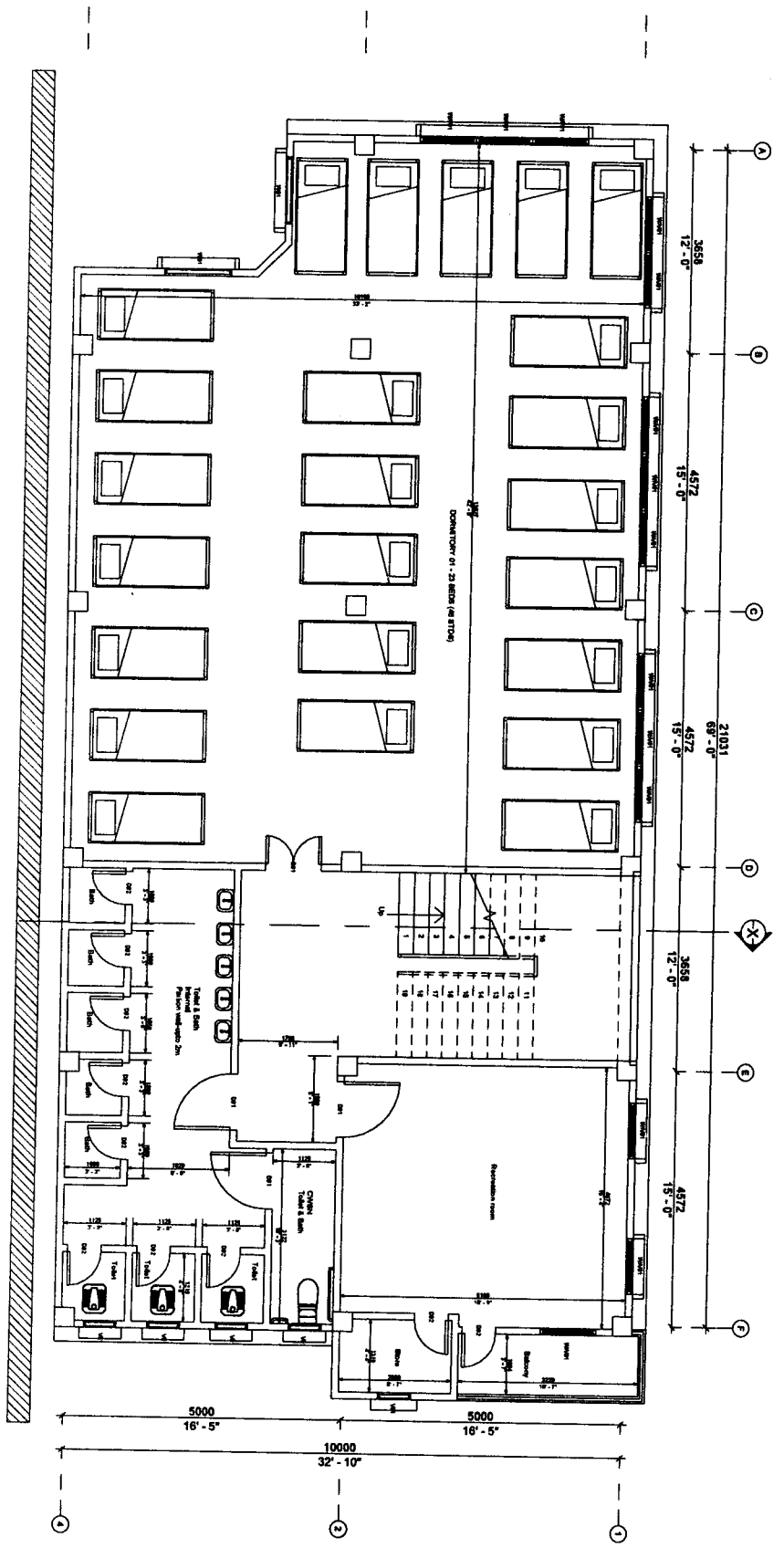


CONSTRUCTION OF KGBV GIRLS HOSTEL
AT TLABUNG (100 Capacity),
LUNGLEI DISTRICT



Programing Officer
 Civil Works
 Samagra Shiksha Mizoram

Project:
 CONSTRUCTION OF KGBV HOSTEL AT TLABUNG (100 CAPACITY) -
 LUNGLEI DISTRICT

W/W01 - 1000X1828.8mm
 W01 - 1000X900mm
 W02 - 600X1200mm
 V01 - 600X500mm
 D01 - 1000X2000mm
 D02 - 600X2000mm

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

ENGINEERING CELL
 STATE PROJECT OFFICE
 SAMAGRA SHIKSHA
 MIZORAM

Project:
**CONSTRUCTION OF KGBV HOSTEL AT TLABUNG (100 CAPACITY) -
 LUNGLEI DISTRICT**

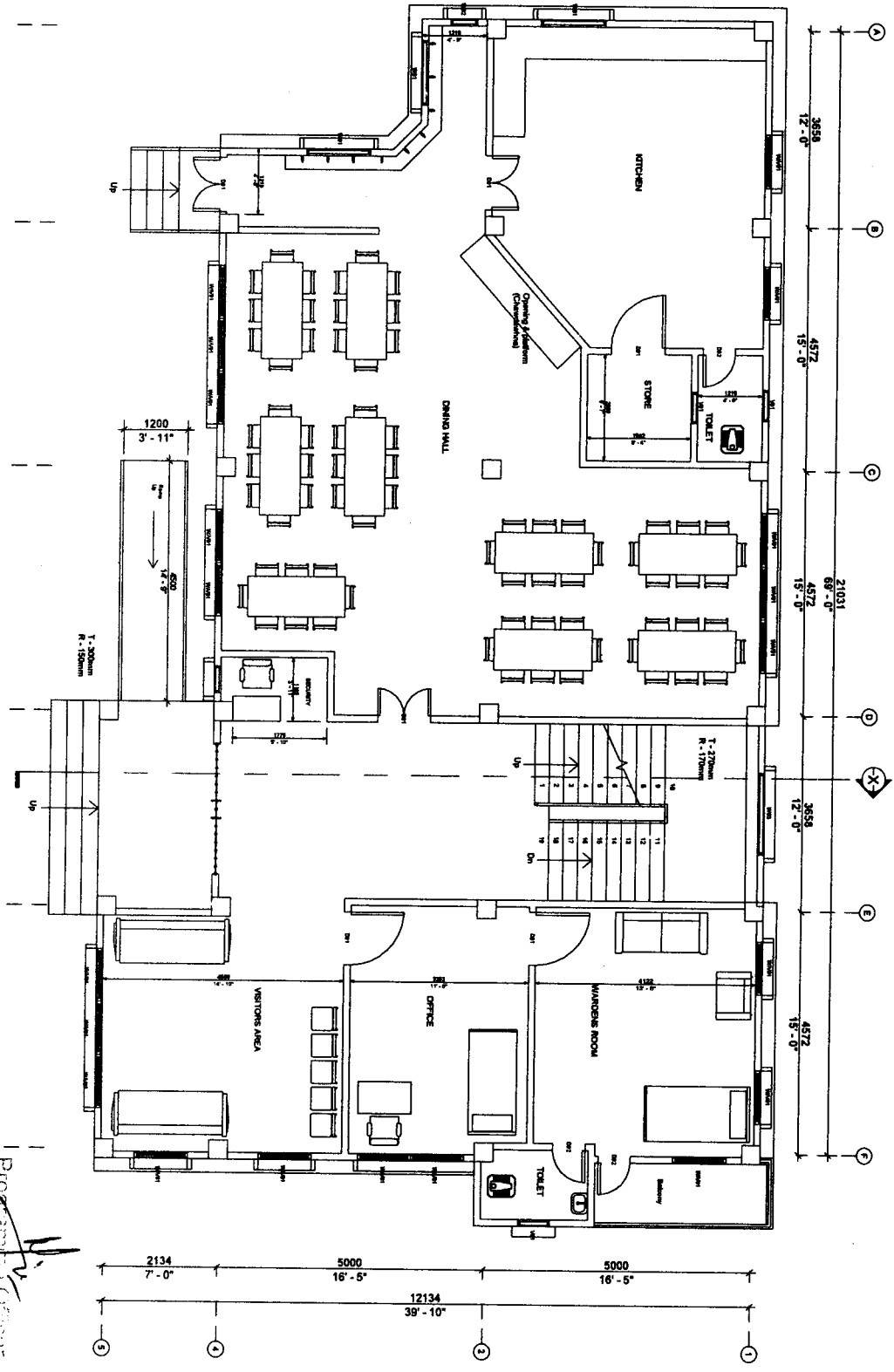
WV01 - 1000X1828.8mm
 W01 - 1000X800mm
 W02 - 600X1200mm
 V01 - 600X500mm
 D01 - 1000X2000mm
 D02 - 600X2000mm

Sheet name: **GROUND FLOOR**

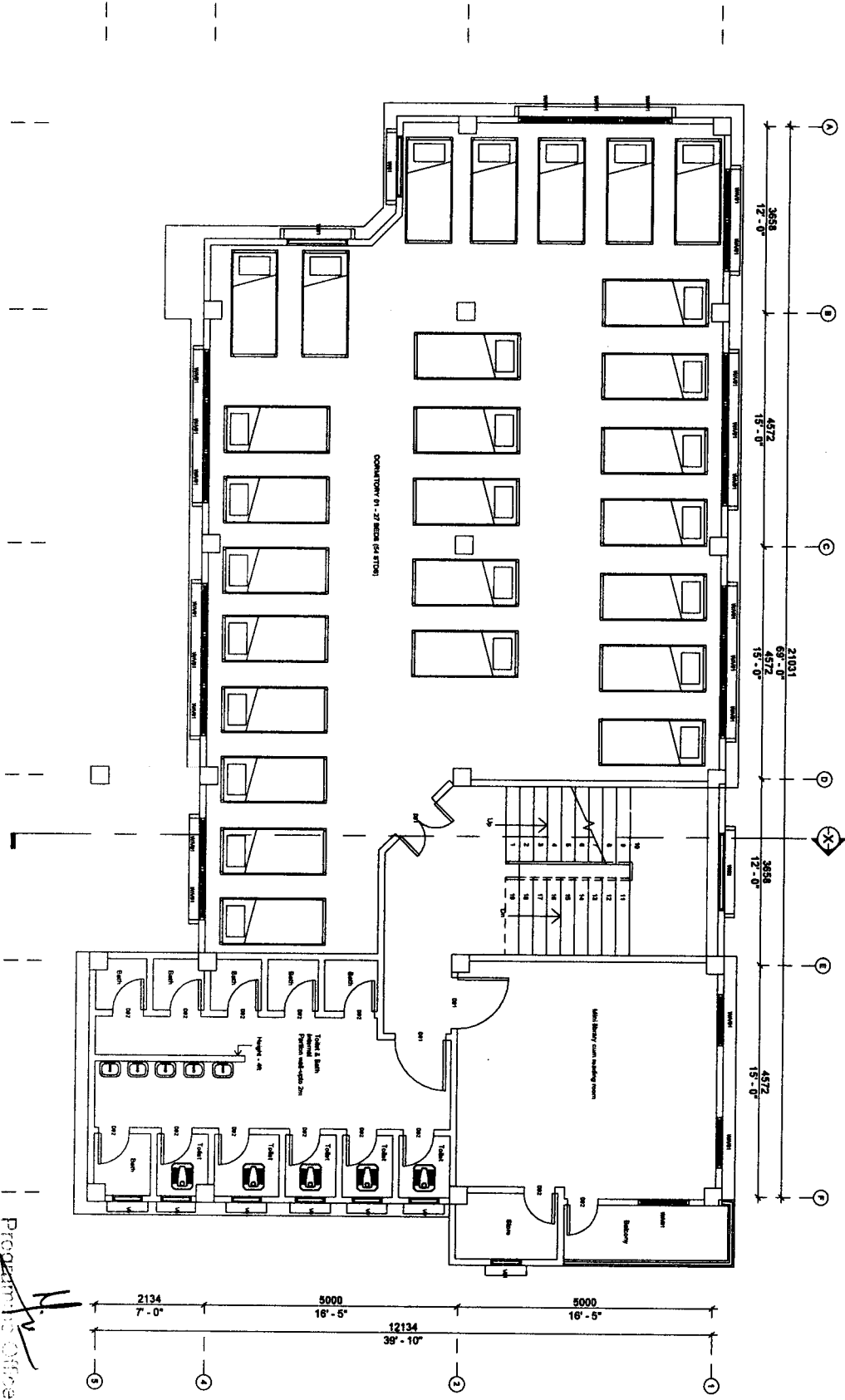
Sheet No: **02**

Scale: **1 : 75**

**ENGINEERING CELL
 STATE PROJECT OFFICE
 SAMAGRA SHIKSHA
 MIZORAM**



Projecting Officer
CHANDANA



Project:

CONSTRUCTION OF KGBV HOSTEL AT TLABUNG (100 CAPACITY) -
LUNGLEI DISTRICT

W/V01 - 1000X1828.8mm
W01 - 1000X900mm
W02 - 600X1200mm
V01 - 600X500mm
D01 - 1000X2000mm
D02 - 600X2000mm

Sheet name: FIRST FLOOR

Sheet No: 03

Scale: 1 : 75

ENGINEERING CELL
STATE PROJECT OFFICE
SAMAGRA SHIKSHA
MIZORAM

Samagra Shiksha Mizoram

Program In-charge
Civil Works

[Signature]

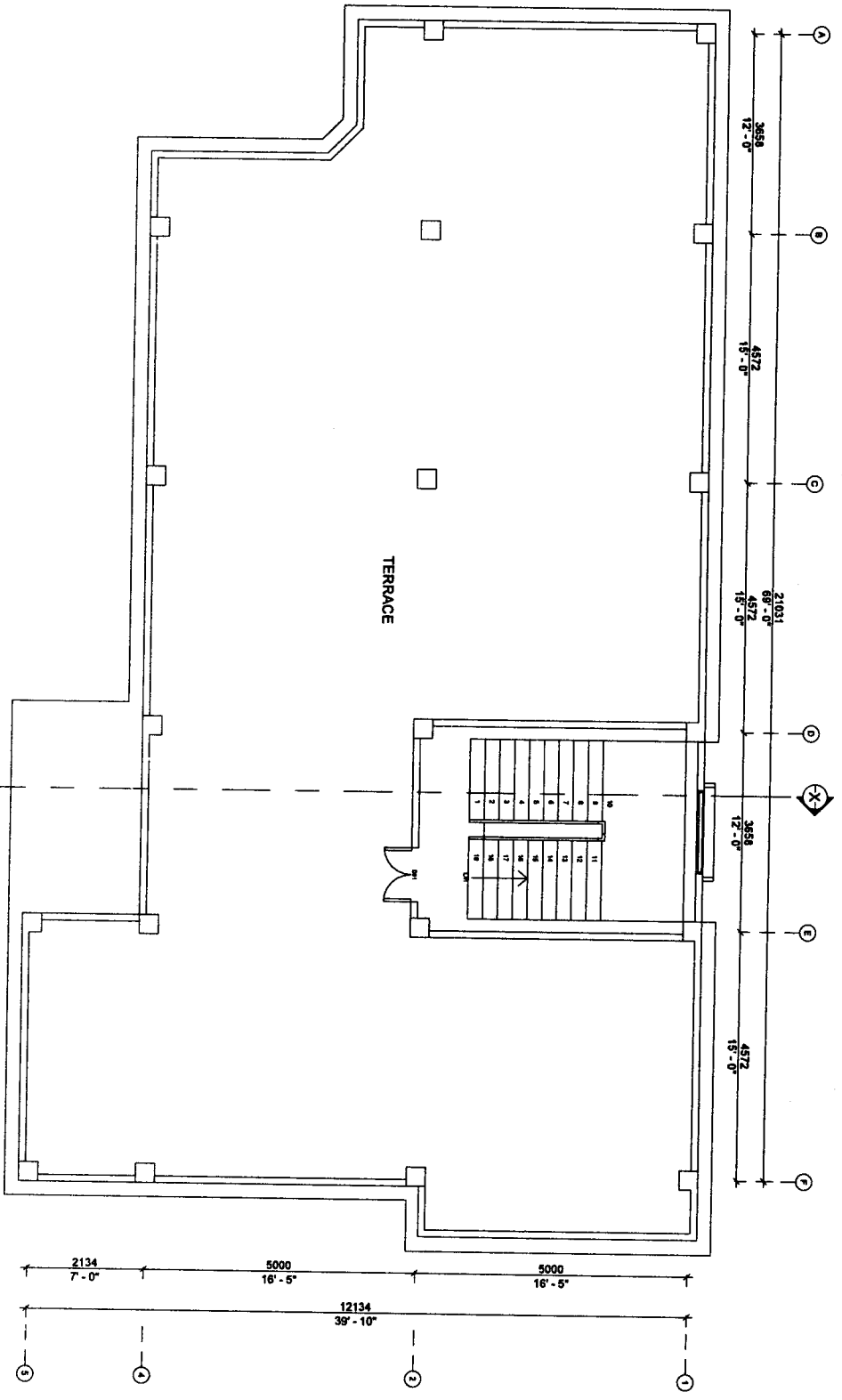
Project:
**CONSTRUCTION OF KGBV HOSTEL AT TLABUNG (100 CAPACITY) -
 LUNGLEI DISTRICT**

Sheet name: ROOF PLAN

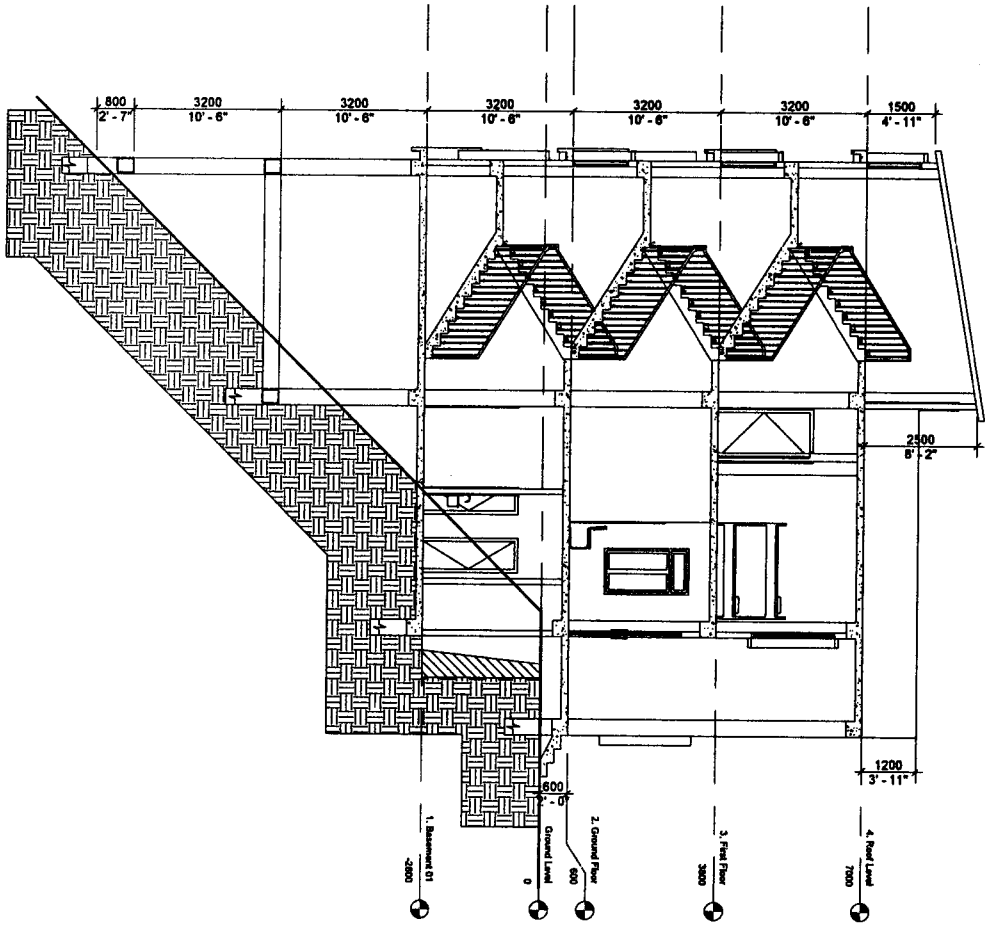
Sheet No: 04

Scale: 1 : 75

**ENGINEERING CELL
 STATE PROJECT OFFICE
 SAMAGRA SHIKSHA
 MIZORAM**



Project:
 CONSTRUCTION OF KGBV HOSTEL AT TLABUNG (100 CAPACITY) -
 LUNGLEI DISTRICT



Handwritten signature
 PROJECT OFFICE
 DISTRICT OFFICE
 DAWLAH, LUNGLEI, MIZORAM

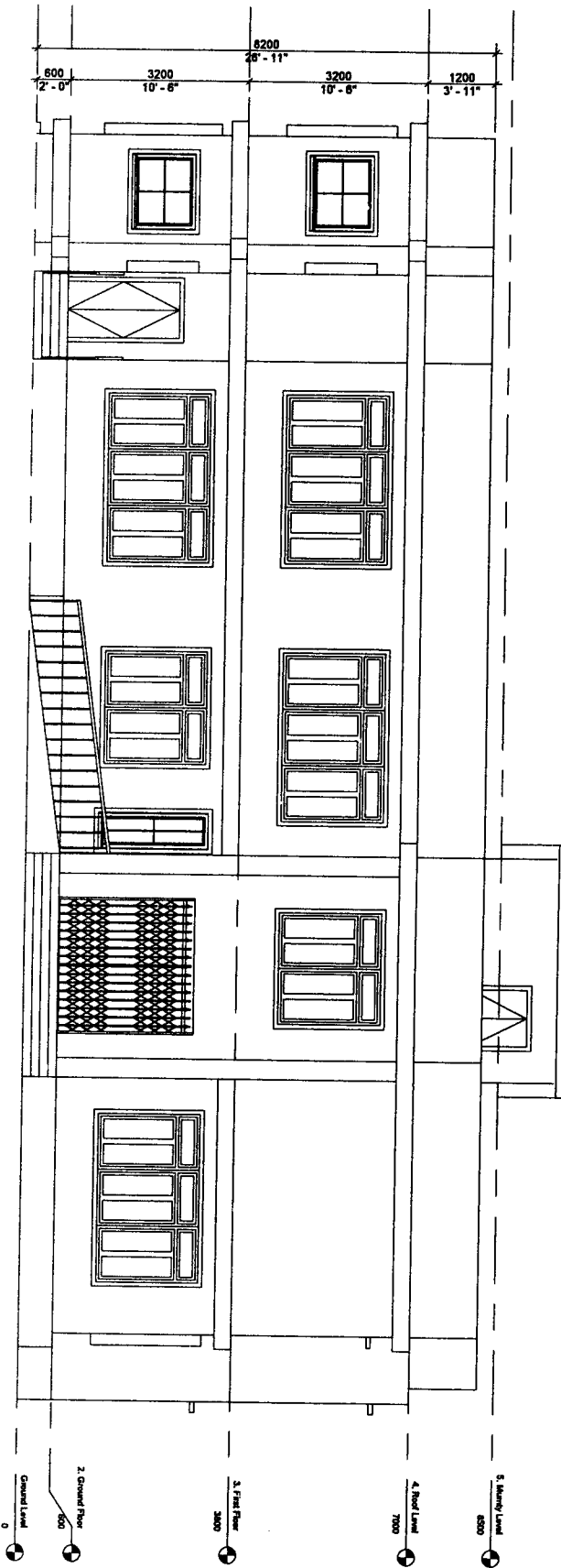
Sheet name: SECTION X


Sheet No: 05

Scale: 1 : 100

ENGINEERING CELL,
 STATE PROJECT OFFICE
 SAMAGRA SHIKSHA
 MIZORAM

Project:
 CONSTRUCTION OF KGBV HOSTEL AT TLABUNG (100 CAPACITY) -
 LUNGLEI DISTRICT



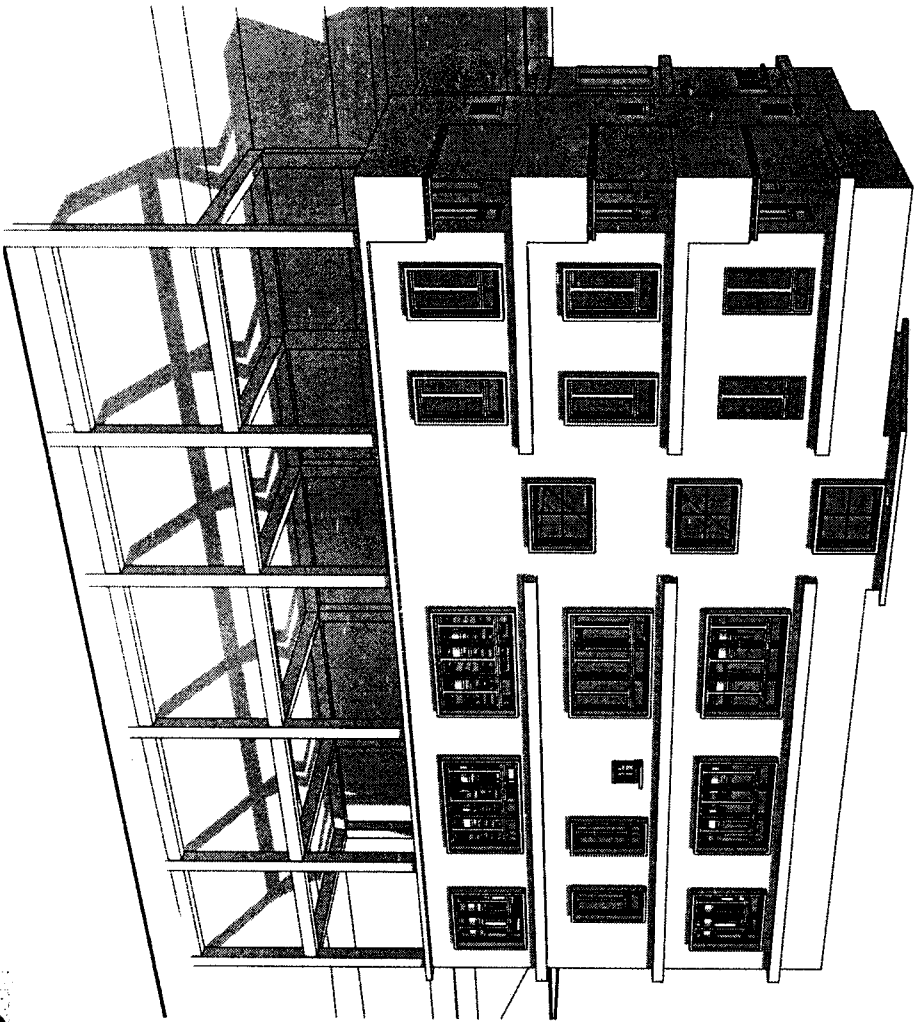

 Project Engineer
 Civil Engineering
 State Project Office
 Samagra Shiksha
 Mizoram

Sheet name: FRONT ELEVATION

Sheet No: 06

Scale: 1 : 75

ENGINEERING CELL
 STATE PROJECT OFFICE
 SAMAGRA SHIKSHA
 MIZORAM



Project Office
Civil Works
Directorate of Public Works
Mizoram

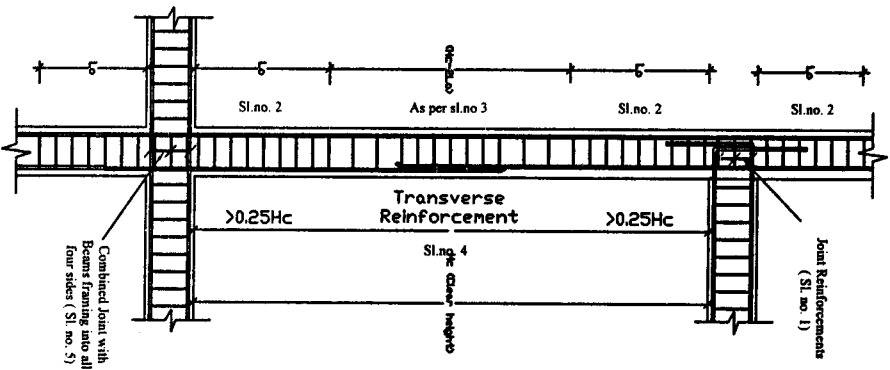
Project:
CONSTRUCTION OF KGBV HOSTEL AT TLABUNG (100 CAPACITY) -
LUNGLEI DISTRICT

Sheet name: VIEW 03

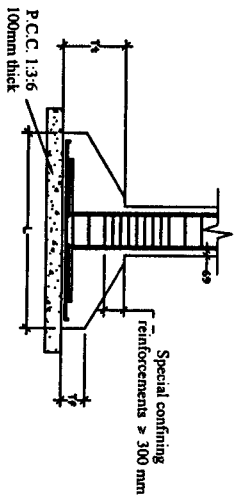
Sheet No: 09

Scale:

ENGINEERING CELL
STATE PROJECT OFFICE
SAMAGRA SHIKSHA
MIZORAM



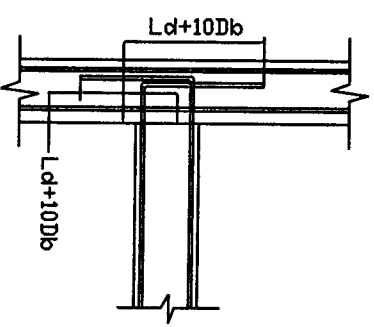
Column and joint detailing



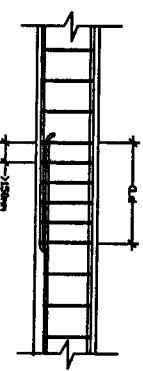
TYPICAL FOUNDATION

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.

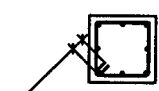


ANCHORAGE OF BEAM AND BAR IN EXTERNAL JOINT

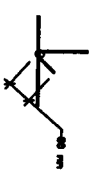


LAP SPLICE IN BEAM

L_d = Development length in tension
 D_b = Bar diameter



Extension of Hoop in column



HOOK DETAILS

DESIGNED BY:

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

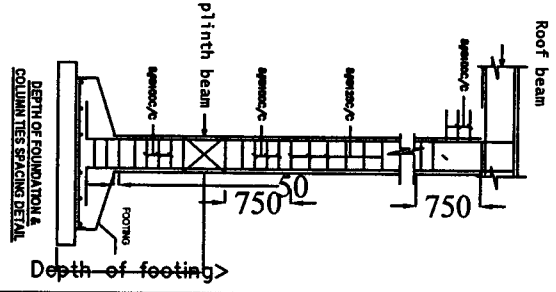
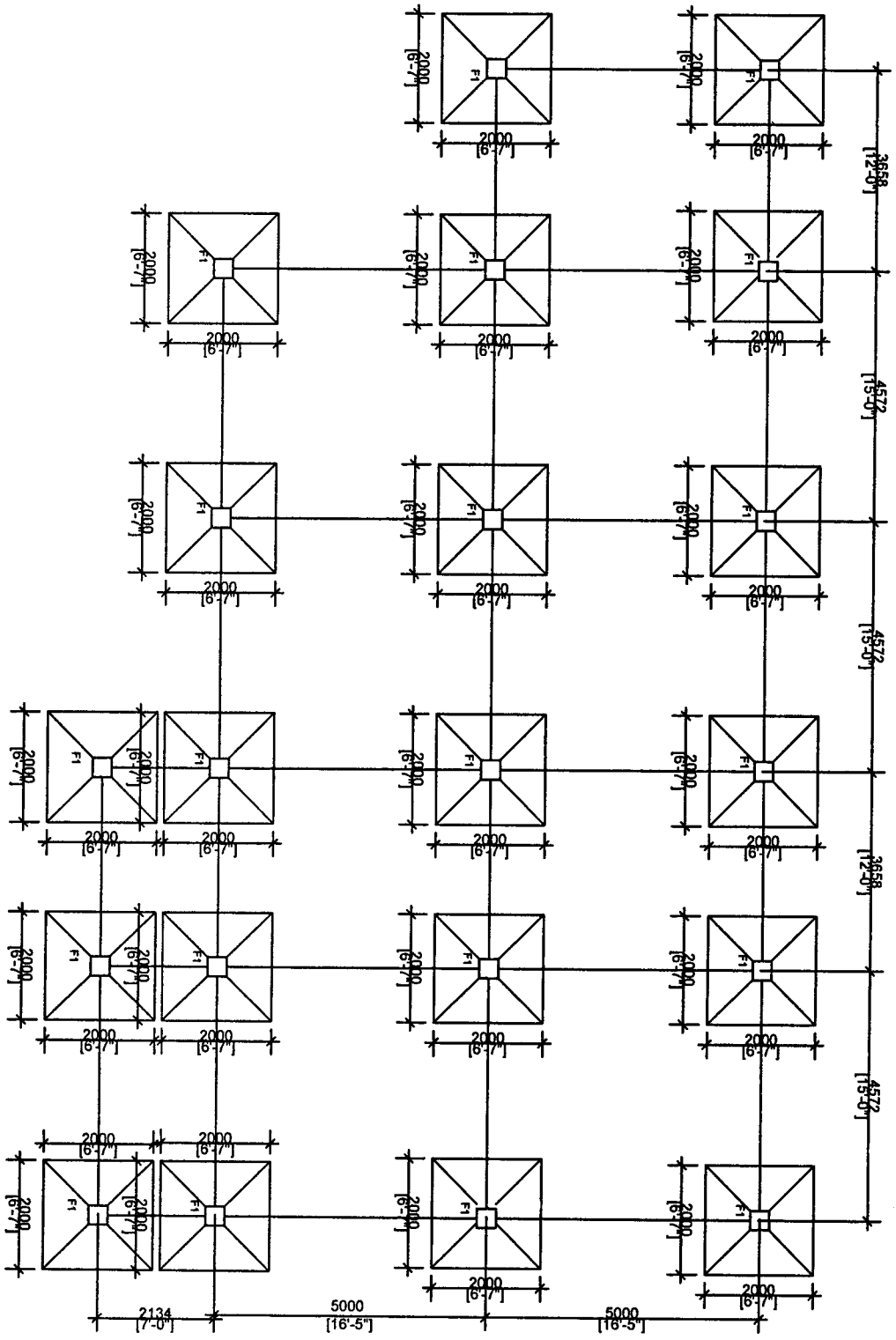
CONSTRUCTION OF KGBV TYPE-I BUILDING AT TLABUNG

GENERAL SPECIFICATIONS FOR STRUCTURAL DETAILS

SCALE : DRAWING NO: NTS 1

ALL DIMENSIONS ARE IN MM

FOUNDATION LAYOUT

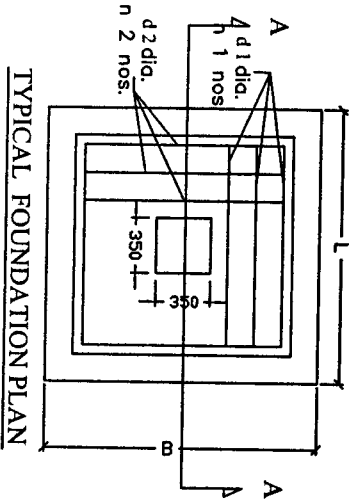
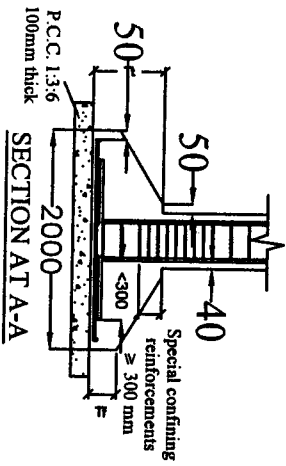


- NOTES:**
1. P.C.C. 1:3:6 100mm thick shall be provided for levelling course below foundation.
 2. Special confining reinforcement shall be extended at least 300mm into the footing or mat when column terminates into the footing of mat.
 3. Concrete Grade = M20, Steel = Fe415 (or Steel)
 4. Clear Cover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

CONSTRUCTION OF KGBV TYPE-I BUILDING AT TLABUNG	
Scale: Not to Scale	Prepared by:
(E.R. DENNISON) State Project Engineer	
SHEET NO. 2	

All dimensions
in mm

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	B			d 1 dia.	n 1 nos.	Dia. d 2	n 2 nos.
F1	2000	2000	150	300	12 mm	20	12 mm	20

SHEET NO.-3

**CONSTRUCTION OF KGBV TYPE-I BUILDING AT
TLABUNG**

Scale:
Not to Scale

Prepared by:

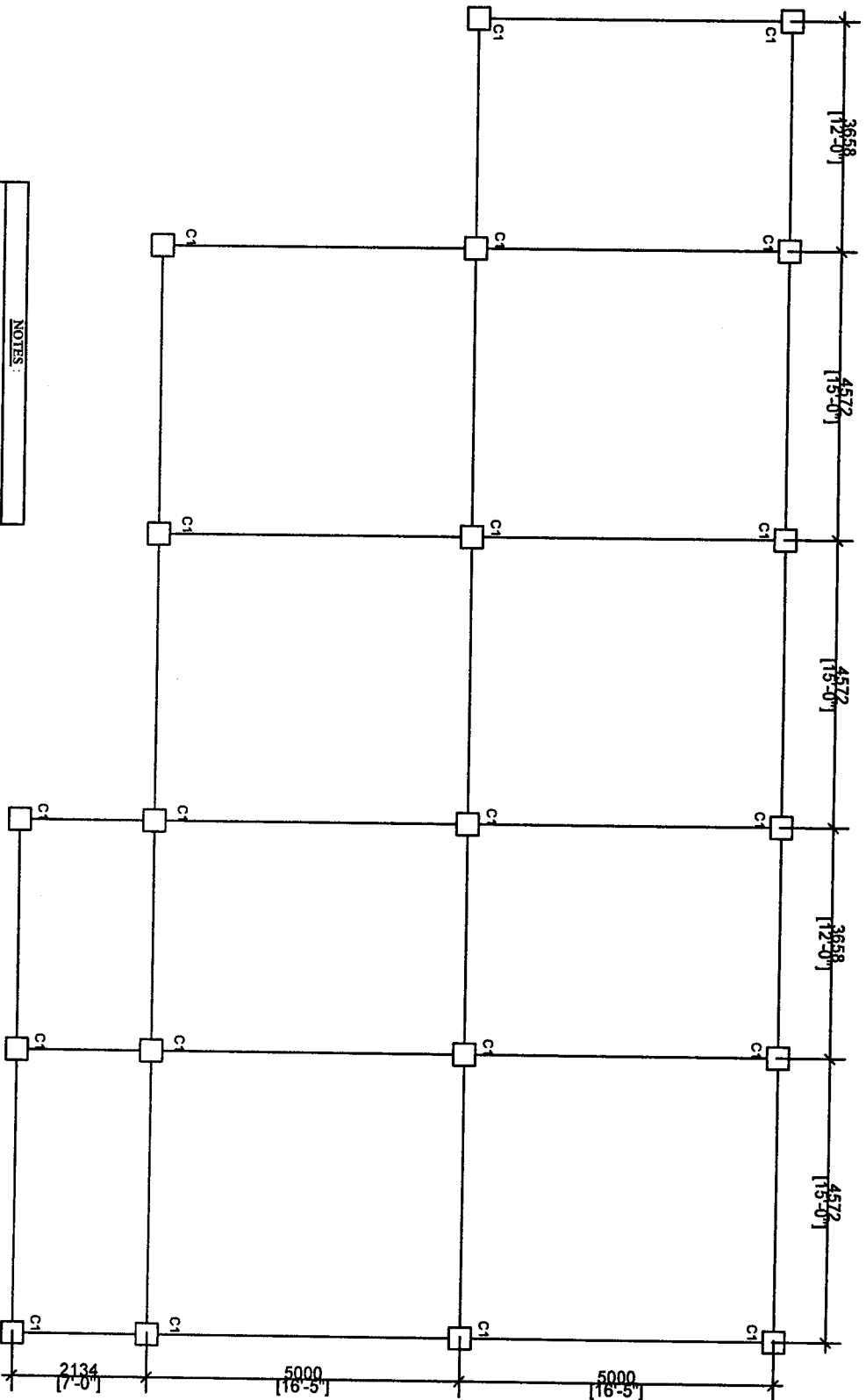


(E. DENNIS LALHLUMPIUA)
State Project Engineer

Civil Works

Samagra Shiksha, Mizoram

COLUMNS LAYOUT



NOTES:

1. Main Reinforcement and Lateral ties shall be of Top Steel Fe415 Grade.
2. Lap length of steel in compression members shall be as per IS 456 and lapping to be provided at a distance $l_{d/4}$ beyond beam-column joint with ties 8mm @ 130 mm c/c.
3. Clear Cover shall be maintained as specified.
4. Provide 135 degree hook, hook length = 80mm at each hook.
5. Grade of Concrete - M20.

SHEET NO: 4

CONSTRUCTION OF KGBV TYPE-I BUILDING AT TLABUNG

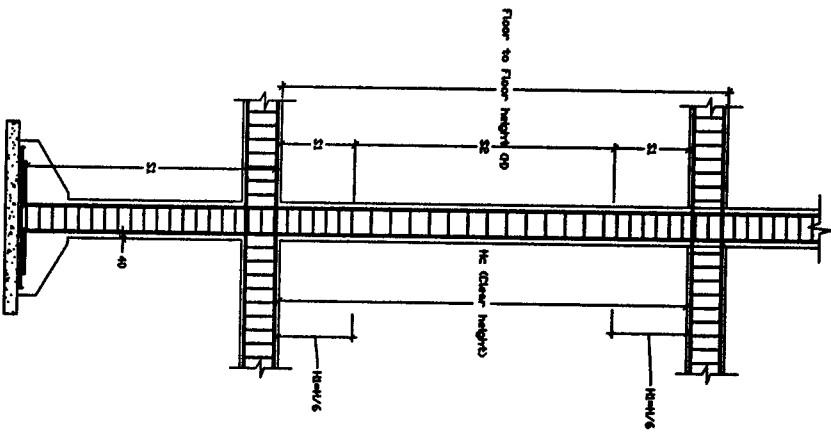
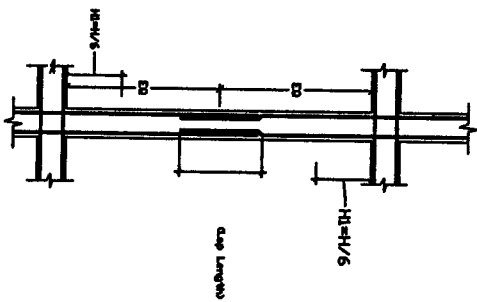
Scale:
Not to Scale

All dimensions
in mm

Prepared by:

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

COLUMN DETAILS



COLUMN MARKED	DETAIL OF COLUMN SECTIONS			Lateral Ties			
	AT GROUND FLOOR	AT FIRST FLOOR LEVEL	AT MUHTY	S1 mm	S2 mm	H1 mm	Dia. mm
C1				100	150	500	8

CONSTRUCTION OF KGBV TYPE-I BUILDING AT TLABUNG

STRUCTURAL DETAILS FOR ALL FLOOR COLUMNS

DRAWING NO: 5

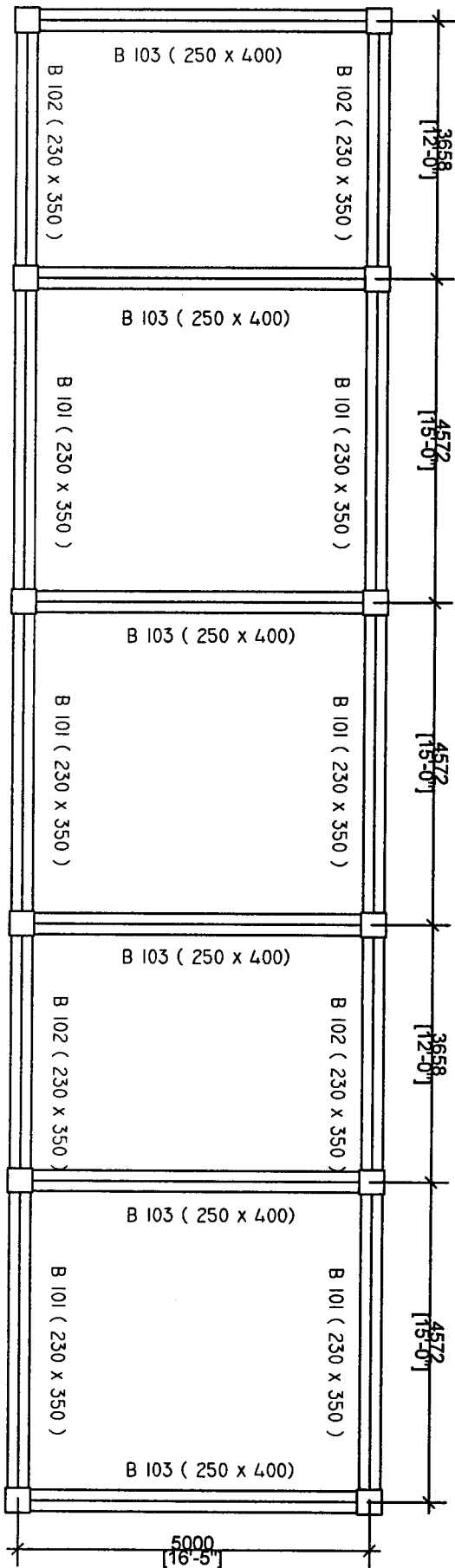
DESIGNED BY:

SCALE : N T S

ALL DIMENSIONS ARE IN MM

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

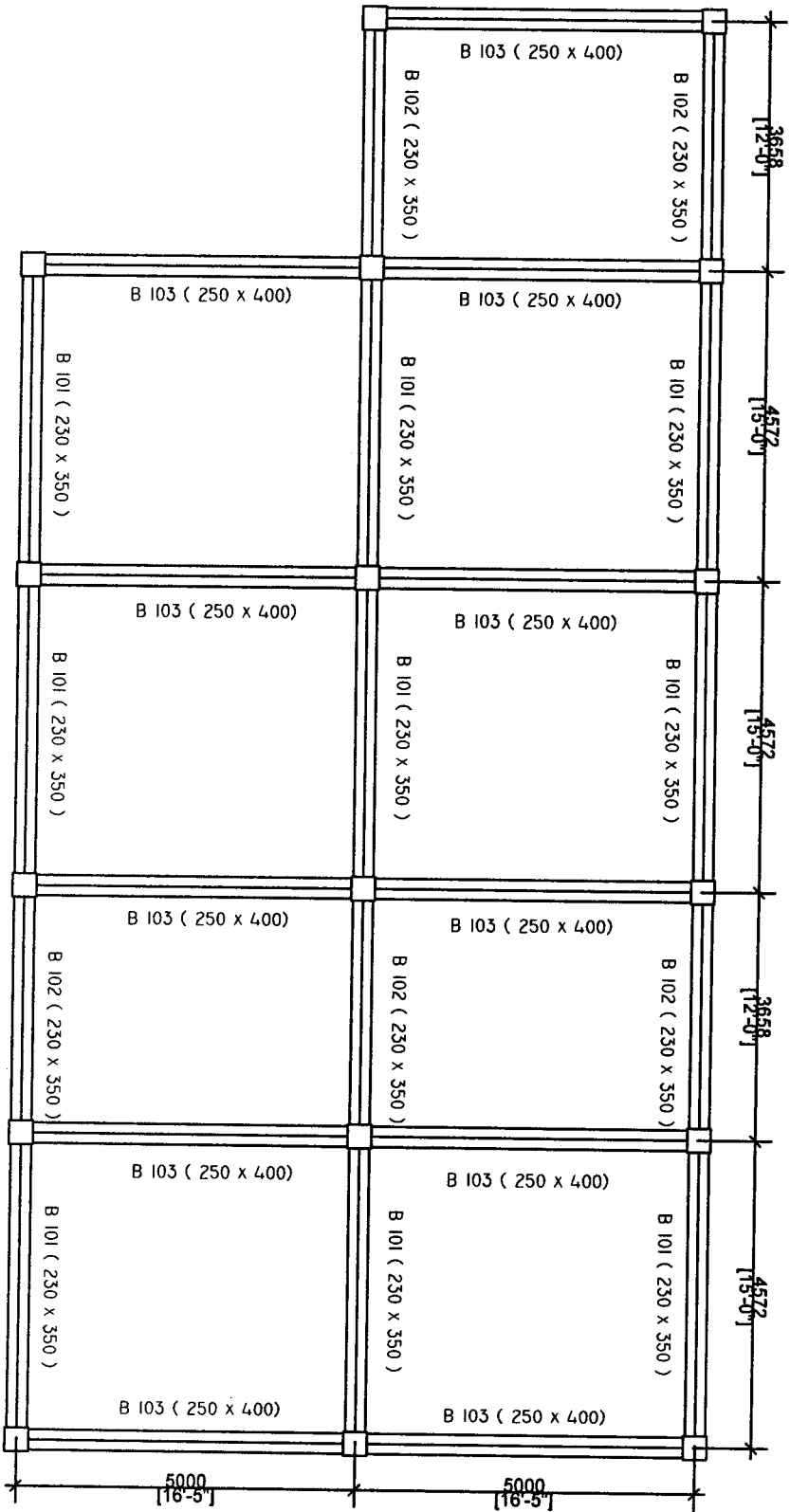
DETAILS OF BEAM



BASEMENT-1

CONSTRUCTION OF KGBV TYPE-I BUILDING AT TLABUNG		SHEET NO.: 6
Scale: Not to Scale		Prepared by: (E. DENNIS LALHLIPUI) State Project Engineer Civil Works
<i>All dimensions in mm</i>		
Sarnagra Shiksha, Mizoram		

DETAILS OF BEAM



BASEMENT-2

CONSTRUCTION OF KGBV TYPE-I BUILDING AT TLABUNG

SHEET NO. : 7

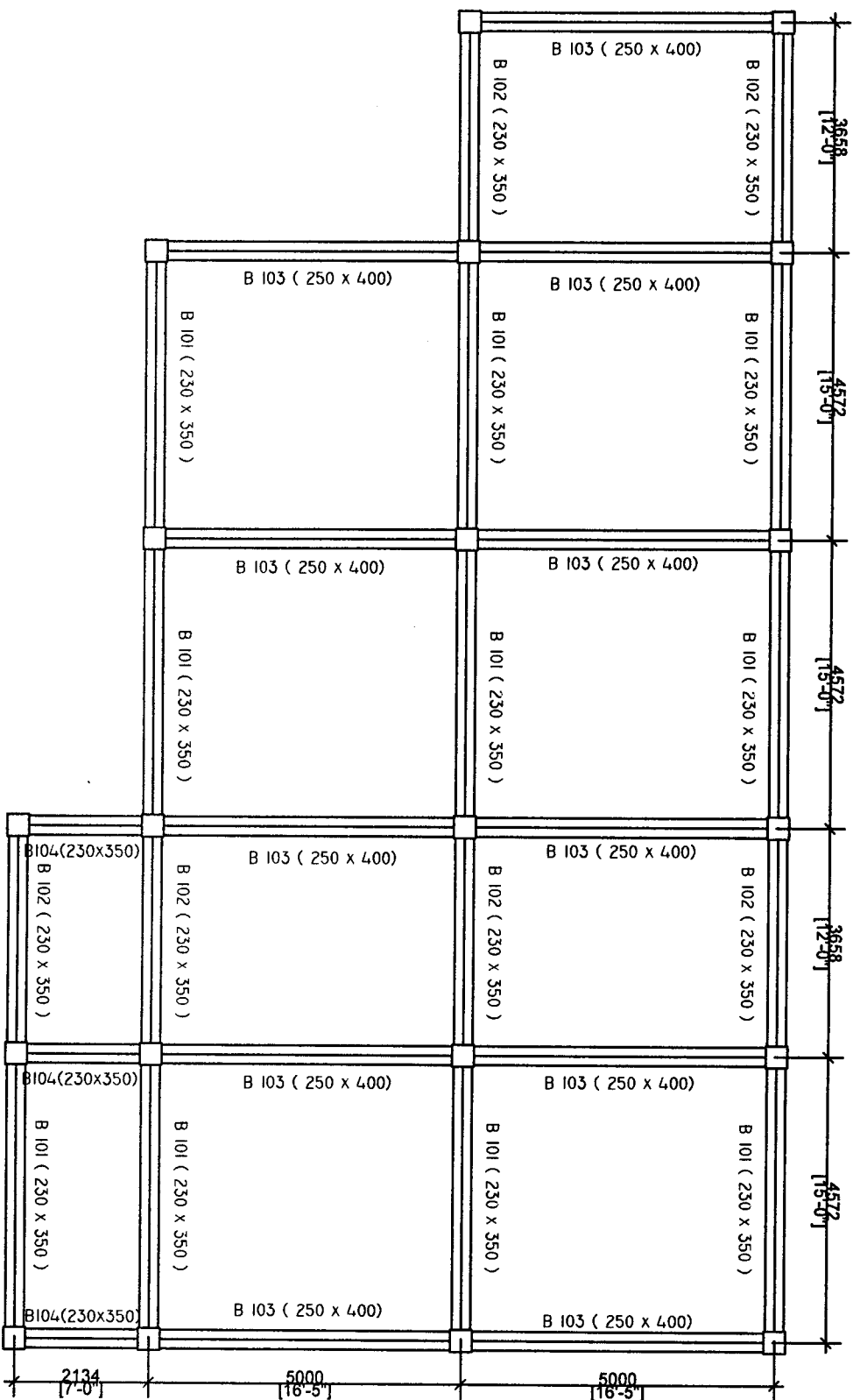
Scale:
Not to Scale

All dimensions
In mm

Prepared by:

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

DETAILS OF BEAM



SHEET NO: 8

CONSTRUCTION OF KGBV TYPE-I BUILDING AT TLABUNG

Scale:
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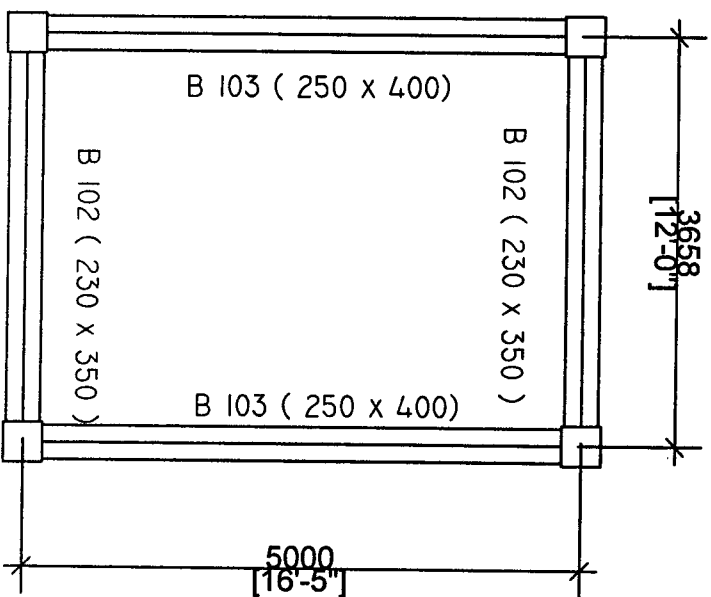
All dimensions
in mm

Prepared by:

(E. DENNIS LAHLIMPIA)
State Project Engineer
Civil Works

Samagra Shiksha, Mizoram

DETAILS OF BEAM



TERRACE LEVEL
MUMTY BEAM

SHEET NO: 9

CONSTRUCTION OF KGBV TYPE-I BUILDING AT
TLABUNG

Scale:
Not to Scale

All dimensions
in mm

DESIGNED BY:

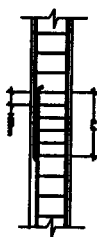
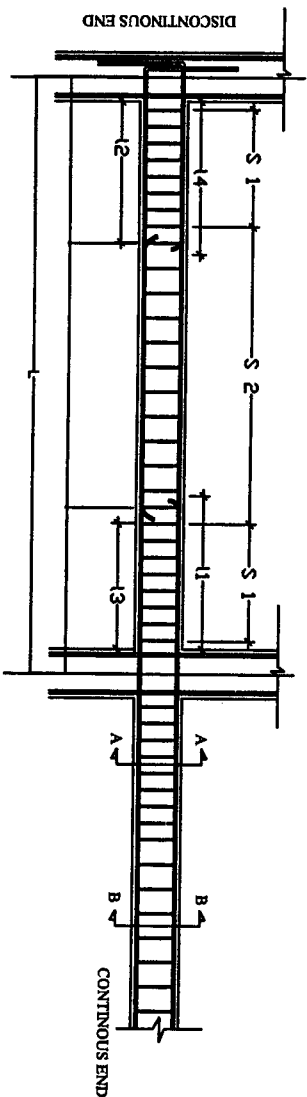
(E. DENNIS LALHINGMA)

State Project Engineer

Civil Works

Samagra Shiksha, Mizoram

TYPICAL LONG SECTION OF BEAM



LAP SPACING REBAR
 Ld = Development length in tension
 Db = Bar diameter

Where,
 S1 = Spacing of stirrups for a length of 2d
 S2 = Spacing of stirrups in the mid-span
 Ld = 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 D-B	Section at C-C	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	S 1	S 2
B 101	230 x 350			4572	1370	680	1150	900	Bar dia. 7mm 100mm c/c	Bar dia. 7mm 100mm c/c
B 102	230 x 350			3658	1100	550	900	730	Bar dia. 7mm 100mm c/c	Bar dia. 7mm 100mm c/c
B 103	250 x 400			5000	1500	750	1250	1000	Bar dia. 7mm 100mm c/c	Bar dia. 7mm 100mm c/c
B 104	230 x 350			2134	640	320	530	430	Bar dia. 7mm 100mm c/c	Bar dia. 7mm 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.

CONSTRUCTION OF KGBV TYPE-4 BUILDING AT TLABUNG

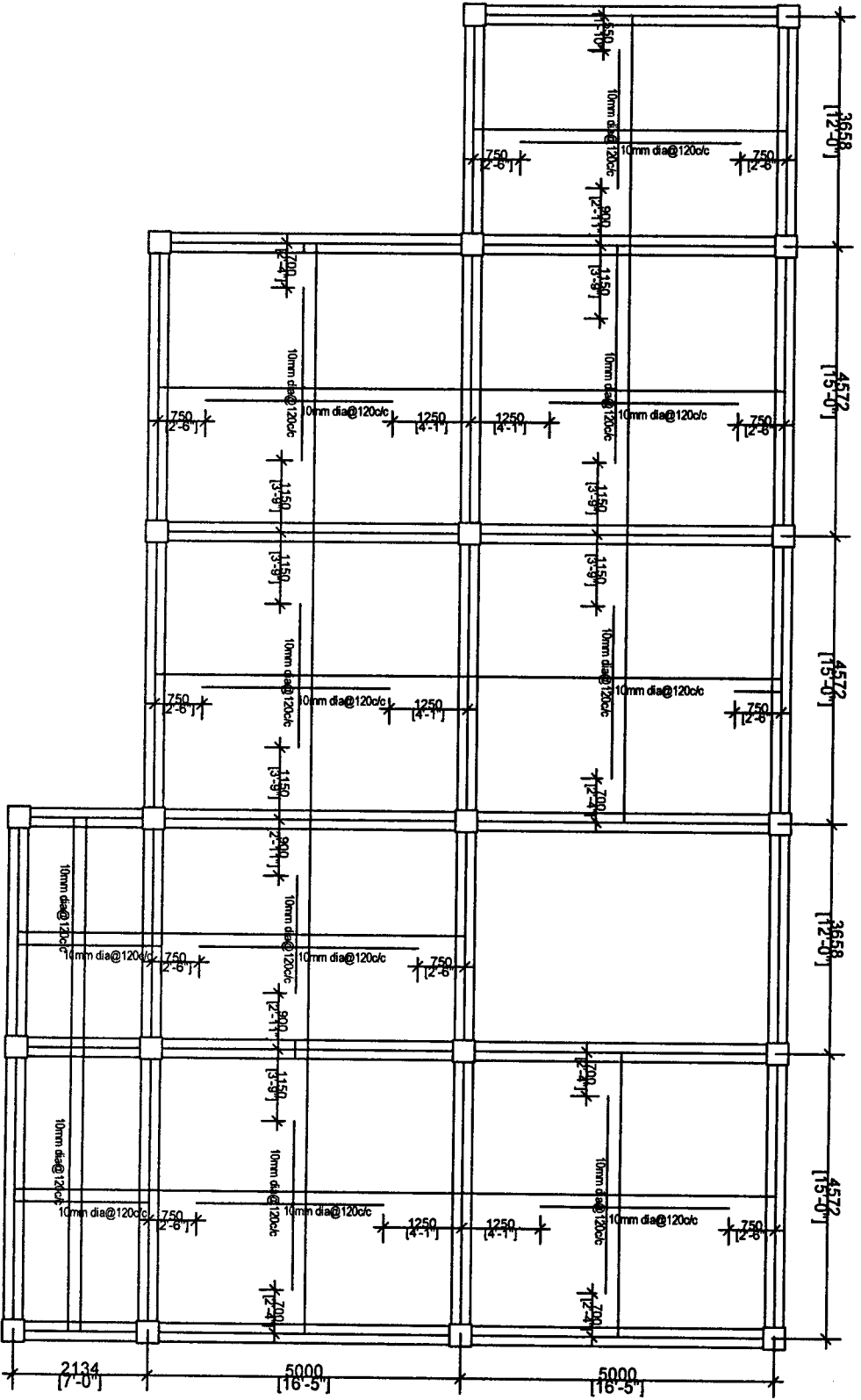
SHEET NO. 10

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

Scale: Not to Scale

Satnaga Shiksha, Mizoram

DETAILS OF SLAB



BOTTOM REINFORCEMENT

CONSTRUCTION OF KGBV TYPE-I BUILDING AT TLABUNG

SHEET NO. 11

Scale:
Not to Scale

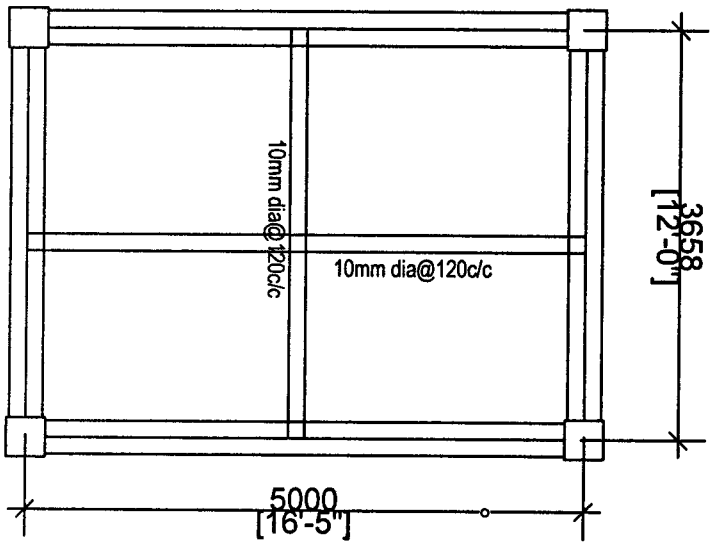
Prepared by:

All dimensions
in mm

(E. DENNIS LALHIMPUIA)
State Project Engineer
Civil Works

Samagra Shiksha, Mizoram

DETAILS OF SLAB



TERRACE LEVEL
MUMTY SLAB
TOP & BOTTOM REINFORCEMENT

SHEET NO: 12

CONSTRUCTION OF KGBV TYPE-I BUILDING AT
TLABUNG

Scale:
Not to Scale

All dimensions
in mm

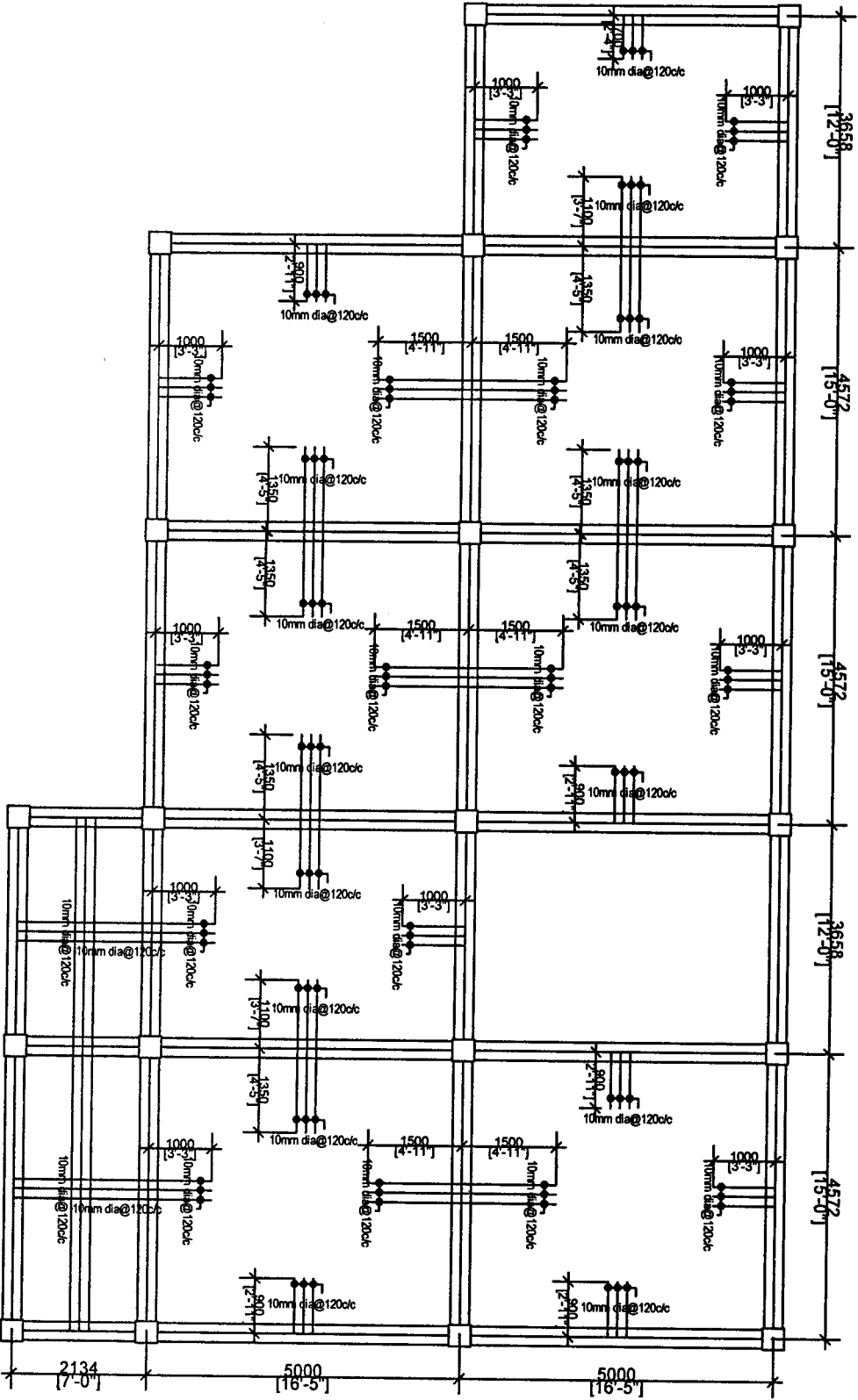
DESIGNED BY:

(*E. DENNIS LALHIMPUIA*)

State Project Engineer
Civil Works

Saneqra Shiksha, Mizoram

DETAILS OF SLAB



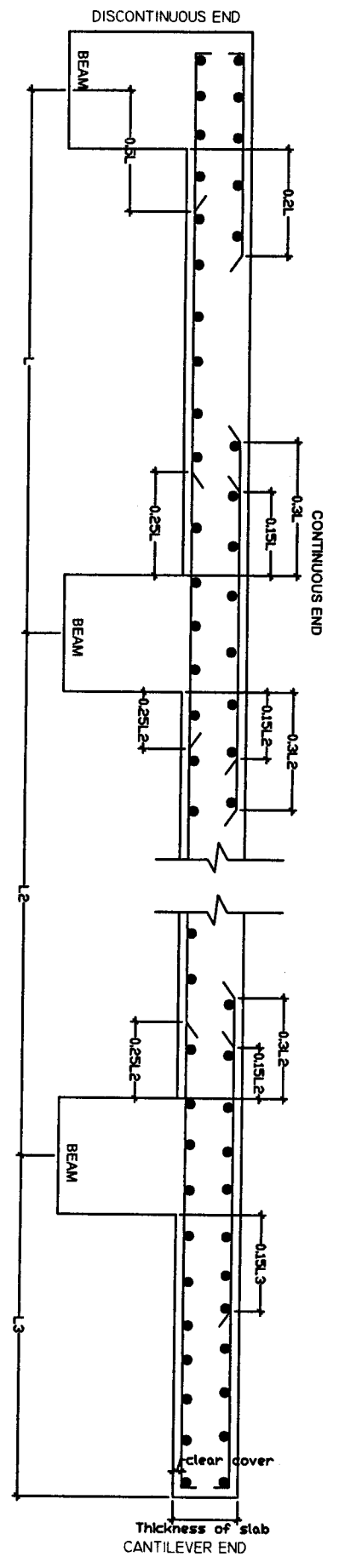
TOP REINFORCEMENT

CONSTRUCTION OF KGBV TYPE-I BUILDING AT TLABUNG

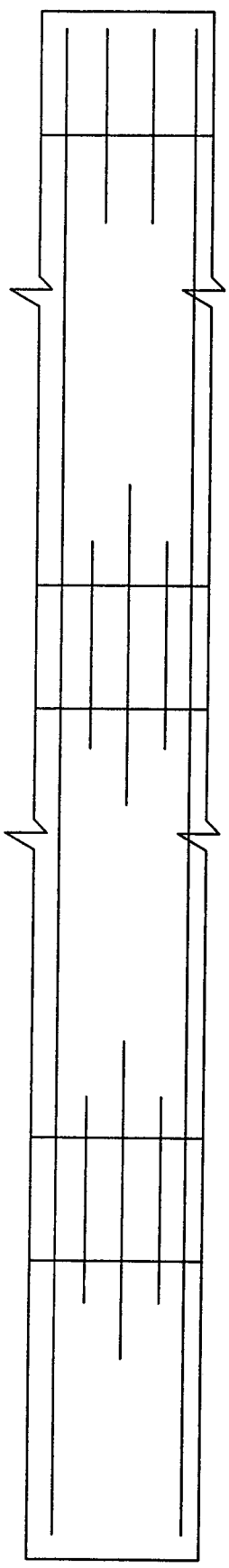
SHEET NO: 13

Scale:		Prepared By:
Not to Scale		
All dimensions In mm		(E. DENNIS LAHLIMPUIA) State Project Engineer Civil Works Sarmaga Shiksha, Mizoram

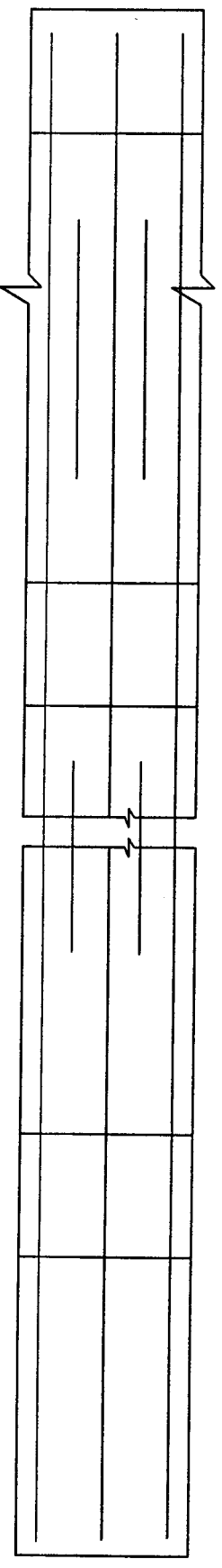
TYPICAL SLAB DRAWING



TYPICAL LONG SECTION OF SLAB AT MID STRIP X-X



PLAN OF TOP MAIN REINFORCEMENT

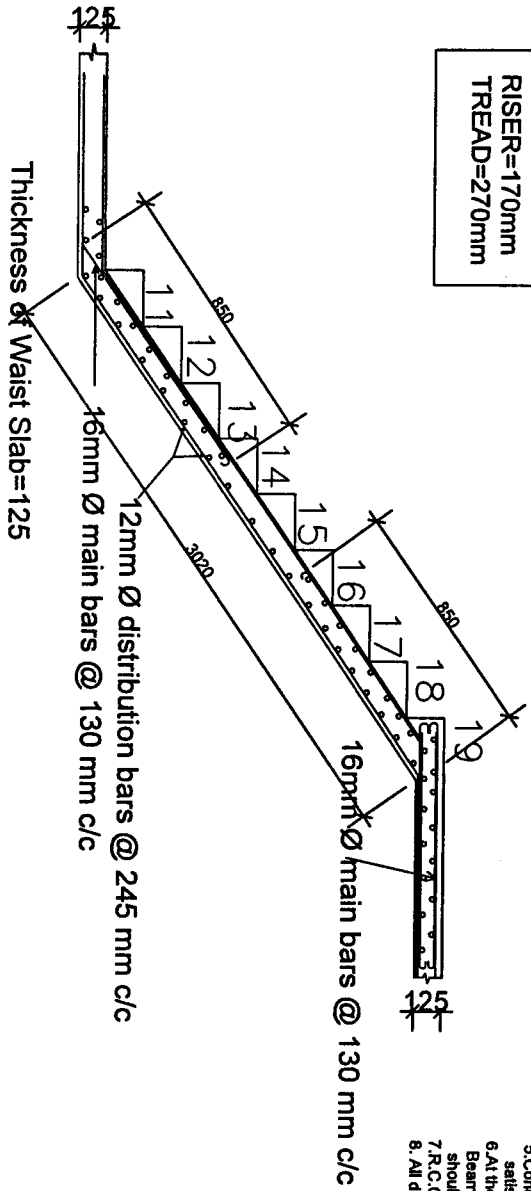


PLAN OF BOTTOM MAIN REINFORCEMENT

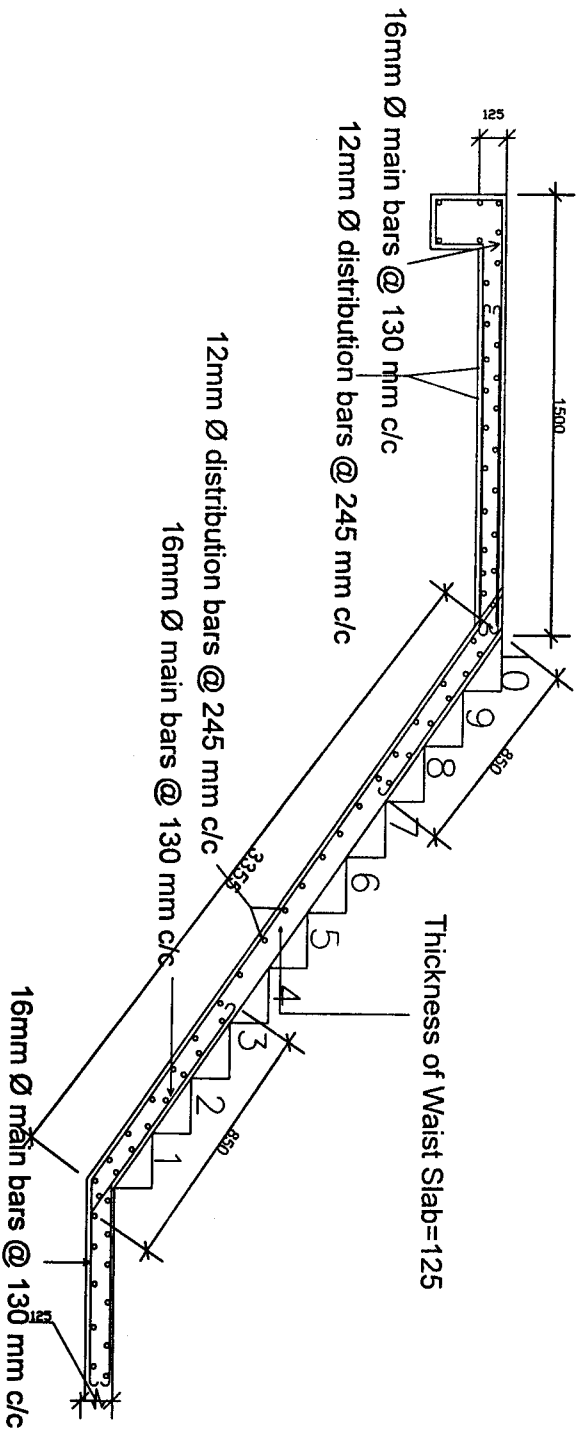
CONSTRUCTION OF KGBV TYPE-I BUILDING AT TLABUNG		SHEET NO. 14
Scale: Not to Scale	Prepared by: <i>[Signature]</i>	(Er. D. L. ...) State Project Engineer Civil Works
All dimensions in mm		

Er. D. L. ... (A)

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 satisfy 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.



1. Grade of Cement Concrete = M20.
2. Grade of Steel = Fe 415.
3. Clear Cover = 20mm.
4. Minimum Curing Period = 28 days.
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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 KGBV TYPE-1 BUILDING
AT TLABUNG

STRUCTURAL DETAILS FOR
STAIRCASE

DESIGNED BY:

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

SCALE :

NTS

ALL DIMENSIONS ARE IN MM

BILL OF QUANTITIES FOR THE CONSTRUCTION OF KGBV TYPE I BUILDING AT TLABUNG (LUNGLEI DISTRICT)

Slno	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	377.052			
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	160			
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	106.667			
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 20mm nominal size)	cum	25.50			


 (E. DEVI S. LALHIMPUIA)
 State Project Engineer
 Civil Works

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	27.252			
6/5.02	Reinforced cement concrete work in walls including attached pilasters, 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	29.43			
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	183.03			
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	40723.971			

(Er. DENNIS LALHIMPUIA)


State Project Engineer

Civil Works

Samagra Chikitsa & Himam

9/5.10	Centering and shuttering including strutting, propping, etc. and removal of form works in -					
	c) Columns, pillars, piers, abutments, posts and struts.					
	C1 350x350	sgm	364			
	d) Lintels, beams, plinth beams, girders, bressumers and cantilevers, etc.					
	230x350	sgm	247.38			
	250X400	sgm	210.00			
		sgm	457.38			
	e) Suspended floors, roofs, landings, shelves and their support, balconies and chajjaj, etc.	sgm	955.83			
	f) Staircases (except spiral staircase) excluding landings.	sgm	29.38			
10/6.06	Half brick masonry with first class brick in superstructure above plinth level upto floor V level.					
	a) in cement mortar 1:3 (1 cement : 3 coarse sand)	sgm	697.340			
11/6.09	7.5 cm thick brick masonry with first class brick in superstructure above plinth level upto floor two level including curing, etc. complete .					
	(b) in cement mortar 1:4 (1 cement : 4 fine sand)	sgm	95			
12/9.06	Providing 1st class local wood dressed in frames of chaukat for doors, windows, clerestory windows fixed in position.	cum	2.018			
13/9.10	Providing and fixing 1st class teak wood panelled shutters for doors etc. including M.S. butt hinges with necessary screws, etc. complete.					
	a) 40 mm thick.	sgm	67.62			

14/11.01	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, mitted 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.					
	(b) Natural Colour					
15/11.02	(i) 2 - track sliding windows/ventilators. Supplying of glass panes at site	sqm	127.87			
	a) 4mm thick plate sheet glass.	sqm	127.87			
16/20.08	12mm cement plaster 1 : 4 (1 cement : 4 fine sand). Supplying and fixing M.S. decorative railing consisting of top and bottom rails of 40mmx40mm square or circular section at distance of 788mm apart, 30mmx30mm square or circular section decorative intermediate balusters welded to top and bottom rails at 280mm apart. The base of balusters at 560mm apart welded with base plate of 60mmx3mm thick and fixed with cement grouting firmly to concrete section including steel priming and steel painting complete etc.	sqm	4135.69			
17/10.09		sqm	58.10			


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

18/12.11	Providing and laying 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 (1 cement : 4 course sand) including pointing the joints with white cement and matching pigments etc. complete. as per designed colour.					
	b) Matt/Antiscratch	sqm	131.14			
19/20.51	Applying priming coat with ready mixed pink or Grey primer of approved brand and manufacture on wood work (hard and soft wood) & Plywood.	sqm	195.79			
20/20.72	Painting with synthetic enamel paint of approved brand and manufacture in all shades on new work (<i>two or more coats</i>).					
	a) General quality	sqm	195.792			
21/20.75	Finishing walls with exterior emulsion of required shade on new work (<i>three or more coats</i>) to give an even shade.					
	a) Regular exterior emulsion like supercote, walmasta etc.	sqm	4135.69			
22/20.50	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface :	sqm	4135.69			
23/7.01	Regular coursed rubble masonry with hard stone in foundation upto one storey above and below ground level including curing, etc. complete.					
	C) in cement mortar 1 : 6 (1 cement : 6 fine sand)	cum	55.97			

24/14.11	Providing and fixing bright finished M.S two lever mortise door lock with necessary screws, etc. complete.					
	a) Union type	Nos	26.00			
25/14.07	Providing and fixing M.S. Tower bolts (socket bolts) bright finished with necessary screws etc. complete.					
	(a) 300 mm	Nos	14.00			
26/14.10	Providing and fixing M.S. handles with necessary screws, etc. complete					
	(a) 150mm	Nos	80.00			
27/18.01	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.					
	a) Sintex or equivalent	lit	6000.00			
28/17.33	Providing and fixing on wall face SWRPVC soil, waste and vent pipes including jointing with rubber lubricant/cement solvent complete.					
	a) 110mm dia.	m	80.00			
29/17.34	Providing and fixing SWRPVC plain bend of required degree (87.50°) including jointing with rubber lubricant/cement solvent complete.					
	a) 110 mm dia.	Nos	60.00			
30/17.35	Providing and fixing SWRPVC plain bend of required degree (45°) including jointing with rubber lubricant/cement solvent complete.					
	a) 110 mm dia.	Nos	50.00			

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Civil Works

Samarra Shiksha Mizoram

31/17.37	Providing and fixing single equal SWRPVC plain junction of required degree (T-junction).					
	a) 110x110x110 mm	Nos	40.00			
32/17.42	Providing and fixing ventilation cowl including jointing with rubber lubricant/cement solvent complete.					
	a) 110 mm dia.	Nos	7.00			
33/17.04	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	11			
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	m	100.00			
35/18.07	Providing and fixing brass bib cock of approved quality.					
	b) 20mm nominal bore	Nos	26.000			
36/18.09	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	Nos	80.000			


 (E. DENNIS LALHIMPUIA)

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 Civil Works
 Samagra Shiksha, Mizoram

37/17.16	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.					
	a) Vitreous China Wash basin size 630x450 mm with single 15 mm C.P. brass pillar taps					
	i) white	Nos	11.000			
38/18.51	Providing and placing in position electric water pump of approved manufacture including connections to G.I pipes etc. complete with accessories.					
	(b) 750 watts	each	1.00			
39/10.18	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete.	sqm	136.09			
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 :	Nos	26.00			

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Sainpara Shiksha, Mizoram

41/10.04	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	7.56			
	SEPTIC TANK					
1/2.08	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	m ³	19.760			
2/5.03	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)	m ³	1.185			
3/5.10	Centering and shuttering including strutting, propping, etc. and removal of form works in -					
	(e) Suspended floors, roofs, landings,	m ²	4.671			

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Civil Works

BILL OF QUANTITIES

NAME OF WORK : INTERNAL ELECTRIFICATION OF KGBV HOSTEL, TLABUNG ; LUNGLEI DISTRICT

SOR	DESCRIPTION OF MATERIAL	UNIT	QUANTITY	RATE		AMOUNT
				in figure	in words	
C:02:01	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:-					
	LIGHT POINT					
	C:02:01 (B) Short Point (Modular)	Each	30			
C:02:01 (C) Medium Point (Modular)	Each	26				
C:02:01 (D) Long Point (Modular)	Each	26				
FAN POINT						
C:02:01 (D) Long Point (Modular)	Each	19				
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	2				



(E. DENNIS LALHMA)
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 Samagra Shiksha, Mizoram


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>							
	<p>C:02:03(D)Power plug Point 15/16 A Long Point (Modular)</p> <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>	Each	6					
	<p>C:02:06(A) 2X2.5 Sqmm copper conductor/cable + 1x2.5 Sqmm earth wire</p> <p>C:02:06(B) 2X4 Sqmm copper conductor/cable + 1x4 Sqmm earth wire</p> <p>C:01:06(C) 2X 6 Sqmm copper conductor/cable + 1 x 6 Sqmm earth wire</p> <p>SUPPLYING AND FIXING OF SWITCH BOARDS (MODULAR TYPE) grade-II</p>	rm	540					
	<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> <p>One Module Switch Board (Modular)</p>	rm	142					
I:02:00			100					
	I:02:01 1 S	No	11					
	I:02:03 1 S two ways	No	4					
	I:02:03 1 S two ways							
	I:02:03 1 S two ways							
	I:02:03 1 S two ways							

(E. DEVIKANTH LALHIMPUIA)
 State Project Engineer
 Civil Works

	i:02:13 2 S	No	14				
	Six modules Switch Board (Modular)						
	i:02:86 2 S + 1 R + 1 SOC	No	19				
N:00:00	MCBs/RCCBs/ELCBs/MCCBs/EARTH FAULT RELAY SP/SPN/DP/DP&N/TP/TP&N/FP						
N:01:00	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	Each	12				
	N:01:01 5 to 32 Amps ,SP , MCB B-series	Each	3				
O:00:00	N:01:27 63 Amps' DP, MCB Isolator DISTRIBUTION BOARDS MCB DISTRIBUTION BOARD						
O:03:00	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.	Each	3				
J:00:00	O:03:75 6-ways MCB DB SP & N DD metallic Door 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	53				
	(1375) LED Batten fitting 1X12W Linea 2' with LED tube (Phillips/equivalent)	No	10				
J:01:00	(1377) LED Batten fitting 1X26W Linea 4' with LED tube (Phillips/equivalent)	No	42				
	(1378) Flood Light 2X05W 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 (1861)Bracket wall mounting fan 400mm sweeps Helix with remote ISI marked (Usha/equivalent) (1845)Ceiling fan 1200mm Sweeps ISI marked 3 blades (Usha/Crompton/Equivalent)	Each	21				
	J:02:00 Installation of all kind of Electrical appliances J:02:02 Installation 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. (1828)Electric Storage Water Heater/Geyser 6 litres 2 KW Havells Rio /Equivalent	Each	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. 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 ')) 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 along with others wires as required.	Metre	18				
R:01:00	LIGHTNING CONDUCTOR	Metre	772.8				

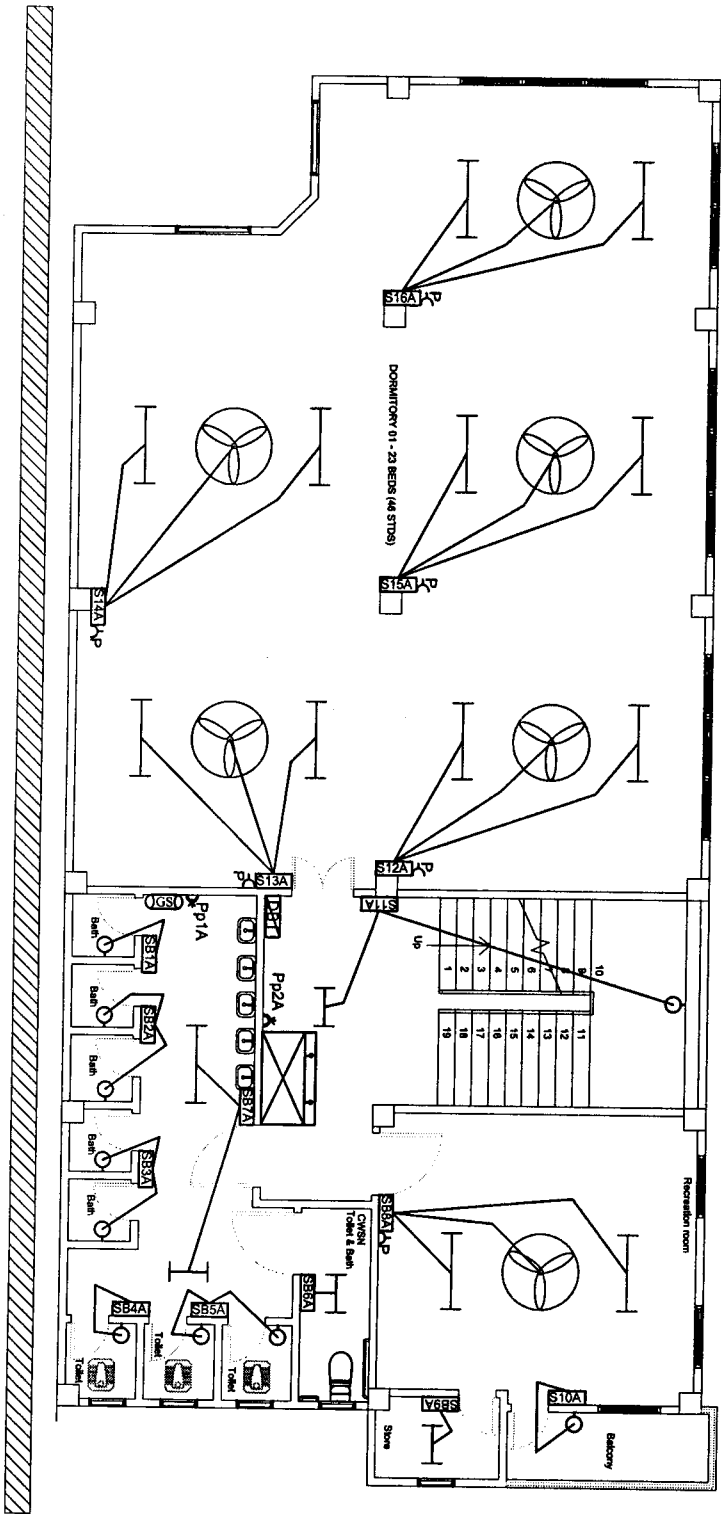

(E. DENNIS LALHLEMPHIA)
 State Project Engineer
 Civil Works
 Samagra Shiksha, Mizoram

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	20			
	Supplying and fitting of Water Cooler 120 ltrs with water pipe line as required in lump sum	Each	3			
	3- Phase Service connection 25sqmm four core Aluminium cable lump sum					
	Total					
	Add 18% GST					
	Add 1% Labour Cess					
	GRAND TOTAL	RS				

Rupees in words


 (E. R. LALNUNFELA)
 Programme Officer
 Civil works
 Samagra Shiksha, Mizoram


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



LEGENDS

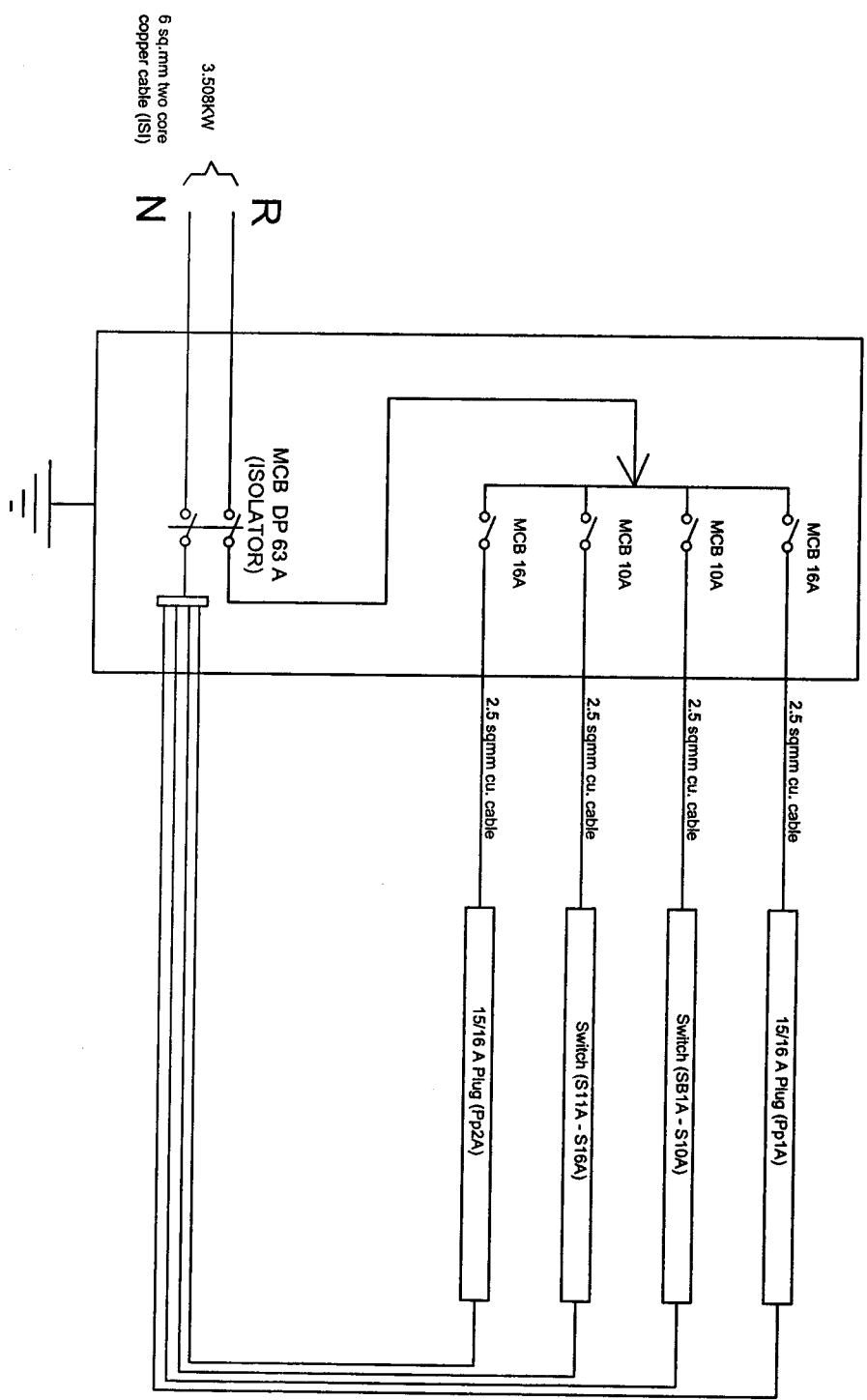
SHEET NO. - 1

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)	
Cryer 6 litres	
Control Switch board (Module)	
5amp S/S comb Plug	
15amp S/S comb Plug	
Circuit Distribution board	
Main Distribution Board	
Water Cooler 120 ltrs	

(Er) DENNIS ALHIMPUIA
 State Project Engineer
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 Programme Officer
 Civil Works
 Samagra Shiksha, Mizoram

6-way MCB DB SP & N D/D



CIRCUIT DISTRIBUTION(1)

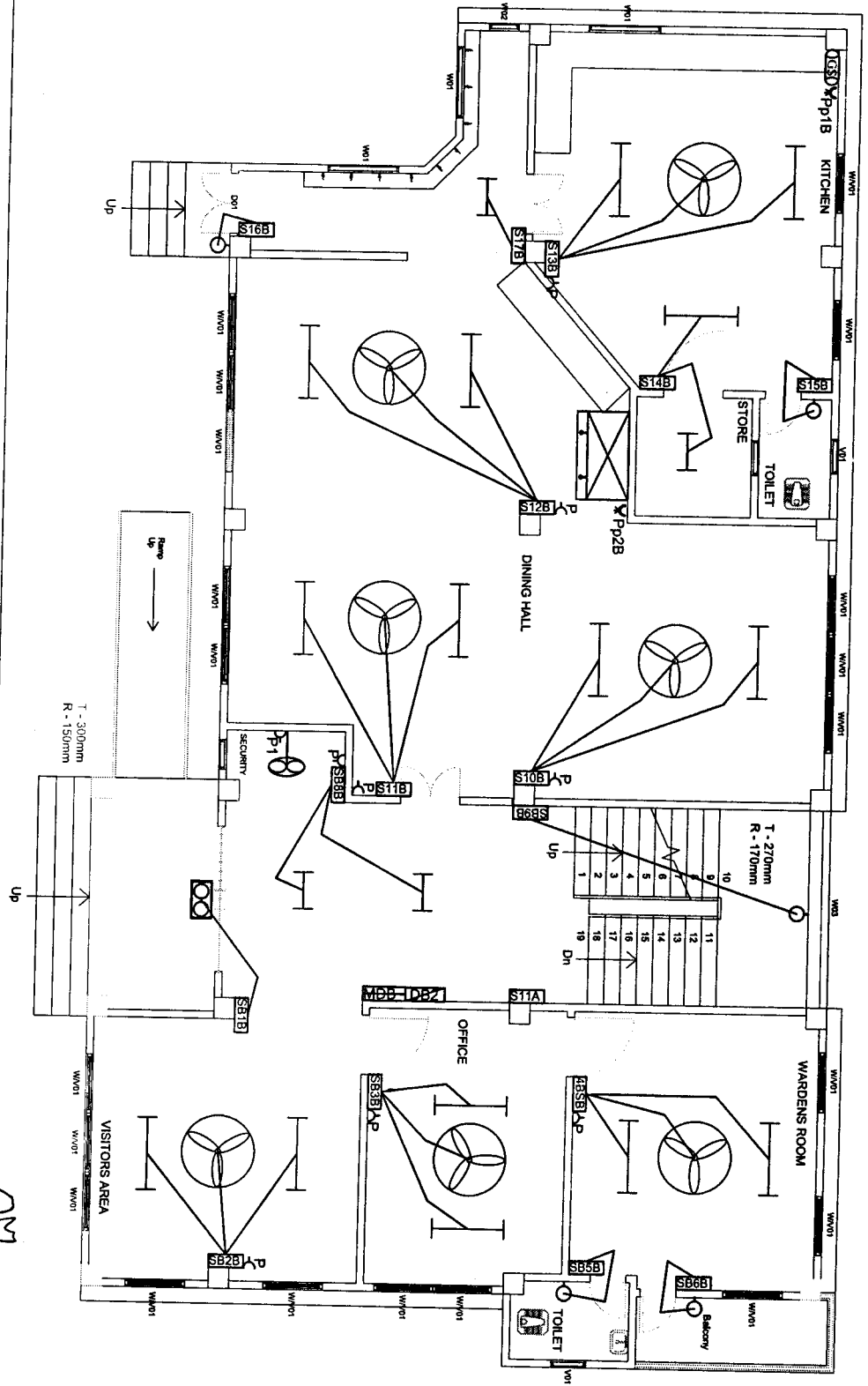
(Er. R. LALNUNFELA)
Programme Officer

Civil works
Samagra Shiksha, Mizoram

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

Signature

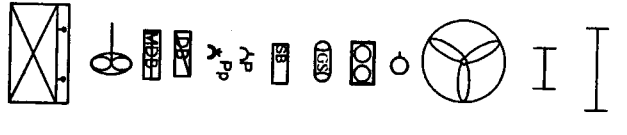
PROJECT	
KGV (HOSTEL) AT LAWNGTLAI DISTRICT	
NOTES	
STATE PROJECT OFFICE SAMAGRA SHIKSHA, MIZORAM	
DRAWING : SINGLE LINE DIAGRAM	
DATE : 05/06/2024	SHEET NO : 02
SCALE : NOT TO SCALE	DRAWN BY
COUNTERSIGNED BY	



SHEET NO : 03

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 (1 S CFL)
- Flood light (2X65 W CFL)
- Guyner 6 lines
- Control Switch board (Modular)
- 5amp S/S comb Plug
- 1amp S/S comb Plug
- Circuit Distribution board
- Main Distribution Board
- Bracket wall mounted fan
400mm sweeps
- Water Cooler 120 ltr



GROUND FLOOR

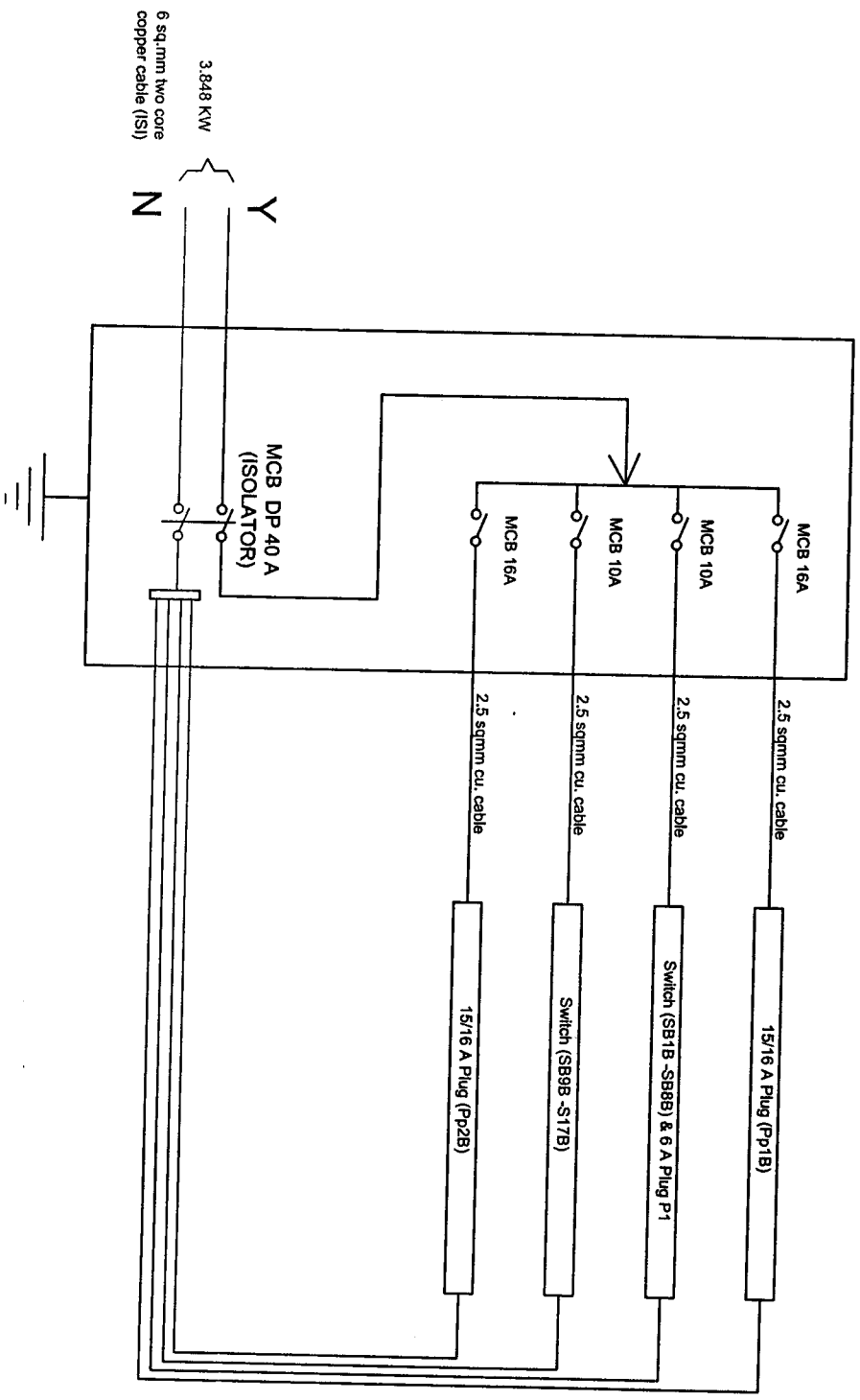
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Samagra Shiksha, Mizoram

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State Project Engineer

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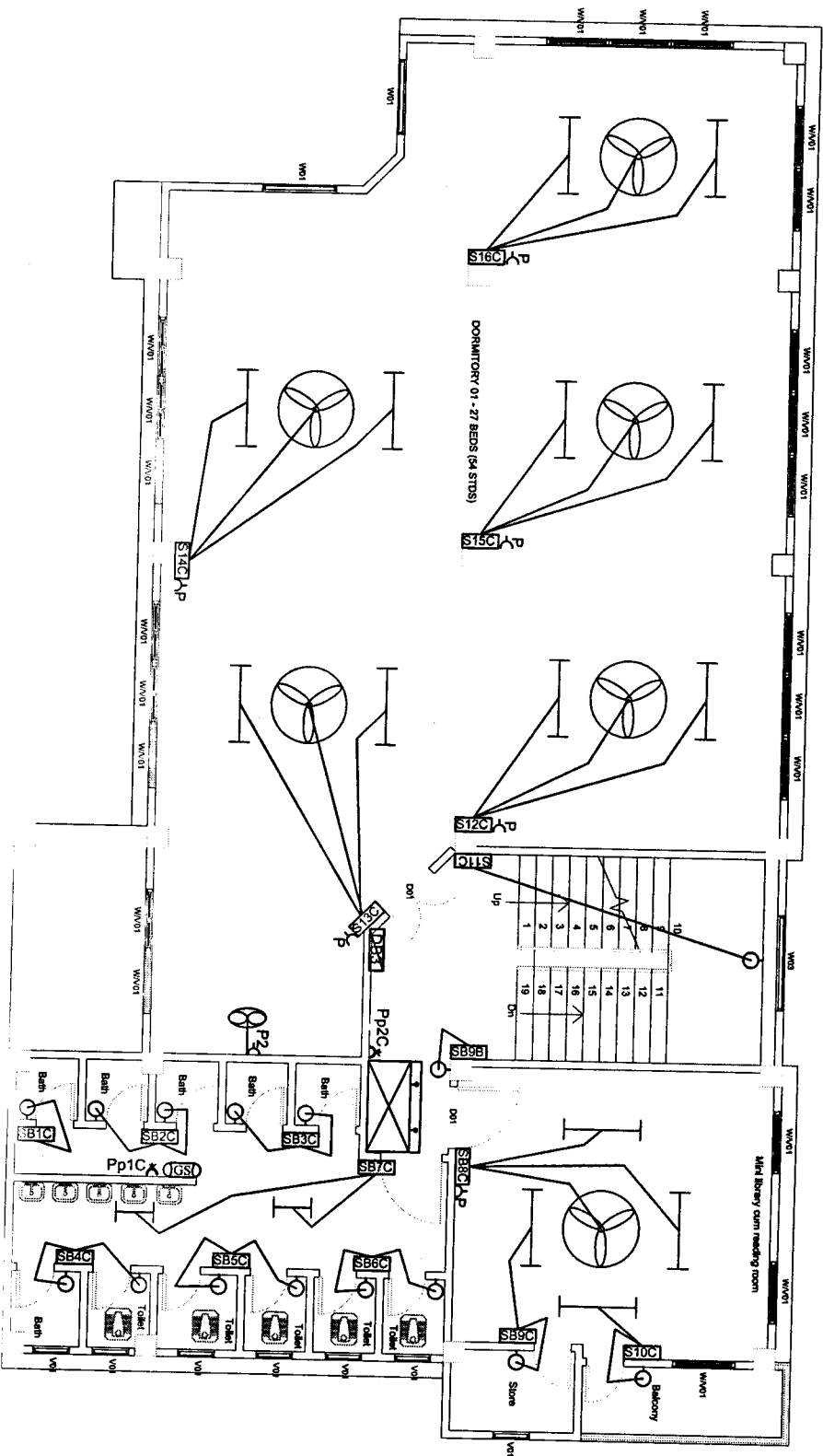
Civil works
Samagra Shiksha, Mizoram

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Samagra Shiksha, Mizoram

PROJECT		KGBV (HOSTEL) AT LAWNGTLAI DISTRICT
NOTES		
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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(1.5 W CFL)
- Flood light(2X65 W CFL)
- Gyser 6 litres
- Control Switch board(Modular)
- 5amp S/S comb Plug
- 15amp S/S comb Plug
- Circuit Distribution board
- Main Distribution Board
- Bracket wall mounted fan
400mm sweeps
- Water Cooler 120 ltrs

SHEET NO. : 05

FIRST FLOOR

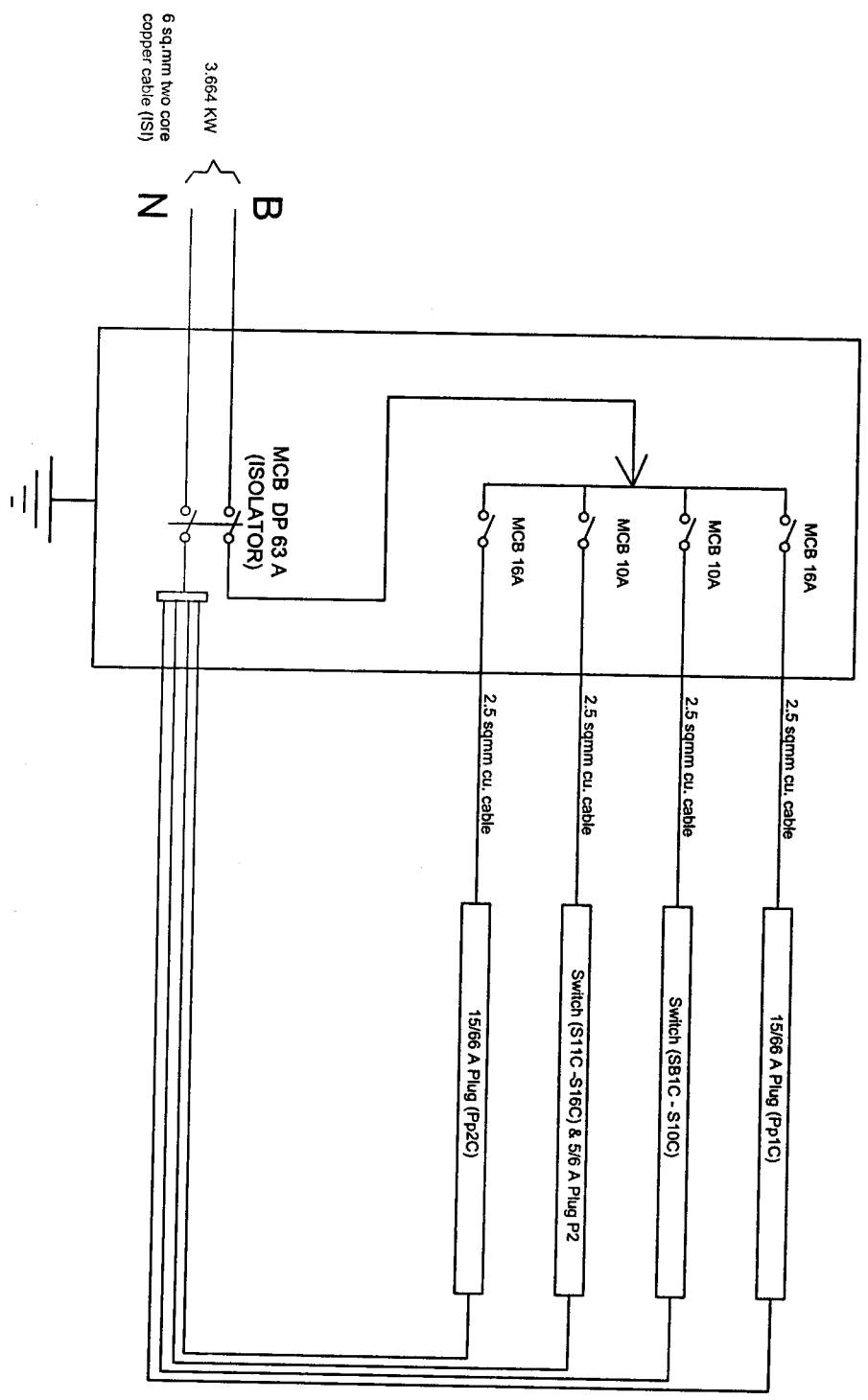
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CIRCUIT DISTRIBUTION(3)

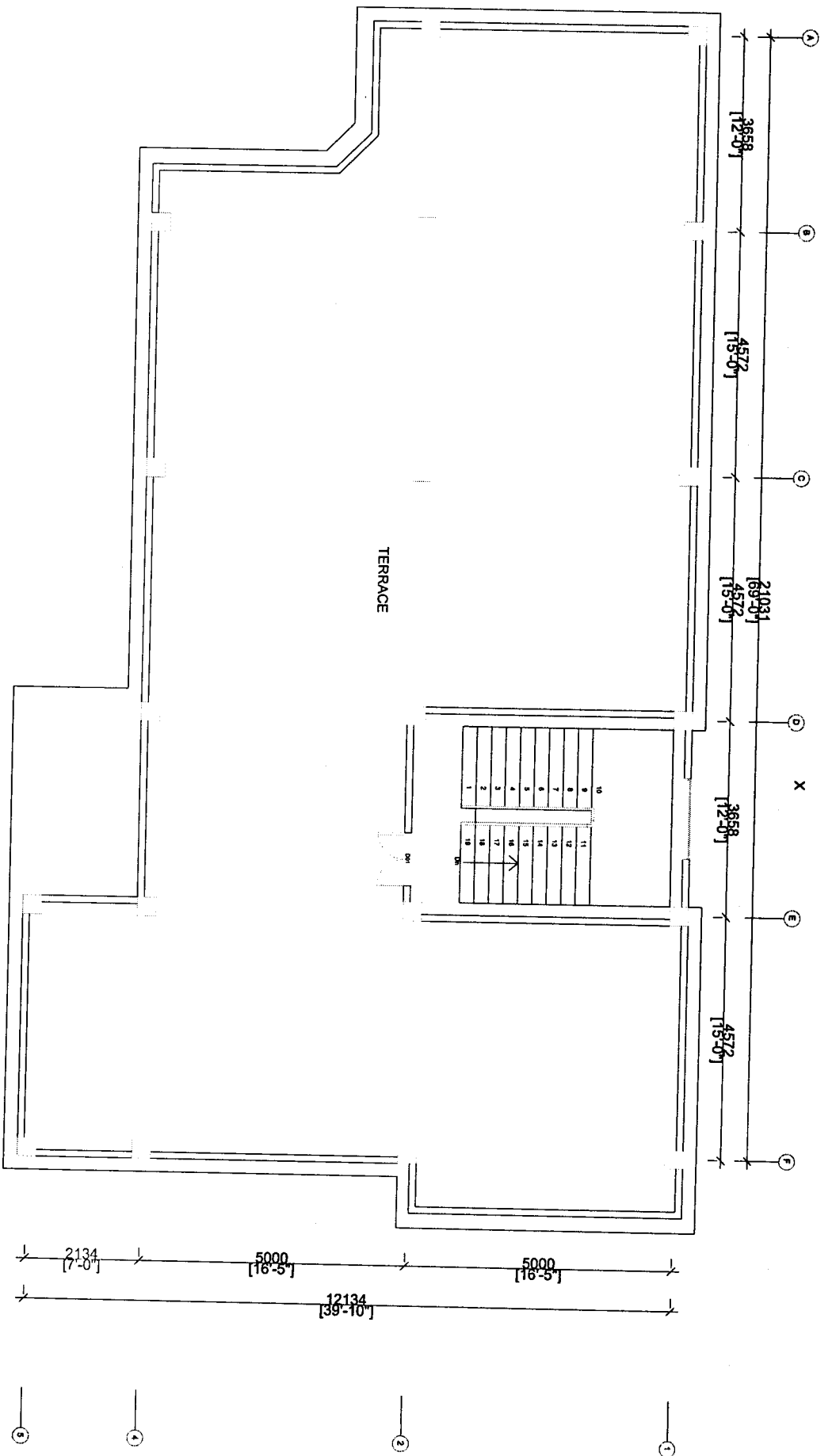
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PROJECT	
KCBV/HOSTEL AT LAIYANGTALAI DISTRICT	
NOTES	
STATE PROJECT OFFICE SAMAGRA SHIKSHA, MIZORAM	
DRAWING : SINGLE LINE DIAGRAM	
DATE : 05/06/2024	SHEET NO : 06
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ROOF

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