

**PROJECT** : KARNAPHULIU WATER SUPPLY PROJECT, PHASE-II  
**SITE** : SHEIKH HASINA PANI SHODHONAGAR  
**SPECIALITY** : FOR CONSTRUCTION DRAWING  
**DTAE** : 16<sup>TH</sup> NOV, 2022

<b>SL.</b>	<b>DRAWING NO.</b>	<b>DRAWING NAME</b>	<b>SHEET NO.</b>	<b>REV.</b>
1	2105-G-02-116	GENERAL NOTES	MD-S-1	0
2	2105-G-02-116	TYPICAL DETAILS-1	MD-S-2	0
3	2105-G-02-116	TYPICAL DETAILS-2	MD-S-3	0
4	2105-G-02-116	TYPICAL DETAILS-3	MD-S-4	0
5	2105-G-02-116	TYPICAL DETAILS-4	MD-S-5	0
6	2105-G-02-116	PILE LAYOUT PLAN	MD-S-6	0
7	2105-G-02-116	PILE CAP LAYOUT PLAN	MD-S-7	0
8	2105-G-02-116	COLUMN LAYOUT PLAN	MD-S-8	0
9	2105-G-02-116	PILE CAP DETAILS	MD-S-9	0
10	2105-G-02-116	PILE CAP DETAILS	MD-S-10	0
11	2105-G-02-116	PILE CAP DETAILS	MD-S-11	0
12	2105-G-02-116	PILE CAP DETAILS	MD-S-12	0
13	2105-G-02-116	PILE CAP DETAILS	MD-S-13	0
14	2105-G-02-116	PILE CAP DETAILS	MD-S-14	0
15	2105-G-02-116	MAT FOUNDATION PLAN	MD-S-15	0
16	2105-G-02-116	WALL SECTIONS	MD-S-16	0
17	2105-G-02-116	TYPICAL SECTIONS	MD-S-17	0
18	2105-G-02-116	TYPICAL SECTIONS	MD-S-18	0
19	2105-G-02-116	MAT FOUNDATION REBAR LAYOUT	MD-S-19	0
20	2105-G-02-116	GEOUND FLOOR PLAN	MD-S-20	0
21	2105-G-02-116	GROUND FLOOR BEAM LAYOUT	MD-S-21	0
22	2105-G-02-116	GROUND FLOOR REBAR LAYOUT	MD-S-22	0
23	2105-G-02-116	COLUMN TYPICAL VIEW	MD-S-23	0
24	2105-G-02-116	COLUMN SCHEDULE	MD-S-24	0
25	2105-G-02-116	COLUMN SCHEDULE	MD-S-25	0
26	2105-G-02-116	SHEAR WALL SCHEDULE	MD-S-26	0
27	2105-G-02-116	SHEAR WALL SCHEDULE	MD-S-27	0
28	2105-G-02-116	BASEMENT SHEAR WALL LAYOUT	MD-S-28	0
29	2105-G-02-116	BEAM SECTION DETAILS	MD-S-29	0
30	2105-G-02-116	BEAM SECTION DETAILS	MD-S-30	0
31	2105-G-02-116	BEAM SECTION DETAILS	MD-S-31	0
32	2105-G-02-116	BEAM SECTION DETAILS	MD-S-32	0
33	2105-G-02-116	BEAM SECTION DETAILS	MD-S-33	0
34	2105-G-02-116	BEAM SECTION DETAILS	MD-S-34	0
35	2105-G-02-116	BEAM SECTION DETAILS	MD-S-35	0

**Code - 2105 G**

**CLIENT**



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**No.** **DRAWING TITLE**

GENERAL NOTES

**SCALE:** As Shown

**Design Team**

**Team Leader**

**DR.M SHAMIM Z. BOSUNIA**  
PH.D, UK  
M.Sc. in civil (BUET)  
B.Sc. in civil (BUET)

**Deputy Team Leader**

**Engr. Rana Masud**  
M. Eng. in Civil Building (AIT, THAILAND)  
B.Sc. in civil (RUT)  
M. ASCE, MIEB (M-26157)

**Drawing Preparation:**

<b>Md. Hazzaz Miah</b> Architectural Drawing Detailer	<b>Md. Shahriar Rahman</b> Structural Drawing Detailer
--	---

**Drawing TYPE**

<input type="checkbox"/> ARCHITECTURAL
<input checked="" type="checkbox"/> STRUCTURAL
<input type="checkbox"/> MEP

**CHECKED BY**

<b>APPROVAL CLIENT</b>	<input type="checkbox"/> INFORMATION
<b>ISSUED FOR</b>	<input type="checkbox"/> APPROVAL
	<input checked="" type="checkbox"/> CONSTRUCTION

<b>DATE</b>	<b>DWG NO.</b>	<b> SHEET NO. REV</b>
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No. DRAWING TITLE

TYPICAL DETAILS-1

SCALE: As Shown

Design Team

Team Leader

DR.M SHAMIM Z. BOSUNIA  
Ph.D, UK  
M.Sc. in civil (BUET)  
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Deputy Team Leader

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Drawing Preparation:

Md. Hazzaz Miah  
Architectural Drawing Detailer

Md. Shahriar Rahman  
Structural Drawing Detailer

Drawing TYPE

ARCHITECTURAL  
STRUCTURAL  
MEP

CHECKED BY

APPROVAL CLIENT

INFORMATION

ISSUED FOR

APPROVAL

CONSTRUCTION

DATE DWG NO. SHEET NO. REV

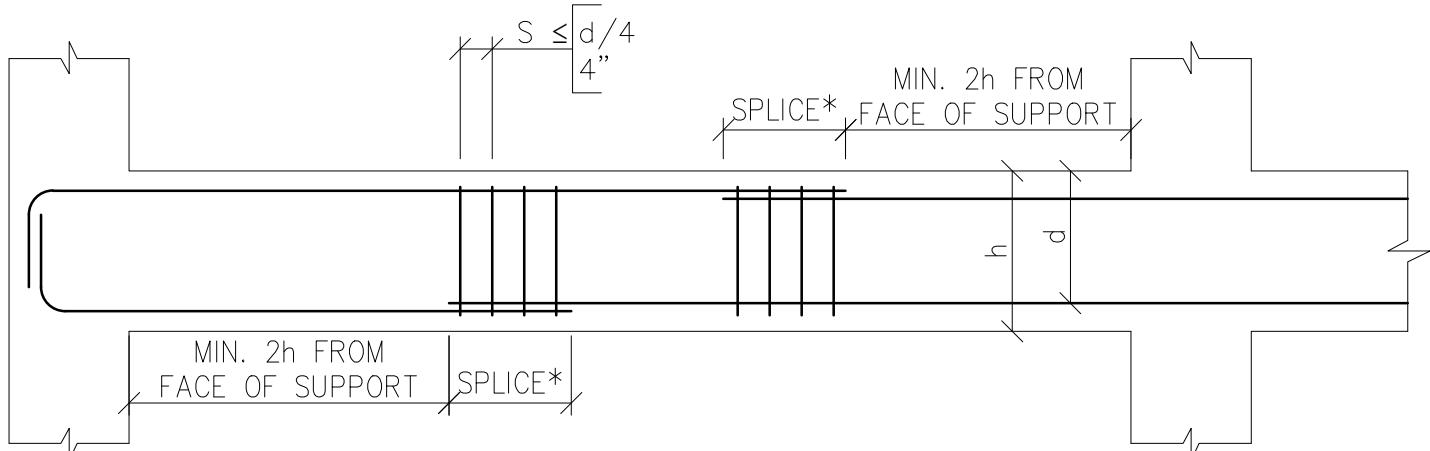
NOTES :

THIS NOTE IS VALID FOR DRAWINGS RELATED TO THIS PROJECT:  
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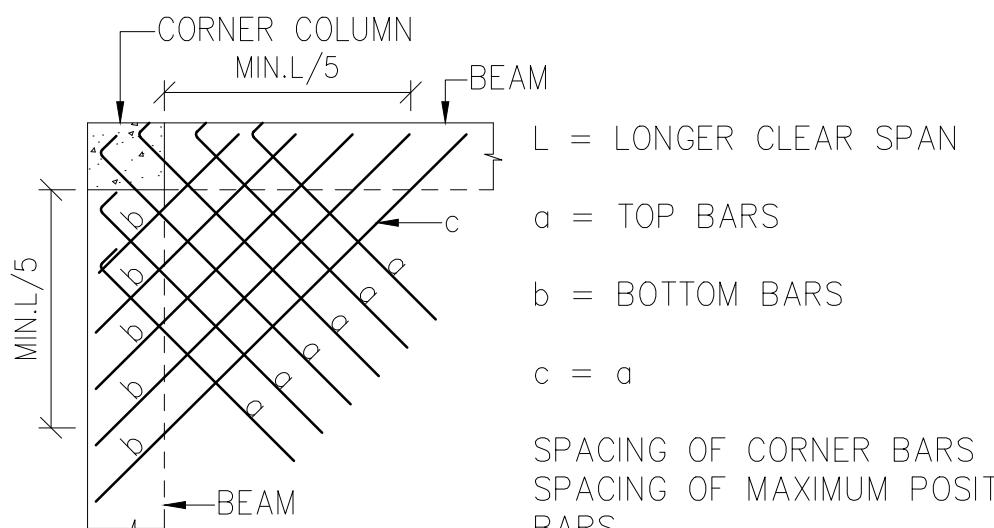
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CONSTRUCTION



NOTE:

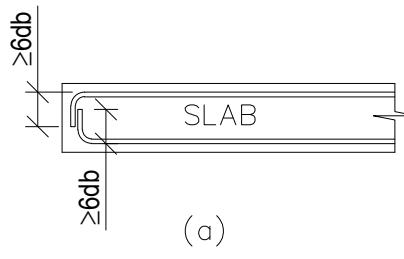
- a) LAP SPLICES SHALL NOT BE PROVIDED WITHIN JOINTS OR WITHIN A DISTANCE OF  $2h$  FROM THE FACE OF JOINT.
- b) NOT MORE THAN 50% OF THE BARS SHALL BE SPliced AT ONE PLACE.
- c) LAP SPLICES \* ARE TO BE CONFINED BY HOOPS WITH MAXIMUM SPACING OR PITCH OF  $d/4$  OR  $4"$  WHERE  $d$  IS THE EFFECTIVE DEPTH OF THE BEAM.



SPACING OF CORNER BARS =  
SPACING OF MAXIMUM POSITIVE  
BARS

LAP LOCATION

N.T.S.



(a) FREE END OF SLAB INCAPABLE OF EMBEDDING OF STEEL BAR IN BEAM/WALL

(b) OTHERS

BAR HOOK	FORM AND EXTENSION	BEND ANGLE (DEGREE)	BEND RADIUS (r)	USED BAR	LOCATION
PRIMARY REINF.		90°	r = 3db	Ø8 TO Ø10	BEND UP FOR EMBEDMENT
TIE / STIRRUP		135°	r = 2db	Ø8 TO Ø12	STIRRUP FASTENING BAR DIAGONAL HOOP

SLAB END REINFORCING DETAILS

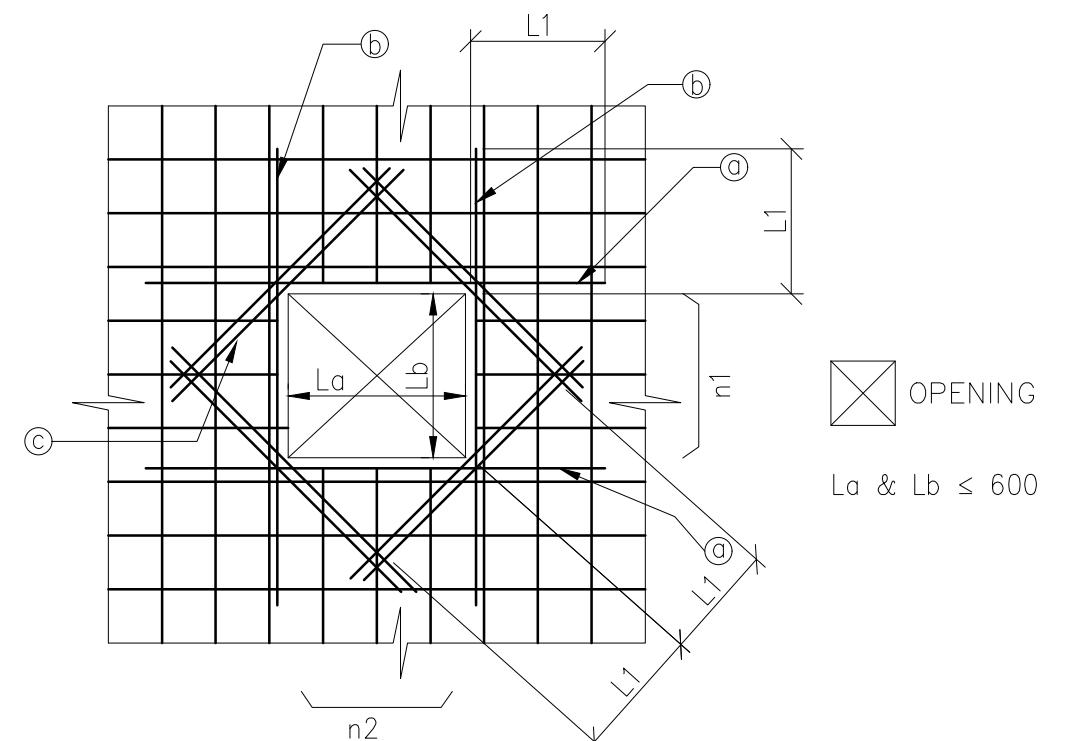
N.T.S.

REINFORCEMENT END HOOKS

N.T.S.

CORNER REINFORCEMENT

N.T.S.



n1, n2: THE NUMBER OF BARS WHICH ARE CUT OFF FOR OPENING  
Ⓐ THE NUMBER OF EXTRA BARS > n1/2 (TOP AND BOTTOM BARS)  
Ⓑ THE NUMBER OF EXTRA BARS > n2/2 (TOP AND BOTTOM BARS)  
Ⓒ THE NUMBER OF EXTRA BARS > 2-#4 (TOP AND BOTTOM BARS)

REINFORCEMENT DETAILS FOR OPENING

N.T.S.

**Code - 2105 G**

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No. DRAWING TITLE

TYPICAL DETAILS-2

SCALE: As Shown

Design Team

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STRUCTURAL	<input checked="" type="checkbox"/>
MEP	<input type="checkbox"/>

CHECKED BY

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INFORMATION

APPROVAL

CONSTRUCTION

DATE	DWG NO.	SHEET NO.	REV

01-June-2022 2105-02-105-A MD-S-03 0

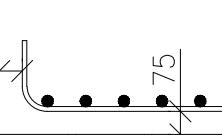
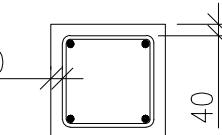
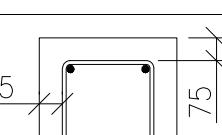
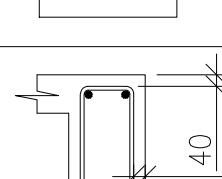
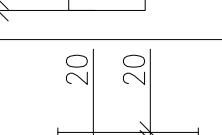
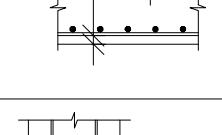
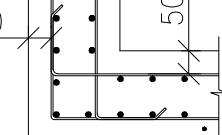
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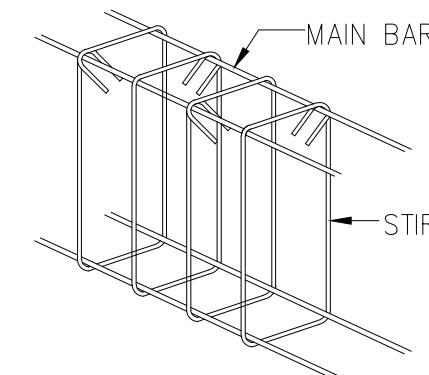
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CONSTRUCTION

MEMBER	LOCATION / CONDITION	NON SALINE ZONE	
		CLEAR COVER	FIGURE
PILE CAP	SIDE	75	
	BOTTOM	75	
COLUMN	ABOVE FGL	40	
	BELOW FGL	75	
BEAM	ALL SIDES	40	
SLAB/ STAIR	ALL SIDES	20	
WATER TANK	WATER FACE	50	
	OTHER FACE	50	

CONCRETE CLEAR COVER FOR REINFORCING BARS

N.T.S.

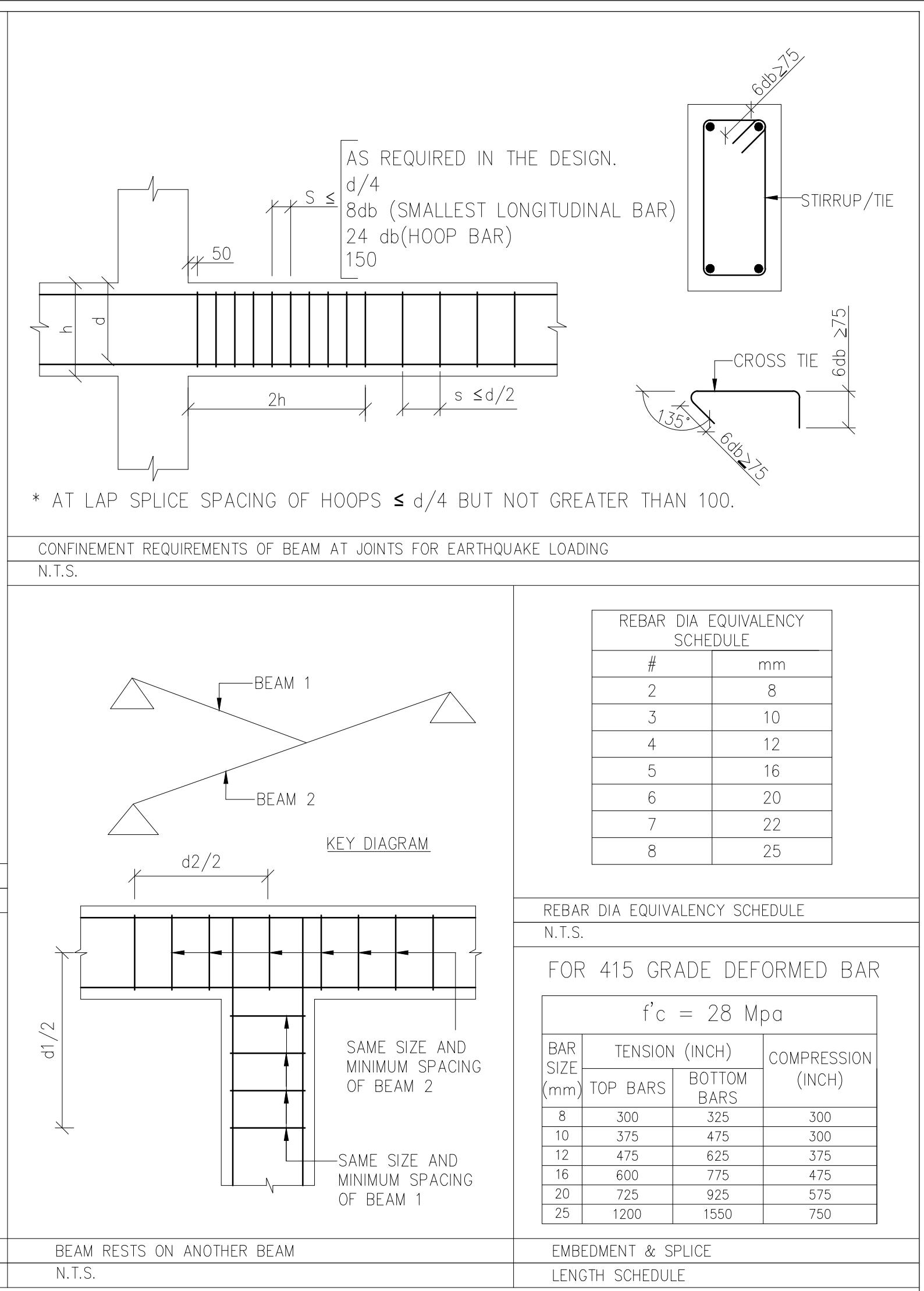


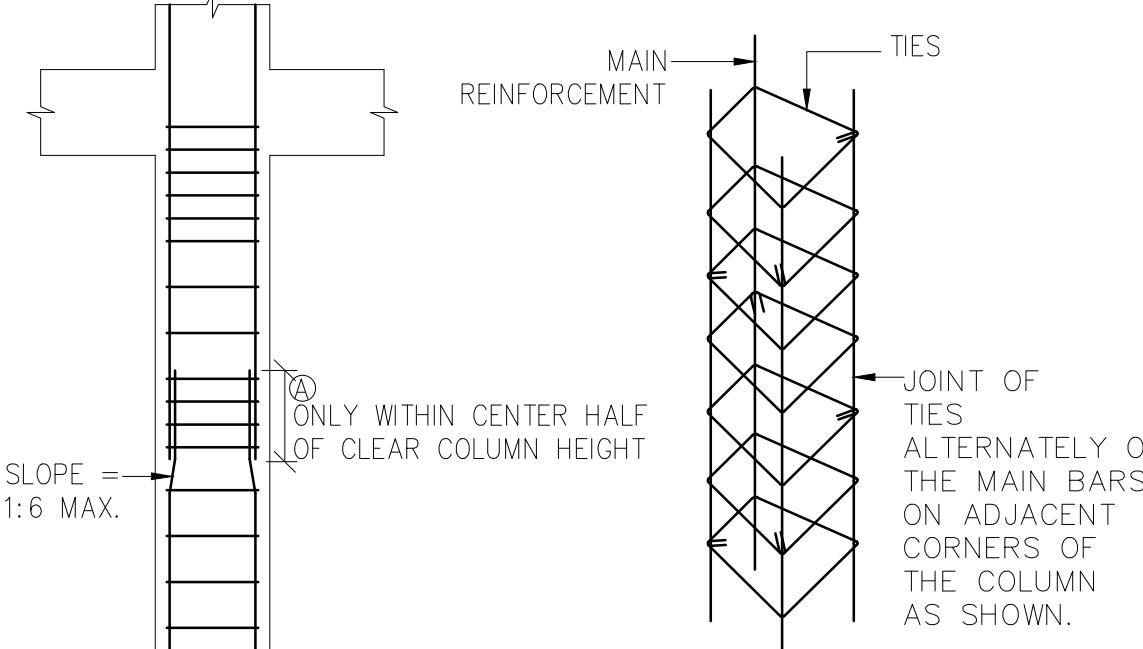
NOTE:

1. END HOOKS OF STIRRUPS ARE LOCATED ALTERNATELY AT TOP CORNER BAR OF THE SECTION.

END HOOKS STIRRUPS

N.T.S.

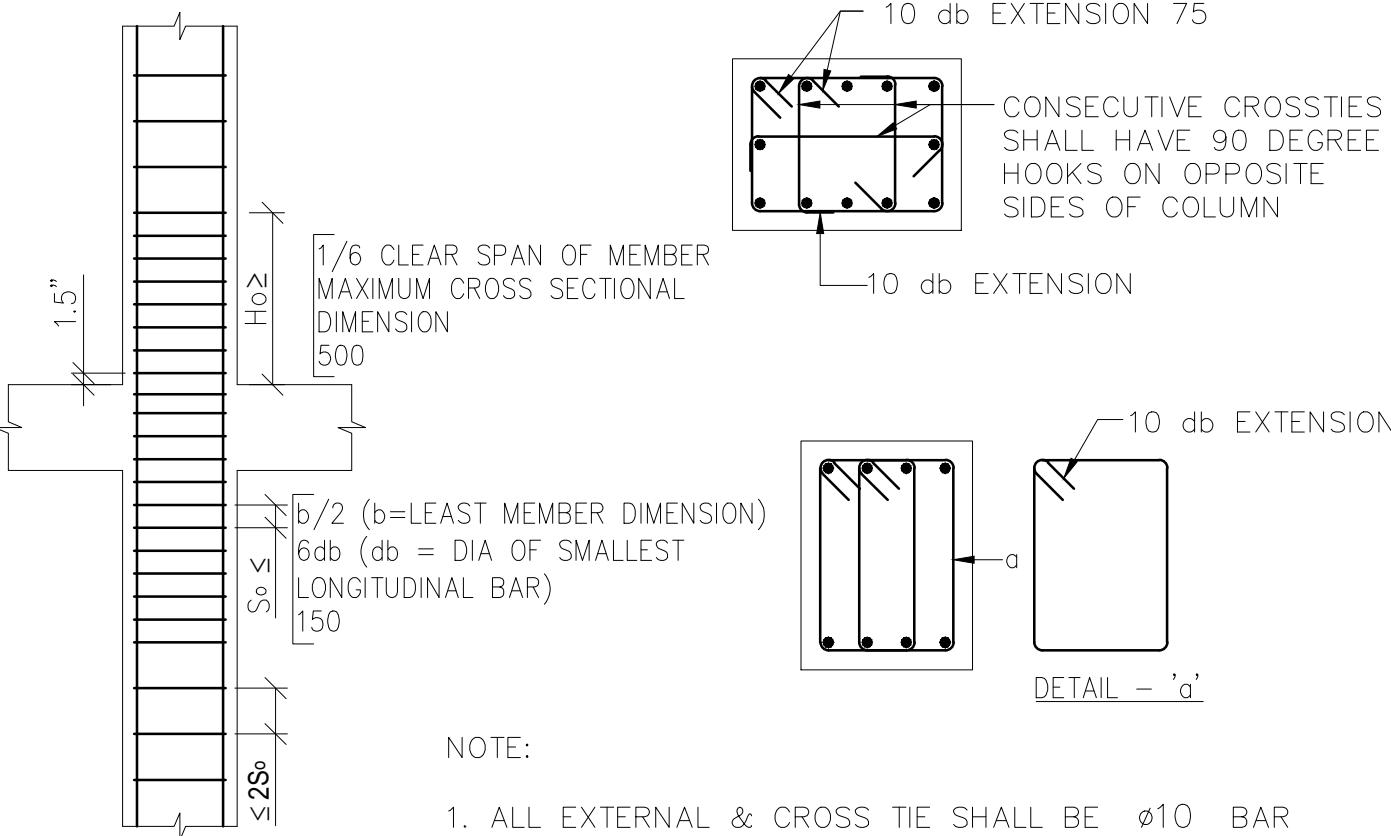




Ⓐ IS AREA FOR SPLICE OF COLUMN REINFORCEMENT  
MAXIMUM 50% OF TOTAL BAR IS SPLICED AT ONE LEVEL.  
H = CLEAR COLUMN HEIGHT

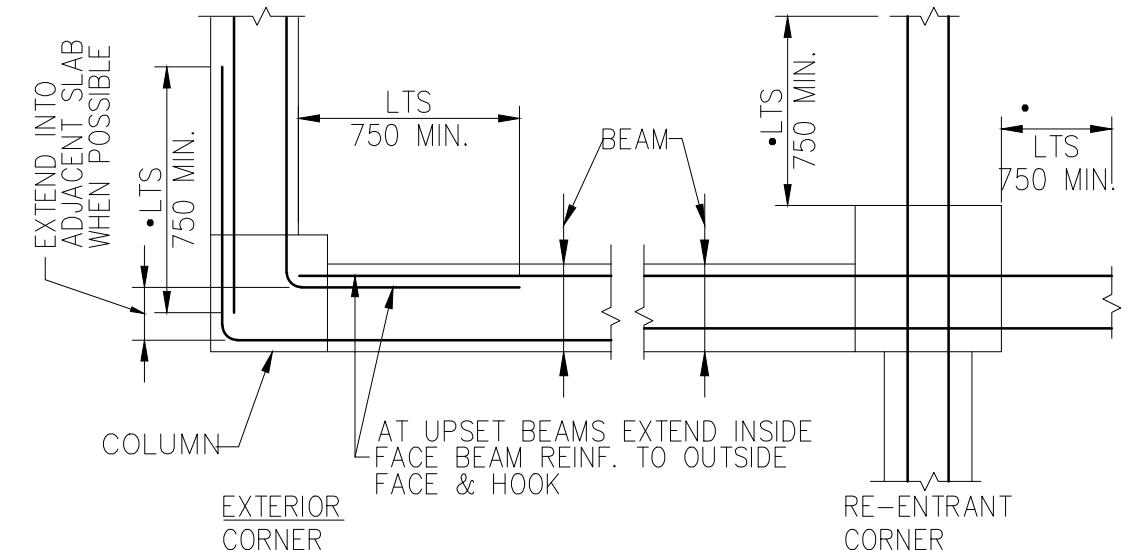
#### COLUMN SPLICING LOCATION

N.T.S.

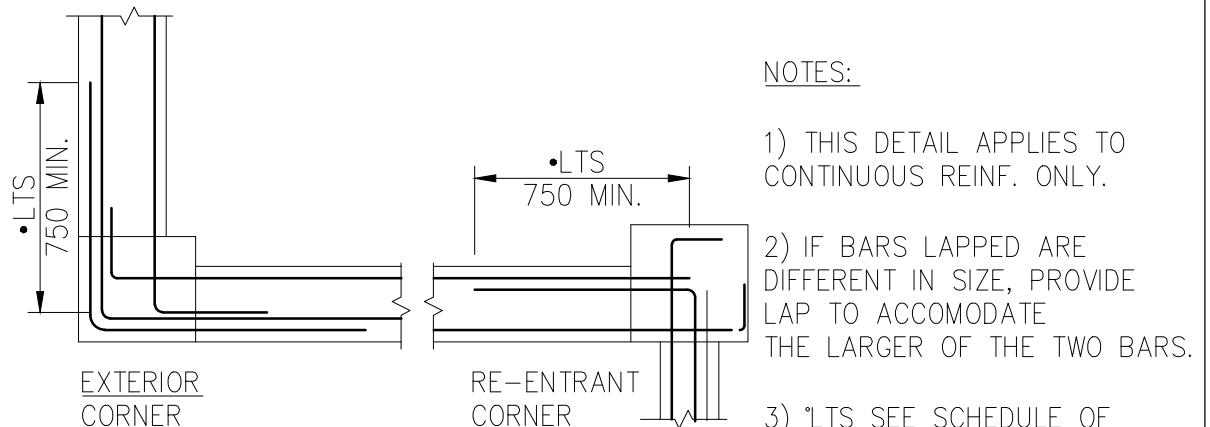


CONFINEMENT REQUIREMENTS OF COLUMN AT JOINTS FOR EARTHQUAKE LOADING

N.T.S.

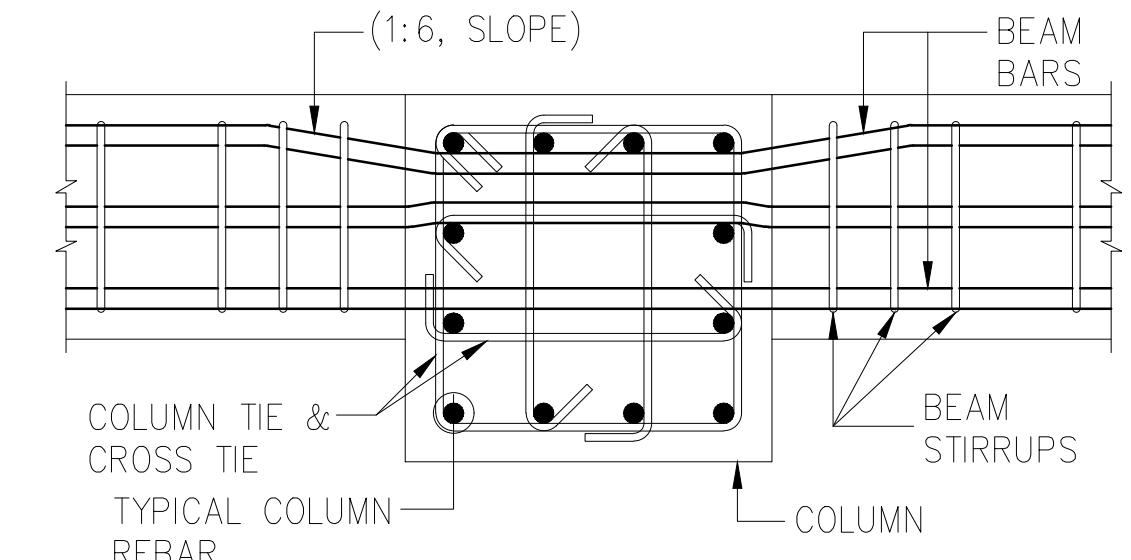


## PLAN: TOP REINFORCEMENT



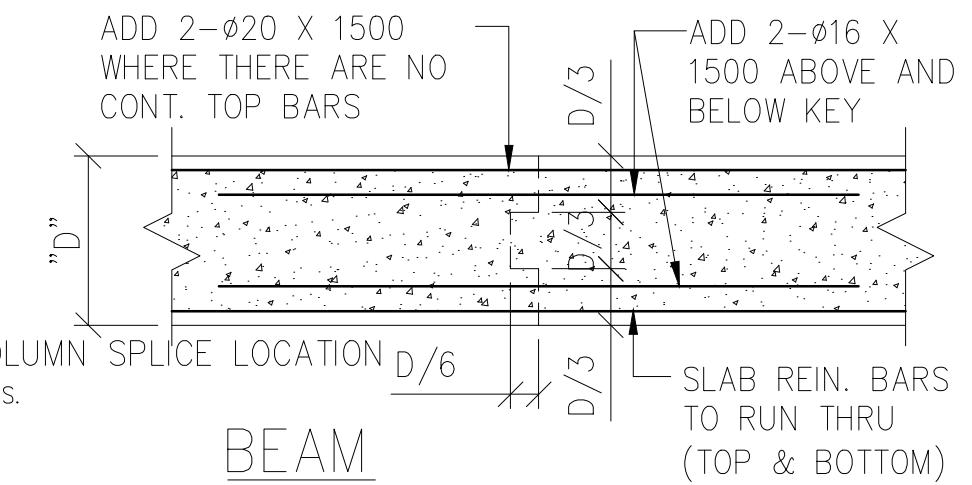
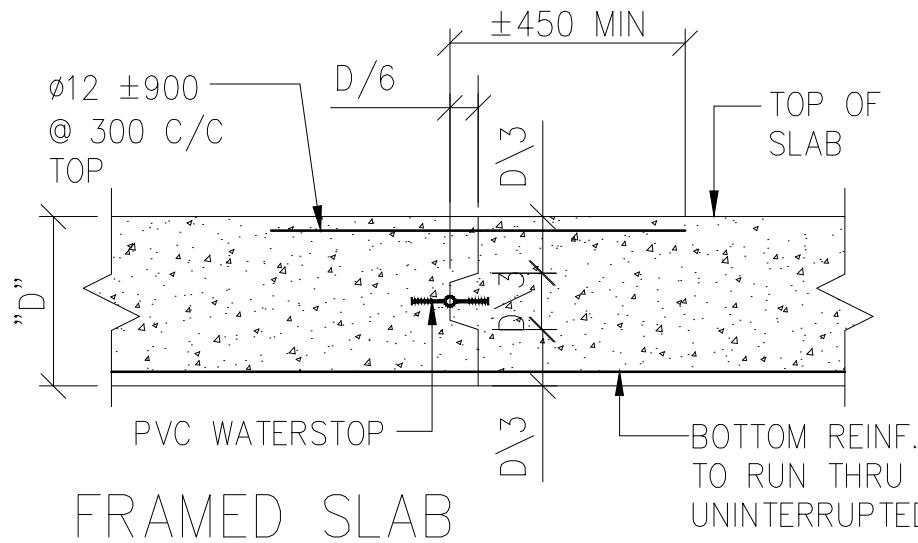
## PLAN: BOTTOM REINFORCEMENT

DETAILS FOR ARRANGEMENT OF REINFORCEMENT FOR DISCONTINUOUS END  
N.T.S.



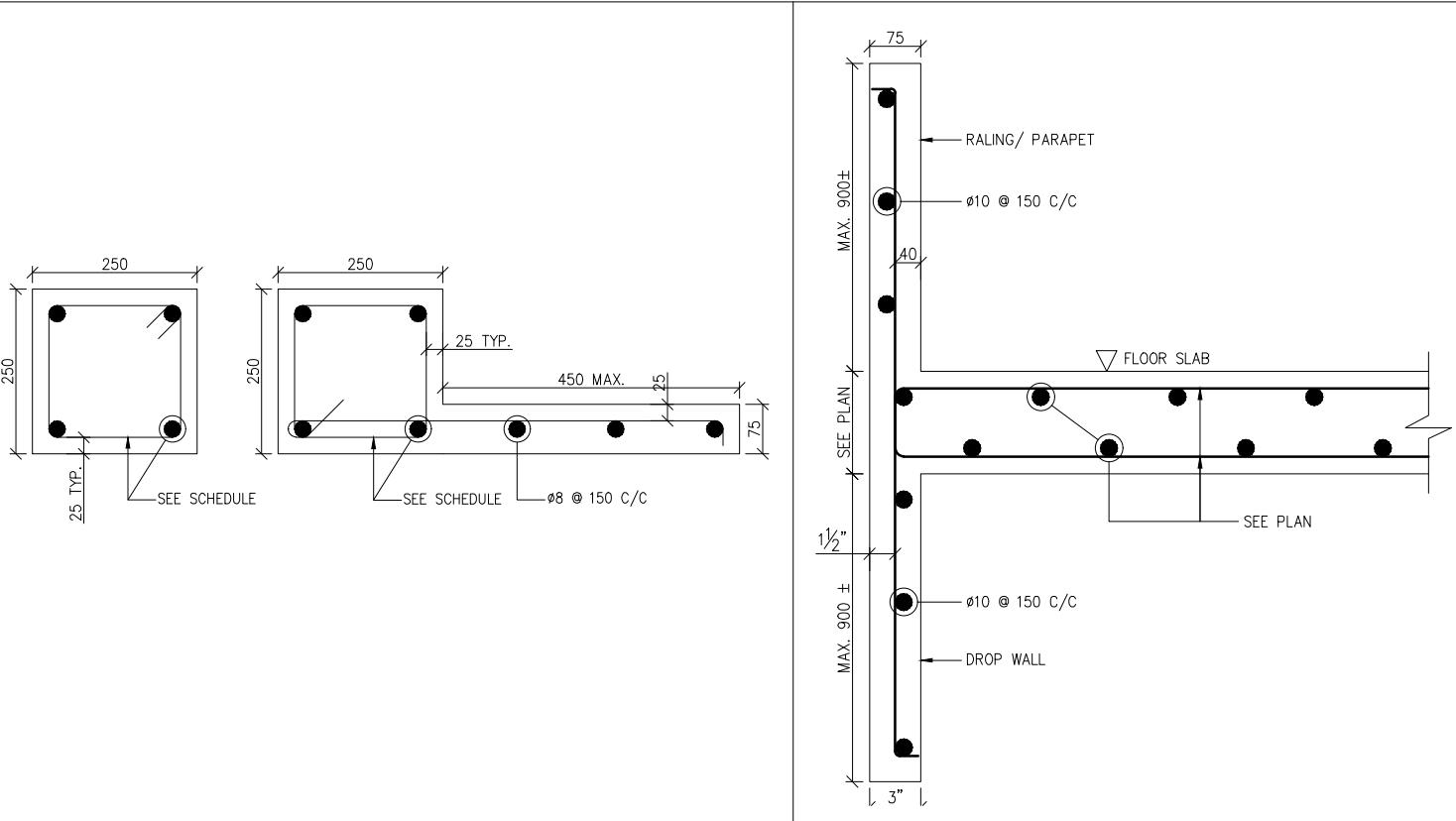
TYPICAL BEAM – COLUMN JOINT DETAIL

N.T.S.



### NOTES FOR CONSTRUCTION JOINT:

1. OTHER CONCRETE – LOCATE MIDWAY AT SUPPORTS. ALLOW 7 DAYS MINIMUM BETWEEN PLACING ADJACENT CONCRETE. MAXIMUM LENGTH OF CASTING, 22500.



TYPICAL CONSTRUCTION JOINT DETAILS

N.T.S.

TYPICAL DETAILS OF REINFORCEMENT OF LINTEL AND SUNSHADE

N.T.S.

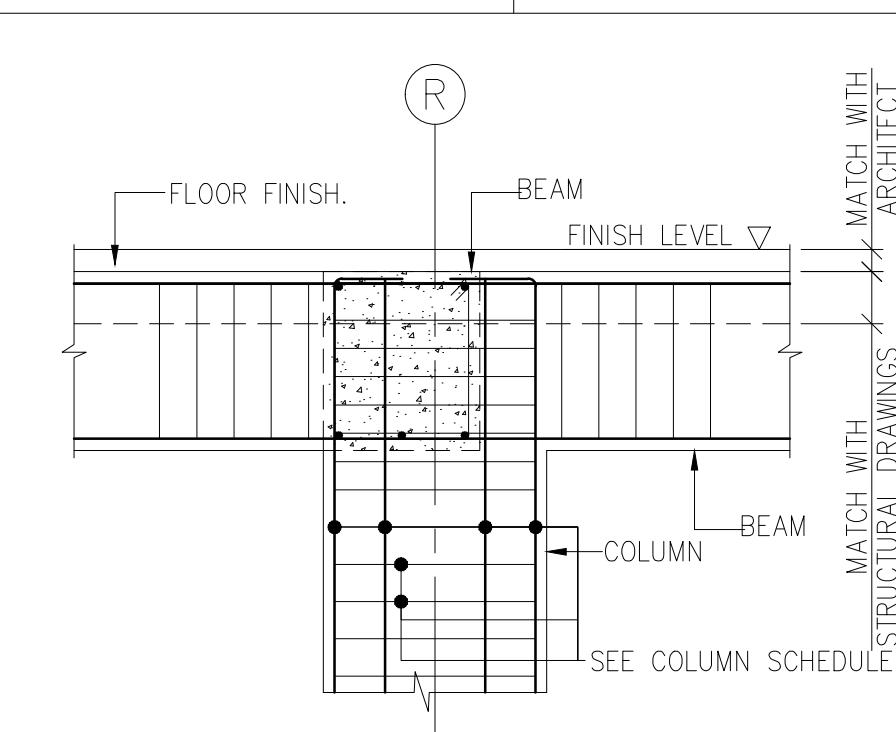
TYPICAL DETAILS OF DROP WALL/RAILING/PARAPET

N.T.S.

SCHEDULE OF LINTEL REINFORCEMENT							
CLEAR SPAN (SP)	WIDTH= b = 125±			WIDTH= b = 250±		DEPTH d	
	LINTEL WIDTH = b	TOP REINF	BOTTOM REINF	STIRRUP	TOP REINF	BOTTOM REINF	STIRRUP
SP<2100	2Ø10	2Ø12	Ø8 @ 200 C/C	2Ø10	2Ø12	Ø8 @ 200 C/C	200
2100<SP<3000	2Ø10	2Ø10	Ø8 @ 200 C/C	2Ø10	2Ø16	Ø8 @ 200 C/C	250
3000<SP<3900	2Ø12	2Ø12	Ø8 @ 200 C/C	2Ø12	2Ø20	Ø8 @ 200 C/C	300
3900<SP<5100	2Ø16	2Ø16	Ø8 @ 200 C/C	2Ø16	2Ø20	Ø8 @ 200 C/C	350
5100<SP<6000	2Ø20	2Ø20	Ø8 @ 200 C/C	2Ø20	2Ø20	Ø8 @ 175 C/C	450
6000<SP<6900	-	-	-	2Ø25	2Ø25	Ø8 @ 150 C/C	500
6900<SP<8100	-	-	-	2Ø25	2Ø25	Ø8 @ 125 C/C	550

TYPICAL LINTEL SCHEDULE

N.T.S.



TYPICAL BEAM – COLUMN JOINT DETAIL

N.T.S.

Code - 2105 G

CLIENT



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No. DRAWING TITLE

PILE LAYOUT PLAN

SCALE:

Design Team

Team Leader

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Structural Drawing Detailer

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STRUCTURAL

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Chittogram Water Supply & Sewerage Authority  
WASA Office Building, Dampara, Chittogram, Bangladesh  
Phone: 880 31 2851695,  
Email: makshudcharchai@yahoo.com

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DEVELOPMENT  
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No. DRAWING TITLE  
PILE CAP LAYOUT PLAN

DR.M SHAMIM Z. BOSUNIA  
Ph.D, UK  
M.Sc. in civil (BUE) T  
B.Sc in civil (BUE)

Engr. Rana Masud  
M. Eng. in Civil Building (AIT, THAILAND)  
B.Sc in Civil (RUT)  
M. ASCE, MIEB (M-26157)

Md. Hazzaz Mia	Md. Shahriar Rahman
Architectural Drawing Detailer	Structural Drawing Detailer

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STRUCTURAL	<input checked="" type="checkbox"/>
MEP	<input type="checkbox"/>

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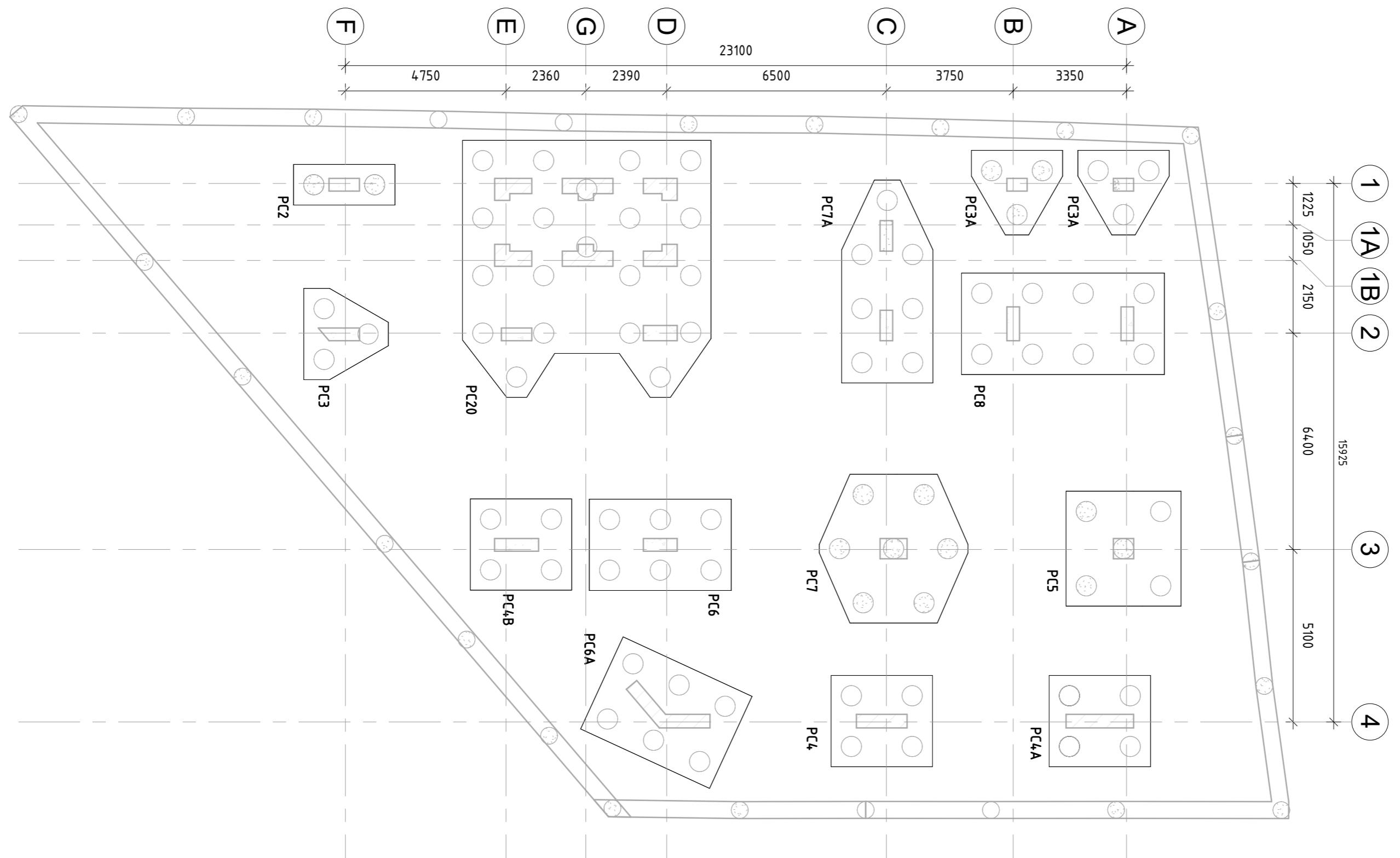
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16-NOV-2022 2105 G-02-116 MD-S-7 0

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**PROJECT  
KARNAPHULI WATER  
SUPPLY PROJECT PHASE-2**

**Code - 2105 G**

**CLIENT**



Chittogram Water Supply & Sewerage Authority  
WASA Office Building, Dampara, Chittogram, Bangladesh  
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**No. DRAWING TITLE**

COLUMN LAYOUT PLAN

**SCALE:**

**Design Team**

**Team Leader**

**DR.M SHAMIM Z. BOSUNIA**

PH.D, UK  
M.Sc. in civil (BUET)  
B.Sc in civil (BUET)

**Deputy Team Leader**

**Engr. Rana Masud**  
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B.Sc in Civil (RUT)  
M. ASCE, MIEB (M-26157)

**Design Team**

**Drawing Preparation**

Md. Hazzaz Mia	Md. Shahriar Rahman
Architectural Drawing Detailer	Structural Drawing Detailer

**Drawing TYPE**

ARCHITECTURAL	<input type="checkbox"/>
STRUCTURAL	<input checked="" type="checkbox"/>
MEP	<input type="checkbox"/>

**CHECKED BY**

<b>APPROVAL CLIENT</b>	INFORMATION <input type="checkbox"/>
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<b>ISSUED FOR</b>	APPROVAL <input type="checkbox"/>
	CONSTRUCTION <input checked="" type="checkbox"/>

DATE	DWG NO.	SHEET NO.	REV
16-NOV-2022	2105 G-02-116	MD-S-8	0

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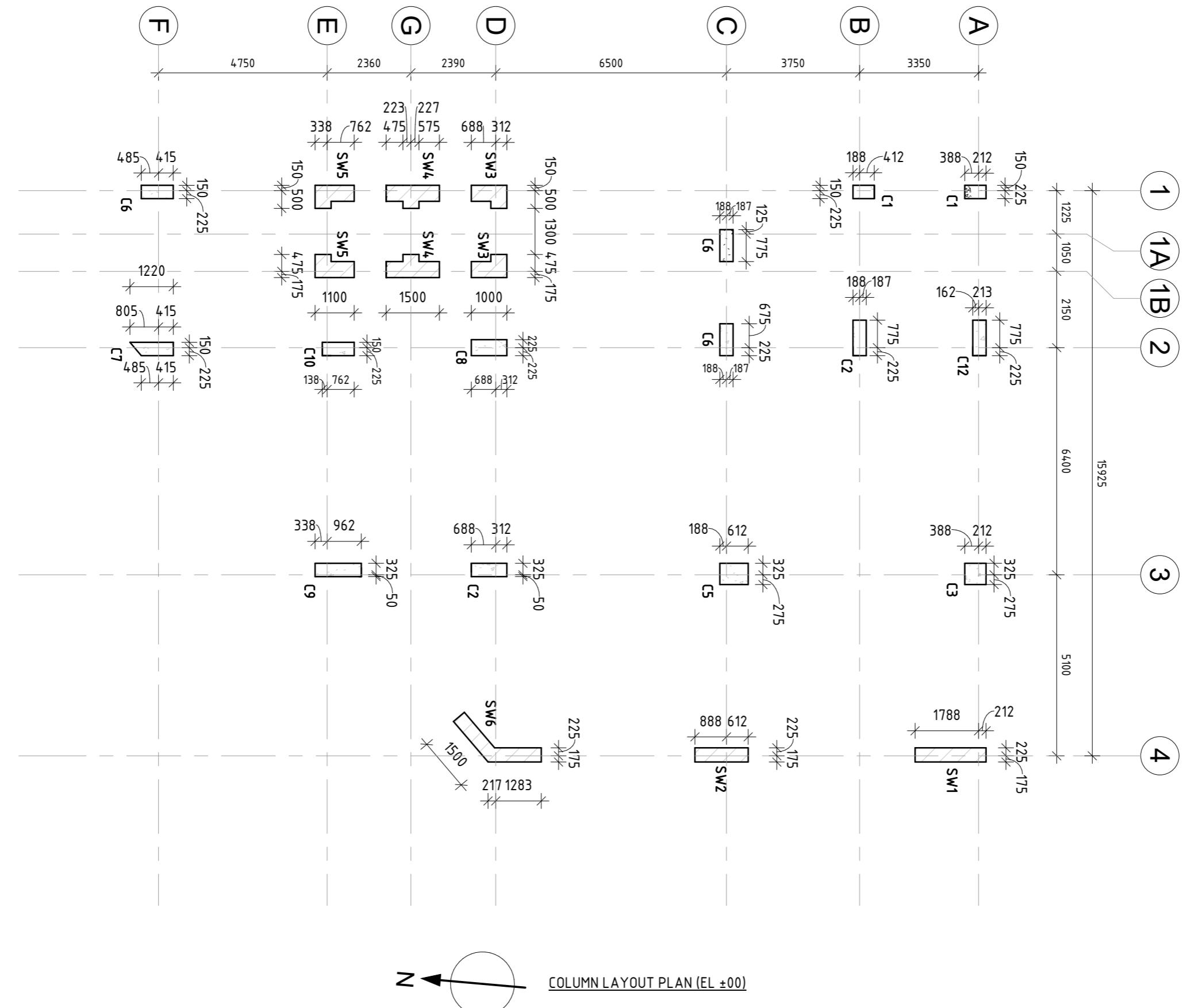
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**CONSTRUCTION**



**PROJECT**  
**KARNAPHULI WATER SUPPLY PROJECT PHASE-2**

**Code - 2105 G**

**CLIENT**



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**No. DRAWING TITLE**

PILE CAP DETAILS

**SCALE:**

**Design Team**

**Team Leader**

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Architectural Drawing Detailer	Structural Drawing Detailer

**Drawing TYPE**

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<input type="checkbox"/> MEP

**CHECKED BY**

<b>APPROVAL CLIENT</b>	<input type="checkbox"/> INFORMATION
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DATE	DWG NO.	SHEET NO.	REV
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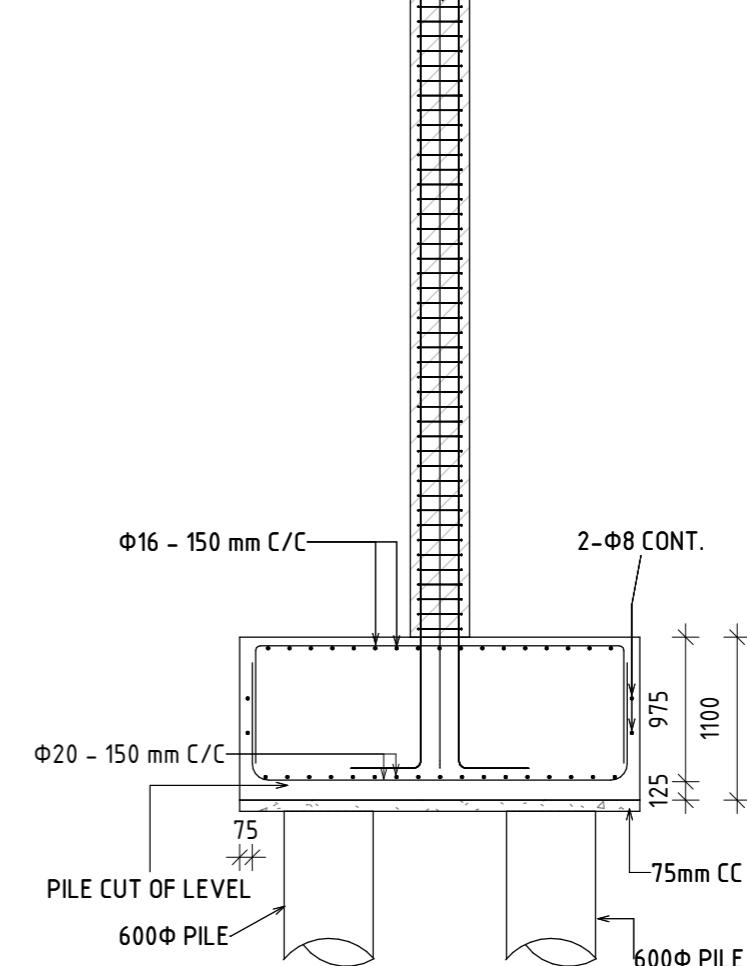
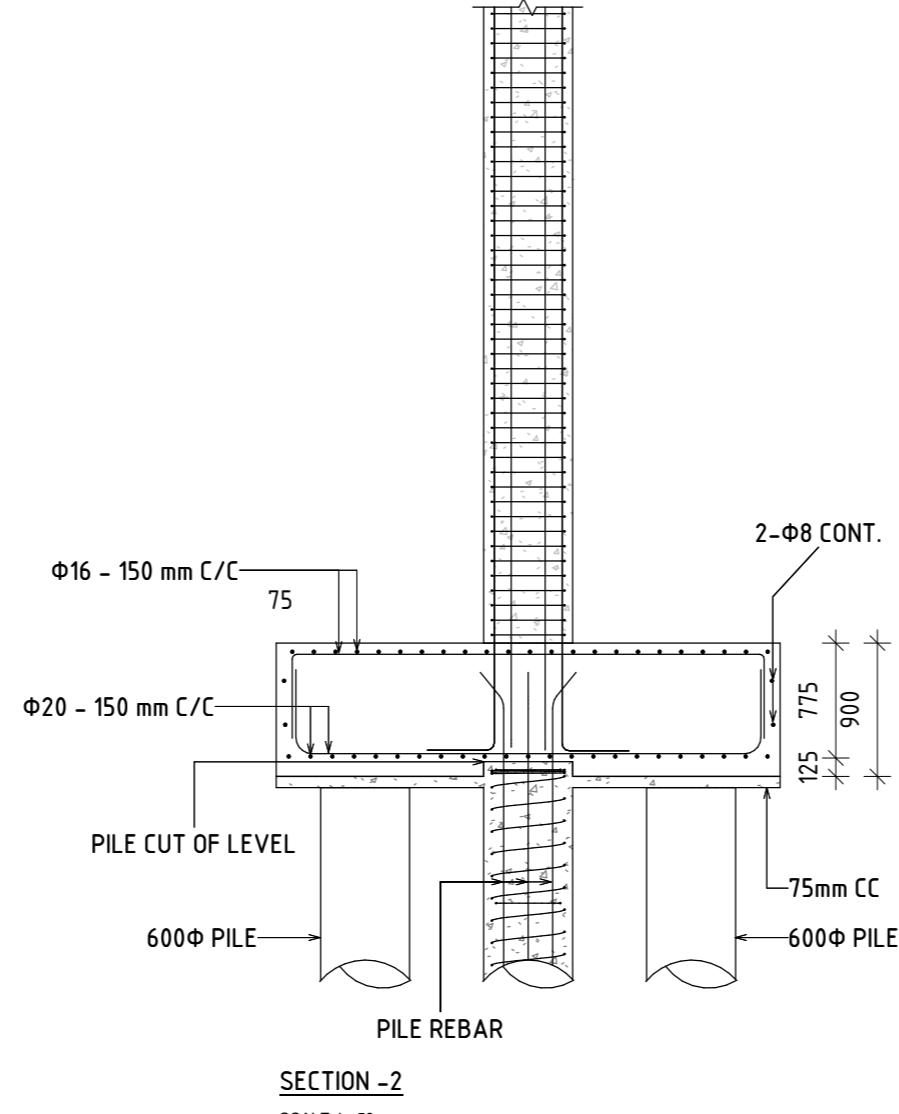
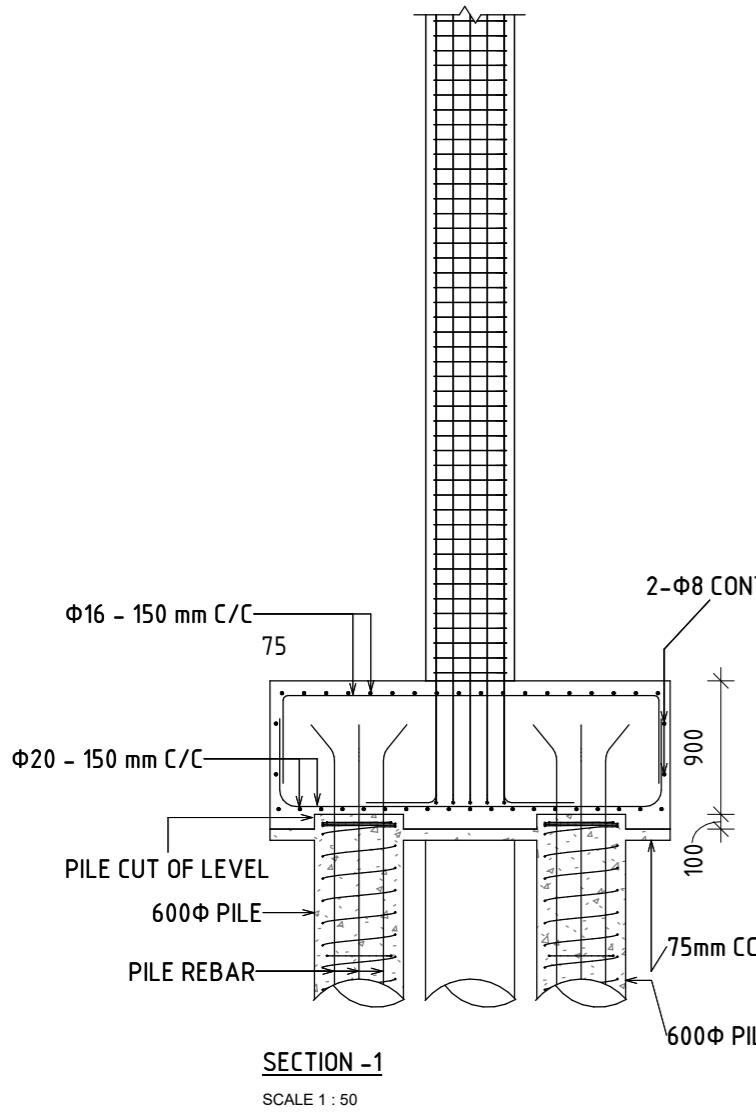
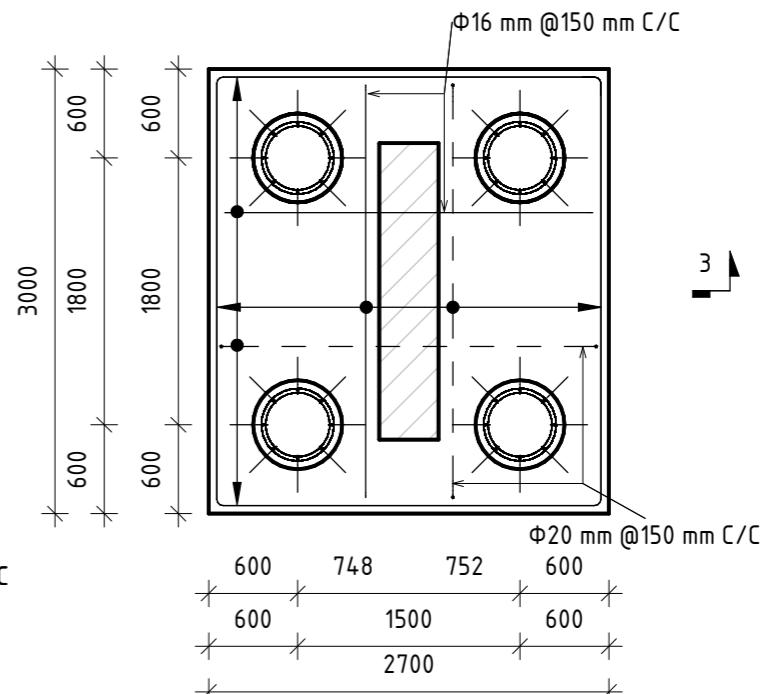
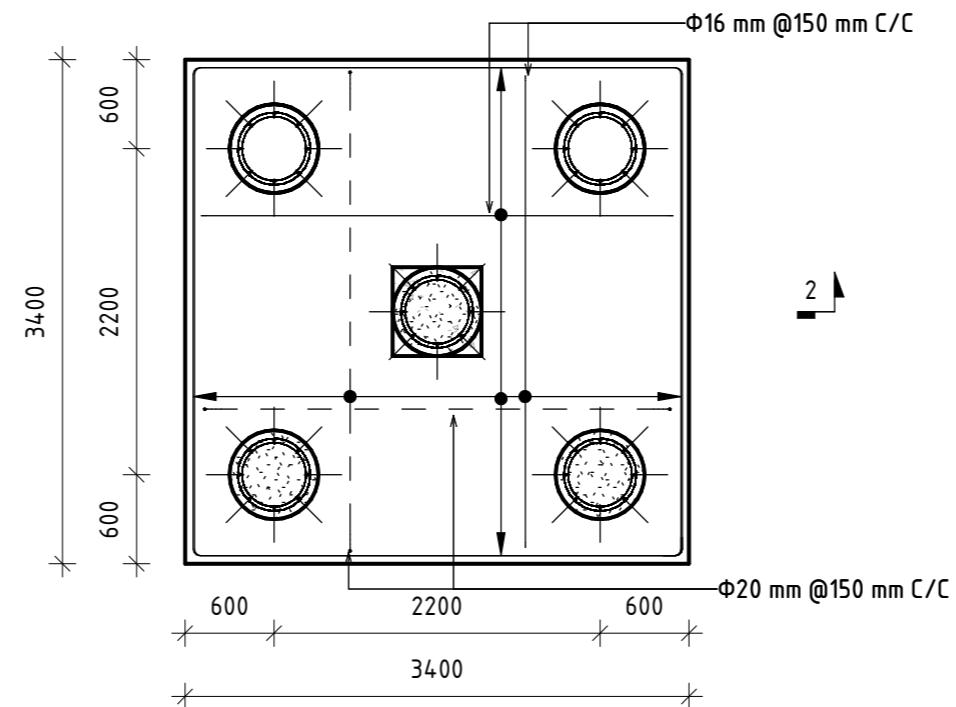
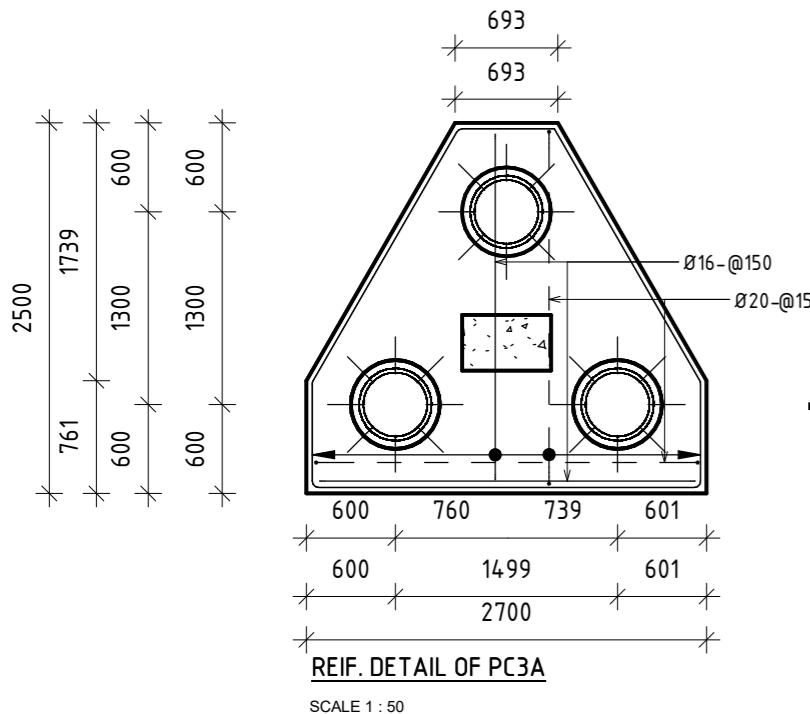
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**PROJECT**  
**KARNAPHULI WATER SUPPLY PROJECT PHASE-2**

**Code - 2105 G**

**CLIENT**



Chittogram Water Supply & Sewerage Authority  
WASA Office Building, Dampara, Chittogram, Bangladesh  
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**CONSULTANT**

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**No.** **DRAWING TITLE**

PILE CAP DETAILS

**SCALE:**

**Design Team**

**Team Leader**

**DR.M SHAMIM Z. BOSUNIA**

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**Deputy Team Leader**

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**Design Team**

**Drawing Preparation**

<b>Md. Hazzaz Mia</b> Architectural Drawing Detailer	<b>Md. Shahriar Rahman</b> Structural Drawing Detailer
---	---

**Drawing TYPE**

<input type="checkbox"/> ARCHITECTURAL
<input checked="" type="checkbox"/> STRUCTURAL
<input type="checkbox"/> MEP

**CHECKED BY**

<b>APPROVAL CLIENT</b>	<input type="checkbox"/> INFORMATION
<b>ISSUED FOR</b>	<input type="checkbox"/> APPROVAL
	<input checked="" type="checkbox"/> CONSTRUCTION

DATE	DWG NO.	SHEET NO.	REV
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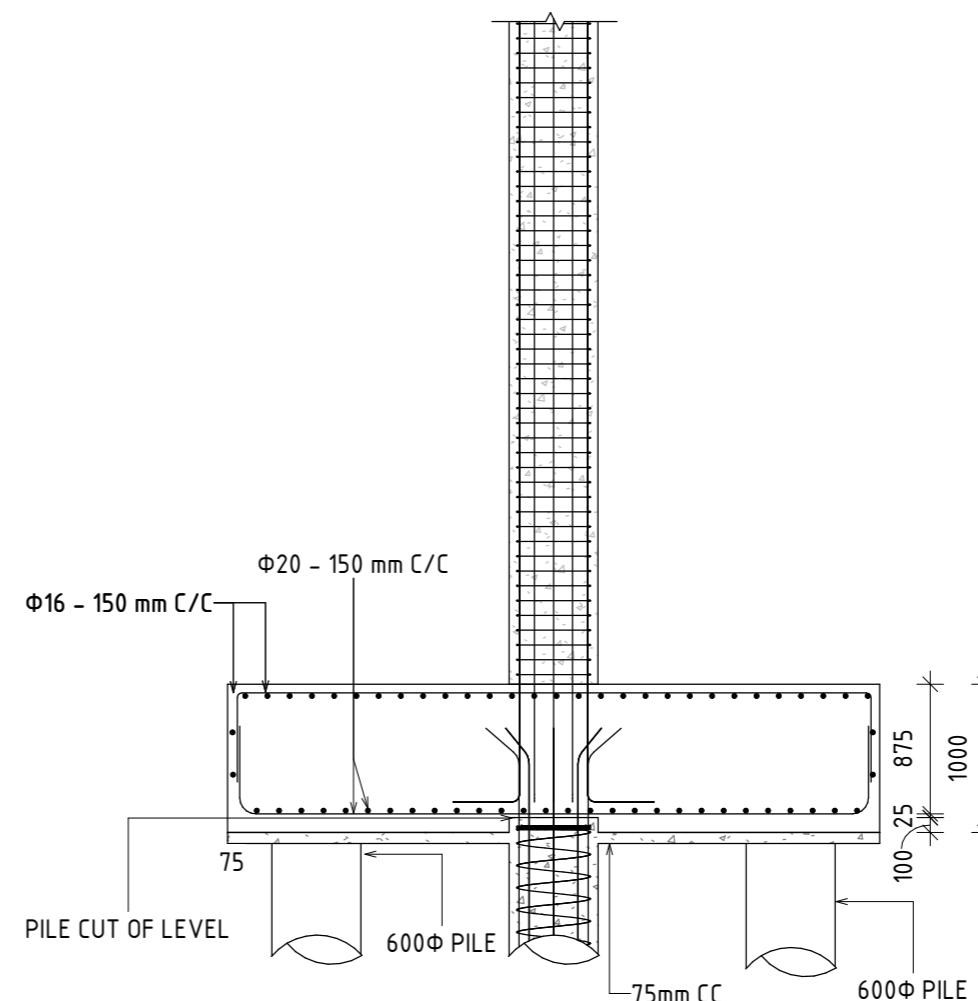
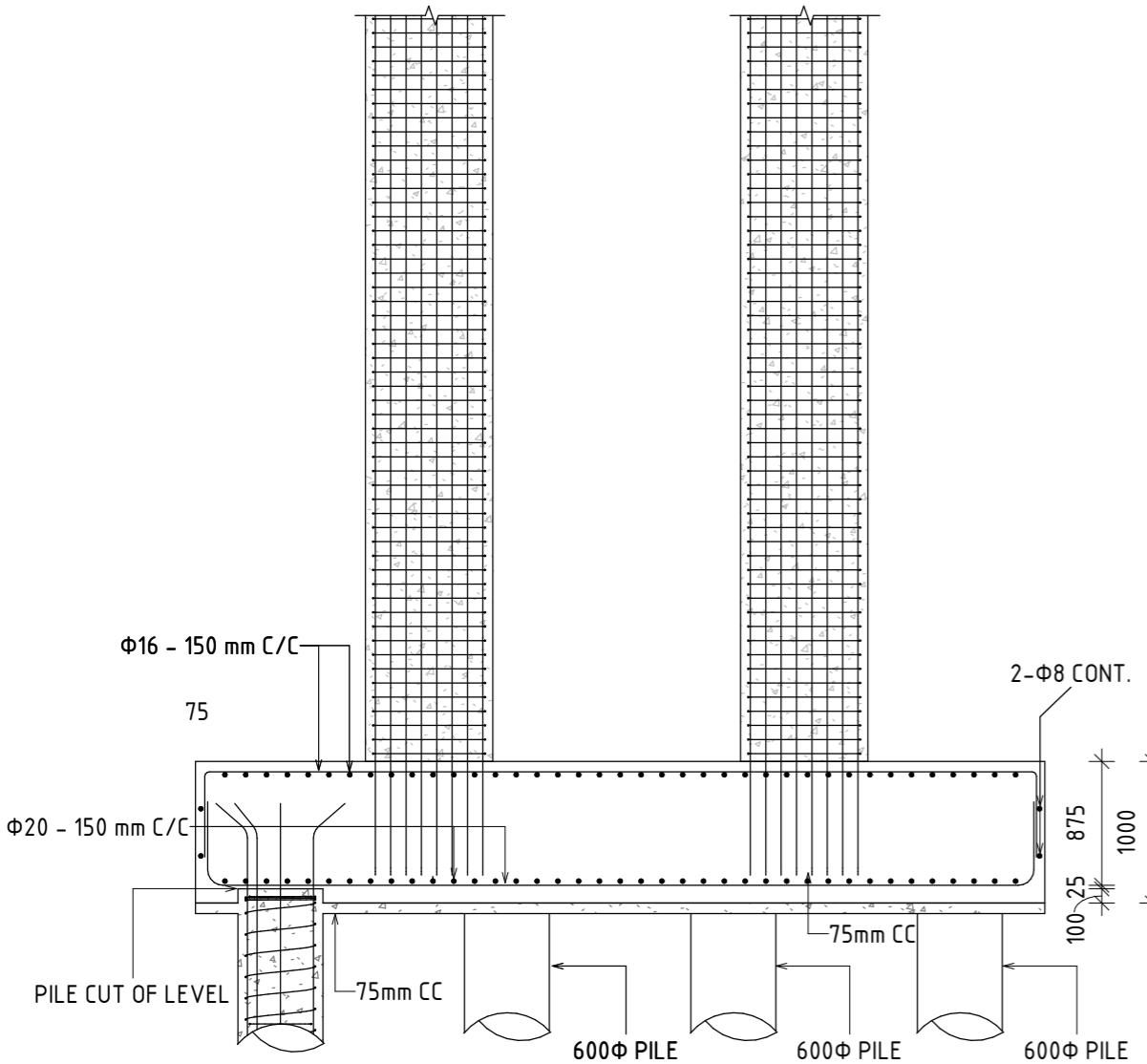
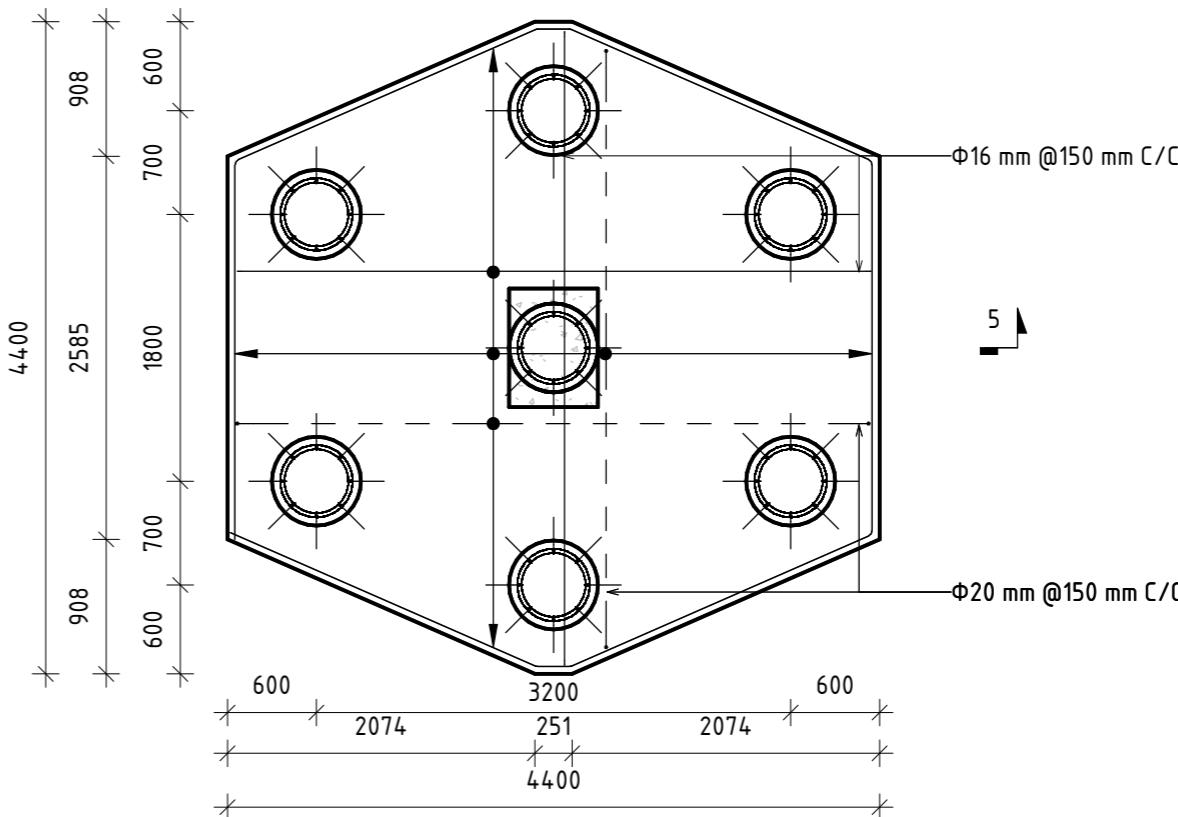
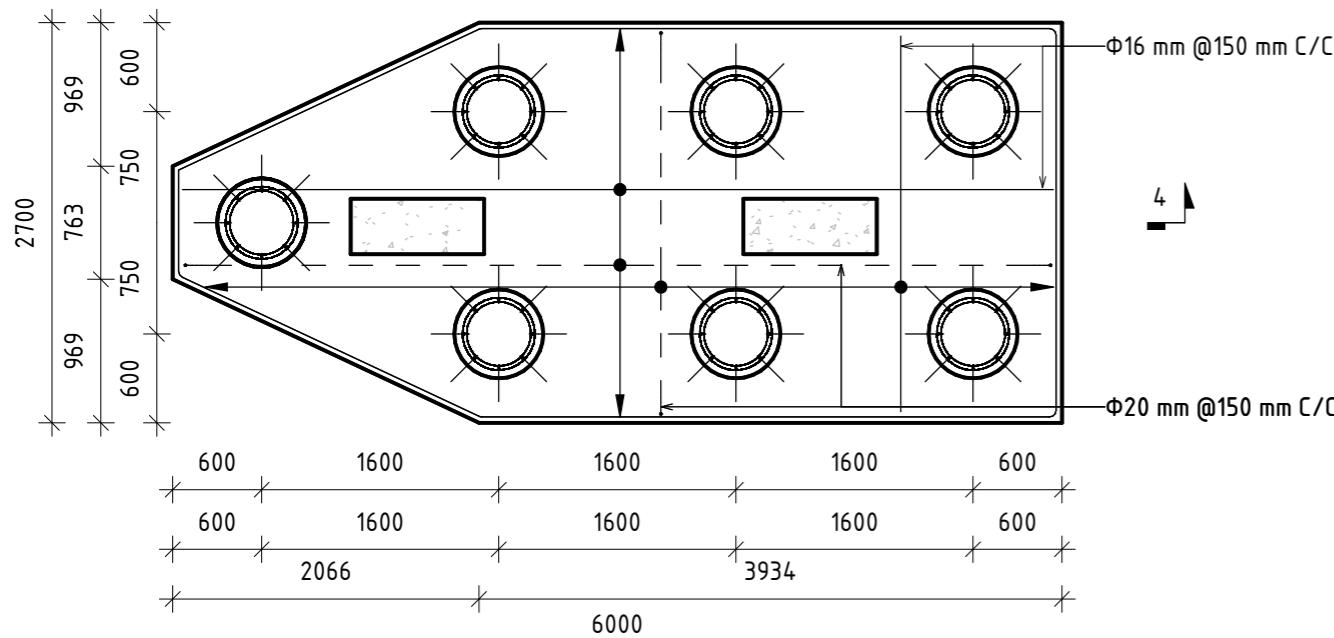
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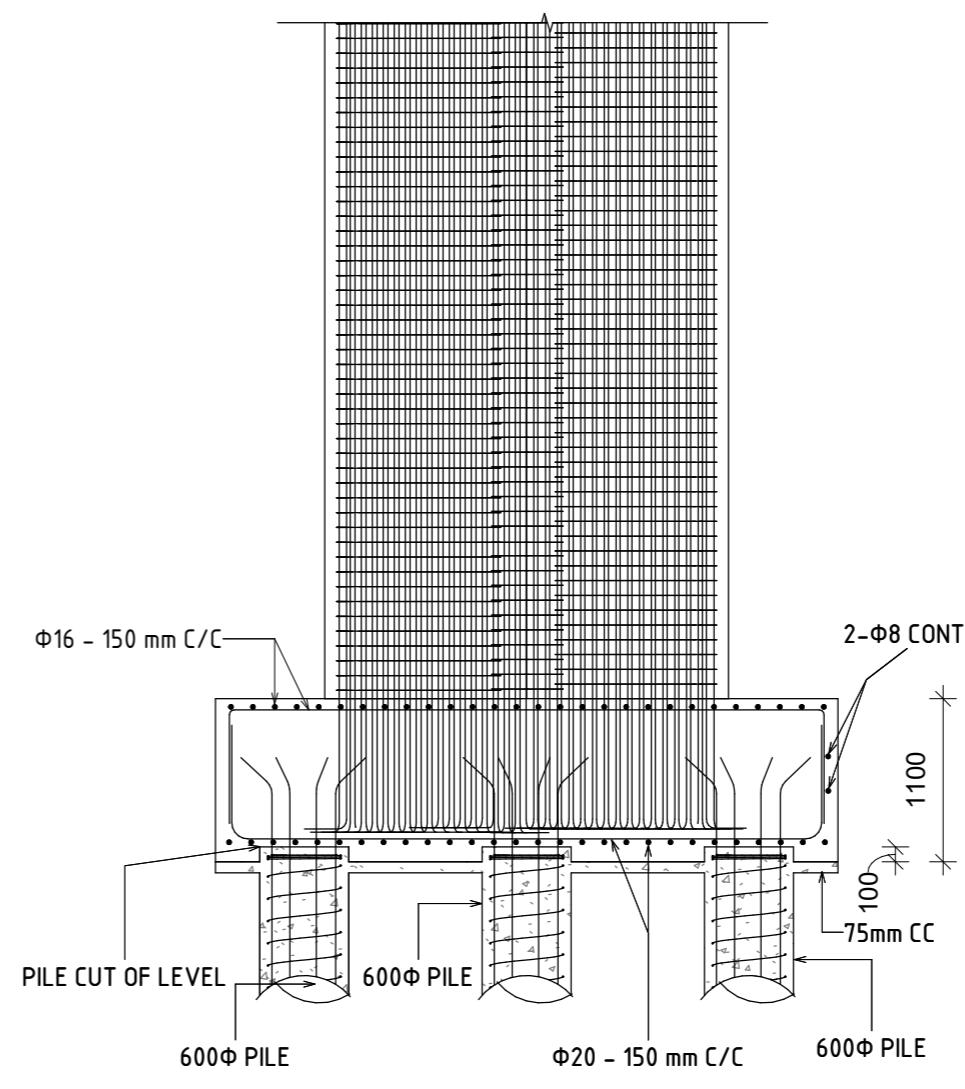
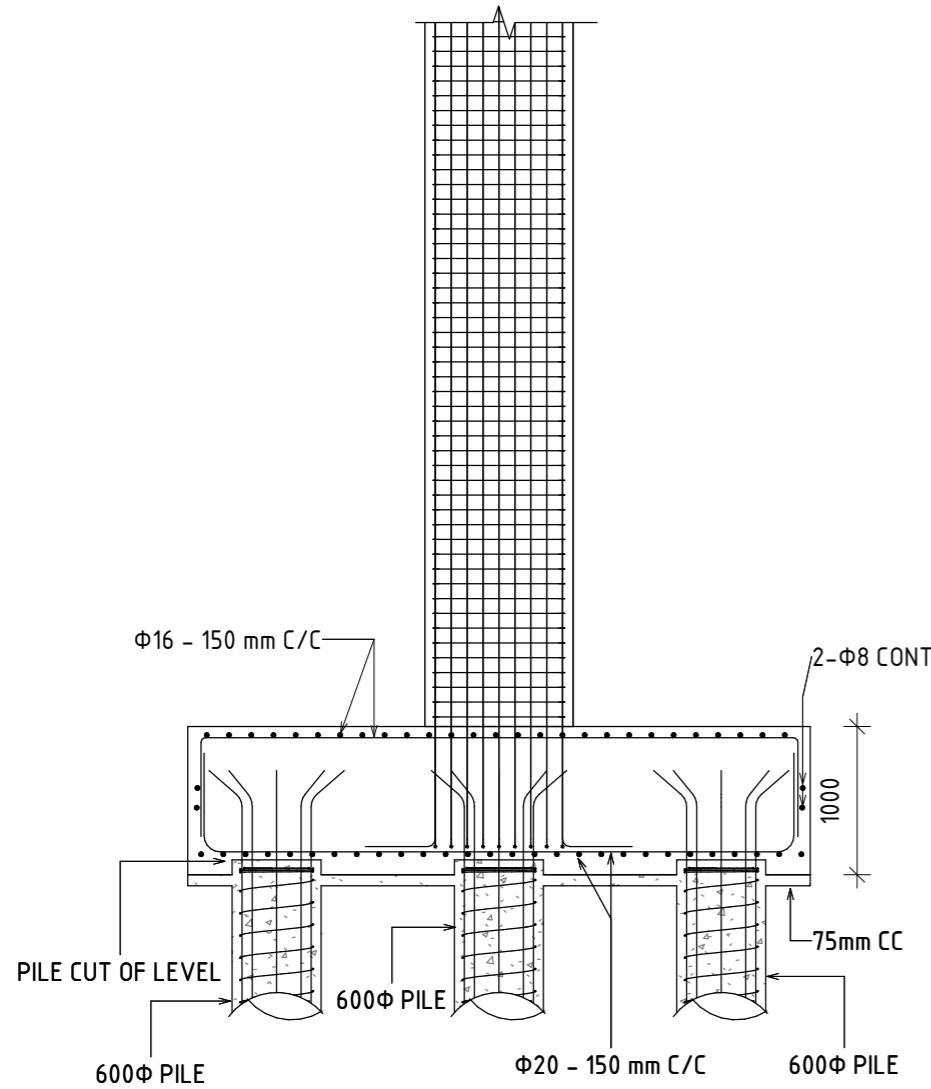
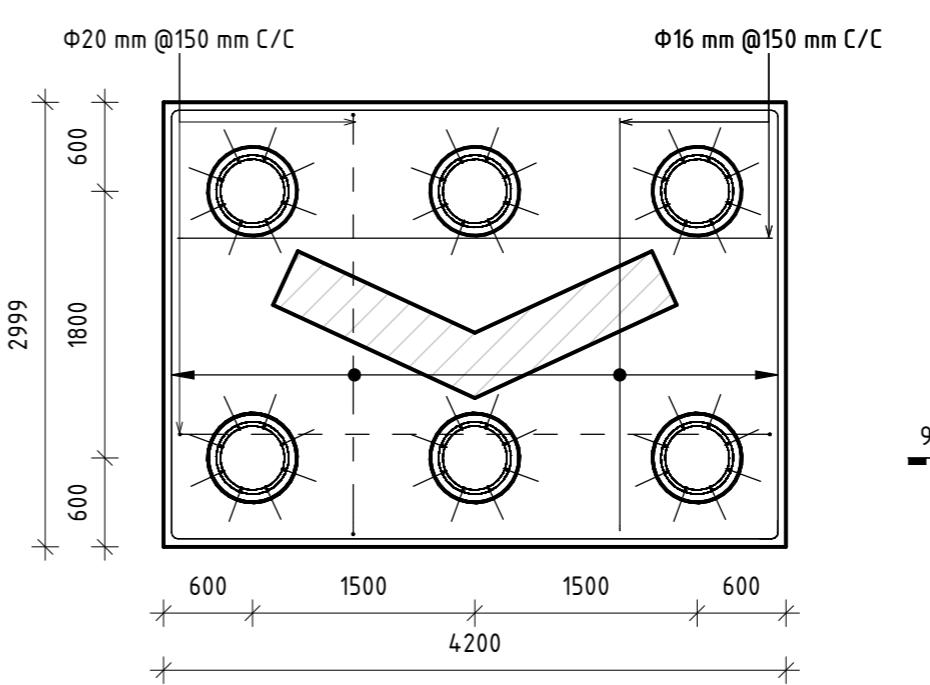
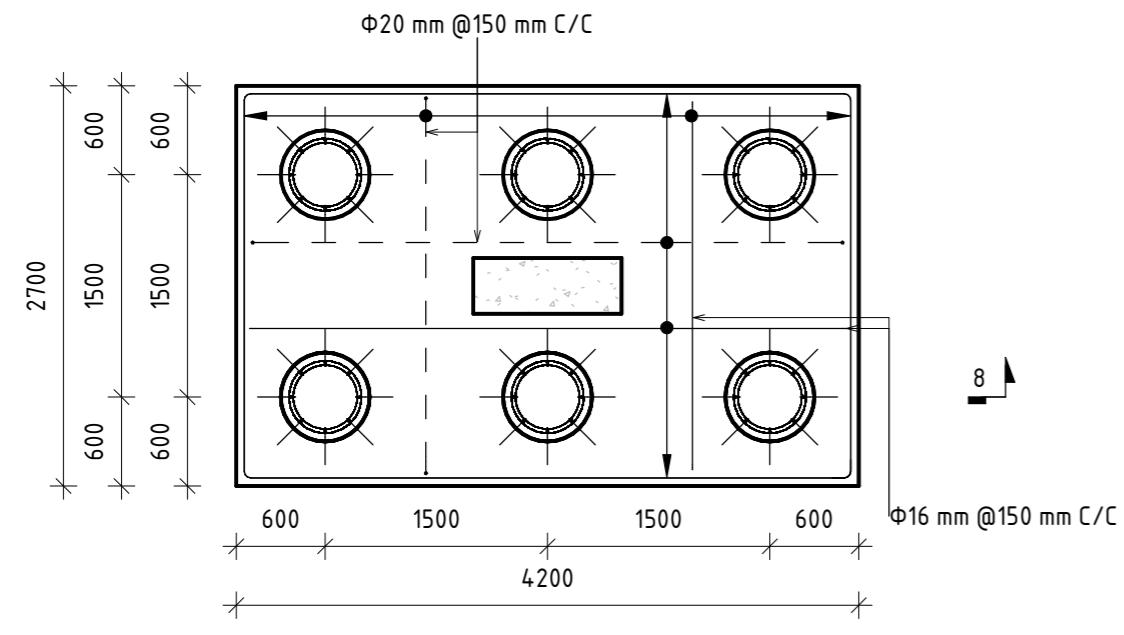
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**PROJECT**  
**KARNAPHULI WATER SUPPLY PROJECT PHASE-2**

**Code - 2105 G**

**CLIENT**



Chittogram Water Supply & Sewerage Authority  
WASA Office Building, Dampara, Chittogram, Bangladesh  
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**No. DRAWING TITLE**

PILE CAP DETAILS

**SCALE:**

**Design Team**

**Team Leader**

**DR.M SHAMIM Z. BOSUNIA**

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B.Sc in civil (BUET)

**Deputy Team Leader**

**Engr. Rana Masud**  
M. Eng. in Civil Building (AIT, THAILAND)  
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**Design Team**

**Drawing Preparation**

<b>Md. Hazzaz Mia</b>	<b>Md. Shahriar Rahman</b>
Architectural Drawing Detailer	Structural Drawing Detailer

**Drawing TYPE**

<input type="checkbox"/> ARCHITECTURAL
<input checked="" type="checkbox"/> STRUCTURAL
<input type="checkbox"/> MEP

**CHECKED BY**

<b>APPROVAL CLIENT</b>	<input type="checkbox"/> INFORMATION
<b>ISSUED FOR</b>	<input type="checkbox"/> APPROVAL
	<input checked="" type="checkbox"/> CONSTRUCTION

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PILE CAP DETAILS

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Architectural Drawing Detailer	Structural Drawing Detailer

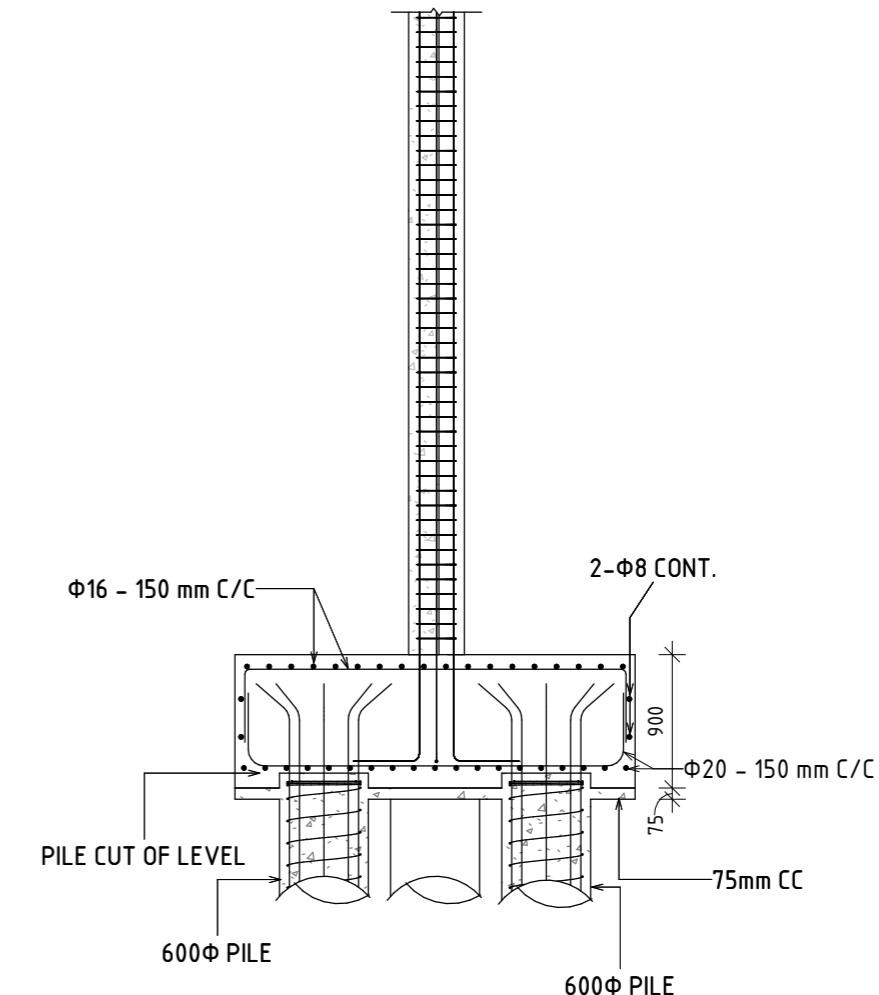
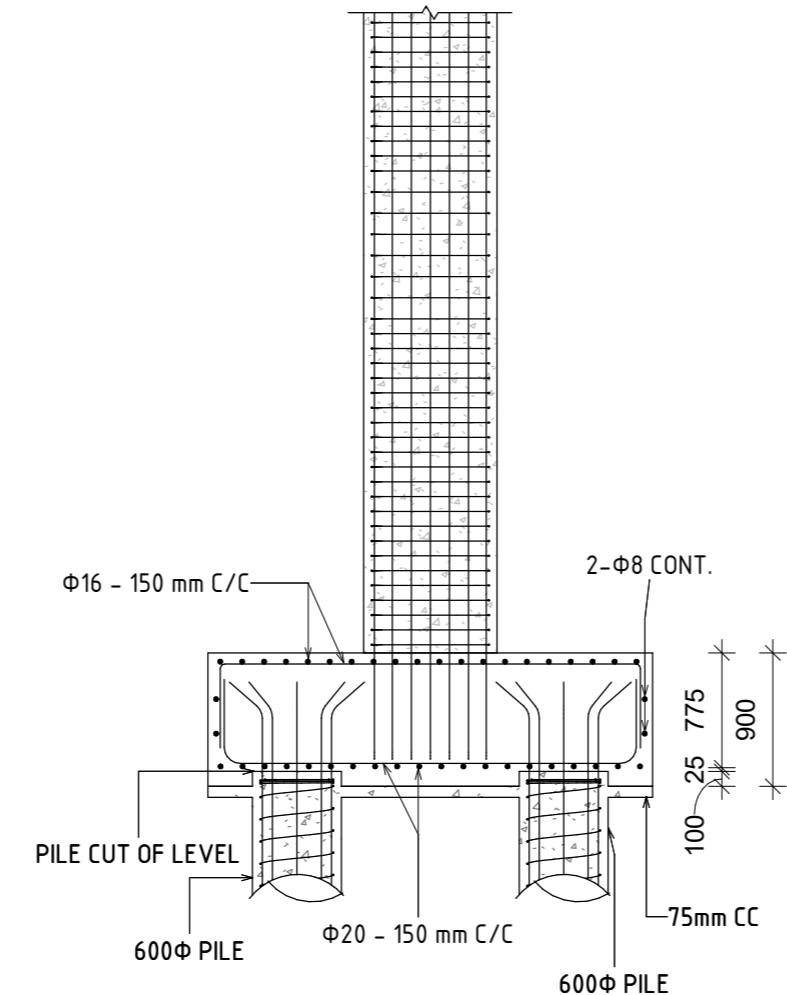
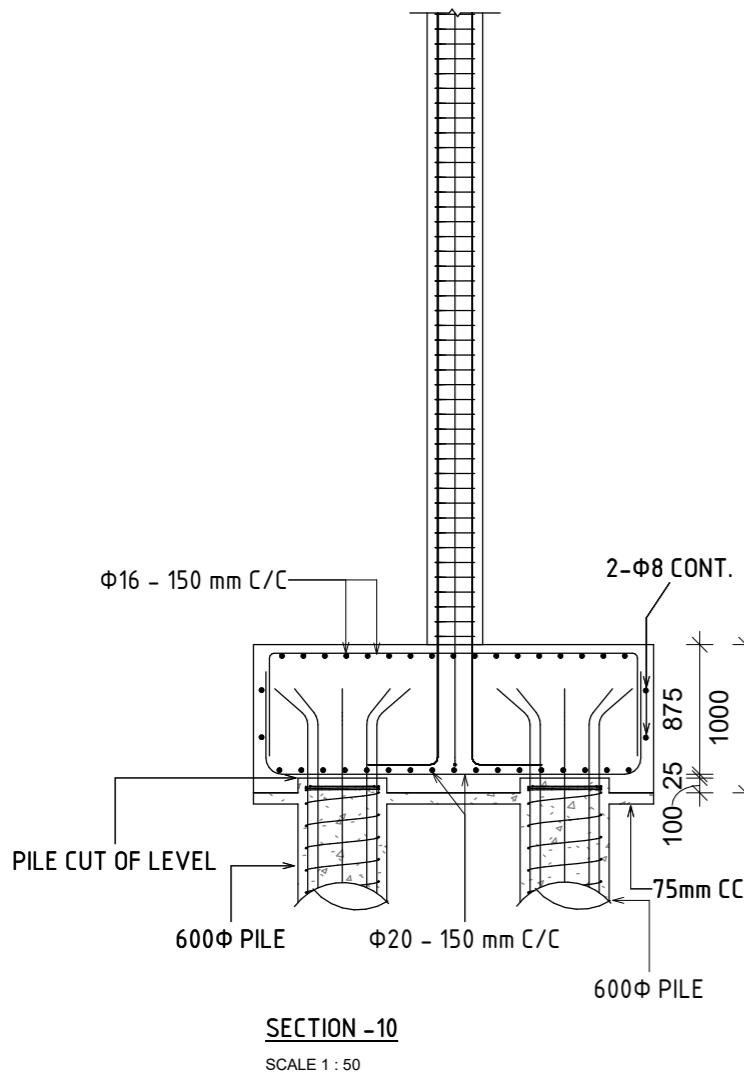
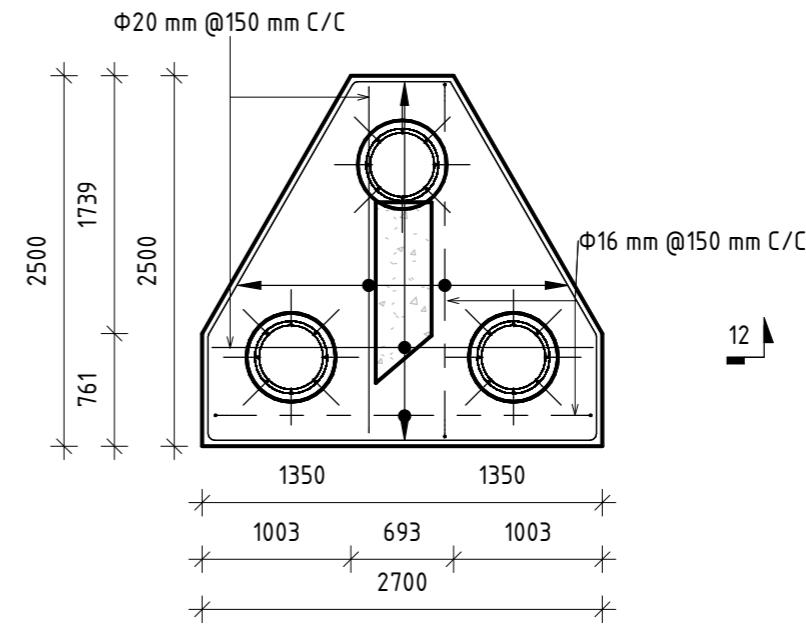
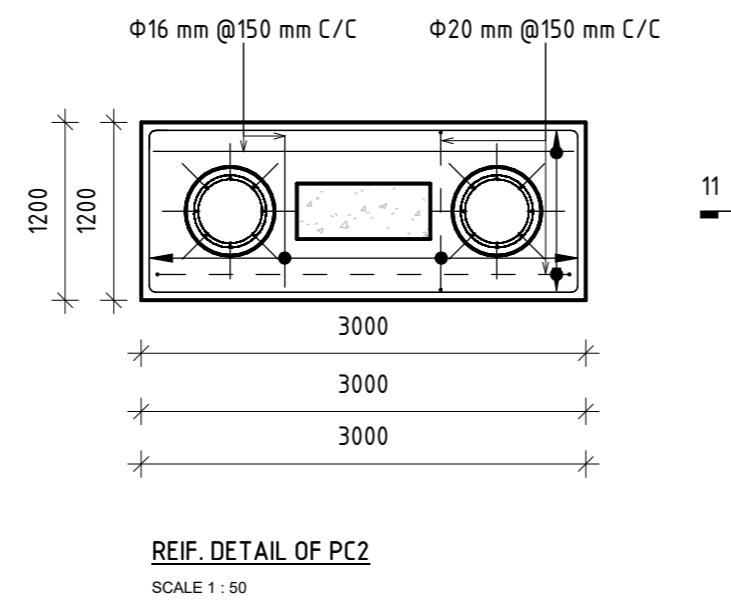
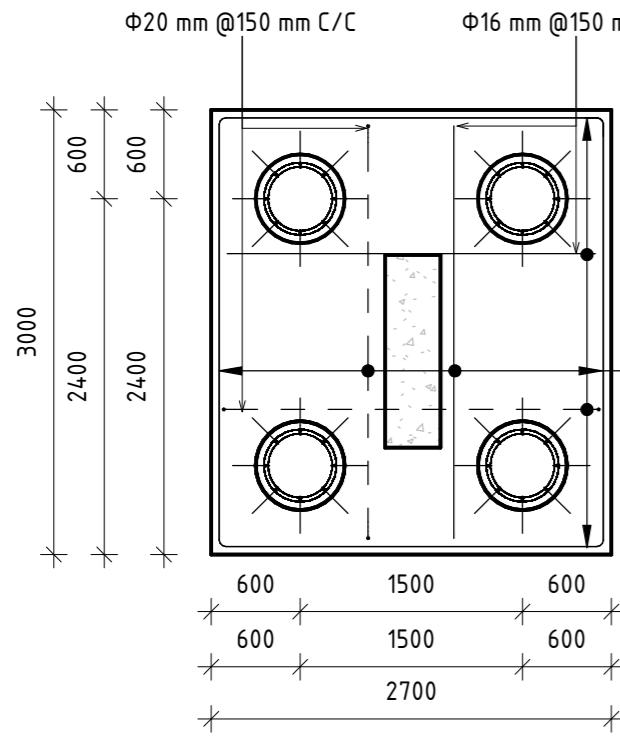
ARCHITECTURAL	<input type="checkbox"/>
STRUCTURAL	<input checked="" type="checkbox"/>
MEP	<input type="checkbox"/>

<b>APPROVAL CLIENT</b>	INFORMATION <input type="checkbox"/>
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DATE	DWG NO.	SHEET NO.	REV
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Code - 2105 G

CLIENT



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CONSULTANT

**INNOVATE - ADOBE JV**

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No. DRAWING TITLE  
PILE CAP DETAILS

SCALE:

Design Team

Team Leader

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Deputy Team Leader

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Design Team

Drawing Preparation

Md. Hazzaz Mia	Md. Shahriar Rahman
Architectural Drawing Detailer	Structural Drawing Detailer

Drawing TYPE

ARCHITECTURAL	<input type="checkbox"/>
STRUCTURAL	<input checked="" type="checkbox"/>
MEP	<input type="checkbox"/>

CHECKED BY

APPROVAL CLIENT	INFORMATION <input type="checkbox"/>
ISSUED FOR	APPROVAL <input type="checkbox"/>
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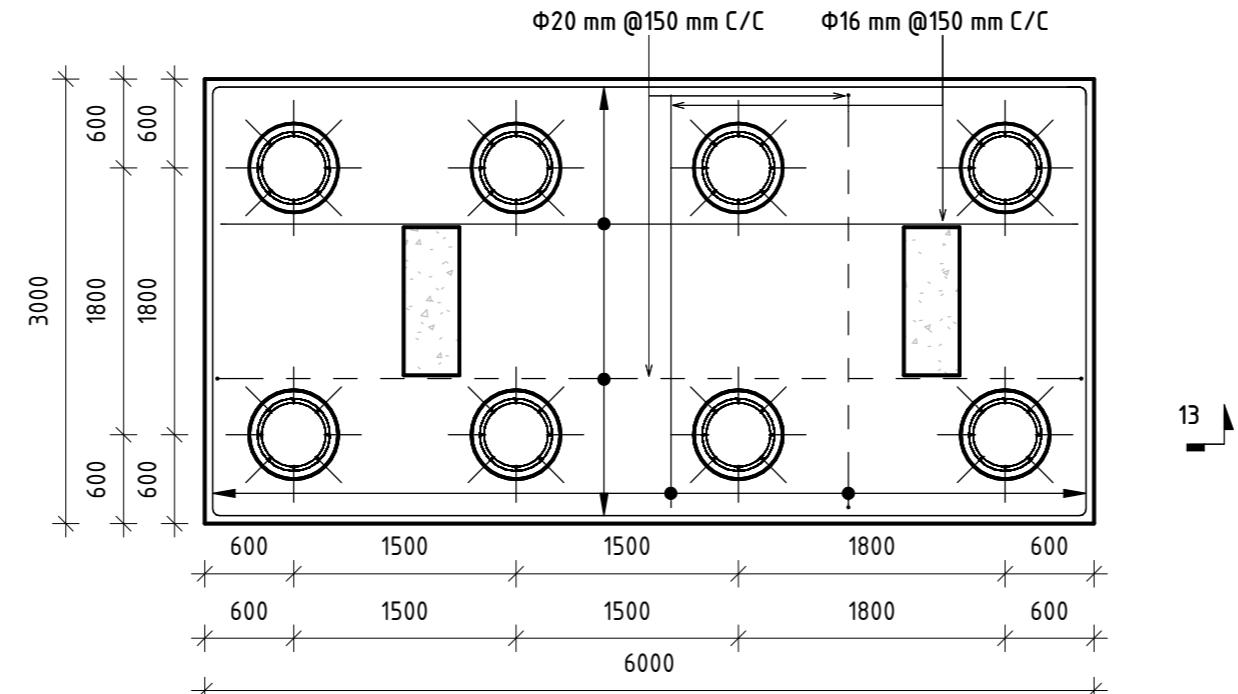
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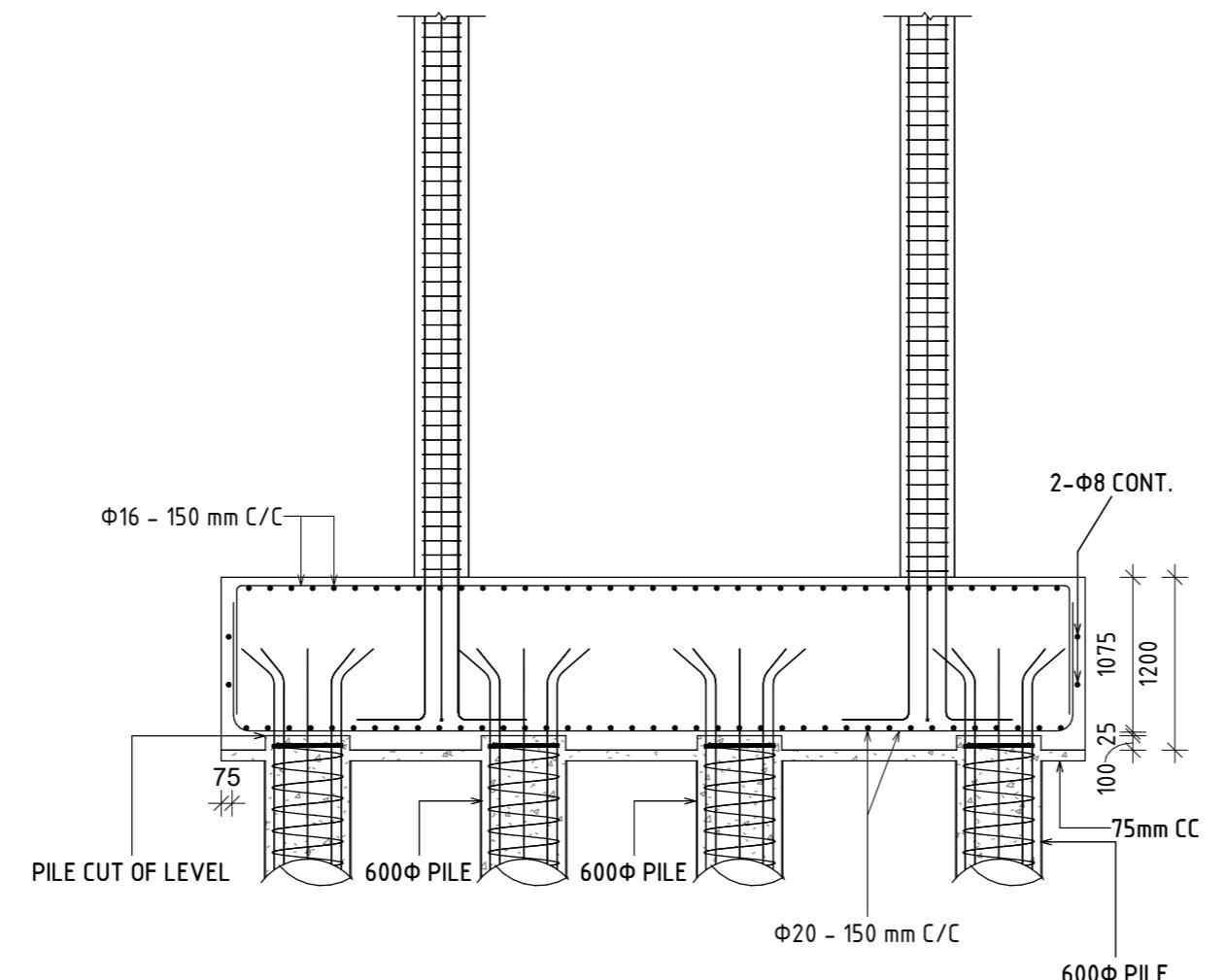
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CONSTRUCTION



REF. DETAIL OF PC8

SCALE 1 : 50



SECTION -13

SCALE 1 : 50



**Code - 2105 G**

CLIENT



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CONSULTANT

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No. DRAWING TITLE

WALL SECTIONS

SCALE:

Design Team

Team Leader

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B.Sc in civil (BUE)

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MEP	<input type="checkbox"/>

CHECKED BY

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16-NOV-2022	2105 G-02-116	MD-S-16	0

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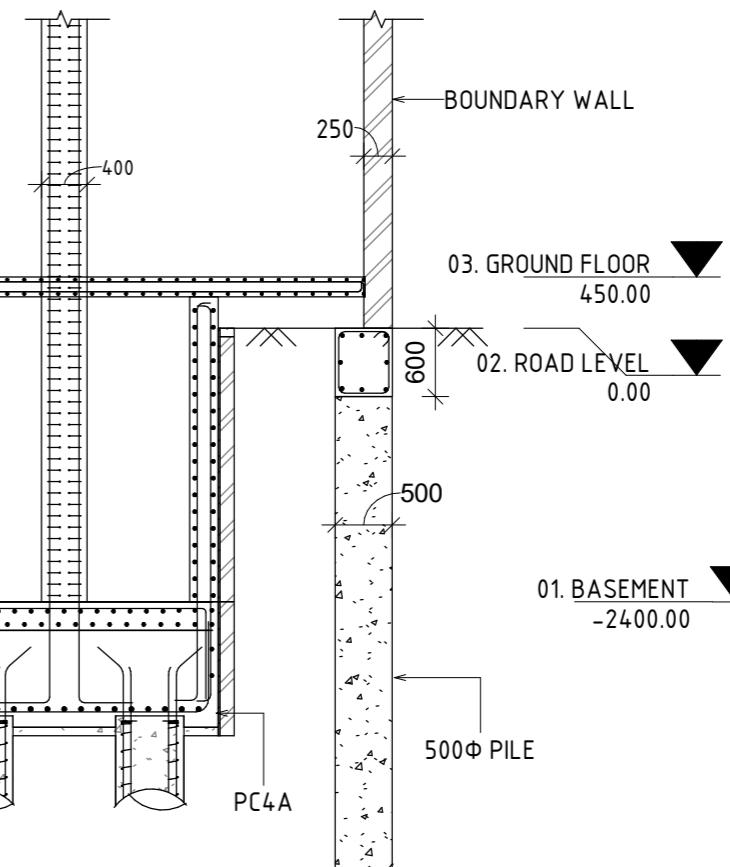
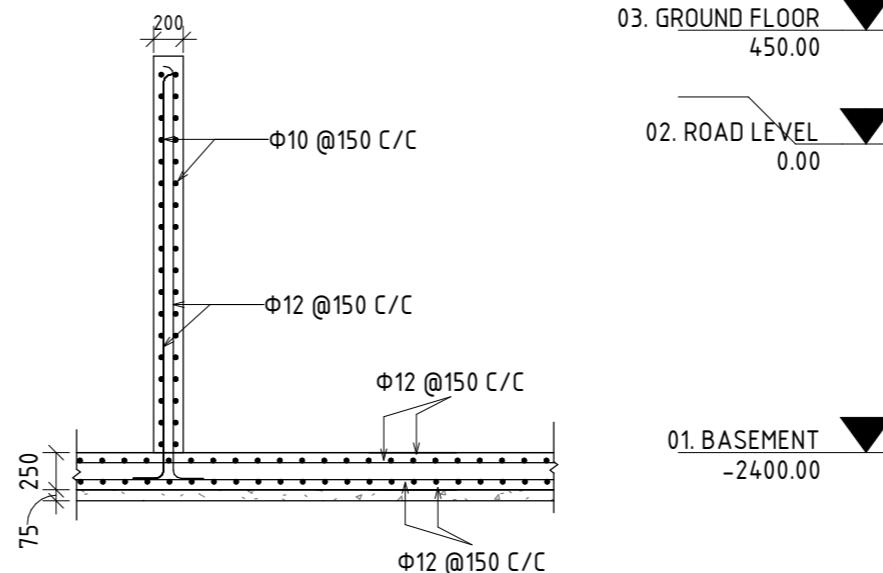
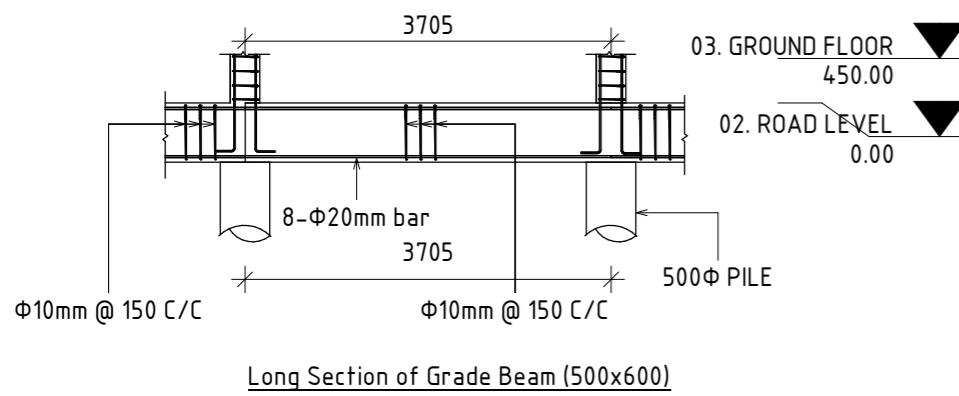
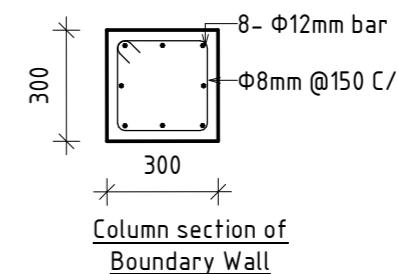
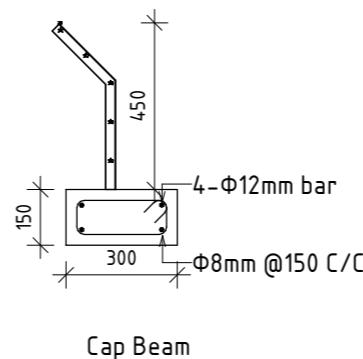
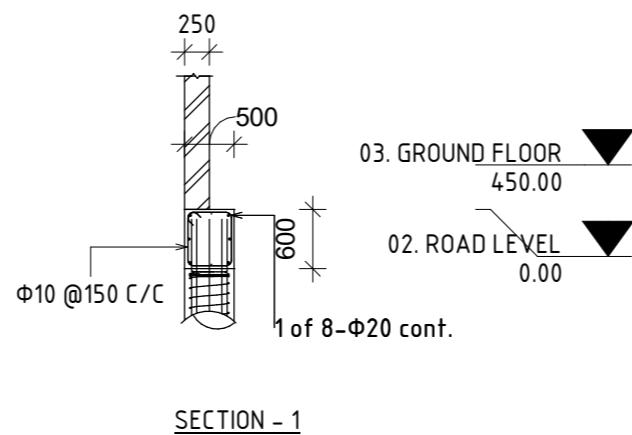
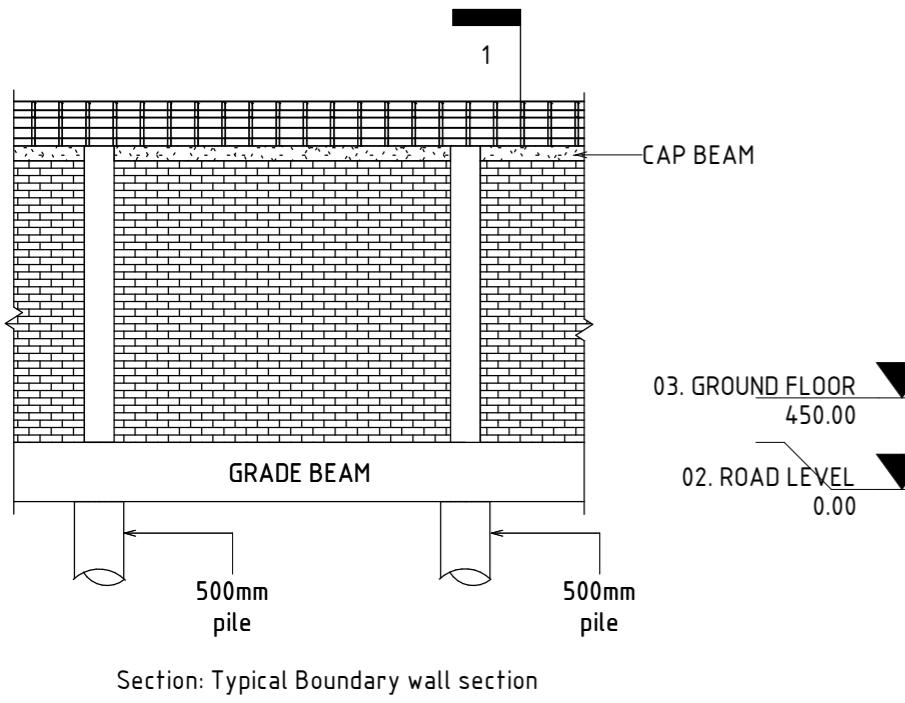
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**CONSTRUCTION**



**PROJECT**  
**KARNAPHULI WATER SUPPLY PROJECT PHASE-2**

**Code - 2105 G**

**CLIENT**



Chittogram Water Supply & Sewerage Authority  
WASA Office Building, Dampara, Chittogram, Bangladesh  
Phone: 880 31 2851695,  
Email: makshudcharchai@yahoo.com

**CONSULTANT**

**INNOVATE - ADOBE JV**

INNOVATE  
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PVT. LTD.  
ADOBE CONSULTANTS (PVT.)  
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M : +8801712076940 W: www.iecbd.org

**No.** **DRAWING TITLE**  
TYPICAL SECTIONS

**SCALE:**

**Design Team**

**Team Leader**

**DR.M SHAMIM Z. BOSUNIA**  
Ph.D, UK  
M.Sc. in civil (BUE)  
B.Sc in civil (BUE)

**Deputy Team Leader**

**Engr. Rana Masud**  
M. Eng. in Civil Building (AIT, THAILAND)  
B.Sc in Civil (RUT)  
M. ASCE, MIEB (M-26157)

**Design Team**

**Drawing Preparation**

<b>Md. Hazzaz Mia</b> Architectural Drawing Detailer	<b>Md. Shahriar Rahman</b> Structural Drawing Detailer
---	---

**Drawing TYPE**

ARCHITECTURAL	<input type="checkbox"/>
STRUCTURAL	<input checked="" type="checkbox"/>
MEP	<input type="checkbox"/>

**CHECKED BY**

**APPROVAL CLIENT**

<b>ISSUED FOR</b>	INFORMATION <input type="checkbox"/>
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	CONSTRUCTION <input checked="" type="checkbox"/>

DATE	DWG NO.	SHEET NO.	REV
16-NOV-2022	2105 G-02-116	MD-S-17	0

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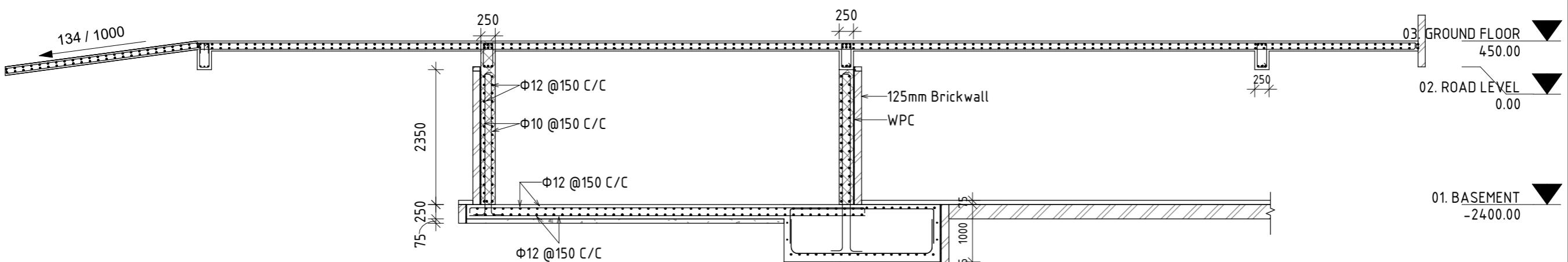
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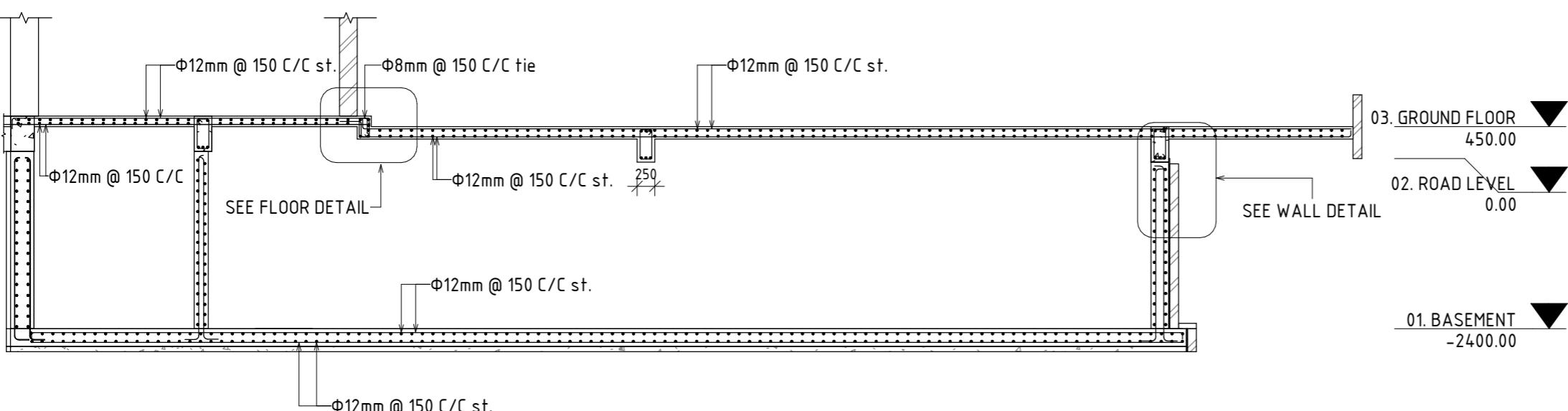
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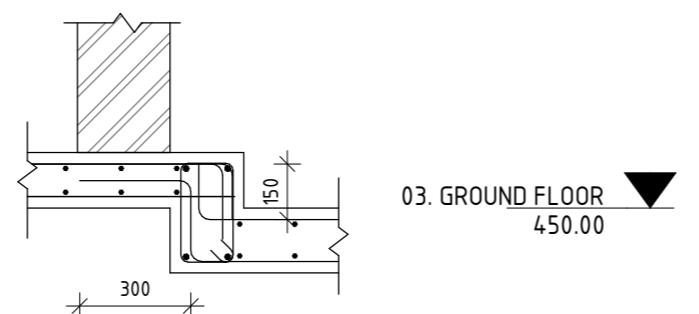
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SCALE 1:75

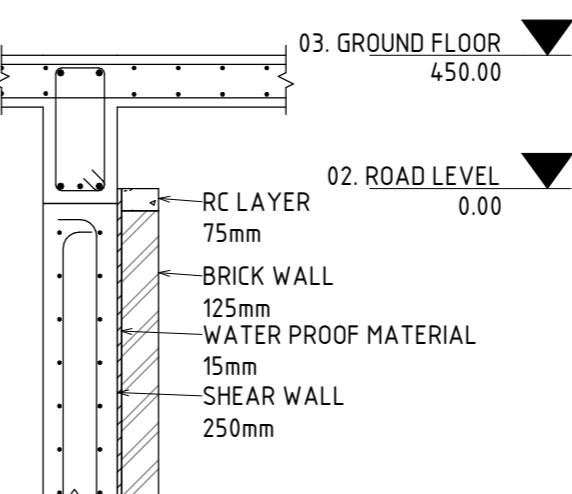


**SECTION - E**

SCALE 1:75



**FLOOR DETAIL**



**WALL DETAIL**

Code - 2105 G

CLIENT



Chittogram Water Supply & Sewerage Authority  
WASA Office Building, Dampara, Chittogram, Bangladesh  
Phone: 880 31 2851695,  
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No. DRAWING TITLE  
TYPICAL SECTIONS

SCALE:

Design Team

Team Leader

**DR.M SHAMIM Z. BOSUNIA**  
PH.D, UK  
M.Sc. In civil (BUE)  
B.Sc in civil (BUE)

Deputy Team Leader

**Engr. Rana Masud**  
M. Eng. in Tall Building (AIT, THAILAND)  
B.Sc in civil (RUT)  
M. ASCE, MIEB (M-26157)

Design Team

Drawing Preparation

Md. Hazzaz Mia	Md. Shahriar Rahman
Architectural Drawing Detailer	Structural Drawing Detailer

Drawing TYPE

ARCHITECTURAL	<input type="checkbox"/>
STRUCTURAL	<input checked="" type="checkbox"/>
MEP	<input type="checkbox"/>

CHECKED BY

APPROVAL CLIENT

ISSUED FOR	INFORMATION <input type="checkbox"/>
	APPROVAL <input type="checkbox"/>
	CONSTRUCTION <input checked="" type="checkbox"/>

DATE	DWG NO.	SHEET NO.	REV
16-NOV-2022	2105 G-02-116	MD-S-18	0

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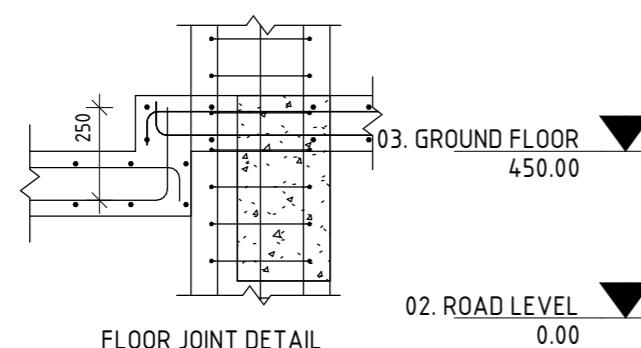
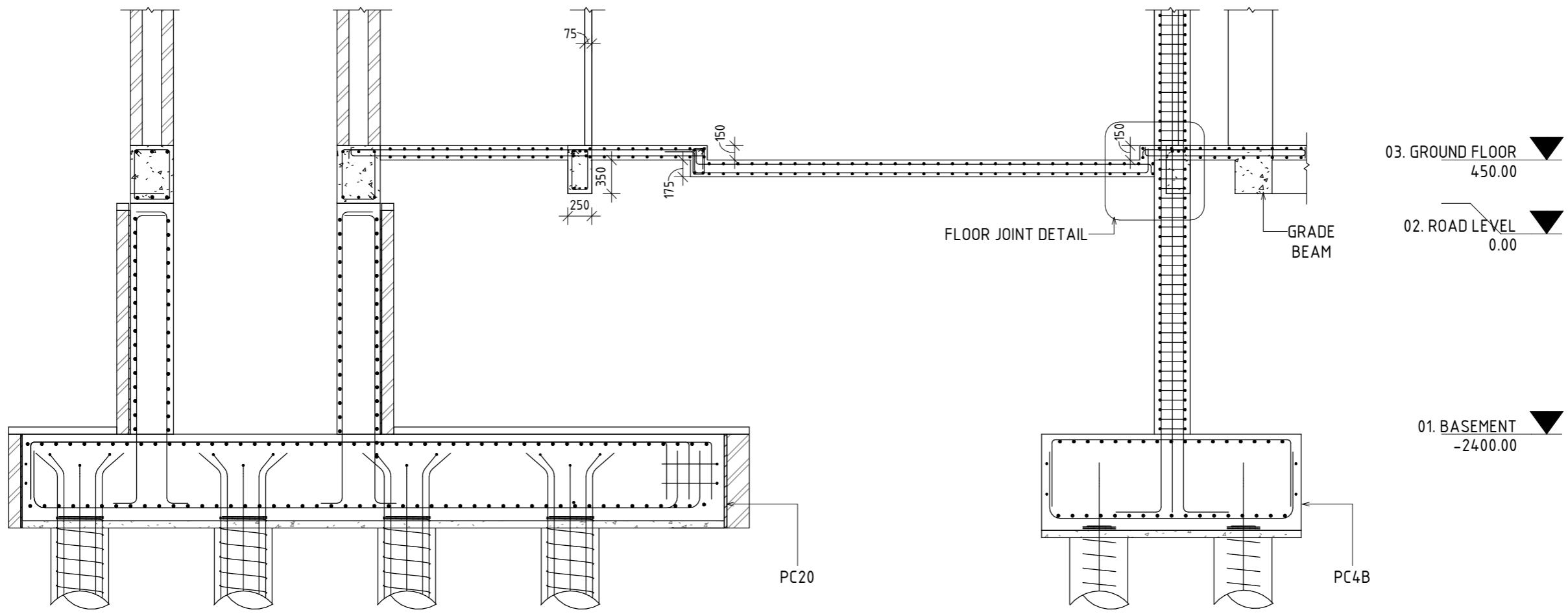
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**CONSTRUCTION**



Code - 2105 G

CLIENT



Chittogram Water Supply & Sewerage Authority  
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Phone: +880 31 2851695,  
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CONSULTANT

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No. DRAWING TITLE  
MAT FOUNDATION REBAR LAYOUT

SCALE:

Design Team

Team Leader

**DR.M SHAMIM Z. BOSUNIA**  
Ph.D, UK  
M.Sc. in civil (BUET)  
B.Sc in civil (BUET)

Deputy Team Leader

**Engr. Rana Masud**  
M. Eng. in Civil Building (AIT, THAILAND)  
B.Sc in civil (RUT)  
M. ASCE, MIEB (M-26157)

Design Team

Drawing Preparation

Md. Hazzaz Mia	Md. Shahriar Rahman
Architectural Drawing Detailer	Structural Drawing Detailer

Drawing TYPE

ARCHITECTURAL	<input type="checkbox"/>
STRUCTURAL	<input checked="" type="checkbox"/>
MEP	<input type="checkbox"/>

CHECKED BY

APPROVAL CLIENT	INFORMATION <input type="checkbox"/>
ISSUED FOR	APPROVAL <input type="checkbox"/>
	CONSTRUCTION <input checked="" type="checkbox"/>

DATE	DWG NO.	SHEET NO.	REV

16-NOV-2022 2105 G-02-116 MD-S-19 0

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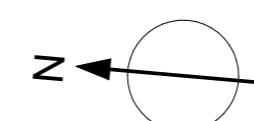
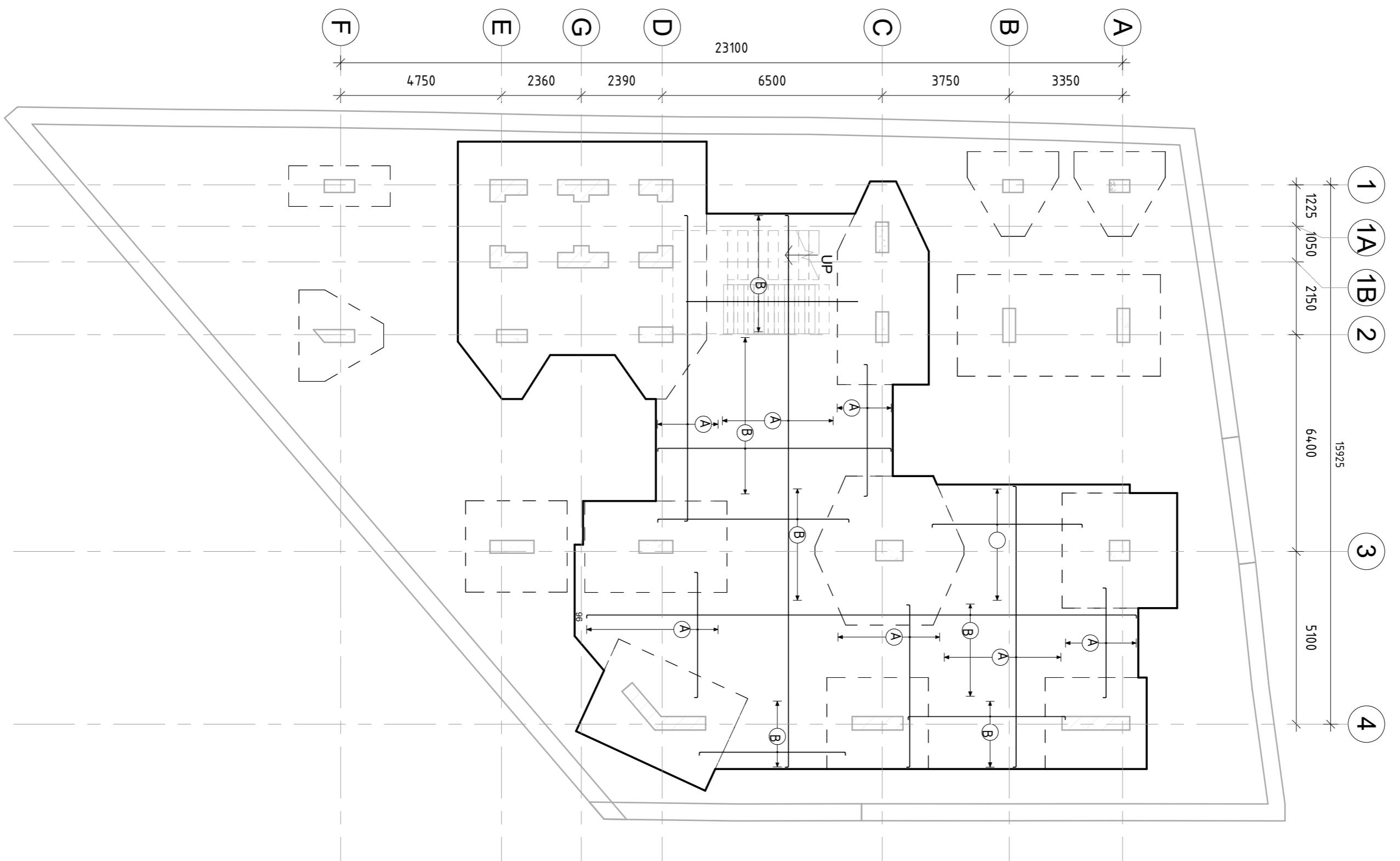
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**CONSTRUCTION**



MAT FOUNDATION REBAR PLAN

→ (A) → φ12mm @150 C/C (Bot. & Top St.)

→ (B) → φ12mm @150 C/C (Bot. & Top St.)

Code - 2105 G

CLIENT



Chittogram Water Supply & Sewerage Authority  
WASA Office Building, Dampara, Chittogram, Bangladesh  
Phone: +880 31 2851695,  
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CONSULTANT

**INNOVATE - ADOBE JV**

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No. DRAWING TITLE  
GROUND FLOOR PLAN

SCALE:

Design Team

Team Leader

**DR.M SHAMIM Z. BOSUNIA**  
Ph.D, UK  
M.Sc. in civil (BUET)  
B.Sc in civil (BUET)

Deputy Team Leader

**Engr. Rana Masud**  
M. Eng. in Civil Building (AIT, THAILAND)  
B.Sc in Civil (RUET)  
M. ASCE, MIEB (M-26157)

Design Team

Drawing Preparation

Md. Hazzaz Mia	Md. Shahriar Rahman
Architectural Drawing Detailer	Structural Drawing Detailer

Drawing TYPE

ARCHITECTURAL	<input type="checkbox"/>
STRUCTURAL	<input checked="" type="checkbox"/>
MEP	<input type="checkbox"/>

CHECKED BY

APPROVAL CLIENT	INFORMATION <input type="checkbox"/>
ISSUED FOR	APPROVAL <input type="checkbox"/>
	CONSTRUCTION <input checked="" type="checkbox"/>

DATE	DWG NO.	SHEET NO.	REV
16-NOV-2022	2105 G-02-116	MD-S-20	0

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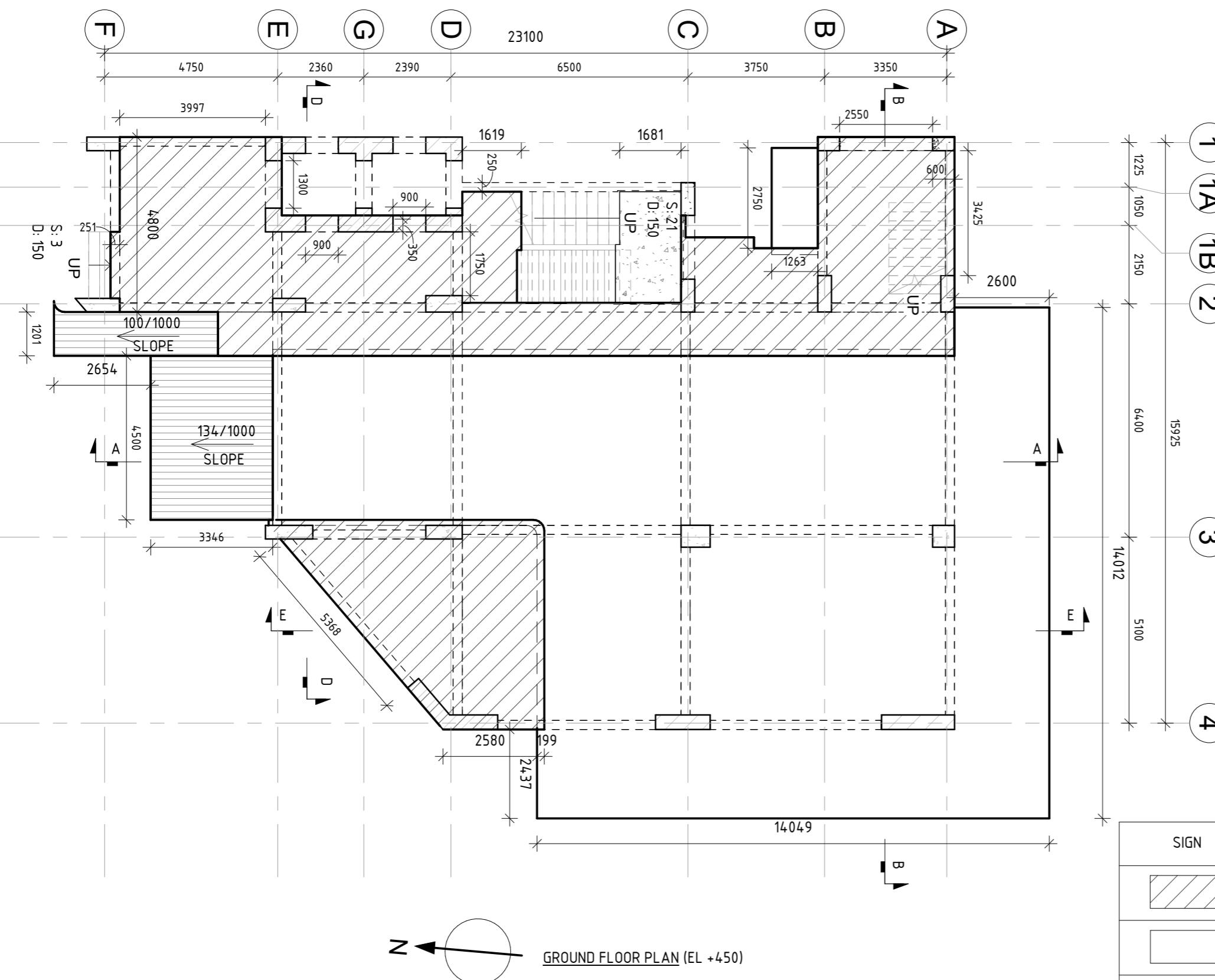
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CONSTRUCTION



GROUND FLOOR PLAN (EL +450)

SIGN	EL. (mm) or, Slope	THICK. (mm)
	600	150
	450	175
	Slope: 100/1000	150
	Slope: 134/1000	150
	2250	150

**PROJECT  
KARNAPHULI WATER SUPPLY PROJECT PHASE-2**

**Code - 2105 G**

**CLIENT**



Chittogram Water Supply & Sewerage Authority  
WASA Office Building, Dampara, Chittogram, Bangladesh  
Phone: +880 31 2851695,  
Email: makshudchanchal@yahoo.com

**CONSULTANT**

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**No. DRAWING TITLE**

GROUND FLOOR BEAM LAYOUT

**SCALE:**

**Design Team**

**Team Leader**

**DR.M SHAMIM Z. BOSUNIA**

Ph.D, UK  
M.Sc. in civil (BUE)

B.Sc in civil (BUE)

**Deputy Team Leader**

**Engr. Rana Masud**  
M. Eng. in Tall Building (AIT, THAILAND)  
B.Sc in civil (RUT)  
M. ASCE, MIEB (M-26157)

**Design Team**

**Drawing Preparation**

Md. Hazzaz Mia	Md. Shahriar Rahman
Architectural Drawing Detailer	Structural Drawing Detailer

**Drawing TYPE**

ARCHITECTURAL	<input type="checkbox"/>
STRUCTURAL	<input checked="" type="checkbox"/>
MEP	<input type="checkbox"/>

**CHECKED BY**

<b>APPROVAL CLIENT</b>	INFORMATION <input type="checkbox"/>
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<b>ISSUED FOR</b>	APPROVAL <input type="checkbox"/>
	CONSTRUCTION <input checked="" type="checkbox"/>

DATE	DWG NO.	SHEET NO.	REV
16-NOV-2022	2105 G-02-116	MD-S-21	0

**NOTES :**

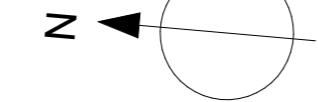
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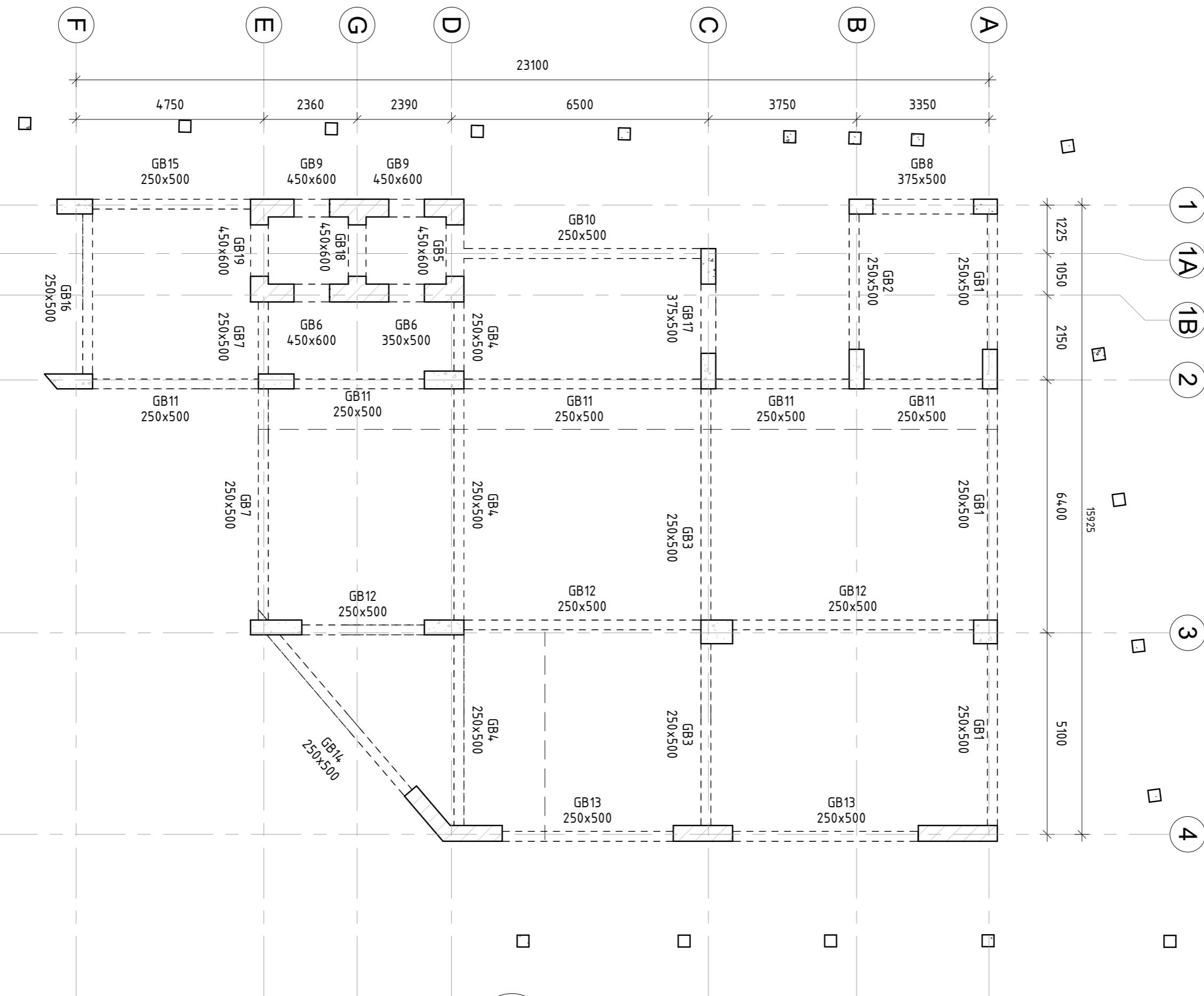
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**CONSTRUCTION**



GROUND FLOOR BEAM LAYOUT (EL +450 mm)



Code - 2105 G

CLIENT



Chittogram Water Supply & Sewerage Authority  
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Phone: 880 31 2851695,  
Email: makshudchanchal@yahoo.com

CONSULTANT

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No. DRAWING TITLE  
GROUND FLOOR REBAR LAYOUT

SCALE:

Design Team

Team Leader

DR.M SHAMIM Z. BOSUNIA

PH.D, UK  
M.Sc. In civil (BUE)  
B.Sc in civil (BUE)

Deputy Team Leader

Engr. Rana Masud  
M. Eng. in Tall Building (AIT, THAILAND)  
B.Sc in civil (RUT)  
M. ASCE, MIEB (M-26157)

Design Team

Drawing Preparation

Md. Hazzaz Mia Md. Shahriar Rahman  
Architectural Drawing Detailer Structural Drawing Detailer

Drawing TYPE

ARCHITECTURAL	<input type="checkbox"/>
STRUCTURAL	<input checked="" type="checkbox"/>
MEP	<input type="checkbox"/>

CHECKED BY

APPROVAL CLIENT	INFORMATION <input type="checkbox"/>
ISSUED FOR	APPROVAL <input type="checkbox"/>
	CONSTRUCTION <input checked="" type="checkbox"/>

DATE	DWG NO.	SHEET NO.	REV
16-NOV-2022	2105 G-02-116	MD-S-22	0

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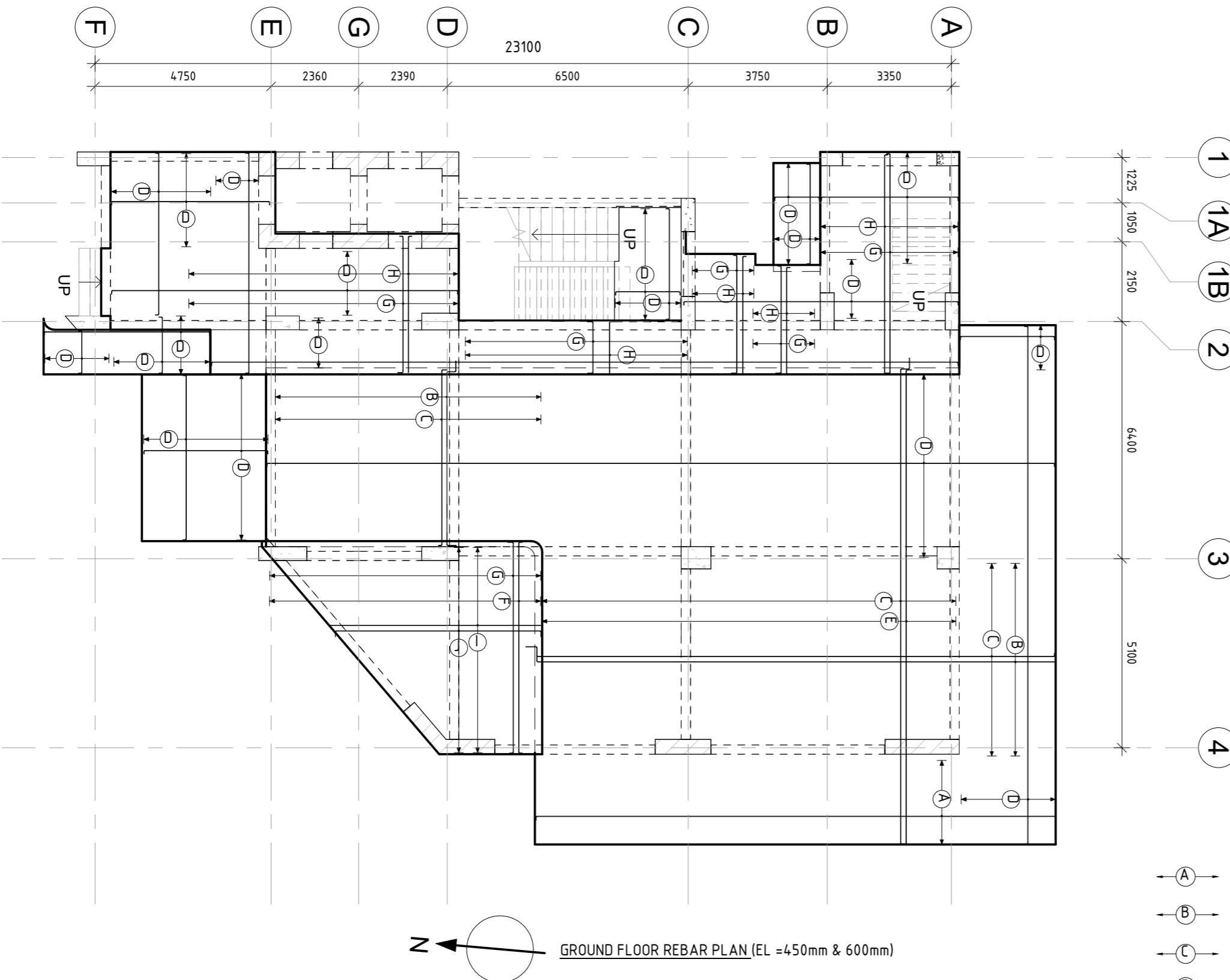
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- A → φ12mm @150 C/C (Bot. & Top ST)
- B → φ12mm @150 C/C (Top)
- C → φ12mm @150 C/C (Bot.)
- D → φ12mm @150 C/C (Bot. & Top ST)
- E → φ12mm @150 C/C (Top)
- F → φ12mm @150 C/C (Bot.)
- G → φ12mm @150 C/C (Top)
- H → φ12mm @150 C/C (Bot.)



Chittogram Water Supply & Sewerage Authority  
WASA Office Building, Dampara, Chittogram, Bangladesh  
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Lalmatia, Dhaka-1207

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COLUMN TYPICAL VIEW

**DR.M SHAMIM Z. BOSUNIA**  
PH.D, UK  
M.Sc. In civil (BUEET)  
B.Sc in civil (BUEET)

**Engr. Rana Masud**  
M. Eng. in Civil Building (AIT, THAILAND)  
B.Sc in Civil (RUT)  
M. ASCE, MIEB (M-26157)

Md. Hazzaz Mia	Md. Shahriar Rahman
Architectural Drawing Detailer	Structural Drawing Detailer

ARCHITECTURAL	<input type="checkbox"/>
STRUCTURAL	<input checked="" type="checkbox"/>
MEP	<input type="checkbox"/>

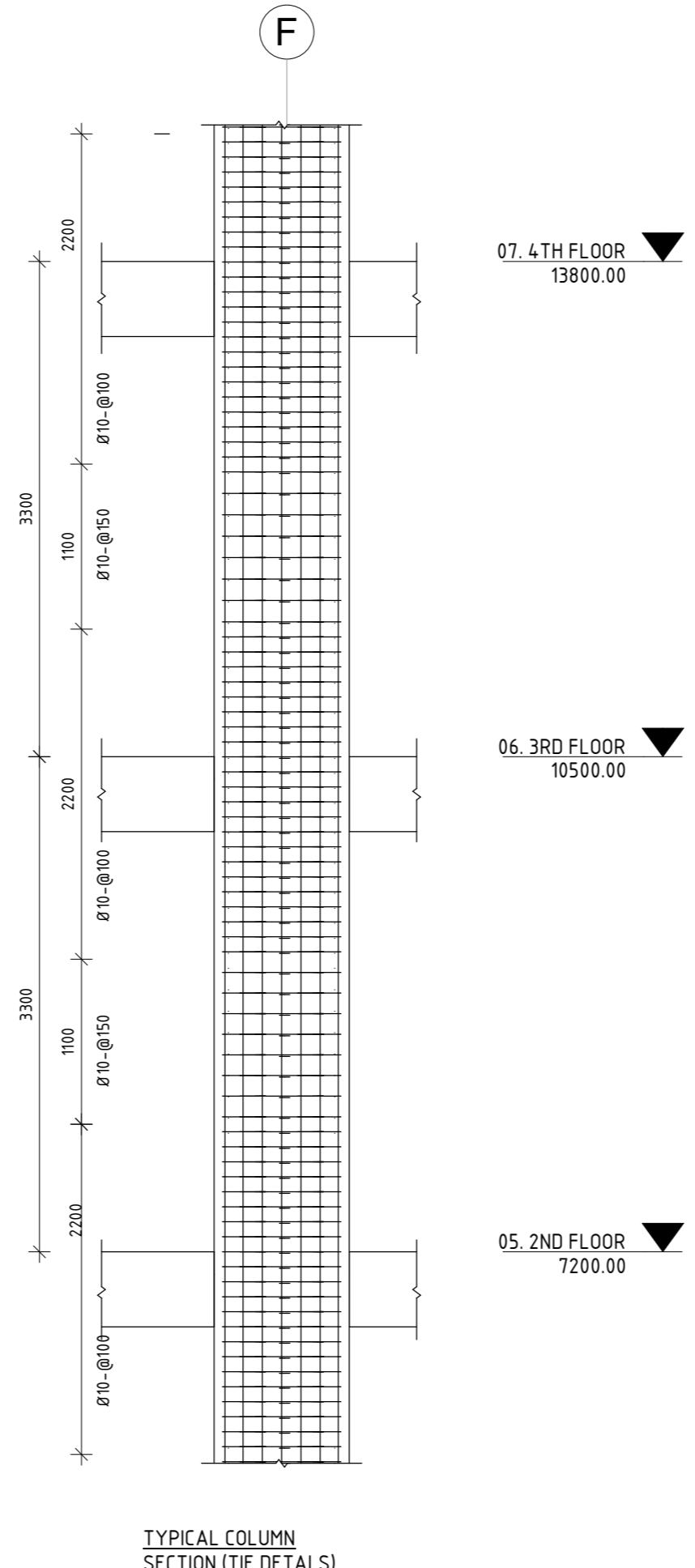
APPROVAL CLIENT	INFORMATION <input type="checkbox"/>
ISSUED FOR	APPROVAL <input type="checkbox"/>
	CONSTRUCTION <input checked="" type="checkbox"/>

DATE	DWG NO.	SHEET NO.	REV
16-NOV-2022	2105 G-02-116	MD-S-23	0

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Code - 2105 G

CLIENT



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CONSULTANT

**INNOVATE - ADOBE JV**

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W: www.iecbd.org

No. DRAWING TITLE

COLUMN SCHEDULE

SCALE:

Design Team

Team Leader

**DR.M SHAMIM Z. BOSUNIA**

P.H.D, UK  
M.Sc. In civil (BUE)  
B.Sc in civil (BUE)

Deputy Team Leader

**Engr. Rana Masud**  
M. Eng. in Tall Building (AIT, THAILAND)  
B.Sc in Civil (RUT)  
M. ASCE, MIEB (M-26157)

Design Team

Drawing Preparation

**Md. Hazzaz Mia**

Architectural Drawing Detailer

**Md. Shahriar Rahman**

Structural Drawing Detailer

Drawing TYPE

ARCHITECTURAL

STRUCTURAL

MEP

CHECKED BY

APPROVAL CLIENT

INFORMATION

APPROVAL

CONSTRUCTION

DATE

DWG NO.

SHEET NO.

REV

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CONSTRUCTION

FLOOR LEVEL	ROOF TOP TO BUILDING TOP	SIZE : 375X600 12Φ20mm					
			EL. 36000 TO 38700				
GROUND FLOOR TO FIFTH FLOOR	ROOF LEVEL TO ROOF LEVEL	SIZE : 375X600 12Φ20mm	EL. 33600 TO 36900				
FOUNDATION TO GROUND FLOOR	EL. 450 TO 17100	SIZE : 375X600 12Φ20mm	SIZE : 375X1000 20Φ20mm	SIZE : 600X600 20Φ20mm	SIZE : 600X800 24Φ20mm		
FOUNDATION TO GROUND FLOOR	EL. -2400 TO 450	SIZE : 375X600 12Φ20mm	SIZE : 375X1000 20Φ20mm	SIZE : 600X600 20Φ20mm	SIZE : 600X800 24Φ20mm	SIZE : 375X900 18Φ20mm	
ORDINATE		1A, 1B	2B	3A	3C	2C, 1AC	
COLUMN INDEX		C1	C2	C3	C5	C6	

**Code - 2105 G**

CLIENT



Chittogram Water Supply & Sewerage Authority  
WASA Office Building, Dampara, Chittogram, Bangladesh  
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Email: makshudcharchai@yahoo.com

CONSULTANT

**INNOVATE - ADOBE JV**

ADOBE ENGINEERING DEVELOPMENT & CONSULTANTS (PVT.) LTD  
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ADOBE CONSULTANTS (PVT.) LTD  
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No. DRAWING TITLE

COLUMN SCHEDULE

SCALE:

Design Team

Team Leader

**DR.M SHAMIM Z. BOSUNIA**  
Ph.D, UK  
M.Sc. in civil (BUET)  
B.Sc in civil (BUET)

Deputy Team Leader

**Engr. Rana Masud**  
M. Eng. in Civil Building (AIT, THAILAND)  
B.Sc in Civil (RUT)  
M. ASCE, MIEB (M-26157)

Design Team

Drawing Preparation

Md. Hazzaz Mia	Md. Shahriar Rahman
Architectural Drawing Detailer	Structural Drawing Detailer

Drawing TYPE

ARCHITECTURAL	<input type="checkbox"/>
STRUCTURAL	<input checked="" type="checkbox"/>
MEP	<input type="checkbox"/>

CHECKED BY

APPROVAL CLIENT	INFORMATION <input type="checkbox"/>
ISSUED FOR	APPROVAL <input type="checkbox"/>
	CONSTRUCTION <input checked="" type="checkbox"/>

DATE	DWG NO.	SHEET NO.	REV
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16-NOV-2022 2105 G-02-116 MD-S-25 0

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REQUESTED OR NO LONGER NEEDED.

**CONSTRUCTION**

FLOOR LEVEL		ROOF TOP TO BUILDING TOP	ROOF LEVEL TO ROOF TOP	EL. 3600 TO 38700	SIZE : 375X1000 22Φ20mm	SIZE : 375X1000 22Φ20mm
GROUND FLOOR TO FIFTH FLOOR		EL. 17100 TO 33600	EL. 33600 TO 36900	EL. 36900 TO 38700	SIZE : 450X1000 24Φ20mm	SIZE : 375X900 18Φ25mm
FOUNDATION TO GROUND FLOOR		EL. 450 TO 17100	EL. 450 TO 17100	EL. 450 TO 17100	SIZE : SEE PLAN 18Φ20mm	SIZE : 375X1300 24Φ20mm
FOUNDATION TO GROUND FLOOR		EL. -2400 TO 450	EL. -2400 TO 450	EL. -2400 TO 450	SIZE : SEE PLAN 18Φ20mm	SIZE : 375X900 24Φ20mm
ORDINATE	2H	2E	3F1	2F1	2A	
COLUMN INDEX	C7	C8	C9	C10	C12	

Code - 2105 G

CLIENT



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No. DRAWING TITLE

SHEAR WALL SCHEDULE

SCALE:

Design Team

Team Leader

**DR.M SHAMIM Z. BOSUNIA**  
Ph.D, UK  
M.Sc. in civil (BUT)  
B.Sc in civil (BUT)

Deputy Team Leader

**Engr. Rana Masud**  
M. Eng. in Civil Building (AIT, THAILAND)  
B.Sc in Civil (RUT)  
M. ASCE, MIEB (M-26157)

Design Team

Drawing Preparation

Md. Hazzaz Mia	Md. Shahriar Rahman
Architectural Drawing Detailer	Structural Drawing Detailer

Drawing TYPE

ARCHITECTURAL	<input type="checkbox"/>
STRUCTURAL	<input checked="" type="checkbox"/>
MEP	<input type="checkbox"/>

CHECKED BY

APPROVAL CLIENT	INFORMATION <input type="checkbox"/>
ISSUED FOR	APPROVAL <input type="checkbox"/>
	CONSTRUCTION <input checked="" type="checkbox"/>

DATE	DWG NO.	SHEET NO.	REV
16-NOV-2022	2105 G-02-116	MD-S-26	0

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CONSTRUCTION

FLOOR LEVEL		ROOF TOP TO BUILDING TOP	ROOF LEVEL TO ROOF TOP	ROOF LEVEL TO ROOF LEVEL	ROOF TOP TO BUILDING TOP
FOUNDATION TO GROUND FLOOR	EL. -24.00 TO 4.50	SIZE : SEE PLAN 30Φ20mm	SIZE : SEE PLAN 24Φ20mm	SIZE : SEE PLAN 30Φ25mm	SIZE : SEE PLAN 30Φ25mm
GROUND FLOOR TO FIFTH FLOOR	EL. 4.50 TO 17.00	SIZE : SEE PLAN 30Φ20mm	SIZE : SEE PLAN 24Φ20mm	SIZE : SEE PLAN 30Φ25mm	SIZE : SEE PLAN 30Φ25mm
FIFTH FLOOR TO ROOF LEVEL	EL. 17.00 TO 33.600	SIZE : SEE PLAN 30Φ20mm	SIZE : SEE PLAN 24Φ20mm	SIZE : SEE PLAN 30Φ25mm	SIZE : SEE PLAN 30Φ25mm
ROOF LEVEL TO ROOF TOP	EL. 33.600 TO 36.900	SIZE : SEE PLAN 30Φ20mm	SIZE : SEE PLAN 24Φ20mm	SIZE : SEE PLAN 30Φ25mm	SIZE : SEE PLAN 30Φ25mm
ROOF TOP TO BUILDING TOP	EL. 36.900 TO 38.700	SIZE : SEE PLAN 30Φ20mm	SIZE : SEE PLAN 24Φ20mm	SIZE : SEE PLAN 30Φ25mm	SIZE : SEE PLAN 30Φ25mm
ORDINATE		4A	4B	1E, 1BE	1E1, 1BE1
SHEAR WALL INDEX		SW1	SW2	SW3	SW4

Code - 2105 G

CLIENT



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No. DRAWING TITLE

SHEAR WALL SCHEDULE

SCALE:

Design Team

Team Leader

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B.Sc in civil (BUT)

Deputy Team Leader

**Engr. Rana Masud**  
M. Eng. in Civil Building (AIT, THAILAND)  
B.Sc in Civil (RUEI)  
M. ASCE, MIEB (M-26157)

Design Team

Drawing Preparation

Md. Hazzaz Mia	Md. Shahriar Rahman
Architectural Drawing Detailer	Structural Drawing Detailer

Drawing TYPE

ARCHITECTURAL	<input type="checkbox"/>
STRUCTURAL	<input checked="" type="checkbox"/>
MEP	<input type="checkbox"/>

CHECKED BY

APPROVAL CLIENT	INFORMATION <input type="checkbox"/>
ISSUED FOR	APPROVAL <input type="checkbox"/>
	CONSTRUCTION <input checked="" type="checkbox"/>

DATE	DWG NO.	SHEET NO.	REV
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16-NOV-2022 2105 G-02-116 MD-S-27 0

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CONSTRUCTION

FLOOR LEVEL		ROOF TOP TO BUILDING TOP	EL. 36000 TO 38700	
		ROOF LEVEL TO ROOF TOP	EL. 33600 TO 36900	SIZE : SEE PLAN 30Φ25mm
		FIFTH FLOOR TO ROOF LEVEL	EL. 17100 TO 33600	SIZE : SEE PLAN 30Φ25mm
		GROUND FLOOR TO FIFTH FLOOR	EL. 450 TO 17100	SIZE : SEE PLAN 30Φ25mm
		FOUNDATION TO GROUND FLOOR	EL. -2400 TO 450	SIZE : SEE PLAN 28Φ25mm
ORDINATE		1F1, 1BF1		4E
SHEAR WALL INDEX		SW5		SW6

**PROJECT  
KARNAPHULI WATER  
SUPPLY PROJECT PHASE-2**

**Code - 2105 G**

**CLIENT**



Chittogram Water Supply & Sewerage Authority  
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**No. DRAWING TITLE**  
BASEMENT SHEAR WALL LAYOUT

**SCALE:**

**Design Team**

**Team Leader**

**DR.M SHAMIM Z. BOSUNIA**

P.H.D, UK  
M.Sc. in civil (BUE)

B.Sc in civil (BUE)

**Deputy Team Leader**

**Engr. Rana Masud**

M. Eng. in Civil Building (AIT, THAILAND)

B.Sc in Civil (RUT)

M. ASCE, MIEB (M-2615)

**Design Team**

**Drawing Preparation**

**Md. Hazzaz Mia**  
Architectural Drawing Detailer

**Md. Shahriar Rahman**  
Structural Drawing Detailer

**Drawing TYPE**

ARCHITECTURAL	<input type="checkbox"/>
STRUCTURAL	<input checked="" type="checkbox"/>
MEP	<input type="checkbox"/>

**CHECKED BY**

**APPROVAL CLIENT**

ISSUED FOR	INFORMATION <input type="checkbox"/>
	APPROVAL <input type="checkbox"/>
	CONSTRUCTION <input checked="" type="checkbox"/>

DATE	DWG NO.	SHEET NO.	REV
16-NOV-2022	2105 G-02-116	MD-S-28	0

**NOTES :**

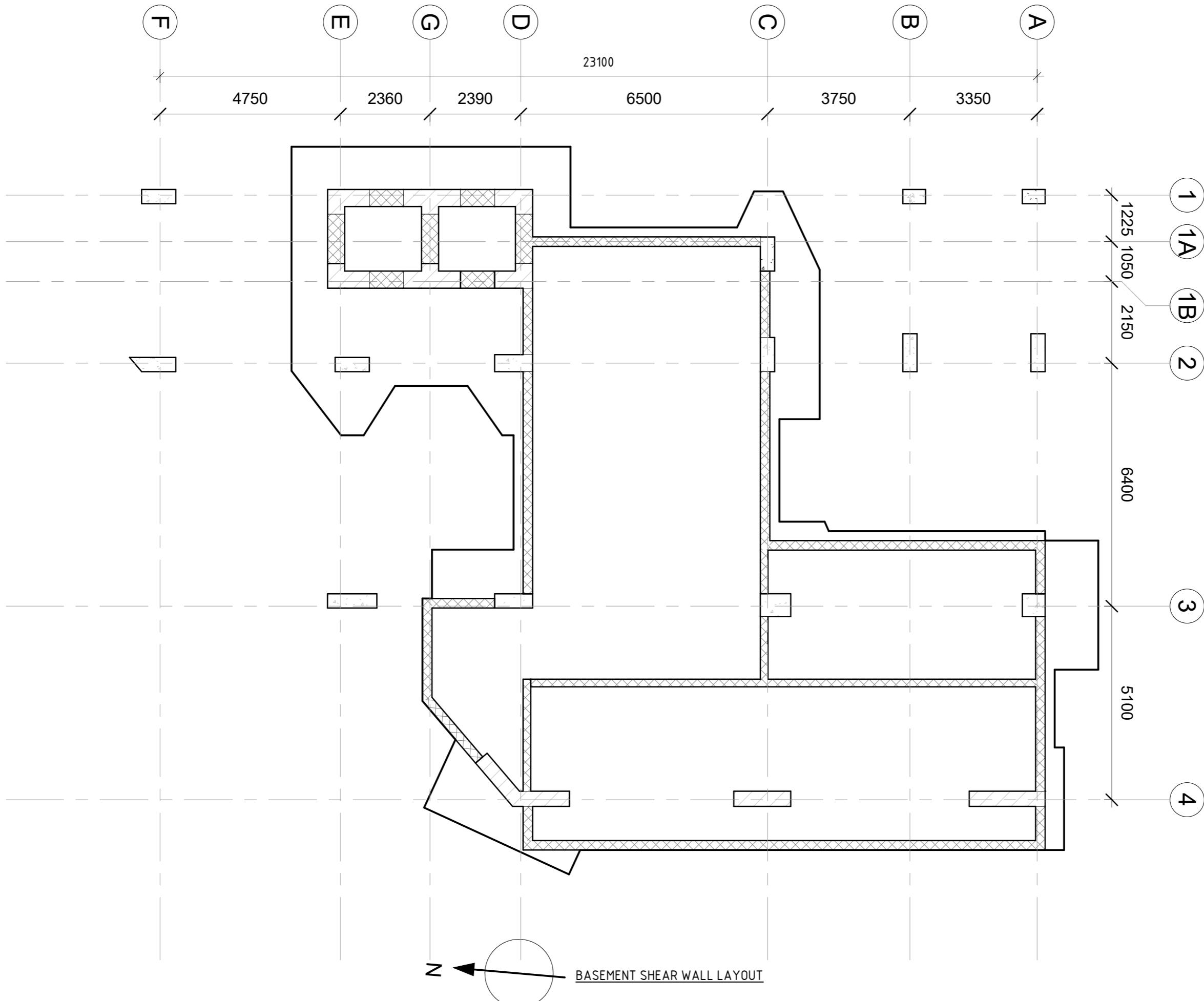
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No. DRAWING TITLE  
BEAM SECTION DETAILS

SCALE:

Design Team

Team Leader

**DR.M SHAMIM Z. BOSUNIA**  
Ph.D, UK  
M.Sc. in civil (BUET)  
B.Sc in civil (BUET)

Deputy Team Leader

**Engr. Rana Masud**  
M. Eng. in Civil Building (AIT, THAILAND)  
B.Sc in Civil (RUT)  
M. ASCE, MIEB (M-26157)

Design Team

Drawing Preparation  
**Md. Hazzaz Mia** Architectural Drawing Detailer      **Md. Shahriar Rahman** Structural Drawing Detailer

Drawing TYPE  
 ARCHITECTURAL       STRUCTURAL       MEP

CHECKED BY

APPROVAL CLIENT  
 INFORMATION       APPROVAL       CONSTRUCTION

ISSUED FOR  
 DATE       DWG NO.       SHEET NO.       REV

16-NOV-2022 2105 G-02-116 MD-S-29 0

NOTES :

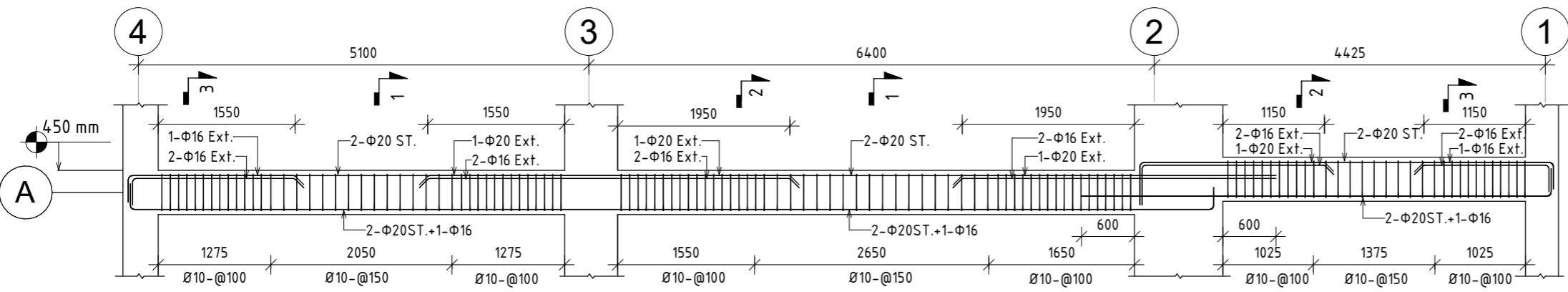
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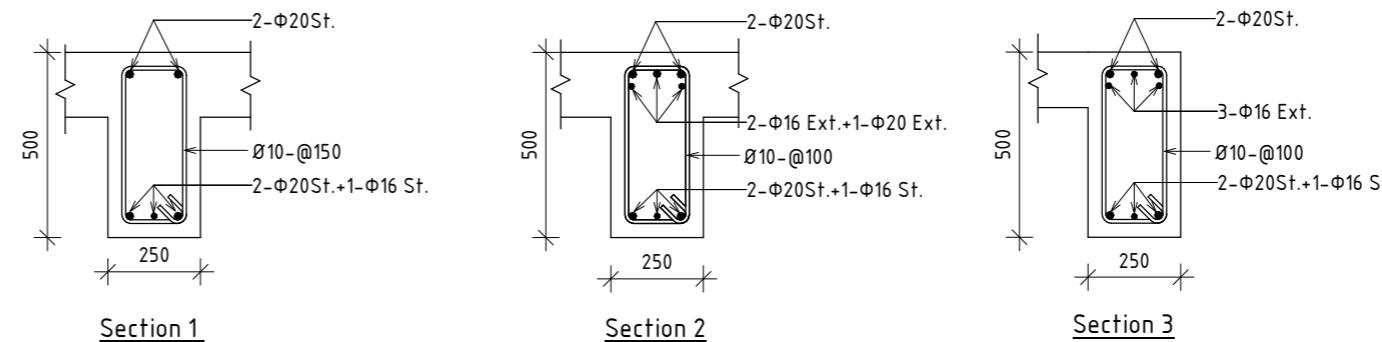
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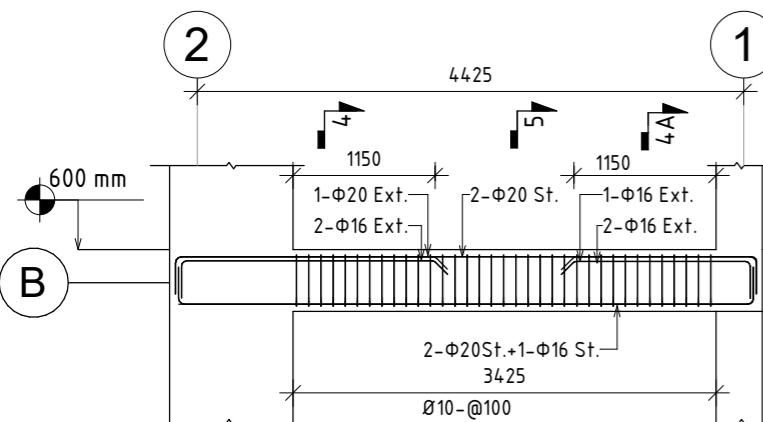
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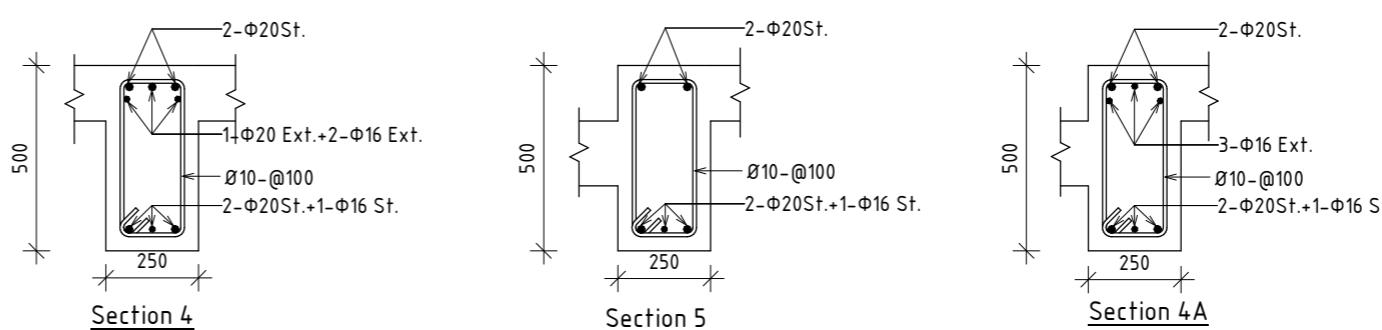
Section 1

Section 2

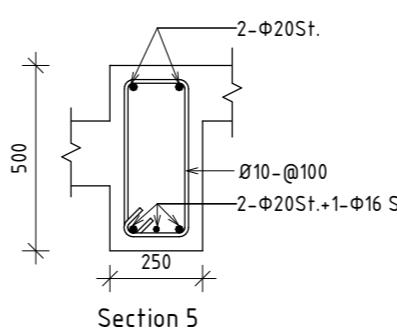
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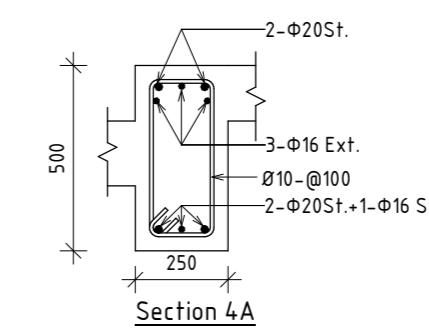
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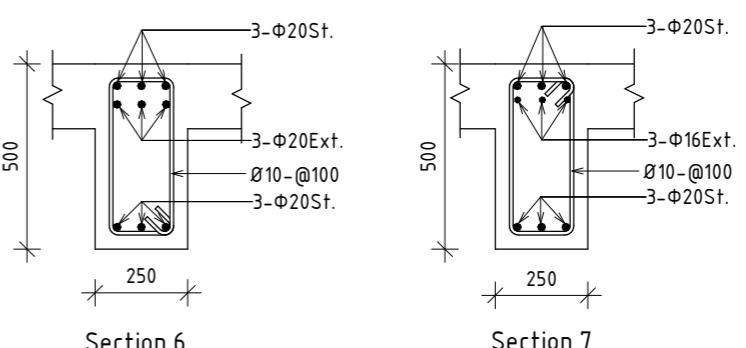
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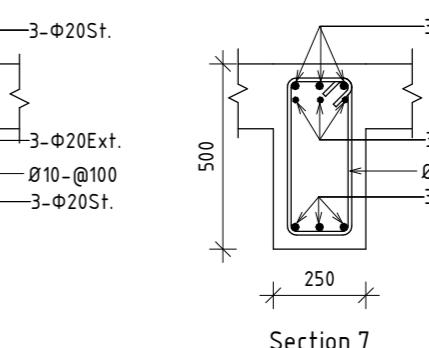
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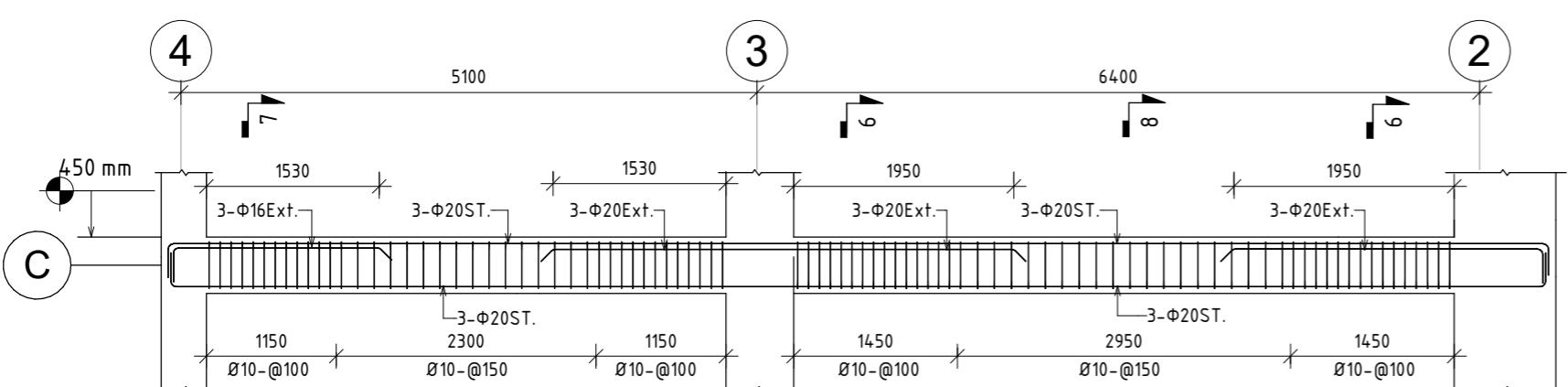
Section 4A



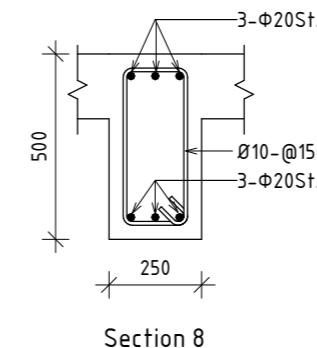
Section 6



Section 7



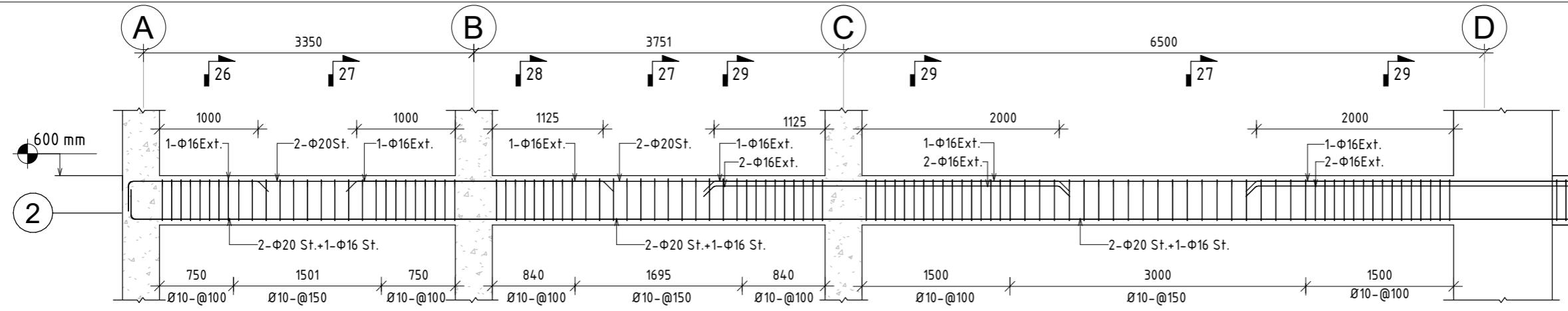
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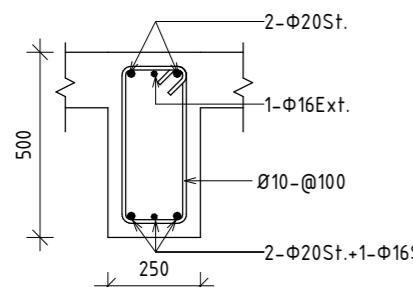
Section 8



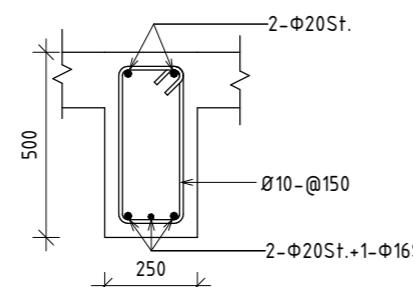




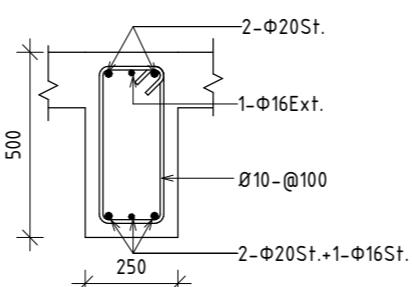
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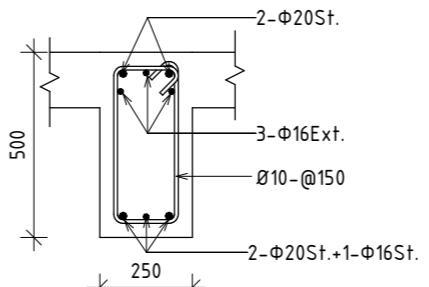
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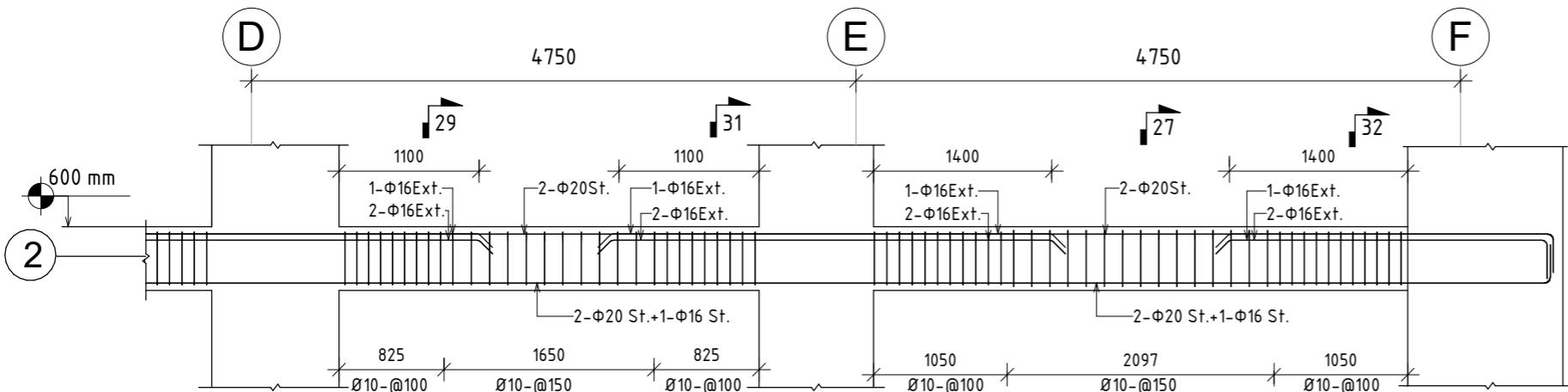
Section 27 (250x500)



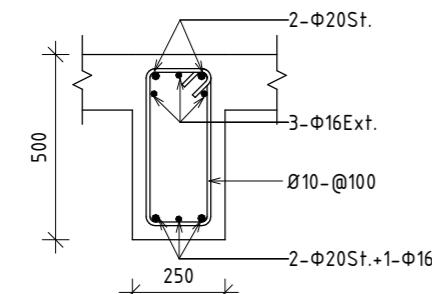
Section 28 (250x500)



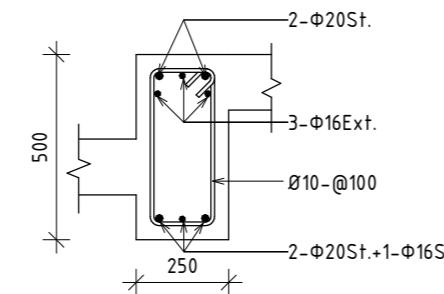
Section 29 (250x500)



LONG SECTION OF GB11 (250X500)



Section 31 (250x500)



Section 32

PROJECT  
KARNAPHULI WATER SUPPLY PROJECT PHASE-2

Code - 2105 G

CLIENT



Chittagong Water Supply & Sewerage Authority  
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No. DRAWING TITLE

BEAM SECTION DETAILS

SCALE:

Design Team

Team Leader

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Drawing Preparation

Md. Hazzaz Mia

Architectural Drawing Detailer

Md. Shahriar Rahman

Structural Drawing Detailer

Drawing TYPE

ARCHITECTURAL

STRUCTURAL

MEP

CHECKED BY

APPROVAL CLIENT

INFORMATION

ISSUED FOR

APPROVAL

CONSTRUCTION

DATE DWG NO. SHEET NO. REV

16-NOV-2022	2105 G-02-116	MD-S-32	0
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**INNOVATE - ADOBE JV**

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No. DRAWING TITLE

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SCALE:

Design Team

Team Leader

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Architectural Drawing Detailer	Structural Drawing Detailer

Drawing TYPE

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STRUCTURAL	<input checked="" type="checkbox"/>
MEP	<input type="checkbox"/>

CHECKED BY

APPROVAL CLIENT	INFORMATION <input type="checkbox"/>
ISSUED FOR	APPROVAL <input type="checkbox"/>
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DATE	DWG NO.	SHEET NO.	REV

16-NOV-2022 2105 G-02-116 MD-S-33 0

NOTES :

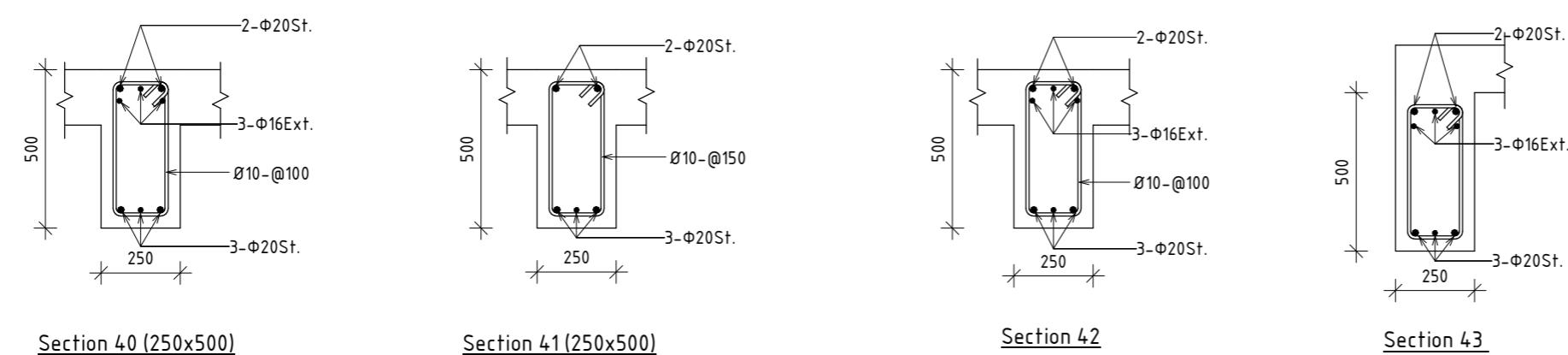
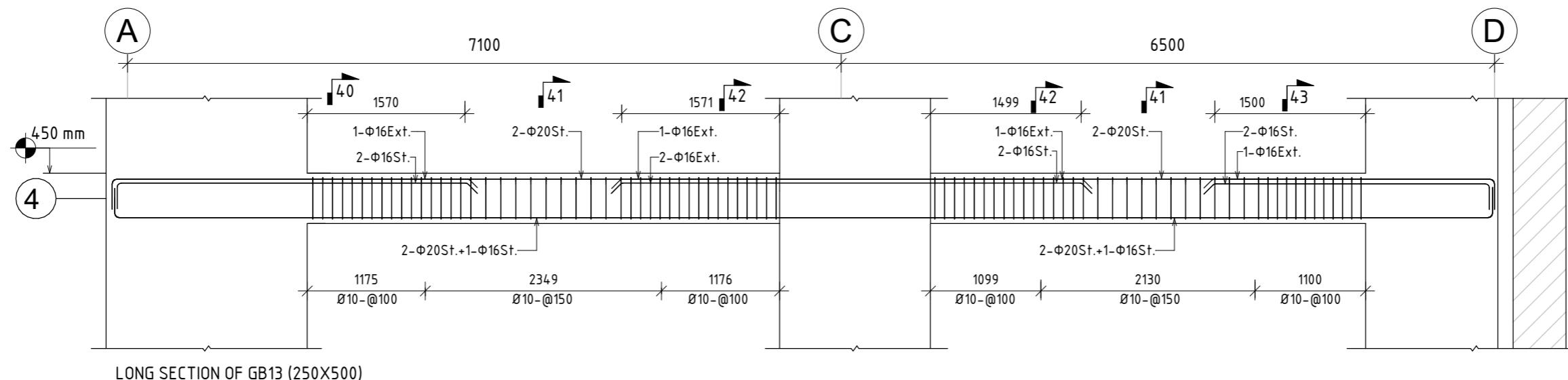
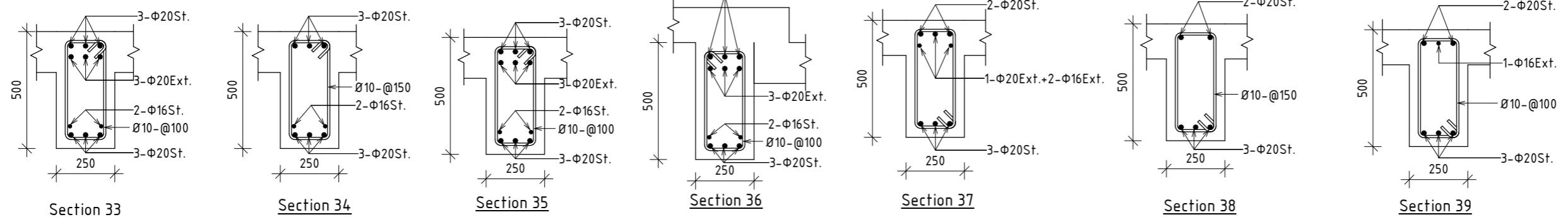
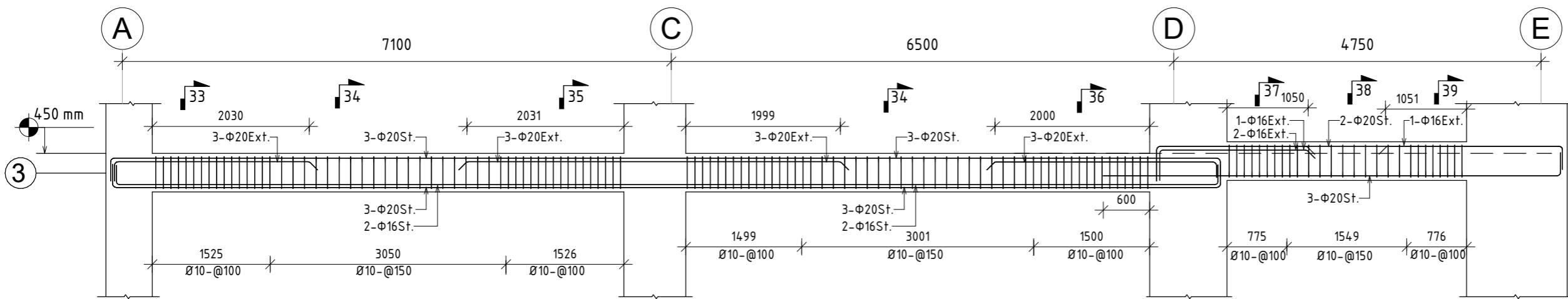
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**CONSTRUCTION**



**Code - 2105 G**

CLIENT



Chittogram Water Supply & Sewerage Authority  
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No. DRAWING TITLE

BEAM SECTION DETAILS

SCALE:

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Team Leader

**DR.M SHAMIM Z. BOSUNIA**

P.H.D, UK  
M.Sc. in civil (BUEET)  
B.Sc in civil (BUEET)

Deputy Team Leader

**Engr. Rana Masud**

M. Eng. in Civil Building (AIT, THAILAND)

B.Sc in Civil (RUEL)

M. ASCE, MIEB (M-26157)

Design Team

Drawing Preparation

**Md. Hazzaz Mia**

Architectural Drawing Detailer

**Md. Shahriar Rahman**

Structural Drawing Detailer

Drawing TYPE

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STRUCTURAL	<input checked="" type="checkbox"/>
MEP	<input type="checkbox"/>

CHECKED BY

APPROVAL CLIENT

INFORMATION

APPROVAL

CONSTRUCTION

DATE	DWG NO.	SHEET NO.	REV
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16-NOV-2022	2105 G-02-116	MD-S-34	0
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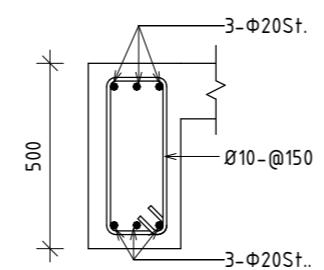
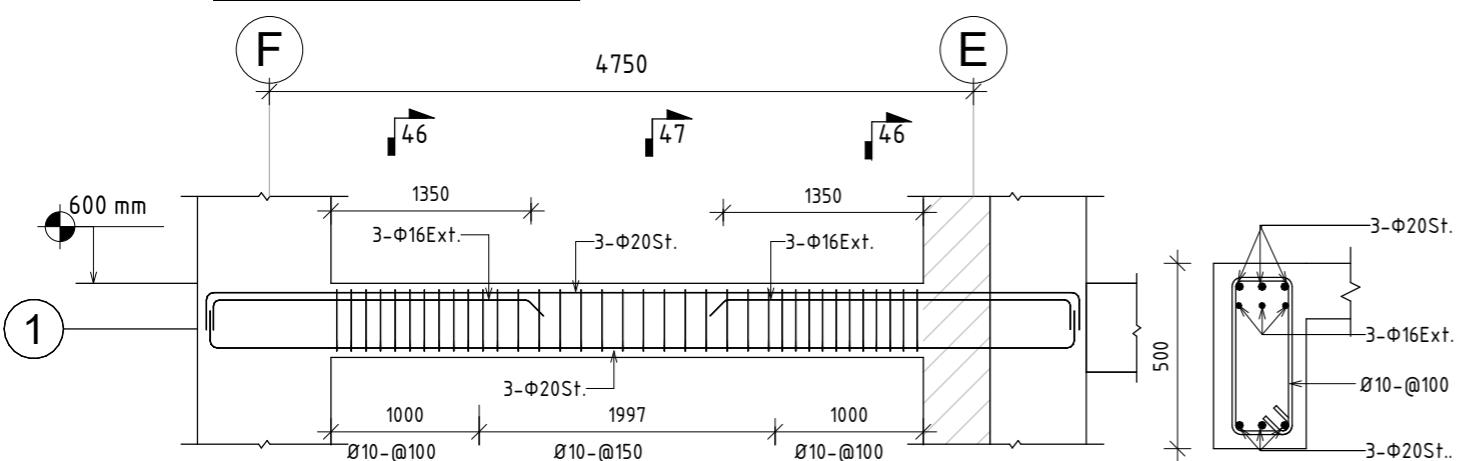
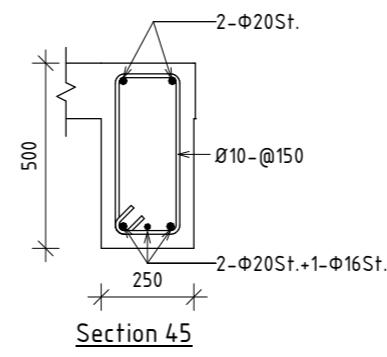
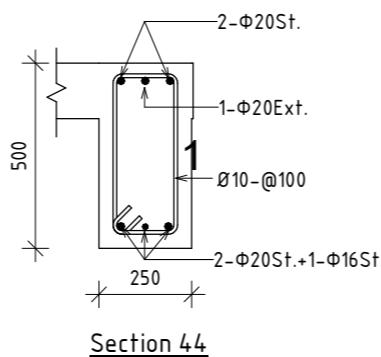
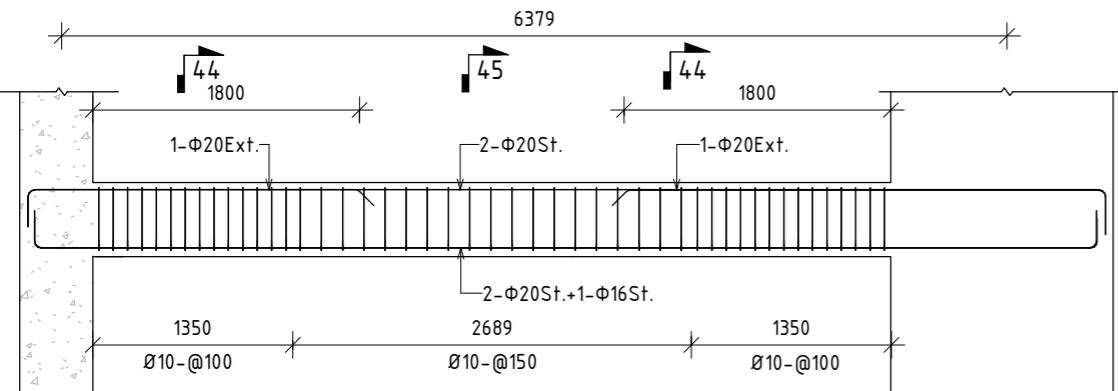
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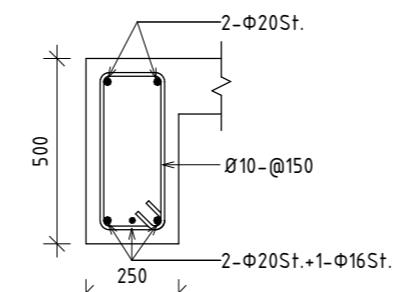
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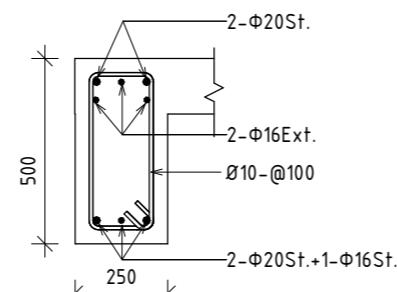
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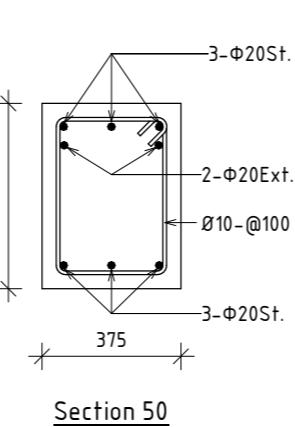
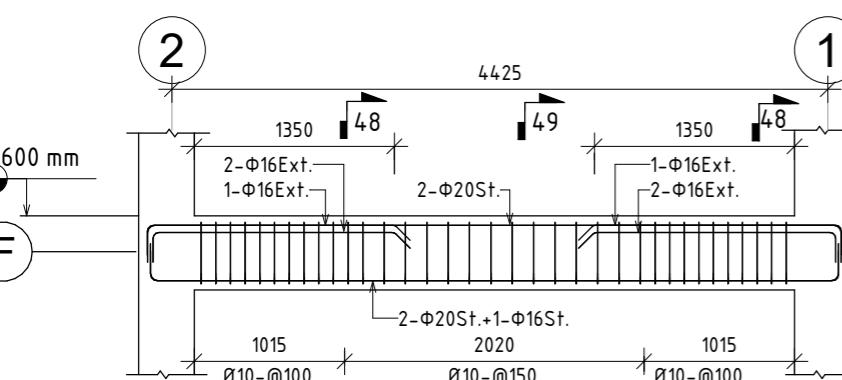
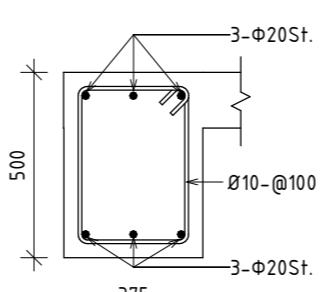
Section 47



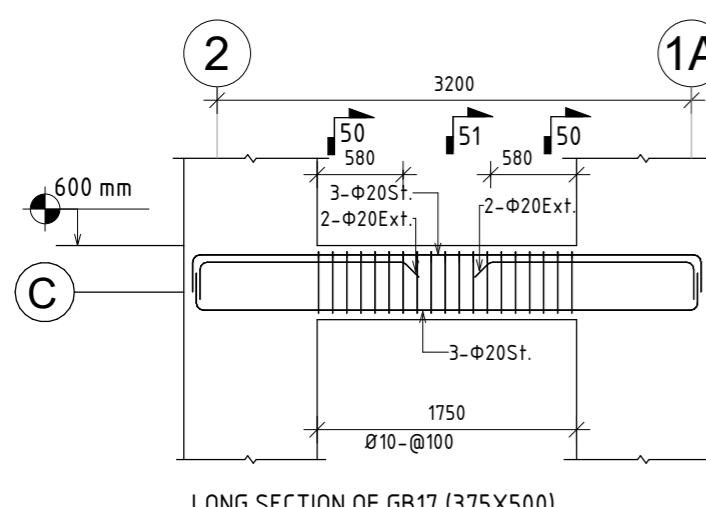
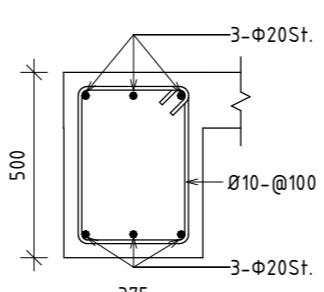
Section 48



Section 49



Section 51





Chittogram Water Supply & Sewerage Authority  
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Email: makshudcharchal@yahoo.com

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Engr. Rana Masud  
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M. ASCE, MIEB (M-26157)

Architectural Drawing Detailer

Structural Drawing Detailer

ARCHITECTURAL  
 STRUCTURAL  
 MEP

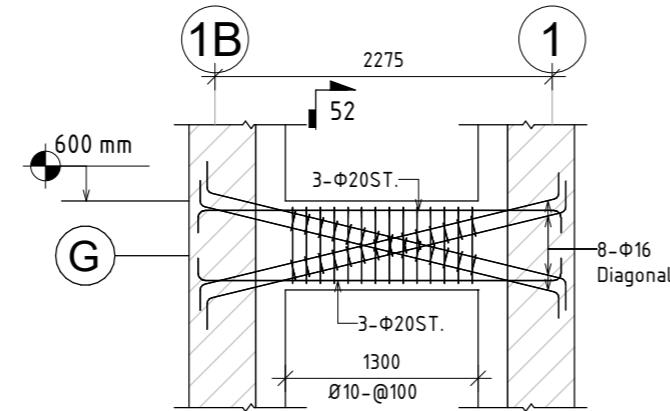
DATE	DWG NO.	SHEET NO.	REV

16-NOV-2022	2105 G-02-116	MD-S-35	0
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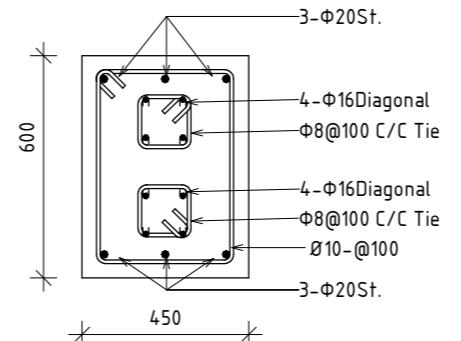
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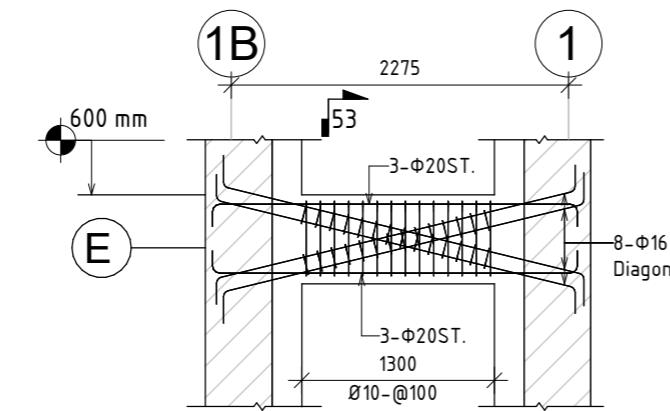
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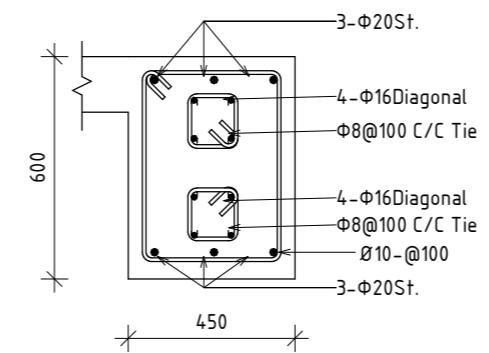
LONG SECTION OF GB18 (450X600)



Section 52



LONG SECTION OF GB19 (450X600)



Section 53