40				
F9	200	200	40				
F10	210	210	40				
F11	220	220	40				
F12	220	220	50				
F13	240	240	50				
F14	260	260	60				
F15	120	160	30				
F16	130	170	30				
F17	140	180	30				
F18	150	190	30				
F19	150	190	40				
F20	160	200	40				
F21	170	210	40				
F22	180	220	45				
F23	190	230	45				
F24	190	230	50				
F25	210	260	60				
F26	230	280	60				
F27	180	270	40				

FOOTING SCHEDULE							
TYPE	DIMENSION			Bottom Reinforcement		Top Reinforcement	
	B	L	H	As (short)	As (long)	As (short)	As (long)
F28	220	550	60				
F29	250	690	65				
F30	310	700	75				
F31	220	500	60				
F32	190	490	60				
F33	690	770	75				
F34	170	360	50				
F35	220	630	60				
F36	380	630	75				
F37	570	600	75				
F38	240	600	65				
F39	300	590	75				
F40	220	520	65				
F41	270	570	70				
F42	250	570	65				
F43	250	590	65				
F44	230	530	60				
F45	230	570	60				



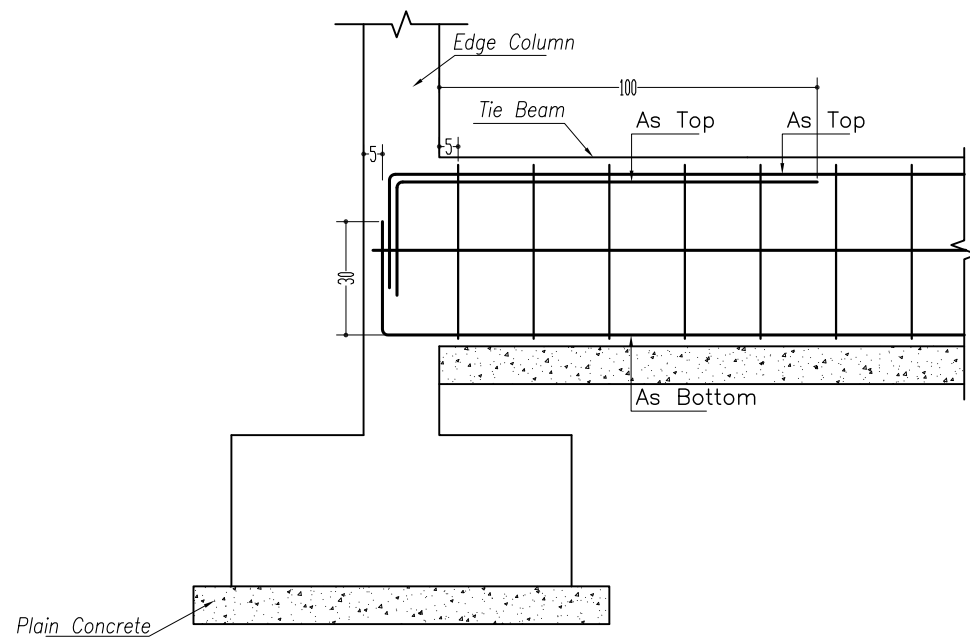
Connection Between
Two Tie Beams

Scale 1/20



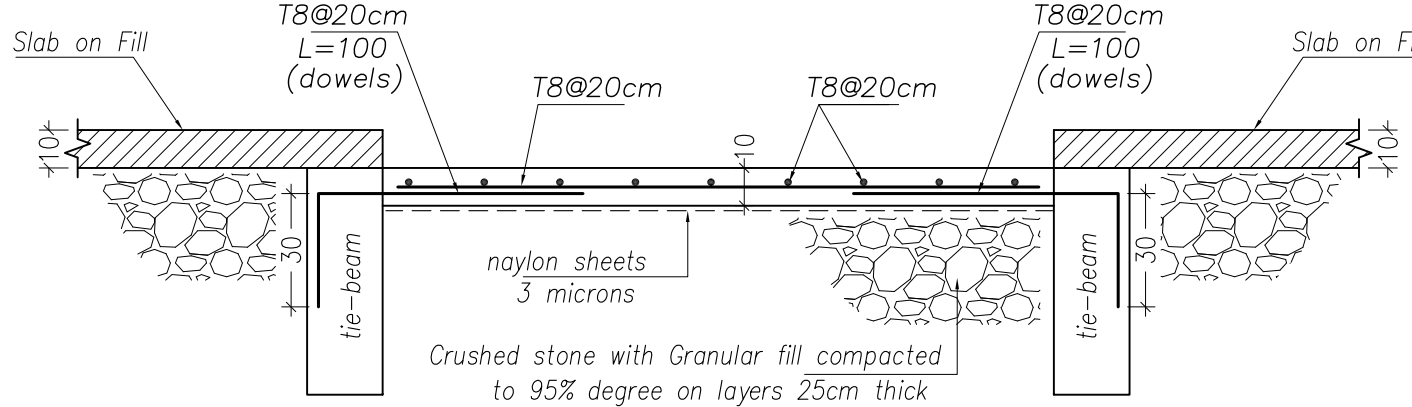
Slab on Fill
Typical Section

Scale 1/20



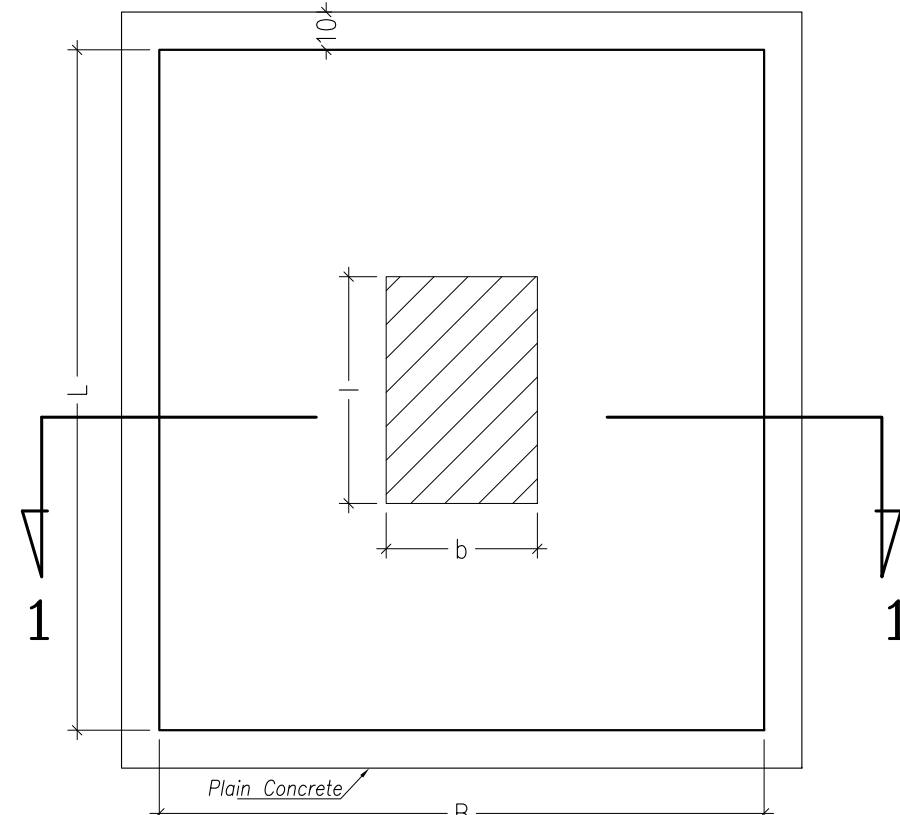
Connection Between
Edge Column And Tie Beam

Scale 1/20



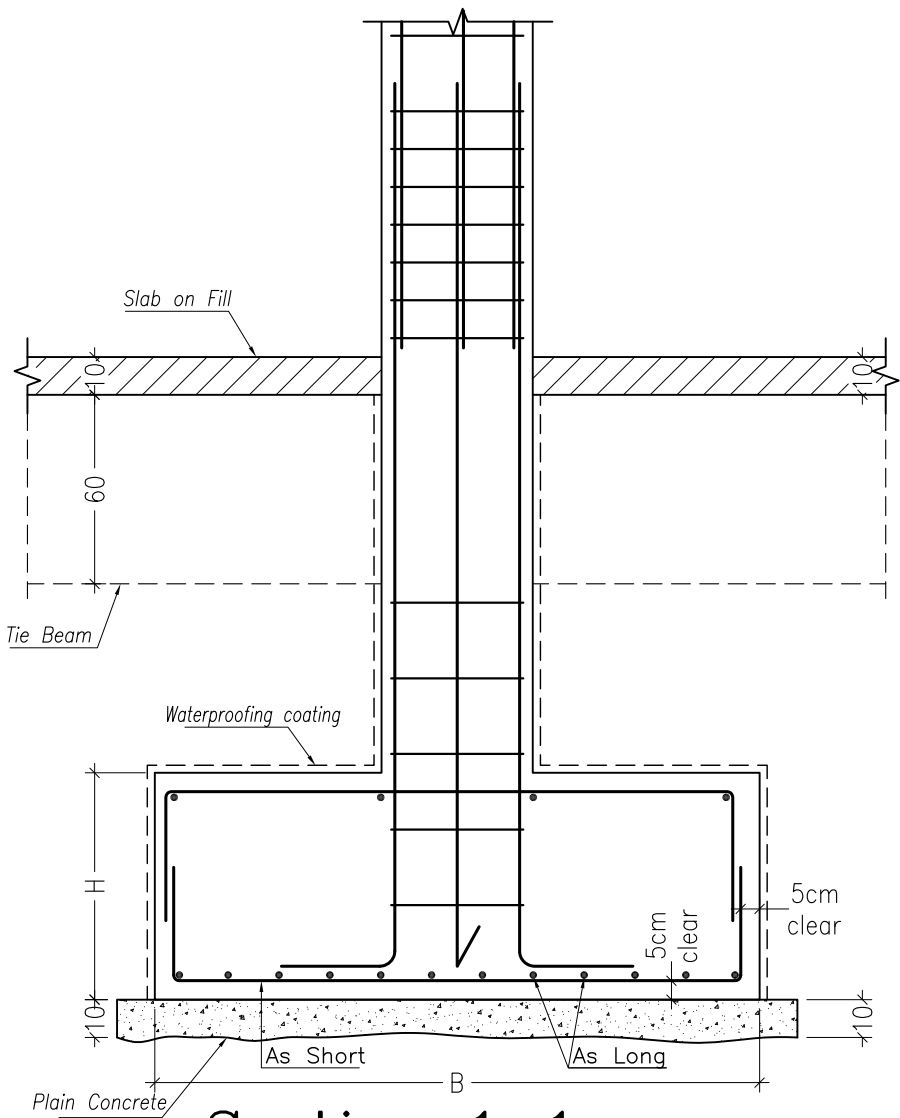
Sunken Slab on Fill
Typical Section

Scale 1/20



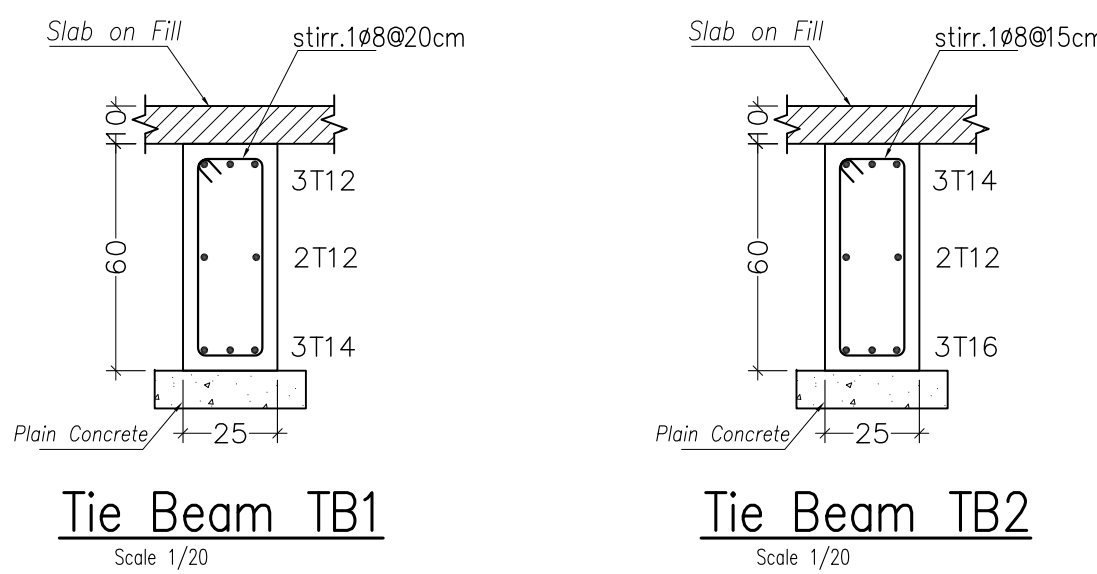
Typical Footing Plan

Scale 1/20



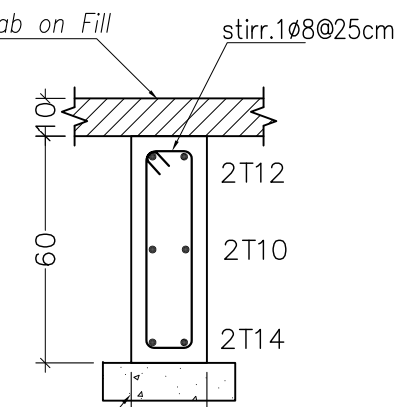
Section 1-1

Scale 1/20



Tie Beam TB1

Tie Beam TB2



Tie Beam TB3

Scale 1/20

Client: HARBATA MUNICIPALITY

- CONCISE STRUCTURAL NOTES
- Dimensions are in cm except indicated, bar diameter in mm & levels in m.
 - Concrete Rate:
 - $f_c=300\text{kg/cm}^2$ for columns & shear walls.
 - $f_c=250\text{kg/cm}^2$ for other members.
 - Steel Reinf.:
 - $f_y=4,200\text{kg/cm}^2$ for rebars, indicated as (T).
 - $f_y=3,000\text{kg/cm}^2$ for stirrups, indicated as ($\emptyset$).
 - Soil Bearing Capacity:
 $q_{all}=2.75\text{ kg/cm}^2$.
 - for more detailed notes see: sheet S001

REV3	BY: J APP-3	REV3-DESC	REV3-DESC
REV2	BY: J APP-2	REV2-DESC	REV2-DESC
REV1	BY: J APP-1	REV1-DESC	REV1-DESC
REV	BY: APP	DESCRIPTION	DATE

Revisions

Project Information

Project:

Project Title:

HARBATA ONE DAY SURGERY HOSPITAL

Country:

LEBANON

Region:

HARBATA BEQAA

Plot No:

705

Contractor:

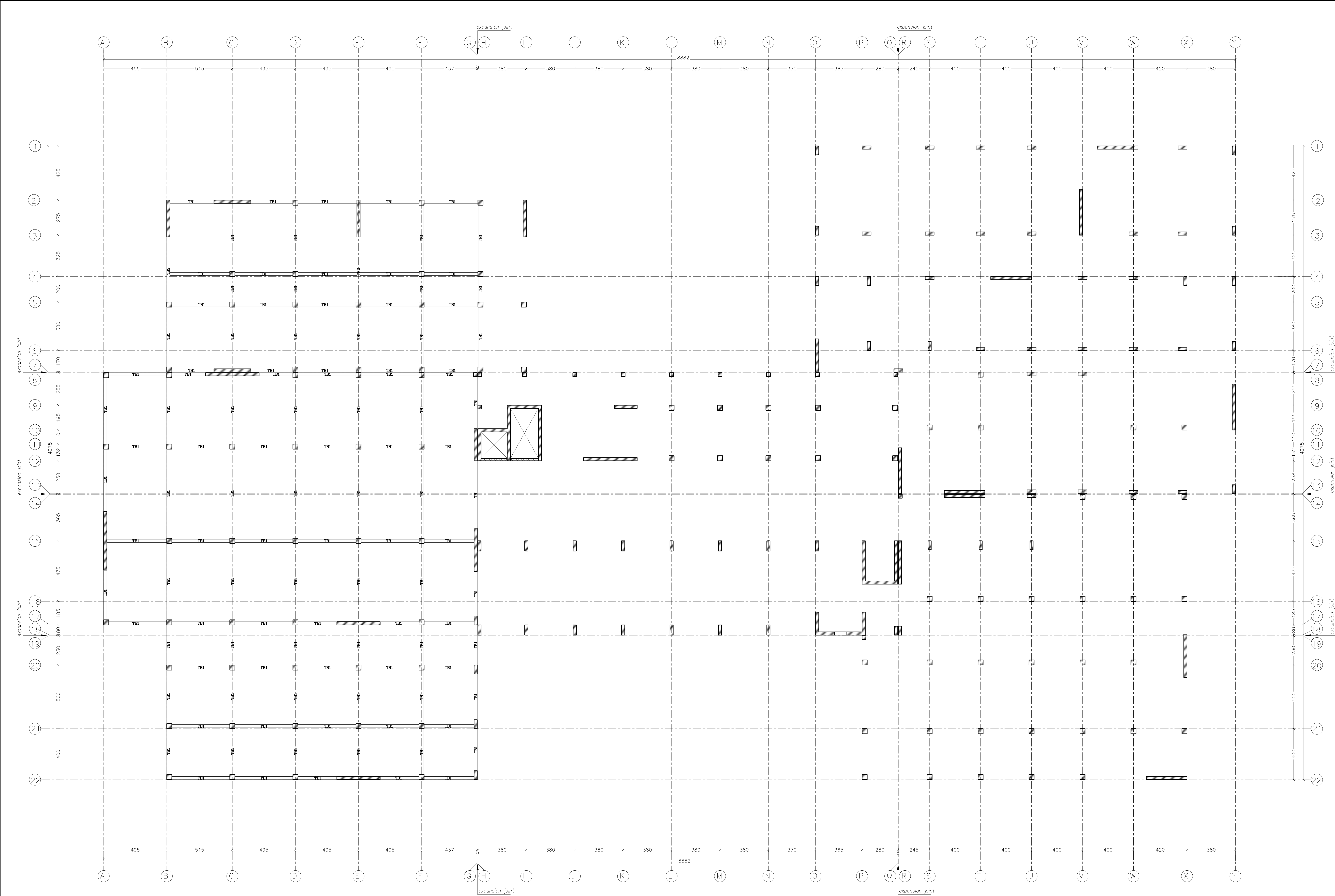
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Footing & Tie-Beam Details

Sheet Information	
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PROJECT PHASE	EXECUTION
DESIGNED	M.T.
DRAWN	M.T.
CHECKED	B.A.
APPROVED	
DATE	05/08/2024
SCALE	1/20
SHEET TYPE	STRUCTURAL

Sheet Number

S 102



Client:

HARBATA MUNICIPALITY

CONCISE STRUCTURAL NOTES

1. Dimensions are in cm except indicated, bar diameter in mm & levels in m.

2. Concrete Rate:

- $f_c=300\text{kg/cm}^2$ for columns & shear walls.
- $f_c=250\text{kg/cm}^2$ for other members.

3. Steel Reinf.:

- $f_y=4,200\text{kg/cm}^2$ for rebars, indicated as (T).
- $f_y=3,000\text{kg/cm}^2$ for stirrups, indicated as ($\emptyset$).

4. Soil Bearing Capacity:
qall=2.75 kg/cm².

5. for more detailed notes see: sheet S001.

REV3	BY: J	APP: 3	REV3-DESC	REV3-DESC
REV2	BY: J	APP: 2	REV2-DESC	REV2-DESC
REV1	BY: J	APP: 1	REV1-DESC	REV1-DESC
REV	BY	APP	DESCRIPTION	DATE

Revisions

Project Information

Project:

Project Title:

HARBATA ONE DAY SURGERY HOSPITAL

Country:

LEBANON

Region:

HARBATA BEQAA

Plot No:

705

Contractor:

Sheet title:

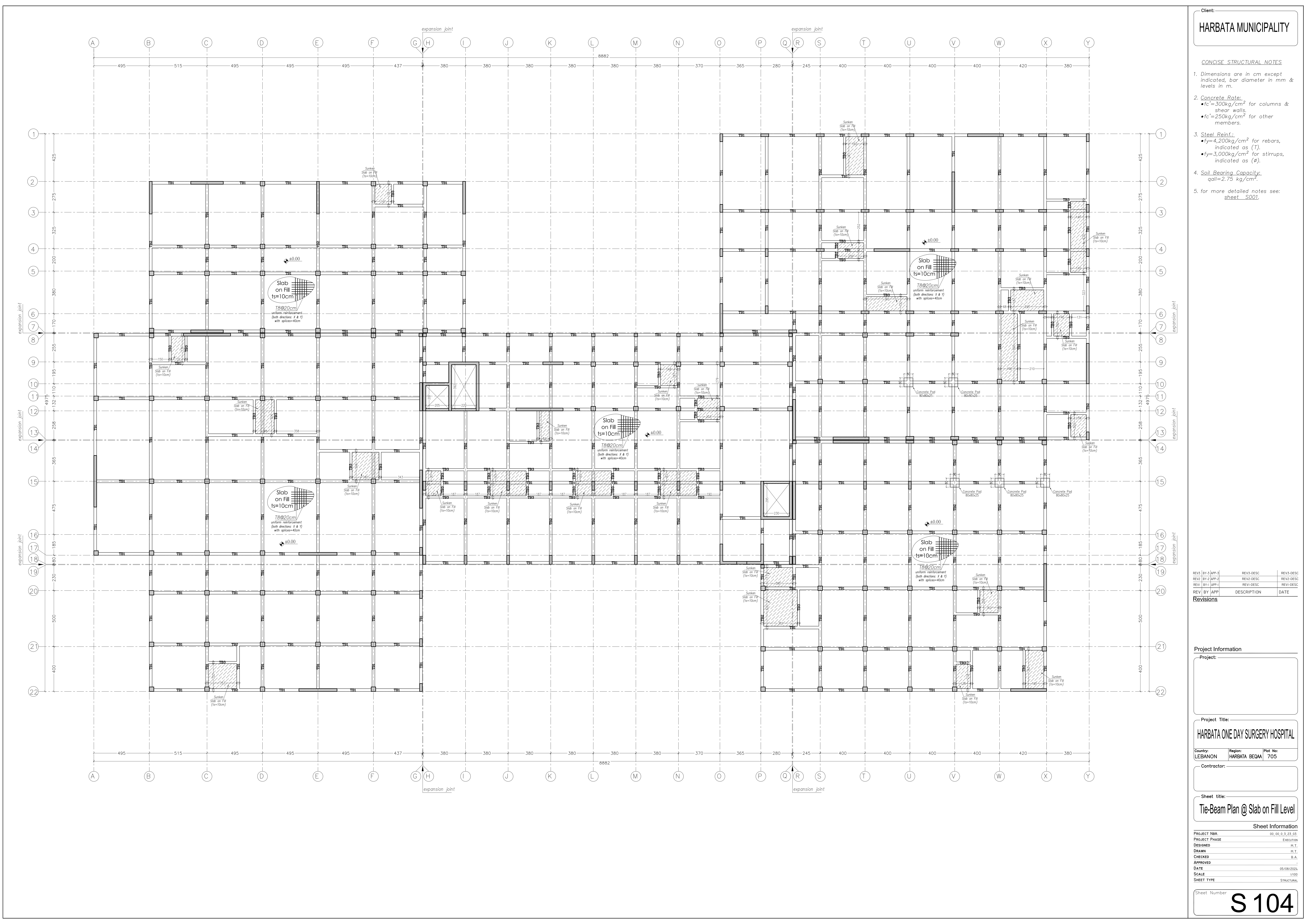
Tie-Beam Plan @ Footing Level

Sheet Information

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PROJECT PHASE	EXECUTION
DESIGNED	M.T.
DRAWN	M.T.
CHECKED	B.A.
APPROVED	
DATE	05/08/2024
SCALE	1/100
SHEET TYPE	STRUCTURAL

Sheet Number

S 103



- Client: HARBATA MUNICIPALITY
- CONCISE STRUCTURAL NOTES
- Dimensions are in cm except indicated, bar diameter in mm & levels in m.
 - Concrete Rate:
 - $f_c = 300 \text{ kg/cm}^2$ for columns & shear walls.
 - $f_c = 250 \text{ kg/cm}^2$ for other members.
 - Steel Reinf.:
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 - $f_y = 3,000 \text{ kg/cm}^2$ for stirrups, indicated as ($\emptyset$).
 - Soil Bearing Capacity:
 - $q_{all} = 2.75 \text{ kg/cm}^2$.
 - For more detailed notes see: sheet S001.

REV3	BY: APP-3	REV3-DESC	REV3-DESC
REV2	BY: APP-2	REV2-DESC	REV2-DESC
REV1	BY: APP-1	REV1-DESC	REV1-DESC
REV	BY: APP	DESCRIPTION	DATE

Revisions

Project Information

Project:

Project Title: HARBATA ONE DAY SURGERY HOSPITAL

Country: LEBANON Region: HARBATA BEQAA Plot No: 705

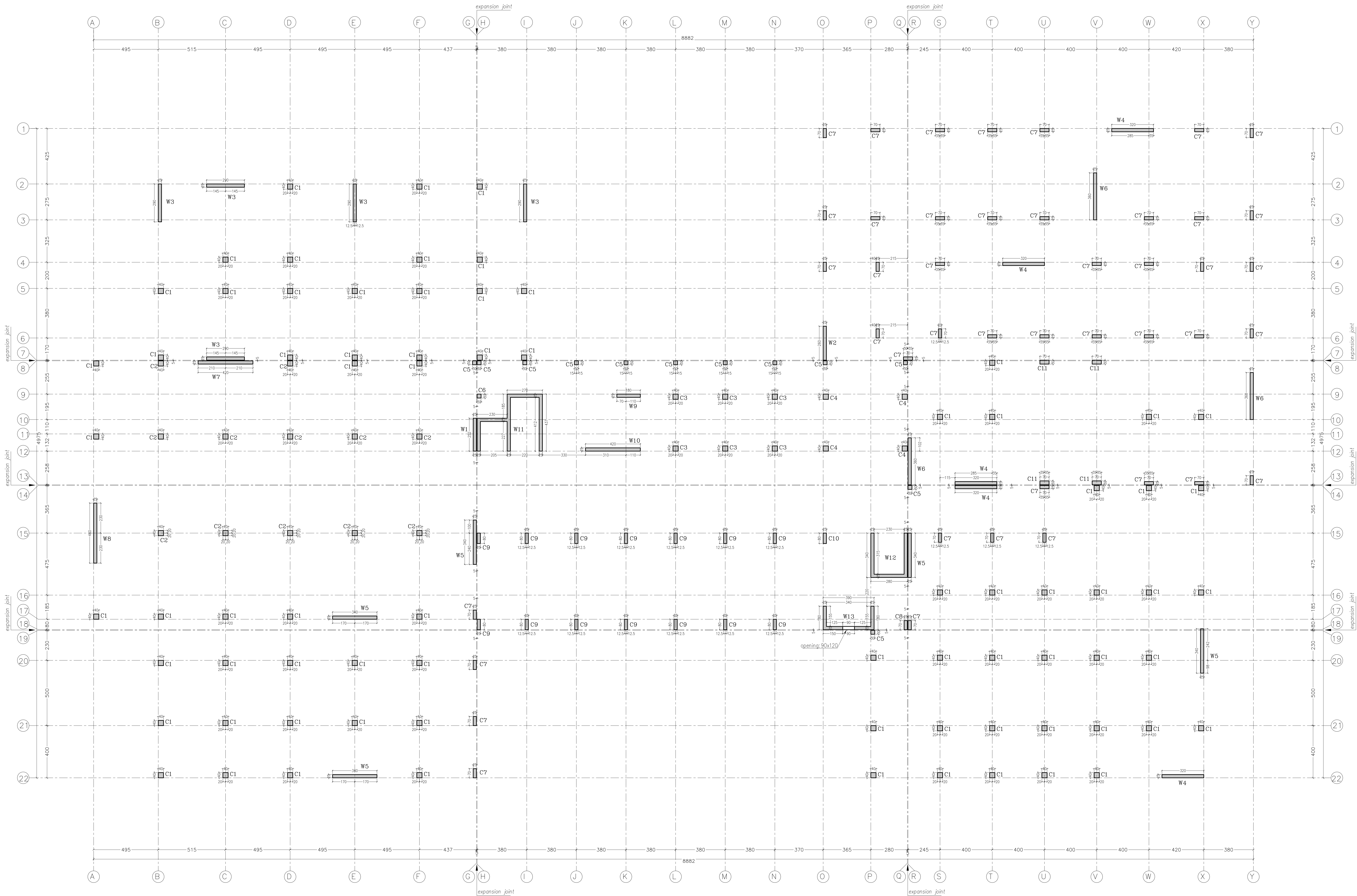
Contractor:

Sheet title: Tie-Beam Plan @ Slab on Fill Level

Sheet Information

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PROJECT PHASE	EXECUTION
DESIGNED	M.T.
DRAWN	M.T.
CHECKED	B.A.
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DATE	05/08/2024
SCALE	1/100
SHEET TYPE	STRUCTURAL

Sheet Number: S 104



- Client: **HARBATA MUNICIPALITY**
- CONCISE STRUCTURAL NOTES**
- Dimensions are in cm except indicated, bar diameter in mm & levels in m.
 - Concrete Rate:**
 - $f_c = 300 \text{ kg/cm}^2$ for columns & shear walls.
 - $f_c = 250 \text{ kg/cm}^2$ for other members.
 - Steel Reinforcement:**
 - $f_y = 4,200 \text{ kg/cm}^2$ for rebars, indicated as (T).
 - $f_y = 3,000 \text{ kg/cm}^2$ for stirrups, indicated as ($\emptyset$).
 - Soil Bearing Capacity:**
qall = 2.75 kg/cm^2 .
 - For more detailed notes see: sheet S001.

REV3	BY: APP-3	REV3-DESC	REV3-DESC
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REV1	BY: APP-1	REV1-DESC	REV1-DESC
REV	BY: APP	DESCRIPTION	DATE

Revisions

Project Information

Project:

Project Title: **HARBATA ONE DAY SURGERY HOSPITAL**

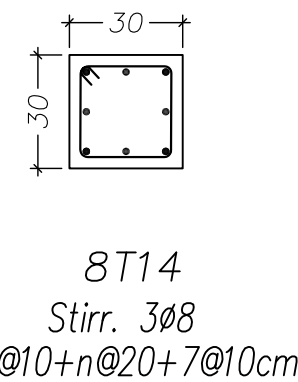
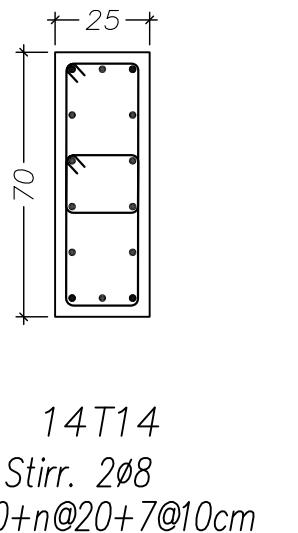
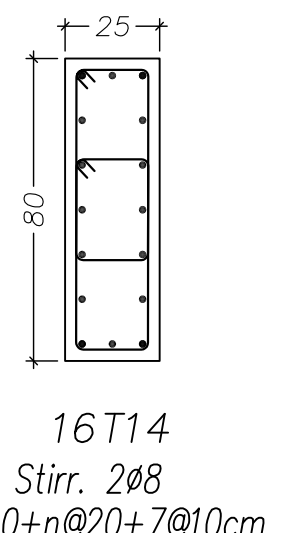
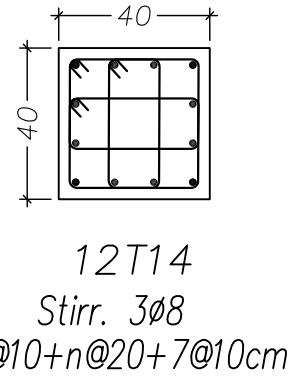
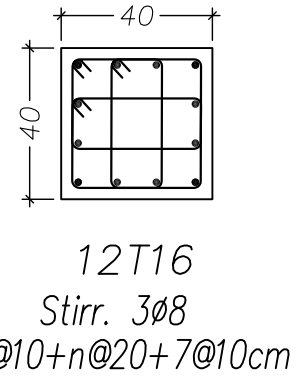
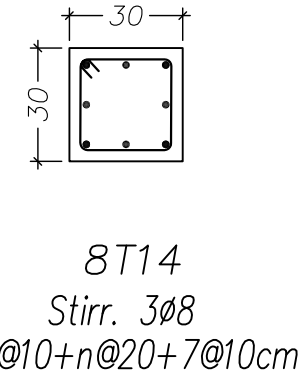
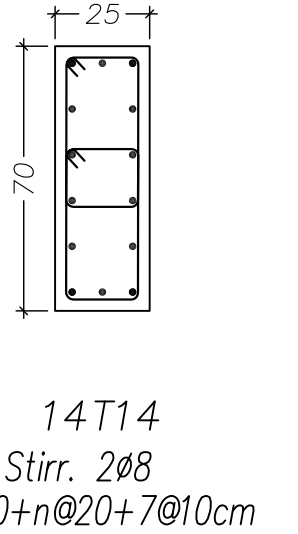
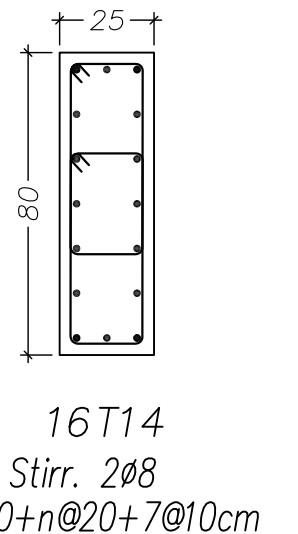
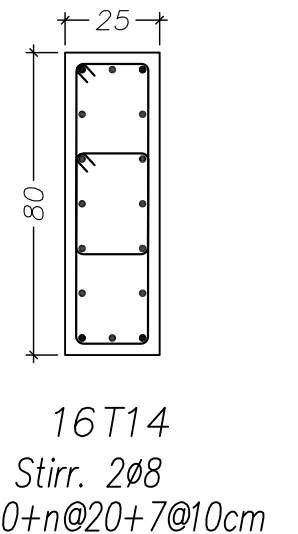
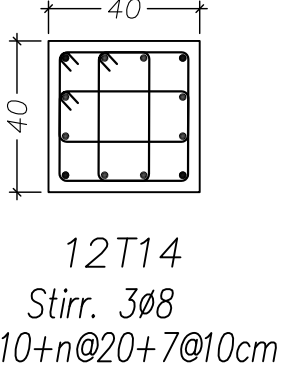
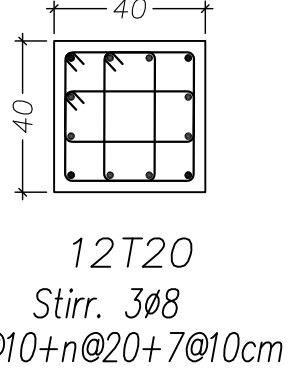
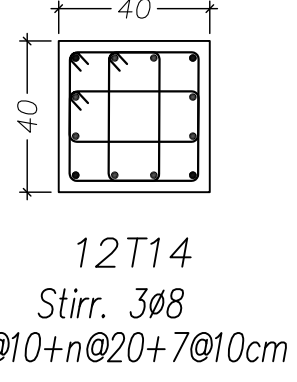
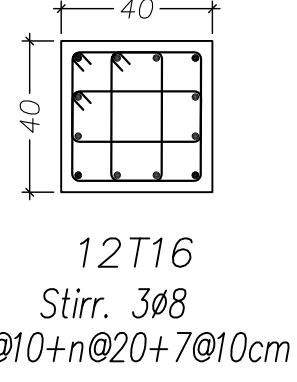
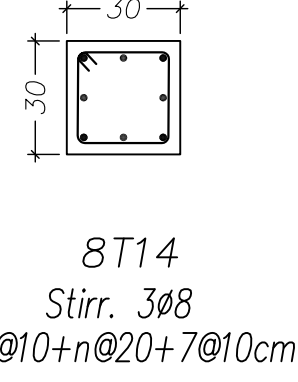
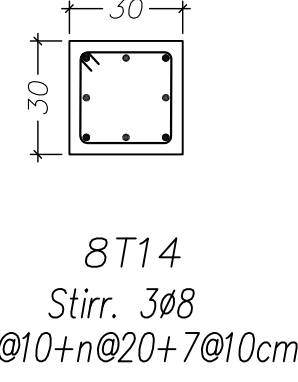
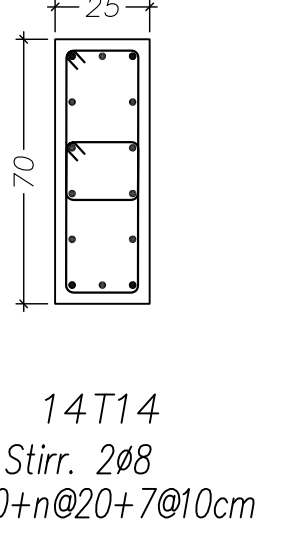
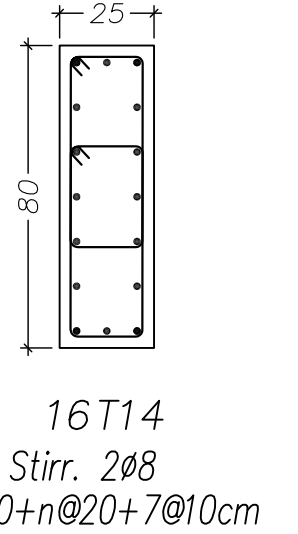
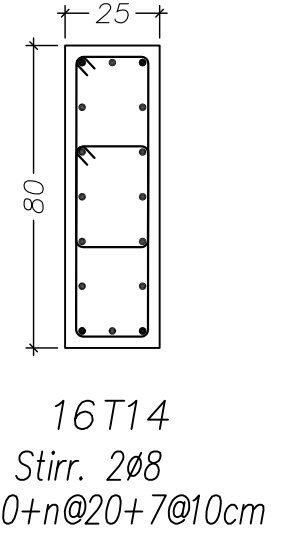
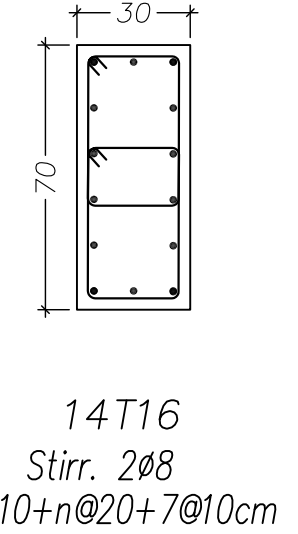
Country: **LEBANON** Region: **HARBATA BEQAA** Plot No: **705**

Contractor:

Sheet title: **General Column Plan**

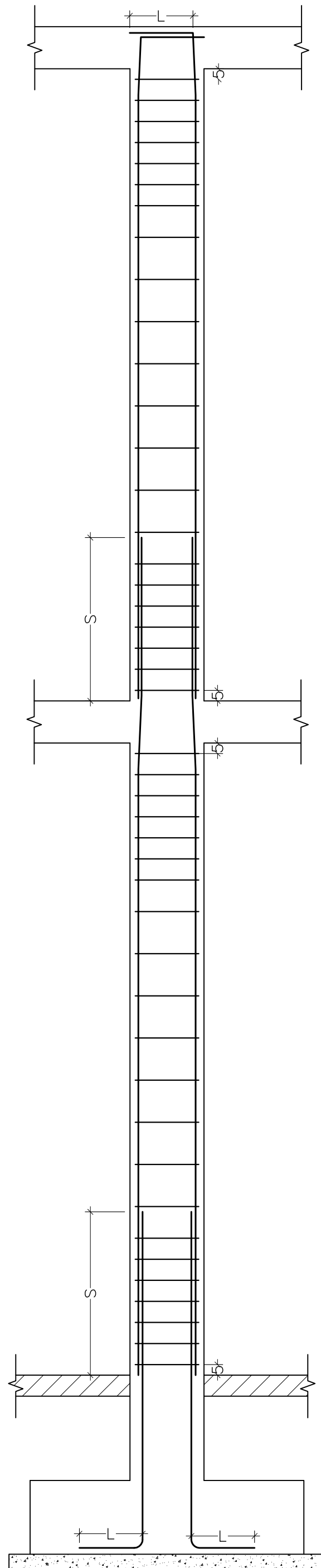
Sheet Information	
PROJECT NBR.	00, 00, 0, 5, 25, 03
PROJECT PHASE	EXECUTION
DESIGNED	M.T.
DRAWN	M.T.
CHECKED	B.A.
APPROVED	
DATE	05/08/2024
SCALE	1/100
SHEET TYPE	STRUCTURAL

Sheet Number **S 201**

COLUMN SCHEDULE											
Floor Type	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11
Rooflop											
First Floor											
Ground Floor											

Scale: 1/20

Splices & Hooks		
T mm	S cm	L cm
12	60	25
14	70	30
16	80	35
20	105	40
25	165	50



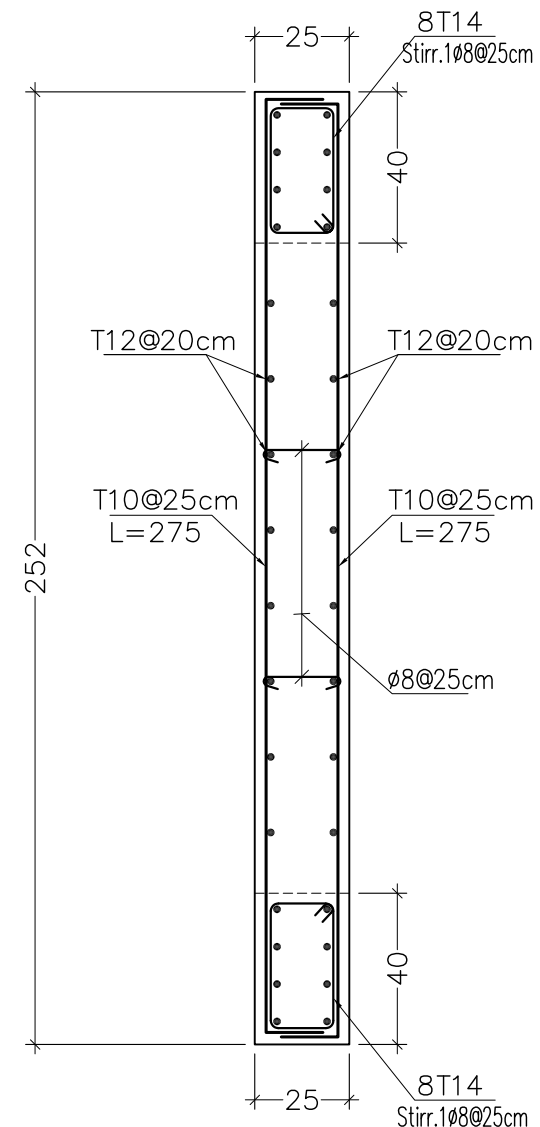
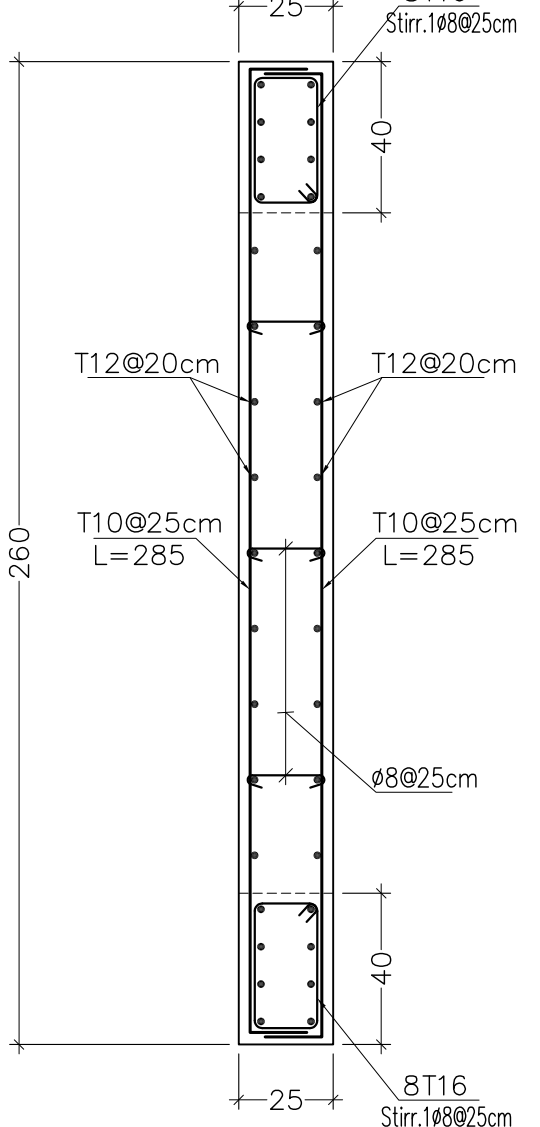
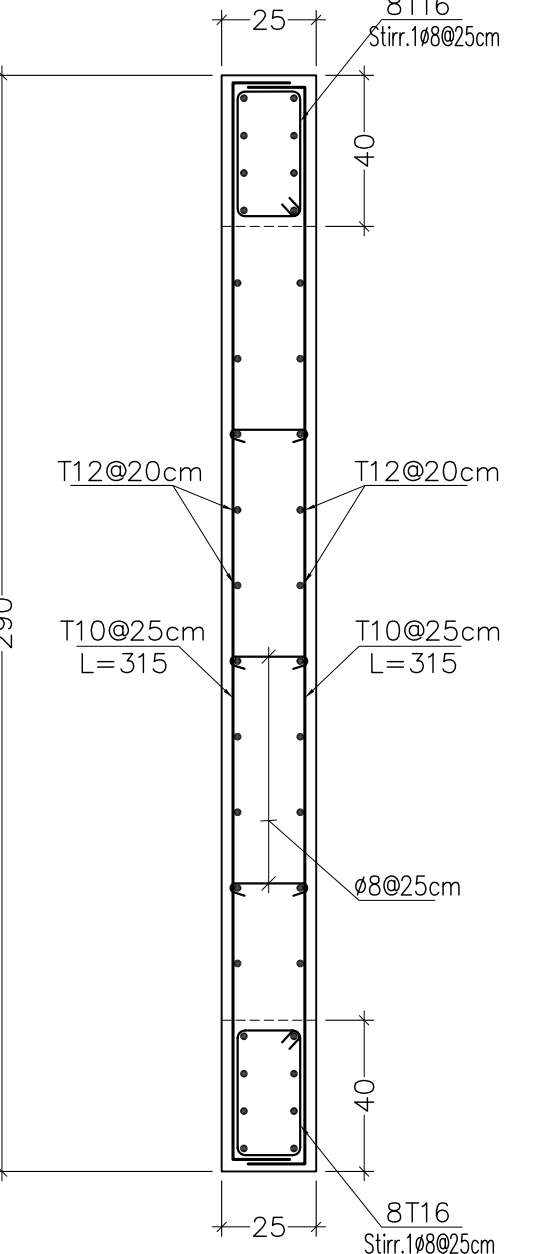
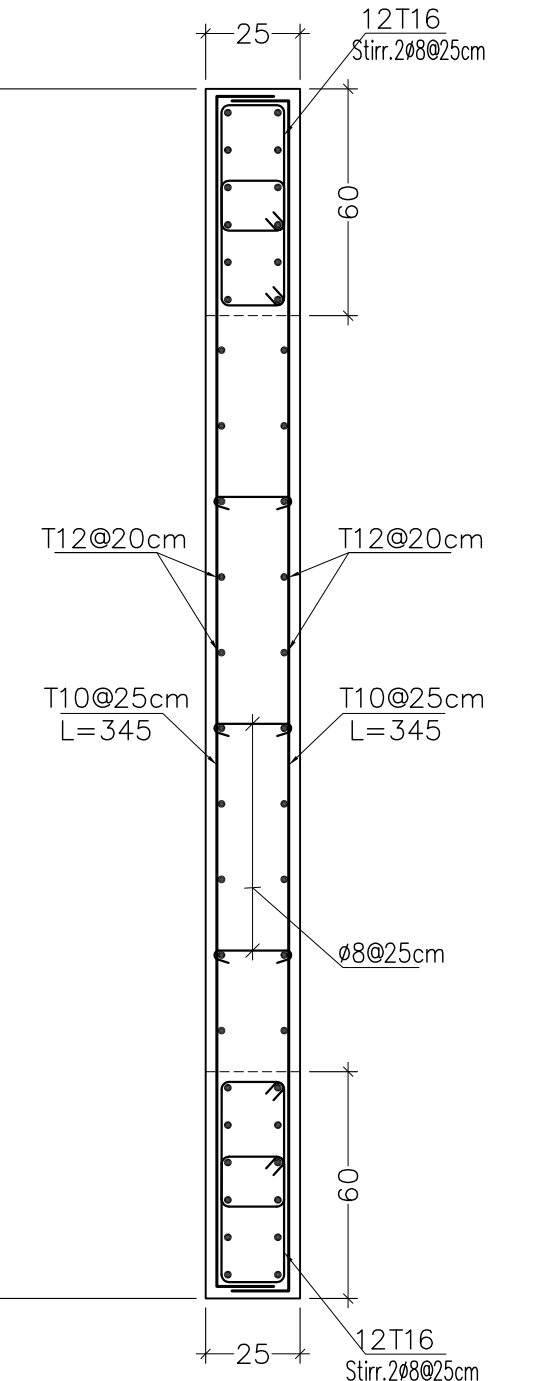
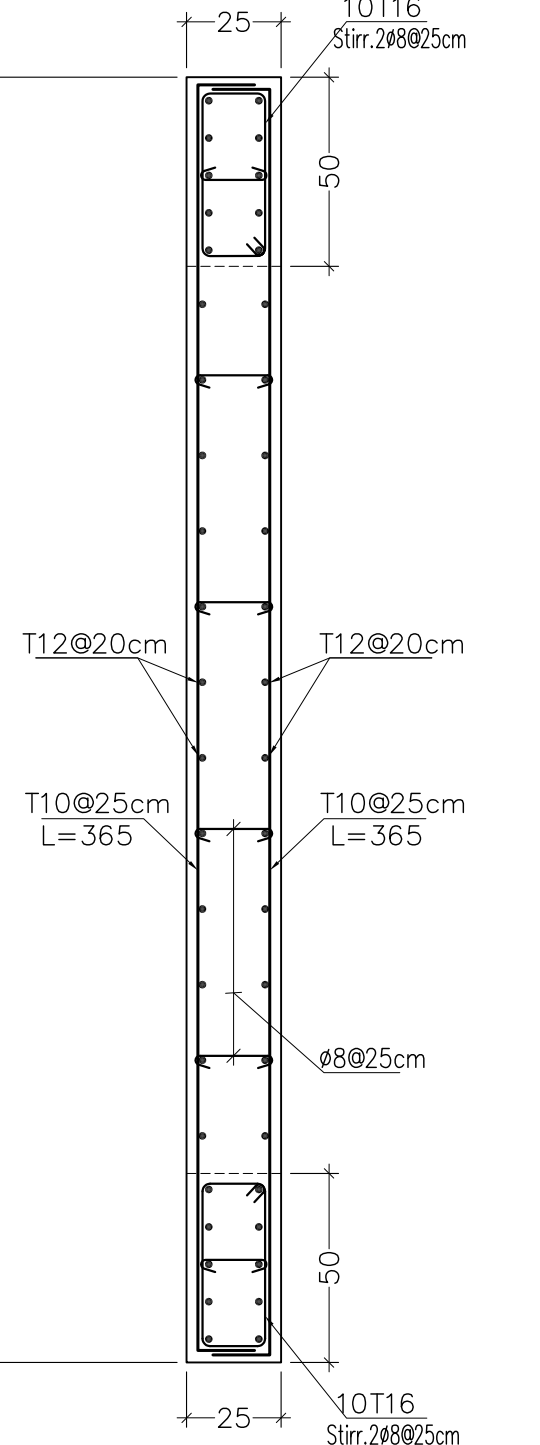
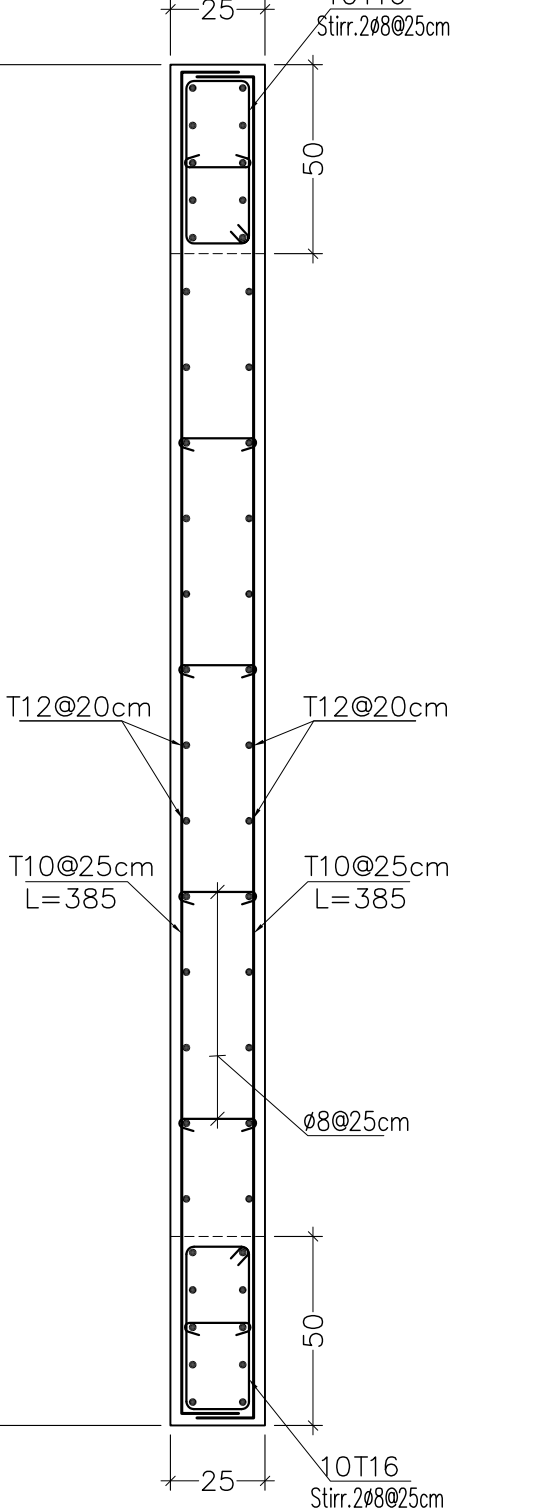
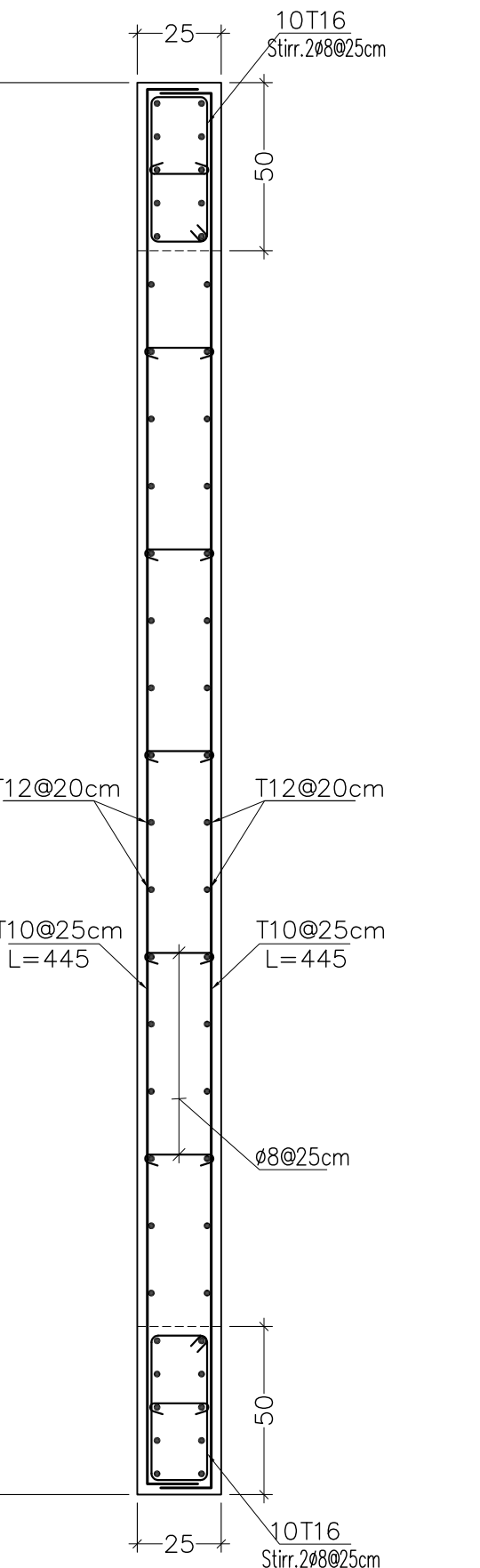
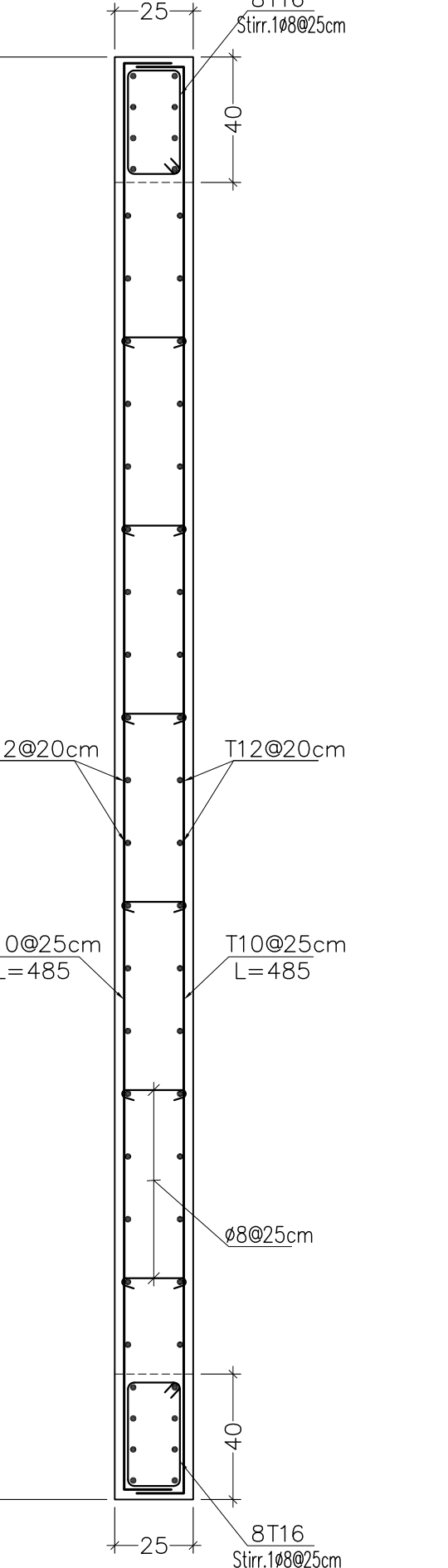
Typical Column
Long Section
Scale: 1/20

Client:

HARBATA MUNICIPALITY

CONCISE STRUCTURAL NOTES

- Dimensions are in cm except indicated, bar diameter in mm & levels in m.
- Concrete Rate:
 - $f_c=300\text{kg/cm}^2$ for columns & shear walls.
 - $f_c=250\text{kg/cm}^2$ for other members.
- Steel Reinf.:
 - $f_y=4,200\text{kg/cm}^2$ for rebars, indicated as (T).
 - $f_y=3,000\text{kg/cm}^2$ for stirrups, indicated as (ø).
- Soil Bearing Capacity:
 $q_{all}=2.75\text{ kg/cm}^2$.
- For more detailed notes see: sheet S001.

SHEAR WALL SCHEDULE								
Floor Type	W1	W2	W3	W4	W5	W6	W7	W8
First Floor & Rooflop								
Ground Floor								

REV3	BY: J APP-3	REV3-DESC	REV3-DESC
REV2	BY: J APP-2	REV2-DESC	REV2-DESC
REV1	BY: J APP-1	REV1-DESC	REV1-DESC
REV	BY: APP	DESCRIPTION	DATE

Revisions

Project Information

Project:

Project Title:

HARBATA ONE DAY SURGERY HOSPITAL

Country:

LEBANON

Region:

HARBATA BEQAA

Plot No:

705

Contractor:

Sheet title:

Column & Shear Wall Details 1

Sheet Information

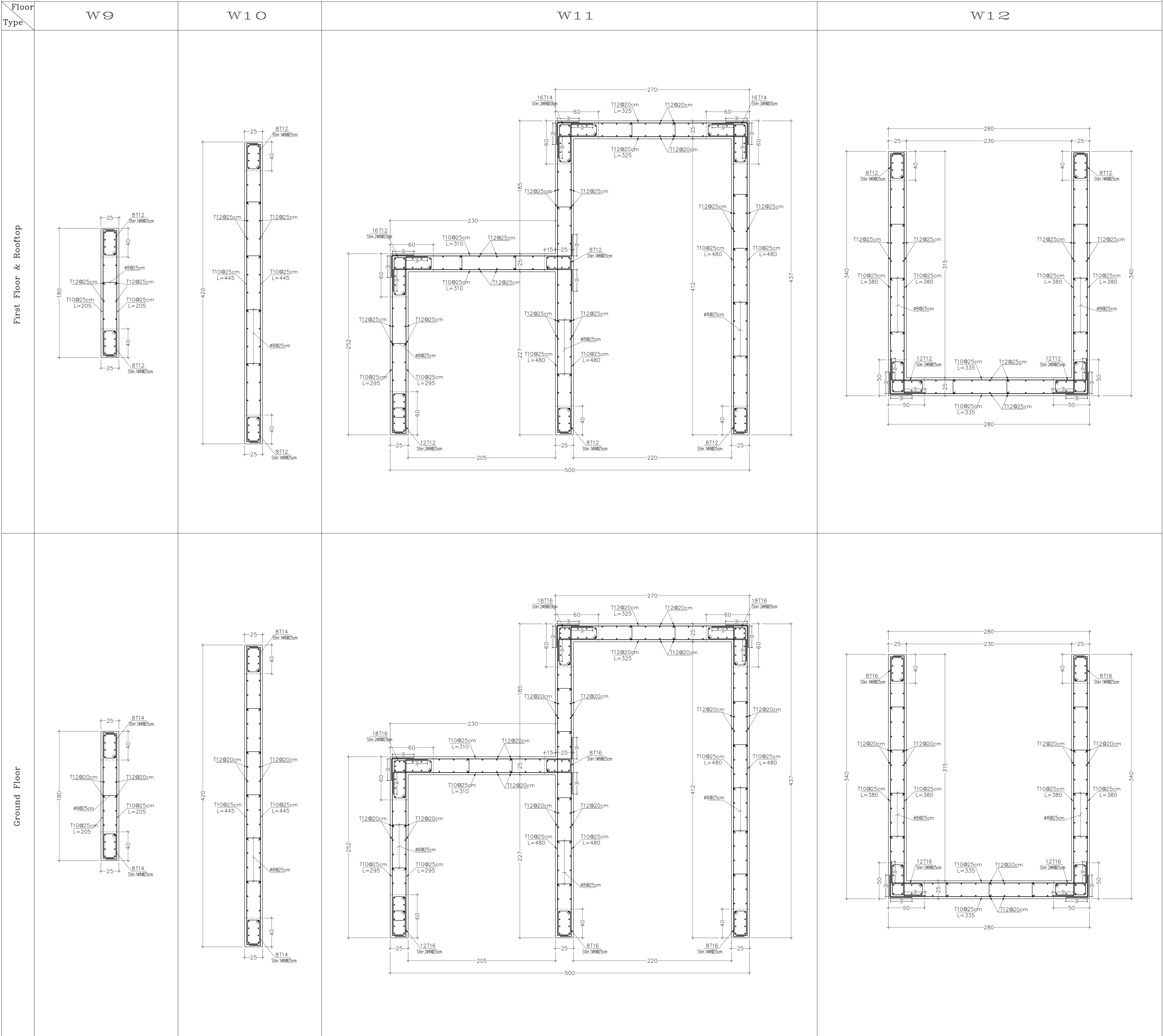
PROJECT NBR.	00.00.0.3.25.03
PROJECT PHASE	EXECUTION
DESIGNED	M.T.
DRAWN	B.A.
CHECKED	
APPROVED	
DATE	05/08/2024
SCALE	1/20
SHEET TYPE	STRUCTURAL

Sheet Number

S 202

SHEAR WALL SCHEDULE

Scale: 1/20

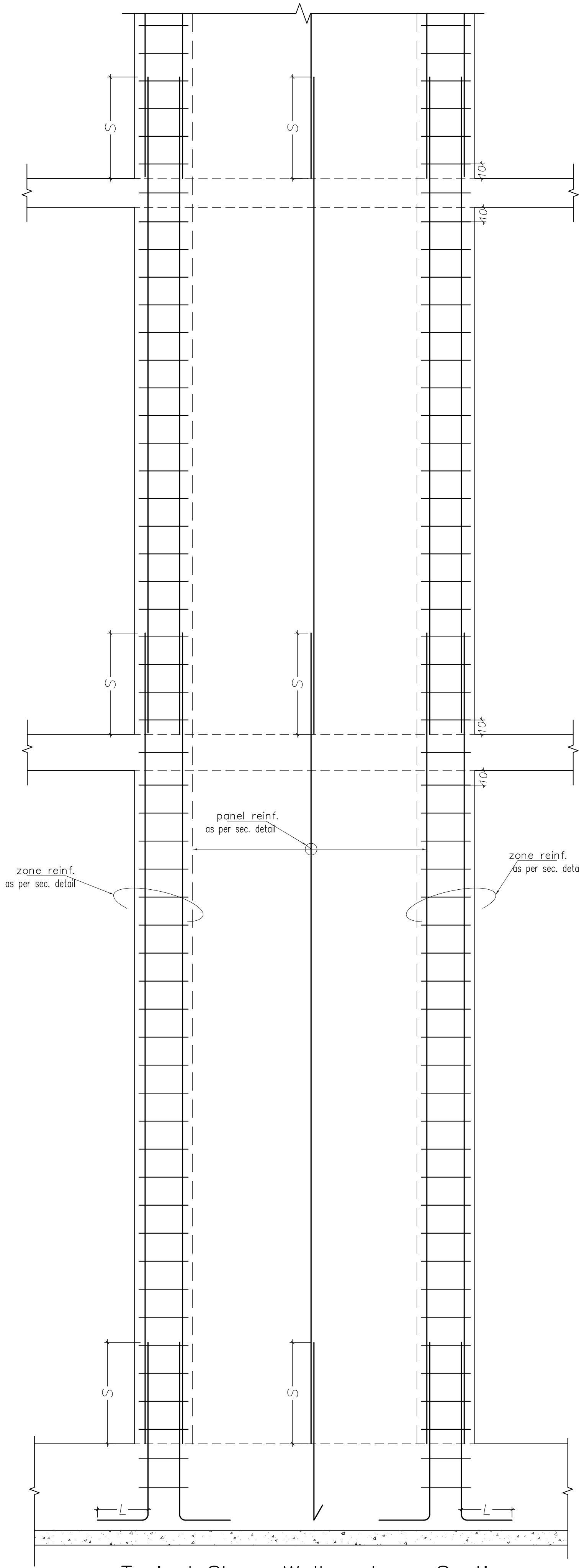


Client:

HARBATA MUNICIPALITY

CONCISE STRUCTURAL NOTES

- Dimensions are in cm except indicated, bar diameter in mm & levels in m.
- Concrete Rate:
 - $f_c' = 300 \text{ kg/cm}^2$ for columns & shear walls.
 - $f_c' = 250 \text{ kg/cm}^2$ for other members.
- Steel Reinf.:
 - $f_y = 4,200 \text{ kg/cm}^2$ for rebars, indicated as (T).
 - $f_y = 3,000 \text{ kg/cm}^2$ for stirrups, indicated as ($\emptyset$).
- Soil Bearing Capacity:
 $q_{all} = 2.75 \text{ kg/cm}^2$.
- For more detailed notes see: sheet S001.



Typical Shear Wall - Long Section

Scale: 1/20

Splices & Hooks		
T _{mm}	S _{cm}	L _{cm}
12	60	25
14	70	30
16	80	35
20	105	40
25	165	50

REV	BY	APP	DESCRIPTION	DATE
REV3	BY-3	APP-3		
REV2	BY-2	APP-2		
REV1	BY-1	APP-1		

Revisions

Project Information

Project:

Project Title:

HARBATA ONE DAY SURGERY HOSPITAL

Country: LEBANON Region: HARBATA BEQAA Plot No: 705

Contractor:

Sheet title:

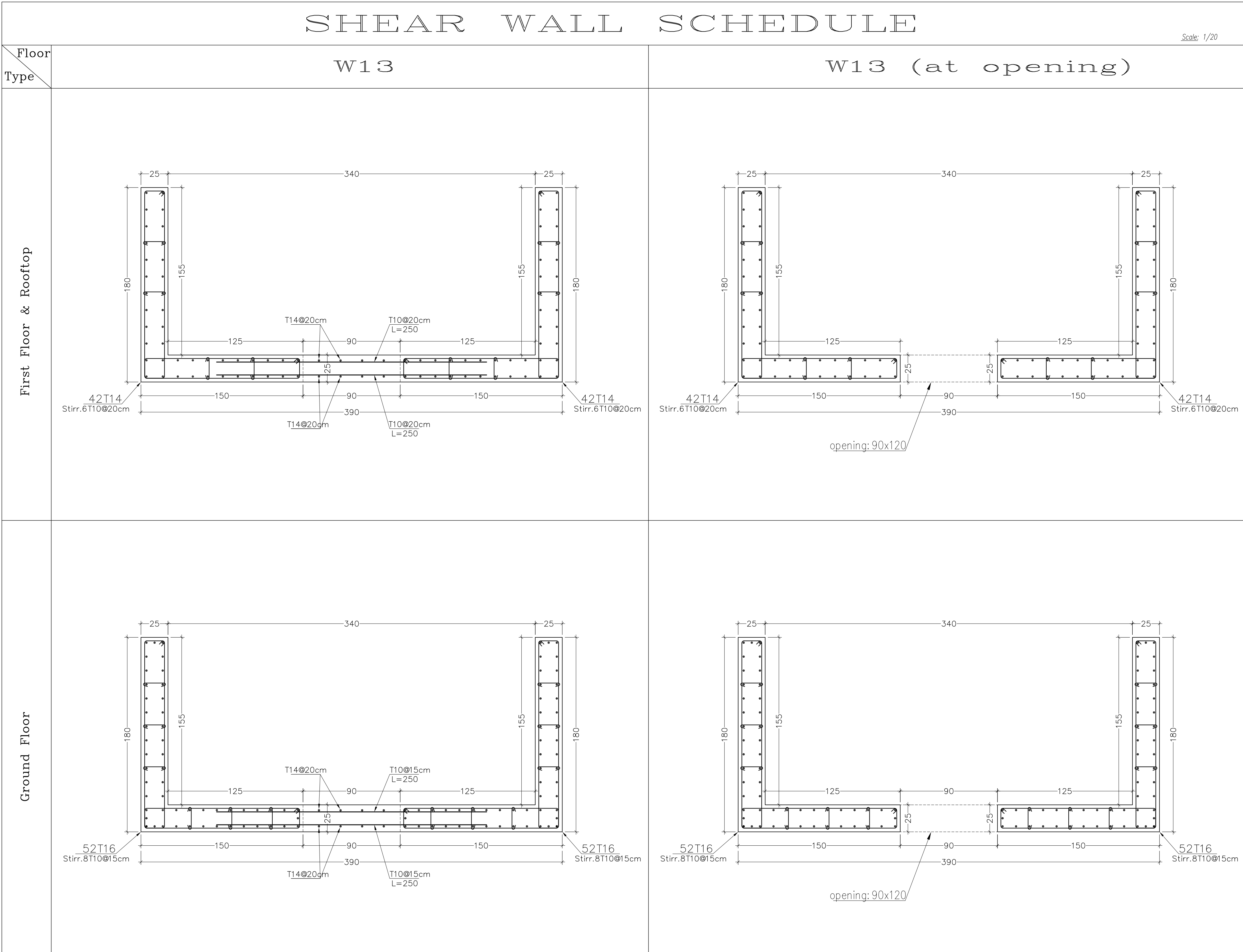
Column & Shear Wall Details 2

Sheet Information

PROJECT NBR.	00.00.0.5.25.03
PROJECT PHASE	EXECUTION
DESIGNED	M.T.
DRAWN	M.T.
CHECKED	B.A.
APPROVED	
DATE	05/08/2024
SCALE	1/20
SHEET TYPE	STRUCTURAL

Sheet Number

S 203



- CONCISE STRUCTURAL NOTES
1. Dimensions are in cm except indicated, bar diameter in mm & levels in m.

2. Concrete Rate:
 - $f_c=300\text{kg/cm}^2$ for columns & shear walls.
 - $f_c=250\text{kg/cm}^2$ for other members.

3. Steel Reinf.:
 - $f_y=4,200\text{kg/cm}^2$ for rebars, indicated as (T).
 - $f_y=3,000\text{kg/cm}^2$ for stirrups, indicated as ($\emptyset$).

4. Soil Bearing Capacity:
qall=2.75 kg/cm².

5. for more detailed notes see: sheet S001.

REV3	BY: J	APP: 3	REV3-DESC	REV3-DESC
REV2	BY: Z	APP: 2	REV2-DESC	REV2-DESC
REV1	BY: I	APP: 1	REV1-DESC	REV1-DESC
REV	BY	APP	DESCRIPTION	DATE

Revisions

Project Information

Project:

Project Title:

HARBATA ONE DAY SURGERY HOSPITAL

Country:

LEBANON

Region:

HARBATA BEQAA

Plot No:

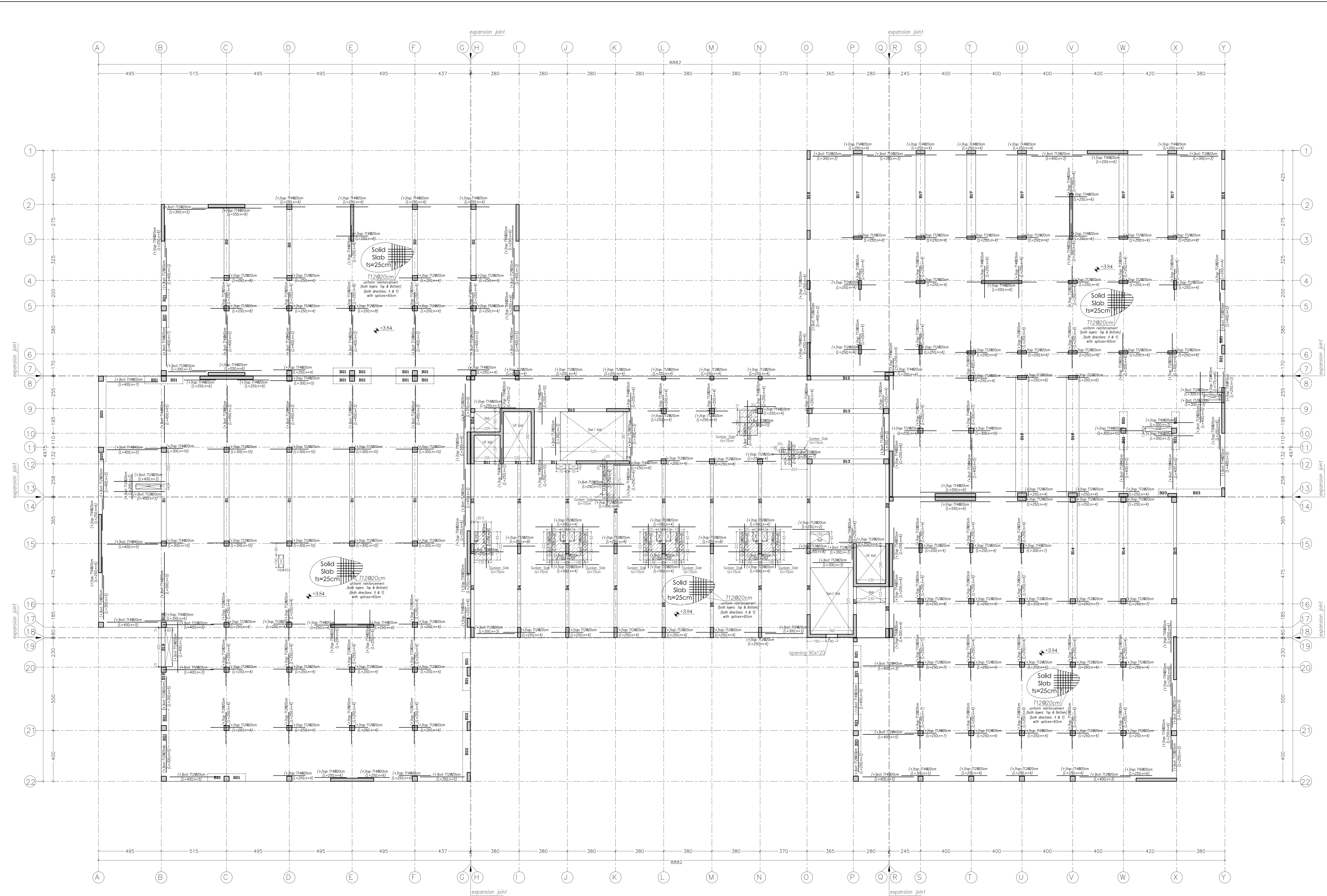
705

Contractor:

Sheet title:

Column & Shear Wall Details 3

Sheet Information	
PROJECT NBR.	00_00_0_3_25_03
PROJECT PHASE	EXECUTION
DESIGNED	M.T.
DRAWN	M.T.
CHECKED	B.A.
APPROVED	
DATE	05/08/2024
SCALE	1/20
SHEET TYPE	STRUCTURAL



- Client: HARBATA MUNICIPALITY
- CONCISE STRUCTURAL NOTES
- Dimensions are in cm except indicated, bar diameter in mm & levels in m.
 - Concrete Rate:
 - $f_c = 300 \text{ kg/cm}^2$ for columns & shear walls.
 - $f_c = 250 \text{ kg/cm}^2$ for other members.
 - Steel Reinforcement:
 - $f_y = 4,200 \text{ kg/cm}^2$ for rebars, indicated as (T).
 - $f_y = 3,000 \text{ kg/cm}^2$ for stirrups, indicated as (Ø).
 - Soil Bearing Capacity:
 - $q_{all} = 2.75 \text{ kg/cm}^2$.
 - For more detailed notes see: sheet S001.

REV	BY	APP	DESC	DATE
REV3	BY-3	APP-3	REV3-DESC	
REV2	BY-2	APP-2	REV2-DESC	
REV1	BY-1	APP-1	REV1-DESC	
REV	BY	APP	DESCRIPTION	DATE

Revisions

Project Information

Project:

Project Title: HARBATA ONE DAY SURGERY HOSPITAL

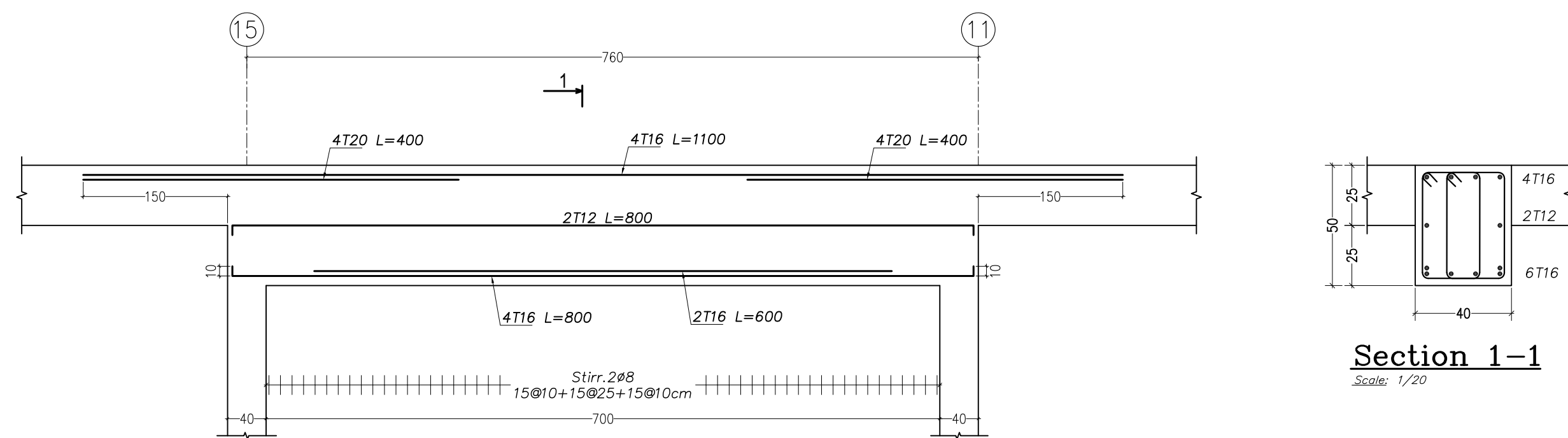
Country: LEBANON Region: HARBATA BEQAA Plot No: 705

Contractor:

Sheet title: Ground Floor Cover Slab Plan

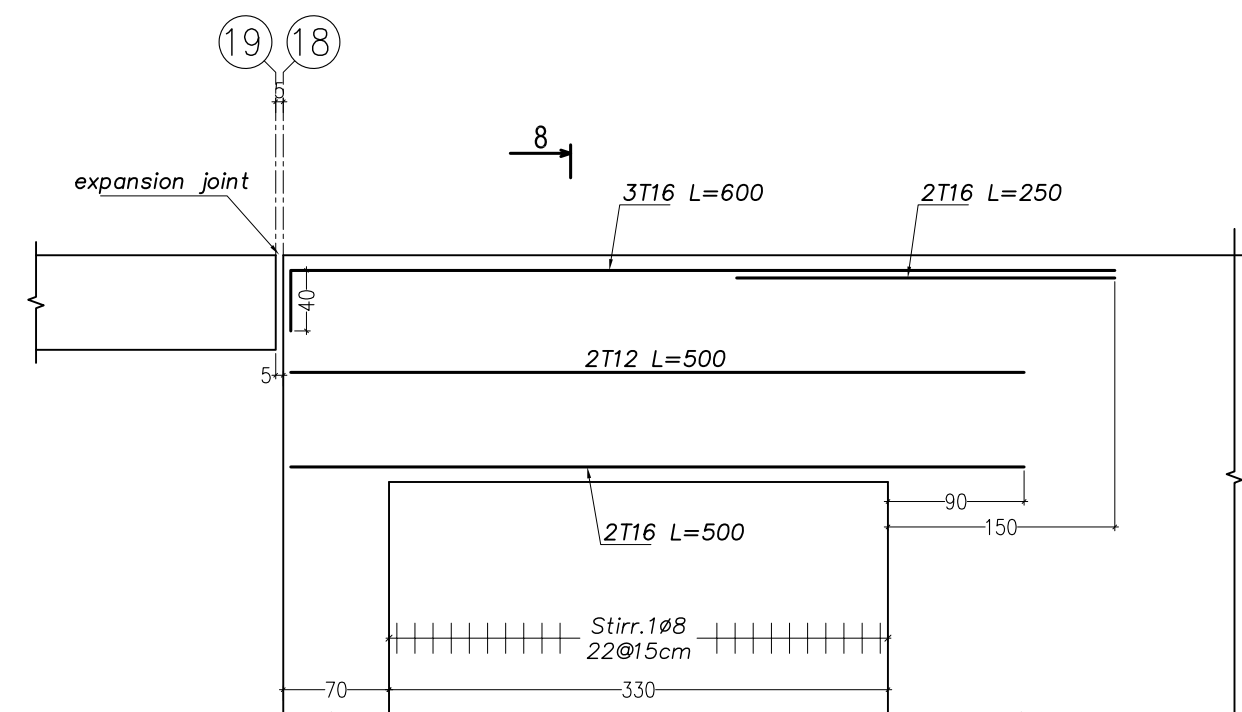
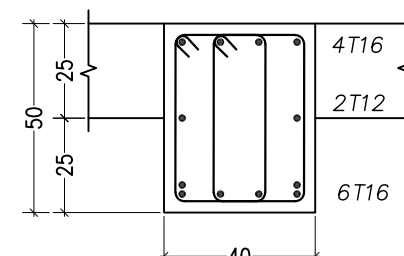
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PROJECT NBR.	00.00.0.5.25.03
PROJECT PHASE	EXECUTION
DESIGNED	M.T.
DRAWN	M.T.
CHECKED	B.A.
APPROVED	
DATE	05/08/2024
SCALE	1/100
SHEET TYPE	STRUCTURAL

Sheet Number S 301



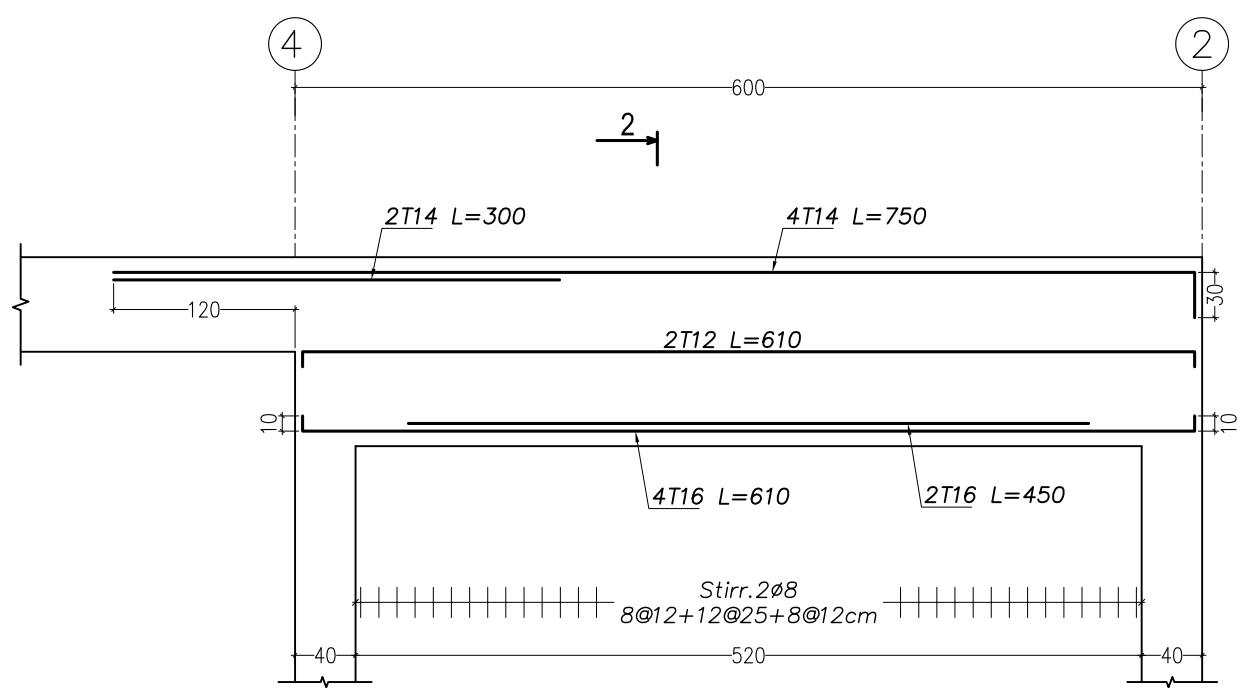
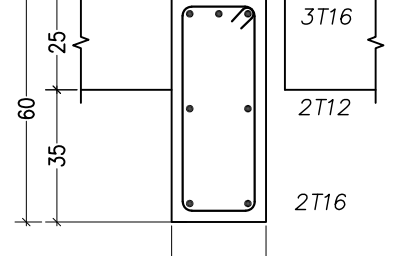
Beam: B1 – long section
Scale: 1/20 – 1/1/20

Section 1-1
Scale: 1/20



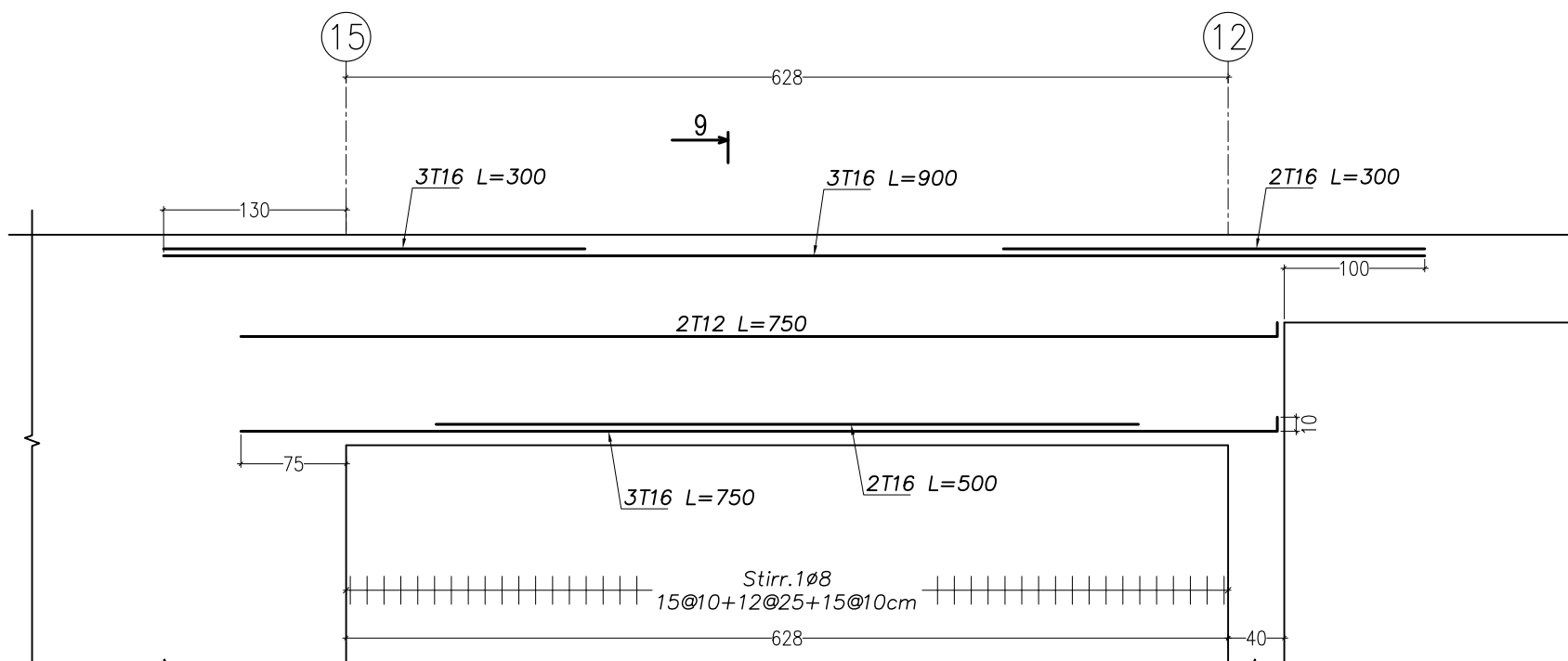
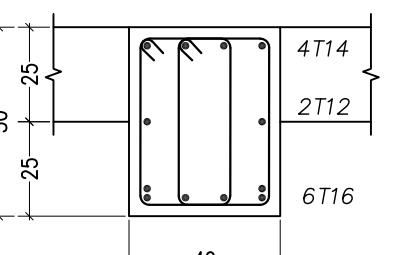
Beam: B8 – long section
Scale: 1/20 – 1/1/20

Section 8-8
Scale: 1/20



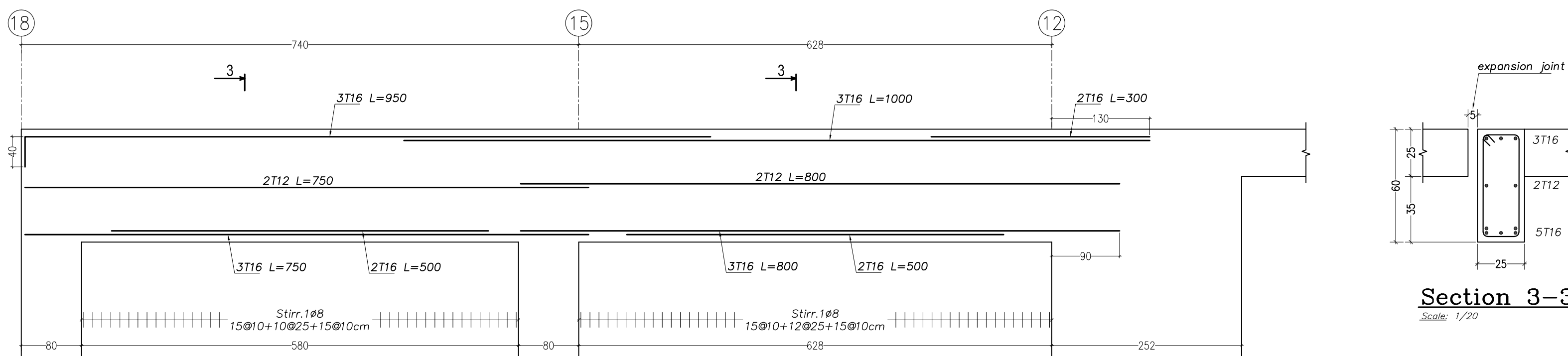
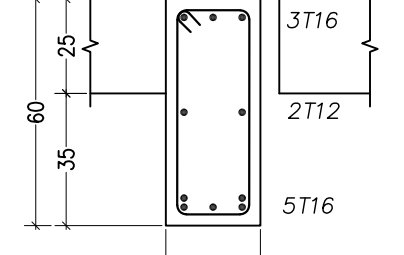
Beam: B2 – long section
Scale: 1/20 – 1/1/20

Section 2-2
Scale: 1/20



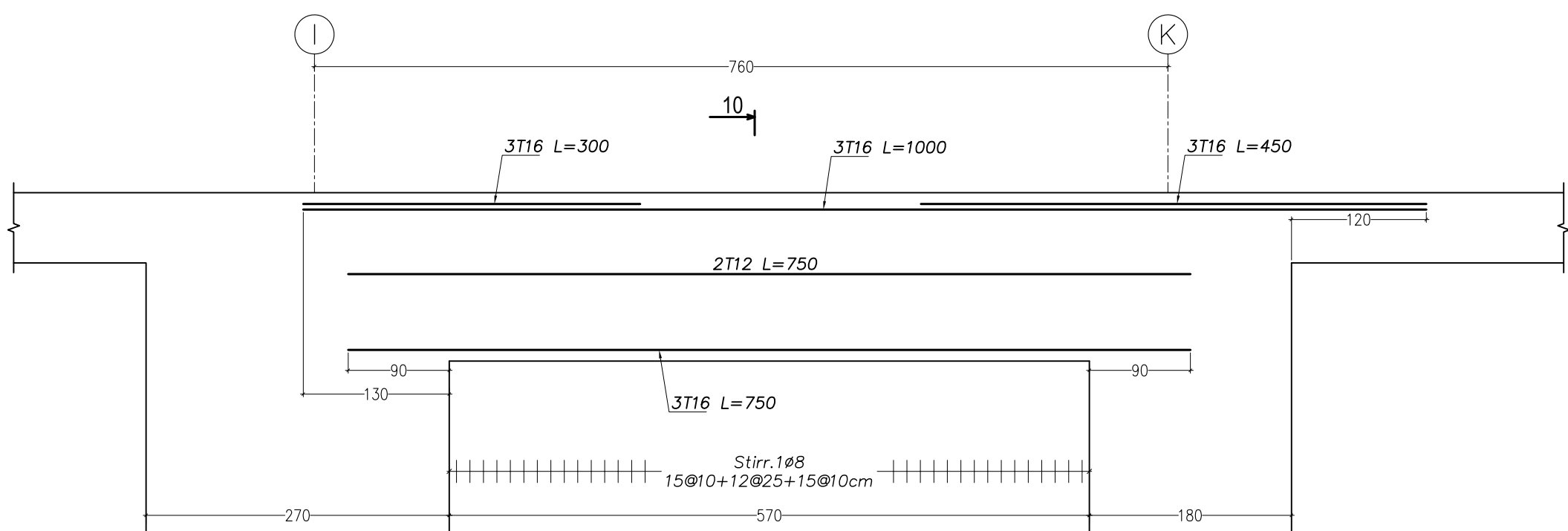
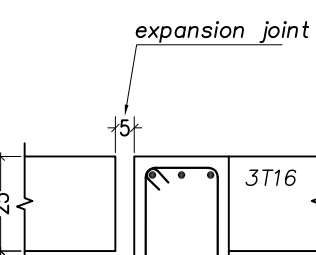
Beam: B9 – long section
Scale: 1/20 – 1/1/20

Section 9-9
Scale: 1/20



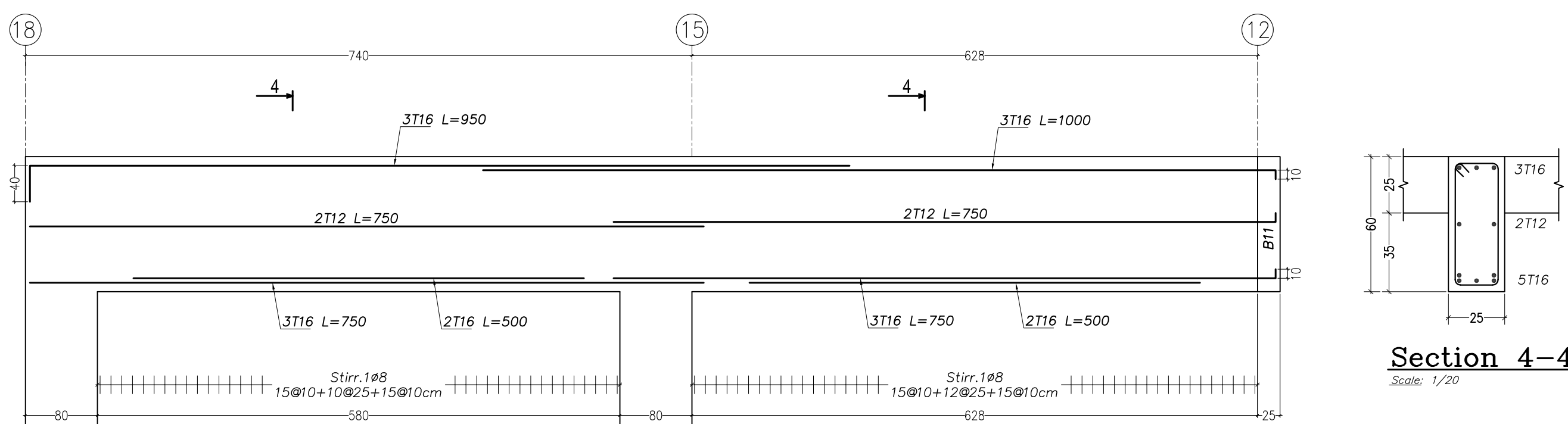
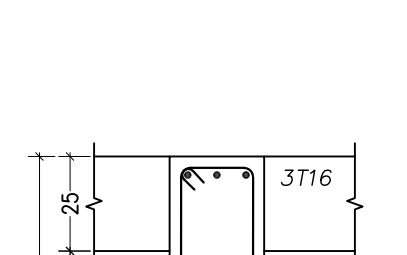
Beam: B3 – long section
Scale: 1/20 – 1/1/20

Section 3-3
Scale: 1/20



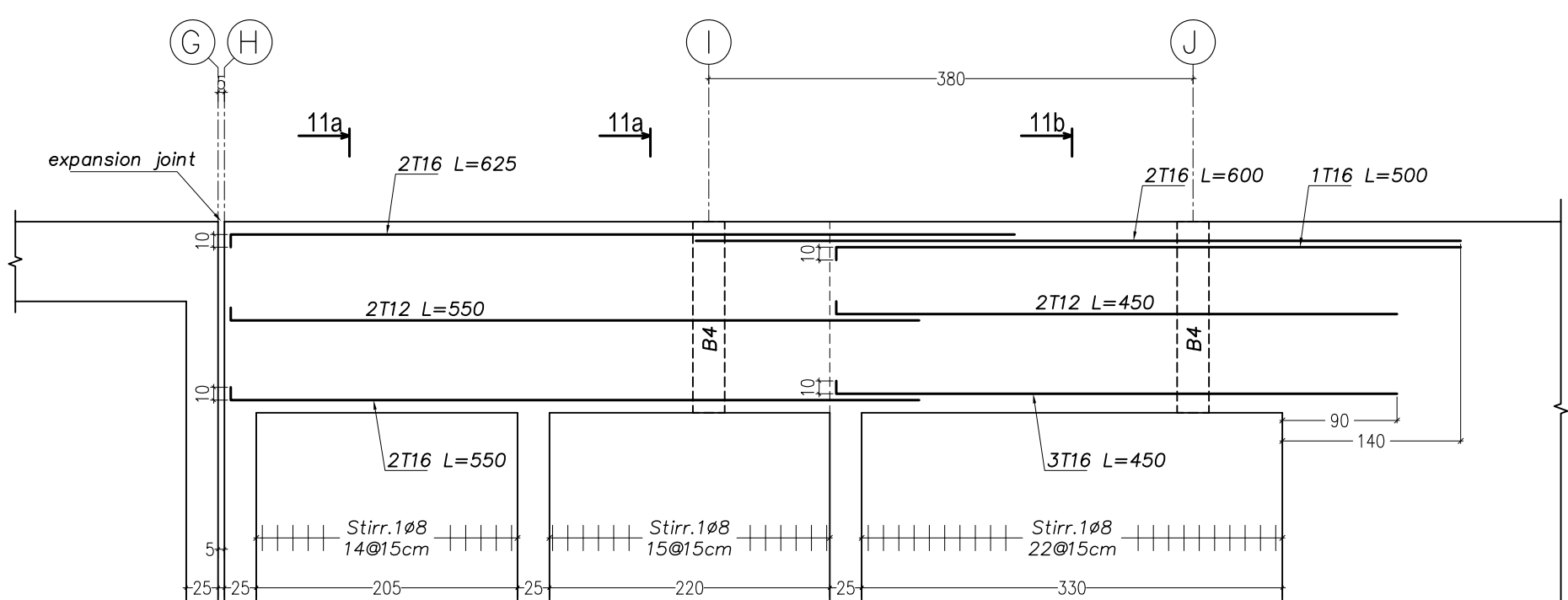
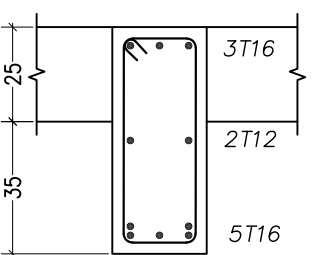
Beam: B10 – long section
Scale: 1/20 – 1/1/20

Section 10-10
Scale: 1/20



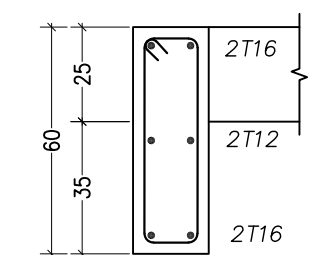
Beam: B4 – long section
Scale: 1/20 – 1/1/20

Section 4-4
Scale: 1/20

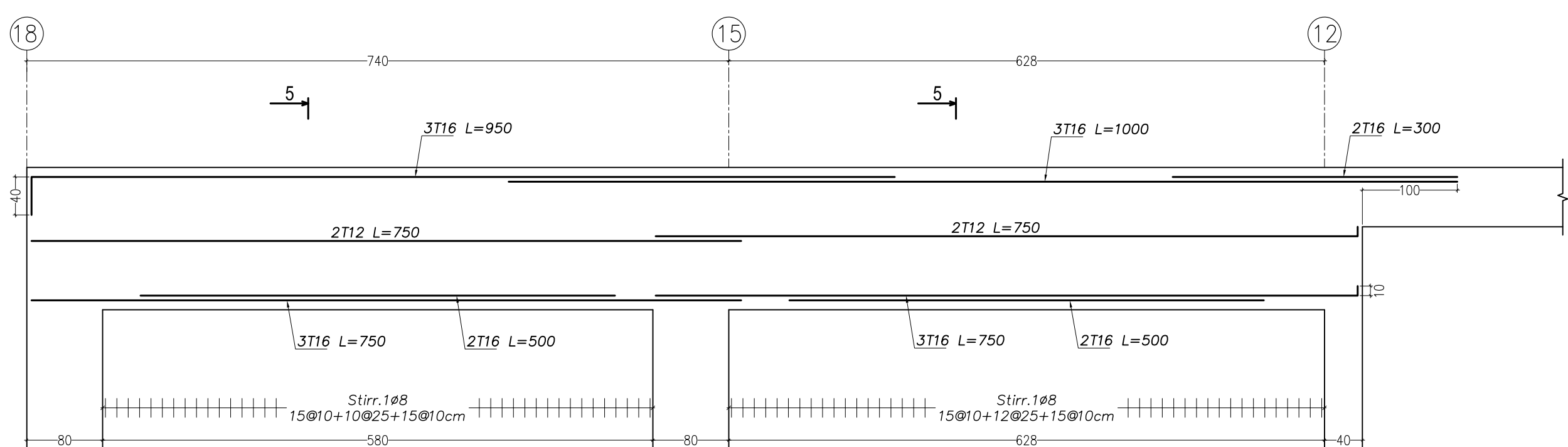
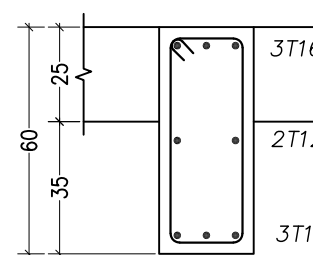


Beam: B11 – long section
Scale: 1/20 – 1/1/20

Section 11a-11a
Scale: 1/20

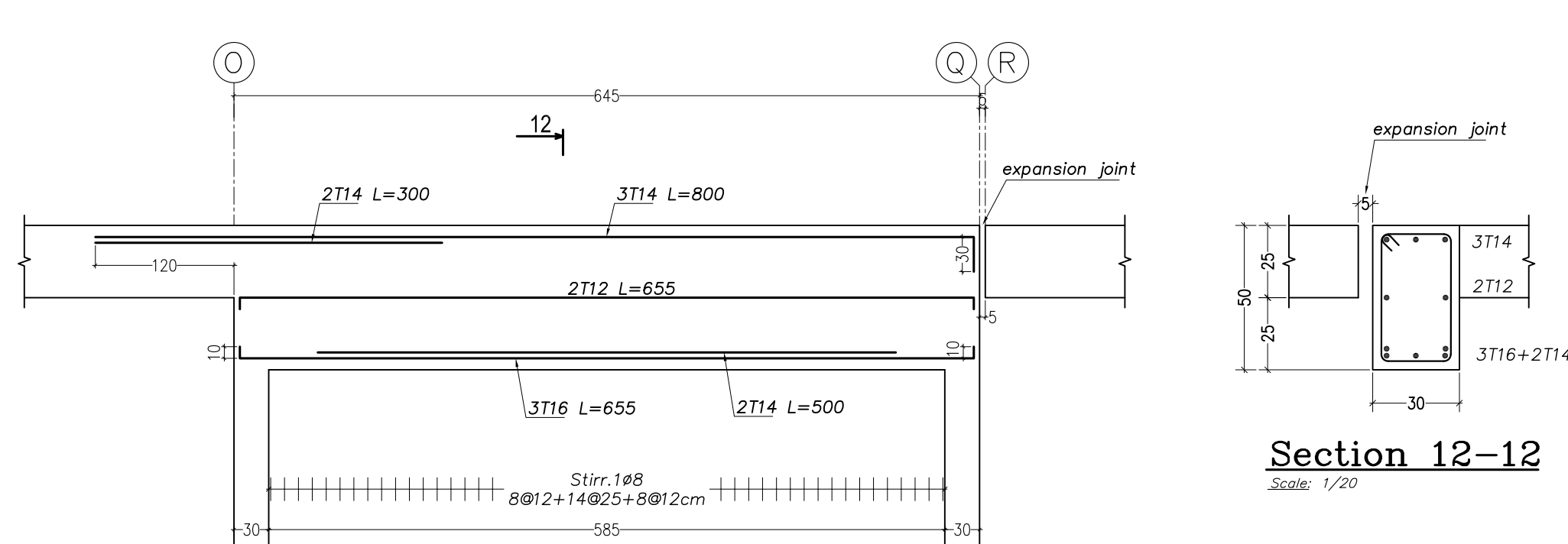
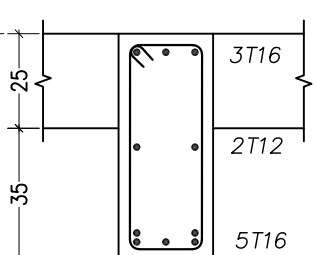


Section 11b-11b
Scale: 1/20



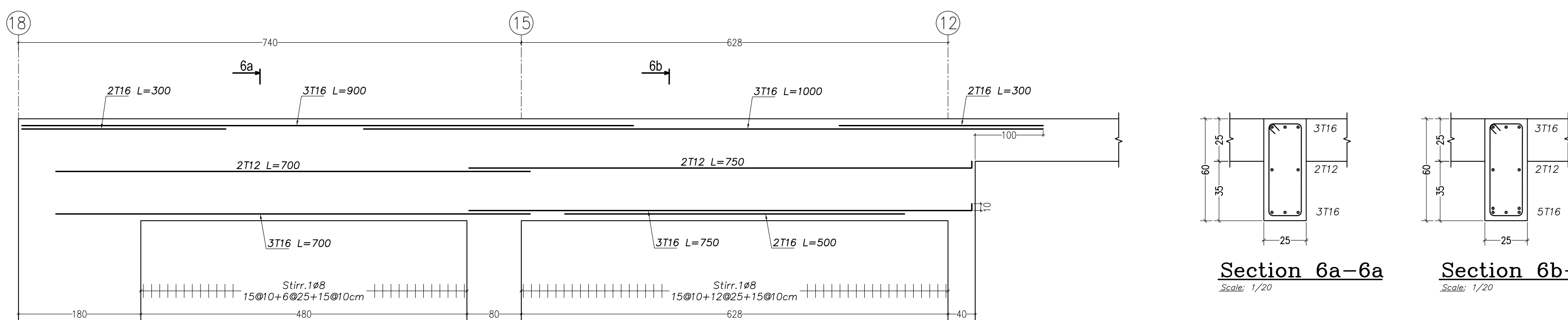
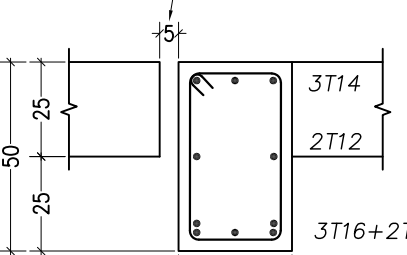
Beam: B5 – long section
Scale: 1/20 – 1/1/20

Section 5-5
Scale: 1/20



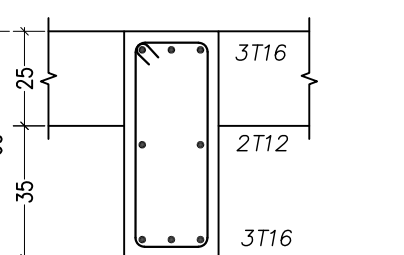
Beam: B12 – long section
Scale: 1/20 – 1/1/20

Section 12-12
Scale: 1/20

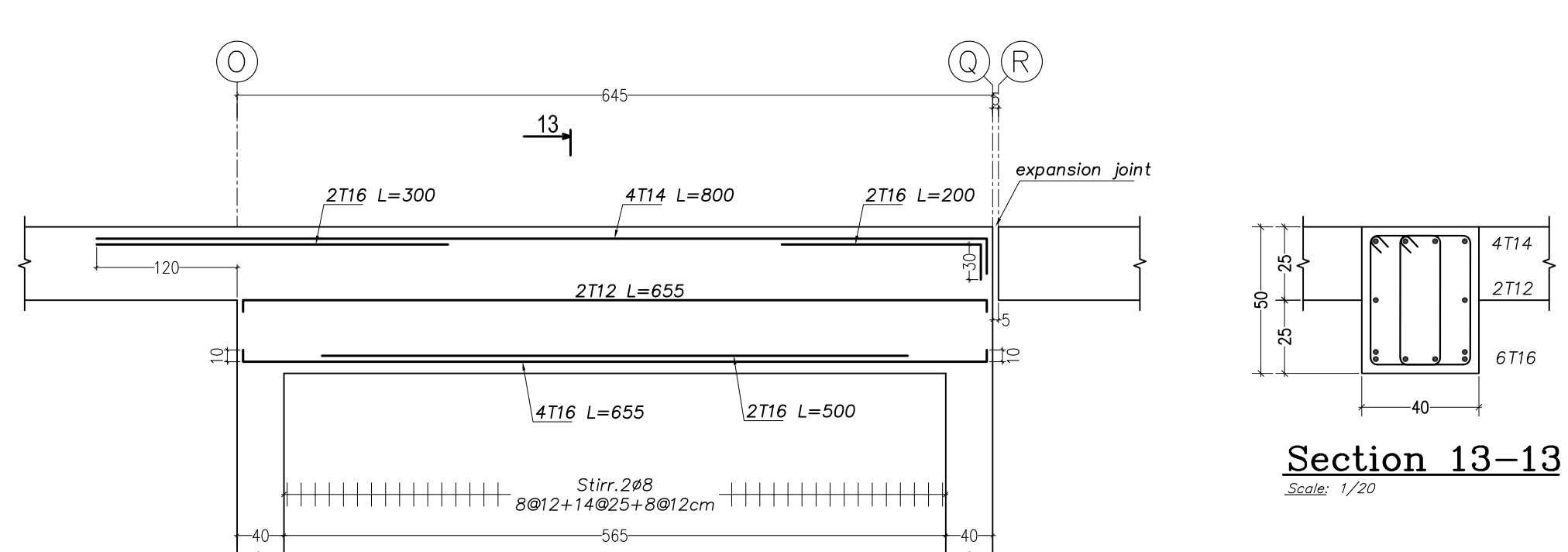
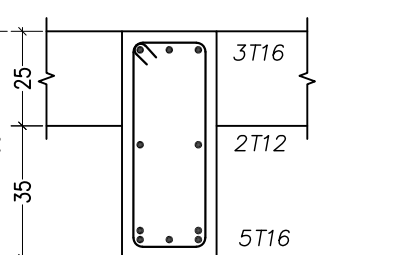


Beam: B6 – long section
Scale: 1/20 – 1/1/20

Section 6a-6a
Scale: 1/20

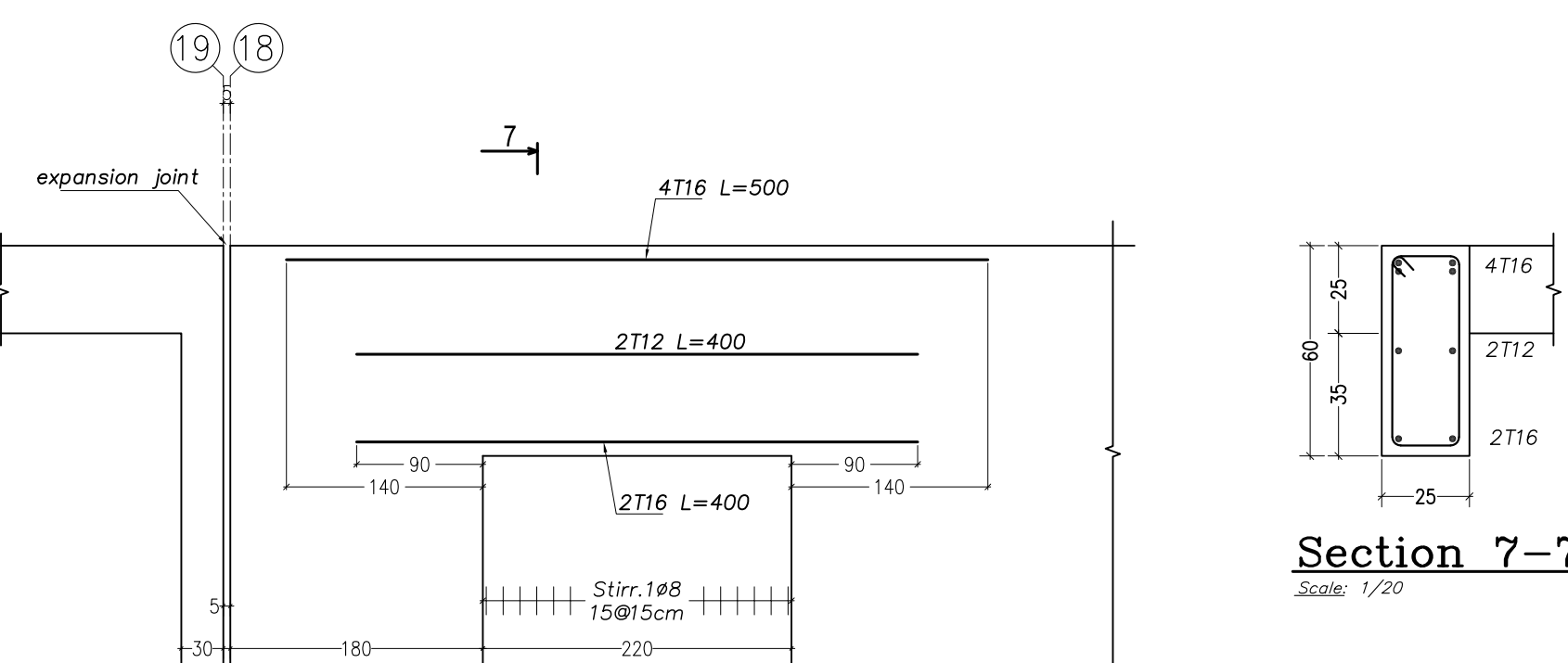
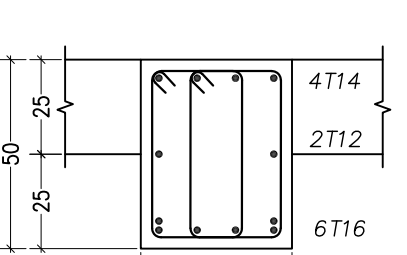


Section 6b-6b
Scale: 1/20



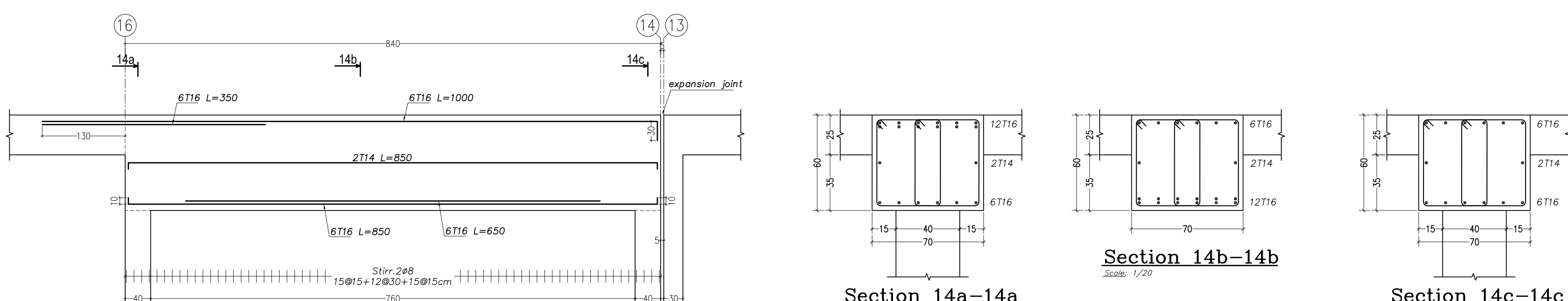
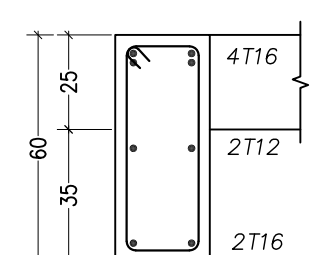
Beam: B13 – long section
Scale: 1/20 – 1/1/20

Section 13-13
Scale: 1/20



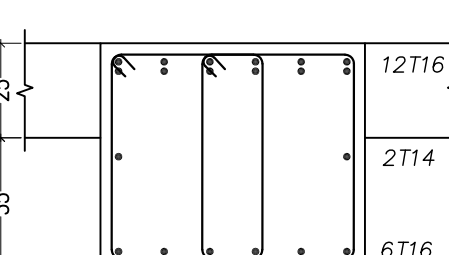
Beam: B7 – long section
Scale: 1/20 – 1/1/20

Section 7-7
Scale: 1/20

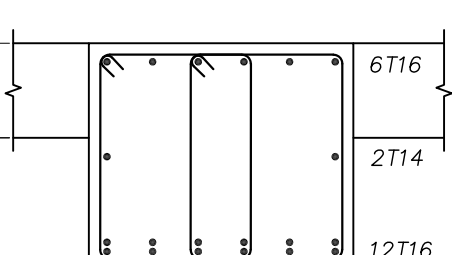


Beam: B14 – long section
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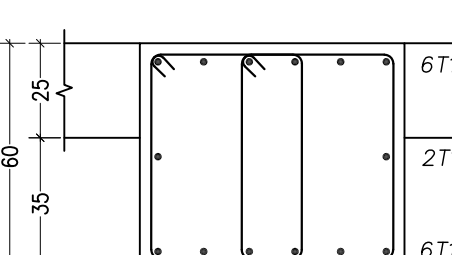
Section 14a-14a
Scale: 1/20



Section 14b-14b
Scale: 1/20



Section 14c-14c
Scale: 1/20



Client:

HARBATA MUNICIPALITY

CONCISE STRUCTURAL NOTES

- Dimensions are in cm except indicated, bar diameter in mm & levels in m.
- Concrete Rate:
 - $f_c=300\text{kg/cm}^2$ for columns & shear walls.
 - $f_c=250\text{kg/cm}^2$ for other members.
- Steel Reinforcement:
 - $f_y=4,200\text{kg/cm}^2$ for rebars, indicated as (T).
 - $f_y=3,000\text{kg/cm}^2$ for stirrups, indicated as (Ø).
- Soil Bearing Capacity:
 - $q_{all}=2.75\text{ kg/cm}^2$.
- For more detailed notes see: sheet S001.

REV	BY	APP	DESC	REV	BY	APP	DESC	REV	BY	APP	DESC
REV3	BY-3	APP-3		REV2	BY-2	APP-2		REV1	BY-1	APP-1	
REV3	DESC			REV2	DESC			REV1	DESC		
REV	BY	APP	DESCRIPTION	REV	BY	APP	DESCRIPTION	REV	BY	APP	DESCRIPTION

Revisions

Project Information

Project:

Project Title:

HARBATA ONE DAY SURGERY HOSPITAL

Country:

LEBANON

Region:

HARBATA BEQAA

Plot No:

705

Contractor:

Sheet title:

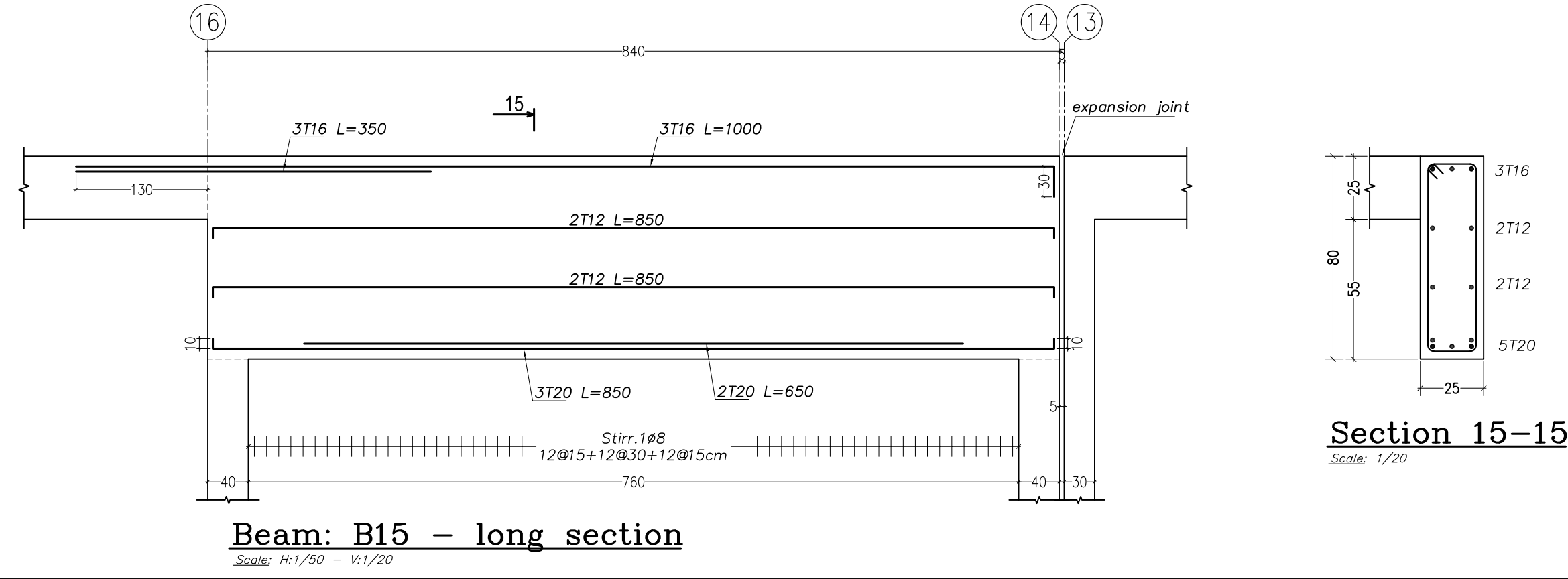
Ground Floor Beam Details 1

Sheet Information	
PROJECT NBR.	00.00.0.3.25.03
PROJECT PHASE	EXECUTION
DESIGNED	M.T.
DRAWN	B.A.
CHECKED	
DATE	05/08/2024
SCALE	1/50 - 1/20
SHEET TYPE	STRUCTURAL

Sheet Number

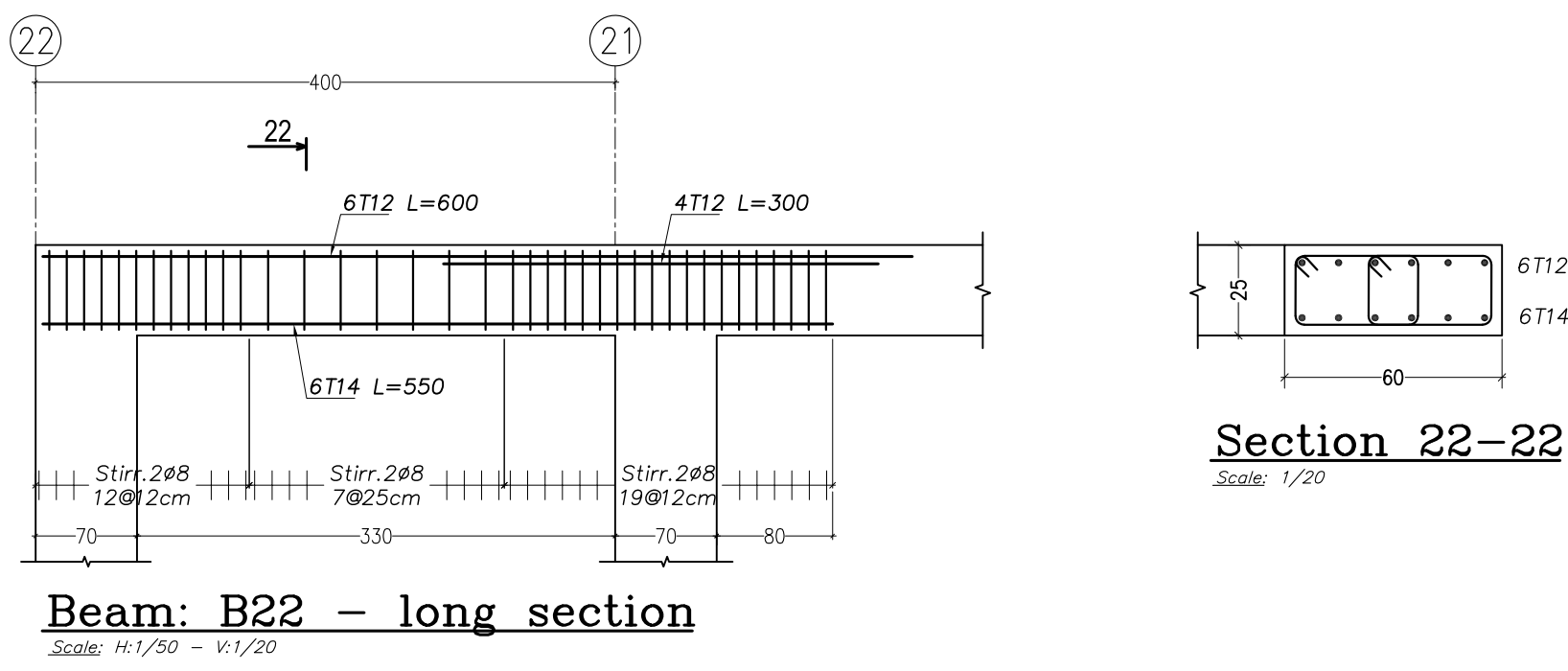
S 302

- CONCISE STRUCTURAL NOTES
- Dimensions are in cm except indicated, bar diameter in mm & levels in m.
 - Concrete Rate:
 - $f_c=300\text{kg/cm}^2$ for columns & shear walls.
 - $f_c=250\text{kg/cm}^2$ for other members.
 - Steel Reinf.:
 - $f_y=4,200\text{kg/cm}^2$ for rebars, indicated as (T).
 - $f_y=3,000\text{kg/cm}^2$ for stirrups, indicated as ($\emptyset$).
 - Soil Bearing Capacity:
qall=2.75 kg/cm².
 - for more detailed notes see: sheet S001.



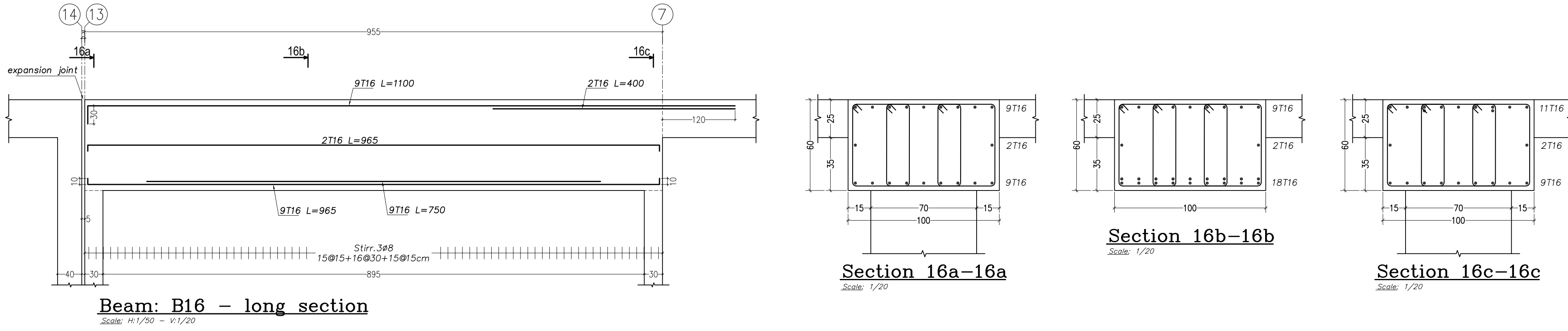
Section 15-15

Beam: B15 – long section



Section 22-22

Beam: B22 – long section

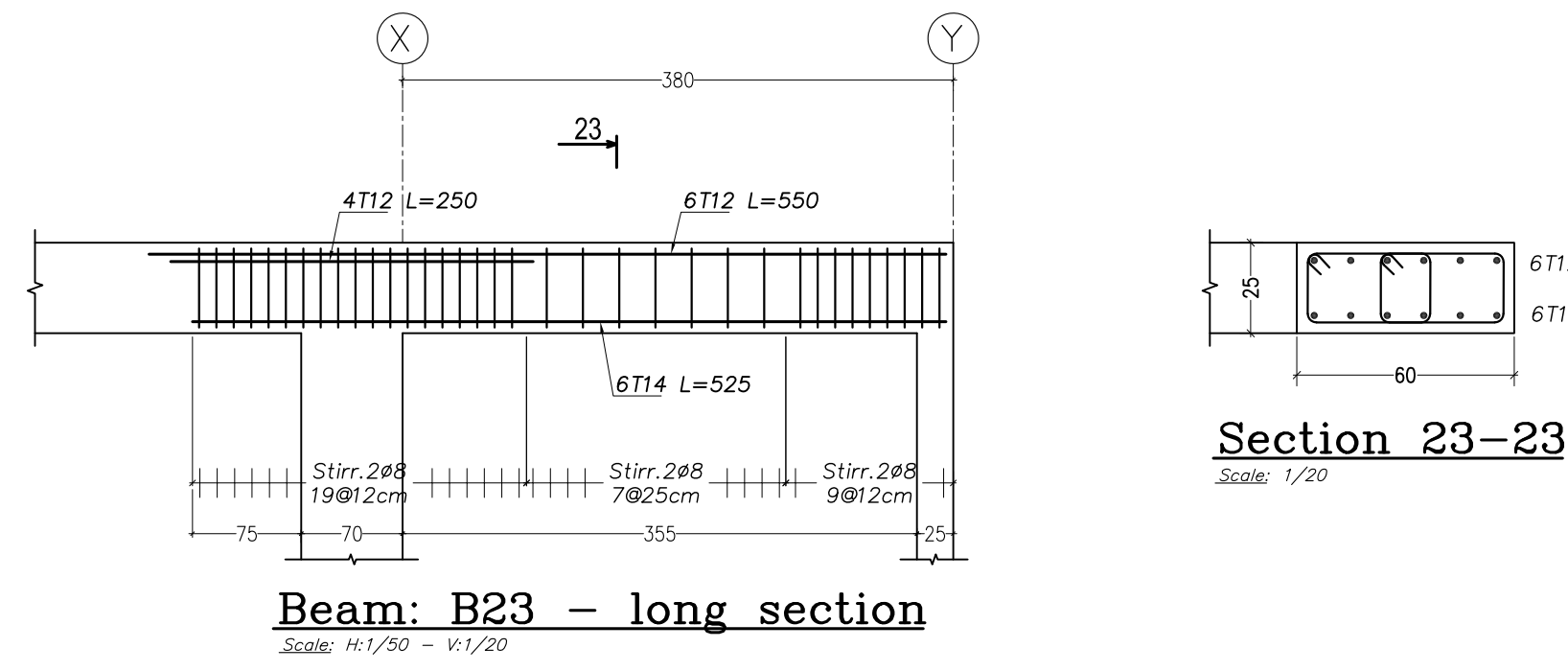


Section 16a-16a

Section 16b-16b

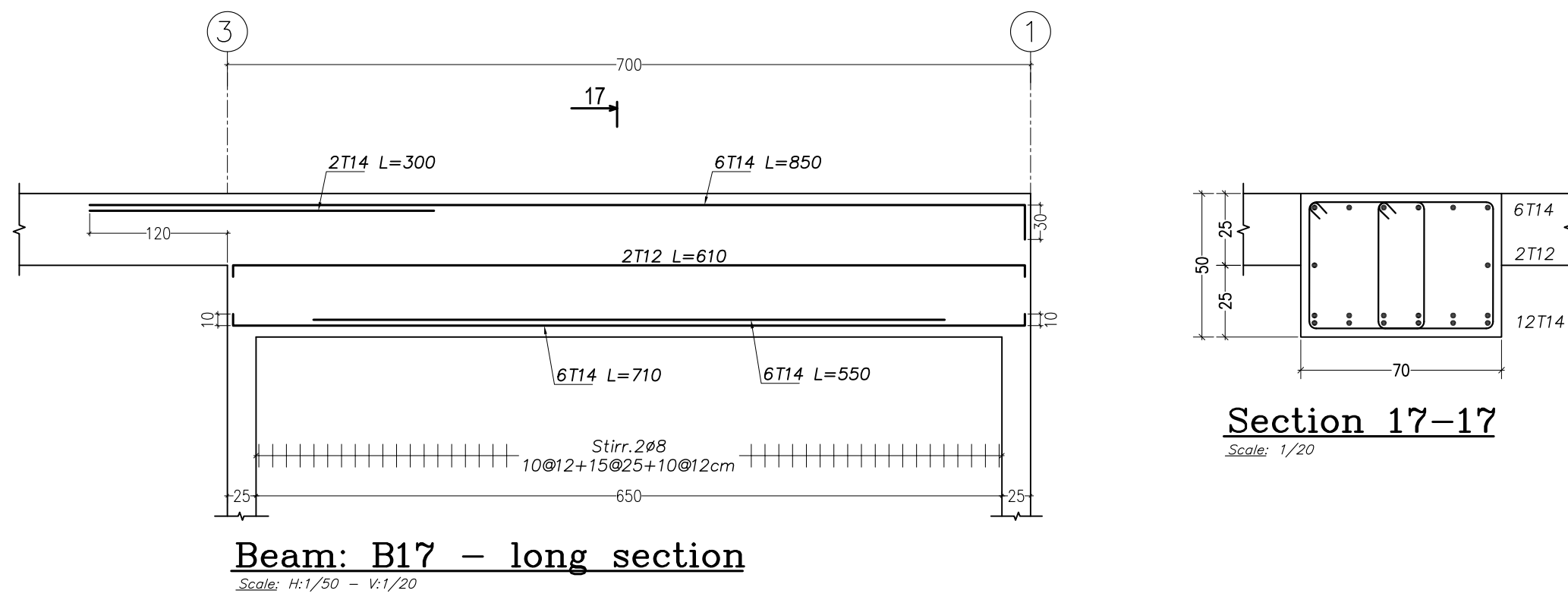
Section 16c-16c

Beam: B16 – long section



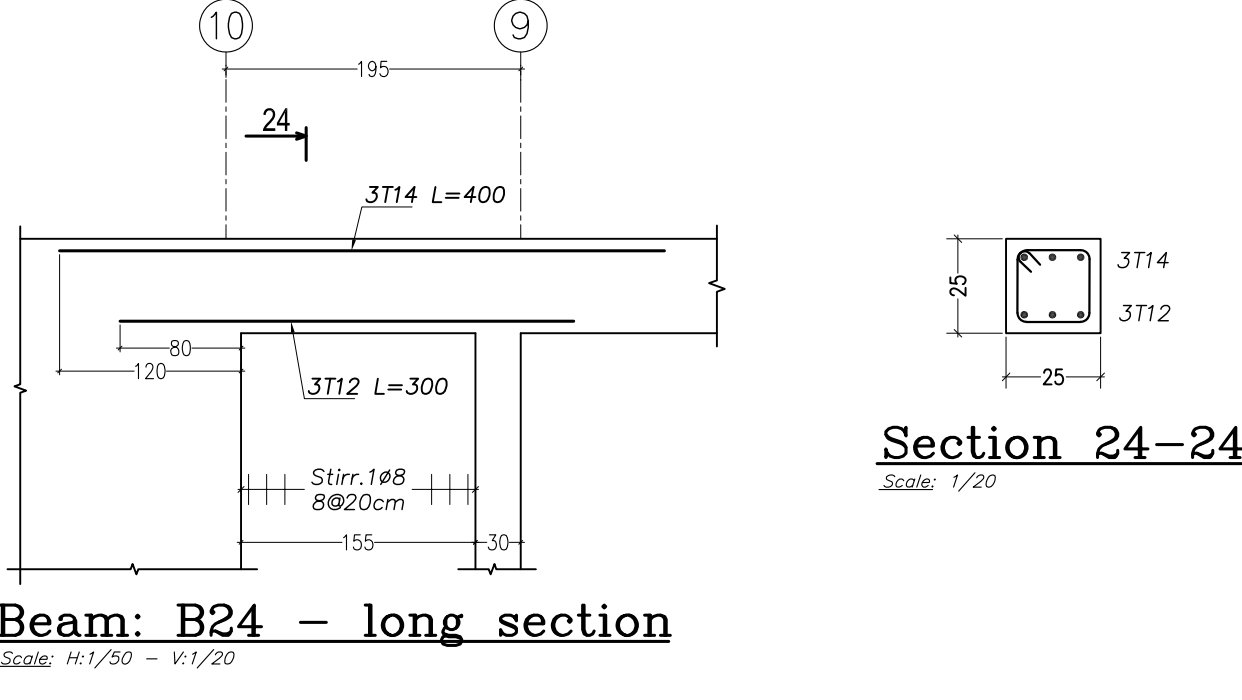
Section 23-23

Beam: B23 – long section



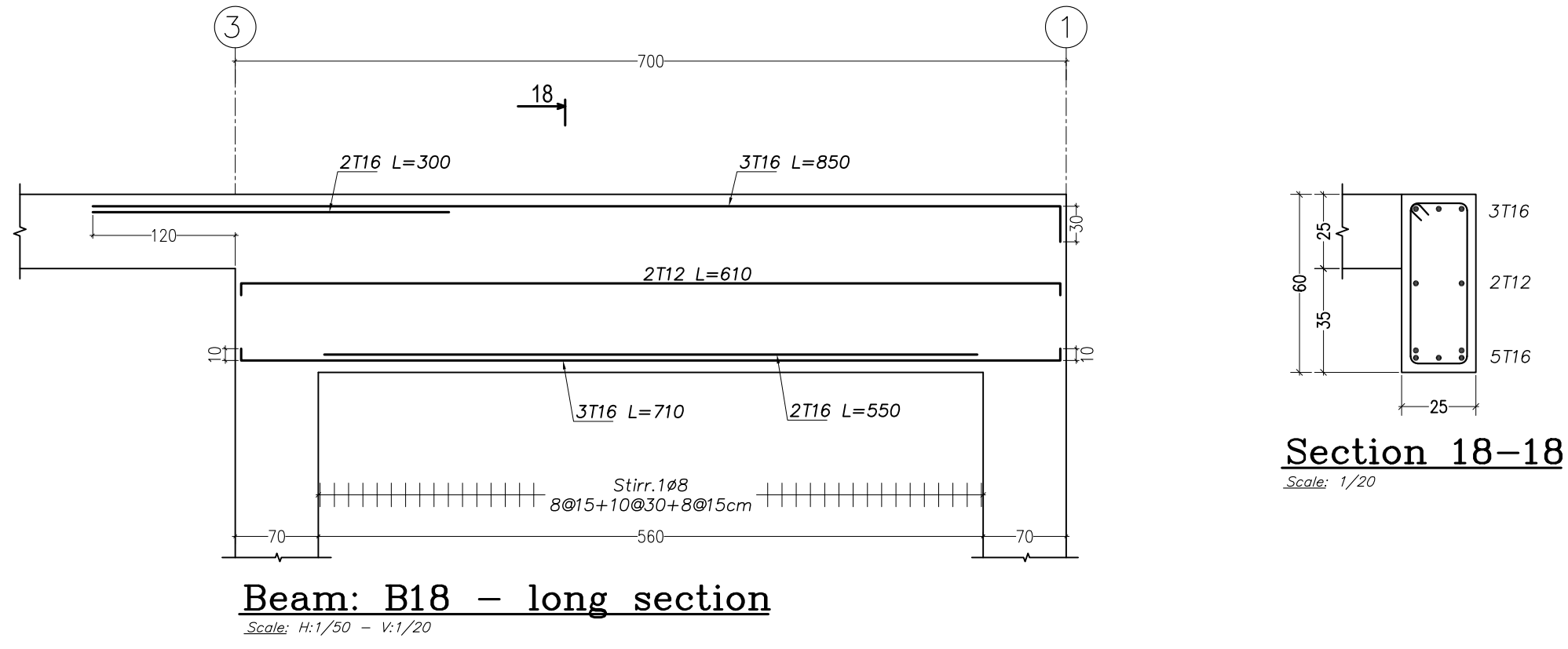
Section 17-17

Beam: B17 – long section



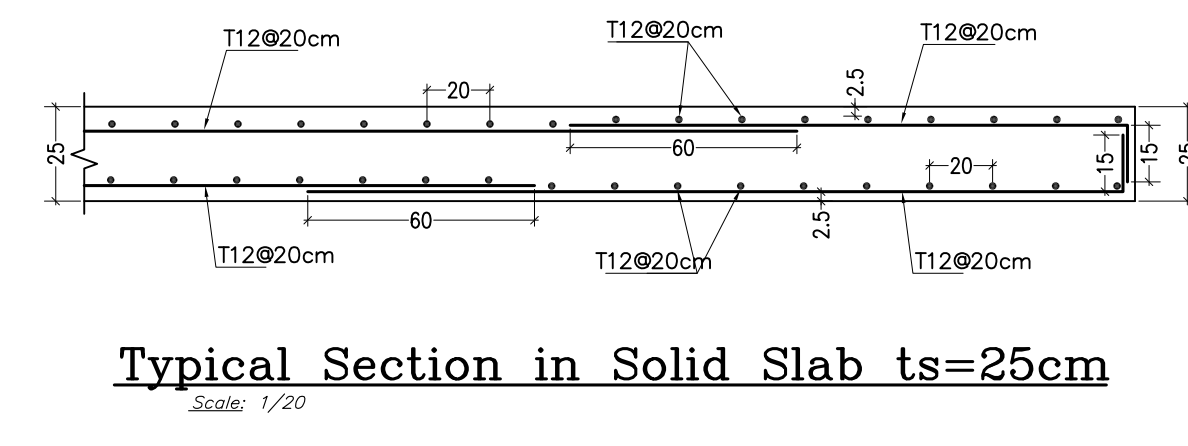
Section 24-24

Beam: B24 – long section

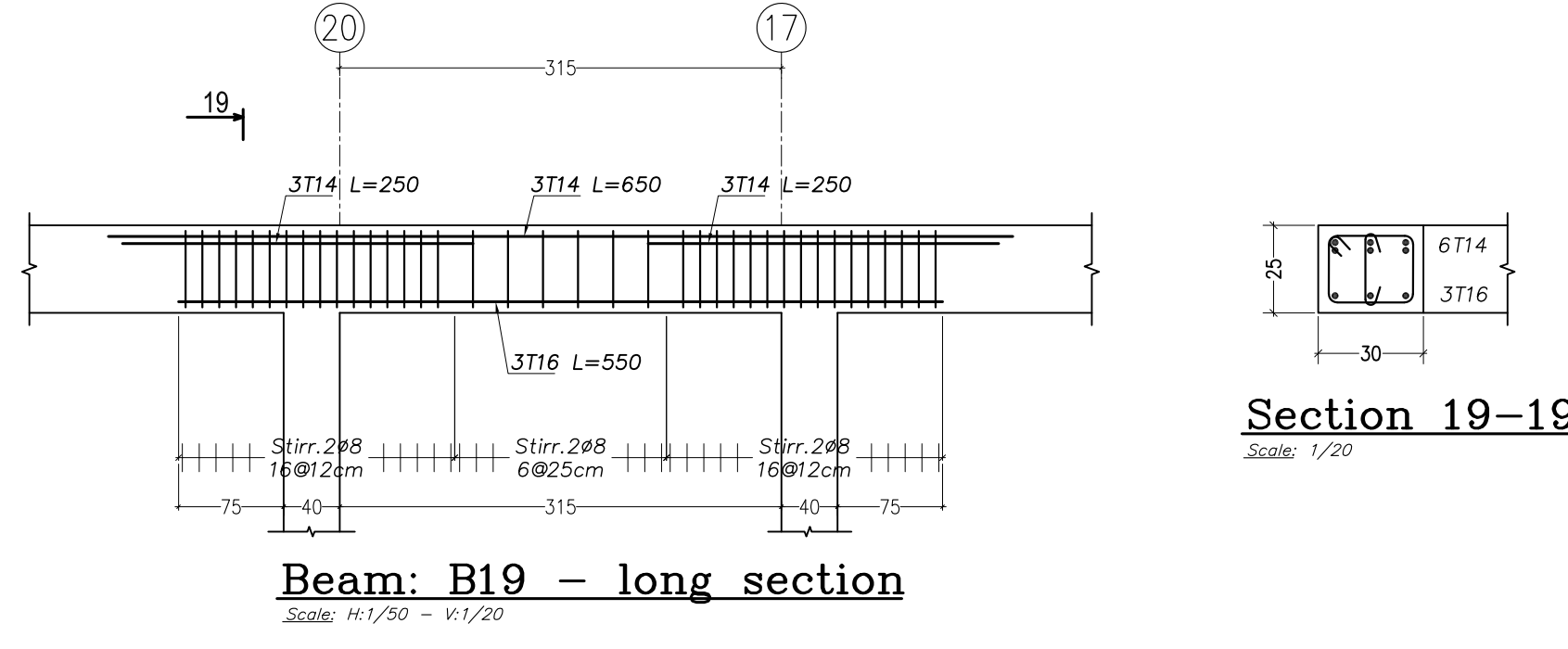


Section 18-18

Beam: B18 – long section

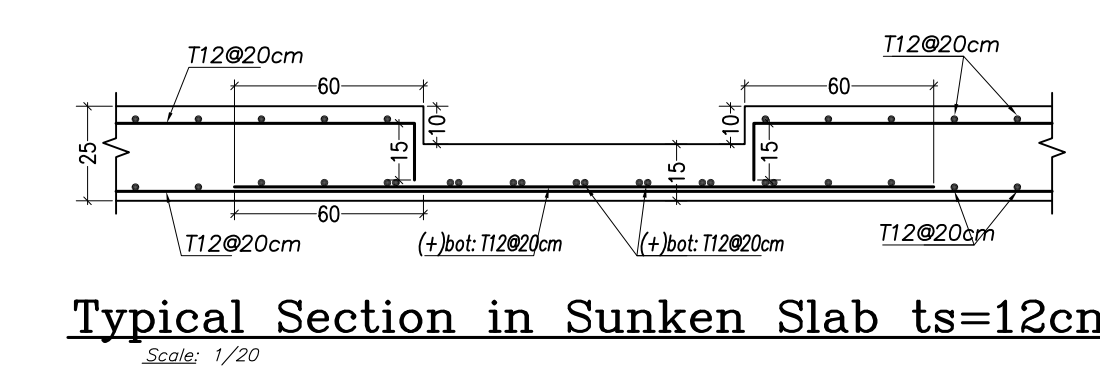


Typical Section in Solid Slab ts=25cm

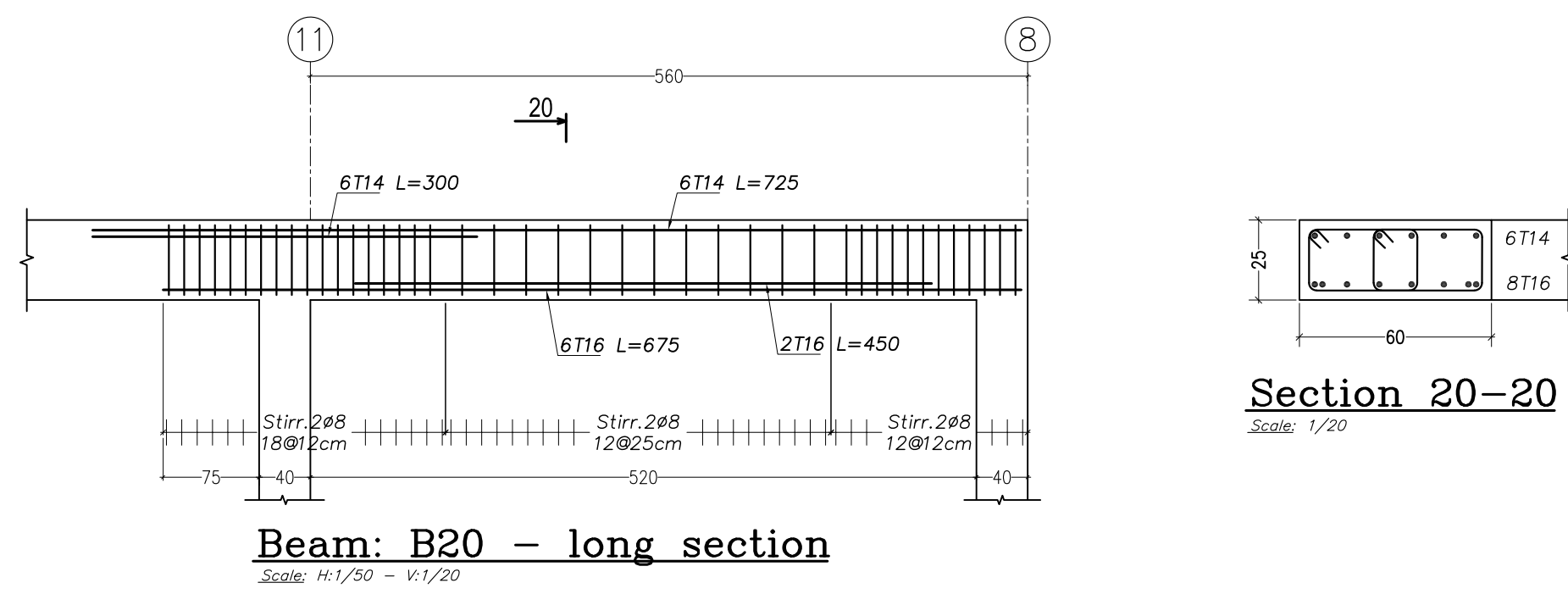


Section 19-19

Beam: B19 – long section

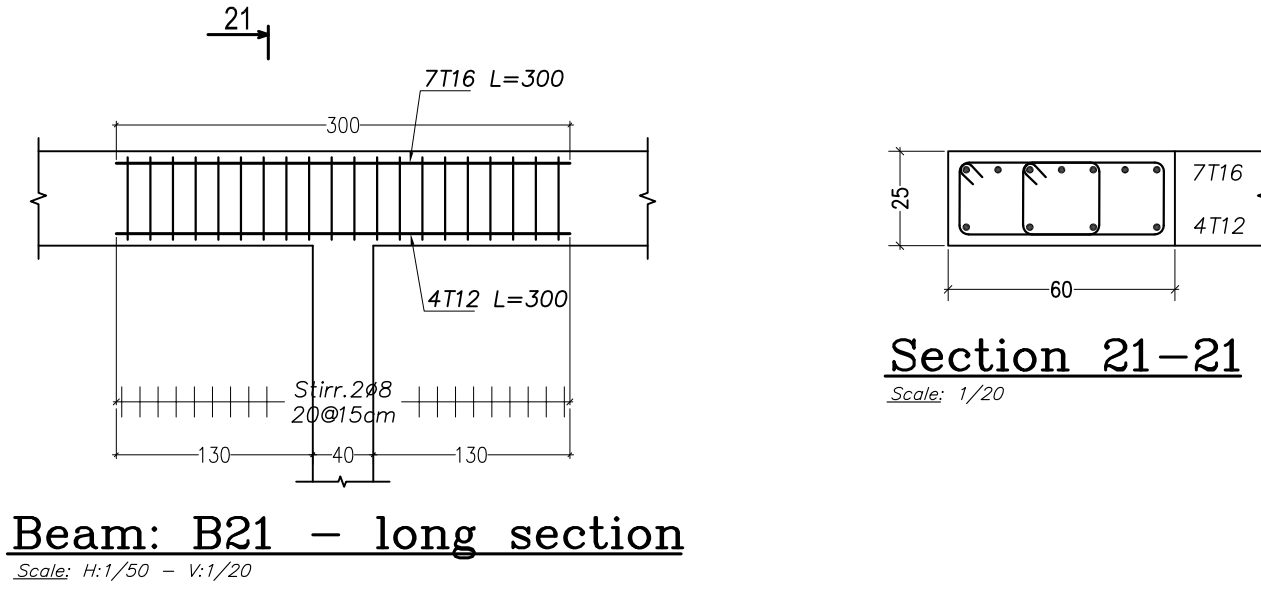


Typical Section in Sunken Slab ts=12cm



Section 20-20

Beam: B20 – long section



Section 21-21

Beam: B21 – long section

REV3	BY: J	APP: J	REV3-DESC	REV3-DESC
REV2	BY: J	APP: J	REV2-DESC	REV2-DESC
REV1	BY: J	APP: J	REV1-DESC	REV1-DESC
REV	BY	APP	DESCRIPTION	DATE

Project Information

Project:

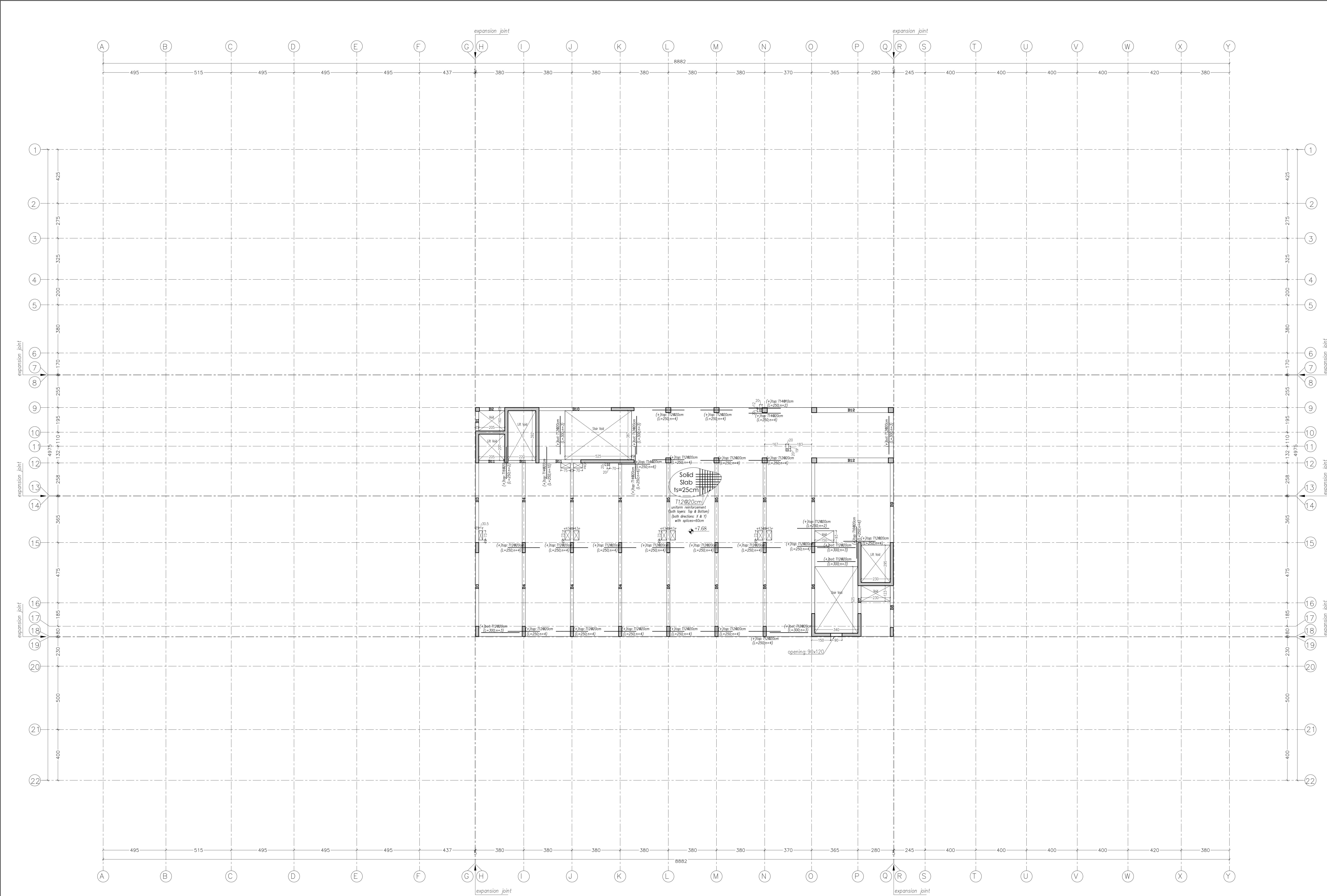
Project Title: **HARBATA ONE DAY SURGERY HOSPITAL**

Country: **LEBANON** Region: **HARBATA BEQAA** Plot No: **705**

Contractor:

Sheet title: **Ground Floor Beam Details 2**

PROJECT NBR.	00.00.0.3.25.03
PROJECT PHASE	EXECUTION
DESIGNED	M.T.
DRAWN	M.T.
CHECKED	B.A.
APPROVED	
DATE	05/08/2024
SCALE	1/50 - 1/20
SHEET TYPE	STRUCTURAL



- Client: **HARBATA MUNICIPALITY**
- CONCISE STRUCTURAL NOTES**
- Dimensions are in cm except indicated, bar diameter in mm & levels in m.
 - Concrete Rate:**
 - $f_c = 300 \text{ kg/cm}^2$ for columns & shear walls.
 - $f_c = 250 \text{ kg/cm}^2$ for other members.
 - Steel Reinf.:**
 - $f_y = 4,200 \text{ kg/cm}^2$ for rebars, indicated as (T).
 - $f_y = 3,000 \text{ kg/cm}^2$ for stirrups, indicated as ($\emptyset$).
 - Soil Bearing Capacity:**
qall = 2.75 kg/cm².
 - for more detailed notes see: sheet S001.

REV3	BY: APP-3	REV3-DESC	REV3-DESC
REV2	BY: APP-2	REV2-DESC	REV2-DESC
REV1	BY: APP-1	REV1-DESC	REV1-DESC
REV	BY: APP	DESCRIPTION	DATE

Revisions

Project Information

Project:

Project Title: **HARBATA ONE DAY SURGERY HOSPITAL**

Country: **LEBANON** Region: **HARBATA BEQAA** Plot No: **705**

Contractor:

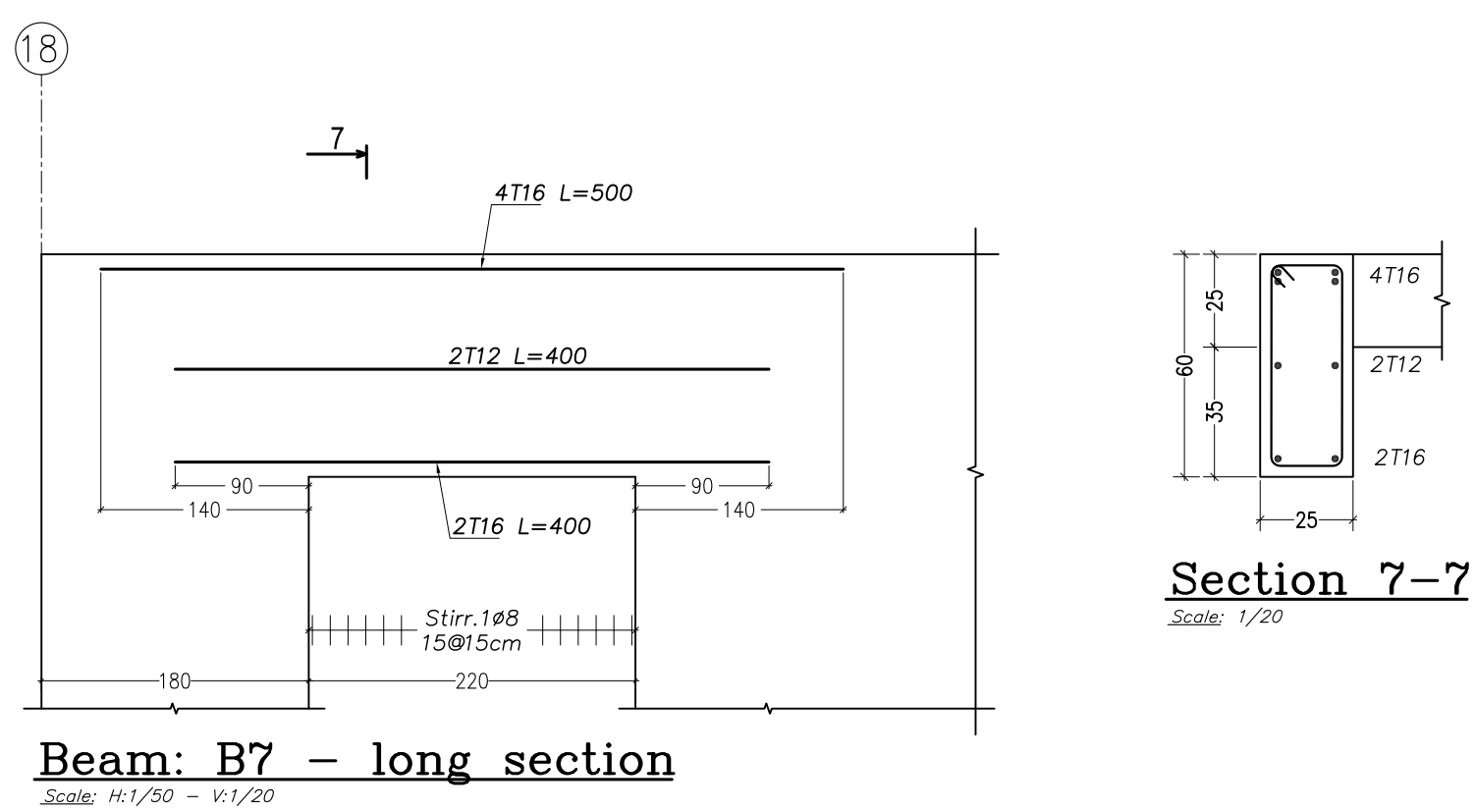
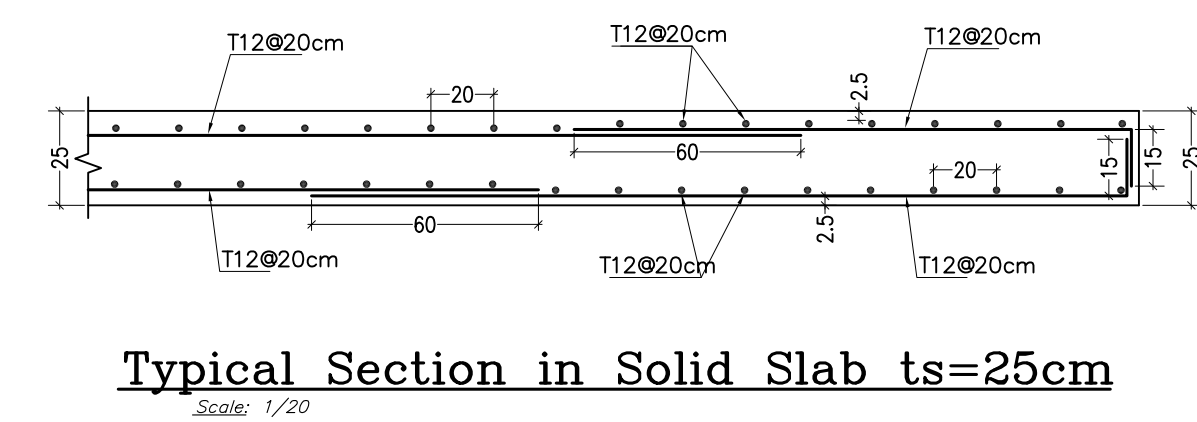
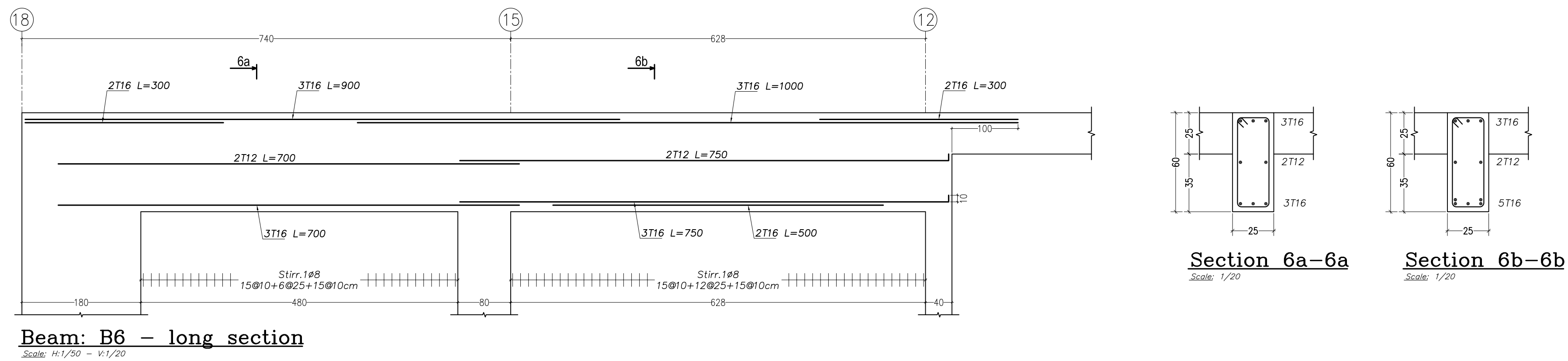
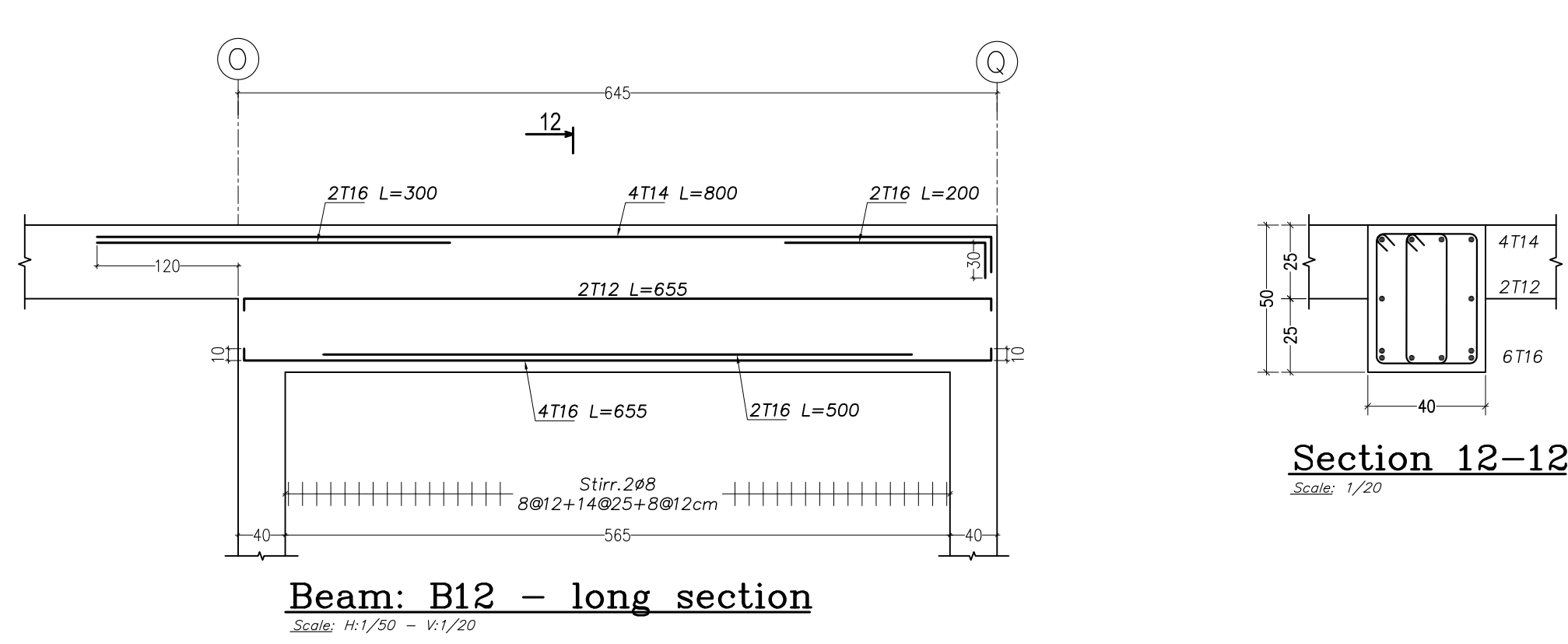
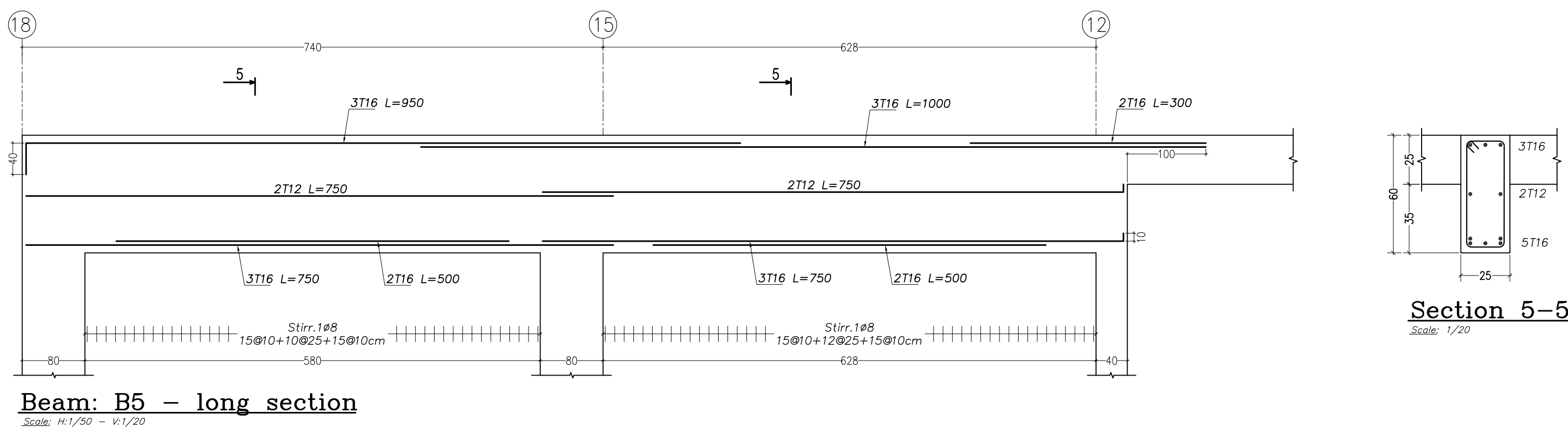
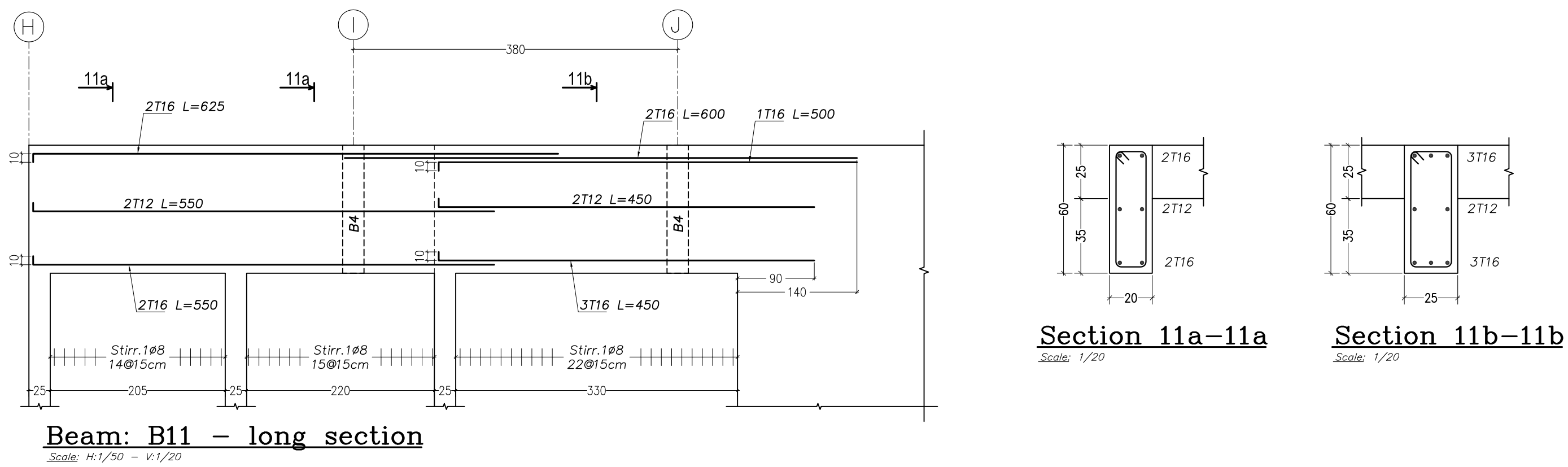
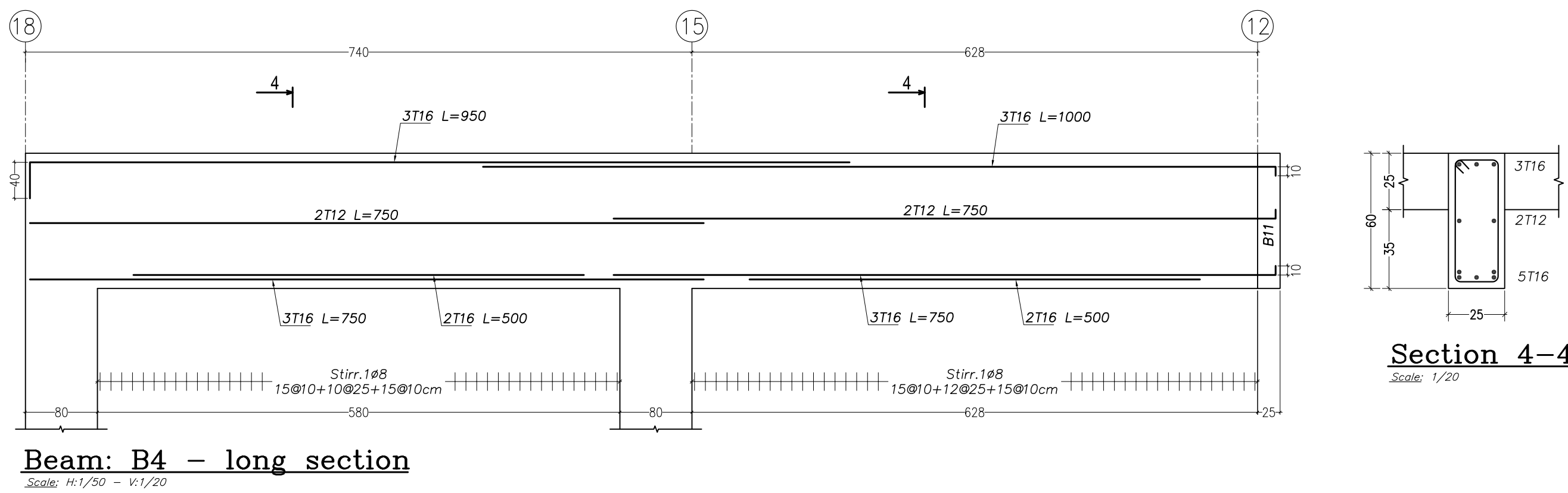
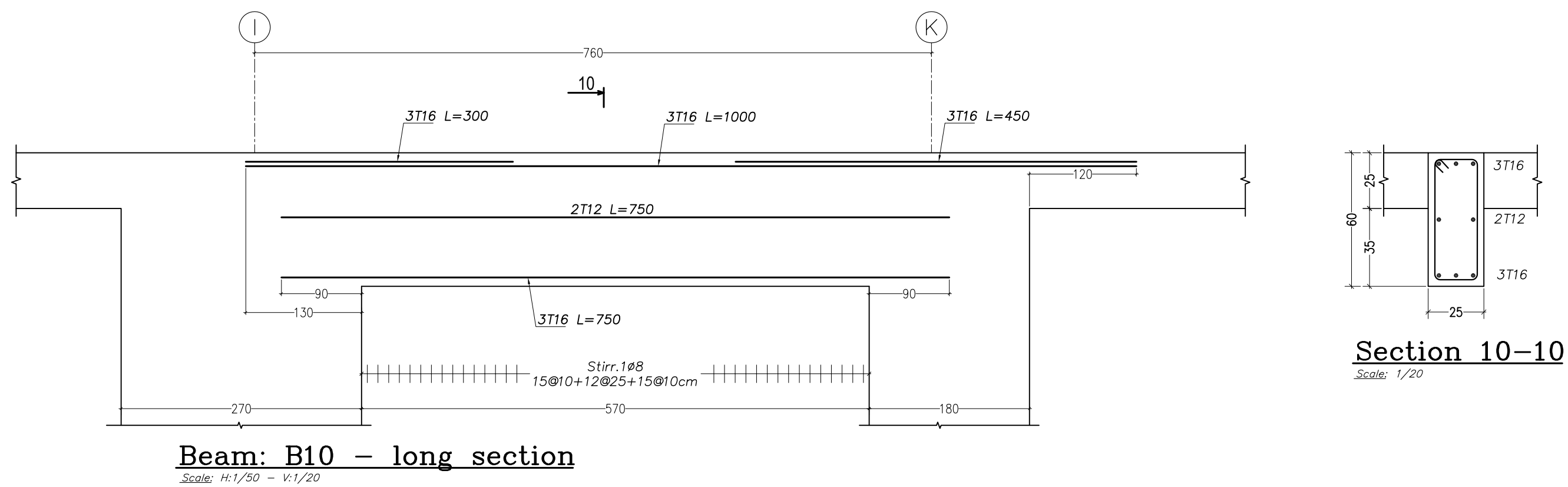
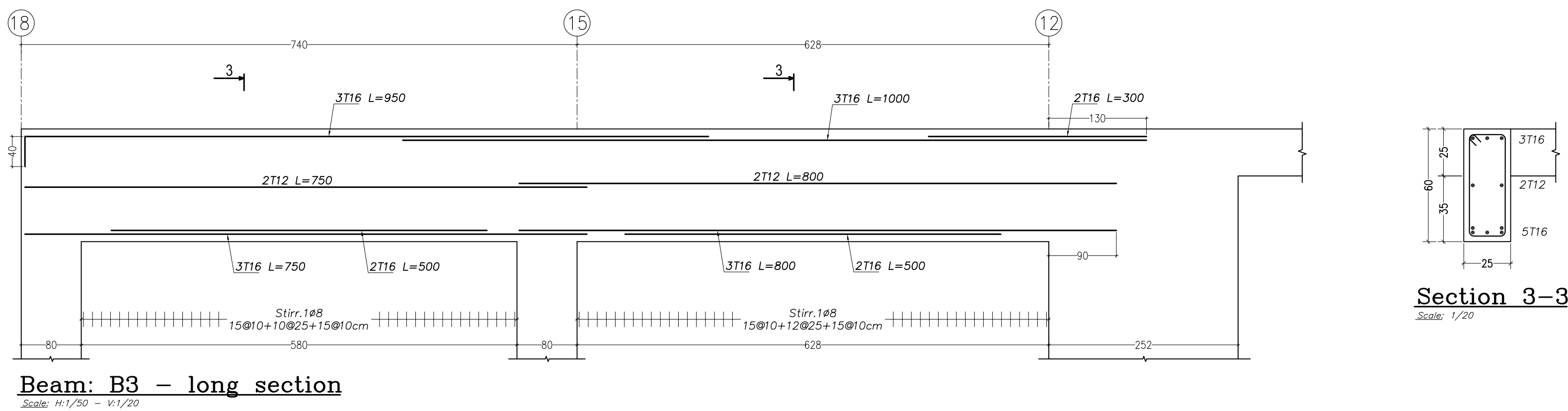
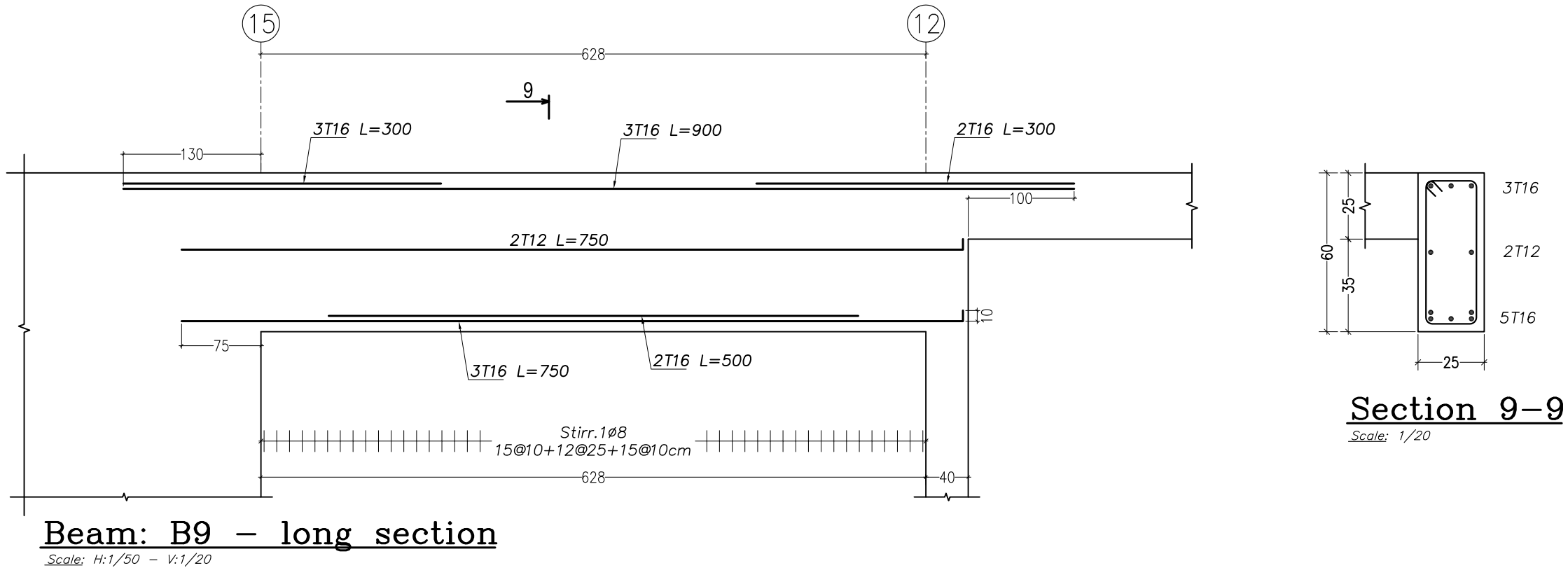
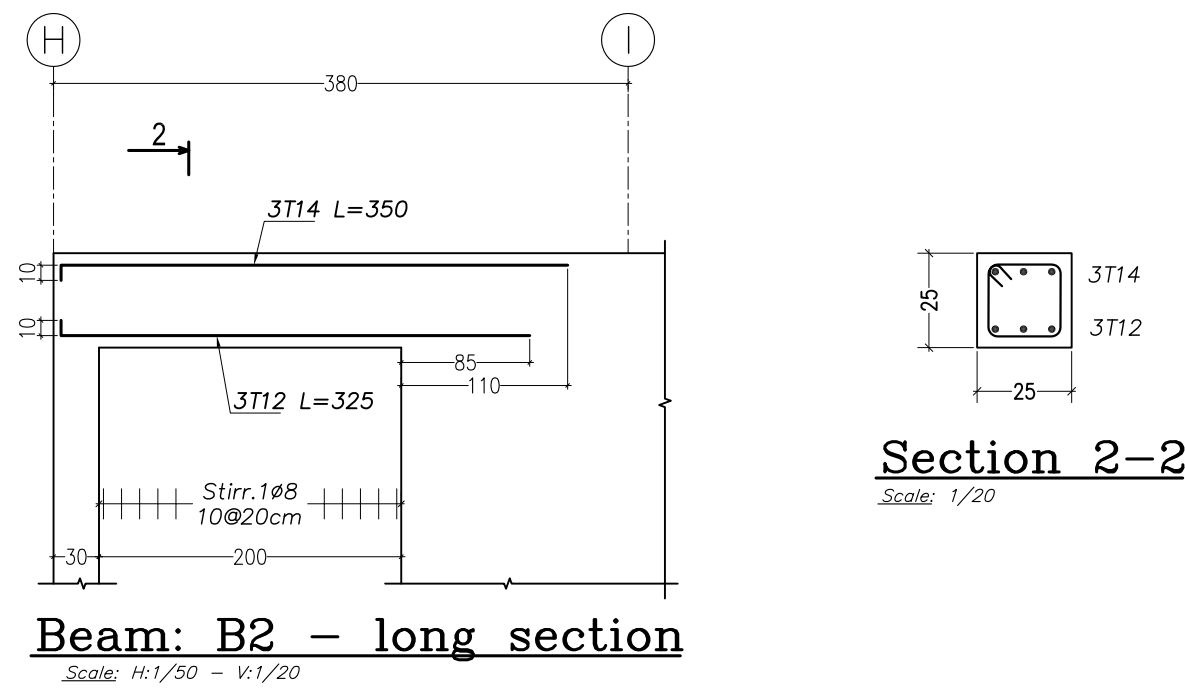
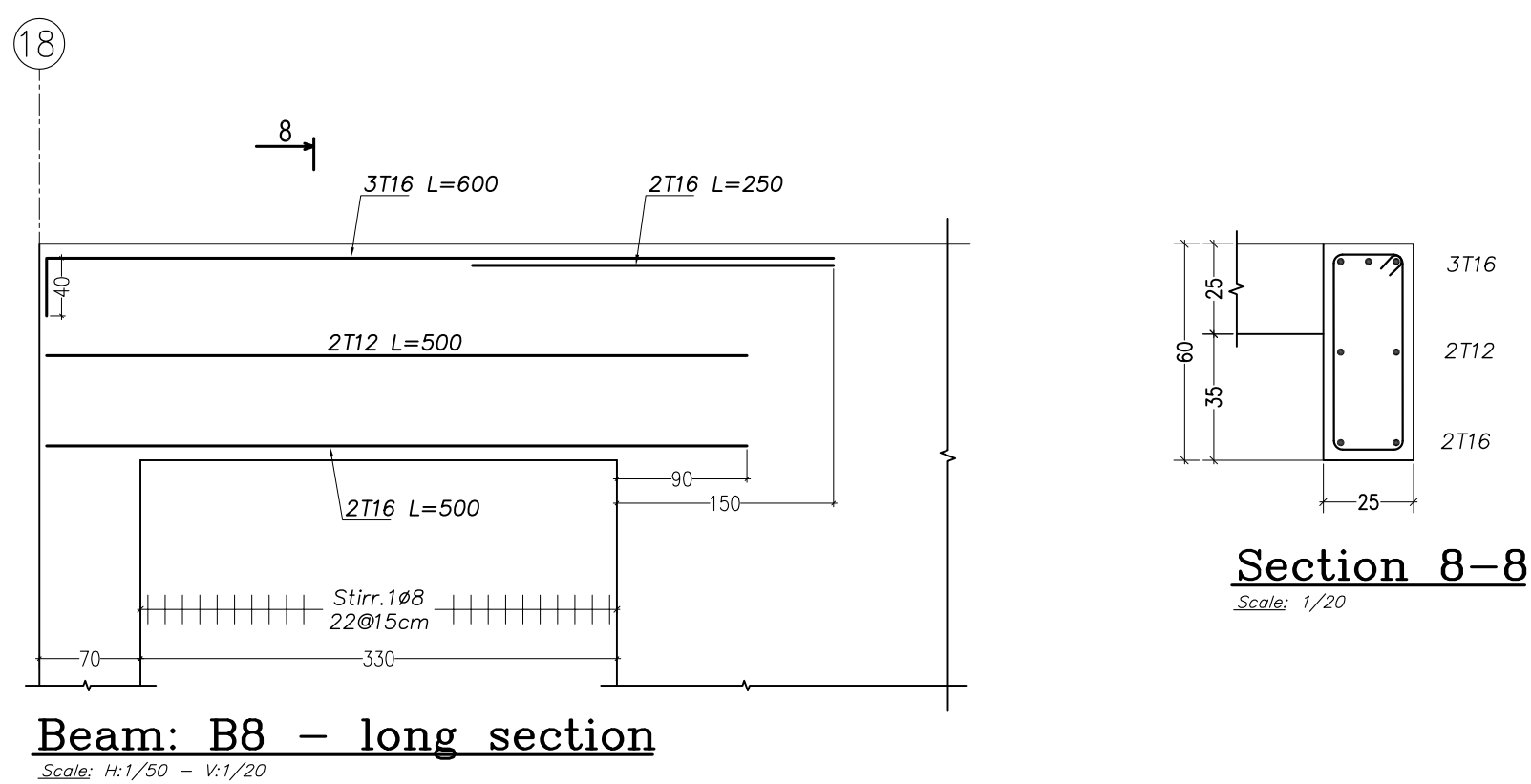
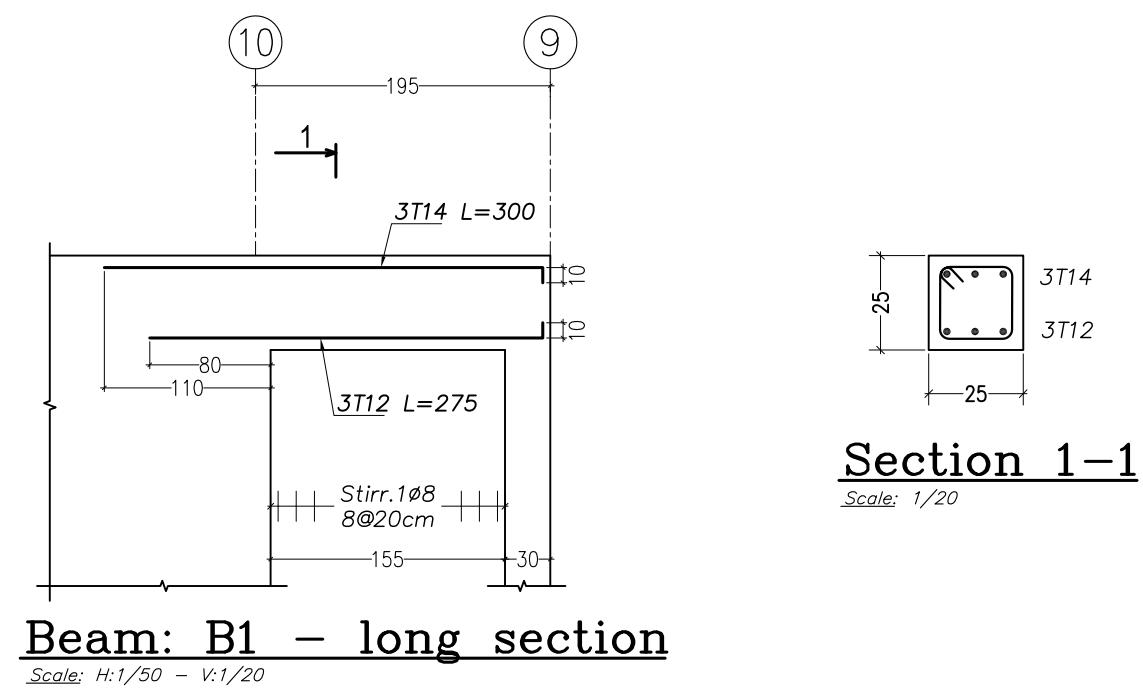
Sheet title:
First Floor Cover Slab Plan

Sheet Information

PROJECT NBR.	00, 00, 0, 5, 25, 03
PROJECT PHASE	EXECUTION
DESIGNED	M.T.
DRAWN	M.T.
CHECKED	B.A.
APPROVED	
DATE	05/08/2024
SCALE	1/100
SHEET TYPE	STRUCTURAL

Sheet Number **S 304**

- Client: **HARBATA MUNICIPALITY**
- CONCISE STRUCTURAL NOTES
- Dimensions are in cm except indicated, bar diameter in mm & levels in m.
 - Concrete Rate:
 - $f_c=300\text{kg/cm}^2$ for columns & shear walls.
 - $f_c=250\text{kg/cm}^2$ for other members.
 - Steel Reinforcement:
 - $f_y=4,200\text{kg/cm}^2$ for rebars, indicated as (T).
 - $f_y=3,000\text{kg/cm}^2$ for stirrups, indicated as (Ø).
 - Soil Bearing Capacity:
 $q_{all}=2.75 \text{ kg/cm}^2$.
 - For more detailed notes see: sheet S001.



REV3	BY: J APP-3	REV3-DESC	REV3-DESC
REV2	BY: J APP-2	REV2-DESC	REV2-DESC
REV1	BY: J APP-1	REV1-DESC	REV1-DESC
REV	BY: APP	DESCRIPTION	DATE

Project Information

Project:

Project Title:

Country: Lebanon Region: HARBATA BEQAA Plot No: 705

Contractor:

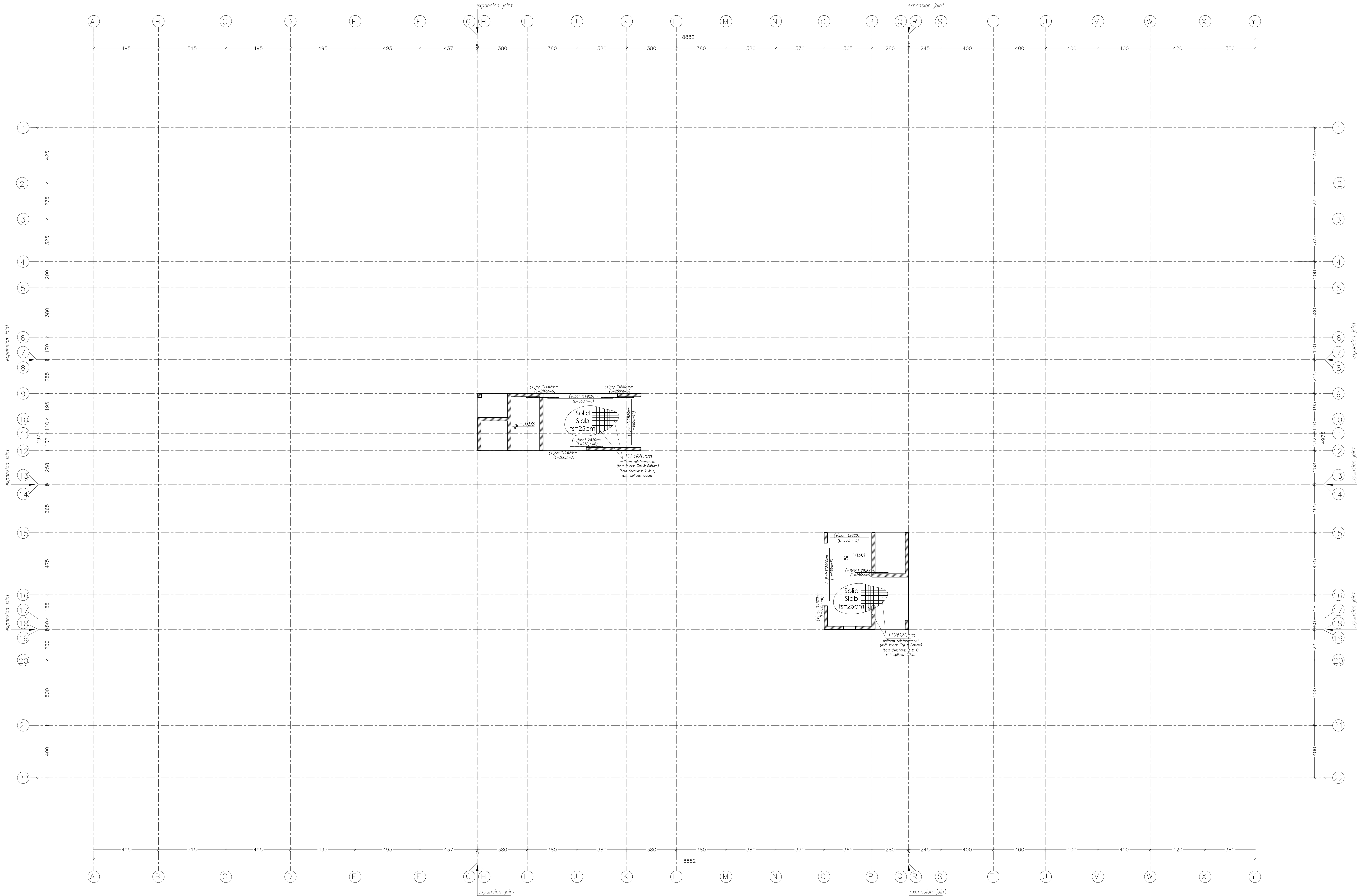
Sheet title:

First Floor Beam Details

Sheet Information

Sheet Number

S 305



- Client: **HARBATA MUNICIPALITY**
- CONCISE STRUCTURAL NOTES**
- Dimensions are in cm except indicated, bar diameter in mm & levels in m.
 - Concrete Rate:**
 - $f_c = 300 \text{ kg/cm}^2$ for columns & shear walls.
 - $f_c = 250 \text{ kg/cm}^2$ for other members.
 - Steel Reinf.:**
 - $f_y = 4,200 \text{ kg/cm}^2$ for rebars, indicated as (T).
 - $f_y = 3,000 \text{ kg/cm}^2$ for stirrups, indicated as ($\emptyset$).
 - Soil Bearing Capacity:**
 $q_{all} = 2.75 \text{ kg/cm}^2$.
 - for more detailed notes see: sheet S001.

REV3	BY: J	APP: 3	REV3-DESC	REV3-DESC
REV2	BY: 2	APP: 2	REV2-DESC	REV2-DESC
REV1	BY: 1	APP: 1	REV1-DESC	REV1-DESC
REV	BY	APP	DESCRIPTION	DATE

Revisions

Project Information

Project:

Project Title: **HARBATA ONE DAY SURGERY HOSPITAL**

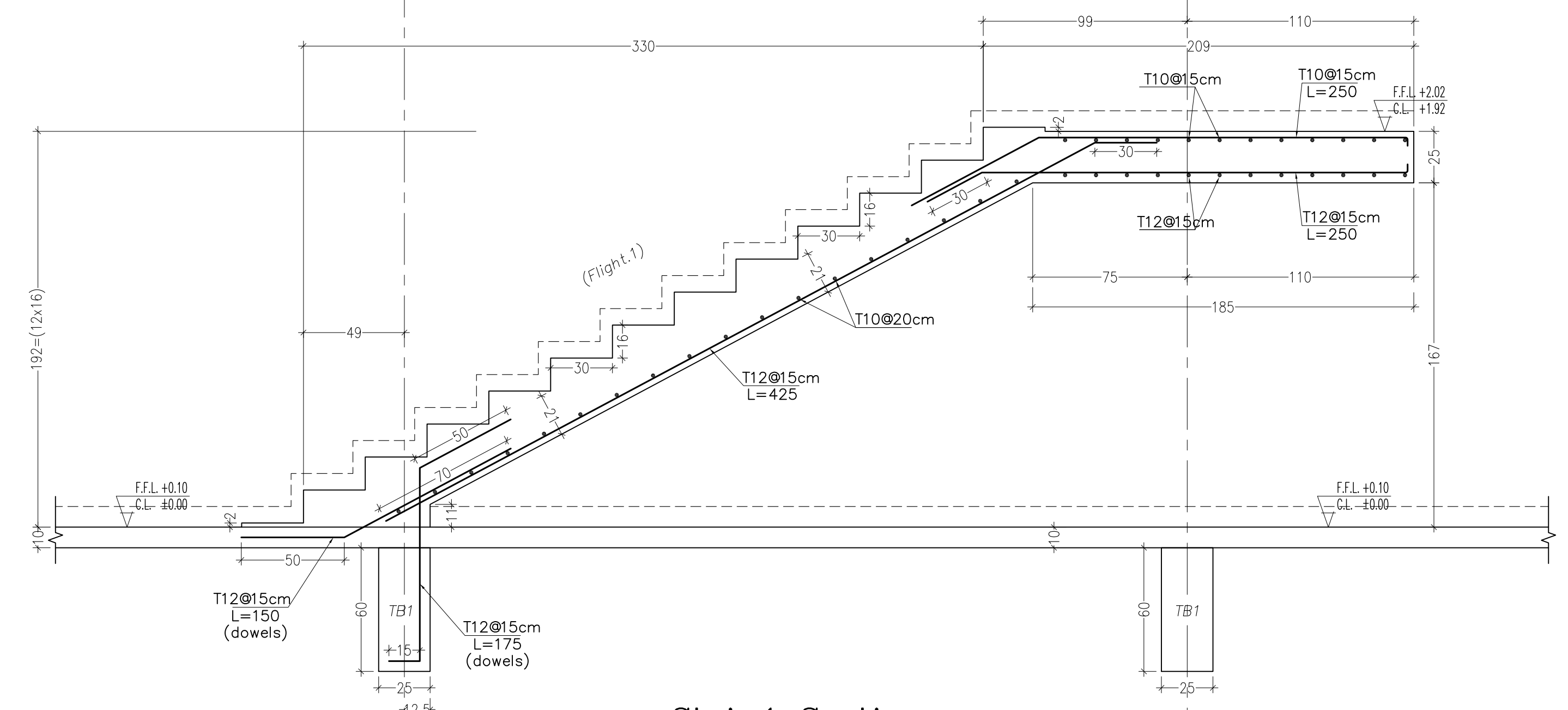
Country: **LEBANON** Region: **HARBATA BEQAA** Plot No: **705**

Contractor:

Sheet title: **Rooftop Cover Slab Plan**

Sheet Information	
PROJECT NBR.	00.00.0.5.25.03
PROJECT PHASE	EXECUTION
DESIGNED	M.T.
DRAWN	M.T.
CHECKED	B.A.
APPROVED	
DATE	05/08/2024
SCALE	1/100
SHEET TYPE	STRUCTURAL

Sheet Number **S 306**

[illegible]Sheet Number **S 401**

