

MIZORAM
HEALTH
SYSTEM
STRENGTHENING
PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT SAITUAL

SHEET TITLE:

FOUNDATION LAYOUT

SHEET No: SD/1

DATE: 15/10/2020

REVISION No: 1

Date of Revision: 7/12/2020

SCALE: Not to Scale

NOTE:

Please refer Sheet

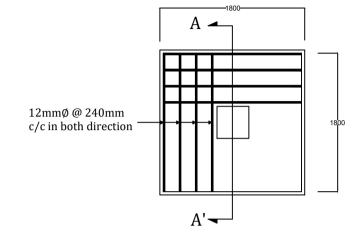
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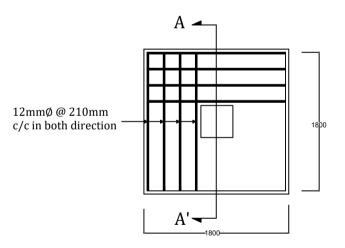
ROZAMPUIA STRUCTURE ENGINEER

Drawing By:

(C ZOTHANTLUANGA)
Assistant Engineer (CPHC/HWC)
National Health Mission
Mizoram : Aizawl



DETAILS OF TOP REINFORCEMENTS



DETAILS OF BOTTOM REINFORCEMENTS

FOOTING DETAIL

TYPICAL SECTION OF ISOLATE FOOTING (F2)

FOOTING	LxB	$T_{\rm f}$	T _t	Top Rft	. Along 'L'	Top Rft. Al	ong 'B'	Bottom R	ft. Along 'L'	Bottom Rft.	Along 'B'
MARKED	(mm)	(mm)	(mm)	D_1	N_1	D ₂	N ₂	D_1	N_1	D_2	N ₂
F2	1800 x 1800	200	450	12mmØ	8	12mmø	8	12mmØ	9	12mmØ	9

ALL DIMENSIONS ARE IN MM

PROJECT: MIZORAM HEALTH SYSTEM

STRENGTHENING PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT SAITUAL

SHEET TITLE:

DETAILS OF FOOTING (F2)

SHEET No: SD/2

DATE: 15/10/2020

REVISION No: 1

Date of Revision: 7/12/2020

SCALE: Not to Scale

NOTE:

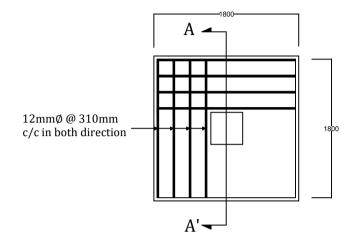
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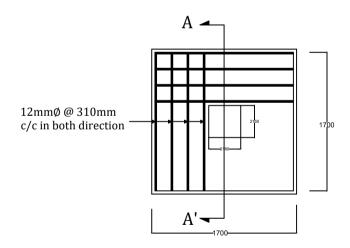
Design By:

ROZAMPUIA STRUCTURE ENGINEER

Drawing By :



DETAILS OF TOP REINFORCEMENTS



DETAILS OF BOTTOM REINFORCEMENTS

FOOTING DETAIL

TYPICAL SECTION OF ISOLATE FOOTING (F1)

FOOTING	LxB	$T_{\rm f}$	T _t	Top Rft	. Along 'L'	Top Rft. Al	ong 'B'	Bottom R	ft. Along 'L'	Bottom Rft.	Along 'B'
MARKED	(mm)	(mm)	(mm)	D_1	N_1	D_2	N ₂	D_1	N_1	D_2	N_2
F1	1700x1700	200	350	12mmø	6	12mmø	6	12mmØ	6	12mmø	6

ALL DIMENSIONS ARE IN MM

PROJECT: MIZORAM HEALTH SYSTEM STRENGTHENING

TITLE:

PROJECT

PROPOSED CMO OFFICE BUILDING AT SAITUAL

SHEET TITLE:

DETAILS OF FOOTING (F1)

SHEET No: SD/3

DATE: 15/10/2020

REVISION No: 1

Date of Revision: 7/12/2020

SCALE: Not to Scale

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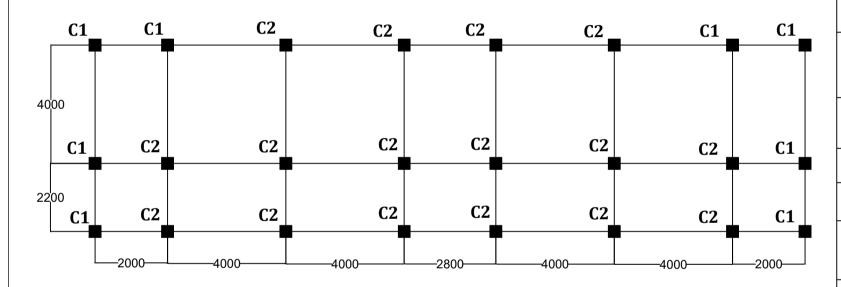
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no: SD/23

Design By:

ROZAMPUIA STRUCTURE ENGINEER

Drawing By:



MIZORAM HEALTH SYSTEM STRENGTHENING PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT SAITUAL

SHEET TITLE:

COLUMN LAYOUT AT +0.00 Lvl

SHEET No: SD/4

DATE: 15/10/2020

REVISION No: 1

Date of Revision:

7/12/2020

SCALE: Not to Scale

NOTE:

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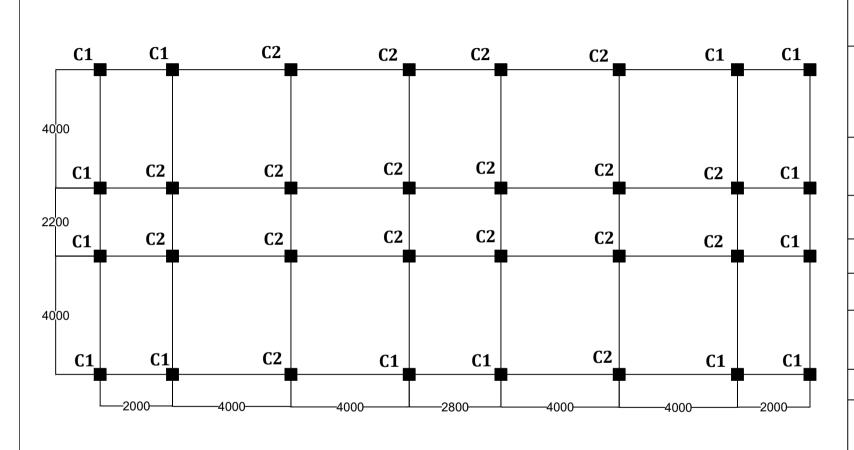
no: SD/23

Design By:

ROZAMPUIA STRUCTURE ENGINEER

Drawing By:

(C ZOTHANTLUANGA)
Assistant Engineer (CPHC/HWC)
National Health Mission
Mizoram : Aizawl



MIZORAM
HEALTH
SYSTEM
STRENGTHENING
PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT SAITUAL

SHEET TITLE:

COLUMN LAYOUT AT +3.20 Lvl; +6.40 Lvl; +9.60 Lvl; +12.80 Lvl.

SHEET No: SD/5

DATE: 15/10/2020

REVISION No: 1

Date of Revision: 7/12/2020

SCALE: Not to Scale

NOTE:

Please refer Sheet

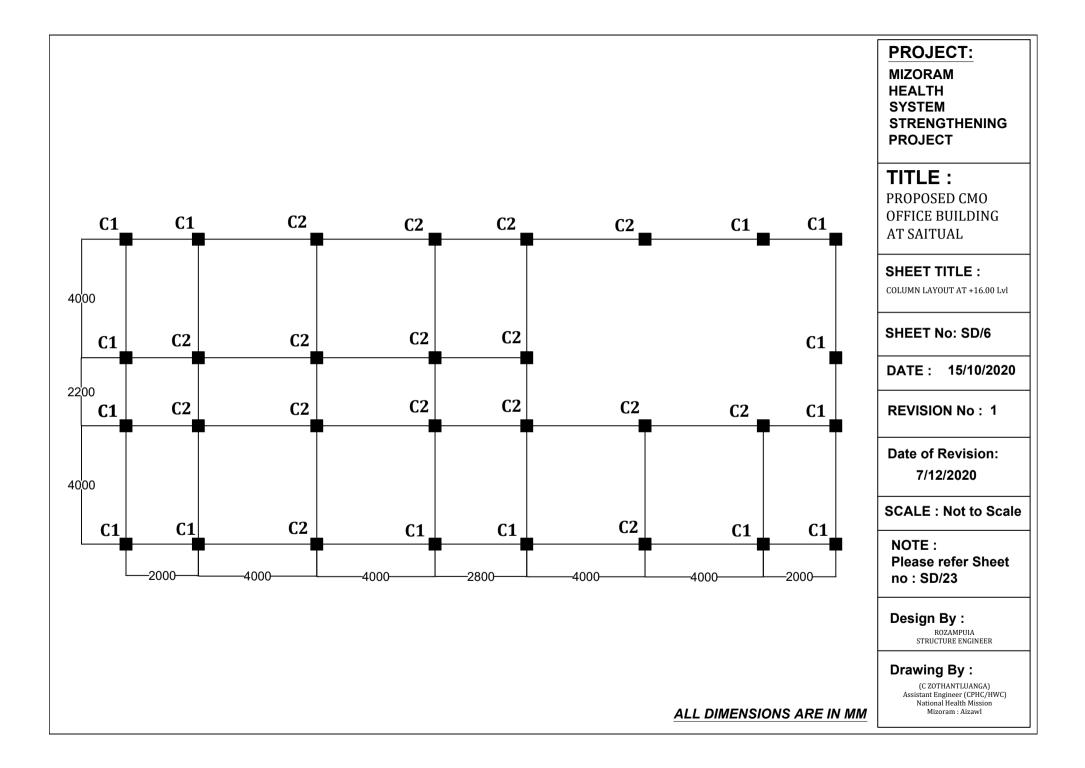
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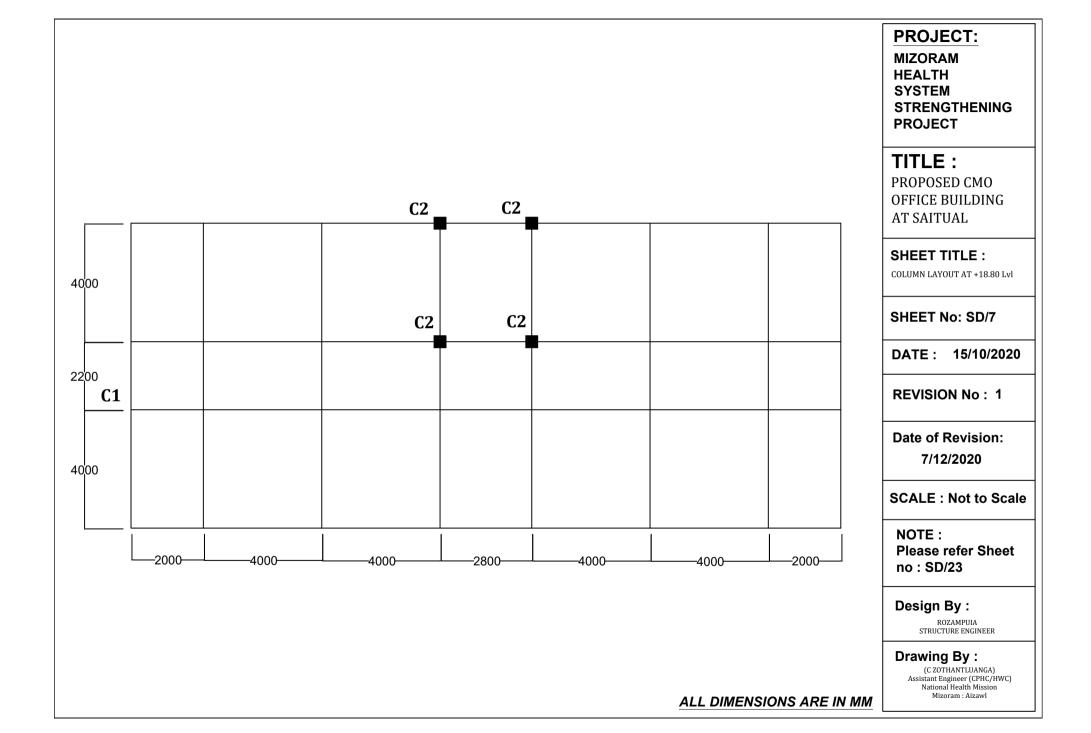
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Drawing By:

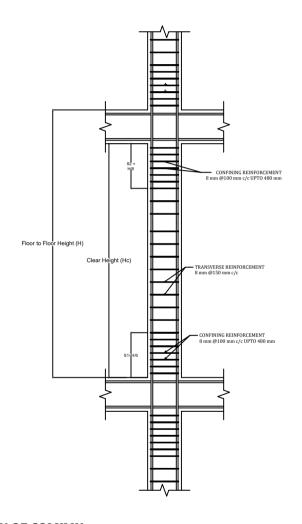
(C ZOTHANTLUANGA)
Assistant Engineer (CPHC/HWC)
National Health Mission
Mizoram : Aizawl





COLUMN MARKED	DETAIL OF COLUMN SECTION					
C1	2# 20Ø 1# 16Ø 8Ø @ 450mm c/c 1# 16Ø 2# 20Ø 8Ø @ 150mm c/c					

COLUMN MARKED	DETAIL OF COLUMN SECTION					
C2	3# 20Ø 8Ø @ 450mm c/c 3# 20Ø 400 8Ø @ 150mm c/c					



TYPICAL CROSS SECION OF COLUMN

ALL DIMENSIONS ARE IN MM

PROJECT:
MIZORAM
HEALTH
SYSTEM
STRENGTHENING

TITLE:

PROJECT

PROPOSED CMO OFFICE BUILDING AT SAITUAL

SHEET TITLE:

COLUMN DETAILS

SHEET No: SD/8

DATE: 15/10/2020

REVISION No: 1

Date of Revision: 7/12/2020

SCALE: Not to Scale

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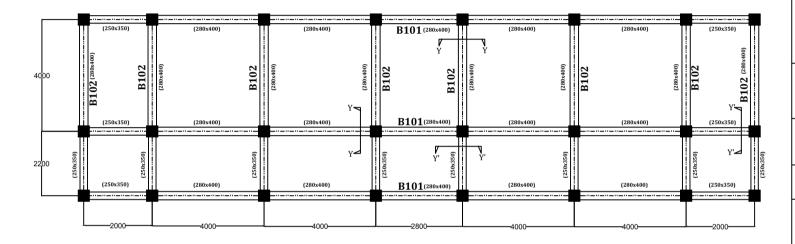
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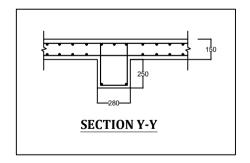
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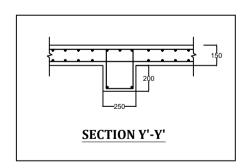
Design By:

ROZAMPUIA STRUCTURE ENGINEER

Drawing By:







MIZORAM HEALTH SYSTEM STRENGTHENING PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT SAITUAL

SHEET TITLE:

BEAM LAYOUT AT +0.00 Lvl

SHEET No: SD/9

DATE: 12/10/2020

REVISION No: 1

Date of Revision: 7/12/2020

SCALE: Not to Scale

NOTE:

Please refer Sheet

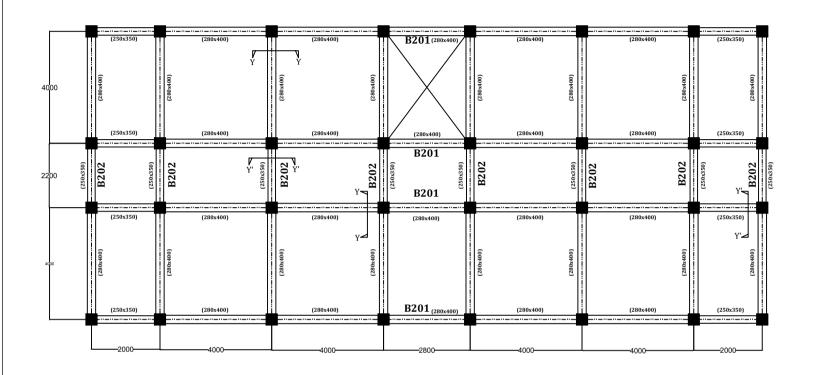
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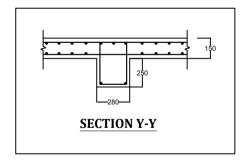
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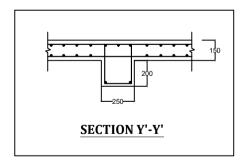
ROZAMPUIA STRUCTURE ENGINEER

Drawing By :

(C ZOTHANTLUANGA) Assistant Engineer (CPHC/HWC) National Health Mission Mizoram : Aizawl







MIZORAM HEALTH SYSTEM STRENGTHENING PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT SAITUAL

SHEET TITLE:

BEAM LAYOUT AT +3.20 Lvl; +6.40 Lvl; +9.60 Lvl; +12.80 Lvl

SHEET No: SD/10

DATE: 15/10/2020

REVISION No: 1

Date of Revision: 7/12/2020

SCALE: Not to Scale

NOTE:

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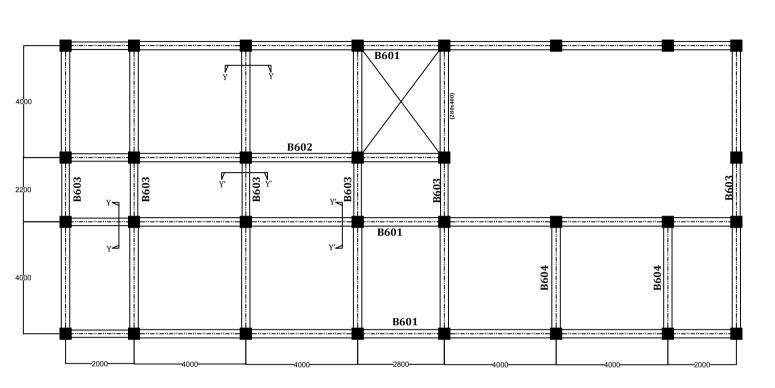
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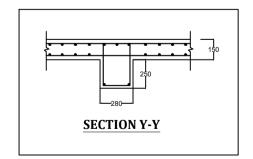
ROZAMPUIA STRUCTURE ENGINEER

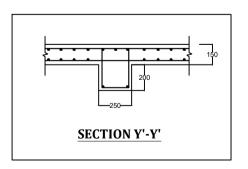
Drawing By:

(C ZOTHANTLUANGA) Assistant Engineer (CPHC/HWC) National Health Mission Mizoram : Aizawl



SIZE OF BEAM: (250x350)





ALL DIMENSIONS ARE IN MM

PROJECT:

MIZORAM HEALTH SYSTEM STRENGTHENING PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT SAITUAL

SHEET TITLE:

BEAM LAYOUT AT +16.00 Lvl

SHEET No: SD/11

DATE: 15/10/2020

REVISION No: 1

Date of Revision:

7/12/2020

SCALE: Not to Scale

NOTE:

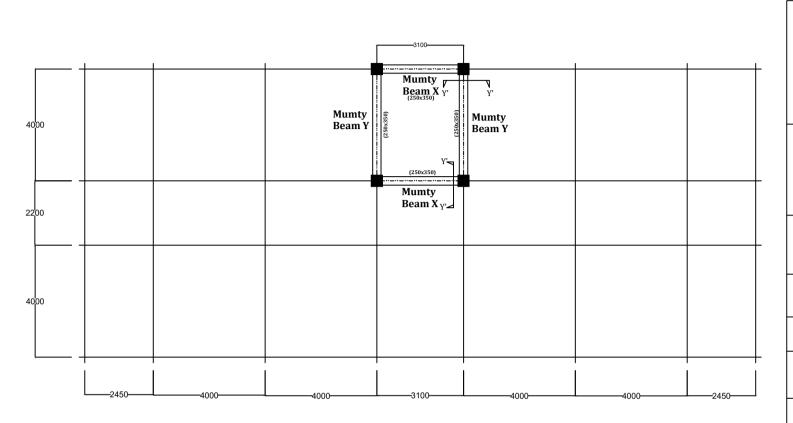
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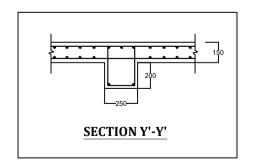
Design By:

ROZAMPUIA STRUCTURE ENGINEER

Drawing By:



SIZE OF BEAM: (250x350)



PROJECT:

MIZORAM HEALTH SYSTEM STRENGTHENING PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT SAITUAL

SHEET TITLE:

BEAM LAYOUT AT +18.80 Lvl

SHEET No: SD/12

DATE: 15/10/2020

REVISION No: 1

Date of Revision:

7/12/2020

SCALE: Not to Scale

NOTE:

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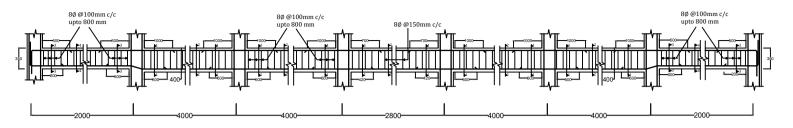
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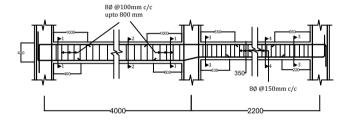
ROZAMPUIA STRUCTURE ENGINEER

Drawing By:

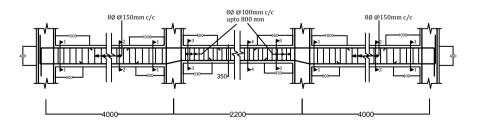
(C ZOTHANTLUANGA)
Assistant Engineer (CPHC/HWC)
National Health Mission
Mizoram : Aizawl



TYPICAL CROSS SECTION OF BEAM B101, B201



TYPICAL CROSS SECTION OF BEAM B102



TYPICAL CROSS SECTION OF BEAM B202

ALL DIMENSIONS ARE IN MM

PROJECT:

MIZORAM HEALTH SYSTEM STRENGTHENING PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT SAITUAL

SHEET TITLE:

BEAM SECTION AT +0.00 Lvl; +3.20 Lvl; +6.40 Lvl; +9.60 Lvl; +12.80 Lvl

SHEET No: SD/13

DATE: 15/10/2020

REVISION No: 1

Date of Revision: 7/12/2020

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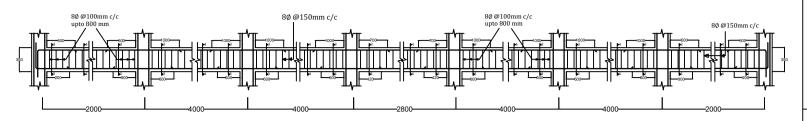
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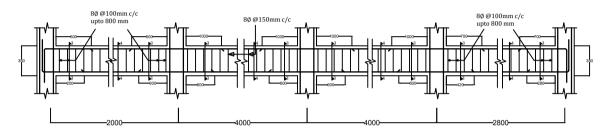
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ROZAMPUIA STRUCTURE ENGINEER

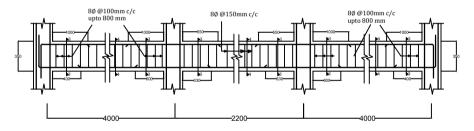
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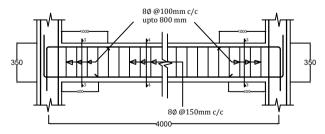
TYPICAL CROSS SECTION OF BEAM B601



TYPICAL CROSS SECTION OF BEAM B602



TYPICAL CROSS SECTION OF BEAM B603



TYPICAL CROSS SECTION OF BEAM B604

ALL DIMENSIONS ARE IN MM

PROJECT:

MIZORAM
HEALTH
SYSTEM
STRENGTHENING
PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT SAITUAL

SHEET TITLE:

BEAM SECTION AT +16.00 Lvl

SHEET No: SD/14

DATE: 15/10/2020

REVISION No: 1

Date of Revision: 7/12/2020

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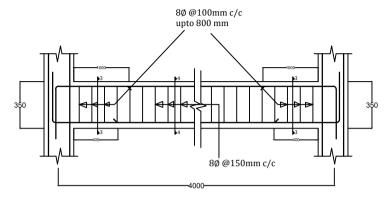
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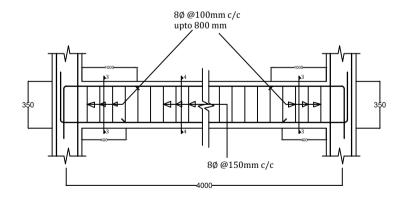
Design By:

ROZAMPUIA STRUCTURE ENGINEER

Drawing By:



TYPICAL CROSS SECTION OF MUMTY BEAM X



TYPICAL CROSS SECTION OF MUMTY BEAM Y

PROJECT:

MIZORAM HEALTH SYSTEM STRENGTHENING PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT SAITUAL

SHEET TITLE:

BEAM LAYOUT AT +18.80 Lvl

SHEET No: SD/15

DATE: 15/10/2020

REVISION No: 1

Date of Revision:

7/12/2020

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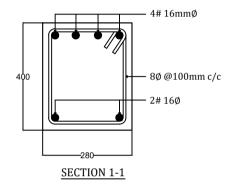
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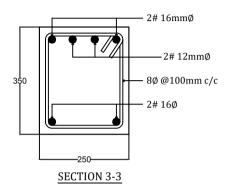
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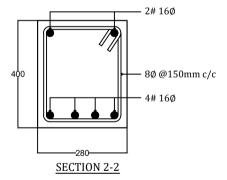
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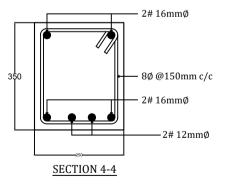
ROZAMPUIA STRUCTURE ENGINEER

Drawing By:









MIZORAM HEALTH SYSTEM **STRENGTHENING PROJECT**

TITLE:

PROPOSED CMO OFFICE BUILDING AT SAITUAL

SHEET TITLE:

BEAM SECTION DETAILS

SHEET No: SD/16

DATE: 15/10/2020

REVISION No: 1

Date of Revision: 7/12/2020

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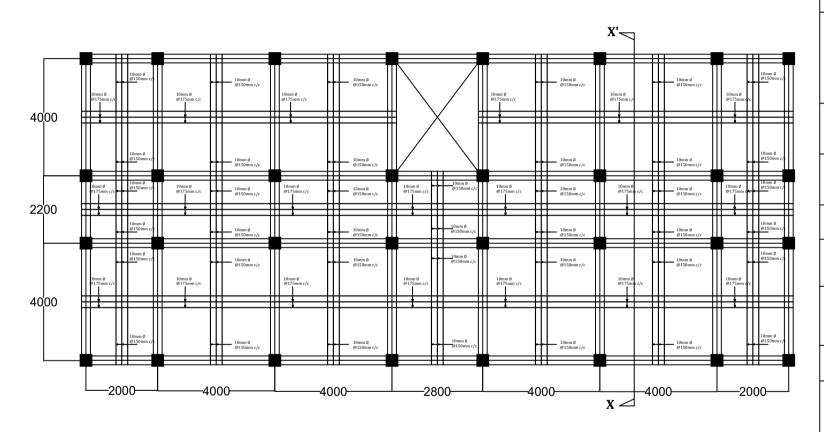
Please refer Sheet

no: SD/23

Design By:

STRUCTURE ENGINEER

Drawing By:
(C ZOTHANTLUANGA)
Assistant Engineer (CPHC/HWC) National Health Mission Mizoram : Aizawl



SLAB (BOTTOM REINFORCEMENT)

SLAB THICKNESS: 150 mm

ALL DIMENSIONS ARE IN MM

PROJECT:

MIZORAM HEALTH SYSTEM STRENGTHENING PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT SAITUAL

SHEET TITLE:

SLAB DETAILS

SHEET No: SD/17

DATE: 15/10/2020

REVISION No: 1

Date of Revision: 7/12/2020

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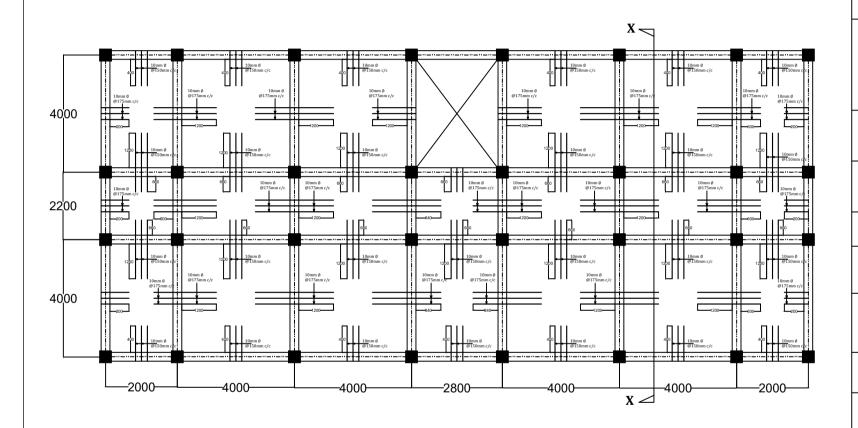
Please refer Sheet

no : SD/23

Design By:

ROZAMPUIA STRUCTURE ENGINEER

Drawing By :



SLAB (TOP REINFORCEMENT)

SLAB THICKNESS: 150 mm

ALL DIMENSIONS ARE IN MM

PROJECT:

MIZORAM
HEALTH
SYSTEM
STRENGTHENING
PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT SAITUAL

SHEET TITLE:

SLAB DETAILS

SHEET No: SD/18

DATE: 15/10/2020

REVISION No: 1

Date of Revision:

7/12/2020

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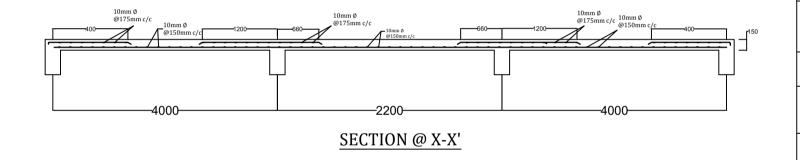
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no: SD/23

Design By:

ROZAMPUIA STRUCTURE ENGINEER

Drawing By:



MIZORAM HEALTH SYSTEM STRENGTHENING PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT SAITUAL

SHEET TITLE:

DETAILS OF SLAB SECTION

SHEET No: SD/19

DATE: 15/10/2020

REVISION No: 1

Date of Revision:

7/12/2020

SCALE: Not to Scale

NOTE:

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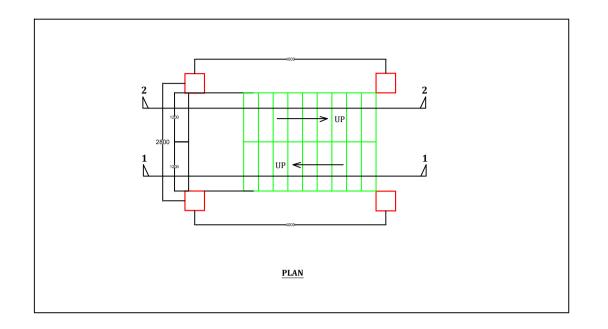
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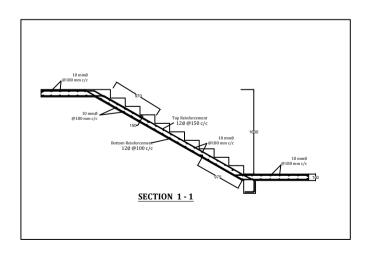
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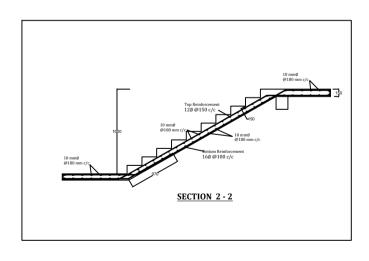
ROZAMPUIA STRUCTURE ENGINEER

Drawing By:

(C ZOTHANTLUANGA)
Assistant Engineer (CPHC/HWC)
National Health Mission
Mizoram : Aizawl







MIZORAM HEALTH SYSTEM STRENGTHENING PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT SAITUAL

SHEET TITLE:

DETAILS OF STAIRS

SHEET No: SD/20

DATE: 15/10/2020

REVISION No: 1

Date of Revision: 7/12/2020

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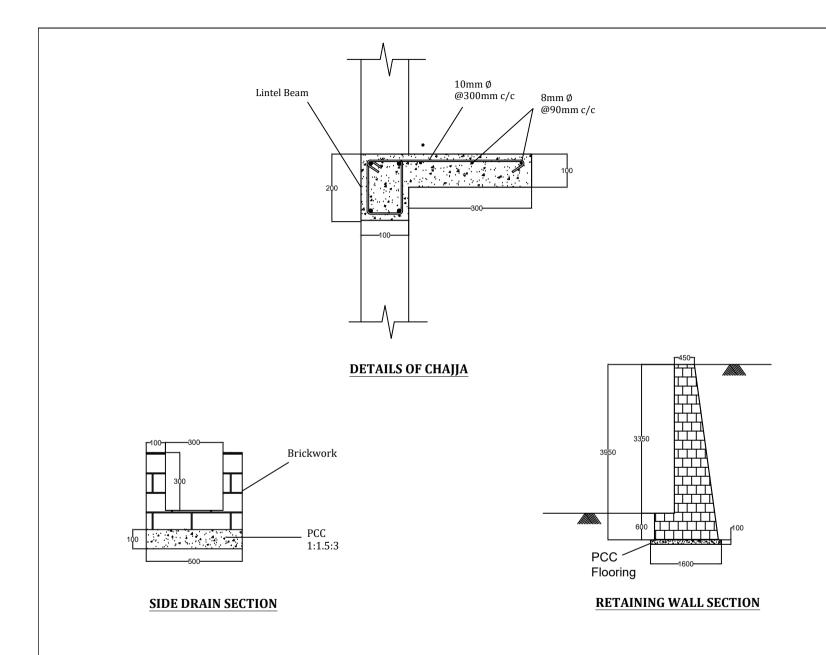
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Design By:

ROZAMPUIA STRUCTURE ENGINEER

Drawing By :

(C ZOTHANTLUANGA)
Assistant Engineer (CPHC/HWC)
National Health Mission
Mizoram : Aizawl



MIZORAM HEALTH SYSTEM STRENGTHENING PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT SAITUAL

SHEET TITLE:

DETAILS OF CHAJJA, SIDE DRAIN, RETAINING WALL

SHEET No: SD/21

DATE: 15/10/2020

REVISION No: 1

Date of Revision: 7/12/2020

SCALE: Not to Scale

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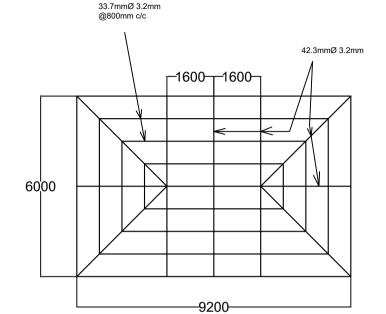
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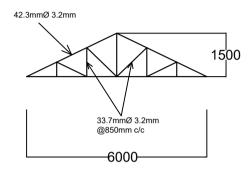
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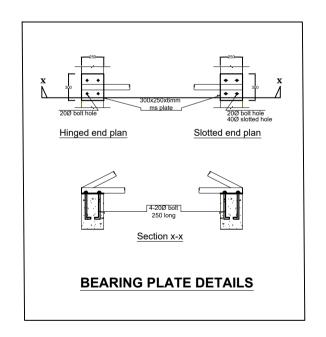
ROZAMPUIA STRUCTURE ENGINEER

Drawing By:

(C ZOTHANTLUANGA)
Assistant Engineer (CPHC/HWC)
National Health Mission
Mizoram : Aizawl







MIZORAM HEALTH SYSTEM STRENGTHENING PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT SAITUAL

SHEET TITLE:

DETAILS OF TRUSS

SHEET No: SD/22

DATE: 15/10/2020

REVISION No: 1

Date of Revision:

7/12/2020

SCALE: Not to Scale

NOTE:

Please refer Sheet

no: SD/23

Design By:

ROZAMPUIA STRUCTURE ENGINEER

Drawing By:

(C ZOTHANTLUANGA)
Assistant Engineer (CPHC/HWC)
National Health Mission
Mizoram : Aizawl

GENERAL NOTES

columns, walls and floor finishes.

drawing and specifications.

Brick Masonry - 20 kN/m³.

below:-

material.

(Part - 1) - 2002.

prominent.

design.

Dead Loads: The dead loads considered for

Thickness and materials of walls and floor

finishes are taken as per architectural

Reinforced Cement Concrete - 25 kN/m³.

Floor Finishes - As per unit weight of the

Live Loads: Imposed loads on floors due to

various services and occupancy of rooms

are taken as per IS: 875 (Part - 2) - 1987.

earthquake forces are taken as per IS: 1893

Wind Loads & Snow Loads: Wind loads and

Combination of Loads: Combination of loads

(for Limit State Design) are taken as per IS:

1893 (Part - 1) - 2002 in the analysis and

Dynamic Loads: Dynamic loads due to

snow loads are not considered as

earthquake load is more

Unit weight of materials are taken as

structural design are weight of slabs, beams,

1. GENERAL:

- 1.1 Please do not scale the drawings. Work to written dimensions only.
- 1.2 All dimensions are in millimetres unless otherwise stated.
- 1.3 These notes are to be followed in conjunction with construction drawings and the specifications for civil and structural works.
- 1.4 Drawings shall be read in conjunction with architectural drawings.
- 1.5 Number of reinforcement bars shall not be counted from the drawings.
- 1.6 Structural design is done based on architectural drawing.

2. ABBREVIATIONS AND SYMBOLS:

1. Footings. 2. C Columns. 3. В Beams. Safe Bearing Capacity of Soil. 4. SBC 5. HYSD High Yield Strength Deformed bars. Mild Steel bars. 6. MS 7. PCC : Plain Cement Concrete. Reinforced Cement Concrete. 8. RCC : 9. IS Indian Standard. : 10. kN Kilo Newton. m^3 Cubic Metre. 11. 12. m Metre.

Millimetre.

Diameter.

Greater than.

At the rate of.

Diameter of bar.

Not greater than.

Centre to centre.

Development length of bars.

3.3 ANALYSIS AND DESIGNS:

3.2

LOADS:

3.2.1

3.2.2

3.2.3

3.2.4

3.2.5

- 3.3.1 Analysis and design are carried out using Staadpro Software.
- .3.2 Dynamic analysis is done using Response Spectrum Method based on IS: 1893 (Part - 1) - 2002.
- 3.3.3 All sections are designed using Limit State Design Method.
- 3.3.4 Detailments of reinforcements are done as per IS: 13920 1993, IS: 456 2000, IS: 4326 1993 and IS: 2502 1963.

3. DESIGN CONSIDERATIONS:

:

:

3.1 FOUNDATIONS:

13.

14. L

15.

16.

17.

18.

19.

20.

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Db

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3.1.1 The SBC of foundation soil is 253.82 kN/m², designs were done accordingly.

4. GENERAL SPECIFICATIONS:

- 4.1 EARTHWORK AND FOUNDATIONS:
 - 4.1.1 Just prefer to laying PCC, the final 400 depth of soil shall be excavated and recompacted to the optimum density.
 - 4.1.2 PCC 1:1.5:3 200mm thick shall be laid for levelling course below foundations.

- 4.1.3 Back filling shall be done in layers not exceeding 200mm thickness.
- 4.1.4 All works below ground level shall be executed in dry conditions.
- 4.1.5 Minimum depth of foundation shall be 1.8m below firm ground.

4.2 MATERIALS:

- 4.2.1 All RCC shall be of controlled grade in accordance with IS: 456 2000.
- 4.2.2 Minimum grade of concrete shall be M20.
- 4.2.3 Grade of Steel shall be TMT conforming to IS:14786-1979
- 4.2.4 Mild Steel bars if specified shall conform to IS: 432.
- 4.2.5 All bars shall be sheared, flame cutting shall not be permitted. The bars shall be bent cold.

3 STRUCTURES:

4.3.1 Clear covers shall be maintained as per IS: 456 - 2000 as below:-

Foundations - 50mm
Columns - 40mm
Beams - 25mm
Slabs - 15mm
Staircases - 15mm
Chajjas, etc. - 15mm

- 4.3.2 Lap Splices shall be staggered in such a way that not more than 50% of bars are lapped at one particular section.
- 4.3.3 Lap length of reinforcement bars shall not be less than the following:Footings 30 x dia. of bar.
 Columns 24 x dia. of bar.

Beams - 30 x dia. of bar.
Slabs - 30 x dia. of bar.

- 4.3.4 Anchorage length of bars shall be maintained as in the drawings.
- 4.3.5 Extension of Hoop length of beam stirrups and lateral ties of column shall be maintained as in the drawings.

PROJECT:

MIZORAM HEALTH SYSTEM STRENGTHENING PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT SAITUAL

SHEET TITLE:

GENERAL NOTES

SHEET No: SD/23

DATE: 15/10/2020

REVISION No: 1

Date of Revision: 7/12/2020

SCALE:

Not to Scale

Design By:

ROZAMPUIA STRUCTURE ENGINEER

Drawing By: