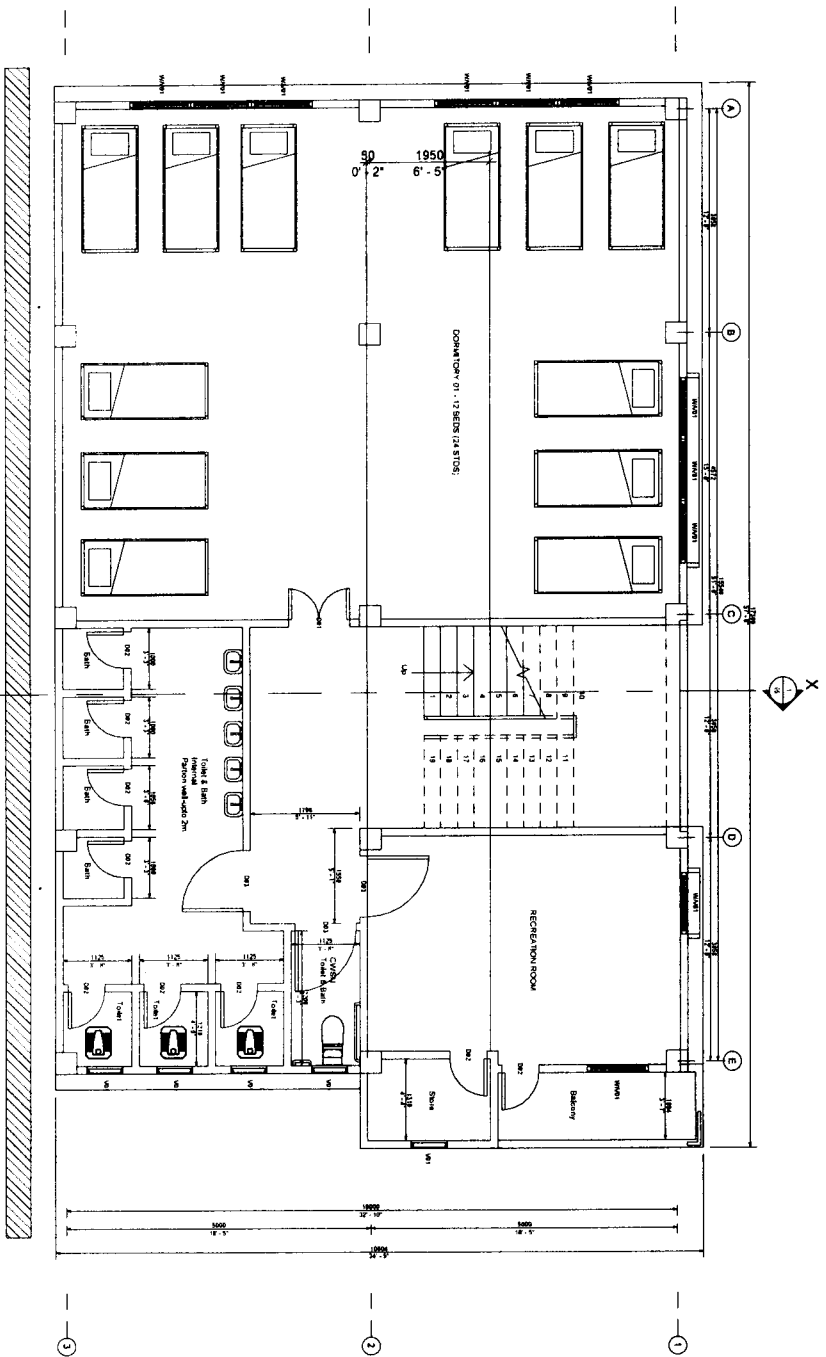


CONSTRUCTION OF
TIPA GIRLS HOSTEL (50 Capacity)
AT SIAHA DISTRICT



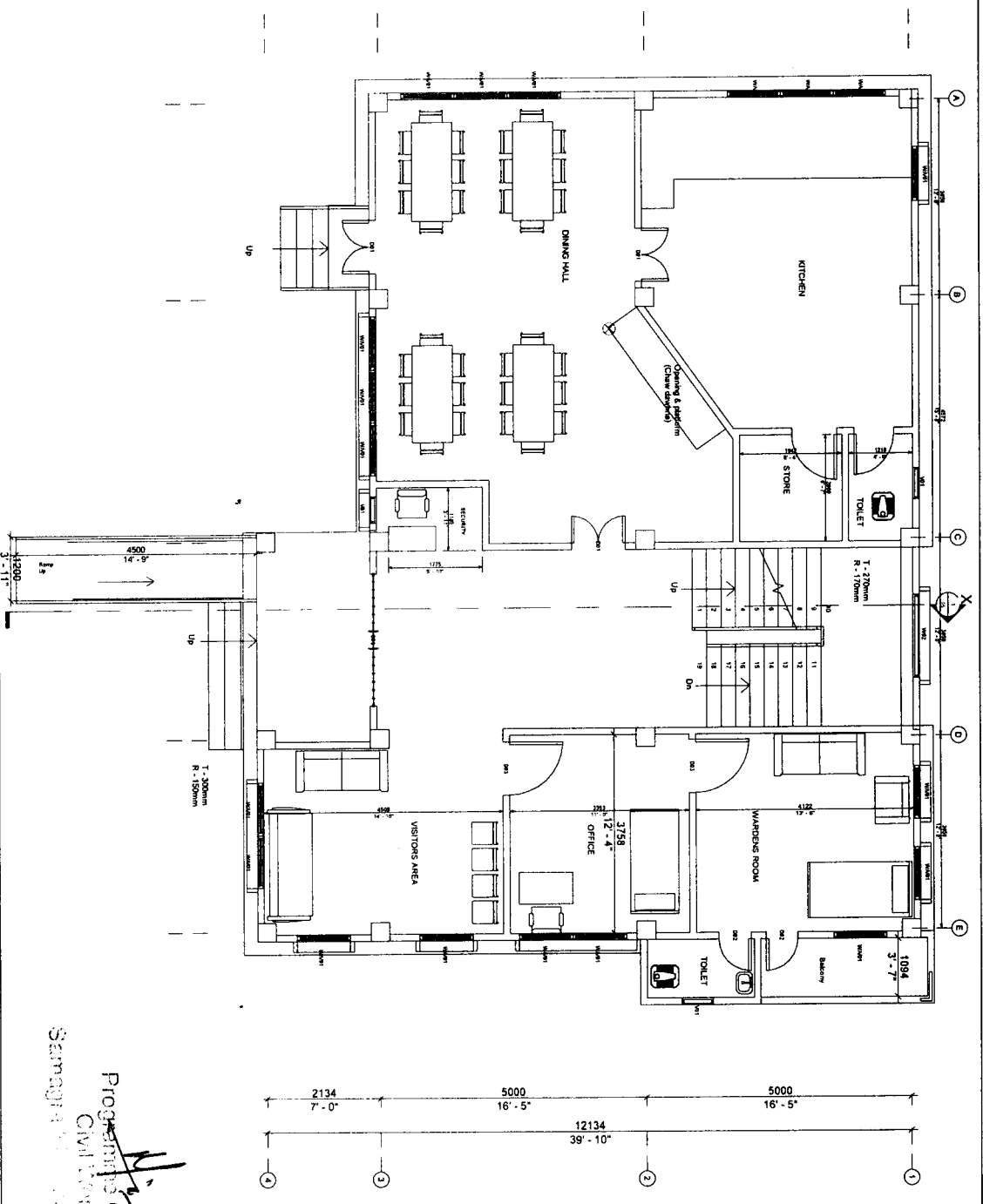
Project Officer
 CIVIL ENGINEER
 Saragada, ...
 ...

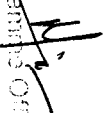
Project:
CONSTRUCTION OF TIPA GIRLS HOSTEL (50 CAPACITY) - SIHAHA DISTRICT

W/V01 - 1000X1828.8mm
 W02 - 1524X1200mm
 V01 - 600X500mm
 D01 - 1000X2000mm
 D02 - 600X2000mm
 D03 - 1000X2000mm

Sheet name: BASEMENT
 Sheet No: 01
 Scale: 1 : 75

ENGINEERING CELL
 STATE PROJECT OFFICE
 SAMAGRA SHIKSHA
 MIZORAM



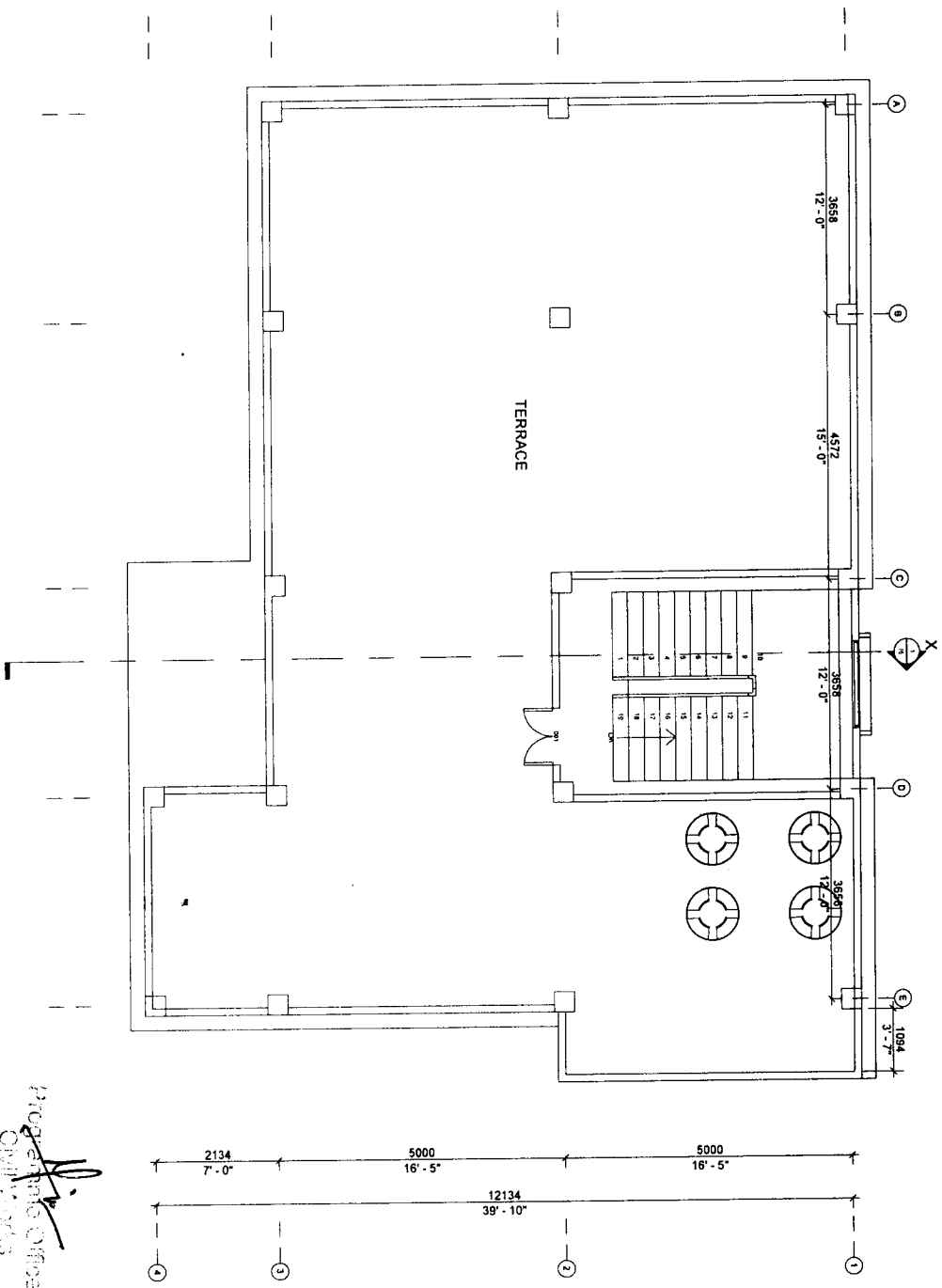

 Program Officer
 Civil Works
 Samagra Shiksha, Mizoram

Project:
CONSTRUCTION OF TIPA GIRLS HOSTEL (50 CAPACITY) - SAHA DISTRICT

W/V01 - 1000X1828, 8mm
 W02 - 1524X1200mm
 V01 - 600X500mm
 D01 - 1000X2000mm
 D02 - 600X2000mm
 D03 - 1000X2000mm

Sheet name: GROUND FLOOR
 Sheet No: 02
 Scale: 1 : 75

ENGINEERING CELL
 STATE PROJECT OFFICE
 SAMAGRA SHIKSHA
 MIZORAM



Project Engineer
 CIVIL WORKS
 Samsudin bin Saad Al-Mazoram

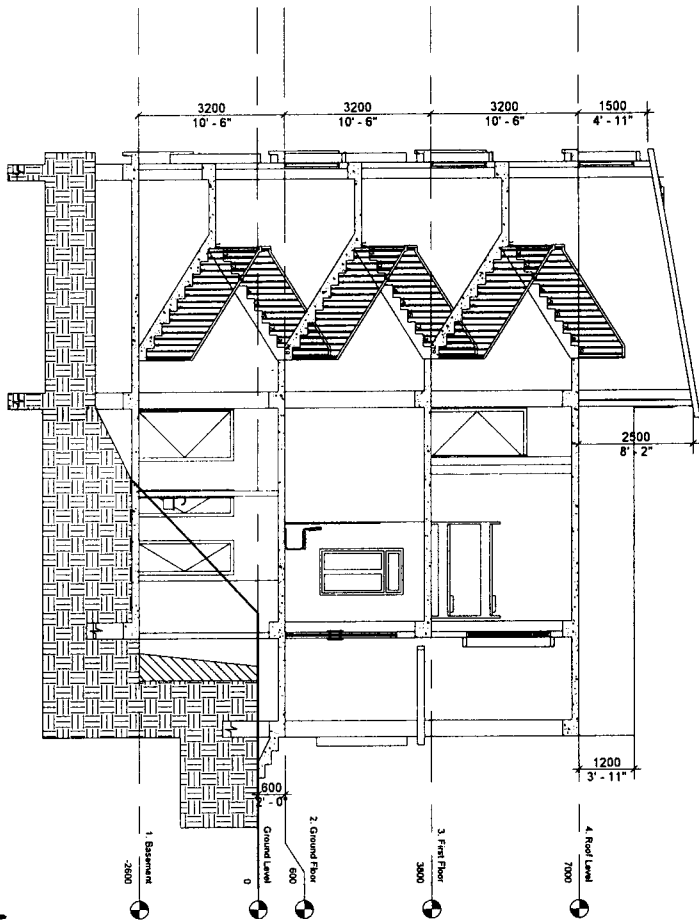
Project:
 CONSTRUCTION OF TIPPA GIRLS HOSTEL (50 CAPACITY) - SIAHA DISTRICT

WV01 - 1000X1828.8mm
 WV02 - 1524X1200mm
 D01 - 600X500mm
 D02 - 600X2000mm
 D03 - 1000X2000mm

Sheet name: ROOF PLAN
 Sheet No: 04
 Scale: 1 : 75

ENGINEERING CELL
 STATE PROJECT OFFICE
 SAMAGRA SHIKSHA
 MIZORAM

Project:
 CONSTRUCTION OF TIPPA GIRLS HOSTEL (50 CAPACITY) - SIAMHA
 DISTRICT



M. V.
 Program Officer
 CIVIL ENGINEERING
 Samagra Shiksha

Sheet name: SECTION X

Sheet No: 05

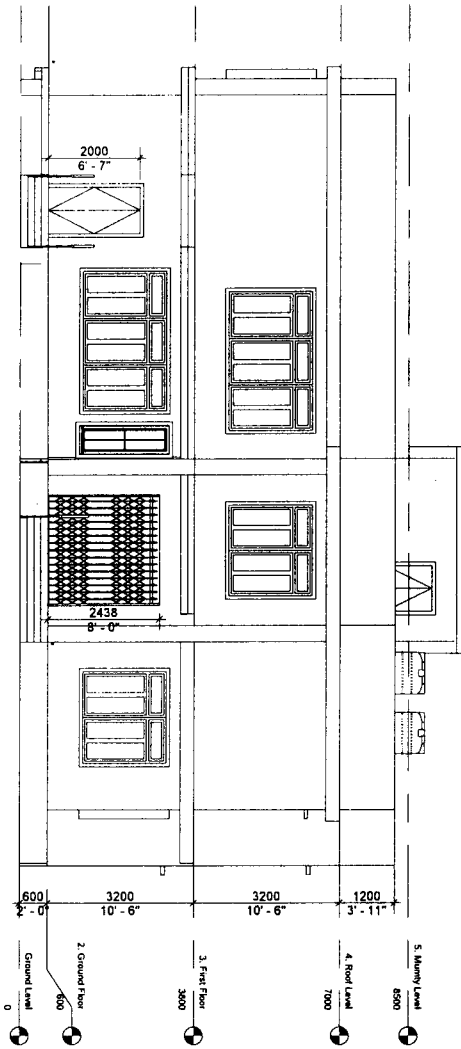
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ENGINEERING CELL
 STATE PROJECT OFFICE
 SAMAGRA SHIKSHA
 MIZORAM

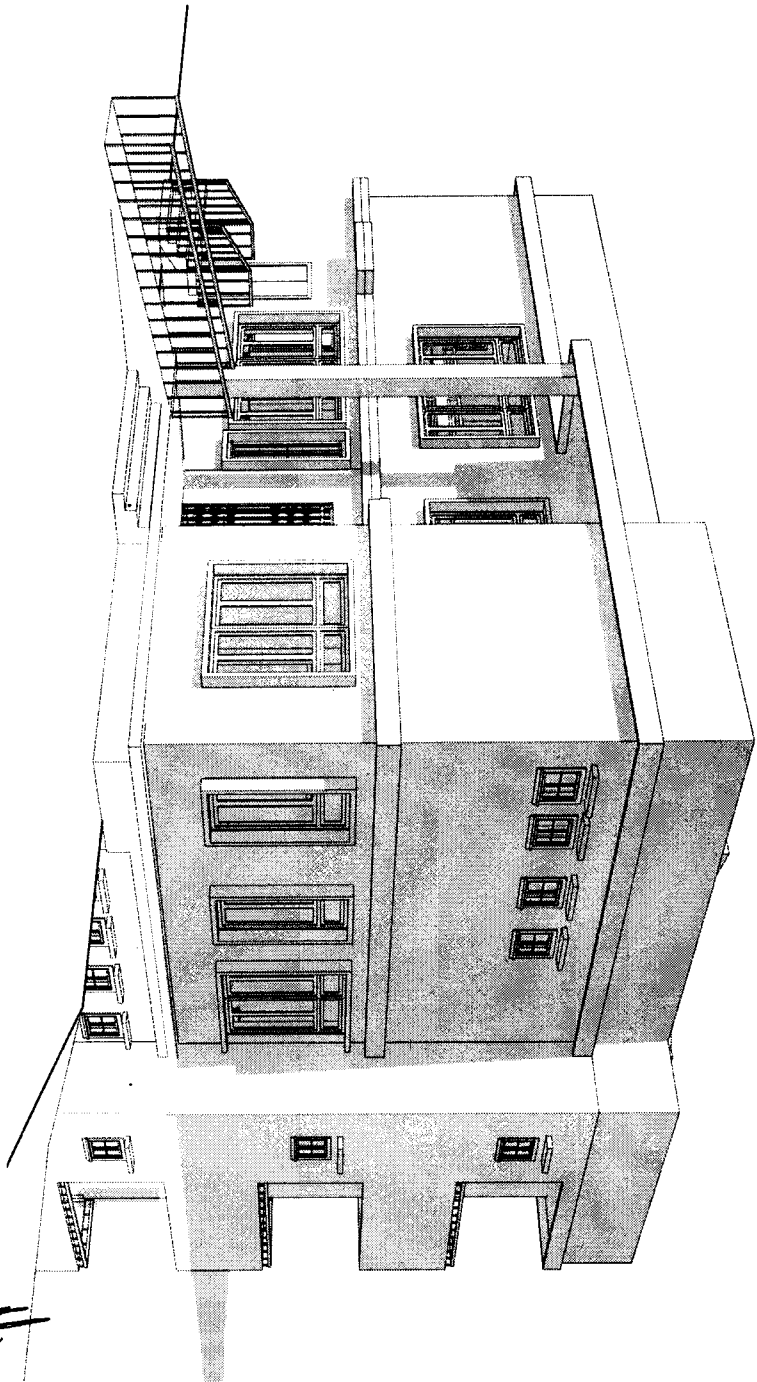
Project:
 CONSTRUCTION OF TIPA GIRLS HOSTEL (50 CAPACITY) - SIAHA
 DISTRICT

Sheet name: FRONT ELEVATION
 Sheet No: 06
 Scale: 1 : 100

ENGINEERING CELL
 STATE PROJECT OFFICE
 SAMAGRA SHIKSHA
 MIZORAM



Handwritten signature
 State Project Office
 Samagra Shiksha
 Mizoram



h
Projecting Officer
C&M Works
Samagra Shiksha, Mizoram

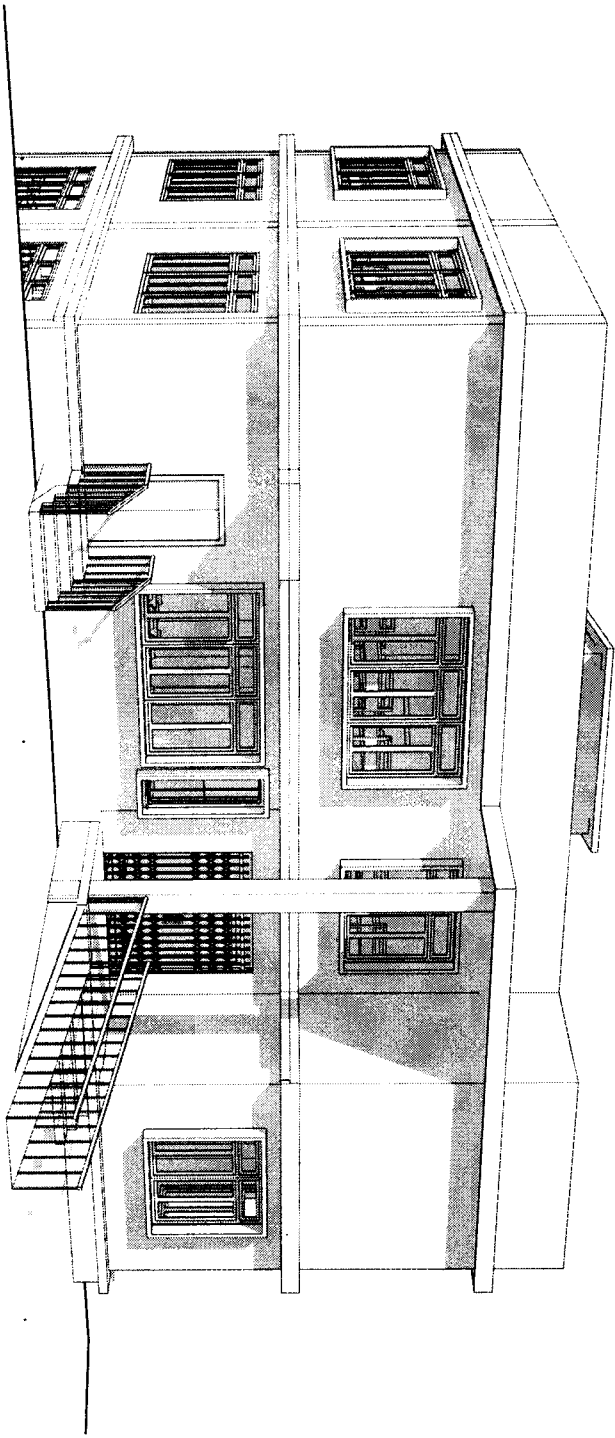
Project:
CONSTRUCTION OF TIPPA GIRLS HOSTEL (50 CAPACITY) - SAHA
DISTRICT

Sheet name: VIEW 01

Sheet No: 07

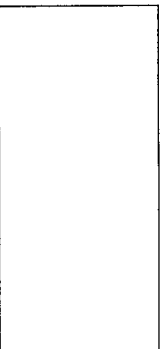
Scale:

ENGINEERING CELL,
STATE PROJECT OFFICE
SAMAGRA SHIKSHA
MIZORAM



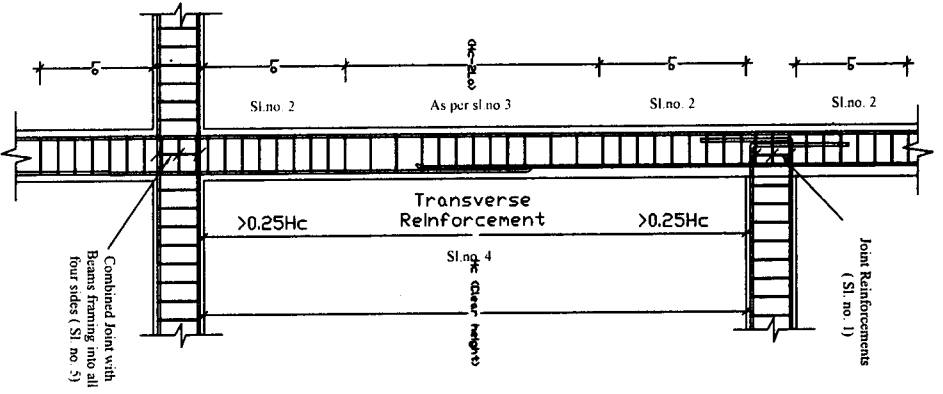
ENGINEER
S. J. J. J. J.
M. J. J. J. J.
S. J. J. J. J.

Project:
CONSTRUCTION OF TIPA GIRLS HOSTEL (50 CAPACITY) - SIAHA DISTRICT



Sheet name: VIEW 02
Sheet No: 08
Scale:

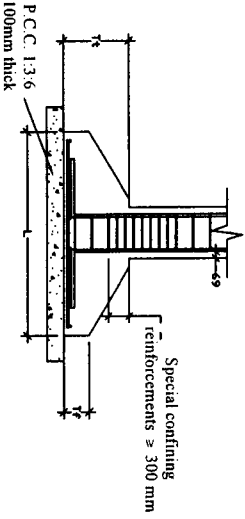
ENGINEERING CELL
STATE PROJECT OFFICE
SAMAGRA SHIKSHA
MIZORAM



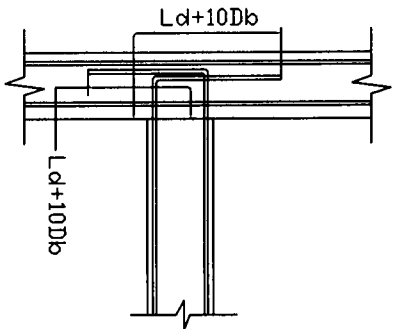
Column and joint detailing

NOTES :

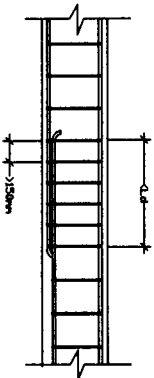
1. Joint which has beam framing into one/two sides shall be provided with special confining steel with a spacing equal to Sl.No 2 within the joint
2. Special Confining Reinforcements shall be provided over a length 'L_o' from each joint face, towards mid span and on either side of any section where flexural yielding may occur under the effect of earthquake forces. The length 'L_o' shall not be less than -
 - a) Larger lateral dimension of the member at the section where yielding occurs. b) 1/6 of the clear span of the member. c) 450mm. The spacing of hoops used as special confining steel shall not exceed 1/4 of minimum member dimension but need not be less than 75mm nor more than 100mm.
3. The spacing of hoops within 'Hc-2L_o' shall not exceed half the least lateral dimension of the column, except where special confining reinforcements is provided for splice.
4. Lap length shall be 69 times the diameter of longitudinal reinforcements.
5. A joint which has beams framing into all four faces shall be provided with a spacing double the special confining steel required at the end of the column. The spacing of the hoop within the joint shall not exceed 150mm.
6. Beam with higher reinforcement should be adopted at the point where two different types of beam meet.



TYPICAL FOUNDATION

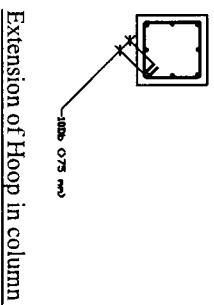


ANCHORAGE OF BEAM AND BAR IN EXTERNAL JOINT

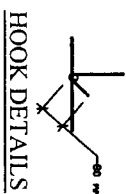


LAP SPLICE IN BEAM

L_d = Development length in tension
 Db = Bar diameter



Extension of Hoop in column



HOOK DETAILS

DESIGNED BY:

(E. DENNIS LALHIMPUJIA)
 State Project Engineer
 Civil Works
 Samagra Shiksha, Mizoram

CONSTRUCTION OF GOVT TPA-V-III M/S
 (GIRLS HOSTEL)

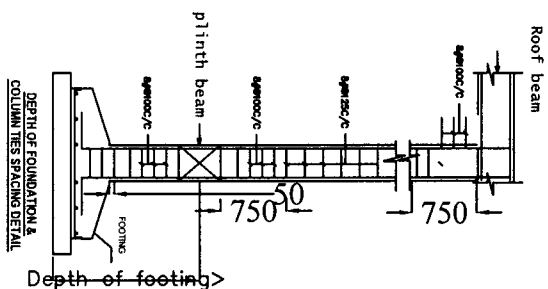
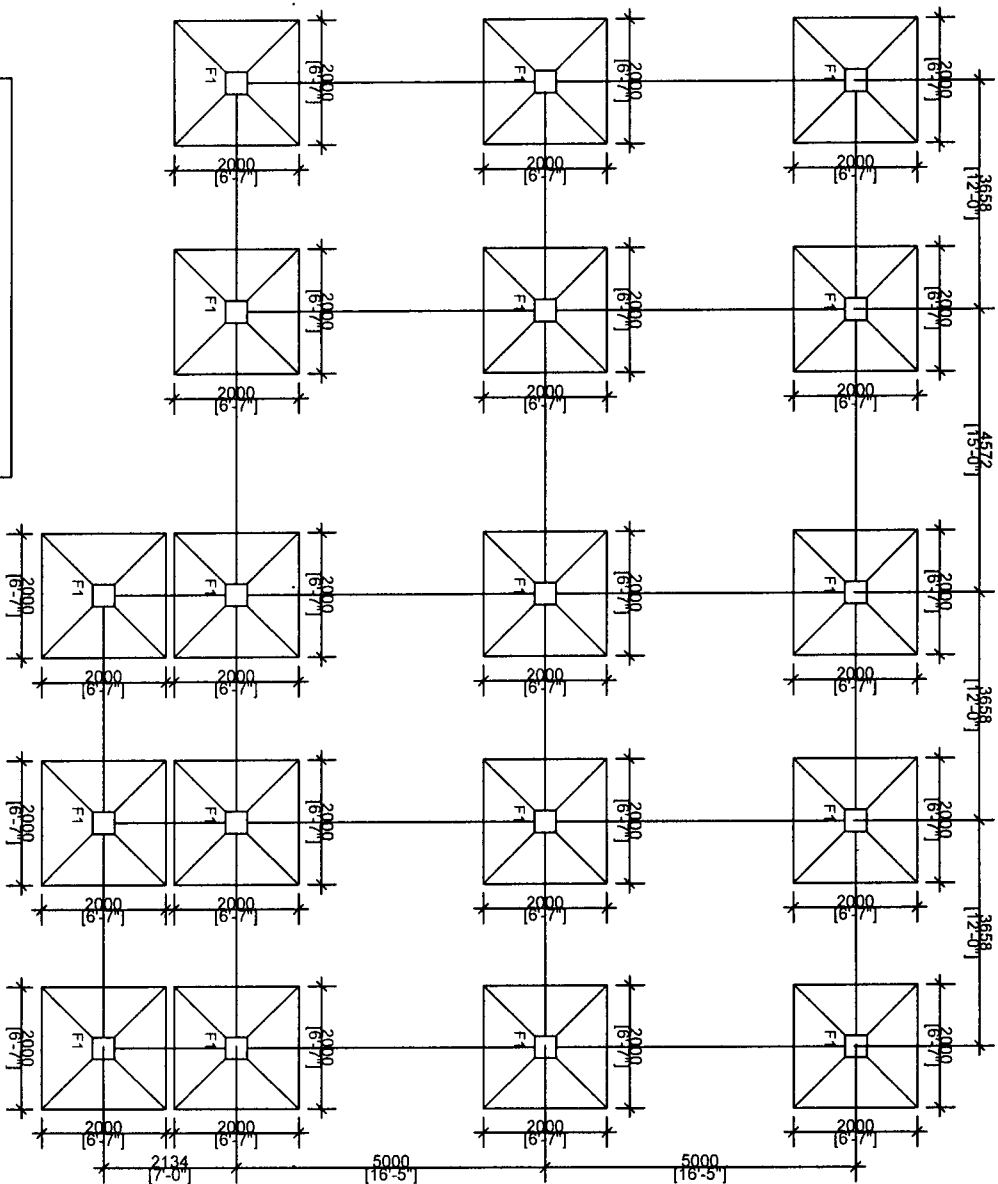
GENERAL SPECIFICATIONS
 FOR STRUCTURAL DETAILS

SCALE : DRAWING NO:

NTS 1

ALL DIMENSIONS ARE IN MM

FOUNDATION LAYOUT



NOTES:

1. P.C.C. 1:3:6 100mm thick shall be provided for levelling course below foundation.
2. Special confining reinforcement shall be extended at least 300mm into the footing or mat when column terminates into the footing of mat.
3. Concrete Grade = M20. Steel = Fe415 (Tor Steel)
4. Clear Cover = 50 mm.

**CONSTRUCTION OF GOVT TIPRA-V-III M/S
(GIRLS HOSTEL)**

Scale:
Not to Scale

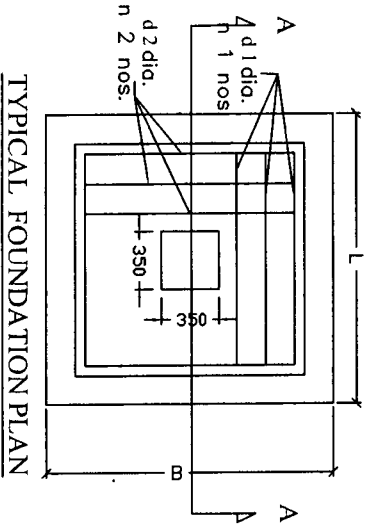
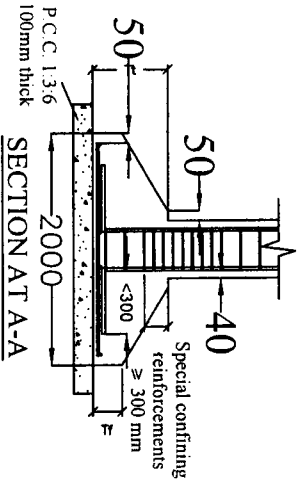
All dimensions
in mm

Prepared by:

(Er. DEB)
State P.E.

SHEET NO. 2

FOUNDATION DETAILS



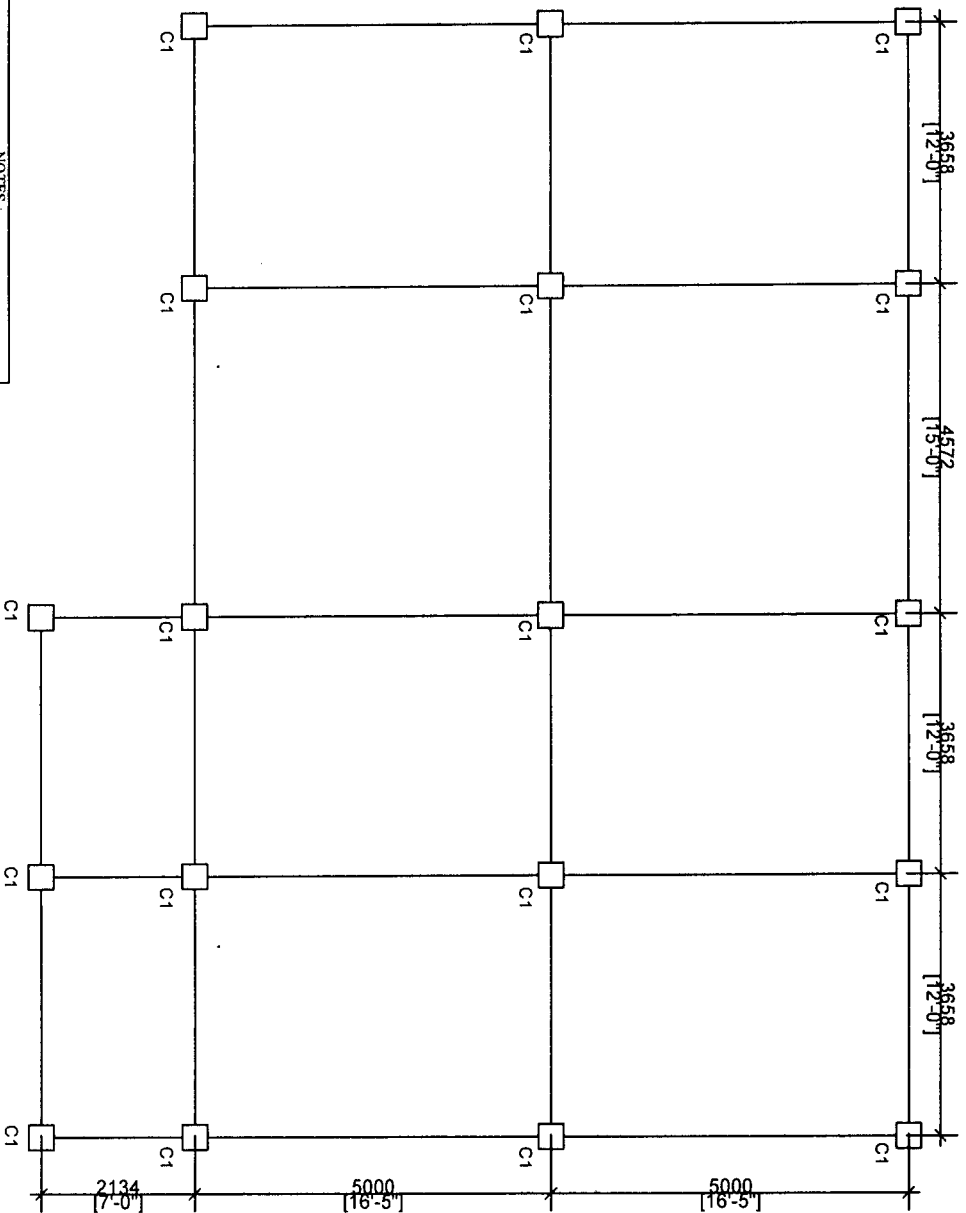
- | NOTES : | |
|---------------------------------------------------------------------------------------------------------------------------------------------|--|
| 1. P.C.C. 1:3:6 100mm thick shall be provided for levelling course below foundation. | |
| 2. Special confining reinforcement shall be extended at least 300mm into the footing or mat when column terminates into the footing of mat. | |
| 3. Clear Cover = 50 mm. | |
| 4. Concrete Grade = M20, Steel = Fe415(Tor Steel) | |

Type of Footing :	Dimensions :		Tf	Tt	L Direction :		B Direction :	
	L x B				d 1 dia.	n 1 nos.	Dia. d 2	n 2 nos.
F1	2000 X 2000		150	300	12 mm	20	12 mm	20

SHEET NO.: 3

CONSTRUCTION OF GOVT TIPPA-V-III M/S	
(GIRLS HOSTEL)	
Scale: Not to Scale	Prepared by:
<i>All dimensions in mm</i>	(E.R. DENNIS) E.A.L.M. State Project Engineer

COLUMNS LAYOUT



NOTES:

1. Main Reinforcement and Lateral ties shall be of Tor Steel Fc-415 Grade.
2. Lap length of steel in compression members shall be at least 480 mm and lapping to be provided at a distance beyond beam-column joint with ties 8mm @ 150 mm c/c.
3. Clear Cover shall be maintained as specified.
4. Provide 135 degree hook, hook length = 8flmm at each hook.
5. Grade of Concrete = M20.

CONSTRUCTION OF GOVT TIP A-V-III M/S
(GIRLS HOSTEL)

SHEET NO. 4

Scale:
Not to Scale

Prepared by:

All dimensions
in mm

(E. DENNIS LALHIMPUIA)
State Project Engineer
Civil Works
Samagra Shiksha, Mizoram

COLUMN DETAILS

CONSTRUCTION OF GOVT TIPA-V-III M/S
(GIRLS HOSTEL)

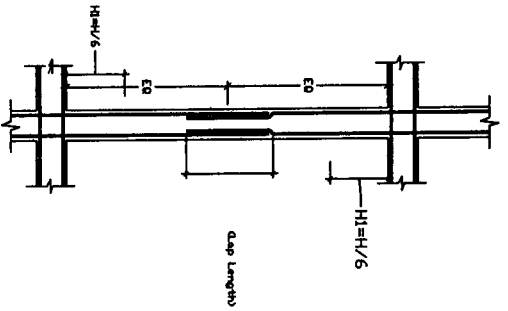
STRUCTURAL DETAILS
FOR ALL FLOOR
COLUMNS

DRAWING
NO: **5**

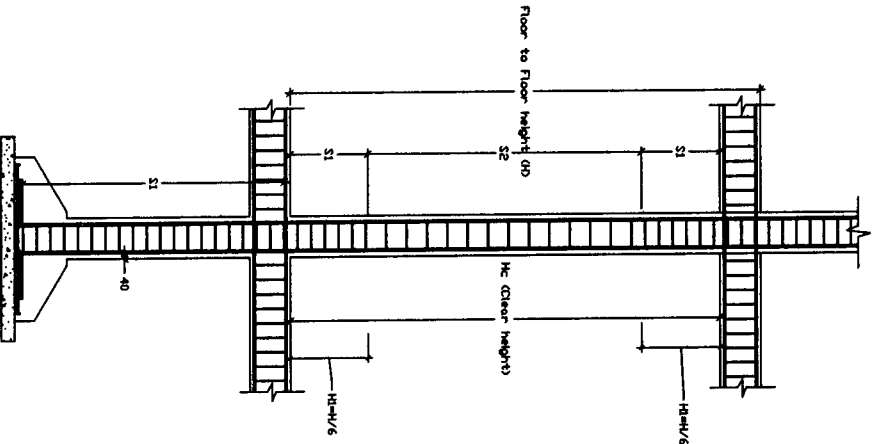
DESIGNED BY:

SCALE :
NTS

ALL DIMENSIONS ARE IN MM



Typical Lap Joint in Column

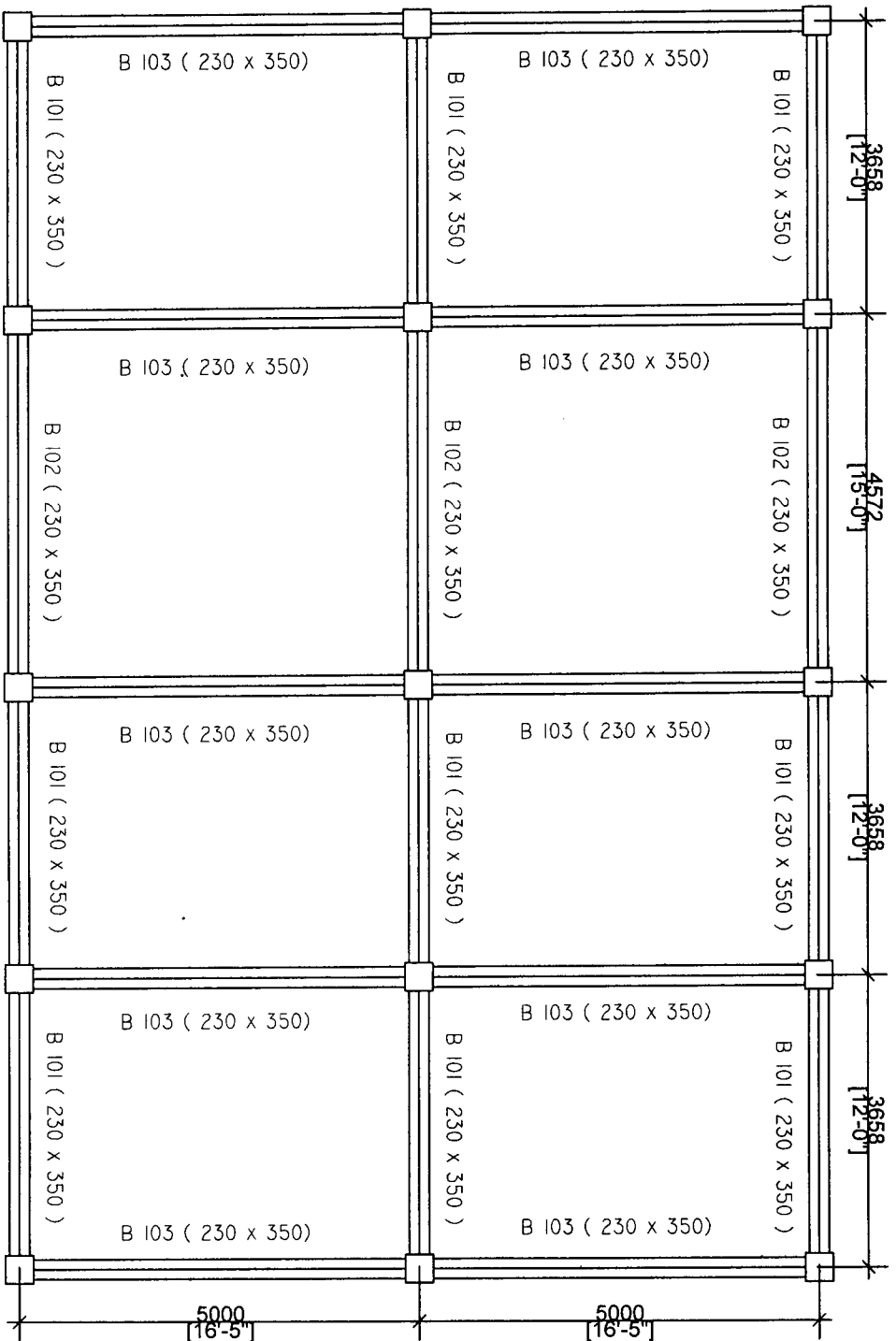


Typical Cross-Section of Column

COLUMN MARKED	DETAIL OF COLUMN SECTIONS				Lateral Ties			
	AT GROUND FLOOR	AT ROOF LEVEL	S1 mm	S2 mm	H1 mm	D1 mm	D2 mm	
C1			100	150	500	8		

(E. DENNIS LALHIMPUIA)
State Project Engineer
Civil Works
Samagra Shiksha, Mizoram

DETAILS OF BEAM



BASEMENT

CONSTRUCTION OF GOVT TPA-V-III M/S
(GIRLS HOSTEL)

Scale:
Not to Scale

All dimensions
in mm

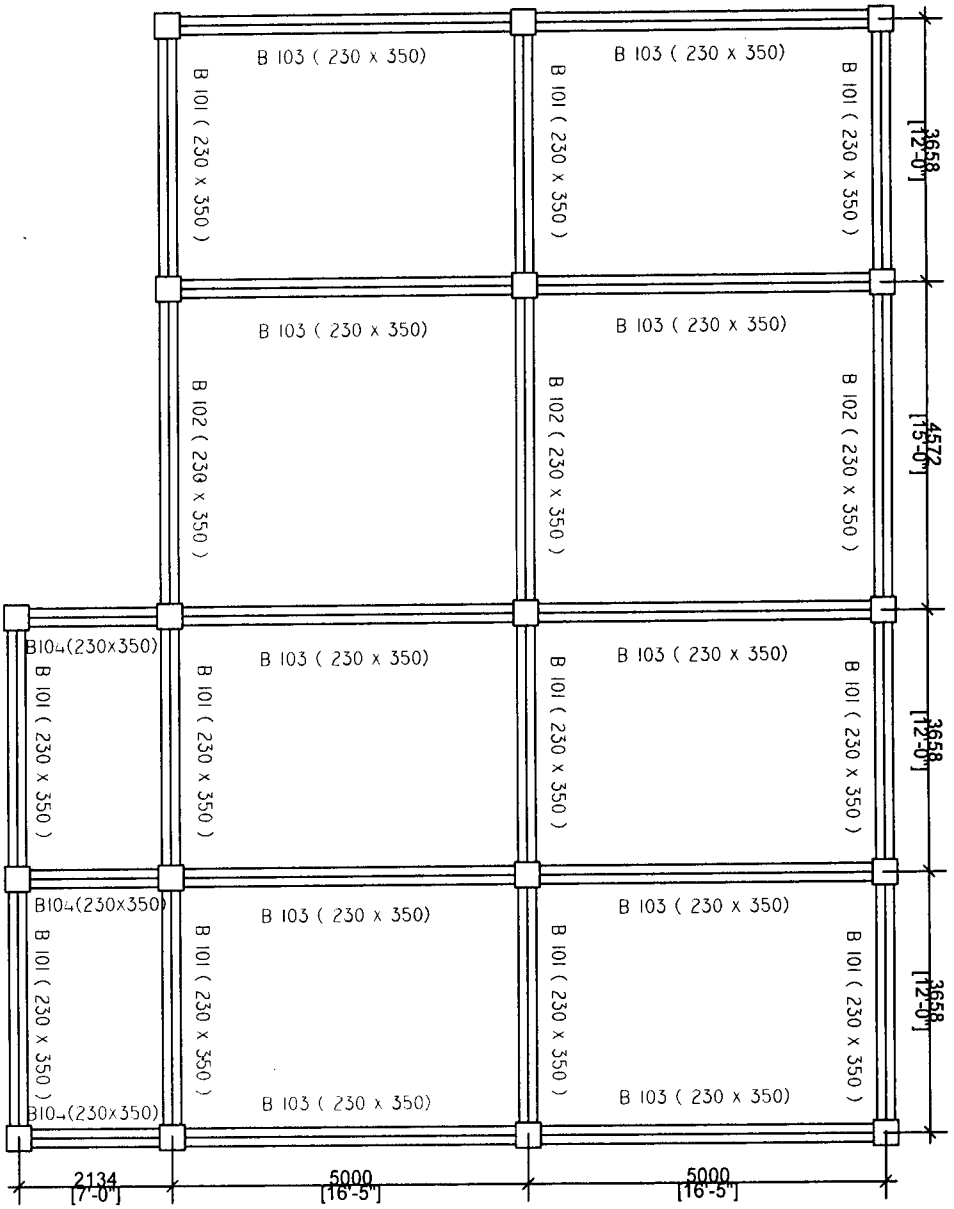
Prepared by:

Dr.
(**Dr. DENNIS LALHIMPUIA**)
State Project Engineer
Civil Works

SHEET NO: 6

Samagra Shiksha, Mizoram

DETAILS OF BEAM



SHEET NO: 7

CONSTRUCTION OF GOVT TIPA-V-III M/S
(GIRLS HOSTEL)

Scale:
Not to Scale

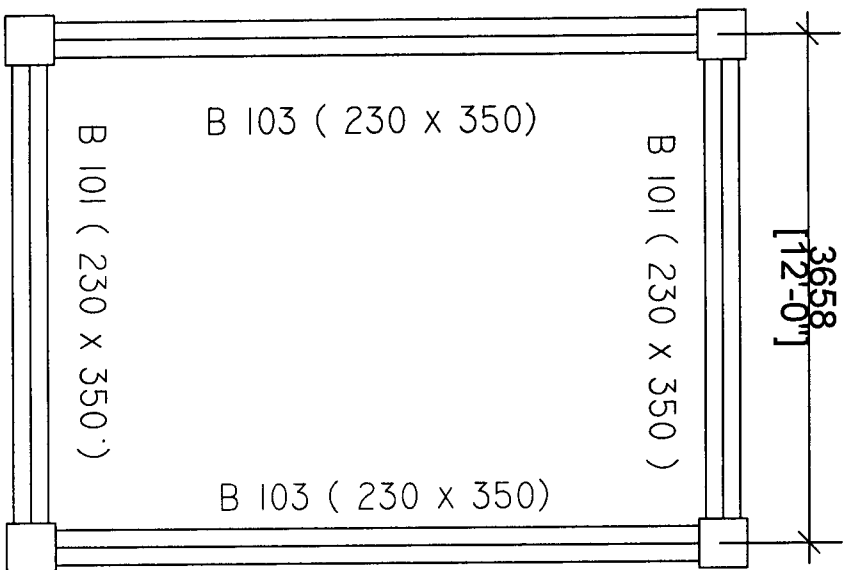
All dimensions
in mm

Prepared by:

(Er. DENNIS LALLIMPUIA)
State Project Engineer
Civil Works

Samagra Shiksha, Mizoram

DETAILS OF BEAM



TERRACE LEVEL
MUMTY BEAM

SHEET NO: 8

CONSTRUCTION OF GOVT
TIPA-V-III M/S (GIRLS HOSTEL)

Scale
Not to Scale

All dimensions
in mm

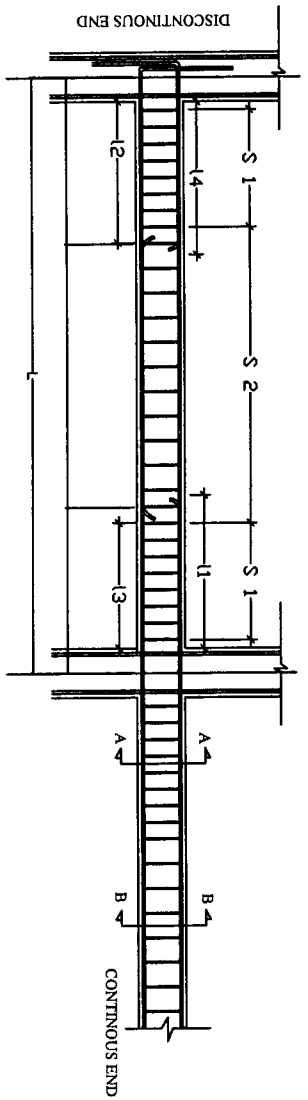
DESIGNED BY:

(Er. DENNIS LALHIMPUIA)
State Project Engineer

Civil Works

Samara Shiksha, Mizoram

TYPICAL LONG SECTION OF BEAM



LAP SPICE IN BEAM
 L_d = Development length in tension
 D_b = Bar diameter

Where
 S_1 = Spacing of stirrups for a length of $2d$
 S_2 = Spacing of stirrups in the mid-span
 L_d = development length of bar in tension
 L = Length of beam (C/C of column)

Typical long section of beam

Type of Beam	Dimension (mm)	Section at B-B'	Section at C-C'	L (mm)	1 1 (mm)	1 2 (mm)	1 3 (mm)	1 4 (mm)	S 1	S 2
B 101	230 x 350			3658	1100	550	900	730	From the Top and 2-legged @ 100mm c/c	From the Top and 2-legged @ 100mm c/c
B 102	230 x 350			4572	1370	690	1140	920	From the Top and 2-legged @ 100mm c/c	From the Top and 2-legged @ 100mm c/c
B 103	230 x 350			5060	1500	750	1250	1000	From the Top and 2-legged @ 100mm c/c	From the Top and 2-legged @ 100mm c/c
B 104	230 x 350			2134	640	320	330	430	From the Top and 2-legged @ 100mm c/c	From the Top and 2-legged @ 100mm c/c

SPECIFICATIONS :

1. Clear Cover for Beam = 25mm.
2. Grade of Steel = Fe 415
3. Grade of Concrete = M 20
4. The first hoop shall be at a distance not exceeding 50mm from the joint face.
5. Minimum Curing Period = 28 days
6. Beam with higher reinforcement should be adopted at the point where two different types of beam meet.

SHEET NO. 9

CONSTRUCTION OF GOVT TIPA-V-III M/S
 (GIRLS HOSTEL)

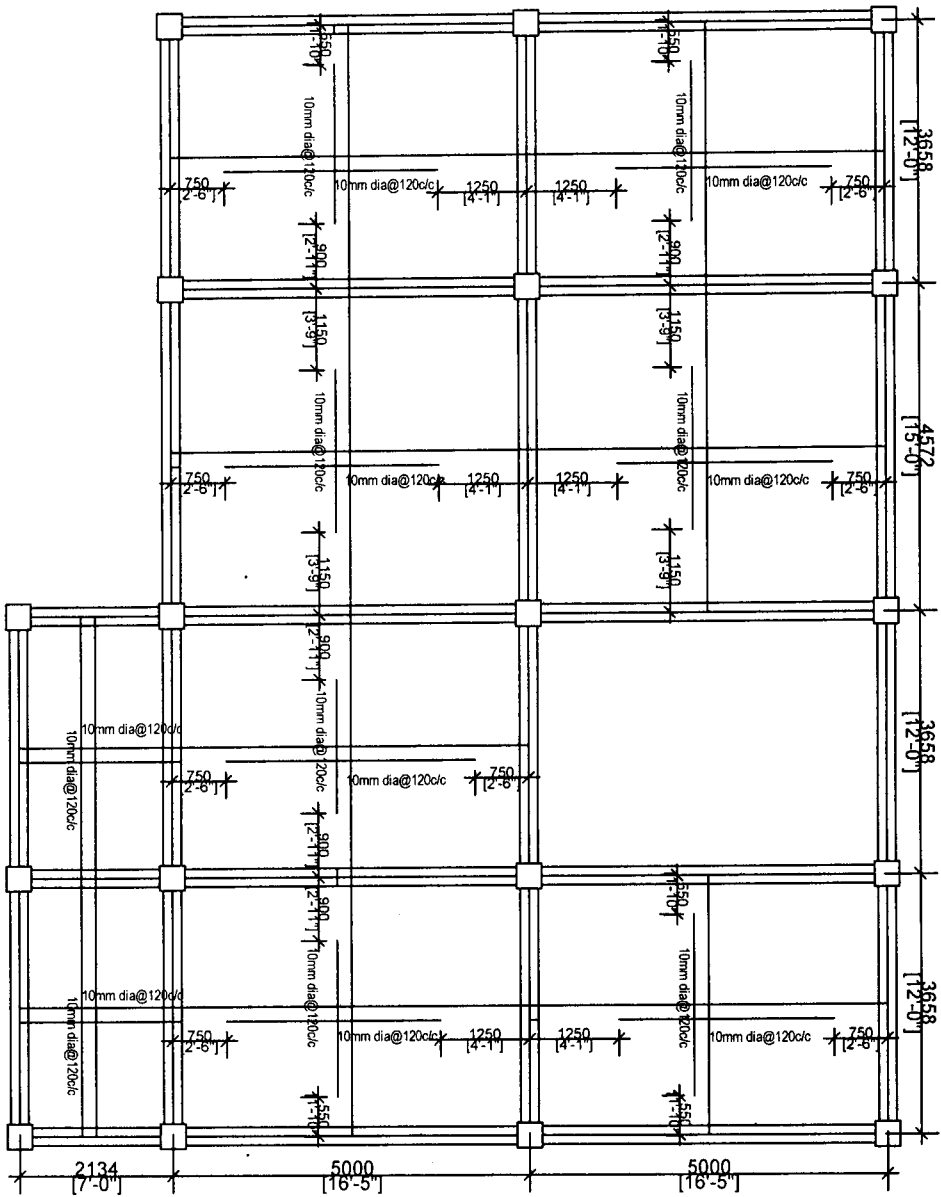
(Certified that the requirements of Regulation 30 of the Arzawl Municipal Council Building regulations, 2012, have been complied with in the preparation of this structural drawing)

Scale:
 Not to Scale

All dimensions
 in mm

(E. DENNIS LALLIMPUIA)
 State Project Engineer
 Civil Works
 Samagra Shiksha, Mizoram

DETAILS OF SLAB



SHEET NO: 10

BOTTOM REINFORCEMENT

CONSTRUCTION OF GOVT TIPA-V-III M/S
(GIRLS HOSTEL)

Scale:
Not to Scale

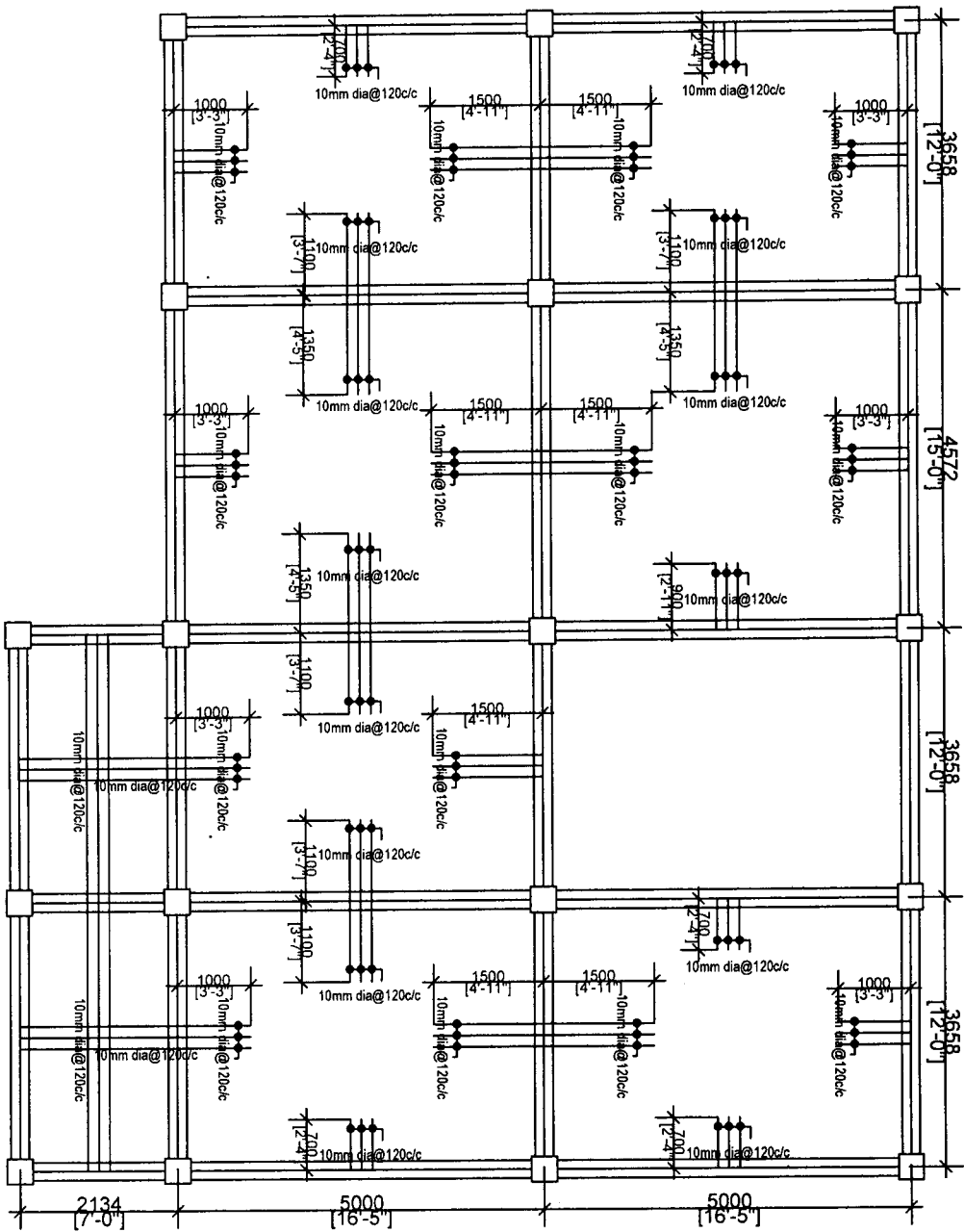
All dimensions
in mm

Prepared by:

(**ER. DENNIS LALHIMPUIA**)
State Project Engineer
Civil Works

Samagra Shiksha, Mizoram

DETAILS OF SLAB



TOP REINFORCEMENT

CONSTRUCTION OF GOVT TIPA-V-III M/S
(GIRLS HOSTEL)

Scale:
Not to Scale

All dimensions
in mm

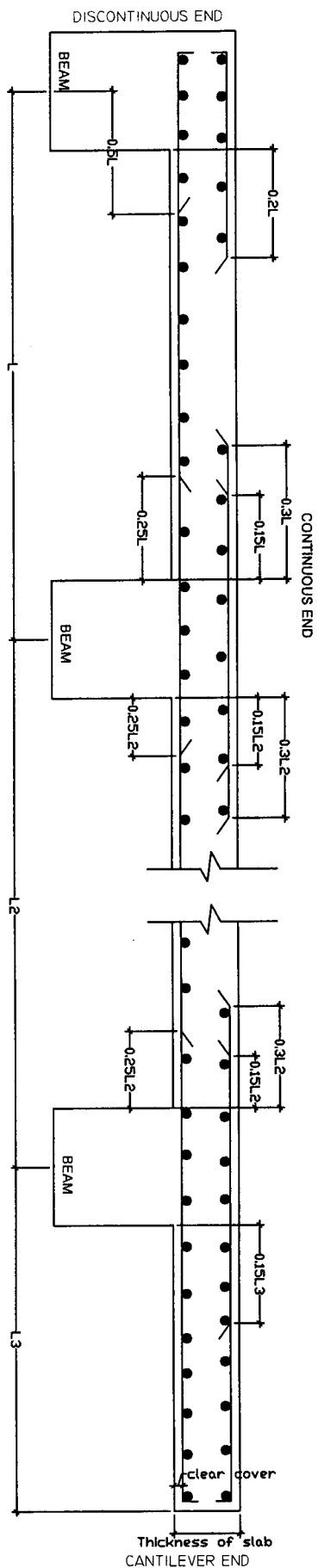
Prepared by:

(Er. DENNIS LALHIMPUIA)
State Project Engineer
Civil Works

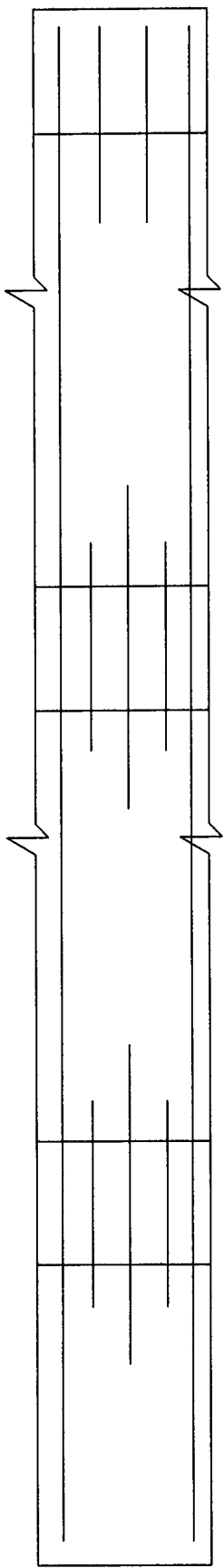
SHEET NO: 11

Samagra Shiksha, Mizoram

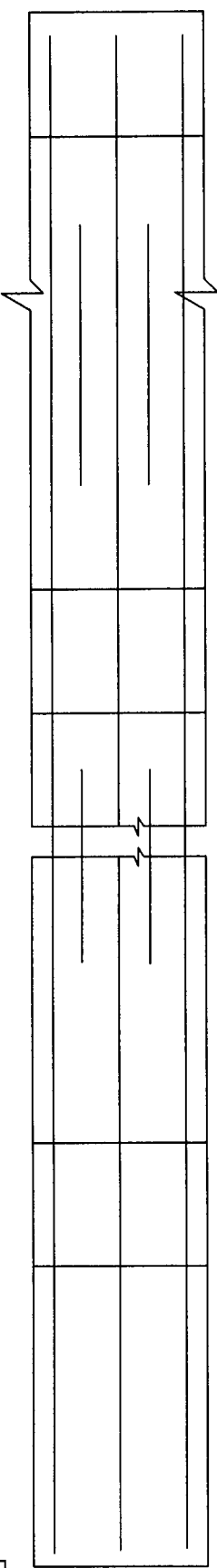
TYPICAL SLAB DRAWING



TYPICAL LONG SECTION OF SLAB AT MID STRIP X-X



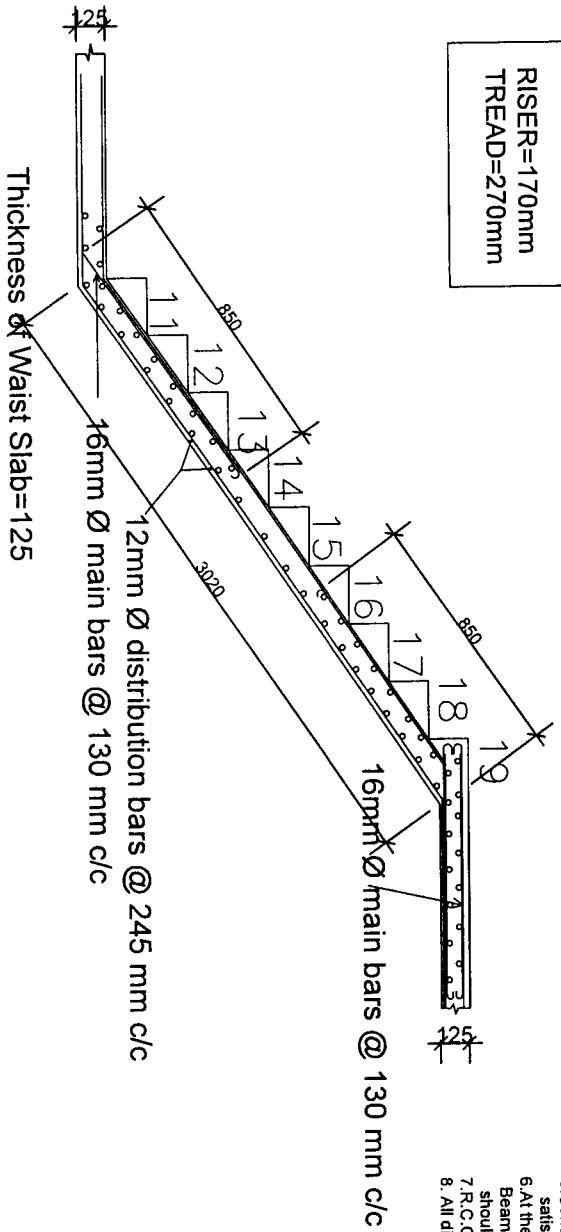
PLAN OF TOP MAIN REINFORCEMENT



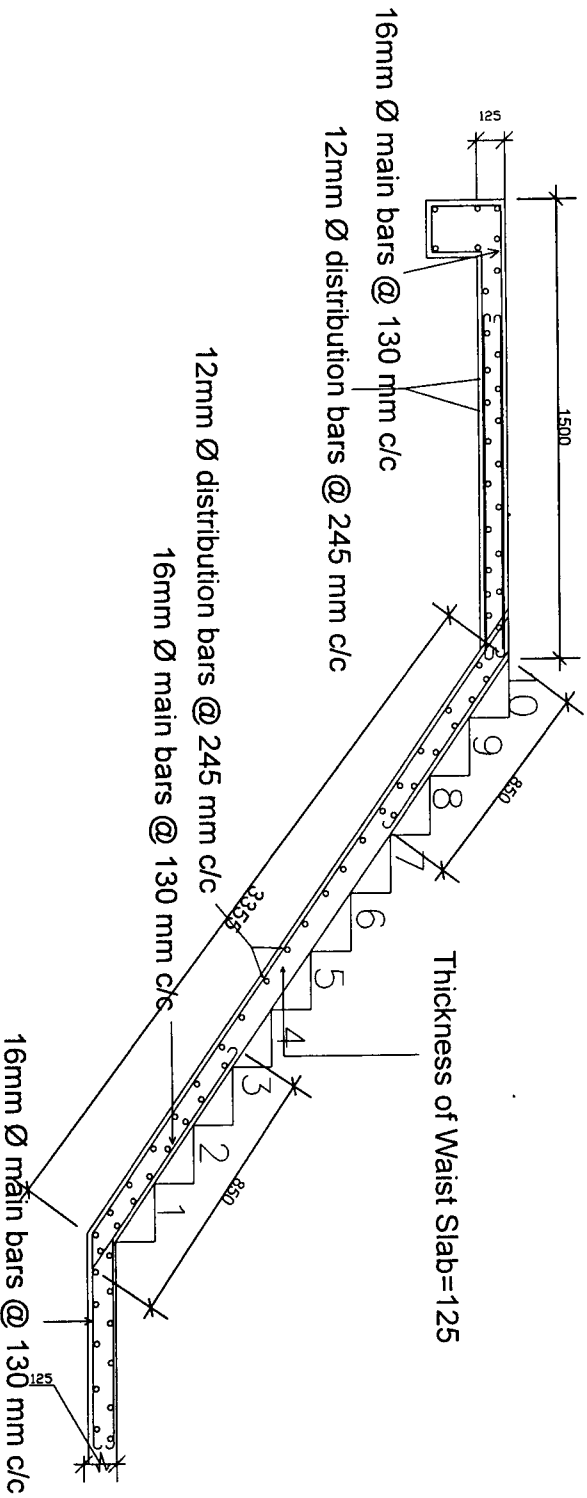
PLAN OF BOTTOM MAIN REINFORCEMENT

CONSTRUCTION OF GOVT TPA-V-III MIS (GIRLS HOSTEL)		SHEET NO. 12
Scale: Not to Scale	Prepared by:	
All dimensions in mm	(ER. DENNIS LALHIMPUIA) State Project Engineer	

RISER=170mm
TREAD=270mm



1. Grade of Cement Concrete = M20.
2. Grade of Steel = Fe 415.
3. Clear Cover = 20mm.
4. Minimum Curing Period = 28 days.
5. Concrete and Steel must be tested and should satisfied the strength specified above.
6. At the point where two different types of Beam meet, Beam with higher reinforcement should be adopted.
7. R.C.C. Slab & Brick Walling
8. All dimension are in mm, but not to scale.



CONSTRUCTION OF GOVT. TIPPA-V-III M/S
(GIRLS HOSTEL)

STRUCTURAL DETAILS FOR
STAIRCASE

DESIGNED BY:

(Signature)
(**DR. DENNIS LALHIMPUIA**)
State Project Engineer
Civil Works
Samagra Shiksha, Mizoram


SCALE :

NTS

ALL DIMENSIONS ARE IN MM


BILL OF QUANTITIES FOR CONSTRUCTION OF GOVT. TIPA V-III M/S (GIRLS HOSTEL)

Sl.no	Description of Items	Unit	Qty	Rate		Amount
				in figure	in words	
1/2.06	Earthwork in excavation over areas (exceeding 30cm in depth, 1.5m in width as well as 10sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed.					
	(a) Ordinary and Hard Soil	cum	433.000			
2/2.08	Earthwork in excavation in foundation trenches etc. not exceeding 2 meters depth including dressing of bottom and sides of trenches and subsequent filling and compaction in 15cm layers as in column foundations, fence posts, etc. and disposal of all surplus soil as directed within a lead of 30 metres.					
	(a) Ordinary Soil	cum	129.600			
3/2.17	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.					
	2/3 of qty taken from 2/2.08	cum	86.400			
4/4.03	Providing and laying in position cement concrete of specified grade excluding cost of centering and shuttering - All work upto plinth level:					
	b) 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40mm nominal size)	cum	23.604			
5/5.01	Providing and laying in position reinforced cement concrete excluding cost of centering and shuttering, finishing and reinforcement in -					
	All work upto plinth level :					
	(a) 1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20mm nominal size)	cum	29.169			


(E. DENNIS LALHIMPUIA)
 State Project Engineer
 Civil Works
 Samagra Shiksha, Mizoram

6/5.02	Reinforced cement concrete work in walls including attached pillasters, columns, pillars, posts, piers, abutments, return walls, retaining walls, struts, buttresses, string or lacing courses, fillets etc. upto floor five level excluding cost of centering shuttering etc complete.					
	a) 1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20mm nominal size)	cum	21.99			
7/5.03	Reinforced cement concrete work in beams, suspended floors, roofs having slope up to 15° landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases above plinth level up to floor five level, excluding the cost of centering, shuttering, finishing and reinforcement complete.					
	a) 1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20mm nominal size)	cum	148.29			
8/5.18	Steel reinforcement for RCC work including straightening, cutting, bending, placing in position and binding all complete					
	b) Thermo-Mechanically Treated Bars	kg	31753.630			
9/5.10	Centering and shuttering including strutting, propping, etc. and removal of form works in -					
	(a) Foundations, footings, bases of columns etc. for mass concrete.	sqm	42			
	(c) Columns, pillars, piers, abutments, posts and struts.					
	Column					
	350x350 mm	sqm	210.000			
	(d) Lintels, beams, plinth beams, girders, bressumers and cantilevers, etc.					
	Beams.					
	230x350 mm	sqm	364.56			
	(e) Suspended floors, roofs, landings, shelves and their support, balconies and chajjai etc.	sqm	970.41			
	(f) Staircases (except spiral staircase)					
	excluding landings.	sqm	47.80			
10/6.09	7.5 cm thick brick masonry with first class brick in superstructure above plinth level upto floor two level including curing, etc. complete.					

	a) in cement mortar 1:3 (1 cement : 3 coarse sand)	sgm	748.276		
11/9.06	Providing 1st class local wood dressed in frames of chaukat for doors, windows, clerestory windows fixed in position.	cum	1.824		
12/9.10	Providing and fixing 1st class teak wood <i>panelled</i> shutters for doors etc. including M.S. butt hinges with necessary screws, etc. complete.				
	a) 40 mm thick.	sgm	65.38		
13/11.01	Providing and fixing anodised aluminium work for doors, windows, ventilators and partitions with extruded built up standard sections/ other sections of approved make conforming to IS : 733 and IS : 1285 fixing with dash fasteners of required dia and size. including necessary filling up of gaps at junctions, at top, bottom and sides with required PVC/ neoprene gaskets etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, aluminium snap beading for glazing /panelling, CP brass /stainless steel screws all complete including fixing of glasses but excluding cost of glasses.				
	a) Natural colour				
	i) 2 - track sliding windows/ventilators.	sgm	95.44		
14/11.02	Supplying of glass panes at site				
	a) 4mm thick plate sheet glass.	sgm	95.44		
15/20.11	15mm cement plaster 1 : 3 (1 cement : 3 fine sand).	sgm	3150.32		
16/10.10	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing, staircase railing and similar works. including applying priming coat of approved steel primer. (round, square or rectangular hollow tubes etc.)				
	a) GI tube 40mm @ 3.72 Kg/m	kg	1009.24		


 (Er. DENNIS LALHIMPUIA)
 State Project Engineer
 Civil Works
 Samagra Shiksha, Mizoram

17/12.11	Providing and ceramic glazed floor tiles of size 300x300mm or more (thickness to be specified by the manufacturer) of 1st quality conforming to IS: 15622 of approved make in all colours, shades, except white, ivory, grey, fume red brown, laid on 20mm thick cement mortar 1 : 4 (cement : 4 course sand) including pointing the joints with white cement and matching pigments etc. complete. as per designed colour.					
	b) Matt/Antiscratch	sqm	80.88			
18/20.51	Applying priming coat with ready mixed pink or Grey primer of approved brand and manufacture on wood work (hard and soft wood) & Plywood.	sqm	102.10			
19/20.72	Painting with synthetic enamel paint of approved brand and manufacture in all shades on new work (two or more coats).					
	a) General quality	sqm	102.096			
20/20.75	Finishing walls with exterior emulsion of required shade on new work (three or more coats) to give an even shade.					
	a) Regular exterior emulsion like supercote, walmasta etc.	sqm	3150.32			
21/20.50	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface :	sqm	3150.32			
22/14.11	Providing and fixing bright finished M.S two lever mortise door lock with necessary screws. etc. complete.	Nos	12.00			
	a) Union type					
23/14.07	Providing and fixing M.S. Tower bolts (socket bolts) bright finished with necessary screws etc. complete.	Nos	48.00			
	(a) 300 mm					
24/14.10	Providing and fixing M.S. handles with necessary screws, etc. complete	Nos	48.00			
	(a) 150mm					
25/18.01	Providing and fixing on terrace (at all floor levels)					
	Polyethylene storage tank of approved brand and manufacture with cover and mosquito proof coupling and suitable locking arrangement and making necessary connections for inlet, outlet and overflow pipes but without the cost for base support.					

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Mizoram

	a) Sintex or equivalent	lit	8000.00		
26/17.33	Providing and fixing on wall face SWRPVC soil, waste and vent pipes including jointing with rubber lubricant/cement solvent complete.				
	a) 110mm dia.	m	100.00		
27/17.34	Providing and fixing SWRPVC plain bend of required degree (87.50°) including jointing with rubber lubricant/cement solvent complete.				
	a) 110 mm dia.	Nos	22.00		
28/17.35	Providing and fixing SWRPVC plain bend of required degree (45°) including jointing with rubber lubricant/cement solvent complete.				
	a) 110 mm dia.	Nos	15.00		
29/17.37	Providing and fixing single equal SWRPVC plain junction of required degree (T-junction) .				
	a) 110x110x110 mm	Nos	17.00		
30/17.42	Providing and fixing ventilation cowl including jointing with rubber lubricant/cement solvent complete.				
	a) 110 mm dia.	Nos	7.00		
31/17.02	Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100 mm uPVC P or S trap, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required: (Without Cistern)				
	(a) Orissa pattern pan with integral type foot resis				
	(i) White	Nos	9.00		
32/17.04	Providing and fixing vitreous china pedestal type water closet (European type W.C. pan) with seat and lid, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever), conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required :				
	i) White	Nos	1.00		
33/18.25	Providing and fixing PVC pipes complete with fittings and clamps, including cutting and making good the walls etc. (internal work).				
	(b) 20mm dia nominal bore	mm	50.000		

34/18.02	Providing and fixing G.I. pipes complete with G.I. fitting and clamps, including cutting and making good the walls etc. (<i>internal works- exposed on wall</i>).					
	a) 20mm dia nominal bore	<i>m</i>	50.00			
35/18.07	Providing and fixing brass bib cock of approved quality.					
	b) 20mm nominal bore	<i>Nos</i>	15.000			
36/18.08	Providing and fixing brass stop cock of approved quality.					
	b) 20mm nominal bore	<i>Nos</i>	27.000			
37/18.09	Providing and fixing G.I. Union in G.I. pipe including cutting and threading the pipe and making long screws etc. complete (New work).					
	b) 20 mm nominal bore	<i>Nos</i>	15.000			
38/17.16	Providing and fixing White vitreous china wash basin Standard of Parryware/ Hindware/ Cera and equivalent make with R.S. or C.I. brackets, 15mm C.P. brass pillar taps, C.P. brass chain with rubber plugs, 32mm C.P. brass waste of standard pattern, 32mm C.P. brass traps and union complete including painting of fittings and brackets, cutting and making good the walls wherever required.					
	b) Vitreous China Wash basin Compact 450 x 300 mm with single 15 mm C.P. brass pillar taps	<i>Nos</i>	9.000			
	i) white					
39/18.51	Providing and placing in position electric water pump of approved manufacture including connections to G.I pipes etc. complete with accessories.					
	(b) 750 watts	<i>each</i>	1.00			
40/17.24	Providing and fixing mirror of superior glass (of approved quality) and of required shape and size with plastic moulded frame of approved make and shade with 6 mm thick hard board backing :					
	Total	<i>Nos</i>	9.00			
41/17.29	Providing and fixing anodised aluminium towel rail with two anodised aluminium brackets to wooden cleats with C.P brass screws.					
	a) 750x20mm size.	<i>Nos</i>	1.00			
42/17.30	Providing and fixing toilet paper holder.					
	b) Plastic toilet paper holder of standard size.	<i>Nos</i>	1.00			

43/17.31	Providing and fixing liquid soap container with C.P. brass lid and brackets fixed to wooden cleats with C.P. brass screws.	Nos	1.00			
44/7.01	a) Glass container with C.P. lid and brackets. Regular coursed rubble masonry with hard stone in foundation upto one storey above and below ground level including curing, etc. complete.					
45/10.16	c) In cement mortar 1 : 6 (1 cement : 6 fine sand) Steel work welded in built up sections/framed work including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.	cum	67.50			
	b) In a grating, frames, guard bar, ladders, railings, brackets, gates & similar works.	kg	1031.07			
46/12.01	Cement concrete flooring 1:2:4 (1 cement : 2 sand : 4 well graded stone aggregate 20mm size) finished with a floating coat neat cement including cement slurry etc. complete but excluding the cost of nosing of steps etc.	sqm	553.00			
47/10.04	Providing and fixing in position collapsible steel shutters with vertical channels 20x10x2mm and braced with flat iron diagonals 20x5mm size with top and bottom rails of T-iron 40x40x6mm with 40mm dia. steel pulleys complete with bolts, nuts, locking arrangement, stoppers, handles, including applying a priming coat of approved steel primer.	sqm	10.08			
1/2.08	SEPTIC TANK Earthwork in excavation in foundation trenches etc. not exceeding 2 meters depth including dressing of bottom and sides of trenches and subsequent filling and compaction in 15cm layers as in column foundations, fence posts, etc. and disposal of all surplus soil as directed within a lead of 30 metres.	m ³	12.400			
2/5.03	(a) Ordinary Soil Reinforced cement concrete work in beams, suspended floor..... reinforcement complete.					
	(a) 1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20mm nominal size)	m ²	1.185			
3/5.10	Centering and shuttering including strutting, propping, etc. and removal of form works in -					

BILL OF QUANTITIES

NAME OF WORK : INTERNAL ELECTRIFICATION OF NSCBV (GIRLS HOSTEL), TIPA V-III MS ; SAHA DISTRICT

SOR	DESCRIPTION OF MATERIAL	UNIT	QUANTITY	RATE		AMOUNT
				in words	in figure	
C:02:00	SURFACE PVC CASING & CAPPING COPPER WIRING (GRADE-II) LIGHT POINT,CEILING FAN POINT,EXHAUST FAN POINT ETC (MODULAR TYPE)					
	Wiring in looping system with PVC wire sheathed standard copper conductor/wires as per IS:694 (1990) and Flame retardant low smoke & Halogen (FR-LSH)1100 voltage graded copper flexible wire stranded copper running inside PVC casing & capping (Gr-II) 20mm dia fixed, surface on the wall/ceiling/floor as per convenience including junction box having required numbers of ways from control switch to the light point etc as required:-					
C:02:01	LIGHT POINT					
	C:02:01 (B) Short Point (Modular)	Each	33			
	C:02:01 (C) Medium Point (Modular)	Each	24			
	C:02:01 (D) Long Point (Modular)	Each	18			
	FAN POINT					
	C:02:01 (D) Long Point (Modular)	Each	13			
	LIGHT PLUG/SOCKET POINT 5/6 AMPERES (MODULAR TYPE)					
	Wiring in looping system with PVC wire sheathed standard copper conductor/wires as per IS:694 (1990) and Flame retardant low smoke & Halogen (FR-LSH) 1100 voltage graded copper flexible wire stranded copper running inside PVC casing & capping (Gr-II) 20x12mm fixed, surface on the wall/ceiling/floor as per convenience including junction box having required numbers of ways from DB to the light plug/socket 5/6A point etc. as required :-					
C:02:02	LIGHT PLUG/SOCKET POINT 5/6 AMPERES (MODULAR TYPE)					
	Wiring in looping system with PVC wire sheathed standard copper conductor/wires as per IS:694 (1990) and Flame retardant low smoke & Halogen (FR-LSH) 1100 voltage graded copper flexible wire stranded copper running inside PVC casing & capping (Gr-II) 20x12mm fixed, surface on the wall/ceiling/floor as per convenience including junction box having required numbers of ways from DB to the light plug/socket 5/6A point etc. as required :-					
	C:02:02(E) Light plug Point Very Long Point (modular)	Each	7			



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C:02:03	<p>POWER PLUG/SOCKET POINT 15/16 AMPERES (MODULAR TYPE)</p> <p>Wiring in looping system with PVC wire sheathed standard copper conductor/wires as per IS:694 1990) and Flame retardant low smoke & Halogen (FR-LSH) 1100 voltage graded copper flexible wire stranded copper running inside PVC casing & capping (Gr-II) 30x12mm fixed, surface on the wall/ceiling /floor as per convenience including junction box having required numbers of ways from DB to the power plug/socket 15/16A point etc. as required :-</p>	Each	3			
C:02:06	<p>MAIN TO SUB-MAIN IN COPPER WIRE GRADE-II SURFACE (SINGLE PHASE TWO WIRES)</p> <p>Wiring in looping system with PVC wire sheathed standard copper conductor/wires as per IS:694 (1990) and Flame retardant low smoke & Halogen (FR-LSH) 1100 voltage graded copper flexible wire stranded copper running inside PVC Casing & capping (Grade-II) of all available sizes diameter fixed, surface on the wall/ceiling/floor as per convenience including junction box having required numbers of ways from Main to Sub-Main/DB/Sub-Main/DB to SDB/SDB/Switch boards/SDB to switch boards as required:-</p>	rm	540			
	C:02:06(A) 2X2.5 Sqmm copper conductor/cable + 1x2.5 Sqmm earth wire	rm	135			
	C:02:06(B) 2X4 Sqmm copper conductor/cable + 1x4 Sqmm earth wire	rm	90			
	C:01:06(C) 2X 6 Sqmm copper conductor/cable + 1 x 6 Sqmm earth wire					
	<p>SUPPLYING AND FIXING OF SWITCH BOARDS (MODULAR TYPE)</p> <p><u>Grade-II</u></p> <p>Supplying and fixing of Modular switch board grade-II of the following sizes/modules on surface/recess including PVC/Steel boxes, modular plate and necessary switches, plug/socket, and fan regulators etc. with necessary painting if necessary</p>					
	One Module Switch Board (Modular)					
	:02:01 1 S	No	11			
	:02:03 1 S two ways	No	6			
I:02:00	Two modules Switch Board (Modular)					

	I:02:13 2 S		No	10				
	Four modules Switch Board (Modular)							
	I:02:57 2S with indicator + 1Soc		No	3				
	Six modules Switch Board (Modular)							
	I:02:86 2 S + 1 R + 1SOC		No	6				
	Eight modules Switch Board (Modular)							
	I:02:158 3 S + 1SOC +1R+ 1BKP		No	7				
N:00:00	MCBs/RCCBs/ELCBs/MCCBs/EARTH FAULT RELAY SP/SPN/DP/DP&N/TP/TP&N/FP							
	MCBs SP/SP&N/DP/TP/TP&N/FP							
	Supplying and fixing of all types and rating MCBs, RCCBs, ELCBs etc, 240/415 Volts 50 Hz AC supply in the existing MCB DB complete with connections, testing & commissioning etc in							
N:01:00	N:01:01 5 to 32 Amps ,SP, MCB B-series		Each	12				
	N:01:26 40 Amps' DP, MCB Isolator		Each	2				
	N:01:27 63 Amps' DP, MCB Isolator		Each	1				
O:00:00	DISTRIBUTION BOARDS							
	MCB DISTRIBUTION BOARD							
	Supplying, fitting, & fixing of 63 Amps' 6-ways Distribution Board with Bakelite fused fitting with fused links, 240 volts, 50 Hz AC on surface/recess completed with inter-connection, painting etc, as required.							
O:03:00	O:03:75 6-ways MCB DB SP & N DD metallic Door		Each	3				
J:00:00	LIGHTING FIXTURES(SURFACE/RECESS)							
	LIGHTING FIXTURES CEILING/WALL MOUNTED:-							
	J:01:03 Supplying, fitting and fixing Batten Holder including connection etc, as required		Each	30				
	(1661) CFL Curvy 15W(SP) B22, E27 Base Havells/Equivalent		No	30				
	J:01:30 Installation, testing & commissioning of pre-wired fluorescent Light fittings of all types, with all accessories and tubes etc, directly on ceiling/wall, including connection with 1.5 Sqmm copper conductor single core cable etc as required.		Each	44				
	(1375) LED Batten fitting 1X12W Linea 2' with LED tube (Phillips/Equivalent)		No	11				
	(1377) LED Batten fitting 1X26W Linea 4' with LED tube (Phillips/Equivalent)		No	32				
J:01:00								

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Samarra Shiksha, Mizoram

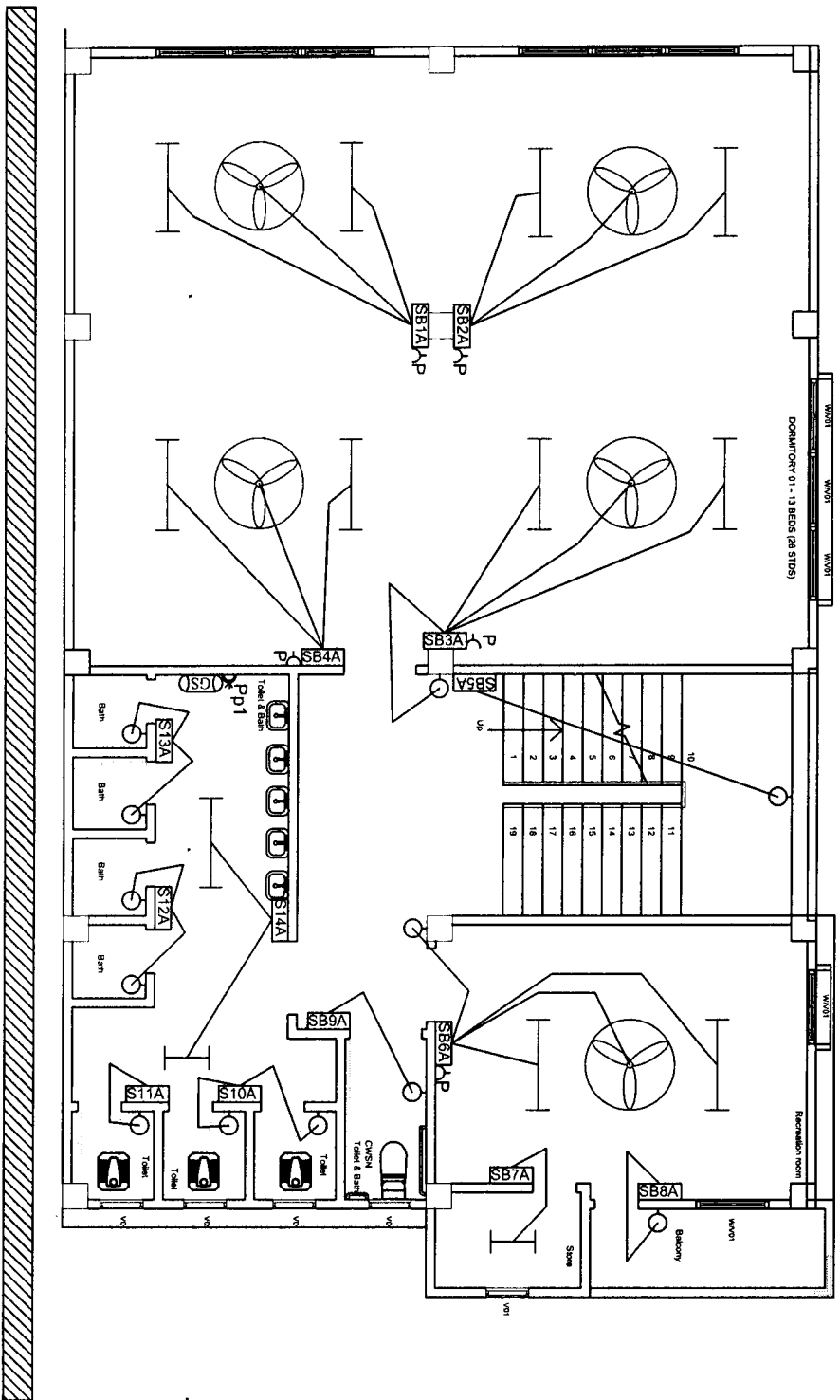
	(1625) Flood Light 2X65W CFL Retro ZING 2 Polycarbonate flood light luminaire for twin high Wattage Retrofit CFL. Havells/equivalent	No	1			
	J:01:36 Installation, testing & commissioning of ceiling fan and regulator, including wiring the down rod of standard length (upto 30cm) with 2X1.5 sqmm PVC insulated copper conductor single core cable etc. as required	Each	19			
	(1861)Bracket wall mounting fan 400mm sweeps Helix with remote ISI marked (Usha/equivalent)	No	6			
	(1845)Ceiling fan 1200mm Sweeps ISI marked 3 blades (Usha/Crompton/Equivalent)	No	13			
	J:02:00Installation of all kind of Electrical appliances					
	J:02:02Installation of Instantaneous Electric Water Heater up to 50 litres in the existing wall including fixing the Hook in the wall by standard sizes of sleeves Nuts and bolt or Standard Screw for the above Instantaneous Electric Water Heater, and making good the damage, connection, testing and commissioning etc, as required.	Each	3			
J:02:00	(1828)Electric Storage Water Heater/Geyser 6 litres 2 KW Havells Rio /Equivalent	No	3			
	EARTHING AND LOOP EARTHING					
	Q:01:07 Earthing with Copper Earth plate 600mmx600mmx6mm thick including accessories and providing masonry enclosure with cover plate having locking arrangement and water pipe, etc. (but without charcoal or coke and salt) complete as required.	Each	1			
	Q:01:10 Extra for using salt and coke for G.I or copper plate earth electrode as required.	Each	1			
Q:01:00	Q:01:38 Supplying & Laying of 8 SWG Copper Wire at .50m below ground level for conductor earth electrode, including soldering etc. as required. (8 SWG Copper Wire (4mm dia '))	Metre	18			
	Q:01:55 Supplying and drawing of 1.5 sqmm PVC sheathed copper conductor for loop earthing in the existing surface/recess steel/PVC conduit/PVC casing & capping alongwith others wires as required.	Metre	767.7			
R:01:00	LIGHTNING CONDUCTOR					

R:01:08 Providing and fixing of ESE type lightning Arrestor PDC 6.5 (DPDC 6.5) with non electric ESE(Early steamer Emission) standardized according to norms UNE 21.186 AND NPC 17.102 Duly tested and certified by CPRI Bangalore, Having coverage area of 63m diameter lightning charge capacity 100 KA and 43 micro second delay (DOKSUN/equivalent)	Each	1			
R:01:10 Providing and fixing of Stainless steel pole for ESE lightning Arrestor 50m 3 meters long made of SS-304 material with base plate to mount lightning Arrestor (DOKSUN/Equivalent) in complete	Each	1			
R:01:67 Providing and laying of copper tape 32mmx6mm thick from earth electrode directly in ground as required.	Metre	18			
Supplying and fitting of Water Cooler 120 ltrs with water pipe line as required in lump sum	Each	1			
1- Phase Service connection 16sqmm twin core Aluminium cable lump sum					
Total					
Add 18% GST					
Add 1% Labour Cess					
GRAND TOTAL	Rs				

Rupees in words

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LEGENDS

SHEET NO : 1

LED Batten fitting 1 x 20W 4' with LED tube	
LED Batten fitting 1 x 12W 2' with LED tube	
1200mm sweep Ceiling fan	
Wall mounting light(15 W CFL)	
Flood light(2X65 W CFL)	
Geyser 6 litres	
Control Switch board(Modular)	
Samp S/S comb Plug	
1kmp S/S comb Plug	
Circuit Distribution board	
Main Distribution Board	
Water Cooler 120 ltrs	

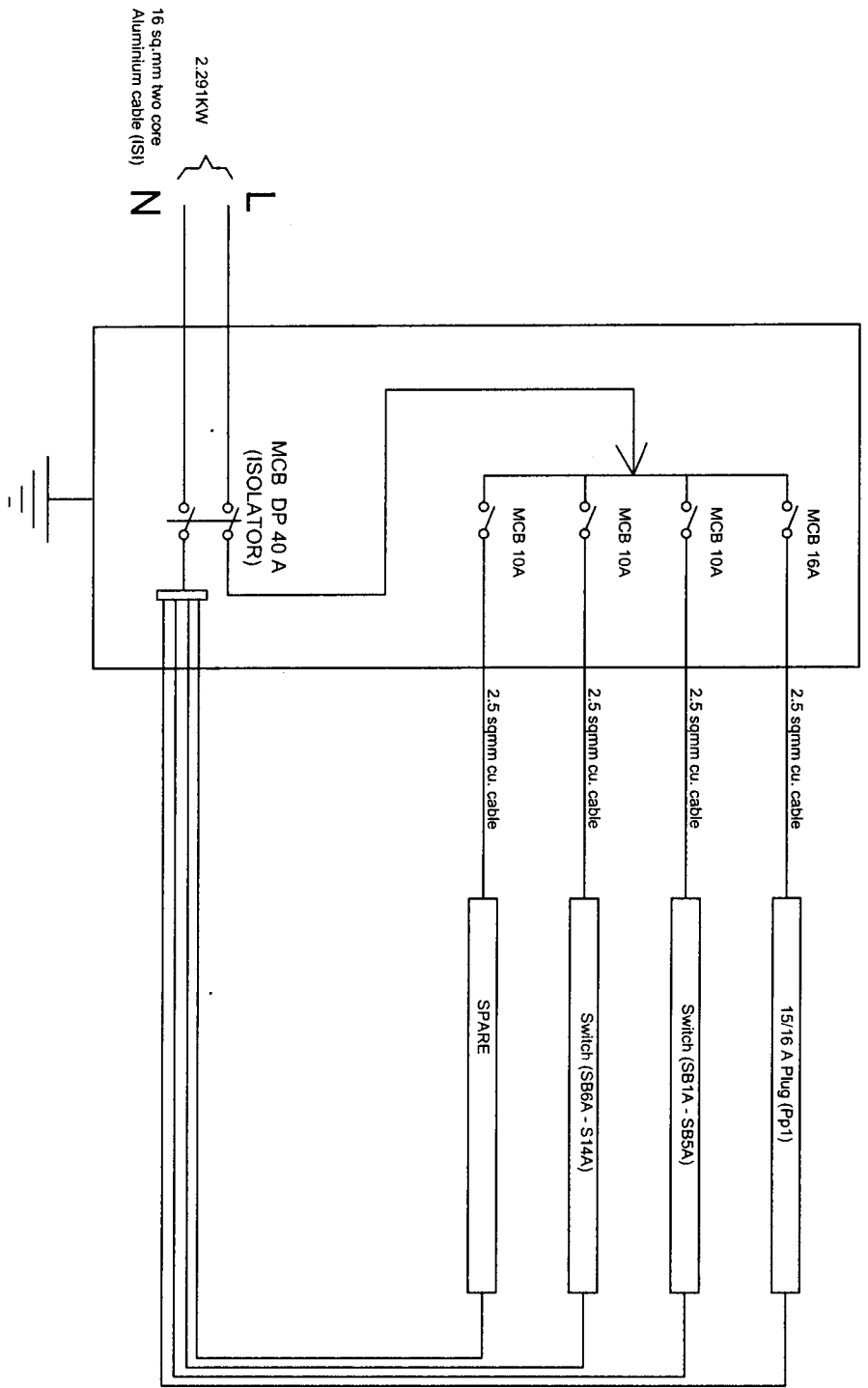
BASEMENT

01

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6-way MCB DB SP & N D/D



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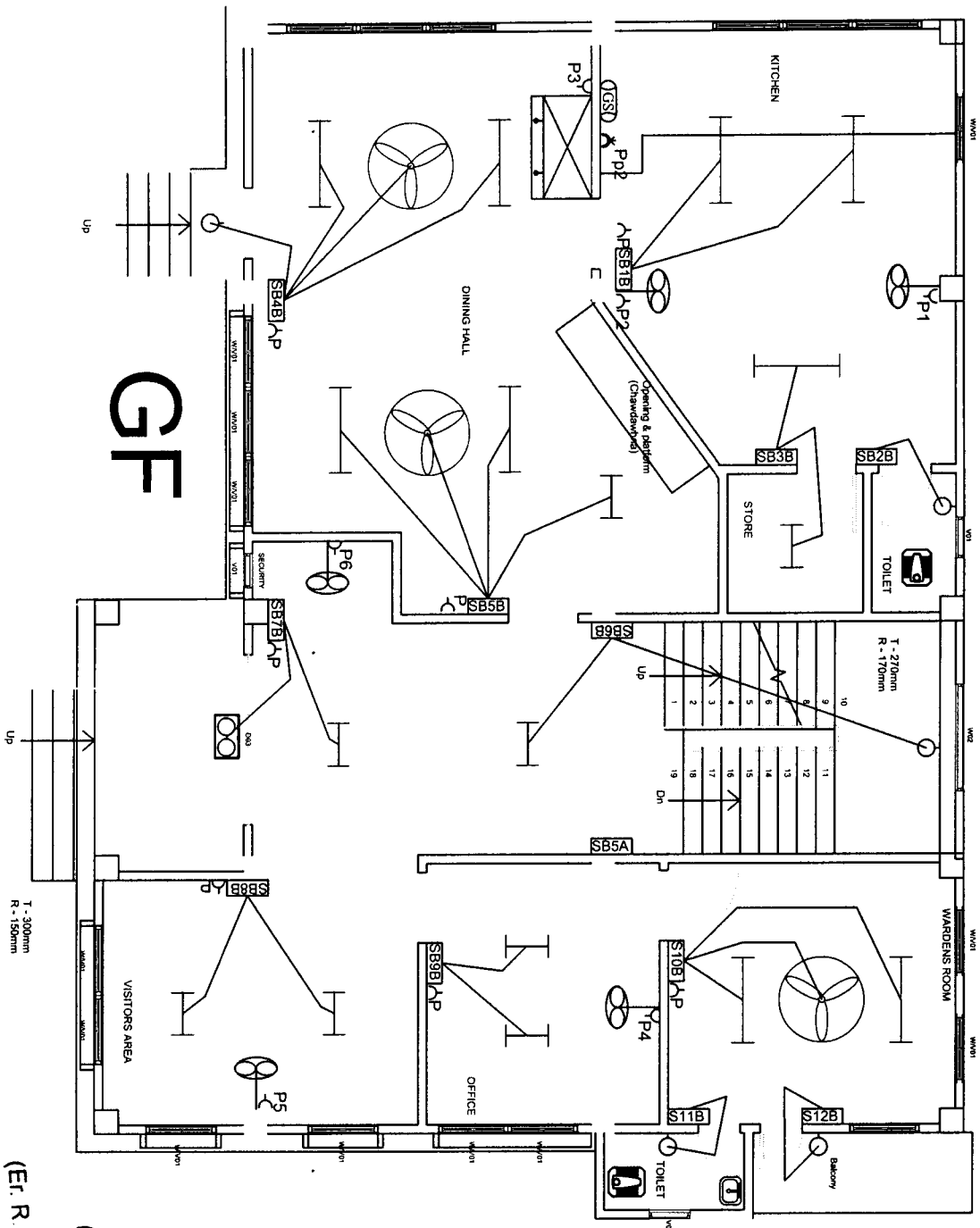
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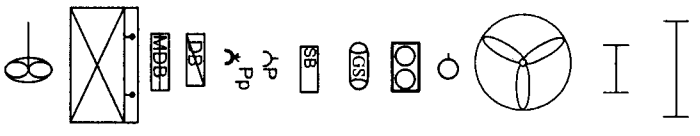
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PROJECT	
NSCBV ELEMENTARY GIRL HOSTEL TIPA V-III MS, SAHA DISTRICT	
NOTES	
STATE PROJECT OFFICE SAMAGRA SHIKSHA, MIZORAM	
DRAWING : SINGLE LINE DIAGRAM	
DATE : 05/06/2024	SHEET NO : 02
SCALE : NOT TO SCALE	DRAWN BY
COUNTERSIGNED BY	



LEGENDS

- LED Batten fitting 1 x 20W
4' with LED tube
- LED Batten fitting 1 x 12W
2' with LED tube
- 1200mm sweep Ceiling fan
- Wall mounting light(15 W CFL)
- Flood light(2X65 W CFL)
- Guyser 6 litres
- Control Switch board(Modular)
- Samp S/S comb Plug
- 16amp S/S comb Plug
- Circuit Distribution board
- Main Distribution Board
- Water Cooler 120 ltrs
- Bracket wall mounted fan
400mm sweeps



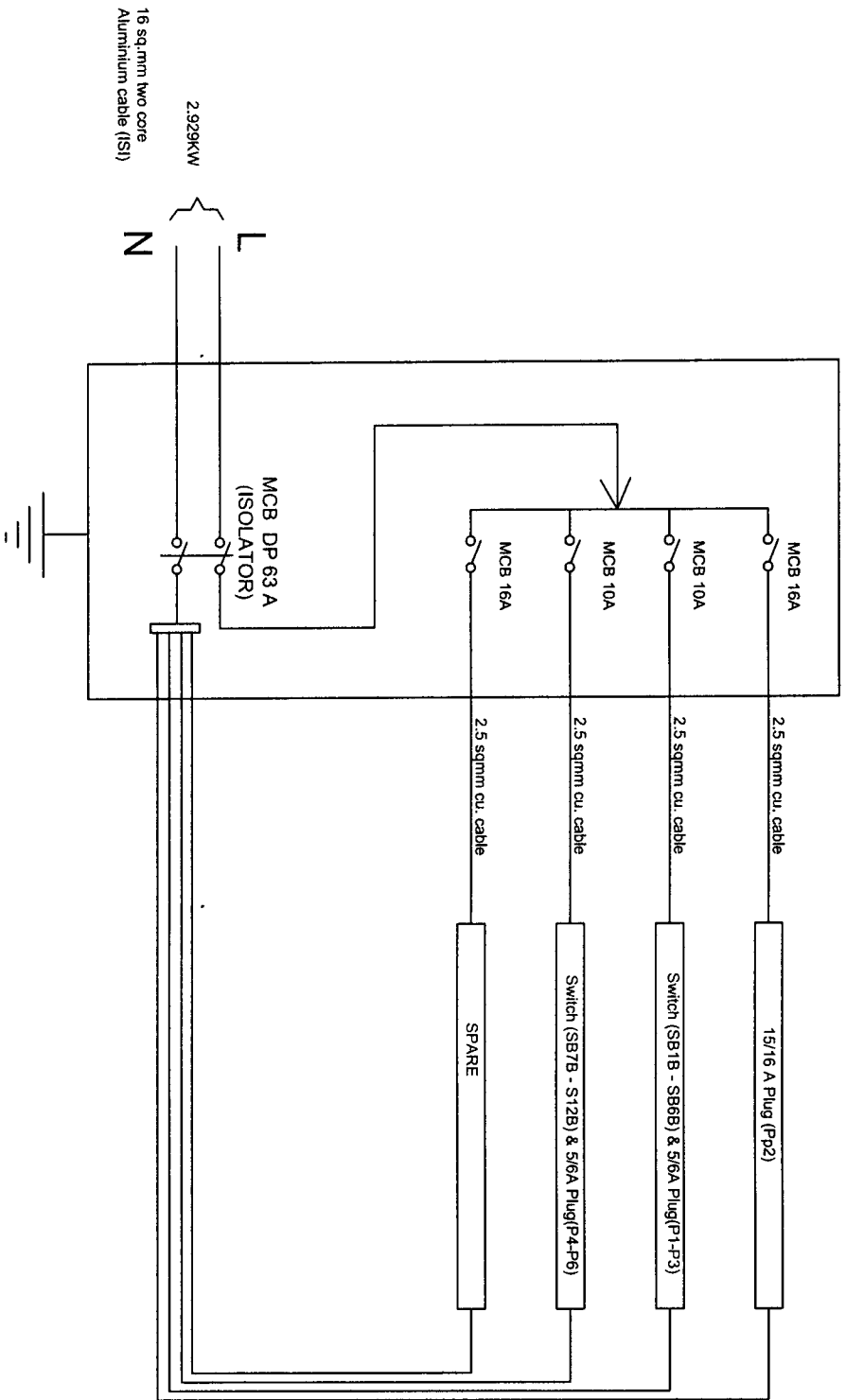
SHEET NO. - 3

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PROJECT

NSCBAY ELEMENTARY GIRL HOSTEL
TIPA V-III MS, SAHA DISTRICT

NOTES

STATE PROJECT OFFICE
SAMAGRA SHIKSHA, MIZORAM

DRAWING : SINGLE LINE DIAGRAM



DATE : 05/06/2024

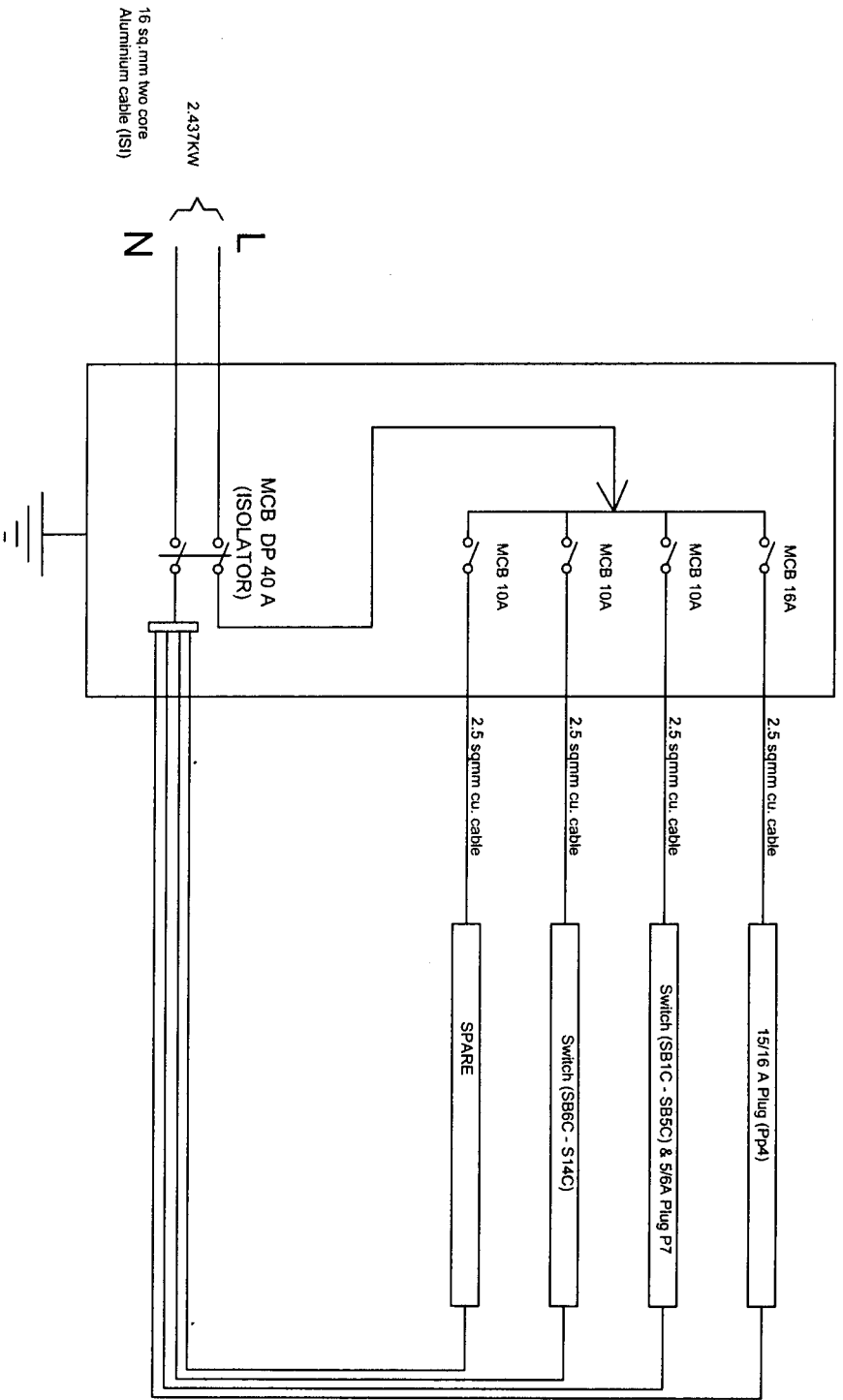
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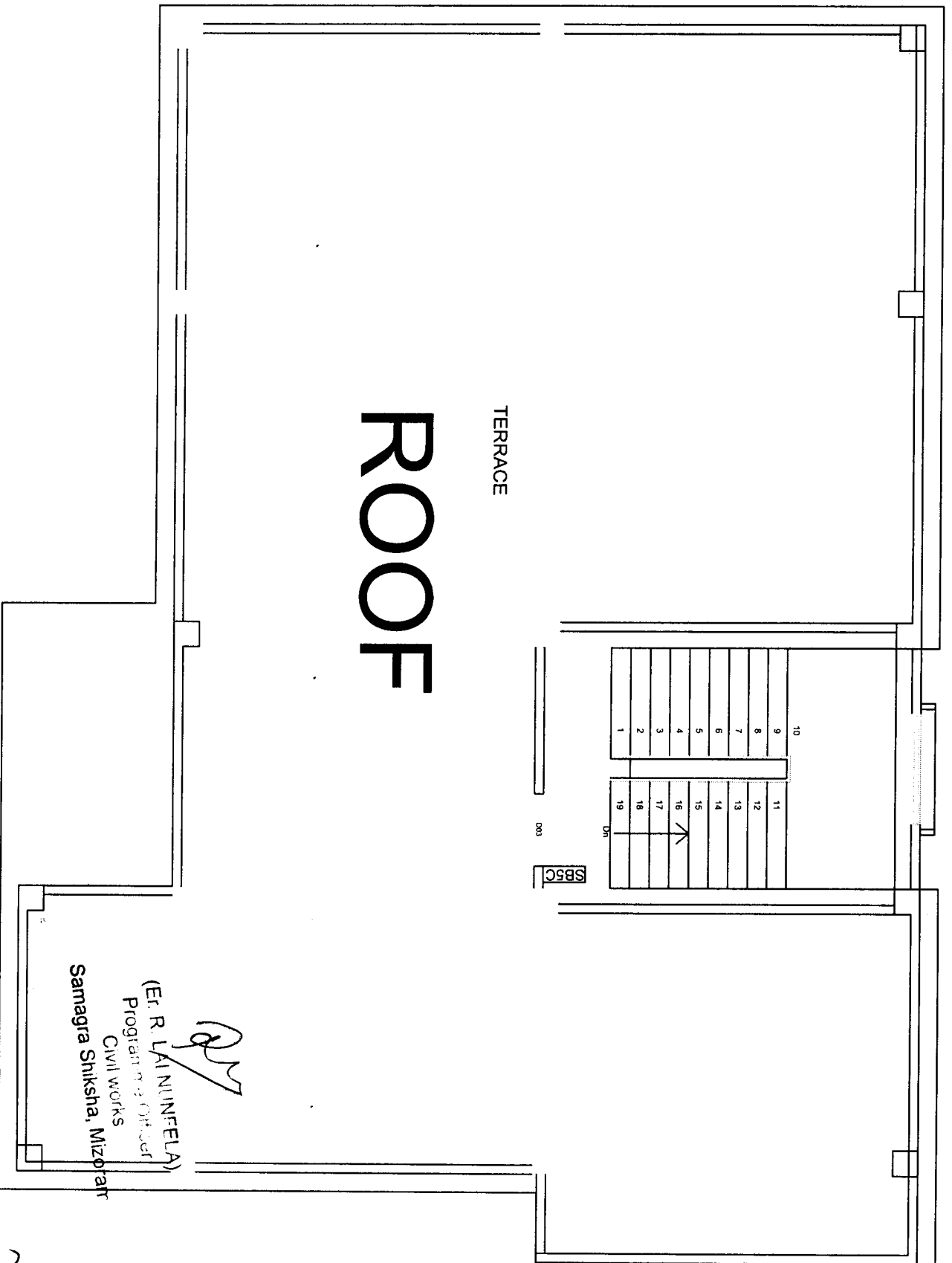
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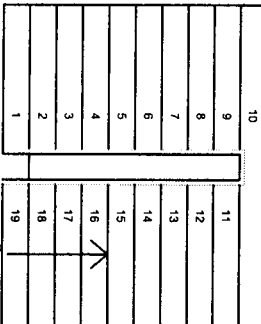
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PROJECT	
NSCBV (ELEMENTARY) CIRL HOSTED TIPA V-III MS. SAHA DISTRICT	
NOTES	
DRAWING : SINGLE LINE DIAGRAM	
STATE PROJECT OFFICE SAMAGRA SHIKSHA, MIZORAM	
DATE : 05/06/2024	SHEET NO : 06
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TERRACE

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003

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