MANNAM AYURVEDA CO-OPERATIVE MEDICAL COLLEGE HOSPITAL

Pandalam, Pathanamthitta District, Kerala – 689501

NOTICE INVITING TENDER (TWO-STAGE BIDDING SYSTEM)

Tender Notice No.: MACMCH/00135/2026-27 **Date:** 25 November 2026

1. INVITATION & GENERAL TENDER PARTICULARS

Sealed competitive tenders under a Two-Stage / Two-Cover System (Stage 1: Pre-Qualification & Technical Bid and Stage 2: Financial Bid) are invited by the Director, Mannam Ayurveda Co-operative Medical College Hospital, Pandalam, from experienced and eligible civil engineering contractors/firms for executing the following work:

Name of Work	**Construction of:** **1. Treatment Block** **2. Twin Room Cottages – 10 Nos.** **3. Panchakarma Treatment Unit – 5 Nos.** **at Mannam Ayurveda Co-operative Medical College Hospital, Pandalam.**
Earnest Money Deposit (EMD)	₹ 100000 (by Demand Draft / Bank Guarantee from a Nationalized/Scheduled Bank in favour of Mannam Ayurveda Co-operative Medical College Hospital, payable at Pandalam).
Cost of Tender Document	₹ 1000 + 18% GST (Non-refundable).
Period of Completion	[150 Days] from the 14th day of issue of Letter of Acceptance / Handing over of site.
Validity of Tender	60 Days from the date of opening of Stage 1 (Pre-Qualification & Technical Bid).
Defect Liability Period	12 Months from the certified date of virtual completion of all works.

Two-Stage Bidding & Submission Procedure

- **Stage 1 (Cover 1 – Pre-Qualification & Technical Bid):** Shall be sealed in Cover 1 and superscribed 'STAGE 1: PRE-QUALIFICATION & TECHNICAL BID'. It must contain the duly filled Stage 1 Form, EMD, Contractor Registration Certificate, PAN/GST/EPF/ESI/BOCW copies, CA-certified financial turnover, work completion certificates, technical personnel & machinery schedules, IS compliance acceptance, and safety & worker insurance undertakings.
- **Stage 2 (Cover 2 – Financial Bid):** Shall be sealed in Cover 2 and superscribed 'STAGE 2: FINANCIAL BID'. It must contain the duly filled and signed Stage 2 Financial Bid Form along with the priced Bill of Quantities (BOQ) for (1) Treatment Block, (2) Twin Room Cottages – 10 Nos., and (3) Panchakarma Treatment Unit – 5 Nos.
- **Outer Envelope & Evaluation Rule:** Both sealed covers (Cover 1 and Cover 2) shall be enclosed inside a single outer sealed cover addressed to the Director, Mannam Ayurveda Co-operative Medical College Hospital, Pandalam. Cover 1 will be opened first; Cover 2 (Financial Bid) will be opened only for bidders who satisfy all Stage 1 Pre-Qualification criteria.

IMPORTANT DISQUALIFICATION NOTICE

Bidders MUST NOT mention, disclose, or attach any quoted rate, percentage, or total financial bid amount inside Cover 1 (Pre-Qualification & Technical Bid). Any disclosure of financial figures in Cover 1 will result in immediate rejection of the tender.

Key Tender Schedule

Sl. No.	Tender Event	Date & Time
1	Issue / Download of Tender Documents	From [25/11/2026] to [02/12/2026] up to 03:00 PM
2	Pre-Bid Site Inspection & Clarification Meeting	MACMC Office, Pandalam
3	Last Date & Time for Receipt of Sealed Tenders	[02/12/2026] up to 03:00 PM
4	Opening of Stage 1 (Pre-Qualification & Technical Bid)	[02/12/2026] at 04:00 PM
5	Opening of Stage 2 (Financial Bid)	To be intimated to Stage-1 qualified bidders

STAGE 1: PRE-QUALIFICATION & TECHNICAL BID FORM (COVER – 1)

To,

The Director,

Mannam Ayurveda Co-operative Medical College Hospital,

Pandalam, Pathanamthitta District, Kerala – 689501.

Sub: Pre-Qualification & Technical Bid for the Construction of (1) Treatment Block, (2) Twin Room Cottages – 10 Nos., and (3) Panchakarma Treatment Unit – 5 Nos. at Mannam Ayurveda Co-operative Medical College Hospital, Pandalam.

Sir,

Having examined the Notice Inviting Tender, site conditions, architectural and structural drawings, Bill of Quantities (BOQ), applicable Indian Standards (IS), safety rules, and statutory worker insurance requirements, I/We hereby submit our Pre-Qualification & Technical Bid for the above-mentioned work.

A. Bidder Profile & Statutory Credentials

Sl. No.	Particulars	Details to be Filled by Bidder
1	Name of Contractor / Firm / Company	
2	Registered Office Address & PIN Code	
3	Telephone, Mobile Number & Official Email ID	
4	Legal Status of Bidder (Proprietorship / Partnership / Pvt. Ltd. / Co-operative Society)	
5	PWD / CPWD / MES Contractor Registration Class, Number & Validity (Attach copy)	Class: _____ Reg. No.: _____ Valid up to: _____
6	Permanent Account Number (PAN) & AADHAR (Attach copy)	
7	GST Registration Number (Attach copy)	
8	EPF, ESIC & BOCW Registration Numbers (Attach copies)	EPF: _____ ESIC: _____
9	Earnest Money Deposit (EMD) Details (DD / BG No., Date, Issuing Bank & Amount)	DD/BG No.: _____ Date: _____ Bank: _____ Amount: ₹ _____

B. Minimum Pre-Qualification Eligibility Criteria

To qualify in Stage 1, the bidder must fulfill all criteria below and enclose self-attested documentary proof:

- **1. Similar Work Experience (Completed during the last 5 years):** Satisfactory completion of similar hospital, institutional, commercial, or multi-unit RCC building construction works meeting ANY ONE of the following thresholds:

• Option (a): One (1) similar completed work costing not less than ₹3.00 Crore; OR

• Option (b): Two (2) similar completed works each costing not less than ₹2.00 Crore; OR

• Option (c): Three (3) similar completed works each costing not less than ₹1.00 Crore.

(Enclose Work Orders and Completion Certificates issued by an officer not below the rank of Executive Engineer or authorized client head).

Sl.	Name of Work & Client	Completed Value (₹)	Date of Start	Actual Completion	Cert. Enclosed
1					Yes / No
2					Yes / No
3					Yes / No

- **2. Annual Construction Turnover & Banker's Solvency:** Audited financial statements and CA-certified turnover certificate (with UDIN) for the last 3 consecutive financial years (2023–24, 2024–25, 2025–26), along with a Banker's Solvency Certificate issued within the last 6 months.

Sl. No.	Financial Year / Particular	Amount (₹ in Lakhs / Crores)
1	Annual Civil Construction Turnover – FY 2023–24	₹
2	Annual Civil Construction Turnover – FY 2024–25	₹
3	Annual Civil Construction Turnover – FY 2025–26	₹
4	Banker's Solvency Certificate Value (Bank & Date: _____)	₹

- **3. Technical Personnel & Construction Plant/Equipment:** The contractor shall deploy a dedicated qualified Project Engineer (B.Tech/B.E. Civil with min. 5 years building experience) and Site Supervisors (Diploma in Civil Engineering with min. 3 years experience), along with concrete batching/mixing plant or RMC tie-up, needle vibrators, bar bending/cutting machines, dewatering pumps, and certified steel scaffolding.

C. Indian Standards (IS) & Technical Specifications to Be Followed

All materials supplied, workmanship executed, and field/laboratory testing carried out for the Treatment Block, Twin Room Cottages (10 Nos.), and Panchakarma Treatment Units (5 Nos.) shall strictly conform to the latest editions of the following Bureau of Indian Standards (BIS / IS) codes and CPWD / Kerala PWD specifications:

Work Category	Applicable IS Codes	Mandatory Material & Execution Requirements
Cement, Concrete & Steel Reinforcement	IS 269, IS 8112, IS 12269, IS 383, IS 456, IS 10262, IS 9103, IS 1786, IS 516	Machine-batched design mix concrete (M-20 / M-25 as specified; min. cement content 330 kg/m³), approved chemical admixtures (IS 9103), Fe-500D/550D TMT bars (IS 1786), slump and 7/28-day cube compressive strength testing.
Masonry & Plastering	IS 2185 (Part 1), IS 2250, IS 1542, IS 1661	Factory-made precast solid concrete blocks (30×20×20 cm & 30×20×10 cm) conforming to IS 2185 Part 1 in CM 1:6; 12 mm thick wall plastering in CM 1:4 with integral waterproofing compound in wet areas.
Roofing, Structural Steel & Clay Tiles	IS 654, IS 2062, IS 4923, IS 277, IS 800, IS 816	Class AA/A pressed Mangalore-pattern clay roof tiles and ridge/hip tiles (IS 654); structural steel sections (IS 2062) and hollow tubes (IS 4923); GI sheets with min. 120 GSM zinc coating (IS 277); UV-coated polycarbonate sheets.
Flooring, Granite & Waterproofing	IS 15622, IS 1124, IS 2645, IS 3067	Glazed & full-body vitrified tiles (water absorption <0.08% / <0.06%, IS 15622) with 2-component epoxy grout; 18 mm gang-saw cut granite slabs; SRI-105 elastomeric liquid membrane & 2K polymer-modified cementitious waterproofing.
Doors, Windows, Glazing & Hardware	IS 2202 (Part 1), IS 2046, IS 1003, IS 2553 (Part 1), IS 1868	35 mm BWP solid-core flush shutters (IS 2202) with 1.0 mm HPL (IS 2046) and solid teak lipping; seasoned 2nd-class teak wood frames/panelled shutters; uPVC multi-chambered profiles with 1.6 mm GI reinforcement; 6063-T5/T6 aluminium windows/doors with 8 mm tempered glass (IS 2553) & SS 304 hardware.
Acoustic & False Ceilings	IS 277, IS 2095, IS 8183	GI perimeter/intermediate grid framework (120 GSM zinc, IS 277); 20 mm Saint-Gobain Ecophon acoustic panels (NRC ≥ 0.90), perforated gypsum wall lining with mineral wool cavity infill, and VOX exterior cellular PVC soffit panels.
Painting, Protective Coatings & Measurement	IS 2074, IS 2932, IS 1477, IS 1200	Two-component epoxy zinc phosphate primer & epoxy/PU topcoats on GI trusses and MS grills; red oxide zinc chromate primer (IS 2074) & synthetic enamel (IS 2932) on metal; anti-algal weatherproof roof tile coating; measurements strictly as per IS 1200.

D. Safety Considerations & Statutory Insurance of Workers

- **1. Site Safety, Barricading & Working at Heights (NBC Part 7 & BOCW Act):** The contractor shall erect secure peripheral barricades around active hospital zones to prevent dust, noise, and unauthorized entry. Rigid tubular/steel scaffolding with guardrails, toe-boards, crawling boards, safety nets, and full-body safety harnesses (IS 3521) shall be mandatory for all roof truss erection, Mangalore tile laying/painting, and exterior plastering/painting works.
- **2. Personal Protective Equipment (PPE) & Electrical/Fire Safety:** All site personnel shall wear ISI-marked safety helmets, safety shoes, and high-visibility vests, plus welding shields, respirators, and chemical-resistant gloves during welding, grinding, epoxy/PU application, and solvent handling. Temporary electrical connections must use weatherproof distribution boards fitted with 30 mA ELCB/RCCB protection, and serviceable ABC fire extinguishers and first-aid boxes shall be maintained on site.
- **3. Trench Excavation & Hospital Campus Protocols:** All foundation and service trenches shall be properly sloped or shored, barricaded with warning tape/lights, and kept free of stagnant water. Material stacking and noisy operations shall follow schedules approved by the Hospital Authorities without obstructing ambulance or patient movement.
- **4. Mandatory Insurance of Workers & Third-Party Liability:** Prior to commencing work, the contractor shall obtain and keep valid throughout the contract and defect liability period: (a) Employee's Compensation (Workmen's Compensation) Insurance Policy under the Employee's Compensation Act, 1923, and active ESIC / Kerala BOCW Welfare Board coverage for every worker employed on site; and (b) Contractor's All Risks (CAR) and Third-Party Liability Insurance covering bodily injury, loss of life, and damage to hospital or neighbouring property. Copies of paid insurance policies shall be submitted to the Engineer-in-Charge before releasing any running account bill.

E. Declaration & Undertaking by the Bidder (Stage 1)

I/We hereby solemnly declare that all information, financial figures, and certificates furnished in Stage 1 (Cover 1) are true and genuine. I/We undertake to strictly comply with all applicable Indian Standards (IS), site safety regulations, and statutory worker insurance requirements, and acknowledge that our Stage 2 Financial Bid (Cover 2) shall be opened only upon qualifying in Stage 1.

Place: _____

Date: _____

Signature of Authorized Signatory:

_____

Name & Designation:

_____

Official Seal of Contractor / Firm:

Contact Mobile No.:

_____

STAGE 2: FINANCIAL BID FORM (COVER – 2)

To,

The Director,

Mannam Ayurveda Co-operative Medical College Hospital,

Pandalam, Pathanamthitta District, Kerala – 689501.

Sub: Financial Bid for the Construction of (1) Treatment Block, (2) Twin Room Cottages – 10 Nos., and (3) Panchakarma Treatment Unit – 5 Nos. at Mannam Ayurveda Co-operative Medical College Hospital, Pandalam.

Sir,

1. Having visited and examined the site, drawings, General and Special Conditions of Contract, applicable Indian Standards (IS), safety and worker insurance obligations, and the itemized Bill of Quantities (BOQ) for all three components of the project, I/We hereby offer to execute, complete, and maintain the entire works in strict conformity with the tender documents for the lump-sum/item-rate amounts detailed below:

Sl. No.	Component / Description of Work	Quoted Amount in Figures (₹)	Quoted Amount in Words (Rupees)
1	Construction of Treatment Block (As per attached Priced BOQ – Schedule I)	₹	Rupees
2	Construction of Twin Room Cottages – 10 Nos. (As per attached Priced BOQ – Schedule II)	₹	Rupees
3	Construction of Panchakarma Treatment Unit – 5 Nos. (As per attached Priced BOQ – Schedule III)	₹	Rupees
A	**TOTAL QUOTED BID AMOUNT (EXCLUDING GST)**	**₹**	**Rupees**
B	Add: Goods & Services Tax (GST @ 18%)	₹	Rupees
C	**GRAND TOTAL BID VALUE (INCLUSIVE OF GST)**	**₹**	**Rupees**

Terms & Conditions of Financial Offer:

- **2. Rate Completeness:** The quoted item rates in the attached BOQ schedules are inclusive of all materials, labour, tools, plant, scaffolding, lead/lift, testing charges, safety measures, worker insurance, and contractor overheads/profit, excluding GST which is shown separately above.
- **3. Validity of Bid:** I/We agree to keep this financial offer valid and open for acceptance for a period of 90 days from the date of opening of Stage 1 bids.

- **4. Performance Security & Commencement:** If this tender is accepted, I/We undertake to furnish an irrevocable Performance Security equal to 5% of the Accepted Contract Value within 10 days of the Letter of Acceptance (LOA), submit valid Worker Insurance & CAR policies, commence work within 14 days, and complete all works within [12 Months].
- **5. Unconditional Bid & Enclosures:** This bid is unconditional. Duly priced, signed, and stamped BOQ schedules for (1) Treatment Block, (2) Twin Room Cottages – 10 Nos., and (3) Panchakarma Treatment Unit – 5 Nos. are enclosed herewith in Cover 2.

Place: _____

Date: _____

Signature of Authorized Signatory:

_____

Name & Designation:

_____

Official Seal of Contractor / Firm:

Contractor Reg. No.:

_____

BILL OF QUANTITIES FOR THE CONSTRUCTION OF TREATMENT BLOCK AT MANNAM AYURVEDA CO-OPERATIVE MEDICAL COLLEGE HOSPITAL, PANDALAM					
Sl No	**Description of Item**	**Quantity**	**Unit**	**Rate**	**Amount**
1	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50 m and lift up to 1.5 m, disposed earth to be levelled and neatly dressed. All kinds of soil	372.87	M^3		
2	Providing and laying in position cement concrete for footing of specified grade excluding the cost of centering and shuttering - All work up to plinth level: 1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40 nominal size)	43.16	M^3		
3	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work for column footing, plinth beams, Lift well etc , using cement content as per approved design mix, including pumping of concrete to site of laying, including the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer - in-charge. Note:- Cement content considered in this item is @ 330 kg/ cum. Excess or less cement used as per design mix is payable or recoverable separately.1. All works up to plinth level	100.11	M^3		

4	Solid block masonry using pre cast solid blocks (Factory made) of size 30x20x20cm or nearest available size confirming to IS 2185 Part I of 1979 Foundation below plinth beams for super structure up to floor two level thickness 20cm and above in: CM 1:6 (1 cement : 6 coarse sand) etc complete	27.75	M^3		
5	Supplying and applying bituminous solution primer on roof and / or wall surface at 0.24 litre per sqm.and applying emulsified thixotropic bitumen protective coating to prevent the percolation of moisture into concrete surfaces.	466.38	M^2		
6	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundation etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift up to 1.5 m.	339.76	M^3		
7	Providing and laying in position machine batched and machine mixed design mix M-20 grade cement concrete for reinforced cement concrete work for flooring, using cement content as per approved design mix, including nominal reinforcement to take up temperature stresses, pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing , including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer - in-charge. Note:- Cement content considered in this item is @ 330 kg/ cum. Excess or less cement used as per design mix is payable or recoverable separately. All work upto plinth level	51.56	M^3		

8	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work for flooring , using cement content as per approved design mix, including pumping of concrete to site of laying but including the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer - in-charge. Note:- Cement content considered in this item is @ 330 kg/ cum. Excess or less cement used as per design mix is payable or recoverable separately. All work above plinth level upto floor V level	262.18	M^3		
9	Solid block masonry using pre cast solid blocks (Factory made) of size 30x20x20cm or nearest available size confirming to IS 2185 Part I of 1979 for walls for super structure up to floor two level thickness 20cm and above in: CM 1:6 (1 cement : 6 coarse sand) etc complete	284.06	M^3		
9.a	Solid block masonry using pre cast solid blocks (Factory made) of size 30x20x10cm or nearest available size confirming to IS 2185 Part I of 1979 for walls for super structure up to floor two level thickness 20cm and above in: CM 1:6 (1 cement : 6 coarse sand) etc complete	308.3	M^2		

10	Plastering inside and outside walls with cement mortar 1:4, 12mm thickness including all material labour and watering etc. complete as per the direction of engineer in charge. For all floors	5116.92	M²		
11	Providing & fixing roof with pressed clay tile (Manglore Patterned Tile) of 20 mm nominal thickness and approved size as per approved pattern on tubular G P frame work. Steel work in builtup tubular (round, square or rectangular hollow tubes) trusses etc including cutting , hoisting, fixing in position and applying a priming coat of approved epoxy primer including welding & bolted with special shaped washeretc. complete(Hot fininshed seamless tube s of 16 gauge includung finishing with epoxy paint 2 or more coats at all locations prepared and appled as per manufacturers specification including appropriate priming coat etc complete	101.1	M²		
12	Providing and fixing Eve board of PVC foam board fixed to cleats using stainless steel bolts and nuts, design as approved by the Engineer in charge	414.8	R M		
13	Providing and applying fibre reinforced elastomeric liquid water proofing membrane with resilient acrylic polymers having Sun Reflectivity Index (SRI) of 105 on top of concrete roof in three coats @ 10.76 litre / 10 m². & Providing and applying two coats of high-build polymer-modified cementitious waterproofing coating on horizontal and vertical surfaces after cleaning and wire brushing, complete as per manufacturer's specifications and direction of Engineer-in-Charge	578.01	M²		

13.a	Providing and applying of water proofing treatment for toilet floor and wall upto 240 cm after necessary preparing work,wire brushing,cleaning the dust etc.complete.Dr.Fixit powercrete polymer based liquid is used for 1st and 2nd coat for floor and wall upto 210cm.the mixing ratio 1 liter powercrete with 2 kg grey cement by slowly adding the powder compound to the liquid component and stirring with slow speed mixing machine for 3-4 min/until free from lumps 3rd and 4th coat is used by Dr Fixit Pidifin 2k,acrylic cementitious water proof coating in Bathrooms over the above products.the mixing ratio,part A 5 litre liquid and part B10kg powder component and stirring with slow speed mixing machine for 3-4 min.until free from lumps.for all floors.	603.19	M²		
14	Providing and laying glazed vitrified floor tiles of size 1200 × 600 mm, matt/antiskid finish, thickness as specified by manufacturer, water absorption less than 0.08% conforming to IS 15622, of approved brand, colour and shade, laidwith approved two-component epoxy resin-based grout consisting of epoxy resin, hardener and suitable filler, in the manufacturer's specified proportions, including grouting joints with white cement and matching pigments, cutting with zero-chipping diamond cutter, and complete laying with levelling clips, wedges, notch trowel and other necessary accessories, complete as per the directions of Engineer-in-Charge.	1032.82	M²		

15	Providing and laying glazed vitrified floor tiles of size 1200 × 600 mm, matt/antiskid finish, thickness as specified by manufacturer, water absorption less than 0.08% conforming to IS 15622, of approved brand, colour and shade, laidwith approved two-component epoxy resin-based grout consisting of epoxy resin, hardener and suitable filler, in the manufacturer's specified proportions, including grouting joints with white cement and matching pigments, cutting with zero-chipping diamond cutter, and complete laying with levelling clips, wedges, notch trowel and other necessary accessories, complete as per the directions of Engineer-in-Charge.	1025.52	M²		
16	Grouting the joints of 1200 × 600 mm glazed vitrified floor tiles, having approximately 3 mm wide joints, using two-component epoxy grout consisting of organic-coated filler of approved shade, hardener and resin in the manufacturer's specified proportions, including preparation and cleaning of joints, filling/grouting, removal of excess grout, cleaning of tile surfaces and finishing complete as per manufacturer's specifications and directions of Engineer-in-Charge.	2058.34	M²		
17	Deduct for not grouting the joints with white cement and matching pigment in the items of fixing of vitrified tiles	2058.34	M²		

18	Providing and fixing 18 mm thick gang saw cut, mirror, polished, premoulded and prepolished, machine cut for kitchen platforms, vanity counters, window sills, facias and similar locations, of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels. Area of slab over 0.50 sqm	58.77	M²		
19	Providing edge moulding to 18 mm thick marble stone counters, vanities etc., including machine polishing to edge to give high gloss finish etc. complete as per design approved by Engineer -in-Charge. Granite work	87.12	R M		
20	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface: Water thinnable cement primer	5116.92	M²		
21	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	5116.92	M²		
22	Wall painting with acrylic emulsion paint of approved brand and manufacture to give an even shade: Two or more coats on new work	5116.92	M²		
23	Extra for providing and mixing water proofing material in cement plaster work in proportion recommended by the manufacturers.	427.12	Sq m		

24	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia & length (hold fast lugs or dash fastener shall be paid for separately).Secod class Teak wood	0.95	M^3		
25	Providing and fixing factory made uPVC white colour fixed glazed windows/ ventilators comprising of uPVC multi-chambered frame and mullion (where ever required) extruded profiles duly reinforced with 1.60 ± 0.2 mm thick galvanized mild steel section made from roll forming process of required length (shape & size according to uPVC profile), , uPVC extruded glazing beads of appropriate dimension, EPDM gasket, G.I fasteners 100 x 8 mm size for fixing frame to finished wall, plastic packers, plastic caps and necessary stainless steel screws etc. Profile of frame shall be mitred cut and fusion welded at all corners, mullion (if required) shall be also fusion welded including drilling of holes for fixing hardware's and drainage of water etc. After fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size and of approved quality, all complete as per approved drawing & direction of Engineer-in-Charge. (Single / double glass panes and silicon sealant shall be paid separately). Fixed window / ventilator made of (small series) frame 47 x 50 mm & mullion 47 x 68	140.88	M2		
26	9.48.2 : 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. Fixed to openings/ wooden frames with rawl plugs screws etc	140.88	M^2		

27	9.117.1 : Providing and fixing factory made uPVC door frame made of uPVC extruded sections having an overall dimension as below (tolerance ±1 mm), with wall thickness 2.0mm (±0.2 mm), corners of the door frame to be jointed with galvanized brackets and stainless steel screws, joints mitred and plastic welded. The hinge side vertical of the frames reinforced by galvanized M.S. tube of size 19 x 19 mm and 1 mm (± 0.1 mm) wall thickness and 3 nos. stainless steel hinges fixed to the frame complete as per manufacturer's specification and direction of Engineer-in-charge Extruded section profile size 48x40 mm	147.2	R M		
28	Providing and fixing 35 mm thick factory-pressed Boiling Water Proof (BWP) grade solid core flush door shutter (conforming to IS: 2202 Part 1), finished on both faces with 1.0 mm thick decorative High-Pressure Laminate (HPL) in approved teak-wood grain finish (conforming to IS: 2046) and 25 mm deep solid teak wood edge lipping on all four sides, fixed to existing teak wood door frame using 4 Nos. 100 × 75 × 3 mm Stainless Steel (SS-304) ball-bearing butt hinges with SS screws, including necessary planing, rebating, and fitting complete as per architectural drawings and directions of the Engineer-in-Charge.	55.2	M^2		

29	Providing & fixing false ceiling at all height including providing & fixing of framework made of special section, power pressed from M.S. sheets and galvanised with zinc coating of 120 gms/ sqm (both side inclusive) as per IS : 277 and consisting of angle cleat of size 25mm wide x 1.6mm thick with flanges of 27mm and 37mm, at 1200mm c/c, one flange fixed to the ceiling with dash fastener 12.5mm dia x 50mm long with 6mm dia bolts, other flange of cleat fixed to the angle hangers of 25 x10 x0.50mm of required length with nuts & bolts of required size and other end of angle hanger fixed with intermediate G.I chanels 45 x15 x 0.90mm running at the spacing of 1200 mm c/c, to which the ceiling section 0.5mm thick bottom wedge of 80mm with tapered flanges of 26 mm each having lips of 10.5mm, at 450mm c/c, shall be fixed in a direction perpendicular to G.I intermediate channel with connecting clip made out of 2.64mm dia x 230mm long G.I wire at every junction, including fixing perimeter channels 0.50mm thick 27mm high having flanges of 20mm and 30mm long, the perimeter of ceiling fixed to wall/ partitions with the help of	713.2	M2		
30	Hand rail using SS 304 grade as directed by the Engineer in charge	147.08	R M		
31	Ornamental work for pillars	32	No		

32	Providing and fixing Tata Steel make GI-coated Trafford profile roofing sheets, 0.45 mm Base Metal Thickness (BMT), galvanized with zinc coating of approved mass, conforming to relevant applicable Indian Standards, in approved colour and finish, including transportation, hoisting, laying and fixing over the structural steel purlins using self-drilling self-tapping corrosion-resistant roofing screws with EPDM sealing washers, providing necessary side laps, end laps wherever unavoidable, matching ridge caps, barge flashings, valley gutters, eaves closures, and all necessary accessories for making the roof completely watertight, including cutting, drilling, alignment and finishing complete as per manufacturer's specifications, approved drawings and directions of Engineer-in-Charge.	862.07	M²		
33	Providing, fabricating, supplying and erecting structural steel roof trusses, including principal rafters, bottom chords, web members, purlins, eave struts, sag rods, roof-plane bracing, longitudinal bracing, cleat plates, gusset plates, stiffeners, base plates and other necessary structural steel components, using approved structural steel sections conforming to IS 2062, including cutting, straightening, drilling, welding, bolting, grinding, fabrication, transportation, hoisting, erection, alignment, providing all necessary bolts, nuts, washers and connection accessories, complete as per approved structural drawings and design calculations.	862.07	M²		

34	Preparing the Galvanized Iron (GI) roof truss surface by degreasing, solvent wiping, and light abrasive sweep-blasting / emery-paper etching (essential for adhesion on zinc-coated GI surfaces), applying one coat of two-component Epoxy Zinc Phosphate / Polyamide Primer (min. 40–50 microns DFT), followed by two coats of two-component Epoxy Finish Paint (min. 40–50 microns DFT per coat; total system DFT ~120–150 microns) of approved make and shade complete, including scaffolding/staging at roof height.	862.07	M^2		
35	Providing and fixing 10 mm / 15 mm thick aluminium foil-faced closed-cell cross-linked polyethylene (XLPE) thermal insulation sheets of approved make, having a density of 25–35 kg/m³ and thermal conductivity not exceeding 0.040 W/mK, fire-retardant grade with manufacturer's certified test report, below GI-coated Trafford profile roofing sheets, including providing and fixing galvanised welded GI wire mesh of 25 mm × 25 mm aperture using 1.0–1.2 mm diameter galvanised GI wire, properly supported and secured to the roof purlins / supporting framework with galvanised binding wire, clips and suitable fasteners, including laying insulation sheets continuously with minimum overlaps as recommended by manufacturer, sealing all joints with approved aluminium foil adhesive tape, cutting, fitting around structural members and roof accessories, ensuring proper support against sagging, and providing all necessary materials, labour, tools and tackles, complete as per manufacturer's specifications and directions of Engineer-in-Charge.	571.36	M^2		

36	Providing and fixing suspended acoustic false ceiling using factory-manufactured Saint-Gobain Ecophon acoustic ceiling panels, 20 mm thick, of approved type, colour and edge profile, with minimum acoustic absorption performance of NRC 0.90 or better, supported on a proprietary exposed T-grid suspension system comprising main runners, cross tees, perimeter wall angles, suspension hangers, connectors and all necessary accessories.	571.06	M²		
37	Providing and fixing seamless sound-absorbing perforated gypsum board wall lining over a concealed galvanized steel framing system, including mineral wool cavity infill, jointing, and finishing complete as per architectural drawings and manufacturer's specifications:	192	M²		
38	Providing and fixing Mangalore pattern clay roof tiles (conforming to IS 654) of approved quality, shape, and colour on wooden/steel battens (battens paid separately), including lapping and pointing/bedding with cement mortar 1:3 where required, complete:				
38.a	Providing and fixing Mangalore pattern clay roof tiles (class AA / A) on sloping roofs/shades (excluding cost of battens/reepers)	331.97	M²		
38.b	Providing and fixing Mangalore pattern clay ridge / hip tiles (conforming to IS 654) set in cement mortar 1:3 (1 cement : 3 coarse sand) including pointing and finishing	47.2	M		

39	Brick masonry inspection chamber of inside dimensions 455 × 610 mm and 45 cm deep for single pipe line, with F.P.S. bricks (class 7.5) in CM 1:4, concrete base (1:5:10), half-round channel, internal plastering in CM 1:3, and C.I. cover & frame (455 × 610 mm)	28	No		
40	Excavating trenches of required width for pipes, cables, etc., including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m				
	Not exceeding 80 mm dia	200	M		
	Exceeding 80 mm & up to 300 mm dia	220	M		
41	Providing and laying full body vitrified tile of minimum 15 mm thickness having water absorption less than 0.06% and conforming to IS: 15622, of approved make, in all colours and shades, of any size, laid on 20 mm thick cement mortar 1:4 (1 cement : 4 coarse sand) including grouting the joints with white cement and matching pigments	53.53	M^2		

42	Providing and fixing VOX Infratop (or approved equivalent) exterior-grade cellular PVC soffit false ceiling panels of 300 mm effective covering width (340 mm total width) in approved wood-grain/matte finish (SVP-08 solid / SVP-09 hidden-ventilated profile) with concealed click-lock joints, fixed onto a levelled Galvanized Iron (GI) perimeter and intermediate grid framework (GI channels spaced at max. 400 mm c/c suspended from RCC slab with GI rawl plugs, hangers, and self-tapping SS screws), including matching VOX J-trims (SVP-15) and H-connectors (SVP-18) along all wall/beam junctions and cutouts for light fixtures complete.	101.1	M²		
43	Providing and fixing openable casement glazed windows fabricated from extruded aluminium Algerian series sections (6063-T5/T6 alloy, minimum 1.5 mm wall thickness, powder coated to min. 50 microns / anodized AC 15), glazed with 8 mm thick clear tempered float glass fixed using EPDM gaskets and snap-on glazing beads, complete with SS 304 heavy-duty friction stays, multi-point locking handle, and perimeter weather silicone sealant, as per architectural drawings	18	M²		

44	Providing and fixing double-leaf glazed aluminium entrance door of overall size 2.40 m x 2.70 m (including 0.60 m high top fixed transom), fabricated from heavy-duty extruded aluminium 6063-T6 sections (100 x 44.5 mm / 85 x 44.5 mm, min. 2.3 mm wall thickness, powder coated to min. 50 microns), glazed with 8 mm clear tempered float glass fixed with EPDM gaskets and snap-on beading, complete with 2 Nos. heavy-duty hydraulic floor springs (120 kg capacity, EN-4, Ozone/Dorma or equivalent) with top and bottom pivots, euro-profile bottom rail lock, 2 pairs of 450 mm SS 304 pull handles, concealed SS flush bolts, and perimeter silicone sealant, complete.	32.4	M^2		
45	Providing and applying two-component (2K) Polyurethane (PU) wood finish (Exterior/Interior grade as specified, Asian Paints WoodTech / ICA / Sirca or equivalent) over new wooden doors, windows, and frames, including mechanical sanding with 120 and 180 grit abrasive papers, applying wood stain and grain filler to uniform shade, spray applying two coats of 2K PU clear sealer sanded smooth with 320/400 grit paper between coats, followed by spray applying two finish coats of 2K PU clear topcoat (Matt/Glossy finish as approved) to achieve a uniform, scratch- and moisture-resistant film, complete.	46.08	M2		

46	Preparing mild steel window grill surfaces by thorough wire brushing, power sanding with emery paper, and solvent cleaning to remove all rust, mill scale, and grease, followed by applying one coat of two-component Epoxy Zinc Phosphate Primer (min. 40 microns DFT, Asian Paints Apcodur / Berger Epilux or equivalent) and finishing with two coats of two-component Epoxy Matt Finish Paint of approved shade (min. 35 microns DFT per coat) by brush/spray, complete (measured flat over overall grill area on one side)	140.88	M2		
47	Providing and fixing motorised perforated Galvanized Iron (GI) rolling shutter fabricated from 1.00 mm to 1.25 mm thick (18–20 SWG) machine-rolled, micro-perforated interlocking GI laths (min. 120 GSM zinc coating, powder coated to approved shade), complete with heavy-duty GI side guide channels, reinforced GI bottom rail, 1.25 mm thick GI top hood box, MS pipe suspension barrel on ball bearings, electrically operated 230V single-phase heavy-duty rolling shutter motor (min. 600 kg capacity) with electromagnetic brake, auto limit switches, lockable push-button control panel, 2 remote transmitters, manual hand-chain pulley override for emergency operation, and heavy-duty bottom rail central/side shoot-bolt locking arrangement with floor sockets, complete as per architectural drawings and manufacturer's specifications	70.2	M2		

BILL OF QUANTITIES FOR THE CONSTRUCTION OF TWIN ROOMS AT MANNAM AYURVEDA CO-OPERATIVE MEDICAL COLLEGE HOSPITAL, PANDALAM					
Sl No	**Description of Item**	**Quantity**	**Unit**	**Rate**	**Amount**
1	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50 m and lift up to 1.5 m, disposed earth to be levelled and neatly dressed. All kinds of soil	381.38	M^3		
2	Providing and laying in position cement concrete for footing of specified grade excluding the cost of centering and shuttering - All work up to plinth level: 1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40 nominal size)	9.42	M^3		
3	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work for column footing, plinth beams, Lift well etc , using cement content as per approved design mix, including pumping of concrete to site of laying, including the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer - in-charge. Note:- Cement content considered in this item is @ 330 kg/ cum. Excess or less cement used as per design mix is payable or recoverable separately.1. All works up to plinth level	22.27	M^3		

4	Solid block masonry using pre cast solid blocks (Factory made) of size 30x20x20cm or nearest available size confirming to IS 2185 Part I of 1979 Foundation below plinth beams for super structure up to floor two level thickness 20cm and above in: CM 1:6 (1 cement : 6 coarse sand) etc complete	20.25	M^3		
5	Supplying and applying bituminous solution primer on roof and / or wall surface at 0.24 litre per sqm.and applying emulsified thixotropic bitumen protective coating to prevent the percolation of moisture into concrete surfaces.	135.92	M^2		
6	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundation etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift up to 1.5 m.	67.42	M^3		
7	Providing and laying in position machine batched and machine mixed design mix M-20 grade cement concrete for reinforced cement concrete work for flooring, using cement content as per approved design mix, including nominal reinforcement to take up temperature stresses, pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing , including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer - in-charge. Note:- Cement content considered in this item is @ 330 kg/ cum. Excess or less cement used as per design mix is payable or recoverable separately. All work upto plinth level	9.43	M^3		

8	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work for flooring , using cement content as per approved design mix, including pumping of concrete to site of laying but including the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer - in-charge. Note:- Cement content considered in this item is @ 330 kg/ cum. Excess or less cement used as per design mix is payable or recoverable separately. All work above plinth level upto floor V level	31.4	M^3		
9	Solid block masonry using pre cast solid blocks (Factory made) of size 30x20x20cm or nearest available size confirming to IS 2185 Part I of 1979 for walls for super structure up to floor two level thickness 20cm and above in: CM 1:6 (1 cement : 6 coarse sand) etc complete	56.56	M^3		
9.a	Solid block masonry using pre cast solid blocks (Factory made) of size 30x20x10cm or nearest available size confirming to IS 2185 Part I of 1979 for walls for super structure up to floor two level thickness 20cm and above in: CM 1:6 (1 cement : 6 coarse sand) etc complete	2.00	M^2		

10	Plastering inside and outside walls with cement mortar 1:4, 12mm thickness including all material labour and watering etc. complete as per the direction of engineer in charge. For all floors	478.29	M²		
11	Providing & fixing roof with pressed clay tile (Manglore Patterned Tile) of 20 mm nominal thickness and approved size as per approved pattern on tubular G P frame work. Steel work in builtup tubular (round, square or rectangular hollow tubes) trusses etc including cutting , hoisting, fixing in position and applying a priming coat of approved epoxy primer including welding & bolted with special shaped washeretc. complete(Hot fininshed seamless tube s of 16 gauge includung finishing with epoxy paint 2 or more coats at all locations prepared and appled as per manufacturers specification including appropriate priming coat etc complete	170.38	M²		
12	Providing and fixing Eve board of PVC foam board fixed to cleats using stainless steel bolts and nuts, design as approved by the Engineer in charge	20.16	R M		
13	Providing and applying fibre reinforced elastomeric liquid water proofing membrane with resilient acrylic polymers having Sun Reflectivity Index (SRI) of 105 on top of concrete roof in three coats @ 10.76 litre / 10 m². & Providing and applying two coats of high-build polymer-modified cementitious waterproofing coating on horizontal and vertical surfaces after cleaning and wire brushing, complete as per manufacturer's specifications and direction of Engineer-in-Charge	45.12	M²		

14	Providing and laying glazed vitrified floor tiles of size 1200 × 600 mm, matt/antiskid finish, thickness as specified by manufacturer, water absorption less than 0.08% conforming to IS 15622, of approved brand, colour and shade, laidwith approved two-component epoxy resin-based grout consisting of epoxy resin, hardener and suitable filler, in the manufacturer's specified proportions, including grouting joints with white cement and matching pigments, cutting with zero-chipping diamond cutter, and complete laying with levelling clips, wedges, notch trowel and other necessary accessories, complete as per the directions of Engineer-in-Charge.	85.43	M²		
15	Providing and laying glazed vitrified floor tiles of size 1200 × 600 mm, matt/antiskid finish, thickness as specified by manufacturer, water absorption less than 0.08% conforming to IS 15622, of approved brand, colour and shade, laidwith approved two-component epoxy resin-based grout consisting of epoxy resin, hardener and suitable filler, in the manufacturer's specified proportions, including grouting joints with white cement and matching pigments, cutting with zero-chipping diamond cutter, and complete laying with levelling clips, wedges, notch trowel and other necessary accessories, complete as per the directions of Engineer-in-Charge.	36.48	M²		

16	Grouting the joints of 1200 × 600 mm glazed vitrified floor tiles, having approximately 3 mm wide joints, using two-component epoxy grout consisting of organic-coated filler of approved shade, hardener and resin in the manufacturer's specified proportions, including preparation and cleaning of joints, filling/grouting, removal of excess grout, cleaning of tile surfaces and finishing complete as per manufacturer's specifications and directions of Engineer-in-Charge.	121.91	M²		
17	Deduct for not grouting the joints with white cement and matching pigment in the items of fixing of vitrified tiles	121.91	M²		
18	Providing and fixing 18 mm thick gang saw cut, mirror, polished, premoulded and prepolished, machine cut for kitchen platforms, vanity counters, window sills, facias and similar locations, of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels. Area of slab over 0.50 sqm	10.42	M²		
19	Providing edge moulding to 18 mm thick marble stone counters, vanities etc., including machine polishing to edge to give high gloss finish etc. complete as per design approved by Engineer -in-Charge. Granite work	29.76	R M		

20	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface: Water thinnable cement primer	478.29	M^2		
21	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	478.29	M^2		
22	Wall painting with acrylic emulsion paint of approved brand and manufacture to give an even shade: Two or more coats on new work	478.29	M^2		
23	Extra for providing and mixing water proofing material in cement plaster work in proportion recommended by the manufacturers.	95.07	Sq m		
24	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia & length (hold fast lugs or dash fastener shall be paid for separately).Secod class Teak wood	0.30	M^3		

25	Providing and fixing factory made uPVC white colour fixed glazed windows/ ventilators comprising of uPVC multi-chambered frame and mullion (where ever required) extruded profiles duly reinforced with 1.60 ± 0.2 mm thick galvanized mild steel section made from roll forming process of required length (shape & size according to uPVC profile), , uPVC extruded glazing beads of appropriate dimension, EPDM gasket, G.I fasteners 100 x 8 mm size for fixing frame to finished wall, plastic packers, plastic caps and necessary stainless steel screws etc. Profile of frame shall be mitred cut and fusion welded at all corners, mullion (if required) shall be also fusion welded including drilling of holes for fixing hardware's and drainage of water etc. After fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size and of approved quality, all complete as per approved drawing & direction of Engineer-in-Charge. (Single / double glass panes and silicon sealant shall be paid separately). Fixed window / ventilator made of (small series) frame 47 x 50 mm & mullion 47 x 68	18	M2		
26	9.48.2 : 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. Fixed to openings/ wooden frames with rawl plugs screws etc	420	Kg		

27	9.117.1 : Providing and fixing factory made uPVC door frame made of uPVC extruded sections having an overall dimension as below (tolerance ±1 mm), with wall thickness 2.0mm (±0.2 mm), corners of the door frame to be jointed with galvanized brackets and stainless steel screws, joints mitred and plastic welded. The hinge side vertical of the frames reinforced by galvanized M.S. tube of size 19 x 19 mm and 1 mm (± 0.1 mm) wall thickness and 3 nos. stainless steel hinges fixed to the frame complete as per manufacturer's specification and direction of Engineer-in-charge Extruded section profile size 48x40 mm	12.8	R M		
28	Providing and fixing to existing door frames 24 mm thick factory made UPVC door shutters made of styles and rails of a uPVC hollow section of size 59x24 mm and wall thickness 2 mm (± 0.2 mm) with inbuilt edging on both sides. The styles and rails mitred and joint at the corners by means of M.S. galvanised/plastic brackets of size 75x220 mm having wall thickness 1.0 mm and stainless steel screws. The styles of the shutter reinforced by inserting galvanised M.S. tube of size 20x20 mm and 1 mm (± 0.1 mm) wall thickness. The lock rail made up of 'H' section, a uPVC hollow section of size 100x24 mm and 2 mm (± 0.2 mm) wall thickness,fixed to the shutter styles by means of plastic/galvanised M.S. 'U' cleats. The shutter frame filled with a uPVC multi-chambered single panel of size not less than 620 mm, having over all thickness of 20 mm and 1 mm (± 0.1 mm) wall thickness. The panels filled vertically and tie bar at two places by inserting horizontally 6 mm galvanised M.S. rod and fastened with nuts and washers, complete as per manufacturer's specification and direction of Engineer-in-charge(Including all locking arrangements etc complete)	4.8	Sq m		

28	Providing and fixing 35 mm thick well-seasoned second-class teak wood panelled door shutter (size 1.20 m × 2.40 m, single/double leaf as shown in drawings) fabricated with 100 mm wide stiles and top rail, 200 mm wide lock and bottom rails, and 20 mm thick solid teak raised panels, hung to existing frame using ISI-marked SS 304 butt hinges (125 × 65 × 2.5 mm) and SS screws, complete (mortise lock, tower bolts, and polishing measured separately)	2.88	M^2		
29	Providing & fixing false ceiling at all height including providing & fixing of framework made of special section, power pressed from M.S. sheets and galvanised with zinc coating of 120 gms/ sqm (both side inclusive) as per IS : 277 and consisting of angle cleat of size 25mm wide x 1.6mm thick with flanges of 27mm and 37mm, at 1200mm c/c, one flange fixed to the ceiling with dash fastener 12.5mm dia x 50mm long with 6mm dia bolts, other flange of cleat fixed to the angle hangers of 25 x10 x0.50mm of required length with nuts & bolts of required size and other end of angle hanger fixed with intermediate G.I chanels 45 x15 x 0.90mm running at the spacing of 1200 mm c/c, to which the ceiling section 0.5mm thick bottom wedge of 80mm with tapered flanges of 26 mm each having lips of 10.5mm, at 450mm c/c, shall be fixed in a direction perpendicular to G.I intermediate channel with connecting clip made out of 2.64mm dia x 230mm long G.I wire at every junction, including fixing perimeter channels 0.50mm thick 27mm high having flanges of 20mm and 30mm long, the perimeter of ceiling fixed to wall/ partitions with the help of	57.59	M2		
30	Hand rail using SS 304 grade as directed by the Engineer in charge	9.8	R M		

31	Random Rubble Masonry Cladding for breakers and polishing the surface using PU paint	47.6	Sqm		
32	Providing, fabricating, and fixing UV-coated 3 mm thick solid polycarbonate sheet roofing (clear/tinted as approved, Lexan / Danpalon / Lotus or equivalent) supported on a welded structural framework of Galvanized Iron (GI) rectangular and square hollow tubes (IS 4923) comprising 75 × 40 × 2.0 mm primary rafters and 40 × 40 × 2.0 mm secondary purlins with MS/GI base plates and anchor fasteners, including zinc-rich cold galvanizing paint on all welded joints, 1 coat of epoxy primer, and 2 coats of epoxy/PU finish paint over the GI frame, and fixing polycarbonate sheets with extruded aluminium H-joiners, end U-profiles, EPDM gaskets, neutral silicone sealant, and SS 304 self-drilling fasteners in oversized thermal expansion slots, complete at all heights and slopes (measured on plan/sloped roof area)	12.46	M^2		
39	Brick masonry inspection chamber of inside dimensions 455 × 610 mm and 45 cm deep for single pipe line, with F.P.S. bricks (class 7.5) in CM 1:4, concrete base (1:5:10), half-round channel, internal plastering in CM 1:3, and C.I. cover & frame (455 × 610 mm)	6	No		

40	Excavating trenches of required width for pipes, cables, etc., including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m				
	Not exceeding 80 mm dia	22	M		
	Exceeding 80 mm & up to 300 mm dia	22	M		
41	Providing and laying full body vitrified tile of minimum 15 mm thickness having water absorption less than 0.06% and conforming to IS: 15622, of approved make, in all colours and shades, of any size, laid on 20 mm thick cement mortar 1:4 (1 cement : 4 coarse sand) including grouting the joints with white cement and matching pigments	8.1	M²		
42	Providing and fixing VOX Infratop (or approved equivalent) exterior-grade cellular PVC soffit false ceiling panels of 300 mm effective covering width (340 mm total width) in approved wood-grain/matte finish (SVP-08 solid / SVP-09 hidden-ventilated profile) with concealed click-lock joints, fixed onto a levelled Galvanized Iron (GI) perimeter and intermediate grid framework (GI channels spaced at max. 400 mm c/c suspended from RCC slab with GI rawl plugs, hangers, and self-tapping SS screws), including matching VOX J-trims (SVP-15) and H-connectors (SVP-18) along all wall/beam junctions and cutouts for light fixtures complete.	15	M²		

45	Providing and applying two-component (2K) Polyurethane (PU) wood finish (Exterior/Interior grade as specified, Asian Paints WoodTech / ICA / Sirca or equivalent) over new wooden doors, windows, and frames, including mechanical sanding with 120 and 180 grit abrasive papers, applying wood stain and grain filler to uniform shade, spray applying two coats of 2K PU clear sealer sanded smooth with 320/400 grit paper between coats, followed by spray applying two finish coats of 2K PU clear topcoat (Matt/Glossy finish as approved) to achieve a uniform, scratch- and moisture-resistant film, complete.	5.76	M2		
46	Preparing mild steel window grill surfaces by thorough wire brushing, power sanding with emery paper, and solvent cleaning to remove all rust, mill scale, and grease, followed by applying one coat of two-component Epoxy Zinc Phosphate Primer (min. 40 microns DFT, Asian Paints Apcodur / Berger Epilux or equivalent) and finishing with two coats of two-component Epoxy Matt Finish Paint of approved shade (min. 35 microns DFT per coat) by brush/spray, complete (measured flat over overall grill area on one side)	6.48	M2		

47	Providing and fixing motorised perforated Galvanized Iron (GI) rolling shutter fabricated from 1.00 mm to 1.25 mm thick (18–20 SWG) machine-rolled, micro-perforated interlocking GI laths (min. 120 GSM zinc coating, powder coated to approved shade), complete with heavy-duty GI side guide channels, reinforced GI bottom rail, 1.25 mm thick GI top hood box, MS pipe suspension barrel on ball bearings, electrically operated 230V single-phase heavy-duty rolling shutter motor (min. 600 kg capacity) with electromagnetic brake, auto limit switches, lockable push-button control panel, 2 remote transmitters, manual hand-chain pulley override for emergency operation, and heavy-duty bottom rail central/side shoot-bolt locking arrangement with floor sockets, complete as per architectural drawings and manufacturer's specifications	49	M2		

BILL OF QUANTITIES FOR THE CONSTRUCTION OF PANCHAKARMA TWIN ROOMS AT MANNAM AYURVEDA CO-OPERATIVE MEDICAL COLLEGE HOSPITAL, PANDALAM					
Sl No	**Description of Item**	**Quantity**	**Unit**	**Rate**	**Amount**
1	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50 m and lift up to 1.5 m, disposed earth to be levelled and neatly dressed. All kinds of soil	281.45	M^3		
2	Providing and laying in position cement concrete for footing of specified grade excluding the cost of centering and shuttering - All work up to plinth level: 1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40 nominal size)	6	M^3		
3	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work for column footing, plinth beams, Lift well etc , using cement content as per approved design mix, including pumping of concrete to site of laying, including the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer - in-charge. Note:- Cement content considered in this item is @ 330 kg/ cum. Excess or less cement used as per design mix is payable or recoverable separately.1. All works up to plinth level	16.04	M^3		

4	Solid block masonry using pre cast solid blocks (Factory made) of size 30x20x20cm or nearest available size confirming to IS 2185 Part I of 1979 Foundation below plinth beams for super structure up to floor two level thickness 20cm and above in: CM 1:6 (1 cement : 6 coarse sand) etc complete	13.59	M^3		
5	Supplying and applying bituminous solution primer on roof and / or wall surface at 0.24 litre per sqm.and applying emulsified thixotropic bitumen protective coating to prevent the percolation of moisture into concrete surfaces.	76.99	M^2		
6	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundation etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift up to 1.5 m.	39.44	M^3		
7	Providing and laying in position machine batched and machine mixed design mix M-20 grade cement concrete for reinforced cement concrete work for flooring, using cement content as per approved design mix, including nominal reinforcement to take up temperature stresses, pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing , including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer - in-charge. Note:- Cement content considered in this item is @ 330 kg/ cum. Excess or less cement used as per design mix is payable or recoverable separately. All work upto plinth level	7.1	M^3		

8	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work for flooring , using cement content as per approved design mix, including pumping of concrete to site of laying but including the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer - in-charge. Note:- Cement content considered in this item is @ 330 kg/ cum. Excess or less cement used as per design mix is payable or recoverable separately. All work above plinth level upto floor V level	21.57	M^3		
9	Solid block masonry using pre cast solid blocks (Factory made) of size 30x20x20cm or nearest available size confirming to IS 2185 Part I of 1979 for walls for super structure up to floor two level thickness 20cm and above in: CM 1:6 (1 cement : 6 coarse sand) etc complete	30.32	M^3		
9.a	Solid block masonry using pre cast solid blocks (Factory made) of size 30x20x10cm or nearest available size confirming to IS 2185 Part I of 1979 for walls for super structure up to floor two level thickness 20cm and above in: CM 1:6 (1 cement : 6 coarse sand) etc complete	2.00	M^2		

10	Plastering inside and outside walls with cement mortar 1:4, 12mm thickness including all material labour and watering etc. complete as per the direction of engineer in charge. For all floors	431.44	M²		
11	Providing & fixing roof with pressed clay tile (Manglore Patterned Tile) of 20 mm nominal thickness and approved size as per approved pattern on tubular G P frame work. Steel work in builtup tubular (round, square or rectangular hollow tubes) trusses etc including cutting , hoisting, fixing in position and applying a priming coat of approved epoxy primer including welding & bolted with special shaped washeretc. complete(Hot fininshed seamless tube s of 16 gauge includung finishing with epoxy paint 2 or more coats at all locations prepared and appled as per manufacturers specification including appropriate priming coat etc complete	145.95	M²		
12	Providing and fixing Eve board of PVC foam board fixed to cleats using stainless steel bolts and nuts, design as approved by the Engineer in charge	45.36	R M		
13	Providing and applying fibre reinforced elastomeric liquid water proofing membrane with resilient acrylic polymers having Sun Reflectivity Index (SRI) of 105 on top of concrete roof in three coats @ 10.76 litre / 10 m². & Providing and applying two coats of high-build polymer-modified cementitious waterproofing coating on horizontal and vertical surfaces after cleaning and wire brushing, complete as per manufacturer's specifications and direction of Engineer-in-Charge	45.12	M²		

14	Providing and laying glazed vitrified floor tiles of size 1200 × 600 mm, matt/antiskid finish, thickness as specified by manufacturer, water absorption less than 0.08% conforming to IS 15622, of approved brand, colour and shade, laidwith approved two-component epoxy resin-based grout consisting of epoxy resin, hardener and suitable filler, in the manufacturer's specified proportions, including grouting joints with white cement and matching pigments, cutting with zero-chipping diamond cutter, and complete laying with levelling clips, wedges, notch trowel and other necessary accessories, complete as per the directions of Engineer-in-Charge.	72.09	M²		
15	Providing and laying glazed vitrified floor tiles of size 1200 × 600 mm, matt/antiskid finish, thickness as specified by manufacturer, water absorption less than 0.08% conforming to IS 15622, of approved brand, colour and shade, laidwith approved two-component epoxy resin-based grout consisting of epoxy resin, hardener and suitable filler, in the manufacturer's specified proportions, including grouting joints with white cement and matching pigments, cutting with zero-chipping diamond cutter, and complete laying with levelling clips, wedges, notch trowel and other necessary accessories, complete as per the directions of Engineer-in-Charge.	36.48	M²		

16	Grouting the joints of 1200 × 600 mm glazed vitrified floor tiles, having approximately 3 mm wide joints, using two-component epoxy grout consisting of organic-coated filler of approved shade, hardener and resin in the manufacturer's specified proportions, including preparation and cleaning of joints, filling/grouting, removal of excess grout, cleaning of tile surfaces and finishing complete as per manufacturer's specifications and directions of Engineer-in-Charge.	108.57	M^2		
17	Deduct for not grouting the joints with white cement and matching pigment in the items of fixing of vitrified tiles	108.57	M^2		
18	Providing and fixing 18 mm thick gang saw cut, mirror, polished, premoulded and prepolished, machine cut for kitchen platforms, vanity counters, window sills, facias and similar locations, of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels. Area of slab over 0.50 sqm	6.74	M^2		
19	Providing edge moulding to 18 mm thick marble stone counters, vanities etc., including machine polishing to edge to give high gloss finish etc. complete as per design approved by Engineer -in-Charge. Granite work	11.1	R M		

20	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface: Water thinnable cement primer	431	M^2		
21	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	431	M^2		
22	Wall painting with acrylic emulsion paint of approved brand and manufacture to give an even shade: Two or more coats on new work	431	M^2		
23	Extra for providing and mixing water proofing material in cement plaster work in proportion recommended by the manufacturers.	111.7	Sq m		
24	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia & length (hold fast lugs or dash fastener shall be paid for separately).Secod class Teak wood	0.30	M^3		

25	Providing and fixing factory made uPVC white colour fixed glazed windows/ ventilators comprising of uPVC multi-chambered frame and mullion (where ever required) extruded profiles duly reinforced with 1.60 ± 0.2 mm thick galvanized mild steel section made from roll forming process of required length (shape & size according to uPVC profile), , uPVC extruded glazing beads of appropriate dimension, EPDM gasket, G.I fasteners 100 x 8 mm size for fixing frame to finished wall, plastic packers, plastic caps and necessary stainless steel screws etc. Profile of frame shall be mitred cut and fusion welded at all corners, mullion (if required) shall be also fusion welded including drilling of holes for fixing hardware's and drainage of water etc. After fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size and of approved quality, all complete as per approved drawing & direction of Engineer-in-Charge. (Single / double glass panes and silicon sealant shall be paid separately). Fixed window / ventilator made of (small series) frame 47 x 50 mm & mullion 47 x 68	11.22	M2		
26	9.48.2 : 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. Fixed to openings/ wooden frames with rawl plugs screws etc	420	Kg		

27	9.117.1 : Providing and fixing factory made uPVC door frame made of uPVC extruded sections having an overall dimension as below (tolerance ±1 mm), with wall thickness 2.0mm (±0.2 mm), corners of the door frame to be jointed with galvanized brackets and stainless steel screws, joints mitred and plastic welded. The hinge side vertical of the frames reinforced by galvanized M.S. tube of size 19 x 19 mm and 1 mm (± 0.1 mm) wall thickness and 3 nos. stainless steel hinges fixed to the frame complete as per manufacturer's specification and direction of Engineer-in-charge Extruded section profile size 48x40 mm	34.8	R M		
28	Providing and fixing to existing door frames 24 mm thick factory made UPVC door shutters made of styles and rails of a uPVC hollow section of size 59x24 mm and wall thickness 2 mm (± 0.2 mm) with inbuilt edging on both sides. The styles and rails mitred and joint at the corners by means of M.S. galvanised/plastic brackets of size 75x220 mm having wall thickness 1.0 mm and stainless steel screws. The styles of the shutter reinforced by inserting galvanised M.S. tube of size 20x20 mm and 1 mm (± 0.1 mm) wall thickness. The lock rail made up of 'H' section, a uPVC hollow section of size 100x24 mm and 2 mm (± 0.2 mm) wall thickness,fixed to the shutter styles by means of plastic/galvanised M.S. 'U' cleats. The shutter frame filled with a uPVC multi-chambered single panel of size not less than 620 mm, having over all thickness of 20 mm and 1 mm (± 0.1 mm) wall thickness. The panels filled vertically and tie bar at two places by inserting horizontally 6 mm galvanised M.S. rod and fastened with nuts and washers, complete as per manufacturer's specification and direction of Engineer-in-charge(Including all locking arrangements etc complete)	11.52	Sq m		

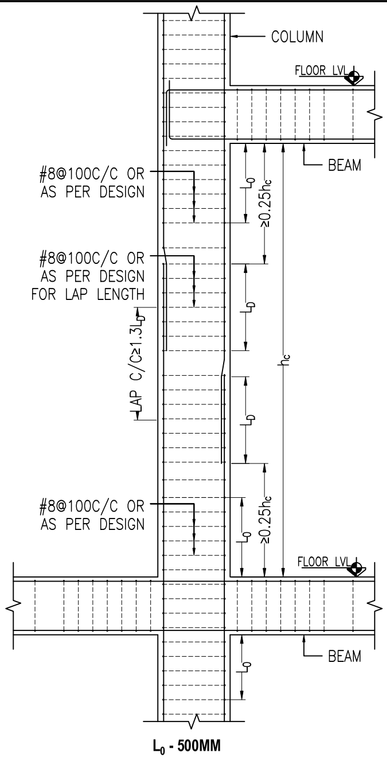
28	Providing and fixing 35 mm thick well-seasoned second-class teak wood panelled door shutter (size 1.20 m × 2.40 m, single/double leaf as shown in drawings) fabricated with 100 mm wide stiles and top rail, 200 mm wide lock and bottom rails, and 20 mm thick solid teak raised panels, hung to existing frame using ISI-marked SS 304 butt hinges (125 × 65 × 2.5 mm) and SS screws, complete (mortise lock, tower bolts, and polishing measured separately)	2.88	M^2		
29	Providing & fixing false ceiling at all height including providing & fixing of framework made of special section, power pressed from M.S. sheets and galvanised with zinc coating of 120 gms/ sqm (both side inclusive) as per IS : 277 and consisting of angle cleat of size 25mm wide x 1.6mm thick with flanges of 27mm and 37mm, at 1200mm c/c, one flange fixed to the ceiling with dash fastener 12.5mm dia x 50mm long with 6mm dia bolts, other flange of cleat fixed to the angle hangers of 25 x10 x0.50mm of required length with nuts & bolts of required size and other end of angle hanger fixed with intermediate G.I chanels 45 x15 x 0.90mm running at the spacing of 1200 mm c/c, to which the ceiling section 0.5mm thick bottom wedge of 80mm with tapered flanges of 26 mm each having lips of 10.5mm, at 450mm c/c, shall be fixed in a direction perpendicular to G.I intermediate channel with connecting clip made out of 2.64mm dia x 230mm long G.I wire at every junction, including fixing perimeter channels 0.50mm thick 27mm high having flanges of 20mm and 30mm long, the perimeter of ceiling fixed to wall/ partitions with the help of	55.69	M2		
30	Hand rail using SS 304 grade as directed by the Engineer in charge	10.2	R M		

31	Ornamental work for columns	2	No		
32	Providing, fabricating, and fixing UV-coated 3 mm thick solid polycarbonate sheet roofing (clear/tinted as approved, Lexan / Danpalon / Lotus or equivalent) supported on a welded structural framework of Galvanized Iron (GI) rectangular and square hollow tubes (IS 4923) comprising 75 × 40 × 2.0 mm primary rafters and 40 × 40 × 2.0 mm secondary purlins with MS/GI base plates and anchor fasteners, including zinc-rich cold galvanizing paint on all welded joints, 1 coat of epoxy primer, and 2 coats of epoxy/PU finish paint over the GI frame, and fixing polycarbonate sheets with extruded aluminium H-joiners, end U-profiles, EPDM gaskets, neutral silicone sealant, and SS 304 self-drilling fasteners in oversized thermal expansion slots, complete at all heights and slopes (measured on plan/sloped roof area)	10.65	M^2		
39	Brick masonry inspection chamber of inside dimensions 455 × 610 mm and 45 cm deep for single pipe line, with F.P.S. bricks (class 7.5) in CM 1:4, concrete base (1:5:10), half-round channel, internal plastering in CM 1:3, and C.I. cover & frame (455 × 610 mm)	6	No		
40	Excavating trenches of required width for pipes, cables, etc., including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m				

	Not exceeding 80 mm dia	18	M		
	Exceeding 80 mm & up to 300 mm dia	18	M		
41	Providing and laying full body vitrified tile of minimum 15 mm thickness having water absorption less than 0.06% and conforming to IS: 15622, of approved make, in all colours and shades, of any size, laid on 20 mm thick cement mortar 1:4 (1 cement : 4 coarse sand) including grouting the joints with white cement and matching pigments	6.6	M²		
42	Providing and fixing VOX Infratop (or approved equivalent) exterior-grade cellular PVC soffit false ceiling panels of 300 mm effective covering width (340 mm total width) in approved wood-grain/matte finish (SVP-08 solid / SVP-09 hidden-ventilated profile) with concealed click-lock joints, fixed onto a levelled Galvanized Iron (GI) perimeter and intermediate grid framework (GI channels spaced at max. 400 mm c/c suspended from RCC slab with GI rawl plugs, hangers, and self-tapping SS screws), including matching VOX J-trims (SVP-15) and H-connectors (SVP-18) along all wall/beam junctions and cutouts for light fixtures complete.	51.9	M²		

45	Providing and applying two-component (2K) Polyurethane (PU) wood finish (Exterior/Interior grade as specified, Asian Paints WoodTech / ICA / Sirca or equivalent) over new wooden doors, windows, and frames, including mechanical sanding with 120 and 180 grit abrasive papers, applying wood stain and grain filler to uniform shade, spray applying two coats of 2K PU clear sealer sanded smooth with 320/400 grit paper between coats, followed by spray applying two finish coats of 2K PU clear topcoat (Matt/Glossy finish as approved) to achieve a uniform, scratch- and moisture-resistant film, complete.	5.76	M2		
46	Preparing mild steel window grill surfaces by thorough wire brushing, power sanding with emery paper, and solvent cleaning to remove all rust, mill scale, and grease, followed by applying one coat of two-component Epoxy Zinc Phosphate Primer (min. 40 microns DFT, Asian Paints Apcodur / Berger Epilux or equivalent) and finishing with two coats of two-component Epoxy Matt Finish Paint of approved shade (min. 35 microns DFT per coat) by brush/spray, complete (measured flat over overall grill area on one side)	11.22	M2		

47	Preparing and painting Mangalore-pattern clay roof tiles at all heights and slopes with two or more coats of exterior weatherproof, anti-algal, water-repellent roof tile coating (Asian Paints Apex Tile Guard / Berger Weathercoat Long Life PU Tile Coat or equivalent) of approved terracotta shade to achieve uniform finish and complete coverage, including thorough cleaning by pressure water jetting/wire brushing, anti-fungal bio-wash treatment, crawling boards, safety harnesses, and scaffolding, complete (measured flat on sloped roof area)	140.12	M2		
48	Preparing steel/metal surfaces by thorough wire brushing, scraping, and sanding with emery paper to remove all rust, mill scale, and grease, applying one coat of approved Red Oxide Zinc Chromate Primer (IS 2074), and finishing with two coats of first-quality Synthetic Enamel Paint (IS 2932, Asian Paints Apcolite / Berger Luxol or equivalent) of approved shade to give an even, glossy/satin finish, complete at all heights.	11.6	M2		



L_D - 500MM

TYPICAL LONGITUDINAL SECTION DETAILS OF COLUMN

NOTE ON COLUMN LONGITUDINAL BAR SPLICING

1. PROVIDE SPLICES AT MID HEIGHT OF THE MEMBER.
2. NOT MORE THAN 50% OF THE BARS SHALL BE SPLICED AT ANY LOCATION AND THE C/C DISTANCE BETWEEN TWO CONSECUTIVE SPLICES SHALL NOT BE LESS THAN $1.30L_D$

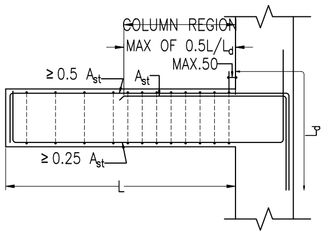
GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS,UNLESS SPECIFIED OTHERWISE . NO DIMENSIONS ARE TO BE SCALED. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
2. IN CASE OF DISCREPANCIES IN DETAILS OR MISSING DETAILS THE ENGINEER MUST BE APPROACHED FOR DECISION PRIOR TO TAKING UP RELATED WORKS. STRUCTURAL ENGINEER'S DECISION IN SUCH MATTERS SHALL BE FINAL.
3. STRUCTURAL DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTURAL, ELECTRICAL, SANITARY DRAWINGS. ANY SLEEVES TO BE MADE IN CONCRETE TO HAVE PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.
4. THE CONSTRUCTION OF R.C.C. WORKS SHALL COMPLY WITH IS:456-2000. REFER TO IS:456 AND OTHER RELEVANT INDIAN STANDARDS.
5. THE DESIGN IS ACCORDING TO THE FOLLOWING CODES:IS 456,IS 875 ,IS 1893 & IS 13920
6. STRUCTURE IS DESIGNED FOR G+2 BUILDING WITHOUT ANY PROVISION FOR FUTURE EXPANSION
7. THE FORM WORK SHALL BE DESIGNED BY THE CONTRACTOR. FOR FURTHER DETAILS REGARDING THIS, REFERENCE MAY BE MADE TO IS 14687. ALSO THE CONTRACTOR SHALL BEAR ANY LOSS DUE TO COLLAPSE HAPPENED BY THE IMPROPER SHUTTERING AND CENTERING WORKS.
8. THE DESIGN MIX CONCRETE SHALL BE M25&M30 AS INSTRUCTED BY THE STRUCTURAL ENGINEER,UNLESS SPECIFIED OTHERWISE.
9. USE REINFORCEMENTS FE 500D CONFORMING TO IS-1786-1985
10. USE AGGREGATES CONFORMING TO IS-383-1970
11. CLEAN AND WASHED RIVER SAND OR CRUSHED STONE SAND SHALL BE USED FOR ALL CONCRETE WORKS.
12. USE POTABLE WATER FOR CONCRETE
13. ALL REINFORCEMENT SHALL BE FREE FROM LOOSE MILL SCALES, LOOSE RUST AND COATS OF PAINTS, OIL, MUD OR ANY OTHER SUBSTANCES WHICH MAY DESTROY OR REDUCE BOND. SAND BLASTING OR OTHER TREATMENT IS RECOMMENDED TO CLEAN REINFORCEMENT.
14. MINIMUM CLEAR COVER TO ALL REINFORCEMENT INCLUDING STIRRUPS; FOUNDATION-50 mm, COLUMNS-40mm, BEAMS-30mm & SLAB-20mm
15. FOR ENSURING PROPER COVER OF CONCRETE TO REINFORCEMENT, MORTAR COVER BLOCKS, ASBESTOS-CEMENT COVER BLOCKS OR SPECIALLY MADE POLYMER COVER BLOCKS SHALL ONLY BE USED. MORTAR COVER BLOCKS SHALL BE PREPARED 28 DAYS PRIOR TO CONCRETING AND SHALL SHALL BE PROPERLY CURED. THE CRUSHING STRENGTH FOR MORTAR COVER BLOCK SHALL BE THE SAME OF THE CONCRETE.
16. SPACER BAR TO BE PROVIDED IN BETWEEN TWO LAYERS OF REINFORCEMENT OF LARGER DIA AT EVERY 1000mm C/C.
17. THE DISTANCE BETWEEN HORIZONTAL LAYERS REINFORCEMENT SHALL BE ENSURED BY MEANS OF SUPPORTING CHAIRS OF 8MM DIAMETER AT SUITABLE INTERVALS AS PER IS:2502.
18. LAPS IN REINFORCEMENT:THE MINIMUM LAP LENGTH OF REINFORCEMENT SHALL BE KEPT AS '50D' WHERE "D" IS THE DIAMETER OF BAR. A MAXIMUM OF 50% OF REINFORCEMENT SHALL BE LAPPED AT ANY ONE LOCATION. LAP SPLICES SHALL BE SUITABLY STAGGERED SUCH THAT THE CENTRE-TO-CENTRE DISTANCE OF THE SPLICES IS NOT LESS THAN 1.3 TIMES THE LAP LENGTH.
19. IN BEAMS AND SLABS, BARS COULD BE LAPPED ONE ABOVE THE OTHER OR HORIZONTALLY, DEPENDING UPON THE SPACE REQUIREMENTS.
20. WELDING OF REINFORCEMENTS SHALL BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS OF IS 2571 AND IS 9417.
21. PROVIDE A PCC 1:4:8 LAYER OF 100mm THICK BELOW FOUNDATION & GRADE BEAM
22. VOLUME BATCHING MAY BE ALLOWED ONLY WHERE WEIGH-BATCHING IS NOT PRACTICAL AND PROVIDED ACCURATE BULK DENSITIES OF MATERIALS TO BE ACTUALLY USED IN CONCRETE HAVE EARLIER BEEN ESTABLISHED.
23. IT IS IMPORTANT TO MAINTAIN THE WATER-CEMENT RATIO CONSTANT AT ITS CORRECT VALUE. TO THIS END, DETERMINATION OF MOISTURE CONTENTS IN BOTH FINE AND COARSE AGGREGATES SHALL BE MADE AS FREQUENTLY AS POSSIBLE ACCORDING TO WEATHER CONDITIONS.
24. CONCRETE SHALL BE PRODUCED IN A MECHANICAL MIXER WHICH SHOULD COMPLY WITH IS 1791 AND 12119. MIXER OF CAPACITY NOT LESS THAN 200 LITERS HAVING INTEGRAL WEIGH-BATCHING FACILITY AND AUTOMATIC WATER MEASURING AND DISPENSING DEVICE SHALL BE PREFERRED. THE MIXING SHALL BE CONTINUED UNTIL THERE IS A UNIFORM DISTRIBUTION OF THE MATERIALS AND THE MASS IS UNIFORM IN COLOUR AND CONSISTENCY. FOR GUIDANCE, THE MIXING TIME SHALL BE AT LEAST 2 MINUTES.
25. WORKABILITY SHOULD BE CHECKED AT FREQUENT INTERVALS.
26. THE CONCRETE SHALL BE PLACED AND COMPACTED BEFORE INITIAL SETTING OF CONCRETE COMMENCES AND SHOULD NOT BE SUBSEQUENTLY DISTURBED. METHODS OF PLACING SHOULD BE SUCH AS TO PRECLUDE SEGREGATION. AS A GENERAL GUIDANCE, THE MAXIMUM PERMISSIBLE FREE FALL OF CONCRETE MAY BE TAKEN AS 1.5M.
27. PROPER COMPACTION OF CONCRETE SHALL BE ENSURED BY USE OF FORM AND/OR NEEDLE VIBRATORS COMPLYING WITH IS2505, IS 2506, IS 2514 AND IS 4656. OVER VIBRATION AND UNDER VIBRATION OF CONCRETE ARE HARMFUL AND SHOULD BE AVOIDED. VIBRATION OF VERY WET MIXES SHOULD BE AVOIDED.
28. EXPOSED SURFACES OF CONCRETE SHALL BE KEPT CONTINUOUSLY IN A DAMP OR WET CONDITION BY PONDING OR BY COVERING WITH A LAYER OF SACKING, CANVAS, HESSIAN OR SIMILAR MATERIALS AND KEPT CONSTANTLY WET FOR AT LEAST SEVEN DAYS FROM THE DATE OF PLACING CONCRETE IN CASE OF ORDINARY PORTLAND CEMENT AND AT LEAST 10 DAYS WHERE PORTLAND POZZALONA CEMENTS ARE USED. WHEN THE CONCRETE EXPOSED TO DRY AND HOT WEATHER CONDITIONS, THE ABOVE PERIODS SHALL BE INCREASED TO 10 AND 14 DAYS RESPECTIVELY.
29. THE FORMWORK SHALL BE CONSTRUCTED SO AS TO REMAIN SUFFICIENTLY RIGID DURING PLACING AND COMPACTION OF CONCRETE, AND SHALL BE SUCH AS TO PREVENT LOSS OF SLURRY FROM THE CONCRETE. THE FACE OF FORMWORK IN CONTACT WITH THE CONCRETE SHALL BE CLEANED AND TREATED WITH FORM RELEASE AGENT.
30. SAMPLES FROM FRESH CONCRETE SHALL BE TAKEN AS PER IS:1199 AND CUBES SHALL BE MADE, CURED AND TESTED AT 28 DAYS IN ACCORDANCE WITH IS:516.
31. THE MINIMUM FREQUENCY OF SAMPLING OF CONCRETE OF EACH GRADE SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

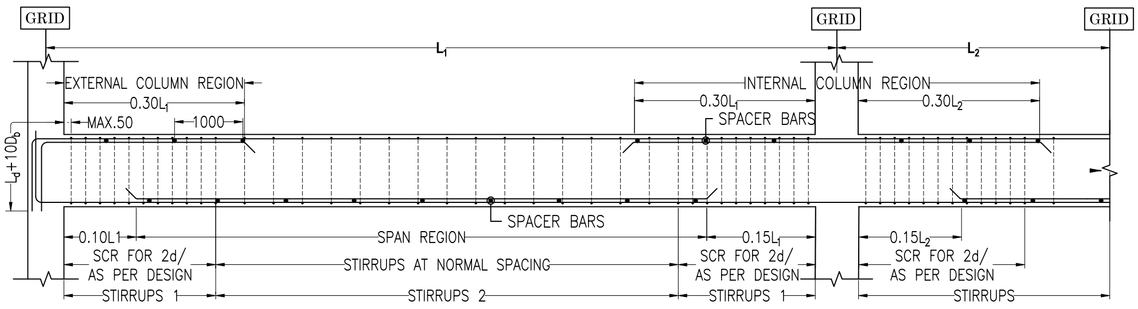
QUANTITY OF CONCRETE IN THE WORK (CU.M.)	1-5	6-15	16-30	31-50	51 and above
NUMBER OF SAMPLES	1	2	3	4	4 plus one additional sample for each additional 50cu.m.

32. IN NORMAL CIRCUMSTANCES ADEQUATE CURING IS DONE, FOLLOWING STRIPPING TIME SHALL BE FOLLOWED:

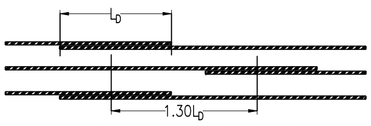
	CONCRETE WITH O.P.C.	CONCRETE WITH P.P.C.
VERTICAL FORMWORK FOR WALLS, COLUMNS AND BEAMS	1 DAY	1 DAY
SLABS SPANNING UP TO 4.5m	7 DAYS	10 DAYS
SLABS SPANNING OVER 4.5m	14 DAYS	18 DAYS
BEAMS SPANNING UP TO 6.0m	14 DAYS	18 DAYS
BEAMS SPANNING OVER 6.0m	21 DAYS	24 DAYS



TYPICAL DETAILS OF A CANTILEVER BEAM



TYPICAL LONGITUDINAL SECTION DETAILS OF BEAM
(APPLICABLE WHEN VARIATION OF SPAN LESS THAN 15%)

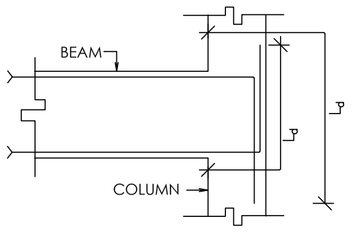


LAPING DETAILS OF BEAMS

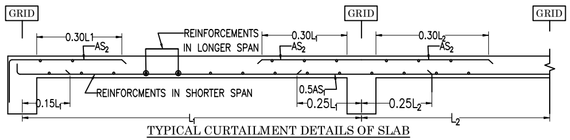
FOR BEAMS,THE LAPPING OF

1. TOP REINFORCEMENT SHALL DONE L/3 AWAY FROM JOINTS,PREFERABLY AT MID SPAN
2. BOTTOM REINFORCEMENT SHALL DONE AWAY FROM MID SPAN, PREFERABLY NEAR JOINTS BUT OUTSIDE JOINTS

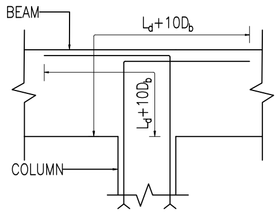
SCR: SPECIAL CONFINING REINFORCEMENT
#8@100C/C(TYP.) OR AS PER DESIGN
d: EFFECTIVE DEPTH OF BEAM UNDER CONSIDERATION
L_d: DEVELOPMENT LENGTH
D_b: DIAMETER OF BAR
SPACER BARS:ø25 BARS AT MAX. SPACING OF 1.0M, MIN. 2 NOS SHOULD BE PROVIDED



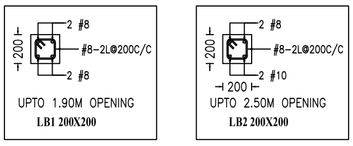
ANCHORAGE OF BEAM REBAR AT AN EXTERNAL JOINT



TYPICAL CURTAILMENT DETAILS OF SLAB



COLUMN LONGITUDINAL REINFORCEMENT TERMINATION DETAILS



TYPICAL CUT-LINTEL BEAM W/O CHAJJA

NOTE ON LINTEL BEAM

1. MAXIMUM HEIGHT OF BRICK WALL CONSIDERED 1.05M ABOVE LINTEL
2. A BEARING OF ATLEAST 300MM INTO BRICK WALL SHOULD BE PROVIDED AT EACH END OF THE BEAM

PROJECT

PROPOSED G+2 AYURVEDA TREATMENT BLOCK AT PANDALAM

CLIENT

Mr. RATHEESHKUMAR

GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE METERS UNO
2. DRAWING NOT TO BE SCALED OFF. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED
3. USE M25 GRADE CONCRETE AND Fe500D STEEL UNO
4. READ THIS DRAWING WITH RELEVANT ARCHITECTURAL DRAWINGS
5. MINIMUM CLEAR COVER TO ALL REINFORCEMENT INCLUDING STIRRUPS; FOUNDATION-50 mm; COLUMNS-40mm, BEAMS-30mm & SLAB-20mm
6. INCASE OF DISCREPANCY, PLEASE CONTACT THE UNDERSIGNED PERSONS
7. FOLLOW ALL THE INSTRUCTIONS GIVEN INTHE GENERAL NOTES & TYPICAL DETAILS

DRAWING TITLE

GENERAL NOTES & DETAILS

REVISON NOTES

CHIEF CONSULTANT

Prof.(Dr.) HARI.G.M.Tech,Ph.D
MOB: 9447097042
hari@cglengineers.in

SIGNATURE

DRAWN BY | THAMANNA J. B.Tech

DESIGNED BY | GIRIPRASAD S .M.Tech

CHECKED BY | Prof.(Dr.) HARI.G.M.Tech,Ph.D

ISSUED FOR TENDERING

File No: **HA2610-81**

DRAWING NO: **S01/R0**

DATE : 30.10.2026

STRUCTURAL CONSULTANT

CGL ENGINEERS Pvt Ltd

CGL COMPLEX, PARADISE ROAD,
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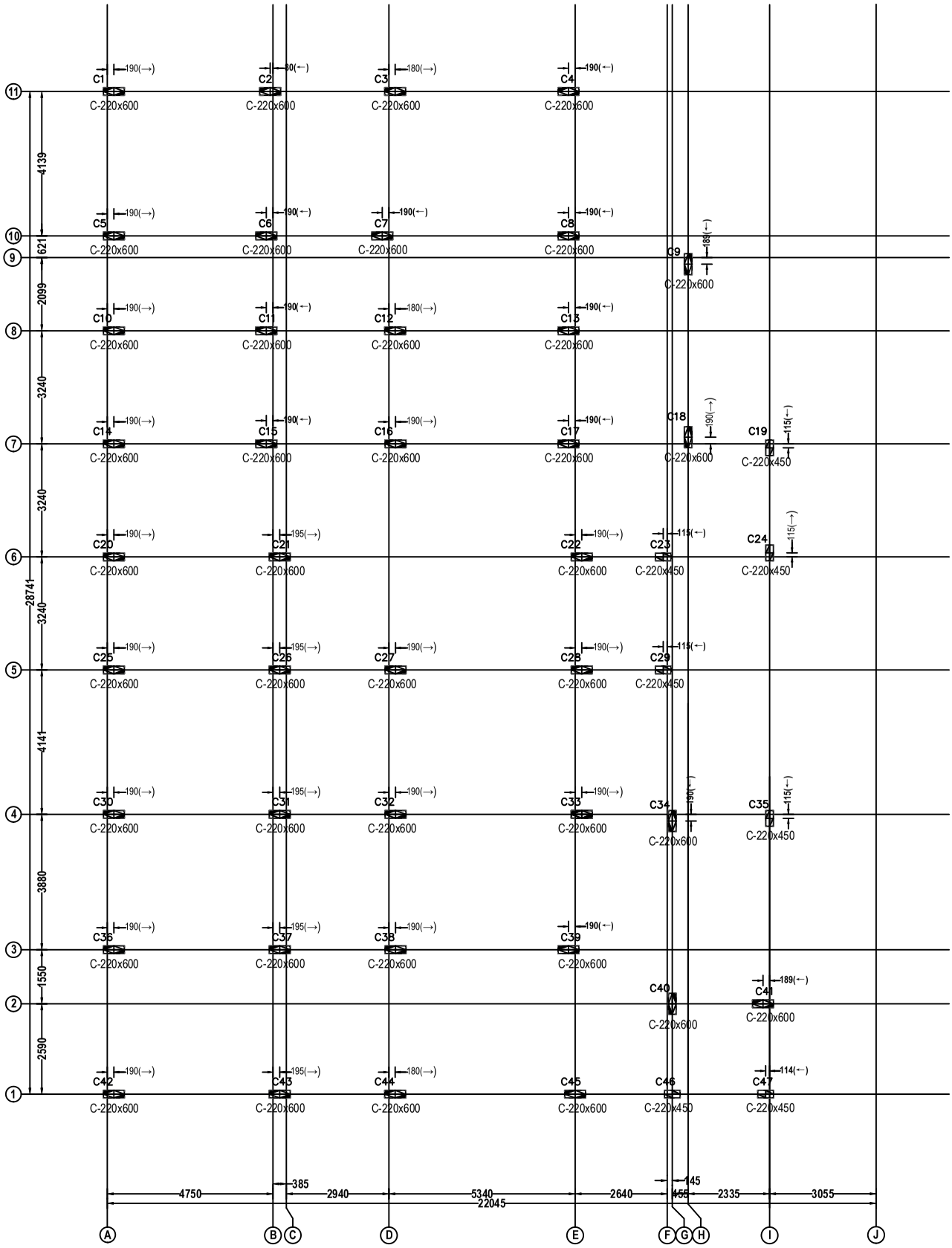

COLUMN LAYOUT

M 25
Fe 500D

A4

PROJECT	PROPOSED G+2 AYURVEDA TREATMENT BLOCK AT PANDALAM
CLIENT	Mr. RATHEESHKUMAR
PRIME CONSULTANT	

GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE METERS UNO
2. DRAWING NOT TO BE SCALED OFF. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED
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5. MINIMUM CLEAR COVER TO ALL REINFORCEMENT INCLUDING STIRRUPS: FOUNDATION-50 mm, COLUMNS-40mm, BEAMS-30mm & SLAB-20mm
6. INCASE OF DISCREPANCY, PLEASE CONTACT THE UNDERSIGNED PERSONS
7. FOLLOW ALL THE INSTRUCTIONS GIVEN IN THE GENERAL NOTES & TYPICAL DETAILS

DRAWING TITLE	COLUMN LAYOUT
REVISION NOTES	

CHIEF CONSULTANT	Prof.(Dr.) HARI.G.M.Tech,Ph.D
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SIGNATURE	
DRAWN BY	THAMANNA J. B.Tech
DESIGNED BY	GIRIPRASAD S. M.Tech
CHECKED BY	Prof.(Dr.) HARI.G.M.Tech,Ph.D
ISSUED FOR TENDERING	
File No: HA2610-81	
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STRUCTURAL CONSULTANT

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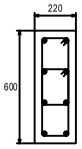
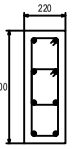
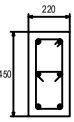
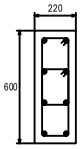
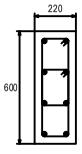
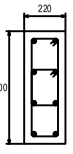
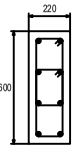
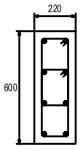
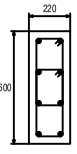
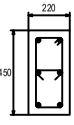
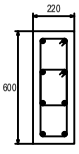
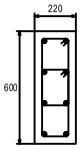
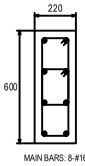
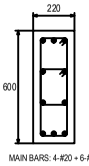
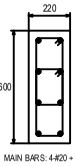
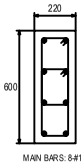
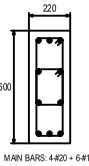
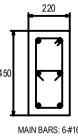
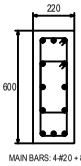
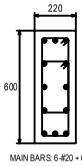
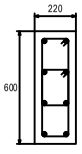
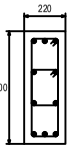
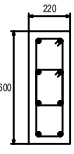
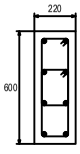
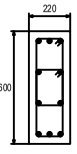
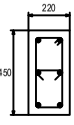
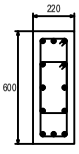
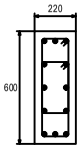
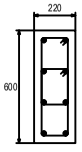
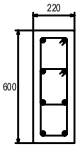
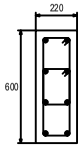
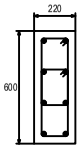
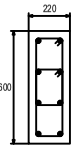
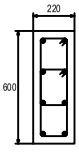
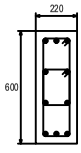
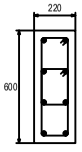
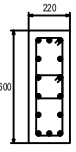
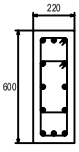
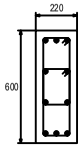
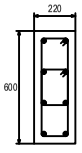
LEVEL 3	 MAIN BARS: 8-#16 TIES: #8@200 (Norm.) 220 x 600	 MAIN BARS: 8-#16 TIES: #8@200 (Norm.) 220 x 600				 MAIN BARS: 6-#16 TIES: #8@200 (Norm.) 220 x 450		 MAIN BARS: 8-#16 TIES: #8@200 (Norm.) 220 x 600
LEVEL 2	 MAIN BARS: 8-#16 TIES: #8@200 (Norm.) 220 x 600	 MAIN BARS: 8-#16 TIES: #8@200 (Norm.) 220 x 600	 MAIN BARS: 8-#16 TIES: #8@200 (Norm.) 220 x 600	 MAIN BARS: 8-#16 TIES: #8@200 (Norm.) 220 x 600	 MAIN BARS: 8-#16 TIES: #8@200 (Norm.) 220 x 600	 MAIN BARS: 6-#16 TIES: #8@200 (Norm.) 220 x 450	 MAIN BARS: 8-#16 TIES: #8@200 (Norm.) 220 x 600	 MAIN BARS: 4-#20 + 4-#16 TIES: #8@200 (Norm.) 220 x 600
LEVEL 1	 MAIN BARS: 8-#16 TIES: #8@200 (Norm.) 220 x 600	 MAIN BARS: 4-#20 + 6-#16 TIES: #8@200 (Norm.) 220 x 600	 MAIN BARS: 4-#20 + 4-#16 TIES: #8@200 (Norm.) 220 x 600	 MAIN BARS: 8-#16 TIES: #8@200 (Norm.) 220 x 600	 MAIN BARS: 4-#20 + 6-#16 TIES: #8@200 (Norm.) 220 x 600	 MAIN BARS: 6-#16 TIES: #8@200 (Norm.) 220 x 450	 MAIN BARS: 4-#20 + 8-#16 TIES: #8@200 (Norm.) 220 x 600	 MAIN BARS: 6-#20 + 6-#16 TIES: #8@200 (Norm.) 220 x 600
LEVEL 0	 MAIN BARS: 8-#16 TIES: #8@200 (Norm.) 220 x 600	 MAIN BARS: 4-#20 + 6-#16 TIES: #8@200 (Norm.) 220 x 600	 MAIN BARS: 4-#20 + 4-#16 TIES: #8@200 (Norm.) 220 x 600	 MAIN BARS: 8-#16 TIES: #8@200 (Norm.) 220 x 600	 MAIN BARS: 4-#20 + 6-#16 TIES: #8@200 (Norm.) 220 x 600	 MAIN BARS: 6-#16 TIES: #8@200 (Norm.) 220 x 450	 MAIN BARS: 4-#20 + 8-#16 TIES: #8@200 (Norm.) 220 x 600	 MAIN BARS: 6-#20 + 6-#16 TIES: #8@200 (Norm.) 220 x 600
COLUMN GROUP	CG1	CG2	CG3	CG4	CG5	CG6	CG7	CG8
COLUMN NOS.	CC1, CC13, CC14, CC18, CC20, CC25, CC30, CC34, CC4 , CC41, CC43, CC9	CC10, CC17, CC2, CC22, CC28, CC33, CC42, CC45, CC8	CC11, CC15, CC21, CC26	CC12, CC31, CC37	CC16, CC32, CC6	CC19, CC23, CC24, CC29, CC35, CC46, CC47	CC27	CC3

 MAIN BARS: 8-#16 TIES: #8@200 (Norm.) 220 x 600		 MAIN BARS: 8-#16 TIES: #8@200 (Norm.) 220 x 600	 MAIN BARS: 8-#16 TIES: #8@200 (Norm.) 220 x 600
 MAIN BARS: 8-#16 TIES: #8@200 (Norm.) 220 x 600	 MAIN BARS: 8-#16 TIES: #8@200 (Norm.) 220 x 600	 MAIN BARS: 8-#16 TIES: #8@200 (Norm.) 220 x 600	 MAIN BARS: 4-#20 + 6-#16 TIES: #8@200 (Norm.) 220 x 600
 MAIN BARS: 4-#20 + 4-#16 TIES: #8@200 (Norm.) 220 x 600	 MAIN BARS: 4-#20 + 10-#16 TIES: #8@200 (Norm.) 220 x 600	 MAIN BARS: 4-#20 + 8-#16 TIES: #8@200 (Norm.) 220 x 600	 MAIN BARS: 4-#20 + 6-#16 TIES: #8@200 (Norm.) 220 x 600
 MAIN BARS: 4-#20 + 4-#16 TIES: #8@200 (Norm.) 220 x 600	MAIN BARS: 4-#20 + 10-#16 TIES: #8@200 (Norm.) 220 x 600	MAIN BARS: 4-#20 + 8-#16 TIES: #8@200 (Norm.) 220 x 600	MAIN BARS: 4-#20 + 6-#16 TIES: #8@200 (Norm.) 220 x 600
CG9	CG10	CG11	CG12
CC36, CC5	CC38, CC7	CC39, CC44	CC40

M 25
Fe 500D

A4

GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE METERS UNO
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COLUMN SCHEDULE

DRAWING TITLE

REVISION NOTES

CHIEF CONSULTANT

Prof.(Dr.) HARI.G.M.Tech,Ph.D

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hari@cglengineers.in
SIGNATURE

DRAWN BY: THAMANNA J. B.Tech
DESIGNED BY: GIRIPRASAD S. M.Tech
CHECKED BY: Prof.(Dr.) HARI.G.M.Tech,Ph.D

ISSUED FOR TENDERING

File No: **HA2610-81**

DRAWING NO.: **S03/R0**

DATE: 31.10.2026

STRUCTURAL CONSULTANT

CGL ENGINEERS Pvt Ltd

CGL COMPLEX, PARADISE ROAD,
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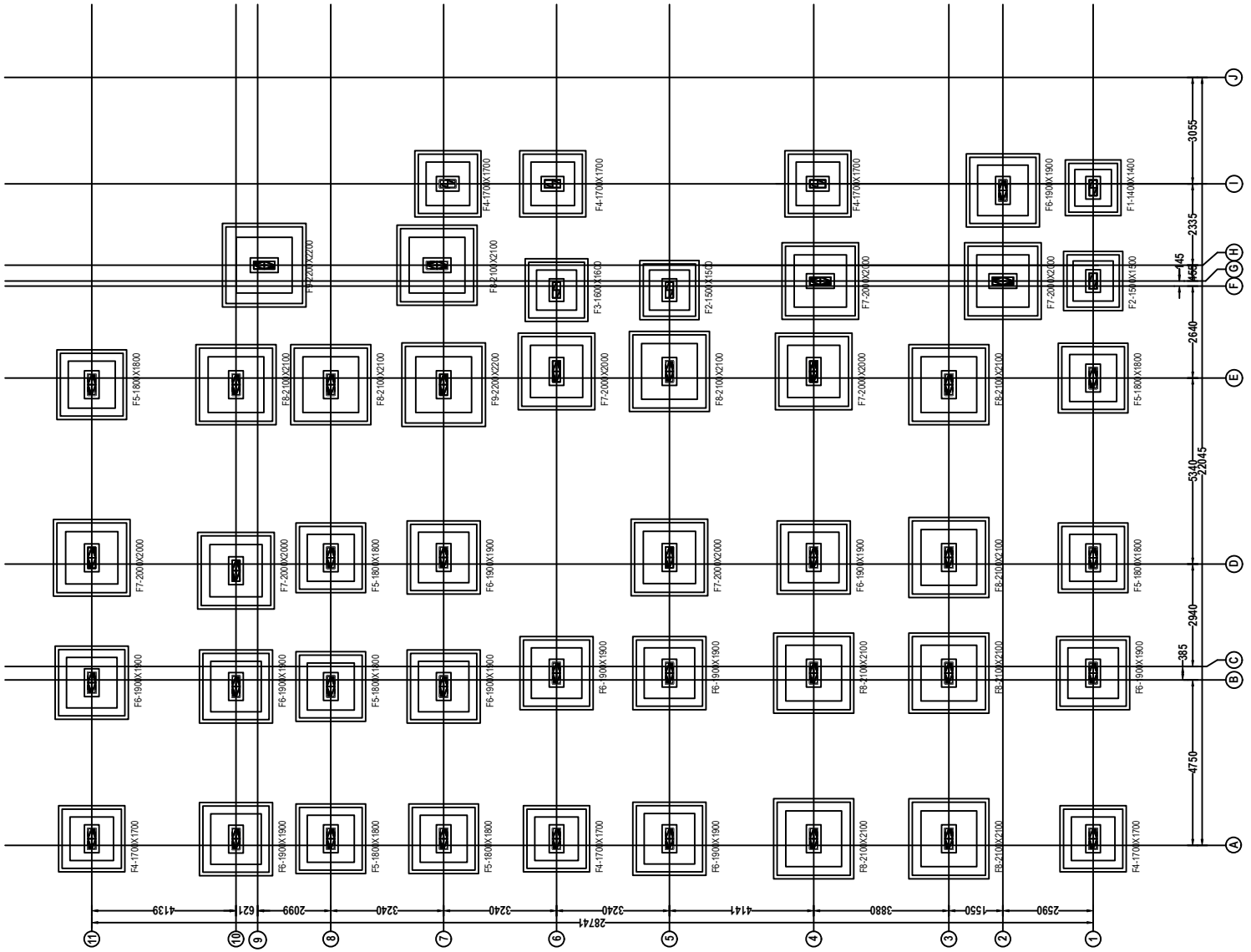
PROJECT

PROPOSED G+2 AYURVEDA TREATMENT BLOCK AT PANDALAM

CLIENT

Mr. RATHEESHKUMAR

PRIME CONSULTANT



FOUNDATION LAYOUT

PROJECT
PROPOSED G+2 AYURVEDA TREATMENT BLOCK AT PANDALAM
CLIENT
Mr. RATHEESHKUMAR
PRIME CONSULTANT

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DRAWING TITLE
FOUNDATION LAYOUT
REVISON NOTES

CHIEF CONSULTANT

Prof.(Dr.) HARI.G,M.Tech,Ph.D

MOB: 9447097042
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SIGNATURE

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DESIGNED BY	GIRIPRASAD S ,M.Tech
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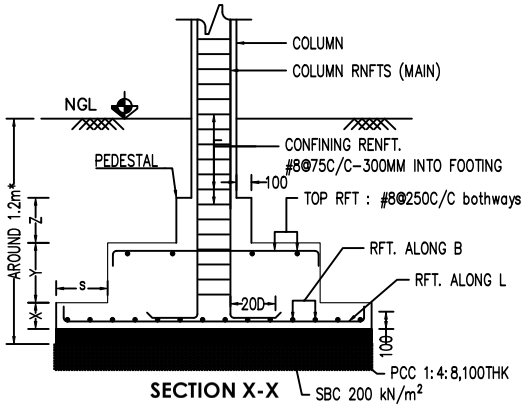
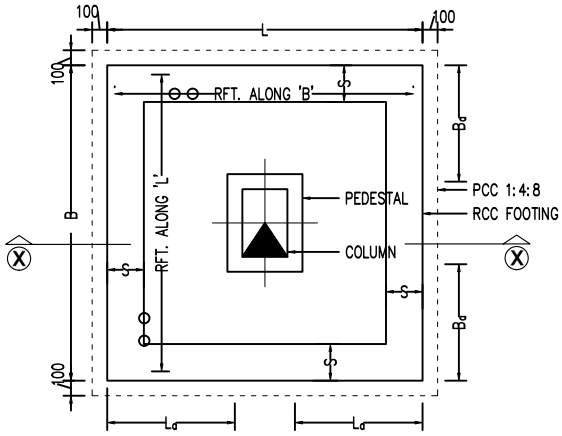
M 25
Fe 500D

A4



SECTION X-X



PLAN

TYP. DETAIL OF COLUMN FOOTING

L : LONGER DIRECTION OF FOOTING
B : SHORTER DIRECTION OF FOOTING

SCHEDULE OF ISOLATED COLUMN FOOTING

SL. NO.	FOOTING NAME	NUMBER OF FOOTINGS	FOOTING DIMENSIONS (mm)						REINFORCEMENTS	
			L	B	S	X	Y	Z	ALONG 'L'	ALONG 'B'
1	F1	1	1400	1400	300	175	225	500	#10@175C/C	#10@175C/C
2	F2	2	1500	1500	300	175	225	500	#10@175C/C	#10@175C/C
3	F3	1	1600	1600	400	200	250	450	#10@150C/C	#10@150C/C
4	F4	6	1700	1700	400	200	250	450	#10@150C/C	#10@150C/C
5	F5	7	1800	1800	400	200	300	450	#10@125C/C	#10@125C/C
6	F6	11	1900	1900	400	200	300	400	#10@125C/C	#10@125C/C
7	F7	7	2000	2000	400	200	350	400	#10@125C/C	#10@125C/C
8	F8	10	2100	2100	400	200	350	350	#10@125C/C	#10@125C/C
9	F9	2	2200	2200	450	250	350	300	#10@100C/C	#10@100C/C

A4

M 25
Fe 500D

GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE METERS UNO
2. DRAWING NOT TO BE SCALED OFF. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED
3. USE M25 GRADE CONCRETE AND Fe500D STEEL UNO
4. READ THIS DRAWING WITH RELEVANT ARCHITECTURAL DRAWINGS
5. MINIMUM CLEAR COVER TO ALL REINFORCEMENT INCLUDING STIRRUPS: FOUNDATION-50 mm, COLUMNS-40mm, BEAMS-30mm & SLAB-20mm
6. INCASE OF DISCREPANCY, PLEASE CONTACT THE UNDERSIGNED PERSONS
7. FOLLOW ALL THE INSTRUCTIONS GIVEN IN THE GENERAL NOTES & TYPICAL DETAILS

PROJECT: **PROPOSED G+2 AYURVEDA TREATMENT BLOCK AT PANDALAM**

CLIENT: **Mr. RATHEESHKUMAR**

PRIME CONSULTANT:

DRAWING TITLE: **FOUNDATION DETAILS**

REVISION NOTES:

CHIEF CONSULTANT: **Prof.(Dr.) HARI.G.M.Tech,Ph.D**
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DESIGNED BY: GIRIPRASAD S .M.Tech
CHECKED BY: Prof.(Dr.) HARI.G.M.Tech,Ph.D

ISSUED FOR TENDERING

File No: **HA2610-81**
DRAWING NO.: **S05/R0**
DATE: 04.11.2026

STRUCTURAL CONSULTANT

CGL ENGINEERS Pvt Ltd
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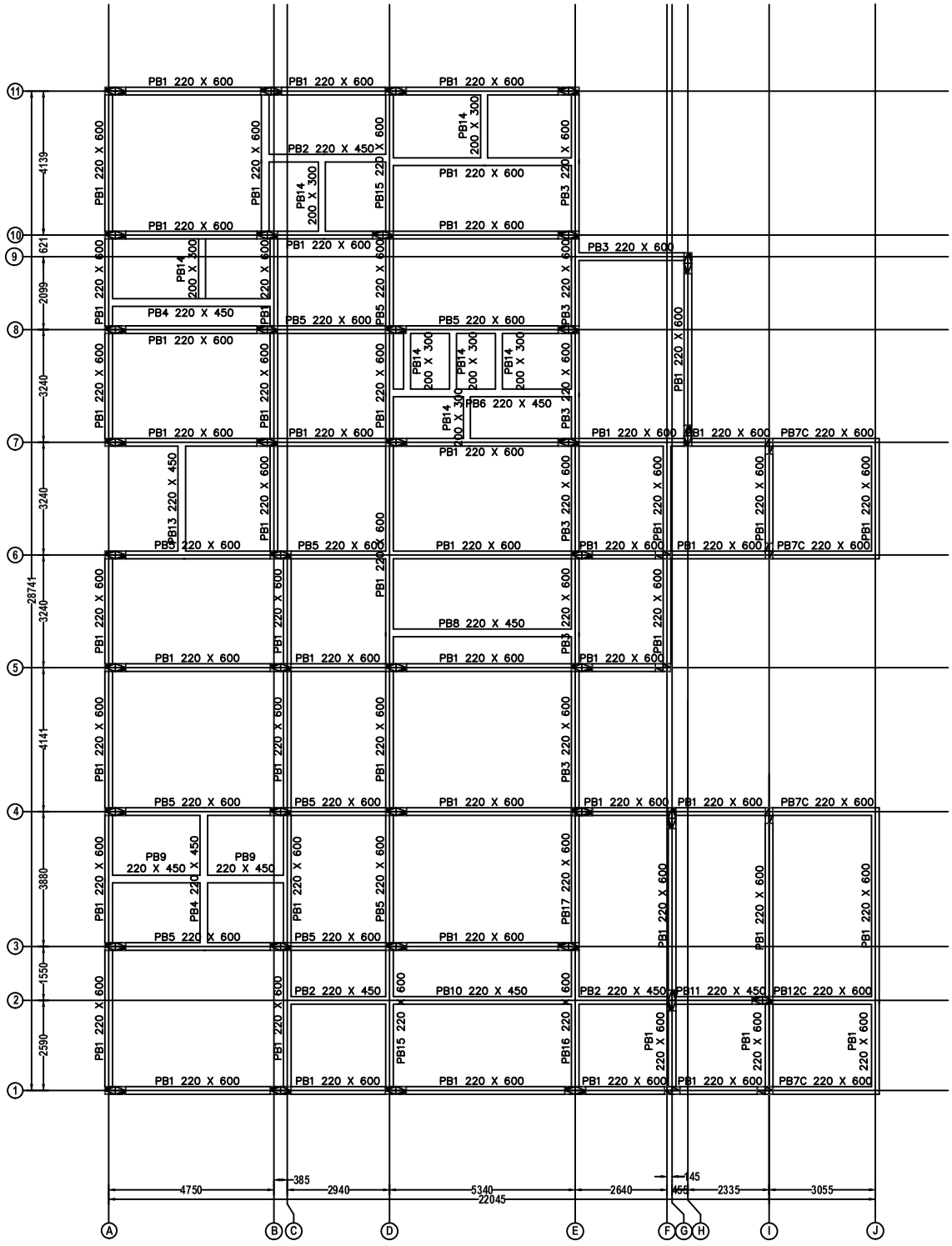
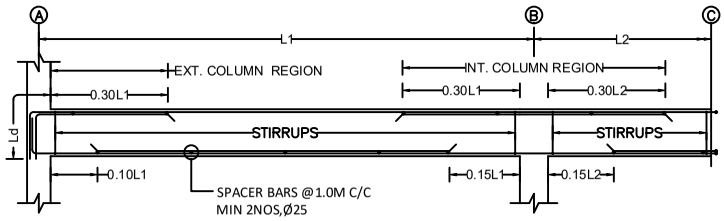
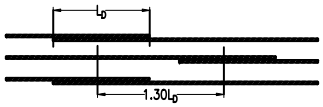


PLINTH BEAM LAYOUT



TYPICAL BEAM DETAILS
(VARIATION OF SPAN SHOULD NOT BE MORE THAN 15%)



LAPING DETAILS OF BEAMS

FOR BEAMS,THE LAPPING OF
1. TOP REINFORCEMENT SHALL DONE L/3 AWAY FROM JOINTS,PREFERABLY AT MID SPAN
2. BOTTOM REINFORCEMENT SHALL DONE AWAY FROM MID SPAN, PREFERABLY NEAR JOINTS BUT OUTSIDE JOINTS

M 25
Fe 500D

A4

GENERAL NOTES

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6. INCASE OF DISCREPANCY, PLEASE CONTACT THE UNDERSIGNED PERSONS
7. FOLLOW ALL THE INSTRUCTIONS GIVEN IN THE GENERAL NOTES & TYPICAL DETAILS

DRAWING TITLE: **PLINTH BEAM LAYOUT**

REVISION NOTES

CHIEF CONSULTANT: **Prof.(Dr.) HARI.G.M.Tech,Ph.D**
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DESIGNED BY: GIRIPRASAD S. M.Tech
CHECKED BY: Prof.(Dr.) HARI.G.M.Tech,Ph.D

ISSUED FOR TENDERING

File No: **HA2610-81**
DRAWING NO.: **S06/R0**
DATE: 31.10.2026

STRUCTURAL CONSULTANT

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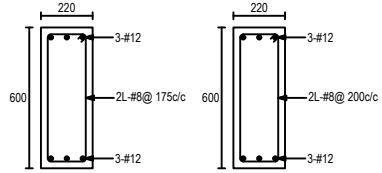
PROJECT: **PROPOSED G+2 AYURVEDA TREATMENT BLOCK AT PANDALAM**
CLIENT: **Mr. RATHEESHKUMAR**
PRIME CONSULTANT



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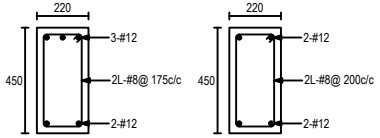

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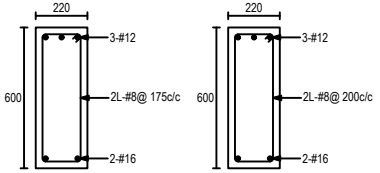

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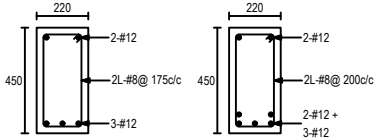

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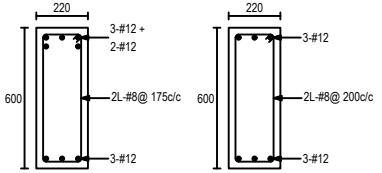

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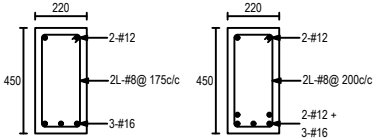

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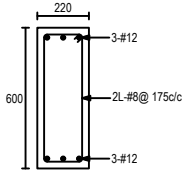

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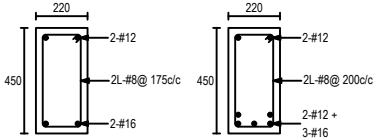

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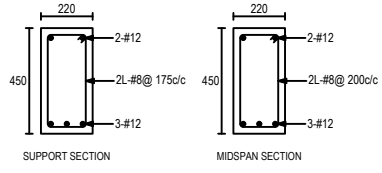

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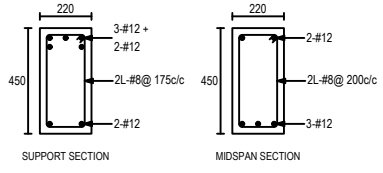

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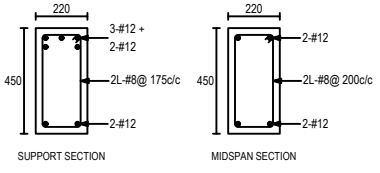

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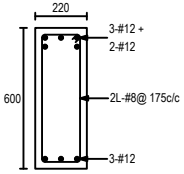

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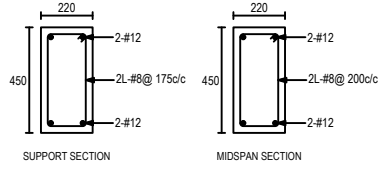

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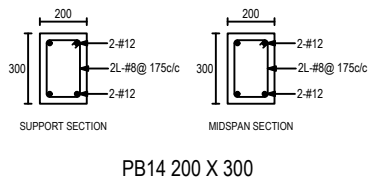

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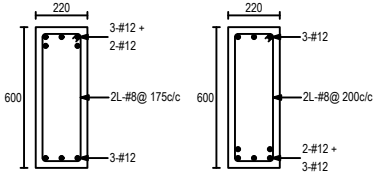

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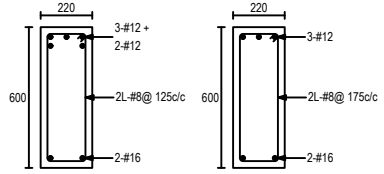

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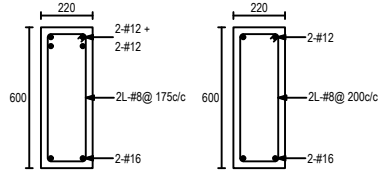

PB17 220 X 600

PROJECT

PROPOSED G+2 AYURVEDA TREATMENT BLOCK AT PANDALAM

CLIENT

Mr. RATHEESHKUMAR

PRIME CONSULTANT

GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE METERS UNO
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DRAWING TITLE

PLINTH BEAM DETAILS

REVISON NOTES

CHIEF CONSULTANT

Prof.(Dr.) HARI.G,M.Tech,Ph.D

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SIGNATURE

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DESIGNED BY	GIRIPRASAD S ,M.Tech
CHECKED BY	Prof.(Dr.) HARI.G,M.Tech,Ph.D

ISSUED FOR TENDERING

File No: **HA2610-81**

DRAWING NO : **S07/R0**

DATE : 31.10.2026

STRUCTURAL CONSULTANT

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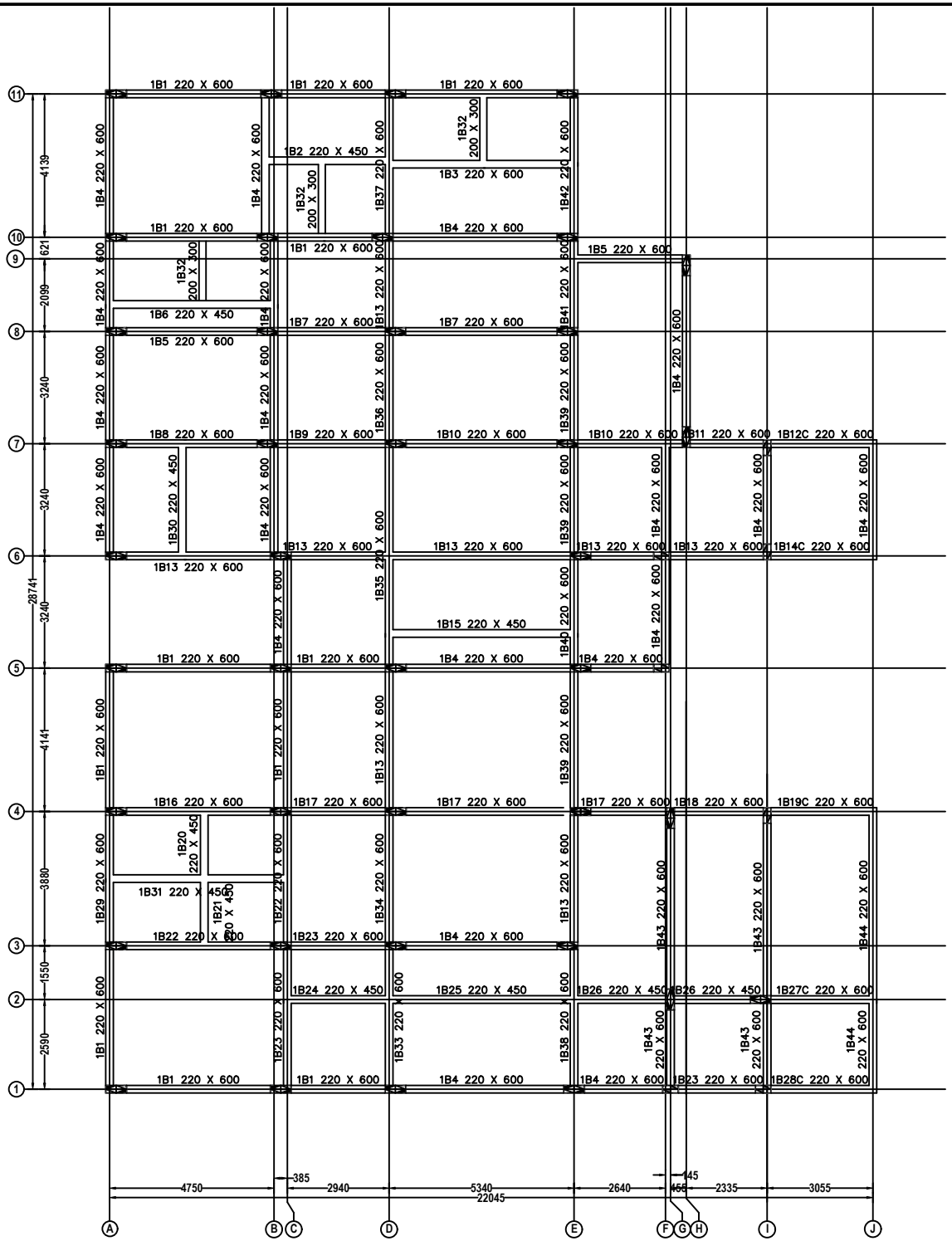
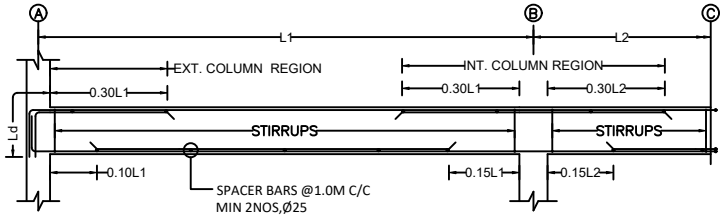
CGL COMPLEX, PARADISE ROAD,
VYTTILA P. O, ERNAKULAM - 682019
mail@cglengineers.in, Ph:9746745472

M 25
Fe 500D

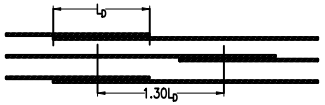
A4



FIRST FLOOR BEAM LAYOUT

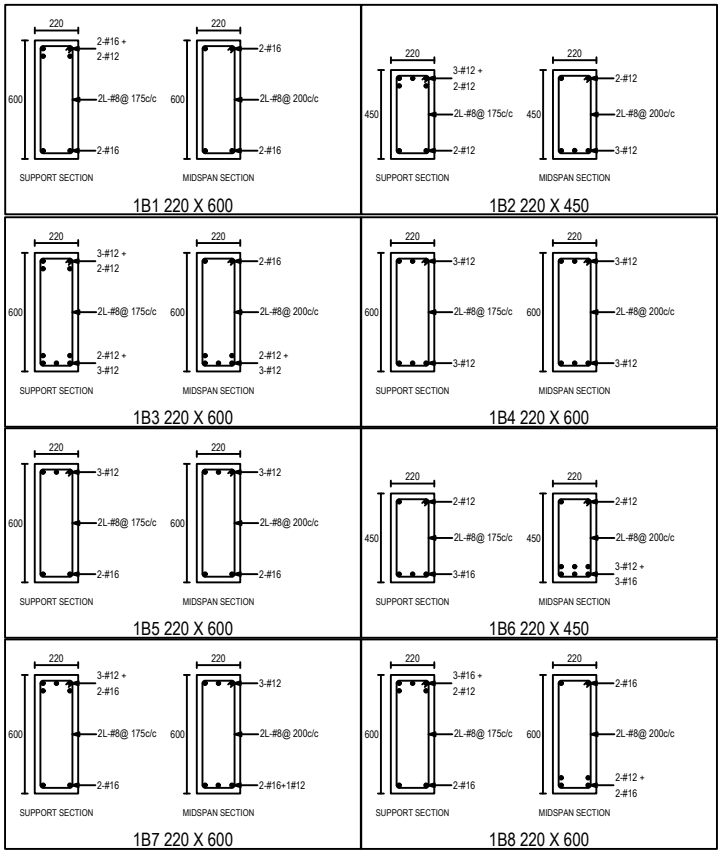


TYPICAL BEAM DETAILS
(VARIATION OF SPAN SHOULD NOT BE MORE THAN 15%)



LAPING DETAILS OF BEAMS

FOR BEAMS,THE LAPPING OF
1. TOP REINFORCEMENT SHALL DONE L/3 AWAY FROM JOINTS,PREFERABLY AT MID SPAN
2. BOTTOM REINFORCEMENT SHALL DONE AWAY FROM MID SPAN, PREFERABLY NEAR JOINTS BUT OUTSIDE JOINTS



PROJECT	PROPOSED G+2 AYURVEDA TREATMENT BLOCK AT PANDALAM
CLIENT	Mr. RATHEESHKUMAR
PRIME CONSULTANT	

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DRAWING TITLE	FRIST FLOOR BEAM LAYOUT
REVISON NOTES	

CHIEF CONSULTANT
Prof.(Dr.) HARI.G,M.Tech,Ph.D
MOB: 9447097042
hari@cglengineers.in

SIGNATURE

DRAWN BY	THAMANNA J, B.Tech
DESIGNED BY	GIRIPRASAD S ,M.Tech
CHECKED BY	Prof.(Dr.) HARI.G,M.Tech,Ph.D

ISSUED FOR TENDERING

File No: **HA2610-81**

DRAWING NO : **S08/R0**

DATE : 31.10.2026

STRUCTURAL CONSULTANT
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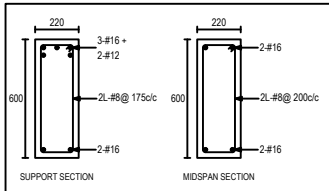
mail@cglengineers.in, Ph:9746745472

M 25
Fe 500D

A4



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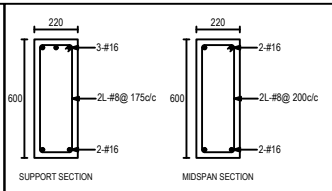

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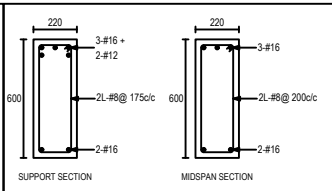

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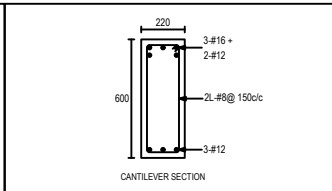

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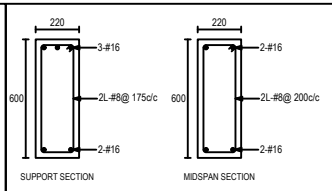

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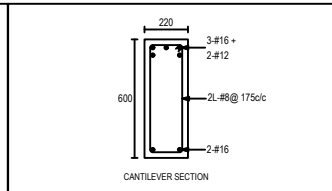

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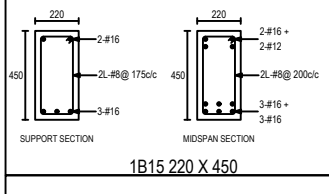

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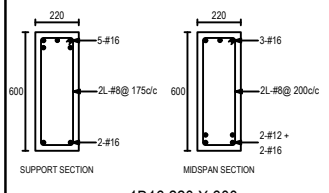

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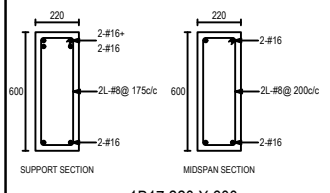

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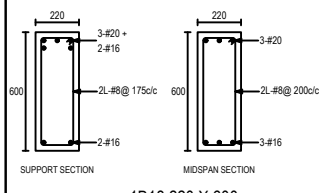

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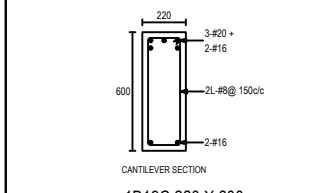

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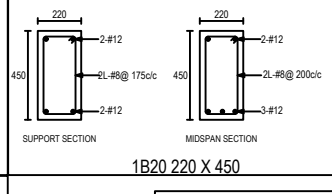

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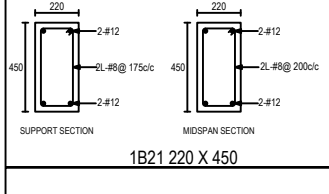

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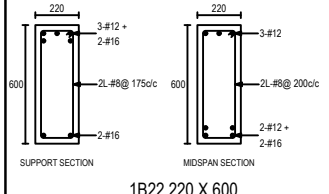

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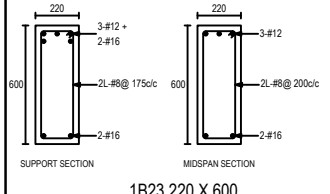

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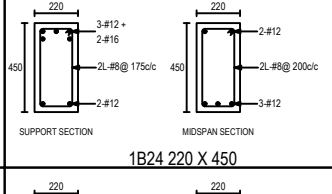

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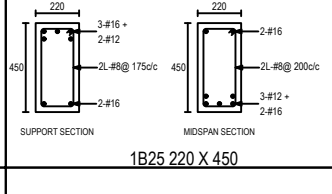

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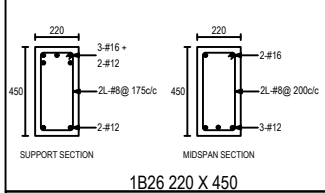

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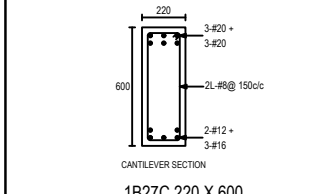

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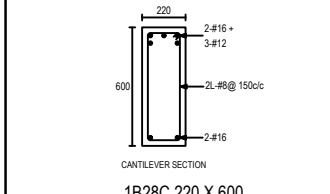

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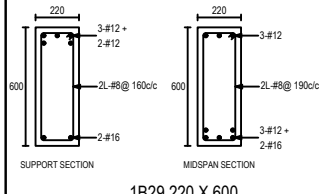

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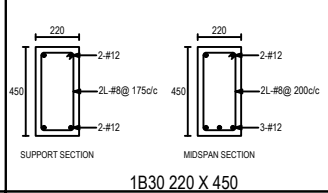

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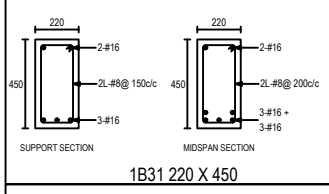

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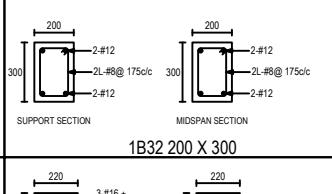

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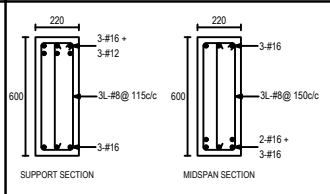

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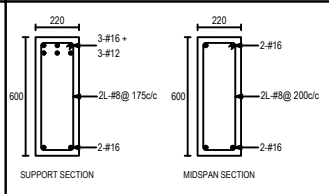

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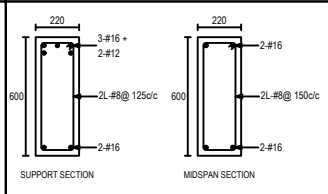

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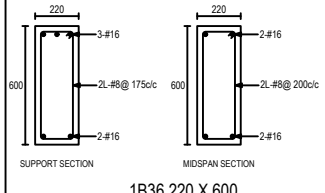

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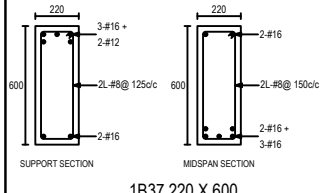

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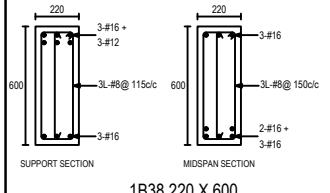

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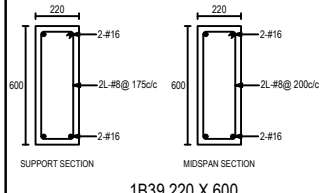

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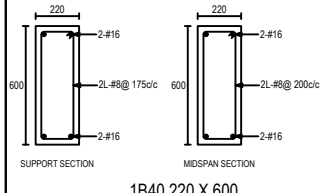

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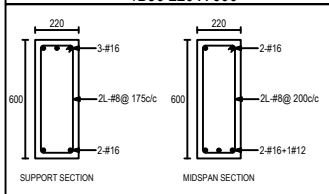

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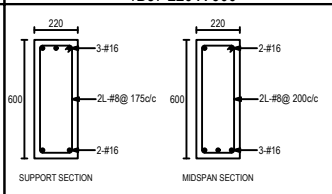

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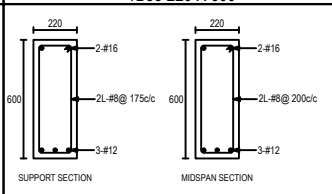

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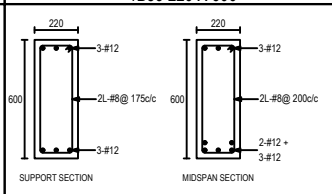

1B44 220 X 600

PROJECT

PROPOSED G+2 AYURVEDA TREATMENT BLOCK AT PANDALAM

CLIENT

Mr. RATHEESHKUMAR

PRIME CONSULTANT

GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE METERS UNO
2. DRAWING NOT TO BE SCALED OFF, ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED
3. USE M25 GRADE CONCRETE AND Fe500D STEEL UNO
4. READ THIS DRAWING WITH RELEVANT ARCHITECTURAL DRAWINGS
5. MINIMUM CLEAR COVER TO ALL REINFORCEMENT INCLUDING STIRRUPS; FOUNDATION-50 mm, COLUMNS-40mm, BEAMS-30mm & SLAB-20mm
6. INCASE OF DISCREPANCY, PLEASE CONTACT THE UNDERSIGNED PERSONS
7. FOLLOW ALL THE INSTRUCTIONS GIVEN INTHE GENERAL NOTES & TYPICAL DETAILS

DRAWING TITLE

FRIST FLOOR BEAM DETAILS

REVISON NOTES

CHIEF CONSULTANT

Prof.(Dr.) HARI.G,M.Tech,Ph.D

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hari@cglengineers.in

SIGNATURE

DRAWN BY	THAMANNA J, B.Tech
DESIGNED BY	GIRIPRASAD S ,M.Tech
CHECKED BY	Prof.(Dr.) HARI.G,M.Tech,Ph.D

ISSUED FOR TENDERING

File No: **HA2610-81**

DRAWING NO : **S09/R0**

DATE : 31.10.2026

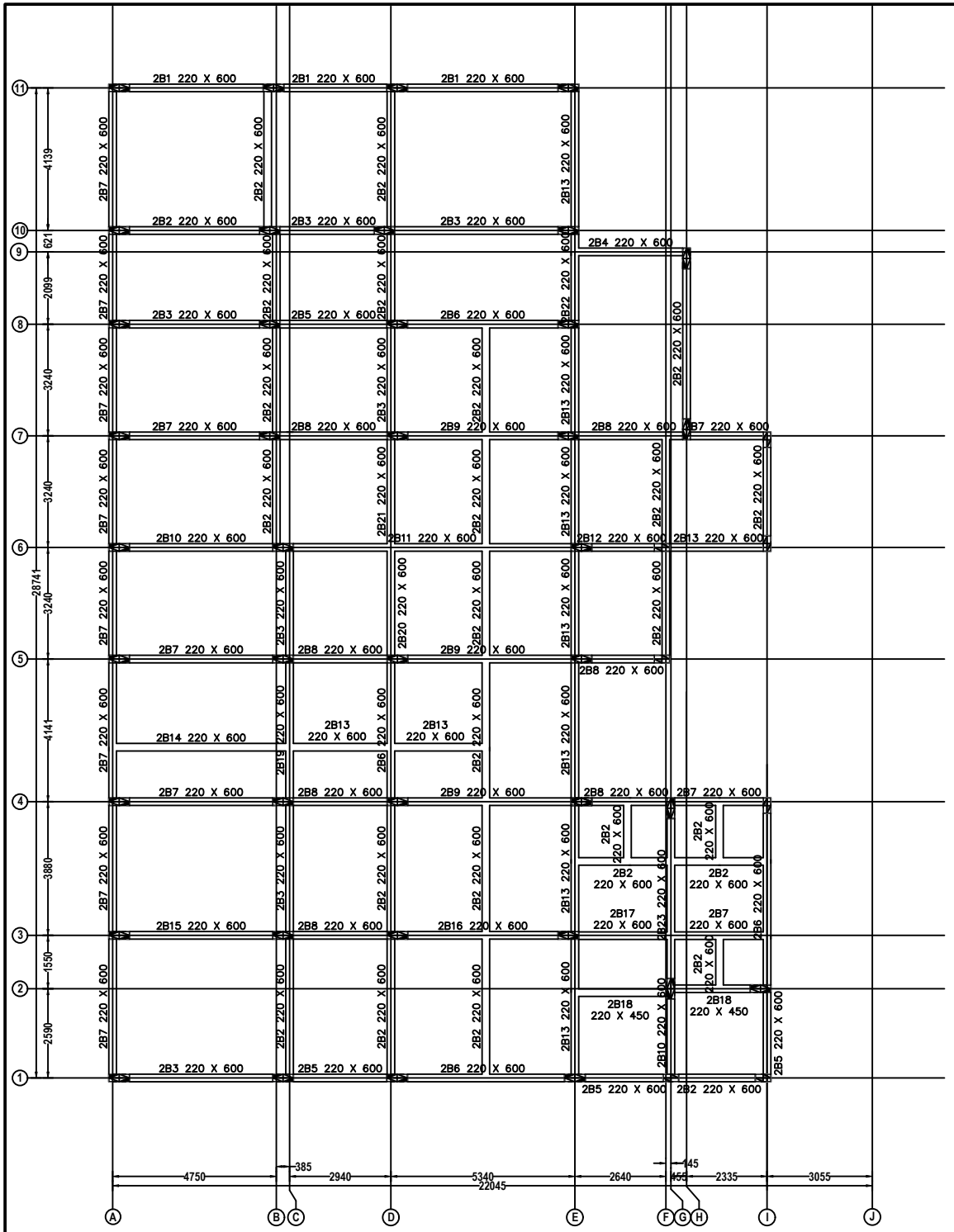
STRUCTURAL CONSULTANT

CGL ENGINEERS Pvt Ltd

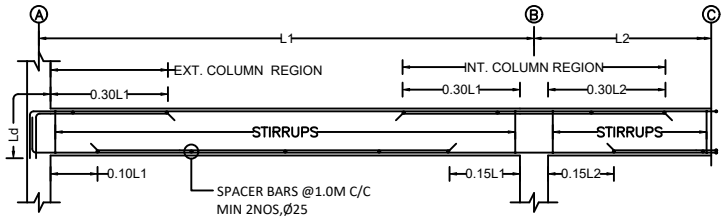
CGL COMPLEX, PARADISE ROAD, VYTTILA P. O, ERNAKULAM - 682019
mail@cglengineers.in, Ph:9746745472

M 25
Fe 500D

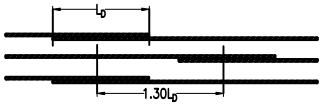
A4



SECOND FLOOR BEAM LAYOUT

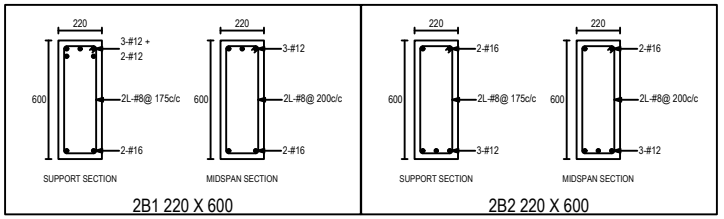


TYPICAL BEAM DETAILS
(VARIATION OF SPAN SHOULD NOT BE MORE THAN 15%)



LAPING DETAILS OF BEAMS

FOR BEAMS,THE LAPPING OF
1. TOP REINFORCEMENT SHALL DONE L/3 AWAY FROM JOINTS,PREFERABLY AT MID SPAN
2. BOTTOM REINFORCEMENT SHALL DONE AWAY FROM MID SPAN, PREFERABLY NEAR JOINTS BUT OUTSIDE JOINTS



PROJECT
PROPOSED G+2 AYURVEDA TREATMENT BLOCK AT PANDALAM
CLIENT
Mr. RATHEESHKUMAR
PRIME CONSULTANT

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6. INCASE OF DISCREPANCY, PLEASE CONTACT THE UNDERSIGNED PERSONS
7. FOLLOW ALL THE INSTRUCTIONS GIVEN INTHE GENERAL NOTES & TYPICAL DETAILS

DRAWING TITLE
SECOND FLOOR BEAM LAYOUT & DETAILS
REVISON NOTES

CHIEF CONSULTANT
Prof.(Dr.) HARI.G,M.Tech,Ph.D
MOB: 9447097042
hari@cglengineers.in

SIGNATURE

DRAWN BY	THAMANNA J, B.Tech
DESIGNED BY	GIRIPRASAD S ,M.Tech
CHECKED BY	Prof.(Dr.) HARI.G,M.Tech,Ph.D

ISSUED FOR TENDERING

File No: **HA2610-81**

DRAWING NO : **S10/R0**

DATE : 03.11.2026

STRUCTURAL CONSULTANT
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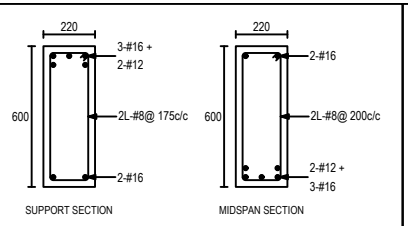
mail@cglengineers.in, Ph:9746745472

M 25
Fe 500D

A4



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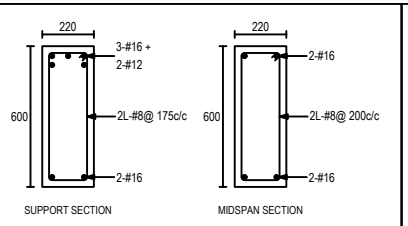

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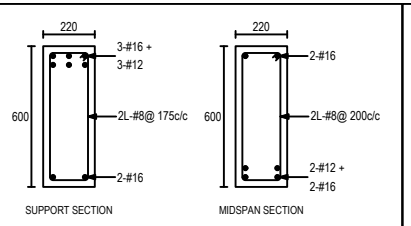

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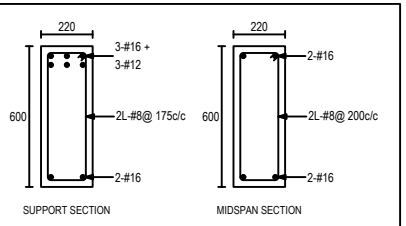

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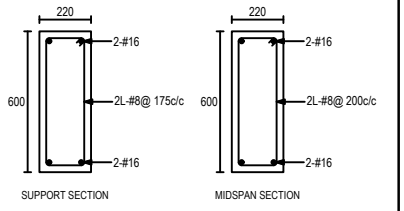

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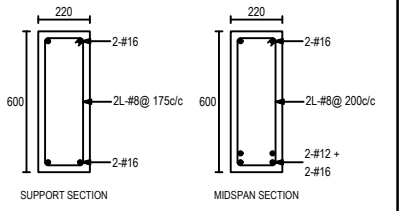

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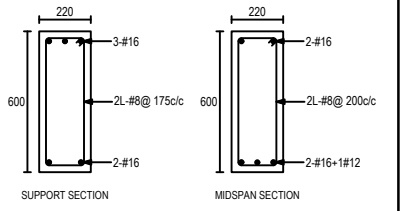

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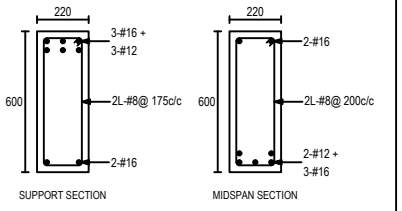

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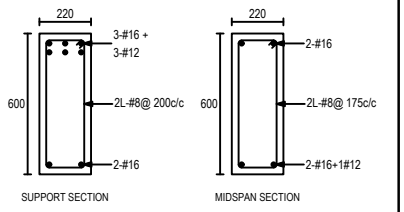

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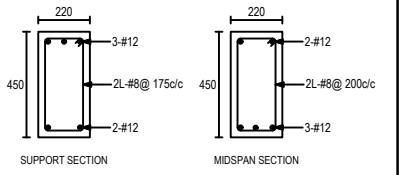

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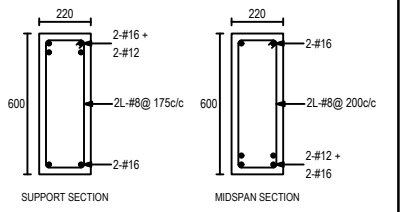

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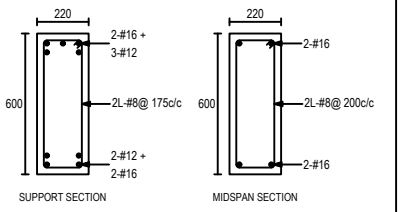

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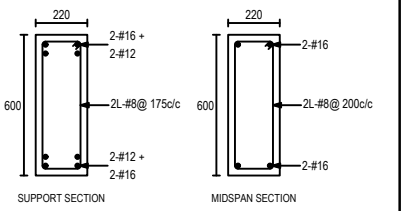

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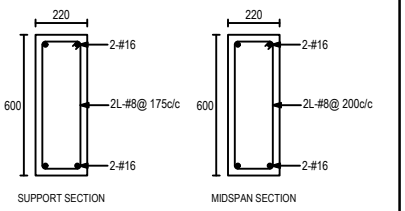

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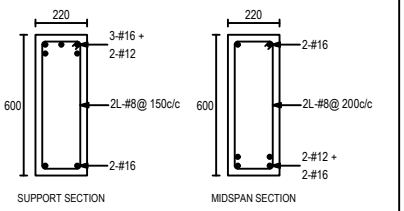

2B23 220 X 600

PROJECT

PROPOSED G+2 AYURVEDA TREATMENT BLOCK AT PANDALAM

CLIENT

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PRIME CONSULTANT

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DRAWING TITLE

SECOND FLOOR BEAM DETAILS

REVISON NOTES

CHIEF CONSULTANT

Prof.(Dr.) HARI.G,M.Tech,Ph.D

MOB: 9447097042
hari@cglengineers.in

SIGNATURE

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DESIGNED BY	GIRIPRASAD S ,M.Tech
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ISSUED FOR TENDERING

File No: **HA2610-81**

DRAWING NO : **S11/R0**

DATE : 03.11.2026

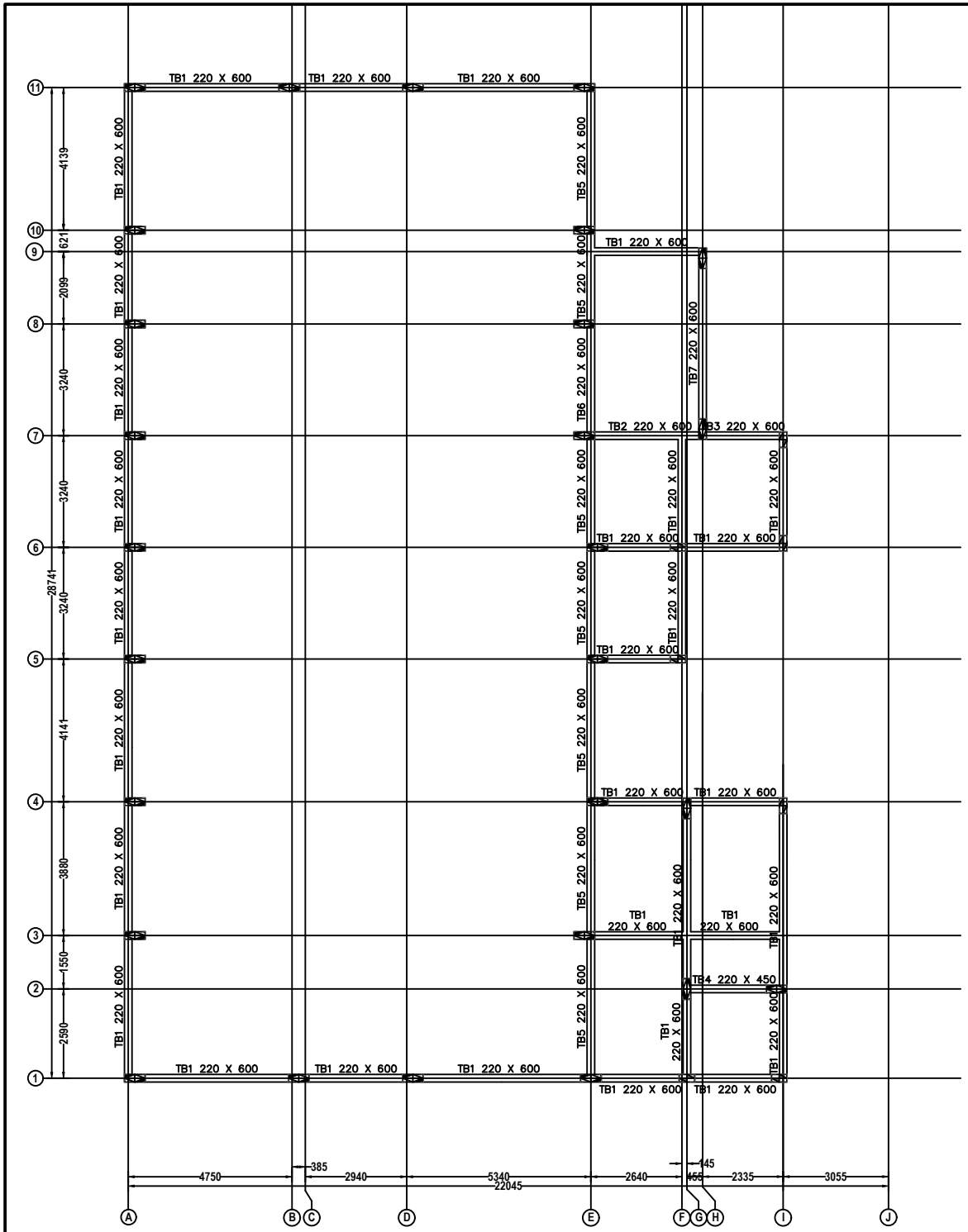
STRUCTURAL CONSULTANT

CGL ENGINEERS Pvt Ltd

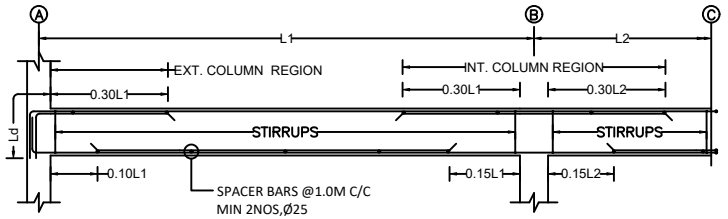
CGL COMPLEX, PARADISE ROAD, VYTTILA P. O, ERNAKULAM - 682019
mail@cglengineers.in, Ph:9746745472

M 25
Fe 500D

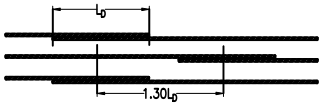
A4



TERRACE FLOOR BEAM LAYOUT



TYPICAL BEAM DETAILS
(VARIATION OF SPAN SHOULD NOT BE MORE THAN 15%)



LAPING DETAILS OF BEAMS

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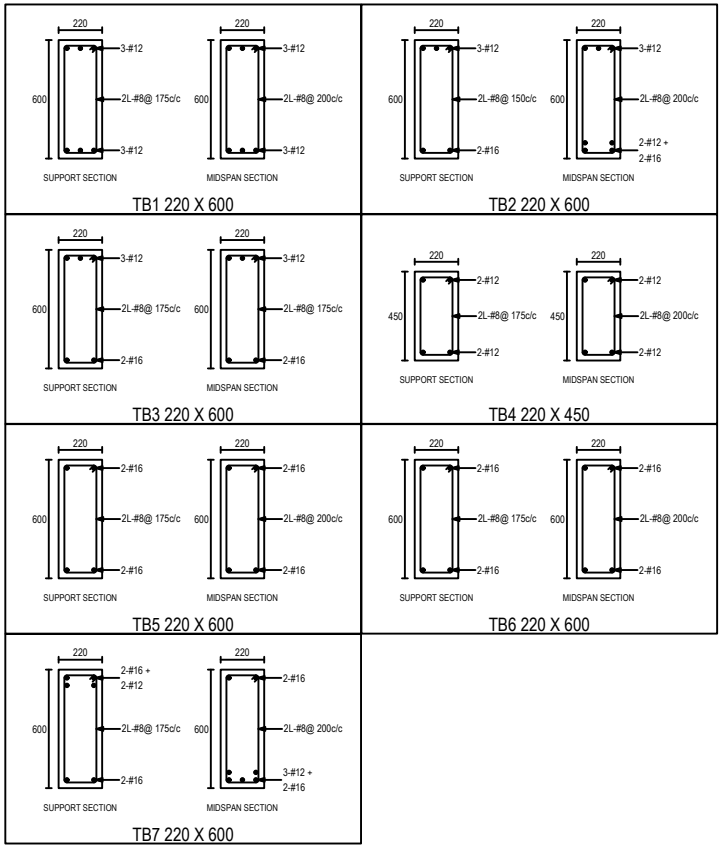
1. TOP REINFORCEMENT SHALL DONE L/3 AWAY FROM JOINTS,PREFERABLY AT MID SPAN
2. BOTTOM REINFORCEMENT SHALL DONE AWAY FROM MID SPAN, PREFERABLY NEAR JOINTS BUT OUTSIDE JOINTS



PROJECT
PROPOSED G+2 AYURVEDA TREATMENT BLOCK AT PANDALAM
CLIENT
Mr. RATHEESHKUMAR
PRIME CONSULTANT

GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE METERS UNO
2. DRAWING NOT TO BE SCALED OFF, ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED
3. USE M25 GRADE CONCRETE AND Fe500D STEEL UNO
4. READ THIS DRAWING WITH RELEVANT ARCHITECTURAL DRAWINGS
5. MINIMUM CLEAR COVER TO ALL REINFORCEMENT INCLUDING STIRRUPS; FOUNDATION-50 mm, COLUMNS-40mm, BEAMS-30mm & SLAB-20mm
6. INCASE OF DISCREPANCY, PLEASE CONTACT THE UNDERSIGNED PERSONS
7. FOLLOW ALL THE INSTRUCTIONS GIVEN INTHE GENERAL NOTES & TYPICAL DETAILS

DRAWING TITLE
TERRACE FLOOR BEAM LAYOUT & DETAILS
REVISON NOTES

CHIEF CONSULTANT
Prof.(Dr.) HARI.G,M.Tech,Ph.D
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ISSUED FOR TENDERING

File No: **HA2610-81**

DRAWING NO : **S12/R0**

DATE : 03.11.2026

STRUCTURAL CONSULTANT
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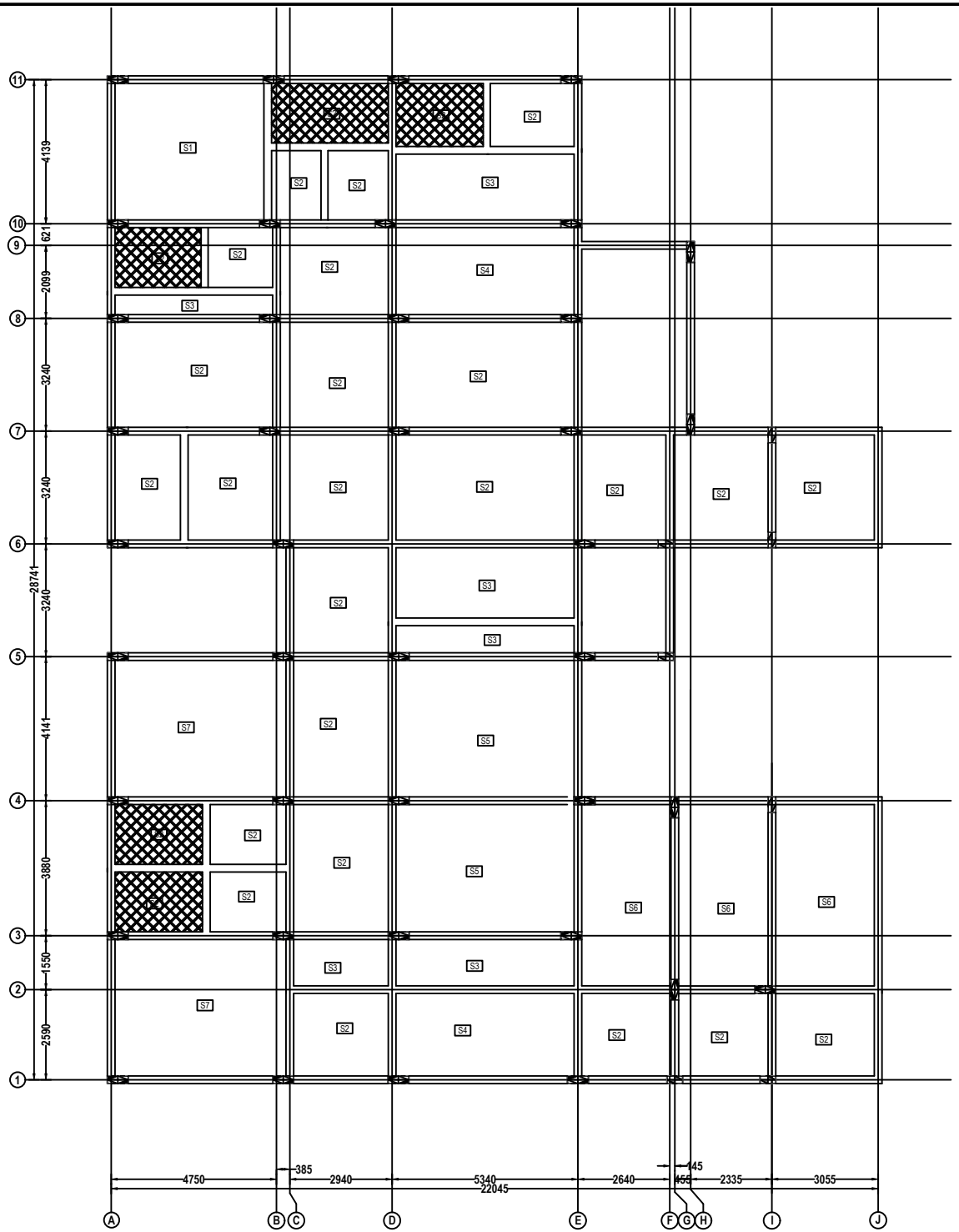
M 25
Fe 500D

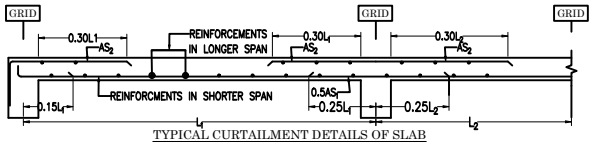
A4



FIRST FLOOR SLAB LAYOUT

SLAB REINFORCEMENT DETAILS						
SLAB DESIGNATION	SLAB THICKNESS	REINFORCEMENT DETAILS				REMARKS
		SHORT SPAN		LONG SPAN		
		MID SPAN (BOTTOM)	SUPPORTS (TOP)	MID SPAN (BOTTOM)	SUPPORTS (TOP)	
S1	110	#8 @ 175 C/C	#8 @ 175 C/C	#8 @ 200 C/C	#8 @ 200 C/C	TWO WAY SLAB
S2	100	#8 @ 175 C/C	#8 @ 175 C/C	#8 @ 200 C/C	#8 @ 200 C/C	TWO WAY SLAB
S3	100	#8 @ 175 C/C	#8 @ 175 C/C	#8 @ 200 C/C	#8 @ 200 C/C	ONE WAY SLAB
S4	100	#8 @ 150 C/C	#8 @ 150 C/C	#8 @ 175 C/C	#8 @ 175 C/C	ONE WAY SLAB
S5	125	#8 @ 125 C/C	#8 @ 125 C/C	#8 @ 150 C/C	#8 @ 150 C/C	TWO WAY SLAB
S6	100	#8 @ 175 C/C	#8 @ 175 C/C	#8 @ 200 C/C	#8 @ 200 C/C	ONE WAY SLAB
S7	110	#8 @ 130 C/C	#8 @ 130 C/C	#8 @ 150 C/C	#8 @ 150 C/C	TWO WAY SLAB

LEGENDS-SLAB	
	SUNKEN SLAB



TYPICAL CURTAILMENT DETAILS OF SLAB

PROJECT

PROPOSED G+2 AYURVEDA TREATMENT BLOCK AT PANDALAM

CLIENT

Mr. RATHEESHKUMAR

PRIME CONSULTANT

GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE METERS UNO
2. DRAWING NOT TO BE SCALED OFF, ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED
3. USE M25 GRADE CONCRETE AND Fe500D STEEL UNO
4. READ THIS DRAWING WITH RELEVANT ARCHITECTURAL DRAWINGS
5. MINIMUM CLEAR COVER TO ALL REINFORCEMENT INCLUDING STIRRUPS; FOUNDATION-50 mm, COLUMNS-40mm, BEAMS-30mm & SLAB-20mm
6. INCASE OF DISCREPANCY, PLEASE CONTACT THE UNDERSIGNED PERSONS
7. FOLLOW ALL THE INSTRUCTIONS GIVEN INTHE GENERAL NOTES & TYPICAL DETAILS

DRAWING TITLE

FRIST FLOOR SLAB LAYOUT & DETAILS

REVISON NOTES

CHIEF CONSULTANT

Prof.(Dr.) HARI.G,M.Tech,Ph.D

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ISSUED FOR TENDERING

File No: **HA2610-81**

DRAWING NO : **S13/R0**

DATE : 04.11.2026

STRUCTURAL CONSULTANT

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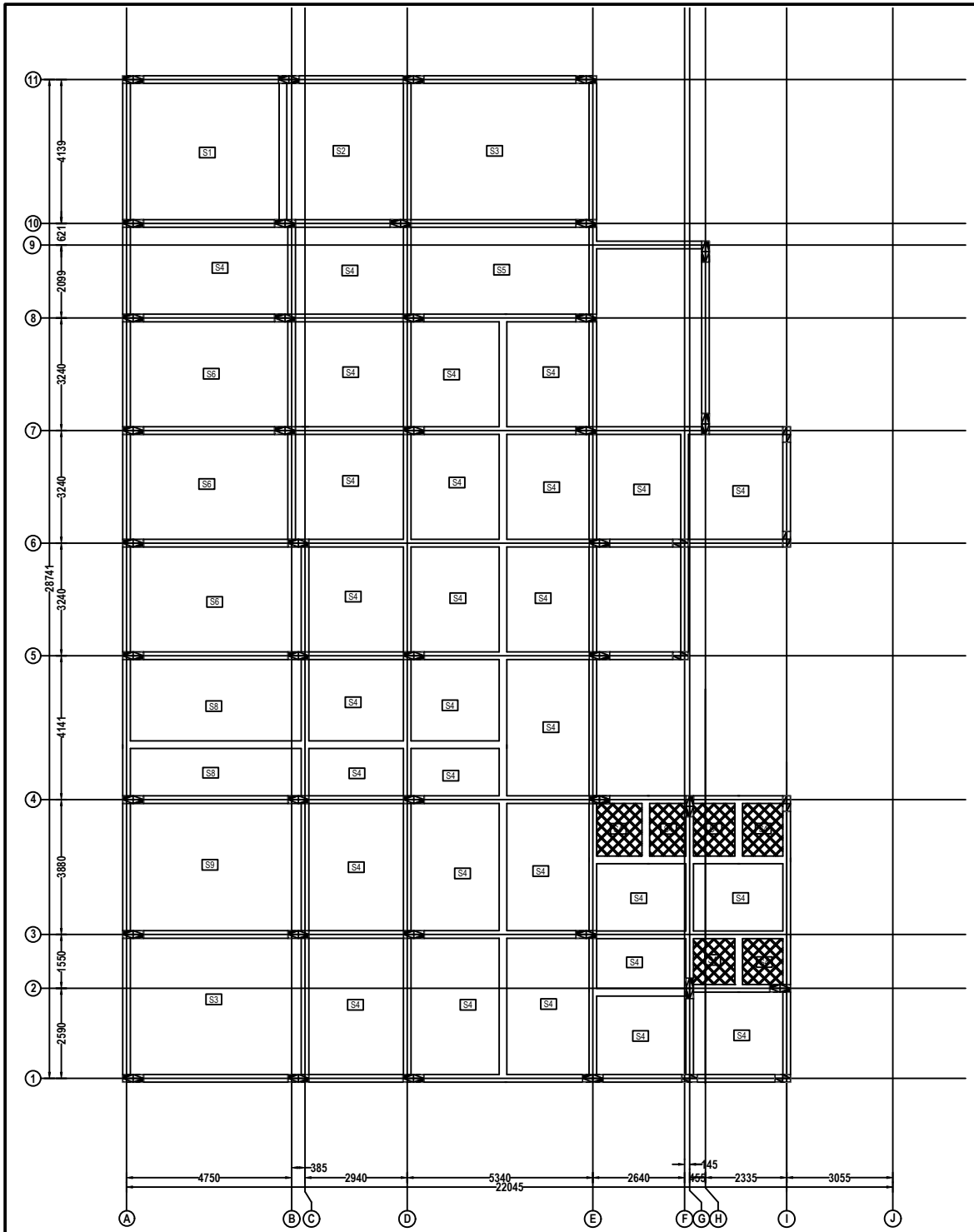


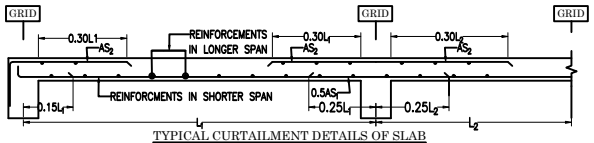
SECOND FLOOR SLAB LAYOUT

SLAB REINFORCEMENT DETAILS

SLAB DESIGNATION	SLAB THICKNESS	REINFORCEMENT DETAILS				REMARKS
		SHORT SPAN		LONG SPAN		
		MID SPAN (BOTTOM)	SUPPORTS (TOP)	MID SPAN (BOTTOM)	SUPPORTS (TOP)	
S1	115	#8 @ 125 C/C	#8 @ 125 C/C	#8 @ 150 C/C	#8 @ 150 C/C	TWO WAY SLAB
S2	100	#8 @ 150 C/C	#8 @ 150 C/C	#8 @ 175 C/C	#8 @ 175 C/C	TWO WAY SLAB
S3	120	#8 @ 120C/C	#8 @ 120 C/C	#8 @ 150 C/C	#8 @ 150 C/C	TWO WAY SLAB
S4	100	#8 @ 175 C/C	#8 @ 175 C/C	#8 @ 200 C/C	#8 @ 200 C/C	TWO WAY SLAB
S5	100	#8 @ 120 C/C	#8 @ 120 C/C	#8 @ 150 C/C	#8 @ 150 C/C	ONE WAY SLAB
S6	100	#8 @ 130 C/C	#8 @ 130 C/C	#8 @ 160 C/C	#8 @ 160 C/C	TWO WAY SLAB
S7	100	#8 @ 125 C/C	#8 @ 125 C/C	#8 @ 150 C/C	#8 @ 150 C/C	ONE WAY SLAB
S8	100	#8 @ 200 C/C	#8 @ 200 C/C	#8 @ 200 C/C	#8 @ 200 C/C	ONE WAY SLAB
S9	115	#8 @ 125 C/C	#8 @ 125 C/C	#8 @ 150 C/C	#8 @ 150 C/C	TWO WAY SLAB

LEGENDS-SLAB

SUNKEN SLAB



TYPICAL CURTAILMENT DETAILS OF SLAB

PROJECT

PROPOSED G+2 AYURVEDA TREATMENT BLOCK AT PANDALAM

CLIENT

Mr. RATHEESHKUMAR

PRIME CONSULTANT

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4. READ THIS DRAWING WITH RELEVANT ARCHITECTURAL DRAWINGS
5. MINIMUM CLEAR COVER TO ALL REINFORCEMENT INCLUDING STIRRUPS; FOUNDATION-50 mm, COLUMNS-40mm, BEAMS-30mm & SLAB-20mm
6. INCASE OF DISCREPANCY, PLEASE CONTACT THE UNDERSIGNED PERSONS
7. FOLLOW ALL THE INSTRUCTIONS GIVEN INTHE GENERAL NOTES & TYPICAL DETAILS

DRAWING TITLE

SECOND FLOOR SLAB LAYOUT & DETAILS

REVISON NOTES

CHIEF CONSULTANT

Prof.(Dr.) HARI.G,M.Tech,Ph.D

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DESIGNED BY	GIRIPRASAD S ,M.Tech
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ISSUED FOR TENDERING

File No: **HA2610-81**

DRAWING NO : **S14/R0**

DATE : 04.11.2026

STRUCTURAL CONSULTANT

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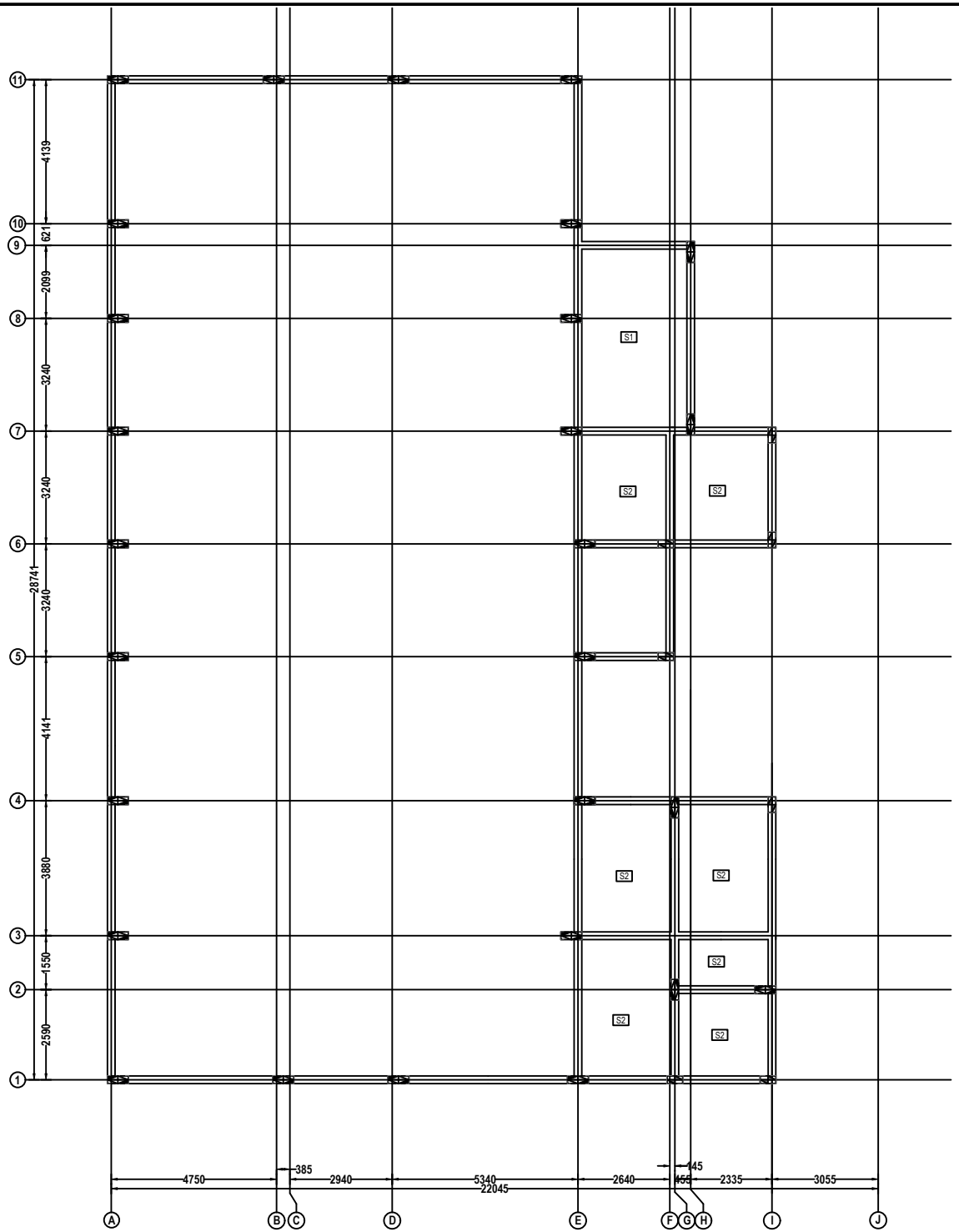
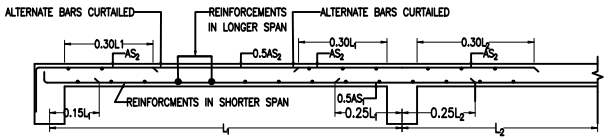


TERRACE FLOOR SLAB LAYOUT

SLAB REINFORCEMENT DETAILS						
SLAB DESIGNATION	SLAB THICKNESS	REINFORCEMENT DETAILS				REMARKS
		SHORT SPAN		LONG SPAN		
		MID SPAN (BOTTOM)	SUPPORTS (TOP)	MID SPAN (BOTTOM)	SUPPORTS (TOP)	
S1	200	#10 @ 150 C/C	#10 @ 150 C/C	#10 @ 150 C/C	#10 @ 150 C/C	TWO WAY SLAB
S2	100	#8 @ 200 C/C	#8 @ 200 C/C	#8 @ 200 C/C	#8 @ 200 C/C	TWO WAY SLAB
S3	120	#10 @ 150 C/C	#10 @150 C/C	#10 @ 200 C/C	#10 @ 200 C/C	TWO WAY SLAB



TYPICAL DETAILS OF TERRACE SLAB

PROJECT

PROPOSED G+2 AYURVEDA TREATMENT BLOCK AT PANDALAM

CLIENT

Mr. RATHEESHKUMAR

PRIME CONSULTANT

GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE METERS UNO
2. DRAWING NOT TO BE SCALED OFF, ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED
3. USE M25 GRADE CONCRETE AND Fe500D STEEL UNO
4. READ THIS DRAWING WITH RELEVANT ARCHITECTURAL DRAWINGS
5. MINIMUM CLEAR COVER TO ALL REINFORCEMENT INCLUDING STIRRUPS; FOUNDATION-50 mm, COLUMNS-40mm, BEAMS-30mm & SLAB-20mm
6. INCASE OF DISCREPANCY, PLEASE CONTACT THE UNDERSIGNED PERSONS
7. FOLLOW ALL THE INSTRUCTIONS GIVEN INTHE GENERAL NOTES & TYPICAL DETAILS

DRAWING TITLE

TERRACE FLOOR SLAB LAYOUT & DETAILS

REVISON NOTES

CHIEF CONSULTANT

Prof.(Dr.) HARI.G,M.Tech,Ph.D

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ISSUED FOR TENDERING

File No: **HA2610-81**

DRAWING NO : **S15/R0**

DATE : 04.11.2026

STRUCTURAL CONSULTANT

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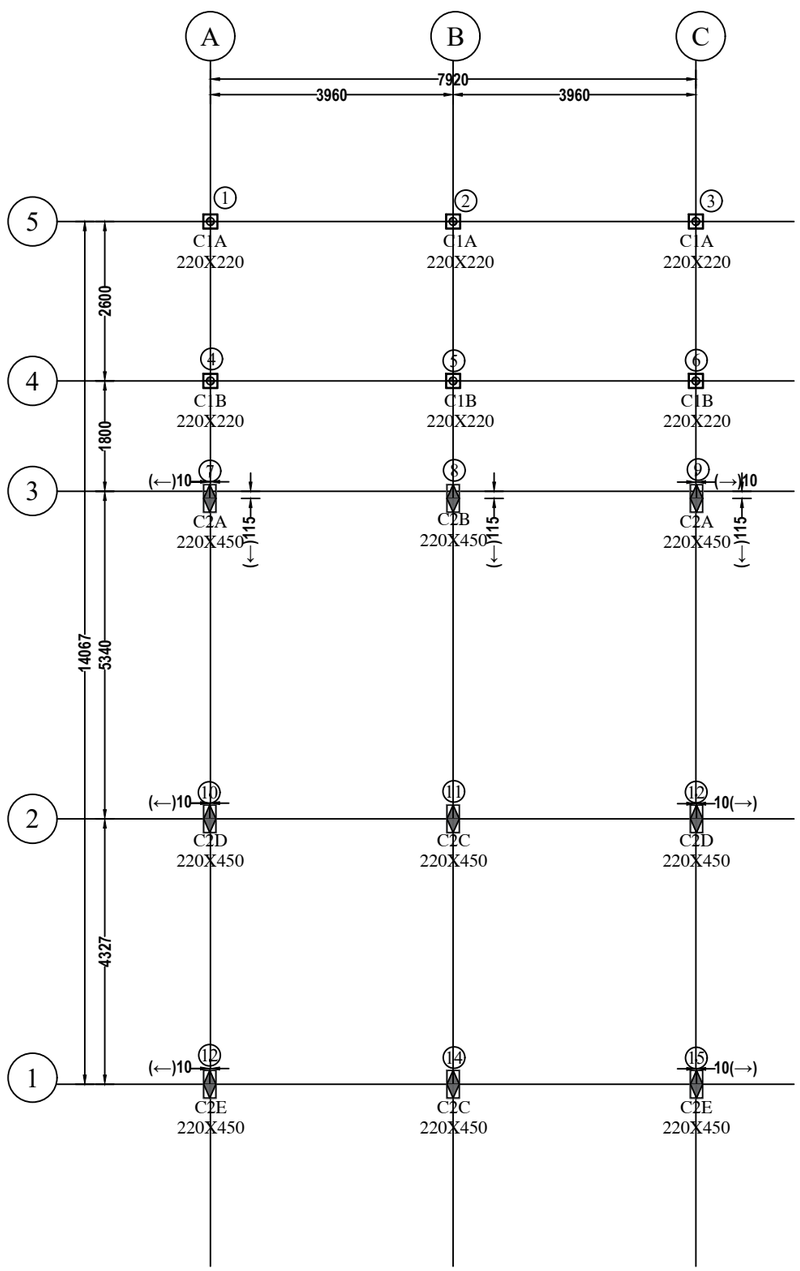
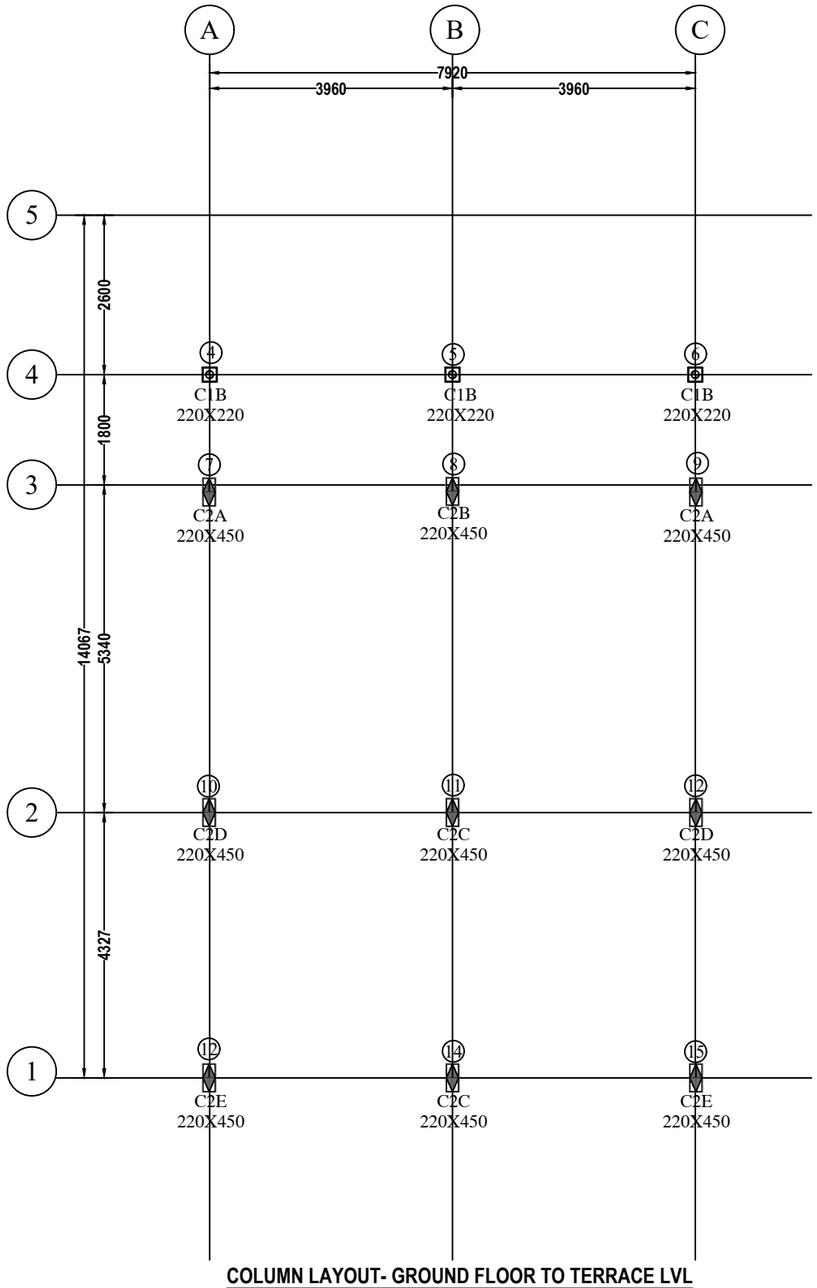
Fe 500D

A4



COLUMN LAYOUT- FOUNDATION TO GROUND FLOOR LVL

SCALE 1:100



COLUMN LAYOUT- GROUND FLOOR TO TERRACE LVL

SCALE 1:100

PROJECT
PROPOSED COTTAGE BUILDING FOR MANNAM AYURVEDHA MEDICAL COLLEGE, PANDALAM
CLIENT
MANNAM AYURVEDHA CO-OPERATIVE MEDICAL COLLEGE, PANDALAM
PRIME CONSULTANT

GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE METERS UNO
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3. USE M25 GRADE CONCRETE AND Fe500D STEEL UNO
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6. INCASE OF DISCREPANCY, PLEASE CONTACT THE UNDERSIGNED PERSONS
7. FOLLOW ALL THE INSTRUCTIONS GIVEN IN THE GENERAL NOTES & TYPICAL DETAILS

DRAWING TITLE
COLUMN LAYOUTS
REVISON NOTES

CHIEF CONSULTANT
Prof.(Dr.) HARI.G,M.Tech,Ph.D
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DESIGNED BY	NITTY SEBASTIAN, M.Tech
CHECKED BY	HG

GOOD FOR CONSTRUCTION

File No: **HA2607-45-**COTTAGE BLDG

DRAWING NO : **CB-S01/R0**

DATE : 17.08.2026

STRUCTURAL CONSULTANT

CGL ENGINEERS Pvt Ltd

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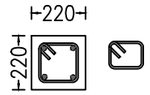
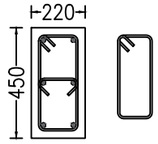
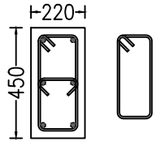
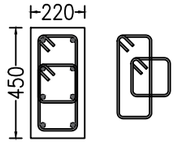
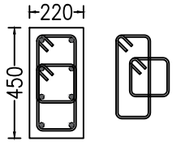
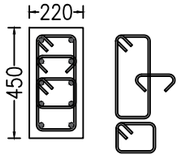
M25 Fe 500D

ISO full bleed A3 (297.00 x 420.00 MM)

GROUND FLOOR (MAX. 3.4m)							
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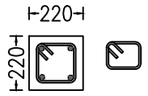
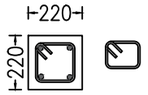
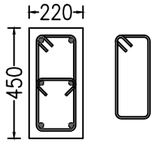
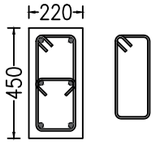
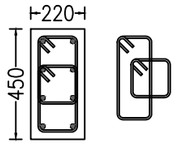
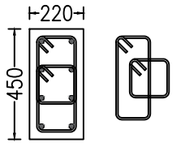
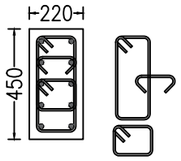
FOUNDATION TO PLINTH BEAM (MAX. 1.5M)							
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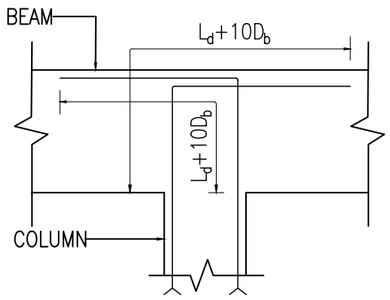
COLUMN SCHEDULE

NTS



COLUMN LONGITUDINAL REINFORCEMENT TERMINATION DETAILS

GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS UNO
2. READ THIS DRAWING WITH RELEVANT ARCHITECTURAL DRAWINGS
3. FOUNDATION DEPTH SHOWN IS INDICATIVE ONLY AND DEPTH WILL VARY DEPENDING ON THE AVAILABILITY OF LATERITIC CLAYEY SAND WITH GRAVELN>50
4. THE SAFE BEARING CAPACITY OF THE GROUND IS TAKEN AS 200 kN/m^2..
5. PCC SHALL BE DONE WITH M25 GRADE CONCRETE
6. BUILDING IS DESIGNED FOR SINGLE STOREYED COTTAGE BUILDING WITH NO FURTHER EXPANSION
7. USE Fe500D STEEL AND M25 GRADE CONCRETE WITH MINIMUM CEMENT CONTENT OF 380 kg/m^3 AND MAXIMUM FREE WATER CEMENT RATIO 0.45 UNO
8. THE CONSTRUCTION OF R.C.C. WORKS SHALL COMPLY WITH IS:456-2000. REFER TO IS:456 AND OTHER RELEVANT INDIAN STANDARDS.
9. MINIMUM CLEAR COVER TO ALL REINFORCEMENT INCLUDING STIRRUPS; FOUNDATION-50 mm, COLUMNS-40mm, BEAMS-30mm & SLAB-20mm
10. LAPS IN REINFORCEMENT:THE MINIMUM LAP LENGTH OF REINFORCEMENT SHALL BE KEPT AS '50D' WHERE "D" IS THE DIAMETER OF BAR. A MAXIMUM OF 50% OF REINFORCEMENT SHALL BE LAPPED AT ANY ONE LOCATION. LAP SPLICES SHALL BE SUITABLY STAGGERED SUCH THAT THE CENTRE-TO-CENTRE DISTANCE OF THE SPLICES IS NOT LESS THAN 1.3 TIMES THE LAP LENGTH.

PROJECT

PROPOSED COTTAGE BUILDING FOR MANNAM AYURVEDHA MEDICAL COLLEGE, PANDALAM

CLIENT

MANNAM AYURVEDHA CO-OPERATIVE MEDICAL COLLEGE, PANDALAM

PRIME CONSULTANT

GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE METERS UNO
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7. FOLLOW ALL THE INSTRUCTIONS GIVEN IN THE GENERAL NOTES & TYPICAL DETAILS

DRAWING TITLE

COLUMN SCHEDULE

REVISON NOTES

CHIEF CONSULTANT

Prof.(Dr.) HARI.G,M.Tech,Ph.D

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hari@cglengineers.in

SIGNATURE

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DESIGNED BY	NITTY SEBASTIAN, M.Tech
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GOOD FOR CONSTRUCTION

File No: **HA2607-45-COTTAGE BLDG**

DRAWING NO : **CB-S02/R0**

DATE : 17.08.2026

STRUCTURAL CONSULTANT

CGL ENGINEERS Pvt Ltd

CGL COMPLEX, PARADISE ROAD,
VYTTILA P. O, ERNAKULAM - 682019
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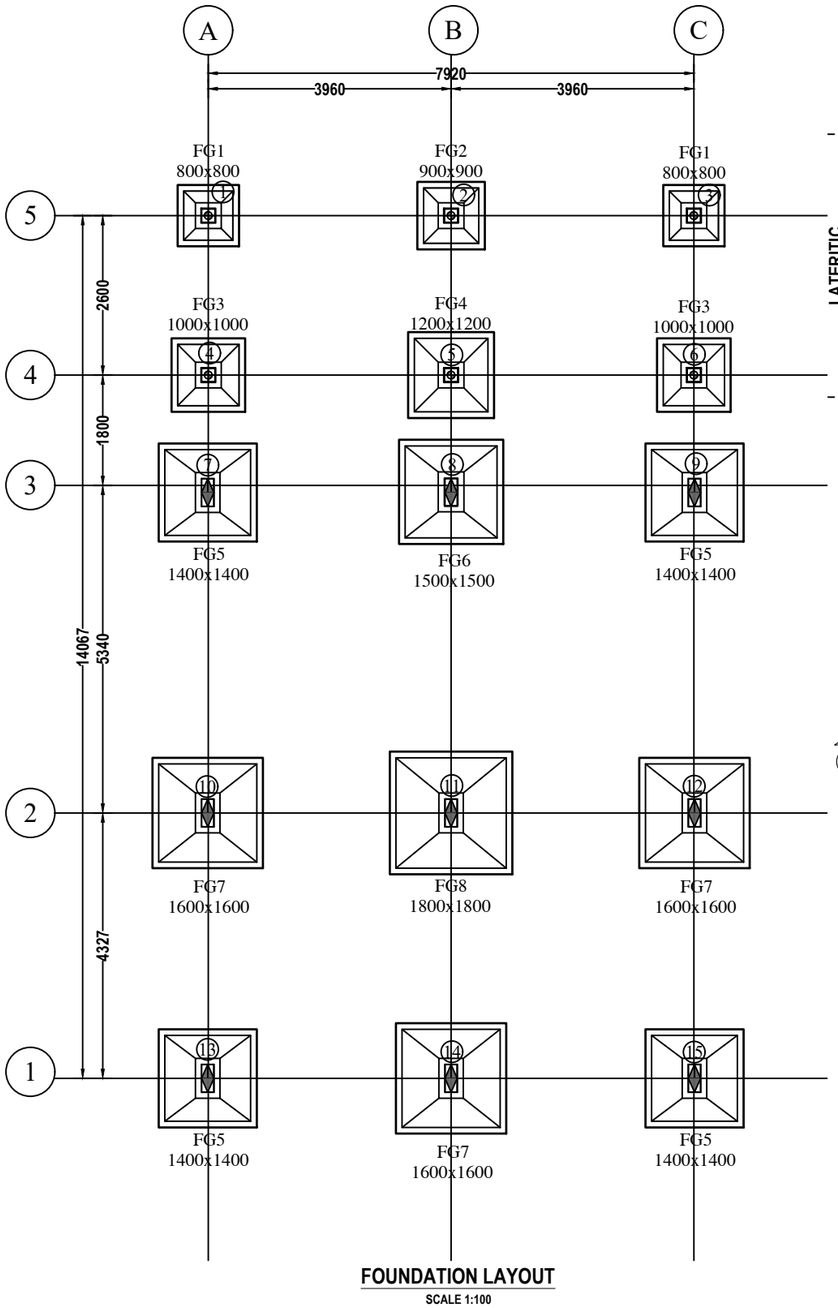
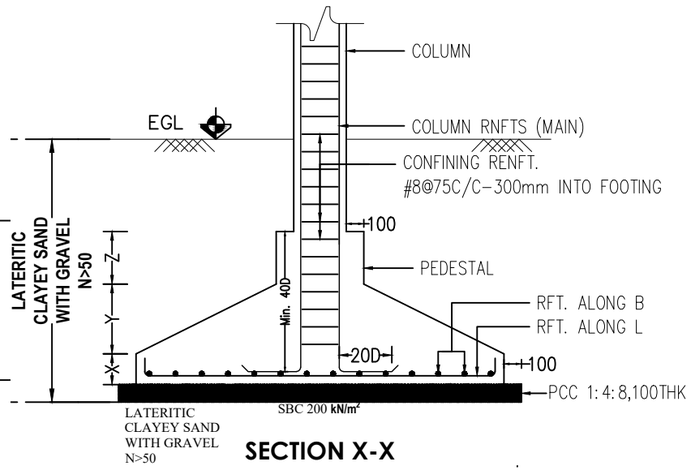
M25 Fe 500D

ISO full bleed A3 (297.00 x 420.00 MM)



FOUNDATION LAYOUT

SCALE 1:100



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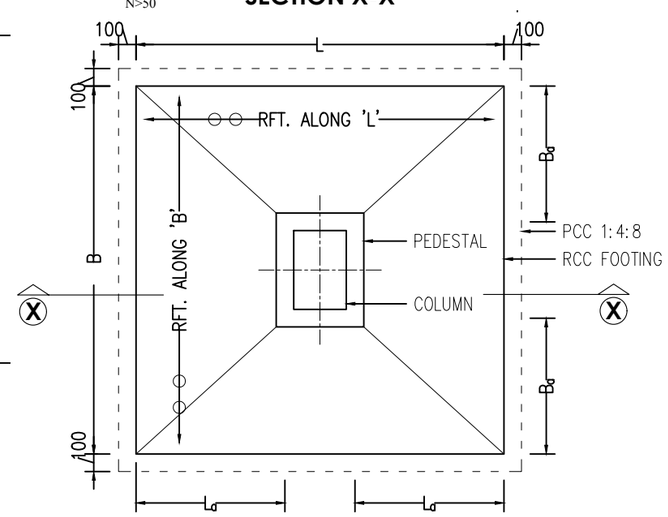

PLAN

TYP. DETAIL OF COLUMN FOOTING

L : LONGER DIRECTION OF FOOTING
B : SHORTER DIRECTION OF FOOTING

SCHEDULE OF ISOLATED COLUMN FOOTING

SL. NO.	FOOTING NAME	NUMBER OF FOOTINGS	FOOTING DIMENSIONS (mm)					REINFORCEMENTS	
			L	B	X	Y	Z	ALONG 'L'	ALONG 'B'
1	FG1	2	800	800	175	150	400	#10@200 C/C	#10@200 C/C
2	FG2	1	900	900	175	150	400	#10@200C/C	#10@200C/C
3	FG3	2	1000	1000	175	150	400	#10@200C/C	#10@200C/C
4	FG4	1	1200	1200	175	175	375	#10@190C/C	#10@190C/C
5	FG5	4	1400	1400	175	225	325	#10@170C/C	#10@170C/C
6	FG6	1	1500	1500	175	275	275	#10@160C/C	#10@160C/C
7	FG7	3	1600	1600	175	300	250	#10@150C/C	#10@150C/C
8	FG8	1	1800	1800	200	325	200	#10@135C/C	#10@135C/C

PROJECT

PROPOSED COTTAGE BUILDING FOR MANNAM AYURVEDHA MEDICAL COLLEGE, PANDALAM

CLIENT

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DRAWING TITLE

FOUNDATION LAYOUT & DETAILS

REVISON NOTES

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DRAWING NO : **CB-S03/R0**

DATE : 17.08.2026

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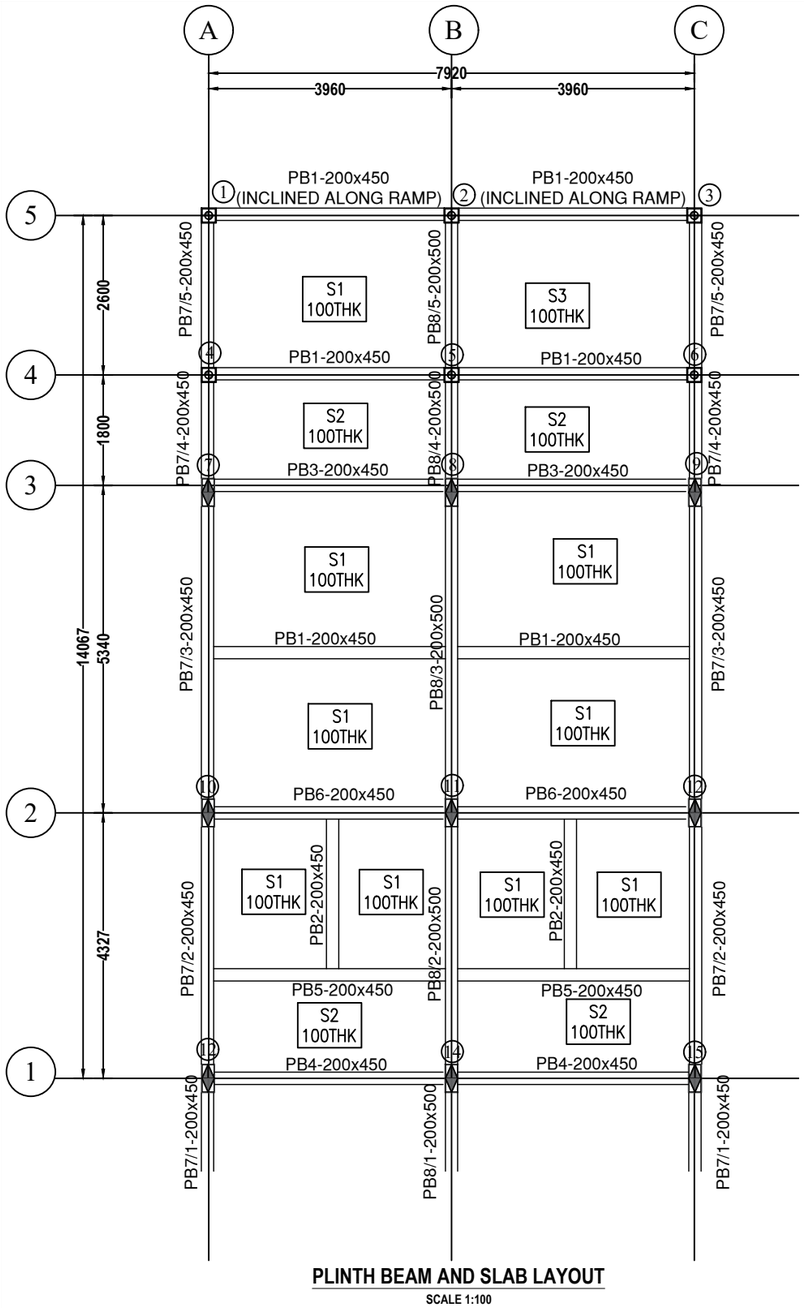
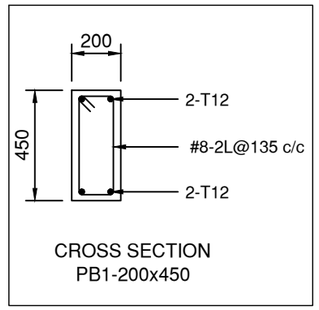
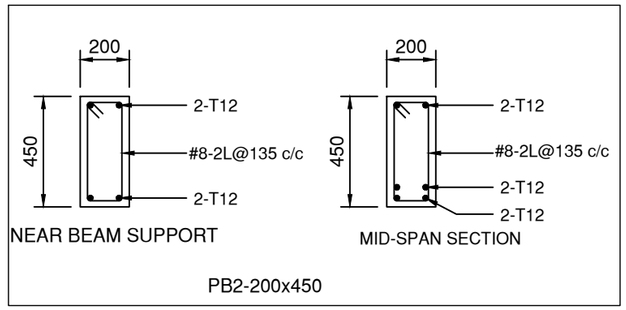
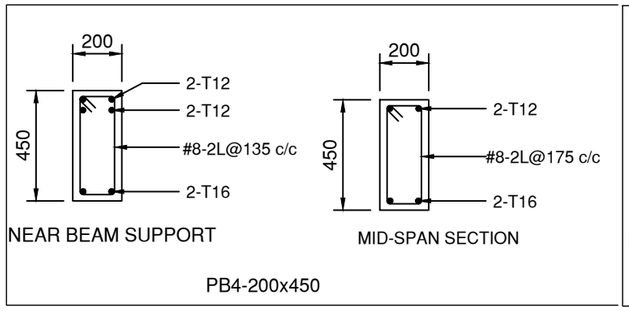


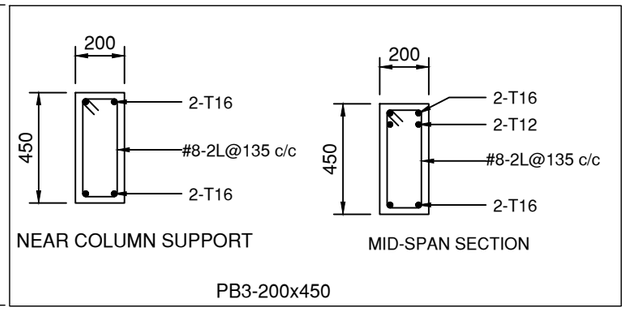
PLINTH BEAM AND SLAB LAYOUT

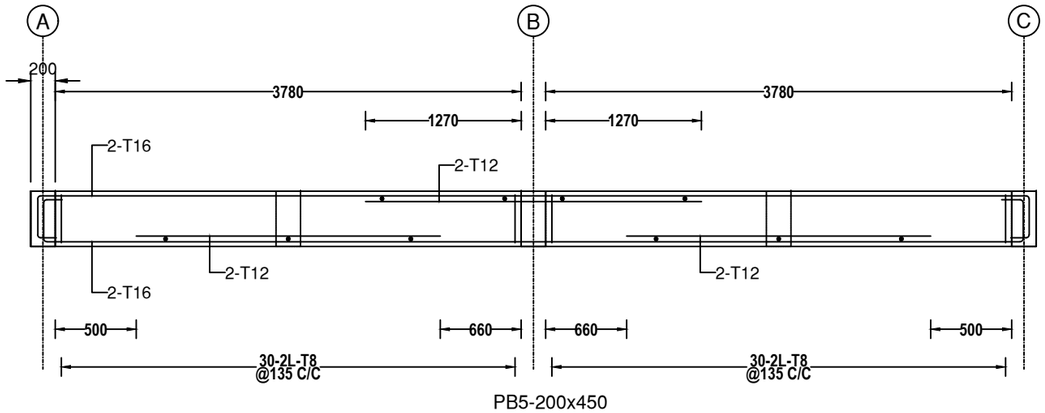
SCALE 1:100

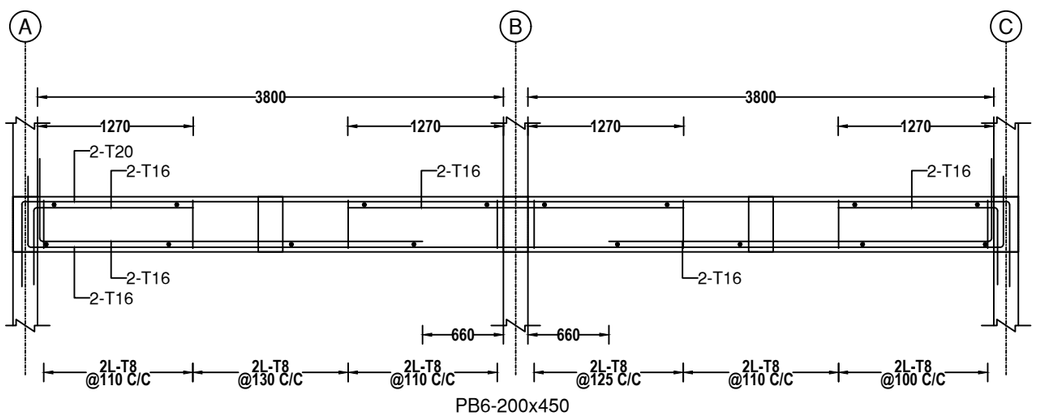












SLAB REINFORCEMENT DETAILS

SLAB DESIGNATION	SLAB THICKNESS	REINFORCEMENT DETAILS				REMARKS
		SHORT SPAN		LONG SPAN		
		MID SPAN (BOTTOM)	SUPPORTS (TOP)	MID SPAN (BOTTOM)	SUPPORTS (TOP)	
S1	100	#8 @ 150 C/C	#8 @ 150 C/C	#8 @ 175 C/C	#8 @ 175 C/C	TWO WAY SLAB
S2	100	#8 @ 150 C/C	#8 @ 150 C/C	#8 @ 200 C/C	#8 @ 200 C/C	ONE WAY SLAB
S3	110	#8 @ 150 C/C	#8 @ 150 C/C	#8 @ 175 C/C	#8 @ 175 C/C	TWO WAY SLAB

PROJECT

PROPOSED COTTAGE BUILDING FOR MANNAM AYURVEDHA MEDICAL COLLEGE, PANDALAM

CLIENT

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PRIME CONSULTANT

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DRAWING TITLE

PLINTH BEAM AND SLAB LAYOUT & DETAILS

REVISON NOTES

CHIEF CONSULTANT

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hari@cglengineers.in

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GOOD FOR CONSTRUCTION

File No: **HA2607-45-COTTAGE BLDG**

DRAWING NO : **CB-S04/R0**

DATE : 17.08.2026

STRUCTURAL CONSULTANT

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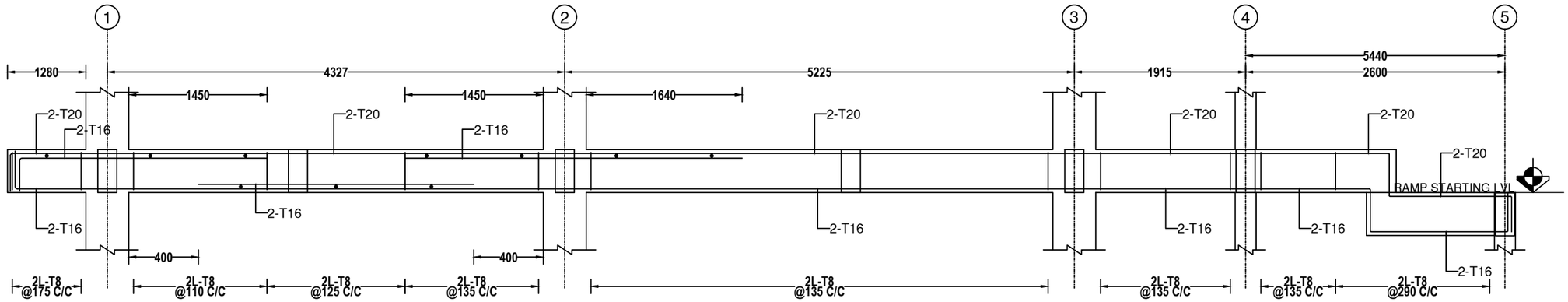

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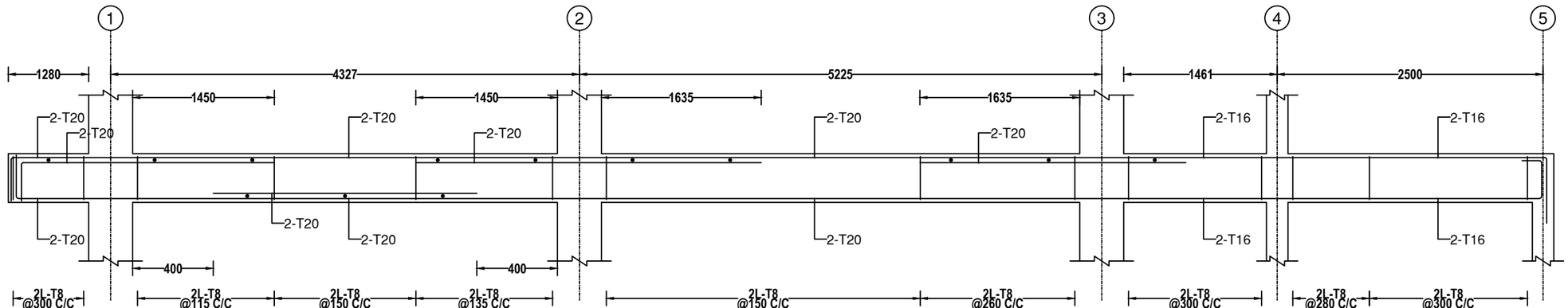

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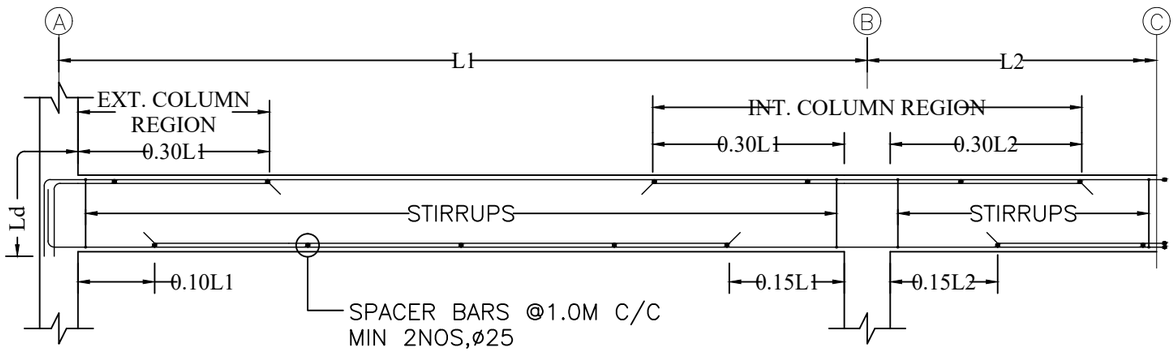
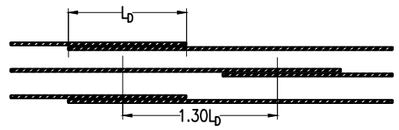


TYPICAL BEAM DETAILS
(VARIATION OF SPAN SHOULD NOT BE MORE THAN 15%)



LAPING DETAILS OF BEAMS

FOR BEAMS,THE LAPPING OF
1. TOP REINFORCEMENT SHALL DONE L/3 AWAY FROM JOINTS,PREFERABLY AT MID SPAN
2. BOTTOM REINFORCEMENT SHALL DONE AWAY FROM MID SPAN, PREFERABLY NEAR JOINTS BUT OUTSIDE JOINTS

PROJECT

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DRAWING TITLE

PLINTH BEAM LAYOUT & DETAILS

REVISON NOTES

CHIEF CONSULTANT

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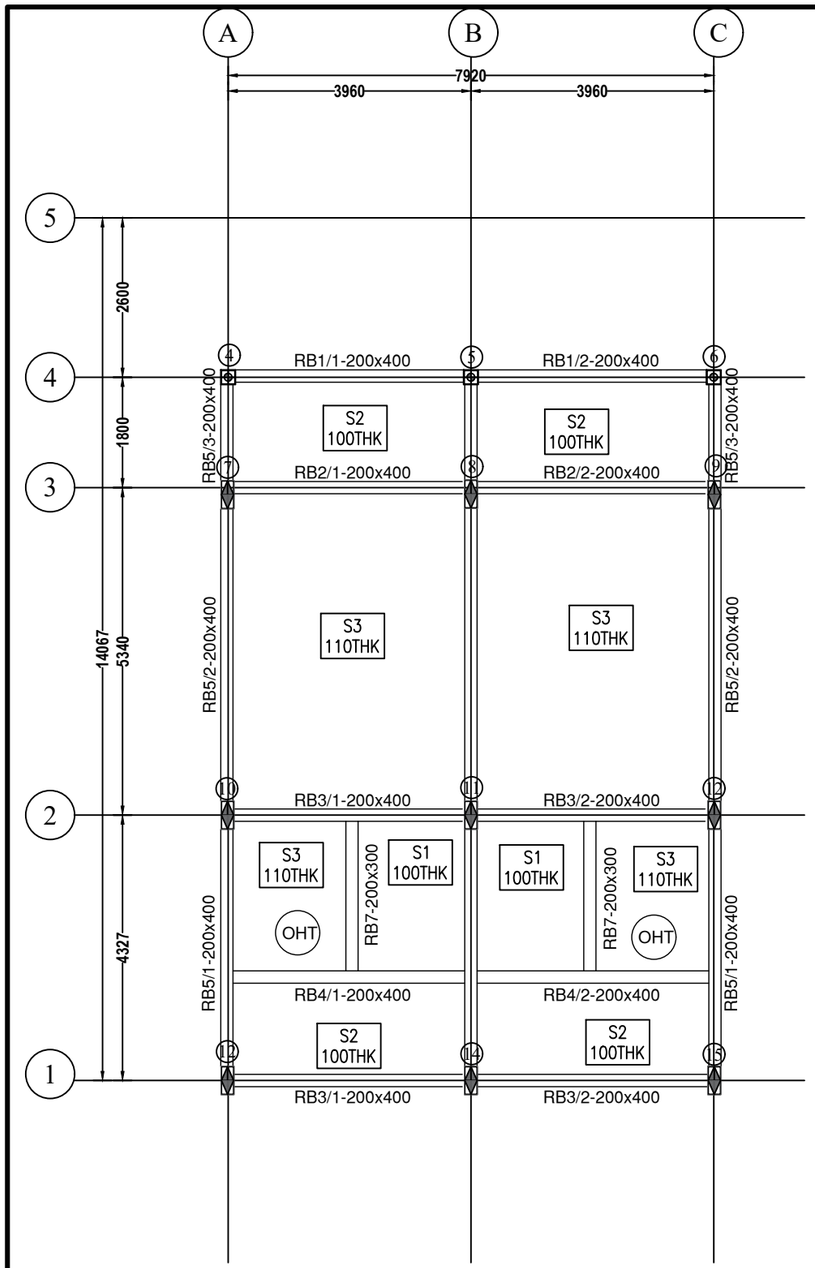
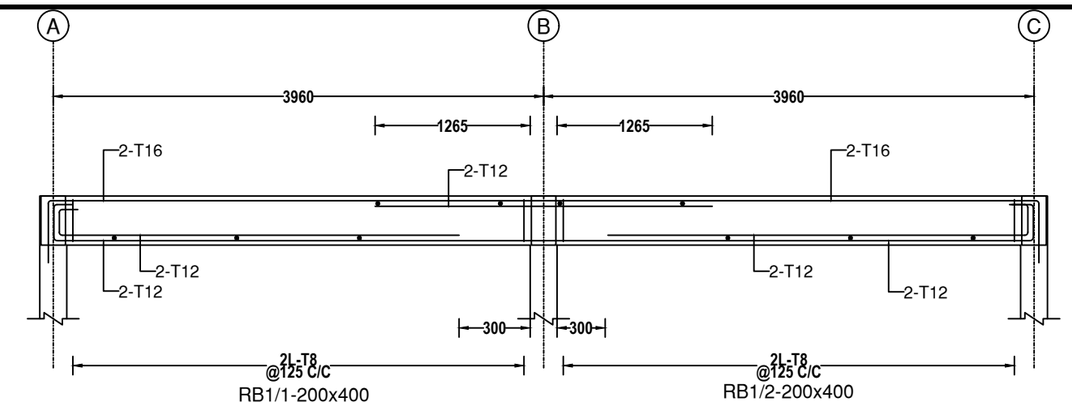
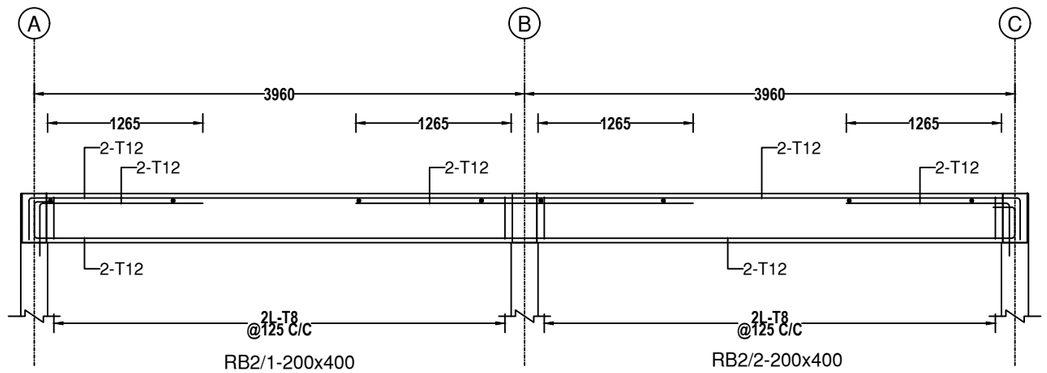
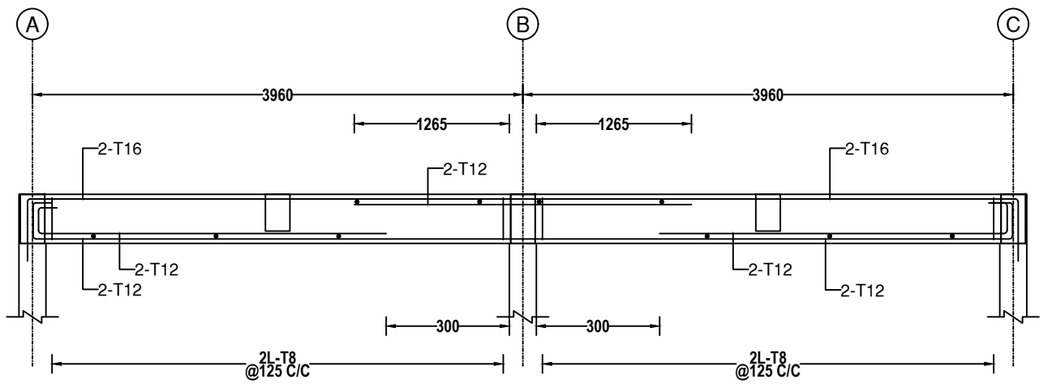


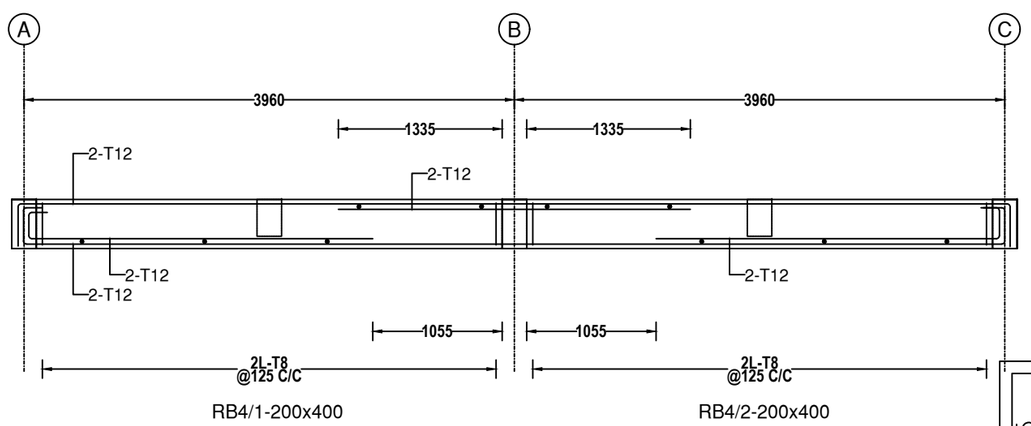
TERRACE BEAM AND SLAB LAYOUT

SCALE 1:100









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M25 Fe 500D

PROJECT

PROPOSED COTTAGE BUILDING FOR MANNAM AYURVEDHA MEDICAL COLLEGE, PANDALAM

CLIENT

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DRAWING TITLE

TERRACE BEAM AND SLAB LAYOUT & DETAILS

REVISON NOTES

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DRAWING NO : **CB-S06/R0**

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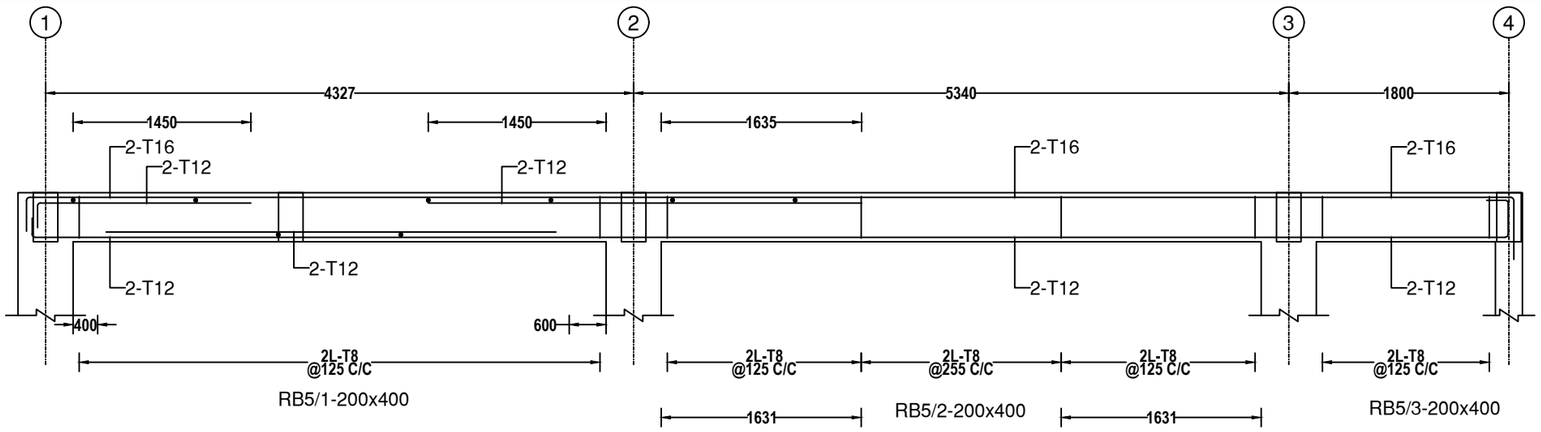

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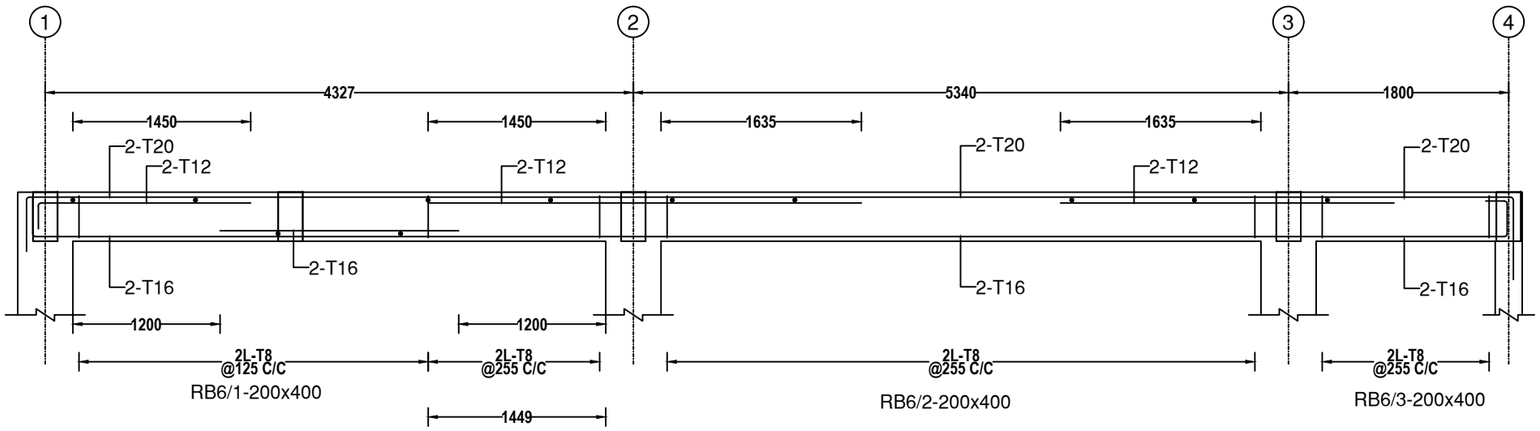
CROSS SECTION
RB7-200x300



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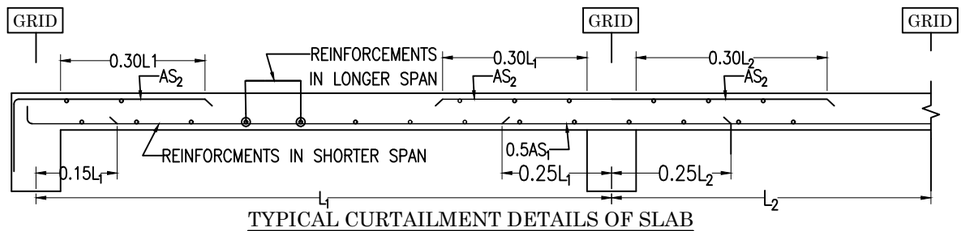
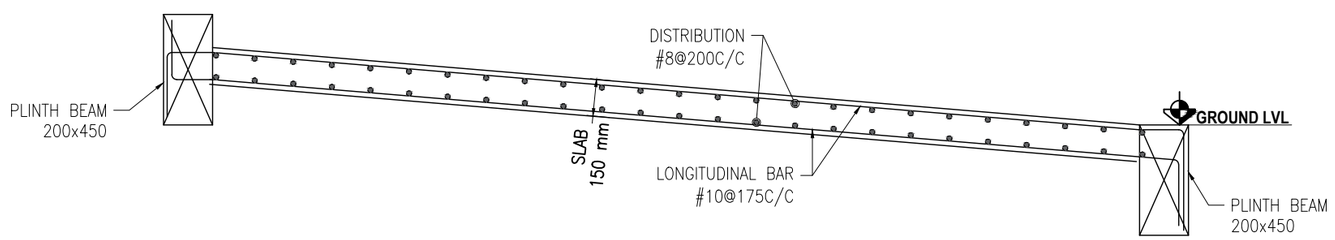


TYPICAL CURTAILMENT DETAILS OF SLAB



TYPICAL RAMP

PROJECT

PROPOSED COTTAGE BUILDING FOR MANNAM AYURVEDHA MEDICAL COLLEGE, PANDALAM

CLIENT

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DRAWING TITLE

TERRACE BEAM AND SLAB LAYOUT & DETAILS

REVISON NOTES

CHIEF CONSULTANT

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File No: **HA2607-45-COTTAGE BLDG**

DRAWING NO : **CB-S07/R0**

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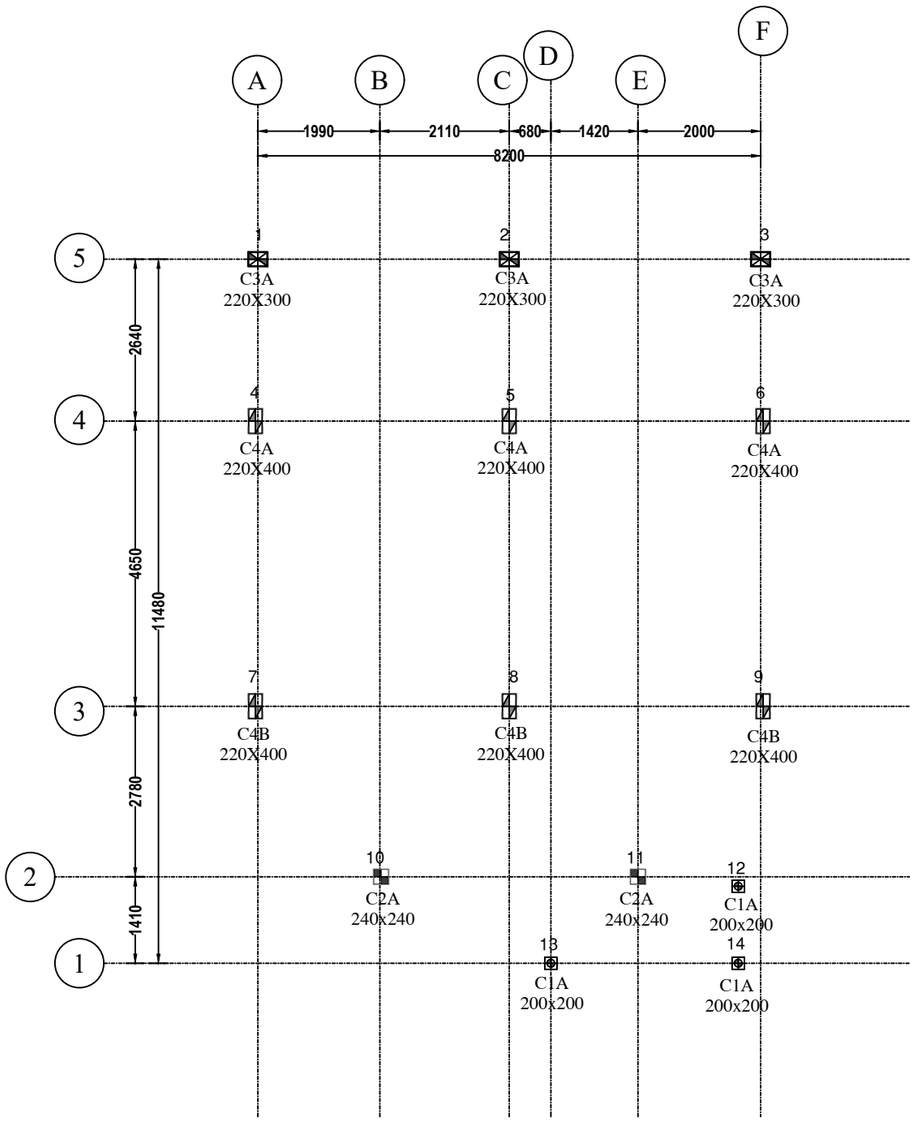
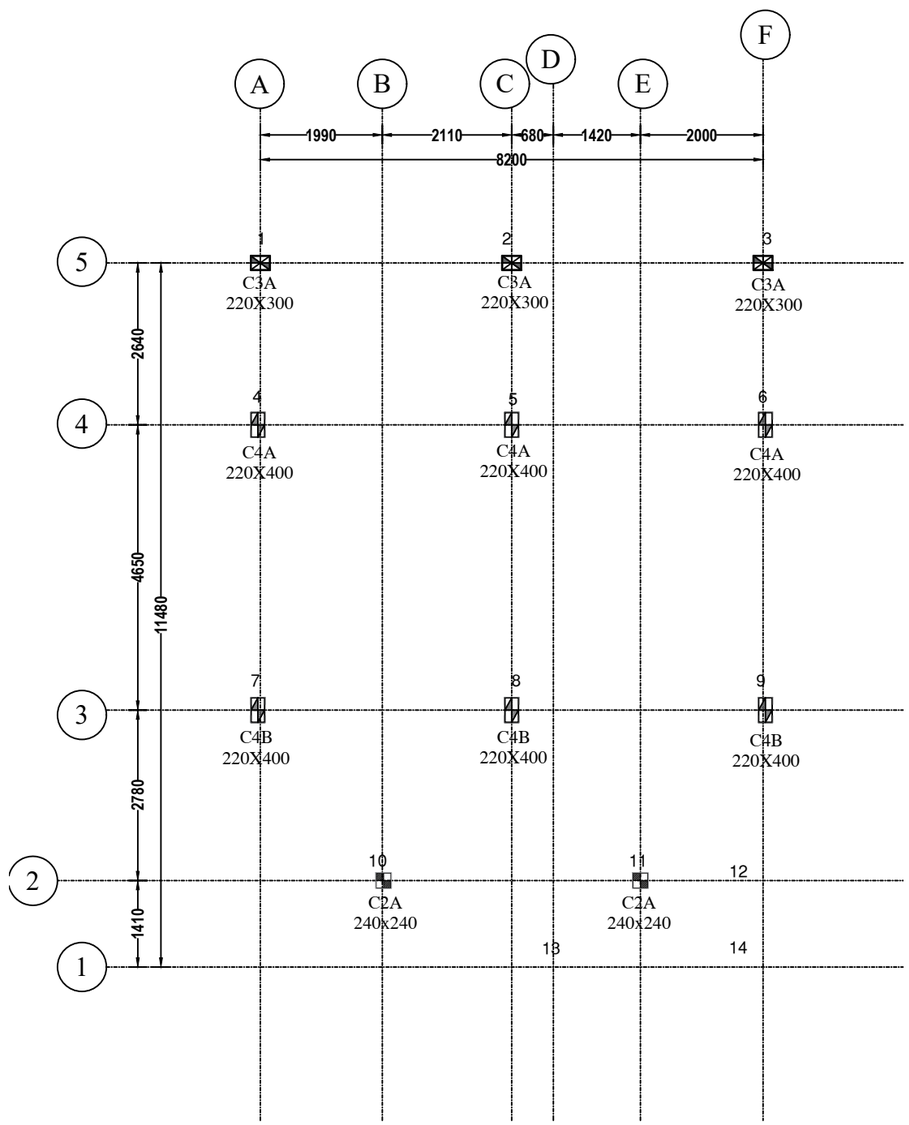


COLUMN LAYOUT- FOUNDATION TO GROUND FLOOR LVL

SCALE 1:100



COLUMN LAYOUT- GROUND FLOOR TO TERRACE LVL

SCALE 1:100

PROJECT
PROPOSED TWIN TREATMENT ROOM FOR MANNAM AYURVEDHA MEDICAL COLLEGE, PANDALAM
CLIENT
MANNAM AYURVEDHA CO-OPERATIVE MEDICAL COLLEGE, PANDALAM
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COLUMN LAYOUTS
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CHECKED BY	HG

GOOD FOR CONSTRUCTION

File No: **HA2607-45-TREATMENT ROOM**

DRAWING NO :	**TR-S01/R0**

DATE : 17.08.2026

STRUCTURAL CONSULTANT

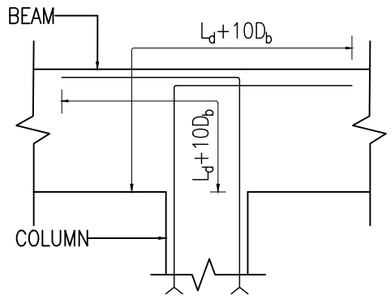
CGL ENGINEERS Pvt Ltd

CGL COMPLEX, PARADISE ROAD, VYTTILA P. O, ERNAKULAM - 682019

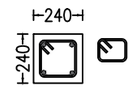
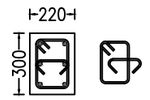
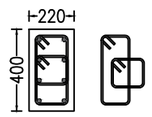
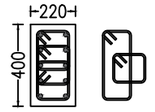
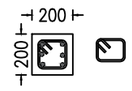
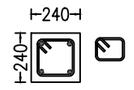
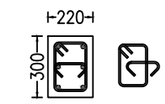
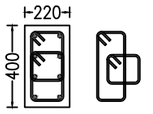
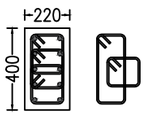
mail@cglengineers.in, Ph:9746745472

M25 Fe 500D

ISO full bleed A3 (297.00 x 420.00 MM)



COLUMN LONGITUDINAL REINFORCEMENT TERMINATION DETAILS

GROUND FLOOR (MAX. 3.4m)					
		MAIN BARS : 4 #16 TIES:#8@175C/C(Norm.)	MAIN BARS : 4 #16+2#12 TIES:#8@175C/C(Norm.)	MAIN BARS : 4 #16+4#12 TIES:#8@175C/C(Norm.)	MAIN BARS : 4 #16+6#12 TIES:#8@175C/C(Norm.)
		240x240	220x300	220x400	220x400
FOUNDATION TO PLINTH BEAM (MAX. 1.5M)					
	MAIN BARS : 6 #12 TIES:#8@175C/C(Norm.) #8@75 C/C(CR)	MAIN BARS : 4 #16 TIES:#8@175C/C(Norm.) #8@75 C/C(CR)	MAIN BARS : 4 #16+2#12 TIES:#8@175C/C(Norm.) #8@75 C/C(CR)	MAIN BARS : 4 #16+4#12 TIES:#8@175C/C(Norm.) #8@75 C/C(CR)	MAIN BARS : 4 #16+6#12 TIES:#8@175C/C(Norm.) #8@75 C/C(CR)
	200X200	240x240	220x300	220x400	220x400
	C1A–3 NO'S	C2A–2 NO'S	C3A–3 NO'S	C4A–3 NO	C4B–3 NO

COLUMN SCHEDULE
NTS

GENERAL NOTES

1. **ALL DIMENSIONS ARE IN MILLIMETERS UNO**
2. **READ THIS DRAWING WITH RELEVANT ARCHITECTURAL DRAWINGS**
3. **FOUNDATION DEPTH SHOWN IS INDICATIVE ONLY AND DEPTH WILL VARY DEPENDING ON THE AVAILABILITY OF LATERITIC CLAYEY SAND WITH GRAVELN>50**
4. **THE SAFE BEARING CAPACITY OF THE GROUND IS TAKEN AS 200 kN/m^2..**
5. **PCC SHALL BE DONE WITH M25 GRADE CONCRETE**
6. **BUILDING IS DESIGNED FOR SINGLE STOREYED COTTAGE BUILDING WITH NO FURTHER EXPANSION**
7. **USE Fe500D STEEL AND M25 GRADE CONCRETE WITH MINIMUM CEMENT CONTENT OF 380 kg/m^3 AND MAXIMUM FREE WATER CEMENT RATIO 0.45 UNO**
8. **THE CONSTRUCTION OF R.C.C. WORKS SHALL COMPLY WITH IS:456-2000. REFER TO IS:456 AND OTHER RELEVANT INDIAN STANDARDS.**
9. **MINIMUM CLEAR COVER TO ALL REINFORCEMENT INCLUDING STIRRUPS; FOUNDATION-50 mm, COLUMNS-40mm, BEAMS-30mm & SLAB-20mm**
10. **LAPS IN REINFORCEMENT:THE MINIMUM LAP LENGTH OF REINFORCEMENT SHALL BE KEPT AS '50D' WHERE "D" IS THE DIAMETER OF BAR. A MAXIMUM OF 50% OF REINFORCEMENT SHALL BE LAPPED AT ANY ONE LOCATION. LAP SPLICES SHALL BE SUITABLY STAGGERED SUCH THAT THE CENTRE-TO-CENTRE DISTANCE OF THE SPLICES IS NOT LESS THAN 1.3 TIMES THE LAP LENGTH.**

M25 Fe 500D

PROJECT

PROPOSED TWIN TREATMENT ROOM FOR MANNAM AYURVEDHA MEDICAL COLLEGE, PANDALAM

CLIENT

MANNAM AYURVEDHA CO-OPERATIVE MEDICAL COLLEGE, PANDALAM

PRIME CONSULTANT

GENERAL NOTES

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6. INCASE OF DISCREPANCY, PLEASE CONTACT THE UNDERSIGNED PERSONS
7. FOLLOW ALL THE INSTRUCTIONS GIVEN IN THE GENERAL NOTES & TYPICAL DETAILS

DRAWING TITLE

COLUMN SCHEDULE AND GENERAL NOTES

REVISON NOTES

CHIEF CONSULTANT

Prof.(Dr.) HARI.G,M.Tech,Ph.D
MOB: 9447097042
hari@cglengineers.in

SIGNATURE

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DESIGNED BY	NITTY SEBASTIAN, M.Tech
CHECKED BY	HG

GOOD FOR CONSTRUCTION

File No: **HA2607-45-TREATMENT ROOM**

DRAWING NO :	**TR-S02/R0**

DATE : 17.08.2026

STRUCTURAL CONSULTANT

CGL ENGINEERS Pvt Ltd
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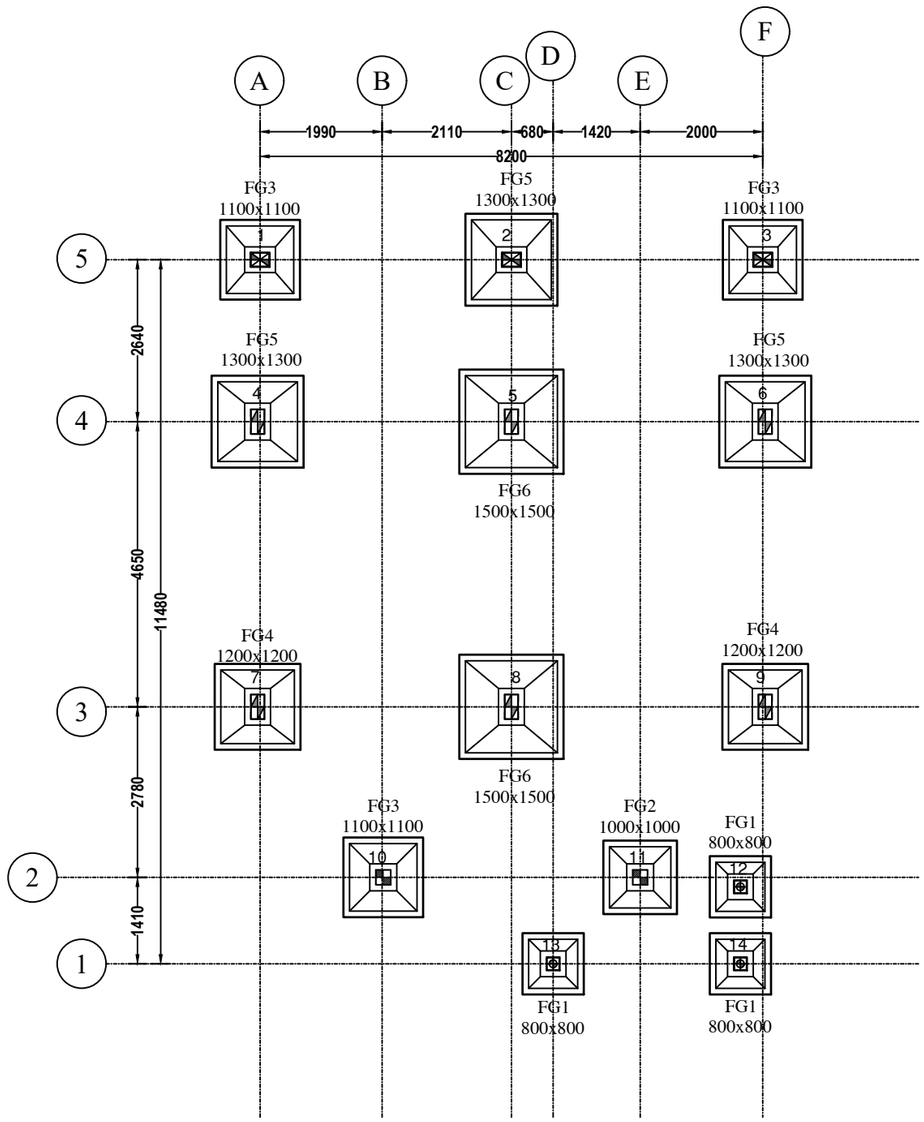
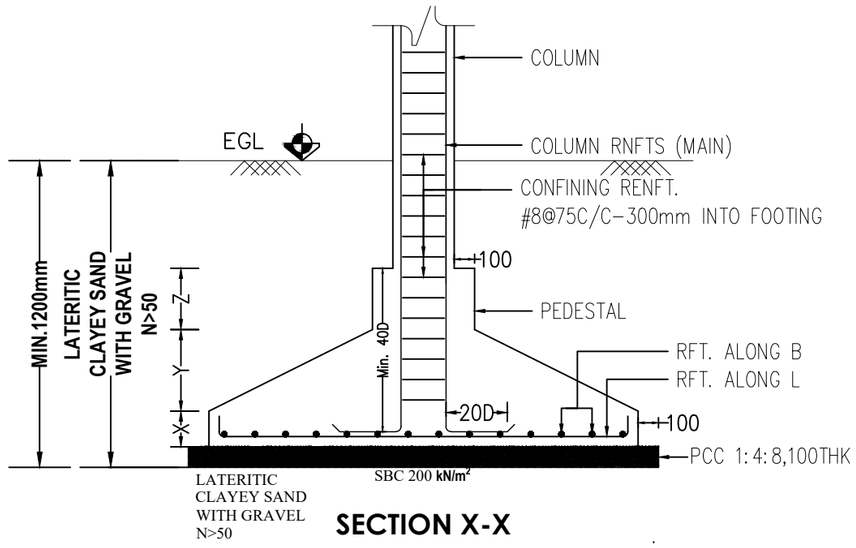
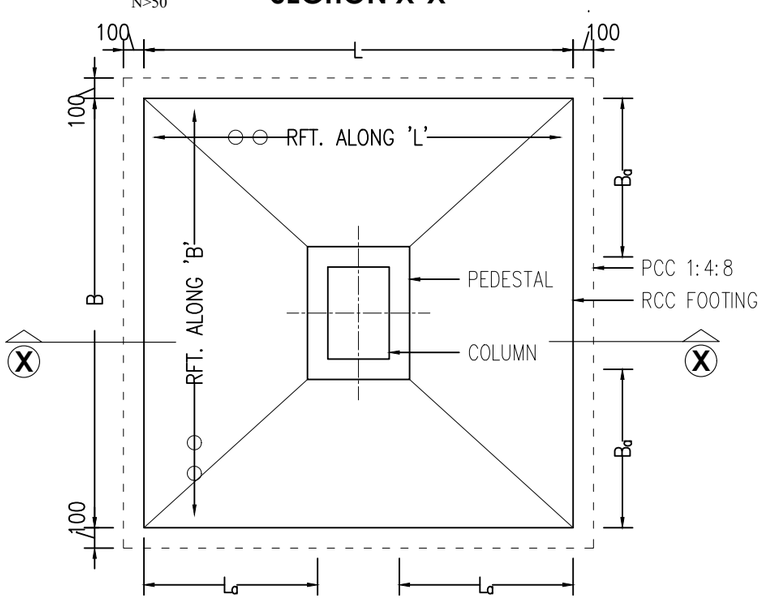


FOUNDATION LAYOUT

SCALE 1:100



SECTION X-X



PLAN

TYP. DETAIL OF COLUMN FOOTING

L : LONGER DIRECTION OF FOOTING
B : SHORTER DIRECTION OF FOOTING

SCHEDULE OF ISOLATED COLUMN FOOTING

SL. NO.	FOOTING NAME	NUMBER OF FOOTINGS	FOOTING DIMENSIONS (mm)					REINFORCEMENTS	
			L	B	X	Y	Z	ALONG 'L'	ALONG 'B'
1	FG1	3	800	800	175	150	400	#10@200 C/C	#10@200 C/C
2	FG2	1	1000	1000	175	150	400	#10@200C/C	#10@200C/C
3	FG3	3	1100	1100	175	150	400	#10@200C/C	#10@200C/C
4	FG4	2	1200	1200	175	175	375	#10@190C/C	#10@190C/C
5	FG5	3	1300	1300	175	225	325	#10@180C/C	#10@180C/C
6	FG6	2	1500	1500	175	275	275	#10@160C/C	#10@160C/C

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7. FOLLOW ALL THE INSTRUCTIONS GIVEN IN THE GENERAL NOTES & TYPICAL DETAILS

DRAWING TITLE

FOUNDATION LAYOUT & DETAILS

REVISON NOTES

CHIEF CONSULTANT

Prof.(Dr.) HARI.G,M.Tech,Ph.D
MOB: 9447097042
hari@cglengineers.in

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File No: **HA2607-45-TREATMENT ROOM**

DRAWING NO : **TR-S03/R0**

DATE : 17.08.2026

STRUCTURAL CONSULTANT

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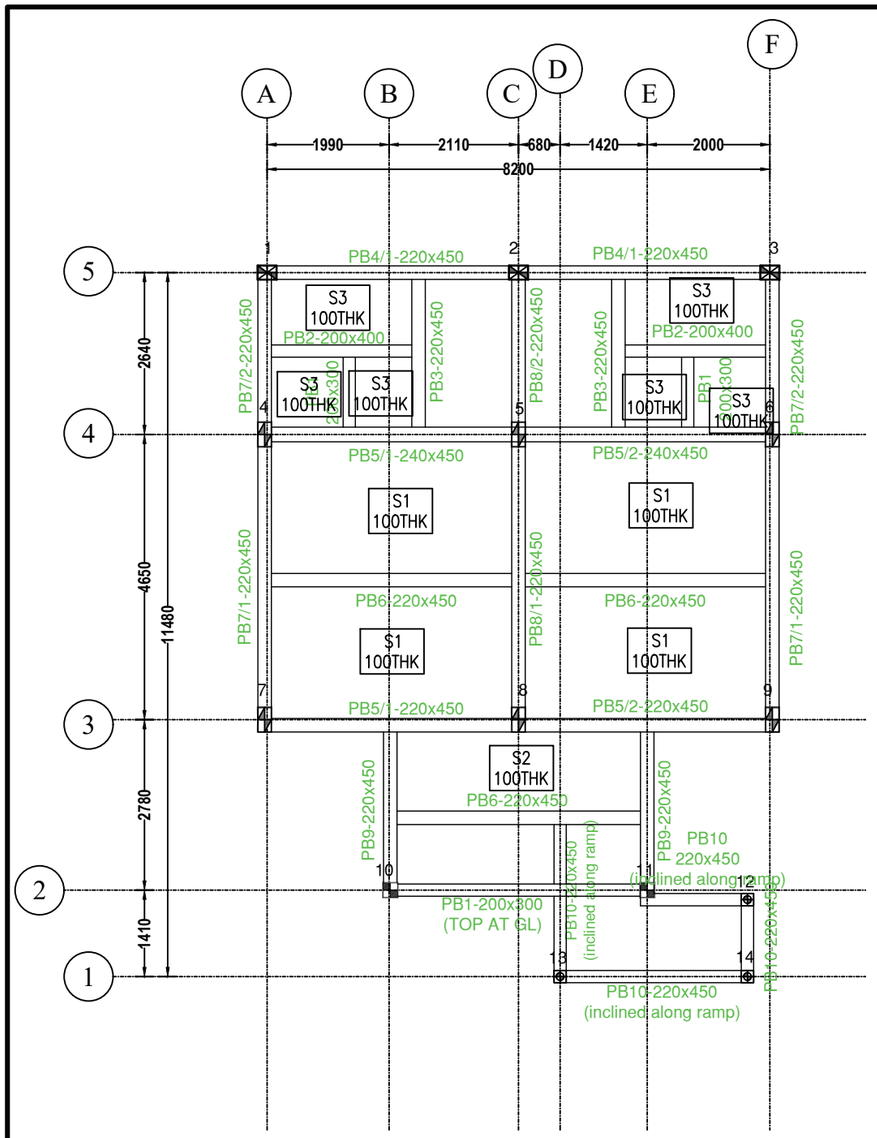
mail@cglengineers.in, Ph:9746745472

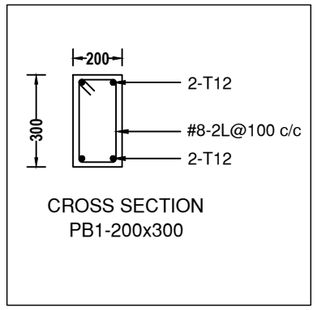
M25 Fe 500D

ISO full bleed A3 (297.00 x 420.00 MM)



PLINTH BEAM LAYOUT

SCALE 1:100



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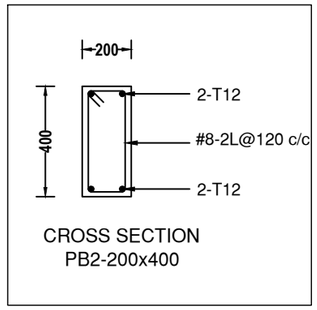

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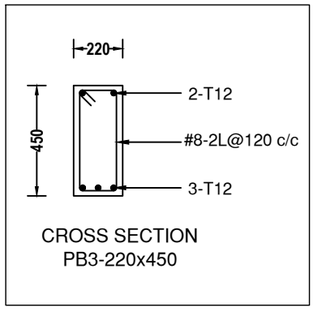

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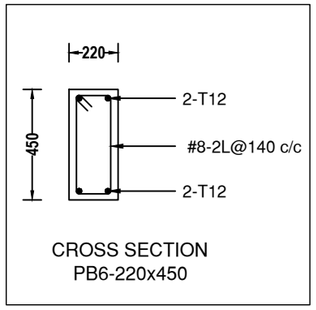

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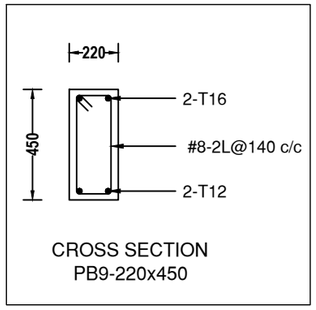

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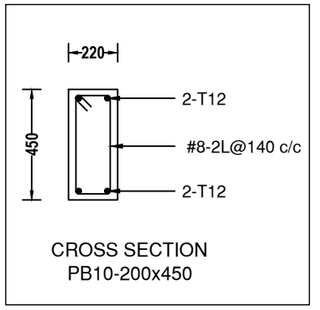

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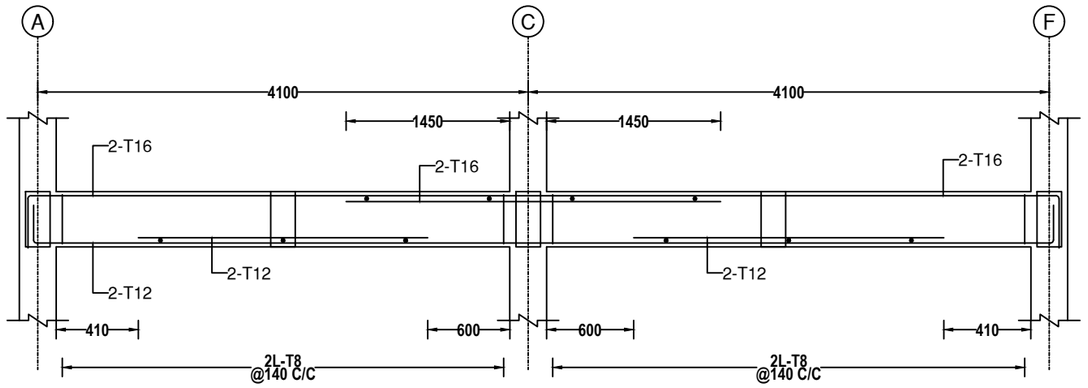
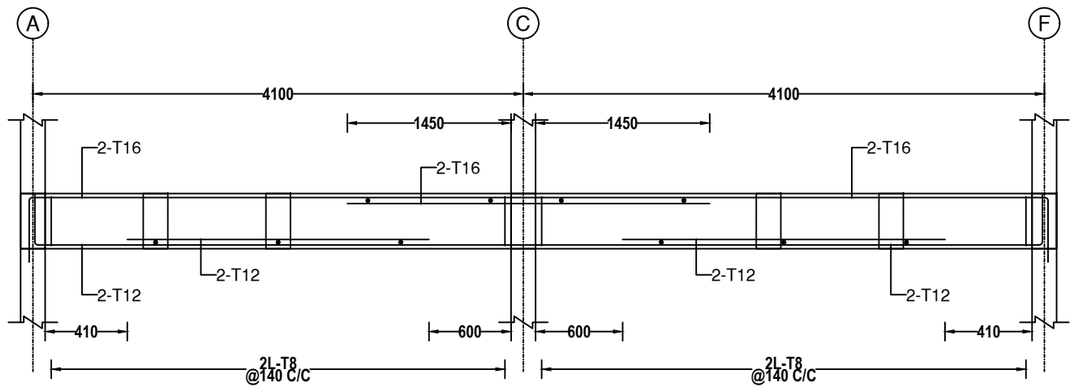
PB10-200x450



PB4/1-220x450

PB4/2-220x450



PB5/1-240x450

PB5/2-240x450

SLAB REINFORCEMENT DETAILS

SLAB DESIGNATION	SLAB THICKNESS	REINFORCEMENT DETAILS				REMARKS
		SHORT SPAN		LONG SPAN		
		MID SPAN (BOTTOM)	SUPPORTS (TOP)	MID SPAN (BOTTOM)	SUPPORTS (TOP)	
S1	100	#8 @ 150 C/C	#8 @ 150 C/C	#8 @ 175 C/C	#8 @ 175 C/C	TWO WAY SLAB
S2	100	#8 @ 150 C/C	#8 @ 150 C/C	#8 @ 200 C/C	#8 @ 200 C/C	ONE WAY SLAB

PROJECT

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PRIME CONSULTANT

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DRAWING TITLE

PLINTH BEAM LAYOUT & DETAILS

REVISON NOTES

CHIEF CONSULTANT

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GOOD FOR CONSTRUCTION

File No: **HA2607-45-TREATMENT ROOM**

DRAWING NO : **TR-S04/R0**

DATE : 17.08.2026

STRUCTURAL CONSULTANT

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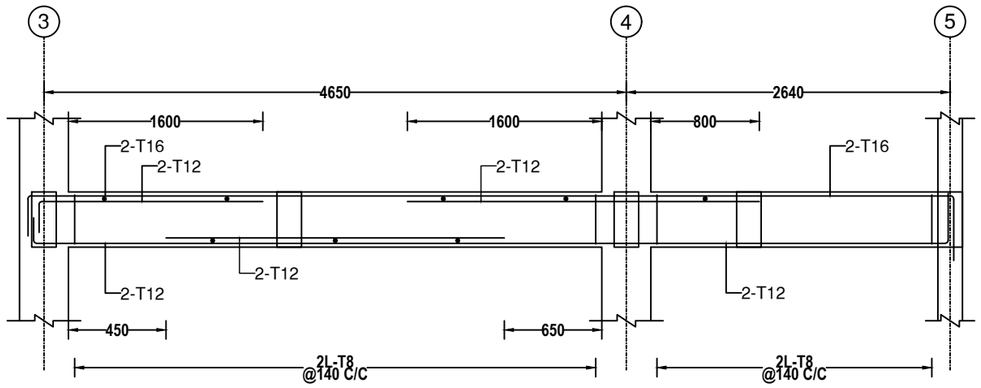
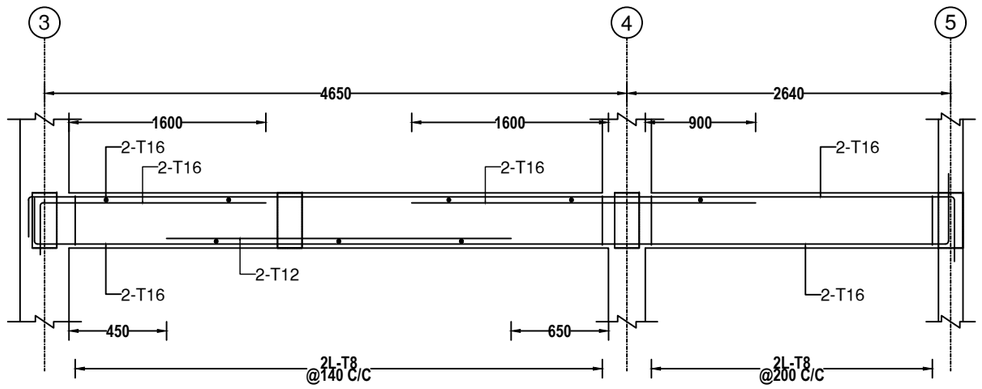


PB7/1-220x450 PB7/2-220x450



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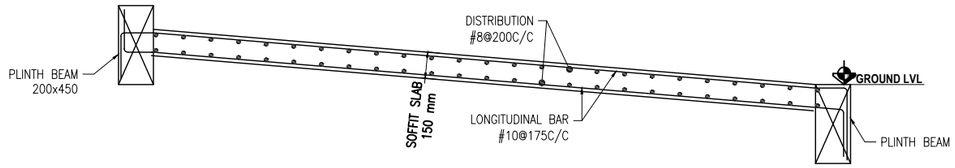
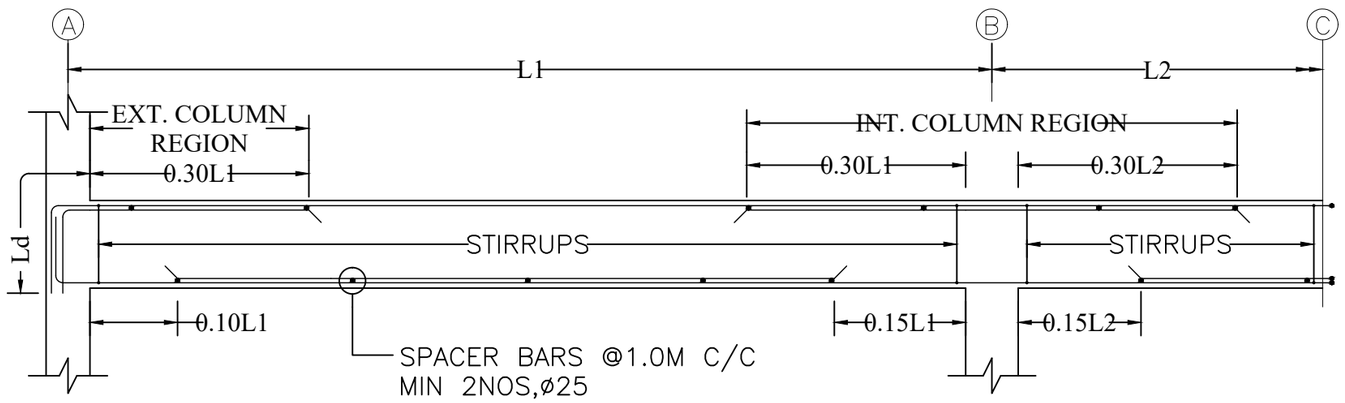
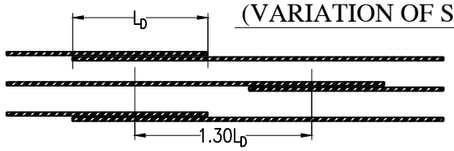


TYPICAL RAMP

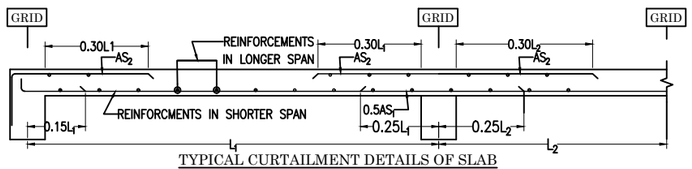


TYPICAL BEAM DETAILS
(VARIATION OF SPAN SHOULD NOT BE MORE THAN 15%)



LAPING DETAILS OF BEAMS

FOR BEAMS,THE LAPPING OF
1. TOP REINFORCEMENT SHALL DONE L/3 AWAY FROM JOINTS,PREFERABLY AT MID SPAN
2. BOTTOM REINFORCEMENT SHALL DONE AWAY FROM MID SPAN, PREFERABLY NEAR JOINTS BUT OUTSIDE JOINTS



TYPICAL CURTAILMENT DETAILS OF SLAB

M25
Fe 500D

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DRAWING TITLE

PLINTH BEAM DETAILS & TYPICAL DETAILS AND TYPICAL RAMP DETAILS

REVISON NOTES

CHIEF CONSULTANT

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CHECKED BY	HG

GOOD FOR CONSTRUCTION

File No: **HA2607-45-**TREATMENT ROOM

DRAWING NO : **TR-S05/R0**

DATE : 17.08.2026

STRUCTURAL CONSULTANT

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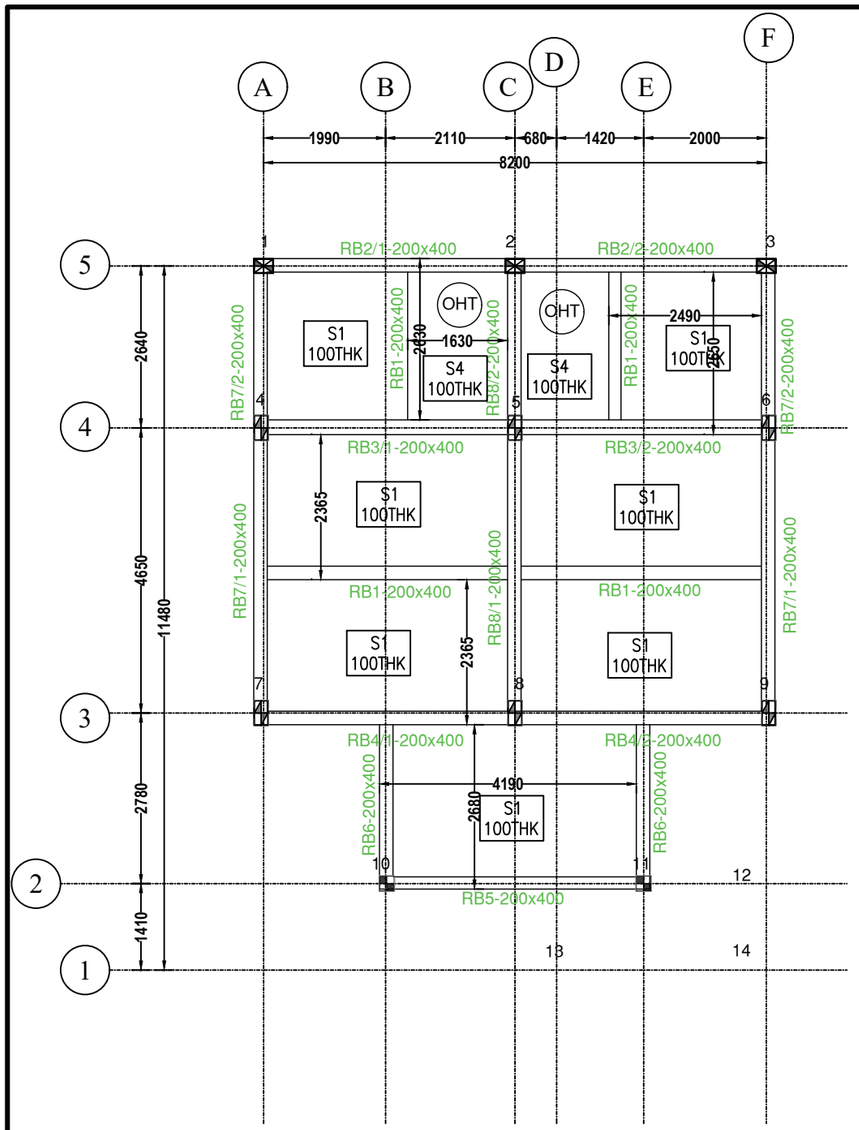
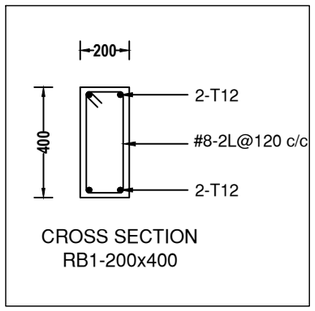


ROOF BEAM LAYOUT

SCALE 1:100



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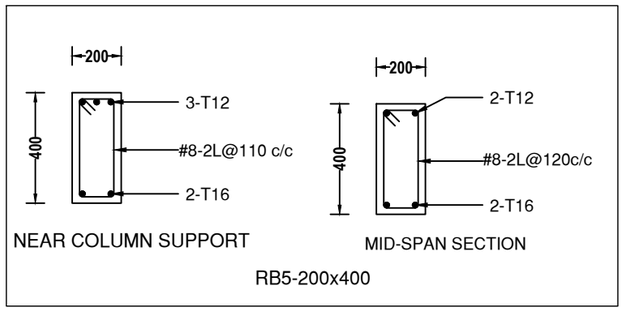
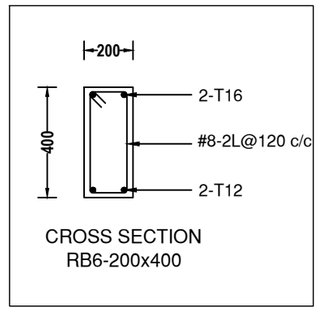
RB1-200x400



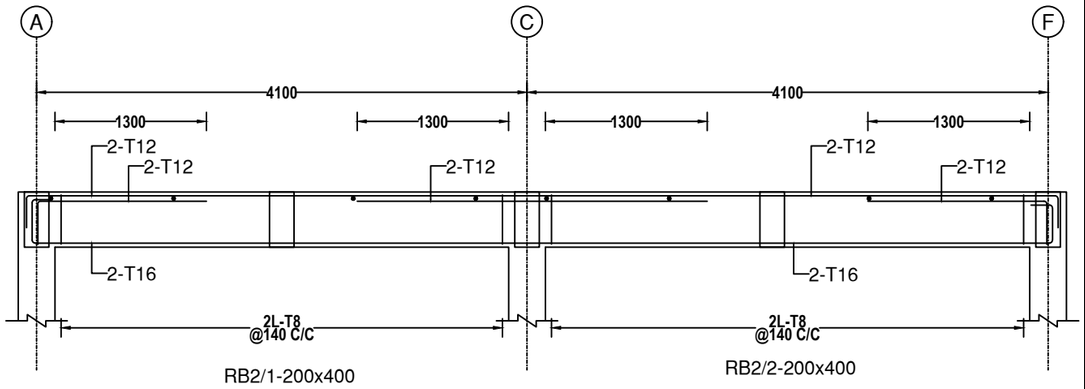
NEAR COLUMN SUPPORT

MID-SPAN SECTION

RB5-200x400

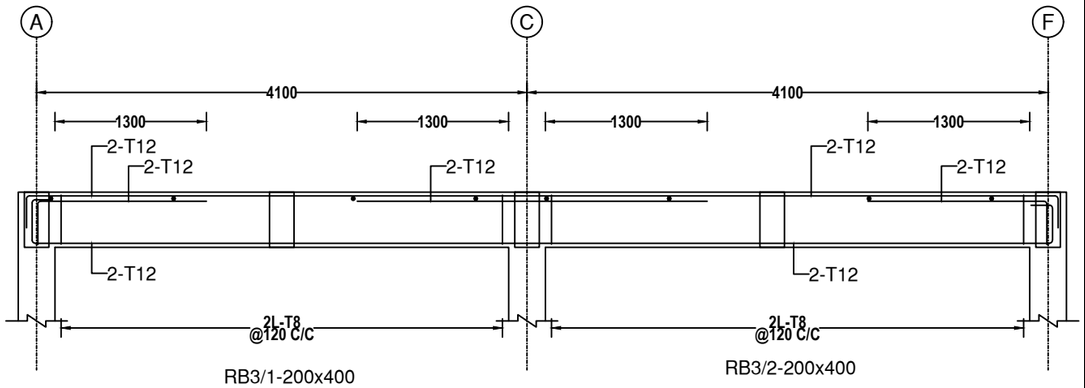


CROSS SECTION
RB6-200x400



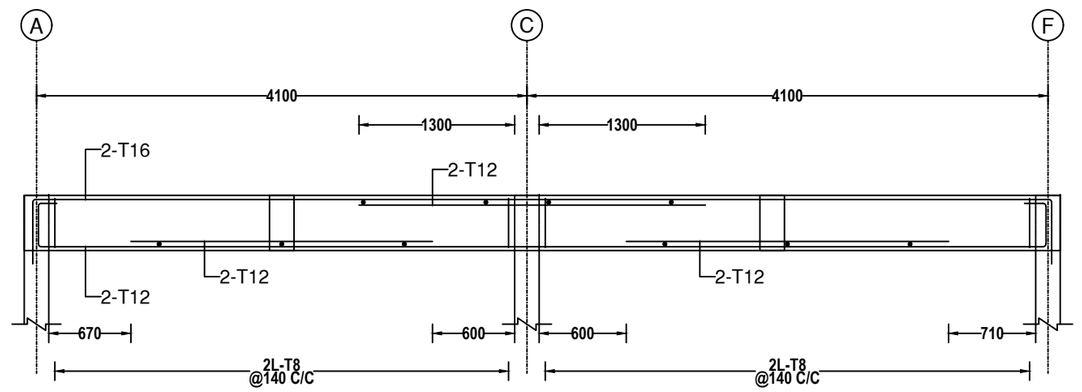
RB2/1-200x400

RB2/2-200x400



RB3/1-200x400

RB3/2-200x400



RB4/1-200x400

RB4/2-200x400

SLAB REINFORCEMENT DETAILS

SLAB DESIGNATION	SLAB THICKNESS	REINFORCEMENT DETAILS				REMARKS
		SHORT SPAN		LONG SPAN		
		MID SPAN (BOTTOM)	SUPPORTS (TOP)	MID SPAN (BOTTOM)	SUPPORTS (TOP)	
S1	100	#8 @ 150 C/C	#8 @ 150 C/C	#8 @ 175 C/C	#8 @ 175 C/C	TWO WAY SLAB
S2	100	#8 @ 150 C/C	#8 @ 150 C/C	#8 @ 200 C/C	#8 @ 200 C/C	ONE WAY SLAB
S3	110	#8 @ 150 C/C	#8 @ 150 C/C	#8 @ 175 C/C	#8 @ 175 C/C	TWO WAY SLAB
S4	100	#8 @ 150 C/C	#8 @ 150 C/C	#8 @ 200 C/C	#8 @ 200 C/C	DOUBLE LAYER

M25
Fe 500D

PROJECT

PROPOSED TWIN TREATMENT ROOM FOR MANNAM AYURVEDHA MEDICAL COLLEGE, PANDALAM

CLIENT

MANNAM AYURVEDHA CO-OPERATIVE MEDICAL COLLEGE, PANDALAM

PRIME CONSULTANT

GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE METERS UNO
2. DRAWING NOT TO BE SCALED OFF, ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED
3. USE M25 GRADE CONCRETE AND Fe500D STEEL UNO
4. READ THIS DRAWING WITH RELEVANT ARCHITECTURAL DRAWINGS
5. MINIMUM CLEAR COVER TO ALL REINFORCEMENT INCLUDING STIRRUPS; FOUNDATION-50 mm, COLUMNS-40mm, BEAMS-30mm & SLAB-20mm
6. INCASE OF DISCREPANCY, PLEASE CONTACT THE UNDERSIGNED PERSONS
7. FOLLOW ALL THE INSTRUCTIONS GIVEN IN THE GENERAL NOTES & TYPICAL DETAILS

DRAWING TITLE

ROOF BEAM AND SLAB LAYOUT & DETAILS

REVISON NOTES

CHIEF CONSULTANT

Prof.(Dr.) HARI.G,M.Tech,Ph.D

MOB: 9447097042

hari@cglengineers.in

SIGNATURE

DRAWN BY	NITTY SEBASTIAN, M.Tech
DESIGNED BY	NITTY SEBASTIAN, M.Tech
CHECKED BY	HG

GOOD FOR CONSTRUCTION

File No: **HA2607-45-TREATMENT ROOM**

DRAWING NO : **TR-S06/R0**

DATE : 17.08.2026

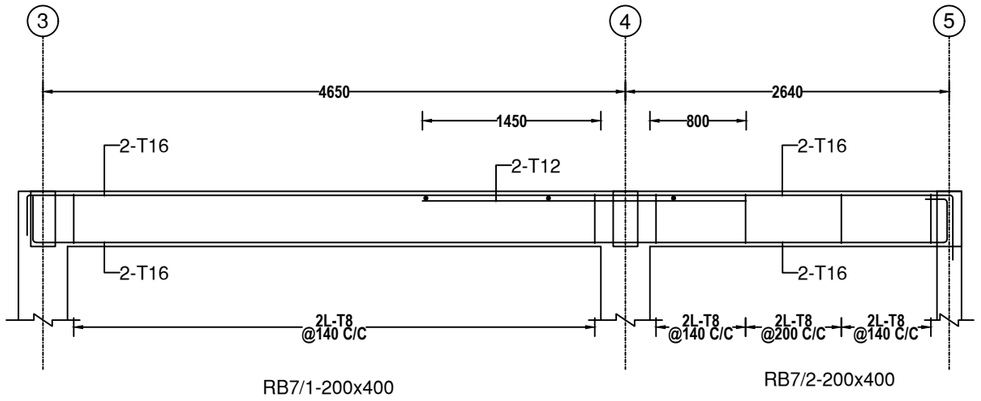
STRUCTURAL CONSULTANT

CGL ENGINEERS Pvt Ltd

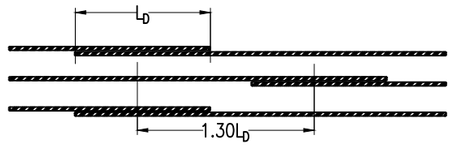
CGL COMPLEX, PARADISE ROAD,
VYTTILA P. O, ERNAKULAM - 682019

mail@cglengineers.in, Ph:9746745472

ISO full bleed A3 (297.00 x 420.00 MM)

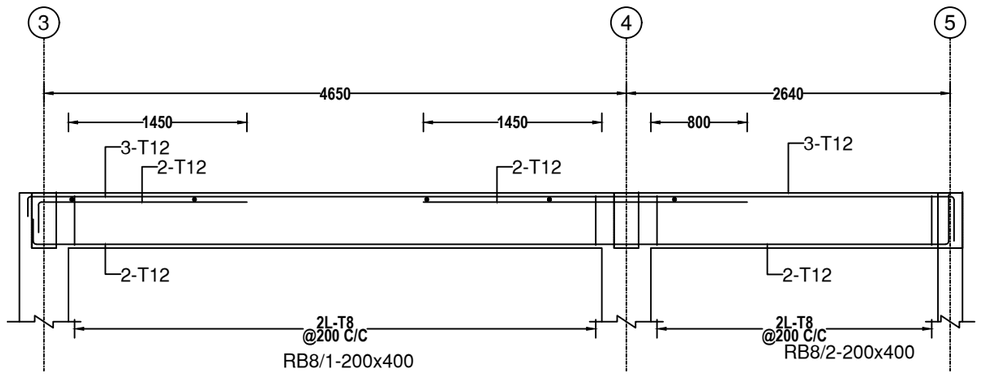


RB7/1-200x400 RB7/2-200x400

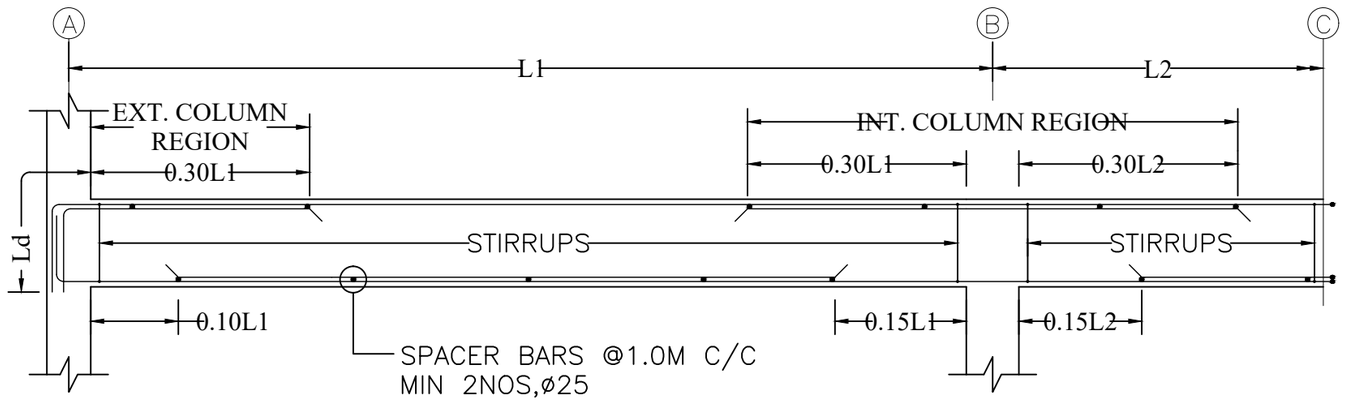


LAPING DETAILS OF BEAMS

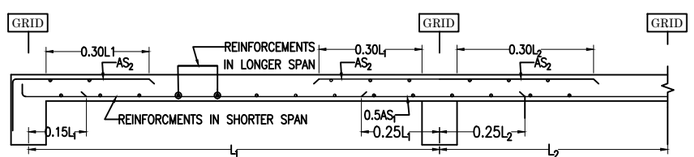
FOR BEAMS,THE LAPPING OF
1. TOP REINFORCEMENT SHALL DONE L/3 AWAY FROM JOINTS,PREFERABLY AT MID SPAN
2. BOTTOM REINFORCEMENT SHALL DONE AWAY FROM MID SPAN, PREFERABLY NEAR JOINTS BUT OUTSIDE JOINTS



RB8/1-200x400 RB8/2-200x400



TYPICAL BEAM DETAILS
(VARIATION OF SPAN SHOULD NOT BE MORE THAN 15%)



TYPICAL CURTAILMENT DETAILS OF SLAB

PROJECT

PROPOSED TWIN TREATMENT ROOM FOR MANNAM AYURVEDHA MEDICAL COLLEGE, PANDALAM

CLIENT

MANNAM AYURVEDHA CO-OPERATIVE MEDICAL COLLEGE, PANDALAM

PRIME CONSULTANT

GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE METERS UNO
2. DRAWING NOT TO BE SCALED OFF, ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED
3. USE M25 GRADE CONCRETE AND Fe500D STEEL UNO
4. READ THIS DRAWING WITH RELEVANT ARCHITECTURAL DRAWINGS
5. MINIMUM CLEAR COVER TO ALL REINFORCEMENT INCLUDING STIRRUPS; FOUNDATION-50 mm, COLUMNS-40mm, BEAMS-30mm & SLAB-20mm
6. INCASE OF DISCREPANCY, PLEASE CONTACT THE UNDERSIGNED PERSONS
7. FOLLOW ALL THE INSTRUCTIONS GIVEN IN THE GENERAL NOTES & TYPICAL DETAILS

DRAWING TITLE

ROOF BEAM DETAILS & TYPICAL DRAWINGS

REVISON NOTES

CHIEF CONSULTANT

Prof.(Dr.) HARI.G,M.Tech,Ph.D
MOB: 9447097042
hari@cglengineers.in

SIGNATURE

DRAWN BY	NITTY SEBASTIAN, M.Tech
DESIGNED BY	NITTY SEBASTIAN, M.Tech
CHECKED BY	HG

GOOD FOR CONSTRUCTION

File No: **HA2607-45-TREATMENT ROOM**

DRAWING NO : **TR-S07/R0**

DATE : 17.08.2026

STRUCTURAL CONSULTANT

CGL ENGINEERS Pvt Ltd
CGL COMPLEX, PARADISE ROAD,
VYTTILA P. O, ERNAKULAM - 682019
mail@cglengineers.in, Ph:9746745472

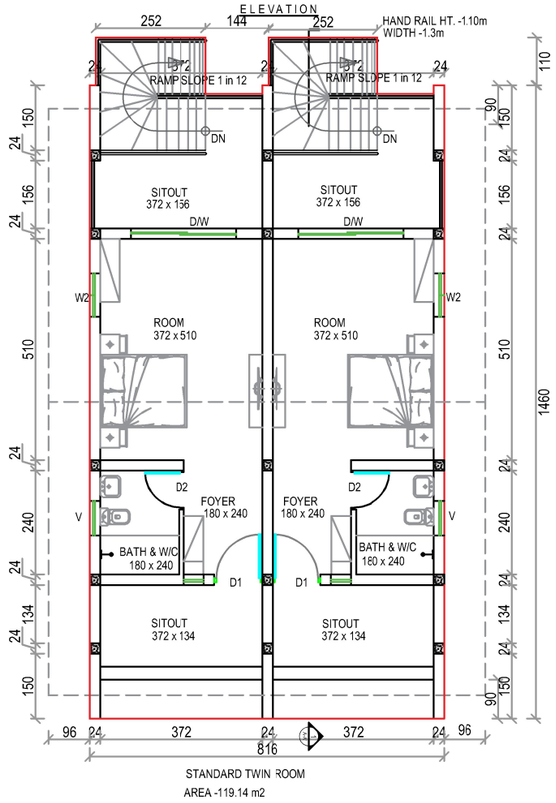
M25 Fe 500D

ISO full bleed A3 (297.00 x 420.00 MM)

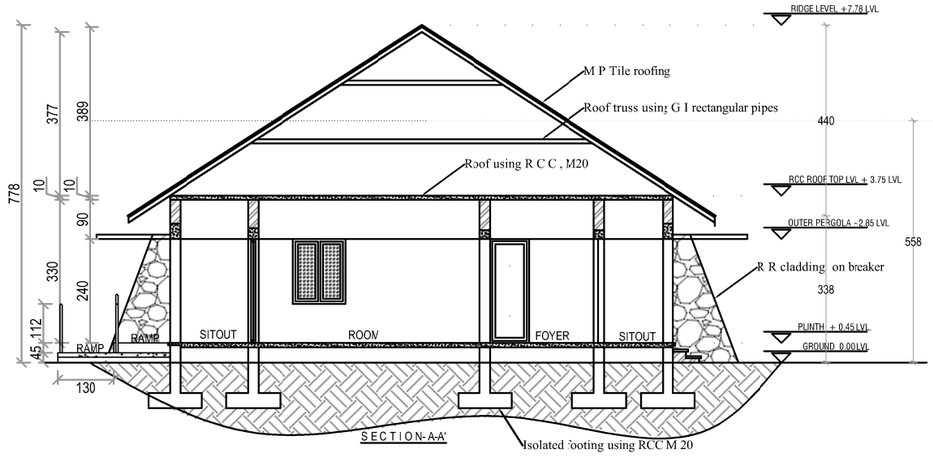
Sl.26-35 | REGULARISATION OF EXISTING BUILDINGS AND PROPOSED NEW BUILDINGS AT MANNAM AYURVEDA CO-OPERATIVE MEDICAL COLLEGE CAMPUS AT PANDALAM MUNCIPALITY



ELEVATION



STANDARD TWIN ROOM
AREA -119.14 m2



SECTION-A-A'

PLAN, SECTION & ELEVATION
SCALE 1:100

SCHEDULE OF JOINERY			
DOORS	DESCRIPTION	SIZE	No.
D	PANELED DOOR	110 x 240	2
D2	U P V C DOOR	80 x 240	2
D/W	U P V C DOOR CUM WINDOW	240 x 240	2
WINDOWS			
W2	FULLY GLAZED WINDOW	120 x 150	2
W1	FULLY GLAZED WINDOW	40 x 150	2
VENTILATORS			
V	U P V C VENTILATOR	80 x 60	2

SPECIFICATIONS
FOUNDATION-Isolated footing using R C C M20
PLINTH BEAM - R C C , M20
FLOORING - Using P C C 1:2:4 10 cm thick
WALLS - Using Cement concrete blocks 30 x 20 x 20 cm size blocks in cement mortar 1:6
ROOF - Using R C C M20, 12 cm thick as per design
ROOF Covering - Using M P tiles on rectangular G I tubes as per design
Plastering - Walls using cement mortar 1:4 12 mm thick
Plastering - Ceiling using cement mortar 1:3, 9 mm thick

Building	Occupancy	Building Number	Area of existing portion authorised / Area to be regularised / Proposed	Built-up Area in Sq m GF	Floor Area in Sq m GF	Coverage Area in Sq m
Standard Twin Room	Group - F		Proposed Building	124.17	98.04	124.17

TOTAL AREA OF TWIN ROOM - 124.17Sq m
TOTAL NUMBER OF TWIN ROOM BLOCKS - 10
TOTAL NUMBER OF ROOMS - 20 No.
TOTAL AREA OF ROOMS - 1241.70 Sq m

A2

EAST
NORTH

NOTES
● All dimensions in centimeters unless otherwise specified

PURPOSE | Verified by
- ■ FOR APPROVAL
- ☐ FOR CONSTRUCTION
- ☐ FOR REFERENCE
- ☐ FOR ESTIMATION

No.	DATE	REVISION

DRAWING TITLE

STANDARD TWIN ROOM PLAN

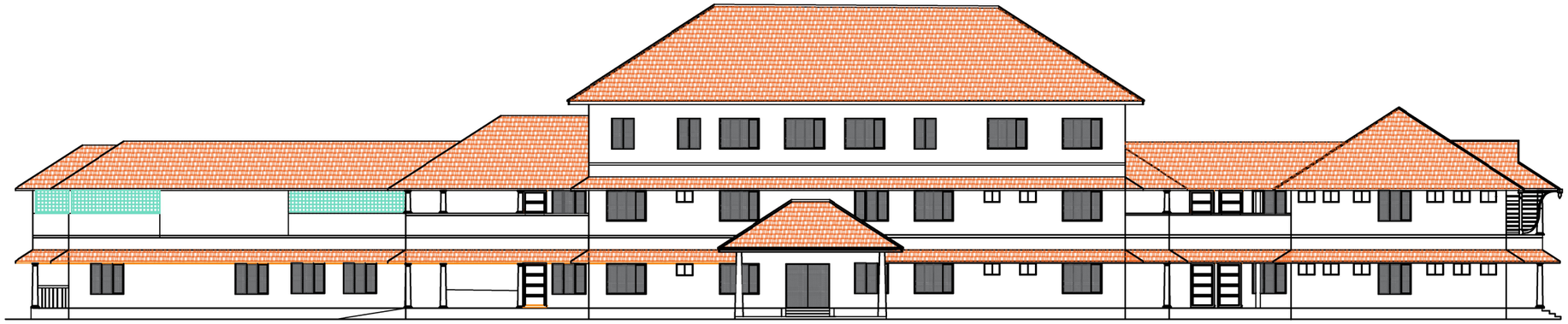
SCALE:1:100
All Dimensions are in cm

26-35. PROPOSED CONSTRUCTION OF STANDARD TWIN ROOM PLAN

APPLICANT	LAND DETAILS	APPENDIX – J1 CERTIFICATE	APPENDIX – J2 CERTIFICATE
NAME : DIRECTOR	RE-SURVEY NO : 609, BLOCK -1	Certified that: (i) the plot boundaries, measurements and other details shown in the site plan are correct and (ii) the drawings are in conformity with the provisions of the Master Plan/Detailed Town Planning Scheme/ Interim Development Order as applicable under the Kerala Town and Country Planning Act 2016. (iii) the drawings are in conformity with the provisions of the Kerala Municipality Building Rules, 2019 and other applicable statutes.	Certified that: (i) the document(s) in support of the ownership of the plot has/have been verified and that the applicant (s) has/have every right of construction in this plot; (ii) the plot boundaries, measurements and other details shown in the site plan have been verified at site and found correct and (iii) the drawings are in conformity with the provisions of the Master Plan/ Detailed Town Planning Scheme/ Interim Development Order as applicable under the Kerala Town and Country Planning Act 2016. (iv) the drawings are in conformity with the provisions of the Kerala Municipality Building Rules,2019 and other applicable statutes.. (Signature) ..... MunicipalCorporation / Municipal Council / Town Panchayat Office Seal
ADDRESS : Mannam Ayurveda Co-operative	OLD-SURVEY NO :393,398,399,412,413,414,423,424,425		
: - Medical College Hospital	EXTEND OF LAND : 33.2850 Hectares		
(A unit of Mannam Sugar Mills)	VILLAGE : Pandalam		
Pandalam -689501	MUNCIPALITY : Pandalam		
SIGNATURE OF APPLICANT	WARD : 27		
	TALUK : Adoor		
	DISTRICT : Pathanamthitta		
	STATE : Kerala		

SL. 41

REGULARISATION OF EXISTING BUILDINGS AND PROPOSED NEW BUILDINGS AT MANNAM AYURVEDA CO-OPERATIVE MEDICAL COLLEGE CAMPUS AT PANDALAM MUNCIPALITY

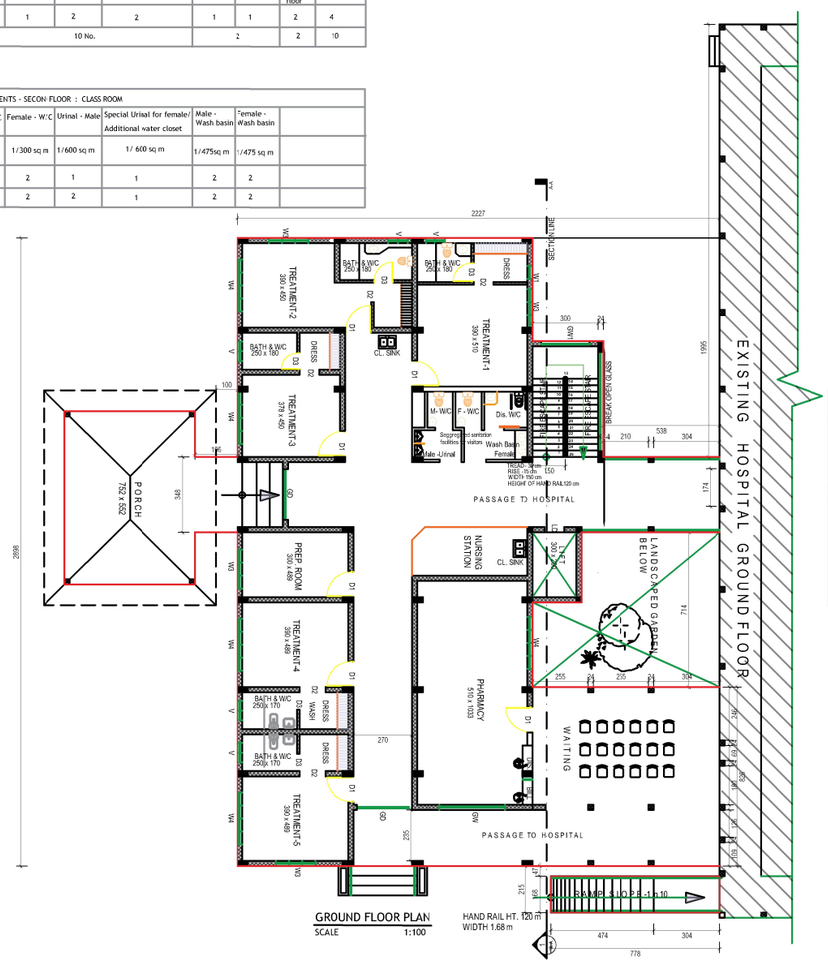


SOUTH SIDE ELEVATION

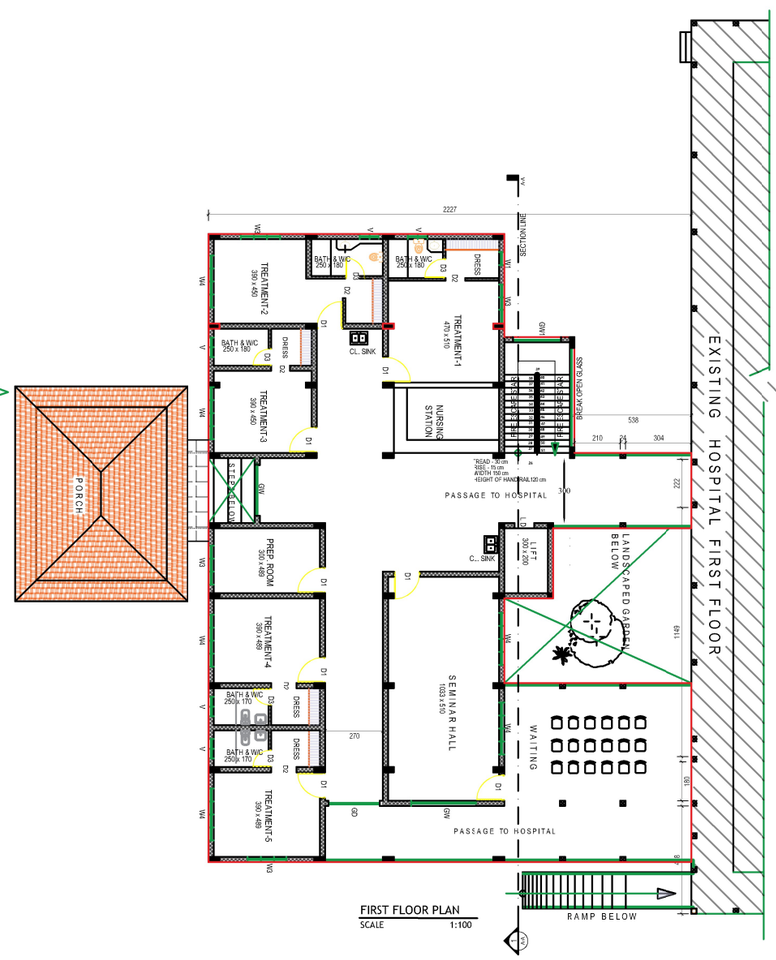
SANITATION REQUIREMENTS - EXTENSION TO THE HOSPITAL BUILDING [OP Area in the GF anc FF]								
Occupancy-C	Male - W/C	Female - W:C	Urinal - Male	Special Urinal for female/ Additional water closet	Male - Wash basin	Female - Wash basin	Cleaners sink	Water Tap in the vicinity of watercloset & Urinals
Floor Area-sf GF & FF 1056.34 sq m	1/1200 sq m	1/1200 sq m	1/600 sq m	1/ 600 sq m	1/1200sq m	1/1200 sq m	1 per floor	1/300 sq m
Total Required	1	1	2	2	1	1	2	4
Provided	10 No.				2		2	10

SANITATON REQUIREMENTS - SECON FLOOR : CLASS ROOM							
Occupancy-C	Male - W/C	Female - W:C	Urinal - Male	Special Urinal for female/ Additional water closet	Male - Wash basin	Female - Wash basin	
Floor Area-sf GF & FF 1056.34 sq m	1/475 sq m	1/300 sq m	1/600 sq m	1/ 600 sq m	1/475sq m	1/475 sq m	
Total Required	2	2	1	1	2	2	
Provided	2	2	2	1	2	2	

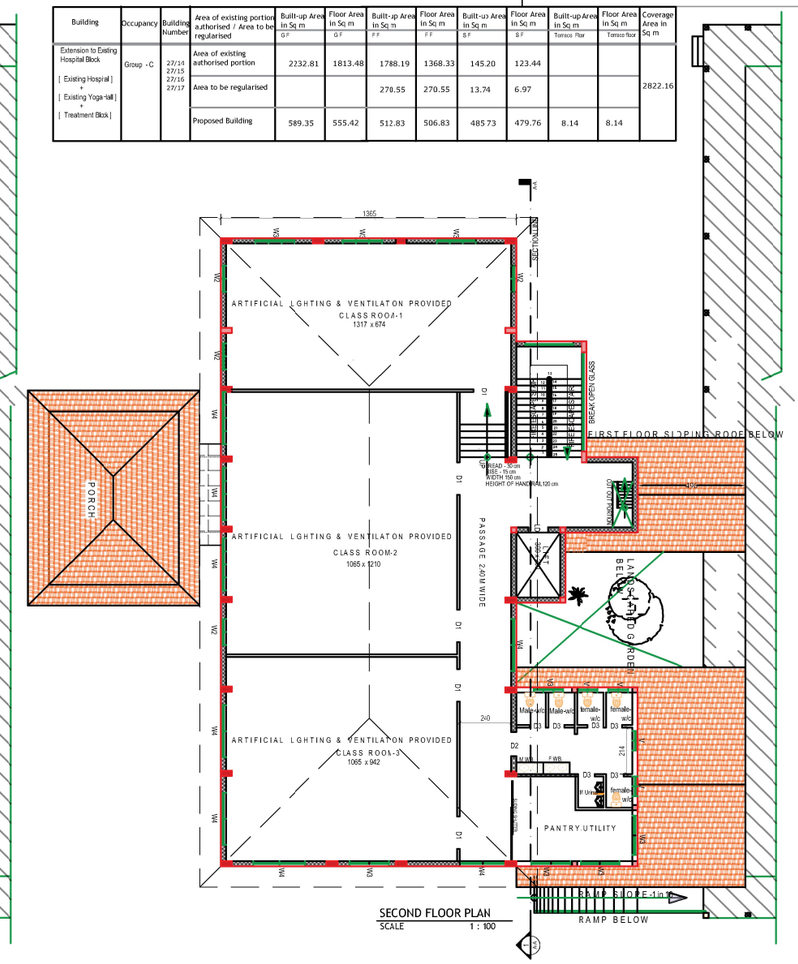
Building	Occupancy	Building Number	Area of existing portion authorised / Area to be regularised	Built-up Area in Sq m G F	Floor Area in Sq m G F	Built-up Area in Sq m F F	Floor Area in Sq m F F	Built-up Area in Sq m S F	Floor Area in Sq m S F	Built-up Area in Sq m Terrace Floor	Floor Area in Sq m Terrace floor	Coverage Area in Sq m
Extension to Exsting Hospital Block [Existing Hospital] + [Existing Yoga-hall] + [Treatment Blck]	Group - C	27/14 27/15 27/16 27/17	Area of existing authorised portion	2232.81	1813.48	1788.19	1368.33	145.20	123.44			2822.16
			Area to be regularised			270.55	270.55	13.74	6.97			
			Proposed Building	589.35	555.42	512.83	506.83	485 73	479.76	8.14	8.14	



GROUND FLOOR PLAN
SCALE 1:100



FIRST FLOOR PLAN
SCALE 1:100



SECOND FLOOR PLAN
SCALE 1 : 100

41.[A] EXTENSION TO EXISTING HOSPITAL BLOCK - (Existing authorised portion of Hospital + Area to be regularised + Proposed portion)

APPLICANT	LAND DETAILS	APPENDIX – J1 CERTIFICATE	APPENDIX – J2 CERTIFICATE
NAME : DIRECTOR	RE-SURVEY NO : 509, BLOCK -1	Certified that: (i) the plot boundaries, measurements and other details shown in the site plan are correct and (ii) the drawingsare in conformity with the provisions of the Master Plan/Detailed Town Planning Scheme/ Interim Development Order as applicable under the Kerala Town and Country Planning Act 2016. (iii) the drawingsare in conformity with the provisions of the Kerala Municipality Building Rules, 2019 and other applicablestatutes.	Certified that: (i) the document(s) in support of the ownership of the plot has/have been verified and that the applicant (s)has/have every right of construction in this plot. (ii) the plot boundares, measurements and otherdetails shown in the site plan have been verified at site and found correct and (iii) the drawings are in conformity with the provisons of the Master Plan/ Detailed Town Planning Scheme/Interim Development Order as applicable under the Kerala Town and Country Planning Ac 2016. (iv) the drawings are in conformity with the provisons of the Kerala Municipality Building Rules,2019 and other applicable statutes. (Signature) ..... MunicipalCorporation / Municipal Council / Town Panchayat Office Seal
ADDRESS : Mannam Ayurveda Co-operative	OLD-SURVEY NO:393,398,399,412,413,414,423,424,425		
: - Medical College Hospital	EXTEND OF LAND : 33.2850 Hectares		
(A unt of Mannam Sugar Mills)	VILLAGE : Pandalam		
Pandalam -689501	MUNCIPALITY : Pandalam		
SIGNATURE OF APPLICANT	WARD : 27		
	TALUK : Adoor		
	DISTRICT : Pathanamthitta		
	STATE : Kerala		

A0

NORTH

EAST

EAST

NOTES

- All dimensions in centimeters unless otherwise specified

PURPOSE	Verified by
■ FOR APPROVAL	
☐ FOR CONSTRUCTION	
☐ FOR REFERENCE	
☐ FOR ESTIMATION	

No.	DATE	REVISION

DRAWING TITLE

TREATMENT BLOCK

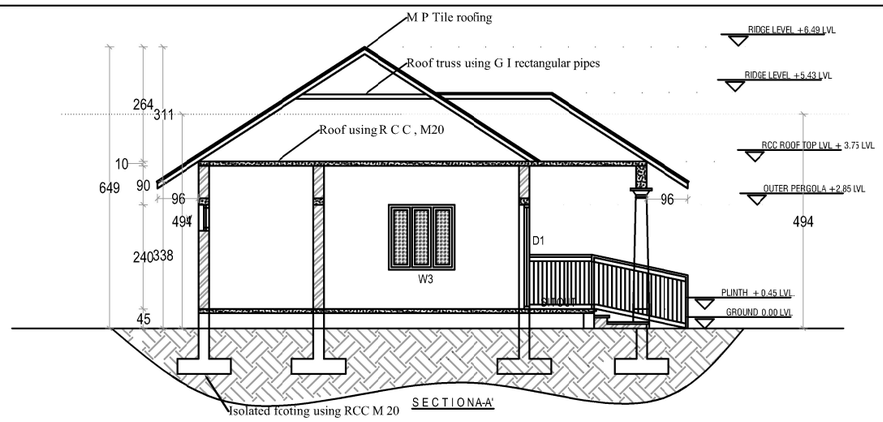
SCALE:1:100

All Dimensions are in cm

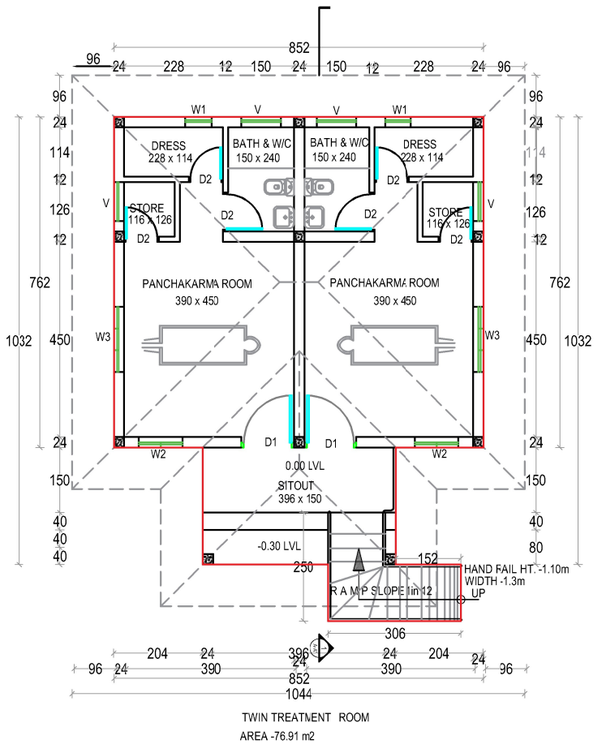
Sl.36-40 | REGULARISATION OF EXISTING BUILDINGS AND PROPOSED NEW BUILDINGS AT MANNAM AYURVEDA CO-OPERATIVE MEDICAL COLLEGE CAMPUS AT PANDALAM MUNCIPALITY



ELEVATION



SECTION A-A'



PLAN, SECTION & ELEVATION

SCALE 1:100

SCHEDULE OF JOINERY			
DOORS	DESCRIPTION	SIZE	No.
D	PANELED DOOR	120 x 240	2
D2	U P V C DOOR	80 x 240	6
WINDOWS			
W3	FULLY GLAZED WINDOW	150 x 150	2
W2	FULLY GLAZED WINDOW	120 x 150	2
W1	FULLY GLAZED WINDOW	60 x 150	2
VENTILATORS			
V	U P V C VENTILATOR	80 x 60	2

SPECIFICATIONS
FOUNDATION-Isolated footing using R C C M20
PLINTH BEAM - R C C , M20
FLOORING - Using P C C 1:2:4 10 cm thick
WALLS - Using Cement concrete blocks
30 x 20 x 20 cm size blocks in cement mortar 1:6
ROOF - Using R C C M20, 12 cm thick as per design
ROOF Covering - Using M P tiles on rectangular G I tubes as per design
Plastering - Walls using cement mortar 1:4 12 mm thick
Plastering - Ceiling using cement mortar 1:3, 9 mm thick

Building	Occupancy	Building Number	Area of existing portion authorised / Area to be regularised/ Proposed	Built-up Area in Sq m (G F)	Floor Area in Sq m (G F)	Coverage Area in Sq m
Twin Treatment Room	Group - F		Proposed Building	80.88	72.91	80.88

TOTAL AREA OF 1 TWIN ROOM BLOCK - 80.88 Sq m

TOTAL NUMBER OF TWIN ROOM BLOCKS - 5

TOTAL NUMBER OF ROOMS - 10

TOTAL AREA OF 10 TWIN ROOMS - 404.4 Sq m

A2

EAST / NORTH

NOTES

- All dimensions in centimeters unless otherwise specified

PURPOSE	Verified by
■ FOR APPROVAL ☐ FOR CONSTRUCTION ☐ FOR REFERENCE ☐ FOR ESTIMATION	

No.	DATE	REVISION

DRAWING TITLE

TWIN TREATMENT ROOM PLAN

SCALE:1:100

All Dimensions are in cm

36-40. PROPOSED CONSTRUCTION OF TWIN TREATMENT ROOM PLAN

APPLICANT	LAND DETAILS	APPENDIX – J1 CERTIFICATE	APPENDIX – J2 CERTIFICATE
NAME : DIRECTOR	RE-SURVEY NO : 609, BLOCK -1	Certified that: (i) the plot boundaries, measurements and other details shown in the site plan are correct and (ii) the drawings are in conformity with the provisions of the Master Plan/Detailed Town Planning Scheme/ Interim Development Order as applicable under the Kerala Town and Country Planning Act 2016. (iii) the drawings are in conformity with the provisions of the Kerala Municipality Building Rules, 2019 and other applicable statutes.	Certified that: (i) the document(s) in support of the ownership of the plot has/have been verified and that the applicant (s) has/have every right of construction in this plot; (ii) the plot boundaries, measurements and other details shown in the site plan have been verified at site and found correct and (iii) the drawings are in conformity with the provisions of the Master Plan/ Detailed Town Planning Scheme/ Interim Development Order as applicable under the Kerala Town and Country Planning Act 2016. (iv) the drawings are in conformity with the provisions of the Kerala Municipality Building Rules,2019 and other applicable statutes.. (Signature) ..... MunicipalCorporation / Municipal Council / Town Panchayat Office Seal
ADDRESS : Mannam Ayurveda Co-operative	OLD-SURVEY NO :393,398,399,412,413,414,423,424,425		
: - Medical College Hospital	EXTEND OF LAND : 33.2850 Hectares		
(A unit of Mannam Sugar Mills)	VILLAGE : Pandalam		
Pandalam -689501	MUNCIPALITY : Pandalam		
SIGNATURE OF APPLICANT	WARD : 27		
	TALUK : Adoor		
	DISTRICT : Pathanamthitta		
	STATE : Kerala		

SL. 41

REGULARISATION OF EXISTING BUILDINGS AND PROPOSED NEW BUILDINGS AT MANNAM AYURVEDA CO-OPERATIVE MEDICAL COLLEGE CAMPUS AT PANDALAM MUNCIPALITY

A0

NORTH EAST

EAST

NOTES

- All dimensions in centimeters unless otherwise specified

PURPOSE	Verified by
■ FOR APPROVAL	
☐ FOR CONSTRUCTION	
☐ FOR REFERENCE	
☐ FOR ESTIMATION	

No.	DATE	REVISION

DRAWING TITLE

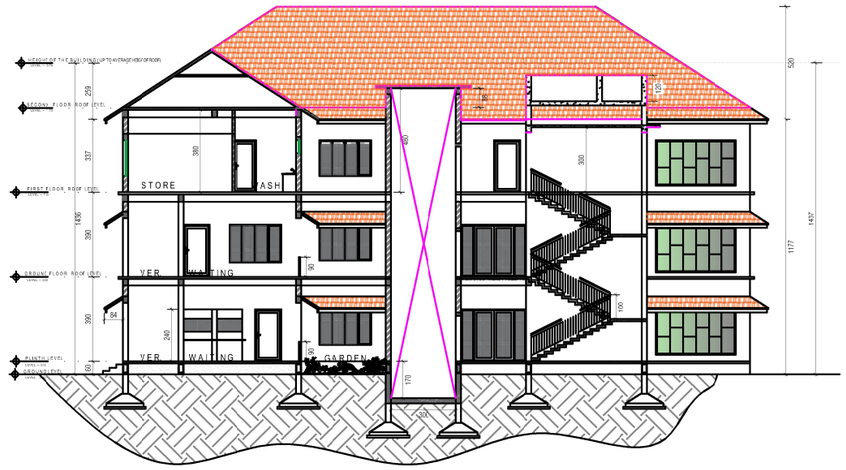
TREATMENT BLOCK

SCALE:1:100

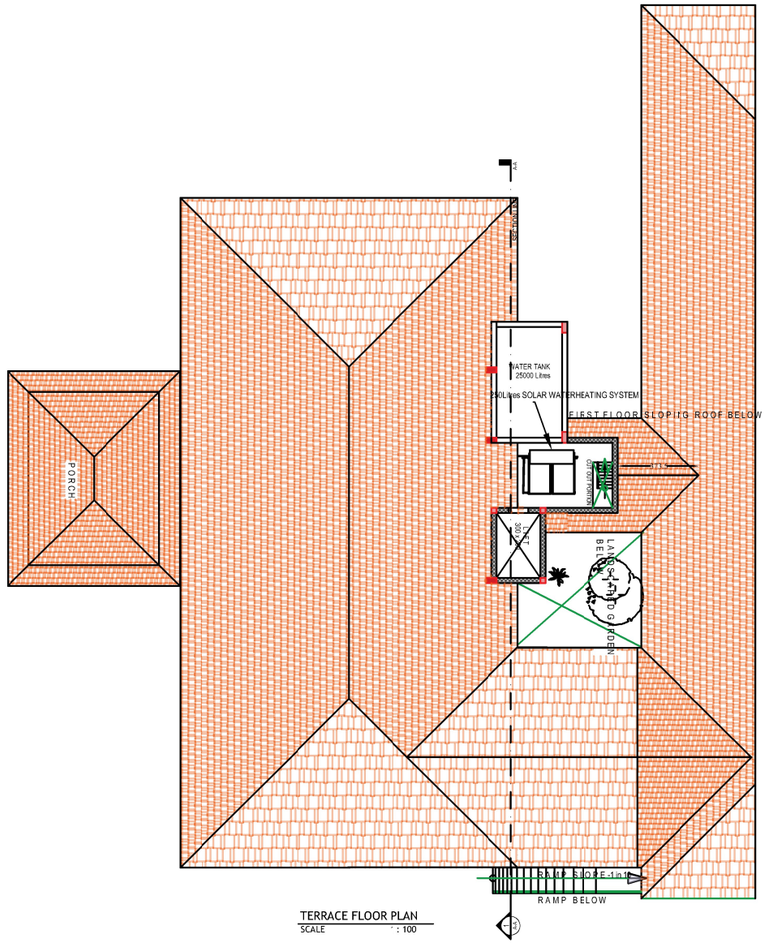
All Dimensions are in cm



ELEVATION

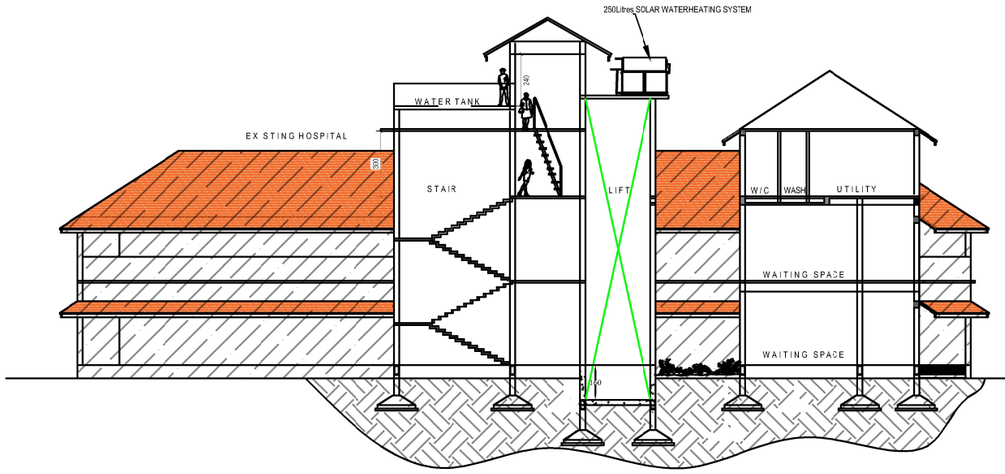


SECTION THROUGH LIFT & STAIRCASE - (VIEW TO NEW TREATMENT BLOCK)



TERRACE FLOOR PLAN

SCALE : 100



SECTION THROUGH LIFT & STA RCASE - (VIEW TO EXISTING HOSPITAL)

SCHEDULE OF JOINERY
DOORS
D - 120 x 210 cm WOODEN PANELLED DOOR - 1 No.
D1 - 90 x 210 cm WOODEN PANELLED DOOR - 6 No.
D2 - 80 x 210 cm FIBRE DOOR - 5 No.
WINDOWS & VENTILATORS
W2 - 100 x 150 cm GLAZED WINDOW - 6 No.
V - 90 x 60 cm GLAZD VENTILATOR - 5 No.
W M - 200 x 155 cm WELDED MESH FRAMES
SPECIFICATIONS
FOUNDATION - R R MASONRY IN CEMENT MORTAR 1:6 - 60 x 60 cm
BASEMENT - R R MASORRY IN CEMENT MORTAR 1:6 - 45 x 45 cm
WALLS - CONCRETE BRICK MASONRY IN C M 1:6 - 15 cm THICK
ROOF - M P TILES ON SYP WOODEN RAFTERS & RCC ROOF SLABS VIRANDAH
FLOOR - CEMENT CONCRETE 1:4:8 10 CM THICK
FLOOR FINISH - CEMENT MORTAR PLASTERING 1:4 , 12 MM THICK

Building	Occupancy	Building Number	Area of existing portion authorised / Area to be regularised	Built-up Area in Sq m G F	Floor Area in Sq m G F	Built-up area in Sq m F F	Floor Area in Sq m F F	Built-up Area in Sq m S F	Floor Area in Sq m S F	Built-up Area in Sq m Terrace Floor	Floor Area in Sq m Terrace floor	Coverage Area in Sq.m
Extension to Existing Hospital Block [Existing Hospital] + [Existing Yoga Hall] + [Treatment Block]	Group - C	27/14 27/15 27/16 27/17	Area of existing authorised portion	2232.81	1813.48	1788.19	1368.33	145.20	123.44			2822.16
			Area to be regularised			270.55	270.55	13.74	6.97			
			Propsed Building	589.35	555.42	512.83	506.83	485.73	479.76	8.14	8.14	

SEGREGATED SANITATION FACILITIES REQUIREMENTS- EXTENSION TO THE HOSPITAL BUILDING [OP Area in the GF and FF]

Occupancy- C	WC - Male	WC - Female	Urinal- Male	Wash Basin - Male	Wash Basin- Female	WC for differently Abled person	Wash Basin for Differently Abled person Female
Floor Area of GF and FF- 1056.34 Sq.m	1/1200 Sqm	1/1200 Sqm	1/600 Sqm	1/1200 Sqm	1/1200 Sqm		
Total Required as per Table 14	1	1	2	1	1	Minimum 1	Minimum 1
Segregated Sanitation Facilities required -10% of the above values	1	1	1	2	1	1	1
Segregated Sanitation Facilities provided	1	1	2	1	3	1	1

CALCULATION OF SOLAR ENERGY INSTALLATION

Combined Solar Energy Plant is provided for the entire Hoapital building and Ladies Hostel and installing on the roof of Ladies Hostel

Building Number	Building	Occupancy	Total built up Area in Sq.m	Solar energy installation to be provided per Sq.m of Built up area	Capacity Solar energy installation in Kv to be provided	Capacity of Solar energy installation provided in Kv
2	Ladies Hostel	Group A2	2295.93	0.0027	6.20	80.00
41	Extension to Existing Hospital Block [For Existing Hospital Building + Existing Yoga Hall to be regularized+ Proposed Treatment Block]	Group C	6046.54	0.0033	19.95	
Total					26.15	80.00

SOLAR ENERGY CAPACITY - 80 Kv SOLAR PANEL HAVING TOTAL AREA OF 208.12 Sq m PROVIDED OVER LADIES HOSTEL FIRST FLOOR ROOF

SOLAR WATER HEATING SYSTEM (Required)- 25 Litres x Number of Bathrooms ie 25 x 10 = 250 Litres
SOLAR WATER HEATING SYSTEM (Provided) = 250 Litres

41.[B] EXTENSION TO EXISTING HOSPITAL BLOCK - (Existing authorised portion of Hospital + Area to be regularised + Proposed portion)

APPLICANT	LAND DETAILS	APPENDIX – J1 CERTIFICATE	APPENDIX – J2 CERTIFICATE
NAME : DIRECTOR	RE-SURVEY NO : 609, BLOCK -1		
ADDRESS : Mannam Ayurveda Co-operative -	OLD-SURVEY No :393,398,399,412,413,414,423,424,425	Certified that: (i) the plot boundaries, measurements and other details shown in the site plan are correct and (ii) the drawings are in conformity with the provisions of the Master Plan/Detailed Town Planning Scheme/ Interim Development Order as applicable under the Kerala Town and Country Planning Act 2016. (iii) the drawings are in conformity with the povisions of the Kerala Municipality Building Rules, 2019 an d other applicable statutes.	Certified that: (i) the document(s) in support of the ownership of the plot has/have been verified and that the applicant (s)/has/have every right of construction in this plot. (ii) the plot boundaries, measurements and other details shown in the site plan have been verified at site and found correct and (iii) the drawings are in conformity with the provisions of the Master Plan/ Detailed Town Planning Scheme/interim Development Order a s applicable under the Kerala Town and Country Planning Ac 2016. (iv) the drawings are in conformity with the provisions of the Kerala Municipality Building Rules,2019 and other applicable statutes. (Signature) ..... Municipal Corporation / Municipal Council / Town Panchayat Office Seal
: - Medical College Hospital	EXTEND OF LAND : 33.2850 Hectares		
(A unt of Mannam Sugar Mills)	VILLAGE : Pandalam		
Pandalam -689501	MUNCIPALITY : Pandalam		
SIGNATURE OF APPLICANT	WARD : 27		
	TALUK : Adoor		
	DISTRICT : Pathanamthitta		
	STATE : Kerala		

SL. 41

REGULARISATION OF EXISTING BUILDINGS AND PROPOSED NEW BUILDINGS AT MANNAM AYURVEDA CO-OPERATIVE MEDICAL COLLEGE CAMPUS AT PANDALAM MUNCIPALITY

A0

NORTH EAST

EAST

NOTES

- All dimensions in centimeters unless otherwise specified

PURPOSE	Verified by
■ FOR APPROVAL	
☐ FOR CONSTRUCTION	
☐ FOR REFERENCE	
☐ FOR ESTIMATION	

No.	DATE	REVISION

DRAWING TITLE

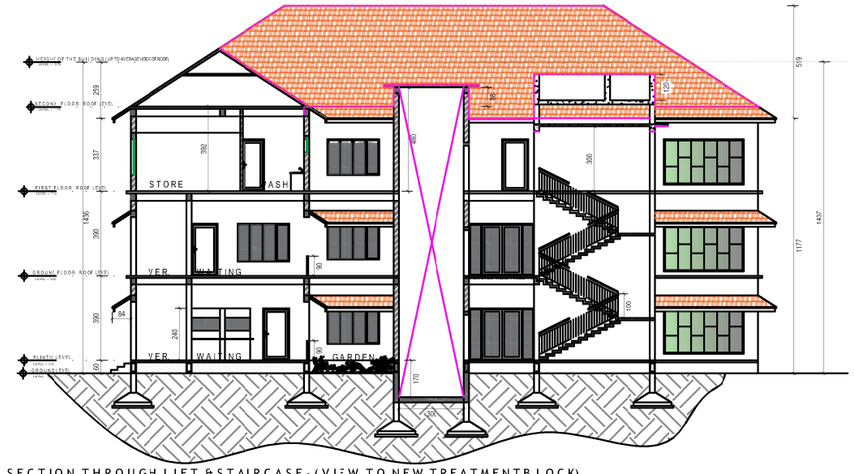
TREATMENT BLOCK

SCALE:1:100

All Dimensions are in cm



ELEVATION



SECTION THROUGH LIFT & STAIRCASE - (VIEW TO NEW TREATMENT BLOCK)

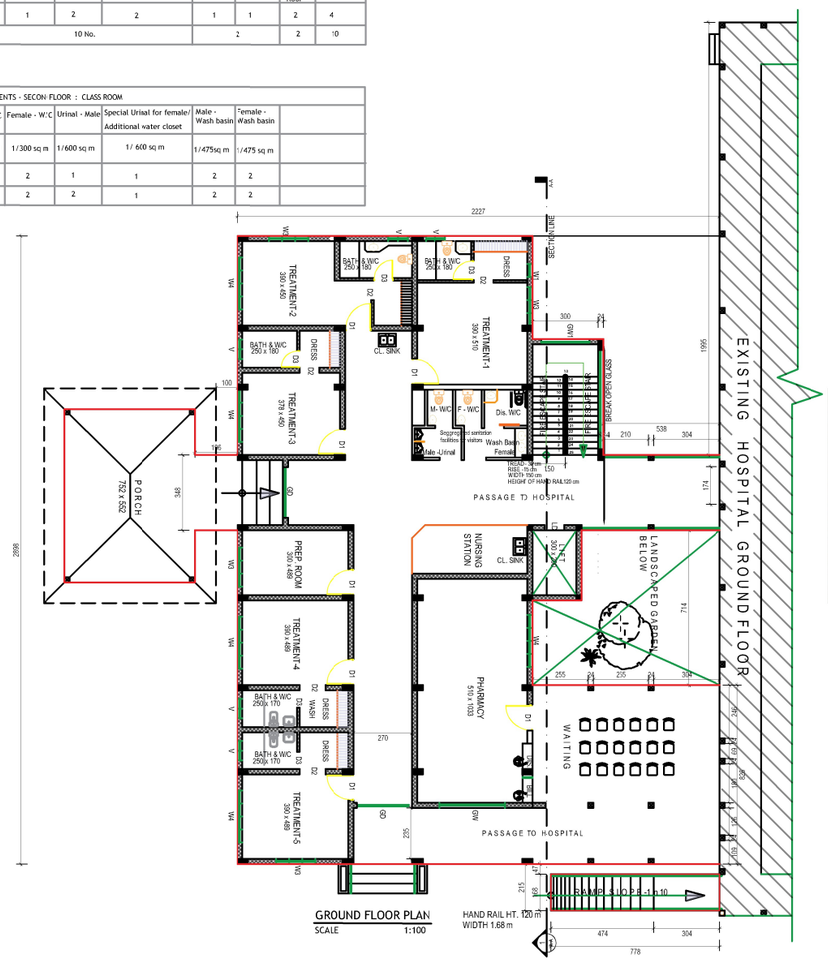
SANITATION REQUIREMENTS - EXTENSION TO THE HOSPITAL BUILDING [OP Area in the GF anc FF]

Occupancy-C	Male - W/C	Female - W/C	Urinal - Male	Special Urinal for female/ Additional water closet	Male - Wash basin	Female - Wash basin	Cleaners sink	Water Tap in the vicinity of watercloset & Urinals
Floor Area of GF & FF 1056.34 sq m	1/1200 sq m	1/1200 sq m	1/600 sq m	1/ 600 sq m	1/1200sq m	1/1200 sq m	1 per floor	1/300 sq m
Total Required	1	1	2	2	1	1	2	4
Provided	10 No.				2		2	10

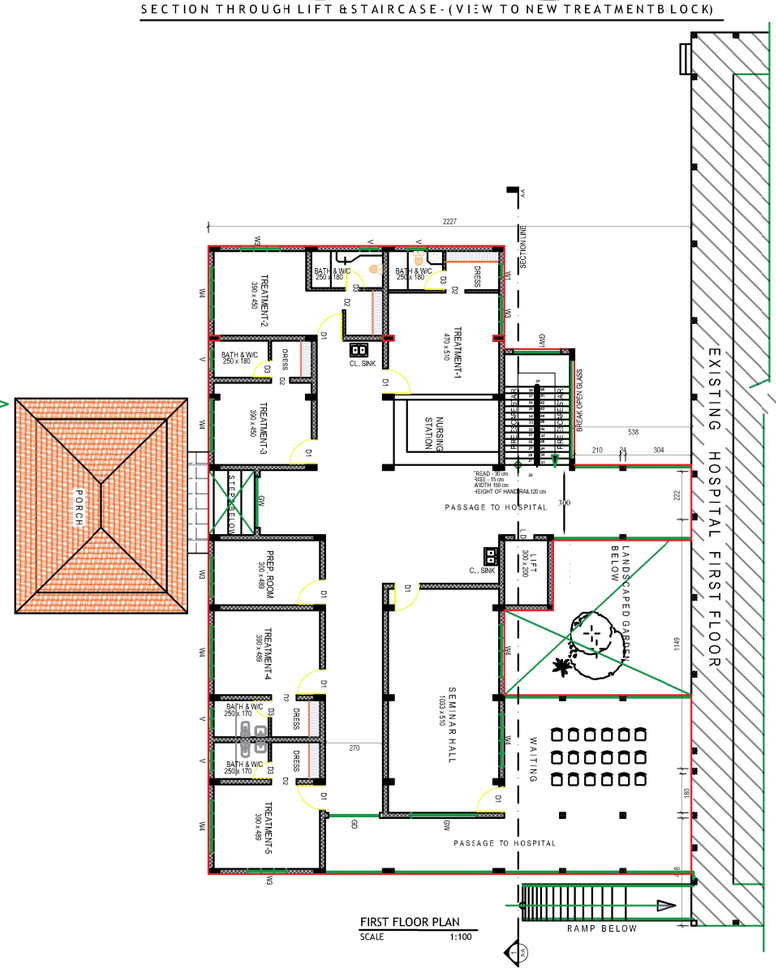
SANITATON REQUIREMENTS - SECON FLOOR : CLASS ROOM

Occupancy-C	Male - W/C	Female - W/C	Urinal - Male	Special Urinal for female/ Additional water closet	Male - Wash basin	Female - Wash basin	
Floor Area of GF & FF 1056.34 sq m	1/475 sq m	1/300 sq m	1/600 sq m	1/ 600 sq m	1/475sq m	1/475 sq m	
Total Required	2	2	1	1	2	2	
Provided	2	2	2	1	2	2	

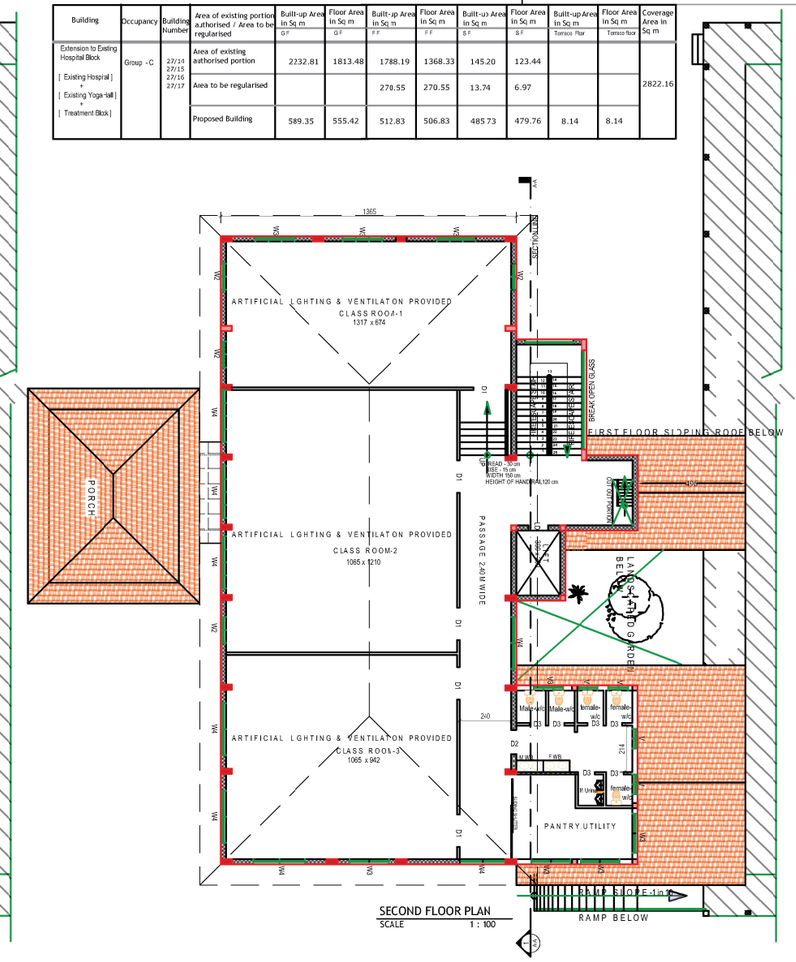
Building	Occupancy	Building Number	Area of existing portion authorised / Area to be regularised	Built-up Area in Sq m G F	Floor Area in Sq m G F	Built-up Area in Sq m F F	Floor Area in Sq m F F	Built-up Area in Sq m S F	Floor Area in Sq m S F	Built-up Area in Sq m Terrace Floor	Floor Area in Sq m Terrace floor	Coverage Area in Sq m
Extension to Exeting Hospital Block [Existing Hospital] + [Existing Yoga-hall] + [Treatment Blok]	Group - C	27/14 27/15 27/16 27/17	Area of existing authorised portion	2232.81	1813.48	1788.19	1368.33	145.20	123.44			2822.16
			Area to be regularised			270.55	270.55	13.74	6.97			
			Proposed Building	589.35	555.42	512.83	506.83	485 73	479.76	8.14	8.14	



GROUND FLOOR PLAN
SCALE 1:100



FIRST FLOOR PLAN
SCALE 1:100



SECOND FLOOR PLAN
SCALE 1 : 100

41.[A] EXTENSION TO EXISTING HOSPITAL BLOCK - (Existing authorised portion of Hospital + Area to be regularised + Proposed portion)

APPLICANT	LAND DETAILS	APPENDIX – J1 CERTIFICATE	APPENDIX – J2 CERTIFICATE
NAME : DIRECTOR	RE-SURVEY NO : 509, BLOCK -1	Certified that: (i) the plot boundaries, measurements and other details shown in the site plan are correct and (ii) the drawings are in conformity with the provisions of the Master Plan/Detailed Town Planning Scheme/ Interim Development Order as applicable under the Kerala Town and Country Planning Act 2016. (iii) the drawings are in conformity with the provisions of the Kerala Municipality Building Rules, 2019 and other applicable statutes.	Certified that: (i) the document(s) in support of the ownership of the plot has/have been verified and that the applicant (s)has/have every right of construction in this plot. (ii) the plot boundaries, measurements and other details shown in the site plan have been verified at site and found correct and (iii) the drawings are in conformity with the provisions of the Master Plan/ Detailed Town Planning Scheme/Interim Development Order as applicable under the Kerala Town and Country Planning Act 2016. (iv) the drawings are in conformity with the provisions of the Kerala Municipality Building Rules,2019 and other applicable statutes. (Signature) ..... Municipal Corporation / Municipal Council / Town Panchayat Office Seal
ADDRESS : Mannam Ayurveda Co-operative	OLD-SURVEY NO: 393, 398, 399, 412, 413, 414, 423, 424, 425		
: - Medical College Hospital	EXTEND OF LAND : 33.2850 Hectares		
(A unt of Mannam Sugar Mills)	VILLAGE : Pandalam		
Pandalam -689501	MUNCIPALITY : Pandalam		
SIGNATURE OF APPLICANT	WARD : 27		
	TALUK : Adoor		
	DISTRICT : Pathanamthitta		
	STATE : Kerala		