

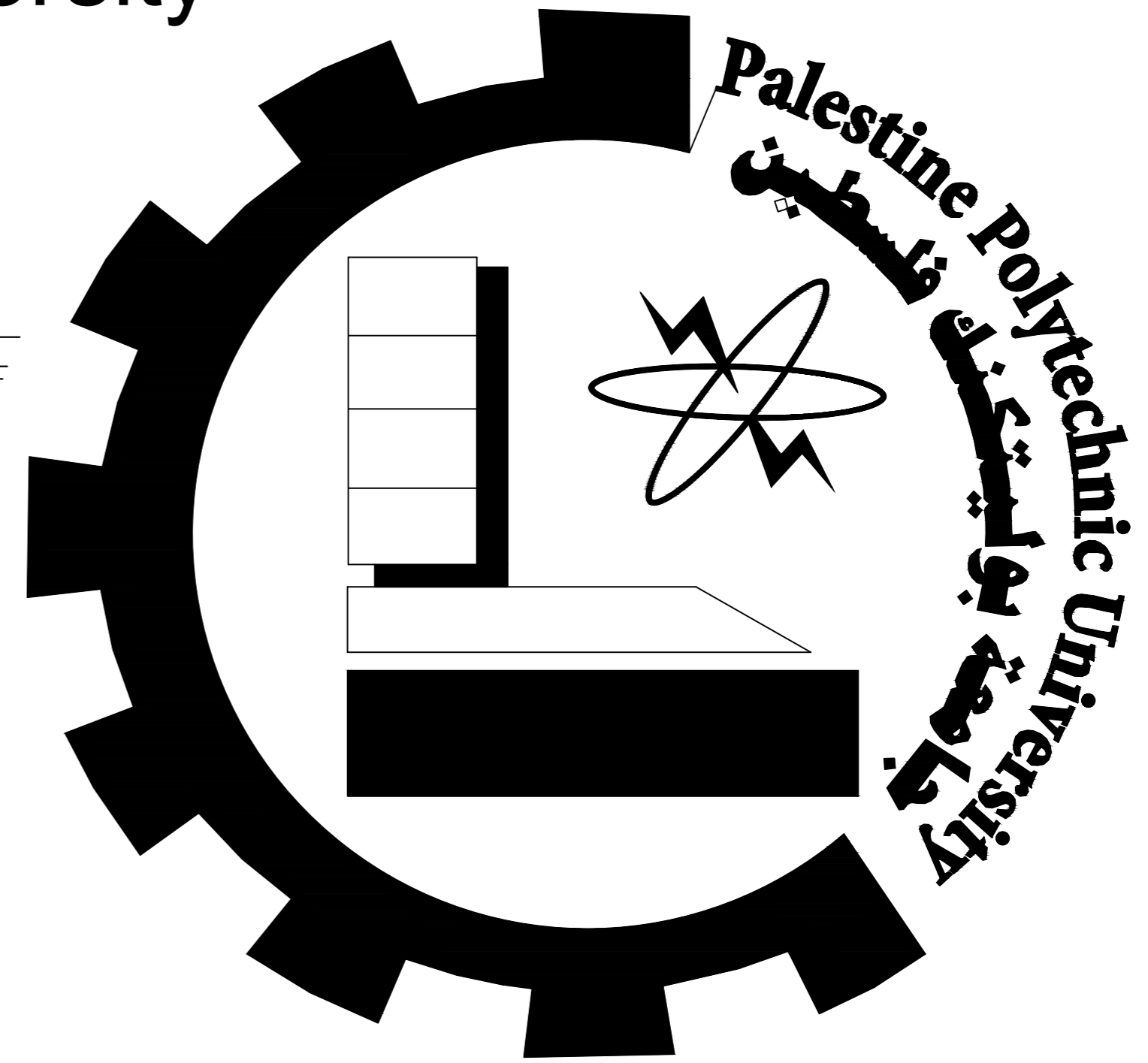
Palestine Polytechnic University

Civil Engineering

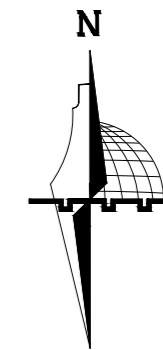
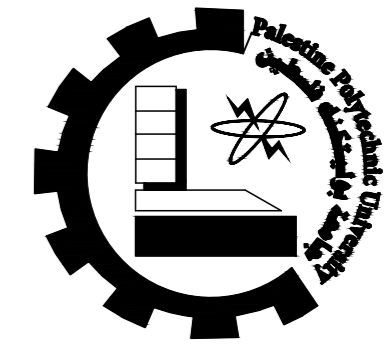
**Structural Design of
Residential Commercial
building in Hebron**

Done By : Rana Burqan
Tarteel Sharaha

Supervisor :
Eng.Hamdi Idais



LIST OF DRAWINGS



NOTES:
All Dimensions are in meters
unless otherwise shown.
All spot levels are in meters.

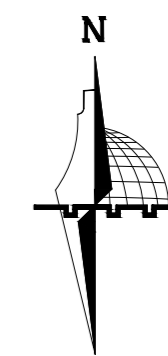
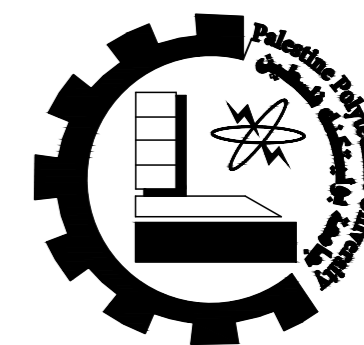
Palestine Polytechnic University
Civil. & Arch. Eng. Department
Building Engineering

Designed By:
Rana Burqan
Tarteel Sharaha

Drawing Title :
List of Drawings
Table

Supervisor :
Eng.Hamdi Idais

ARCHITECTURAL		Elevations & Sections		Key Plans		Structural	
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A 02	Dimension Ground plan	E 02	West Elevation	K 02	Key plan Columns	S 01	Reinforcement Plan Basement Floor
A 03	Dimension First plan	E 03	South Elevation	K 03	Key plan Basement Floor	S 02	Reinforcement Plan Ground Floor
A 04	Dimension Second plan	E 04	East Elevation	K 04	Key plan Ground Floor	S 03	Reinforcement Plan Roof Floor
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A 09	Furniture Second plan					S 08	Columns Details
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						S 11	Foundation Details
						S 12	Foundation Details
						S 13	Foundation Details
						S 14	Walls Details
						S 15	Walls Details
						S 16	Stair Details



NOTES:
 All Dimensions are in meters
 unless otherwise shown.
 All spot levels are in meters.

Palestine Polytechnic University

Civil. & Arch. Eng. Department

Building Engineering

Designed By:

Rana Burqan
 Tarteel Sharaha

Drawing Title :

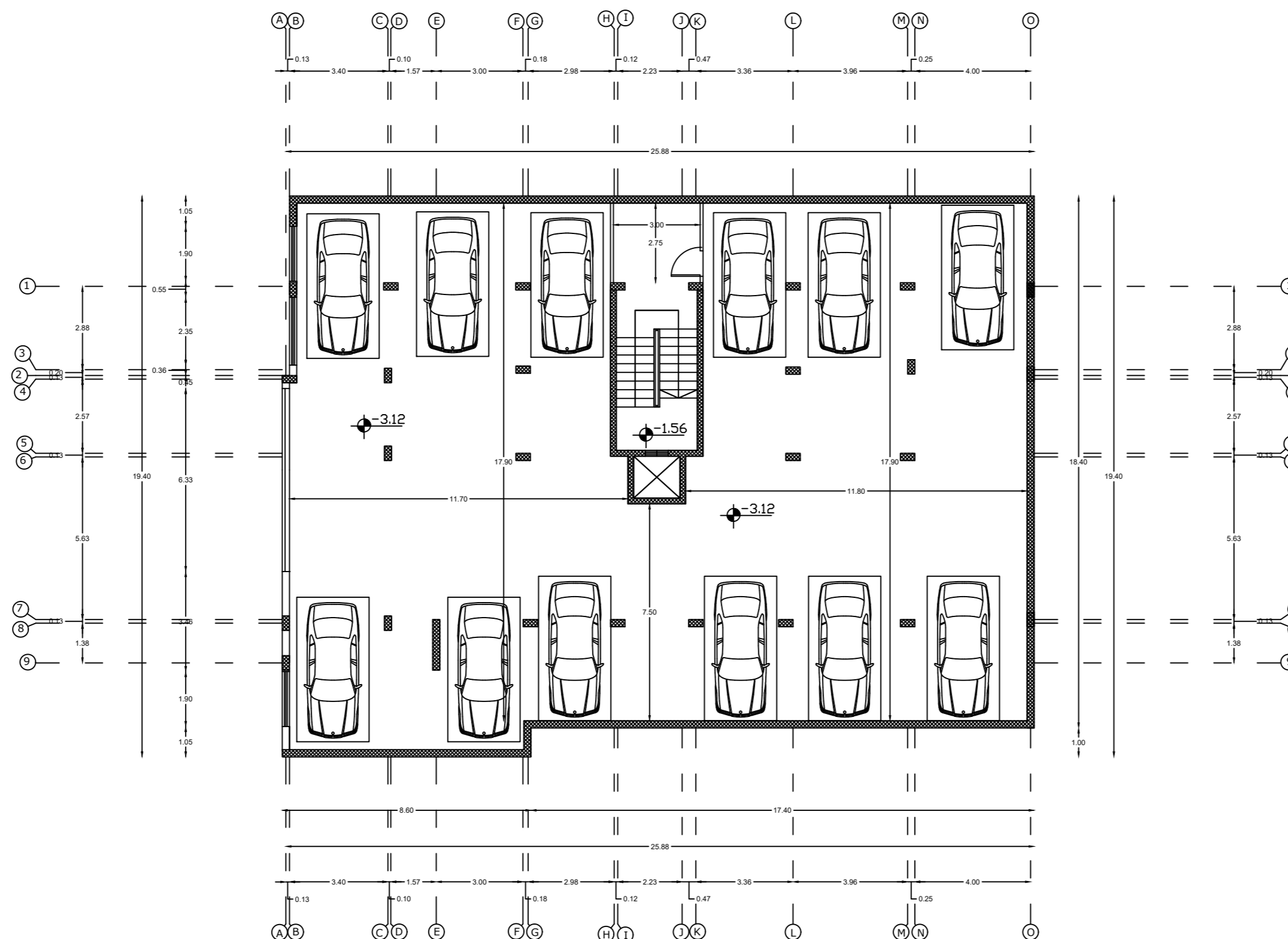
Dimension
 Basement plan

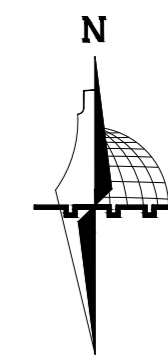
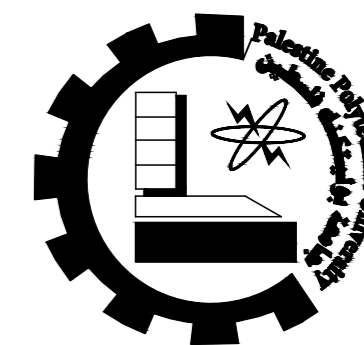
Supervisor :

Eng. Hamdi Edais

1/100

A 01





NOTES:

All Dimensions are in meters unless otherwise shown.

All spot levels are in meters.

Palestine Polytechnic University

Civil. & Arch. Eng. Department

Building Engineering

Designed By:

Rana Burqan
Tarteel Sharaha

Drawing Title :

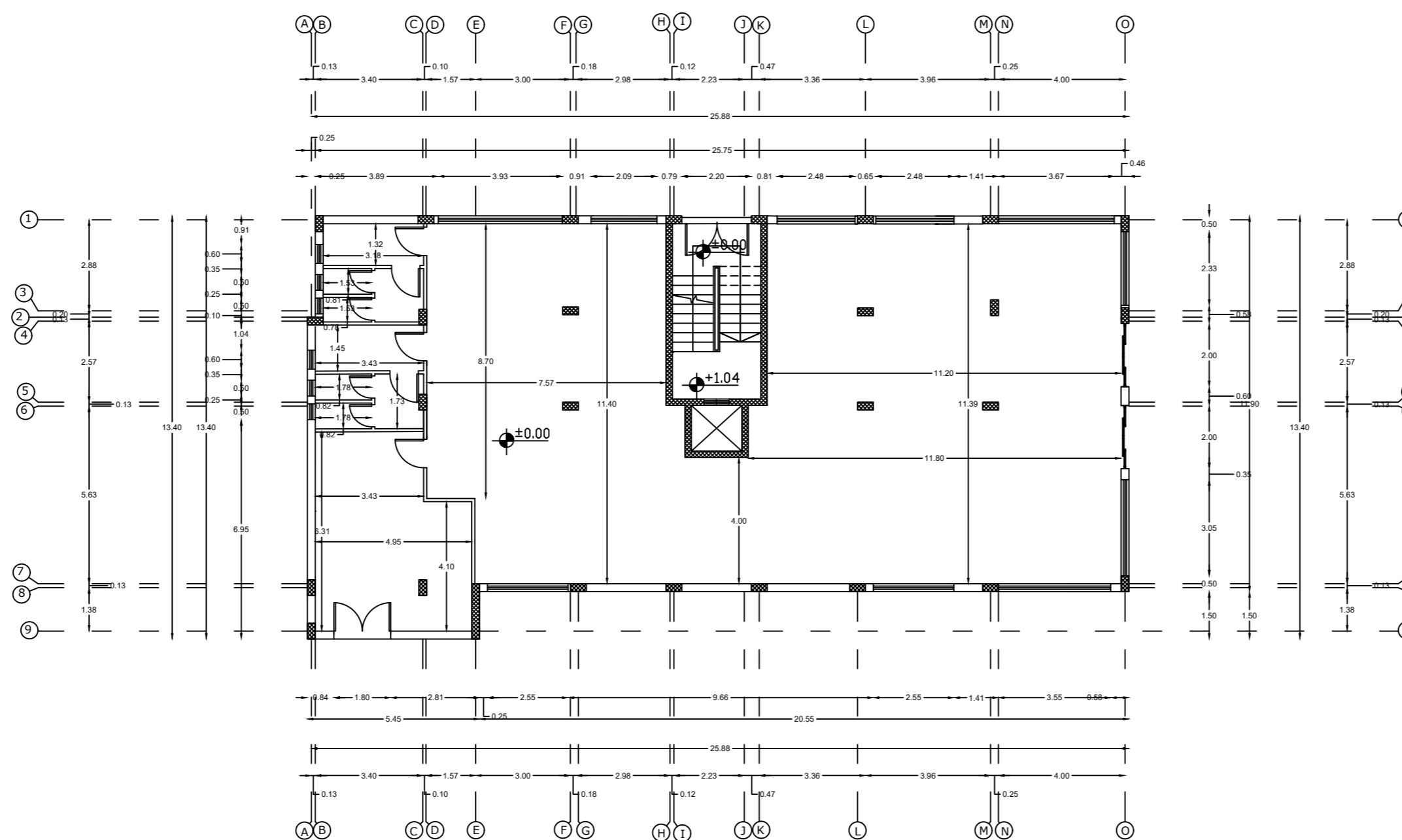
Dimension
Ground plan

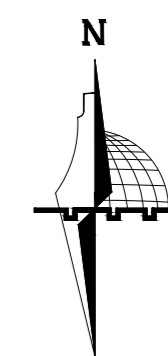
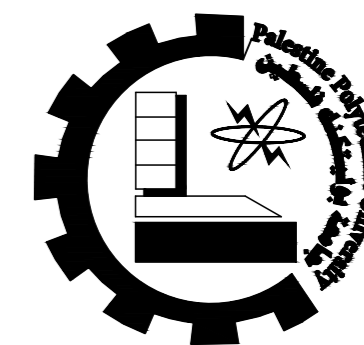
Supervisor :

Eng.Hamdi Edais

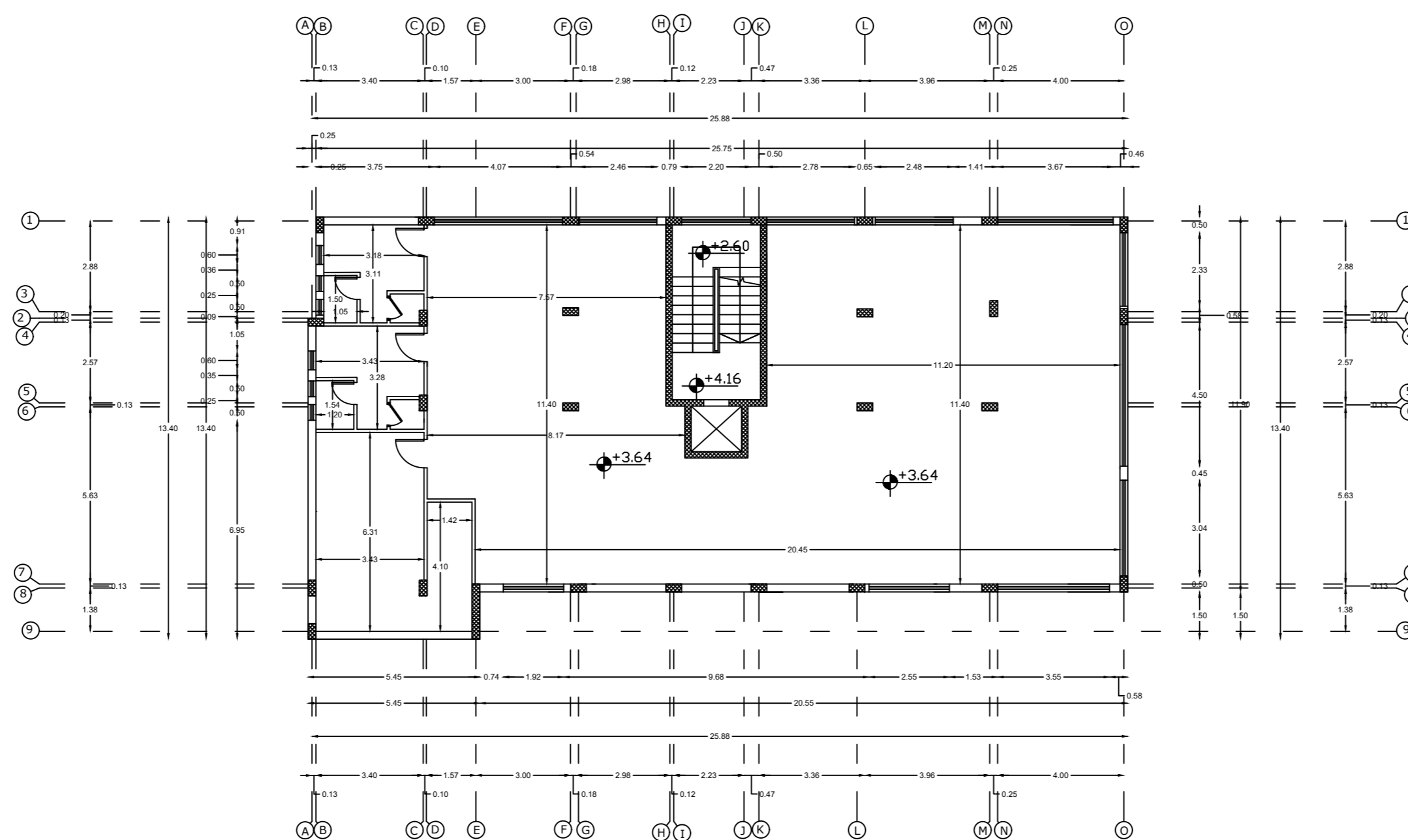
1/100

A 02





NOTES:
 All Dimensions are in meters
 unless otherwise shown.
 All spot levels are in meters.



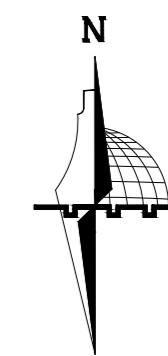
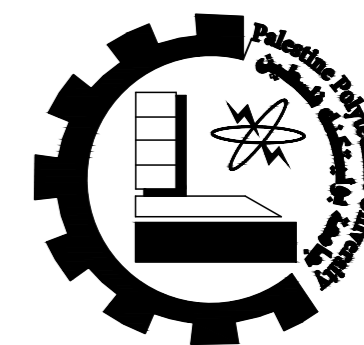
Palestine Polytechnic University
 Civil. & Arch. Eng. Department
 Building Engineering

Designed By:
 Rana Burqan
 Tarteel Sharaha

Drawing Title :
 Dimension
 First plan
 Supervisor :
 Eng. Hamdi Edais

1/100

A 03



NOTES:

All Dimensions are in meters unless otherwise shown.

All spot levels are in meters.

Palestine Polytechnic University

Civil. & Arch. Eng. Department

Building Engineering

Designed By:

Rana Burqan
Tarteel Sharaha

Drawing Title :

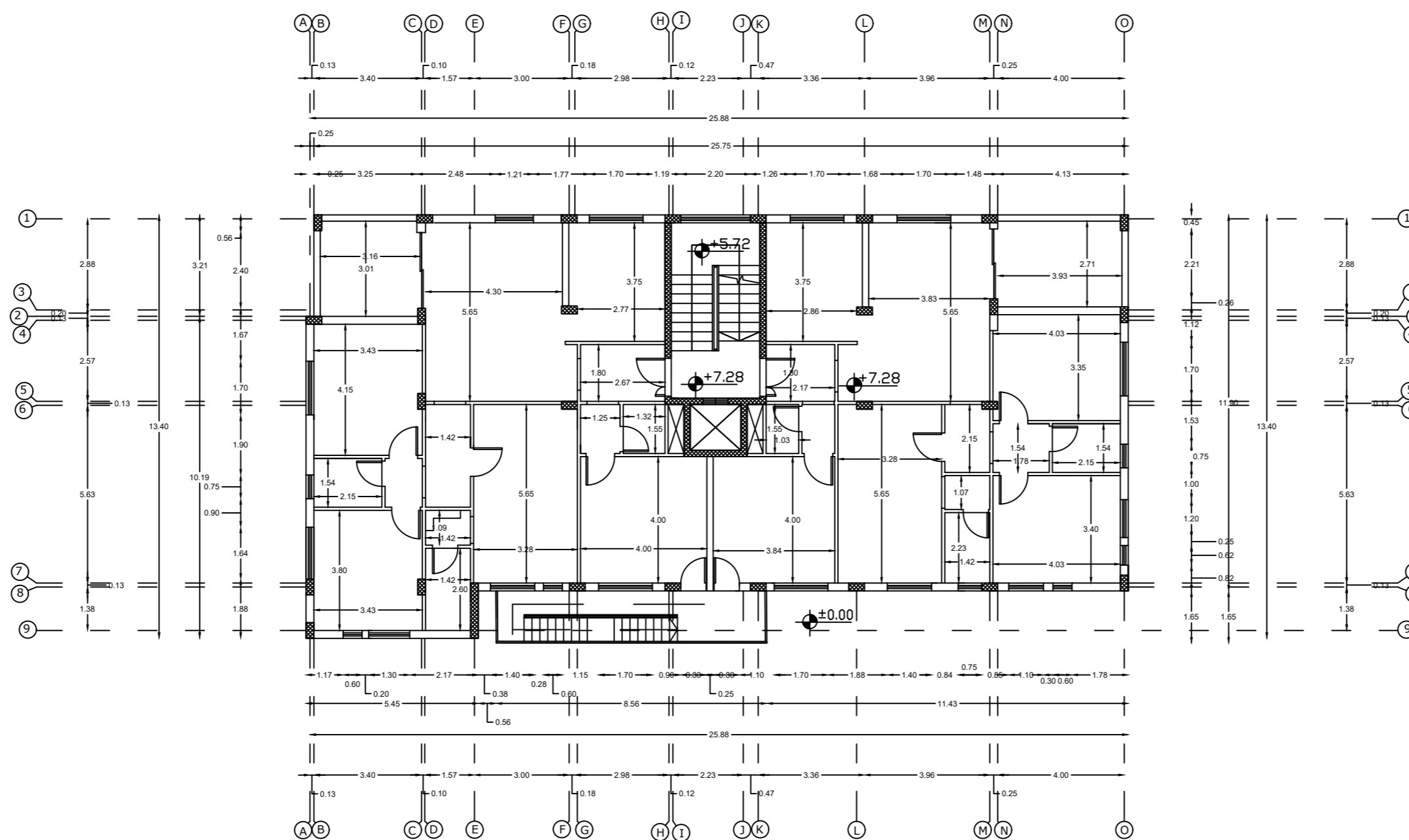
Dimension
Second plan

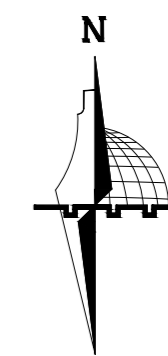
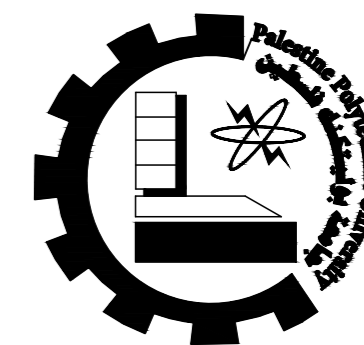
Supervisor :

Eng.Hamdi Edais

1/100

A 04





NOTES:

All Dimensions are in meters unless otherwise shown.

All spot levels are in meters.

Palestine Polytechnic University

Civil. & Arch. Eng. Department

Building Engineering

Designed By:

Rana Burqan
Tarteel Sharaha

Drawing Title :

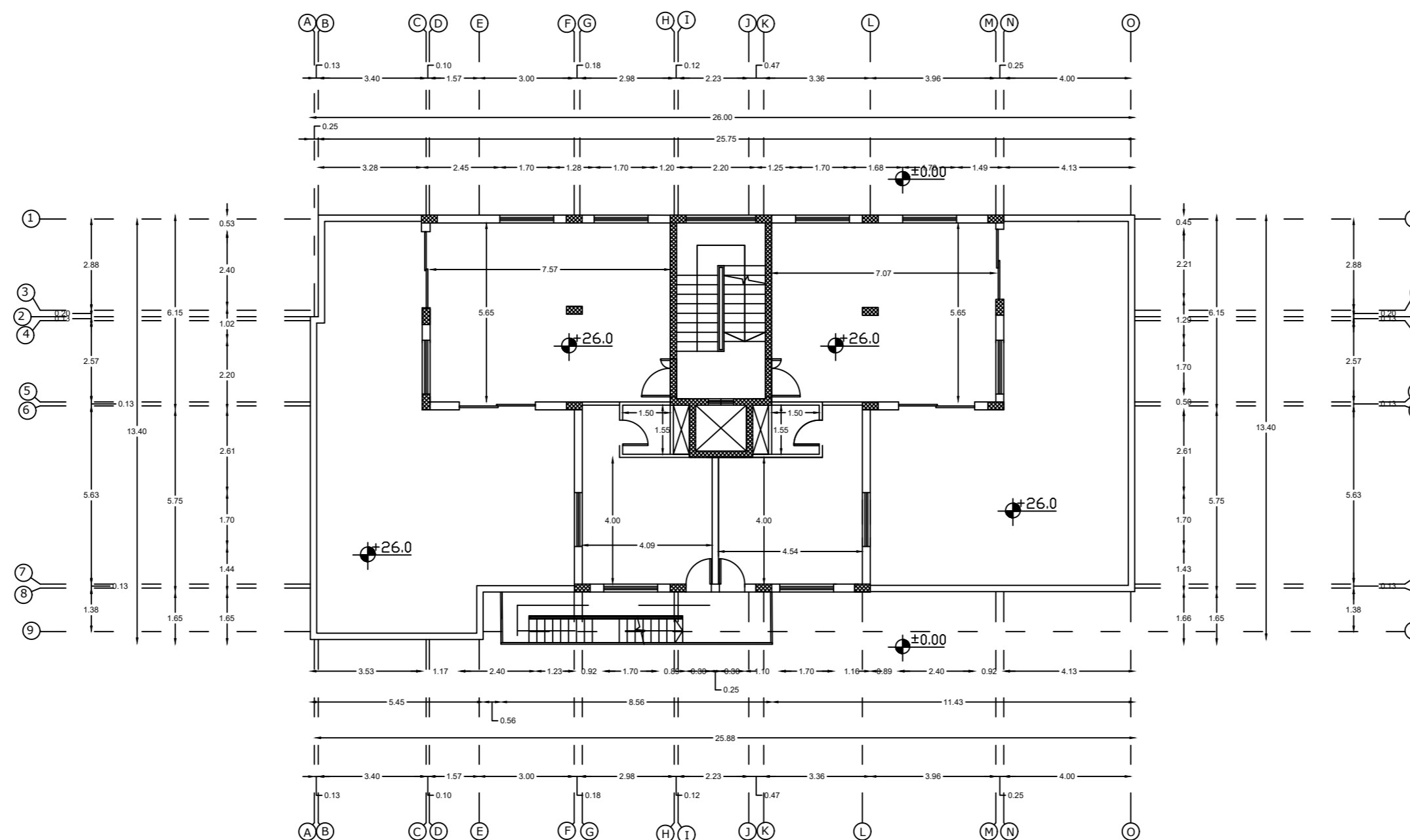
Dimension
Roof plan

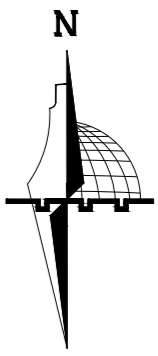
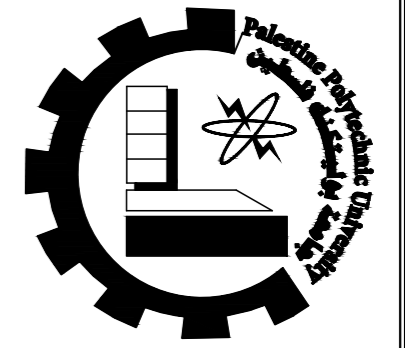
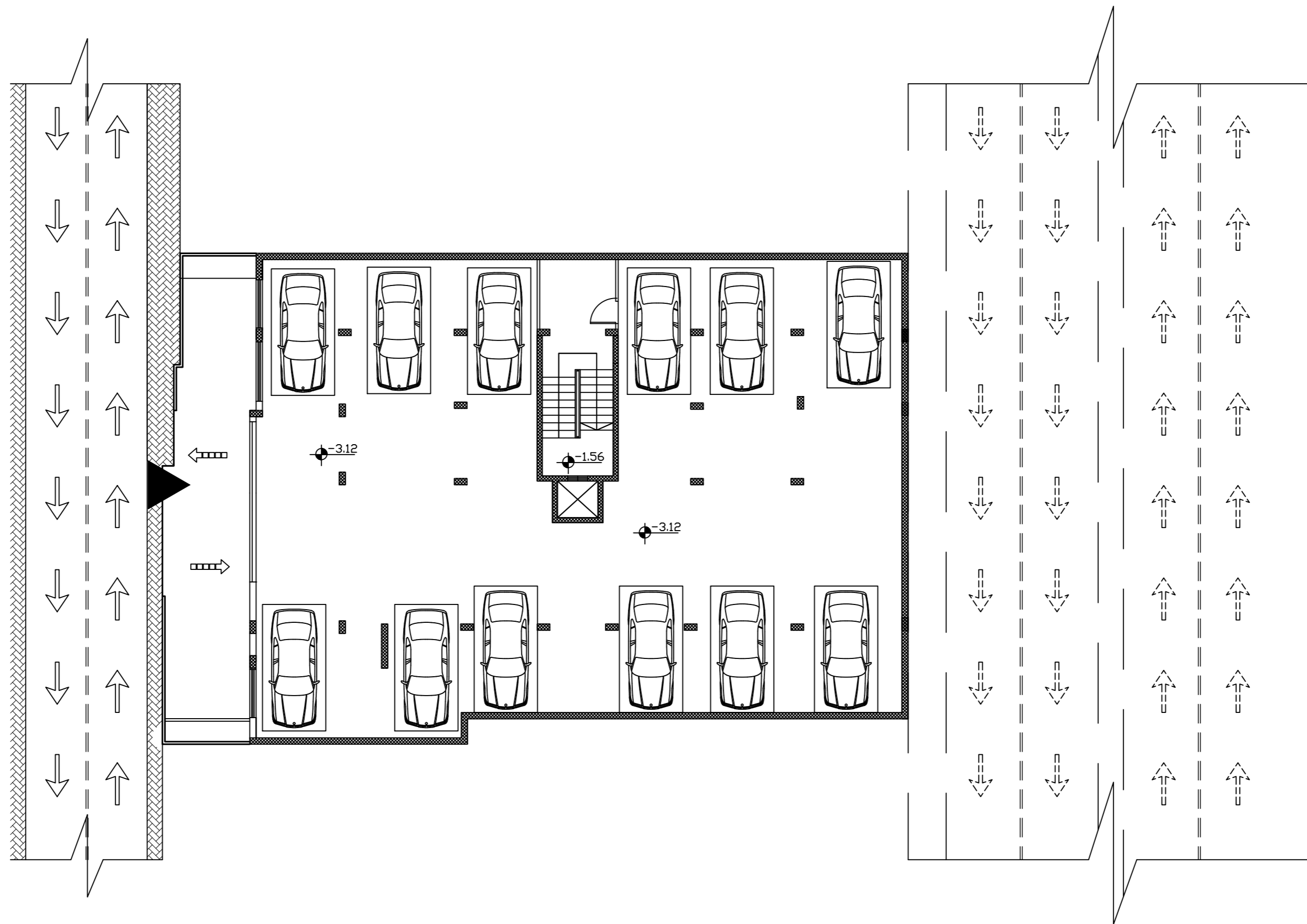
Supervisor :

Eng.Hamdi Edais

1/100

A 05





NOTES:
 All Dimensions are in meters
 unless otherwise shown.
 All spot levels are in meters.

Palestine Polytechnic University

Civil. & Arch. Eng. Department

Building Engineering

Designed By:

Rana Burqan
 Tarteel Sharaha

Drawing Title :

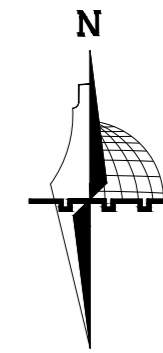
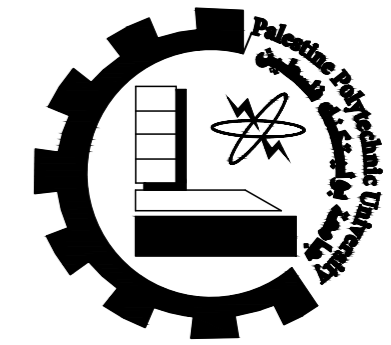
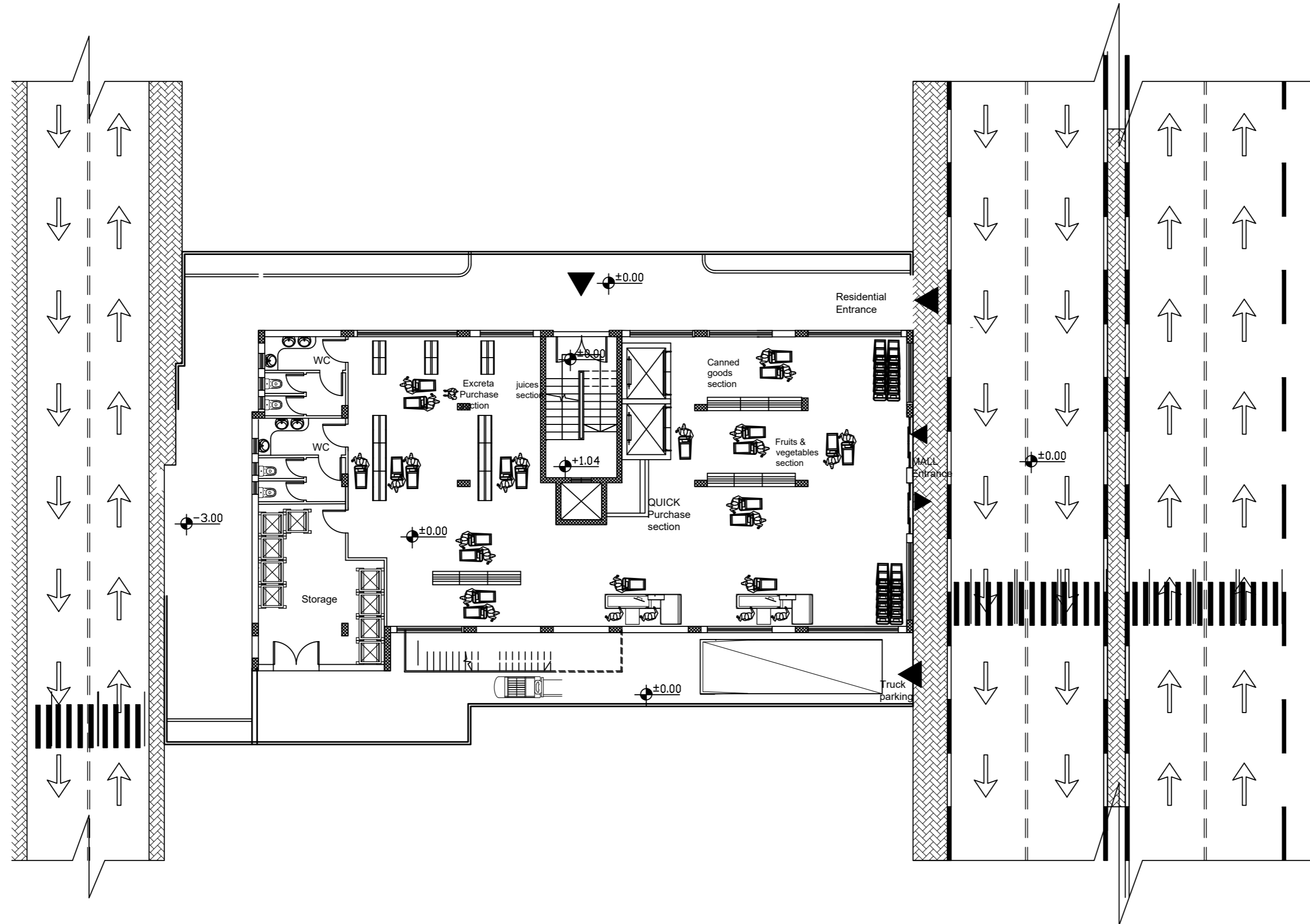
Dimension
 Basement plan

Supervisor :

Eng.Hamdi Edais

1/100

A 06



NOTES:
 All Dimensions are in meters unless otherwise shown.
 All spot levels are in meters.

Palestine Polytechnic University
 Civil. & Arch. Eng. Department
 Building Engineering

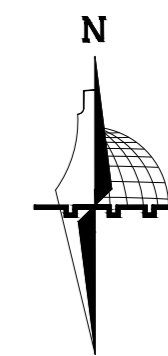
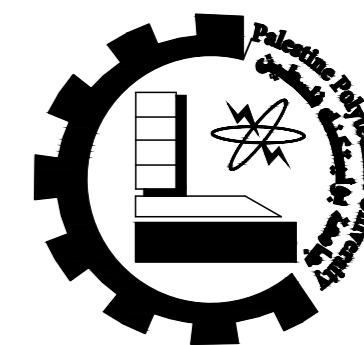
Designed By:
 Rana Burqan
 Tarteel Sharaha

Drawing Title :
 Dimension
 Ground plan

Supervisor :
 Eng.Hamdi Edais

1/100

A 07



NOTES:

All Dimensions are in meters unless otherwise shown.

All spot levels are in meters.

Palestine Polytechnic University

Civil. & Arch. Eng. Department

Building Engineering

Designed By:

Rana Burqan
Tarteel Sharaha

Drawing Title :

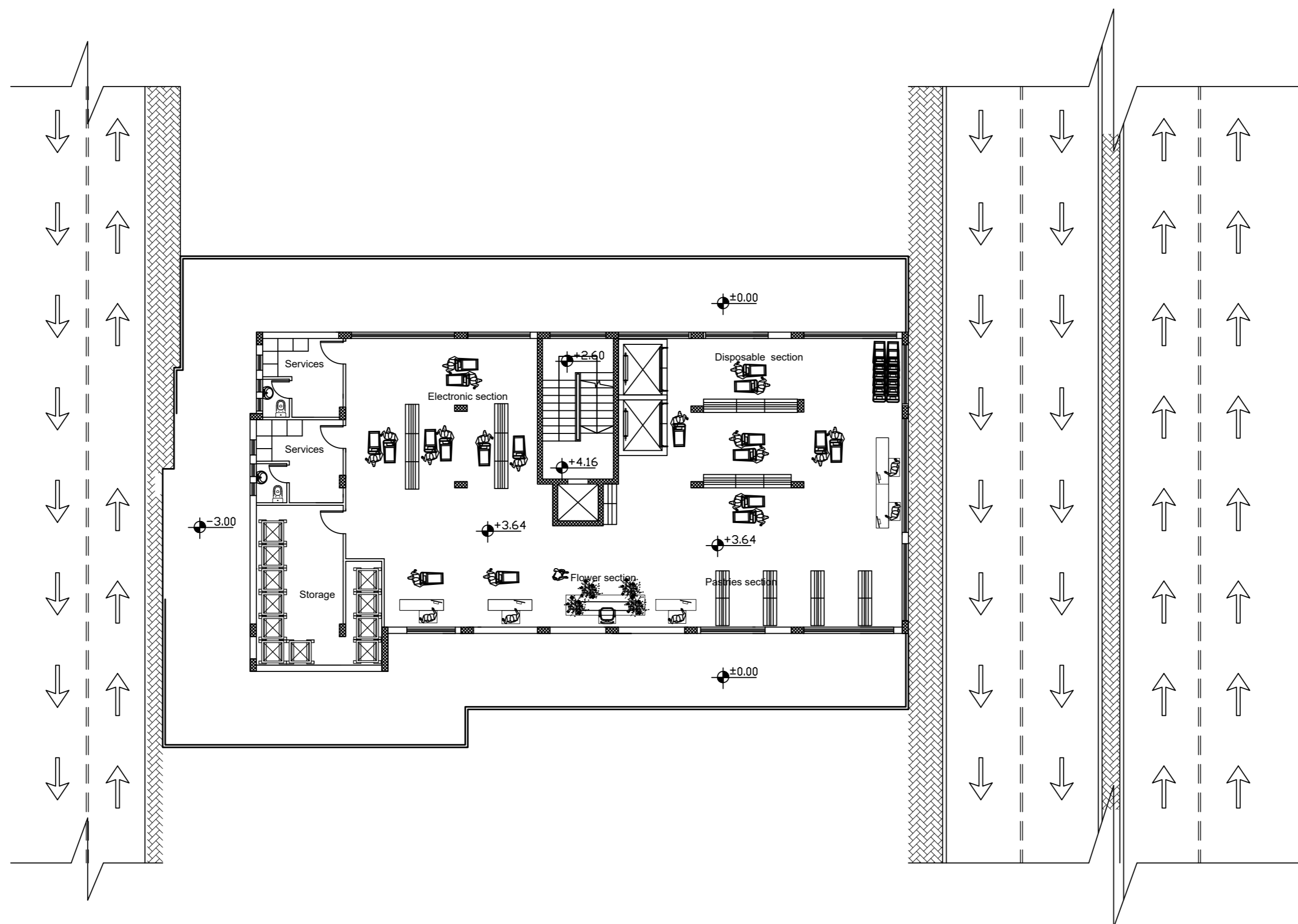
Dimension
First plan

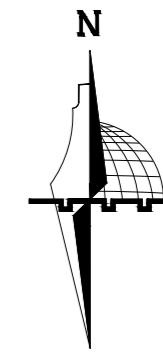
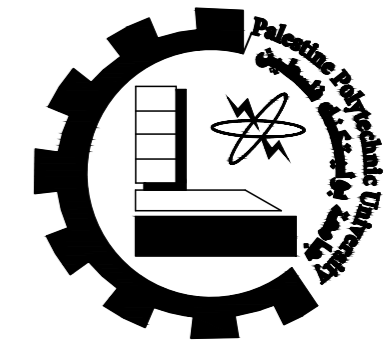
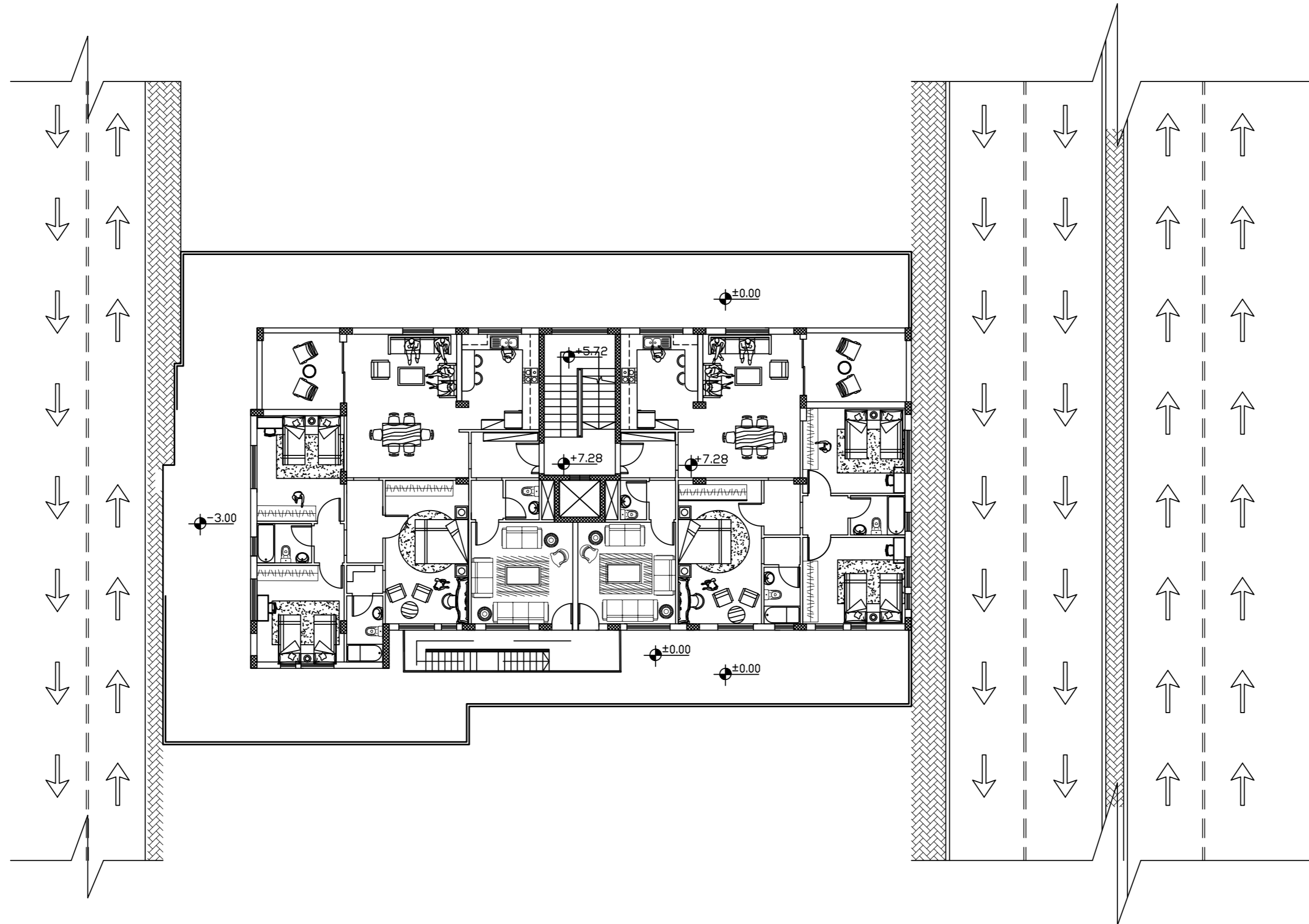
Supervisor :

Eng.Hamdi Edais

1/100

A 08



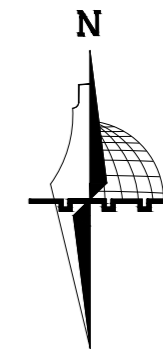
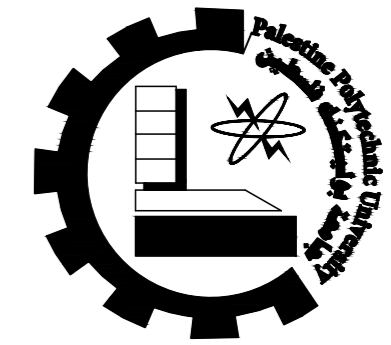
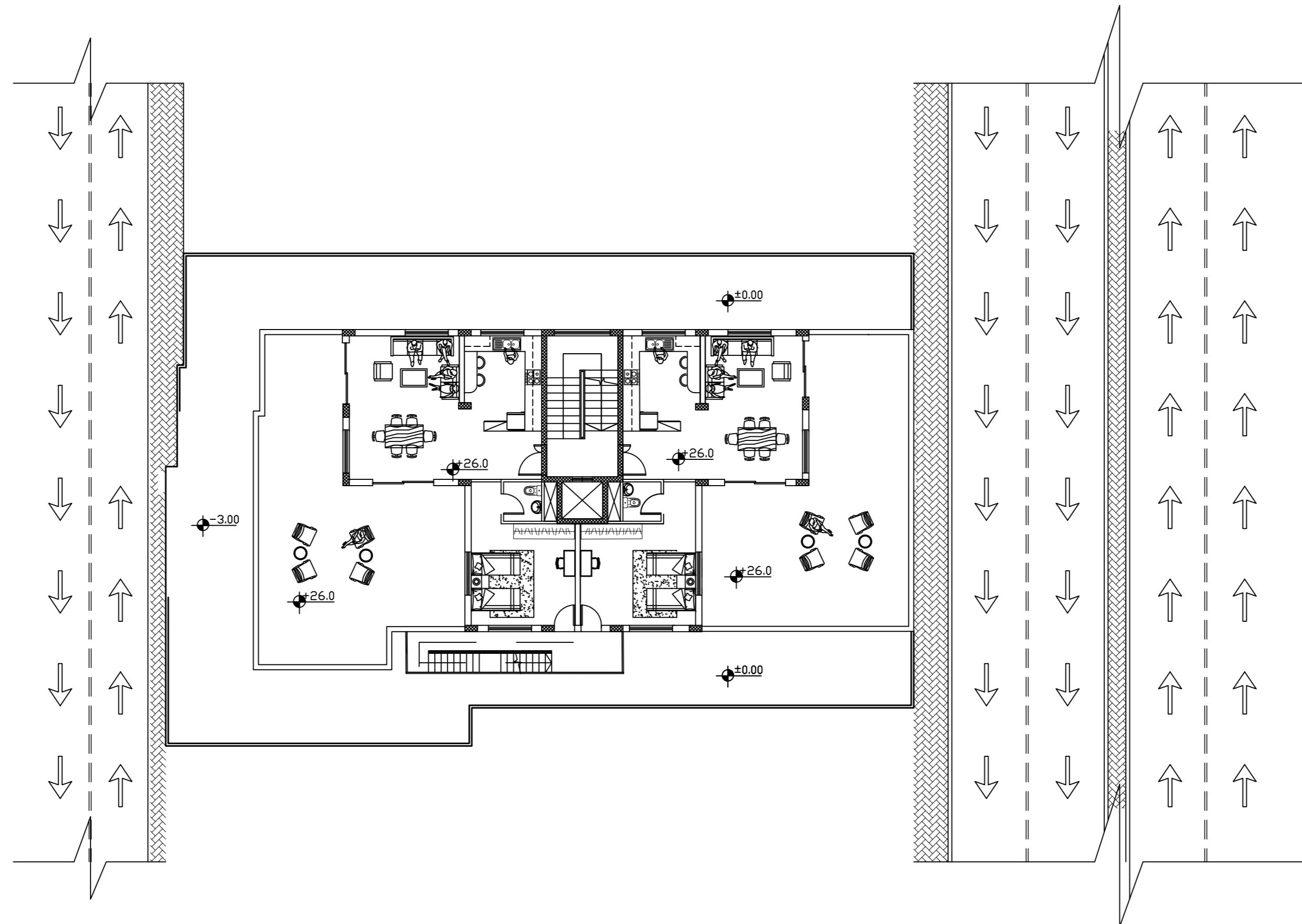


NOTES:
 All Dimensions are in meters
 unless otherwise shown.
 All spot levels are in meters.

Palestine Polytechnic University
Civil. & Arch. Eng. Department
Building Engineering
Designed By: Rana Burqan Tarteel Sharaha
Drawing Title : Dimension Second plan
Supervisor : Eng.Hamdi Edais

1/100

A 09

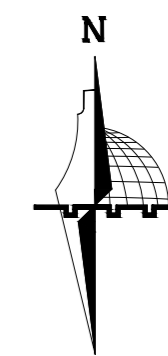
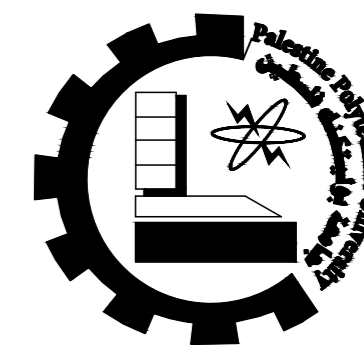


NOTES:
 All Dimensions are in meters
 unless otherwise shown.
 All spot levels are in meters.

Palestine Polytechnic University
Civil. & Arch. Eng. Department
Building Engineering
Designed By: Rana Burqan Tarteel Sharaha
Drawing Title : Dimension Roof plan
Supervisor : Eng.Hamdi Edais

1/100

A 10



NOTES:

All Dimensions are in meters unless otherwise shown.

All spot levels are in meters.

Palestine Polytechnic University

Civil. & Arch. Eng. Department

Building Engineering

Designed By:

Rana Burqan
Tarteel Sharaha

Drawing Title :

North Elevation

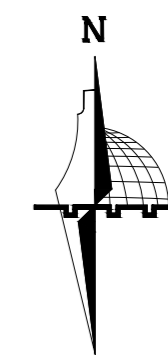
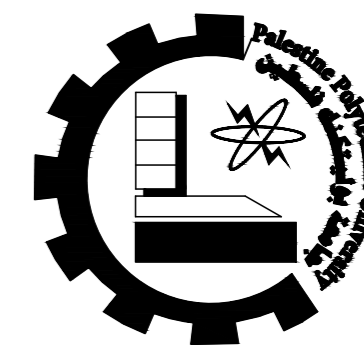
Supervisor :

Eng.Hamdi Edais

1/100

E 01





NOTES:

All Dimensions are in meters unless otherwise shown.

All spot levels are in meters.

Palestine Polytechnic University

Civil. & Arch. Eng. Department

Building Engineering

Designed By:

Rana Burqan
Tarteel Sharaha

Drawing Title :

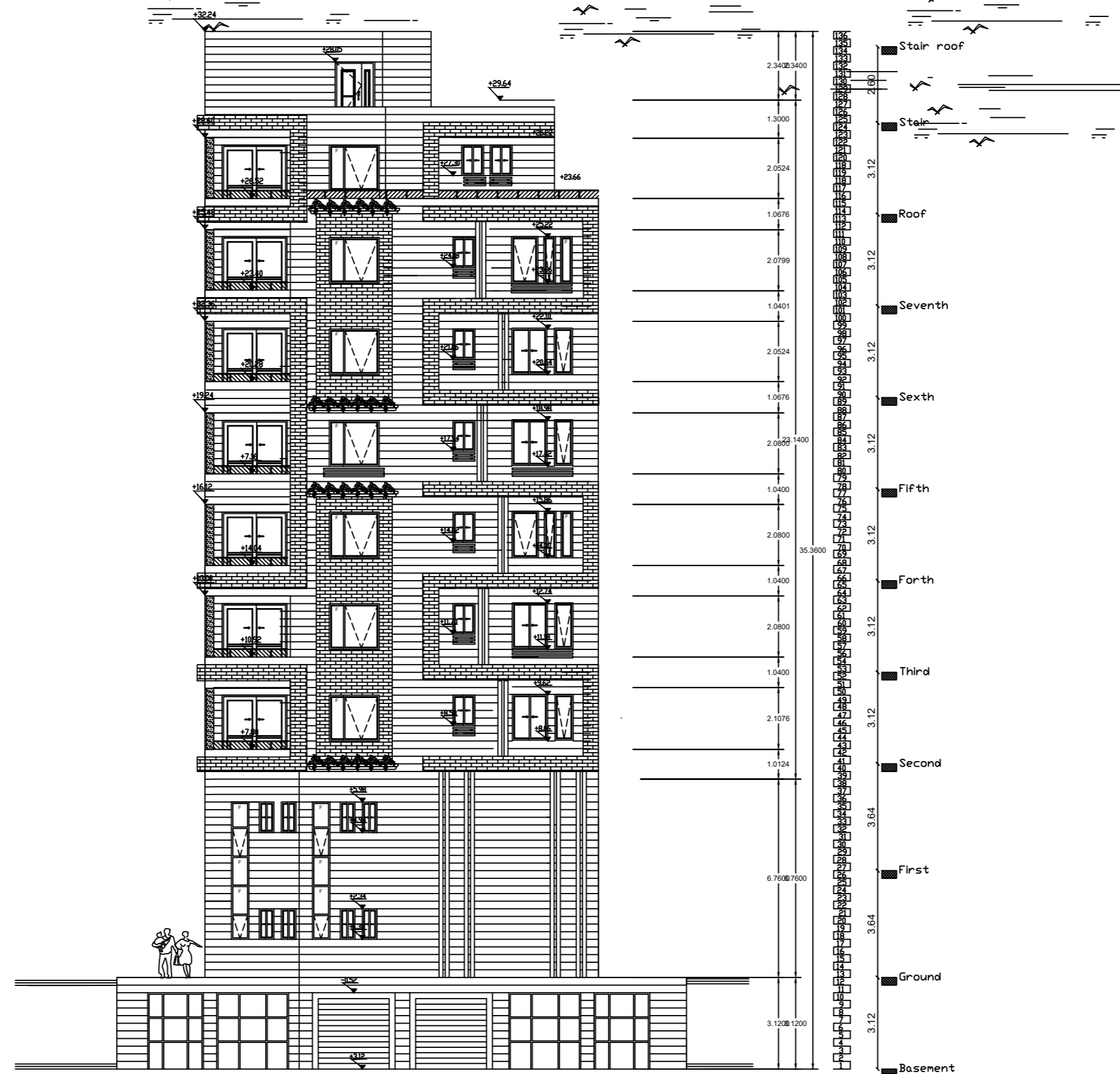
West Elevation

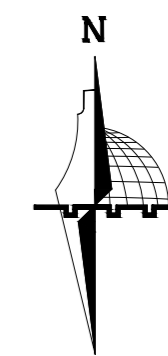
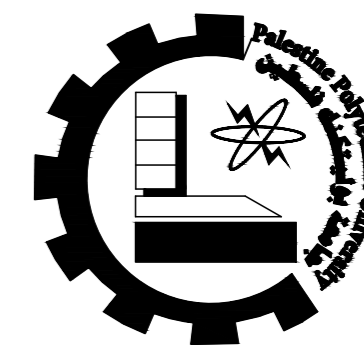
Supervisor :

Eng.Hamdi Edais

1/100

E 02





NOTES:

All Dimensions are in meters unless otherwise shown.

All spot levels are in meters.

Palestine Polytechnic University

Civil. & Arch. Eng. Department

Building Engineering

Designed By:

Rana Burqan
Tarteel Sharaha

Drawing Title :

South Elevation

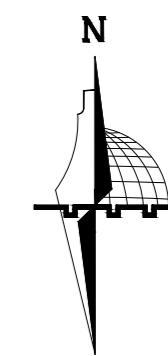
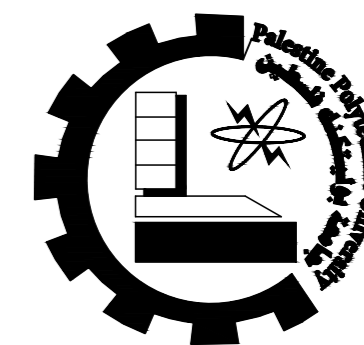
Supervisor :

Eng.Hamdi Edais

1/100

E 03





NOTES:

All Dimensions are in meters unless otherwise shown.

All spot levels are in meters.

Palestine Polytechnic University

Civil. & Arch. Eng. Department

Building Engineering

Designed By:

Rana Burqan
Tarteel Sharaha

Drawing Title :

East Elevation

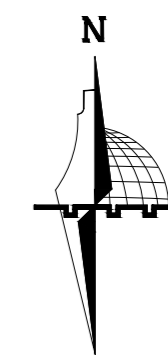
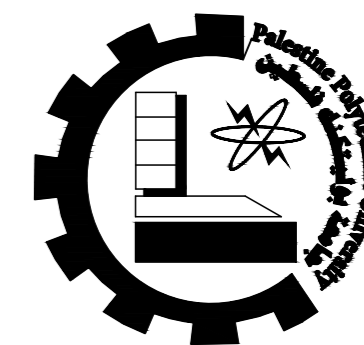
Supervisor :

Eng.Hamdi Edais

1/100

E 04





NOTES:

All Dimensions are in meters unless otherwise shown.

All spot levels are in meters.

Palestine Polytechnic University

Civil. & Arch. Eng. Department

Building Engineering

Designed By:

Rana Burqan
Tarteel Sharaha

Drawing Title :

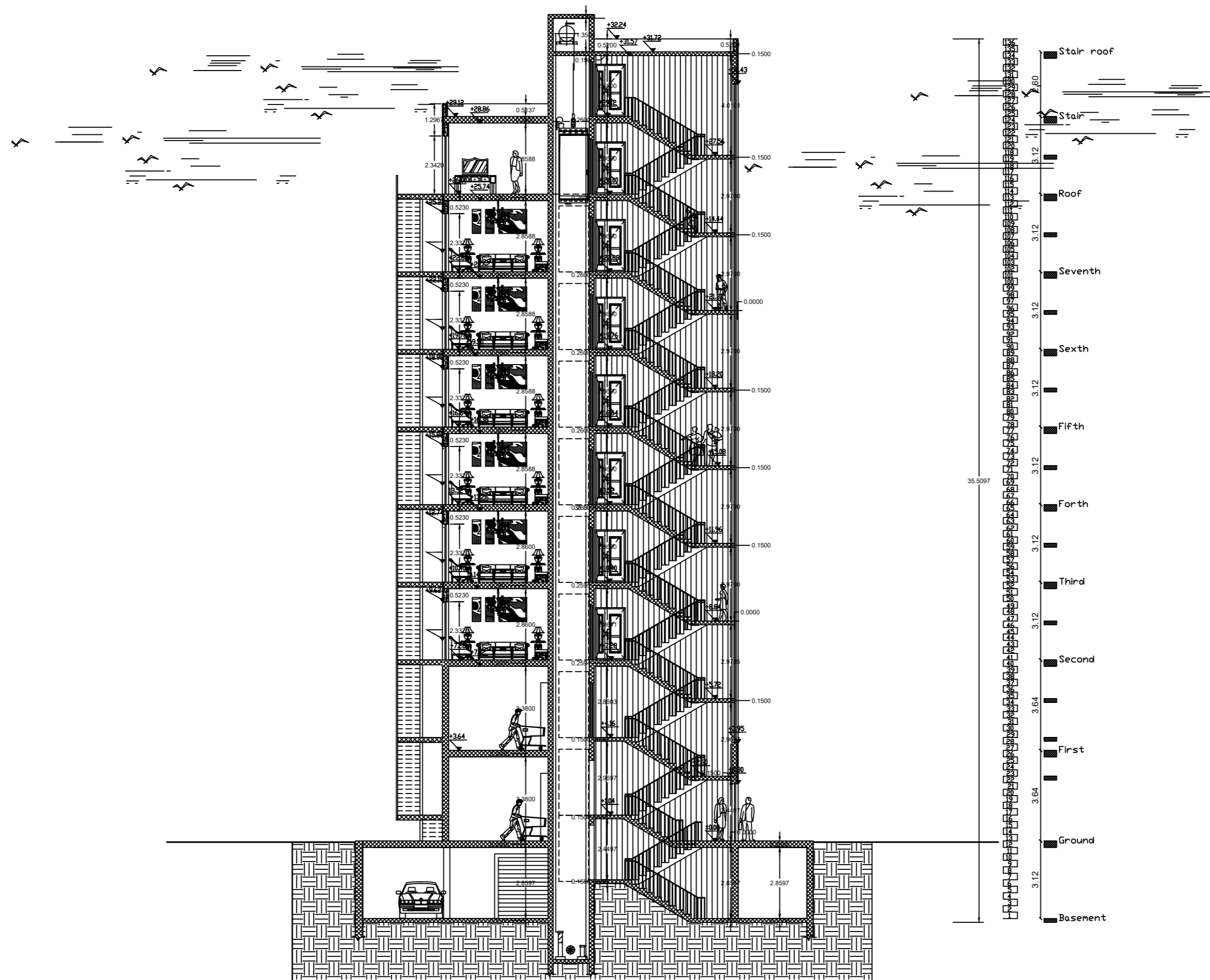
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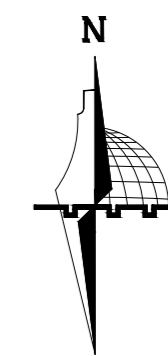
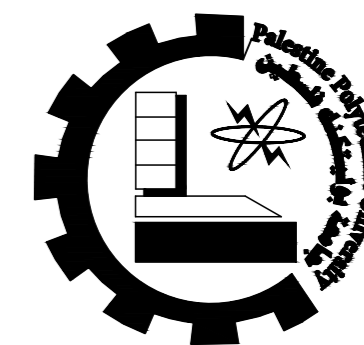
Supervisor :

Eng.Hamdi Edais

1/100

SC 01





NOTES:

All Dimensions are in meters unless otherwise shown.
All spot levels are in meters.

Palestine Polytechnic University

Civil. & Arch. Eng. Department

Building Engineering

Designed By:

Rana Burqan
Tarteel Sharaha

Drawing Title :

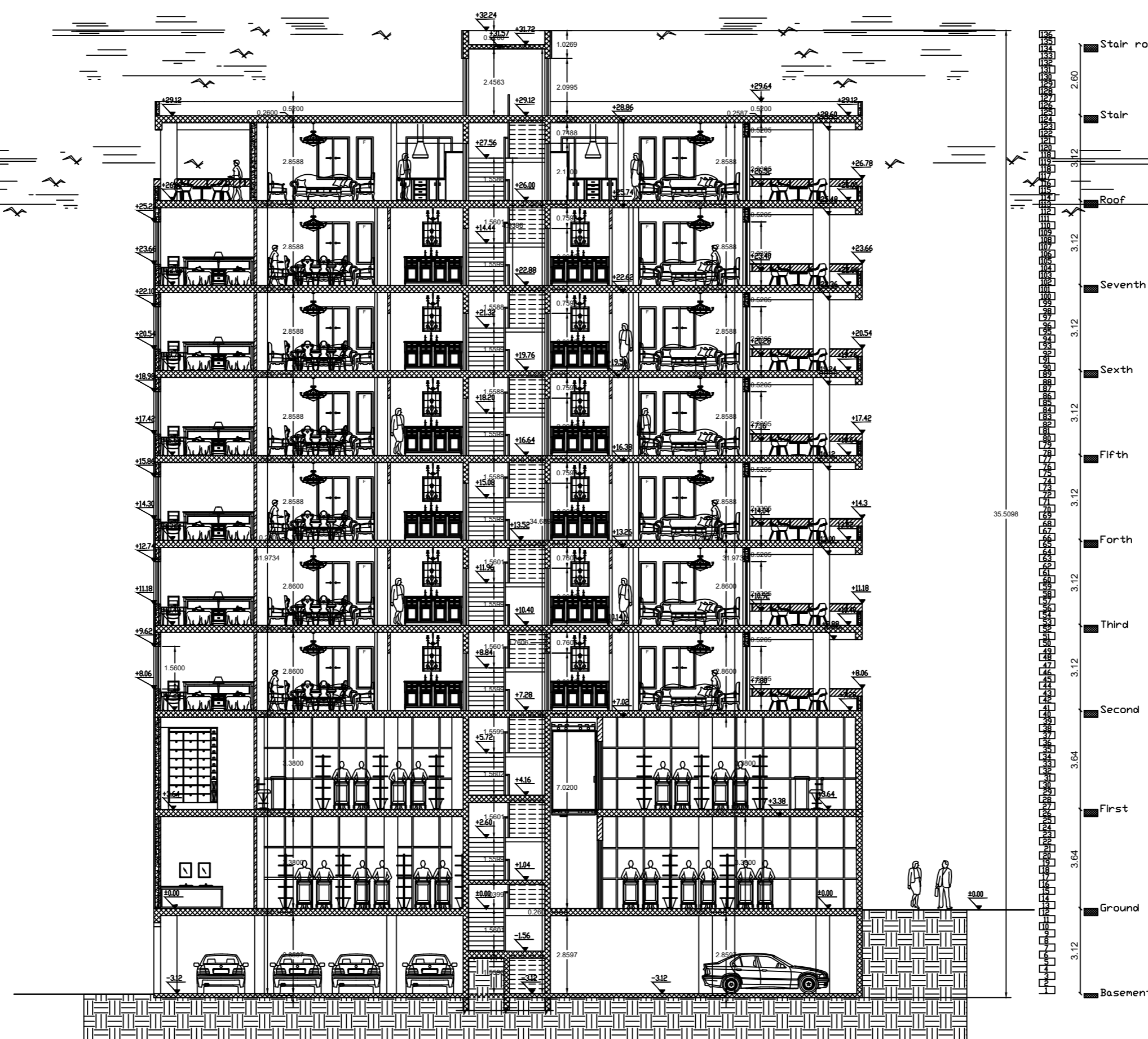
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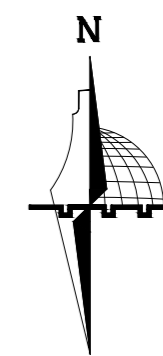
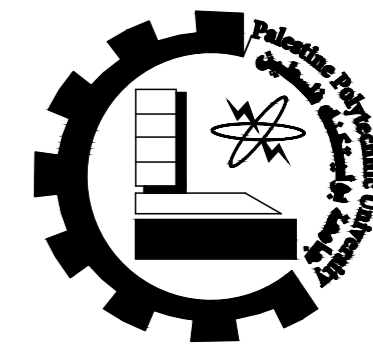
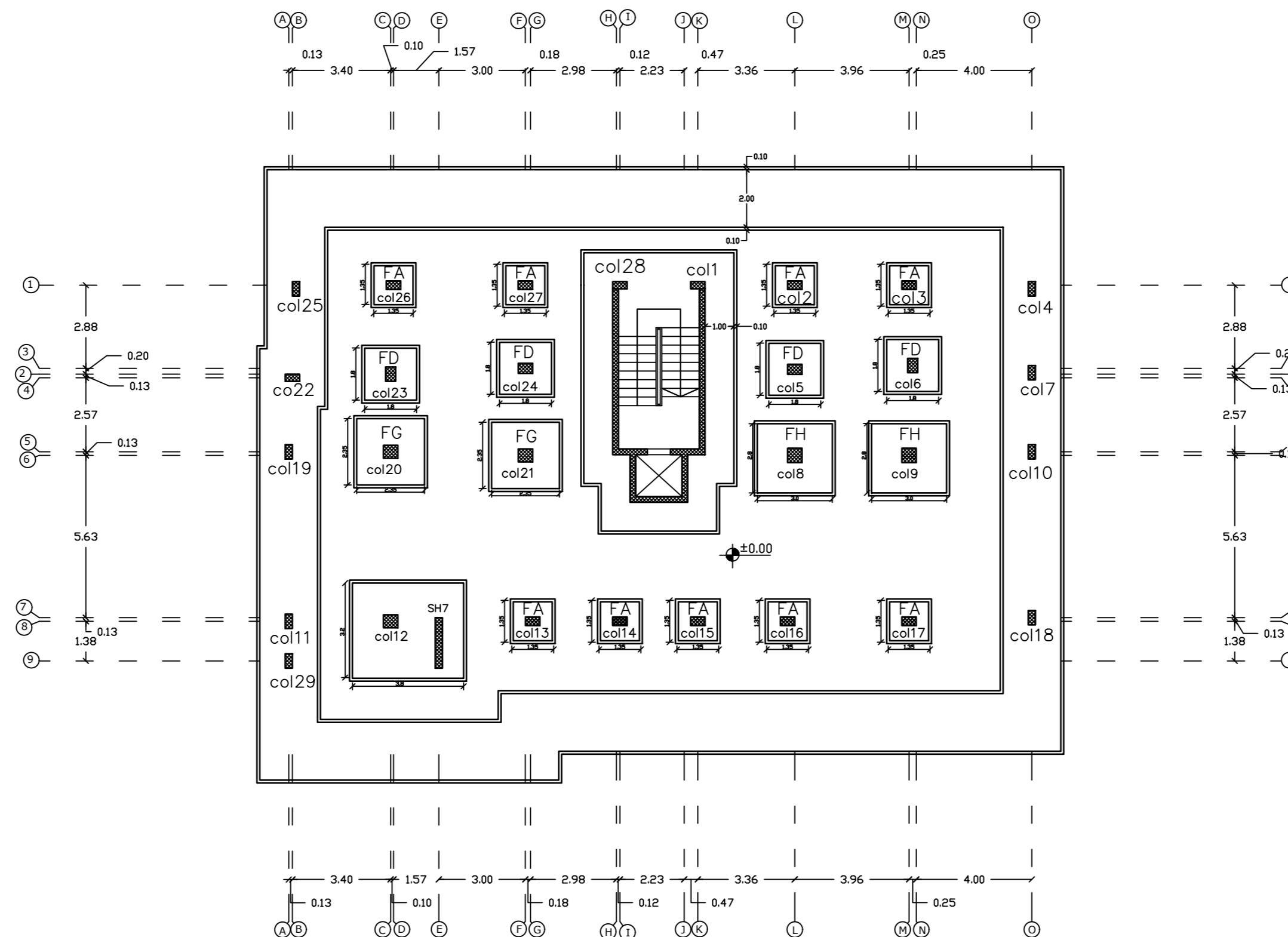
Eng.Hamdi Edais

1/100

SC 02



Foundations Key Plan



NOTES:

All Dimensions are in meters unless otherwise shown.

All spot levels are in meters.

Palestine Polytechnic University

Civil. & Arch. Eng. Department

Building Engineering

Designed By:

Rana Burqan
Tarteel Sharaha

Drawing Title :

Foundation
Key plan

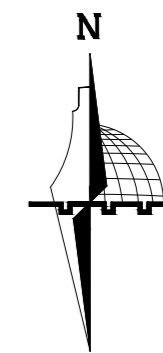
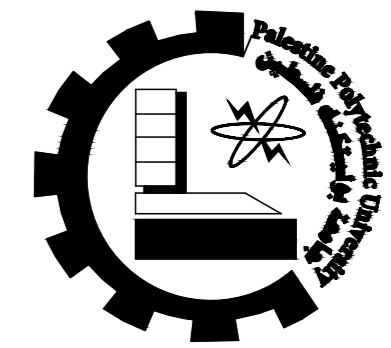
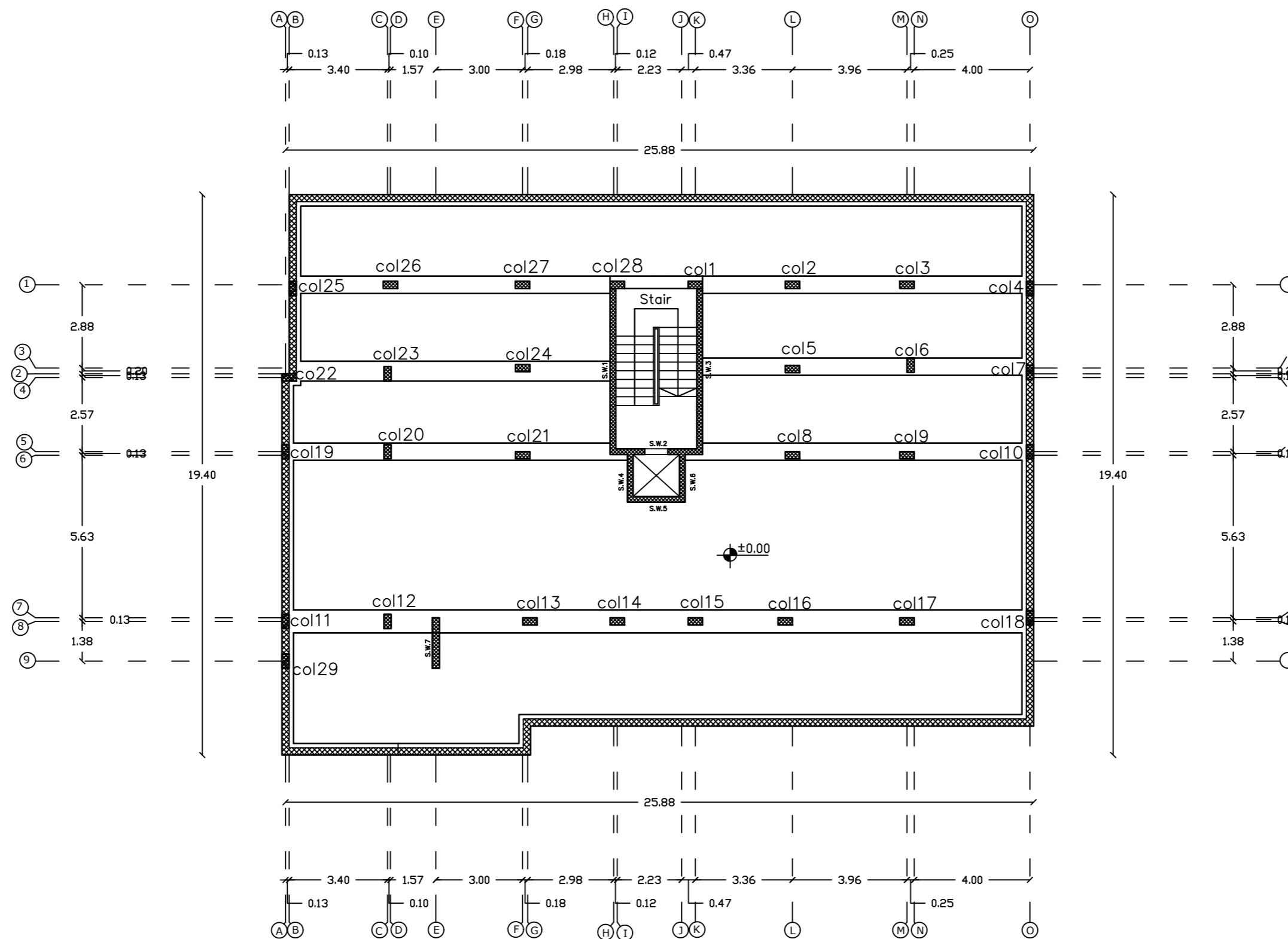
Supervisor :

Eng.Hamdi Edais

1/100

K01

Columns Key Plan



NOTES:
 All Dimensions are in meters
 unless otherwise shown.
 All spot levels are in meters.

Palestine Polytechnic University

Civil. & Arch. Eng. Department

Building Engineering

Designed By:

Rana Burqan
 Tarteel Sharaha

Drawing Title :

Column
 Key plan

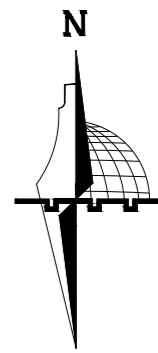
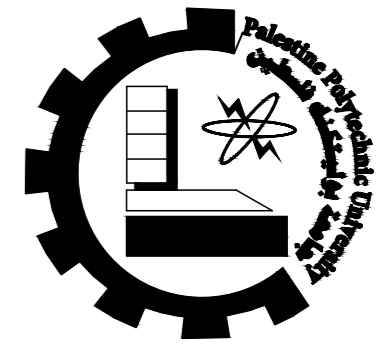
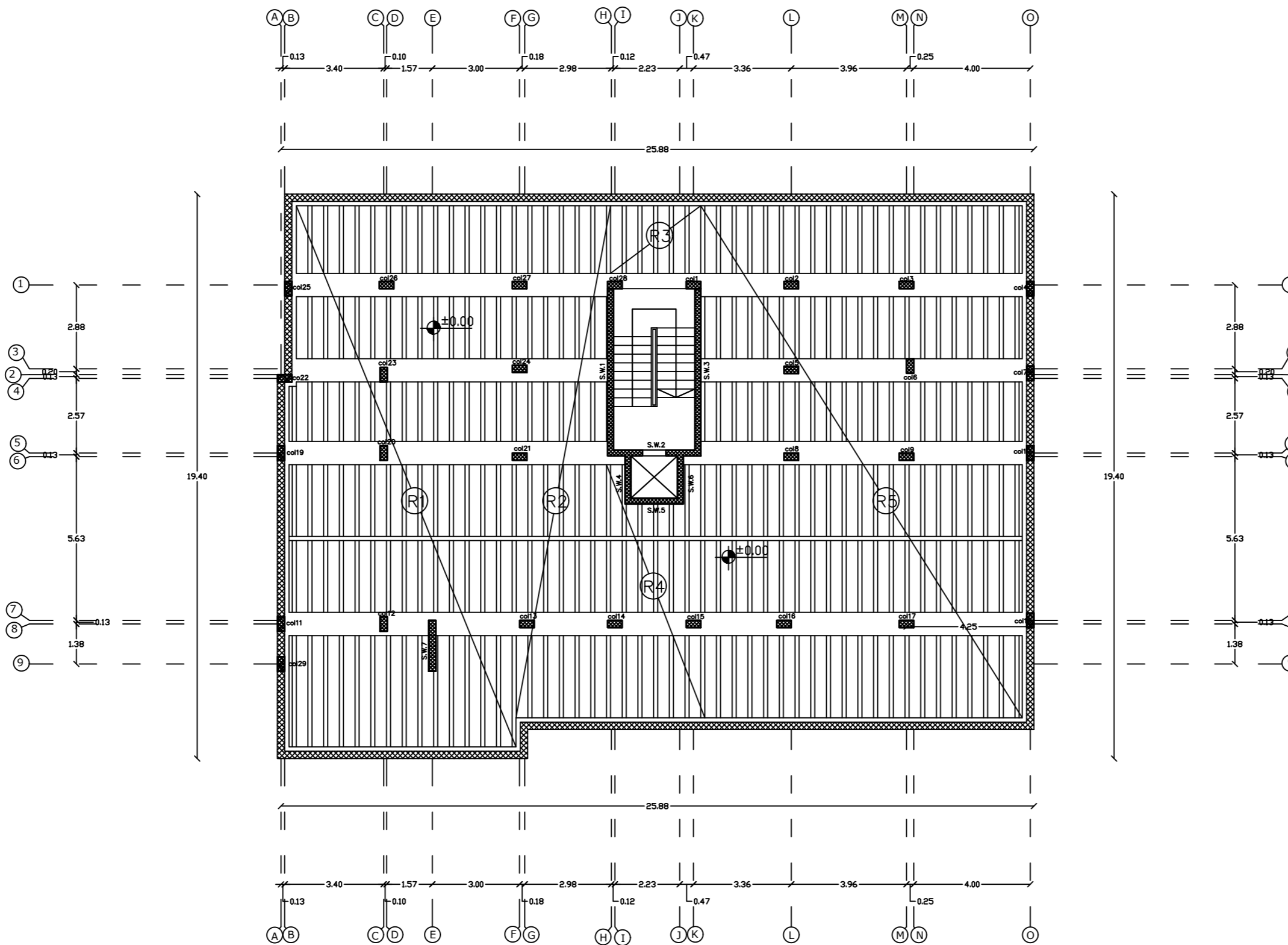
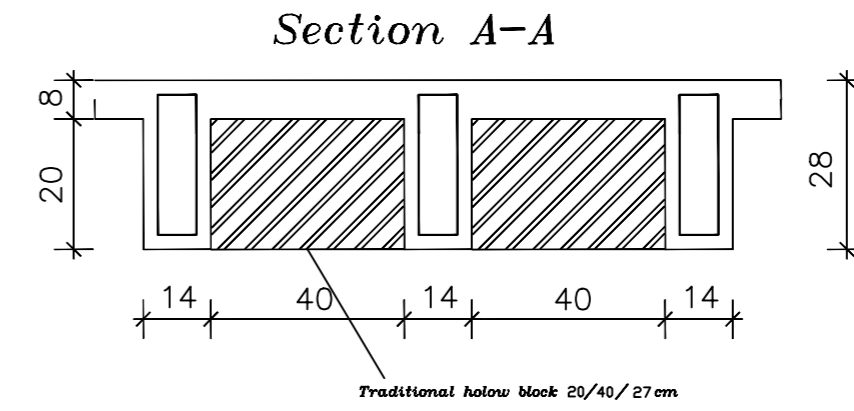
Supervisor :

Eng.Hamdi Edais

1/100

K02

Slab of Basement Floor



NOTES:

All Dimensions are in meters unless otherwise shown.

All spot levels are in meters.

Palestine Polytechnic University

Civil. & Arch. Eng. Department

Building Engineering

Designed By:

Rana Burqan
Tarteel Sharaha

Drawing Title :

Key plan
Basement Floor

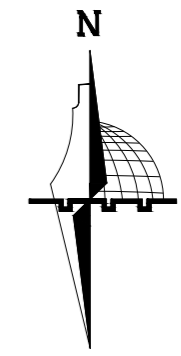
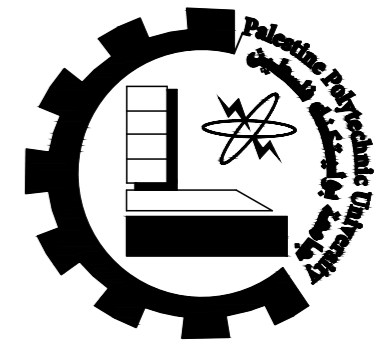
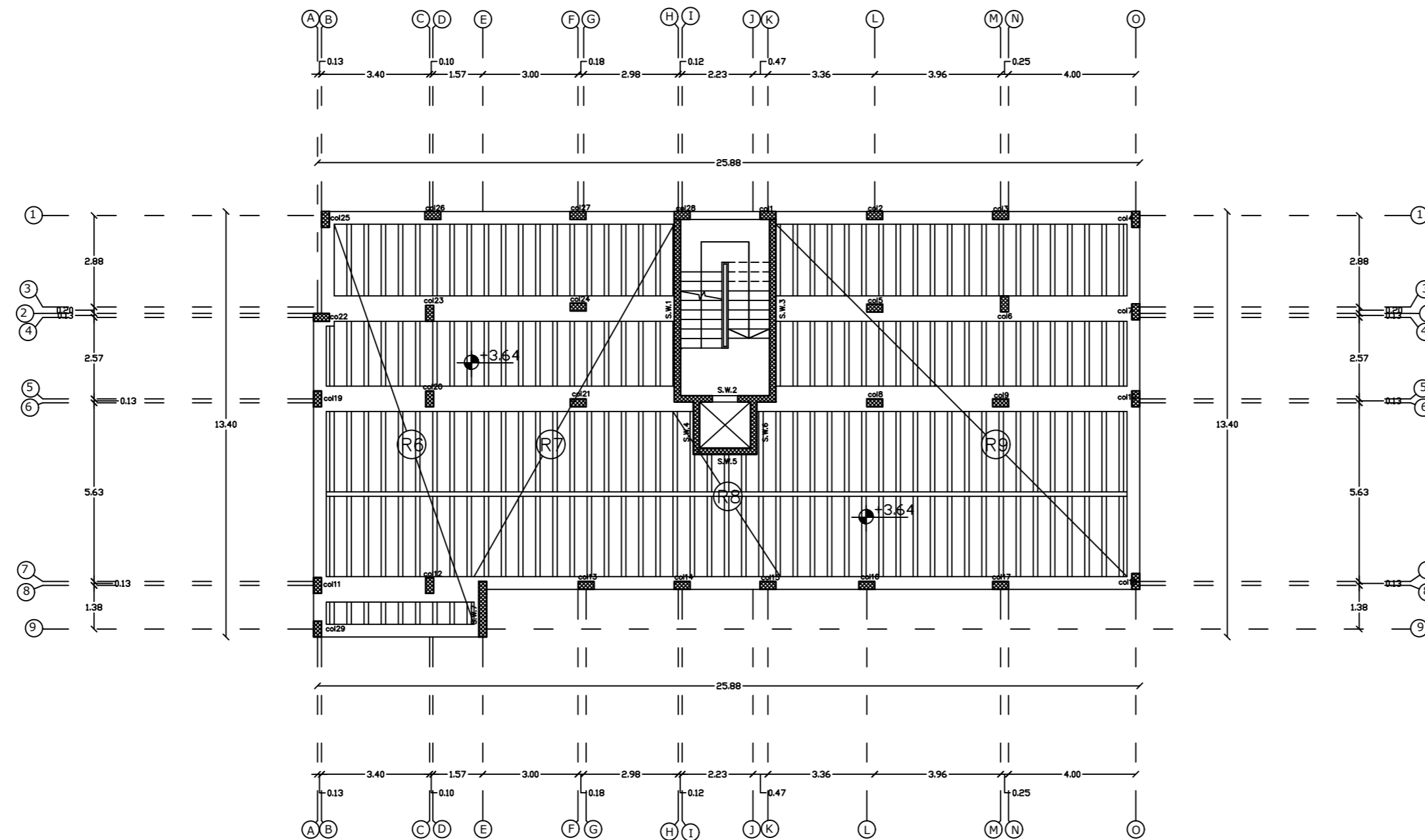
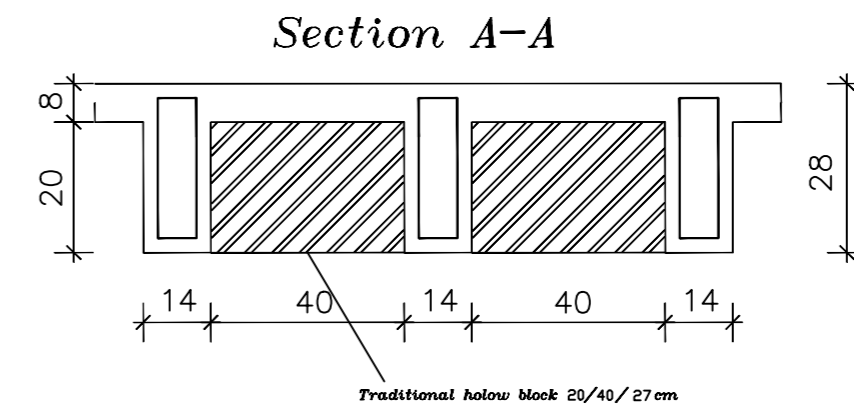
Supervisor :

Eng.Hamdi Edais

1/100

K03

Slab of Ground Floor



NOTES:

All Dimensions are in meters unless otherwise shown.

All spot levels are in meters.

Palestine Polytechnic University

Civil. & Arch. Eng. Department

Building Engineering

Designed By:

Rana Burqan
Tarteel Sharaha

Drawing Title :

Key plan
Ground Floor

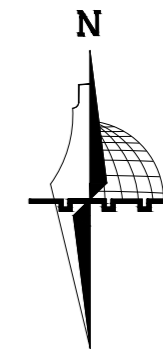
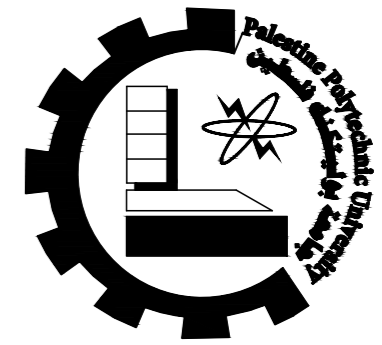
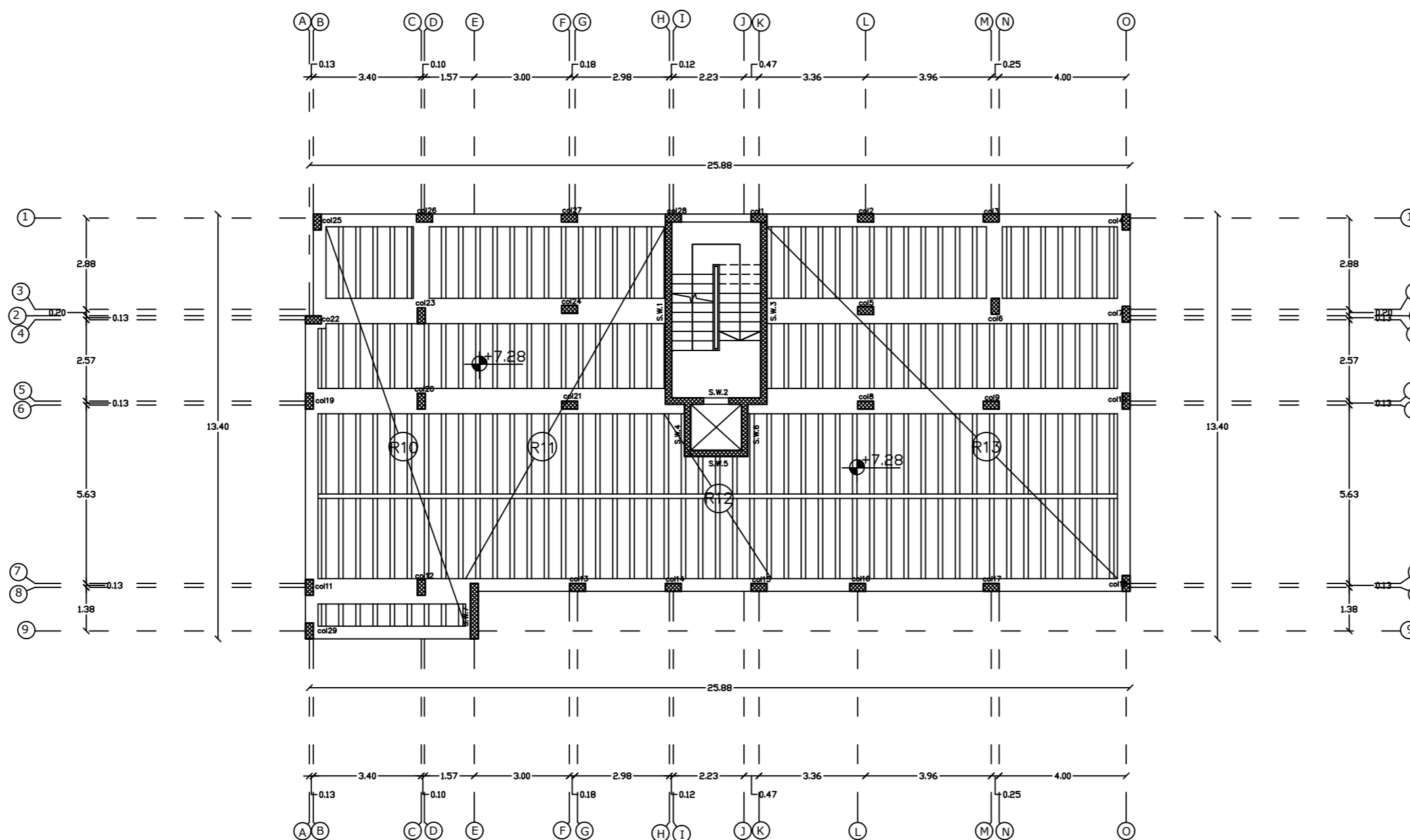
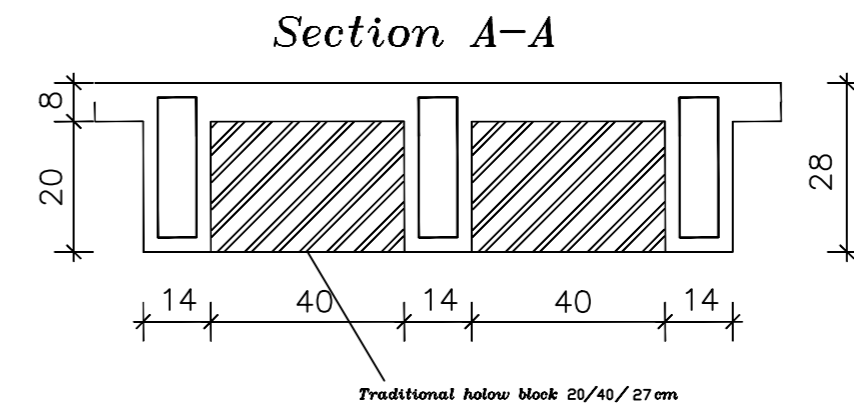
Supervisor :

Eng.Hamdi Edais

1/100

K04

Slab of First Floor



NOTES:
 All Dimensions are in meters
 unless otherwise shown.
 All spot levels are in meters.

Palestine Polytechnic University

Civil. & Arch. Eng. Department

Building Engineering

Designed By:

Rana Burqan
 Tarteel Sharaha

Drawing Title :

Key plan
 First Floor

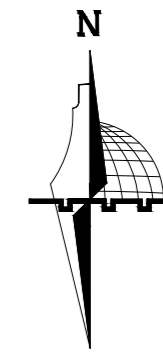
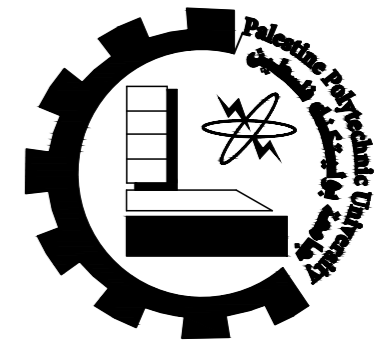
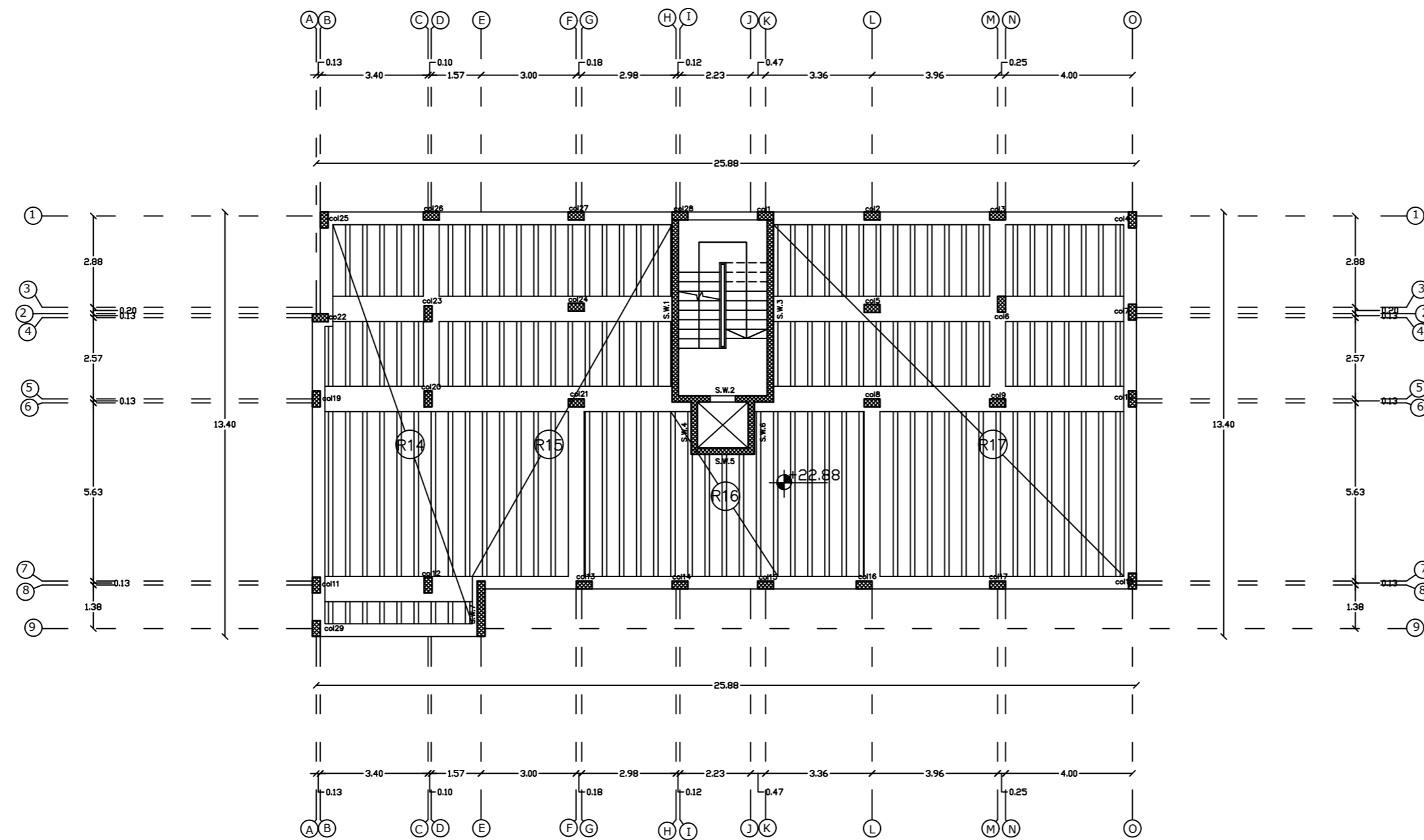
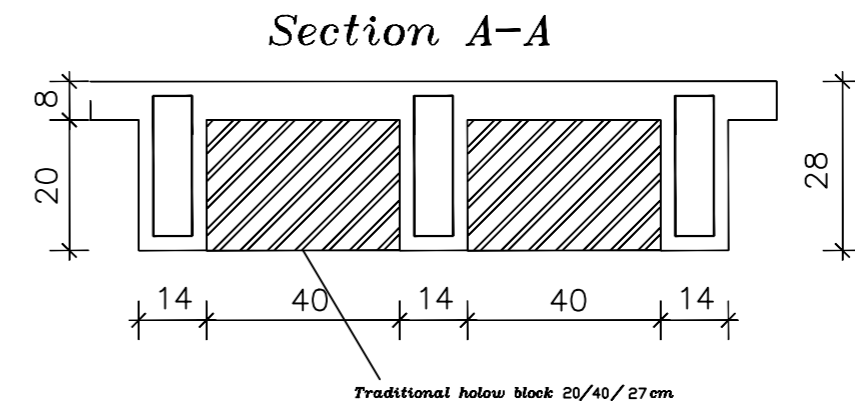
Supervisor :

Eng.Hamdi Edais

1/100

KOS

Slab of Seenth Floor



NOTES:

All Dimensions are in meters unless otherwise shown.

All spot levels are in meters.

Palestine Polytechnic University

Civil. & Arch. Eng. Department

Building Engineering

Designed By:

Rana Burqan
Tarteel Sharaha

Drawing Title :

Key plan
Seventh Floor

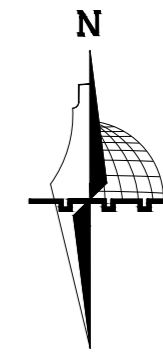
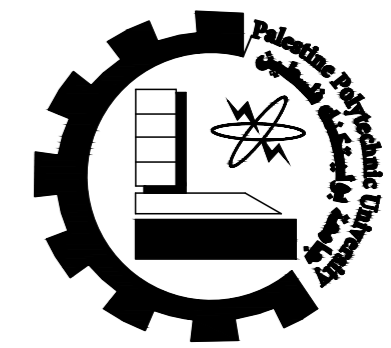
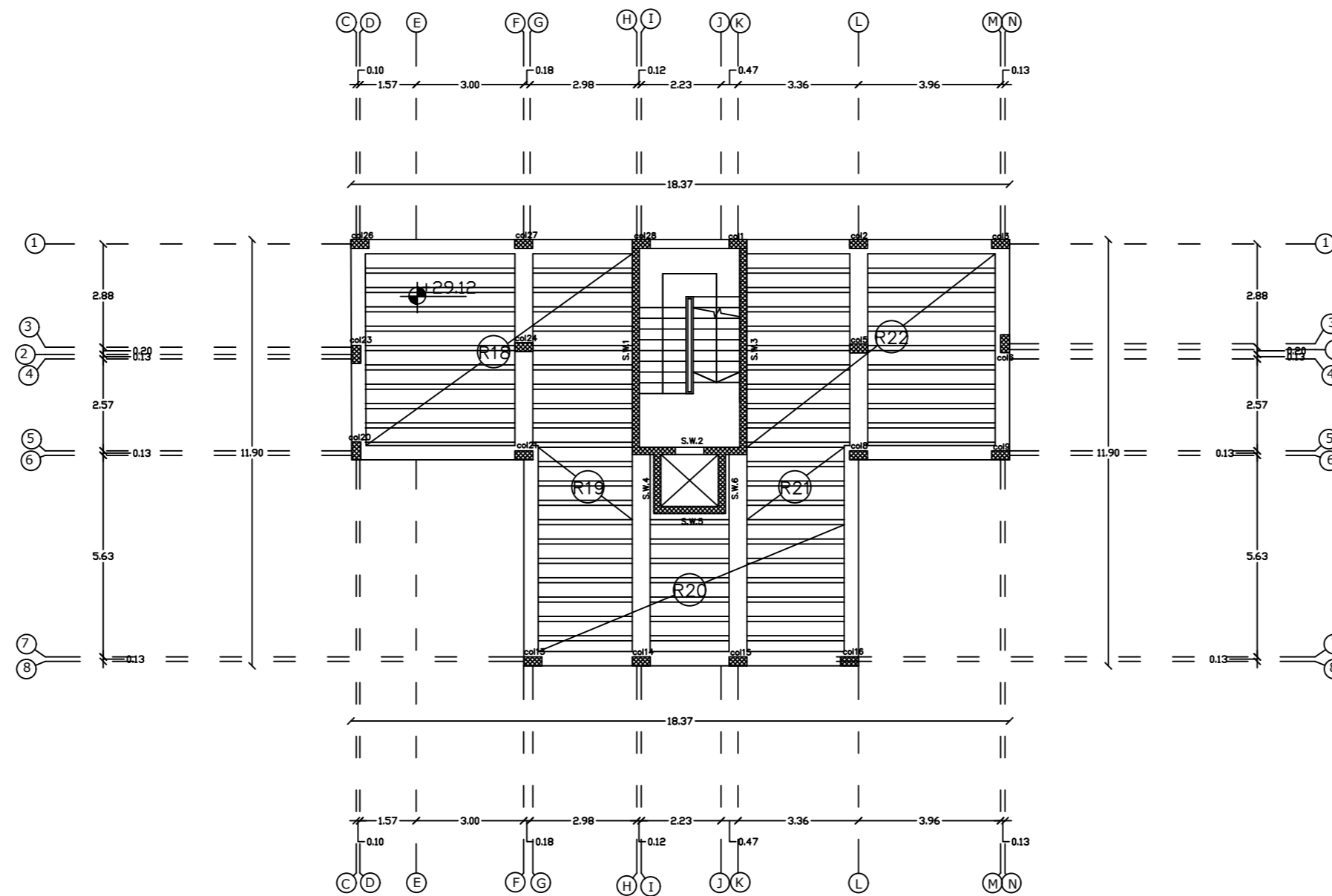
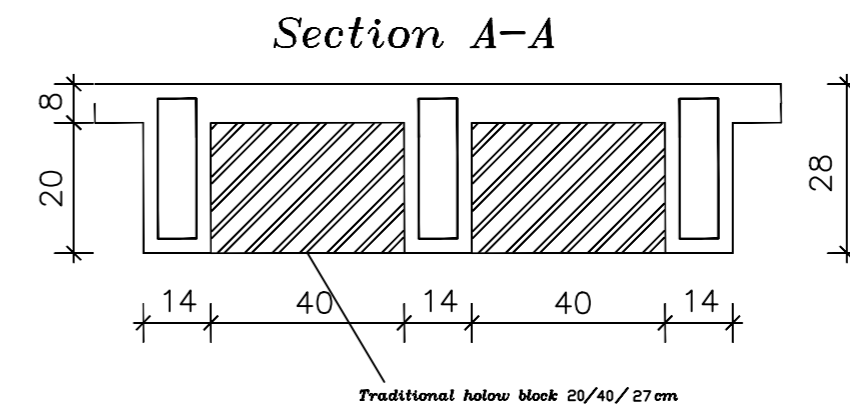
Supervisor :

Eng.Hamdi Edais

1/100

K06

Slab of Roof Floor



NOTES:
 All Dimensions are in meters
 unless otherwise shown.
 All spot levels are in meters.

Palestine Polytechnic University

Civil. & Arch. Eng. Department

Building Engineering

Designed By:

Rana Burqan
 Tarteel Sharaha

Drawing Title :

Key plan
 Roof Floor

Supervisor :

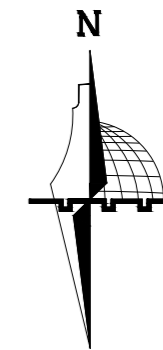
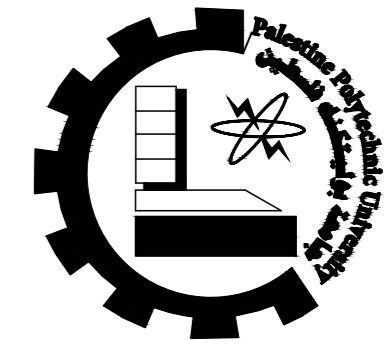
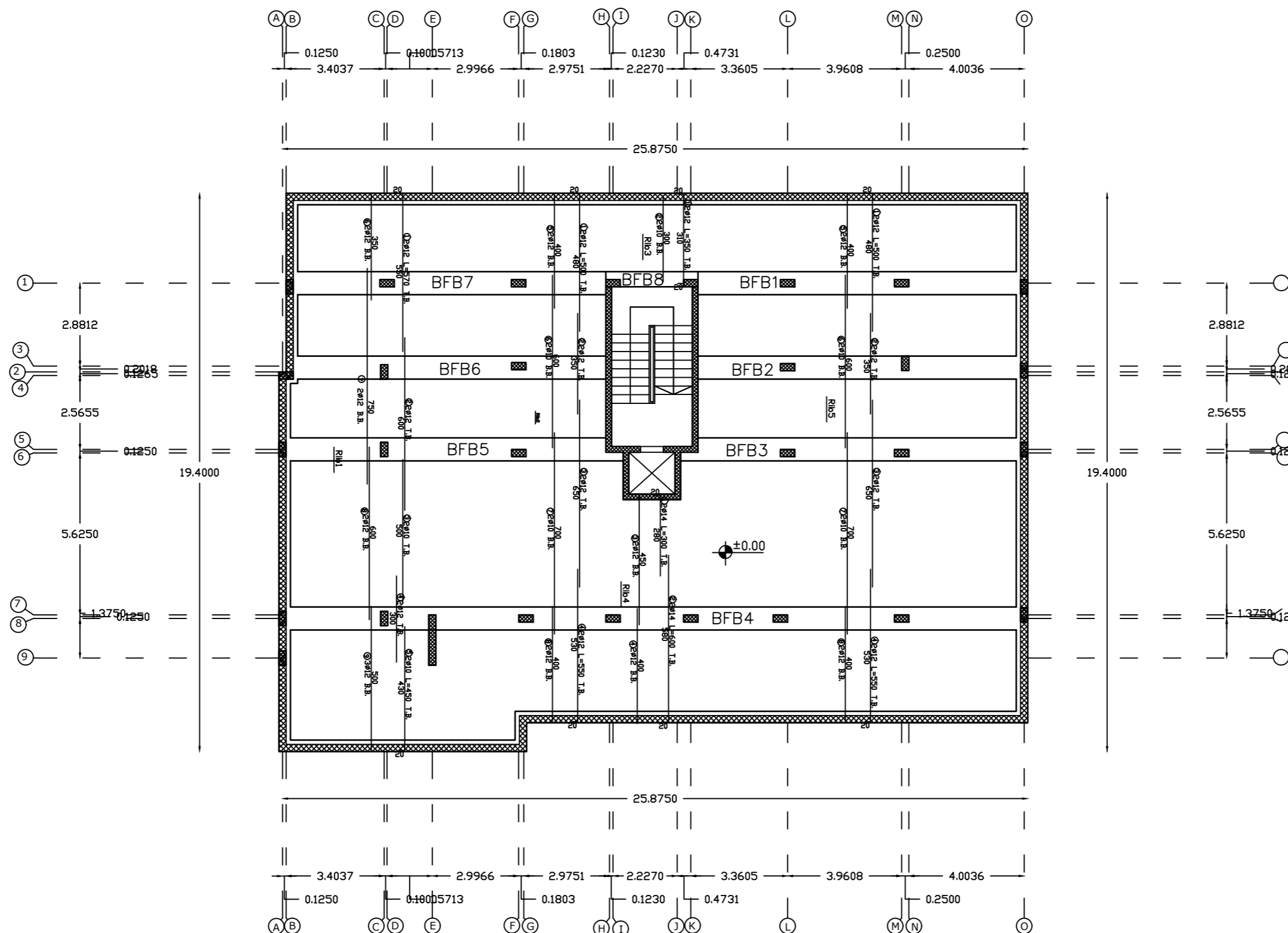
Eng. Hamdi Edais

1/100

K07

Reinforcement of slab of Basement Floor

$h = 28 \text{ cm}$
scale 1:100



NOTES:
All Dimensions are in meters
unless otherwise shown.
All spot levels are in meters.

Palestine Polytechnic University

Civil. & Arch. Eng. Department

Building Engineering

Designed By:

Rana Burqan
Tarteel Sharaha

Drawing Title :

Reinforcement Plan
Basement Floor

Supervisor :

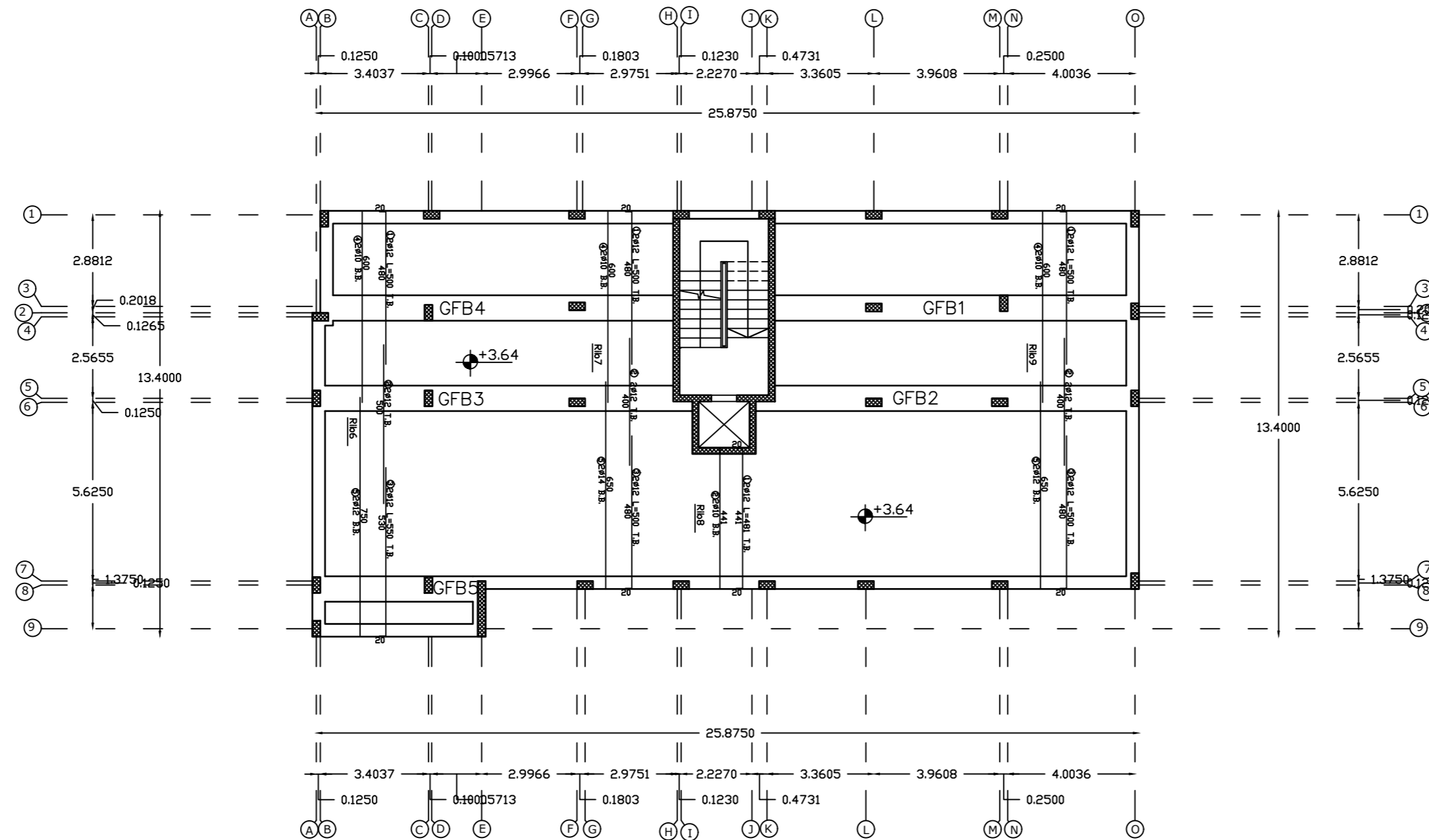
Eng.Hamdi Edais

1/100

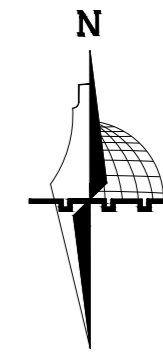
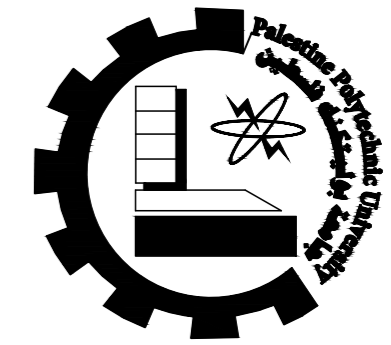
S01

Reinforcement of slab of Ground Floor

$h = 28 \text{ cm}$
scale 1:100



Number of the floor	First floor	Second floor	Third floor	Forth floor	Fifth floor	Sexth floor	Seventh floor
Elevation of the floor	+7.28	+10.4	+13.52	+16.64	+19.76	+22.8	+26.0



NOTES:
All Dimensions are in meters unless otherwise shown.
All spot levels are in meters.

Palestine Polytechnic University

Civil. & Arch. Eng. Department

Building Engineering

Designed By:

Rana Burqan
Tarteel Sharaha

Drawing Title :

Reinforcement Plan
Ground Floor

Supervisor :

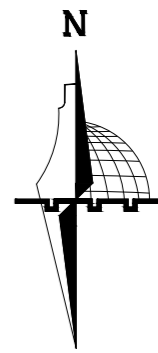
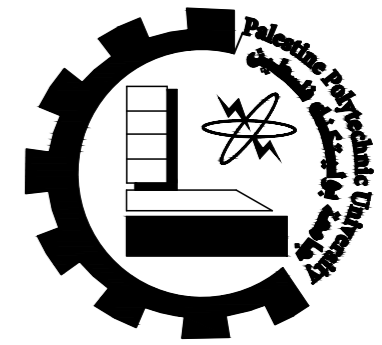
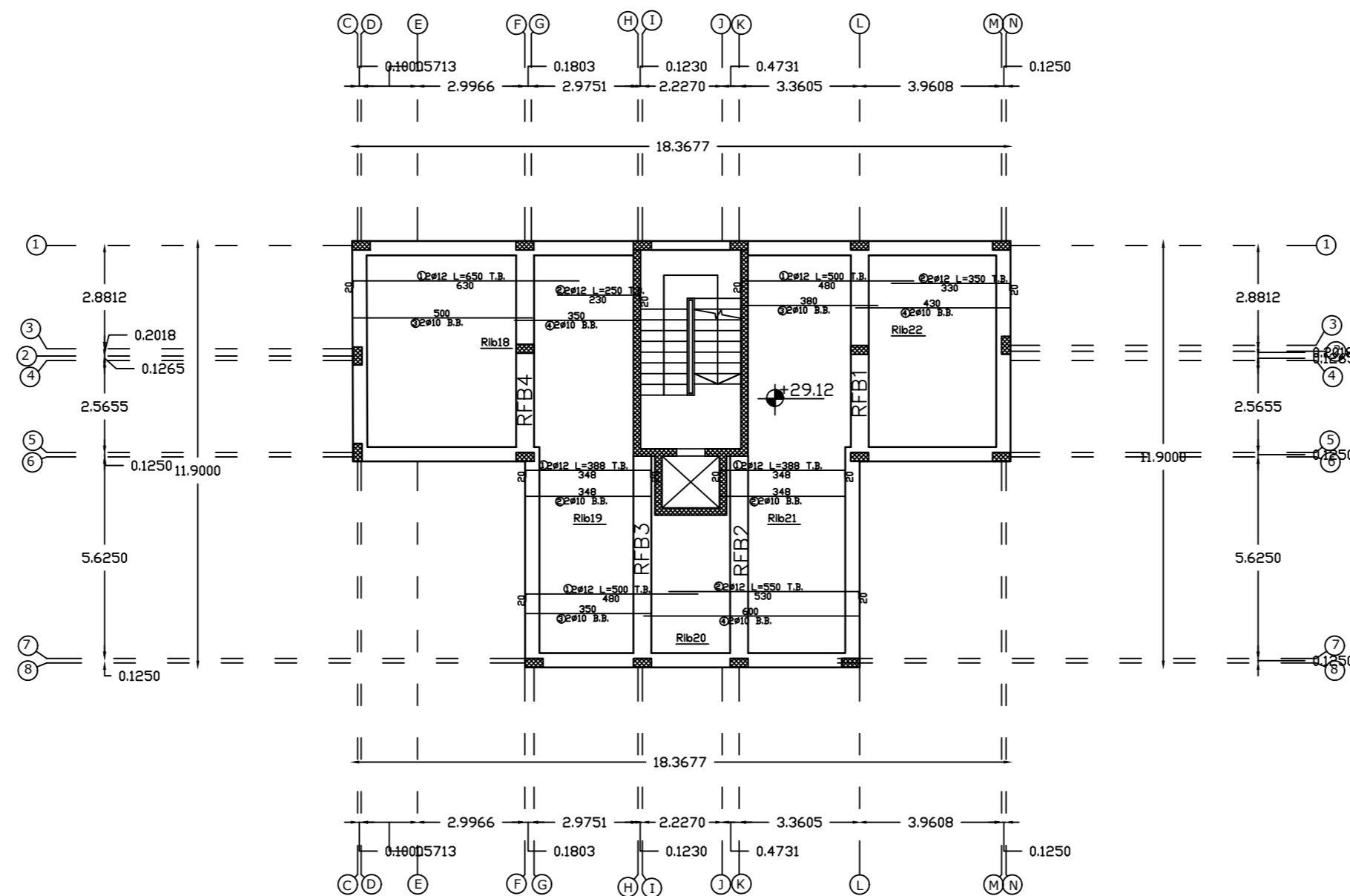
Eng.Hamdi Edais

1/100

S02

Reinforcement of slab of Roof Floor

$h = 28 \text{ cm}$
scale 1:100



NOTES:
All Dimensions are in meters unless otherwise shown.
All spot levels are in meters.

Palestine Polytechnic University

Civil. & Arch. Eng. Department

Building Engineering

Designed By:

Rana Burqan
Tarteel Sharaha

Drawing Title :

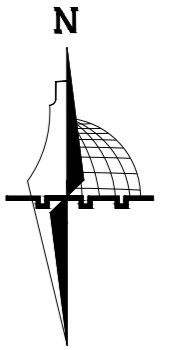
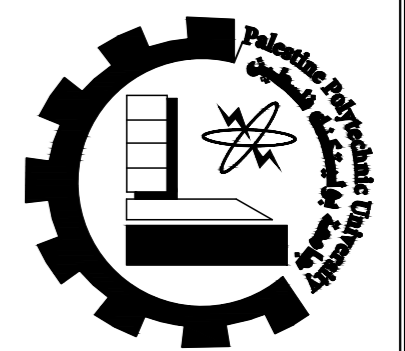
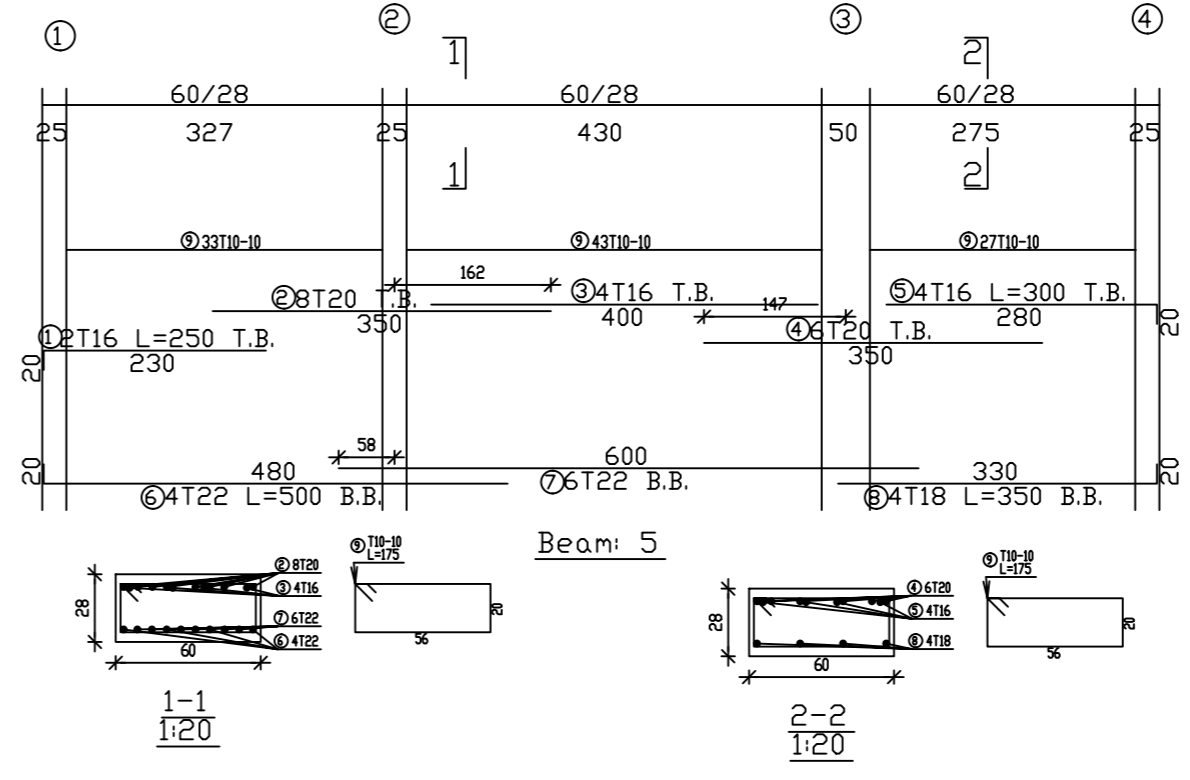
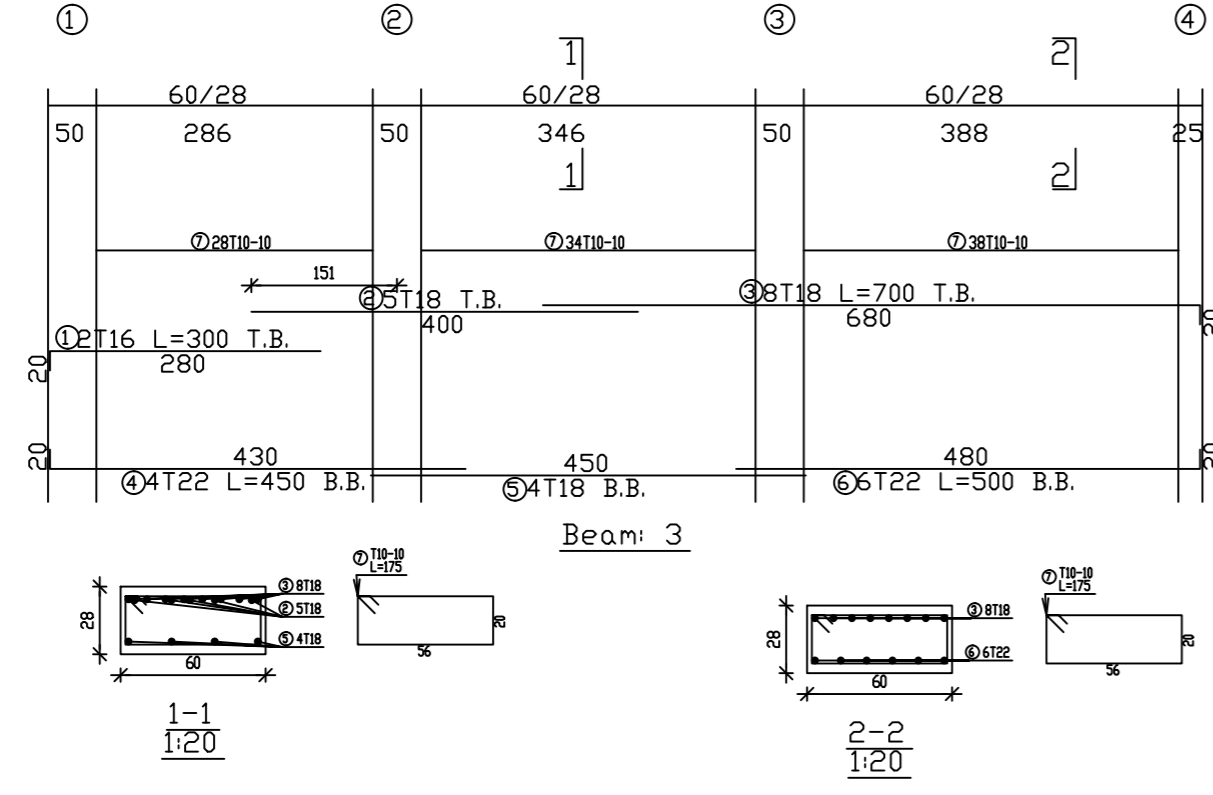
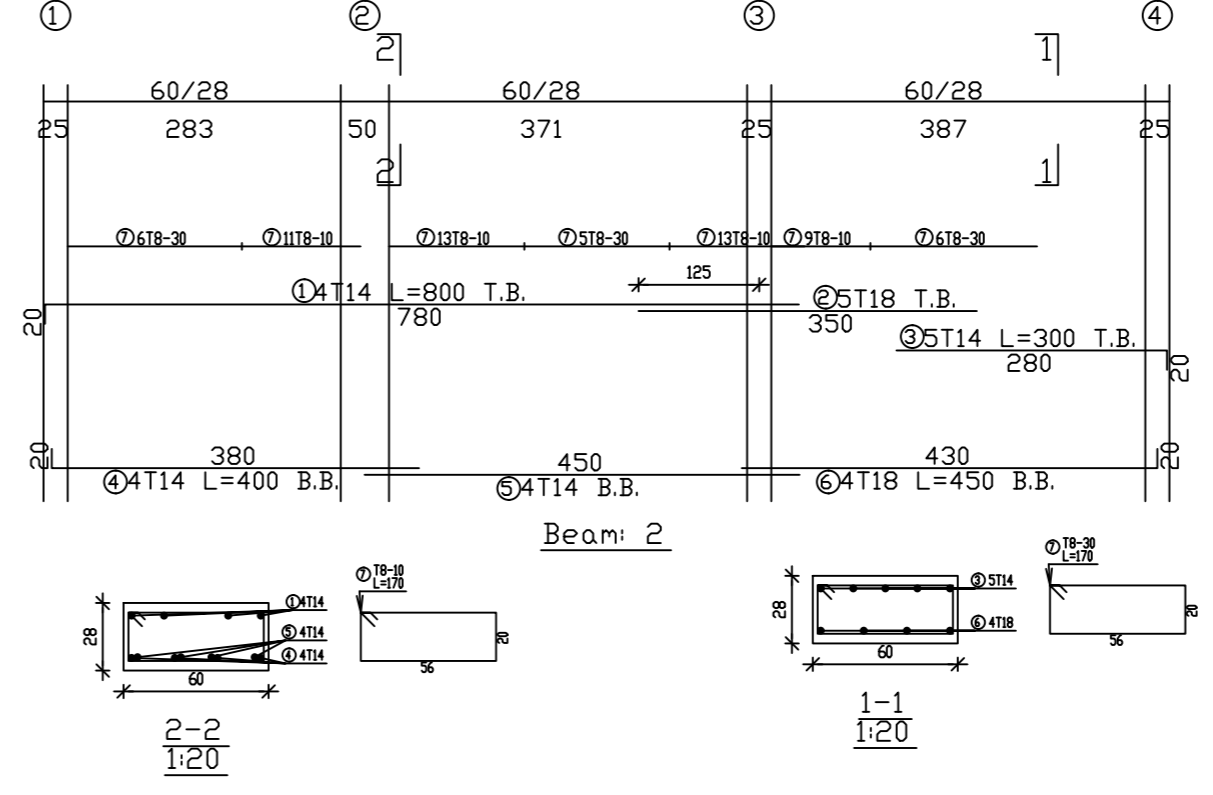
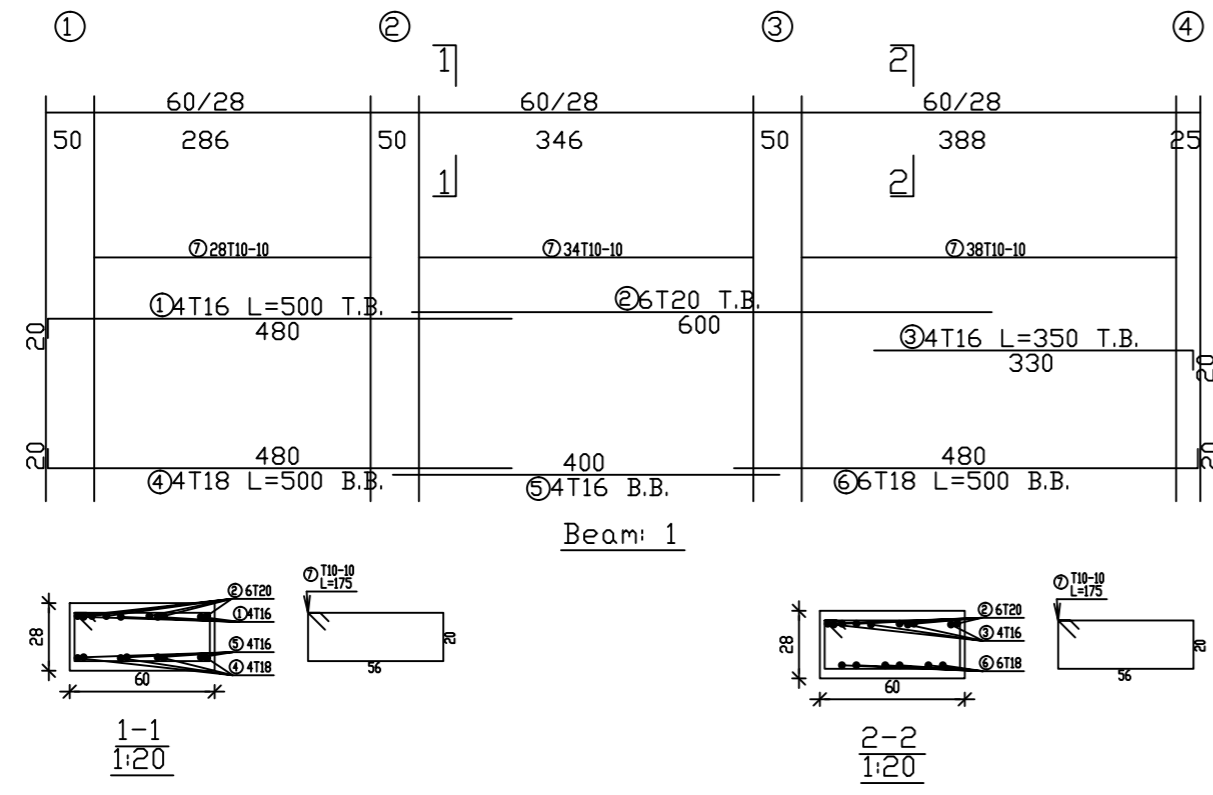
Reinforcement Plan
Roof Floor

Supervisor :

Eng.Hamdi Edais

1/100

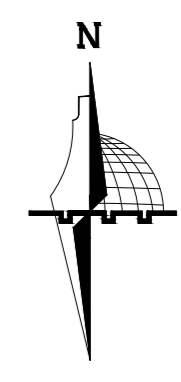
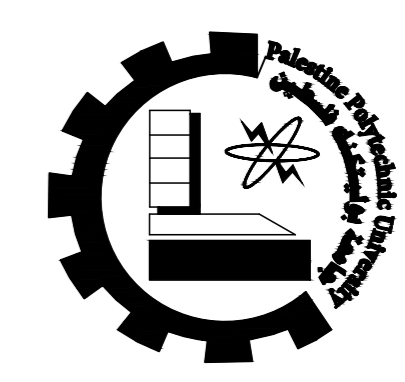
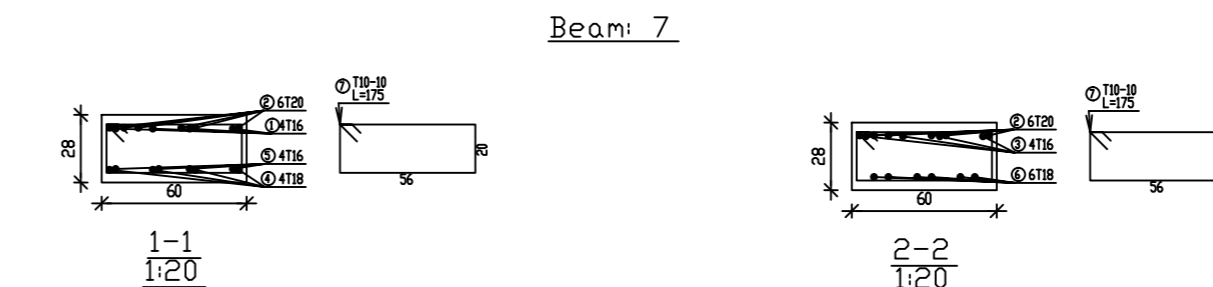
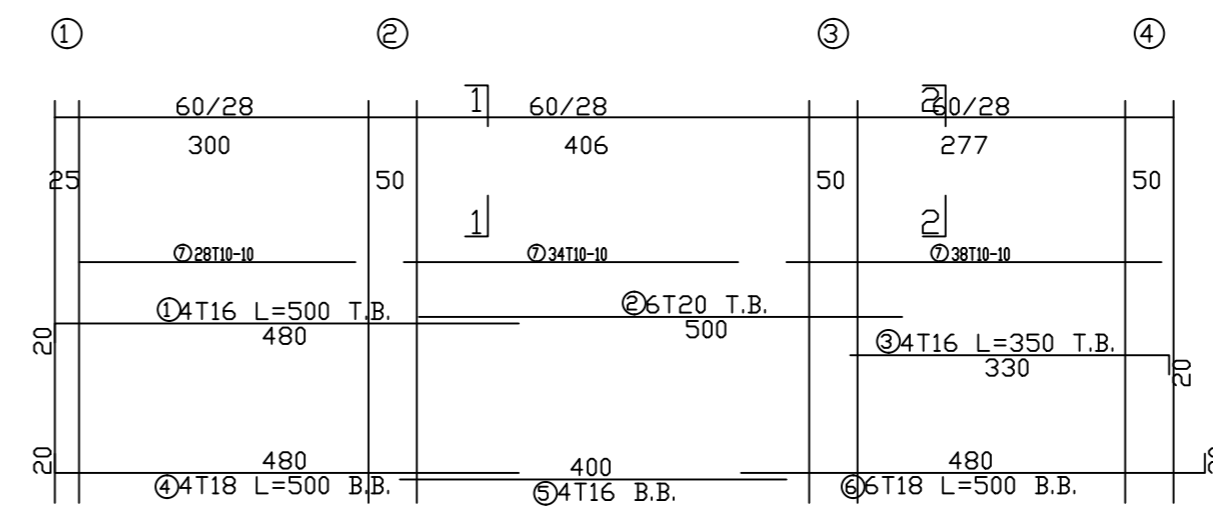
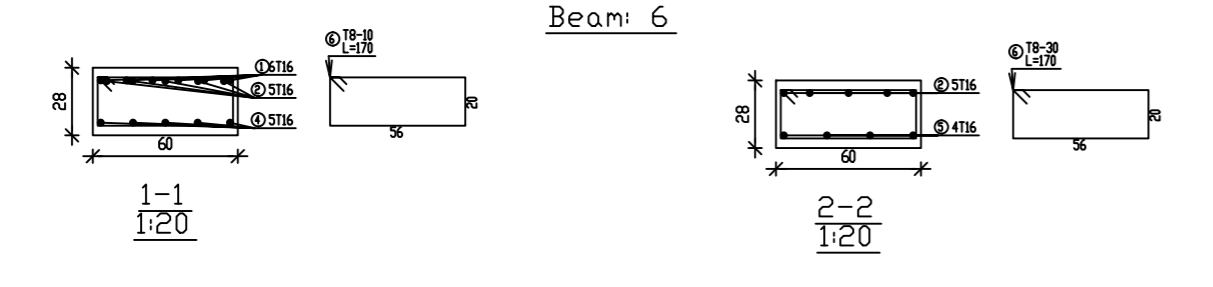
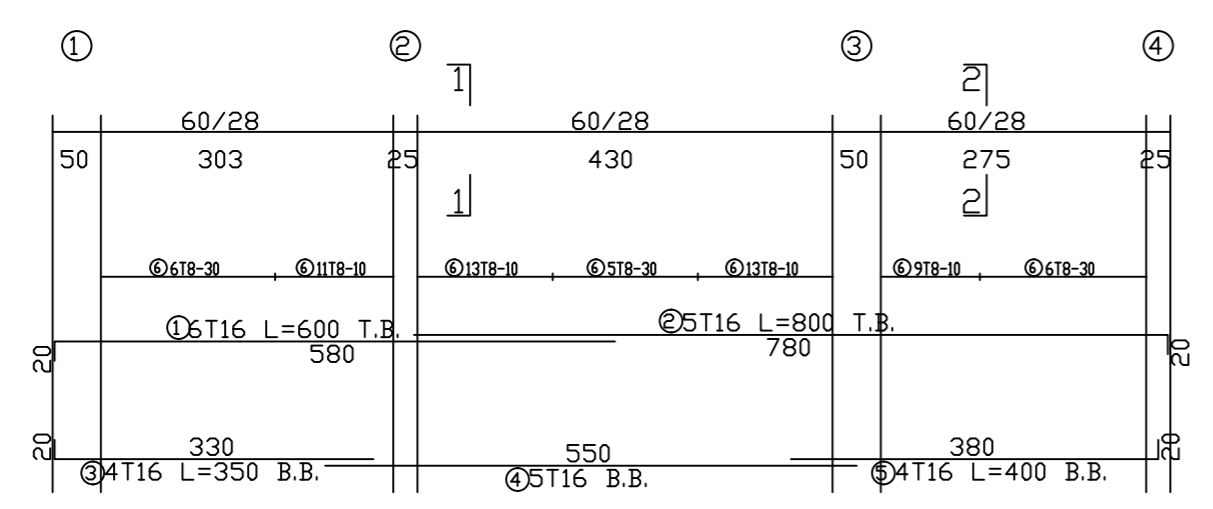
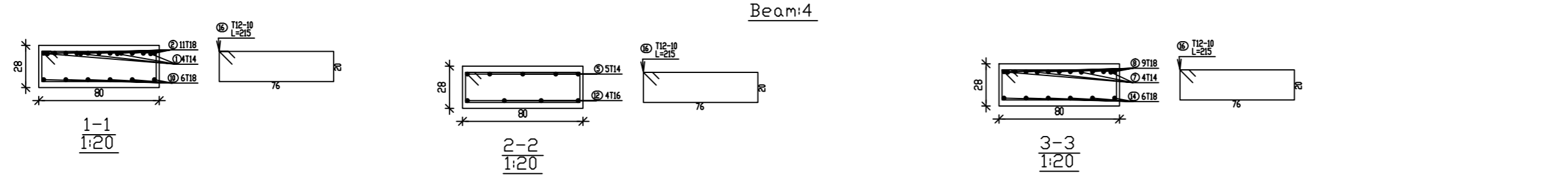
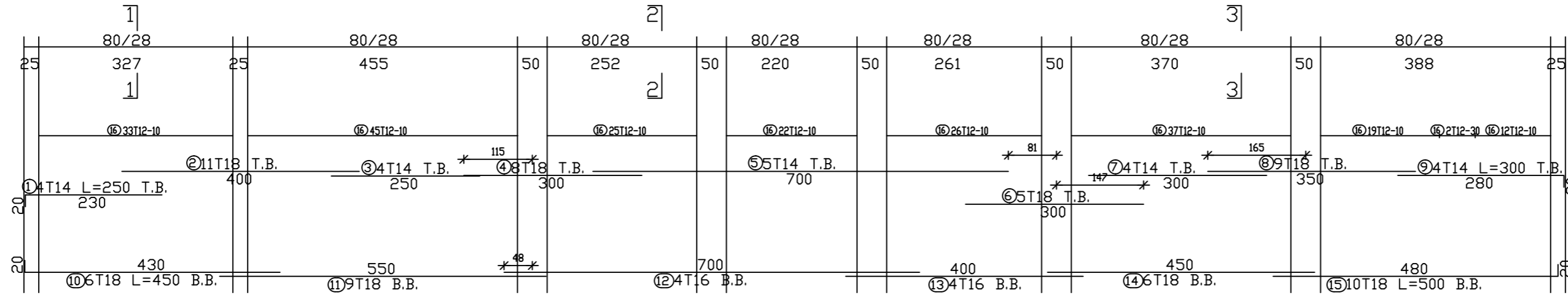
S03



NOTES:
 All Dimensions are in meters unless otherwise shown.
 All spot levels are in meters.

Palestine Polytechnic University
 Civil. & Arch. Eng. Department
 Building Engineering
 Designed By:
 Rana Burqan Tarteel Sharaha
 Drawing Title :
 Beams Details
 Supervisor :
 Eng.Hamdi Edais

1/100
 S04

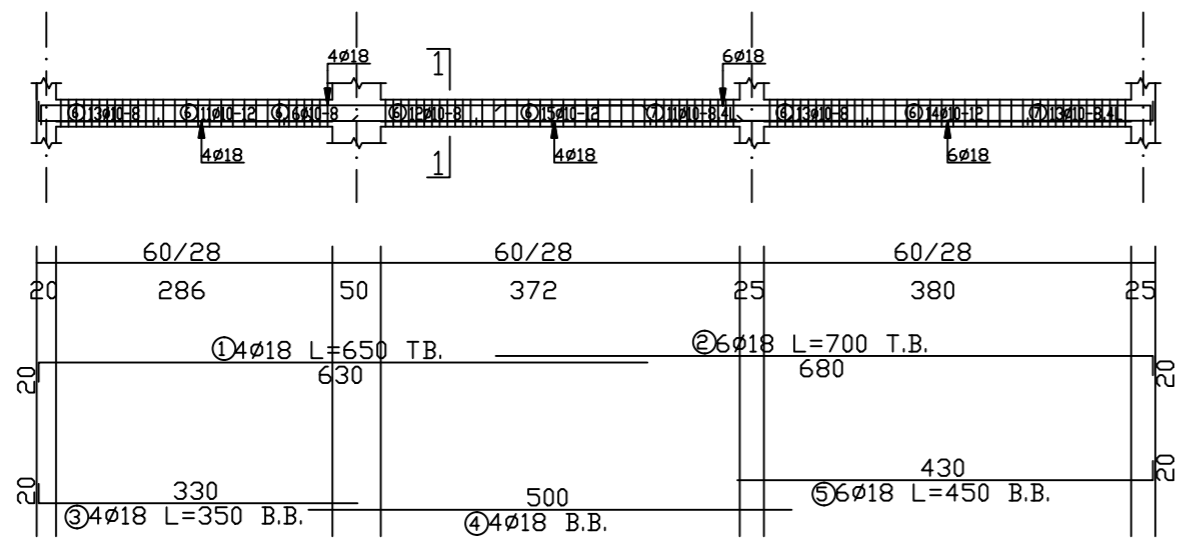


NOTES:
 All Dimensions are in meters unless otherwise shown.
 All spot levels are in meters.

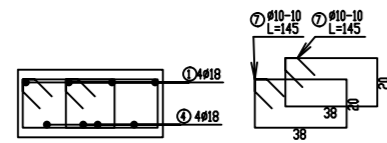
Palestine Polytechnic University
 Civil. & Arch. Eng. Department
 Building Engineering

Designed By:
 Rana Burqan Tarteel Sharaha
 Drawing Title :
 Beams Details
 Supervisor :
 Eng. Hamdi Edais

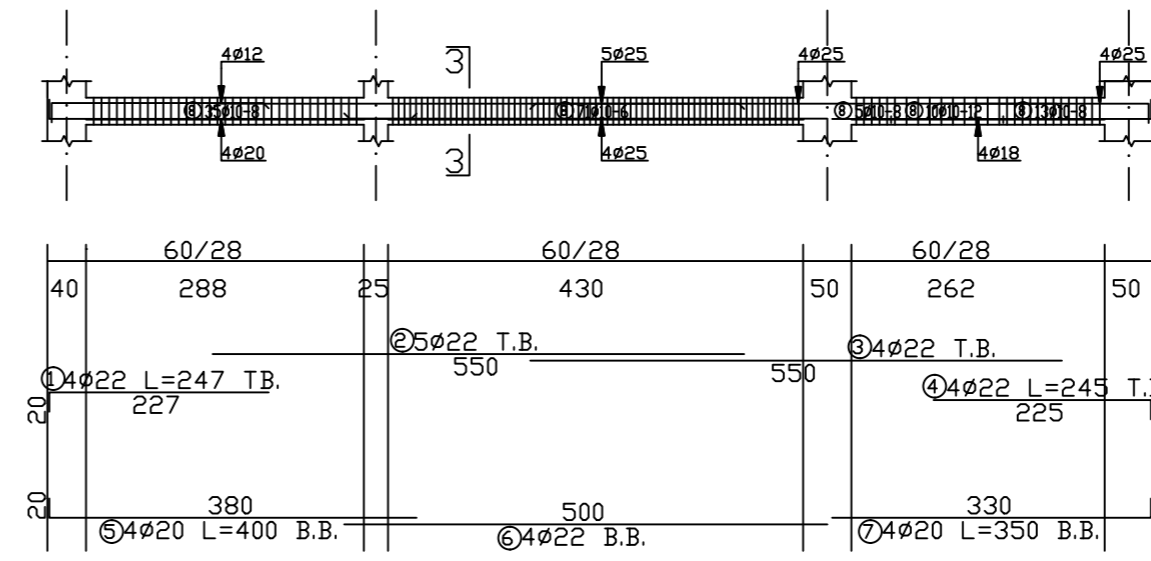
1/100
 S05



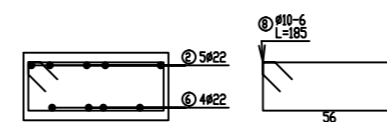
Beam/gfb1



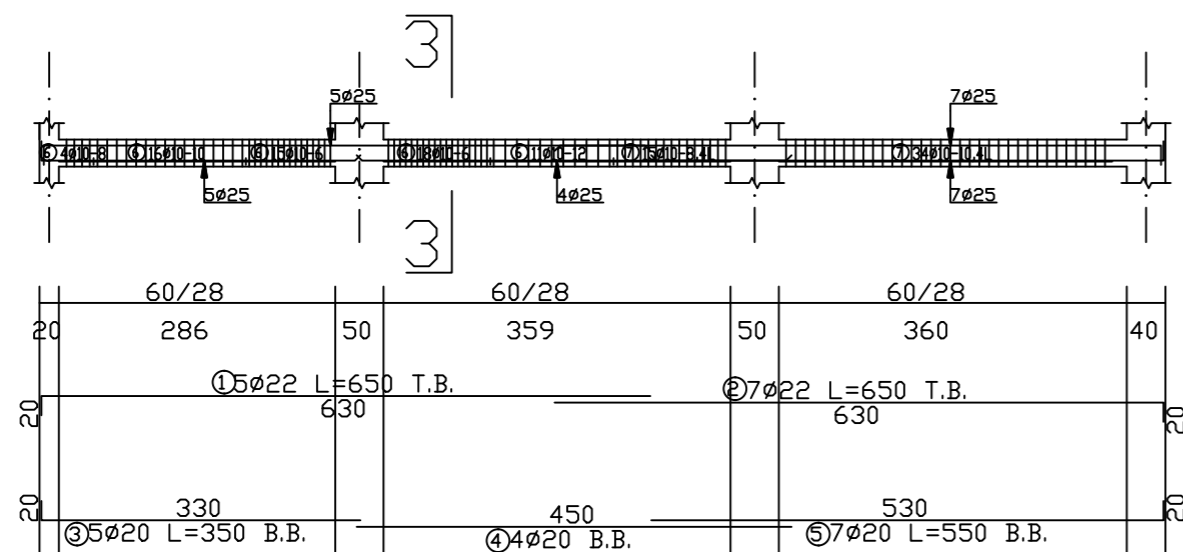
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1:20



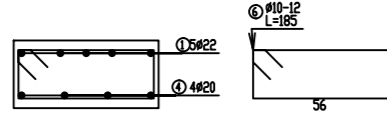
Beam/gfb3



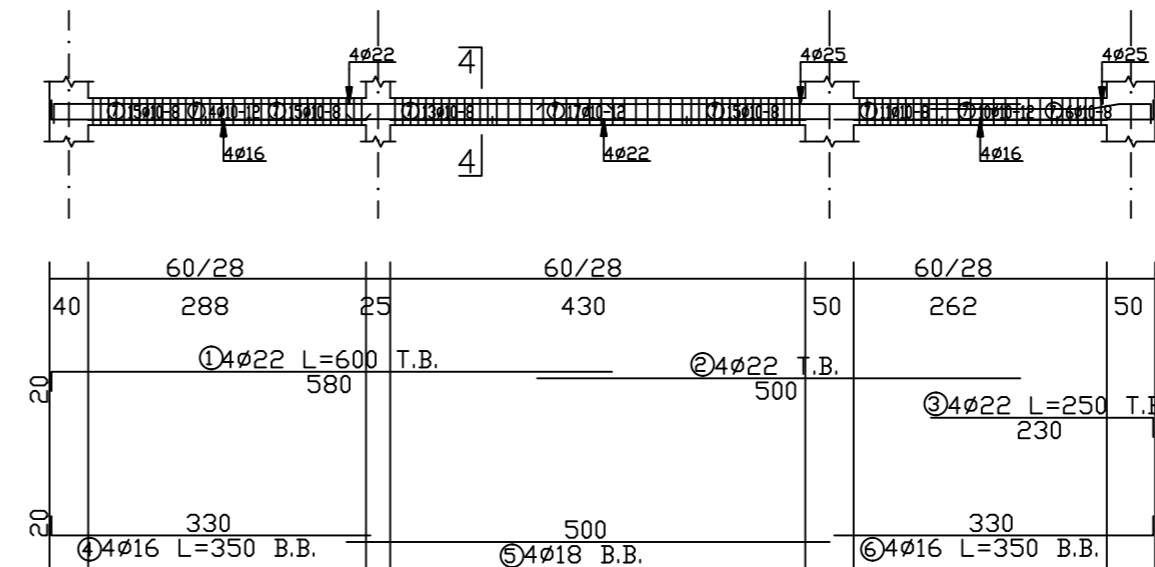
3-3
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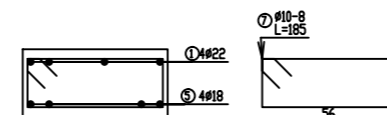
Beam/gfb2



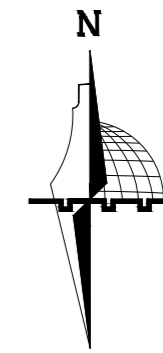
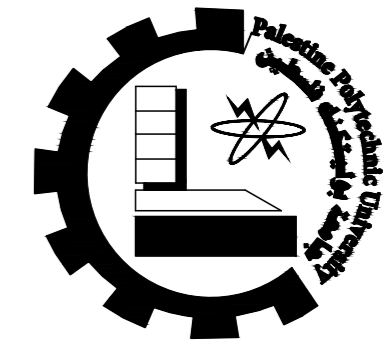
2-2
1:20



Beam/gfb4



4-4
1:20



NOTES:

All Dimensions are in meters unless otherwise shown.

All spot levels are in meters.

Palestine Polytechnic University

Civil. & Arch. Eng. Department

Building Engineering

Designed By:

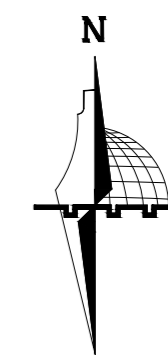
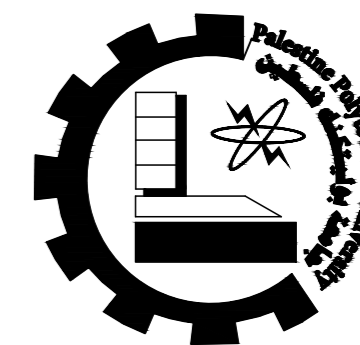
Rana Burqan
Tarteel Sharaha

Drawing Title :
Beams Details

Supervisor :
Eng.Hamdi Edais

1/100

506



NOTES:

All Dimensions are in meters unless otherwise shown.

All spot levels are in meters.

Palestine Polytechnic University

Civil. & Arch. Eng. Department

Building Engineering

Designed By:

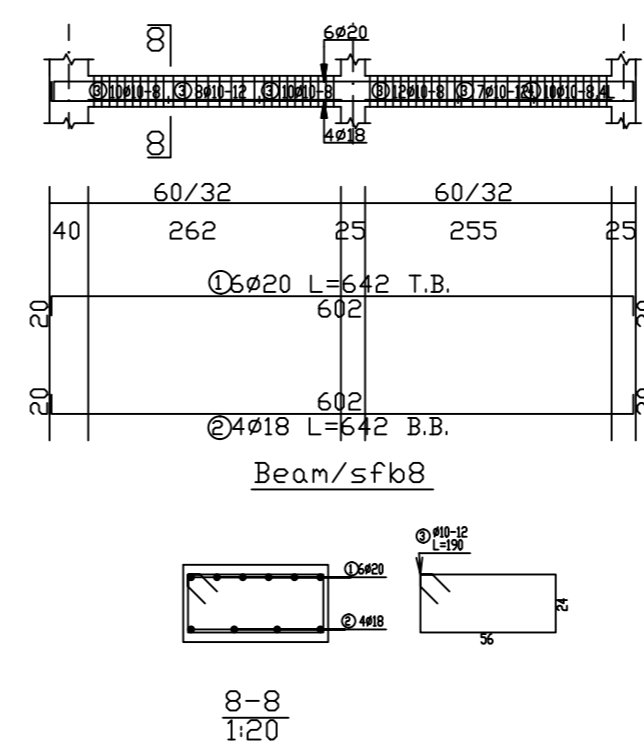
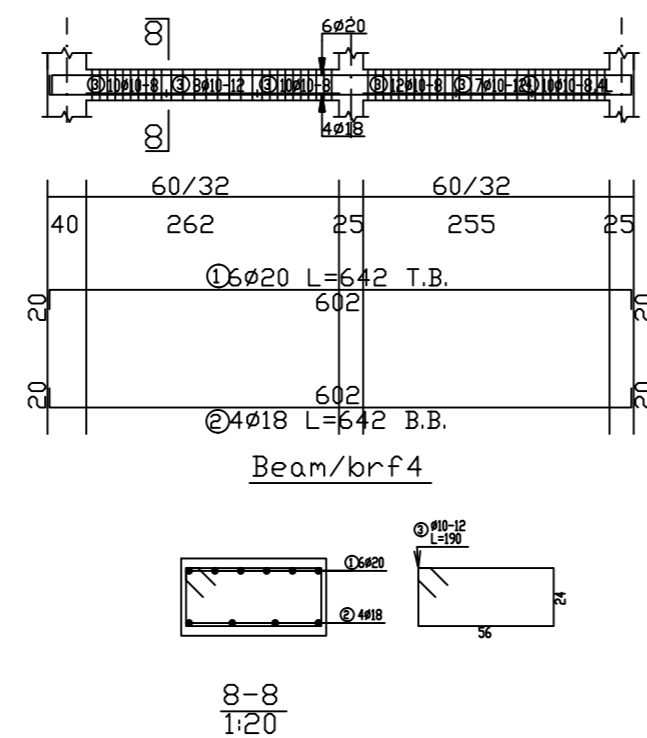
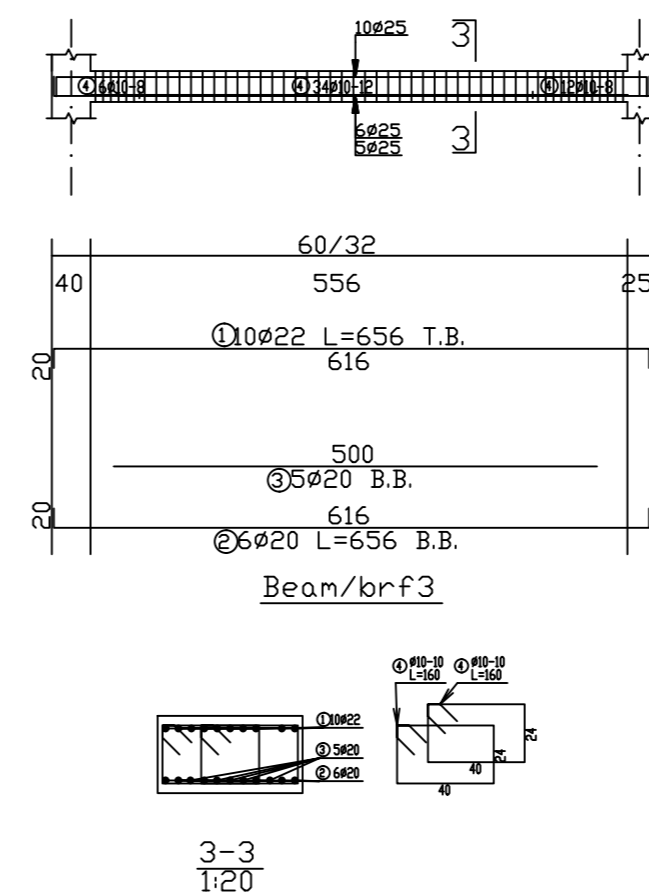
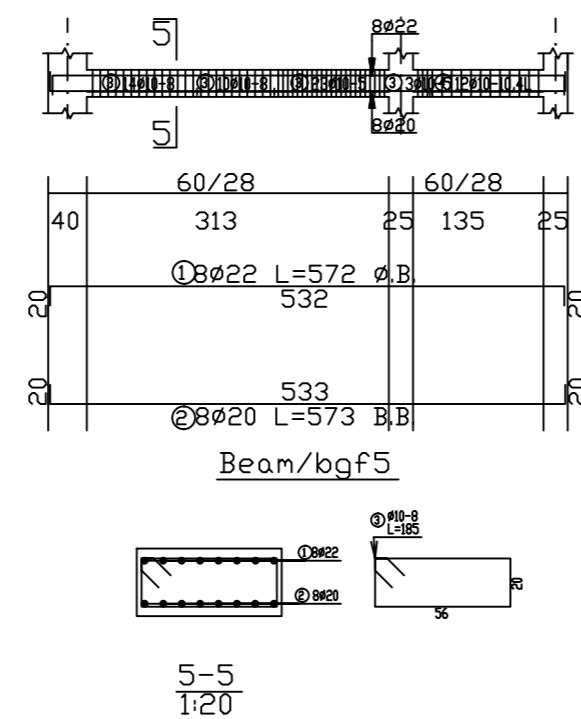
Rana Burqan
Tarteel Sharaha

Drawing Title :
Beams Details

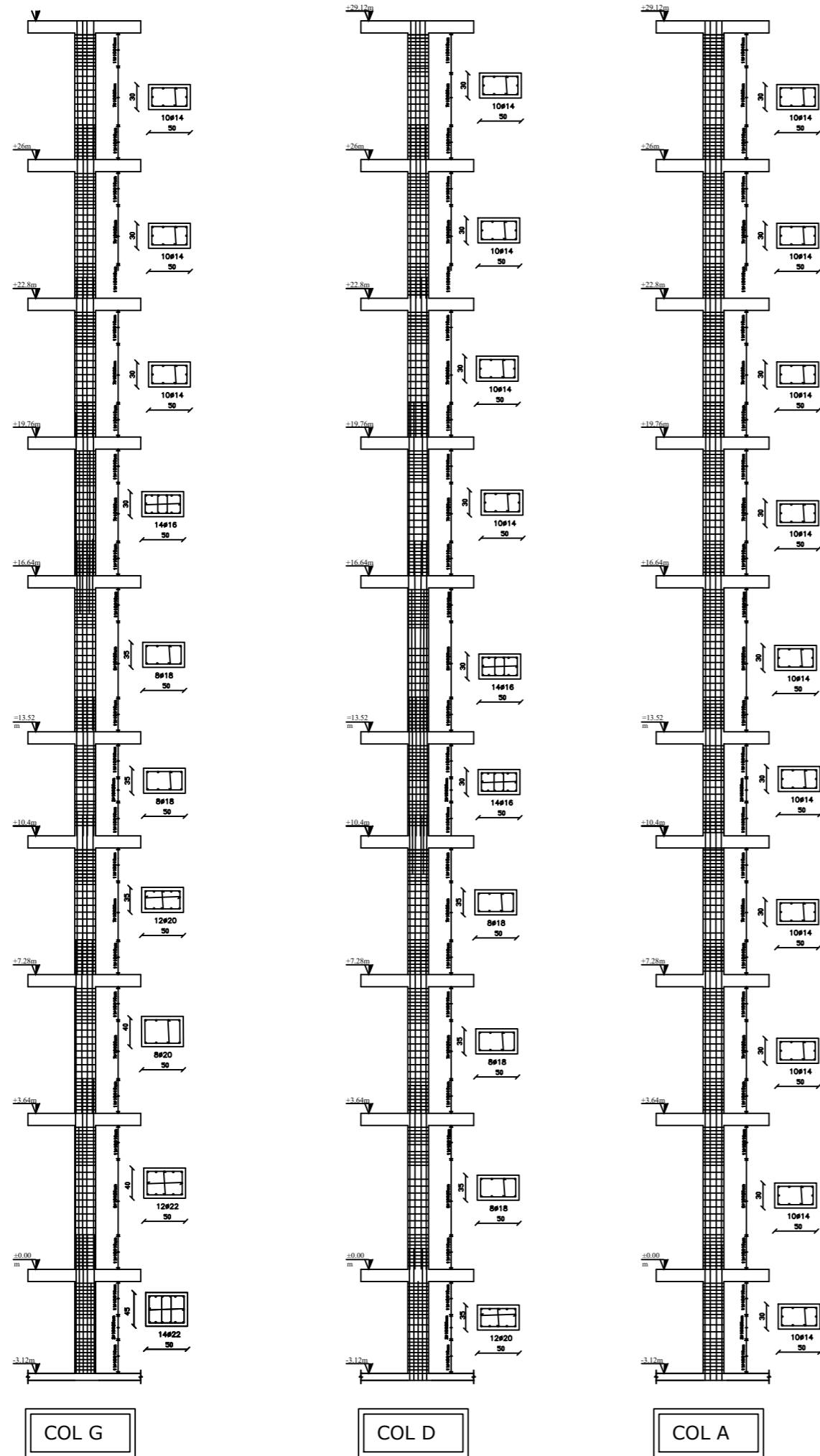
Supervisor :
Eng. Hamdi Edais

1/100

S07

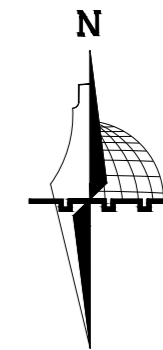
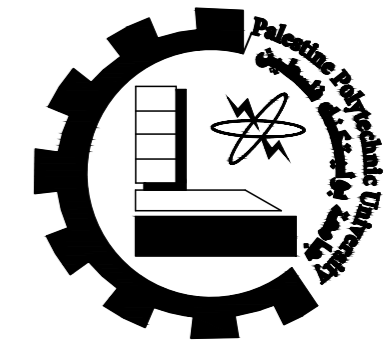


Group 1



A	B	C	D	E	F	G	H
<0-1000>	<1000-1500>	<1500-2000>	<2000-2500>	<2500-3000>	<3000-3500>	<3500-4000>	<4000-4500>
10#14 30	14#16 30	8#18 30	12#20 30	8#20 30	12#22 30	14#22 30	14#25 30

Floor	Column's Design Sections							
	Column Section A	Column Section B	Column Section C	Column Section D	Column Section E	Column Section F	Column Section G	
Basment Floor	Col: 1,2,3,5,6,8,9,13,14,15,16,20,21,23,26,24,27,28,29	Col: 5,6,8,9,20,21,23,24	Col: 5,6,8,9,20,21,23,24	Col: 5,6,8,9,20,21,23,24	Col: 8,9,20,21	Col: 8,9	Col: 8,9	Col: 8,9
Ground Floor	10#14 30	14#16 30	8#18 30	12#20 30	8#20 30	12#22 30	14#22 30	14#25 30
1st-8th - Floor	10#14 30	14#16 30	8#18 30	12#20 30	8#20 30	12#22 30	14#22 30	14#25 30



NOTES:
All Dimensions are in meters unless otherwise shown.
All spot levels are in meters.

Palestine Polytechnic University

Civil. & Arch. Eng. Department

Building Engineering

Designed By:

Rana Burqan
Tarteel Sharaha

Drawing Title :

Reinforcement Plan
Basement Floor

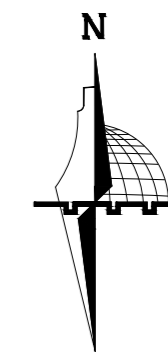
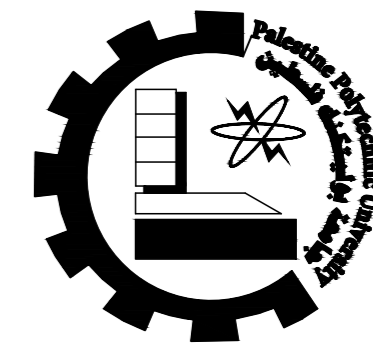
Supervisor :

Eng.Hamdi Edais

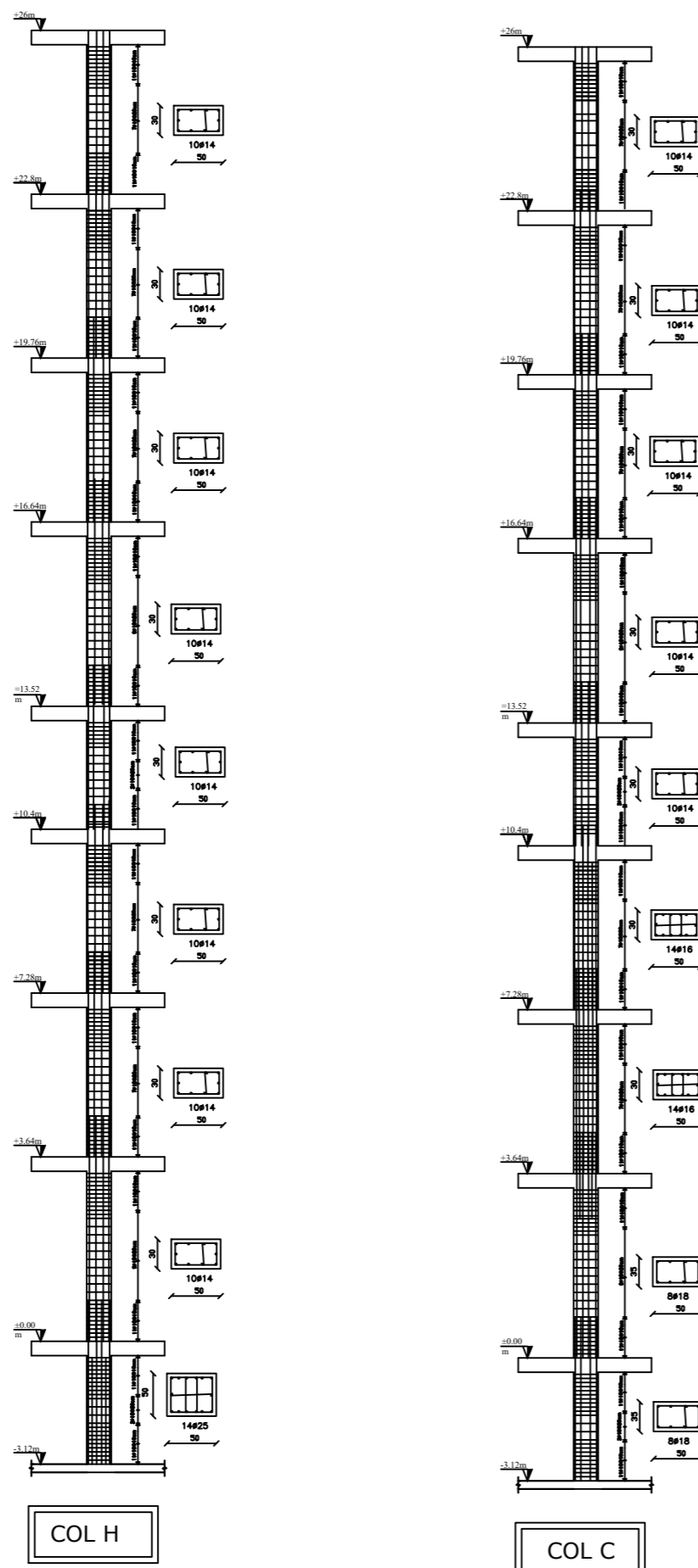
1/200

S08

Group 2



NOTES:
 All Dimensions are in meters unless otherwise shown.
 All spot levels are in meters.



A	B	C	H
<0-1000>	<1000-1500>	<1500-2000>	<4000-4500>

Floor	Column's Design Sections			
	Col(4,7,10,11,12,17, 18,19,22,23)	Col(10,11,12)	Col(10,11)	Col(19)
Basment Floor				
Ground Floor				
1st-7th - Floor				

Palestine Polytechnic University

Civil. & Arch. Eng. Department

Building Engineering

Designed By:

Rana Burqan
 Tarteel Sharaha

Drawing Title :

Reinforcement Plan
 Basement Floor

Supervisor :

Eng.Hamdi Edais

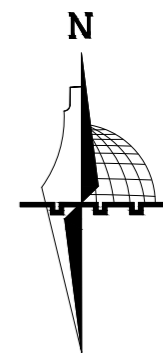
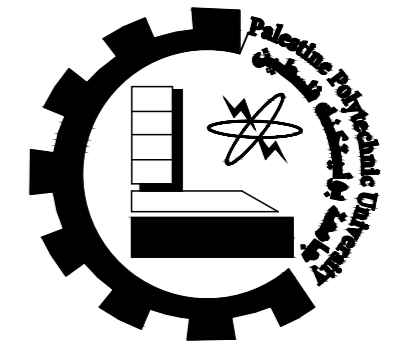
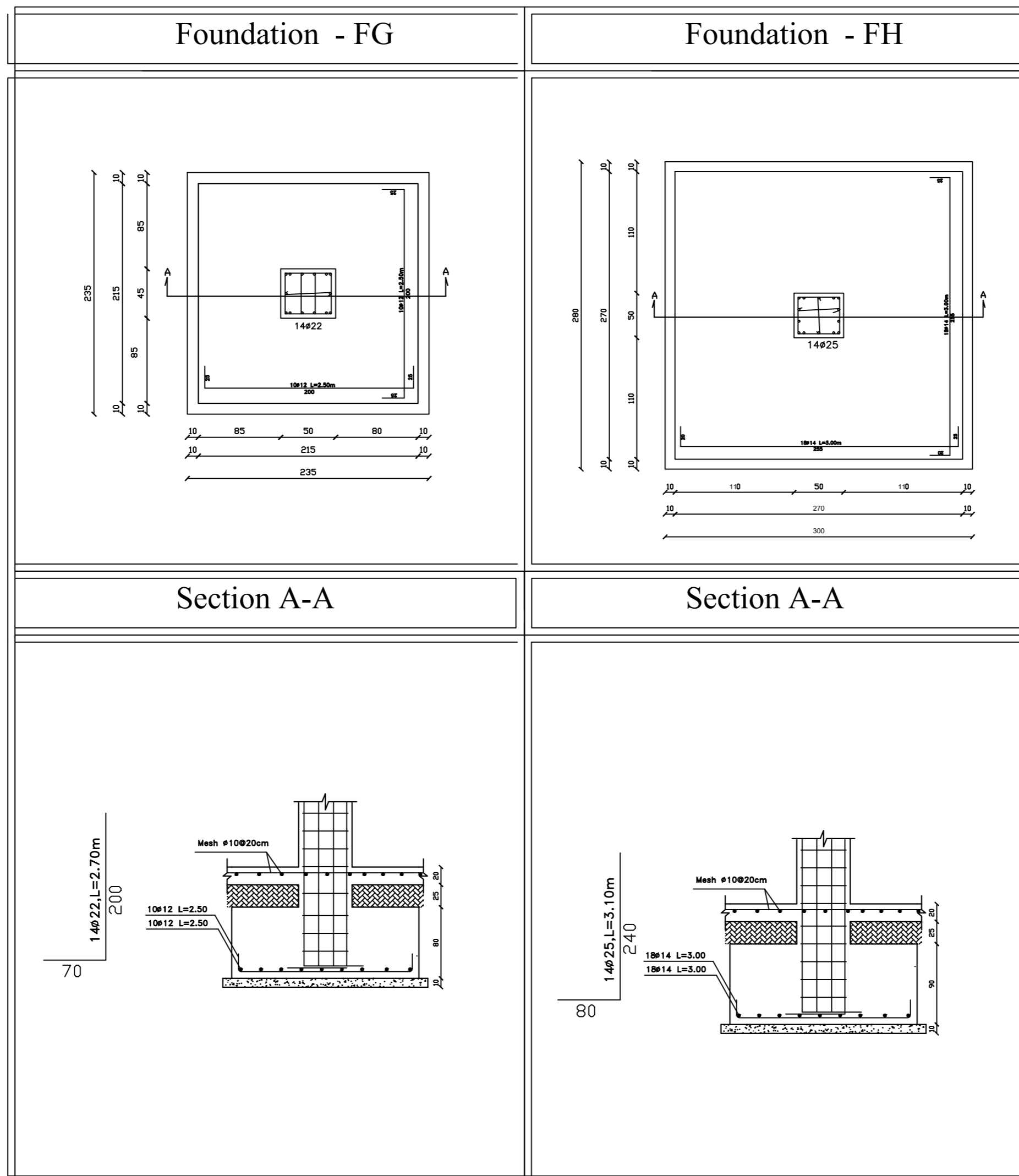
1/200

509

Foundations Details

Scale 1:20

Foundation Details -Isolated



NOTES:
 All Dimensions are in meters unless otherwise shown.
 All spot levels are in meters.

Palestine Polytechnic University

Civil. & Arch. Eng. Department

Building Engineering

Designed By:

Rana Burqan
 Tarteel Sharaha

Drawing Title :

Foundation
 Details

Supervisor :

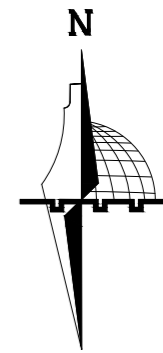
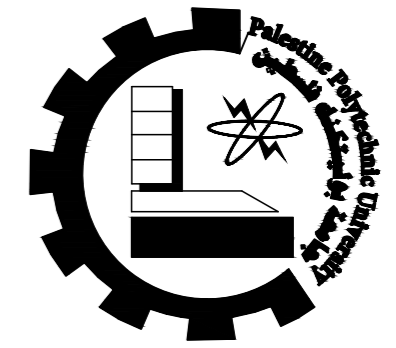
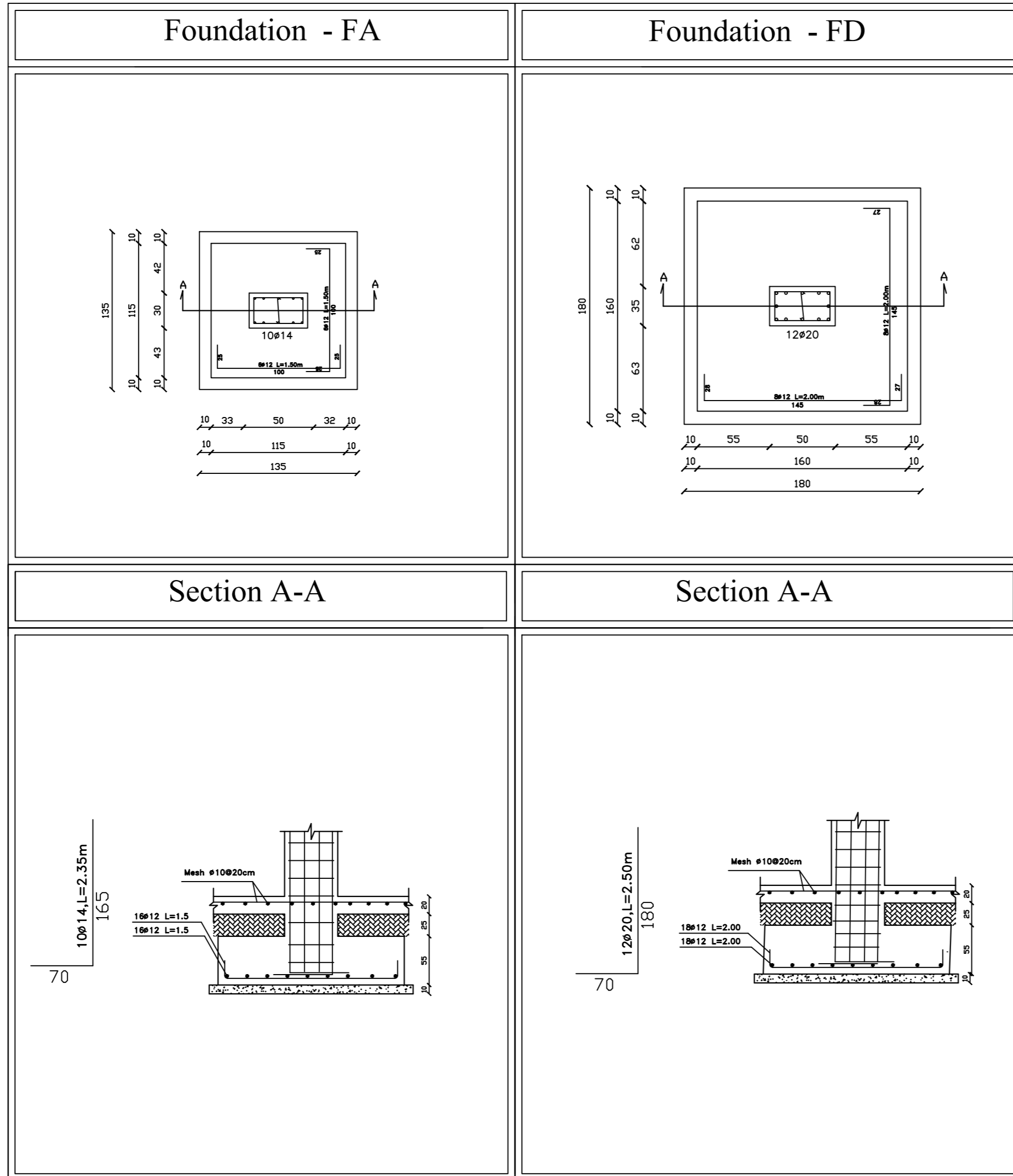
Eng.Hamdi Idais

S10

Foundations Details

Scale 1:20

Foundation Details -Isolated



NOTES:
 All Dimensions are in meters unless otherwise shown.
 All spot levels are in meters.

Palestine Polytechnic University
 Civil. & Arch. Eng. Department
 Building Engineering
 Designed By:
 Rana Burqan
 Tarteel Sharaha
 Drawing Title :
 Foundation
 Details
 Supervisor :
 Eng.Hamdi Idais

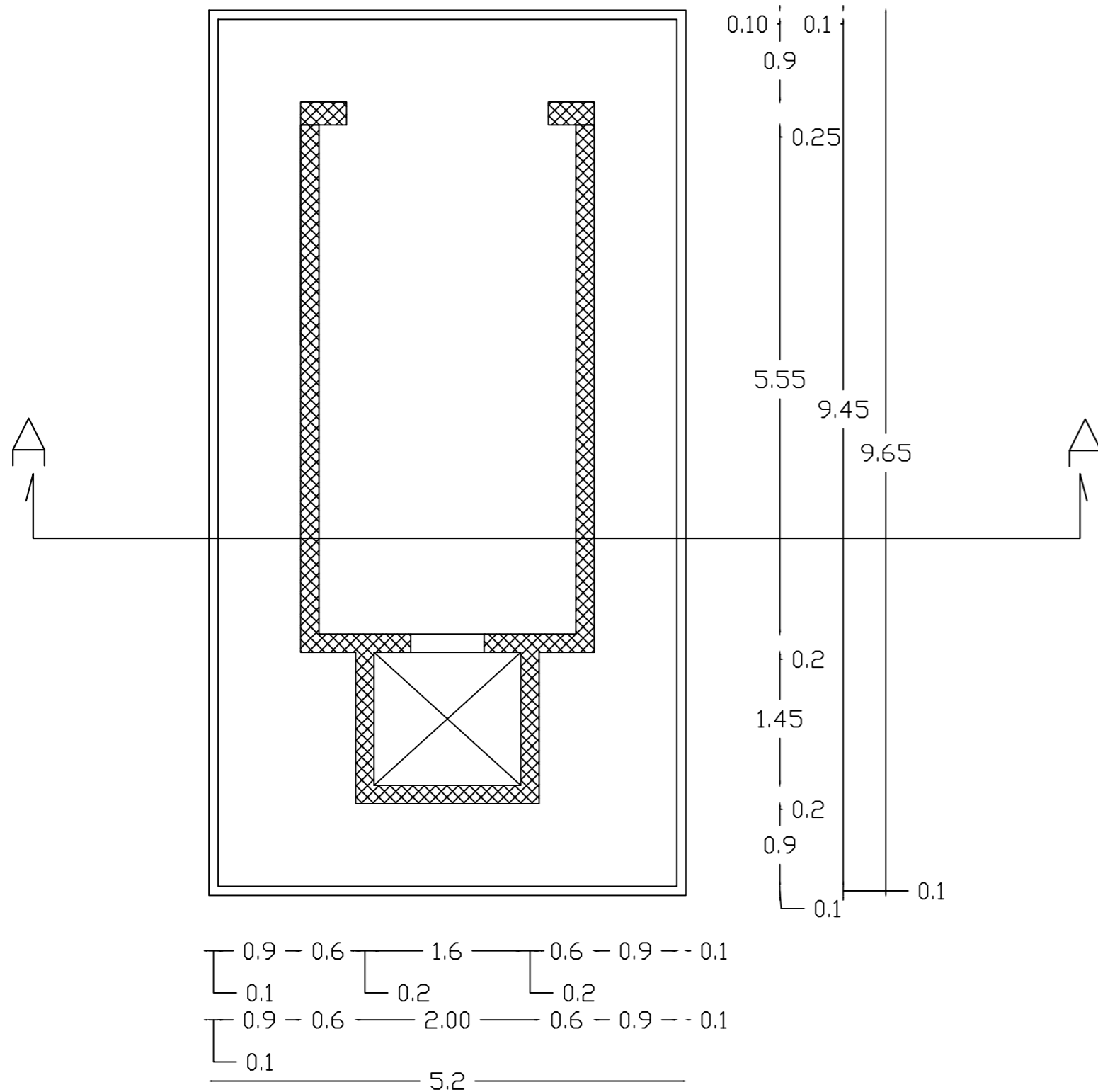
S11

Foundations Details

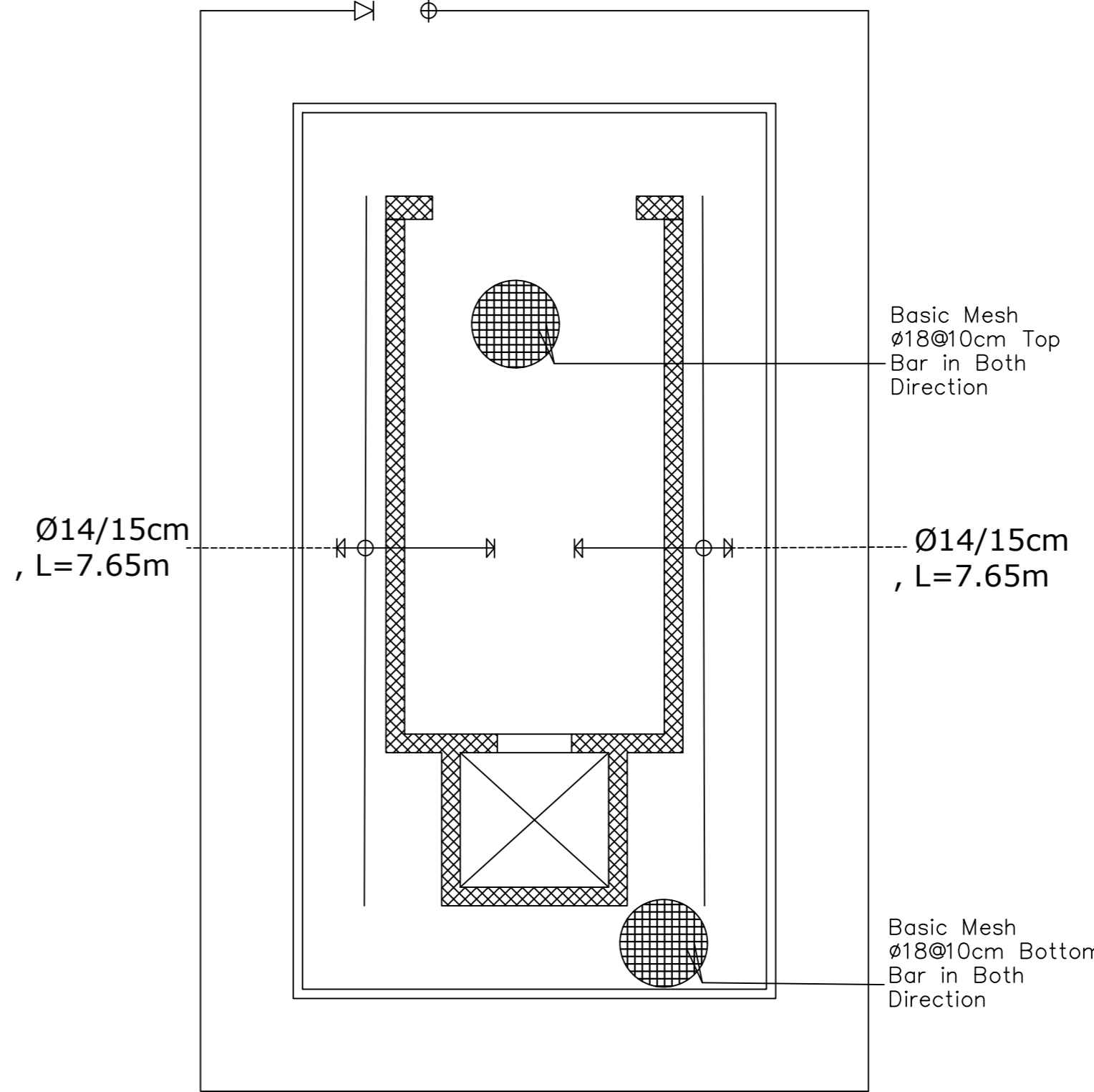
Scale 1:25

Foundation Details -matt

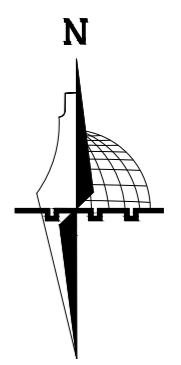
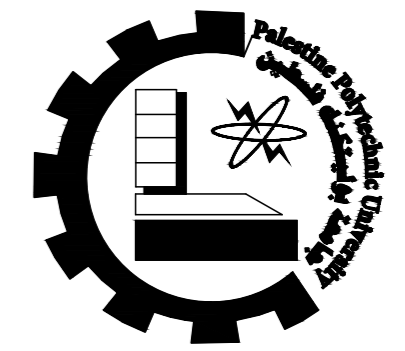
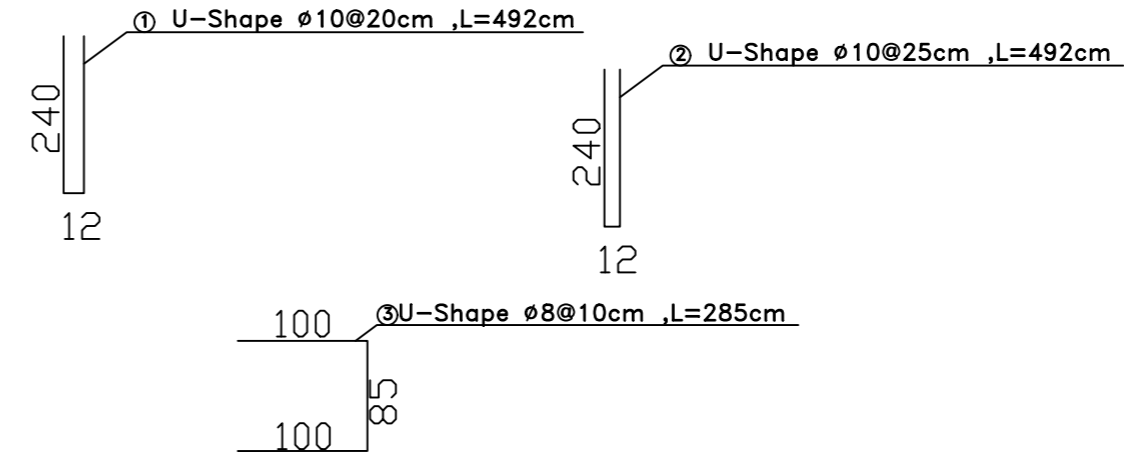
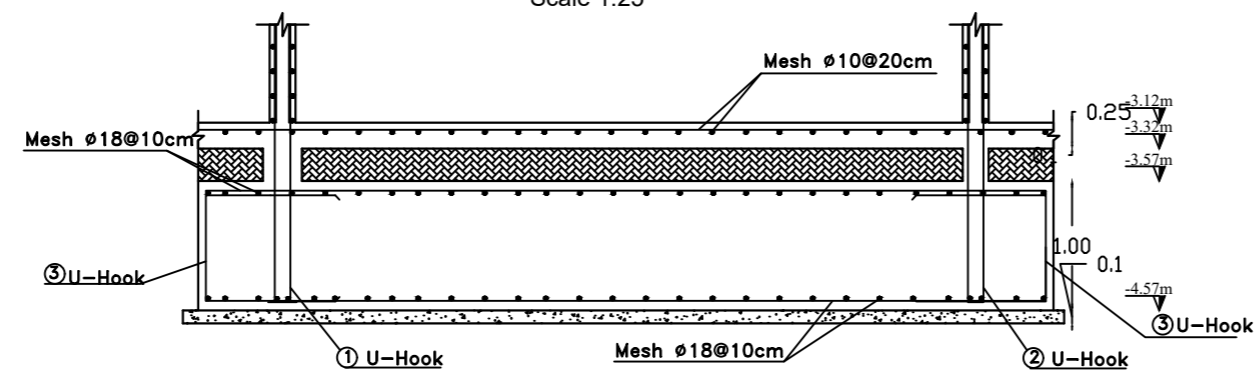
Plan
Scale 1:25



Top and Bottom Reinforcement Details
Scale 1:25



Section A-A
Scale 1:25



NOTES:
All Dimensions are in meters unless otherwise shown.
All spot levels are in meters.

Palestine Polytechnic University
Civil. & Arch. Eng. Department
Building Engineering

Designed By:
Rana Burqan
Tarteel Sharaha

Drawing Title :
Foundation
Details

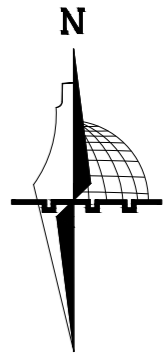
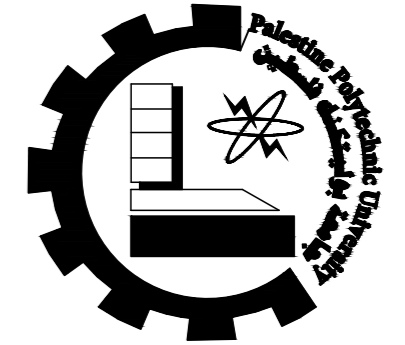
Supervisor :
Eng.Hamdi Idais

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Foundations Details

Scale 1:25

Foundation Details -Strip



NOTES:
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Building Engineering

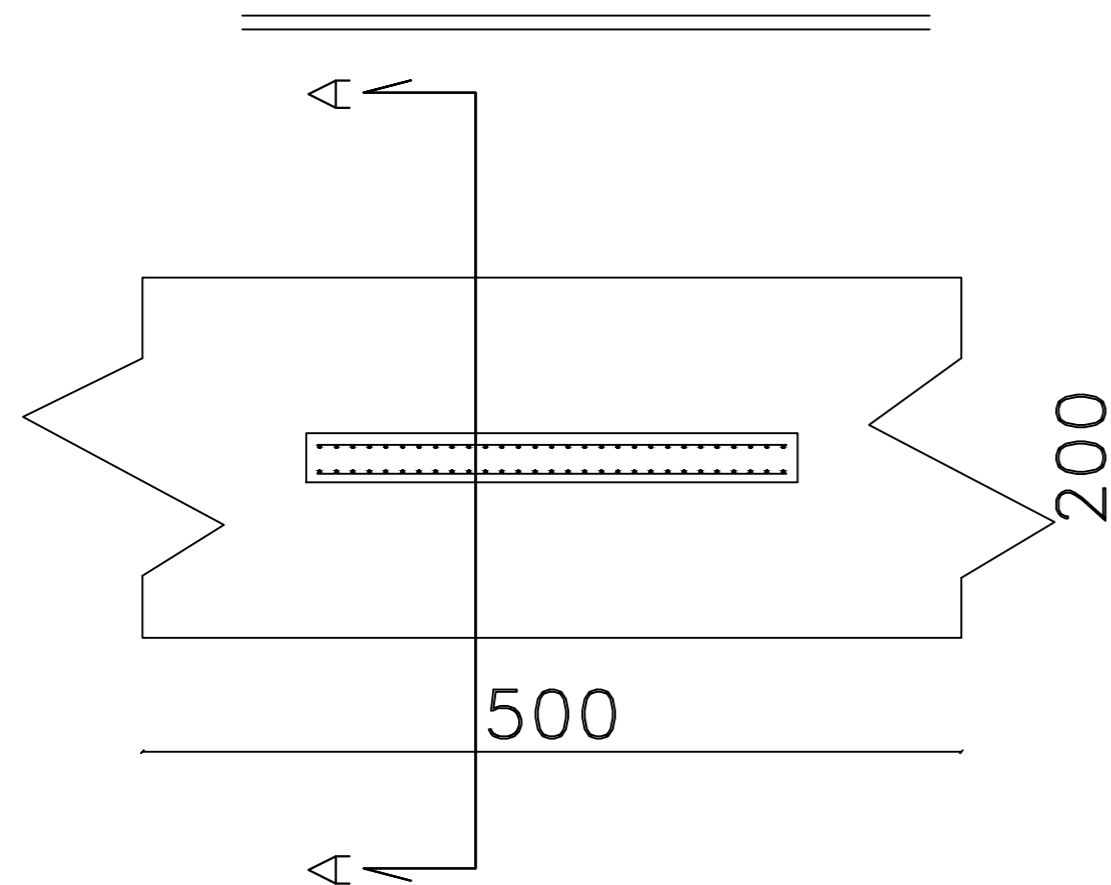
Designed By:

Rana Burqan
Tarteel Sharaha

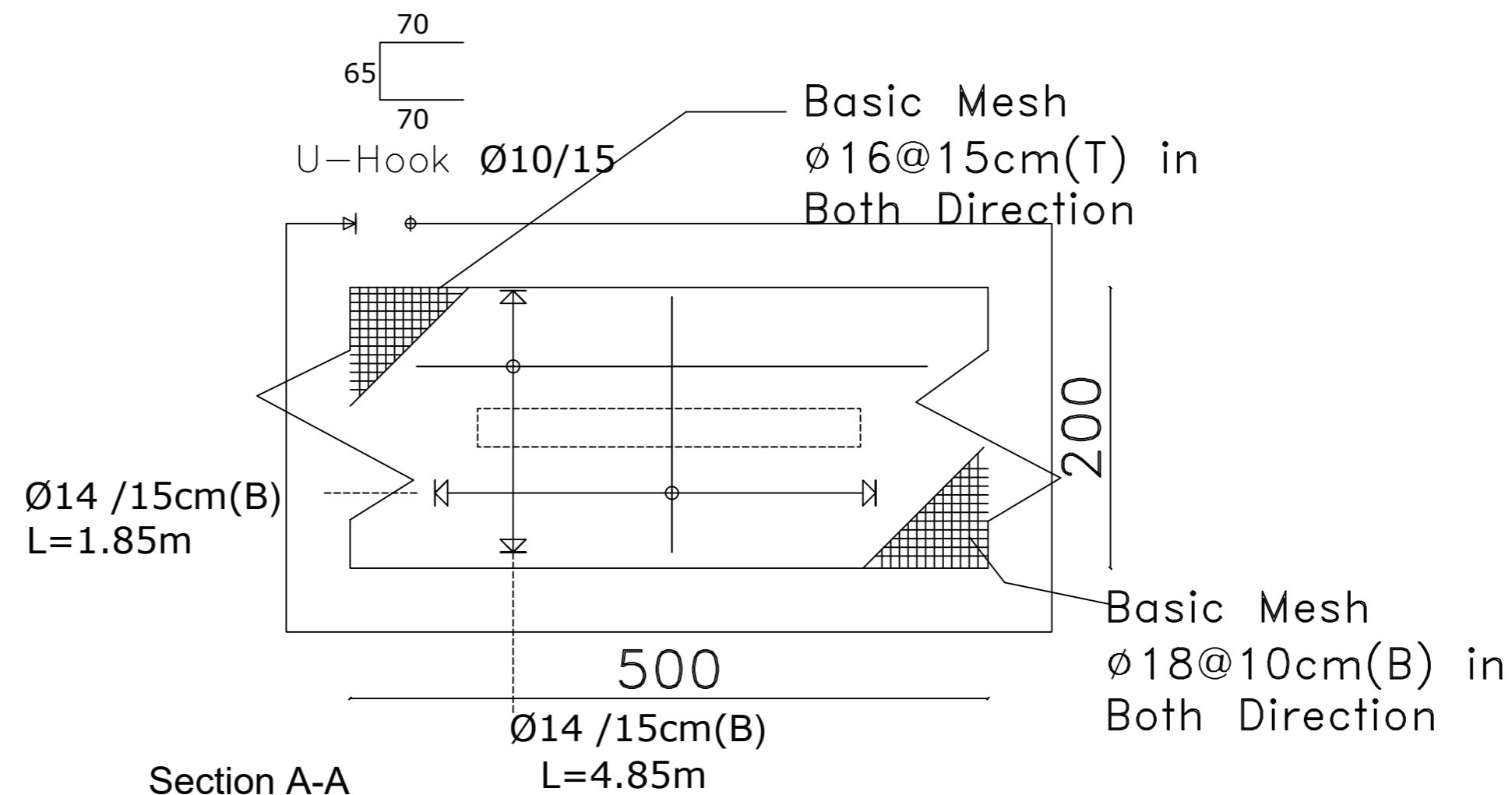
Drawing Title :
Foundation
Details

Supervisor :
Eng.Hamdi Idais

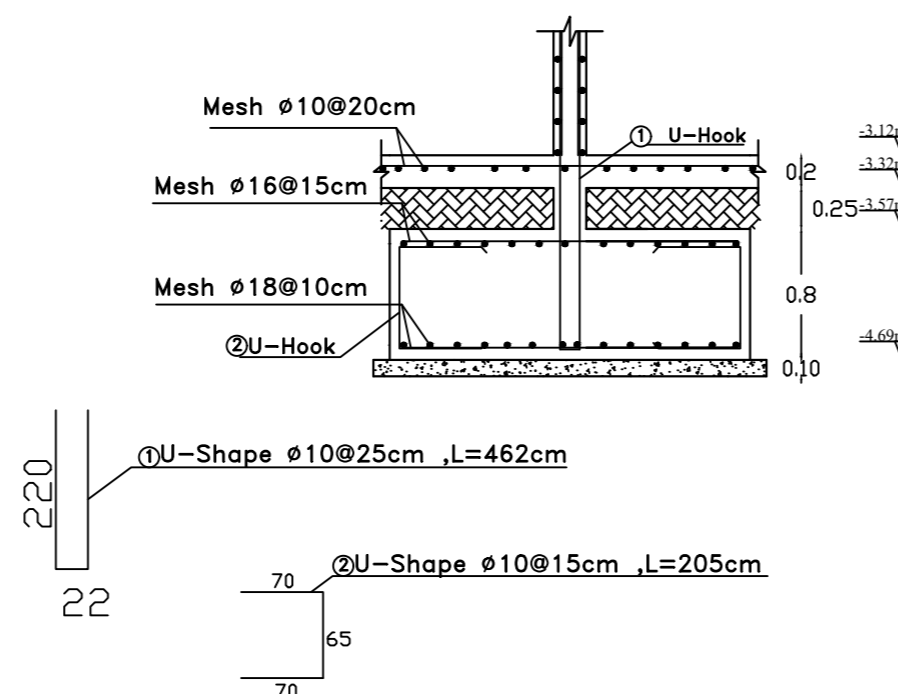
S13

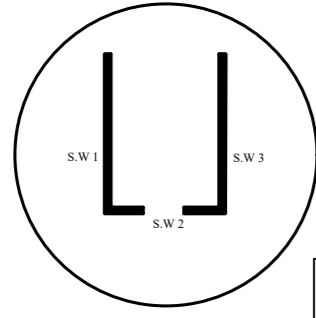


Reinforcement Details

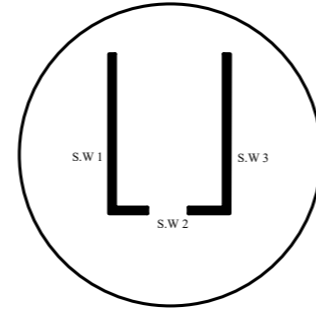
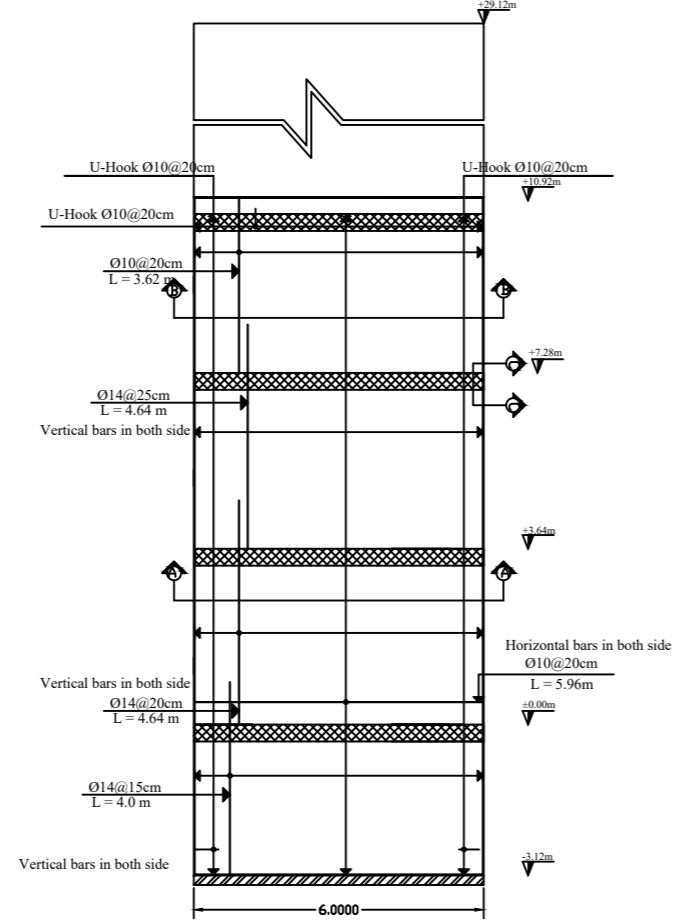
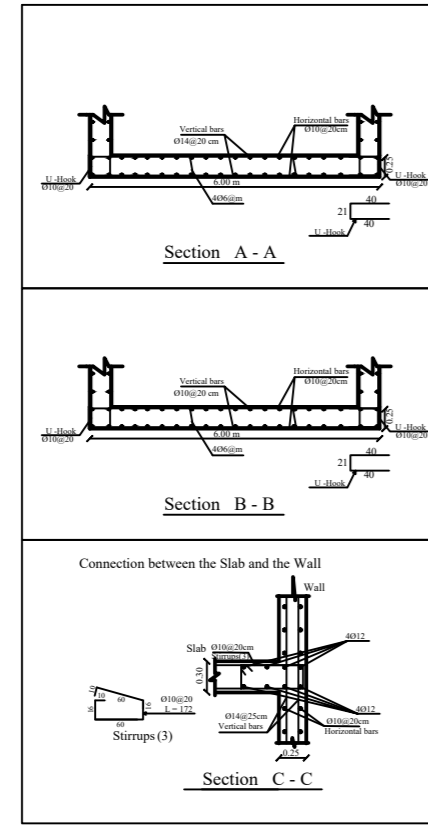


Section A-A

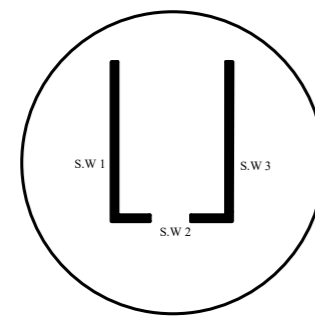
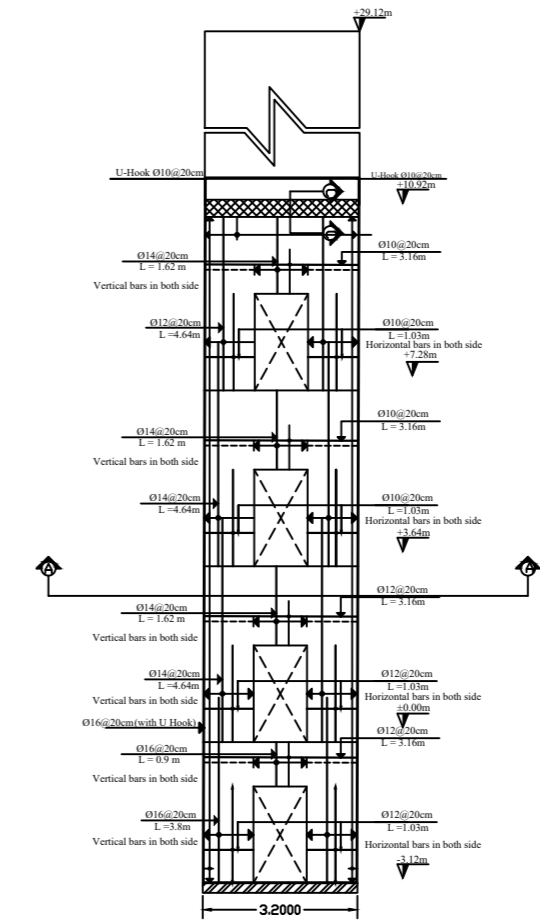
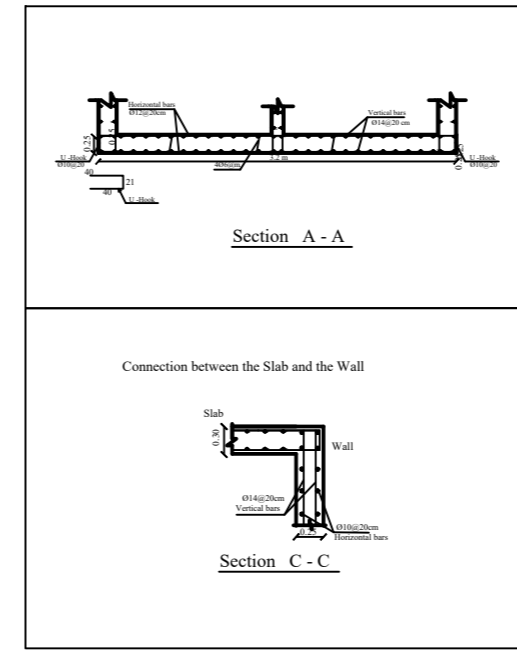




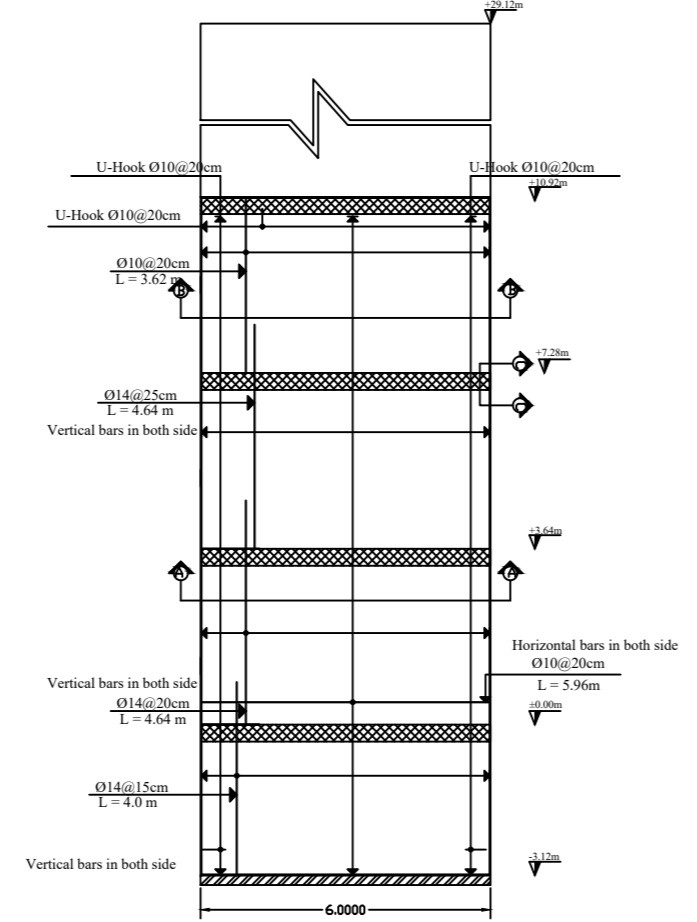
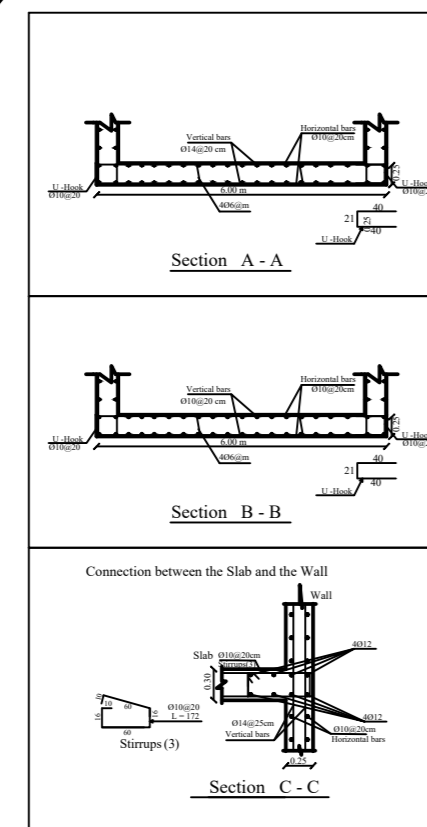
Shear Wall 1



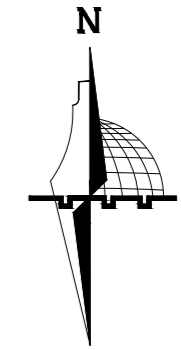
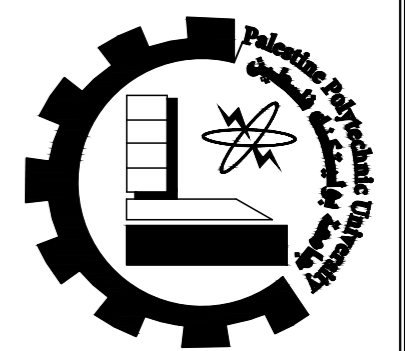
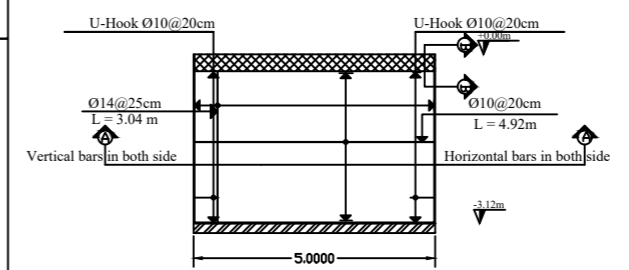
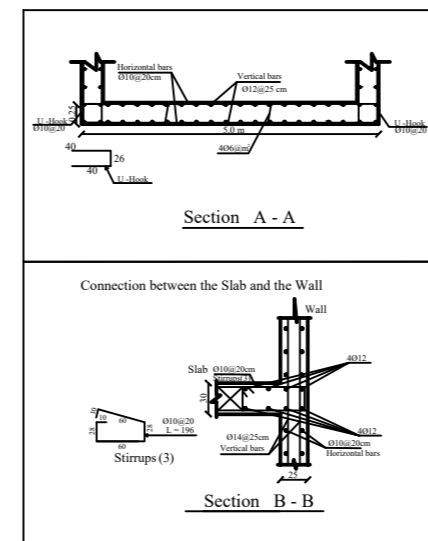
Shear Wall 2



Shear Wall 3



Basement Wall



NOTES:
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All spot levels are in meters.

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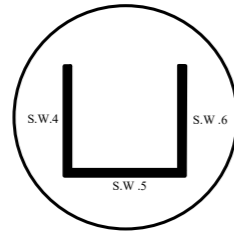
Designed By:
Rana Burqan Tarteel Sharaha

Drawing Title :
Wall Details

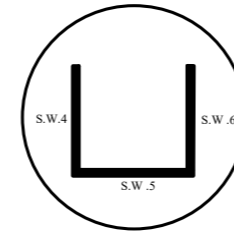
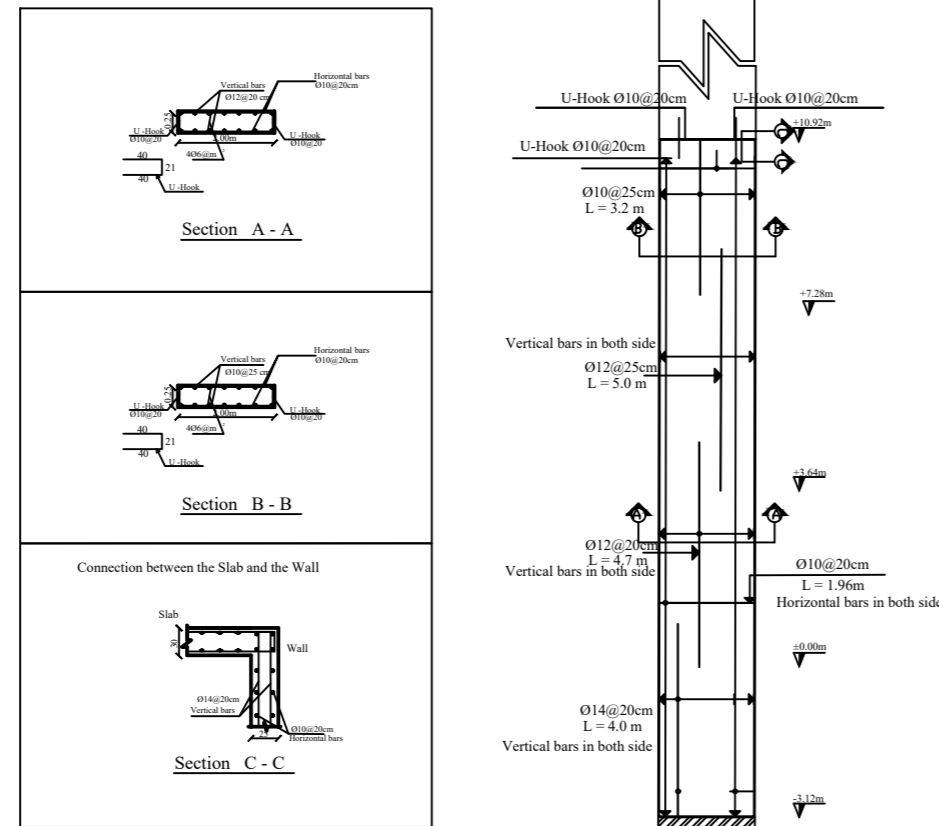
Supervisor :
Eng. Hamdi Edais

1/100

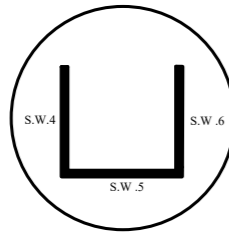
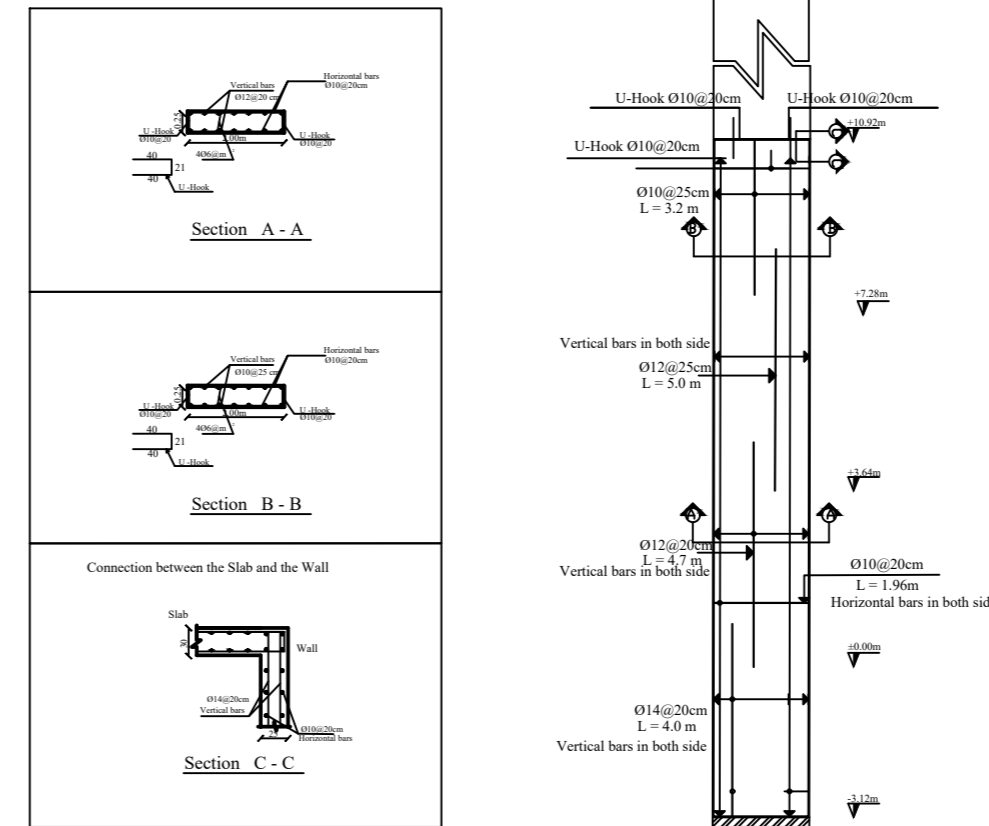
S14



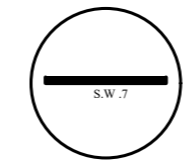
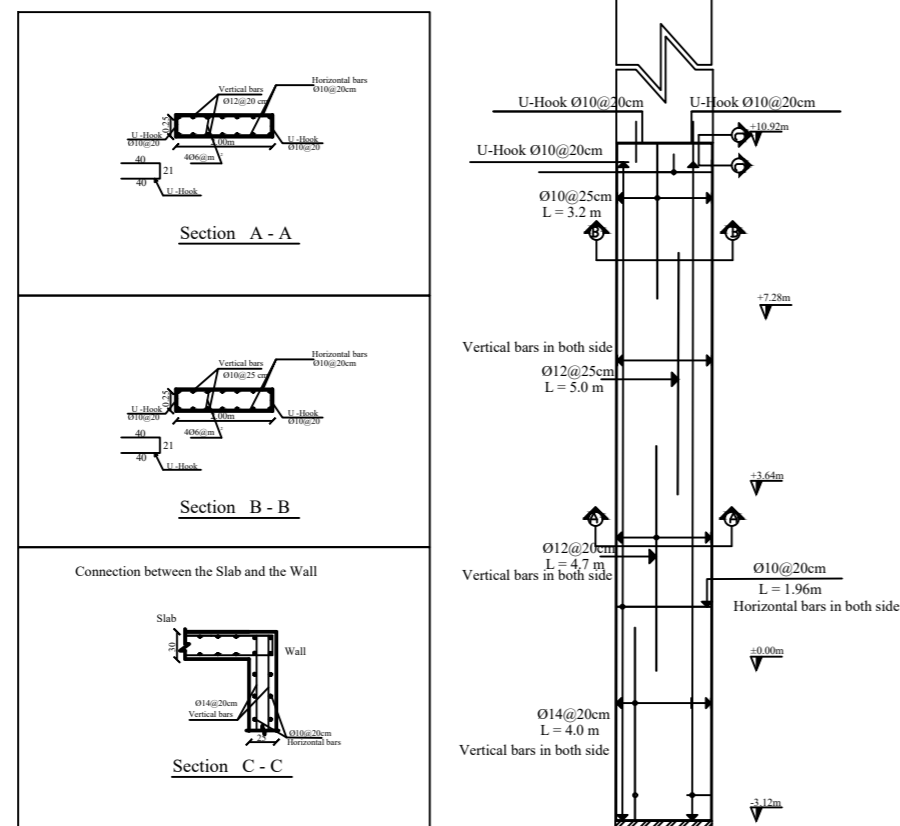
Shear Wall 4



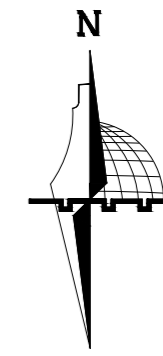
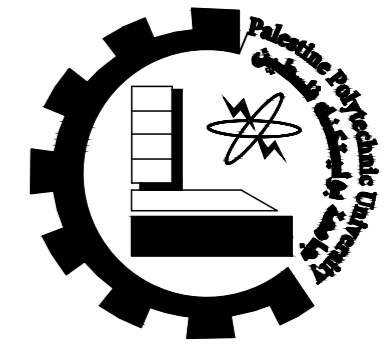
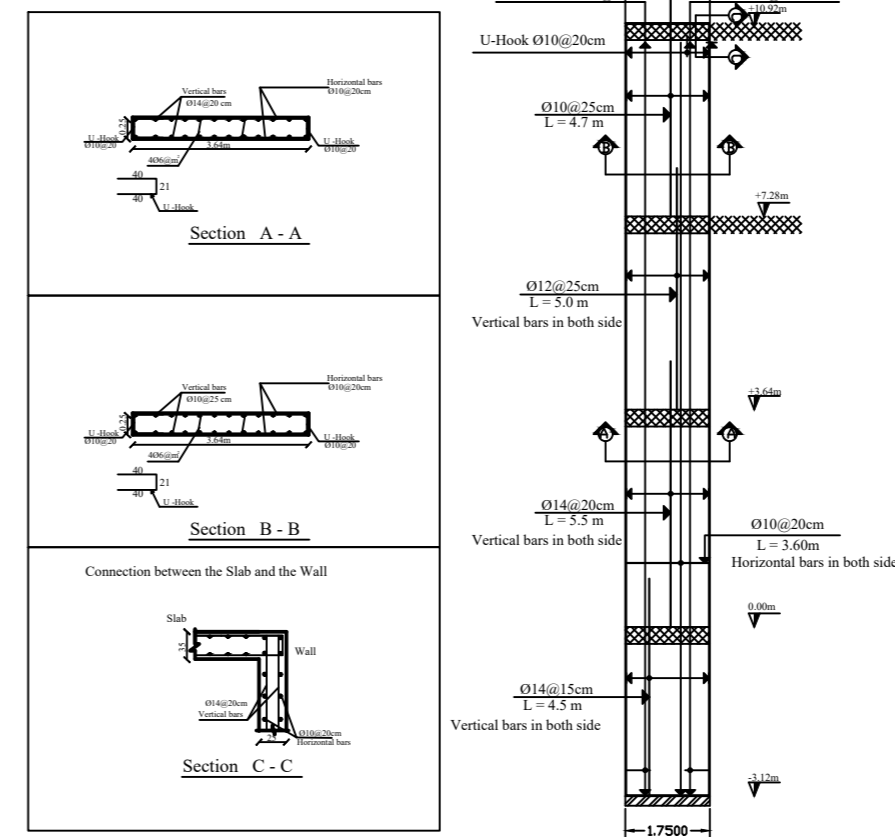
Shear Wall 5



Shear Wall 6



Shear Wall 7



NOTES:
All Dimensions are in meters
unless otherwise shown.
All spot levels are in meters.

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Civil. & Arch. Eng. Department

Building Engineering

Designed By:

Rana Burqan
Tarteel Sharaha

Drawing Title :
Wall Details

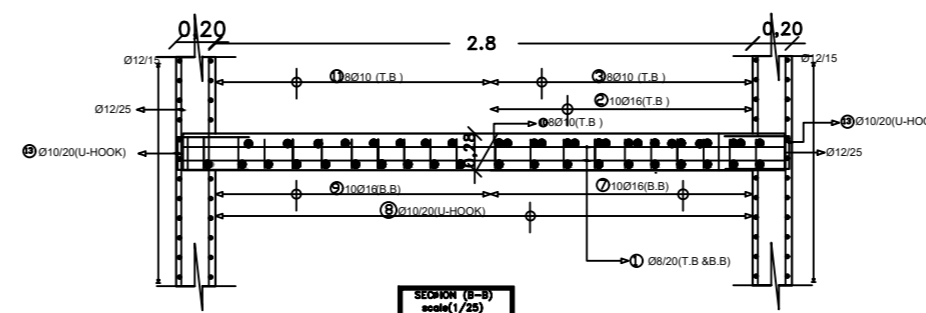
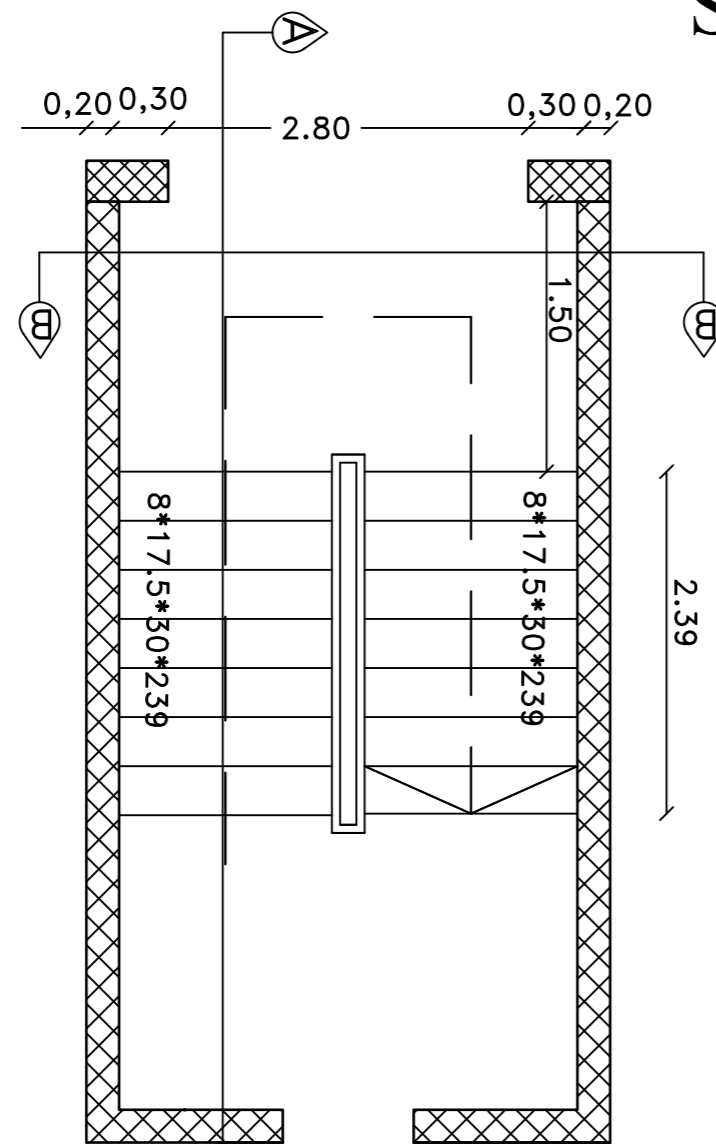
Supervisor :
Eng.Hamdi Edais

1/100

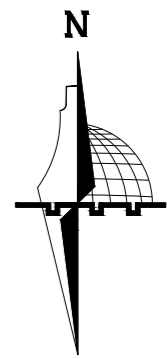
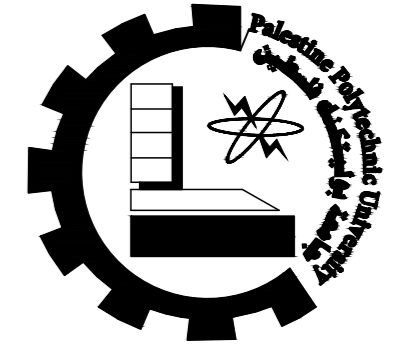
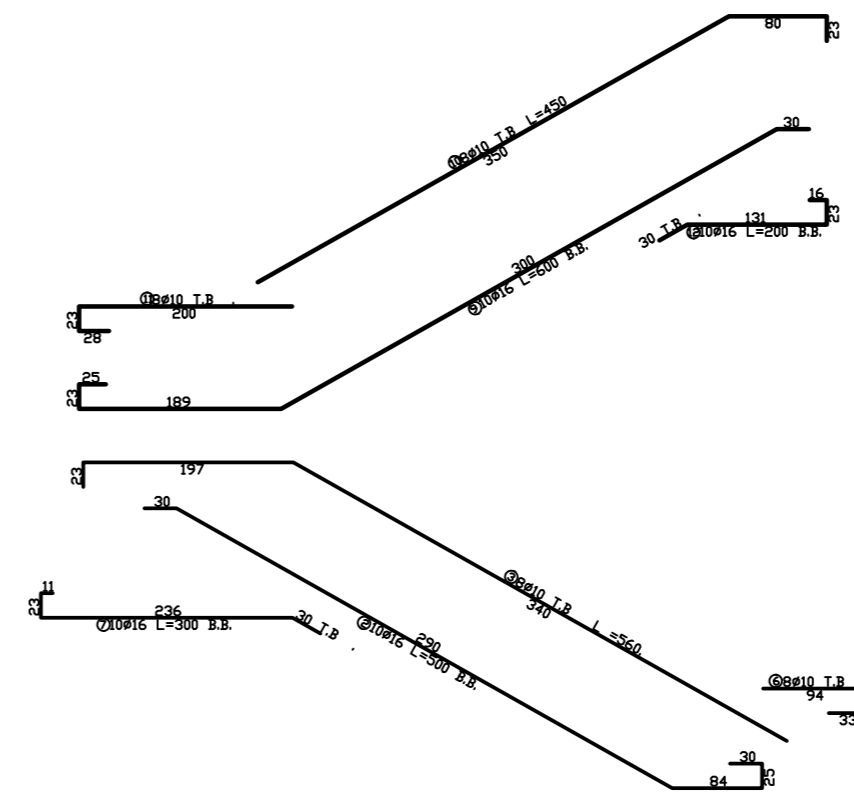
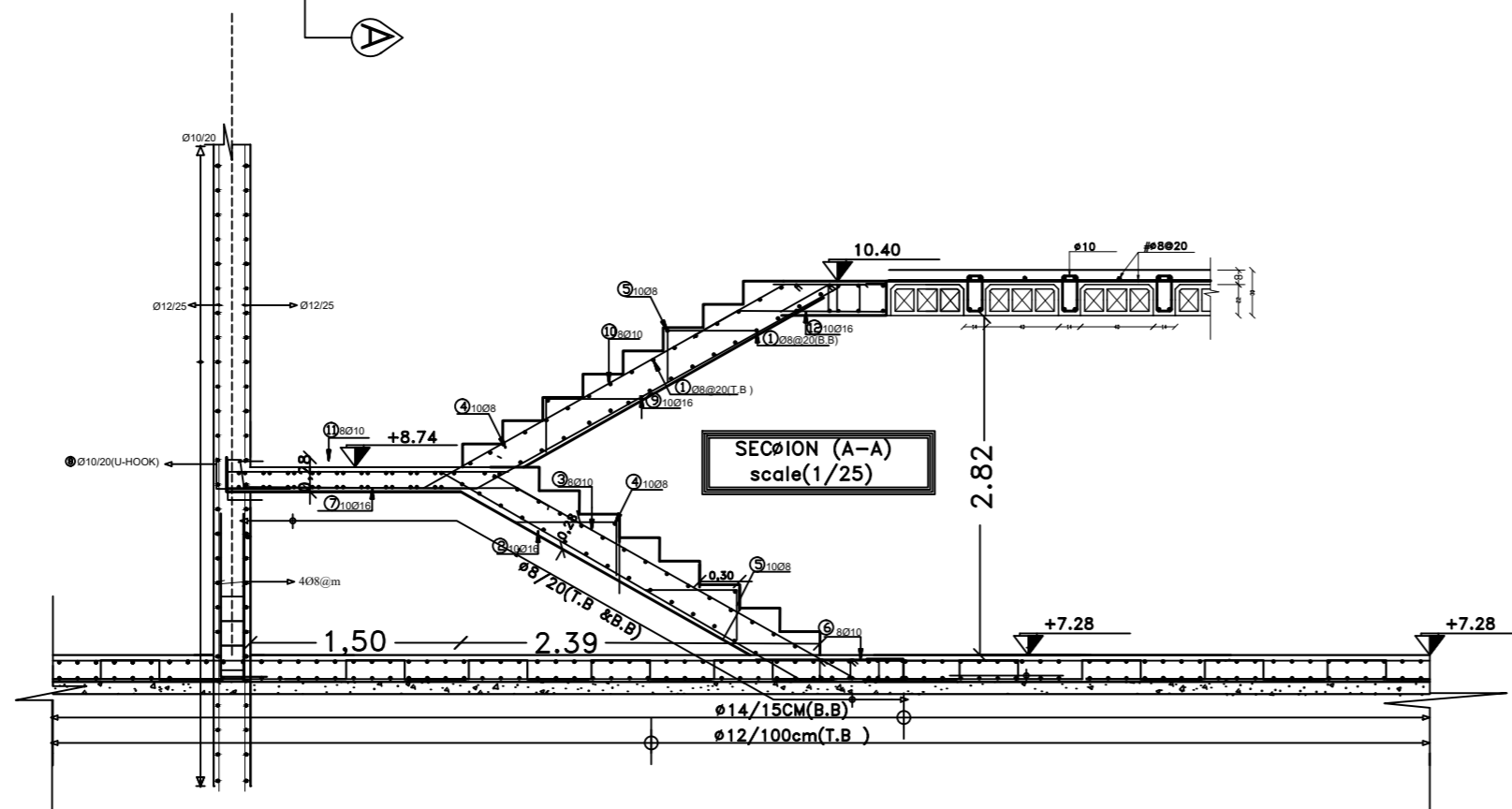
S15

Stairs Between Basement and Ground Floor

Stairs Height = 3.12 meters
Stair 1



SØIRRUP DETAILS		
⊕1200B/L=1.15	⊕2200/L=1.44(U-HOOK)	⊕1900 L=1.44(U-HOOK)
75	60	24
90	60	60



NOTES:
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All spot levels are in meters.

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Civil & Arch. Eng. Department
Building Engineering

Designed By:
Rana Burqan
Tarteel Sharaha

Drawing Title :
Stair Details

Supervisor :
Eng.Hamdi Idais

S16