Provincial Government
Sudurpaschim Province
Ministry of Social Development
Dhangadhi, Kailali

प्रदेश सरकार
सुदूरपश्चिम प्रदेश
सामाजिक विकास मन्त्रालय
कैलाली, नेपाल
२०७४

धनगढी उप-महानगरपालिका
नगर कार्यपालिकाको कार्यालय
धनगढी, कैलाली
सुदूरपश्चिम प्रदेश, नेपाल

FINAL REPORT

Detail Engineering Design & Cost Estimate of Two Room School Building (Terai Region)

DRAWING REPORT

Volume II

2076B.S.

Submitted By:

Durga Engineering Construction and Consult Nepal Pvt. Ltd.

Doti

दुर्गा इन्जिनियरिङ्ग कन्स्ट्रक्सन एण्ड कन्सल्ट नेपाल प्रा.लि.
DECCN
आदर्श गा.पा.-२, डोटी

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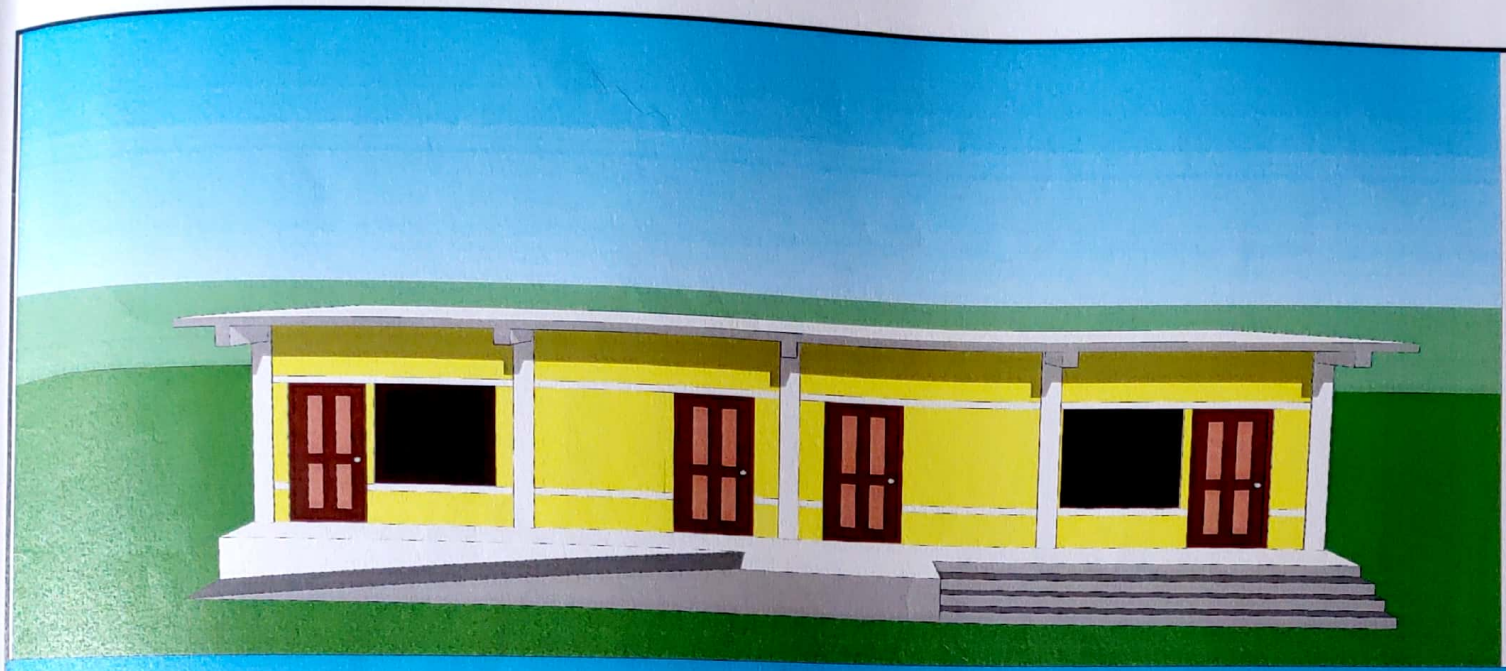

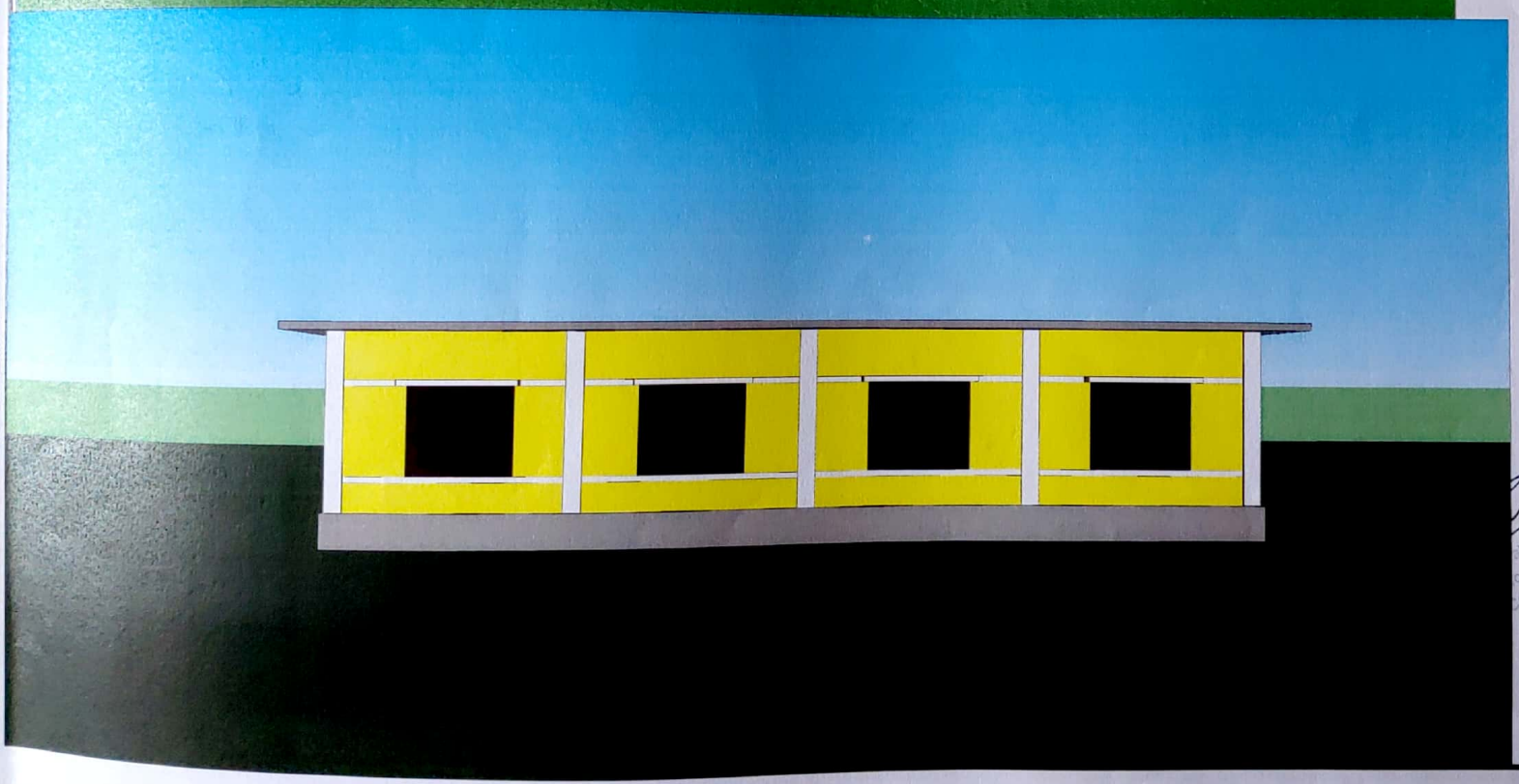

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धनगढी, कैलाली
कार्यालय
सुदूरपश्चिम प्रदेश, नेपाल

प्रदेश सरकार
सुदूरपश्चिम प्रदेश
सामाजिक विकास मन्त्रालय
कैलाली, नेपाल
२०७४

Er. Upendra Prasad Bhatta
NEC Regd. No: 13339"Civil"
Category: "A"

डिभिजनल इन्जिनियर

CLINT:

Provincial Government
Sudurpashim Provience
Ministry of Social Development
Dhangadhi Kailali .

Name Of Consultant :

Durga Engineering Construction & Consult Nepal Pvt Ltd., Doti

Name Of Project:	Two Room School Building
Building Area:- 810.00 square ft.	Checked By:
Firm's Stamp:	Drawn By:
Scale: 1" = 8'-0"	Details : ELEVATION
Date:- 2020	Sheet No:- A A

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धनगढी उप-महानगरपालिका
मेयर धनगढी, कैलाली
सुदूरपश्चिम प्रदेश, नेपाल

प्रदेश सरकार
सुदूरपश्चिम प्रदेश
सामाजिक विकास मन्त्रालय
कैलाली, नेपाल
२०७४

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Ministry of Social Development
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Building Area:- 810.00 square ft.	Checked By:
Firm's Stamp:	Drawn By:
Scale: 1" = 6'-0"	Details : ELEVATION
Date:- 2020	Sheet No:-

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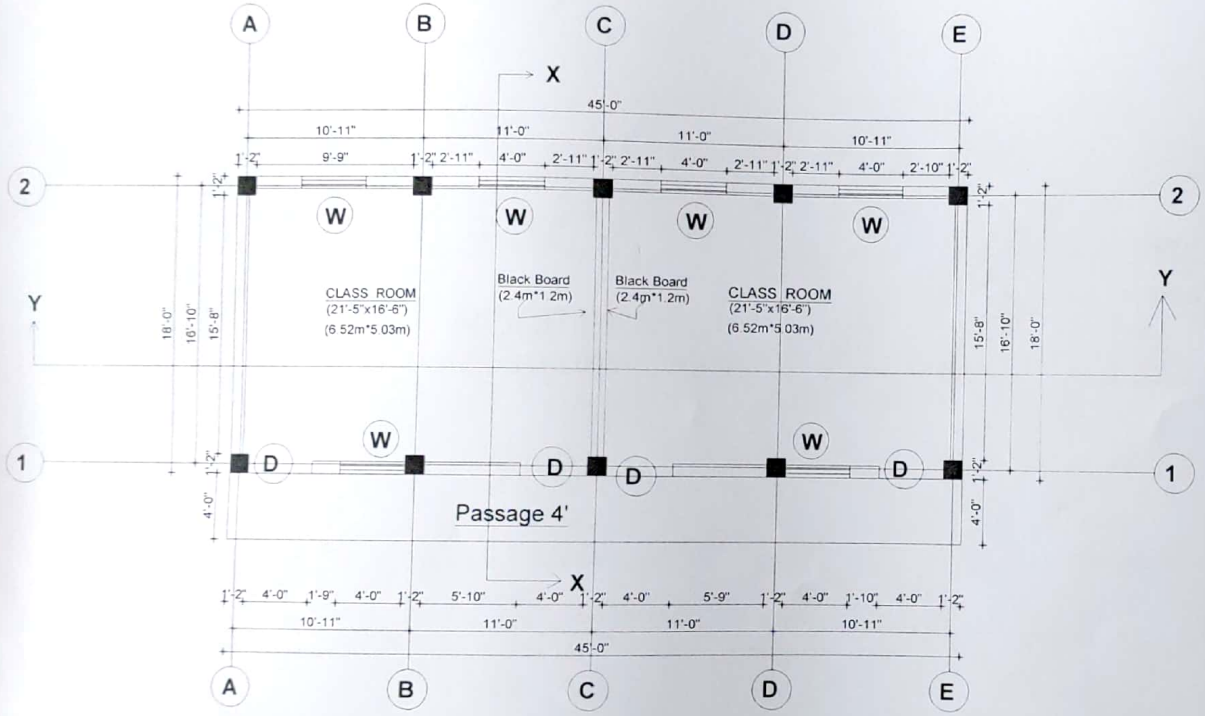
Brick



GROUND FLOOR PLAN

(AREA:-810.00 SQ.FT)

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सुदूरपश्चिम प्रदेश
सामाजिक विकास मन्त्रालय
कैलाली, नेपाल
२०७४

Er. Upendra Prasad Bhatta
NEC Regd. No: 13339"Civil"
Category: "A"

डिभिजनल इन्जिनियर

CLINT:

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Sudurpashim Provience
Ministry of Social Development
Dhangadhi Kailali .

Name Of Consultant:

Durga Engineering Construction & Consult Nepal Pvt Ltd., Doti

Name Of Project:	Two Room School Building
Building Area:- 810.00 square ft	Checked By: Er. Deepak Upadhyay (Nec Regd No - 16289 civil 'A')
Firm's Stamp:	Drawan By: Sudip Chaudhary
Scale: 1" = 8'-0"	Details: Site Plan
Date:- 2020	Sheet No:- A 1

Er. Deepak Upadhyay
NEC No. 16289 Civil
Category "A"

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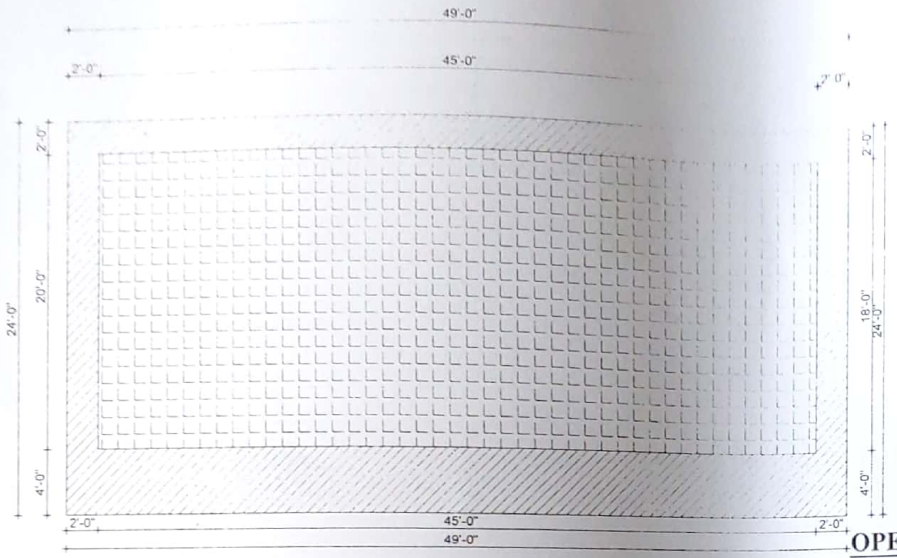
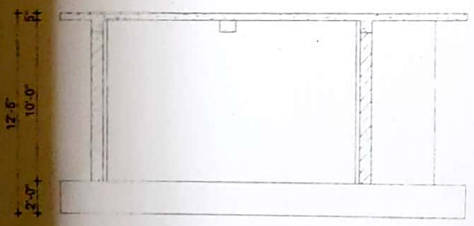


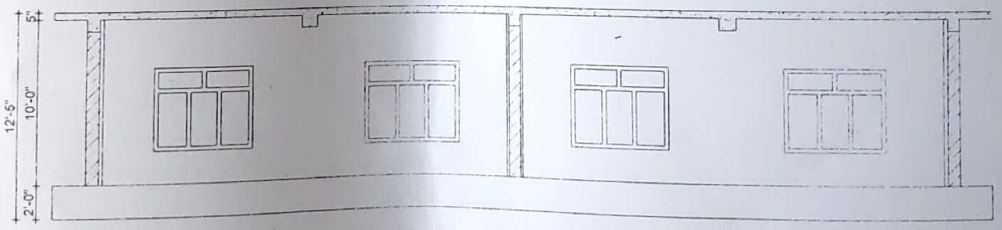
ROOF PLAN
(AREA:-1176.000SQ.FT)

OPENINGS SCHEDULE

S.N.	SYM.	PARTICULAR	WIDTH	HEIGHT	NOS.
1.	D	DOOR	4'-0"	7'-0"	4
2.	W	WINDOW	4'-0"	5'-0"	6



SECTION AT X-X



SECTION AT Y-Y

सुदूरपश्चिम प्रदेश सामाजिक विकास मन्त्रालय कैलाली, नेपाल २०७४

Er. Deepak Upadhyay
NEC No. 16269 'Civil'
Category "A"

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धनगढी उप-महानगरपालिका नगर कार्यपालिकाको कार्यालय धनगढी, कैलाली सुदूरपश्चिम प्रदेश, नेपाल

Er. Upendra Prasad Bhatta
NEC Regd. No: 13339 "Civil"
Category: "A"

सिभिल इन्जिनियर

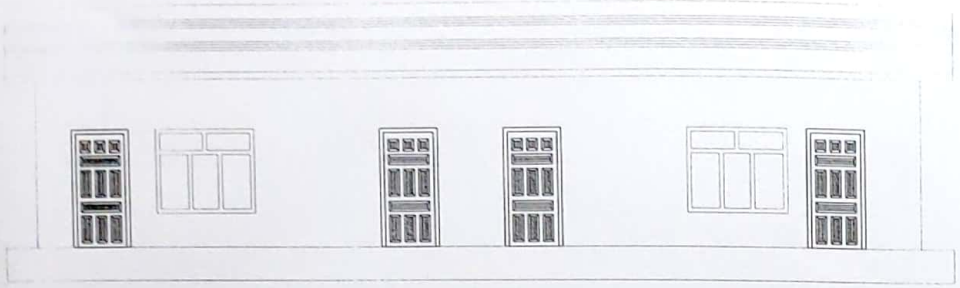
(Structural Analysis 2 Storey)

CLIENT:
Provincial Government
Sudurpashim Provience
Ministry of Social Development
Dhangadhi Kailali .

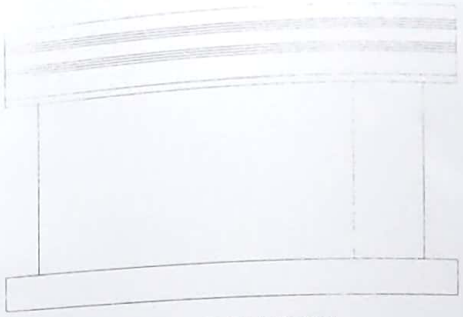
Name of Consultant:
Durga Engineering Construction & Consult Nepal Pvt Ltd., Doti

Name Of Project:	Two Room School Building
Building Area:- 810.00 square ft.	Checked By: Er. Deepak Upadhyay Nec Regd No - 16269 Civil A
Firm's Stamp:	Drawan By: Sudip Chaudhary
Scale: 1" = 8'-0"	Details: ROOF PLAN & SECTION
Date:- 2020	Sheet No:- A 2

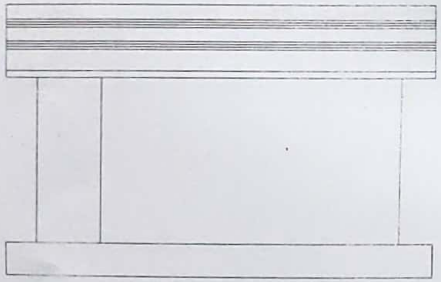
Scanned with CamScanner



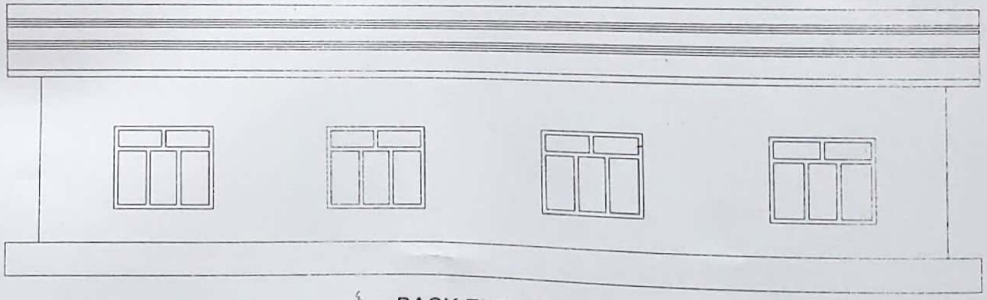
FRONT ELEVATION



WEST ELEVATION



EAST ELEVATION



BACK ELEVATION

सुदूरपश्चिम प्रदेश सरकार
सामाजिक विकास मन्त्रालय
कैलाली, नेपाल
२०७४

Er. Upendra Prasad Bhatta
NEC Regd. No: 13339 'Civil'
Category "A"

Er. Deepak Upadhyay
NEC No. 16269 'Civil'
Category "A"

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धनगढी उप-महानगरपालिका
नगर कार्यपालिकाको कार्यालय
धनगढी, कैलाली
सुदूरपश्चिम प्रदेश, नेपाल

सिभिल इन्जिनियर

CLIENT:

Provincial Government
Sudurpashim Provience
Ministry of Social Development
Dhangadhi Kailali .

Name Of Consultant :

Durga Engineering Construction & Consult Nepal Pvt Ltd., Doti

Name Of Project:	Two Room School Building
Building Area:- 810.00 square ft.	Checked By: Er. Deepak Upadhyay Nec Regd No. : 16269 civil 'A'
Firm's Stamp:	Drawan By: Sudip Chaudhary
Scale: 1" = 8'-0"	Details : ELEVATION
Date:- 2020	Sheet No:- A 3

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Note -

1) Concrete grade for all the R.C.C. work shall be of M20(1:1 $\frac{1}{2}$:3)

2) Mortar mix for all brick works shall be 1:4

3) Minimum clear cover for slab, beam, column and foundation shall be 15mm, 25mm, 40mm and 50mm respectively.

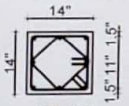
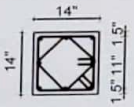
4) The Formwork should be removed only after 24 hours of Concreting. The curing of Columns should be carried properly by putting water on column surfaces for minimum 7 days. Jute bags can be used to cover the Column surfaces during curing to keep the surfaces wet.

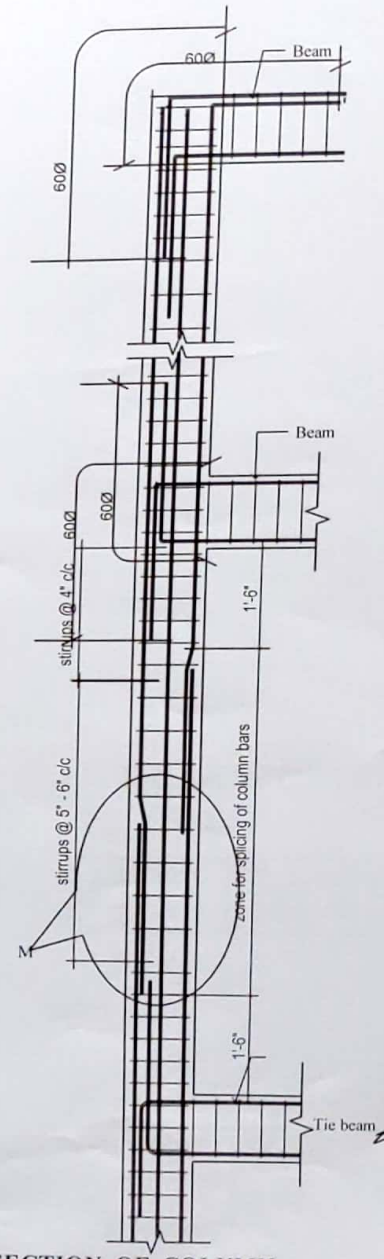
5) Shear key of size 100 x 100 x 100 mm should be provided at the top surface of the Column to avoid cold joint between old and new concrete and to strengthen the Column.

6) According to soil type round the foundation, it is adopted for medium foundation according to NBC 205.

COLUMN DETAIL

Steel grade : Fe415 SCALE:1"=8/3'-0"

	Type	Concrete grade	Lateral Ties		C1
			IN (h+z)	IN (H-2h)	
			End Ties	Mid Ties	
Column (For Ground floor)		M20	ø8@4"c/c	8ø@6"c/c	 4-20+4-16mm
Column (For First floor)		M20	ø8@4"c/c	8ø@6"c/c	 4-20+4-16mm



L- SECTION OF COLUMN WITH LAPPING

Scale- (1" = 2'-0")

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धनगढी उप-महानगरपालिका नगर कार्यपालिकाको कार्यालय धनगढी, कैलाली सुदूरपश्चिम प्रदेश, नेपाल

Er. Upendra Prasad Bhatta NEC Regd. No: 13339 Civil Category: "A"

डिभिजनल इन्जिनियर

CLINT:

Provincial Government Sudurpashim Provience Ministry of Social Development Dhangadhi Kailali .

Name Of Consultant:

Durga Engineering Construction & Consult Nepal Pvt Ltd., Doti

Er. Deepak Upadhyay NEC No. 16289 Civil Category "A"

Name Of Project:	Two Room School Building
Building Area:- 810.00 square ft.	Checked By: Er. Deepak Upadhyay Nec Regd No:- 16289 civil 'A'
Firm's Stamp:	Drawan By: Sudip Chaudhary
Scale: 1" = 8'-0"	Details : REINFORCEMENT DETAILS
Date:- 2020	Sheet No:- S 1

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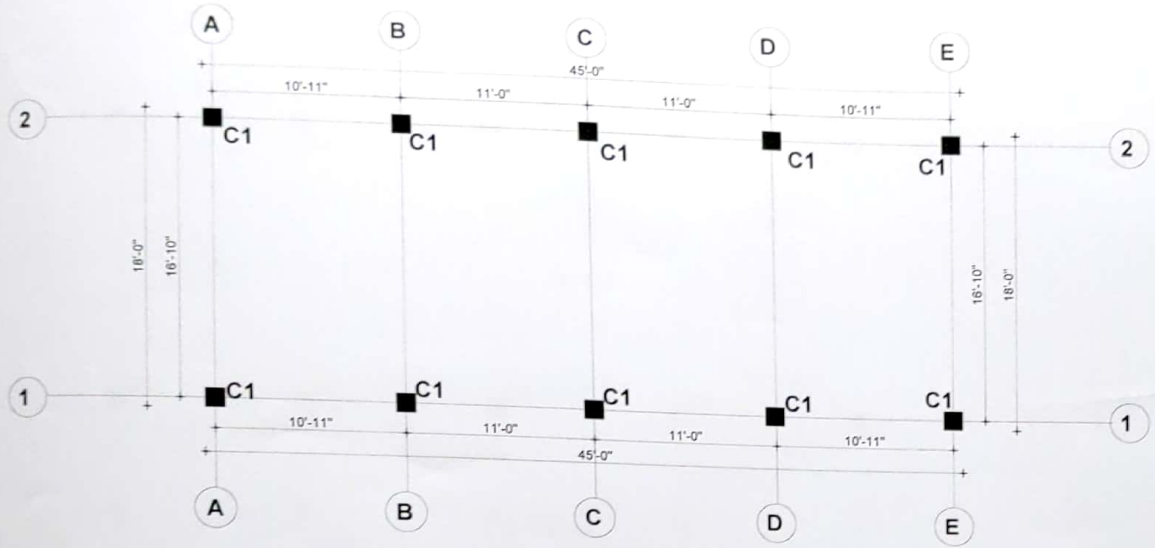
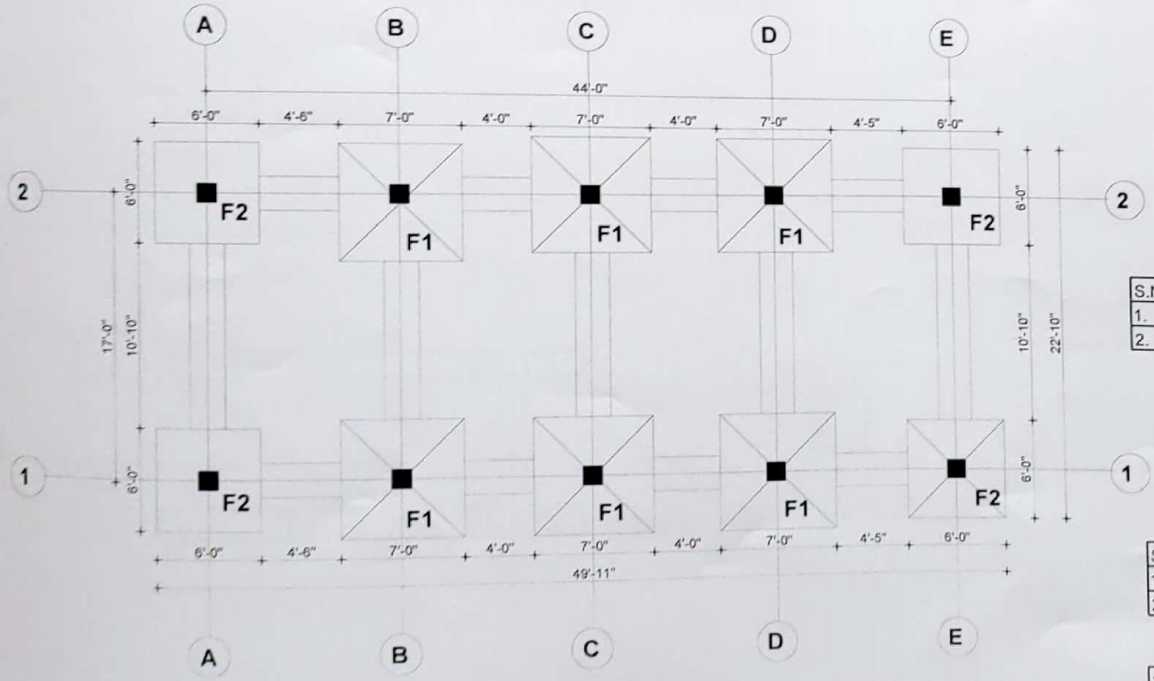


LAYOUT PLAN



TRENCH PLAN

TRENCH DETAIL

SBC=80KN/M2

S.N.	SYMBOL	SIZE	DEPTH
1.	F1	7'-0"*7'-0"	5'-0"
2.	F2	6'-0"*6'-0"	5'-0"

SBC=100KN/M2

S.N.	SYMBOL	SIZE	DEPTH
1.	F1	6'-6"*6'-6"	5'-0"
2.	F2	5'-6"*5'-6"	5'-0"

SBC=150KN/M2

S.N.	SYMBOL	SIZE	DEPTH
1.	F1	5'-6"*5'-6"	5'-0"
2.	F2	5'-0"*5'-0"	5'-0"

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Sudurpashim Provience
Ministry of Social Development
Dhangadhi Kailali .

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Firm's Stamp:	Drawan By: Sudip Chaudhary
Scale: 1" = 8'-0"	Details : LAYOUT & TRENCH PLAN
Date:- 2020	Sheet No:- S 2

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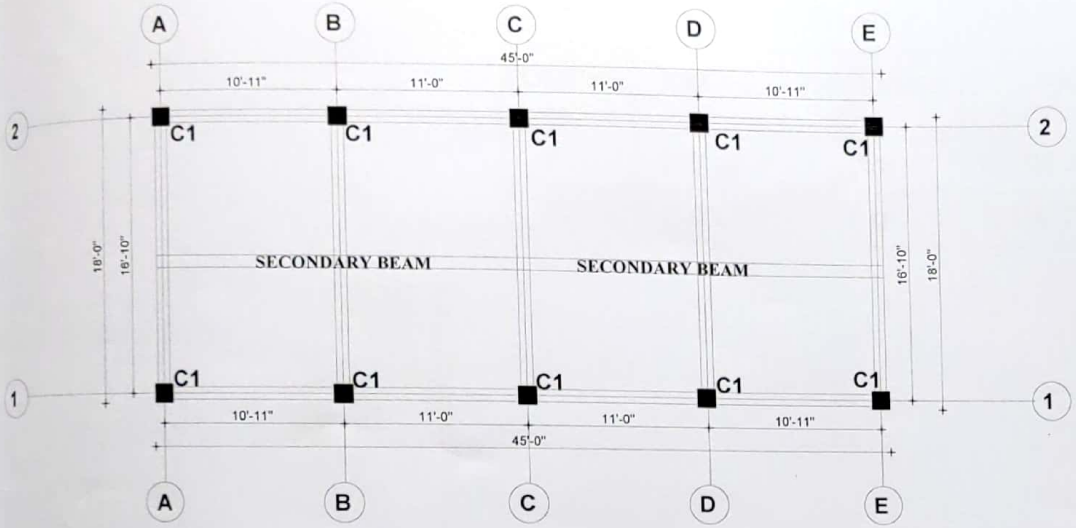
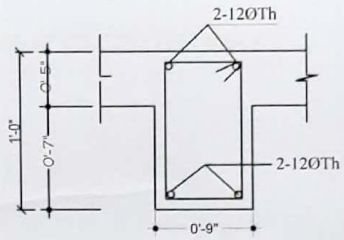
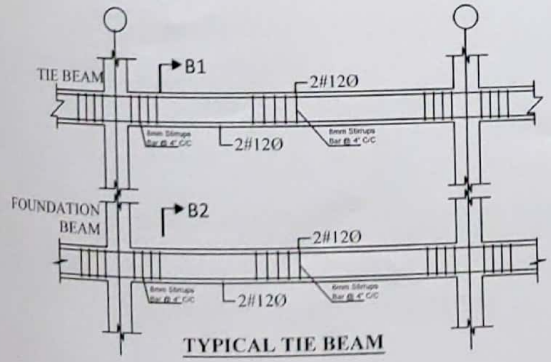


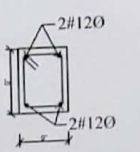
COLUMN BEAM PLAN



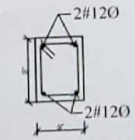
SECTION
Secondary Beam



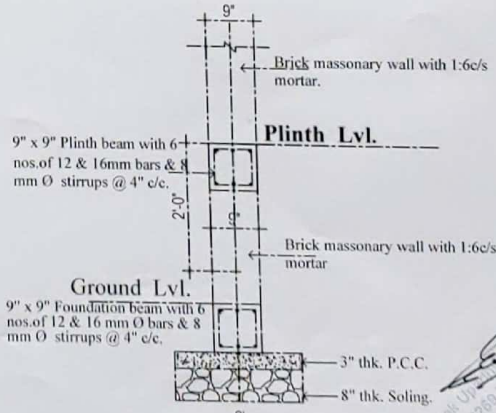
TYPICAL TIE BEAM



SECTION OF FOUNDATION TIE BEAM AT B2-B2



SECTION OF PLINTH TIE BEAM AT B1-B1



TOE WALL SECTION

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CLINT:
Provincial Government
Sudurpashim Provience
Ministry of Social Development
Dhangadhi Kailali .

Name Of Consultant:
Durga Engineering Construction & Consult Nepal Pvt Ltd., Doti

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Building Area:- 810.00 square ft.	Checked By: Er. Deepak Upadhyay
Firm's Stamp:	Drawan By: Sudip Chaudhary
Scale: 1" = 8'-0"	Details: COLUMN BEAM PLAN
Date:- 2020	Sheet No:- S 3

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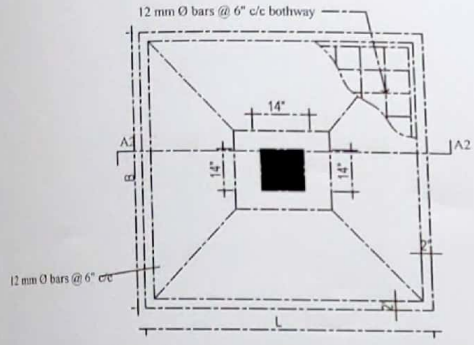
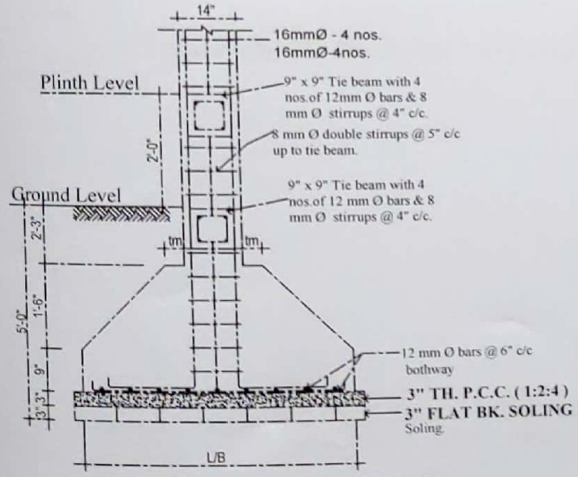
FOOTING ID	LxB	THICKNESS tm	REINFORCEMENT BOTH WAY
F1	6'-0"x6'-0"	1'-0"	12 MM DIA. @ 6" C/ C BOTH WAY
F2	7'-0"x7'-0"	1'-0"	12 MM DIA. @ 6" C/ C BOTH WAY



COMMON FOOTING PLAN



COMMON FOOTING SECTION

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धनगढी उप-महानगरपालिका
नगर कार्यपालिकाको कार्यालय
धनगढी, कैलाली
सुदूरपश्चिम प्रदेश, नेपाल

Category: "A"

डिभिजनल इन्जिनियर

CLINT:

Provincial Government
Sudurpashim Provience
Ministry of Social Development
Dhangadhi Kailali .

Name Of Consultant :

Durga Engineering Construction & Consult Nepal Pvt Ltd., Doti

Name Of Project: Two Room School Building

Building Area:- 810.00 square ft.	Checked By: Er. Deepak Upadhyay Nec Regd No - 16269 civil 'A'
Firm's Stamp:	Drawan By: Sudip Chaudhary
Scale: 1" = 8'-0"	Details : FOUNDATION DETAILS
Date:- 2020	Sheet No:- S 4

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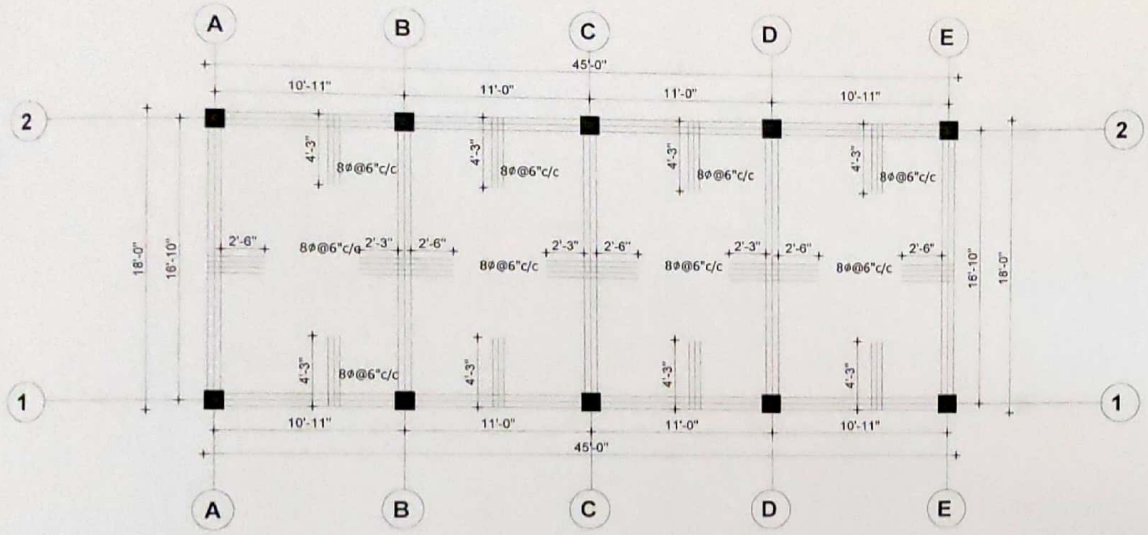
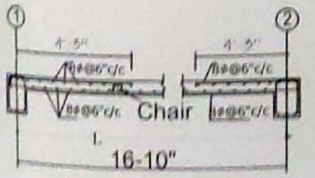
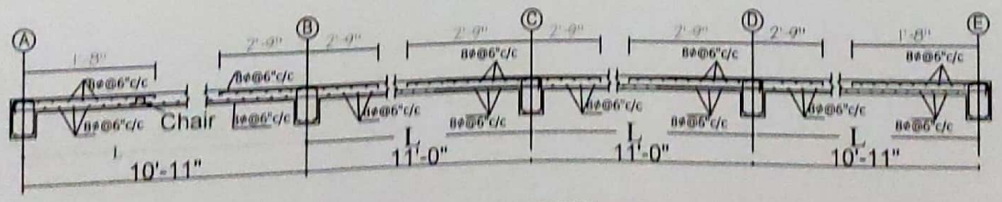


Slab Reinforcement Top Bar Plan



SLAB SECTION AT X-X



SLAB SECTION AT Y-Y

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Provincial Government
Sudurpashim Provience
Ministry of Social Development
Dhangadhi Kailali .

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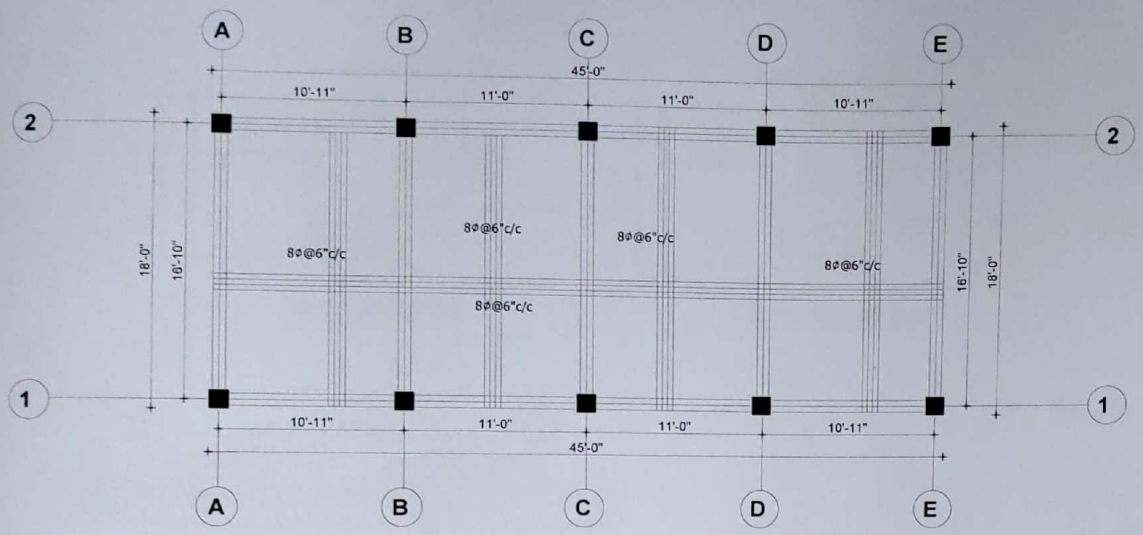
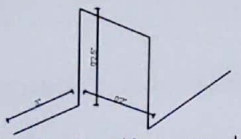
Firm's Stamp	Drawan By: Sudip Chaudhary
Scale: 1" = 8'-0"	Details: SLAB DETAILS
Date:- 2020	Sheet No:- S 5

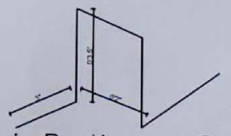
Scanned with CamScanner



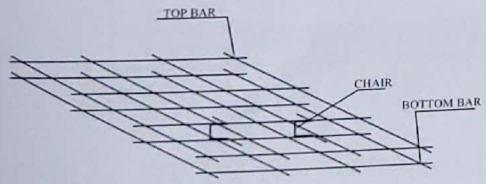
Slab Reinforcement Bottom Bar Plan



8mm dia Chair Resting on bottom bars



8mm dia Chair Resting on Slab formworks



CHAIR DETAIL
SCALE: 1"=2'0"

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सुदूरपश्चिम प्रदेश
सामाजिक विकास मन्त्रालय
कैलाली

धनगढी उप-महानगरपालिका
नगर कार्यपालिकाको कार्यालय
धनगढी, कैलाली
सुदूरपश्चिम प्रदेश, नेपाल

Er. Prasad Bhatta
NEC Regd No: 13339 "Civil"
Category: "A"

डिभिजनल इन्जिनियर

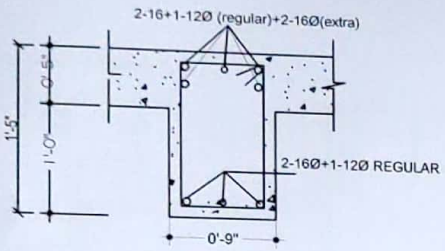
CLINT:
Provincial Government
Sudurpashim Provience
Ministry of Social Development
Dhangadhi Kailali .

Name Of Consultant:
Durga Engineering Construction & Consult Nepal Pvt Ltd., Doti

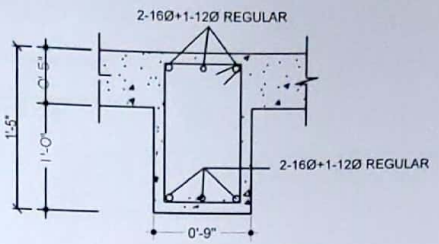
Er. Deepak Upadhyay
NEC No. 16269 "Civil"
Category "A"

Name Of Project:	Two Room School Building
Building Area:- 810.00 square ft	Checked By: Er. Deepak Upadhyay Nec Regd No:- 16269 civil 'A'
Firm's Stamp:	Drawan By: Sudip Chaudhary
Scale: 1" = 8'-0"	Details : SLAB DETAILS
Date:- 2020	Sheet No:- S 6

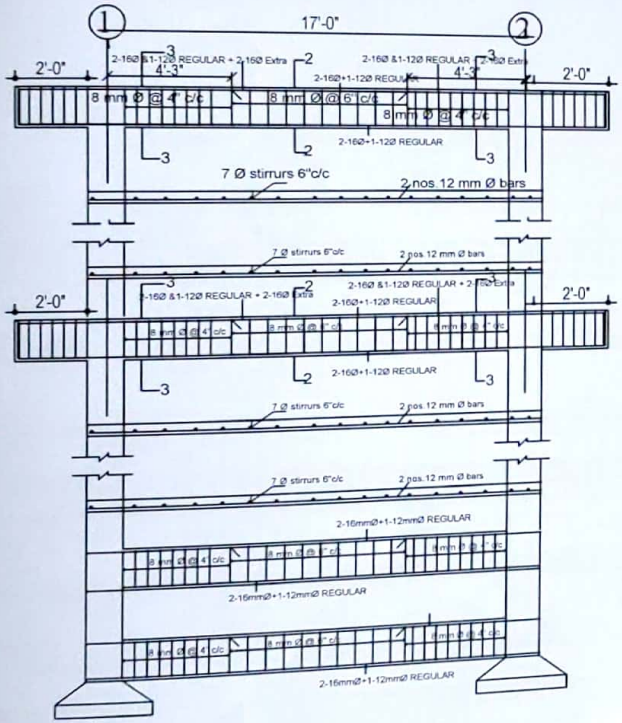
Scanned with CamScanner



SECTION AT 3-3



SECTION AT 2-2



TYPICAL BEAM SECTION ALONG GRID X-X

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Upendra Prasad Bhatta
Regd. No: 13339 Civil
Category: "A"

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Sudurpashim Provience
Ministry of Social Development
Dhangadhi Kailali

Name Of Consultant:

Durga Engineering Construction
& Consult Nepal Pvt Ltd., Doti

Er. Deepak Upadhyay
NEC No. 10269 Civil
Category "A"

Name Of Project:	Two Room School Building
Building Area:- 810. square ft.	Checked By: Er. Deepak Upadhyay Nec Regd No.: 10269 civil "A"
Firm's Stamp:	Drawan By: Sudip Chaudhary
Scale: 1" = 8'-0"	Details: TYPICAL BEAM
Date:- 2020	Sheet No:- S 7

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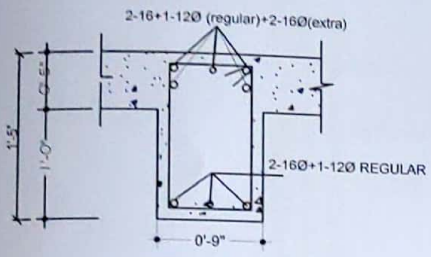
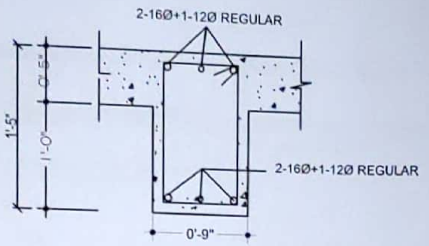


SECTION AT 3-3



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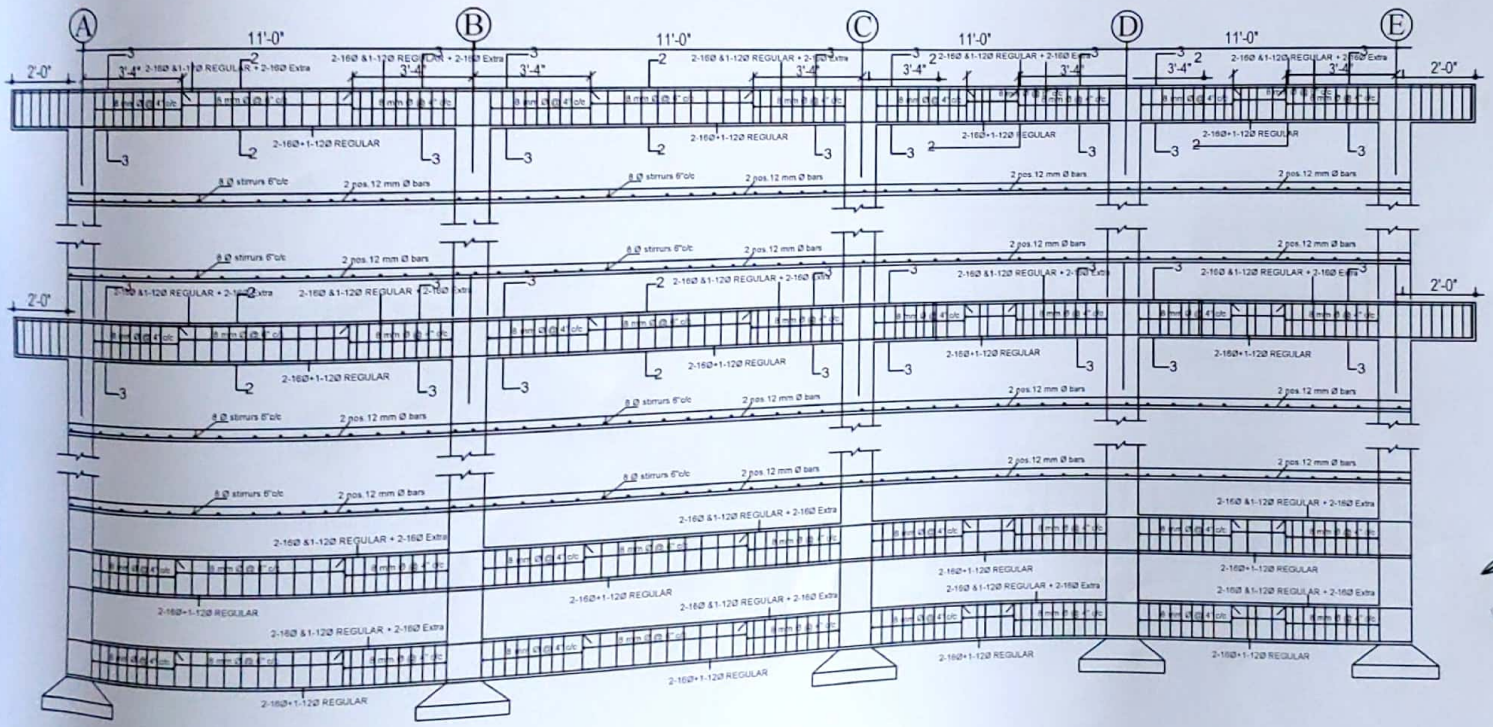

TYPICAL BEAM SECTION ALONG GRID Y-Y

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Dhangadhi Kailali .

Name Of Consultant :

Durga Engineering Construction & Consult Nepal Pvt Ltd., Doti

Name Of Project:	Two Room School Building
Building Area:- 810.00square ft.	Checked By: Er. Deepak Upadhyay
Firm's Stamp:	Drawan By: Sudip Chaudhary
Scale: 1" = 8'-0"	Details : TYPICAL BEAM
Date:- 2020	Sheet No:- S 8

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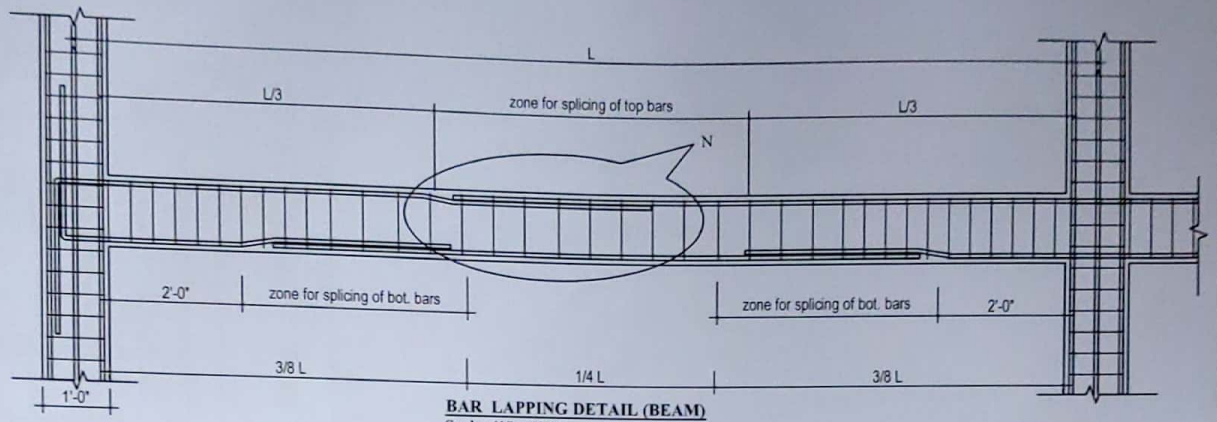
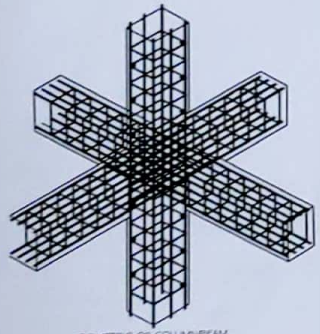
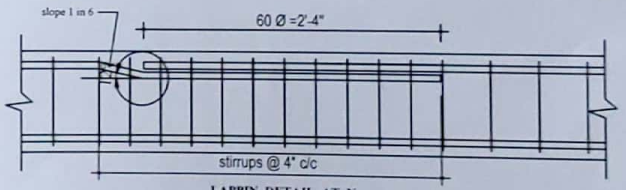


BAR LAPPING DETAIL (BEAM)
Scale- (1" = 2'-0")

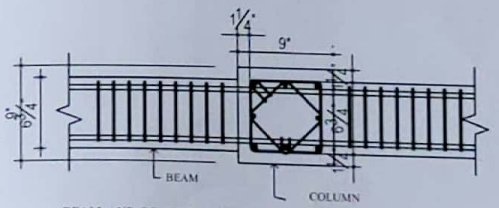
DETAIL AT A



ISOMETRIC OF COLUMN/BEAM JOINT REINFORCEMENT DETAIL



LAPPIN DETAIL AT N
(Scale-1" = 1'-0")



BEAM AND COLUMN JUNCTION DETAIL (12" x 12") COLUMN
(Scale-1" = 1'-0")

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Firm's Stamp:	Drawan By: Sudip Chaudhary
Scale: 1" = 8'-0"	Details : LAPPING DETAILS
Date:- 2020	Sheet No:- S 9

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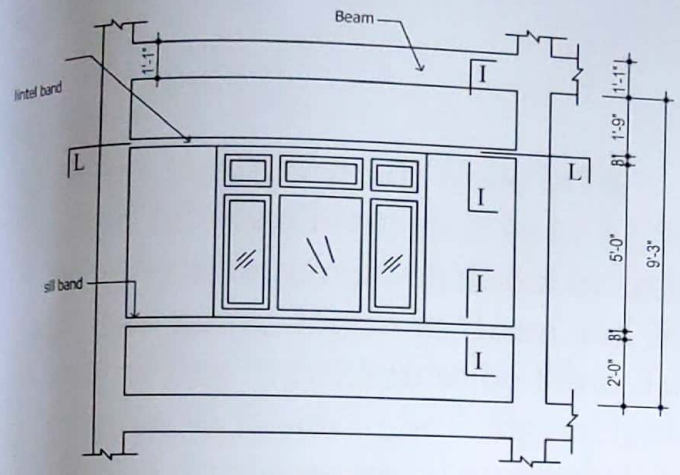
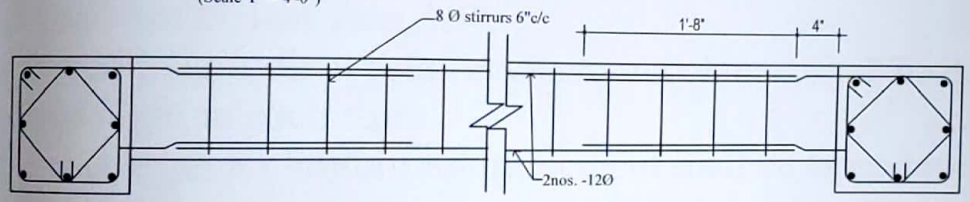
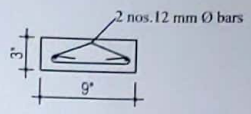


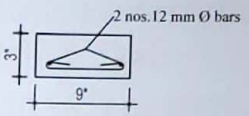
ELEVATION OF WALL
(Scale-1" = 4'-0")



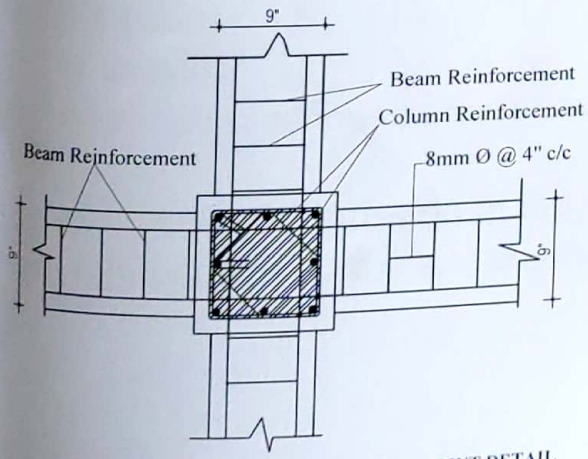
SECTION AT L-L
(Scale-1" = 1'-0")



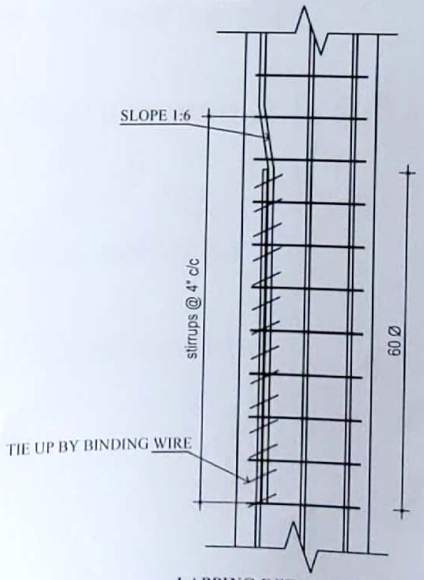
DETAIL OF SILL/PARAPET BAND AT I-I
(Scale-1" = 1'-0")



DETAIL OF LINTEL BAND AT I-I
(Scale-1" = 1'-0")



SECTIONAL PLAN OF BEAM COLUMN JOINT DETAIL
Scale- (1" = 1'-0")



LAPPING DETAIL AT M
(Scale-1" = 1'-0")

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Name Of Consultant:
Durga Engineering Construction & Consult Nepal Pvt Ltd., Doti

Name Of Project:	Two Room School Building
Building Area:- 810.00 square ft.	Checked By: Er. Deepak Upadhyay Nec Regd No.- 16269 civil 'A'
Firm's Stamp:	Drawan By: Sudip Chaudhary
Scale: 1" = 8'-0"	Details: SECTION DETAILS
Date:- 2020	Sheet No:- S 10

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Notes :-

1. Minimum concrete grade to be M20.
2. Grade of reinforcement steel to be FE500.
3. Cover to reinforcement shall not be less than 50mm in foundation, 40mm in column, 25mm in Beam and 20mm in Slab & Stair.
4. All lateral ties in column to be 8mm dia. at 100mm (4") centers.
5. All stirrups in Beam to be 2 legged 8 mm dia
6. Hooks in lateral ties and stirrups shall be bent at 135°and hook length shall not be less than 3.5".
7. Lapping of longitudinal reinforcement in columns shall be done at the mid hight in each story.
8. In Beam & Slab no bottom reinforcement shall be lapped near mid-span and no top reiinforcement shall be lapped near support.
9. All chairs in slab to be 10mm at 500mm.
10. Development / lap length (ld.) for bars. (for M20 concrete & fe 500)

BAR DIA-(mm)	8	10	12	16	20	25	28	32
Ld(inch)	18	22	26	35	45	55	65	75

10. Only written dimensions to be followed, drawings not to be measured.
11. Any discrepancy or omission in the drawing if found shall be reported immediately to the site engineer.

Er. Deepak Upadhyay
NEC No. 16289 'Civil'
Category "A"

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प्रदेश सरकार
सुदूरपश्चिम प्रदेश
सामाजिक विकास मन्त्रालय
कैलाली, नेपाल
२०७६

नगर कार्यपालिकाको कार्यालय
धनगढी, कैलाली
सुदूरपश्चिम प्रदेश, नेपाल

Er. Upendra Prasad Bhatta
NEC Regd. No: 13339"Civil"
Category: "A"

डिभिजनल इन्जिनियर

CLINT:
Provincial Government
Sudurpashim Provience
Ministry of Social Development
Dhangadhi Kailali .

Name Of Consultant:
Durga Engineering Construction & Consult Nepal Pvt Ltd., Doti

Name Of Project:	Two Room School Building
Building Area:- 810.00 square ft	Checked By: Er. Deepak Upadhyay (New Regd No.: 16289 civil 'A')
Firm's Stamp:	Drawan By: Sudip Chaudhary
Scale: 1" = 8'-0"	Details: NOTES
Date:- 2020	Sheet No:- S 10

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