

MIZORAM HEALTH SYSTEM STRENGTHENING PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT KHAWZAWL

SHEET TITLE:

FOUNDATION LAYOUT

SHEET No: SD/1

DATE: 5/10/2020

REVISION No: 1

Date of Revision:

10/12/2020

SCALE: Not to Scale

All dimensions are in mm

NOTE:

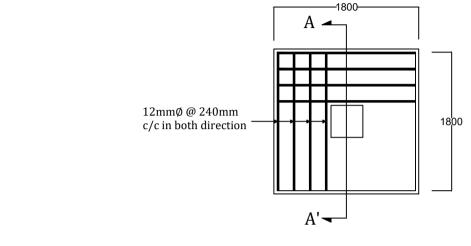
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no : SD/21

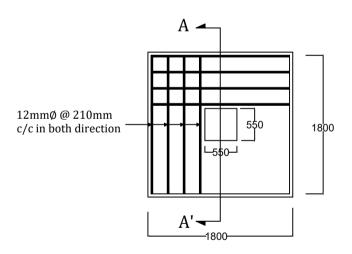
Design By:

ROZAMPUIA STRUCTURE ENGINEER

Drawing By:



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	long '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

PROJECT:

MIZORAM HEALTH SYSTEM STRENGTHENING PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT KHAWZAWL

SHEET TITLE:

DETAILS OF FOOTING (F2)

SHEET No: SD/2

DATE: 5/10/2020

REVISION No: 1

Date of Revision: 10/12/2020

SCALE: Not to Scale

All dimensions are in mm

NOTE:

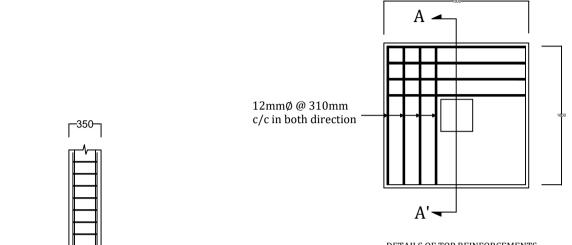
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no: SD/21

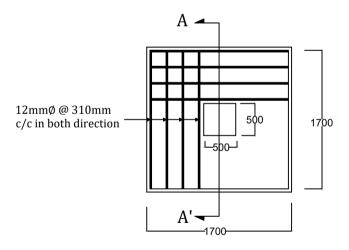
Design By:

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

PROJECT:

MIZORAM
HEALTH
SYSTEM
STRENGTHENING
PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT KHAWZAWL

SHEET TITLE:

DETAILS OF FOOTING (F1)

SHEET No: SD/3

DATE: 5/10/2020

REVISION No: 1

Date of Revision: 10/12/2020

SCALE: Not to Scale

All dimensions are in mm

NOTE:

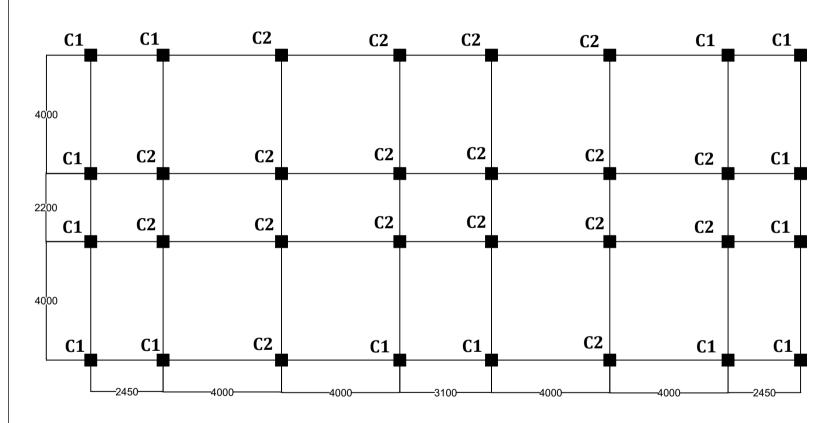
Please refer Sheet

no : SD/21

Design By:

ROZAMPUIA STRUCTURE ENGINEER

Drawing By:



MIZORAM HEALTH SYSTEM STRENGTHENING PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT KHAWZAWL

SHEET TITLE:

COLUMN LAYOUT at +0.00 Lvl; +3.20 Lvl; +6.40 Lvl; +9.60 Lvl.

SHEET No: SD/4

DATE: 5/10/2020

REVISION No: 1

Date of Revision: 10/12/2020

SCALE: Not to Scale

All dimensions are in mm

NOTE:

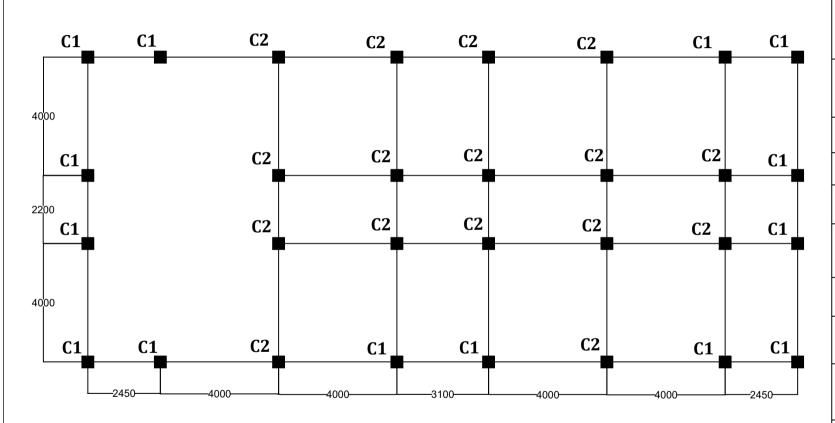
Please refer Sheet no: SD/21

_ _ _

Design By:

ROZAMPUIA STRUCTURE ENGINEER

Drawing By:



MIZORAM HEALTH SYSTEM STRENGTHENING PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT KHAWZAWL

SHEET TITLE:

COLUMN LAYOUT AT +12.80 Lvl

SHEET No: SD/5

DATE: 5/10/2020

REVISION No: 1

Date of Revision: 10/12/2020

SCALE: Not to Scale

All dimensions are in mm

NOTE:

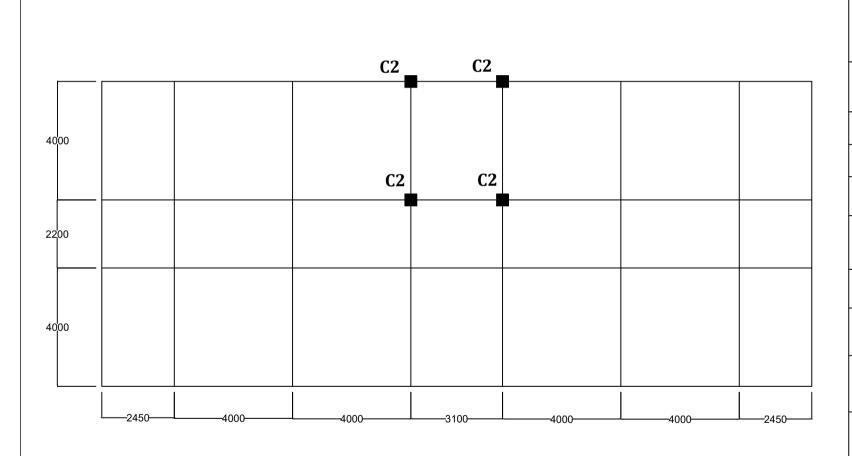
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no: SD/21

Design By:

ROZAMPUIA STRUCTURE ENGINEER

Drawing By:



MIZORAM HEALTH SYSTEM STRENGTHENING PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT KHAWZAWL

SHEET TITLE :

COLUMN LAYOUT AT +12.80 Lvl

SHEET No: SD/6

DATE: 5/10/2020

REVISION No: 1

Date of Revision:

10/12/2020

SCALE: Not to Scale

All dimensions are in mm

NOTE:

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no: SD/21

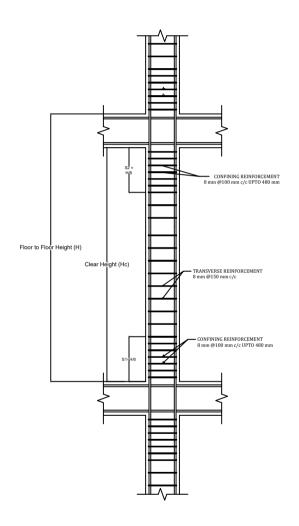
Design By:

ROZAMPUIA STRUCTURE ENGINEER

Drawing By:

COLUMN MARKED	DETAIL OF COLUMN SECTION					
C1	2# 20ø 1# 16ø 8ø @ 450mm c/c 1# 16ø 2# 20ø 350 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

PROJECT:

MIZORAM HEALTH SYSTEM STRENGTHENING PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT KHAWZAWL

SHEET TITLE:

COLUMN DETAILS

SHEET No: SD/7

DATE: 5/10/2020

REVISION No: 1

Date of Revision:

10/12/2020

SCALE: Not to Scale

All dimensions are in mm

NOTE:

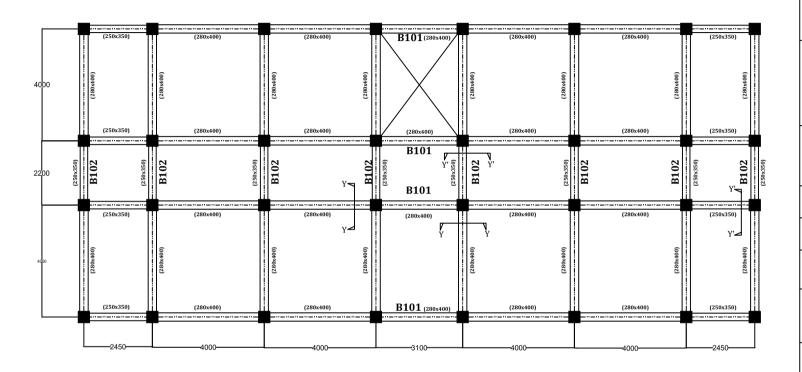
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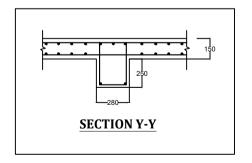
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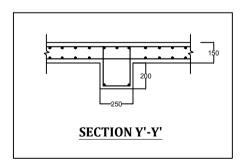
Design By:

ROZAMPUIA STRUCTURE ENGINEER

Drawing By :







MIZORAM HEALTH SYSTEM STRENGTHENING PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT KHAWZAWL

SHEET TITLE:

BEAM LAYOUT AT +0.00 Lvl; +3.20 Lvl; +6.40 Lvl; +9.60 Lvl

SHEET No: SD/8

DATE: 5/10/2020

REVISION No: 1

Date of Revision:

10/12/2020

SCALE: Not to Scale

All dimensions are in mm

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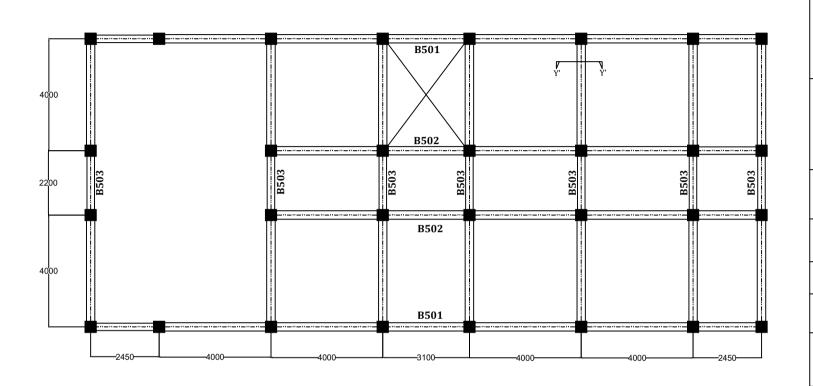
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no: SD/21

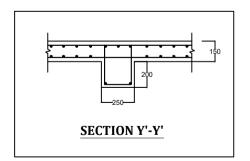
Design By:

ROZAMPUIA STRUCTURE ENGINEER

Drawing By:



SIZE OF BEAM : (250x350)



PROJECT:

MIZORAM HEALTH SYSTEM STRENGTHENING PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT KHAWZAWL

SHEET TITLE:

BEAM LAYOUT AT +12.80 Lvl

SHEET No: SD/9

DATE: 5/10/2020

REVISION No: 1

Date of Revision:

10/12/2020

SCALE: Not to Scale

All dimensions are in mm

NOTE:

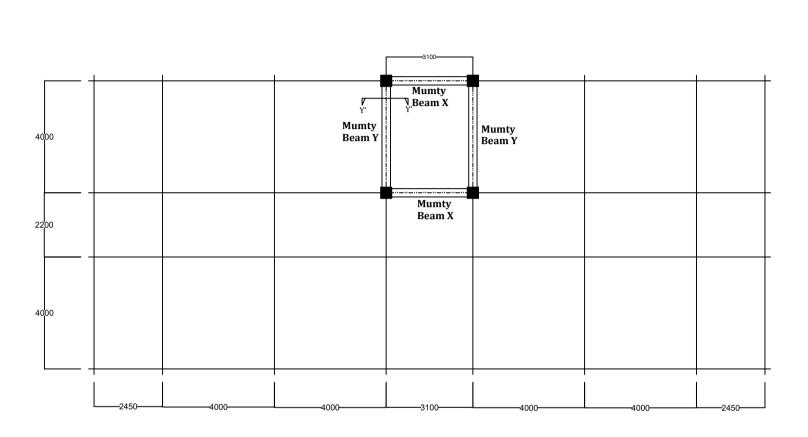
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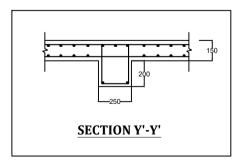
Design By:

ROZAMPUIA STRUCTURE ENGINEER

Drawing By:



SIZE OF BEAM: (250x350)



PROJECT:

MIZORAM HEALTH SYSTEM STRENGTHENING PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT KHAWZAWL

SHEET TITLE:

BEAM LAYOUT AT +15.60 Lvl

SHEET No: SD/10

DATE: 5/10/2020

REVISION No: 1

Date of Revision:

10/12/2020

SCALE: Not to Scale

All dimensions are in mm

NOTE:

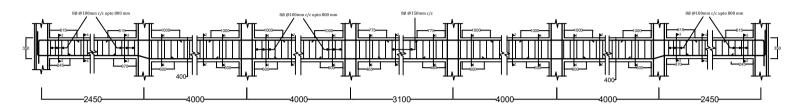
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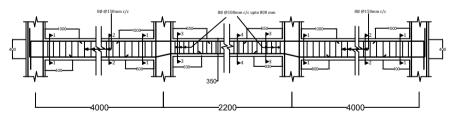
Design By:

ROZAMPUIA STRUCTURE ENGINEER

Drawing By:



TYPICAL CROSS SECTION OF BEAM B101



TYPICAL CROSS SECTION OF BEAM B102

PROJECT:

MIZORAM HEALTH SYSTEM STRENGTHENING PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT KHAWZAWL

SHEET TITLE:

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

SHEET No: SD/11

DATE: 5/10/2020

REVISION No: 1

Date of Revision: 10/12/2020

SCALE: Not to Scale

All dimensions are in mm

NOTE:

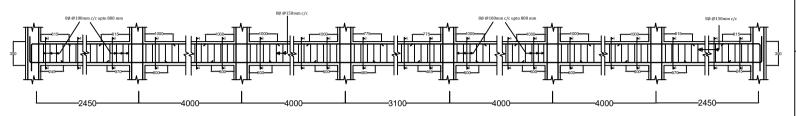
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no : SD/21

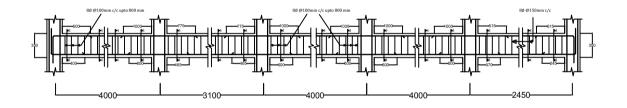
Design By:

ROZAMPUIA STRUCTURE ENGINEER

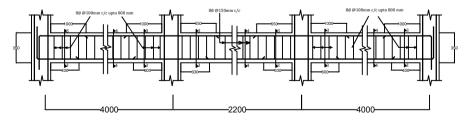
Drawing By:



TYPICAL CROSS SECTION OF BEAM B501



TYPICAL CROSS SECTION OF BEAM B502



TYPICAL CROSS SECTION OF BEAM B503

PROJECT:

MIZORAM HEALTH SYSTEM STRENGTHENING PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT KHAWZAWL

SHEET TITLE:

BEAM SECTION AT +12.80 Lvl

SHEET No: SD/12

DATE: 5/10/2020

REVISION No: 1

Date of Revision:

10/12/2020

SCALE: Not to Scale

All dimensions are in mm

NOTE:

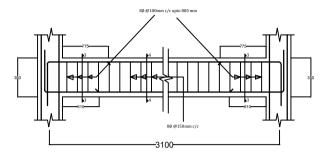
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no: SD/21

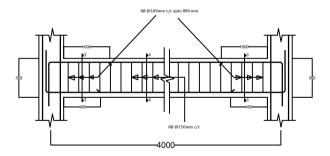
Design By:

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 KHAWZAWL

SHEET TITLE:

BEAM SECTION AT +15.60 Lvl

SHEET No: SD/13

DATE: 5/10/2020

REVISION No: 1

Date of Revision: 10/12/2020

SCALE: Not to Scale

All dimensions are in mm

NOTE:

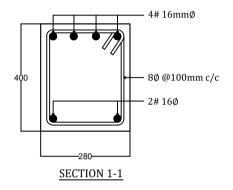
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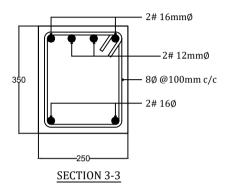
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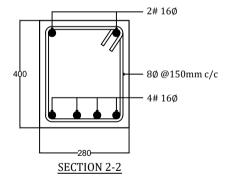
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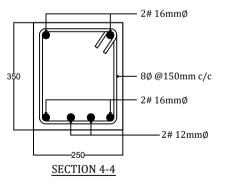
ROZAMPUIA STRUCTURE ENGINEER

Drawing By:









MIZORAM HEALTH SYSTEM STRENGTHENING PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT KHAWZAWL

SHEET TITLE:

BEAM SECTION DETAILS

SHEET No: SD/14

DATE: 5/10/2020

REVISION No: 1

Date of Revision: 10/12/2020

SCALE: Not to Scale

All dimensions are in mm

NOTE:

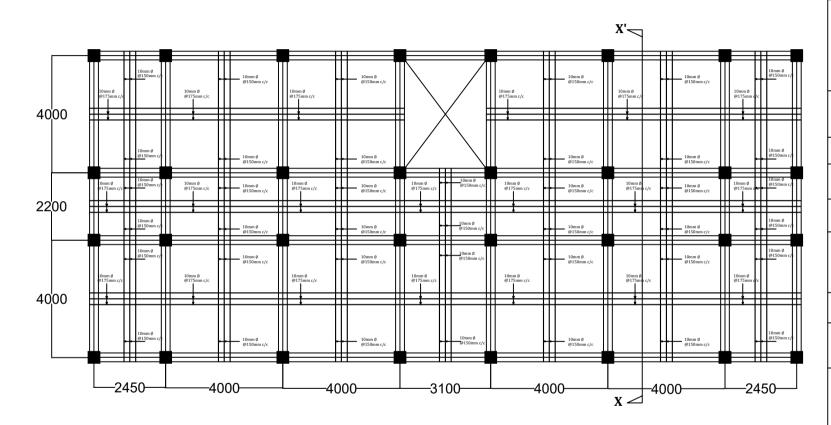
Please refer Sheet

no: SD/21

Design By:

ROZAMPUIA STRUCTURE ENGINEER

Drawing By:



SLAB (BOTTOM REINFORCEMENT)

SLAB THICKNESS: 150 mm

PROJECT:

MIZORAM HEALTH SYSTEM STRENGTHENING PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT KHAWZAWL

SHEET TITLE:

SLAB DETAILS

SHEET No: SD/15

DATE: 5/10/2020

REVISION No: 1

Date of Revision:

10/12/2020

SCALE: Not to Scale

All dimensions are in mm

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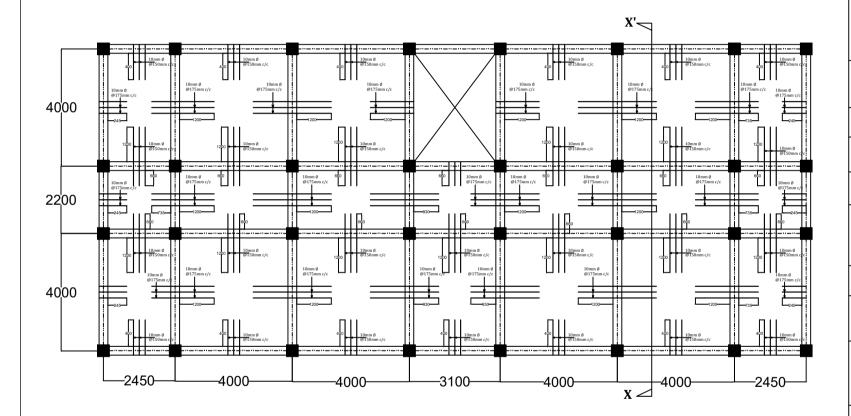
Please refer Sheet

no : SD/21

Design By:

ROZAMPUIA STRUCTURE ENGINEER

Drawing By:



SLAB (TOP REINFORCEMENT)

PROJECT:

MIZORAM HEALTH SYSTEM STRENGTHENING PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT KHAWZAWL

SHEET TITLE:

SLAB DETAILS

SHEET No: SD/16

DATE: 5/10/2020

REVISION No: 1

Date of Revision:

10/12/2020

SCALE: Not to Scale

All dimensions are in mm

NOTE:

SLAB THICKNESS: 150 mm

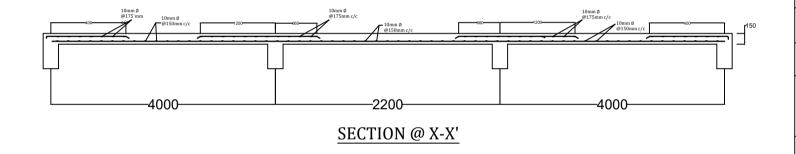
Please refer Sheet

no : SD/21

Design By:

ROZAMPUIA STRUCTURE ENGINEER

Drawing By:



MIZORAM
HEALTH
SYSTEM
STRENGTHENING
PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT KHAWZAWL

SHEET TITLE:

DETAILS OF SLAB SECTION

SHEET No: SD/17

DATE: 5/10/2020

REVISION No: 1

Date of Revision:

10/12/2020

SCALE: Not to Scale

All dimensions are in mm

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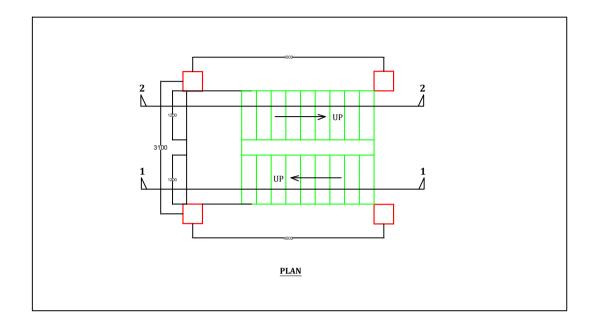
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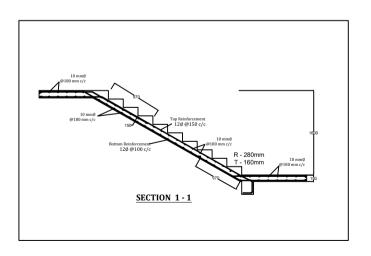
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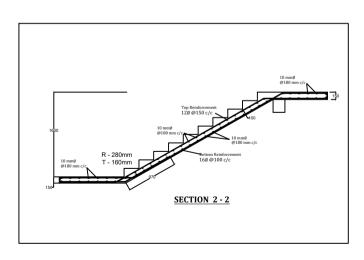
Design By:

ROZAMPUIA STRUCTURE ENGINEER

Drawing By:







MIZORAM HEALTH SYSTEM STRENGTHENING PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT KHAWZAWL

SHEET TITLE:

DETAILS OF STAIRS

SHEET No: SD/18

DATE: 5/10/2020

REVISION No: 1

Date of Revision:

10/12/2020

SCALE: Not to Scale

All dimensions are in mm

NOTE:

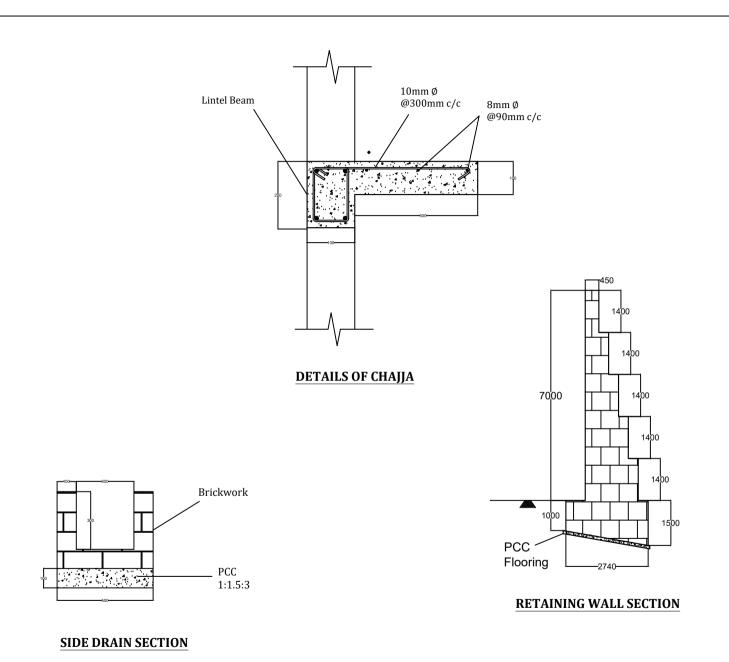
Please refer Sheet

no: SD/21

Design By:

ROZAMPUIA STRUCTURE ENGINEER

Drawing By:



MIZORAM HEALTH SYSTEM STRENGTHENING PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT KHAWZAWL

SHEET TITLE:

DETAILS OF CHAJJA, SIDE DRAIN, RETAINING WALL

SHEET No: SD/19

DATE: 5/10/2020

REVISION No: 1

Date of Revision: 10/12/2020

SCALE: Not to Scale

All dimensions are in mm

NOTE:

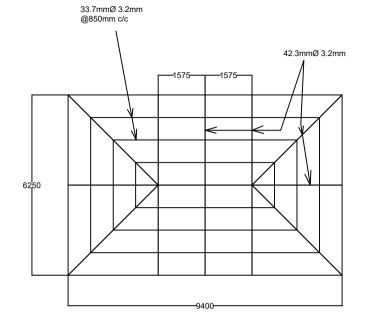
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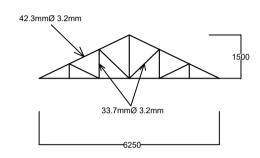
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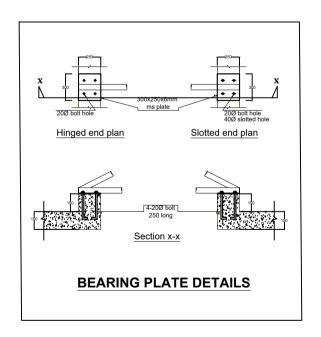
Design By:

ROZAMPUIA STRUCTURE ENGINEER

Drawing By:







MIZORAM HEALTH SYSTEM STRENGTHENING PROJECT

TITLE:

PROPOSED CMO OFFICE BUILDING AT KHAWZAWL

SHEET TITLE:

DETAILS OF TRUSS

SHEET No: SD/20

DATE: 5/10/2020

REVISION No: 1

Date of Revision:

10/12/2020

SCALE: Not to Scale

All dimensions are in mm

NOTE:

Please refer Sheet

no: SD/21

Design By:

ROZAMPUIA STRUCTURE ENGINEER

Drawing By:

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

Spectrum Method based on IS: 1893

per IS: 13920 - 1993, IS: 456 - 2000,

IS: 4326 - 1993 and IS: 2502 - 1963.

All sections are designed using Limit State

Detailments of reinforcements are done as

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,

GENERAL: 1.

1.

13.

- 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.
- Drawings shall be read in conjunction with 1.4 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.

ABBREVIATIONS AND SYMBOLS:

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

Footings.

- ANALYSIS AND DESIGNS:
- 3.3.1 Analysis and design are carried out using Metre. Staadpro Software. Millimetre. mm : Dynamic analysis is done using Response

3.2

LOADS:

3.2.1

3.2.2

3.2.3

3.2.4

3.2.5

3.3.3

3.3.4

- Development length of bars. 14. L Diameter of bar. 15. Db
- 16. Diameter. dia 17. Greater than. >
- 18. >/ : Not greater than. 19. At the rate of. **@** 20. c/c Centre to centre.

GENERAL SPECIFICATIONS:

4.1

(Part - 1) - 2002.

Design Method.

- Just prefer to laying PCC, the final 4.1.1 400 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

- 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:

- All RCC shall be of controlled grade in 4.2.1 accordance with IS: 456 - 2000.
- Minimum grade of concrete shall be M20. 4.2.2
- 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.

STRUCTURES:

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

- Lap Splices shall be staggered in such a way 4.3.2 that not more than 50% of bars are lapped at one particular section.
- 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. 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 KHAWZAWL

SHEET TITLE:

GENERAL NOTES

SHEET No: SD/21

DATE: 5/10/2020

REVISION No: 1

Date of Revision: 10/12/2020

SCALE:

Not to Scale

Design By:

ROZAMPIIIA STRUCTURE ENGINEER

Drawing By:

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

DESIGN CONSIDERATIONS:

FOUNDATIONS: 3.1

The SBC of foundation soil is 250.99 3.1.1 kN/m², designs were done accordingly.

EARTHWORK AND FOUNDATIONS:

foundations.