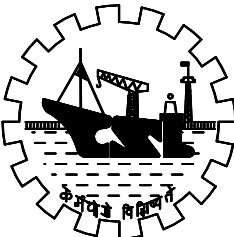


## SCALE -NTS

		<p align="center"><b>COCHIN SHIPYARD LIMITED</b></p> <p align="center">COCHIN - 682 015</p>	
DGM (CE)		<p align="center"><b>CONSTRUCTION OF G+11 RESIDENTIAL EMPLOYEES QUARTERS</b></p> <p align="center"><b><u>LOCATION PLAN</u></b></p>	
AGM-I (CE)			
SM (CE)			
CHECKED			
DRAWN	TECHNICALIYA		
DATE : 04 - 04 - 2026	SCALE : NTS	DWG NO: CVL/EMP QTRS/ LOC. PLAN/01	SH NO :01

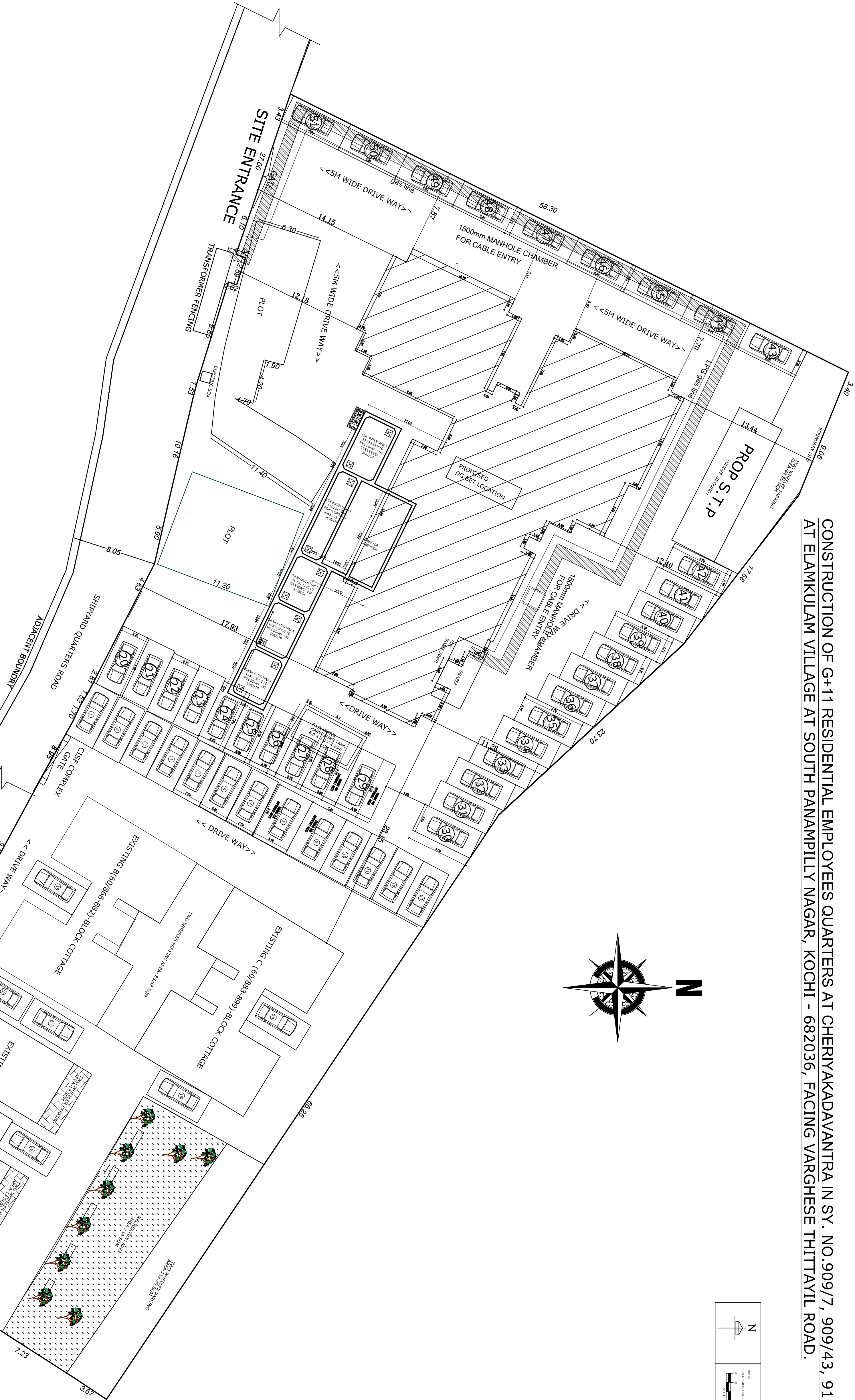
CONSTRUCTION OF G+11 RESIDENTIAL EMPLOYEES QUARTERS AT CHERIYAKADAVANTRA IN SY. NO.909/7, 909/43, 916/1 of 2 AT ELAMKULAM VILLAGE AT SOUTH PANAMPILLY NAGAR, KOCHI - 682036, FACING VARGHESE THITTAYIL ROAD.

REFERENCE

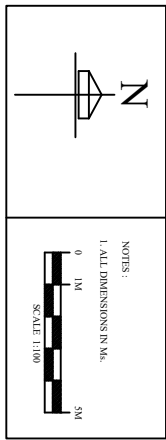
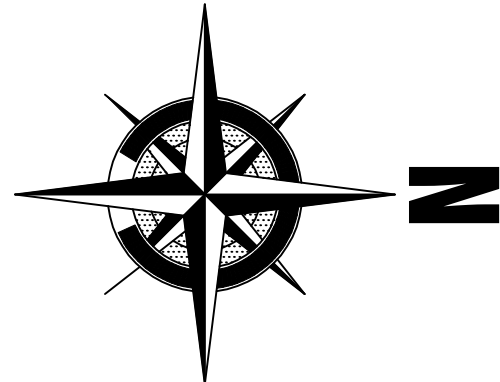
DISTRICT	: ERNAKULAM
VILLAGE	: ELAMKULAM
TALUK	: KANAYANNUR
CORPORATION	: KOCHI
SURVEY NO	: 909/7, 909/43, 916/1 - 2
EXTENT	: 181 m <sup>2</sup> + 2060 m <sup>2</sup> + 2105 m <sup>2</sup> = 4346 m <sup>2</sup>
FSI	: 2.24
Coverage	: 29.64 %

AREA CALCULATIONS (PROPOSED BUILDING)

FLOOR	BUILT UP AREA (M2)	FLOOR AREA (M2)
GROUND FLOOR (including lift)	745.37	367.71
FIRST FLOOR (excluding lift)	668.19	652.95
SECOND FLOOR	668.19	652.95
THIRD FLOOR	668.19	652.95
FOURTH FLOOR	668.19	652.95
FIFTH FLOOR	668.19	652.95
SIXTH FLOOR	668.19	652.95
SEVENTH FLOOR	668.19	652.95
EIGHTH FLOOR	668.19	652.95
NINTH FLOOR	668.19	652.95
TENTH FLOOR	668.19	652.95
ELEVENTH FLOOR	668.19	652.95
TERRACE FLOOR (STAIR, RECREA.)	48.53	37.03
TOTAL	8143.99	7587.19



SITE PLAN



**TECHNICALLYA CONSULTANTS PVT LTD**  
#501, VASANTHA AVENUE, M.R.C. NAGAR, CHENNAI-28  
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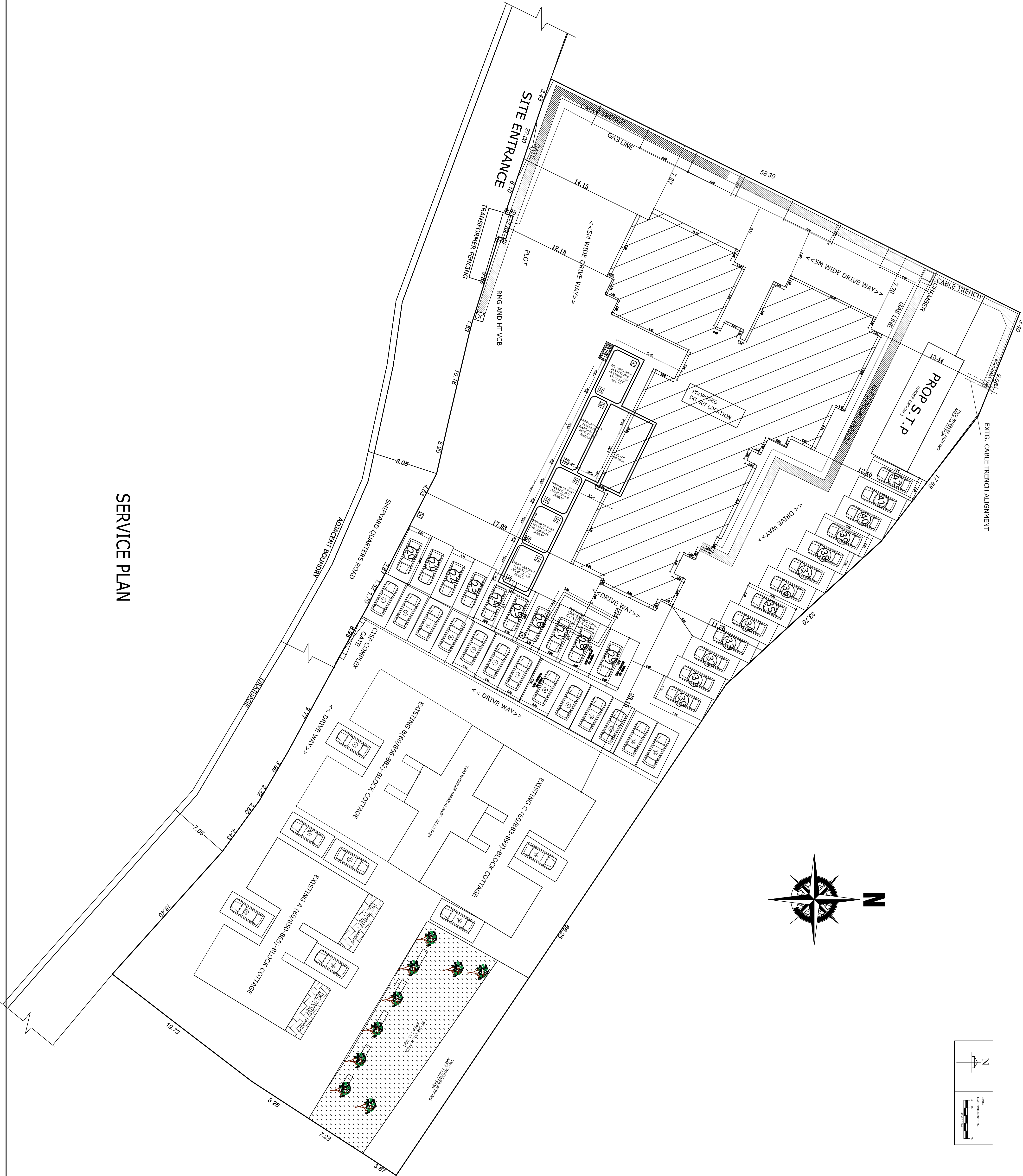
DRAWING TITLE:	SITE PLAN
SCALE :	1:100
SHEET SIZE :	A1
NOTE :	ALL DIMENSIONS ARE IN METERS, UNLESS SPECIFIED



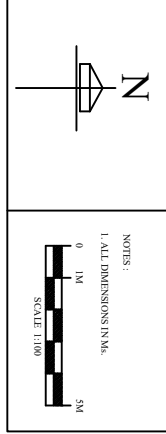
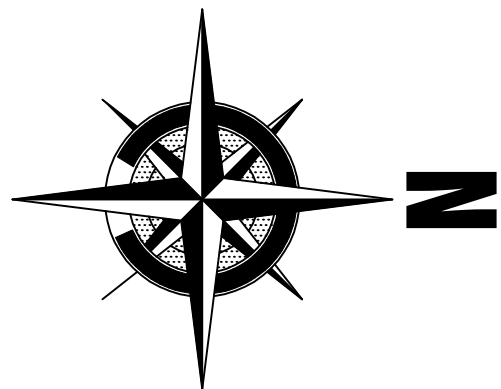
**COCHIN SHIPYARD LIMITED**  
COCHIN - 682 015

DESIGNED BY	SRIBUP	CONSTRUCTION OF G+11 RESIDENTIAL EMPLOYEES QUARTERS SITE PLAN
CHECKED BY	PO (CE)	
DRAWN BY	TECHNICALLYA	
DATE	04 - 04 - 2026	





SERVICE PLAN

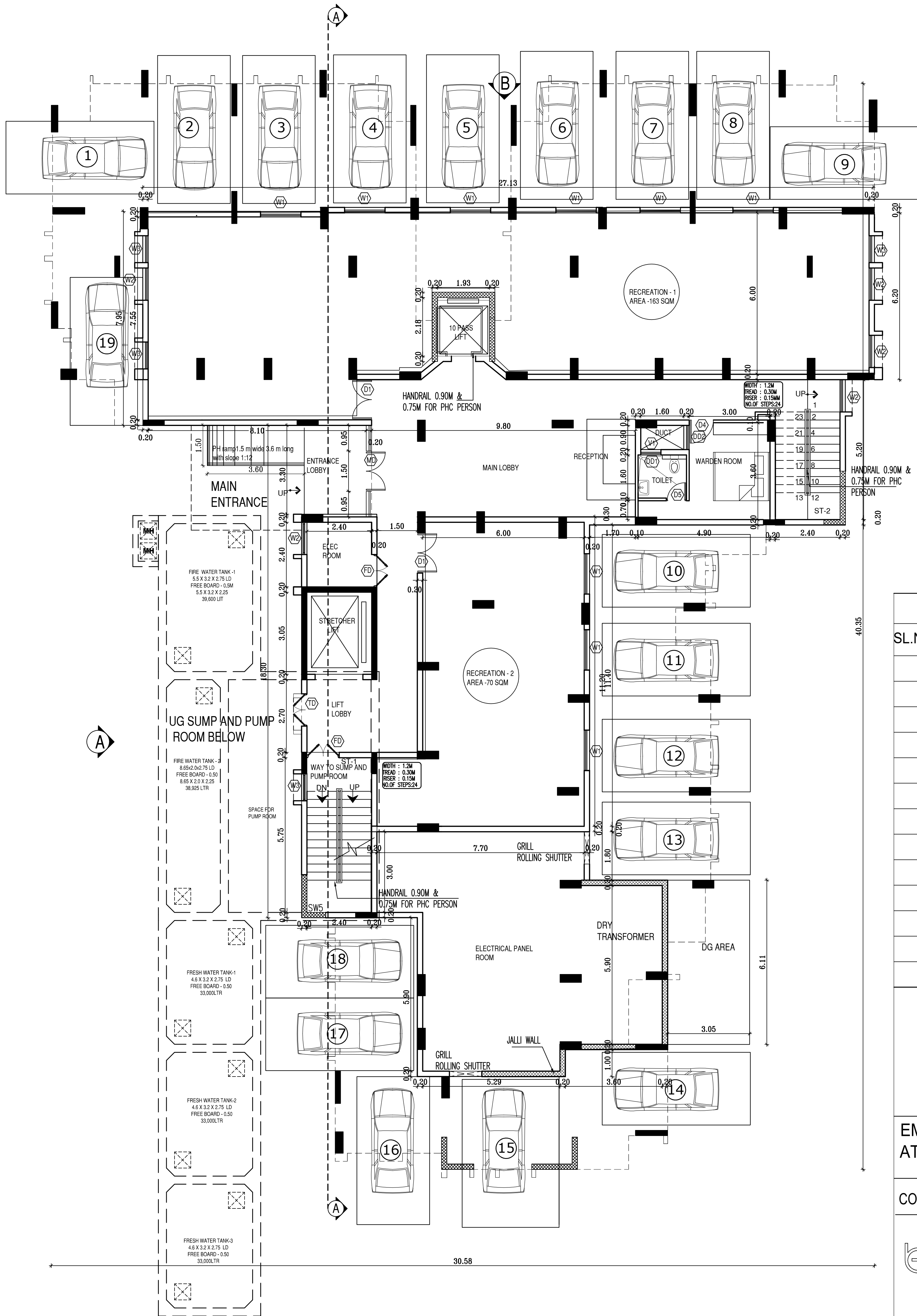


**TECHNICALIYA CONSULTANTS PVT LTD**  
#2941, VASANTHA AVENUE, N.R.C NAGAR, CHENNAI-28  
PH: 044-24933276, 24933287 FAX: 044-24937341  
Email - admin@technicaliya.com  
Email - admin@technicaliya.com

**DRAWING TITLE:** SERVICE PLAN  
**SCALE:** 1:100  
**SHEET SIZE:** A1  
**NOTE:** ALL DIMENSIONS ARE IN METERS, UNLESS SPECIFIED

**COCHIN SHIPYARD LIMITED**  
COCHIN - 682 015

**CONSTRUCTION OF G+11 RESIDENTIAL EMPLOYEES QUARTERS SERVICE PLAN**  
DRAWN: TECHNICALIYA  
CHECKED: PO (CE)  
SM (CE) LAKSHMAN  
ADM (CE) SHRIJ.P  
DSM (CE)  
DATE: 04 - 04 - 2026 SCALE: 1:100 (P/L/ENP OTRS/ SERVICE PLAN/01 SH-NO: 01)



# GROUND FLOOR PLAN

SCHEDULE OF JOINERY :			
SL.NO	TYPE	SIZE	DESCRIPTION
	MD	1.50 X 2.4	MAIN DOOR
	D1	1.50 X 2.1	DOOR
	D2	1.20 X 2.1	DOOR
	D3	1.05 X 2.1	DOOR
	D4	0.90 X 2.1	DOOR
	D5	0.75 X 2.1	DOOR
	W1	1.50 X 1.5	WINDOW
	W2	1.20 X 1.5	WINDOW
	W3	1.00 X 1.5	WINDOW
	W3A	0.90 X 1.5	WINDOW
	W4	0.75 X 1.5	WINDOW
	W5	0.60 X 1.5	WINDOW
	V1	0.75 X 0.6	VENTILATOR

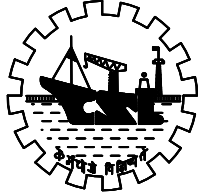
EMPLOYEES QUARTERS  
AT CHERIYAKADAVANTHARA, KOCHI

CONSULTANTS:



**TECHNICALIYA CONSULTANTS PVT LTD**  
#25/41, VASANTHA AVENUE, M.R.C NAGAR, CHENNAI-28.  
PH: 044-24933278, 24933287 FAX: 044-24937341  
Email - admin@technicaliya.com

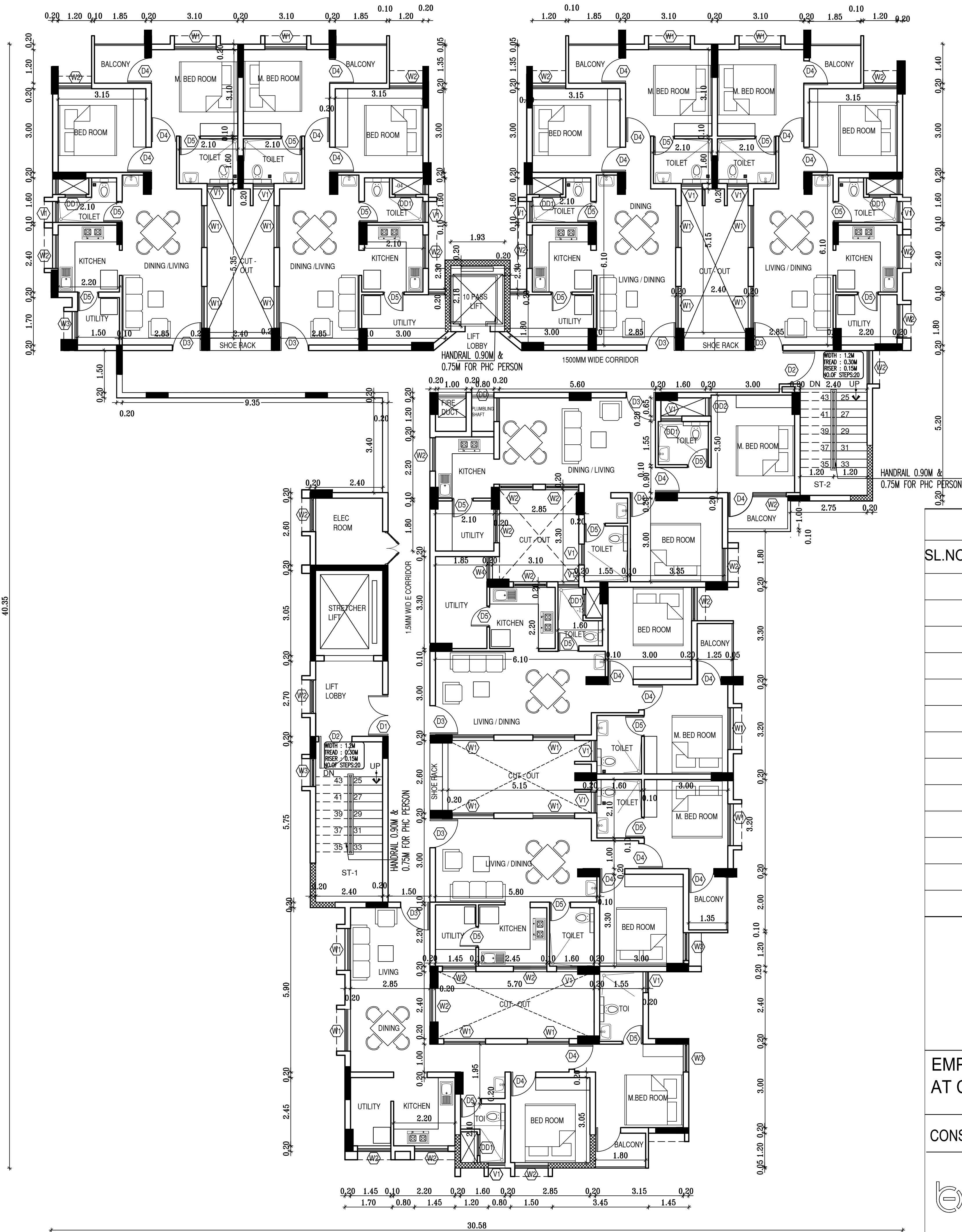
SCALE : 1:100 SHEET SIZE : A1	NOTE : ALL DIMENSIONS ARE IN METERS , UNLESS SPECIFIED
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**COCHIN SHIPYARD LIMITED**  
COCHIN - 682 015

DGM (CE)		<b>CONSTRUCTION OF G+11 RESIDENTIAL EMPLOYEES QUARTERS GROUND FLOOR PLAN</b>
AGM (CE)	SHIBU P	
SM (CE)	LAKSHMAN	
CHECKED	PO (CE)	
DRAWN	TECHNICALIYA	
DATE : 04 - 04 - 2026	SCALE : 1:100	DWG NO: CVL/EMP QTRS/GF PLAN/01
		SH NO :01





SCHEDULE OF JOINERY :

SL.NO	TYPE	SIZE	DESCRIPTION
	MD	1.50 X 2.4	MAIN DOOR
	D1	1.50 X 2.1	DOOR
	D2	1.20 X 2.1	DOOR
	D3	1.05 X 2.1	DOOR
	D4	0.90 X 2.1	DOOR
	D5	0.75 X 2.1	DOOR
	W1	1.50 X 1.5	WINDOW
	W2	1.20 X 1.5	WINDOW
	W3	1.00 X 1.5	WINDOW
	W3A	0.90 X 1.5	WINDOW
	W4	0.75 X 1.5	WINDOW
	W5	0.60 X 1.5	WINDOW
	V1	0.75 X 0.6	VENTILATOR

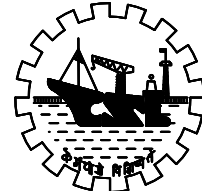
EMPLOYEES QUARTERS  
AT CHERIYAKADAVANTHARA, KOCHI

CONSULTANTS:

 TECHNICALIYA CONSULTANTS PVT LTD  
#25/41, VASANTHA AVENUE, M.R.C NAGAR, CHENNAI-28.  
PH: 044-24933278, 24933287 FAX: 044-24937341  
Email - admin@technicaliya.com

SCALE : 1:100  
SHEET SIZE : A1

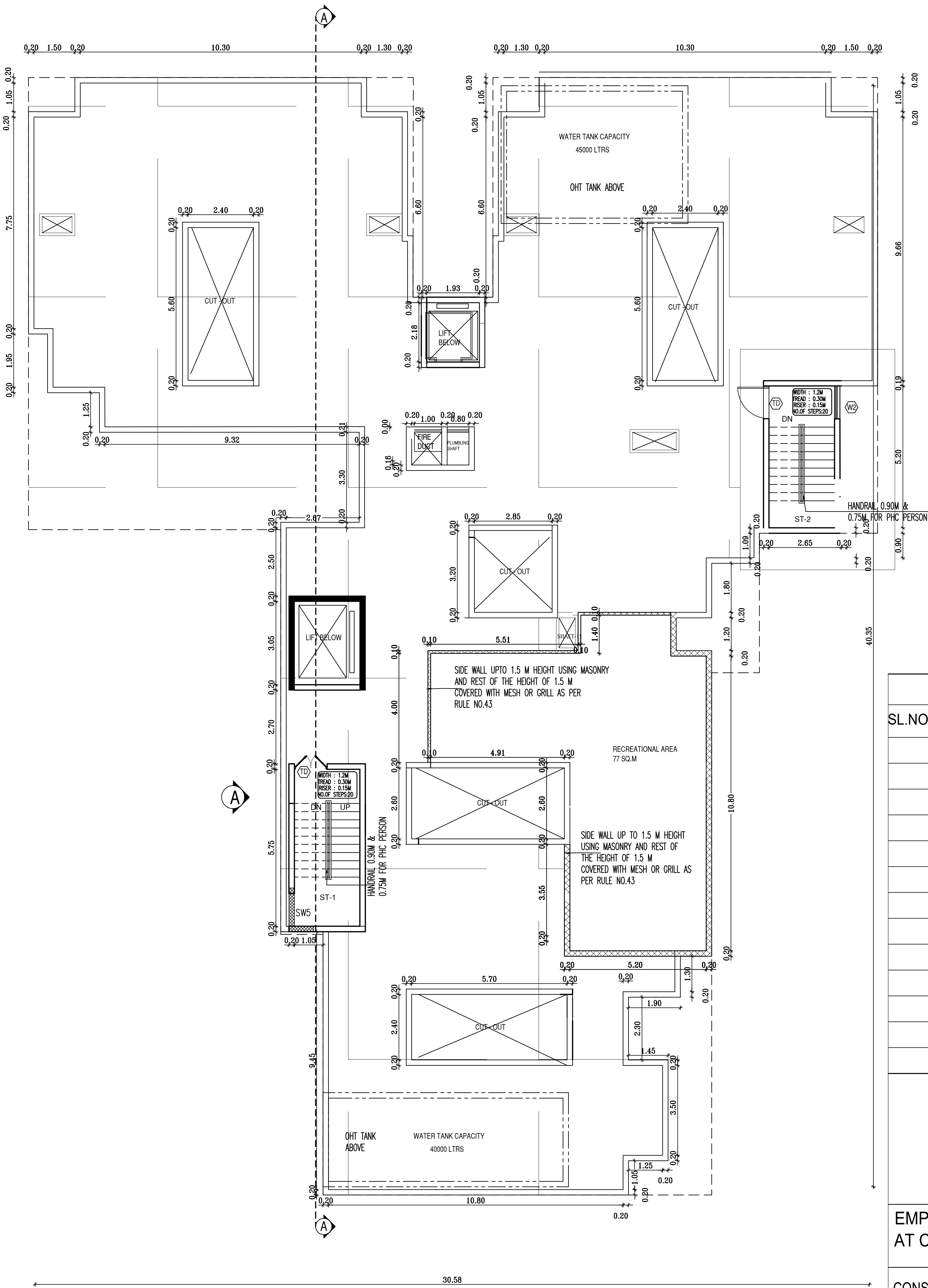
NOTE : ALL DIMENSIONS ARE IN METERS ,  
UNLESS SPECIFIED



**COCHIN SHIPYARD LIMITED**  
COCHIN - 682 015

DGM (CE)		<b>CONSTRUCTION OF G+11 RESIDENTIAL EMPLOYEES QUARTERS TYPICAL FLOOR PLAN (1 TO 11 TH)</b>	
AGM (CE)	SHIBU P		
SM (CE)	LAKSHMAN		
CHECKED	PO (CE)		
DRAWN	TECHNICALIYA		
DATE : 04 - 04 - 2026	SCALE 1:100	DWG NO: CVL/EMP QTRS/TYPICAL FLOOR PLAN/01	SH NO :01

TYPICAL ( 1ST TO 11TH) FLOOR PLAN



# TERRACE FLOOR PLAN

SCHEDULE OF JOINERY :			
SL.NO	TYPE	SIZE	DESCRIPTION
	MD	1.50 X 2.4	MAIN DOOR
	D1	1.50 X 2.1	DOOR
	D2	1.20 X 2.1	DOOR
	D3	1.05 X 2.1	DOOR
	D4	0.90 X 2.1	DOOR
	D5	0.75 X 2.1	DOOR
	W1	1.50 X 1.5	WINDOW
	W2	1.20 X 1.5	WINDOW
	W3	1.00 X 1.5	WINDOW
	W3A	0.90 X 1.5	WINDOW
	W4	0.75 X 1.5	WINDOW
	W5	0.60 X 1.5	WINDOW
	V1	0.75 X 0.6	VENTILATOR

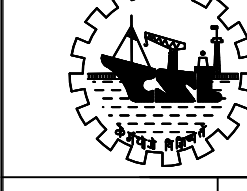
## EMPLOYEES QUARTERS AT CHERIYAKADAVANTHARA, KOCHI

### CONSULTANTS:



**TECHNICALIYA CONSULTANTS PVT LTD**  
#25/41, VASANTHA AVENUE, M.R.C NAGAR, CHENNAI-28.  
PH: 044-24933278, 24933287 FAX: 044-24937341  
Email - admin@technicaliya.com

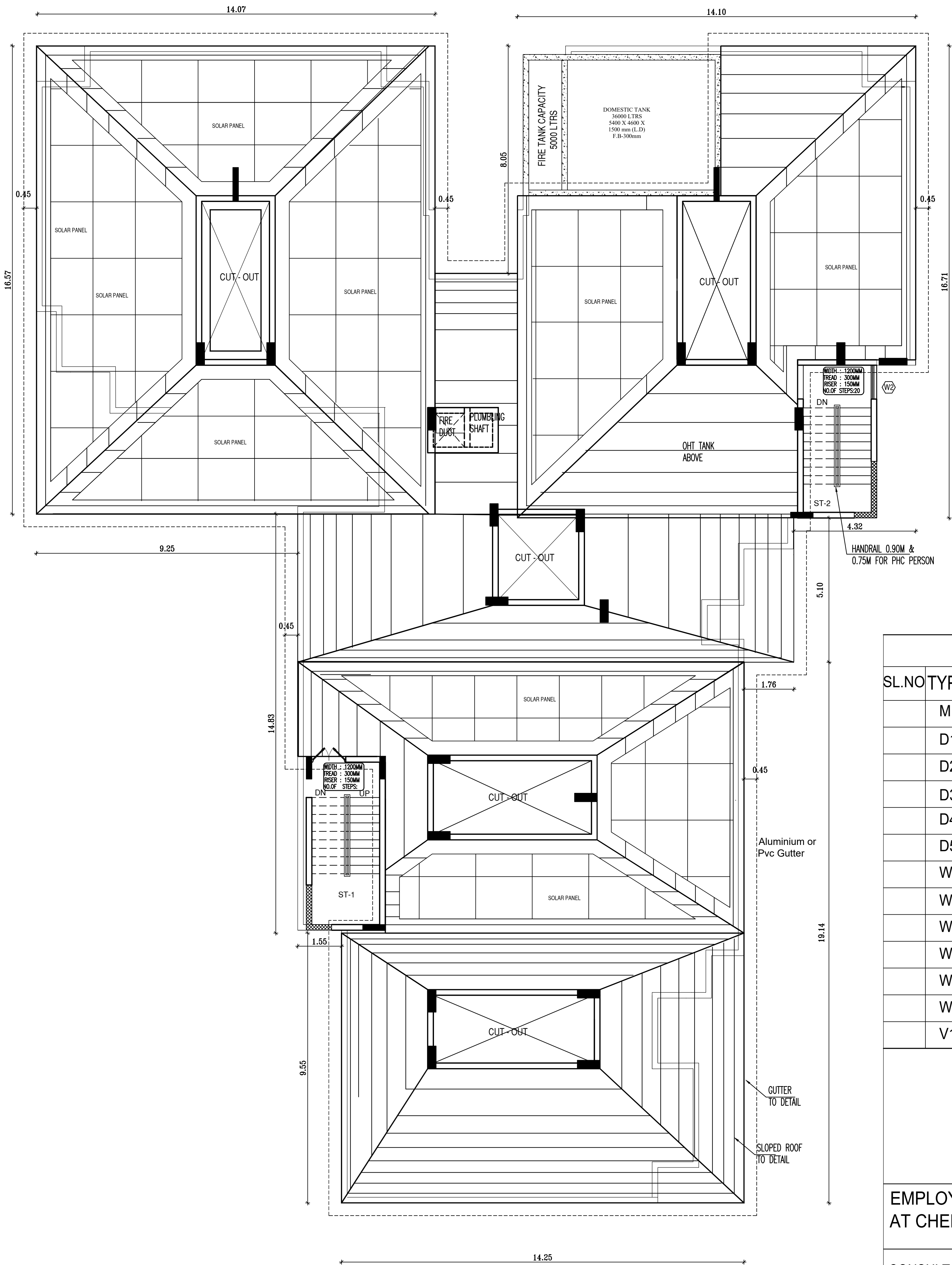
SCALE : 1:100 SHEET SIZE : A1	NOTE : ALL DIMENSIONS ARE IN METERS , UNLESS SPECIFIED
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**COCHIN SHIPYARD LIMITED**  
COCHIN - 682 015

DGM (CE)		<b>CONSTRUCTION OF G+11 RESIDENTIAL EMPLOYEES QUARTERS TERRACE FLOOR PLAN</b>
AGM (CE)	SHIBU P	
SM (CE)	LAKSHMAN	
CHECKED	PO (CE)	
DRAWN	TECHNICALIYA	
DATE : 04 - 04 - 2026	SCALE 1:100	DWG NO: CVL/EMP QTRS/TERRACE FLOOR PLAN/01
		SH NO : 01





## ROOF PLAN

### SCHEDULE OF JOINERY :

SL.NO	TYPE	SIZE	DESCRIPTION
	MD	1.50 X 2.4	MAIN DOOR
	D1	1.50 X 2.1	DOOR
	D2	1.20 X 2.1	DOOR
	D3	1.05 X 2.1	DOOR
	D4	0.90 X 2.1	DOOR
	D5	0.75 X 2.1	DOOR
	W1	1.50 X 1.5	WINDOW
	W2	1.20 X 1.5	WINDOW
	W3	1.00 X 1.5	WINDOW
	W3A	0.90 X 1.5	WINDOW
	W4	0.75 X 1.5	WINDOW
	W5	0.60 X 1.5	WINDOW
	V1	0.75 X 0.6	VENTILATOR

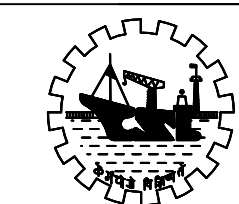
### EMPLOYEES QUARTERS AT CHERIYAKADAVANTHARA, KOCHI

#### CONSULTANTS:

 **TECHNICALIYA CONSULTANTS PVT LTD**  
#25/41, VASANTHA AVENUE, M.R.C NAGAR, CHENNAI-28.  
PH: 044-24933278, 24933287 FAX: 044-24937341  
Email - admin@technicaliya.com

SCALE : 1:100  
SHEET SIZE : A1

NOTE : ALL DIMENSIONS ARE IN METERS ,  
UNLESS SPECIFIED

		<b>COCHIN SHIPYARD LIMITED</b> COCHIN - 682 015	
DGM (CE)		<b>CONSTRUCTION OF G+11 RESIDENTIAL EMPLOYEES QUARTERS ROOF PLAN</b>	
AGM (CE)	SHIBU P		
SM (CE)	LAKSHMAN		
CHECKED	PO (CE)		
DRAWN	TECHNICALIYA		
DATE : 04 - 04 - 2026	SCALE 1:100	DWG NO: CVL/EMP QTRS/ROOFPLAN/01	SH NO :01



Aluminium or Pvc  
Gutter

FIN. TERRACE FLOOR

+36.90m

FIN. ELEVENTH FLOOR

+33.90m

FIN. TENTH FLOOR

+30.90m

FIN. NINTH FLOOR

+27.90m

FIN. EIGHTH FLOOR

+24.90m

FIN. SEVENTH FLOOR

+21.90m

FIN. SIXTH FLOOR

+18.90m

FIN. FIFTH FLOOR

+15.90m

FIN. FOURTH FLOOR

+12.90m

FIN. THIRD FLOOR

+9.90m

FIN. SECOND FLOOR

+6.90m

FIN. FIRST FLOOR

+3.90m

FIN. GROUND FLOOR

+0.30m

FORMED GROUND  
+0.00

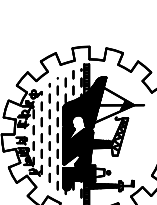
# ELEVATION

EMPLOYEES QUARTERS  
AT CHERIYAKADAVANTHARA, KOCHI

CONSULTANTS:

**TECHNICALIYA CONSULTANTS PVT LTD**  
#25/41, VASANTHA AVENUE, M.R.C NAGAR, CHENNAI-28.  
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Email - admin@technicaliya.com

SCALE : NTS  
SHEET SIZE : A2  
NOTE : ALL DIMENSIONS ARE IN METERS ,  
UNLESS SPECIFIED

			<b>COCHIN SHIPYARD LIMITED</b>	
COCHIN - 682 015				
DGM (CE)			CONSTRUCTION OF G+11 RESIDENTIAL EMPLOYEES QUARTERS ELEVATION	
AGM (CE)	SHIBU P			
SM (CE)	LAKSHMAN			
CHECKED	PO (CE)			
DRAWN	TECHNICALIYA			
DATE : 04 - 04 - 2026	SCALE	DWG NO:		
1:100	CVL/EMP QTRS/ELEVATION/01	SH NO :01		







1. ASSUMPTIONS

- The structural design and detailing, including that of foundations are prepared on the assumption that contractor / Project Engineer – in charge will be strictly following the below mentioned guidelines to ensure the quality of construction, strength and durability of all structural members and elements. So we hereby request contractor / Project Engineer in charge to ensure the quality of all the materials for construction by proper lab tests before usage and to ensure the quality of construction by proper supervision and all the required field tests. We will in no way be responsible for any structural and non – structural defects due to the usage of improper and poor quality materials and substandard method of construction. Also all records related to quality inspection & certification is to be forwarded to Structural Engineer's office and should be countersigned by the representative of our firm for records.
- Reinforcement shall be verified and certified before concreting by the Project Engineer.
- Stresses in steel and concrete are assumed as per I.S.1786 –1979 / 2008 & I.S. 456 – 2000. Loads are assumed as per I.S. 875 (Part 1,2,4,5)–1987 and I.S. 875 (Part 3)–2015.

2. REINFORCEMENT

- Deformed steel bars of grade strength Fe 415/ 500 / 500D / 550 as per I.S 1786 –1979 / 2008 shall be used as reinforcement for slabs, beams and footings. Reinforcement for columns / shear wall shall be as specified in the structural drawings.
- It is advised to avoid under and over twisted bars.
- Yield strength, ultimate strength, percentage of elongation, bend and rebar characteristics, nominal weight and diameter of the reinforcement should be tested. If the result of any of the properties is less than the recommended value as per I. S 1786 –1979/2008 the reinforcement should be rejected or the design should be revised as per the characteristics obtained in the relevant test.
- Bending of reinforcement in columns, slabs, beams, and other structural members must be as per the detailing.
- Lap length including the anchorage value of hooks in flexural tension shall be LD (Development length) or 30d which ever is greater and for direct tension 2LD or 30d which ever is greater. The straight length of the lap shall not be less than 15d or 20cm
- Development length – Development length for fully stressed deformed bars, for development length grade of concrete are given below.

TENSION BARS

Grade of steel	Development Length in cm for diff. grades of concrete				
	M20	M25	M30	M35	M40 & Above
415	47d	41d	36d	34d	30d
500	57d	49d	46d	40d	36d
550	63d	54d	50d	44d	40d

*d* is diameter of bar

- The development length given above are for a stress of 0.87 fy in the bars.
- Lap length in compression shall be equal to the development length in compression but not less than 24d.
- Sufficient chairs of 12mm bars should be provided near the supports of cantilever and continuous slabs to maintain proper distance between top and bottom layer of bars.
- 25d pins at 1m minimum centre to centre should be provided between two layers of bars.
- Clear cover for reinforcement is to be ( for concrete exposed to mild/moderate environmental condition ).
  - 25mm for slabs.
  - 30mm for longitudinal reinforcing bars in beams, walls or water tank and retaining walls.
  - 40mm for columns & shear wall.
  - 75mm for footing, if P .C.C. bed is not provided.
  - 50mm for footings, if P .C.C. bed is provided.
  - 60mm for pile cap.
  - 45mm for grade beams.
  - 100mm for bottom tip of piles.
- For other exposure conditions take advice from the consultant.
- In order to provide clear cover to the reinforcement cement mortar cover blocks shall be used in the ratio of cement to fine aggregate in the cover block the same as in surrounding concrete. The cover blocks must be properly cured before use.

3. COLUMNS & SHEAR WALL

- The slope of any knickd bar in columns should not be more than one horizontal to ten vertical.
- The lapping of bars in columns during the transitions should be out side the starter region. This is necessitated to see that the starter does not get disturbed.
- In the zone of development length in columns, it is preferable to reduce the tie spacing to half the nominal value.
- Lapping shall be provided for not more than 50% of bars of any section.
- For any bar there shall not be more than one lap in any storey.
- The thickness of the starter for columns should be at least 8cms.
- The concrete in the starter should preferably be one grade higher than the concrete in the upper column.
- It is preferable to avoid column ties or links in the starter region.

4. BINDING WIRE

- Block soft iron wire of 16 gauge (1.6mm dia) shall be used as binding wire for tying reinforcement . Annealed binding wire of size not less than 0.9mm(20 gauge ) also can be used for tying of reinforcement.
- It is important to see that after tying, the surplus binding wire is cut off and ends of the wire ties are kept reasonably short so that they do not touch the form work to avoid rust spots forming later, on the face of concrete.

5. STRUCTURAL SAFETY

- The contractor shall have to ensure the structural safety by load testing of his own cost and risk as desired by consultants.
- In order to assure the quality and strength of concrete, the contractor should arrange the facility for destructive and non destructive tests (Rebound hammer, pulse velocity etc) at site, at his risk and cost.

6. CONCRETE AND CEMENT

( Notes in relevant structural drawings supercede General Notes )

- It is advised to use a IS approved water proofing compound for concreting water tanks and both room floor slabs. Concrete mix for columns shall be as specified in the structural drawings.
- Cement should be fresh OPC or PPC or PSC. The fineness, initial and final setting time and compressive strength of cement should be tested as per IS 4031 – 1968 before use and the copy of results duly submitted to the consultants.
- As far as possible for monolithic construction use some brand of cement from same plant. More than one brand cement should not be used in monolithic constructions.
- The concrete cubes of 150mm x150mm x150mm sizes are to be taken out periodically. Refer I.S. 456 – 2000 clause –15.2 for number of cubes related to quantity of concrete. Half the number of cubes are to be tested at 7 days, and remaining are to be tested at 28 days. The test results should be regularly submitted to the consulting engineer. The sampling and analysis must be done according to the specifications of IS :1199 – 1959.
- The water used in concrete should be clean and potable.
- Mixing of concrete should be done by mechanical mixers and should be done for atleast 2 minutes for O.P.C. The Mixer shall confirm to the specifications outlined in I.S. 5891 or I.S. 5892 – 1970.
- Compacting of concrete should be done by using mechanical vibrators.
- For beams and deep members immersion vibrators (I.S.2505–1980) shall be used for compaction. The operation frequency of the motor should preferably be between 8000 to 12000 vibrations per minute. The vibrator should penetrate rapidly into the bottom of the layer and atleast 15 cms into the preceding layer, if there is any. It should be held (generally 10 to 20 sec.) until the compaction is considered adequate and then with down slowly at the rate of about 8 cms per sec.
- For slab and other thin members screed board type vibrators (I.S.2506–1964 )shall be used.
- The vibrator has a limited sphere of influence. Hence to obtain uniform compaction, the vibrators must be inserted into the concrete at close intervals say about 50cms.

10. FORM WORK AND DECENTERING

- Vibration should stop when paste first begins to appear around the vibrator.
- Concrete should not be dropped in form work from a height greater than 1.5m.
- It is advisable to reduce the slump as the level of concrete rises in columns, in order to prevent water gain which would weaken the upper portion of the concrete and make it less durable.
- Junction of columns and beams and place of congestion of bars should be concreted with aggregate of nominal max. size restricted to 5mm less than the min. clear distance between main bars or 5mm less than the max. cover to the reinforcement which ever is smaller. Concrete mix used for the junction of columns and beams shall be that of the higher grade.
- Junction of columns and beams and place of congestion of bars should be concreted with aggregate of nominal max. size restricted to 5mm less than the min. clear distance between main bars or 5mm less than the max. cover to the reinforcement which ever is smaller. Concrete mix used for the junction of columns and beams shall be that of the higher grade.

7. AGGREGATE

- Aggregate should be clean, dense, hard, durable structurally sound and properly graded and should be according to the specification out lined in I. S. 383 – 1970.
- Aggregate should not be stored on dusty, muddy or greasy spots. when stored on ground, 5cm thick bottom layer of aggregate should be rejected.
- For RCC work concrete of grade M20 and above with 20mm graded aggregate should be used as per IS 383 –1970.
- 40mm and 20mm aggregate used for structural work shall be according to the grading given in the table below.

IS sieve designation	Percentage passing for graded aggregates	
	Nominal max. size of 40mm	Nominal max. size of 20mm
80mm	100	100
40mm	95 to 100	100
20mm	30 to 70	95 to 100
10mm	10 to 35	25 to 55
4.75mm	0 to 5	0 to 10

- For RCC works and plastering use well graded sand as mentioned in the table below.

IS sieve designation	Percentage passing for graded aggregates	
	Sand for RCC works	Sand for plastering works
10mm	100	100
4.75mm	90 to 100	95 to 100
2.36mm	75 to 100	95 to 100
1.18mm	55 to 90	90 to 100
600 micron	35 to 59	80 to 100
300 micron	8 to 30	20 to 65
150 micron	0 to 10	0 to 15

8. CONSTRUCTION JOINT

- Construction joint should be left at 1/4 span distance from support when concreting is not possible in one stage .Before laying new concrete the surface of the old concrete should be rubbed out with wire brush, loose material should be removed and the surface should be cleaned with water and 12mm(1/2" ) layer of cement mortar should be applied.
- Construction joints in columns / shear wall should be rough and free from laitance.
- Construction joint in beam – column / shear wall junctions should be provided on top of columns / shear wall at a distance of 50 to 75 mm from soffit of lower beam.
- Bonding agents to be applied before proceeding with further concrete.

9. CURING

- Exposed surface of the concrete shall be kept continuously in a damp or wet condition by ponding or by covering with a layer of soaking,cumrus hessian or similar materials, and kept constantly wet for atleast 7 days from the date of placing of concrete if O.P.C. is used. For other types of cements take advice from structural consultant. If concreting is done in dry weather, the fresh concrete shall be covered with suitable covering immediately , after the evaporation of excess water due to bleeding.

13. QUALITY CHECK REQUIREMENT FOR CONCRETING AT SITE

- Shuttering to be cleaned and inspected before laying reinforcement.
- Reinforcement to be checked before concreting and certified by the structural consultant.
- Proper chairs should be provided to slab reinforcement to ensure that required depth is maintained for the slab.
- An upper level slab should be concreted only after the cube strength of concrete in the slab immediately below has attained 28th day strength and preferably after 21 days of pour.
- Proportions of mix to be approved looking into cement grade used for the concrete.
- Minimum 9 nos concrete cubes for testing should be taken for each concreting by a competent person and proper records should be kept for reference (7,21,28 days).
- Water cement ratio should be controlled properly to attain required concrete strength.
- Shuttering to be done only after getting written clearance from the project in charge.
- Reinforcement to be tied properly using black soft 16 gauge winding wire and to be inspected before concreting.
- More than one brand of cement should not be used in once pour. Concrete cubes taken should correct to dimensions and to be taken periodically at the rate of one cube per 50m<sup>3</sup> or six cube per day which ever is more from some concrete.
- Test result should be recorded properly and once in 15 days cubes to be checked simultaneously in different labs and test result to be compared and correction to be done if any on advice from structural consultant.
- Water used should be checked periodically.
- Proper mixing of concrete to be ensured by posting competent person at the plant site and observing the time for mixing.
- Slump to be checked routinely, recorded, and corrected if necessary. Slump should not exceed 100mm / 120mm normally.
- Aggregate should be clean, dense, sound and graded.
- Sand should be of proper grade and type.
- Concrete should be cured properly to the required period.
- Formwork should be sufficiently rigid to withstand the load.

14. ROOF PROTECTION WORK

- Cracks in walls which supports roof slab, due to arching up of roof slab can be reduced by providing a good reflective surface over concrete roof slab of adequate thickness.
- In the roof slab flexural deformations associated with thermal gradient can be controlled by providing "china mosaic ".
- Cracks in walls which supports roof slab, due to arching up of roof slab can be reduced by providing a good reflective surface over concrete roof slab of adequate thickness.
- In the roof slab flexural deformations associated with thermal gradient can be controlled by providing "china mosaic ".
- Aggregate should be clean, dense, sound and graded.
- Sand should be of proper grade and type.
- Concrete should be cured properly to the required period.
- Formwork should be sufficiently rigid to withstand the load.
- Cracks in walls which supports roof slab, due to arching up of roof slab can be reduced by providing a good reflective surface over concrete roof slab of adequate thickness.
- In the roof slab flexural deformations associated with thermal gradient can be controlled by providing "china mosaic ".
- Aggregate should be clean, dense, sound and graded.
- Sand should be of proper grade and type.
- Concrete should be cured properly to the required period.
- Formwork should be sufficiently rigid to withstand the load.


15. PILING

- All reinforcement for piles should be C.R.S bars and all connections of the reinforcement for the piles should be welded.
- Clear cover for reinforcement is to be
  - 100 mm for bottom tip of piles.
  - 75mm for longitudinal reinforcement.
- Grade of concrete for piles and its cap should be M30 respectively with minimum cement content of 400kg/m<sup>3</sup>
- The pile should be taken into pile cap by 75mm.
- To ensure building up of pile upto the required level with good concrete, pile has to be built up initially to a length more than that is required and this is to be cut off to remove all laitance layer of concrete at its top.
- Initial load test on test piles and Routine Load tests on working piles should be carried out as per I.S.2911 (part IV) –– 2013.
- The contractor should ensure the integrity of building-up of the piles, by con–ducting integrity test (Low Strain Dynamic Testing or such tests) on one percentage of total number of piles as directed and demarked by the consultants, at his risk and cost. It is highly necessary to ensure the structural strength of the piles and safety against potential defects such as necking, honey– combing, cracks,voids etc.
- The liquid limit of Bentonite shall be more than 300% and less than 450%.
- Bentonite solution should be prepared by mixing it with fresh water and by circulation using pump. The relative density of the Bentonite solution should be between 1.034 and 1.12.

GENERAL NOTES ( SHEET 1 OF 2 )

CSL EMPLOYERS QUARTERS AT KOCHUKADAVANTRA

PROJECT	REV. NO.	DATE	BY	CHK	DESCRIPTION	APP
PROJECT	0	13.02.2026	AK	SA	GOOD FOR CONSTRUCTION	BS
	B	04.02.2026	AK	SA	PROOF CHECKING COMMENTS	RS
	A	02.02.2026	AK	SA	PROOF CHECKING COMMENTS	RS
	1		DRN	CHK	DESCRIPTION	APP



**GEO TECHNICAL & STRUCTURAL CONSULTANTS**  
Pullepadty, Cochin-18  
Phone: 2857624, 2868321 Fax: 2376443  
E-mail: geostructural@gmail.com



**TECHNICALVA CONSULTANTS PVT. LTD.**  
929/14, VASANTHA MENDE, M.C. Nagar, CHENNAI - 28.  
PH: 044-24933278, 24933287 FAX: 044-24933341  
Email – adm@technicva.co

COCHIN SHIPYARD LIMITED

FOR EXECUTION PURPOSE FOLLOW ONLY THE DRAWINGS APPROVED & SIGNED BY THE STRUCTURAL CONSULTANT.  
All revisions starting with alphabet A,B,C are only for approval, information. Revision with numerical 1,2,3, are issued as Good For Construction(GFC).

GOOD FOR CONSTRUCTION

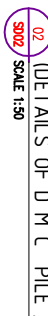
TITLE

A			
SCALE	SIZE	DRAWN	CHECKING (CC)
NTS	DESIGN (E <sub>1</sub> )	ANANTHAKRISHNAN	JACOB THOMAS
		SANJSA	RINTU SELASJINE
		APPROVED (NO)	
APPROVED (TM)	APPROVED (D1)	APPROVED (MD)	
PHILIP GEORGE	BINDU SUNIL	ANIL JOSEPH	
DRAWING NUMBER	DATE OF ISSUE	JOB NUMBER	
3152-S001	13.02.2026	3152/05/2024	









CHANGES M/S GEO STRUCTURALS (P) LTD WILL NOT BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE.

PILE CAPACITY	
PILE	CAPACITY
P60	117T
P70	160T
P80	208T
P90	236T



BROUGHT TO OUR NOTICE AND RECTIFIED BEFORE EXECUTION

GOOD FOR CONSTRUCTION

issued as Good For Construction(GFC).
REFERENCE DRAWING

(-2.9 m) PILE CAP AT SUMP LEVEL

PH: 044-24933218, 24933261 FAX: 044-24931341  
Email - admin@technicaliya.com

E-mail: [geostrutturals@gmail.com](mailto:geostrutturals@gmail.com)

REV. NO:	DATE	DRN	CHK	DESCRIPTION	APP
PROJECT					

KOCHUKADAVANTRA

## DETAILS OF PILES

DRAWING NUMBER	DATE OF ISSUE	JOB NUMBER
3152-SD02	13.02.2026	3152/GS/2024



NOTES

1. This drawing should be read along with our general Notes.
2. All dimensions should be checked by the architect and any discrepancy found should be brought to our notice before execution.
3. All dimensions are in mm unless otherwise specified and levels are in meters.
4. Dimensions shall not be measured directly from this drawing, follow only written dimensions.
5. Do not duplicate any part of this drawing without our written permission.
6. Clear cover to reinforcement a) Pile cap-60mm b) Base slab-30mm c) Grade beam-30mm d) Rec well-40mm.
7. Grade of concrete & steel shall be M30 & Fe5000 respectively.
8. Lap length is 55 d and not more than half the bars shall be spliced at one section. Where 'd' is the Diameter of bar
9. The building is designed for G + 11 floors only.

COLUMN NO. 2, 3, 4, 5, 9, 13, 14, 20, 21, 34, 35, 36, 37, 52, 53, 54, 57, 58, 60, 65, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77  
CANCELED

GOOD FOR CONSTRUCTION

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REFERENCE DRAWING

- LEGEND
- PILE CAP AT LIFT PIT LEVEL
  - COLUMN
  - SHEARWALL
  - BRICK WORK
  - WELL COMPACTED SOIL
  - (-3.75m w)PILE CAP AT PUMP ROOM LEVEL
  - (-2.9m w)PILE CAP AT SUMP LEVEL

COCHIN SHIPYARD LIMITED

ARCHITECT  
TECHNICALIYA CONSULTANTS PVT. LTD.  
#25/41 VASUNTHA MENDE M.A.C. NAGAR,CHENNAI -28.  
Phone: 2851624, 2868321, Fax: 237643  
E-mail: - adm@technicliya.com

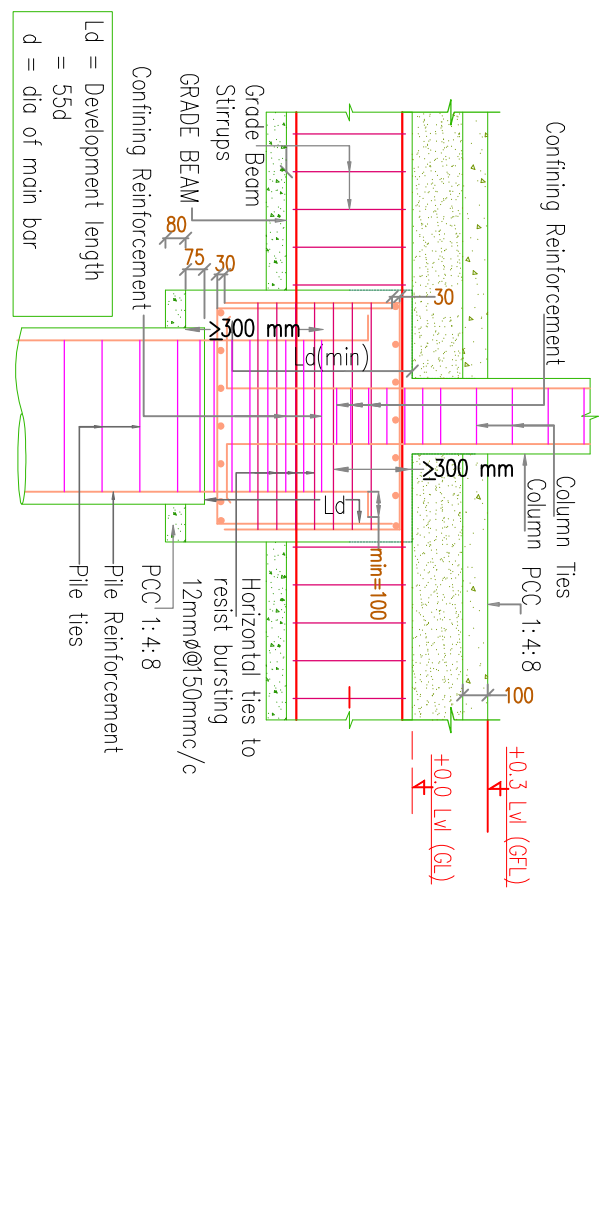
STRUCTURAL CONSULTANT  
GEO STRUCTURALS (P) LTD  
GEO TECHNICAL & STRUCTURAL CONSULTANTS  
Pullepeddy, Cochin-18  
Phone: 2851624, 2868321, Fax: 237643  
E-mail: geosctructurals@gmail.com

Sl. No.	DATE	DESCRIPTION	APP
0	13.02.2026	AK. SA. GOOD FOR CONSTRUCTION.	RS
1	02.02.2026	AK. SA. PROOF CHECKING COMMENTS	RS
2	06.01.2026	AK. SA. PROOF CHECKING COMMENTS	RS
3	02.12.2025	AK. SA. ARCH. REVISED	RS
4	13.08.2025	AK. SA. FOR PROOF CHECKING	RS
5	18.03.2025	AK. SA. FOR INFORMATION	RS
6	19.10.2024	AK. SA. 2P90W PILE CAP DETAIL REVISED	RS
7	10.10.2024	AK. SA. FOR INFORMATION ONLY	RS
8	02.09.2024	AK. SA. INTERNAL REVIEW	RS
9	30.08.2024	AK. SA. INTERNAL REVIEW	RS
10		AK. SA. DESCRIPTION	APP

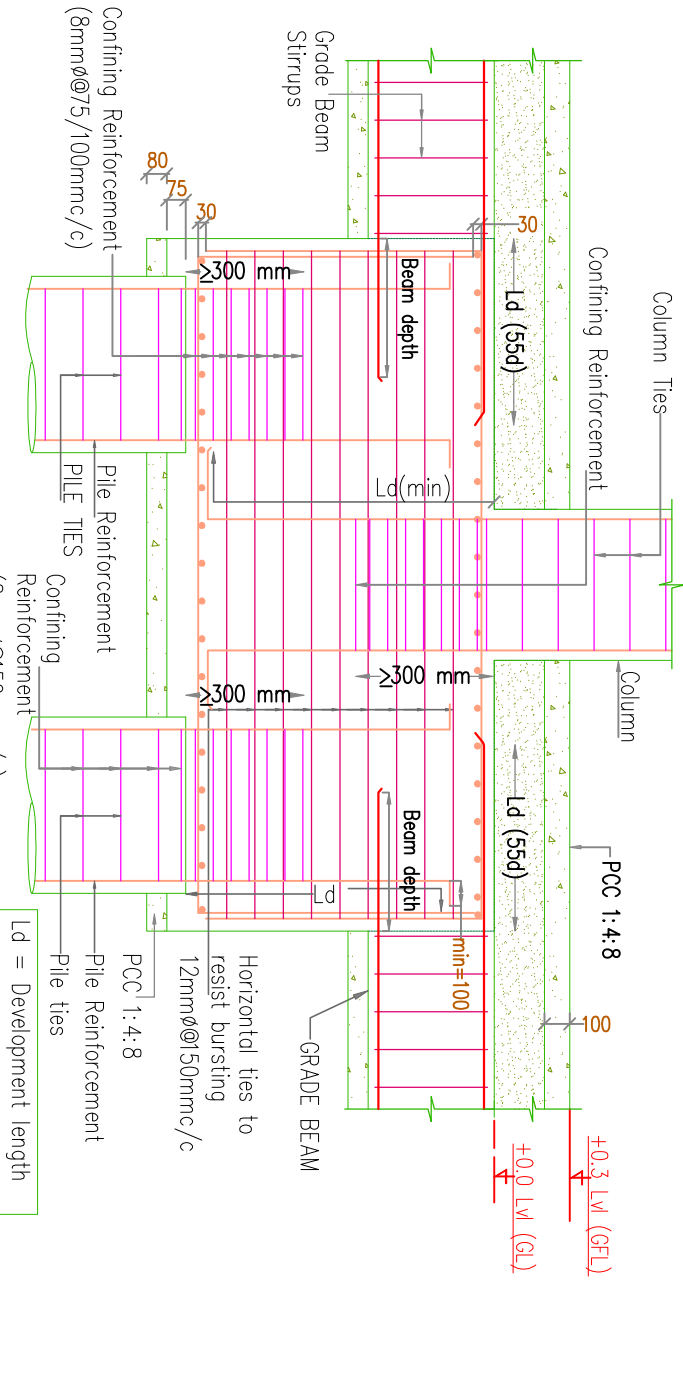
CSL EMPLOYERS QUARTERS AT  
KOCHUKADAVANTRA

LAYOUT OF PILE CAPS, GRADE BEAMS,  
BASE SLABS AND DETAILS OF GRADE  
BEAM AND BASE SLABS

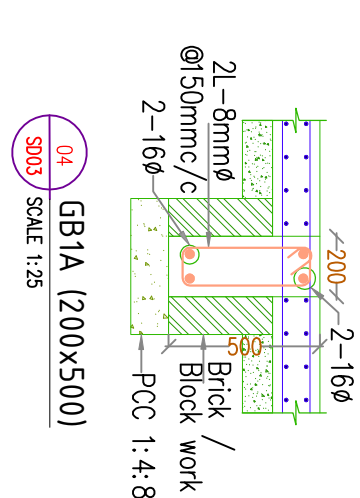
SCALE	SIZE	DRAWN	CHECKING (CC)
NTS	A1	ANANTHARISHMAN	JACOB THOMAS
APPROVED (TA)	DESIGN (ET)	SANSA	CHEGUNG (TL)
APPROVED (UT)	APPROVED (OT)	PHILIP GEORGE	RINTU SELASTINE
DRAWING NUMBER	3132-S003	DATE OF ISSUE	13.02.2026
3132-S003	3132-S003	SAB NUMBER	3132/S03/2024



002 TYPICAL SECTION OF SINGLE PILECAP

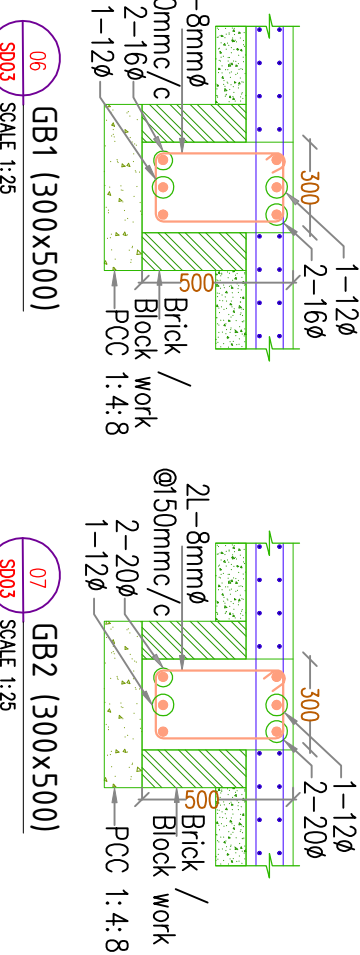


003 TYPICAL SECTION OF PILECAP



004 GB1A (200X500)

GRADE BEAMS AND BASE SLABS ARE DESIGNED AS SUPPORTED ON P.C.C LAID OVER WELL COMPACTED AND CONSOLIDATED SOIL.

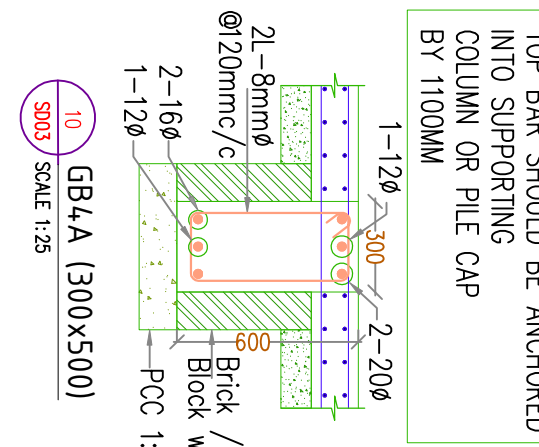


005 GB1 (300X500)

006 GB2 (300X500)

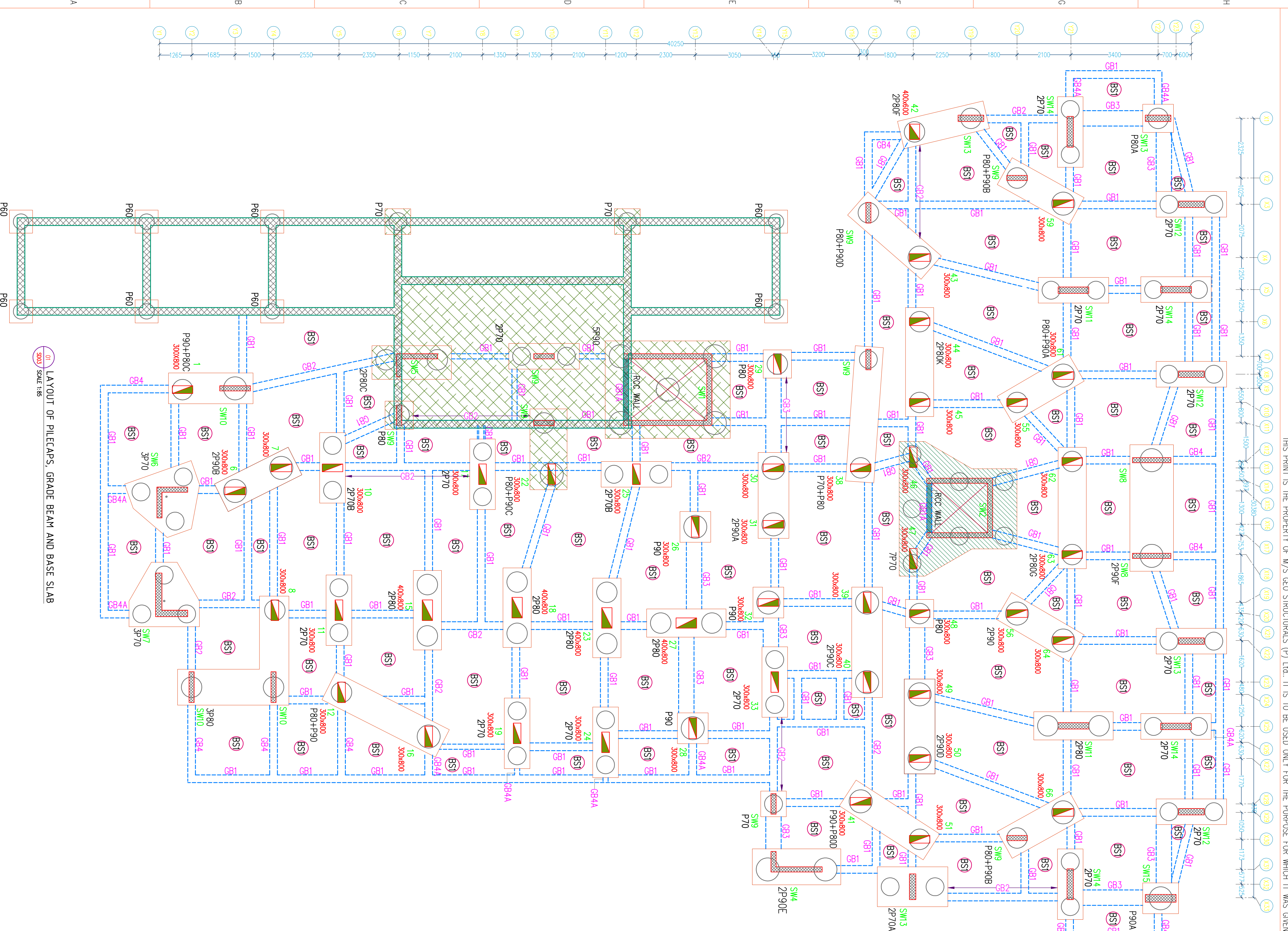
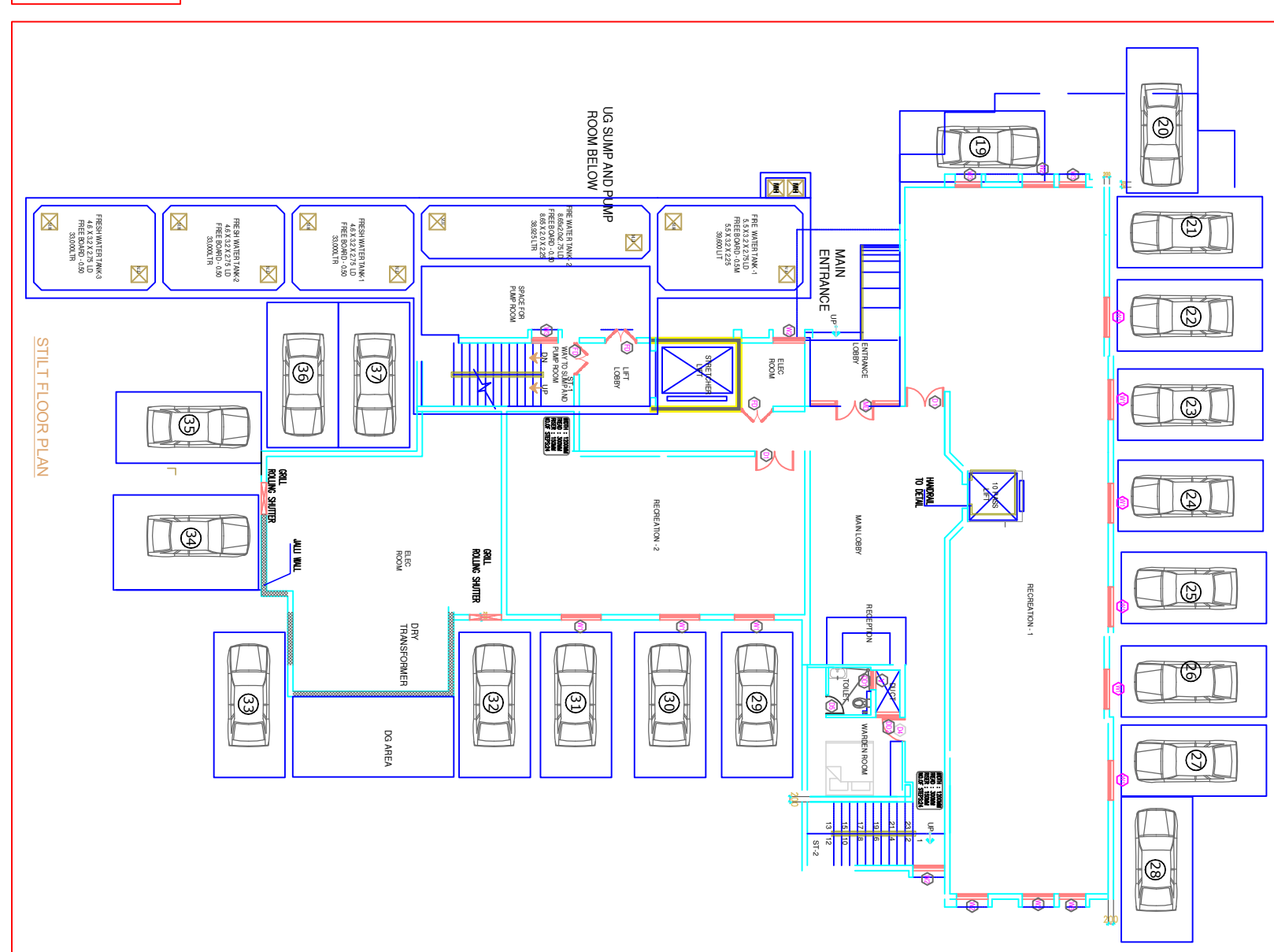
007 GB3 (600X600)

008 GB4 (300X500)



009 GB4A (300X500)

THIS STRUCTURAL LAYOUT IS PREPARED BASED ON THE ARCHITECTURAL DRAWING. IF ANY CHANGES ARE MADE IN ARCHITECTURAL DRAWINGS, REVISED STRUCTURAL DRAWINGS SHOULD BE OBTAINED FROM US BEFORE EXECUTION. ALSO, ANY REVISION WHICH VIOLATES THE BASIC STRUCTURAL FRAMING OF THE BUILDING CANNOT BE ACCOMMODATED. IN THE EVENT SUCH CHANGES W/S GEO STRUCTURALS (P) LTD WILL NOT BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE.

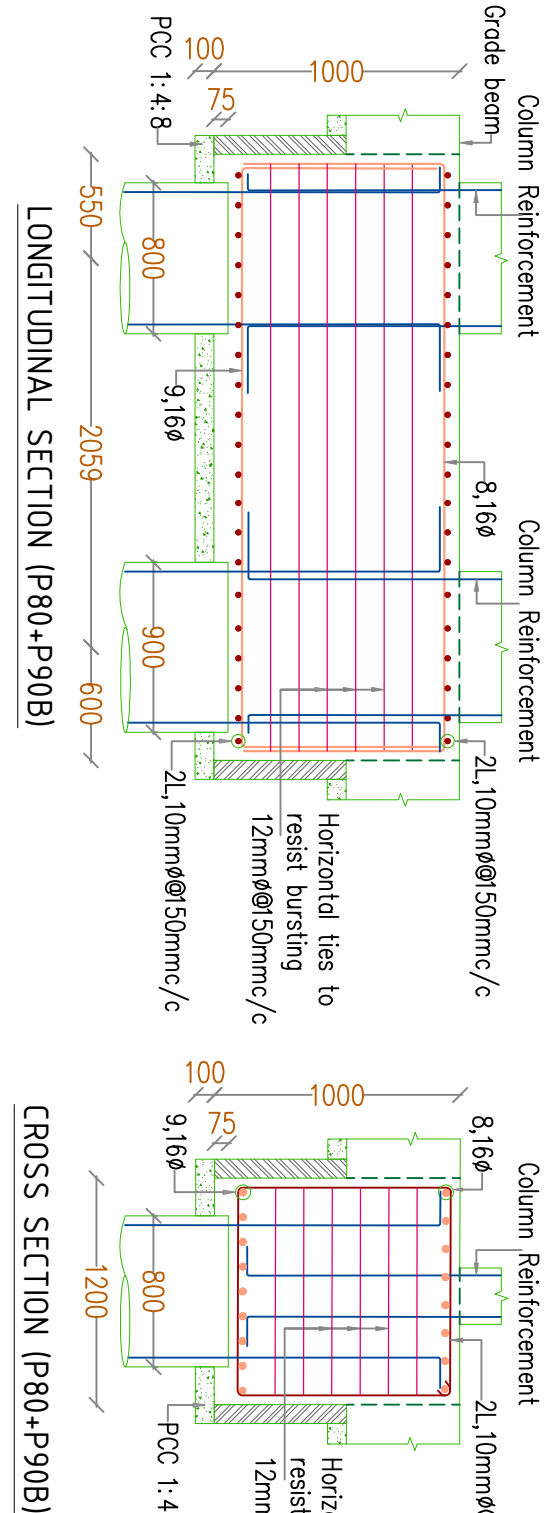


001 LAYOUT OF PILECAPS, GRADE BEAM AND BASE SLAB

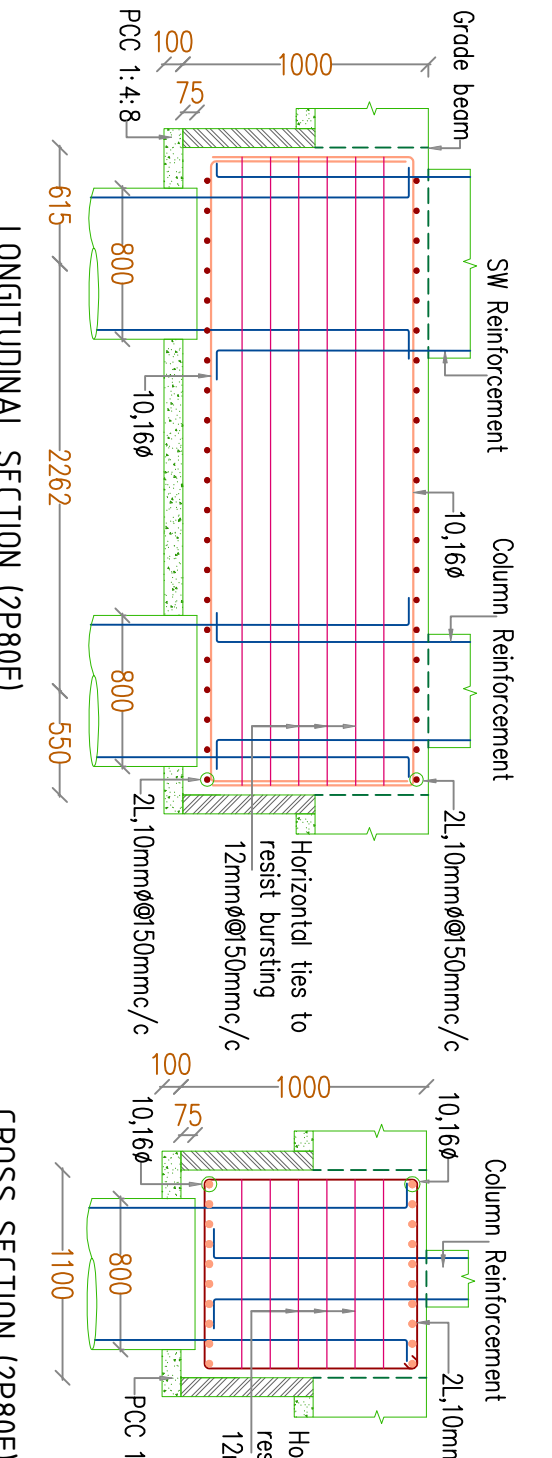




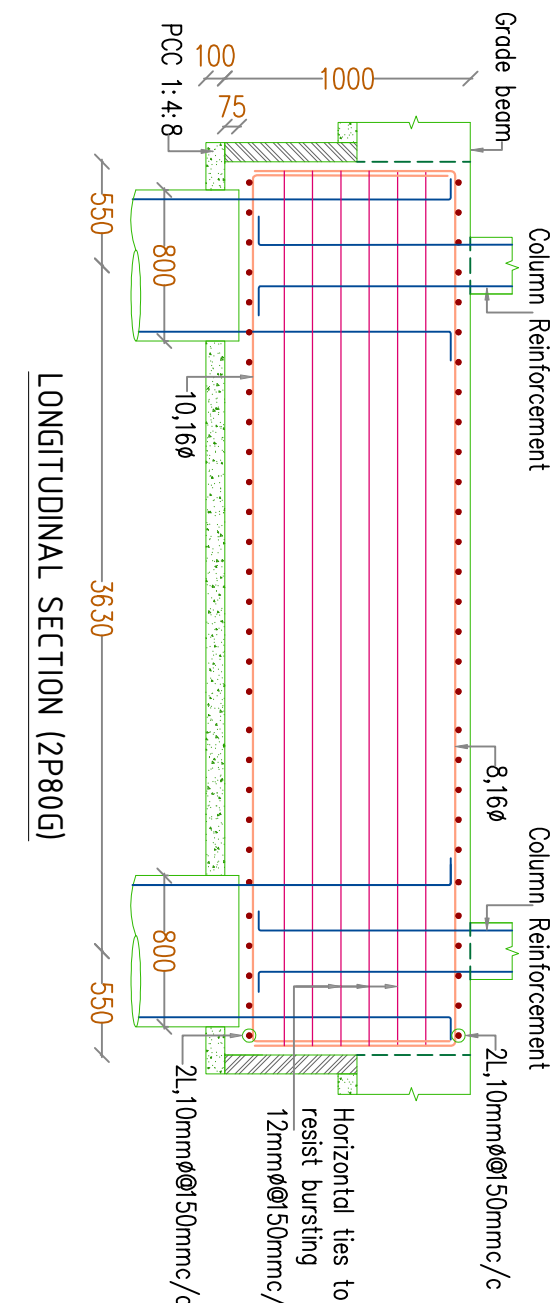




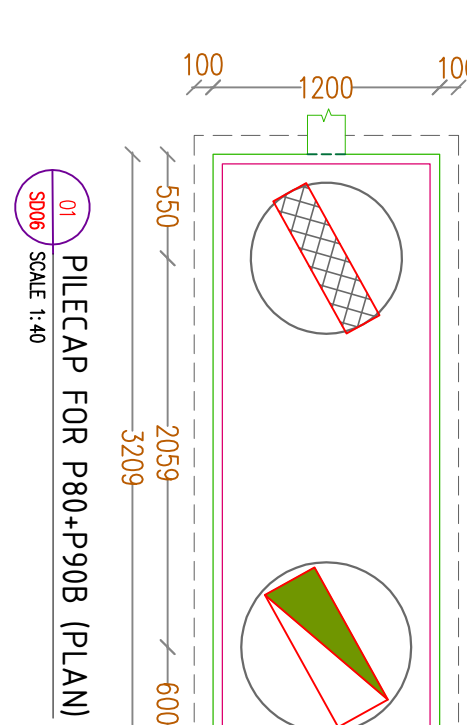
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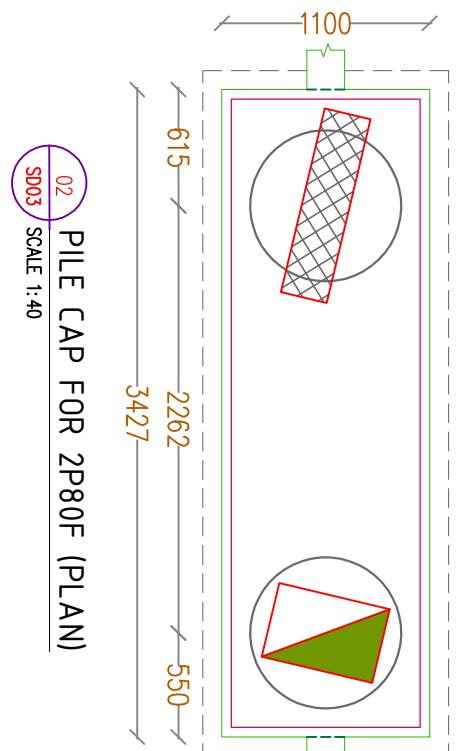
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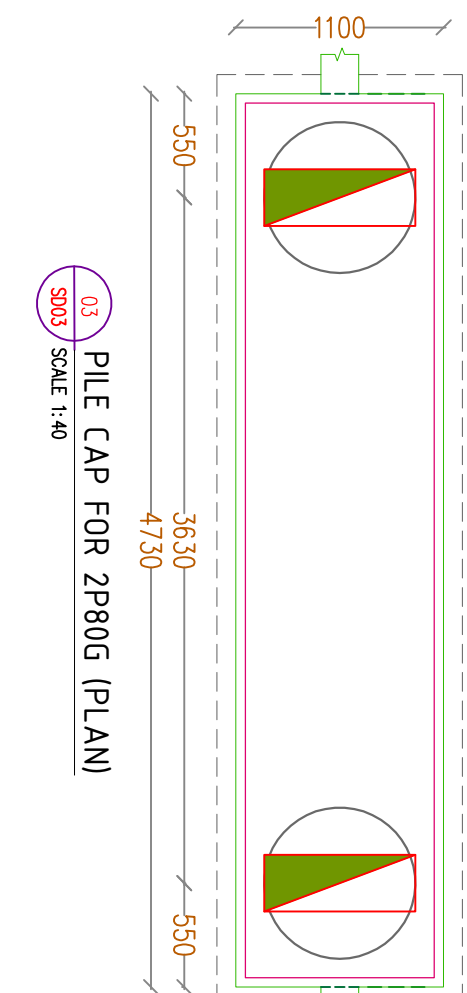
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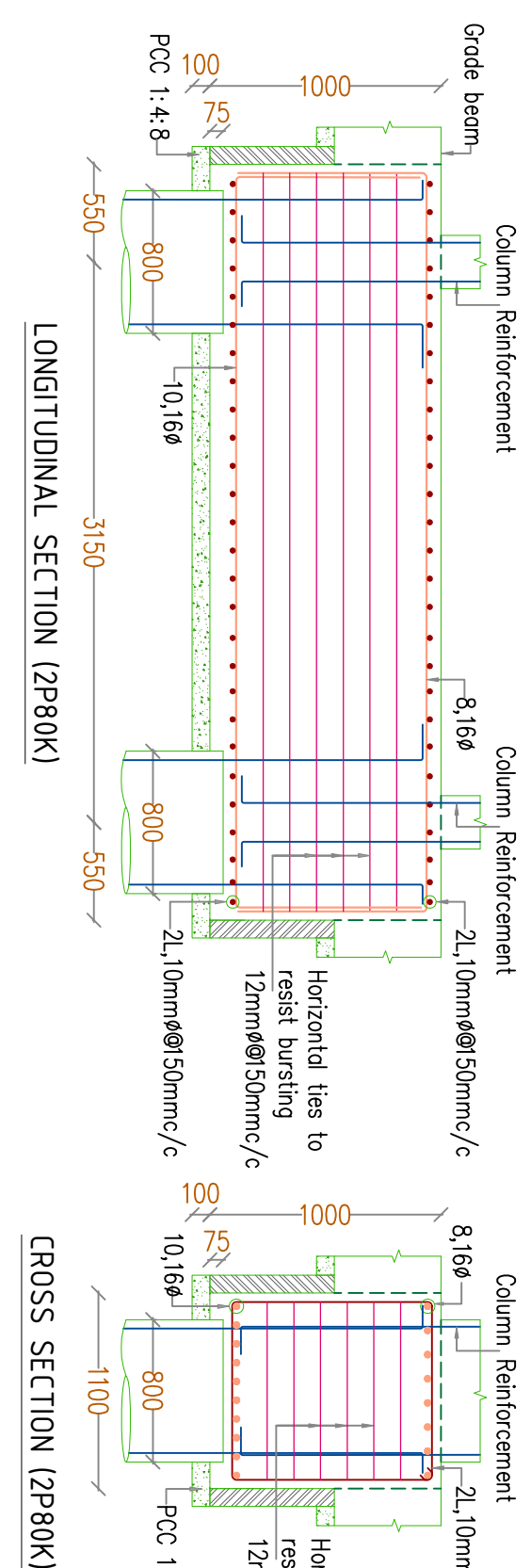
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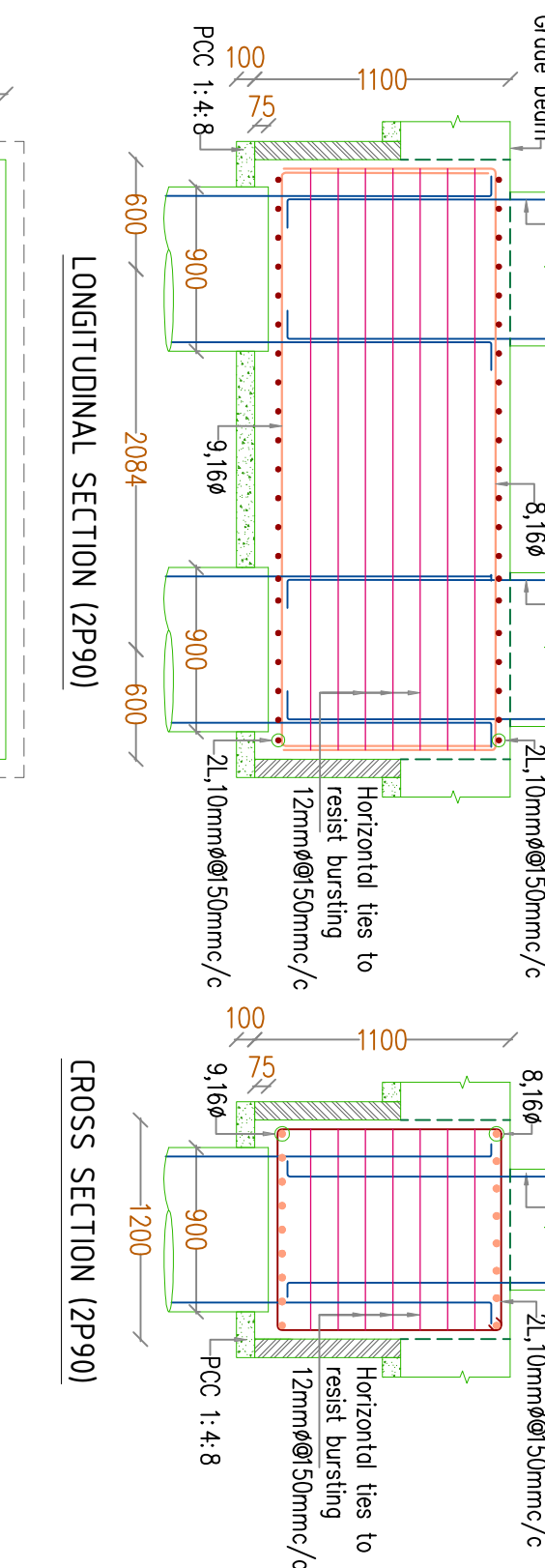
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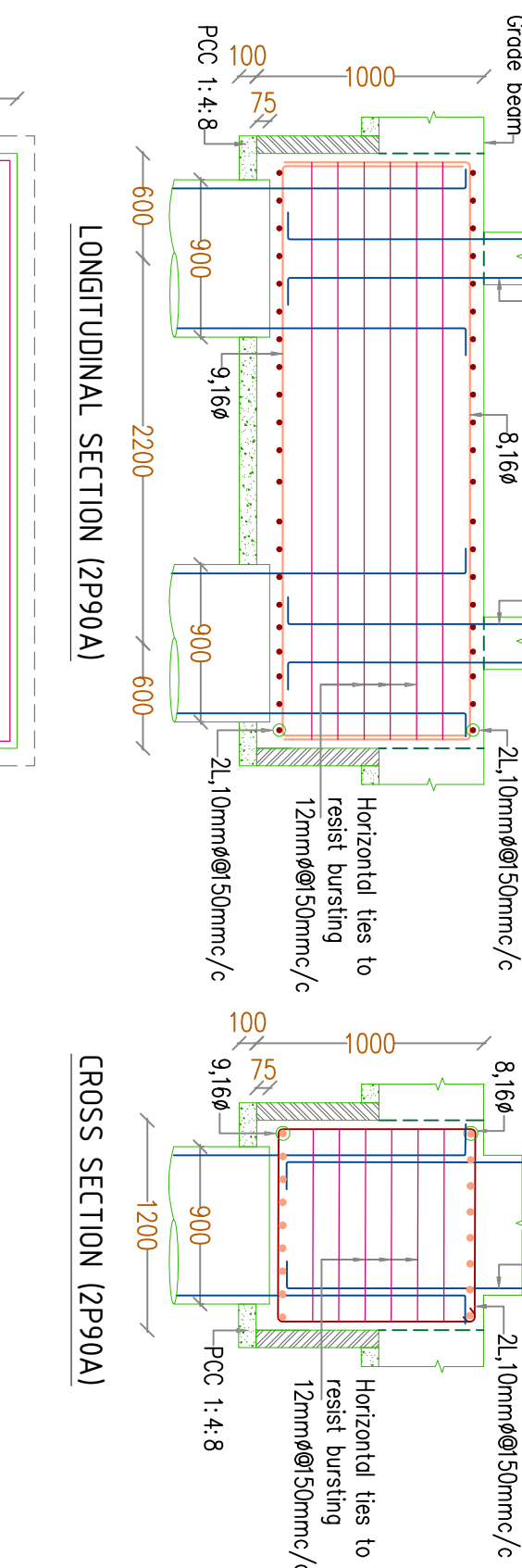
PILE CAP FOR 2P80G (PLAN)



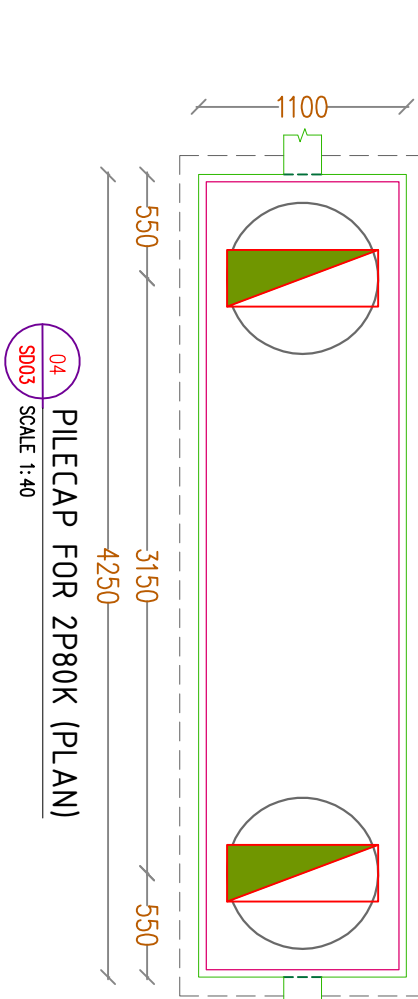
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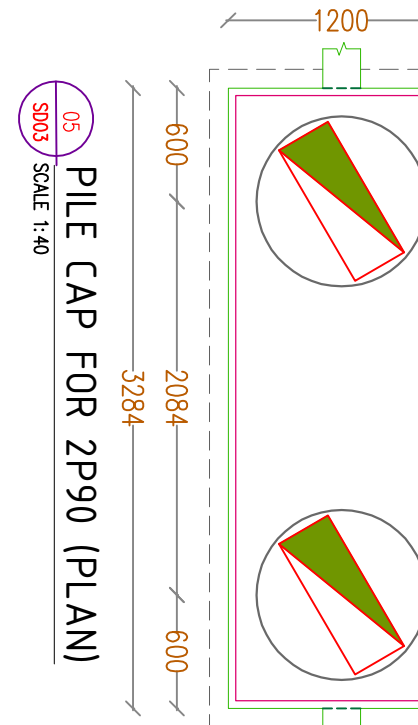
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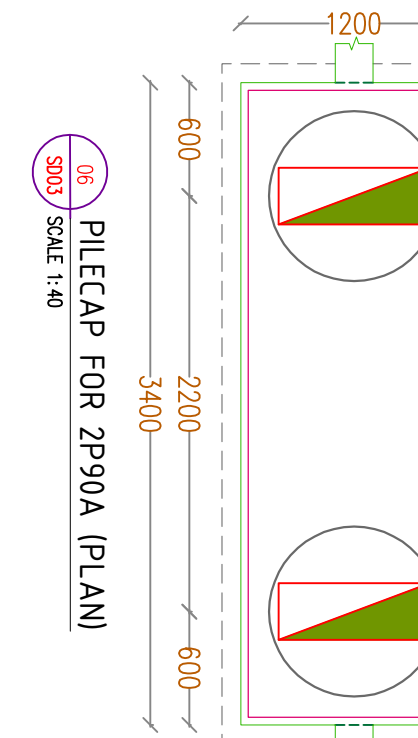
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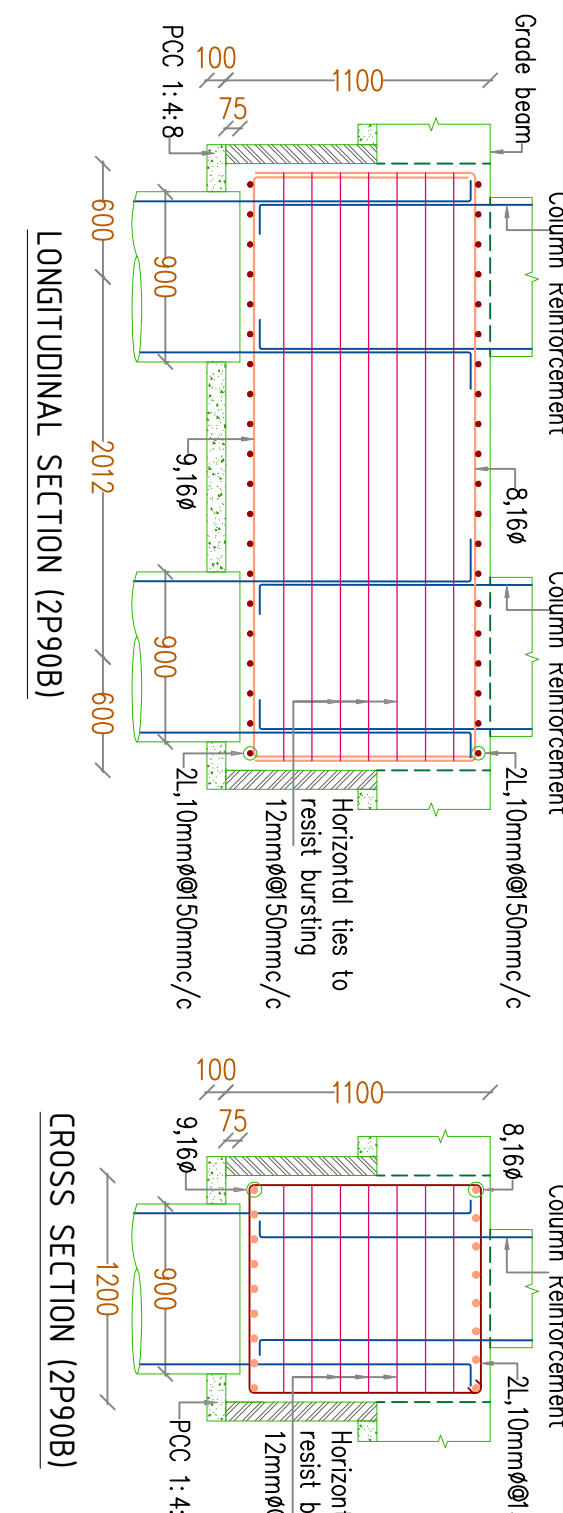
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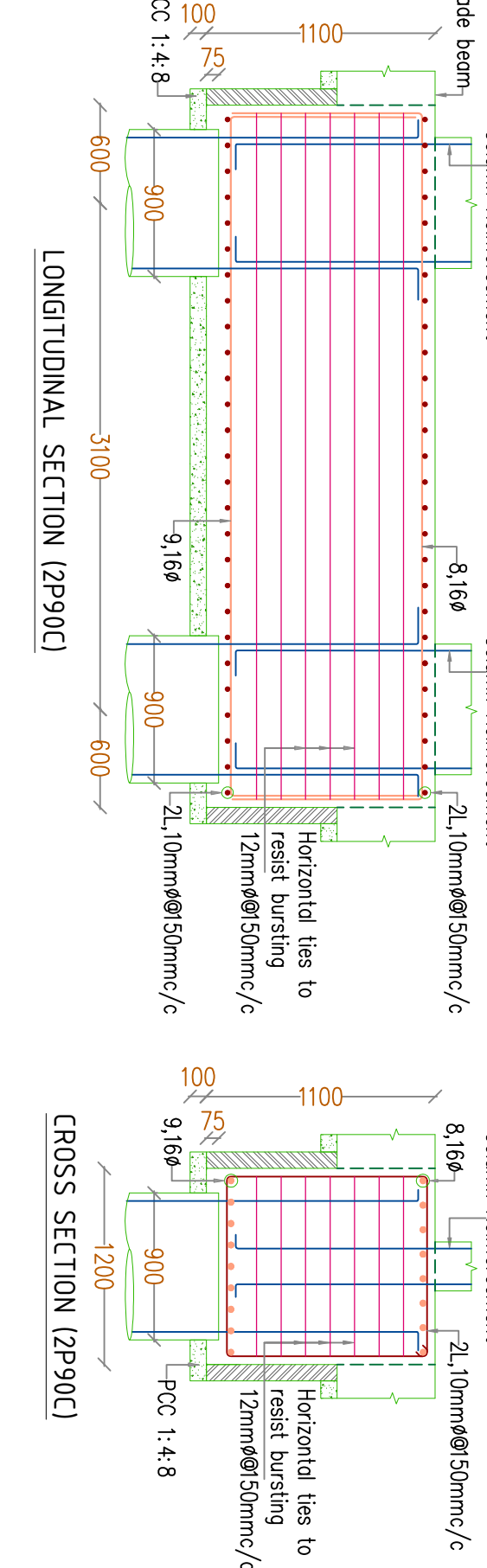
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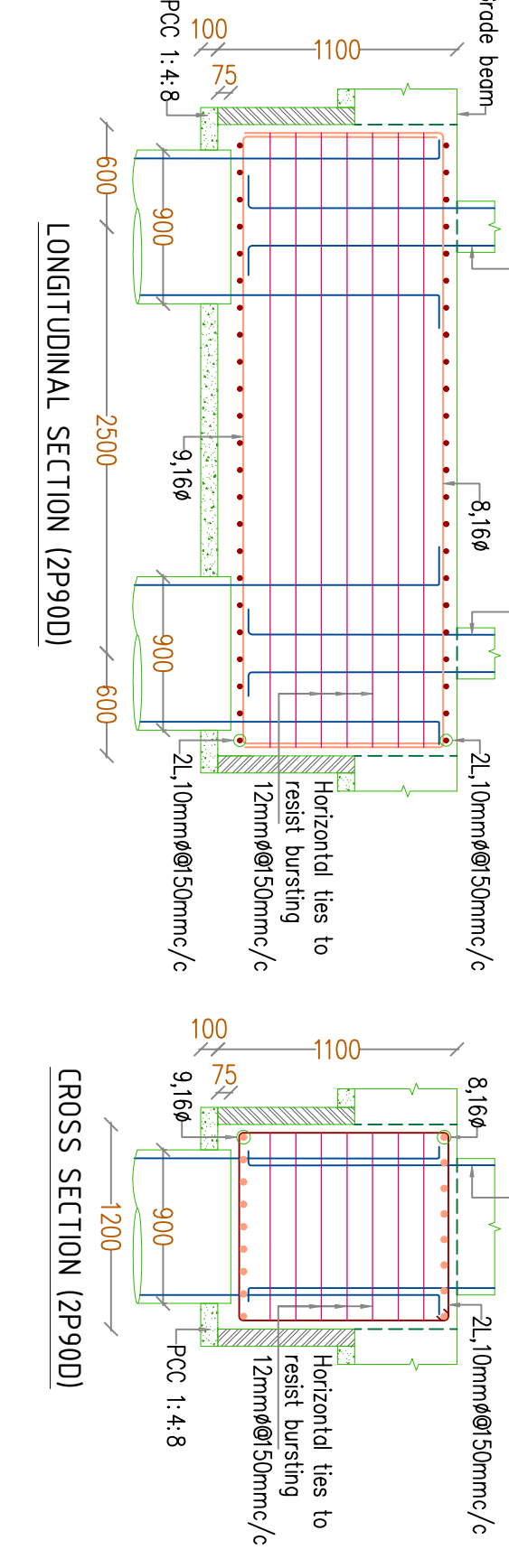
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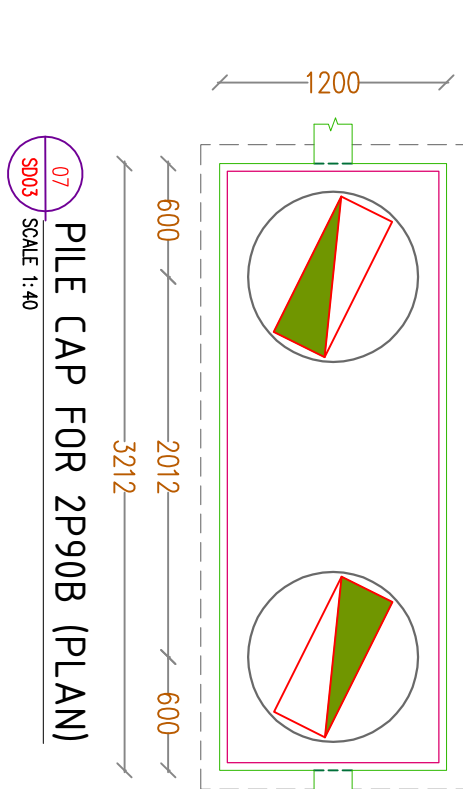
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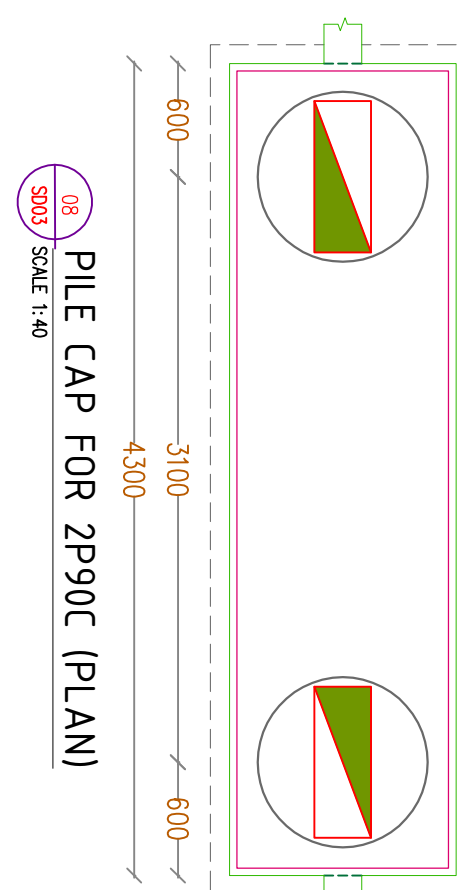
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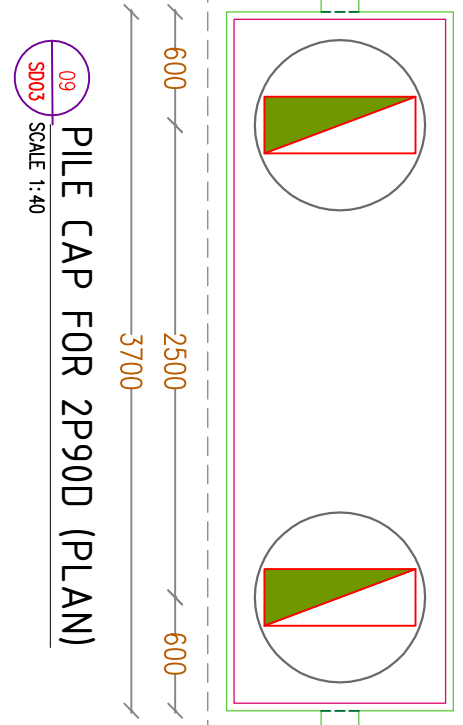
CROSS SECTION (2P90D)



PILE CAP FOR 2P90B (PLAN)



PILE CAP FOR 2P90C (PLAN)



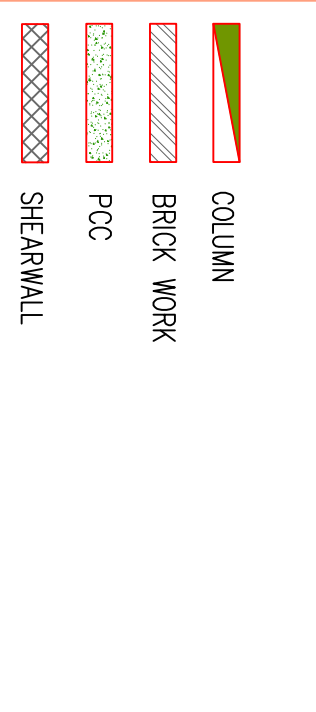
PILE CAP FOR 2P90D (PLAN)

- NOTES
- This drawing should be read along with our general Notes. Notes in this drawing, Architectural Drawings & Specifications.
  - All dimensions should be checked by the architect and any discrepancy found should be brought to our notice before execution.
  - All dimensions are in mm unless otherwise specified and levels are in meters.
  - Dimensions shall not be measured directly from this drawing, follow only written dimensions.
  - Do not duplicate any part of this drawing without our written permission.
  - Clear cover to reinforcement o) Pile cap-60mm b) Base Slab-30mm c) Grade beam-30mm d) Rec well-40mm.
  - Grade of concrete & steel shall be M30 & Fe5000 respectively.
  - Top length is 55 d and not more than half the bars shall be spliced at the section, Where 'd' is the Diameter of bar
  - The building is designed for G + 11 floors only.

GOOD FOR CONSTRUCTION

FOR EXECUTION PURPOSE FOLLOW ONLY THE DRAWINGS APPROVED & SIGNED BY THE STRUCTURAL CONSULTANT. All revisions starting with alphabet A,B,C...are only for approval, information. Revision with numerical 1,2,3...are issued as Good For Construction(GFC).

REFERENCE DRAWING



CLIENT  
COCHIN SHIPYARD LIMITED

ARCHITECT  
TECHNICALVA CONSULTANTS PVT. LTD.  
#25/41 VASANTHA AVENUE M.R.C NGAR,CHENNAI -28.  
PH: 044-24933278, 24933287 FAX: 044-24937341  
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STRUCTURAL CONSULTANT  
GEO STRUCTURALS (P) LTD  
GEO TECHNICAL & STRUCTURAL CONSULTANTS  
Pullepady, Cochin-18  
Phone: 2367624, 2368321 Fax: 2376463  
E-mail: geostructurals@gmail.com

Rev	NO	DATE	DESCRIPTION	APP
A	30.08.2024	AK	INTERNAL REVIEW	RS
B	02.09.2024	AK	FOR INFORMATION ONLY	RS
C	10.10.2024	AK	FOR INFORMATION ONLY	RS
D	19.10.2024	AK	FOR INFORMATION	RS
E	18.03.2025	AK	FOR INFORMATION	RS
F	13.08.2025	AK	FOR PROOF CHECKING	RS
G	02.12.2025	AK	ARCH REVISD	RS
H	06.01.2026	AK	PROOF CHECKING COMMENTS	RS
I	02.02.2026	AK	PROOF CHECKING COMMENTS	RS
O	13.02.2026	AK	GOOD FOR CONSTRUCTION	RS

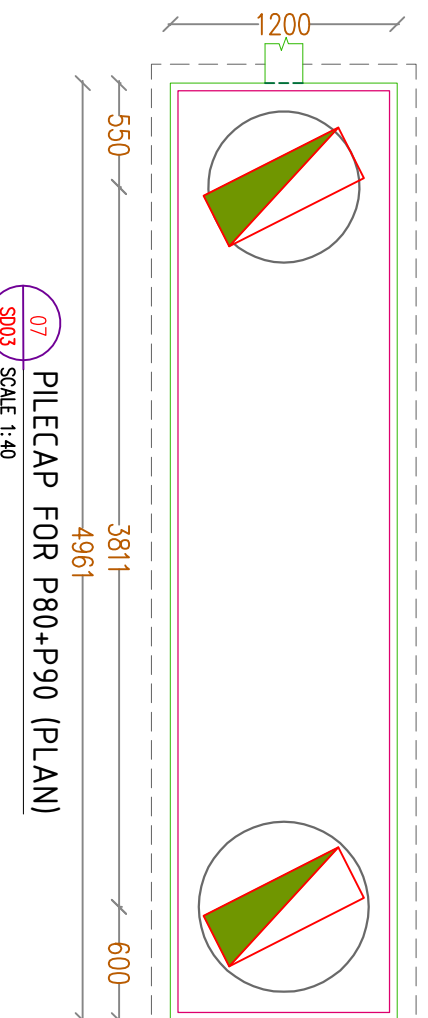
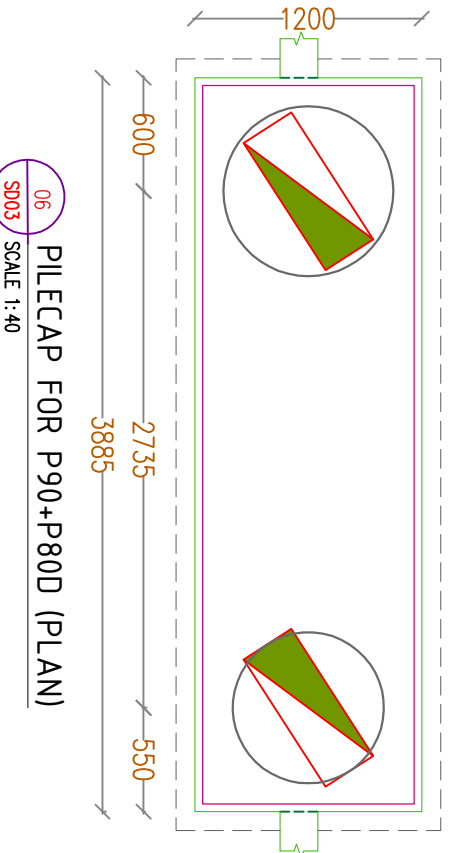
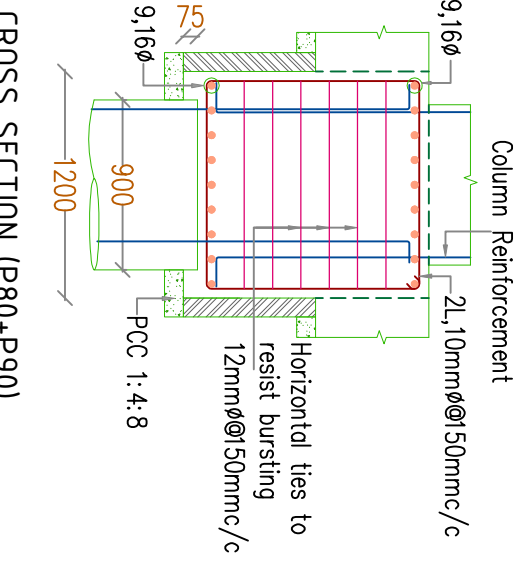
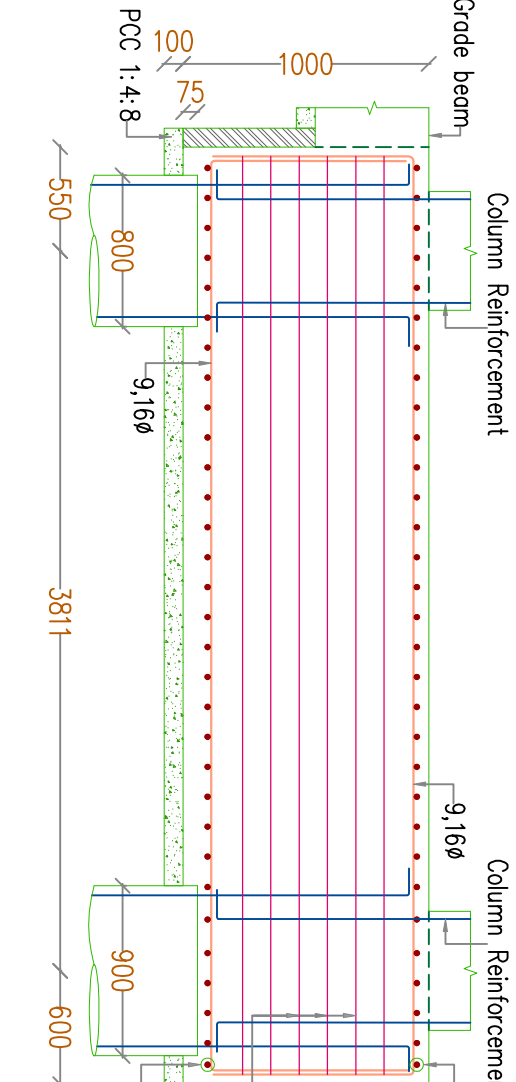
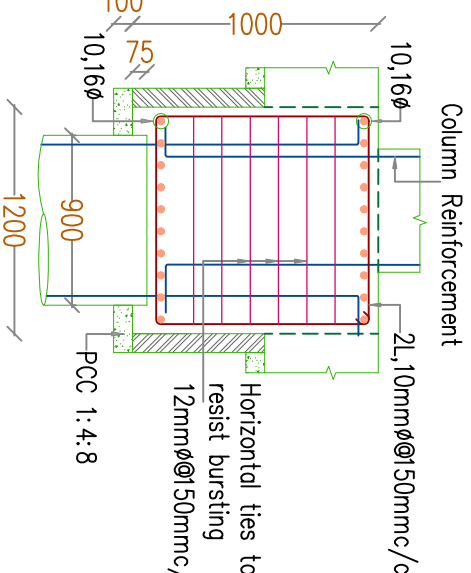
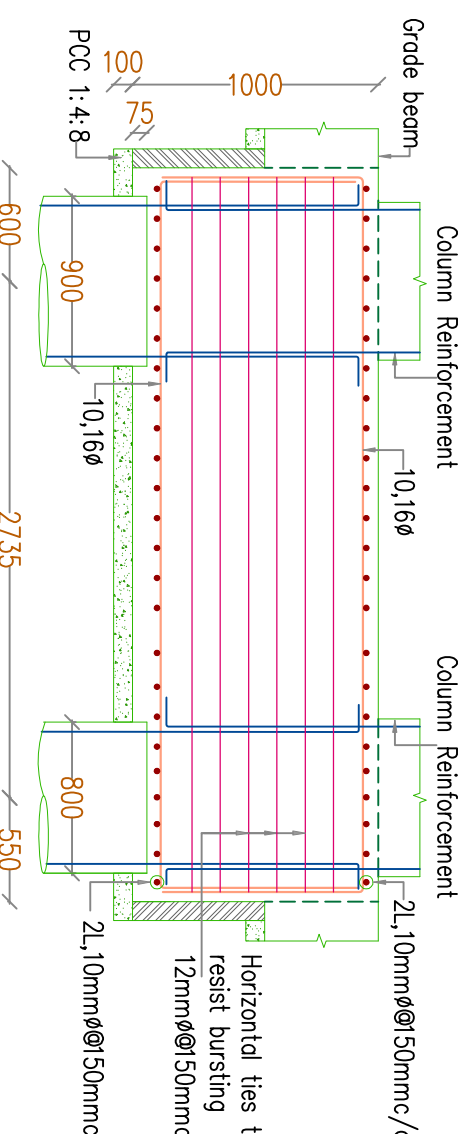
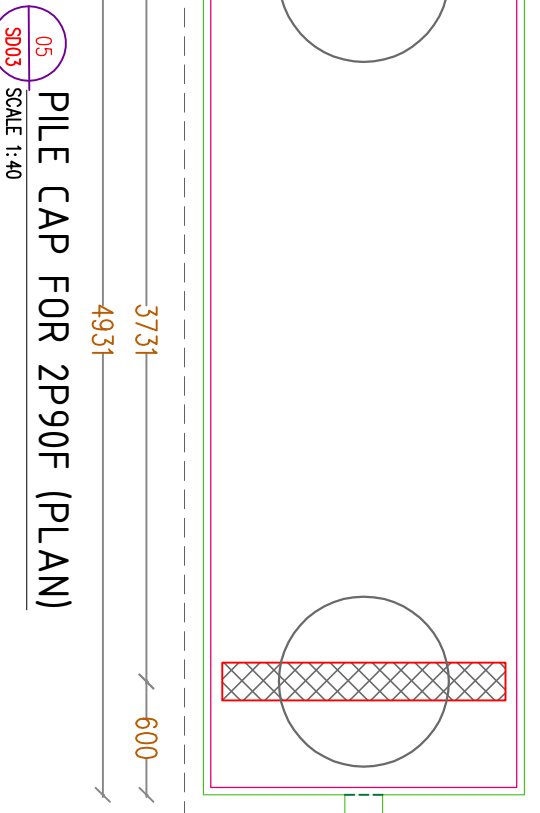
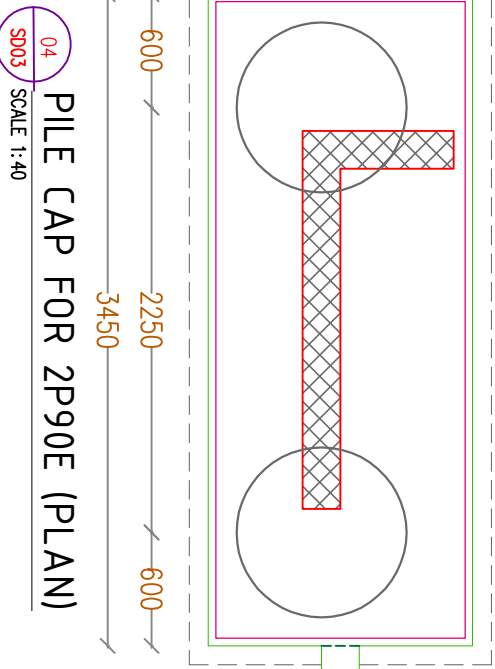
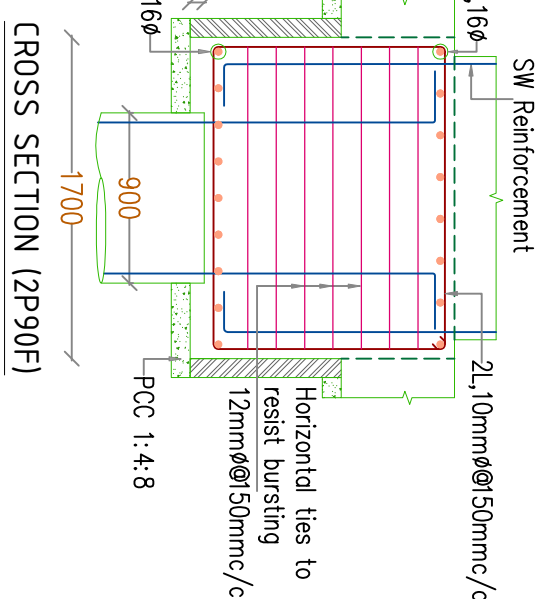
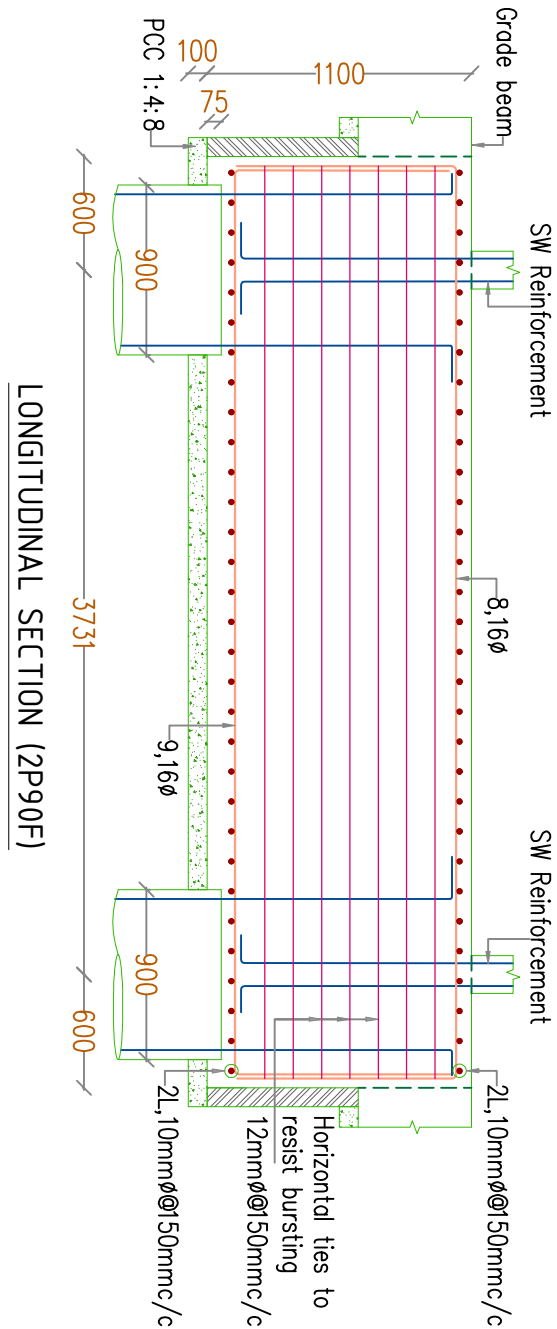
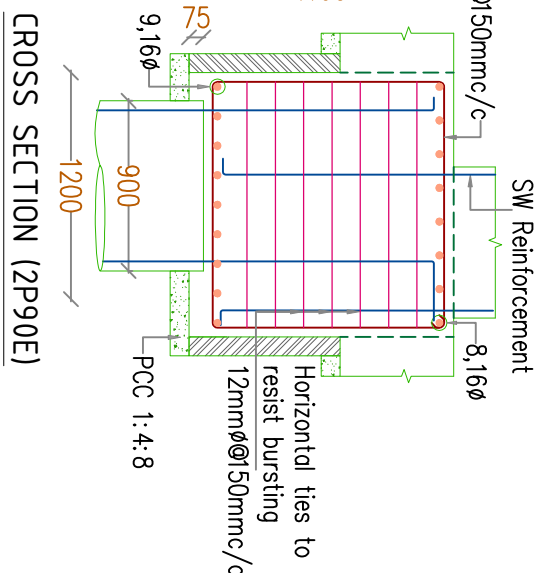
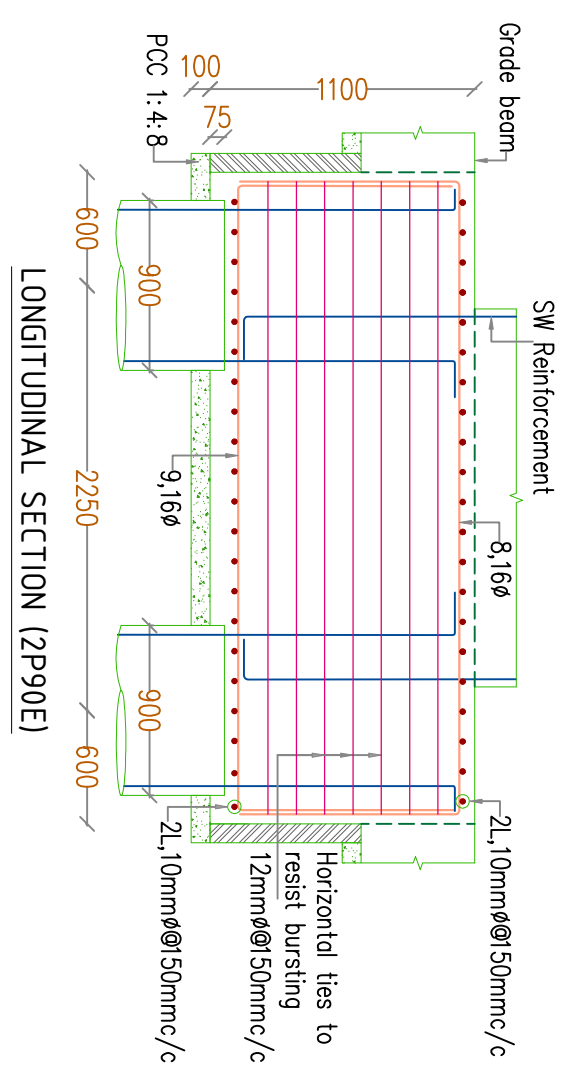
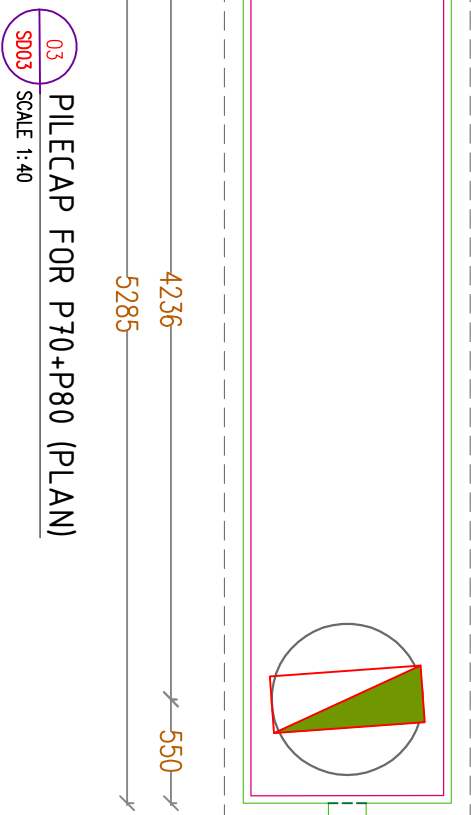
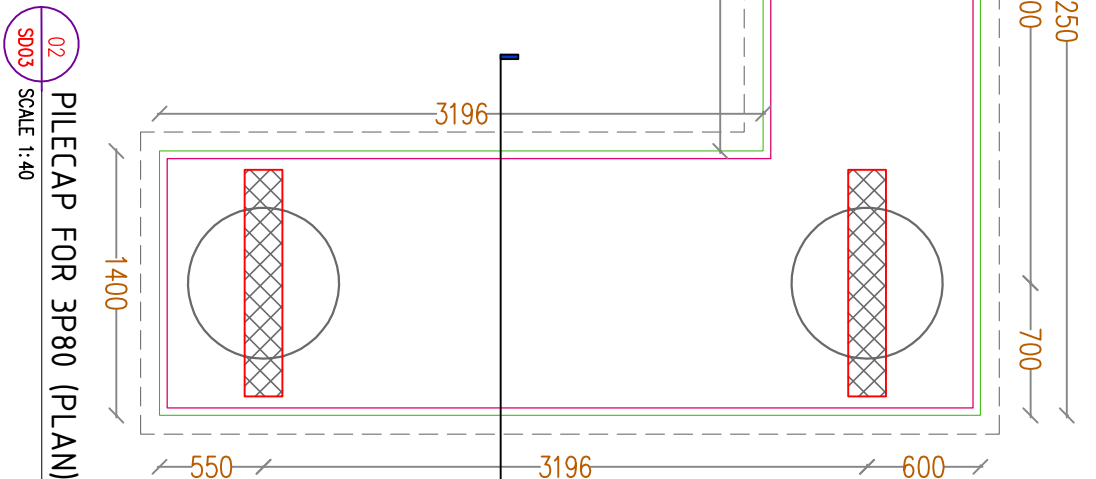
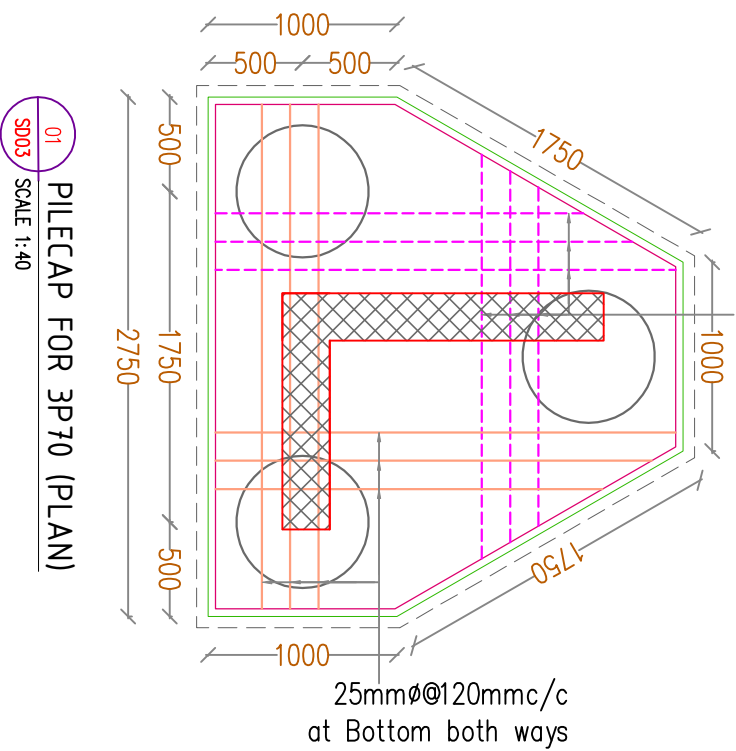
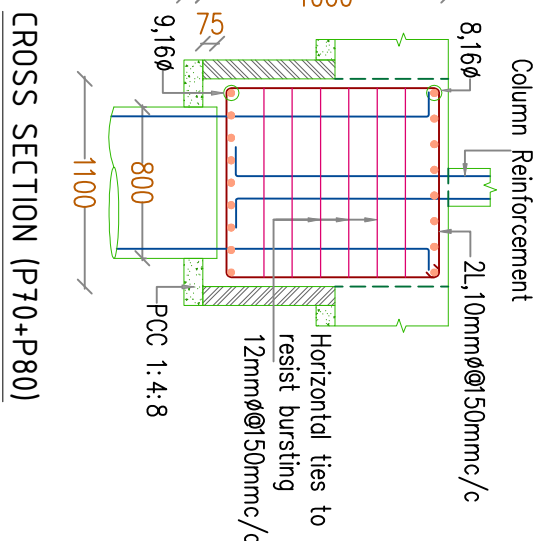
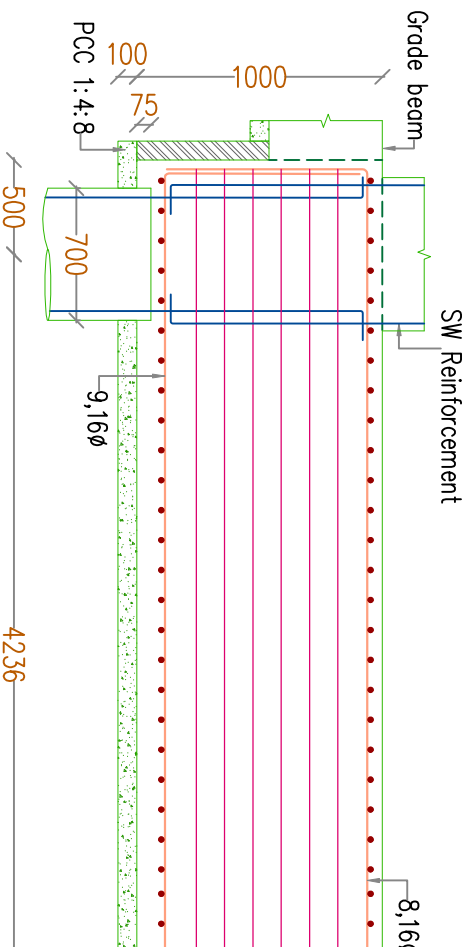
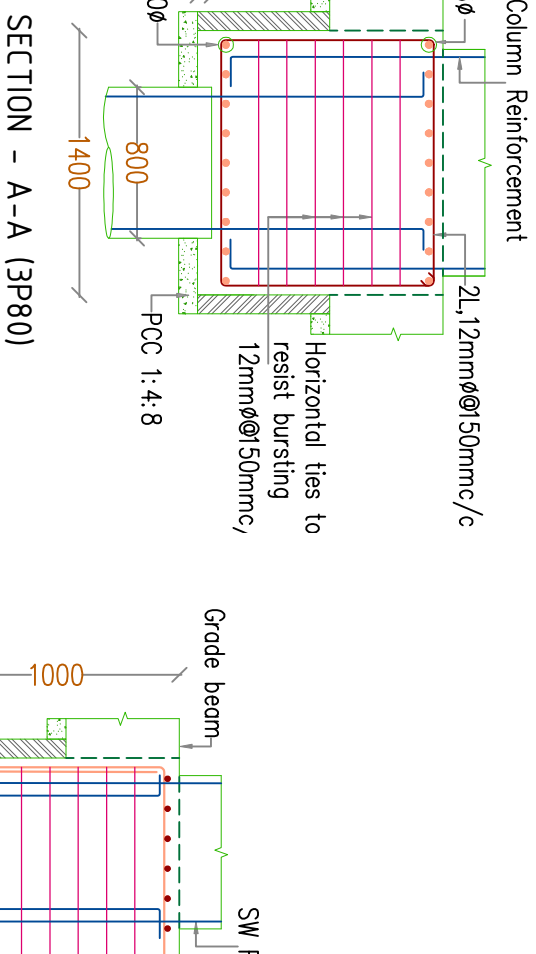
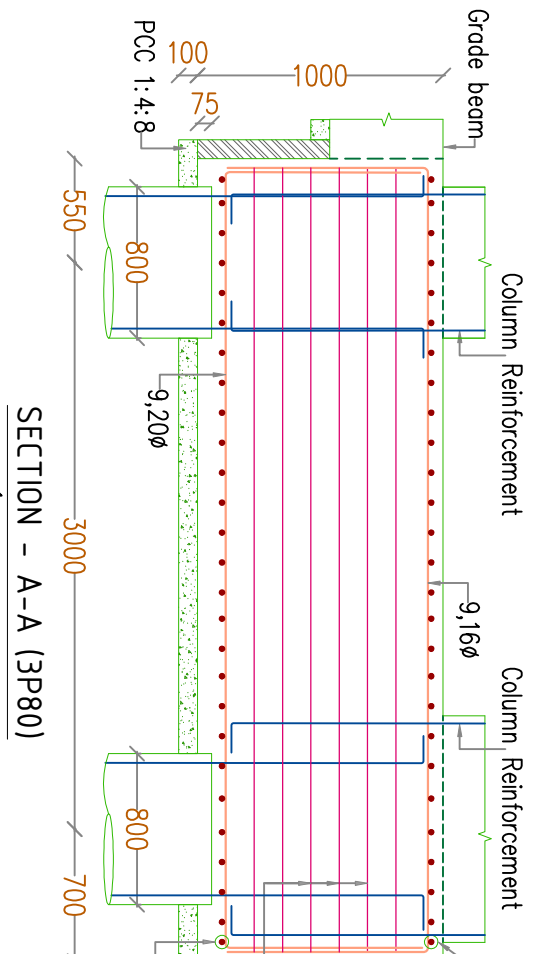
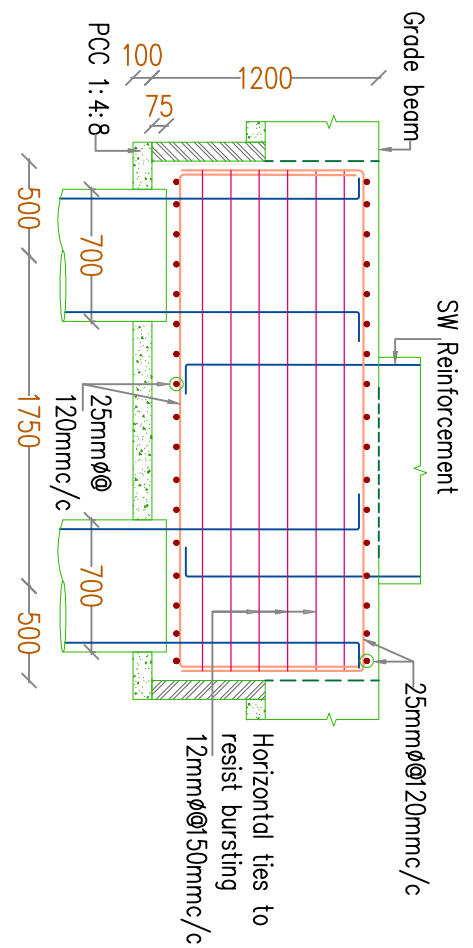
CSL EMPLOYERS QUARTERS AT  
KOCHUKADAVANTRA

DETAILS OF PILE CAPS

SCALE	SIZE	DRAWN	CHECKING (CC)
NTS	A1	ANANTHAKRISHNAN	JACOB THOMAS
APPROVED (TV)	DESIGN (Er)	SANSA	CHEONG (TL)
APPROVED (GT)	APPROVED (GT)	PHILIP GEORGE	APPROVED (UN)
APPROVED (UN)	APPROVED (UN)	PHILIP GEORGE	APPROVED (UN)
DATE OF ISSUE	308 NUMBER	DATE OF ISSUE	308 NUMBER
13/02/2026	3152/05/2024	13/02/2026	3152/05/2024

SHEET 2 OF 4





- NOTES
- This drawing should be read along with our general Notes, Notes in this drawing, Architectural Drawings & Specifications.
  - All dimensions should be checked by the architect and any discrepancy found should be brought to our notice before execution.
  - All dimensions are in mm unless otherwise specified and levels are in meters.
  - Dimensions shall not be measured directly from this drawing, follow only written dimensions.
  - Do not duplicate any part of this drawing without our written permission.
  - Clear cover to reinforcement a) Pile cap-60mm b) Base Slab-30mm c) Grade beam-30mm d) Rec wall-40mm.
  - Grade of concrete & steel shall be M30 & Fe5000 respectively.
  - Lap length is 55 d and not more than half the bars shall be spliced at the section, Where 'd' is the Diameter of bar
  - The building is designed for G + 11 Floors only.

GOOD FOR CONSTRUCTION

FOR EXECUTION PURPOSE FOLLOW ONLY THE DRAWINGS APPROVED & SIGNED BY THE STRUCTURAL CONSULTANT. All revisions starting with alphabet A,B,C...are only for approval, information. Revision with numerical 1,2,3...are issued as Good For Construction(GFC).

REFERENCE DRAWING

- LEGEND
- COLUMN
  - BRICK WORK
  - PCC
  - SHEARWALL

COCHIN SHIPYARD LIMITED

TECHNICALITYA CONSULTANTS PVT. LTD.  
#25/41 VASANTHA AVENUE M.B.C NAGAR CHENNAI - 28.  
Phone: 2651624, 2668321 Fax: 2376453  
E-mail: geostructuralis@gmail.com

GEO STRUCTURALS (P) LTD  
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Pullepadty, Cochin-18  
Phone: 2651624, 2668321 Fax: 2376453  
E-mail: geostructuralis@gmail.com

Rev	NO	DATE	DESCRIPTION	APP
A	30.08.2024	AK	INTERNAL REVIEW	RS
B	02.09.2024	AK	INTERNAL REVIEW	RS
C	10.10.2024	AK	FOR INFORMATION ONLY	RS
D	18.03.2025	AK	FOR INFORMATION	RS
E	13.08.2025	AK	FOR PROOF CHECKING	RS
F	02.12.2025	AK	ARCH REVISD	RS
G	06.01.2026	AK	PROOF CHECKING COMMENTS	RS
H	06.01.2026	AK	PROOF CHECKING COMMENTS	RS
I	02.02.2026	AK	GOOD FOR CONSTRUCTION	RS
O	13.02.2026	AK	SA	RS

CSL EMPLOYERS QUARTERS AT  
KOCHUKADAVANTRA

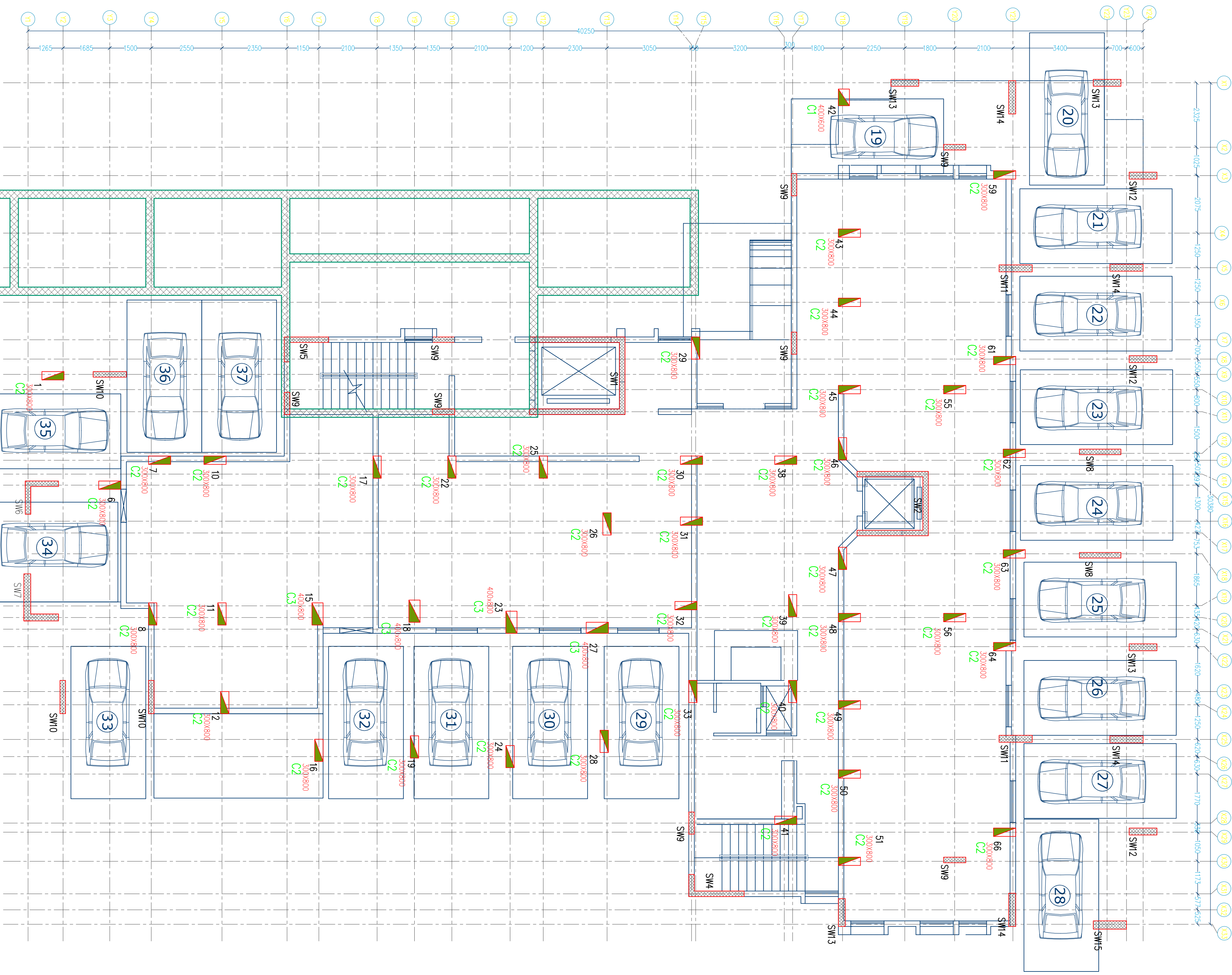
DETAILS OF PILE CAPS

SCALE	SIZE	DRAWN	CHECKING (CC)
NTS	A1	ANANTHAKRISHNAN	JACOB THOMAS
APPROVED (TN)	DESIGN (Er)	SANSA	RINTU SELASTINE
PHILIP GEORGE	APPROVED (DT)	ANIL JOSEPH	
DRAWING NUMBER	DATE OF ISSUE	SAB NUMBER	
3132-S006	13.02.2026	3152/GS/2024	

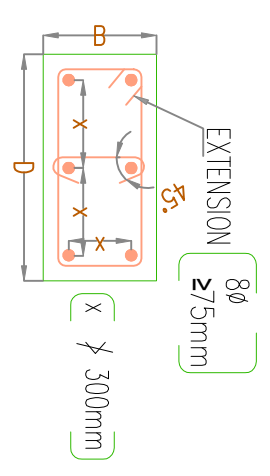




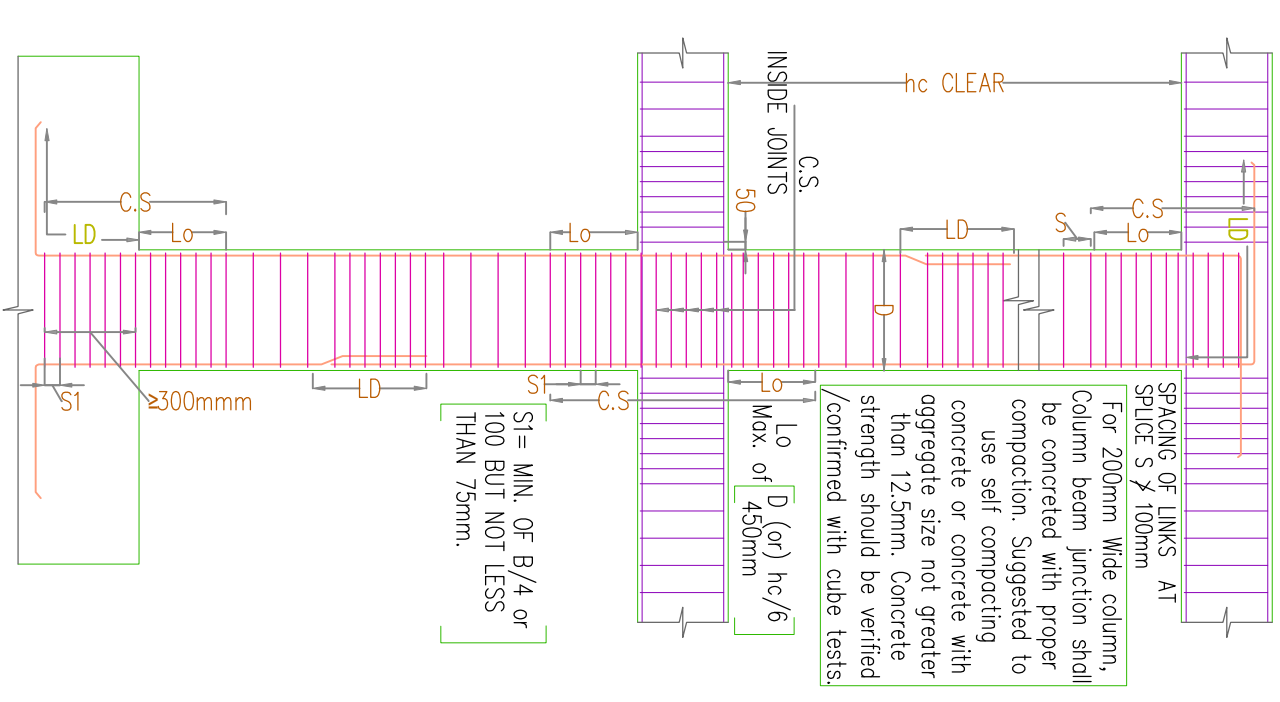




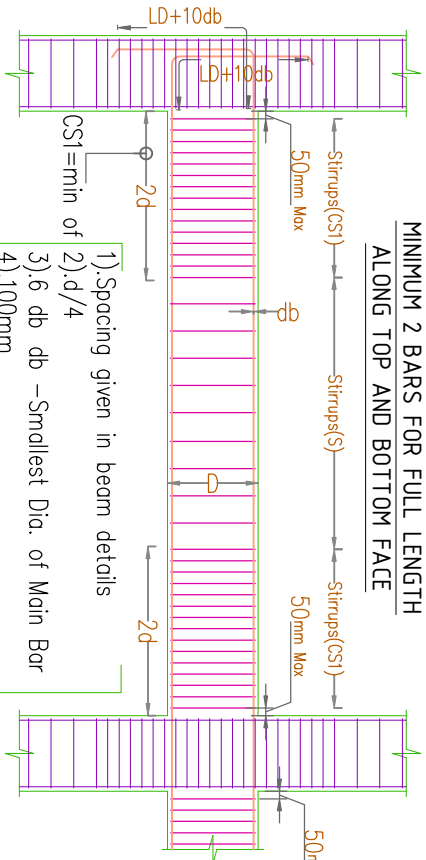
01 LAYOUT OF GROUND FLOOR COLUMNS AND SHEARWALLS  
SCALE: 1:50



02 DETAILS OF TIES IN COLUMNS  
SCALE: 1:20

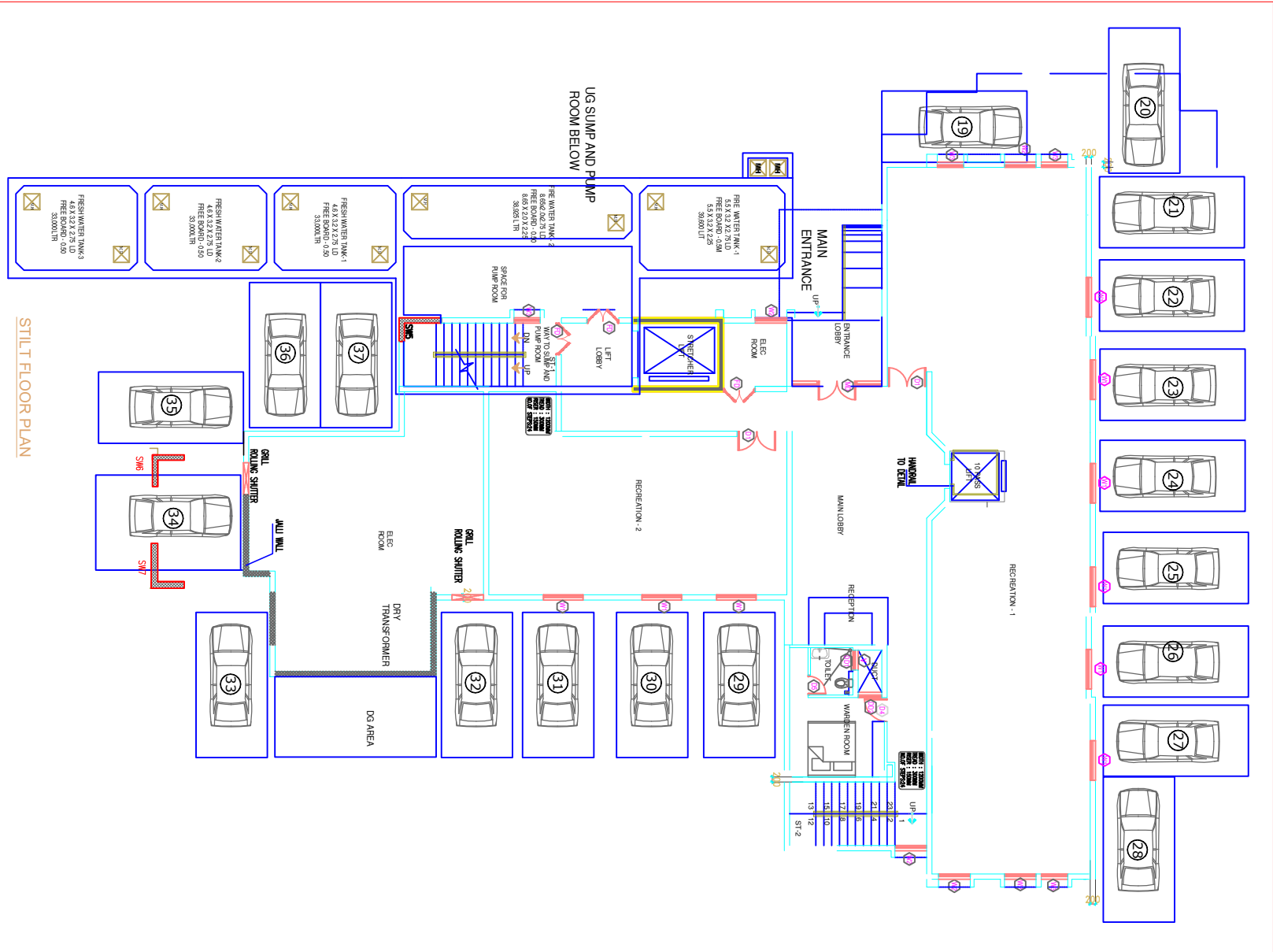


03 DETAILING OF COLUMN FOR DUCTILITY  
SCALE: 1:30



04 DETAILING OF REINFORCEMENT IN BEAMS FOR DUCTILITY  
SCALE: 1:30

THIS STRUCTURAL LAYOUT IS PREPARED BASED ON THE ARCHITECTURAL DRAWING RECEIVED ON 25.11.2025. NO REVISIONS HAS BEEN BROUGHT TO OUR NOTICE TILL NOW. IF ANY CHANGES ARE MADE IN ARCHITECTURAL DRAWINGS, REVISED STRUCTURAL DRAWINGS SHOULD BE OBTAINED FROM US BEFORE EXECUTION. ALSO, ANY REVISION WHICH VIOLATES THE BASIC STRUCTURAL PRINCIPLES OF THE BUILDING CANNOT BE ACCOMMODATED IN THE EVENT SUCH CHANGES IN/S GEO STRUCTURALS (P) LTD WILL NOT BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE.



NOTES

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- All dimensions should be checked by the architect and any discrepancy found should be brought to our notice before execution.
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- Dimensions shall not be measured directly from this drawing, follow only written dimensions. Do not duplicate any part of this drawing without our written permission.
- Column - 40mm, b) Shear wall - 40mm
- Clear cover to reinforcement
- Grade of concrete shall be M40, M30 & Grade of steel shall be Fe200D.
- Lap length is 35 d and not more than half the bars shall be spliced at one section. Where 'd' is the diameter of bar
- Building is designed for G + 11 Floors only.
- For 200mm Wide column, Column beam junction shall be concreted with proper composition. Suggested to use self compacting concrete or concrete with aggregate size not greater than 12.5mm. Concrete strength should be verified /confirmed with cube tests.

COLUMN NO. 2, 3, 4, 5, 9, 13, 14, 20, 21, 34, 35, 36, 37, 52, 53, 54, 57, 58, 60, 65, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77  
CANCELLED

GOOD FOR CONSTRUCTION

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REFERENCE DRAWING

LEGEND  
COLUMN  
SHEAR WALL

CLIENT  
COCHIN SHIPYARD LIMITED

ARCHITECT  
TECHNICALVA CONSULTANTS PVT. LTD.  
#25/41 VASANTHA MENDE M.C. NAGAR CHENNAI - 28.  
Email - adm@technicalva.com  
Phone: 044-24933278, 24933297 FAX: 044-24937341

STRUCTURAL CONSULTANT  
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Phone: 2351824, 23683271 Fax: 237643  
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REV.	NO.	DATE	DESCRIPTION	APP.
A	29.08.2024	AR	INTERNAL REVIEW	RS
B	03.09.2024	AK	FOR INFORMATION ONLY	RS
C	06.09.2024	AK	FOR INFORMATION ONLY	RS
D	10.10.2024	AK	FOR INFORMATION ONLY	RS
E	18.03.2025	AN	FOR INFORMATION ONLY	RS
F	13.08.2025	AS	FOR PROOF CHECKING	RS
G	02.12.2025	AS	ARCHITECT REVIEW	RS
H	06.01.2026	AS	PROOF CHECKING COMMENTS	RS
I	02.02.2026	AK	SAI PROOF CHECKING COMMENTS	RS
J	04.02.2026	AK	SAI PROOF CHECKING COMMENTS	RS
K	13.02.2026	AK	GOOD FOR CONSTRUCTION	BS

CSL EMPLOYEES QUARTERS AT  
KOCHUKADAVANTRA

LAYOUT OF COLUMNS AND SHEAR WALLS

SCALE	SIZE	DRAWN	CHECKING (CC)
NTS	A1	ANANTHAKRISHNAN	JACOB THOMAS
APPROVED (TA)		SANJAY	RINTU SELASTINE
APPROVED (DT)		PHILIP GEORGE	ANIL JOSEPH
DRAWING NUMBER	3152-S008	DATE OF ISSUE	3152/05/2024









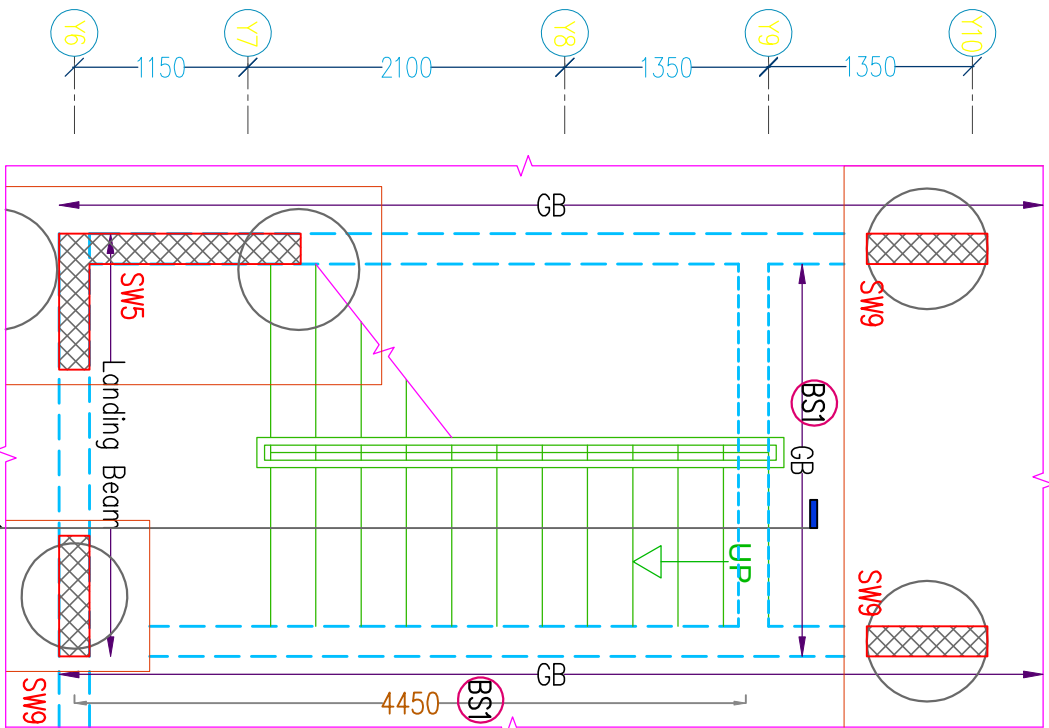
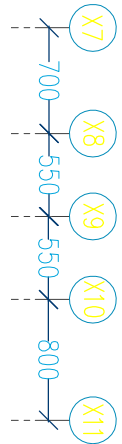




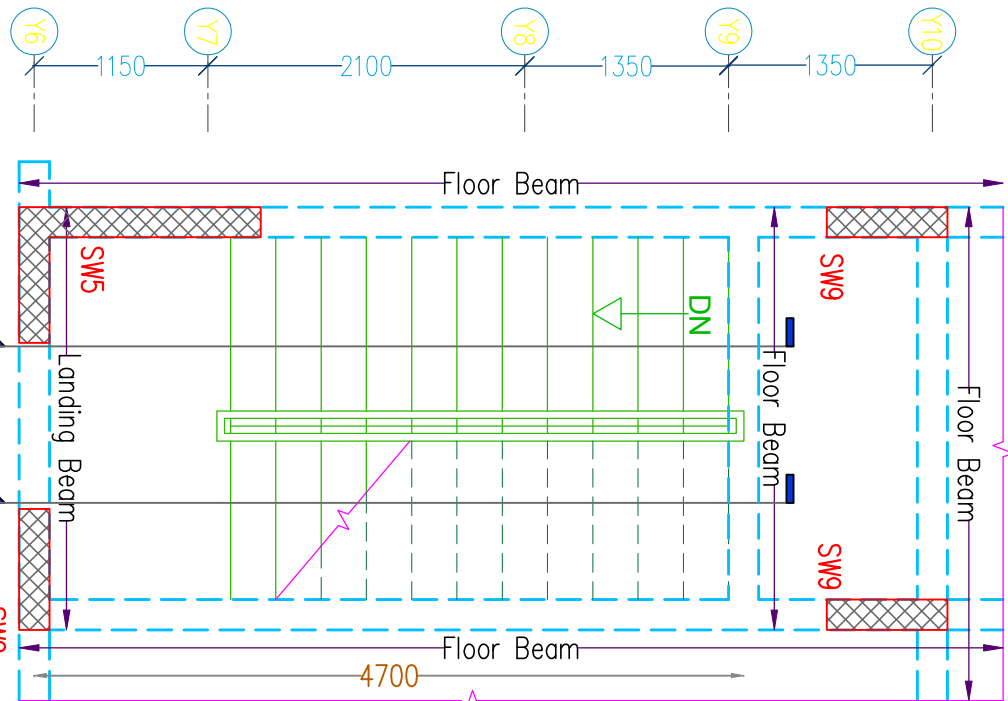
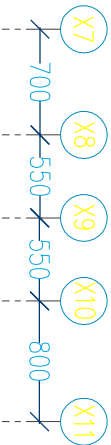




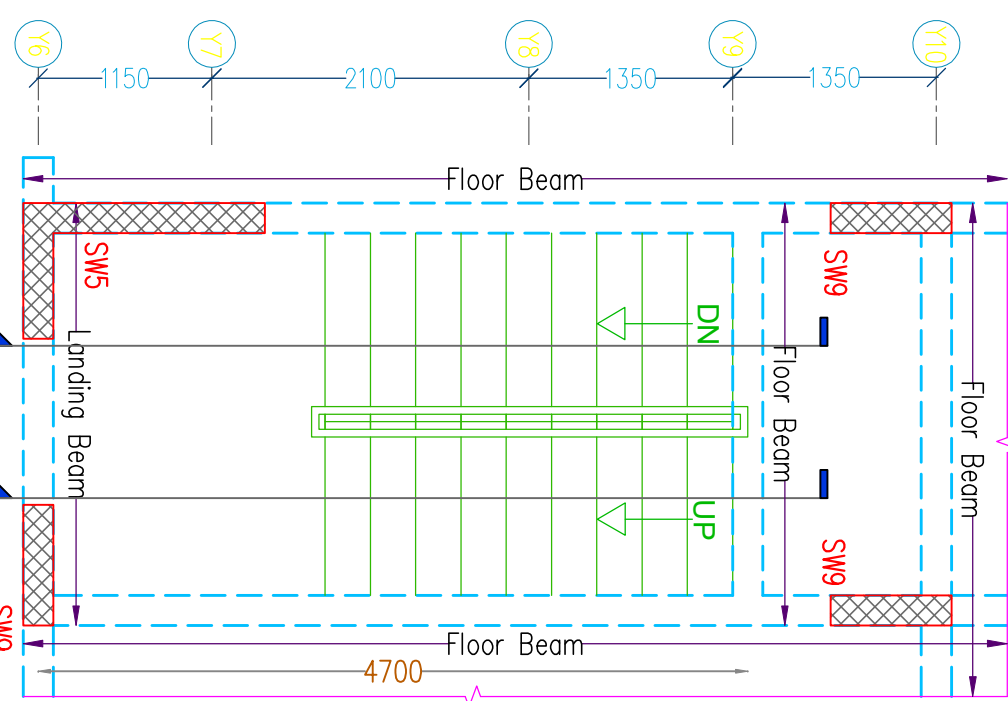
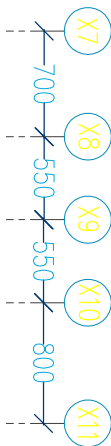




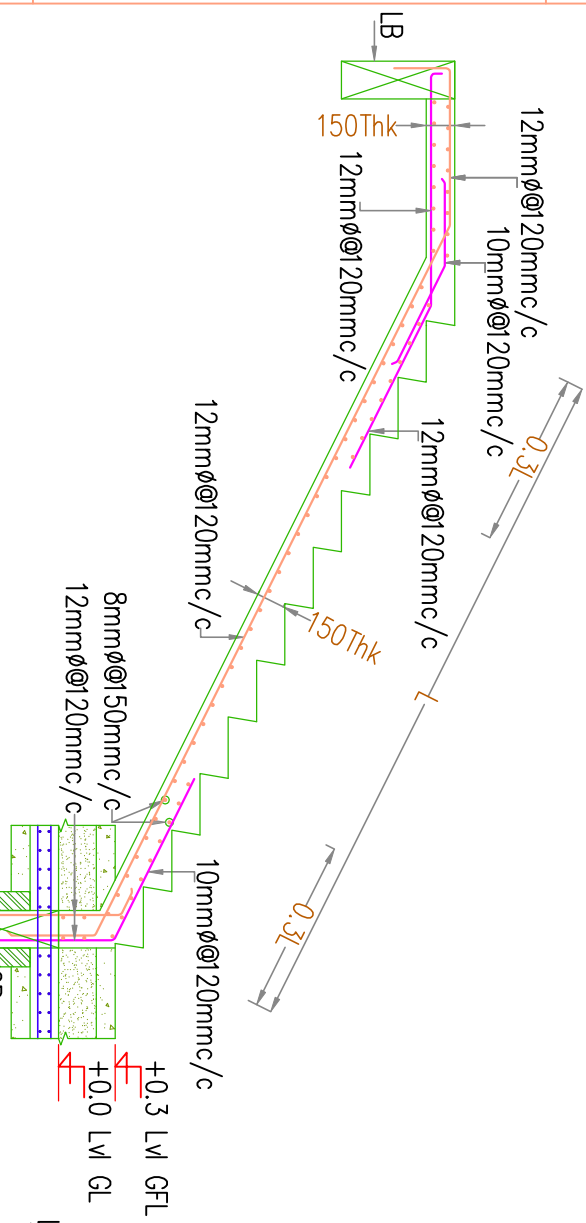
01 LAYOUT OF STAIR - 1 (GROUND FLOOR TO LANDING)  
SD13 SCALE 1:50



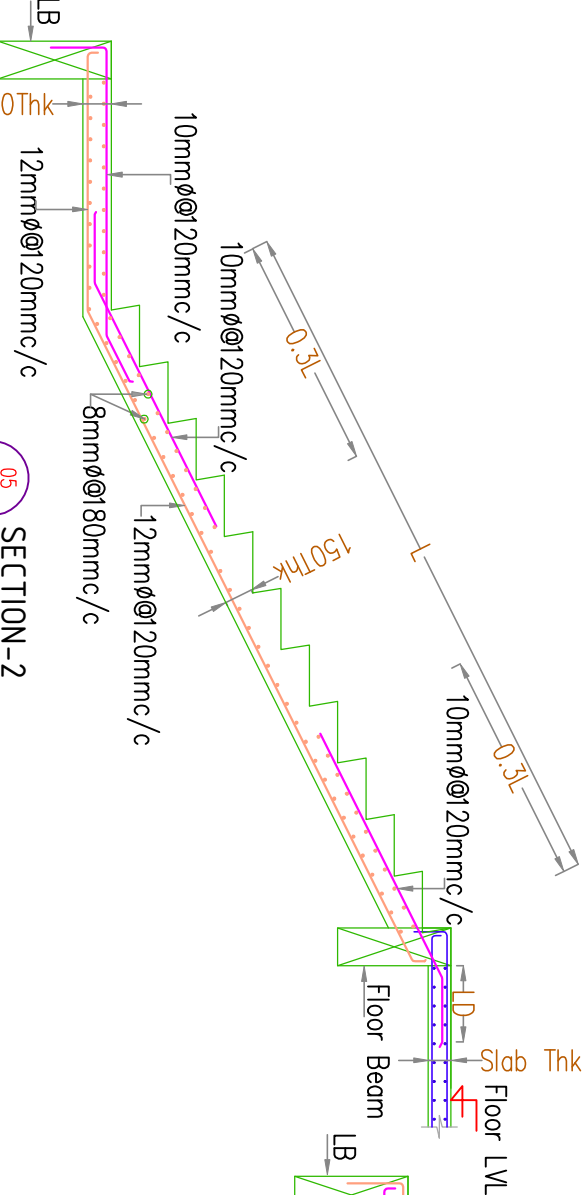
02 LAYOUT OF STAIR - 1 (LANDING TO FIRST FLOOR)  
SD13 SCALE 1:50



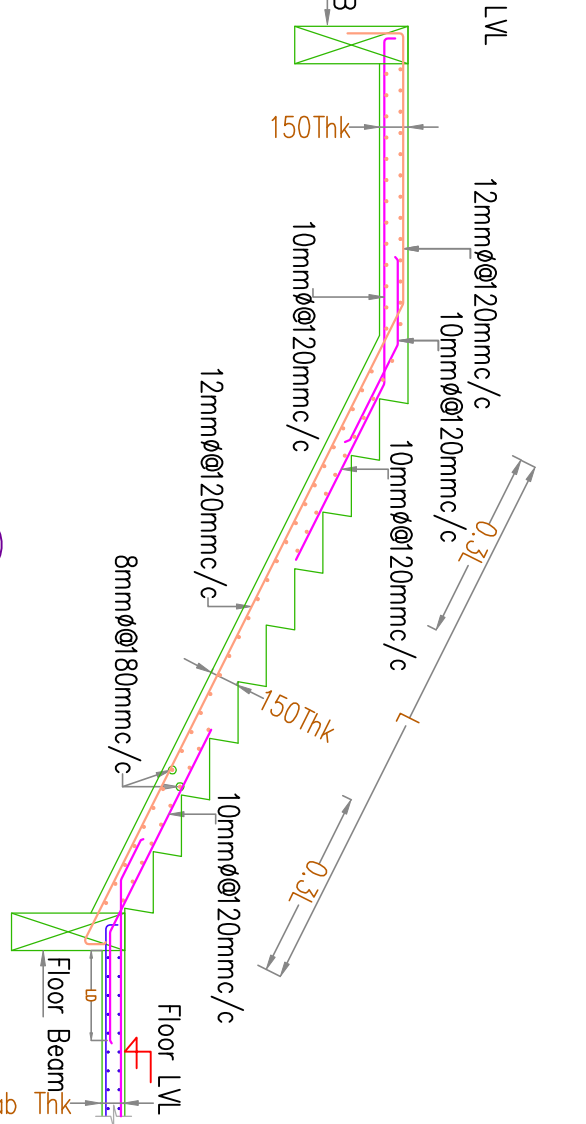
03 LAYOUT OF STAIR - 1 (TYPICAL FLOOR)  
SD13 SCALE 1:50



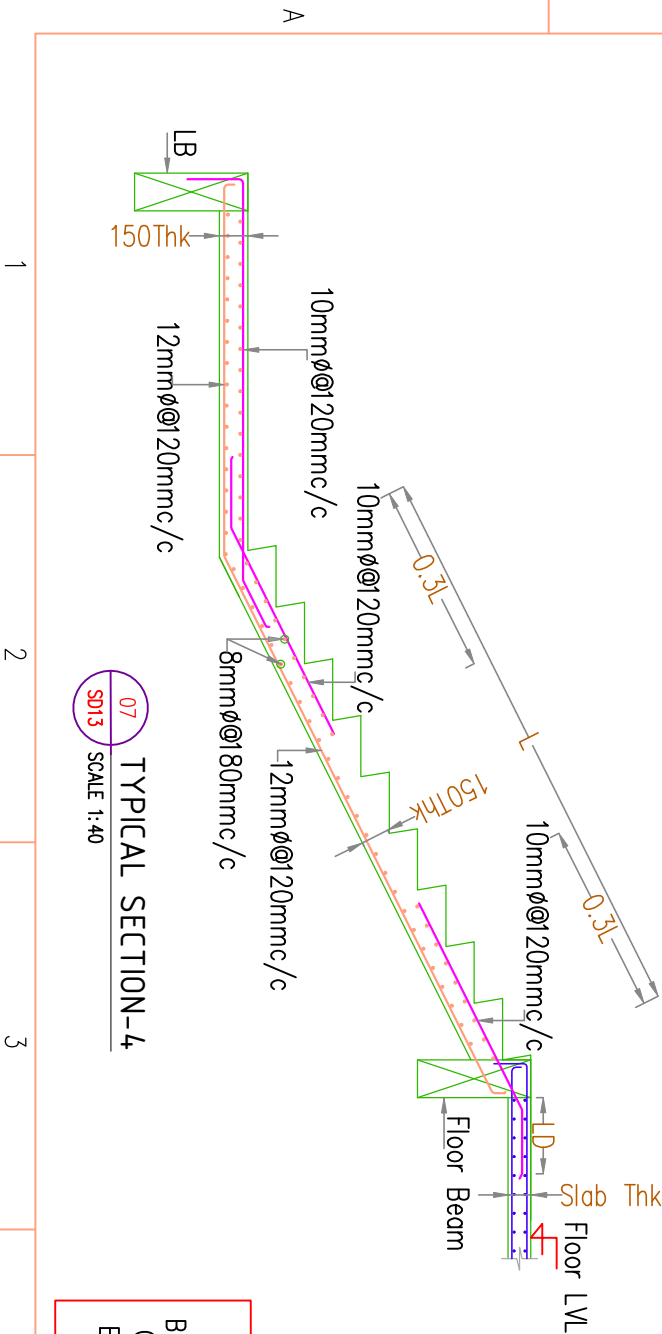
04 SECTION-1  
SD13 SCALE 1:40



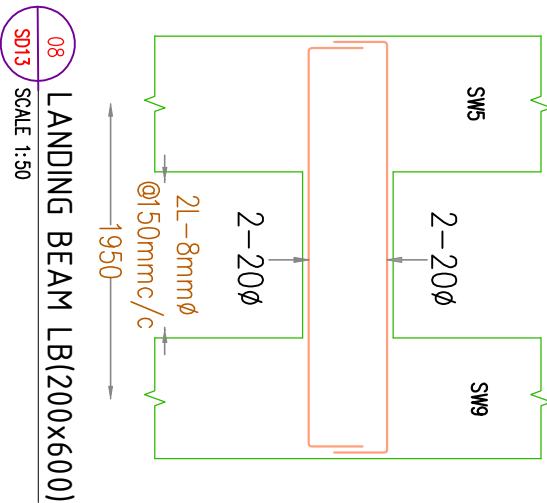
05 SECTION-2  
SD13 SCALE 1:40



06 TYPICAL SECTION-3  
SD13 SCALE 1:40

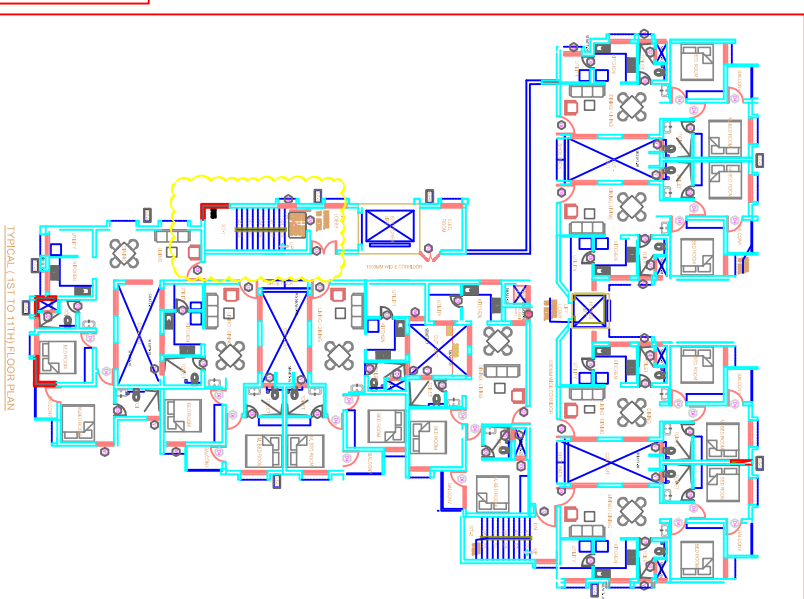


07 TYPICAL SECTION-4  
SD13 SCALE 1:40



08 LANDING BEAM LB(200x600)  
SD13 SCALE 1:50

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NOTES

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- Clear cover to reinforcement d) Beam – 30mm, b) Slab – 25mm.
- Grade of concrete & steel shall be M30 & Fe500D respectively.
- Lap length is 55 d and not more than half the bars shall be spliced at one section, Where 'd' is the Diameter of bar
- Building is designed for : G + 11 Floor Only.

GOOD FOR CONSTRUCTION

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LEGEND



COCHIN SHIPYARD LIMITED

ARCHITECT

TECHNICALIYA CONSULTANTS PVT. LTD.  
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Email - admin@technicaliya.com

STRUCTURAL CONSULTANT

GEO STRUCTURALS (P) LTD  
GEO TECHNICAL & STRUCTURAL CONSULTANTS  
Pullepady, Cochin-18  
Phone: 2367824, 2368327, Fax :2371643  
E-mail: geostructurals@gmail.com

0	13.02.2026	AK	SA	GOOD FOR CONSTRUCTION	BS
1	06.01.2026	AK	SA	PROOF CHECKING COMMENTS	RS
H	02.12.2025	AK	SA	ARCH REVISED	RS
G	13.08.2025	AK	SA	FOR PROOF CHECKING	RS
F	18.03.2025	AK	SA	FOR INFORMATION	RS
E	19.10.2024	AK	SA	REVISED AS PER ARCH DRAWING	RS
D	10.10.2024	AK	SA	FOR INFORMATION ONLY	RS
C	06.09.2024	AK	SA	FOR INFORMATION ONLY	RS
B	03.09.2024	AK	SA	INTERNAL REVIEW	RS
A	31.08.2024	AK	SA	INTERNAL REVIEW	RS
Rev No:	DATE	DRN	CHK	DESCRIPTION	APP

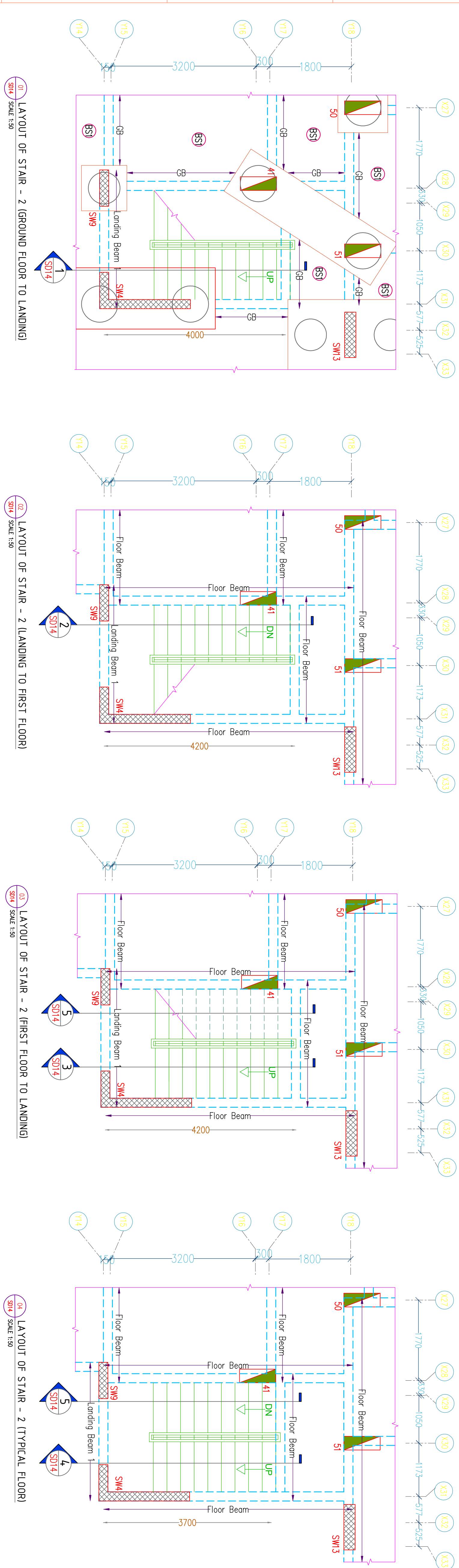
CSL EMPLOYEES QUARTERS AT  
KOCHUKADAVANTRA

TITLE

LAYOUT AND DETAILS OF STAIRCASE -1

SCALE	SIZE	DRAWN	CHECKING (CC)
NTS	A2	ANANTHAKRISHNAN	JACOB THOMAS
APPROVED (TM)	DESIGN (E-)	SANSA	RINTU SELASTINE
PHILIP GEORGE	APPROVED (DT)	BINJU SUNIL	ANIL JOSEPH
DRAWING NUMBER	DATE OF ISSUE	JOB NUMBER	
3152-SD13	13.02.2026	3152/GS/2024	





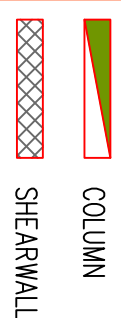
- NOTES
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  - All dimensions are in mm unless otherwise specified and levels are in meters.
  - Dimensions shall not be measured directly from this drawing, follow only written dimensions.
  - Do not duplicate any part of this drawing without our written permission.
  - Clear cover to reinforcement a) Beam – 30mm, b) Slab – 25mm.
  - Grade of concrete & steel shall be M30 & Fe500D respectively.
  - Top length is 55 d and not more than half the bars shall be spliced at one section, Where d is the Diameter of bar
  - Building is designed for : G + 11 Floor Only

**GOOD FOR CONSTRUCTION**

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REFERENCE DRAWING

LEGEND



CLIENT  
**COCHIN SHIPYARD LIMITED**

ARCHITECT  
**TECHNICALVA CONSULTANTS PVT. LTD.**  
#29/41,VASANTHA AVENUE,MAR C NAGAR,CHENNAI-28.  
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Email – adm@technicalva.com

STRUCTURAL CONSULTANT  
**GEO**  
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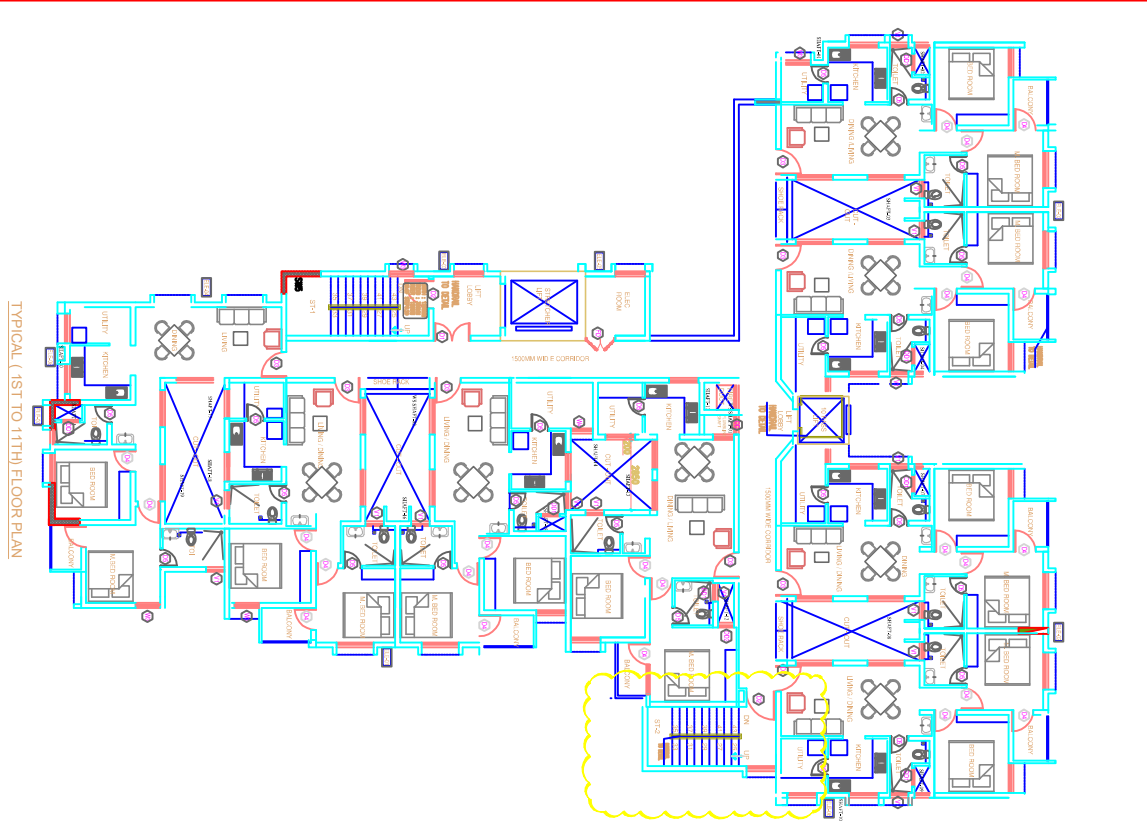
REV NO.	DATE	DESCRIPTION	APP
0	13.02.2026	AK SS	GOOD FOR CONSTRUCTION
1	06.01.2026	AK SS	PROOF CHECKING COMMENTS
2	02.12.2025	AK SS	ARCH REVIEWED
3	13.06.2025	AK SA	FOR PROOF CHECKING
4	18.03.2025	AK SA	FOR INFORMATION
5	19.10.2024	AK SA	REVISED AS PER ARCH DRAWING
6	10.10.2024	AK SA	FOR INFORMATION ONLY
7	06.09.2024	AK SA	FOR INFORMATION ONLY
8	03.09.2024	AK SA	INTERNAL REVIEW
9	31.08.2024	AK SA	INTERNAL REVIEW
10			

PROJECT  
**CSL EMPLOYEES QUARTERS AT KOCHUKADAVANTRA**

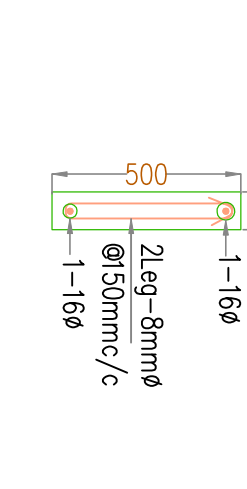
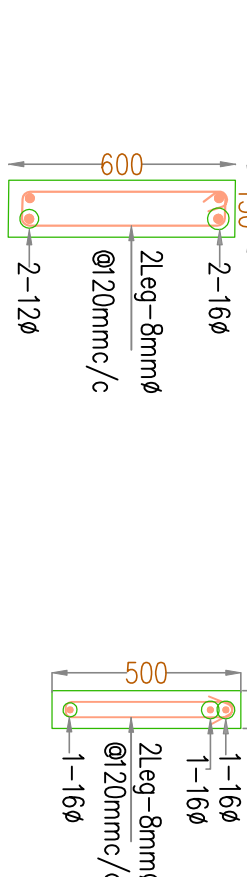
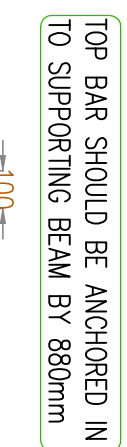
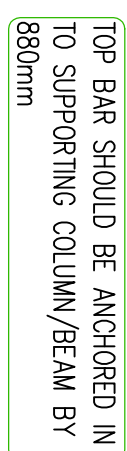
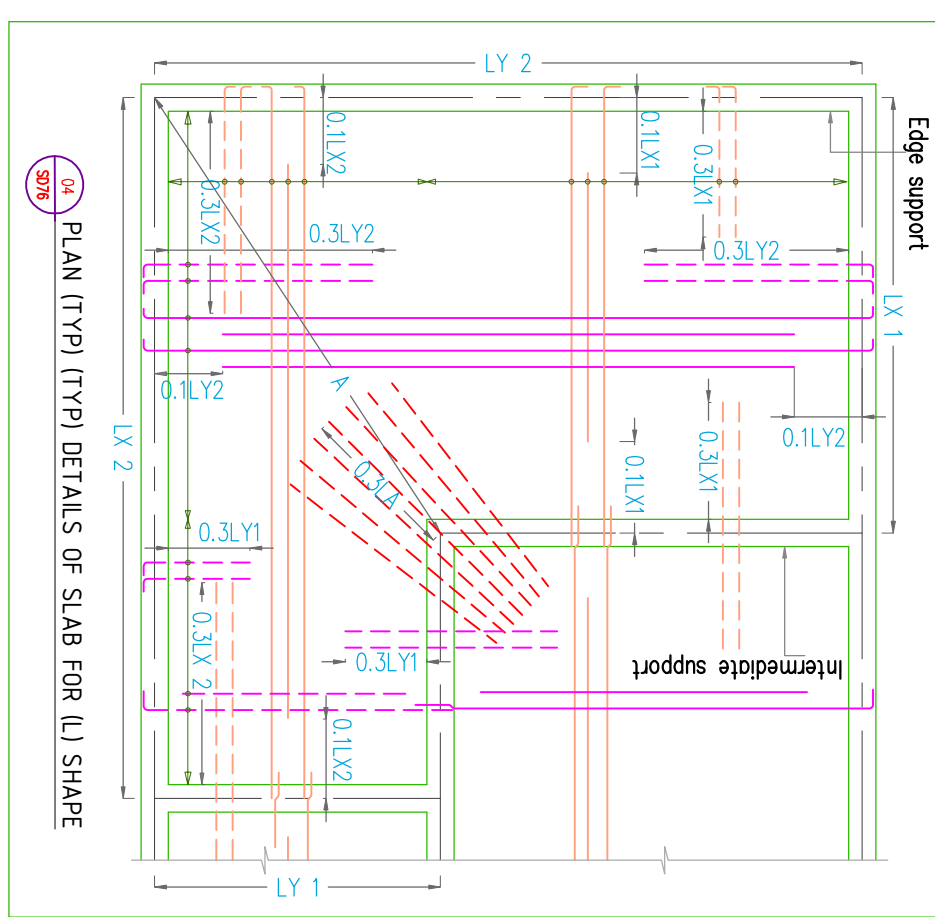
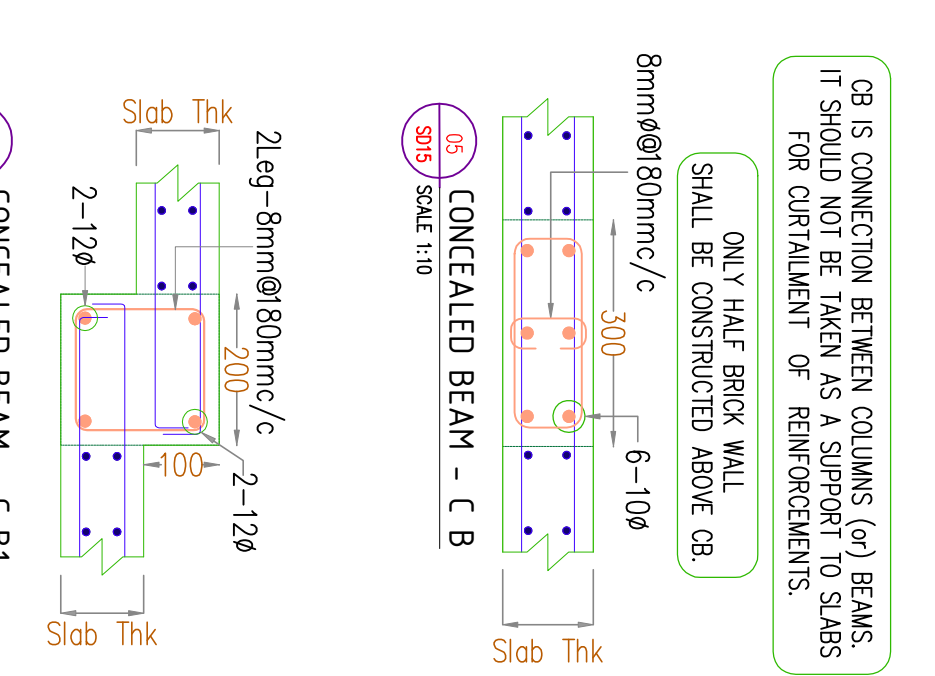
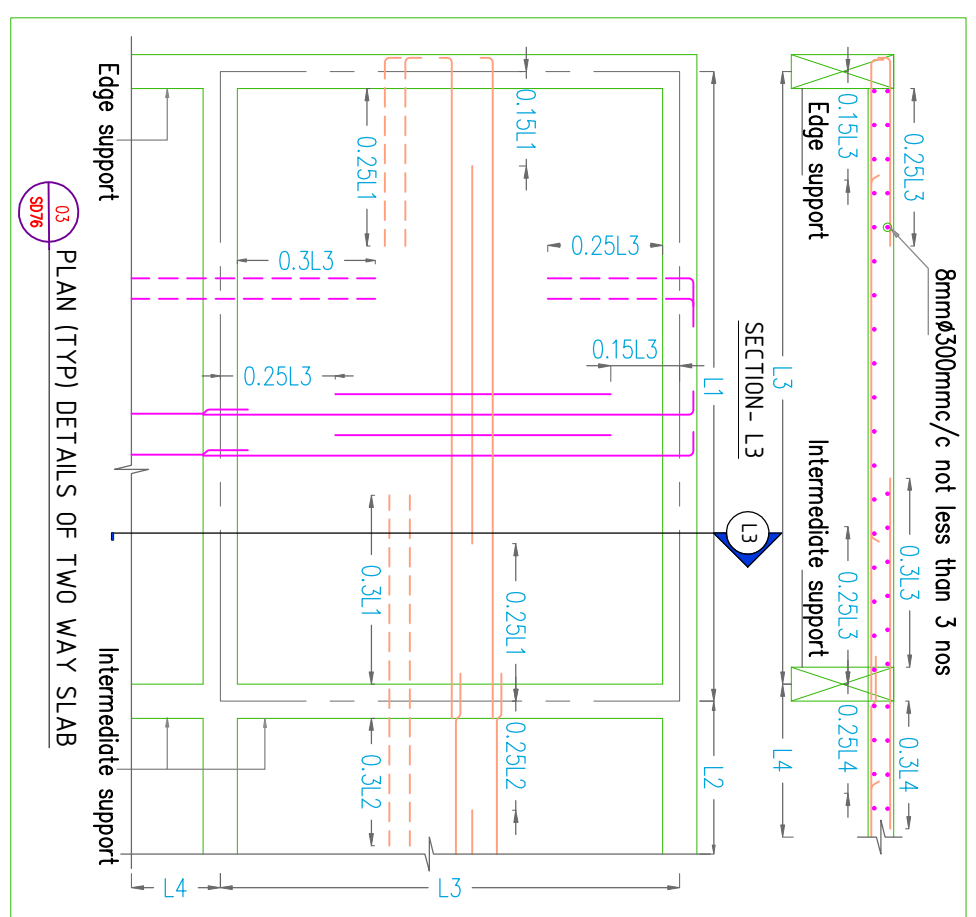
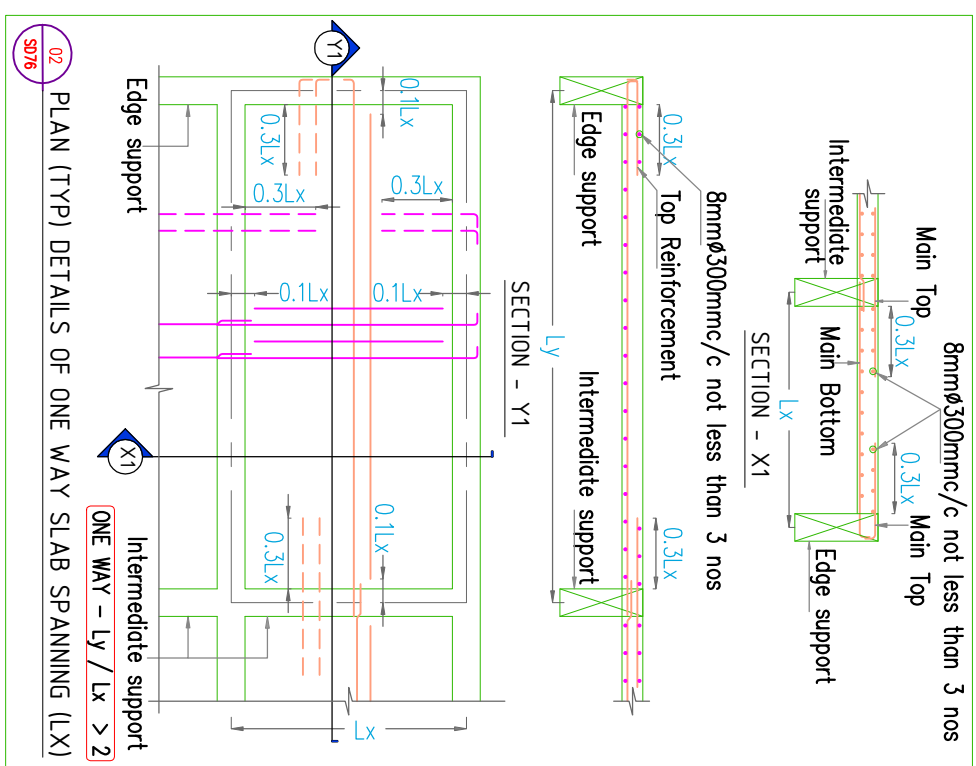
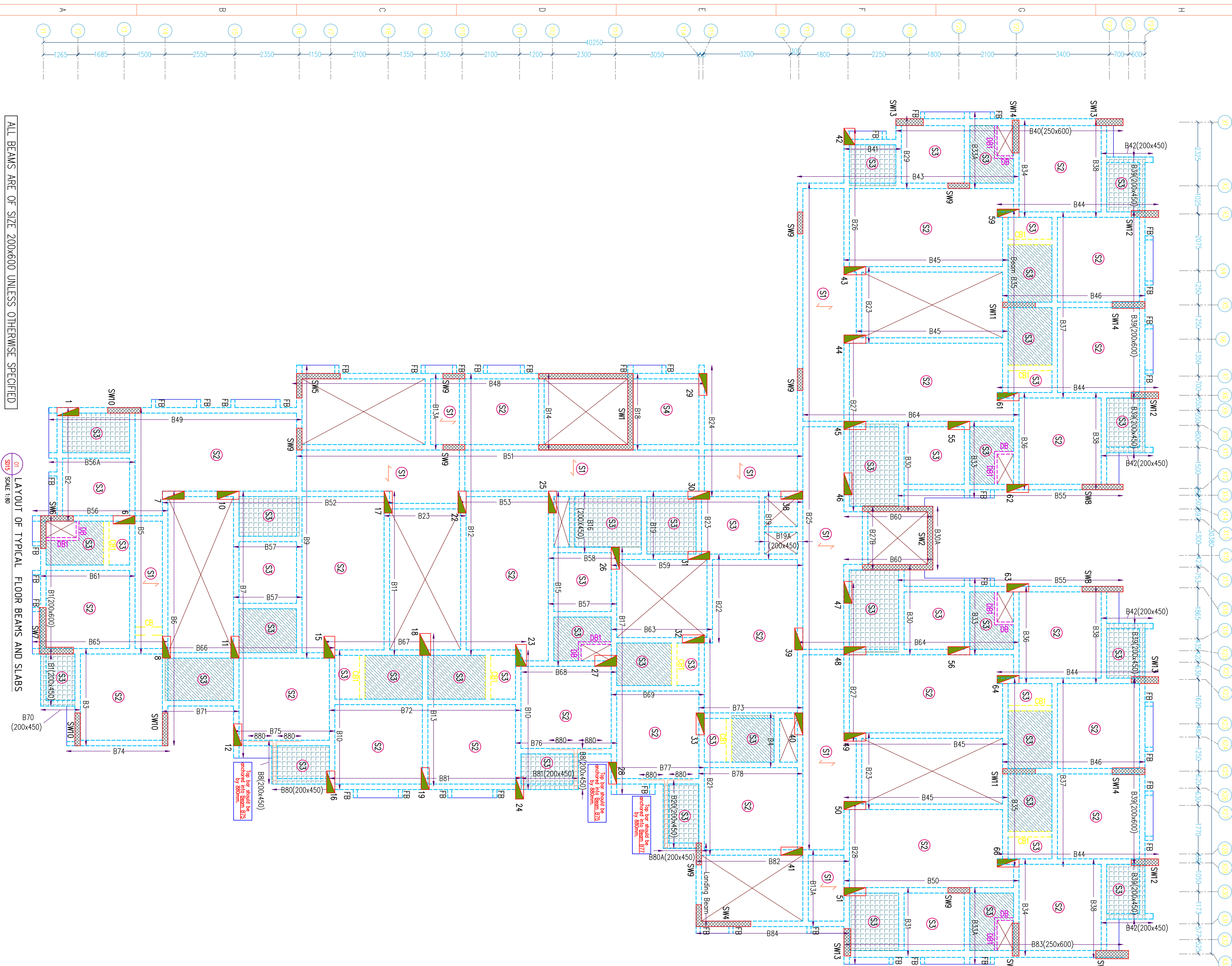
TITLE  
**LAYOUT AND DETAILS OF STAIRCASE -2**

SCALE	SIZE	DRAWN	CHECKING (CC)
NTS	A1	ANANTHAKRISHNAN	JACOB THOMAS
APPROVED (NA)		SANSA	RINTU SELASTINE
APPROVED (NO)		PHILIP GEORGE	ANIL JOSEPH
DRAWING NUMBER		5152-S014	3152/05/2024
DATE OF ISSUE		13.02.2026	3152/05/2024
JOB NUMBER			

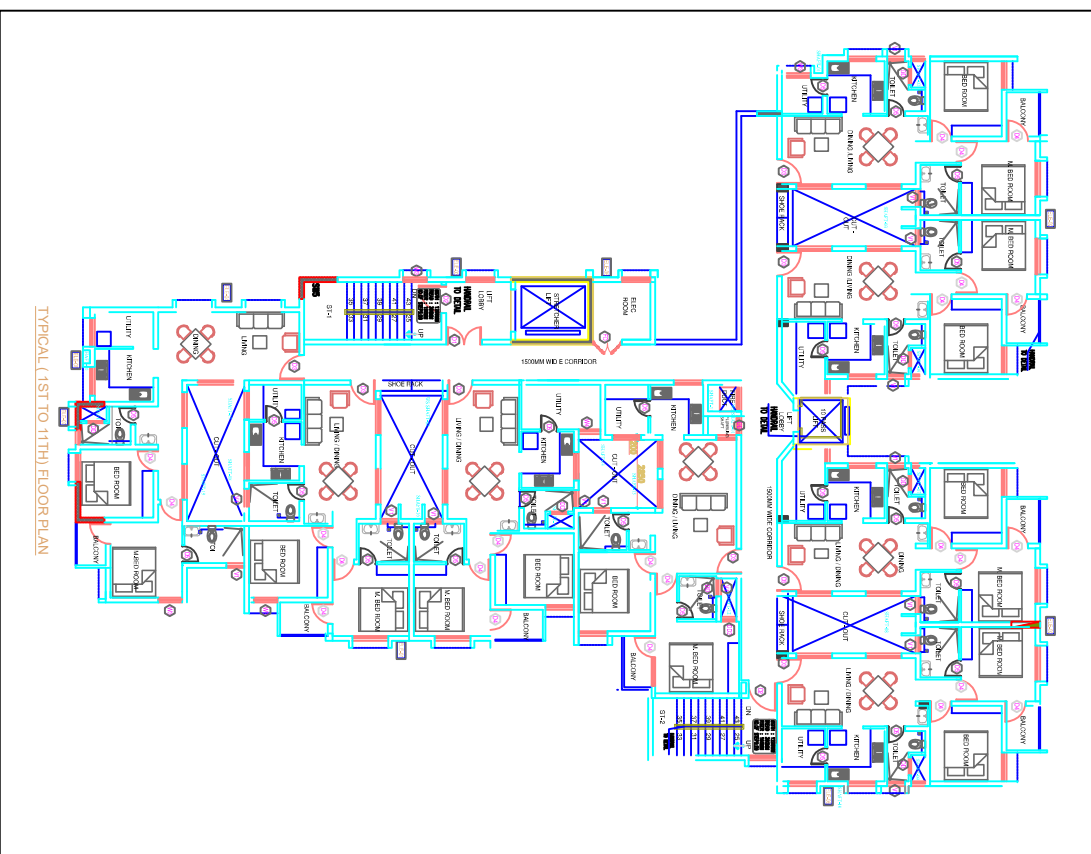
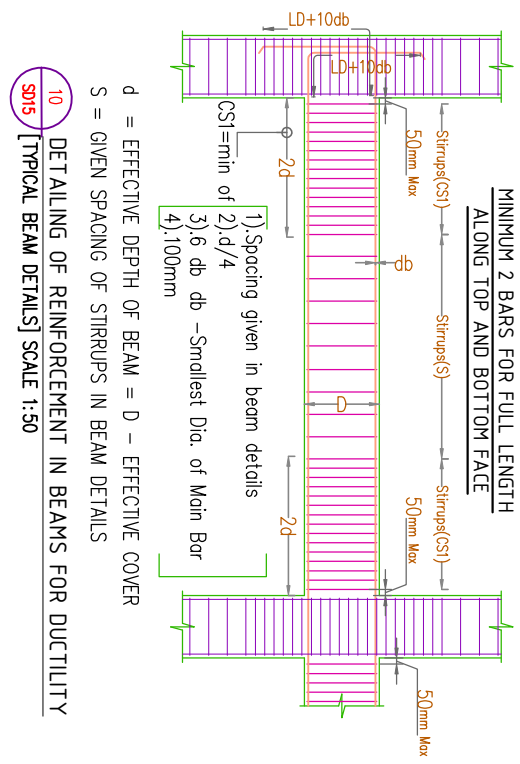
THIS STRUCTURAL LAYOUT IS PREPARED BASED ON THE ARCHITECTURAL DRAWING RECEIVED ON 25.11.2025. NO REVISIONS HAS BEEN BROUGHT TO OUR NOTICE TILL NOW. IF ANY CHANGES ARE MADE IN ARCHITECTURAL DRAWINGS, REVISED STRUCTURAL DRAWINGS SHOULD BE OBTAINED FROM US BEFORE EXECUTION. ALSO, ANY REVISION WHICH VIOLATES THE BASIC STRUCTURAL FRAMING OF THE BUILDING CANNOT BE ACCOMMODATED. IN THE EVENT SUCH CHANGES W/S GEO STRUCTURALS (P) LTD WILL NOT BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE.







SCHEDULE OF SLAB			
REINFORCEMENT ALONG SHORT SPAN		REINFORCEMENT ALONG LONG SPAN	
Type	Thick Top — — — — Bottom — — — —	Thin Top — — — — Bottom — — — —	Thin Top — — — — Bottom — — — —
S1 (one way)	125 8mm@80mm/c 8mm@80mm/c	125 8mm@80mm/c 8mm@200mm/c	125 8mm@80mm/c 8mm@200mm/c
S2	125 8mm@50mm/c 8mm@50mm/c	125 8mm@80mm/c 8mm@80mm/c	125 8mm@80mm/c 8mm@200mm/c
S3	125 8mm@80mm/c 8mm@80mm/c	125 8mm@80mm/c 8mm@200mm/c	125 8mm@80mm/c 8mm@200mm/c
S4	150 10mm@50mm/c 10mm@50mm/c	150 10mm@80mm/c 10mm@80mm/c	150 10mm@80mm/c 10mm@80mm/c



1. This drawing should be read along with our general Specifications and Notes.
2. All dimensions should be checked by the architect and any discrepancy found should be brought to our notice before execution.
3. All dimensions are in mm unless otherwise specified and levels are in meters.
4. Dimensions shall not be measured directly from this drawing, follow only written dimensions.
5. Do not duplicate any part of this drawing without our written permission.
6. Clear cover to reinforcement (a) Beam – 30mm, (b) Slab – 25mm.
7. Grade of concrete & steel shall be M30 & Fe500D respectively.
8. Lap length is 55 d and not more than half the bars shall be spliced at one section. Where 'd' is the diameter of bar.
9. Bundling is designed for : C + 11 floor Only.

BEAM B27A CANCELLED

COLUMN NO. 2, 3, 4, 5, 9, 13, 14, 20, 21,  
34, 35, 36, 37, 52, 53, 54, 57, 58, 60, 65,  
67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77  
CANCELLED.

GOOD FOR CONSTRUCTION

FOR EXECUTION PURPOSE FOLLOW ONLY THE DRAWINGS APPROVED & SIGNED BY THE STRUCTURAL CONSULTANT.

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## REFERENCE DRAWING

LEGEND

SLAB SUNKEN BY 150mm



FB- FIN BEAM

COCHIN SHIPYARD LIMITED

ARCHITECT

**TECHNICALIYA CONSULTANTS PVT. LTD**  
#25/41, VASANTHA AVENUE, M.R.C NAGAR, CHENNAI - 28.  
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STRUCTURAL CONSULTANT

**GEO**  
GEO STRUCTURALS (P) LTD  
GEO TECHNICAL & STRUCTURAL CONSULTANT  
Pullepadu, Cochin-18  
Phone: 2367824, 2368327, Fax: 237664;  
E-mail: geostructurals@gmail.com

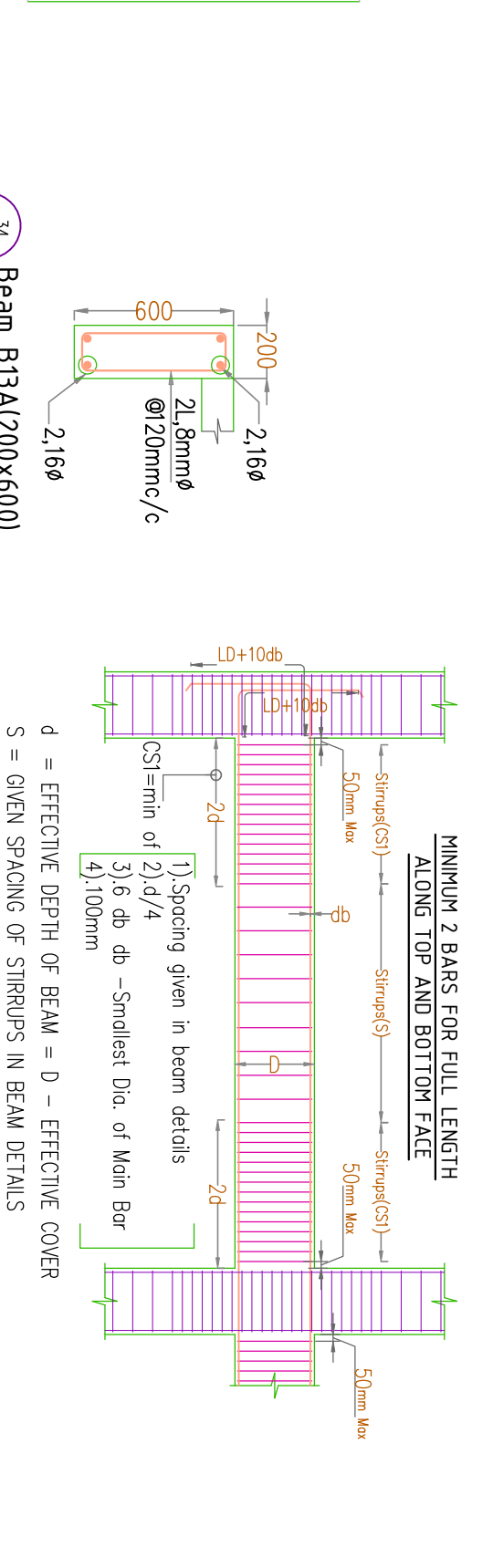
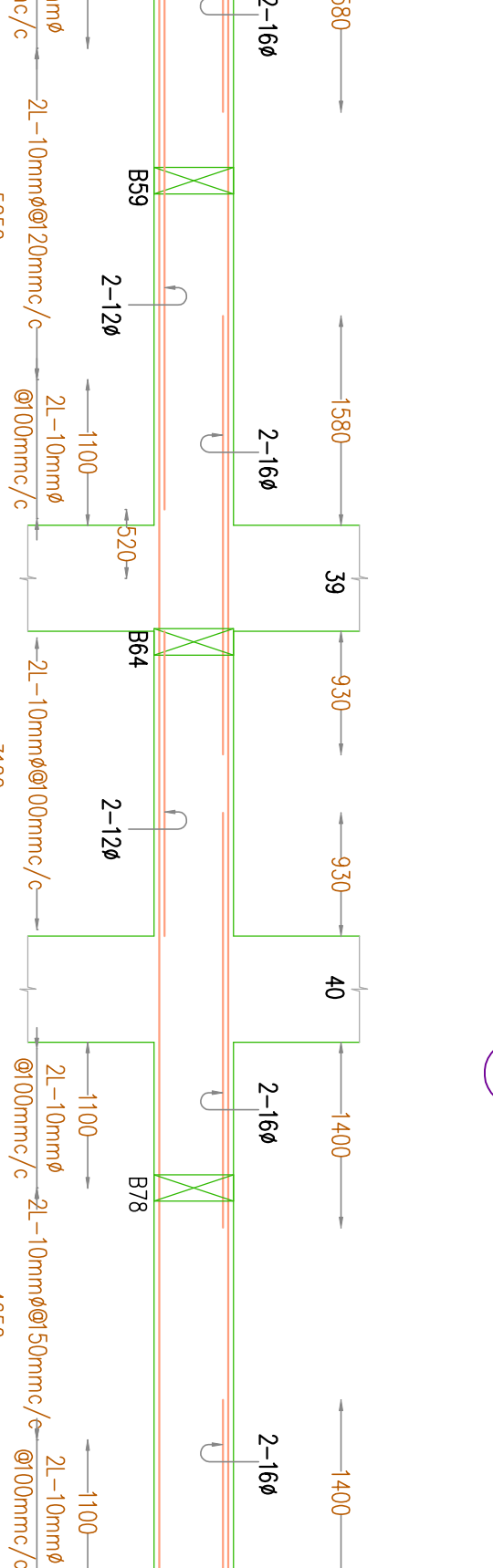
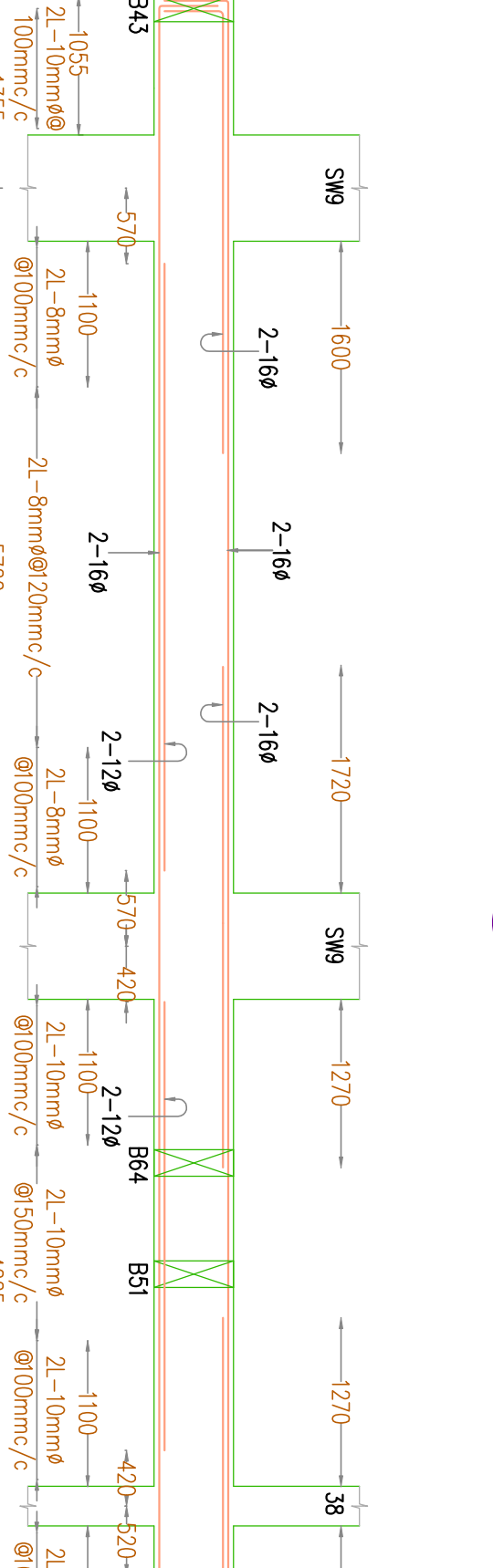
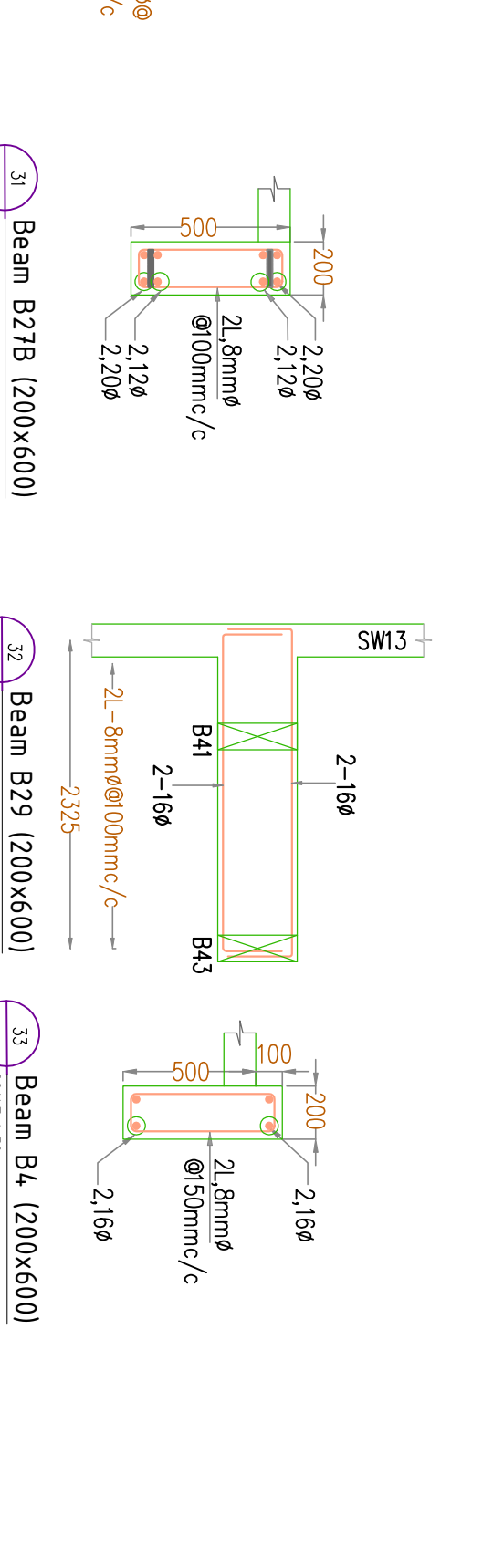
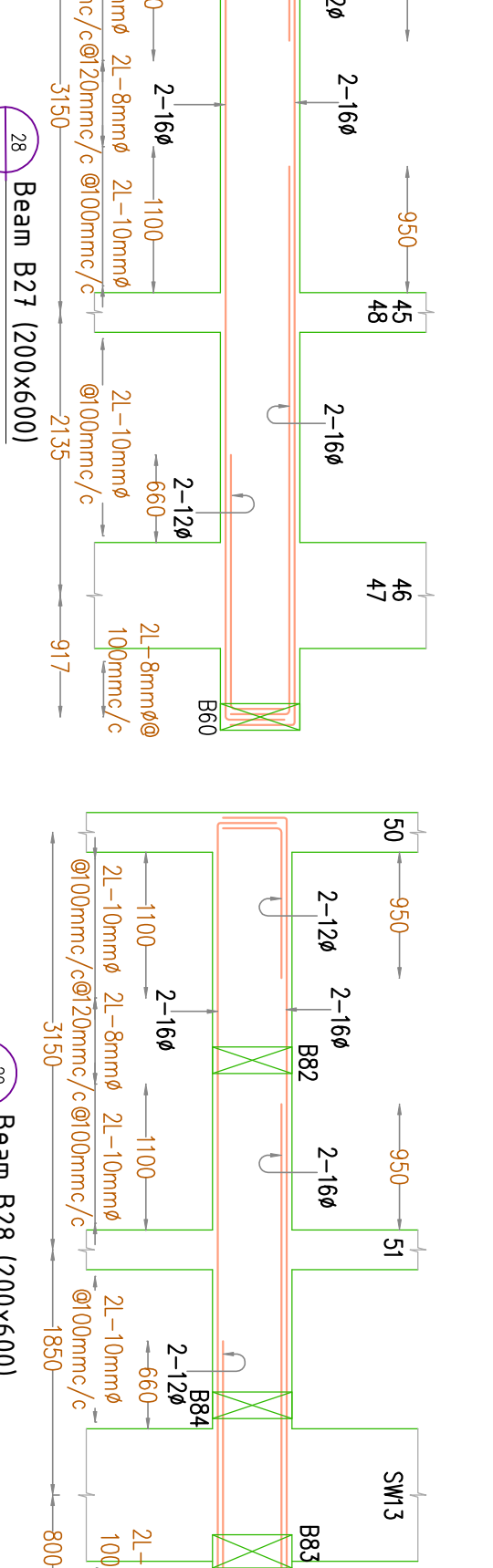
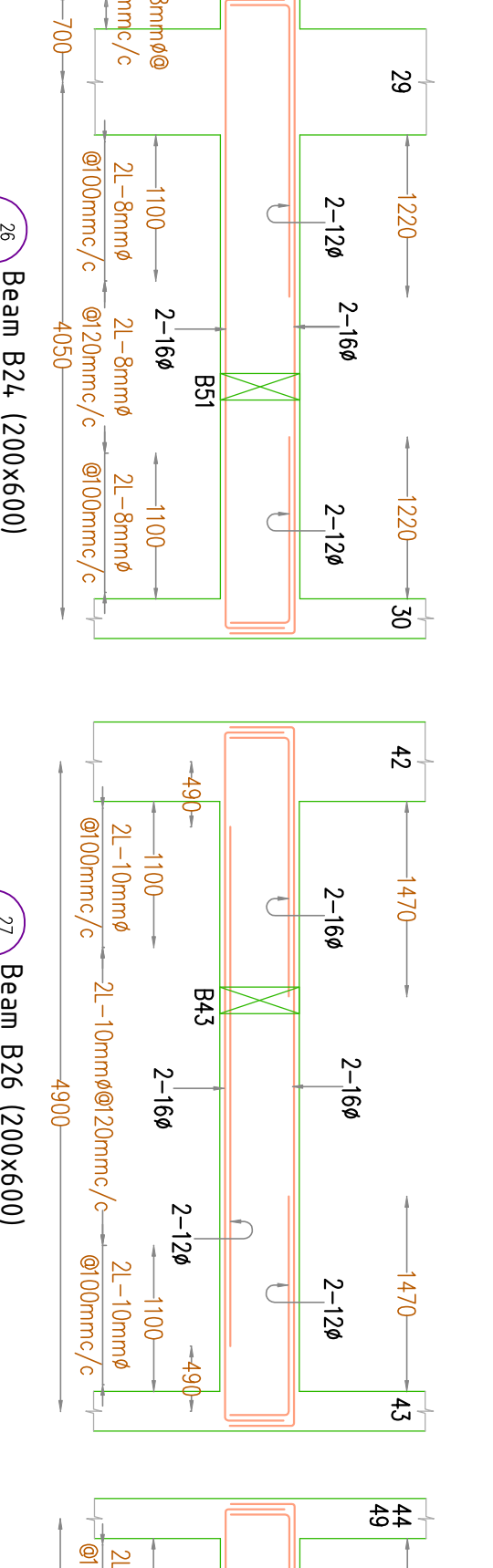
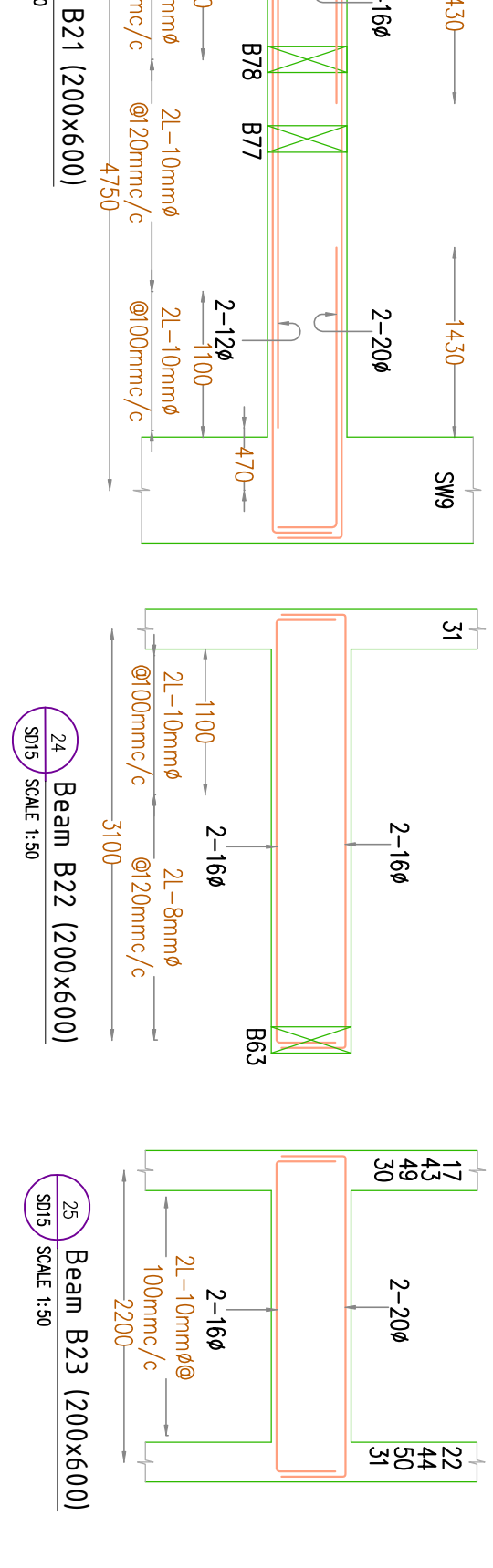
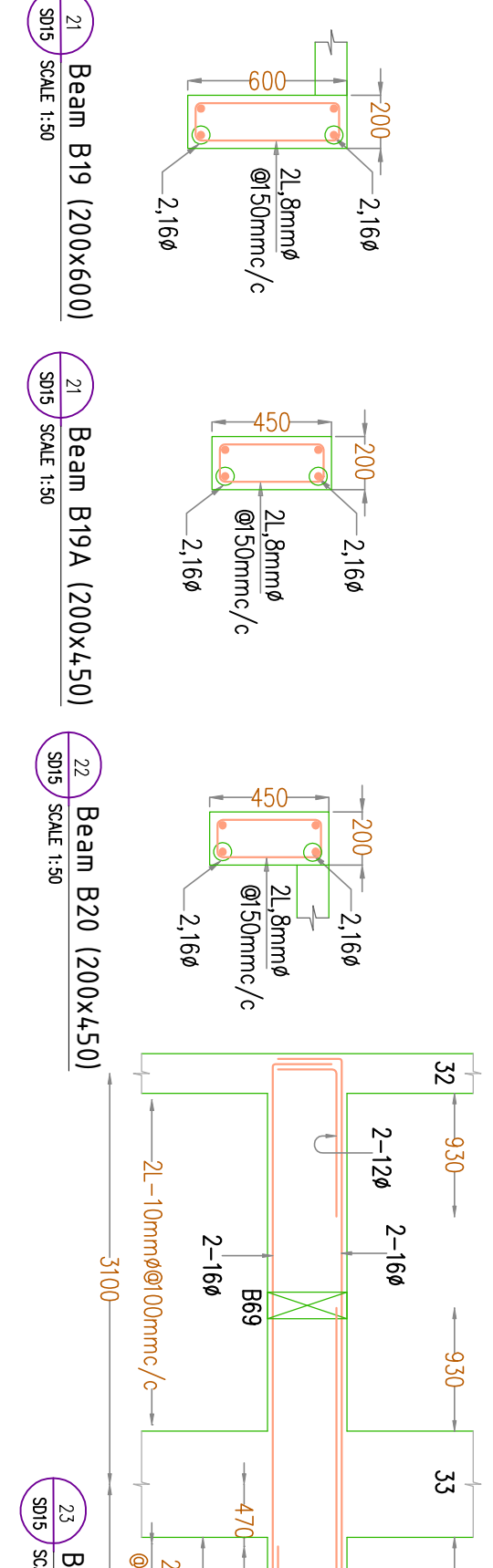
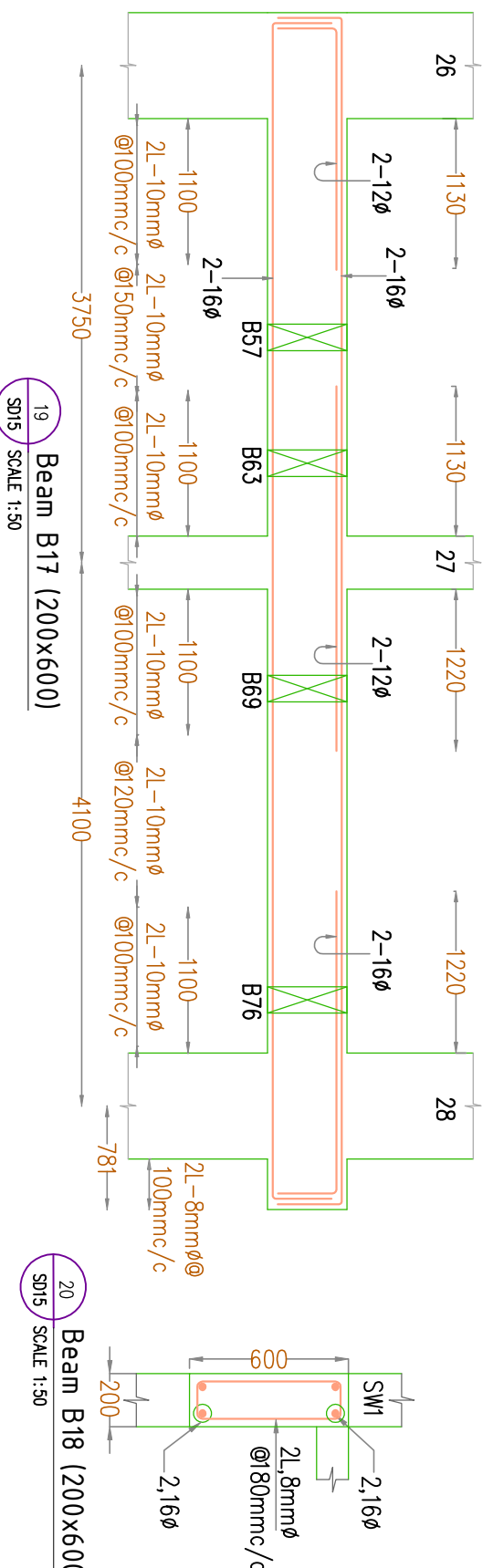
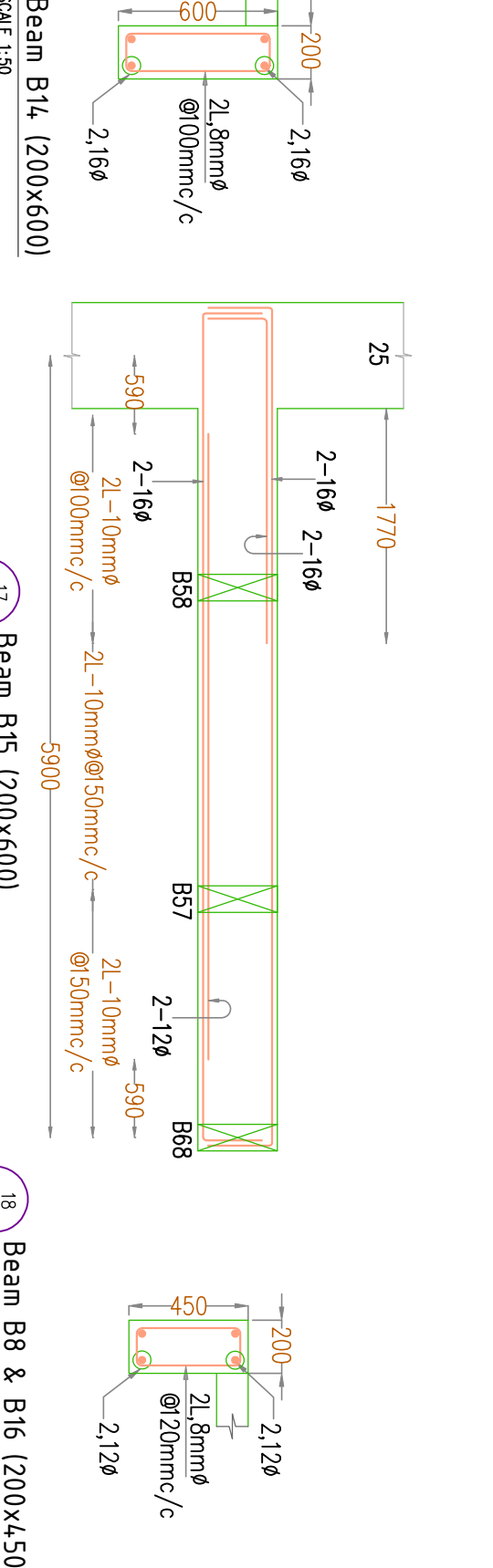
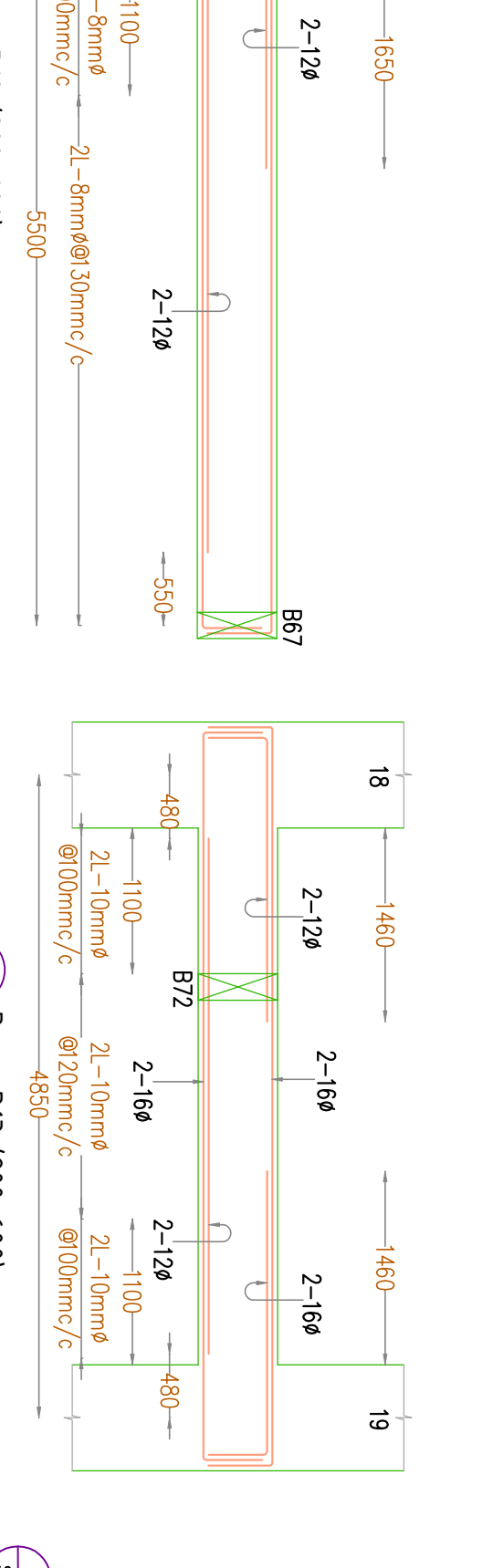
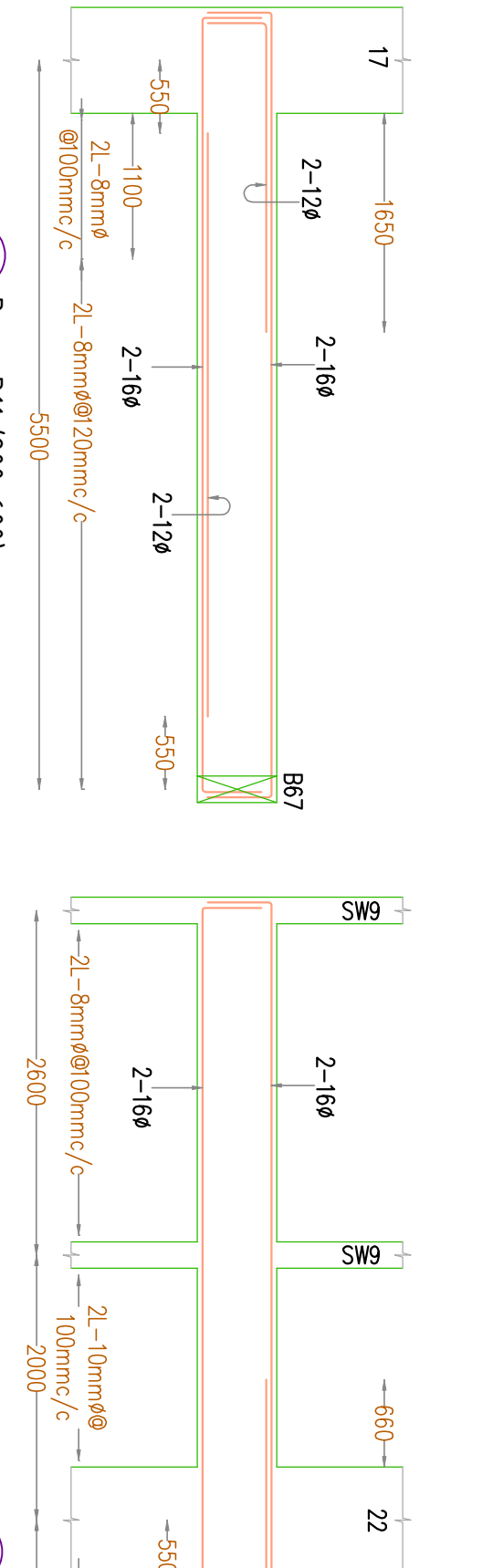
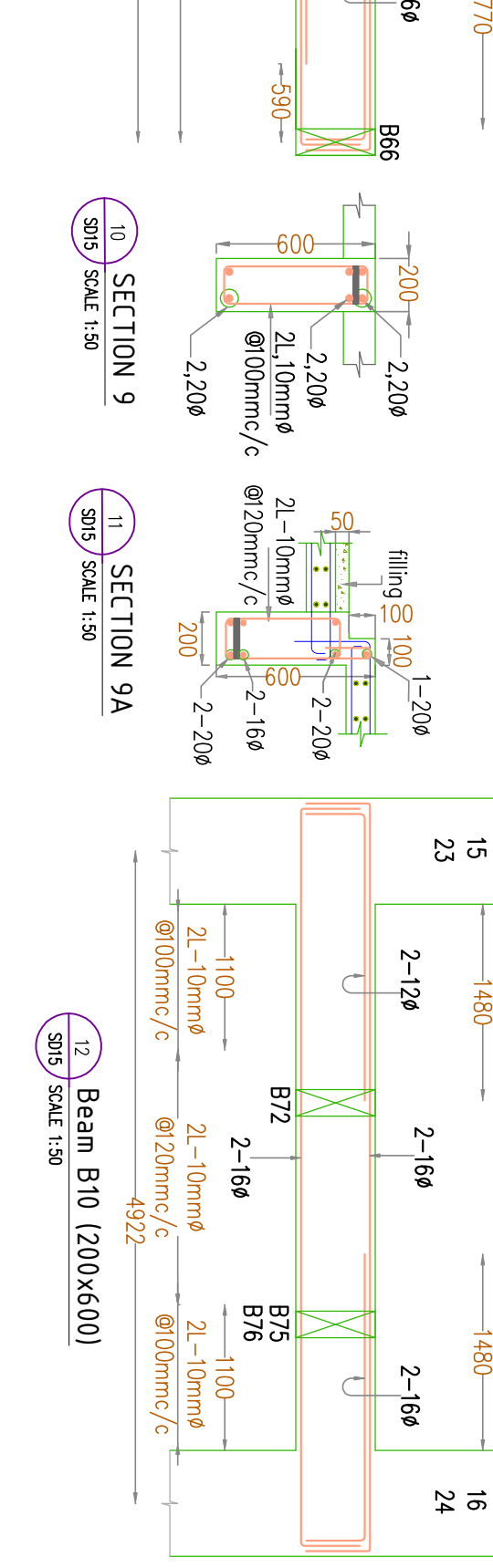
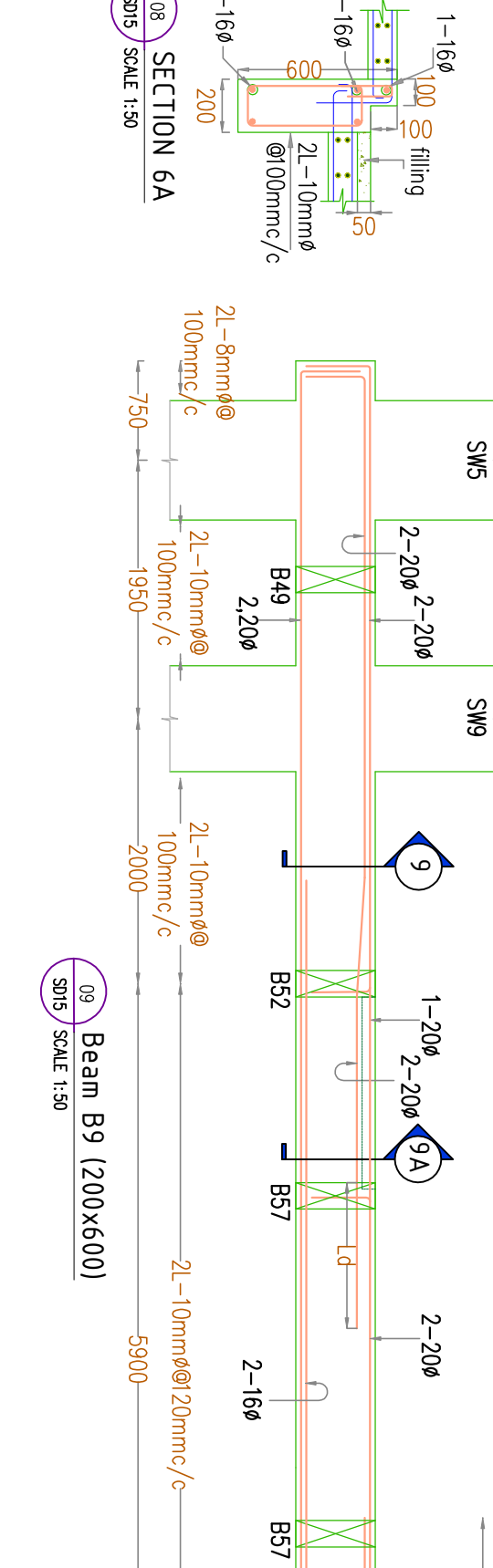
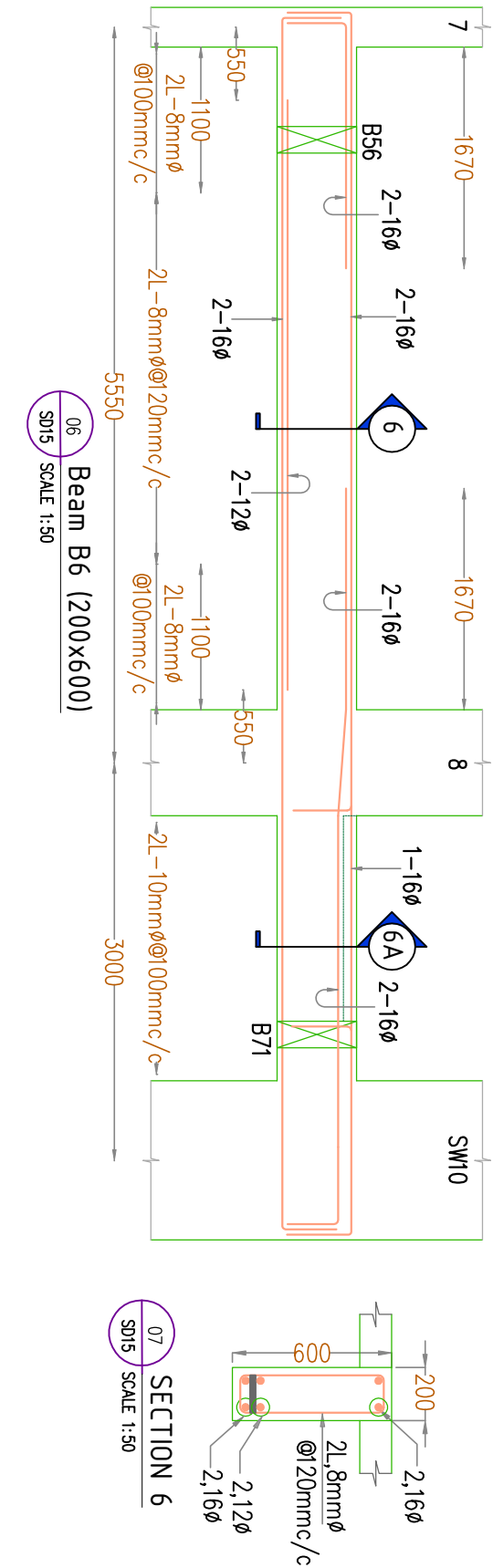
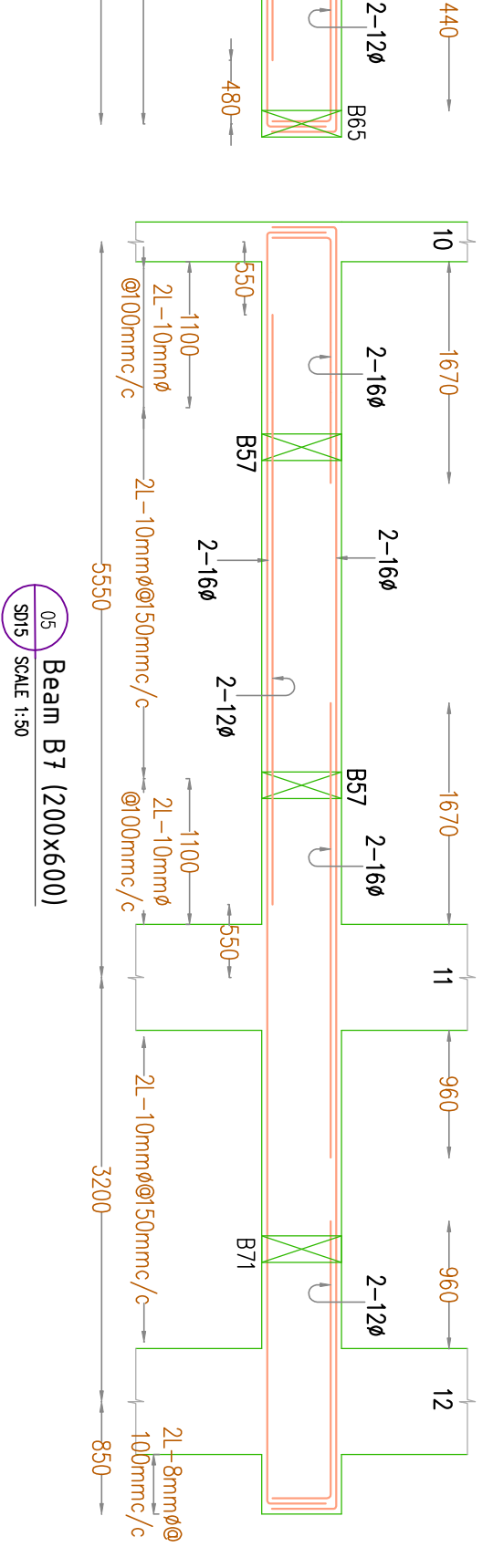
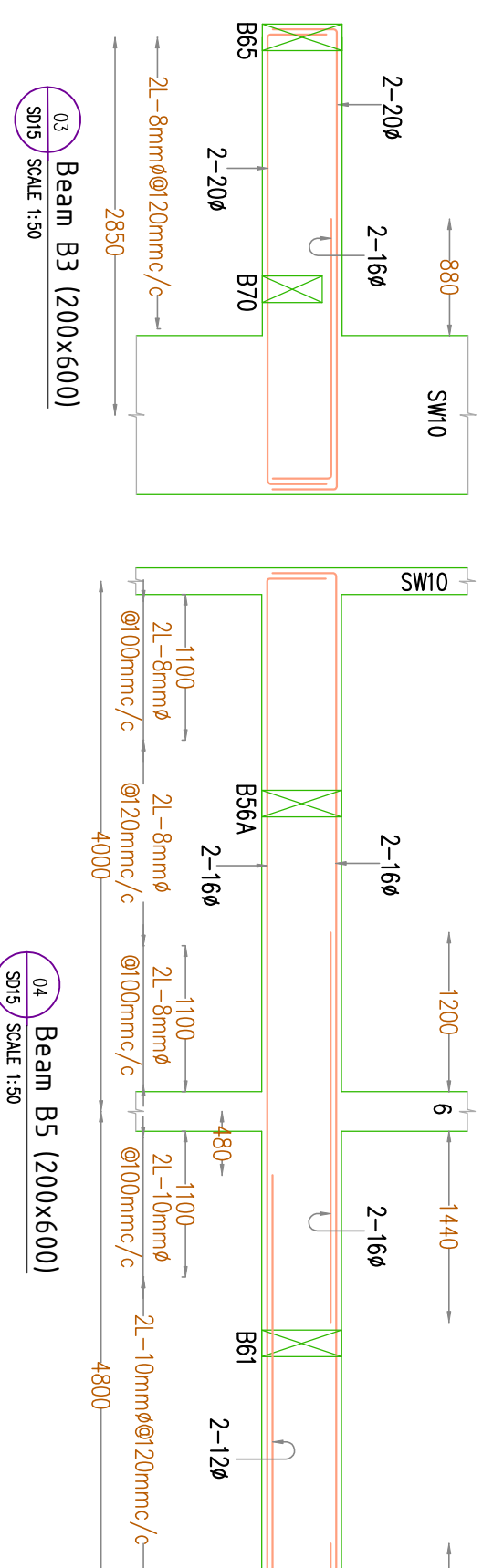
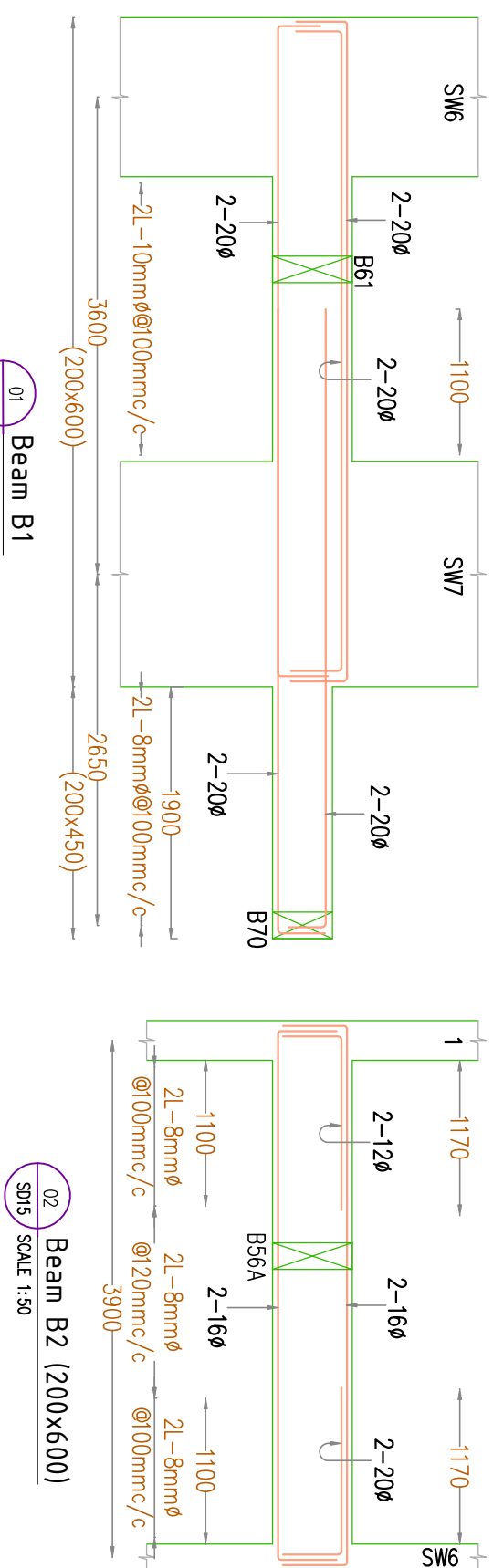
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	G	02.02.2026	AS	SS	PROOF CHECKING COMMENTS	RS	
	F	06.01.2026	AS	SS	PROOF CHECKING COMMENTS	RS	
	E	02.12.2025	AS	SS	ARCH REVISED	RS	
	D	13.08.2025	AS	SS	FOR PROOF CHECKING	RS	
	C	18.03.2025	AS	SS	FOR INFORMATION	RS	
	B	19.10.2024	AS	SS	FOR INFORMATION ONLY	RS	
	A	11.02.2024	AS	SS	FOR INFORMATION ONLY	RS	

CSL EMPLOYERS QUARTERS A  
KOCHUKADAVANTRA

LAYOUT OF TYPICAL FLOOR BEAMS  
& SLABS AND DETAILS OF SLABS  
(1st - 11 th FLOOR)

SCALE	SIZE	DRAWN	CHECKING (JC)
		AMANTHAKISHAN	JACOB THOMAS
NTS	A1	DESIGN (ET)	CHECKING (TL)
		SANSA	RINTU SELASTINE
APPROVED (TN)		APPROVED (T)	APPROVED (MD)
PHILIP GEORGE		BINDU SUNIL	ANIL JOSEPH
DRAWING NUMBER	DATE OF ISSUE	JOB NUMBER	
31522 - CN15	13.02.2026	3452/JOS/2027	





NOTES

1. This drawing should be read along with our general Notes, Notes in this drawing, Architectural Drawings & Specifications.
2. All dimensions should be checked by the architect and any discrepancy found should be brought to our notice before execution.
3. All dimensions are in mm unless otherwise specified and levels are in meters.
4. Dimensions shall not be measured directly from this drawing, follow only written dimensions.
5. Do not duplicate any part of this drawing without our written permission.
6. Clear cover to reinforcement o) Beam – 30mm, b) Slab – 25mm.
7. Grade of concrete & steel shall be M30 & Fe5000 respectively.
8. Lap length is 55 d and not more than half the bars shall be spliced at one section, Where d is the diameter of bar
9. Building is designed for : G +11 Floor Only.

BEAM B27A CANCELLED

GOOD FOR CONSTRUCTION

FOR EXECUTION PURPOSE FOLLOW ONLY THE DRAWINGS APPROVED & SIGNED BY THE STRUCTURAL CONSULTANT. All revisions starting with alphabet A,B,C are only for approval, information. Revision with numerical 1,2,3, are issued as Good For Construction(GFC).

REFERENCE DRAWING

COCHIN SHIPYARD LIMITED

TECHNICALIYA CONSULTANTS PVT. LTD.  
#29/41, VASANTHA MENDE M.R.C. NAGAR, CHENNAI - 28.  
Phone: 2851624, 2868321 Fax: 237643  
E-mail: adm@technicaliya.com

CSL EMPLOYERS QUARTERS AT KOCHUKADAVANTRA

BEAM DETAILS OF TYPICAL FLOOR  
1st – 11 th FLOOR  
(Sheet 1 of 3)

SCALE	SIZE	DRAWN	CHECKING (CC)
NTS	A1	ANANTHAKRISHNAN	JACOB THOMAS
		DESIGN (Er)	CHECKING (TL)
		SANSA	RINTU SELASTINE
		APPROVED (OJ)	APPROVED (NO)
		PHILIP GEORGE	ANIL JOSEPH
		DRAWING NUMBER	SHEET NUMBER
		3152-S016	3152/CS/2024







1. This drawing should be read along with our general Notes, Notes in this drawing, Architectural Drawing & Specifications.

3. All dimensions are in mm unless otherwise specified and levels are in meters.

5. Clear cover to reinforcement  $\geq 30\text{mm}$

8. Lop length is 55 d and not more than half the bar respectively.

FOR EXECUTION PURPOSE FOLLOW ONLY THE DRAWINGS  
APPROVED & SIGNED BY THE STRUCTURAL CONSULTANT

All revisions starting with alphabet A,B,C...are only for  
approval, information. Revision with numerical 1,2,3,...are  
issued as Good For Construction(GFC).

 #25/41, VASANTHA AVENUE, M.R.C NAGAR, CHENNAI - 28.  
PH: 044-24933278, 24933287 FAX: 044-249373  
Email - admin@technicalya.com



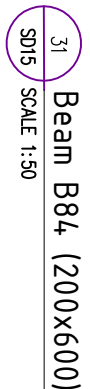
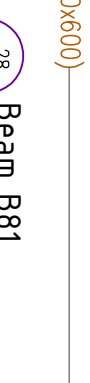
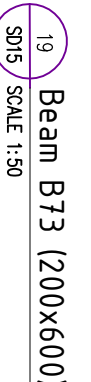
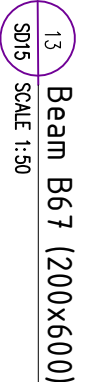
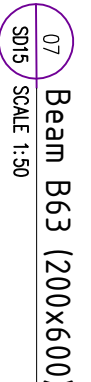
**GEO STRUCTURALS (P) Ltd**

**Phone:** 2367824, 2368327, Fax :23716  
**E-mail:** [geostructurals@gmail.com](mailto:geostructurals@gmail.com)

PRODUCT	REV.	NO.	DATE	DRAWN BY	DESCRIPTION
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	F	02.02.2026	AS	SS	PROOF CHECKING COMMENTS
	F	08.01.2026	AS	SS	PROOF CHECKING COMMENTS
	E	02.12.2025	AS	SS	AECI REVISED
	D	13.08.2025	AS	SS	FOR PROOF CHECKING
	C	18.03.2025	AS	SS	FOR INFORMATION
	B	19.10.2024	AS	SS	FOR INFORMATION ONLY
	A	11.10.2024	AS	SS	FOR INFORMATION ONLY

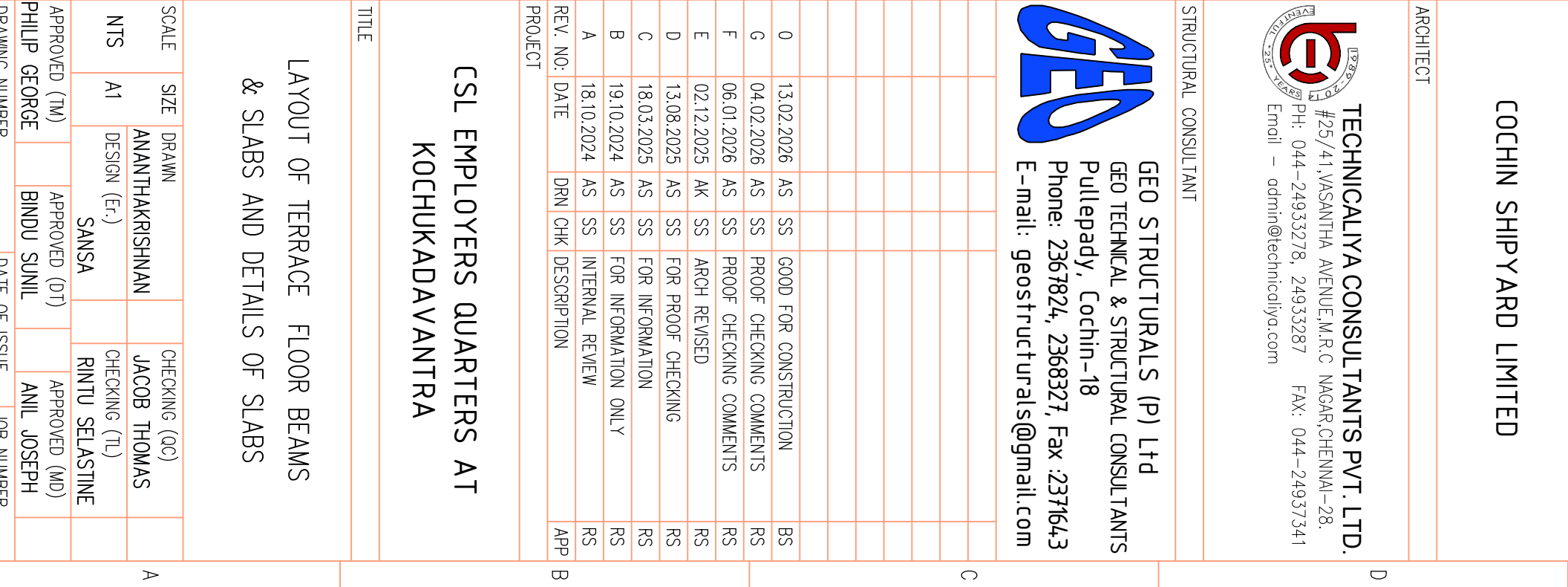
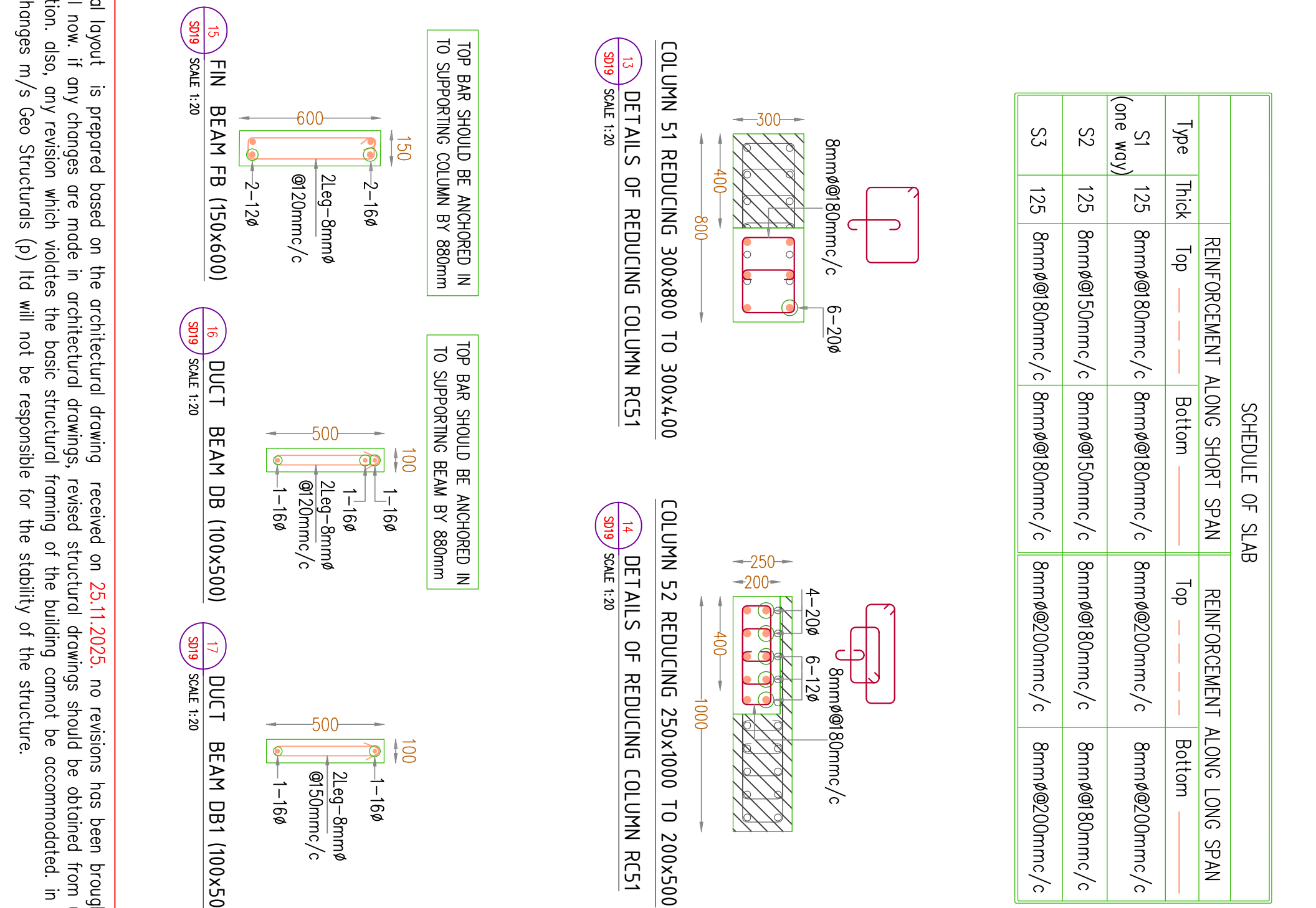
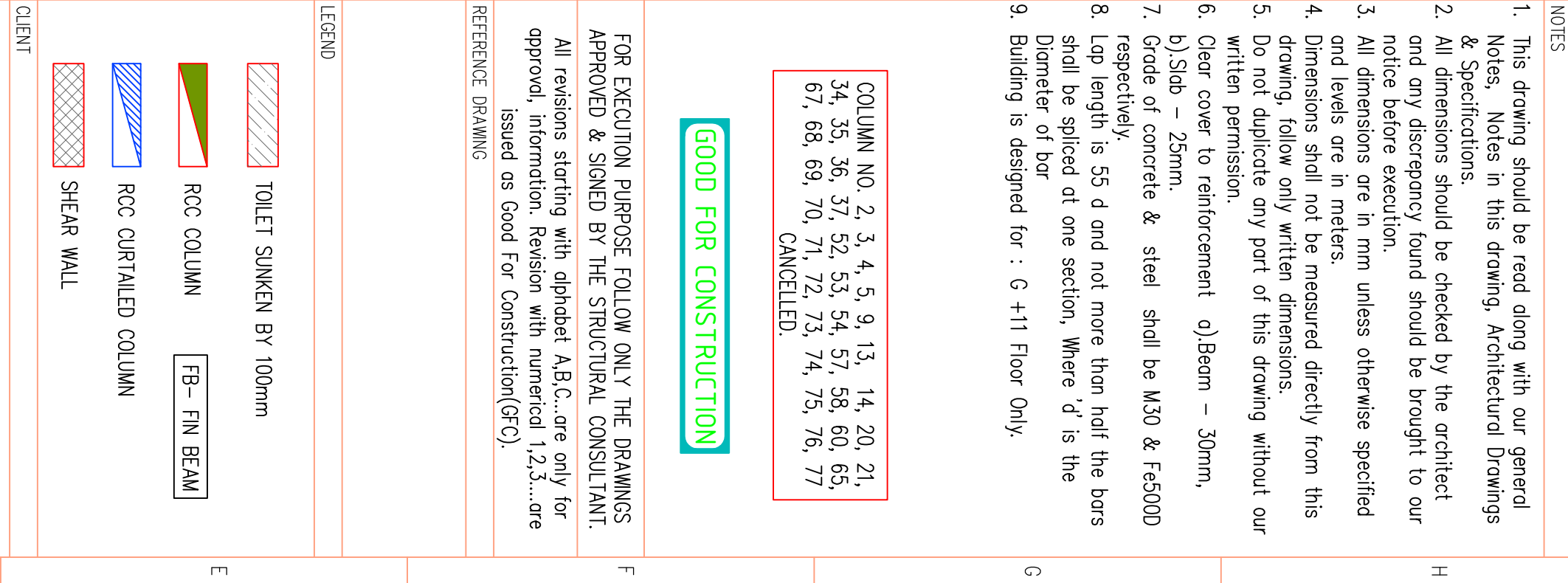
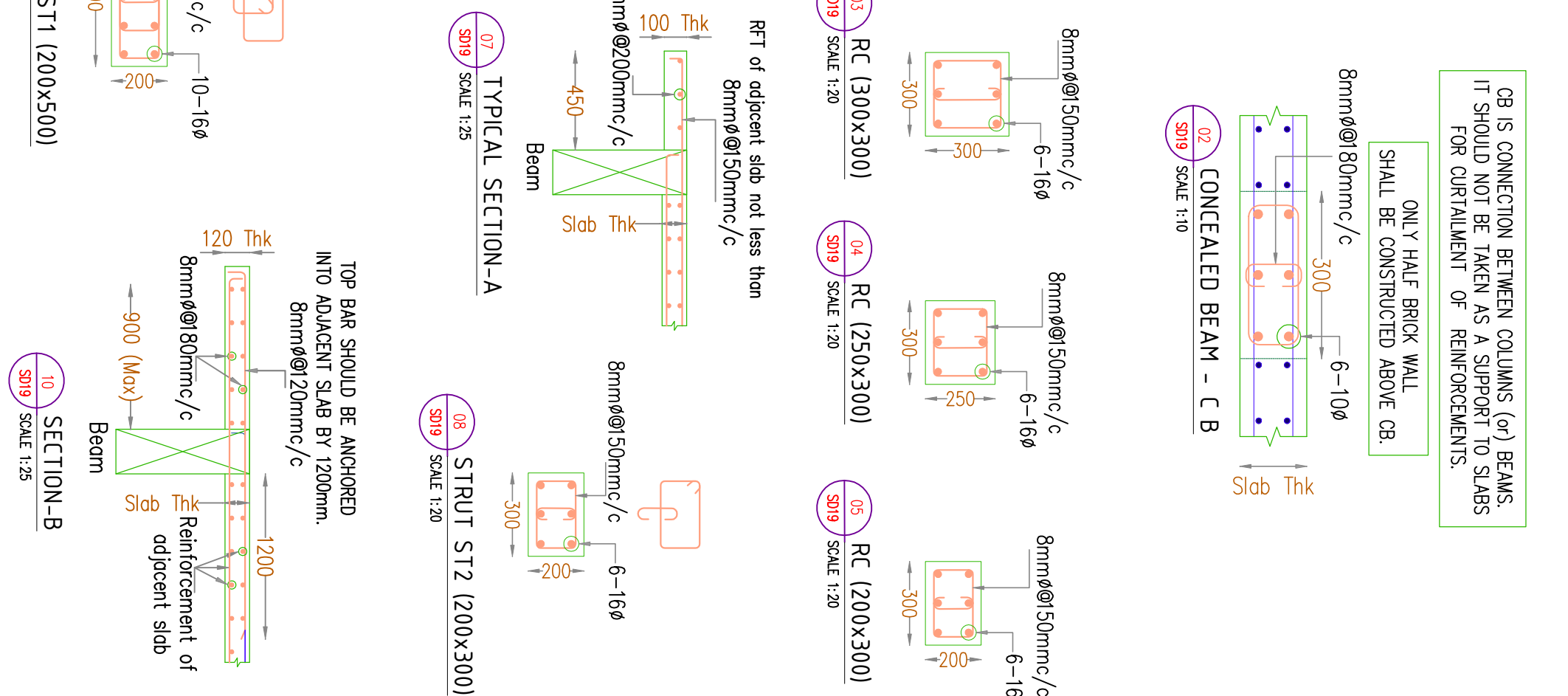
CSL EMPLOYERS QUARTERS AT  
KOCHUKADAVANTRA1st - 11 th FLOOR)  
(sheet 3 of 3 )

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	DESIGN (Gr.)	SANSA	RINTU SELASTINE
	APPROVED (TM)	APPROVED (DT)	APPROVED (NM)
	PHILIP GEORGE	BINDU SUNIL	ANIL JOSEPH
DRAWING NUMBER	DATE OF ISSUE	JOB NUMBER	
7450	01.09.2019	74000000	

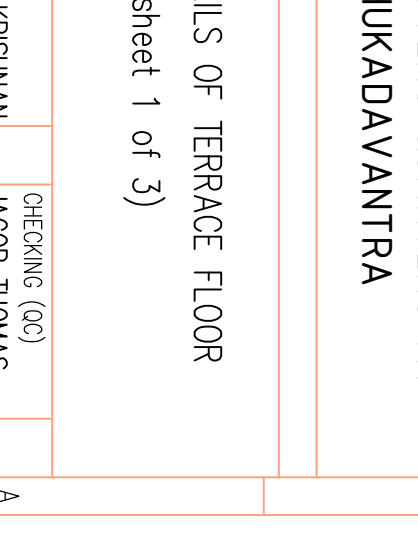
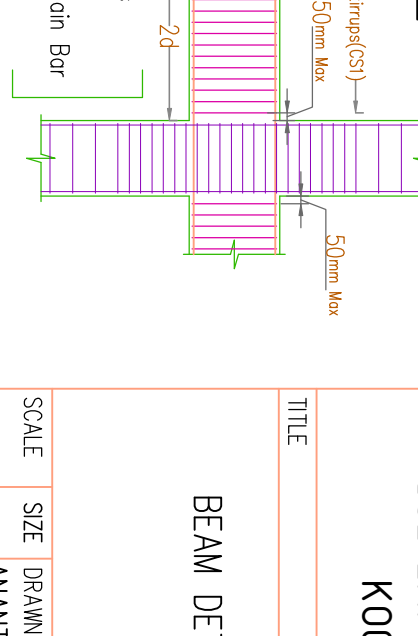
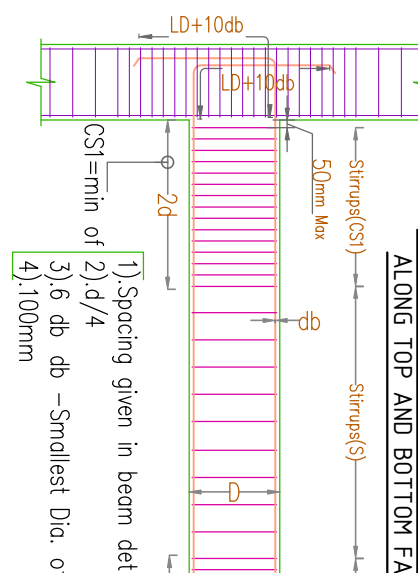
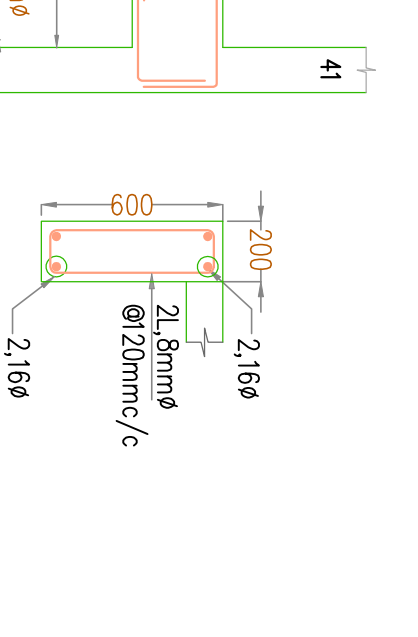
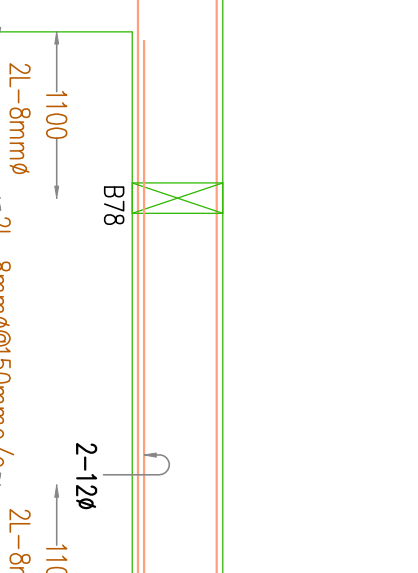
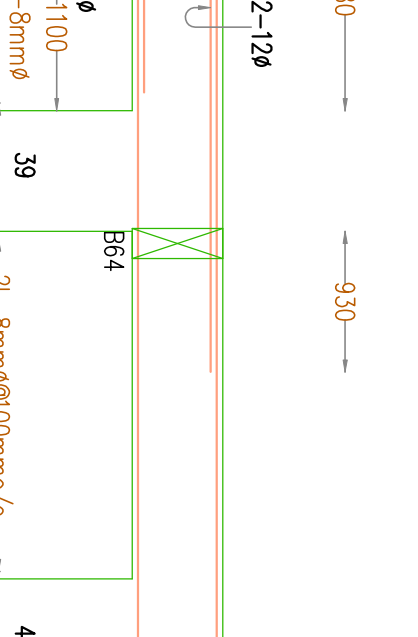
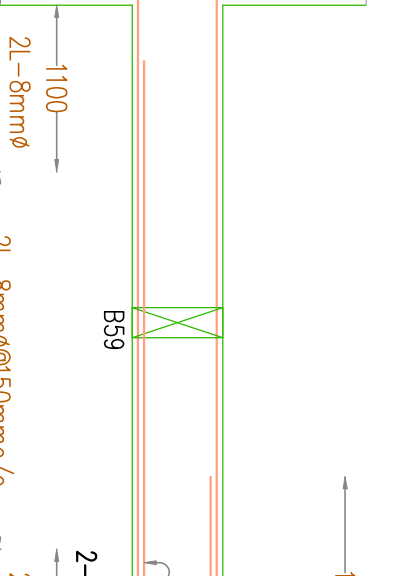
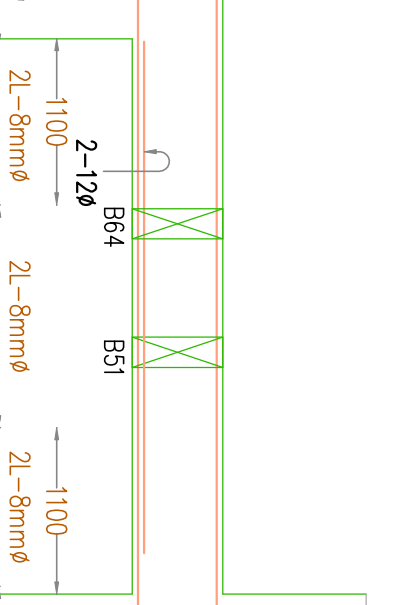
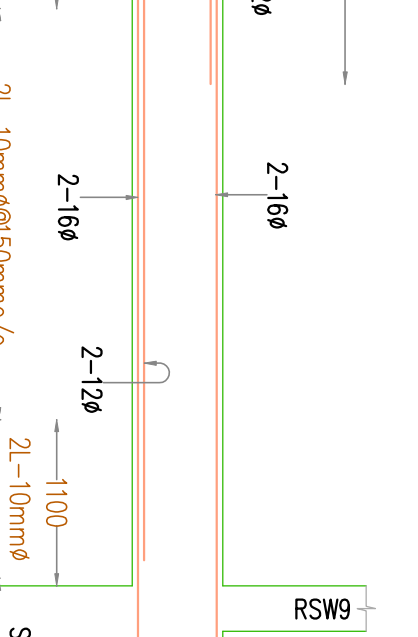
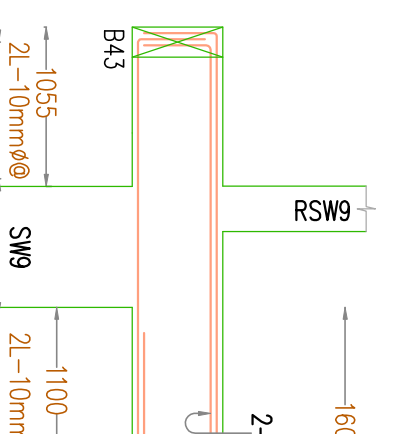
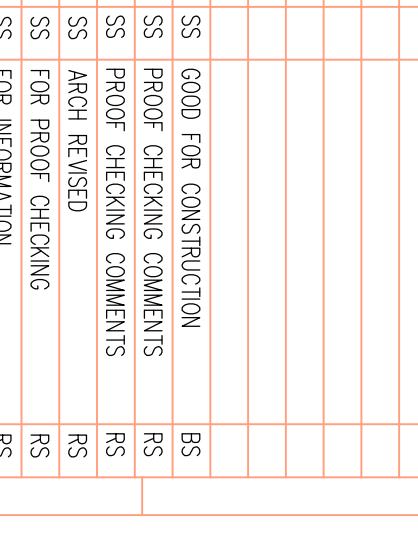
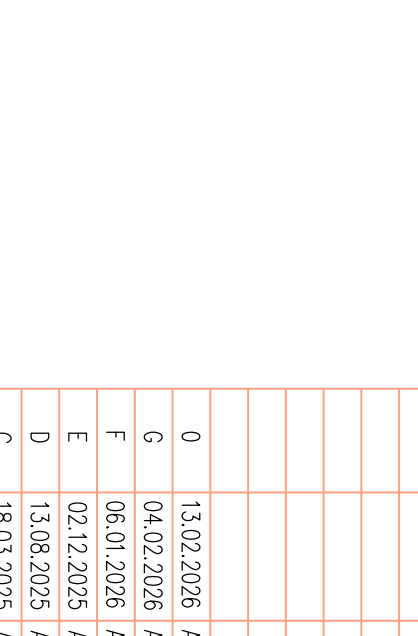
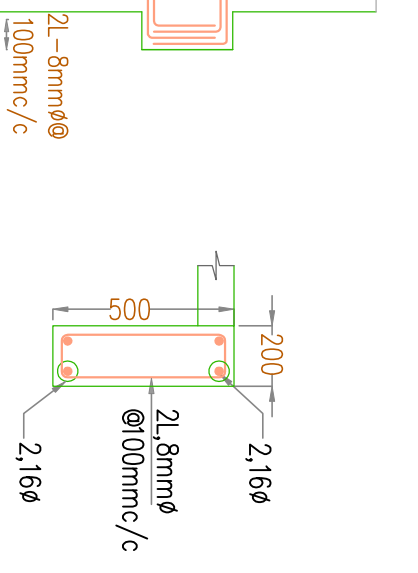
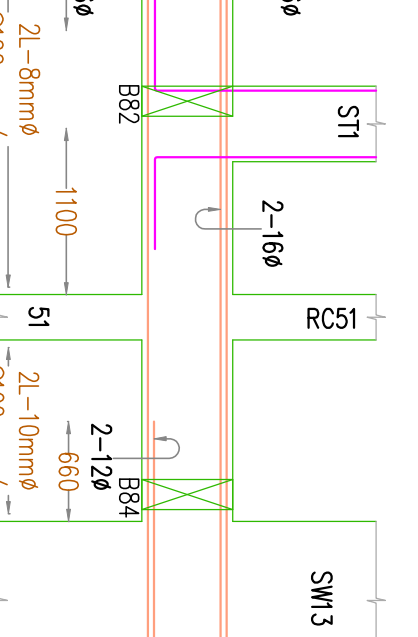
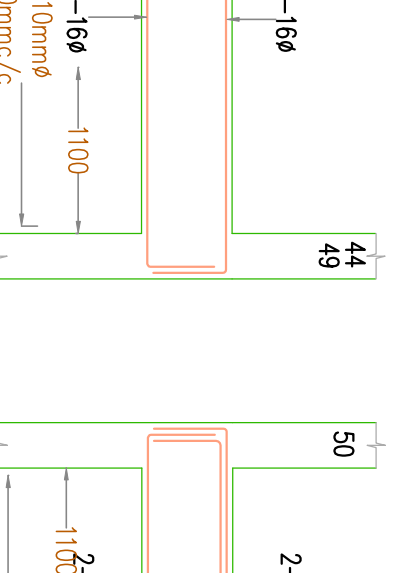
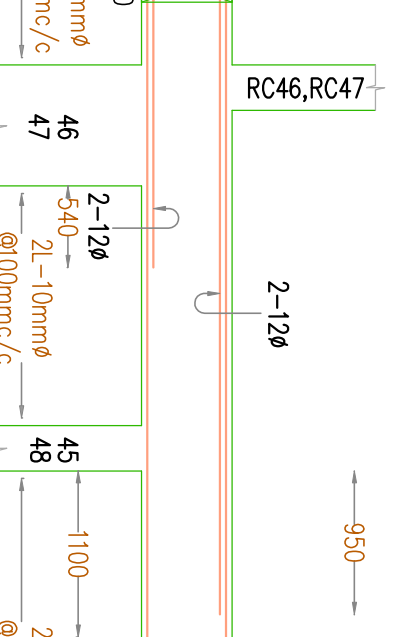
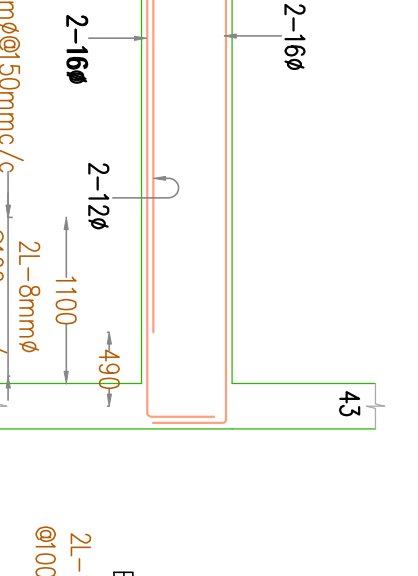
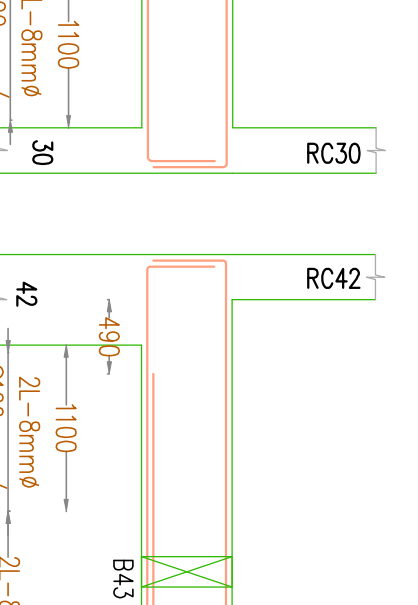
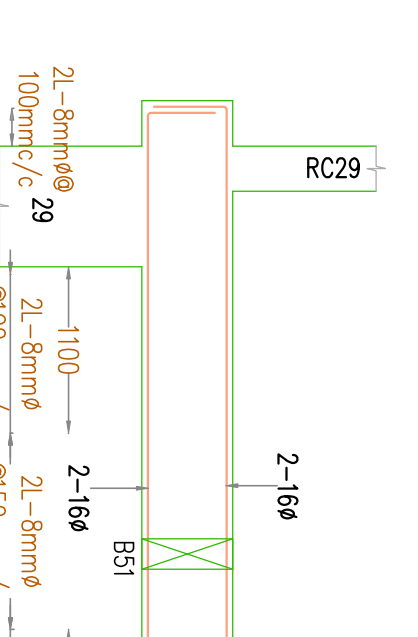
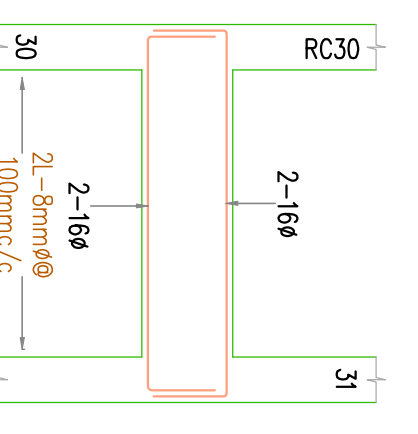
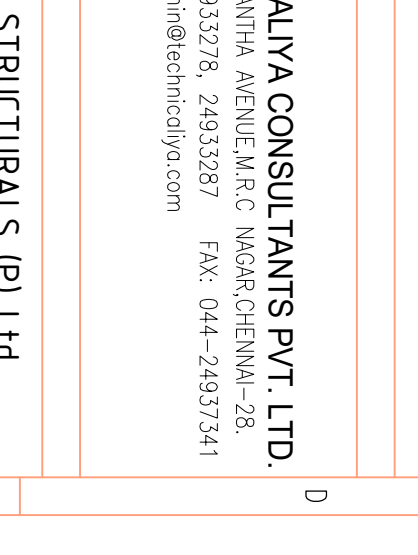
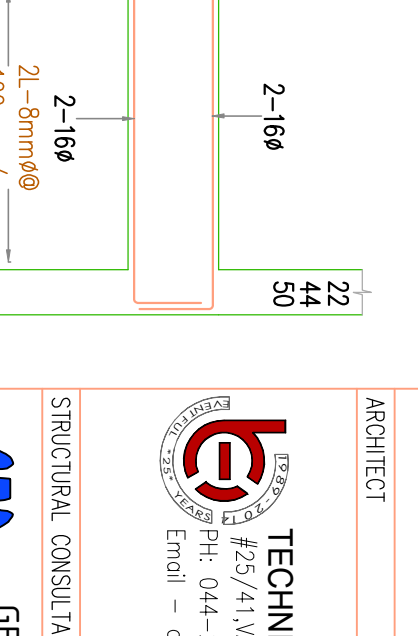
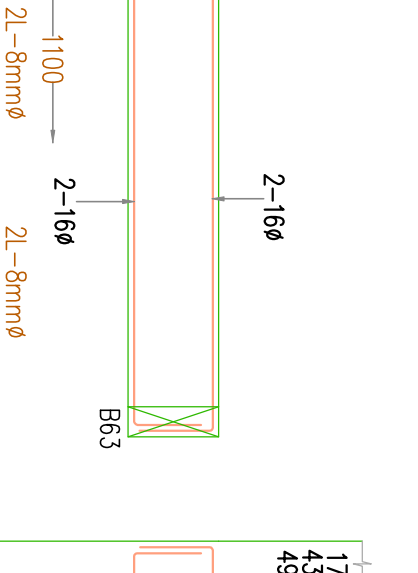
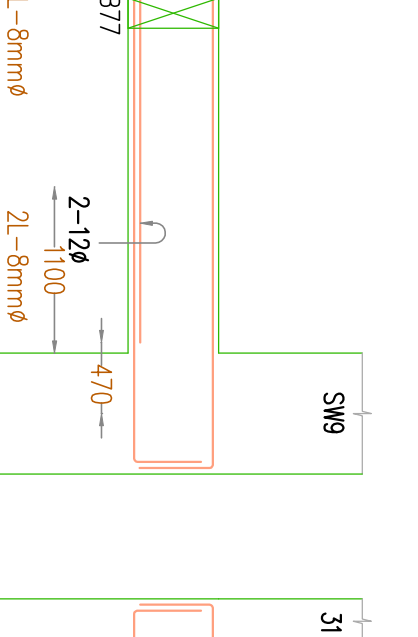
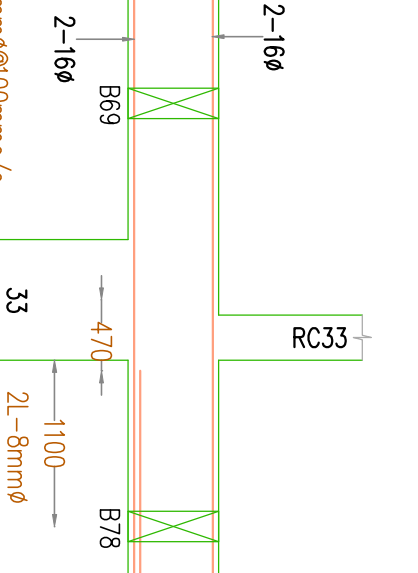
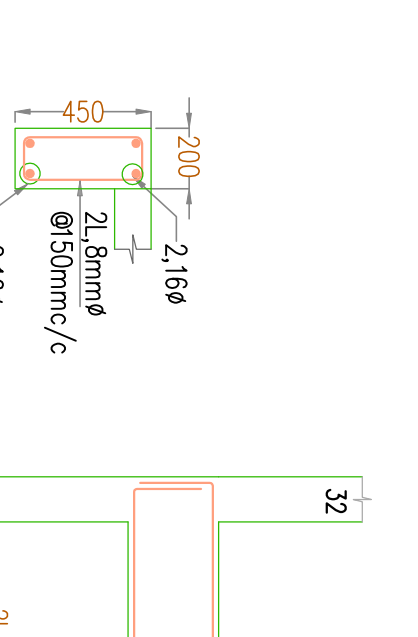
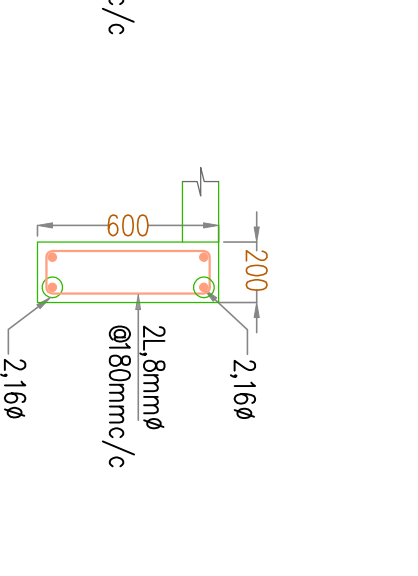
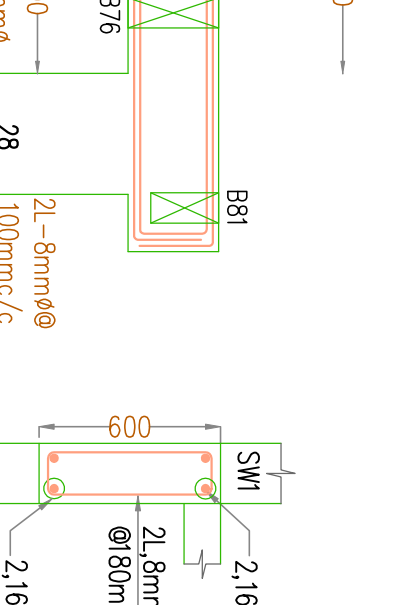
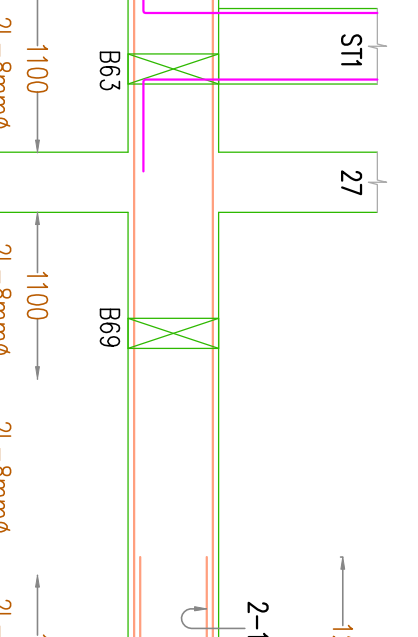
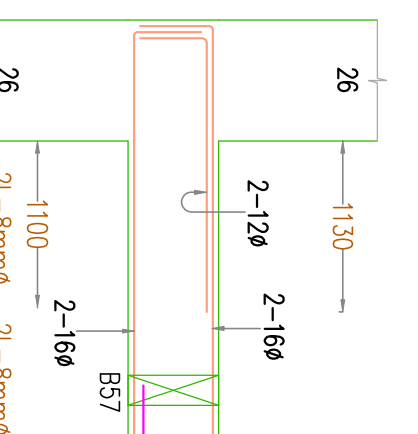
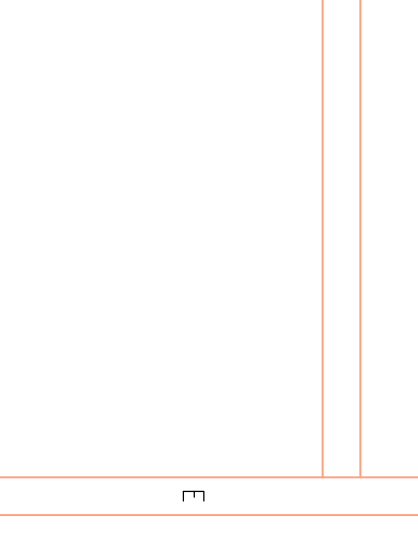
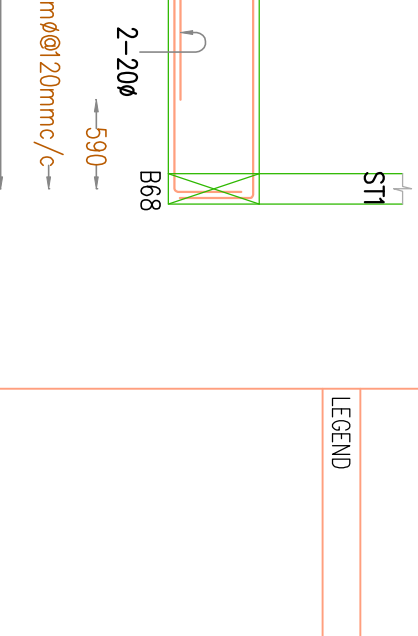
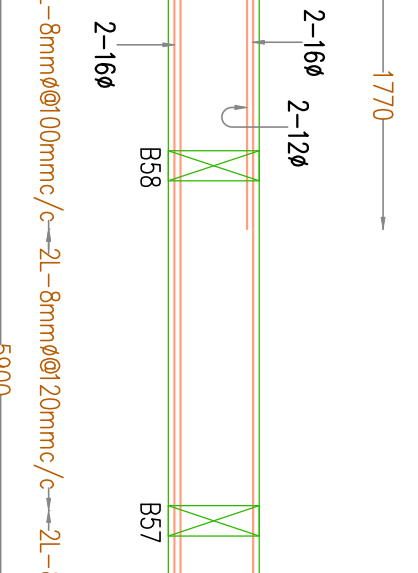
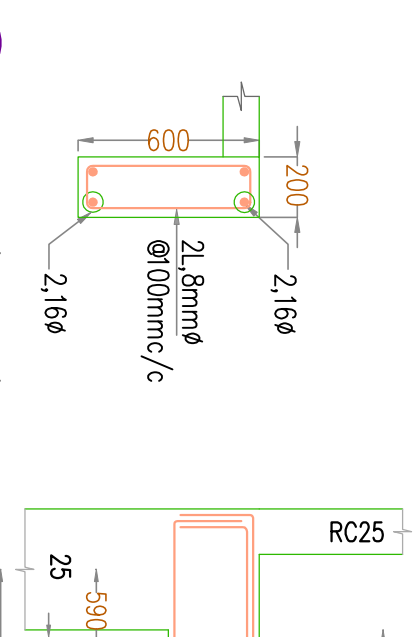
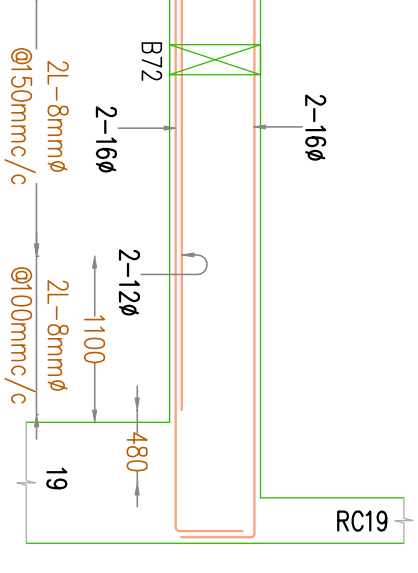
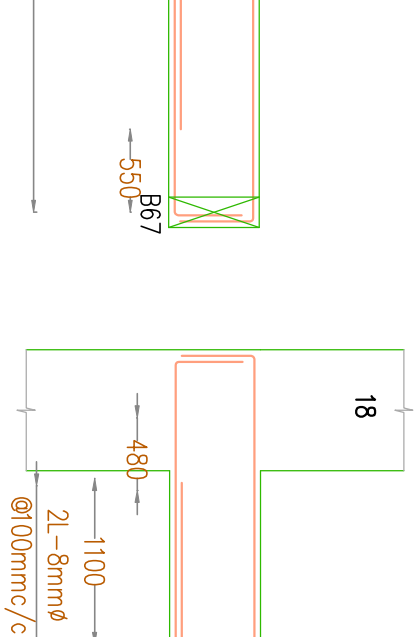
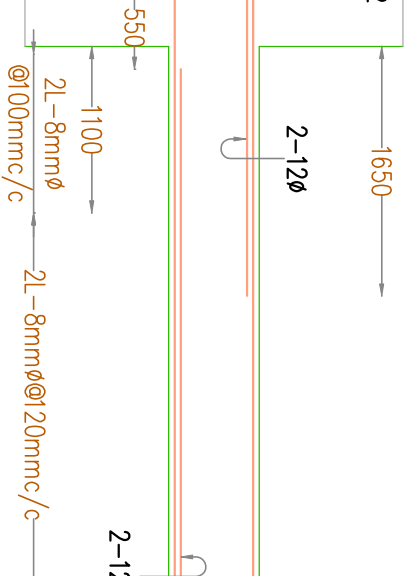
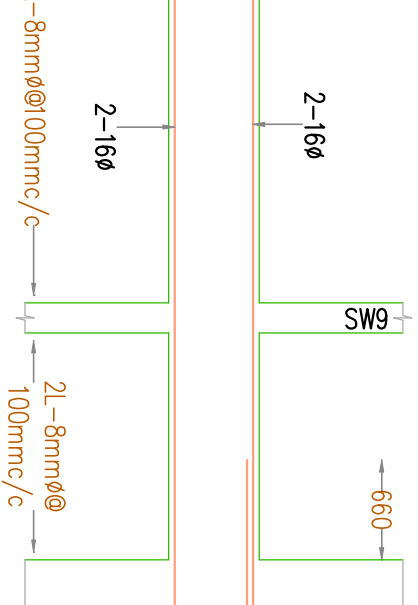
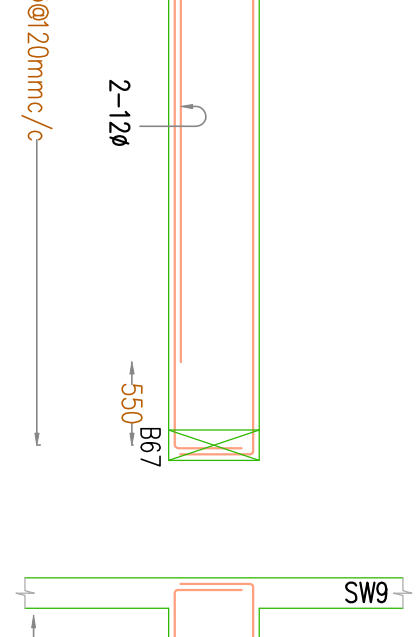
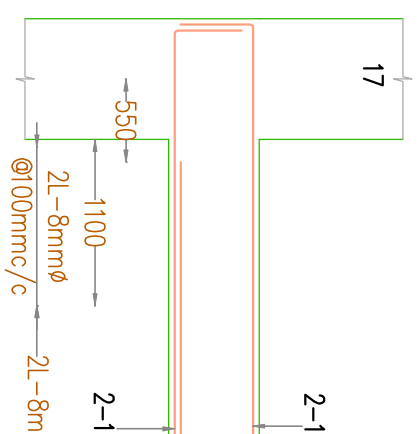
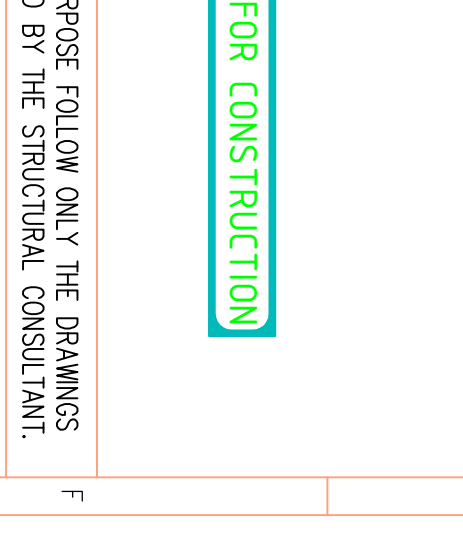
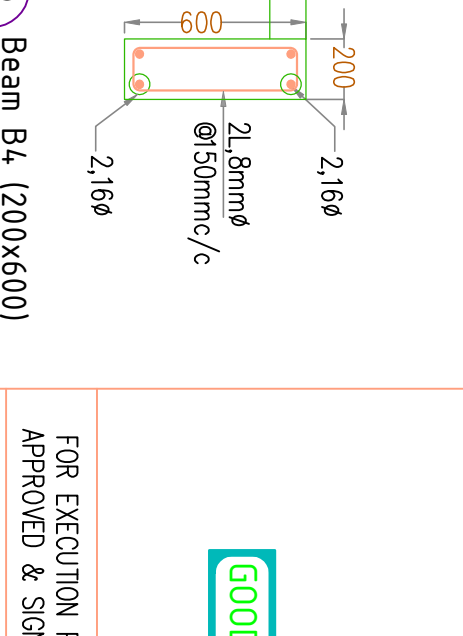
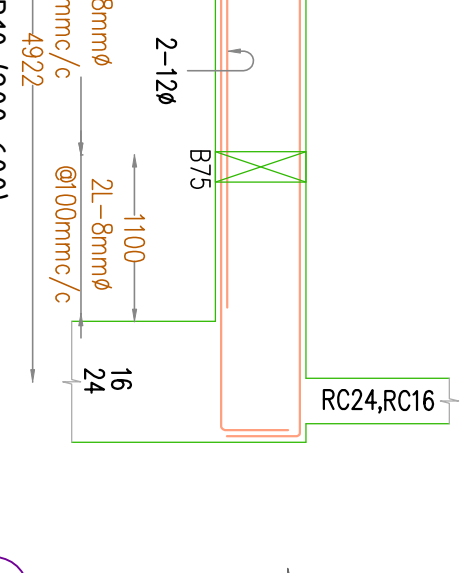
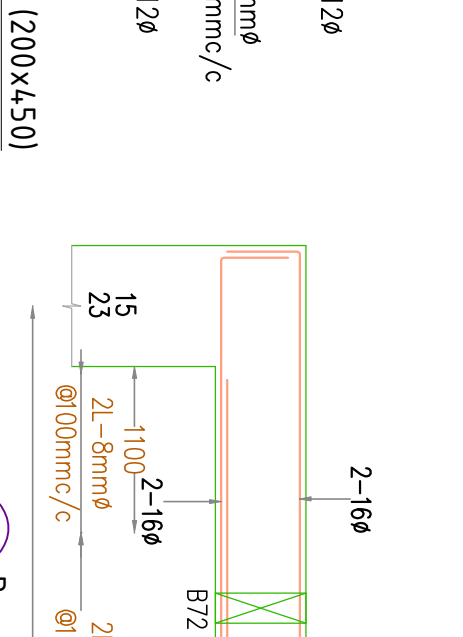
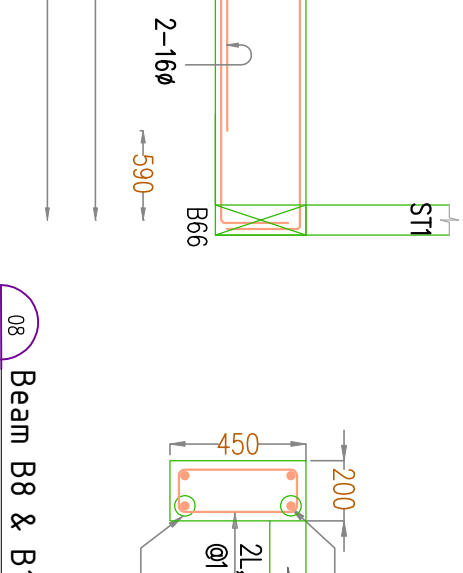
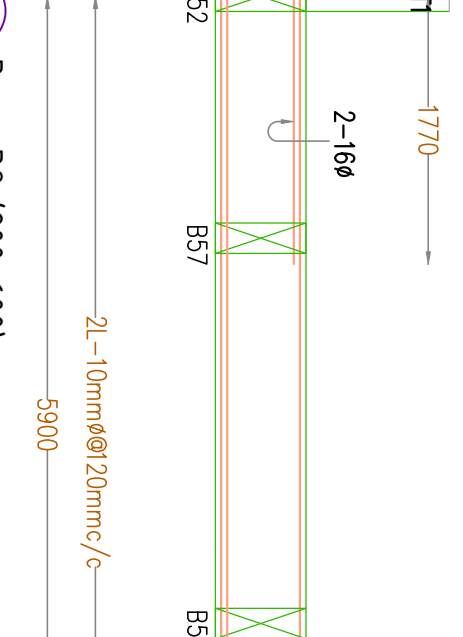
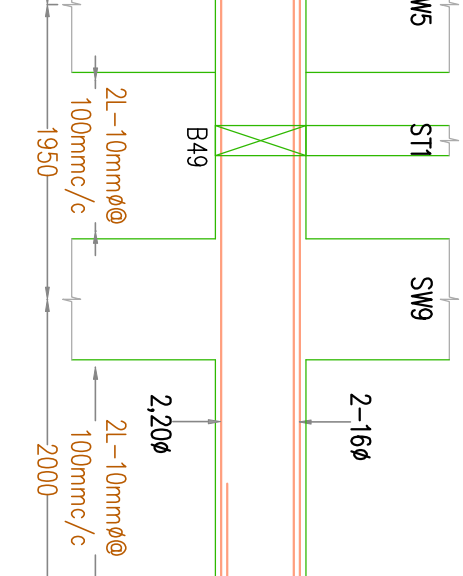
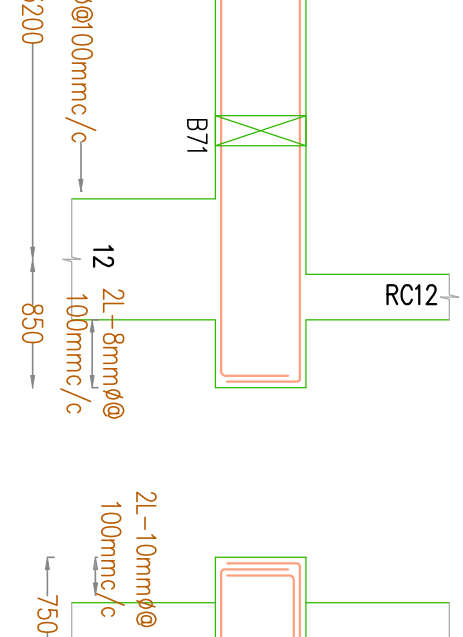
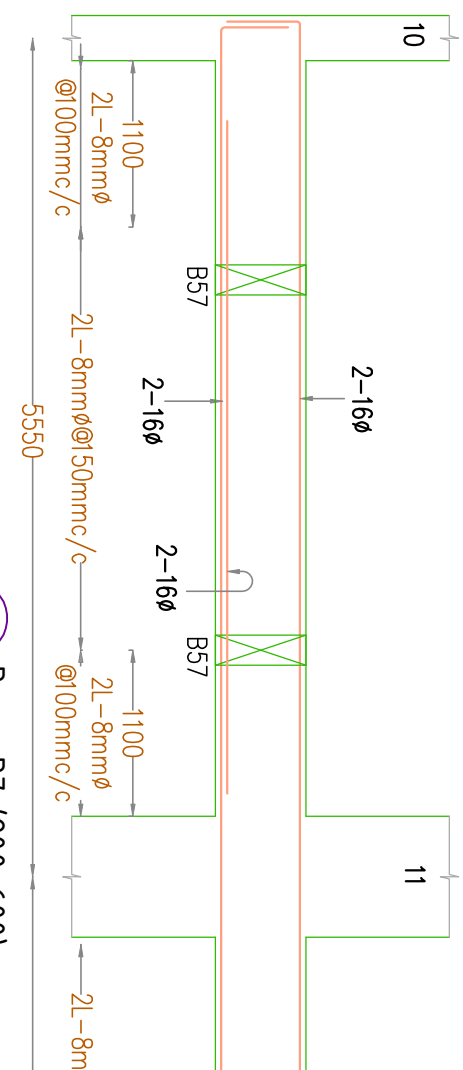
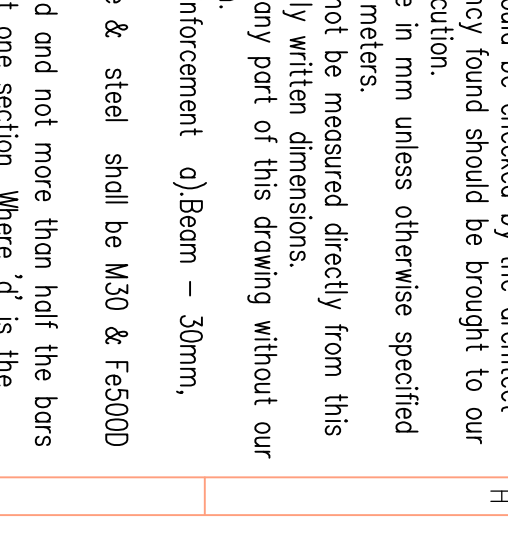
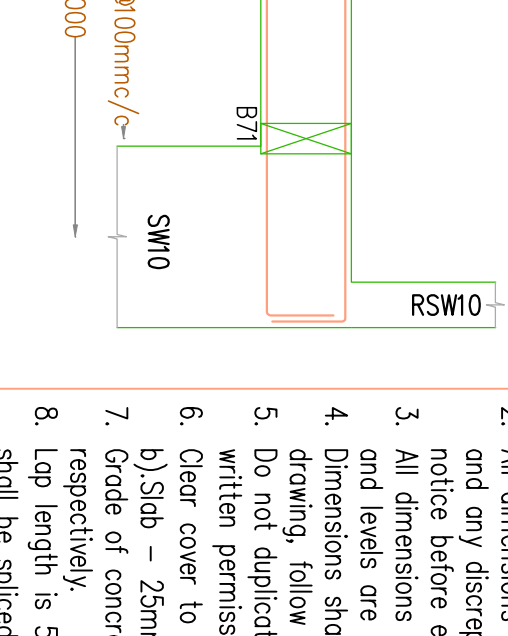
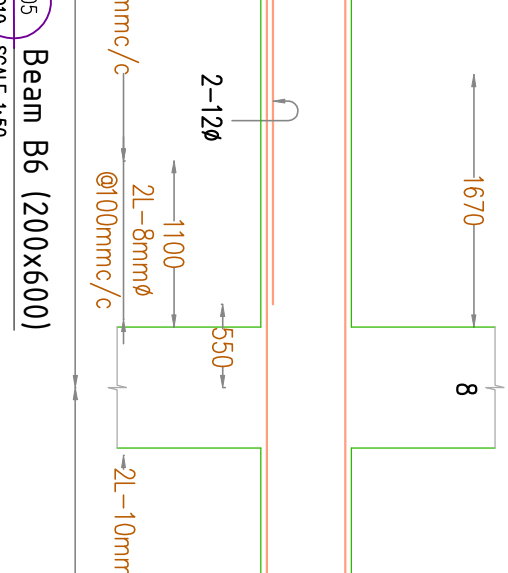
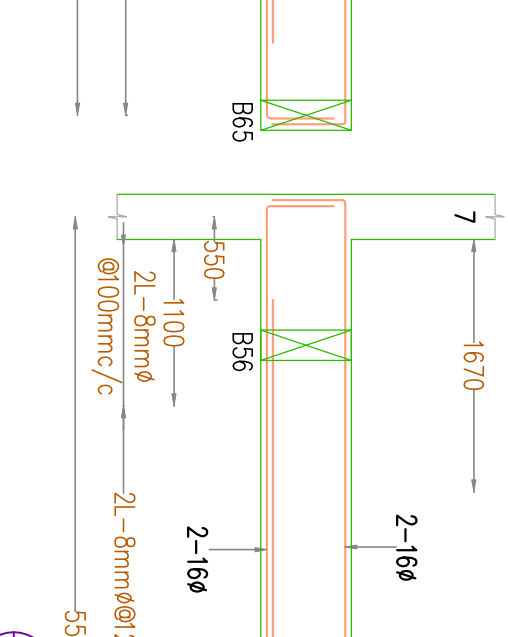
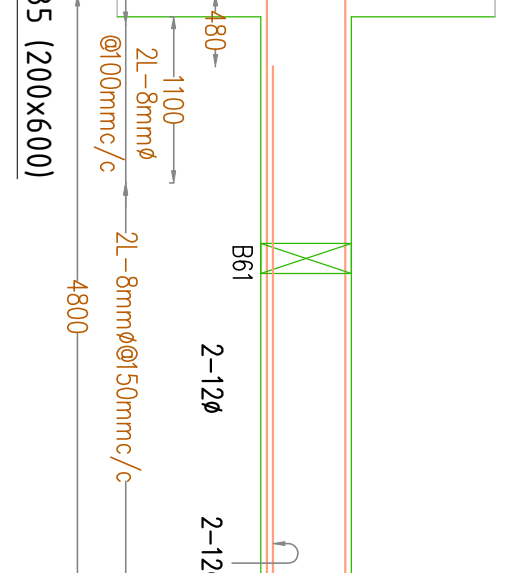
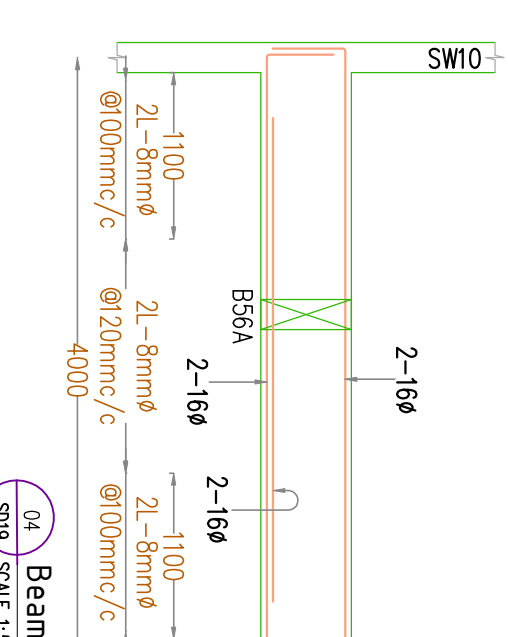
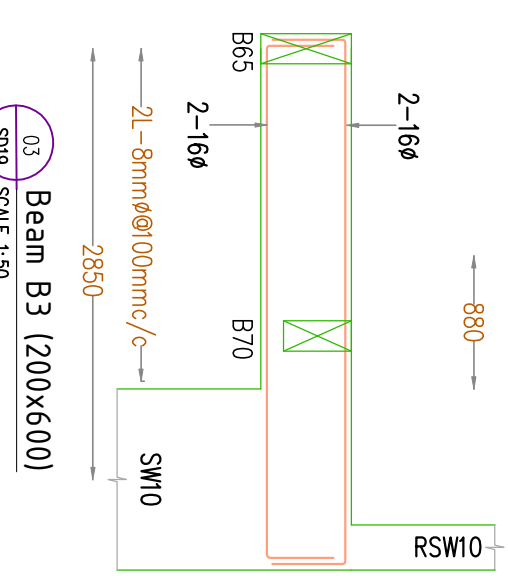
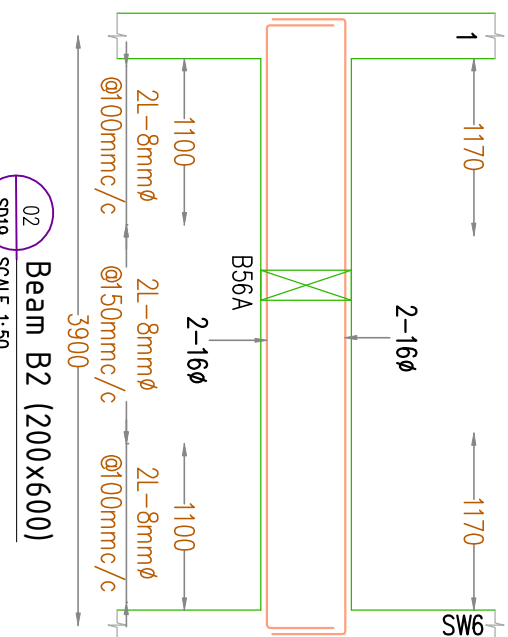
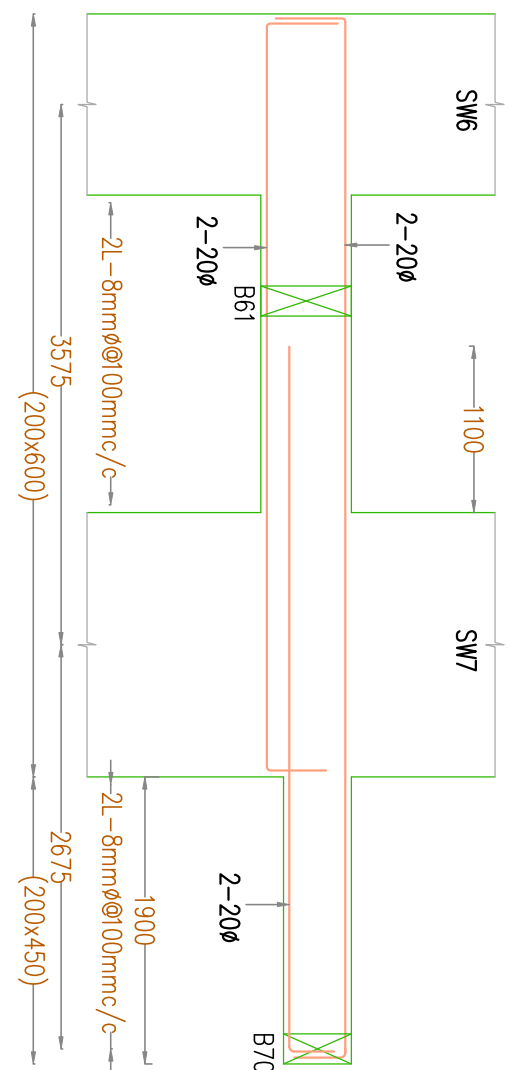


**35** DETAILING OF REINFORCEMENT IN BEAMS FOR DUCTILITY  
**SD15** [TYPICAL BEAM DETAILS] SCALE 1:50









- NOTES
1. This drawing should be read along with our general Notes, Notes in this drawing, Architectural Drawings & Specifications.
  2. All dimensions should be checked by the architect and any discrepancy found should be brought to our notice before execution.
  3. All dimensions are in mm unless otherwise specified and levels are in meters.
  4. Dimensions shall not be measured directly from this drawing, follow only written dimensions.
  5. Do not duplicate any part of this drawing without our written permission.
  6. Clear cover to reinforcement o) Beam – 30mm, b) Slab – 25mm.
  7. Grade of concrete & steel shall be M30 & Fe5000 respectively.
  8. Lap length is 55 d and not more than half the bars shall be spliced at one section, Where d is the Diameter of bar
  9. Building is designed for : G +11 Floor Only.

GOOD FOR CONSTRUCTION

FOR EXECUTION PURPOSE FOLLOW ONLY THE DRAWINGS APPROVED & SIGNED BY THE STRUCTURAL CONSULTANT. All revisions starting with alphabet A,B,C...are only for approval, information. Revision with numerical 1,2,3,...are issued as Good For Construction(GFC).

REFERENCE DRAWING

COCHIN SHIPYARD LIMITED

TECHNICALIYA CONSULTANTS PVT. LTD.  
#25/41 VASANTHA MENDE M.A.C NIGAR,CHENNAI -28.  
Email – admn@technicliya.com

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#25/41 VASANTHA MENDE M.A.C NIGAR,CHENNAI -28.  
Phone: 2856424, 2868321, Fax: 2376453  
E-mail: geostructurals@gmail.com

0	13.02.2026	AS	SS	GOOD FOR CONSTRUCTION	BS
1	04.02.2026	AS	SS	PROOF CHECKING COMMENTS	RS
2	06.02.2026	AS	SS	PROOF CHECKING COMMENTS	RS
3	02.12.2025	AK	SS	ARCH REVIEWED	RS
4	13.08.2025	AK	SS	FOR PROOF CHECKING	RS
5	18.03.2025	AS	SS	FOR INFORMATION	RS
6	19.10.2024	AS	SS	FOR INFORMATION ONLY	RS
7	20.05.2024	AS	SS	INTERNAL REVIEW	RS
8					RS
9					RS
10					RS
11					RS
12					RS
13					RS
14					RS
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99					RS
100					RS

CSL EMPLOYERS QUARTERS AT  
KOCHUKADAVANTRA

BEAM DETAILS OF TERRACE FLOOR  
(Sheet 1 of 3)

SCALE	SIZE	DRAWN	CHECKING (CC)
NTS	A1	ANANTHAKRISHNAN	JACOB THOMAS
APPROVED (NV)	DESIGN (ET)	SANSA	CHECKING (TL)
PHILIP GEORGE	APPROVED (OT)	RINITH SELASTINE	APPROVED (NO)
DRAWING NUMBER	DATE OF ISSUE	SAB NUMBER	
3152-SD20	13.02.2026	3152/GS/2024	



NOT

9. Building is designed for : G + 11 Floor Only.

GOOD FOR CONSTRUCTION

issued

LEGENDE

CLIN

COCHIN SHIPYARD LIMITED

AR1

Email – [admin@technicaliya.com](mailto:admin@technicaliya.com)

**GEO**  
GEO STRUCTURALS (P) Ltd  
GEO TECHNICAL & STRUCTURAL CONSULTANTS  
Pullepady, Cochin-18  
Phone: 2361824, 2368327, Fax : 23716  
E-mail: geosstructurals@gmail.com

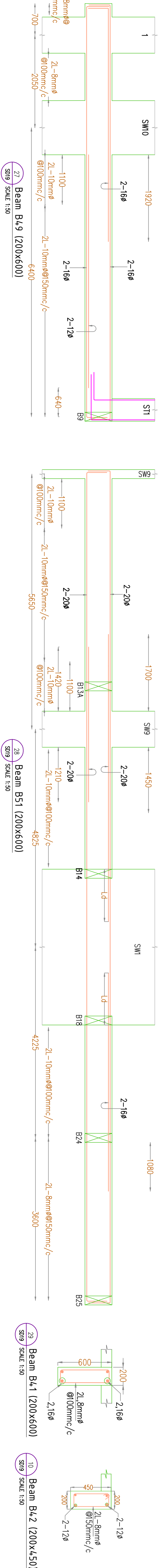
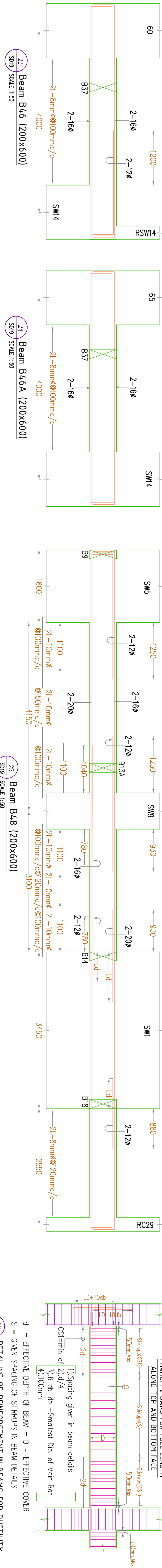
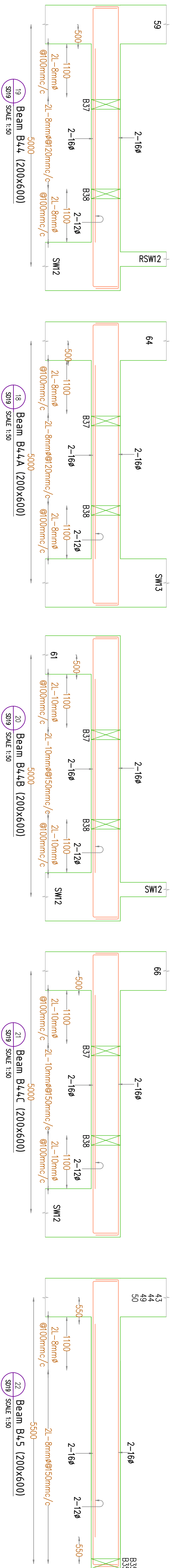
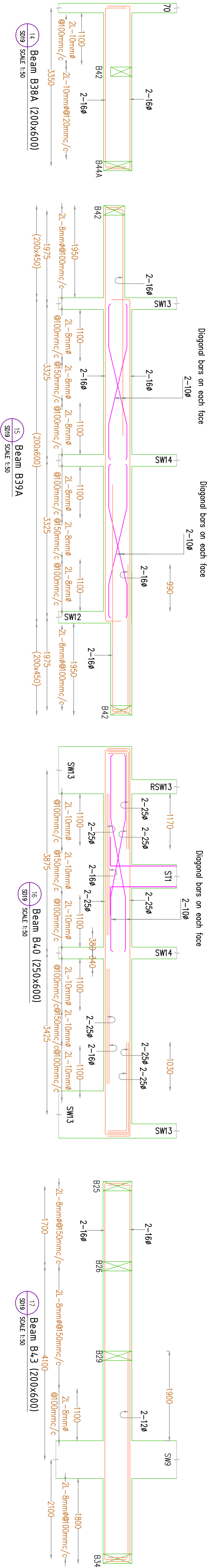
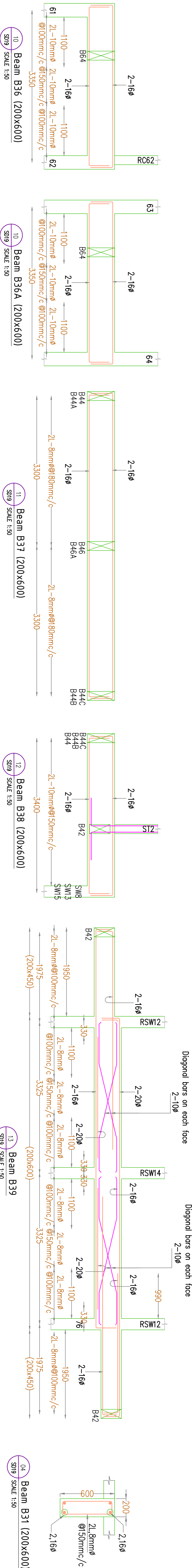
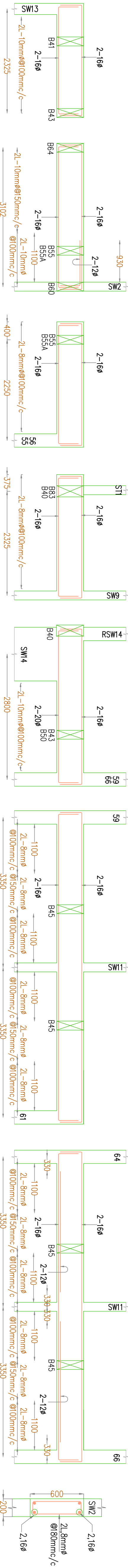
REV. NO.	DATE	BY	CHK	DESCRIPTION
0	13.02.2026	AS	SS	GOOD FOR CONSTRUCTION
A	04.02.2026	AS	SS	PROOF CHECKING COMMENTS
F	06.01.2026	AS	SS	PROOF CHECKING COMMENTS
E	02.12.2025	AK	SS	ARCHI REVIEWED
D	13.08.2025	AS	SS	FOR PROOF CHECKING
C	18.03.2025	AS	SS	FOR INFORMATION
B	19.10.2024	AS	SS	FOR INFORMATION ONLY
A	20.05.2024	AS	SS	INTERNAL REVIEW
		DRN	CHK	DISCREPION

CSL EMPLOYERS QUARTER  
KOCHUKADAVANTRA

## BEAM DETAILS OF TERRACE FLOOR

(sheet 2 of 3)

SCALE	SIZE	DRAWN	CHECKING (QC)
	A1	ANANTHAKRISHNAN	JACOB THOMAS
	DESIGN (Cr.)		CHECKING (TL)
NIS		SANSA	RINTU SELASTINE
APPROVED (TL)		APPROVED (DT)	APPROVED (IM)
PHILIP GEORGE		BINODU SIVUL	ANIL JOSEPH
DRAWING NUMBER		DATE OF ISSUE	JOB NUMBER



26 DETAILING OF REINFORCEMENT IN BEAMS FOR DUCTILITY  
SD19 [TYPICAL BEAM DETAILS] SCALE 1:50

MINIMUM 2 BARS FOR FULL LENGTH ALONG TOP AND BOTTOM FACE

String (CS) 50mm dia 20

1) Spacing given in beam details

String (CS) 50mm dia 20

CS min of 2 @  $d/4$

3/8 dia - Smallest Dia. of Main Bar

22 Beam B45 (200x600)  
SD19 SCALE 1:50

17 Beam B43 (200x600)  
SD19 SCALE 1:50

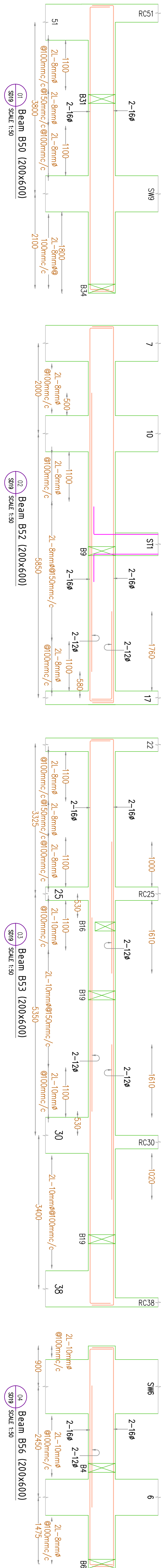
13 Beam B39

09 Beam B35A (200x600)  
SD19 SCALE 1:50

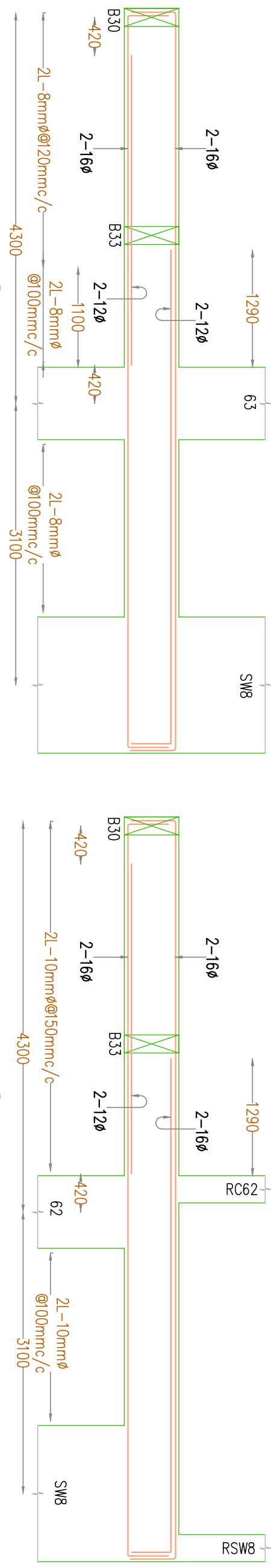
04 Dealii D31 (200X800)  
SD19 SCALE 1:50

17 Beam B43 (200x600)  
SD19 SCALE 1:50

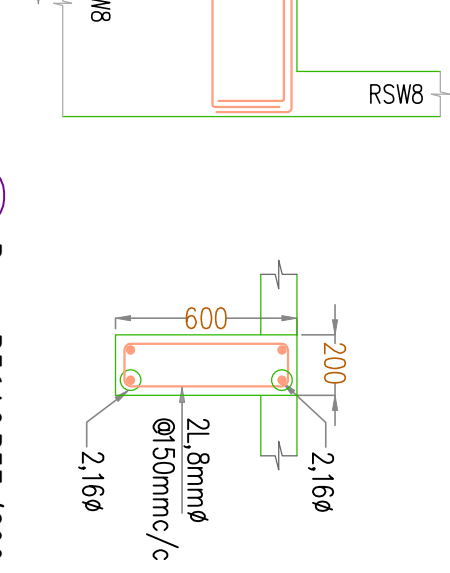




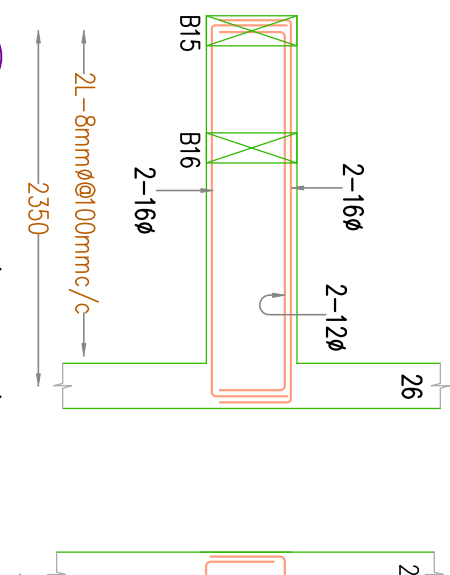
01 Beam B50 (200x600)  
S019 SCALE 1:50



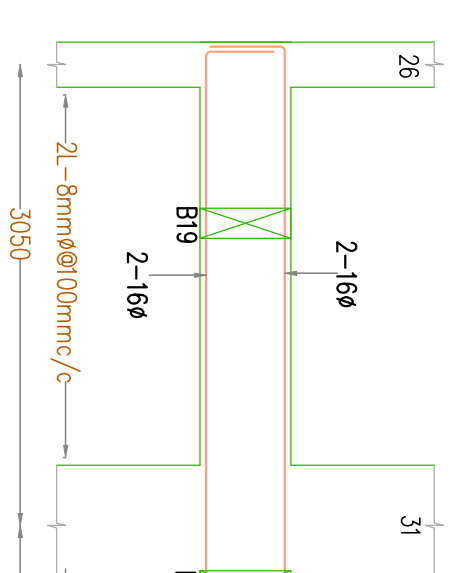
02 Beam B52 (200x600)  
S019 SCALE 1:50



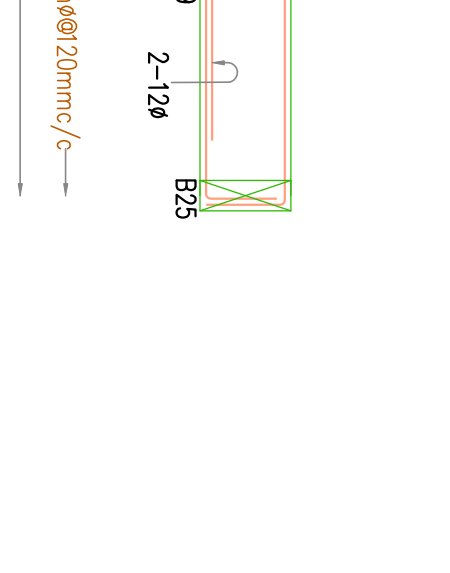
03 Beam B53 (200x600)  
S019 SCALE 1:50



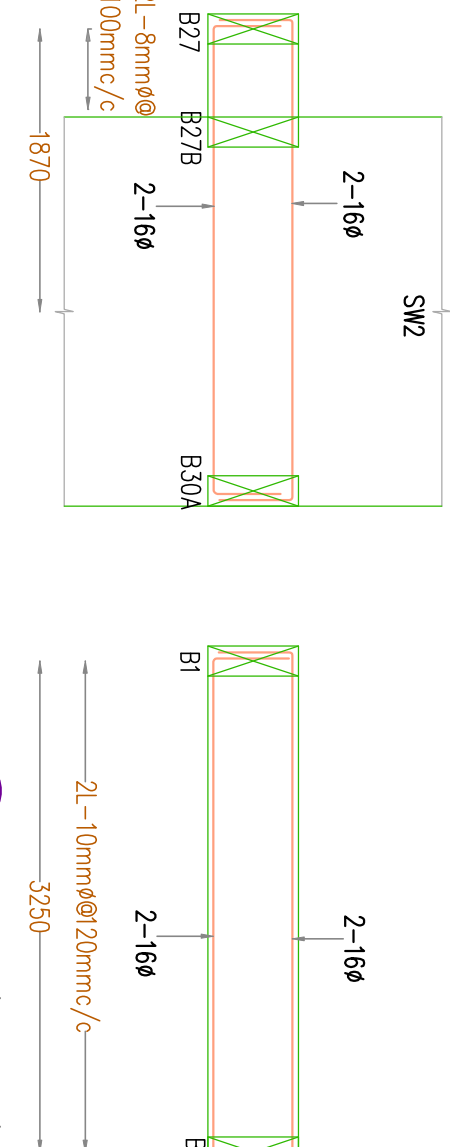
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S019 SCALE 1:50



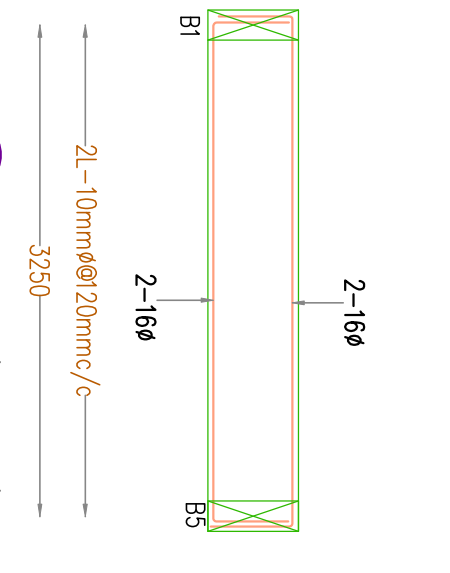
05 Beam B55 (200x600)  
S019 SCALE 1:50



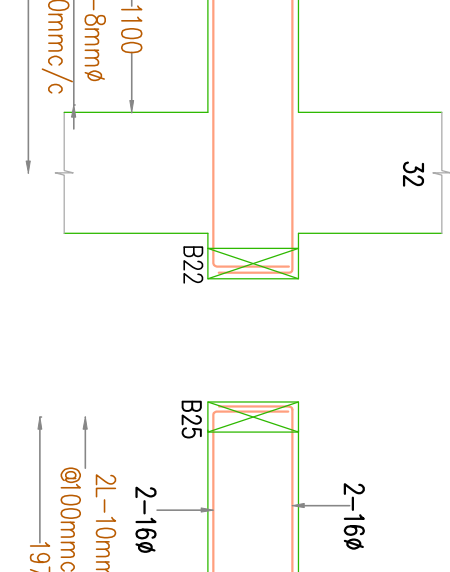
06 Beam B56 (200x600)  
S019 SCALE 1:50



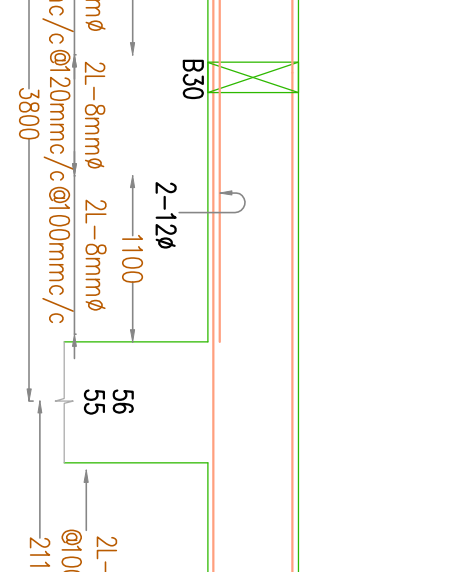
10 Beam B60 (200x600)  
S019 SCALE 1:50



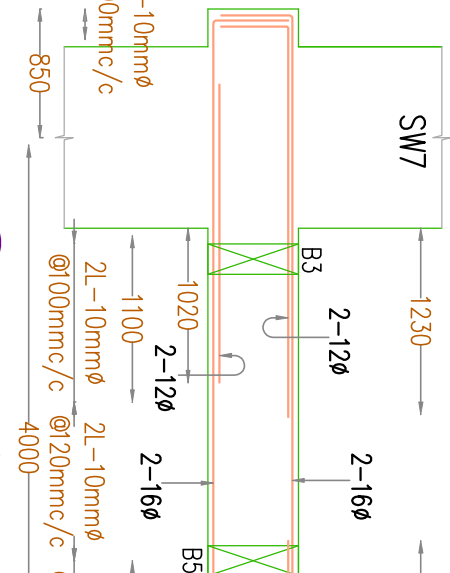
11 Beam B61 (200x600)  
S019 SCALE 1:50



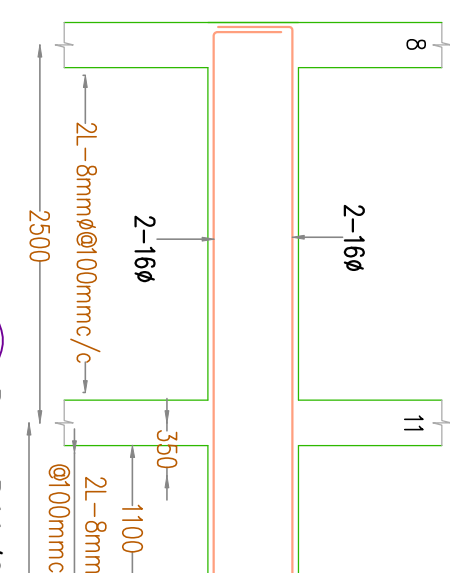
12 Beam B63 (200x600)  
S019 SCALE 1:50



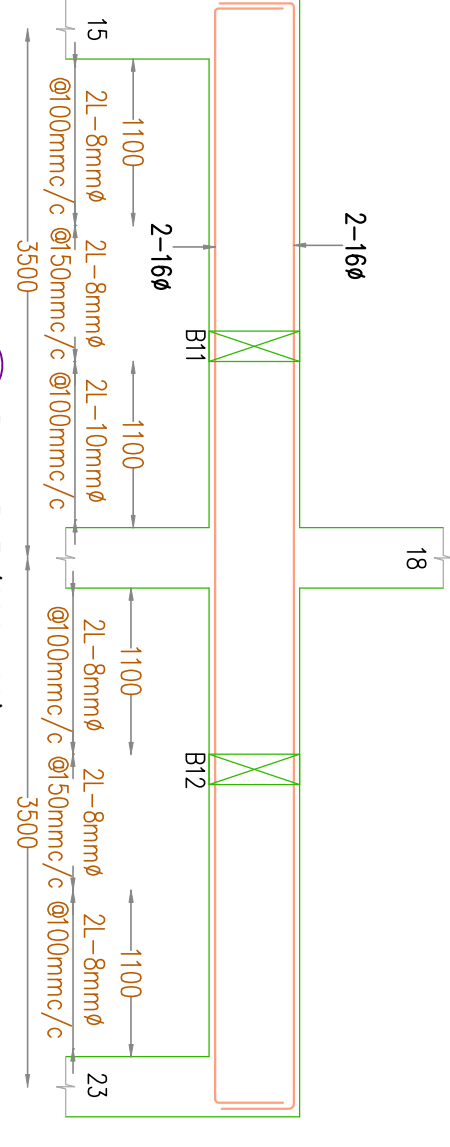
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S019 SCALE 1:50



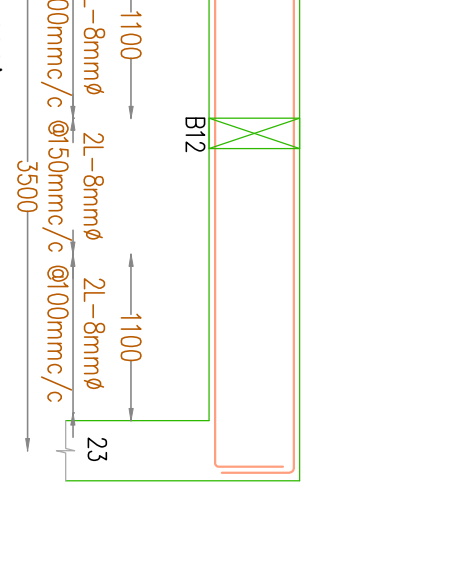
14 Beam B65 (200x600)  
S019 SCALE 1:50



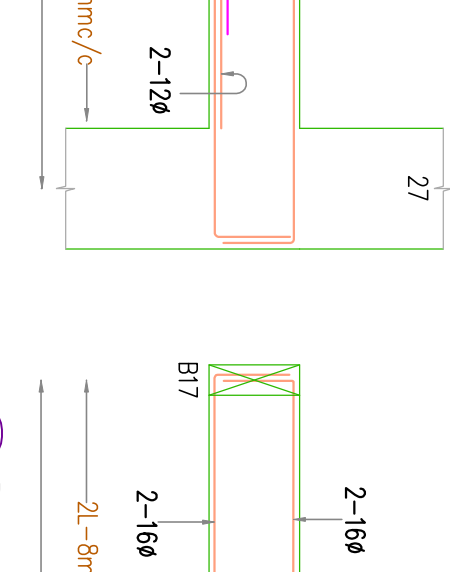
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S019 SCALE 1:50



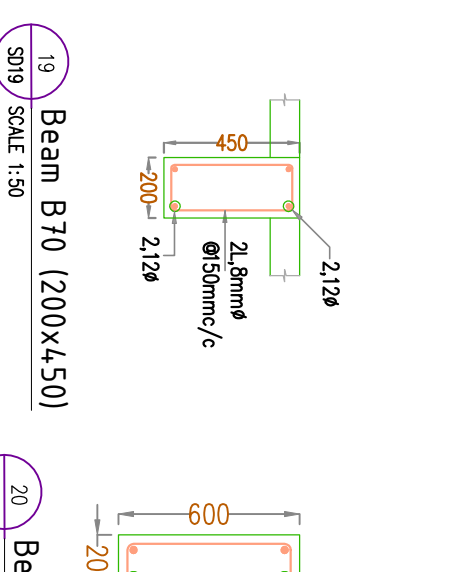
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S019 SCALE 1:50



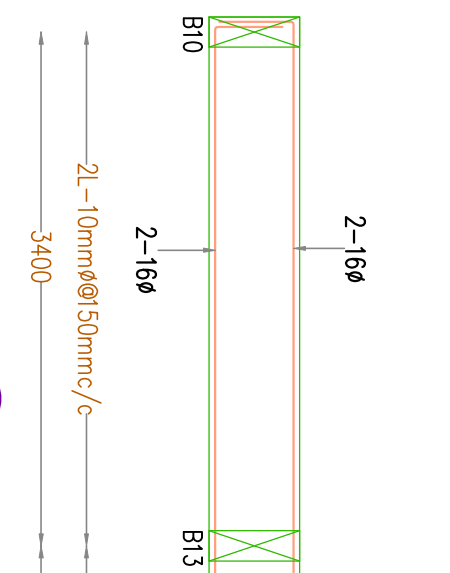
17 Beam B68 (200x600)  
S019 SCALE 1:50



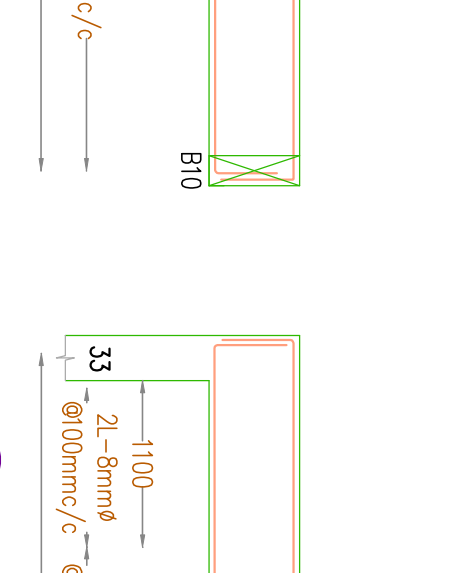
18 Beam B69 (200x600)  
S019 SCALE 1:50



19 Beam B70 (200x450)  
S019 SCALE 1:50



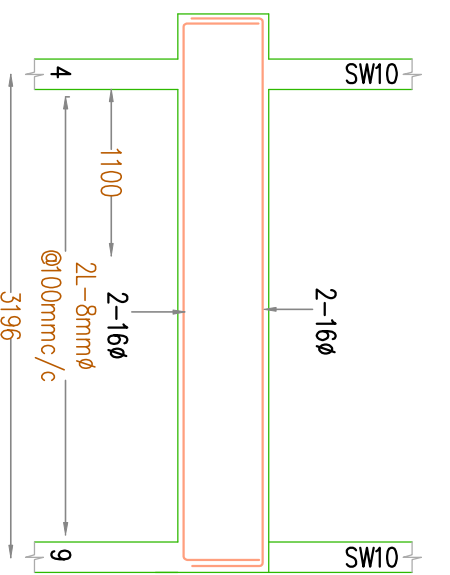
20 Beam B71 (200x600)  
S019 SCALE 1:50



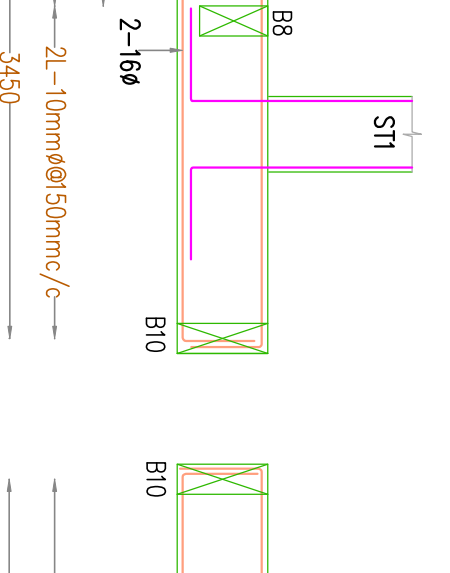
21 Beam B72 (200x600)  
S019 SCALE 1:50



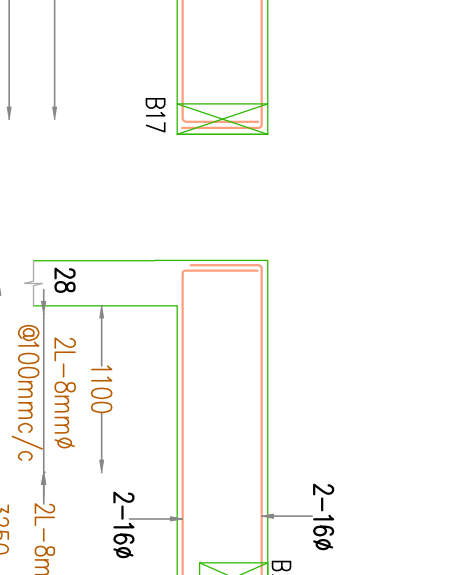
22 Beam B73 (200x600)  
S019 SCALE 1:50



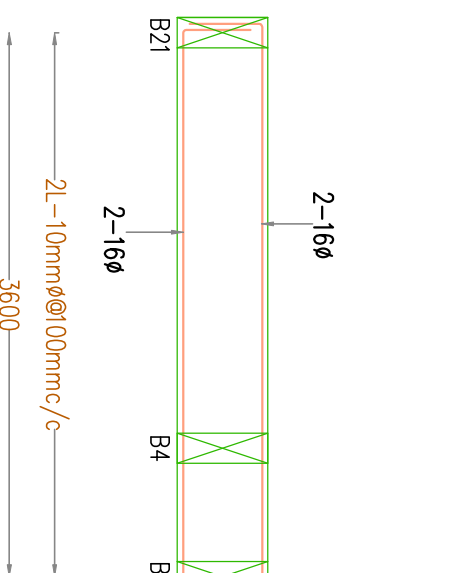
23 Beam B74 (200x600)  
S019 SCALE 1:50



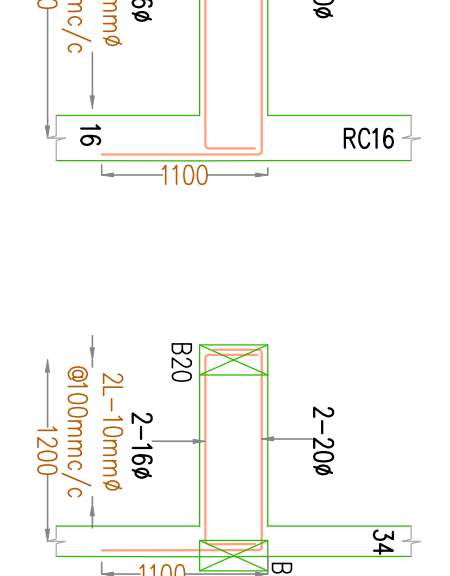
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S019 SCALE 1:50



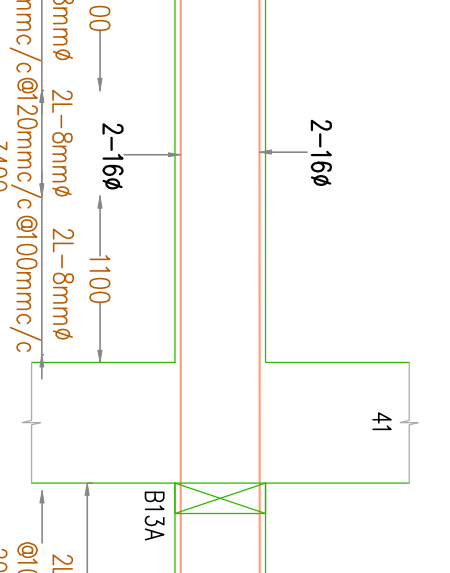
25 Beam B76 (200x600)  
S019 SCALE 1:50



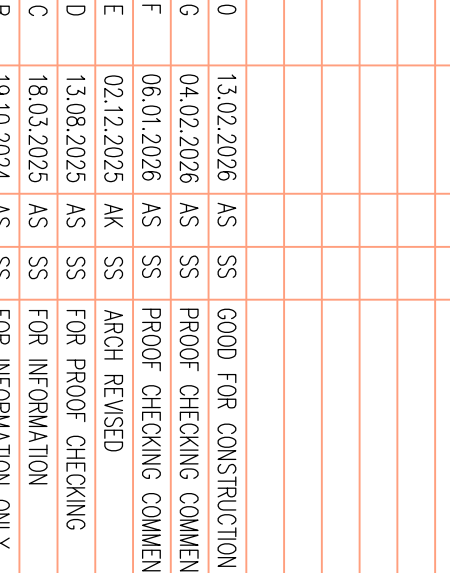
26 Beam B77 (200x600)  
S019 SCALE 1:50



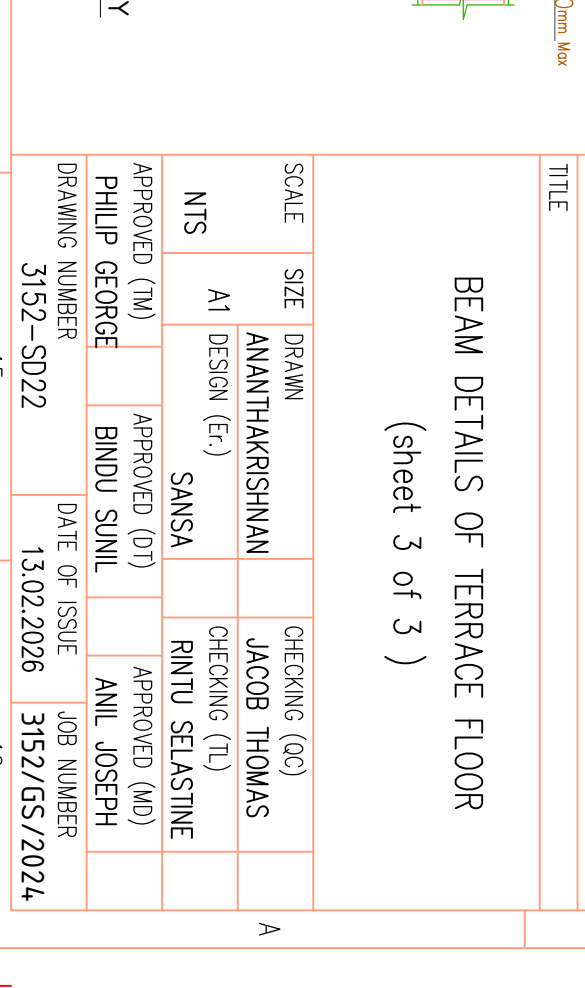
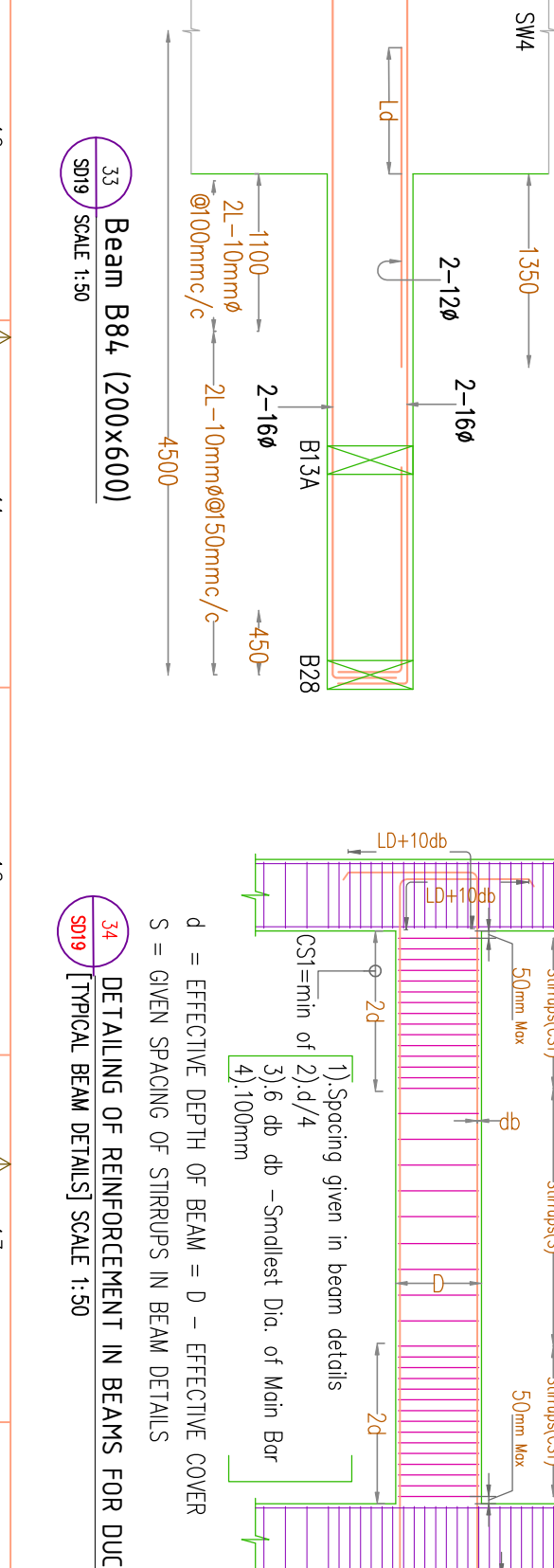
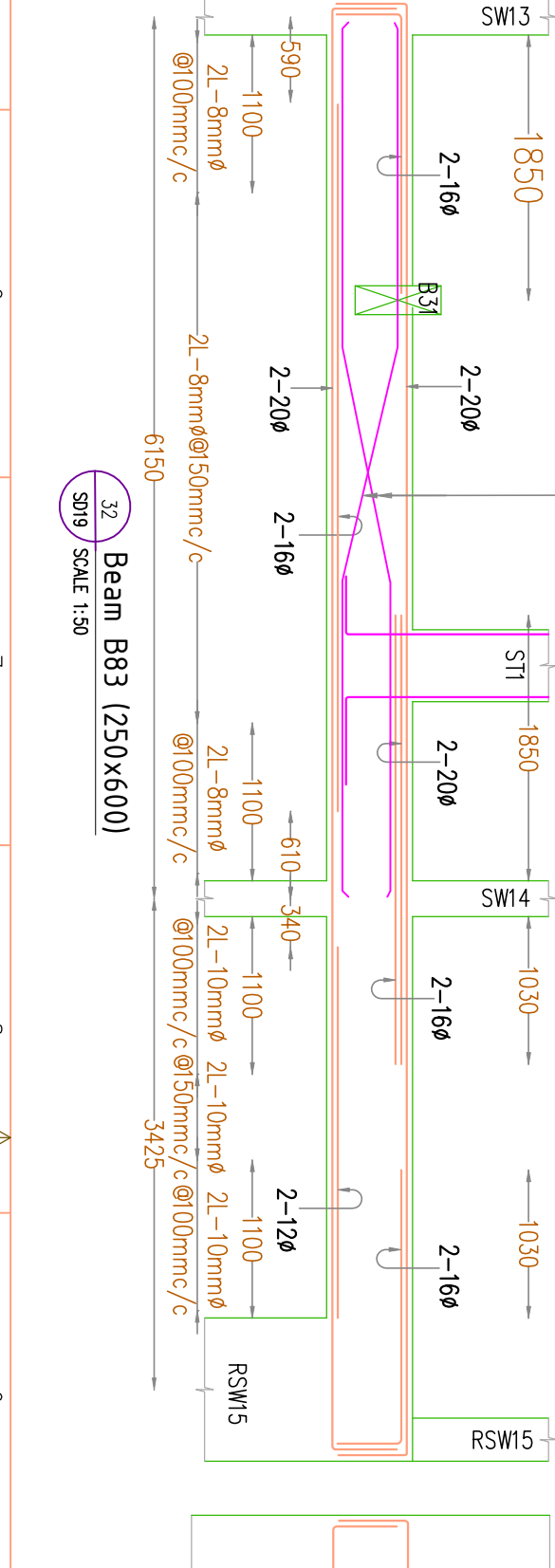
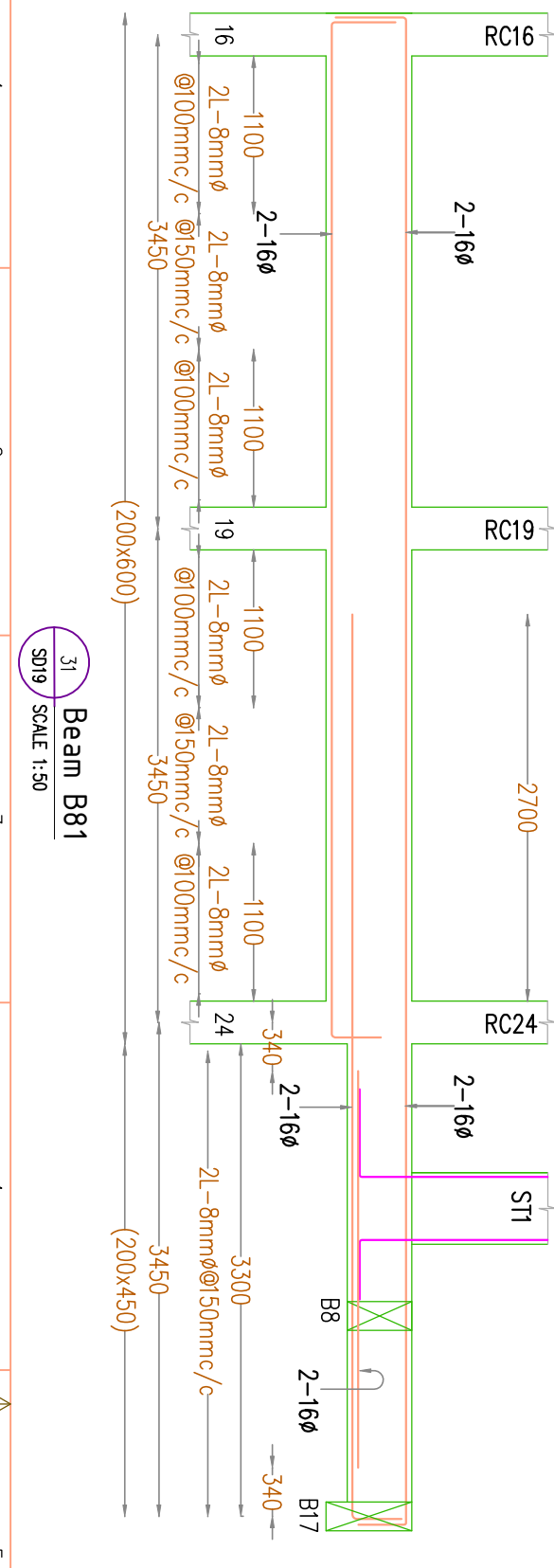
27 Beam B78 (200x600)  
S019 SCALE 1:50



28 Beam B80 (200x450)  
S019 SCALE 1:50



29 Beam B82 (200x600)  
S019 SCALE 1:50



33 Beam B84 (200x600)  
S019 SCALE 1:50



34 Beam B84 (200x600)  
S019 SCALE 1:50



35 Beam B84 (200x600)  
S019 SCALE 1:50



36 Beam B84 (200x600)  
S019 SCALE 1:50



37 Beam B84 (200x600)  
S019 SCALE 1:50



38 Beam B84 (200x600)  
S019 SCALE 1:50



39 Beam B84 (200x600)  
S019 SCALE 1:50



40 Beam B84 (200x600)  
S019 SCALE 1:50



41 Beam B84 (200x600)  
S019 SCALE 1:50



42 Beam B84 (200x600)  
S019 SCALE 1:50



43 Beam B84 (200x600)  
S019 SCALE 1:50



44 Beam B84 (200x600)  
S019 SCALE 1:50



45 Beam B84 (200x600)  
S019 SCALE 1:50



46 Beam B84 (200x600)  
S019 SCALE 1:50



47 Beam B84 (200x600)  
S019 SCALE 1:50



48 Beam B84 (200x600)  
S019 SCALE 1:50



49 Beam B84 (200x600)  
S019 SCALE 1:50



50 Beam B84 (200x600)  
S019 SCALE 1:50



51 Beam B84 (200x600)  
S019 SCALE 1:50



52 Beam B84 (200x600)  
S019 SCALE 1:50



53 Beam B84 (200x600)  
S019 SCALE 1:50



54 Beam B84 (200x600)  
S019 SCALE 1:50



55 Beam B84 (200x600)  
S019 SCALE 1:50



56 Beam B84 (200x600)  
S019 SCALE 1:50



57 Beam B84 (200x600)  
S019 SCALE 1:50



58 Beam B84 (200x600)  
S019 SCALE 1:50



59 Beam B84 (200x600)  
S019 SCALE 1:50



60 Beam B84 (200x600)  
S019 SCALE 1:50



61 Beam B84 (200x600)  
S019 SCALE 1:50



62 Beam B84 (200x600)  
S019 SCALE 1:50



63 Beam B84 (200x600)  
S019 SCALE 1:50



64 Beam B84 (200x600)  
S019 SCALE 1:50



65 Beam B84 (200x600)  
S019 SCALE 1:50



66 Beam B84 (200x600)  
S019 SCALE 1:50



67 Beam B84 (200x600)  
S019 SCALE 1:50



68 Beam B84 (200x600)  
S019 SCALE 1:50



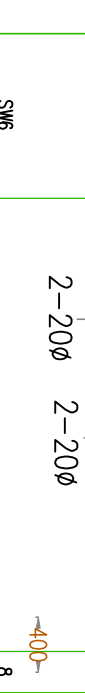
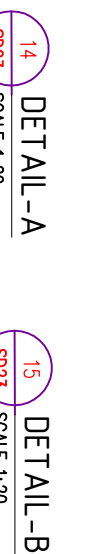
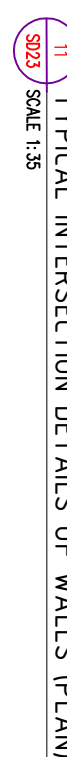
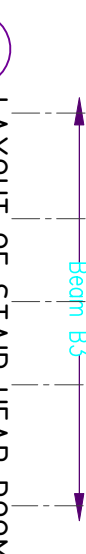
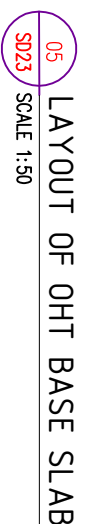
69 Beam B84 (200x600)  
S019 SCALE 1:50



70 Beam B84 (200x600)  
S019 SCALE 1:50

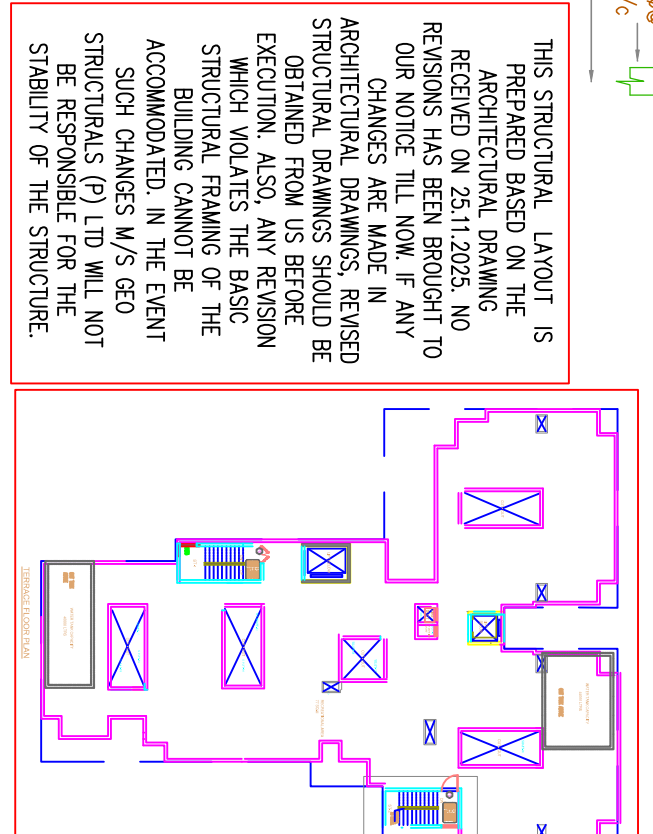
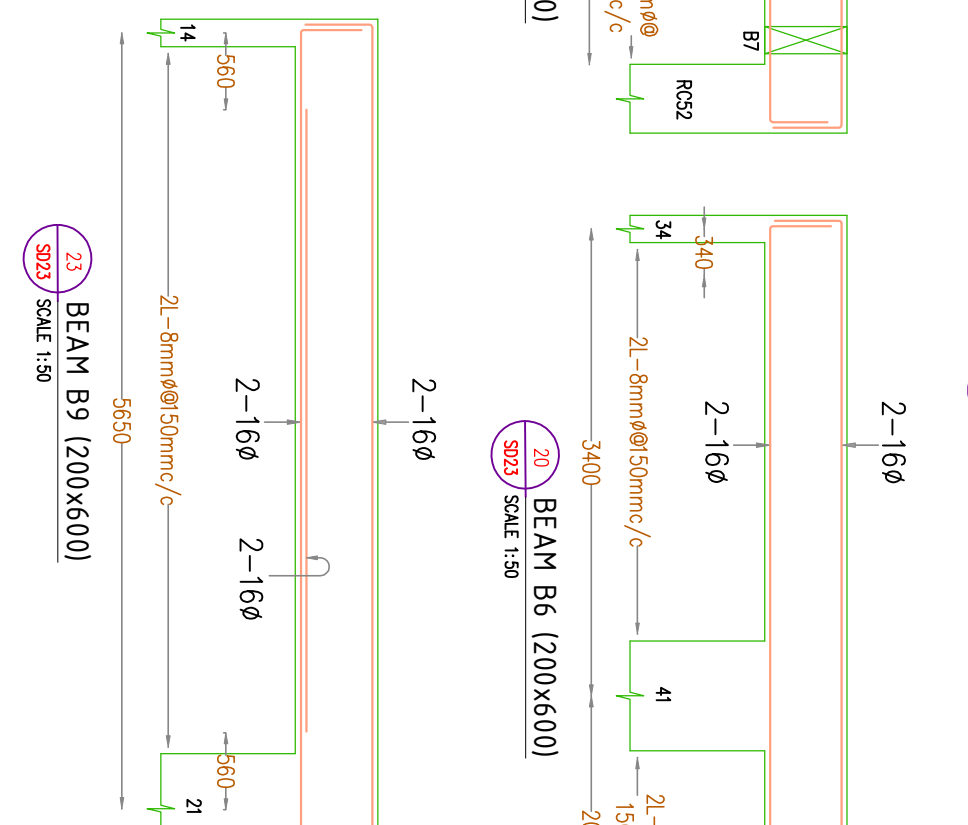
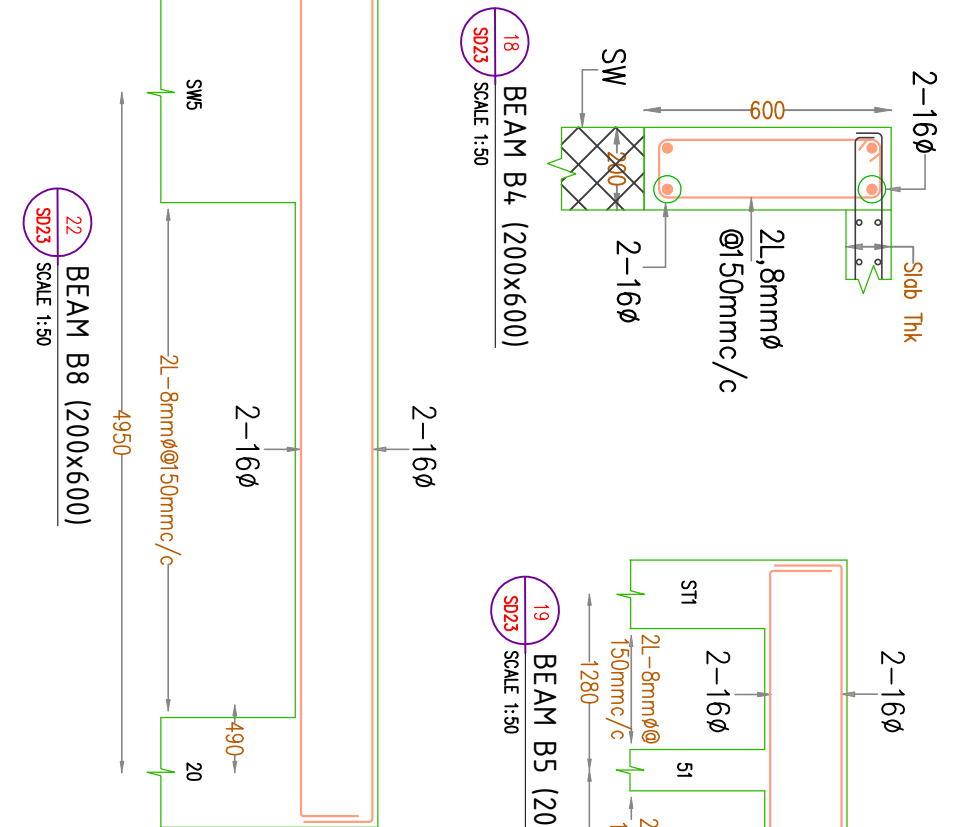
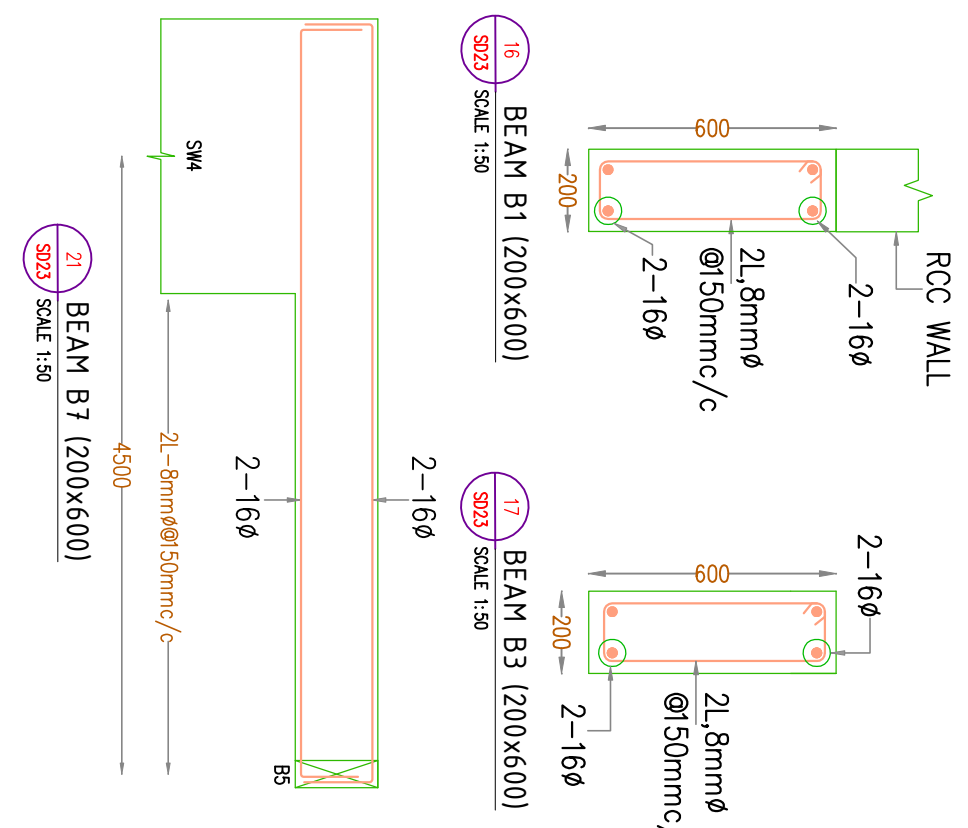
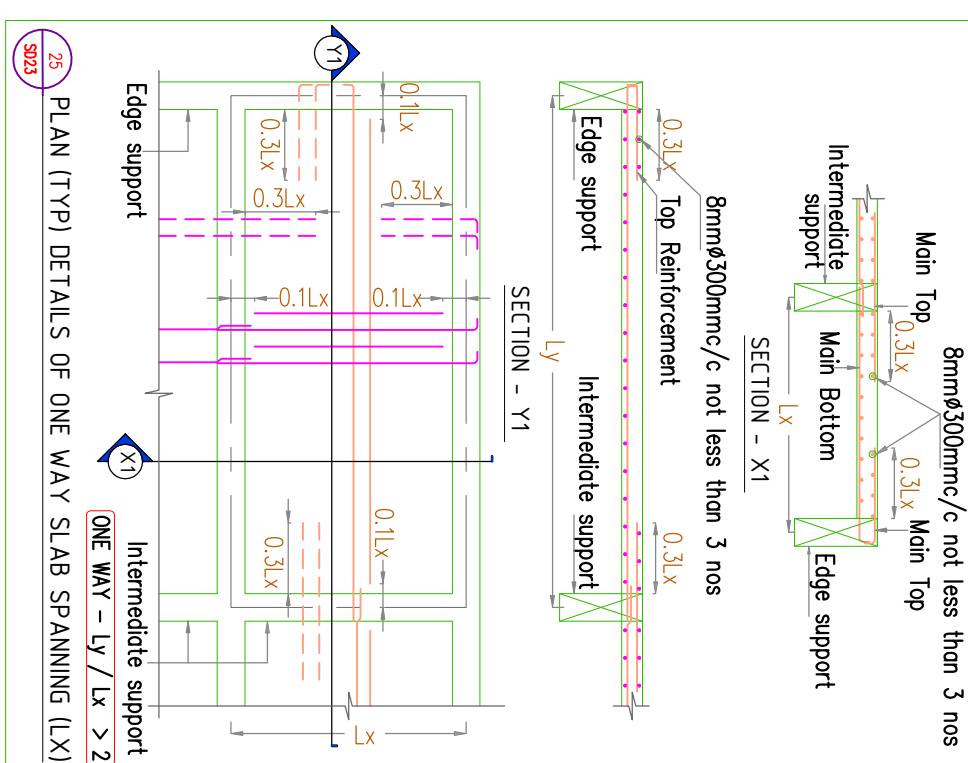
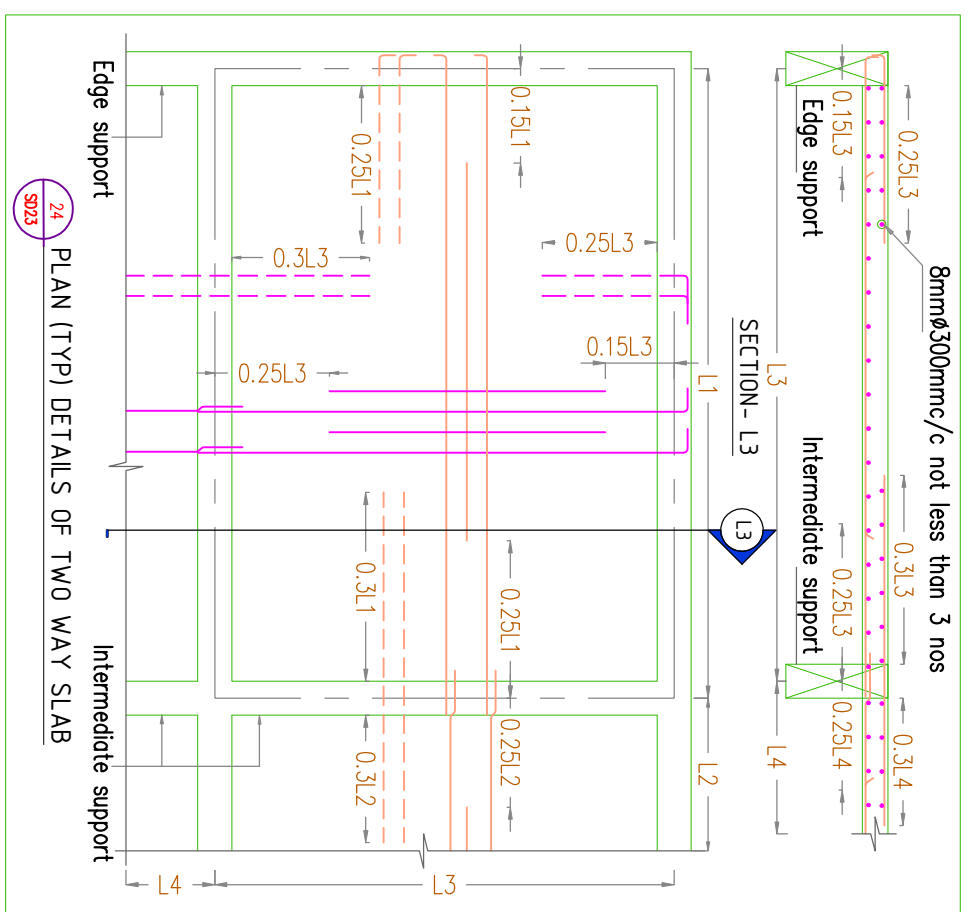






SCHEDULE OF SLAB					
REINFORCEMENT ALONG SHORT SPAN		REINFORCEMENT ALONG LONG SPAN			
Type	Thick	Top	Bottom	Top	Bottom
S1	125	8mm@150mm/c	8mm@150mm/c	8mm@180mm/c	8mm@180mm/c
S2	125	8mm@150mm/c	8mm@150mm/c	8mm@180mm/c	8mm@180mm/c
S3	200	12mm@150mm/c	12mm@150mm/c	12mm@150mm/c	12mm@150mm/c
		Throughput	Throughput	Throughput	Throughput

PROVIDE WATER PROOFING TREATMENT USING APPROVED MATERIALS TO PREVENT WATER LEAKAG



PRODUCT	REV.	NO.	DATE	BY	CHK	DESCRIPTION	APP.
C	0	13.02.2026	AS	SA		GOOD FOR CONSTRUCTION	BS
	0	02.02.2026	AS	SA		PROOF CHECKING COMMENTS	RS
	F	06.01.2026	AS	SA		PROOF CHECKING COMMENTS	RS
	E	02.12.2025	AS	SA		ARCH REVISD	RS
	E	13.08.2025	AS	SA		FOR PROOF CHECKING	RS
	C	18.03.2025	AN	AS		FOR INFORMATION ONLY	RS
	B	19.10.2024	AN	AS		FOR INFORMATION ONLY	RS
A		28.09.2024	AN	AS		INTERNAL REVIEW	RS

CSL EMPLOYERS QUARTER  
KOCHUKADAVANTRA

## LAYOUT AND DETAILS OF LMR, OHT, STAIR HEAD ROOM BEAMS AND SLABS

SCALE	SIZE	DRAIN	CHECKING (CJ)
MTS	ANANTHAKRISHNAN	JACOB THOMAS	
A1	DESIGN (E+)	RINTU SELASINE	CHECKING (CJ)
	RAHUL		
APPROVED (TA)	APPROVED (OT)	APPROVED (MD)	
PHILIP GEORGE	BRINDU SONIL	ANIL JOSEPH	
DRAINING NUMBER	DATE OF ISSUE	JOB NUMBER	
3152-SD23	13/02/2026	3152/65/2024	




GOOD FOR CONSTRUCTION

ALL BEAMS ARE OF SIZE 200x600  
UNLESS OTHERWISE SPECIFIED.

1. This drawing should be read along with our general Notes. Notes in this drawing, Architectural Drawings & Specifications.
2. All dimensions should be checked by the architect and any discrepancy found should be brought to our notice before execution.
3. All dimensions are in mm unless otherwise specified and levels are in centimeters.
4. Dimensions shall not be measured directly from this drawing, follow only written dimensions.
5. Do not duplicate any part of this drawing without our written permission.
6. Clear cover to reinforcement a) Beam – 30mm  
b) Slab – 25mm, c) Rcc wall – 40mm,  
d) OH Base slab – 25mm.
7. Grade of concrete & steel shall be M30 & Fe500 respectively.
8. Lap length is 55 d and not more than half the bars shall be spliced at one section, Where 'd' is the Diameter of bar
9. Building is designed for G + 11 Floors Only.

FOR EXECUTION PURPOSE FOLLOW ONLY THE DRAWINGS  
APPROVED & SIGNED BY THE STRUCTURAL CONSULTANT.  
All revisions starting with alphabet A,B,C,...are only for  
approval, information. Revision with numerical 1,2,3,...are  
issued as Good For Construction(GFC).

## REFERENCE DRAWING

	SHEAR WALL
	RCC WALL
	CURTAINED COLUMN

COCHIN SHIPYARD LIMITED

ARCHITECT

**TECHNICALITYA CONSULTANTS PVT. LTD.**  
#25/41, VASANTHA, ADEENI, M.C. NAGAR, CHENNAI-60.  
PH: 044-24933278, 24933287 FAX: 044-24937341  
Email - [adm@technicaliya.com](mailto:adm@technicaliya.com)

**GEO**  
GEO STRUCTURALS (P) Ltd  
GEO TECHNICAL & STRUCTURAL CONSULTANTS  
Pullepadu, Cochin-18  
Phone: 2367824, 2368327, Fax :2371643  
E-mail: geosstructurals@gmail.com



NOTES

- This drawing should be read along with our general Notes. Notes in this drawing, Architectural Drawings & Specifications.
- All dimensions should be checked by the architect and any discrepancy found should be brought to our notice before execution.
- All dimensions are in mm unless otherwise specified and levels are in meters.
- Dimensions shall not be measured directly from this drawing, follow only written dimensions.
- Do not duplicate any part of this drawing without our written permission.
- Clear cover to reinforcement a) Base Slab- 30mm b.) Grade beam-30mm c) Rec wall-40mm.
- Grade of concrete & steel shall be M30 & F65000 respectively.
- Top length is 55 d and not more than half the bars shall be spliced at the section, Where 'd' is the Diameter of bar

GOOD FOR CONSTRUCTION

FOR EXECUTION PURPOSE FOLLOW ONLY THE DRAWINGS APPROVED & SIGNED BY THE STRUCTURAL CONSULTANT. All revisions starting with alphebet A,B,C...are only for approval, information. Revision with numerical 1,2,3...are issued as Good For Construction(GFC).

REFERENCE DRAWING

- LEGEND
- COLUMN
  - RCC WALL/SHEARWALL
  - BRICK WORK
  - (-3.75m) PILE CAP AT PUMP ROOM LEVEL.

COCHIN SHIPYARD LIMITED

ARCHITECT

TECHNICALVA CONSULTANTS PVT. LTD.  
#29/41,VASANTHA MENUE,MAR C NAGAR,CHENNAI-28.  
PH: 044-24933278, 24933287 FAX: 044-24937341  
Email - adm@technicalva.com

STRUCTURAL CONSULTANT

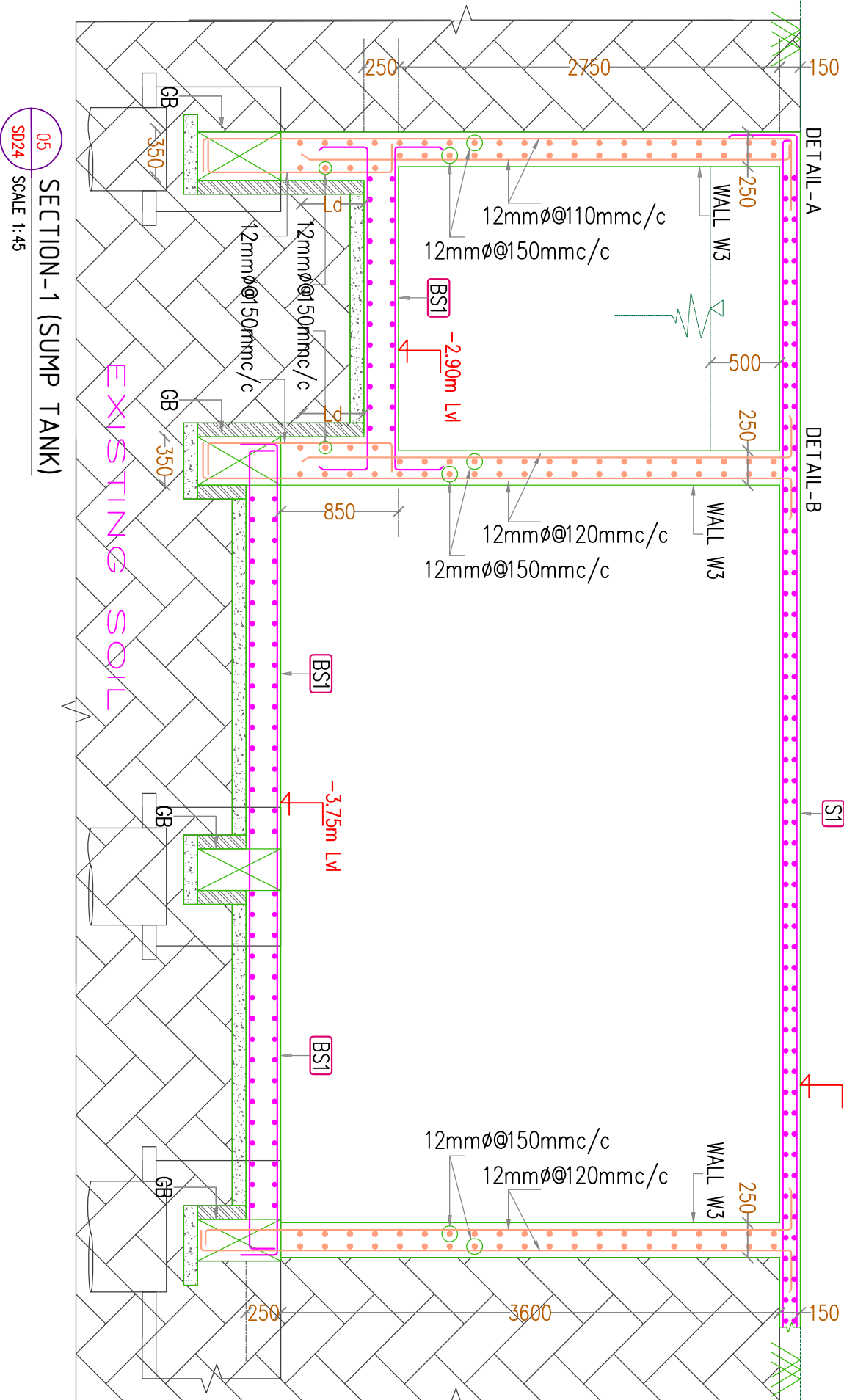
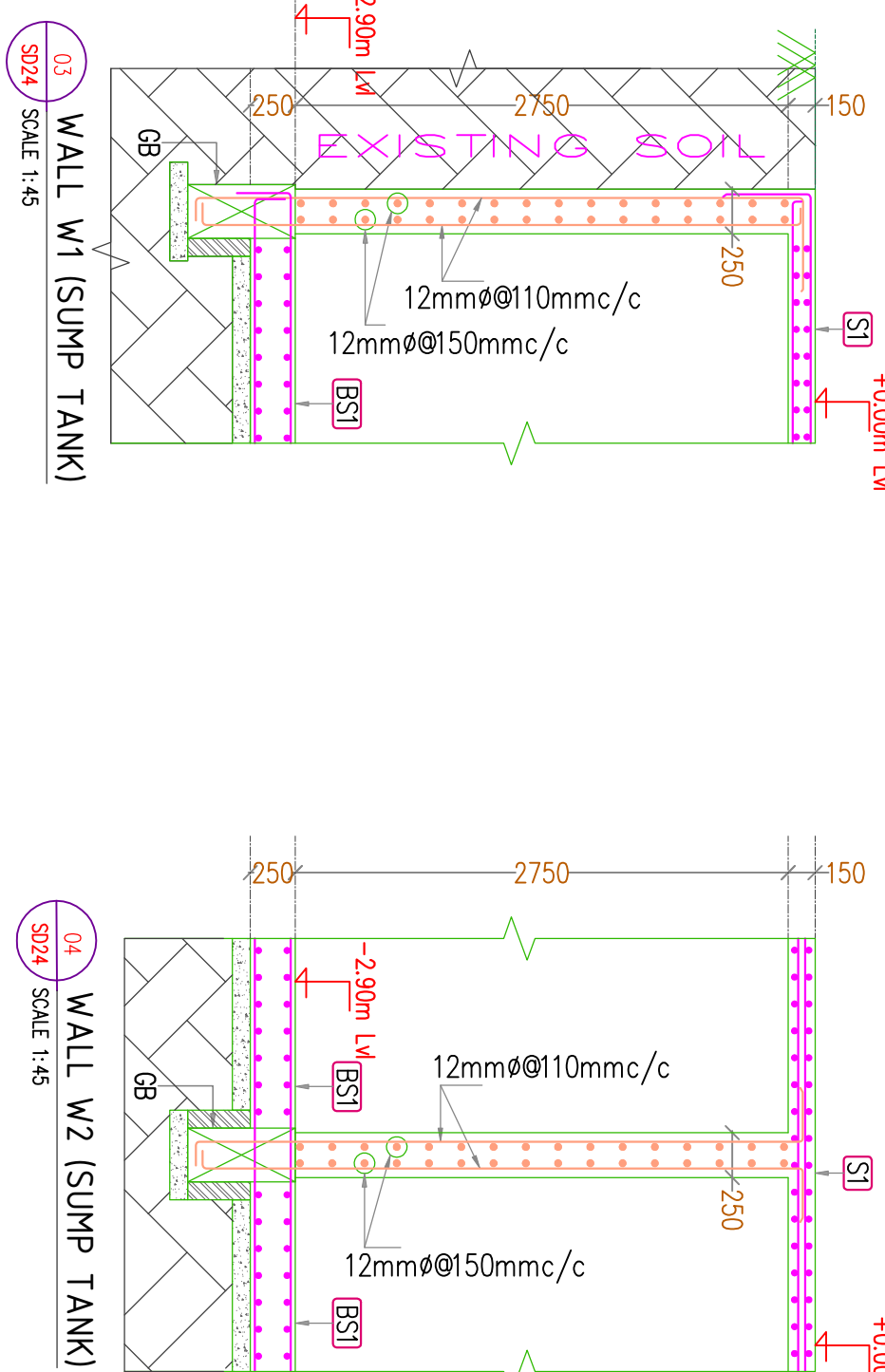
GEO STRUCTURALS (P) LTD  
GEO TECHNICAL & STRUCTURAL CONSULTANTS  
Pullepady, Cochin-18  
Phone: 2656824, 2668221, Fax :237643  
E-mail: geostructurals@gmail.com

REV	NO.	DATE	BY	CHK	DESCRIPTION	APP
0	13.02.2026	AS	SA		GOOD FOR CONSTRUCTION	BS
B	02.02.2026	AS	SA		PROOF CHECKING COMMENTS	RS
A	02.02.2026	AS	SA		INTERNAL REVIEW	RS
Rev No.	DATE	BY	CHK	DESCRIPTION	APP	

CSL EMPLOYERS QUARTERS AT  
KOCHUKADAVANTRA

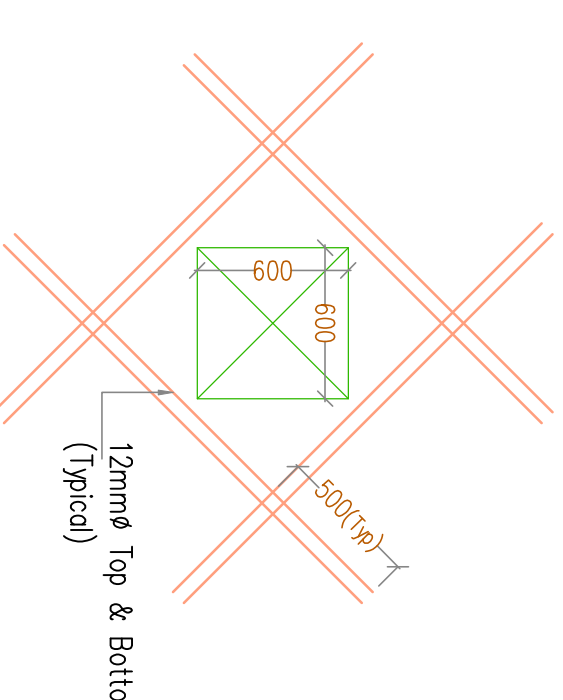
LAYOUT AND DETAILS OF SUMP TANK

SCALE	SIZE	DRAWN	CHECKING (CC)
NTS	A1	ANANTHARISHMAN	JACOB THOMAS
APPROVED (IN)	DESIGN (E)	SAVISA	CHECKING (TL)
APPROVED (OUT)	APPROVED (OT)	PHILIP GEORGE	APPROVED (NO)
DRAWING NUMBER	3152-3024	DATE OF ISSUE	13.02.2026
3152-3024	3152/03/2024	SDB NUMBER	



TYPICAL CORNER DETAILS OF WALLS (PLAN)

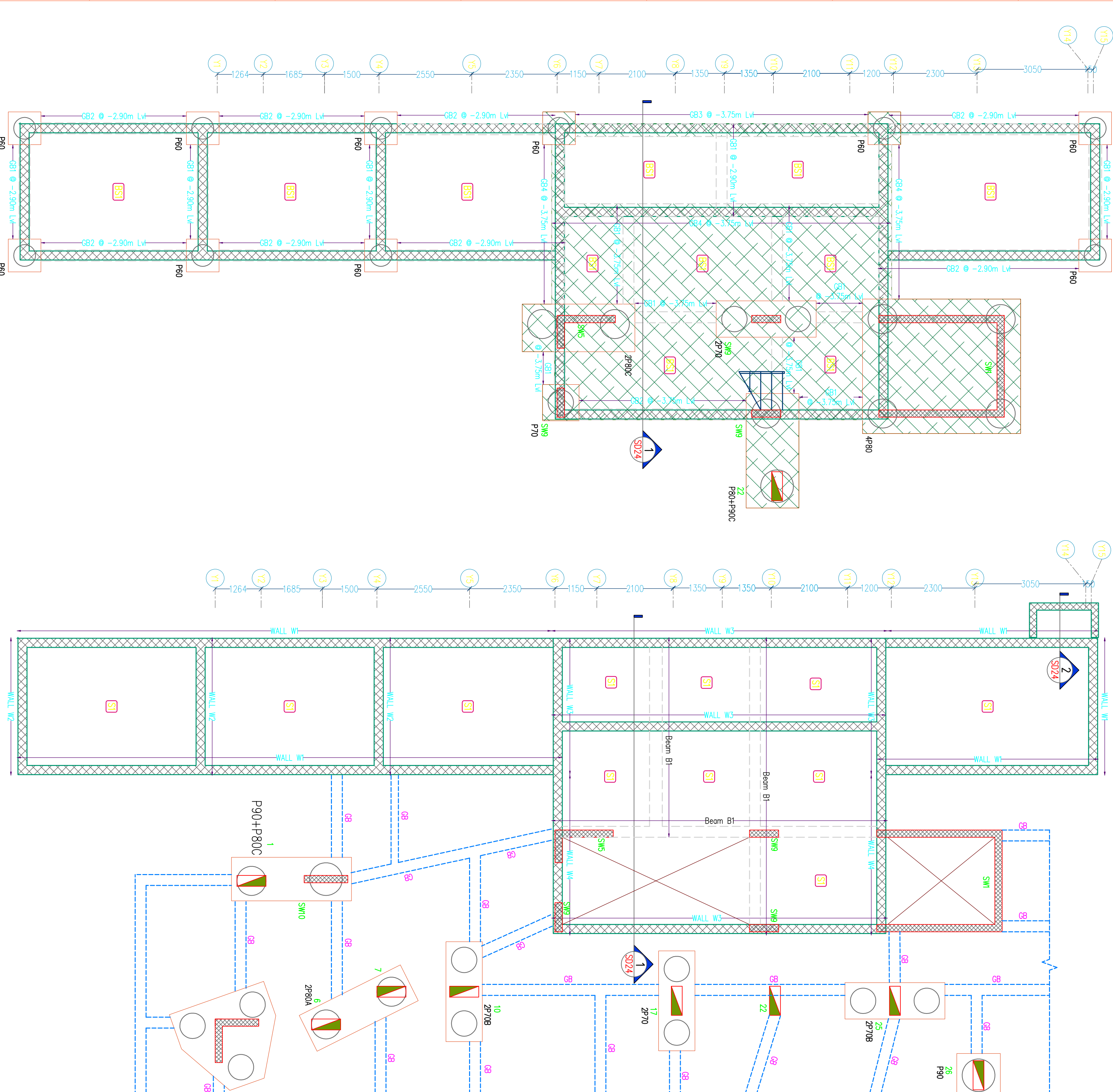
TYPICAL INTERSECTION DETAILS OF WALLS (PLAN)



TYPICAL DETAILS OF MANHOLE

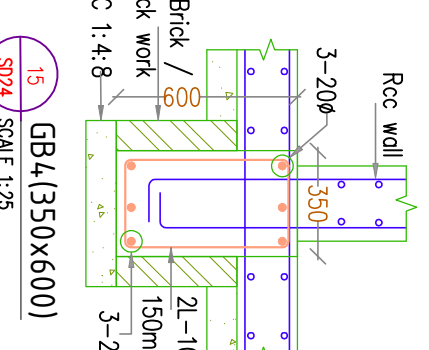
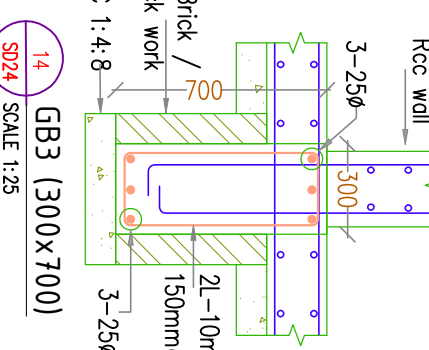
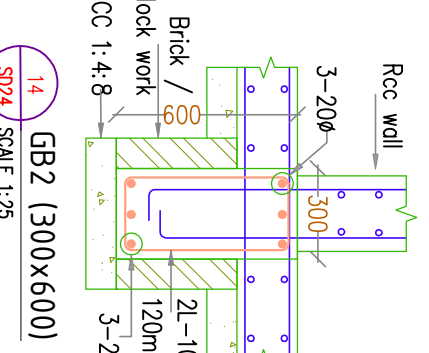
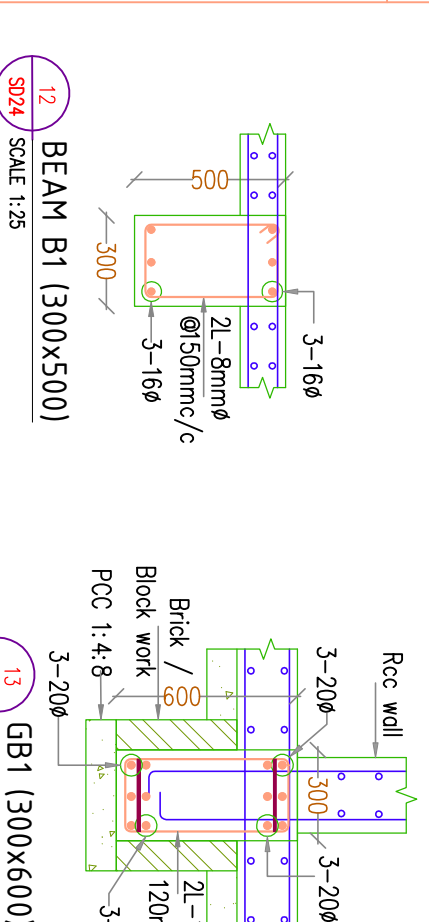
SCHEDULE OF SLAB			
SLAB TYPE	THICK	REINFORCEMENT ALONG SHORT SPAN	REINFORCEMENT ALONG LONG SPAN
SI	150	10mm@50mm/c	10mm@80mm/c
BS1	250	12mm@40mm/c	12mm@40mm/c

PROVIDE WATER PROOFING TREATMENT USING APPROVED MATERIALS TO PREVENT WATER LEAKAGE



LAYOUT OF SUMP TANK BASE SLAB

LAYOUT OF SUMP TANK COVER SLAB



THIS STRUCTURAL LAYOUT IS PREPARED BASED ON THE ARCHITECTURAL DRAWING RECEIVED ON 06/07/2024. NO REVISIONS HAS BEEN BROUGHT TO OUR NOTICE TILL NOW. DRAWINGS SHOULD BE OBTAINED FROM US BEFORE EXECUTION. ALSO, ANY REVISION WHICH VIOLATES THE BASIC STRUCTURAL FRAME OF THE BUILDING CANNOT BE ACCOMMODATED. IN THE EVENT SUCH CHANGES W/S GEO STRUCTURALS (P) LTD WILL NOT BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE.







NOTES

1. This drawing should be read along with our general Notes, Notes in this drawing, Architectural Drawings & Specifications.
2. All dimensions shall be verified at the site by the contractor.
3. All dimensions are in mm unless otherwise specified and levels are in meters.
4. Dimensions shall not be measured directly from this drawing, follow only written dimensions.
5. Do not duplicate any part of this drawing without our written permission.
6. In order to avoid internal corrosion the ends of all hollow closed sections should be sealed with 4 mm plate.
7. Welding shall conform to IS:816-1969.
8. All dimensions to be verified at site before fabrication.
9. All electrodes shall conform to IS :814(part-1)/1974.
10. Washers shall conform to IS:5369-1975, IS:5370-1969 or IS:5374-1973.
11. Grade of SFS section shall be Fe 310.
12. Grade of steel all plate shall be Fe 250.
13. All fillet weld should not be less than 8mm

GOOD FOR CONSTRUCTION

FOR EXECUTION PURPOSE FOLLOW ONLY THE DRAWINGS APPROVED & SIGNED BY THE STRUCTURAL CONSULTANT. All revisions starting with alphabet A,B,C...are only for approval, information. Revision with numerical 1,2,3...are issued as Good For Construction(GFC).

REFERENCE DRAWING

LEGEND

- ROCC COLUMN
- SHEAR WALL
- STRUT CURTIALS AT TRUSS ROOF LEVEL
- COLUMN CURTIALS AT TRUSS ROOF LEVEL

CLIENT

COCHIN SHIPYARD LIMITED

ARCHITECT

TECHNICALVA CONSULTANTS PVT. LTD.  
#25/41 VASANTHA AVENUE M.C. NAGAR, CHENNAI - 28.  
Phone: 2561824, 25683271 Fax: 2376434  
E-mail: admin@technicalva.com

STRUCTURAL CONSULTANT

GEO STRUCTURALS (P) LTD  
GEO TECHNICAL & STRUCTURAL CONSULTANTS  
Pullepady, Cochin-18  
Phone: 2561824, 25683271 Fax: 2376434  
E-mail: geostructurals@gmail.com

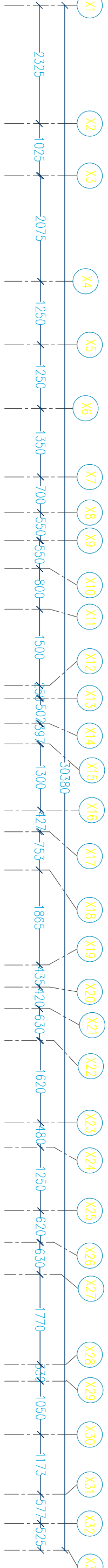
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F	06.02.2026	AS	SS	PROOF CHECKING	RS
E	02.12.2025	AS	SS	ARCH REVISED	RS
D	13.08.2025	AS	SS	FOR PROOF CHECKING	RS
C	18.03.2025	AS	SS	FOR INFORMATION	RS
B	14.11.2024	AS	RSR	FOR INFORMATION ONLY	RS
A	14.11.2024	AS	RSR	INTERNAL REVIEW	RS
REV. NO.	DATE	AS	RSR	DESCRIPTION	APP
PROJECT	DATE	DRN	CHK	DESCRIPTION	APP

CSL EMPLOYERS QUARTERS AT  
KOCHUKADAVANTRA

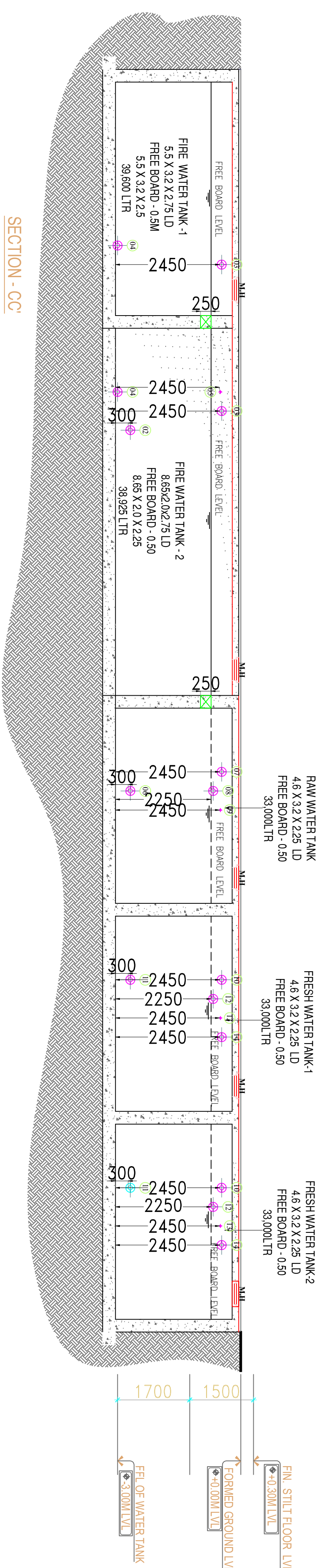
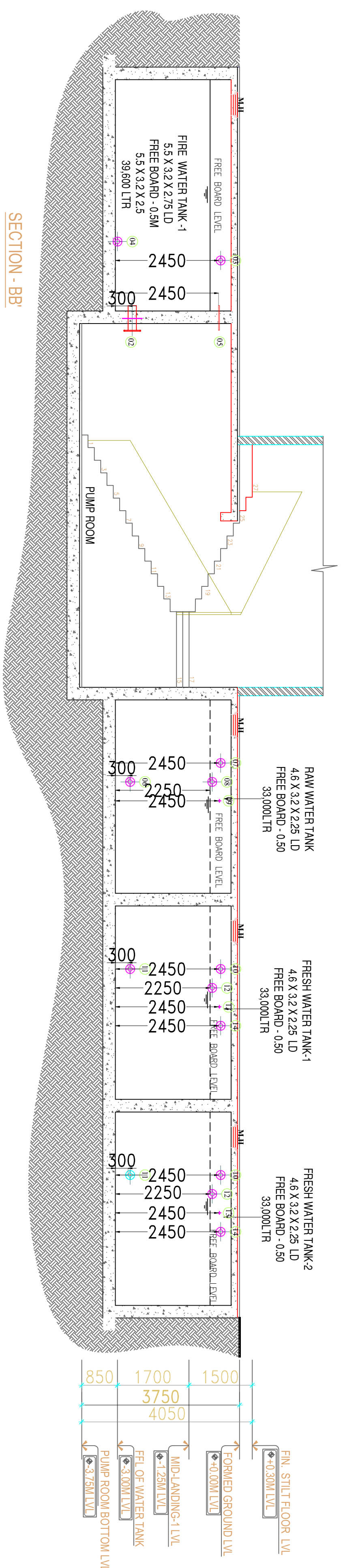
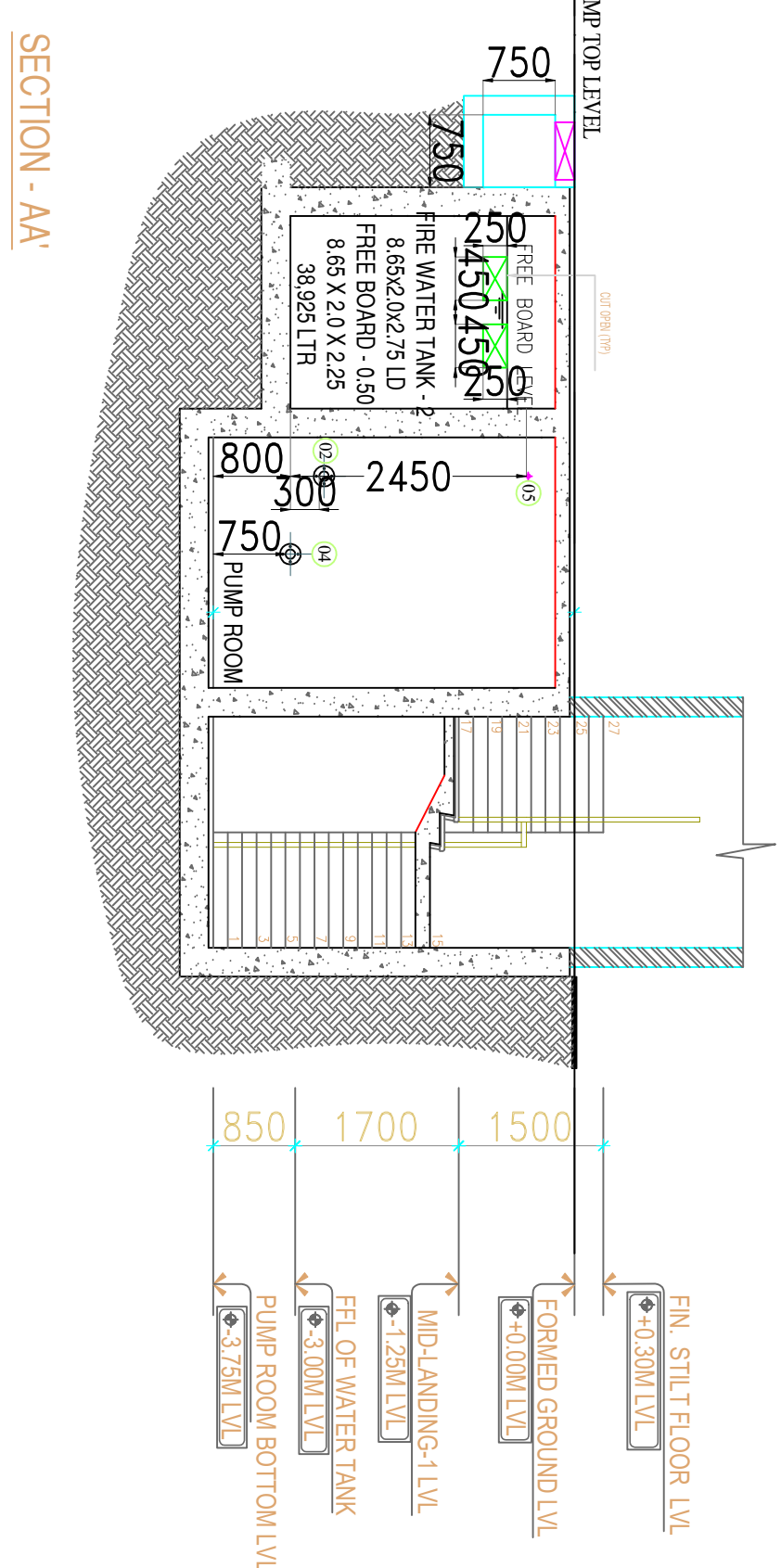
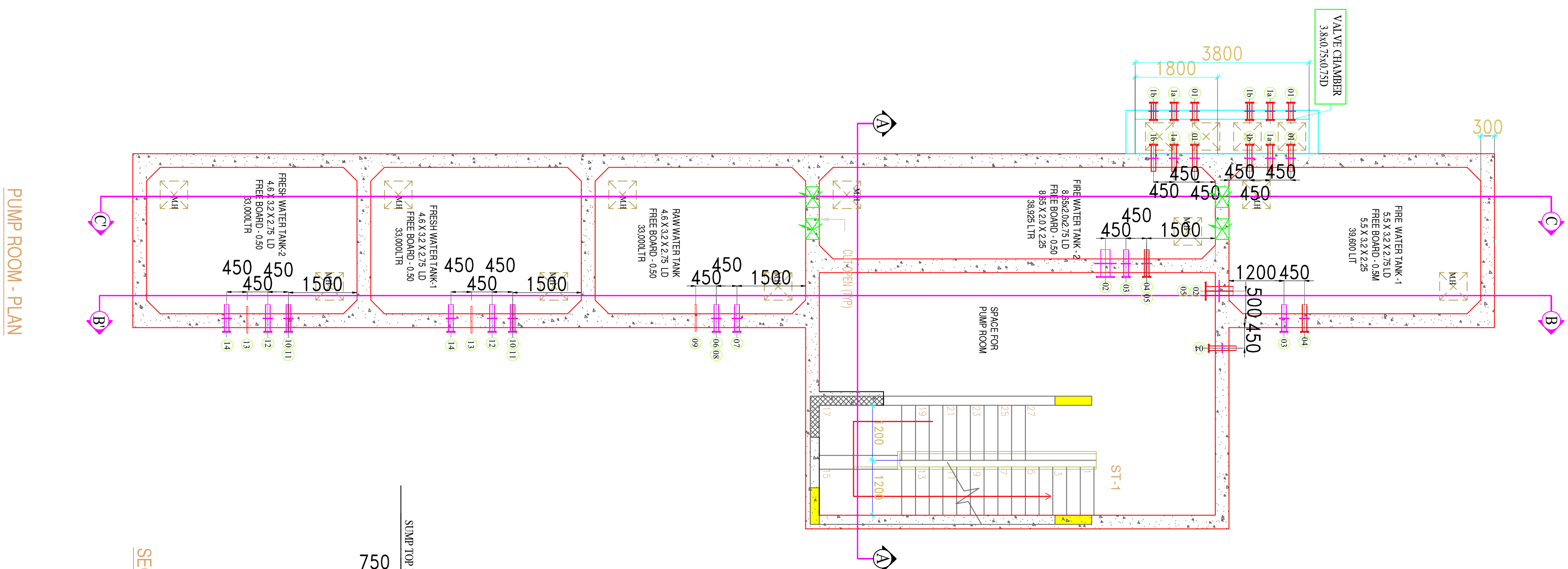
TITLE

LAYOUT OF TRUSS ROOF

SCALE	SIZE	DRAWN	CHECKING (CC)
1/15	A1	ANANTHAKRISHNAN	JACOB THOMAS
APPROVED (TV)	DESIGN (E)	ROHITH	CHENGING (TL)
APPROVED (TV)	APPROVED (D)	PHILIP GEORGE	APPROVED (UN)
DATE OF ISSUE	DATE OF ISSUE	31/02/2026	31/02/2024
DRAWING NUMBER	SHEET NUMBER	3152-S026	3152/S026







TAG NO	DIAM	LEVEL / MM	USAGE	QTY
1.	1500	2450	FIRE BRIGADE INLET	4
1a.	800	2450	BORE WELL INLET	4
1b.	1000	2450	TANKER INLET	4
2.	2000	300	FIRE PUMP SUCTION	2
3.	1000	2450	VENT	2
4.	500	0	DRAIN	3
5.	2500	2450	CONTROL WIRE	2
RAW WATER SUMP				
6.	1000	300	SUCTION	1
7.	1000	2450	VENT	1
8.	1000	2250	OVER FLOW	1
9.	250	2450	CONTROL WIRE	1
TREATED WATER SUMP - (1&2)				
10.	1000	2450	INLET	2
11.	1000	300	SUCTION	2
12.	1000	2250	OVER FLOW	2
13.	250	2450	CONTROL WIRE	2
14.	1000	2450	VENT	2
ALL DIMENSIONS ARE FROM TANK BOTTOM				
OTHER PUDDLES (FROM PUMP ROOM BOTTOM)				
15.	1500	3600	HYDRANT OUTLET	2
16.	1000	0	SPACE	3
17.	500	3800	DRAIN	2

Project Name

# PROPOSED NEW EMPLOYEES QUARTERS AT CHERIYAKADAVANTHARA, KOCHI

## Clients:

COCHIN SHIPYARD LIMITED

DRAWING TITLE

## SECTION-BB



JOB NO:

DRG NO:

REV: 00 REF. CODE

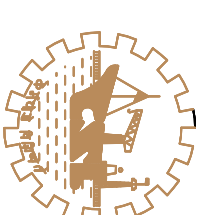
487/18

## Consultants

TECHNICALIYA CONSULTANTS PVT. LTD

Drawn:

Scale:



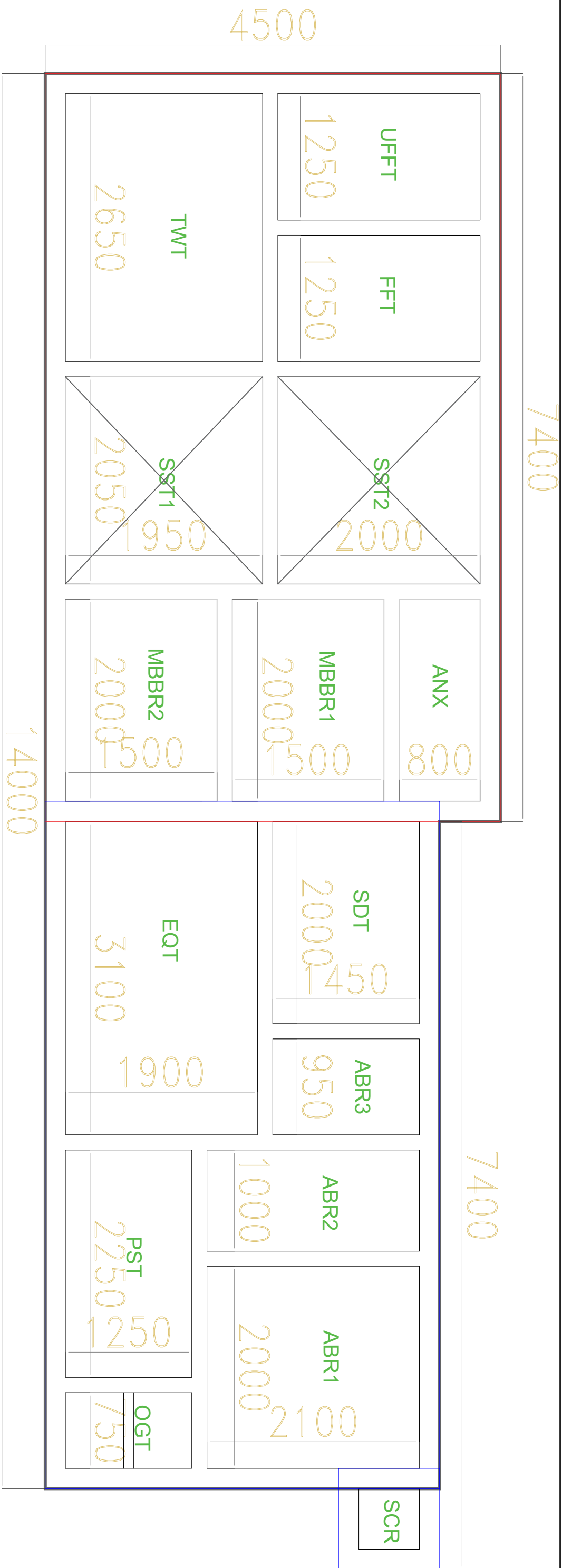
COCHIN - 682 015

AGM (CE)	SHIBU P
SM (CE)	LAKSHMAN
CHECKED	PO (CE)

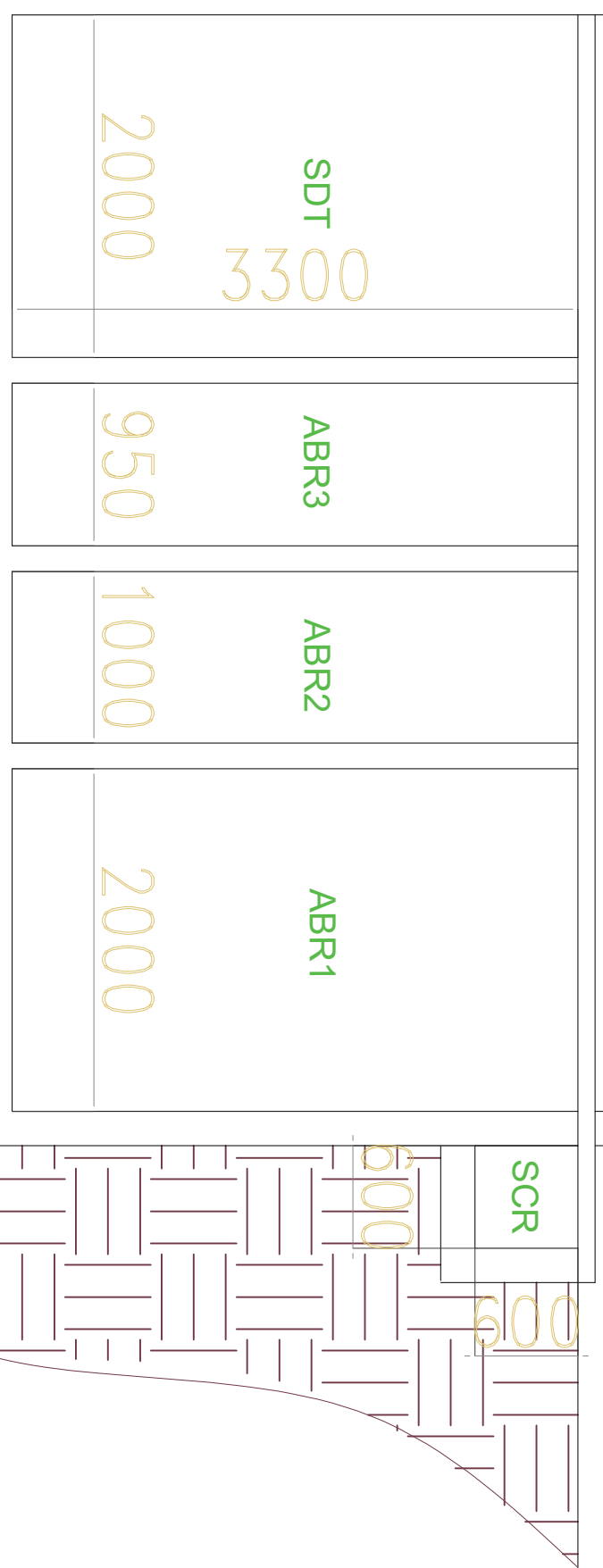
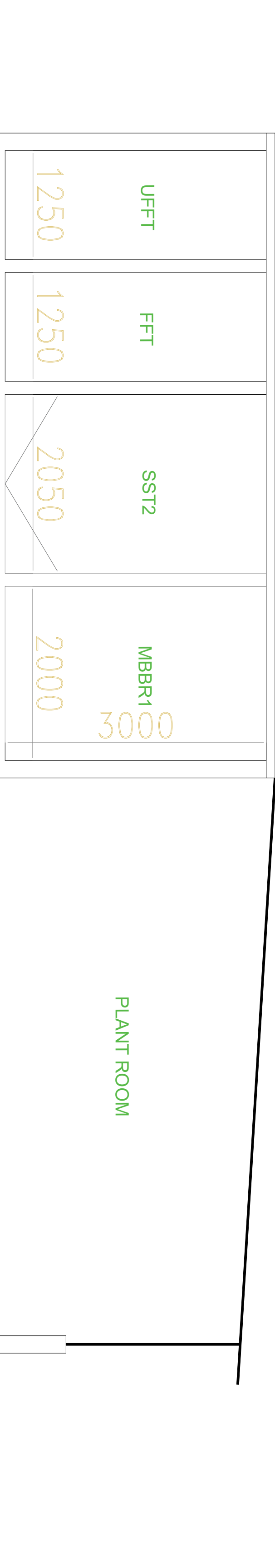
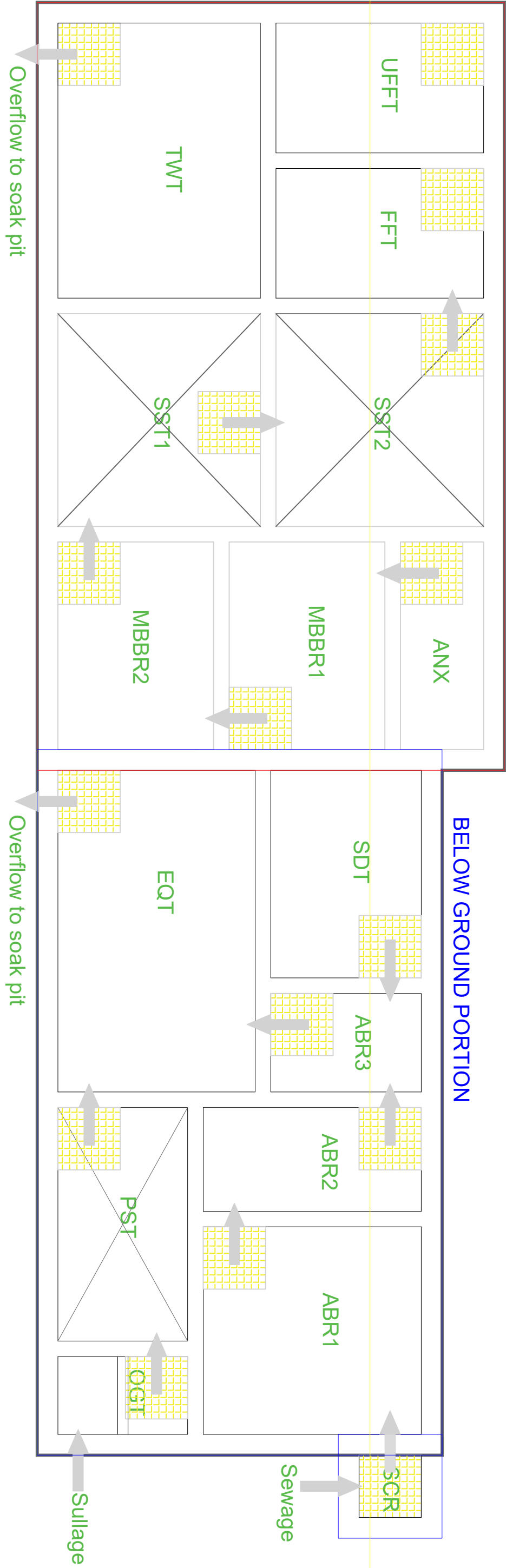
UG SUMP & PUMP ROOM  
PUDDLE DETAIL LAYOUT

DATE: 04 - 04 - 2026 DWG NO





Abbreviations	
SCR	-Screen chamber
OGT	- Oil & Grease Trap
EQT	- Equalization Tank
MBBR	- Moving Bed Bio-Reactor
SST	- Secondary Settling Tank
FFT	- Filter Feed Tank
UFFT	- Ultra-filtration feed tank
TWT	-Treated Water Tank



R5	FOR APPROVAL	PREMNATH	21.01.2026
R4	FOR APPROVAL	MANO	31.03.2025
R3	FOR APPROVAL	PREMNATH	03.02.2025
R2	FOR APPROVAL	PREMNATH	11.01.2025
R1	FOR APPROVAL	PREMNATH	29.10.2024
R0	FOR APPROVAL	PREMNATH	23.10.2024
R.NO	REVISION	BY	DATE
ARCH SOURCE AS ON-18.10.2024			
STRUCTURAL SOURCE AS ON-			

CLIENT

MEP CONSULTANT:



# 17-A, RMS APARTMENTS, III RD FLOOR,  
No.12, GOPALAKRISHNA STREET, T-NAGAR, CHENNAI-17.  
PH:044-47971153. E-mail: strassociates.mepservices@gmail.com

Consultants:

1989-2017  
YEARS

TECHNICALIYA CONSULTANTS PVT. LTD.

#25/41, VASANTHA AVENUE,M.R.C NAGAR,CHENNAI-28.  
PH: 044-24933278, 24933287 FAX: 044-24937341  
Email - admin@technicaliya.com

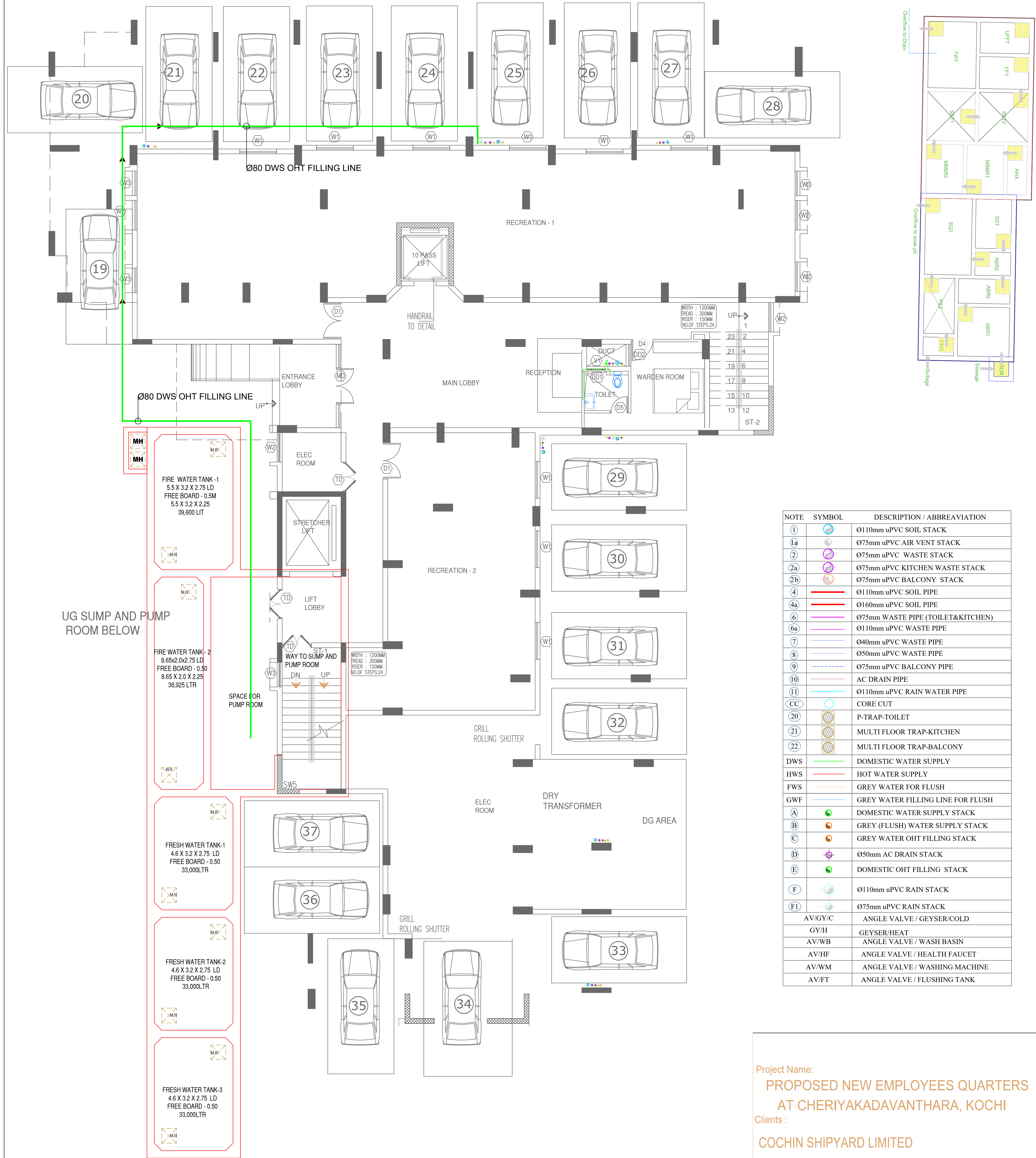
PROPOSED NEW EMPLOYEES QUARTERS  
AT CHERYAKADAVANTHARA, COCHIN

DRAWN	:	PREMNATH	SCALE	:	NTS
CHECKED	:	RAJA	DATE	:	23.10.2024
APPROVED	:	MADHU	REVISION :R0	SHEET SIZE :A2	

STP LAYOUT

DRG.NO	JOB.NO
<input type="checkbox"/> PRELIMINARY <input type="checkbox"/> TENDER <input type="checkbox"/> INFORMATION <input checked="" type="checkbox"/> APPROVAL <input type="checkbox"/> CONSTRUCTION	



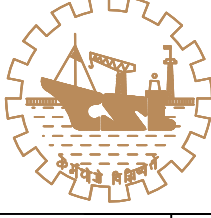


NOTE	SYMBOL	DESCRIPTION / ABBREVIATION
①		Ø110mm uPVC SOIL STACK
①a		Ø75mm uPVC AIR VENT STACK
②		Ø75mm uPVC WASTE STACK
②a		Ø75mm uPVC KITCHEN WASTE STACK
②b		Ø75mm uPVC BALCONY STACK
④		Ø110mm uPVC SOIL PIPE
④a		Ø160mm uPVC SOIL PIPE
⑥		Ø75mm WASTE PIPE (TOILET&KITCHEN)
⑥a		Ø110mm uPVC WASTE PIPE
⑦		Ø40mm uPVC WASTE PIPE
⑧		Ø50mm uPVC WASTE PIPE
⑨		Ø75mm uPVC BALCONY PIPE
⑩		AC DRAIN PIPE
⑪		Ø110mm uPVC RAIN WATER PIPE
CC		CORE CUT
⑳		P-TRAP-TOILET
㉑		MULTI FLOOR TRAP-KITCHEN
㉒		MULTI FLOOR TRAP-BALCONY
DWS		DOMESTIC WATER SUPPLY
HWS		HOT WATER SUPPLY
FWS		GREY WATER FOR FLUSH
GWF		GREY WATER FILLING LINE FOR FLUSH
A		DOMESTIC WATER SUPPLY STACK
B		GREY (FLUSH) WATER SUPPLY STACK
C		GREY WATER OHT FILLING STACK
D		Ø50mm AC DRAIN STACK
E		DOMESTIC OHT FILLING STACK
F		Ø110mm uPVC RAIN STACK
FI		Ø75mm uPVC RAIN STACK
AV/GY/C		ANGLE VALVE / GEYSER/COLD
GY/H		GEYSER/HEAT
AV/WB		ANGLE VALVE / WASH BASIN
AV/HF		ANGLE VALVE / HEALTH FAUCET
AV/WM		ANGLE VALVE / WASHING MACHINE
AV/FT		ANGLE VALVE / FLUSHING TANK

Project Name:  
**PROPOSED NEW EMPLOYEES QUARTERS  
AT CHERIYAKADAVANTHARA, KOCHI**

Clients :  
**COCHIN SHIPYARD LIMITED**

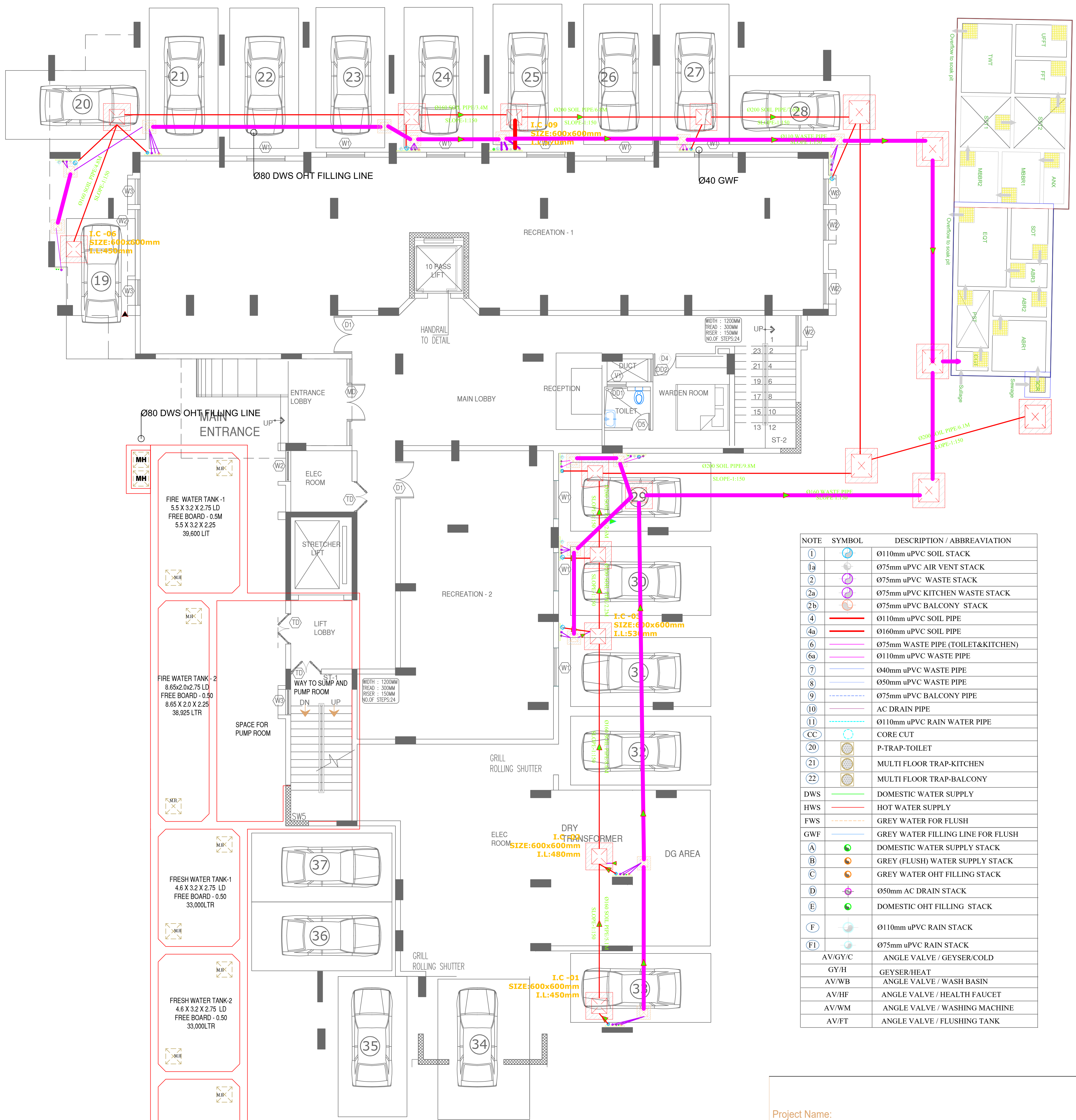
Consultants:  
**TECHNICALIYA CONSULTANTS PVT. LTD.**  
#25/41,VASANTHA AVENUE,M.R.C NAGAR,CHENNAI-28.  
PH: 044-24933278, 24933287 FAX: 044-24937341  
Email - admin@technicaliya.com

**COCHIN SHIPYARD LIMITED**  
COCHIN - 682 015

DGM (CE)		EXTERNAL WATER SUPPLY LAYOUT
AGM (CE)	SHIBU P	
SM (CE)	LAKSHMAN	
CHECKED	PO (CE)	

DATE:04 - 04 - 2026DWG NO:  
CVL/EMP QTRS/EX WS LAYOUT/01





NOTE	SYMBOL	DESCRIPTION / ABBREVIATION
1		Ø110mm uPVC SOIL STACK
1a		Ø75mm uPVC AIR VENT STACK
2		Ø75mm uPVC WASTE STACK
2a		Ø75mm uPVC KITCHEN WASTE STACK
2b		Ø75mm uPVC BALCONY WASTE STACK
4		Ø110mm uPVC SOIL PIPE
4a		Ø160mm uPVC SOIL PIPE
6		Ø75mm WASTE PIPE (TOILET&KITCHEN)
6a		Ø110mm uPVC WASTE PIPE
7		Ø40mm uPVC WASTE PIPE
8		Ø50mm uPVC WASTE PIPE
9		Ø75mm uPVC BALCONY PIPE
10		AC DRAIN PIPE
11		Ø110mm uPVC RAIN WATER PIPE
CC		CORE CUT
20		P-TRAP-TOILET
21		MULTI FLOOR TRAP-KITCHEN
22		MULTI FLOOR TRAP-BALCONY
DWS		DOMESTIC WATER SUPPLY
HWS		HOT WATER SUPPLY
FWS		GREY WATER FOR FLUSH
GWF		GREY WATER FILLING LINE FOR FLUSH
A		DOMESTIC WATER SUPPLY STACK
B		GREY (FLUSH) WATER SUPPLY STACK
C		GREY WATER OHT FILLING STACK
D		Ø50mm AC DRAIN STACK
E		DOMESTIC OHT FILLING STACK
F		Ø110mm uPVC RAIN STACK
F1		Ø75mm uPVC RAIN STACK
AV/GY/C		ANGLE VALVE / GEYSER/COLD
GY/H		GEYSER/HEAT
AV/WB		ANGLE VALVE / WASH BASIN
AV/HF		ANGLE VALVE / HEALTH FAUCET
AV/WM		ANGLE VALVE / WASHING MACHINE
AV/FT		ANGLE VALVE / FLUSHING TANK

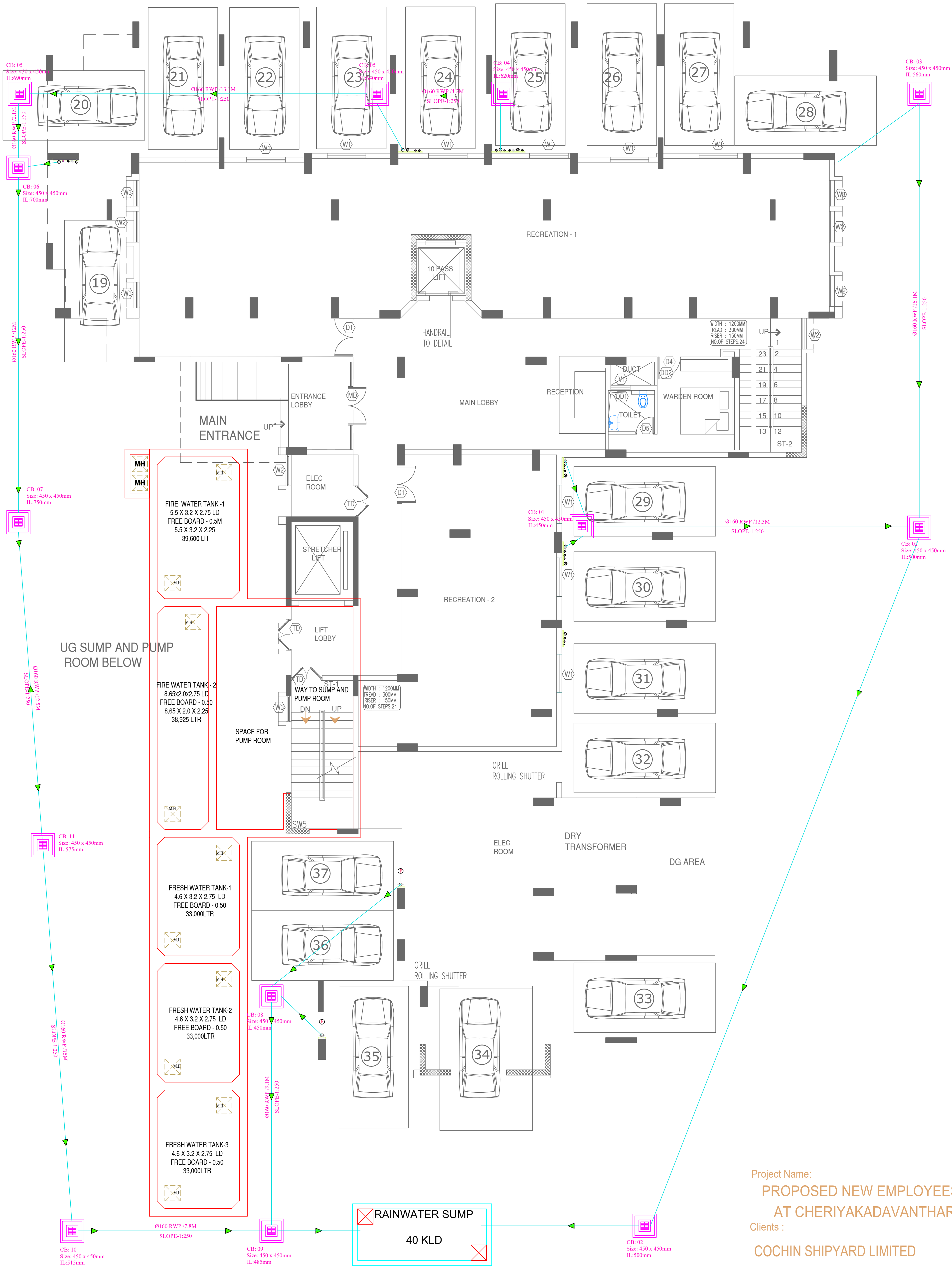
Project Name:  
**PROPOSED NEW EMPLOYEES QUARTERS**  
**AT CHERIYAKADAVANTHARA, KOCHI**  
Clients :

**COCHIN SHIPYARD LIMITED**

Consultants:  
**TECHNICALIYA CONSULTANTS PVT. LTD.**  
#25/41,VASANTHA AVENUE,M.R.C NAGAR,CHENNAI-28.  
PH: 044-24933278, 24933287 FAX: 044-24937341  
Email - admin@technicaliya.com

		<b>COCHIN SHIPYARD LIMITED</b> COCHIN - 682 015	
DGM (CE)		<b>EXTERNAL DRAINAGE LAYOUT</b>	
AGM (CE)	SHIBU P		
SM (CE)	LAKSHMAN		
CHECKED	PO (CE)		
DATE:04 - 04 - 2026		DWG NO: CVL/EMP QTRS/EXT DRAINAGE LAYOUT/01	

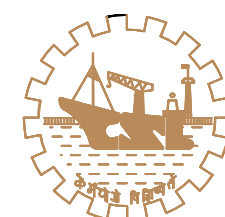




Project Name:  
**PROPOSED NEW EMPLOYEES QUARTERS  
AT CHERIYAKADAVANTHARA, KOCHI**

Clients :  
**COCHIN SHIPYARD LIMITED**

Consultants:  
**TECHNICALIYA CONSULTANTS PVT. LTD.**  
#25/41,VASANTHA AVENUE,M.R.C NAGAR,CHENNAI-28.  
PH: 044-24933278, 24933287 FAX: 044-24937341  
Email - admin@technicaliya.com

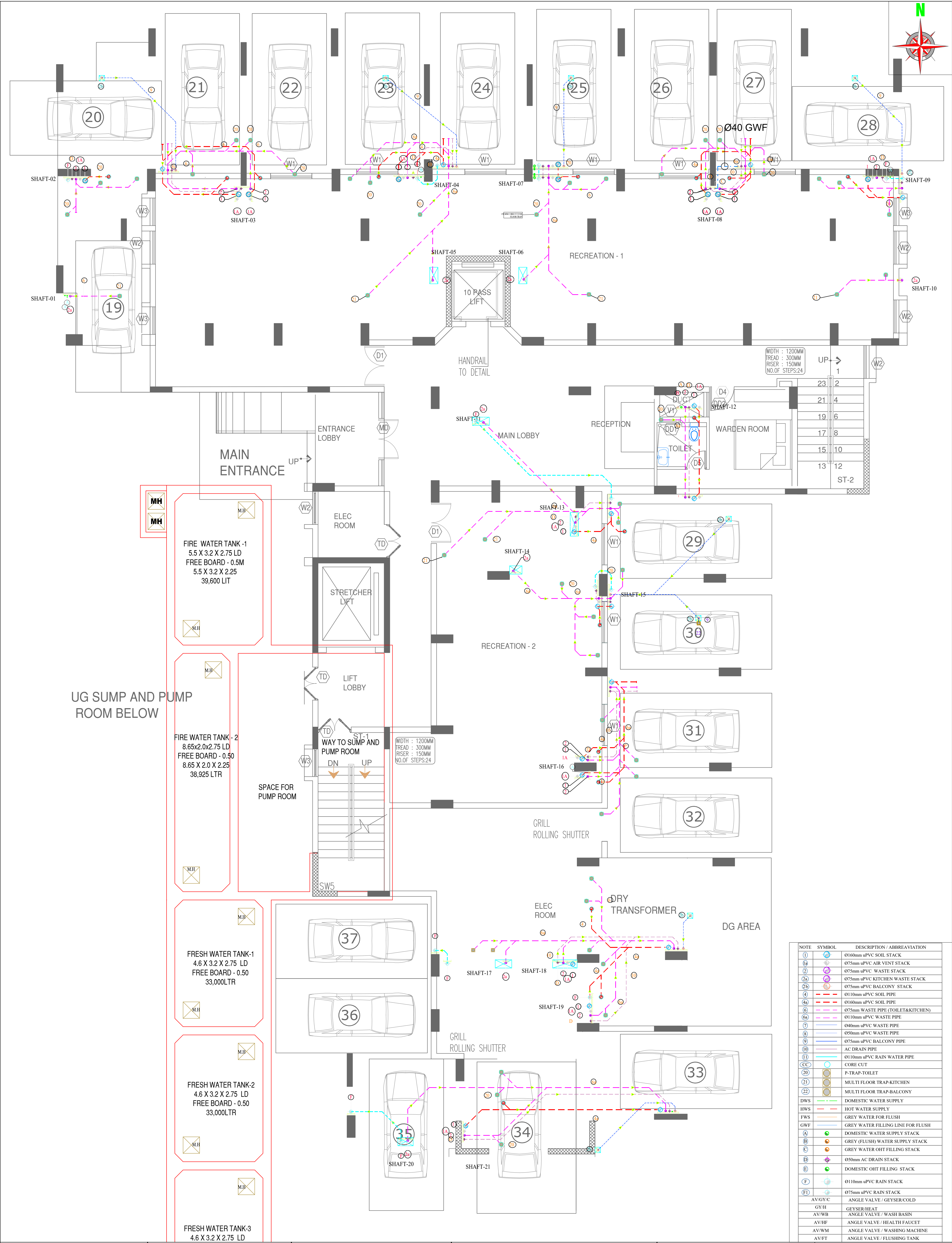


**COCHIN SHIPYARD LIMITED**

COCHIN - 682 015

DGM (CE)		EXTERNAL STORM WATER DISPOSAL LAYOUT
AGM (CE)	SHIBU P	
SM (CE)	LAKSHMAN	
CHECKED	PO (CE)	
DATE:04 - 04 - 2026		DWG NO: CVL/EMP QTRS/STORM WATER DISPOSAL LAYOUT/01





<div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div></div> <div>PRELIMINARY CONSTRUCTION FOR APPROVAL</div>			
R5	FOR APPROVAL	PREMNATH	21.01.2026
R4	FOR APPROVAL	MANO	31.03.2025
R3	FOR APPROVAL	PREMNATH	03.02.2025
R2	FOR APPROVAL	PREMNATH	11.01.2025
R1	FOR APPROVAL	PREMNATH	29.10.2024
R0	FOR APPROVAL	PREMNATH	23.10.2024
R.NO	REVISION	BY	DATE

CLIENT
COCHIN SHIPYARD LIMITED

PROJECT
PROPOSED NEW EMPLOYEES QUARTERS AT CHERIYAKADAVANTHARA, COCHIN

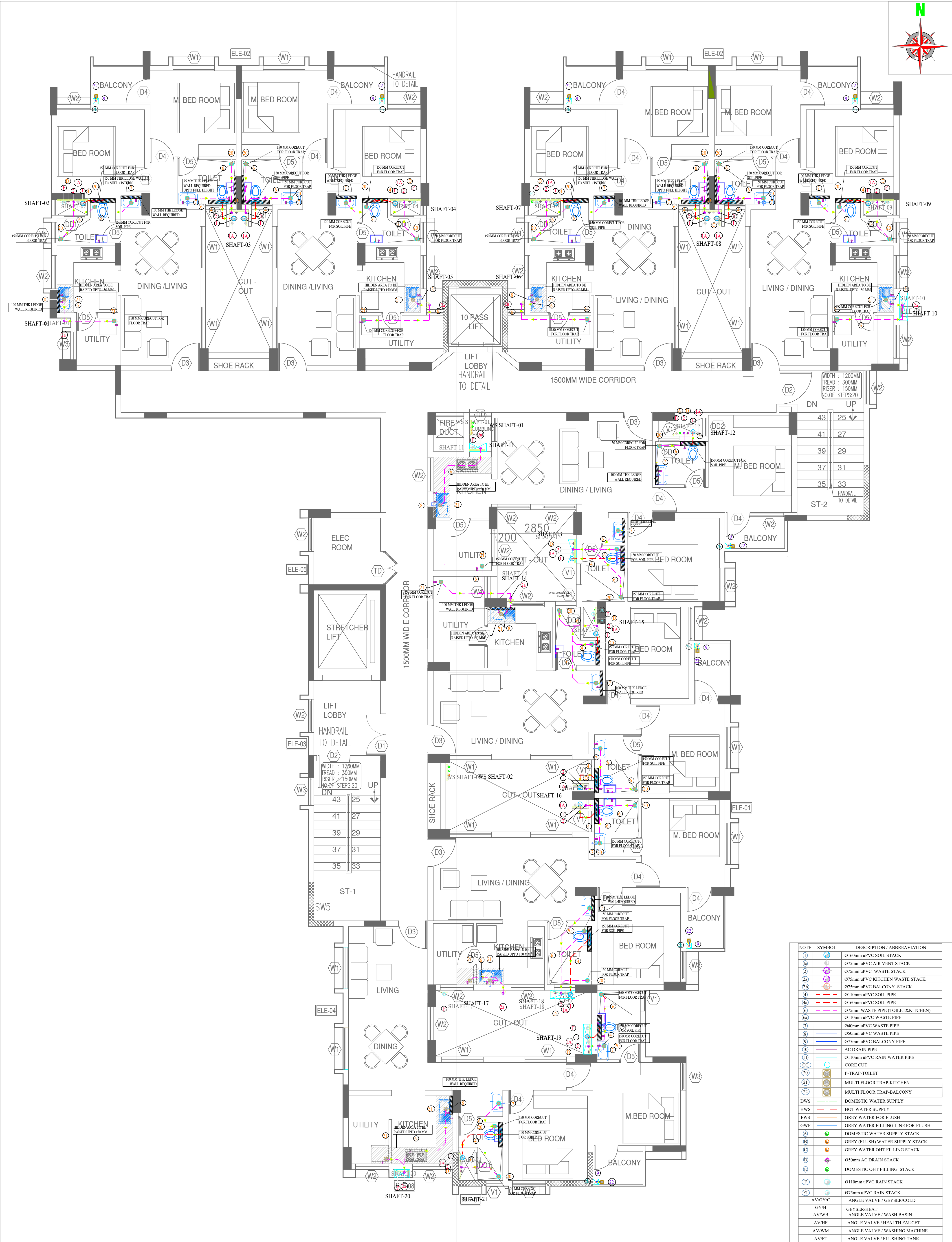
Consultants:
<div><div><div></div><div></div></div><div><div></div><div></div></div></div> <div>TECHNICALIYA CONSULTANTS PVT. LTD. #25/41,VASANTHA AVENUE,M.R.C NAGAR,CHENNAI-28. PH: 044-24933278, 24933287 FAX: 044-24937341 Email - admin@technicaliya.com</div>

MEP Consultants:
<div><div><div></div><div></div></div><div><div></div><div></div></div></div> <div>SR ASSOCIATES # 17-A, RMS APPARTMENTS, III RD FLOOR, No.12, GOPALAKRISHNA STREET, T-NAGAR, CHENNAI-17. PH:044-47971153, E-mail: srassociates.mepservices@gmail.com</div>

DRAWING TITLE		
STILT FLOOR DRAINAGE LAYOUT		
Drawn: PREMNATH		Checked: MADHU
APPROVED: MADHU		SCALE: NTS
DATE: 23.10.2024		SHEET: A1
DRG NO: SRA/2853/PHE/06		REV: R0
File Path:		

[C:\Users\madhu\Documents\Projects\2853\2853\\_PHE\2853\\_PHE.dwg](#)





R.NO	REVISION	BY	DATE
R5	FOR APPROVAL	PREMNATH	21.01.2026
R4	FOR APPROVAL	MANO	31.03.2025
R3	FOR APPROVAL	PREMNATH	03.02.2025
R2	FOR APPROVAL	PREMNATH	11.01.2025
R1	FOR APPROVAL	PREMNATH	29.10.2024
R0	FOR APPROVAL	PREMNATH	23.10.2024

CLIENT	
COCHIN SHIPYARD LIMITED	

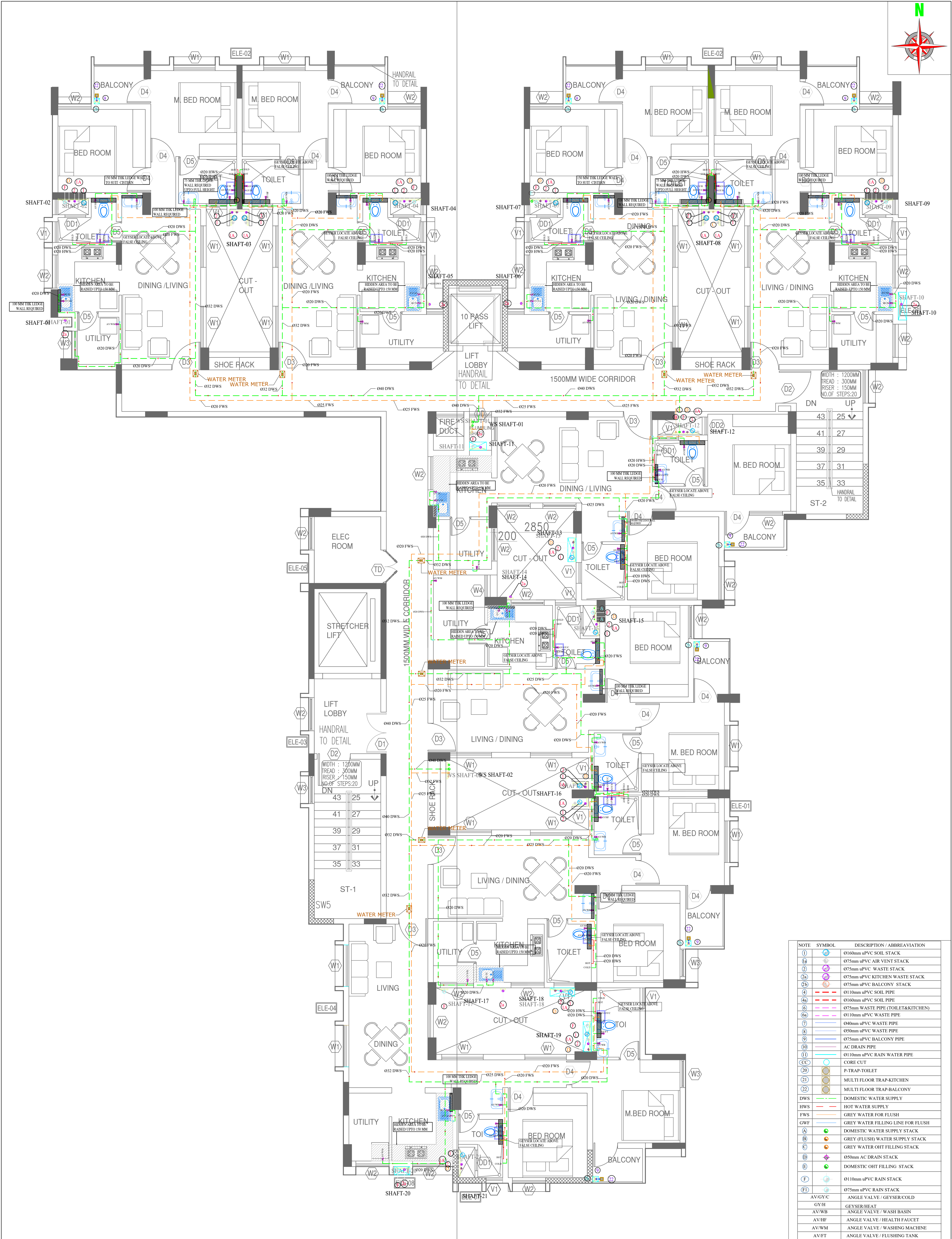
PROJECT	
PROPOSED NEW EMPLOYEES QUARTERS AT CHERIYAKADAVANTHARA, COCHIN	

Consultants:	
TECHNICLIYA CONSULTANTS PVT. LTD. #25/41,VASANTHA AVENUE,M.R.C. NAGAR,CHENNAI-28. PH: 044-24933278, 24933287 FAX: 044-24937341 Email - admin@technicaliya.com	

MEP Consultants:	
SR ASSOCIATES # 17-A, RMS APPARTMENTS, III RD FLOOR, No.12, GOPALAKRISHNA STREET, T-NAGAR, CHENNAI-17. PH:044-47971153. E-mail: srassociates.mepservices@gmail.com	

DRAWING TITLE	
TYPICAL FLOORS INTERNAL DRAINAGE LAYOUT	
Drawn: PREMNATH	Checked: MADHU
APPROVED: MADHU	SCALE: NTS
DATE: 23.10.2024	SHEET: A1
DRG NO: SRA/2853/PHE/07	REV: R0
File Path:	





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R4	FOR APPROVAL	MANO	31.03.2025
R3	FOR APPROVAL	PREMNATH	03.02.2025
R2	FOR APPROVAL	PREMNATH	11.01.2025
R1	FOR APPROVAL	PREMNATH	29.10.2024
R0	FOR APPROVAL	PREMNATH	23.10.2024
R.NO	REVISION	BY	DATE

CLIENT
COCHIN SHIPYARD LIMITED

PROJECT
PROPOSED NEW EMPLOYEES QUARTERS AT CHERIYAKADAVANTHARA, COCHIN

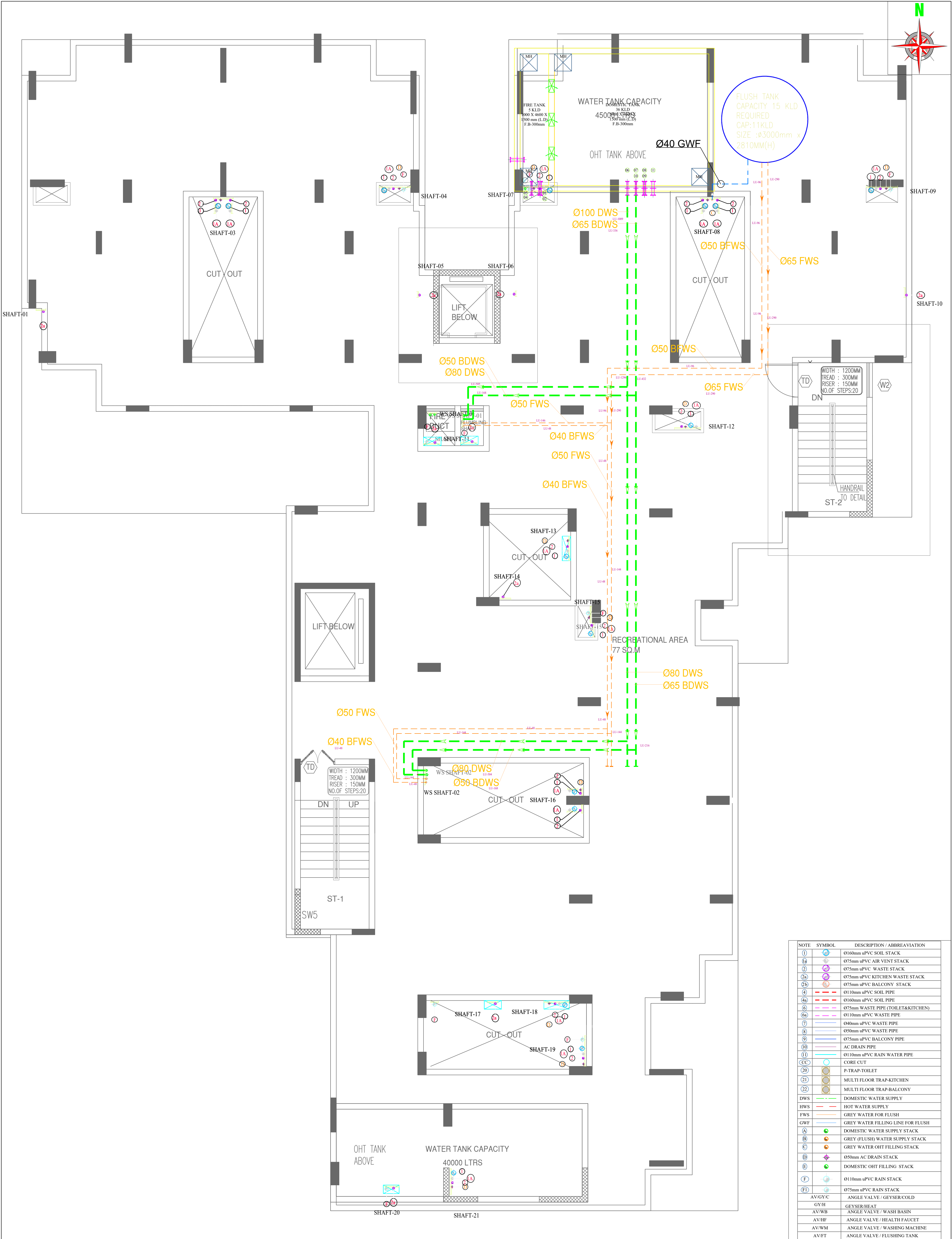
Consultants:
<div><div><div></div><div></div><div></div></div><div>TECHNICALIYA CONSULTANTS PVT. LTD. #25/41,VASANTHA AVENUE,M.R.C. NAGAR,CHENNAI-28. PH: 044-24933278, 24933287 FAX: 044-24937341 Email - admin@technicaliya.com</div></div>

MEP Consultants:
<div><div><div></div><div></div><div></div></div><div>SR ASSOCIATES #17-A, RMS APPARTMENTS, III RD FLOOR, No.12, GOPALAKRISHNA STREET, T-NAGAR, CHENNAI-17. PH:044-47971153. E-mail: srassociates.mepservices@gmail.com</div></div>

TYPICAL FLOORS INTERNAL WATER SUPPLY LAYOUT	
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APPROVED: MADHU	SCALE: NTS
DATE: 23.10.2024	SHEET: A1
DRG NO: SRA/2853/PHE/08	REV: R0
File Path:	

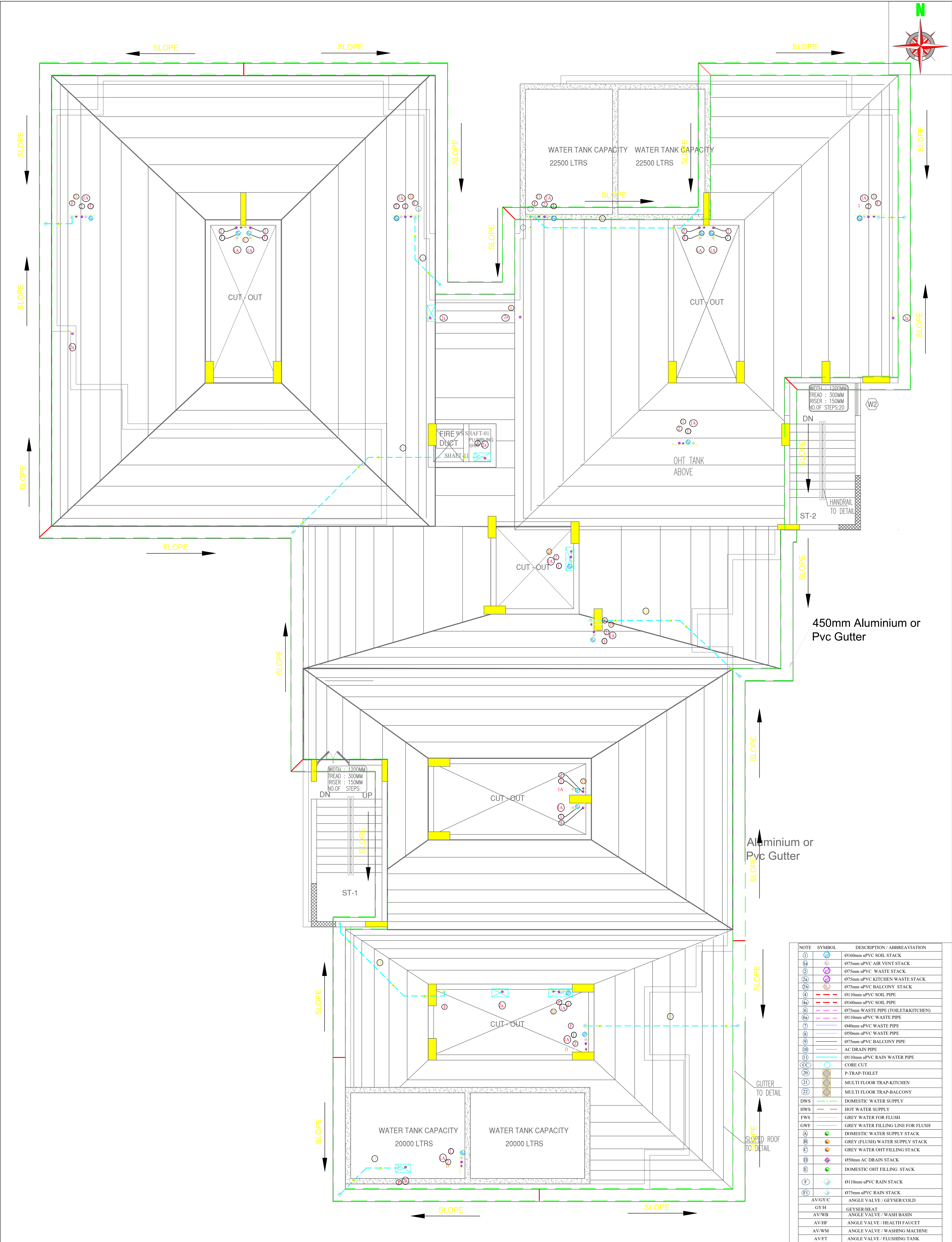
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<div><div><div><div><input type="checkbox"/> PRELIMINARY</div><div><input type="checkbox"/> TENDER</div></div><div><div><input type="checkbox"/> CONSTRUCTION</div><div><input type="checkbox"/> INFORMATION</div><div><input checked="" type="checkbox"/> APPROVAL</div></div></div><table><tr><td></td><td></td><td></td><td></td></tr><tr><td>R5</td><td>FOR APPROVAL</td><td>PREMNATH</td><td>21.01.2026</td></tr><tr><td>R4</td><td>FOR APPROVAL</td><td>MANO</td><td>31.03.2025</td></tr><tr><td>R3</td><td>FOR APPROVAL</td><td>PREMNATH</td><td>03.02.2025</td></tr><tr><td>R2</td><td>FOR APPROVAL</td><td>PREMNATH</td><td>11.01.2025</td></tr><tr><td>R1</td><td>FOR APPROVAL</td><td>PREMNATH</td><td>29.10.2024</td></tr><tr><td>R0</td><td>FOR APPROVAL</td><td>PREMNATH</td><td>23.10.2024</td></tr><tr><td>R.NO</td><td>REVISION</td><td>BY</td><td>DATE</td></tr></table></div>								R5	FOR APPROVAL	PREMNATH	21.01.2026	R4	FOR APPROVAL	MANO	31.03.2025	R3	FOR APPROVAL	PREMNATH	03.02.2025	R2	FOR APPROVAL	PREMNATH	11.01.2025	R1	FOR APPROVAL	PREMNATH	29.10.2024	R0	FOR APPROVAL	PREMNATH	23.10.2024	R.NO	REVISION	BY	DATE	CLIENT  COCHIN SHIPYARD LIMITED		PROJECT  PROPOSED NEW EMPLOYEES QUARTERS AT CHERIYAKADAVANTHARA, COCHIN		Consultants:  <div><div><div></div><div>TECHNICALIYA CONSULTANTS PVT. LTD. #25/41,VASANTHA AVENUE,M.R.C NAGAR,CHENNAI-28. PH: 044-24933278, 24933287 FAX: 044-24937341 Email - admin@technicaliya.com</div></div></div>		MEP Consultants:  <div><div><div></div><div>SR ASSOCIATES # 17-A, RMS APPARTMENTS, III RD FLOOR, No.12, GOPALAKRISHNA STREET, T-NAGAR, CHENNAI-17. PH:044-47971153. E-mail: srassociates.mepservices@gmail.com</div></div></div>		DRAWING TITLE  TERRACE FLOOR WATER SUPPLY LAYOUT <table><tr><td>Drawn: PREMNATH</td><td>Checked: MADHU</td></tr><tr><td>APPROVED: MADHU</td><td>SCALE: NTS</td></tr><tr><td>DATE: 23.10.2024</td><td>SHEET: A1</td></tr><tr><td>DRG NO: SRA/2853/PHE/09</td><td>REV: R0</td></tr><tr><td colspan="2">File Path:</td></tr></table>		Drawn: PREMNATH	Checked: MADHU	APPROVED: MADHU	SCALE: NTS	DATE: 23.10.2024	SHEET: A1	DRG NO: SRA/2853/PHE/09	REV: R0	File Path:	
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DRG NO: SRA/2853/PHE/09	REV: R0																																																						
File Path:																																																							





NOTE	SYMBOL	DESCRIPTION / ABBREVIATION
(1)		0160mm uPVC SOIL STACK
(1a)		075mm uPVC AIR VENT STACK
(2)		075mm uPVC WASTE STACK
(2a)		075mm uPVC KITCHEN WASTE STACK
(2b)		075mm uPVC BALCONY STACK
(4)		0110mm uPVC SOIL PIPE
(4a)		0160mm uPVC SOIL PIPE
(6)		075mm WASTE PIPE (TOILET&KITCHEN)
(6a)		0110mm uPVC WASTE PIPE
(7)		040mm uPVC WASTE PIPE
(8)		050mm uPVC WASTE PIPE
(9)		075mm uPVC BALCONY PIPE
(10)		AC DRAIN PIPE
(11)		0110mm uPVC RAIN WATER PIPE
(CC)		CORE CUT
(20)		P-TRAP-TOILET
(21)		MULTI FLOOR TRAP-KITCHEN
(22)		MULTI FLOOR TRAP-BALCONY
DWS		DOMESTIC WATER SUPPLY
HWS		HOT WATER SUPPLY
FWS		GREY WATER FOR FLUSH
GWF		GREY WATER FILLING LINE FOR FLUSH
(A)		DOMESTIC WATER SUPPLY STACK
(B)		GREY (FLUSH) WATER SUPPLY STACK
(C)		GREY WATER OHT FILLING STACK
(D)		050mm AC DRAIN STACK
(E)		DOMESTIC OHT FILLING STACK
(F)		0110mm uPVC RAIN STACK
(F1)		075mm uPVC RAIN STACK
AV/GY/C		ANGLE VALVE / GEYSER/COLD
GY/H		GEYSER/HEAT
AV/WB		ANGLE VALVE / WASH BASIN
AV/HF		ANGLE VALVE / HEALTH FAUCET
AV/WM		ANGLE VALVE / WASHING MACHINE
AV/FT		ANGLE VALVE / FLUSHING TANK

<input type="checkbox"/> PRELIMINARY <input type="checkbox"/> TENDER			
<input type="checkbox"/> CONSTRUCTION <input type="checkbox"/> INFORMATION <input checked="" type="checkbox"/> APPROVAL			
R5	FOR APPROVAL	PREMNATH	21.01.2026
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CLIENT  
COCHIN SHIPYARD LIMITED

PROJECT  
PROPOSED NEW EMPLOYEES QUARTERS  
AT CHERIYAKADAVANTHARA, COCHIN

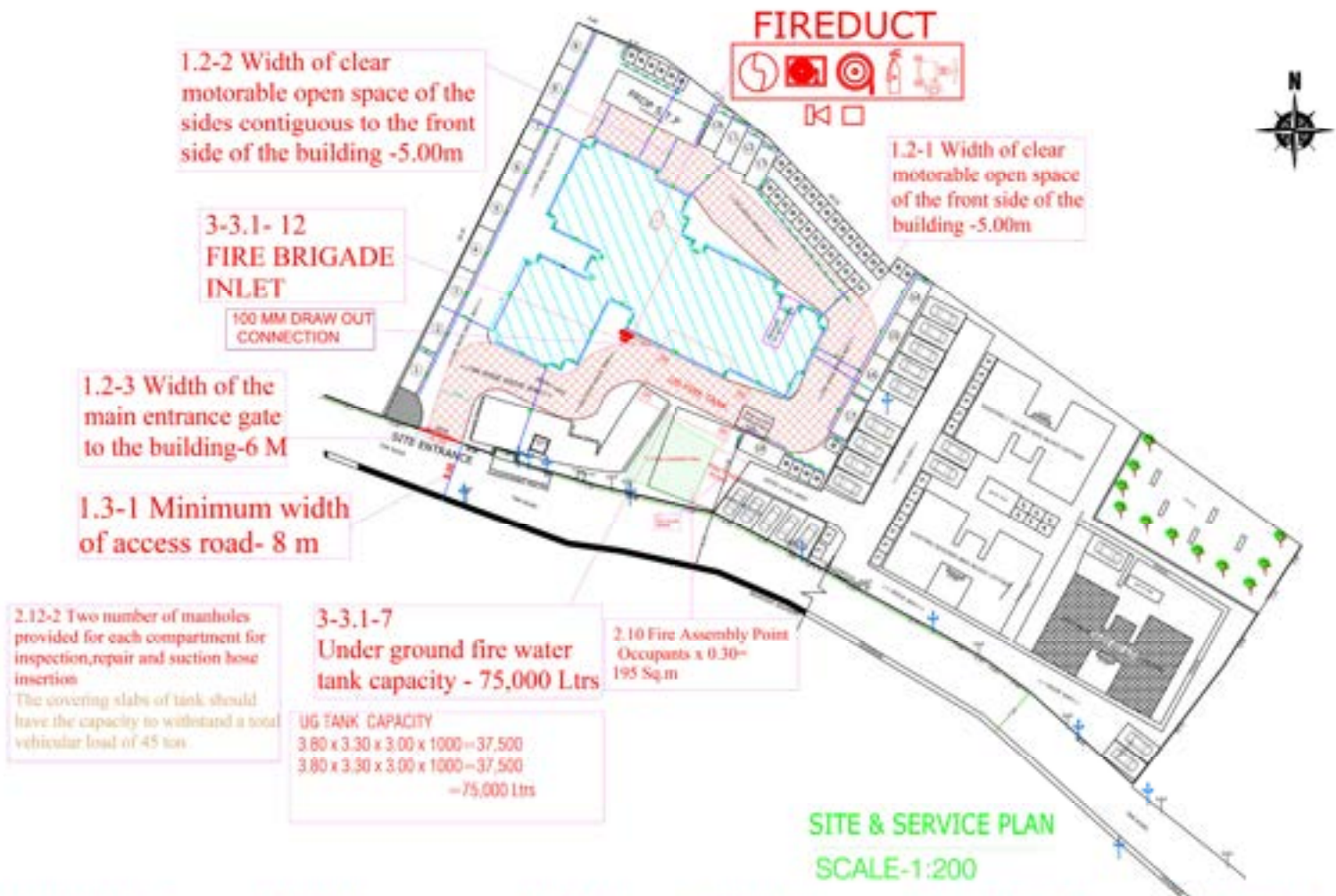
Consultants:  
**TECHNICALIYA CONSULTANTS PVT. LTD.**  
#25/41,VASANTHA AVENUE,M.R.C NAGAR,CHENNAI-28.  
PH: 044-24933278, 24933287 FAX: 044-24937341  
Email - admin@technicaliya.com

MEP Consultants:  
**SR ASSOCIATES**  
# 17-A, RMS APPARTMENTS, III RD FLOOR,  
No.12, GOPALAKRISHNA STREET, T-NAGAR, CHENNAI-17.  
PH:044-47971153. E-mail: srassociates.mepservices@gmail.com

DRAWING TITLE	
TERRACE RAIN WATER DISPOSAL LAYOUT	
Drawn: PREMNATH	Checked: MADHU
APPROVED: MADHU	SCALE: NTS
DATE: 23.10.2024	SHEET: A1
DRG NO: SRA/2853/PHE/10	REV: R0
File Path:	



## PROPOSED RESIDENTIAL BUILDING AT ELAMKULAM



### OWNER/GENERAL SECTION

1. Applicant Name : Cochin Shipyard Limited  
 2. Permanent Address : Cochin Shipyard Limited, Ernakulam, Pin-682015  
 3. Communication address : Same As Above  
 4. Contact No (Mobile ) : 9072595992  
 5. Email ID : hydrotech11@gmail.com

### SITE DETAILS

1. Survey No. : 90543/2007/1/206/1  
 2. Village : Elamkulam  
 3. Taluk : Kattappana  
 4. District : Ernakulam  
 5. Corporation/Municipality : Cochin Corporation  
 6. Nearby Permanent Landmark : Arvin near date apartment

### APPLICANT

APPROVED BY  
 COCHIN CORPORATION  
 10/05/2017

### FIRE CONSULTANT

**HYDROTECH**  
 AZAD ROAD, VADHYAR LANE  
 KALLOOR, KOCHI-682447  
 PHONE: 9447118885

### FIRE FIGHTING SYSTEM CONTRACTOR

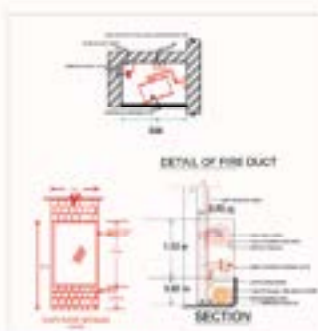
### FIRE APPROVAL



## PROPOSED RESIDENTIAL BUILDING AT ELAMKULAM

[illegible]

LEGEND	
PIRE 5.0 TYPING NUMBER	
HOUSE REEL	
WET RIGGING	
SURVIVAL KIT	
HOOPER	
WANGI GILL MOUNT	
PIRE ALARIN CONTROL, PIRAGE	
HOUSE BOB	
PIRE BRAGADE HOLE	
PIRE BRAGADE HOLE	
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PIRE BRAGADE HOLE	



3-3.1-9. JP - 180 LPM ELECTRIC PUMP-1 Nos.  
3-3.1-10. EP - 2280 LPM ELECTRICAL PUMP-1 Nos.  
3-3.1-11. SP - 2280 LPM DIESEL PUMP (STAND - BY) -1 Nos.

3-3.1-7 Under ground fire water tank capacity - 75,000 ltrs

ING Tank Capacity

3.80 + 3.30 + 3.00 + 1000 = 37,500

3.80 + 3.30 + 3.00 + 1000 = 37,500

= 75,000 ltrs



3-3,1-4  
WET RISER SYSTEM SCHEMATIC DIAGRAM

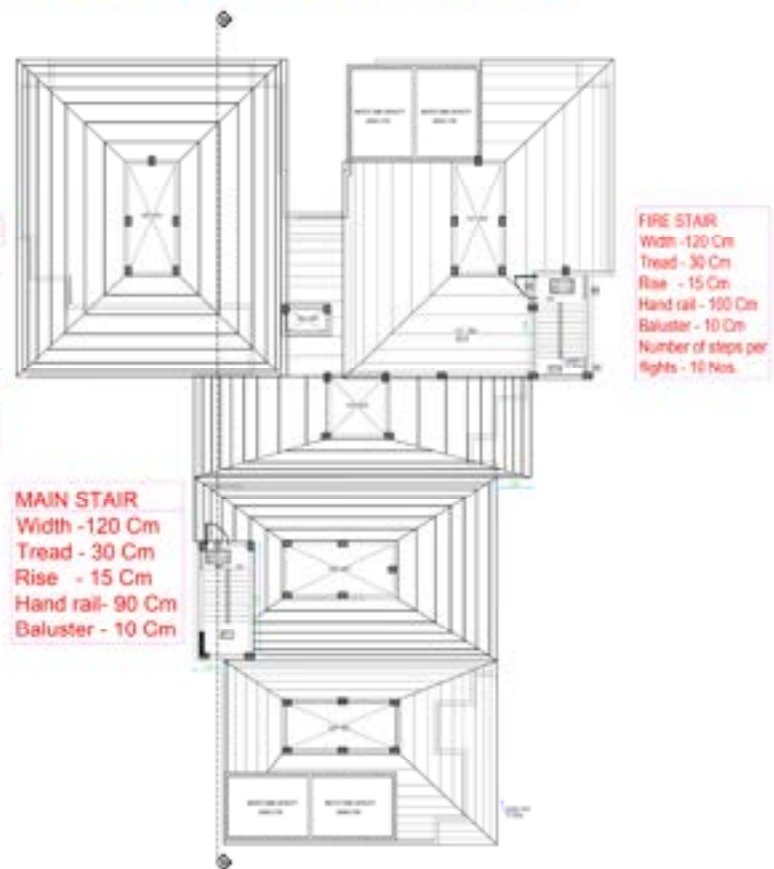
OWNER-GENERAL SECTION	SITE DETAILS	APPLICANT	FIRE CONSULTANT	FIRE FIGHTING SYSTEM CONTRACTOR	FIRE APPROVAL
1. Applicant Name : Coclin Shipyard Limited 2. Permanent Address : Coclin Shipyard Limited, Ernakulam, Pin-682015 3. Communication address : Same As Above 4. Contact No (Mobile ) : 9072959992 5. Email (E) : hydrotech11@gmail.com	1. Survey No. : 980-41/2007/AN/1 2. Village : Ernakulam 3. Taluk : Kattappana 4. District : Ernakulam 5. Corporation / Municipality / Gramapanchayat : Coclin Corporation 6. Nearest Permanent Landmark : Arakkulam Jale apartment	 (Signature) (Name) (Address) (City) (State) (Pin) (Phone) (Email)	 (Signature) (Name) (Address) (City) (State) (Pin) (Phone) (Email)		



## PROPOSED RESIDENTIAL BUILDING AT ELAMKULAM



**TERRACE FLOOR PLAN**



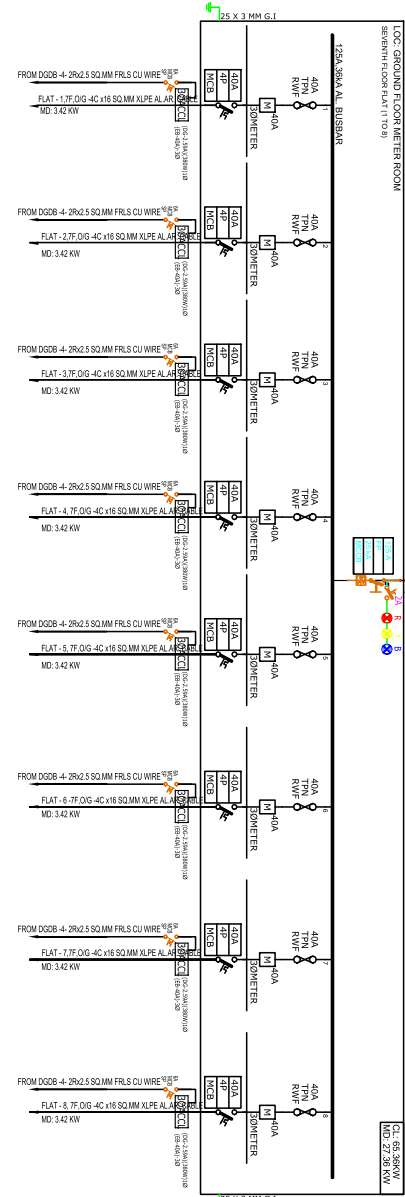
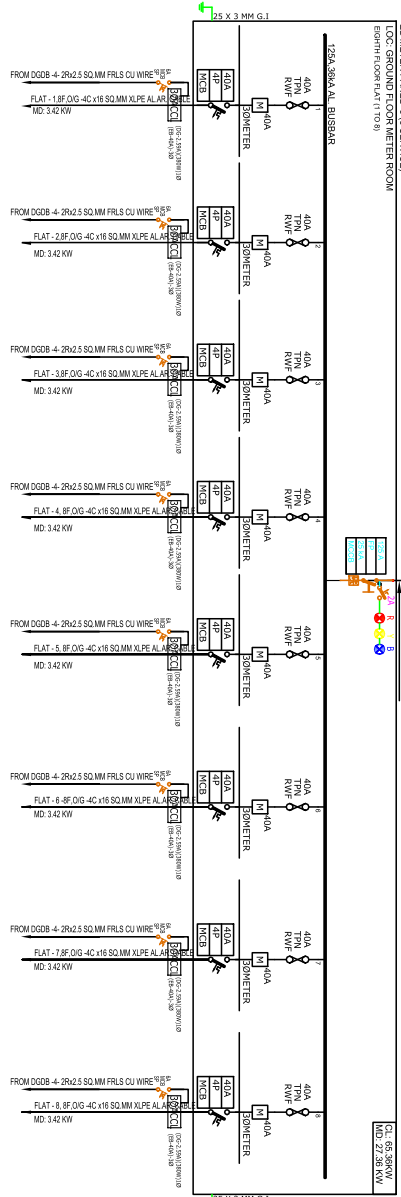
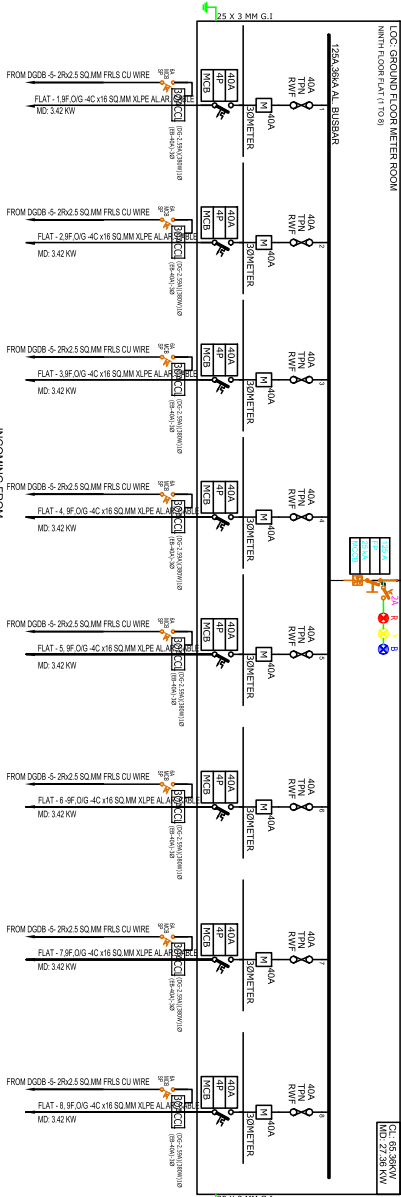
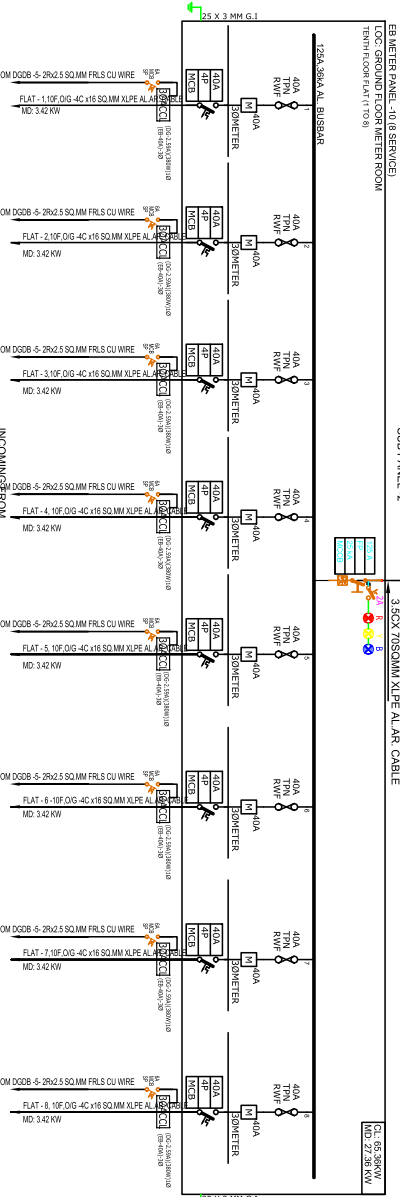
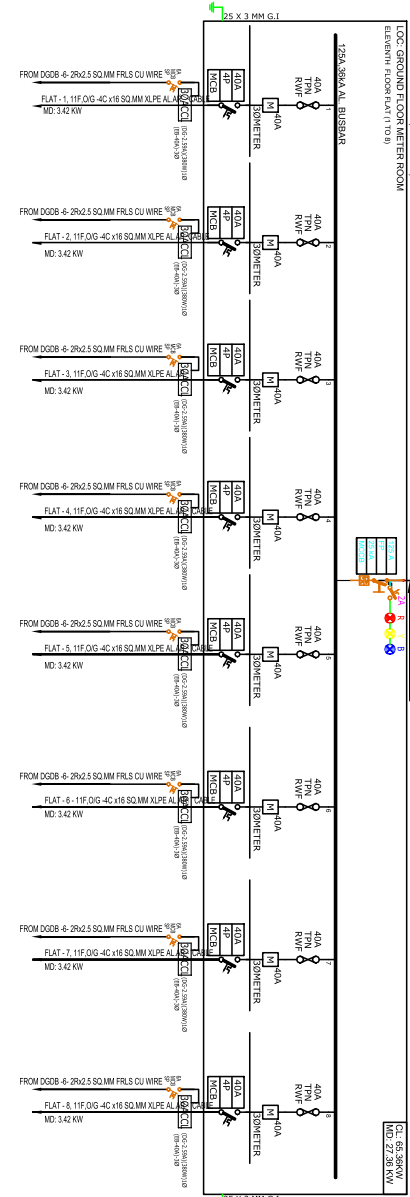
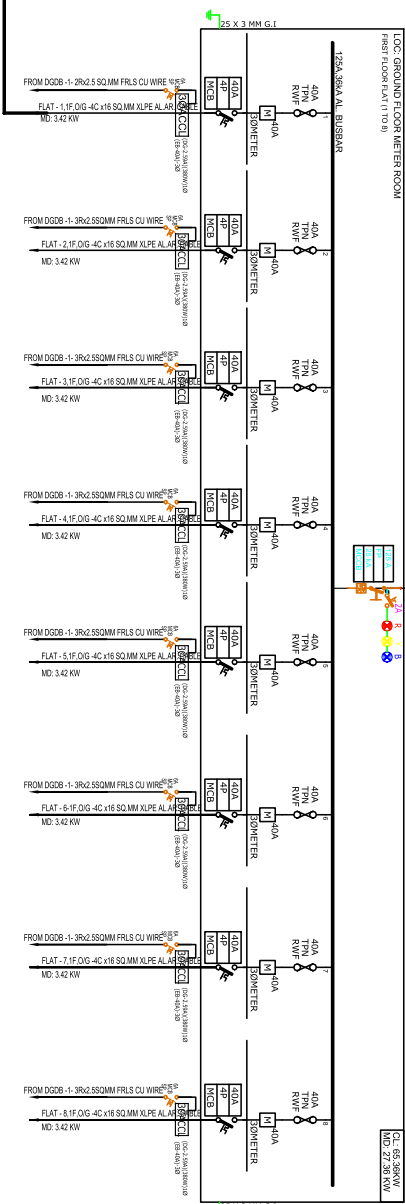
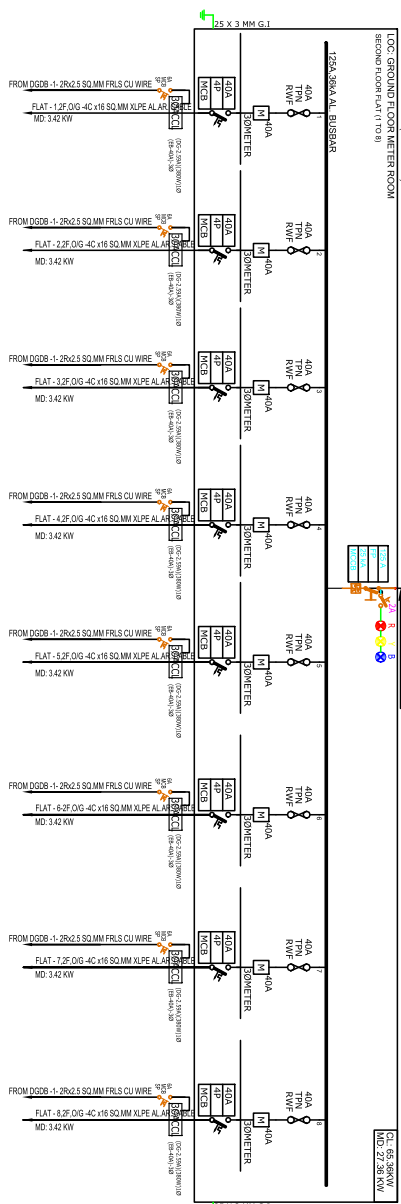
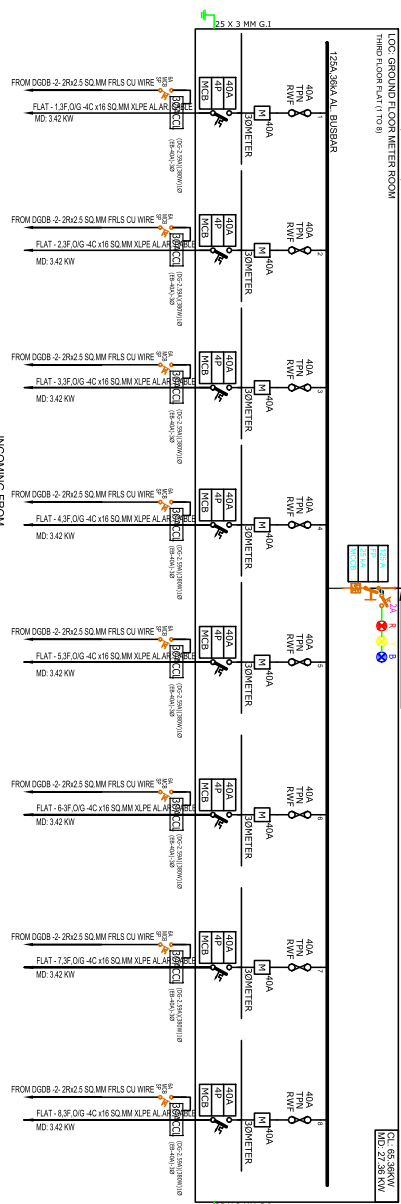
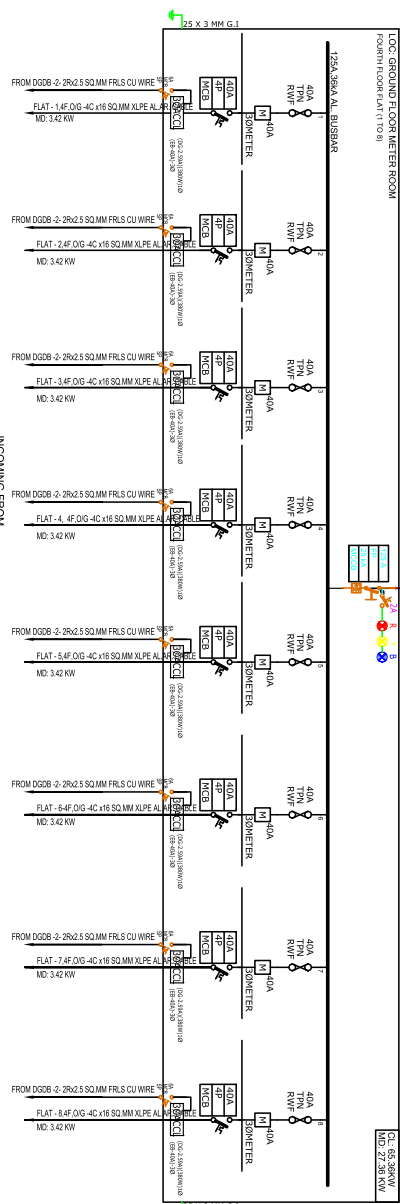
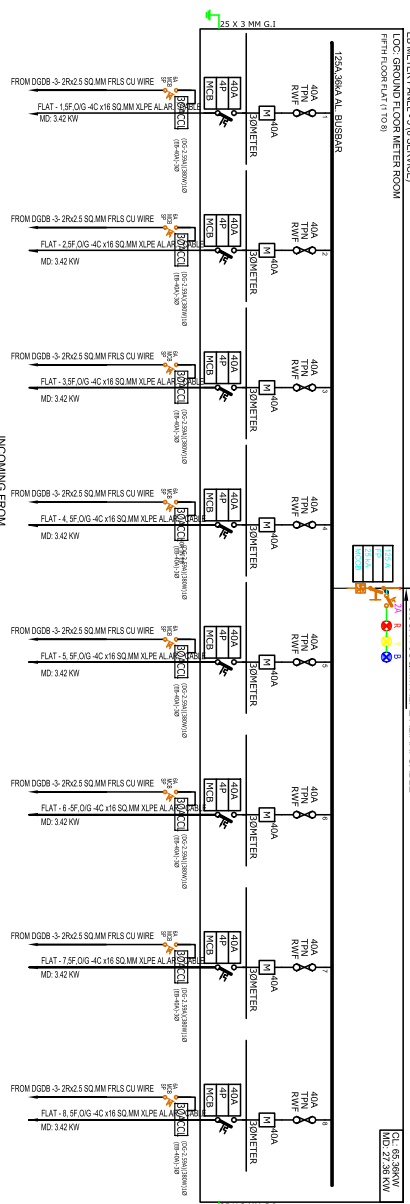
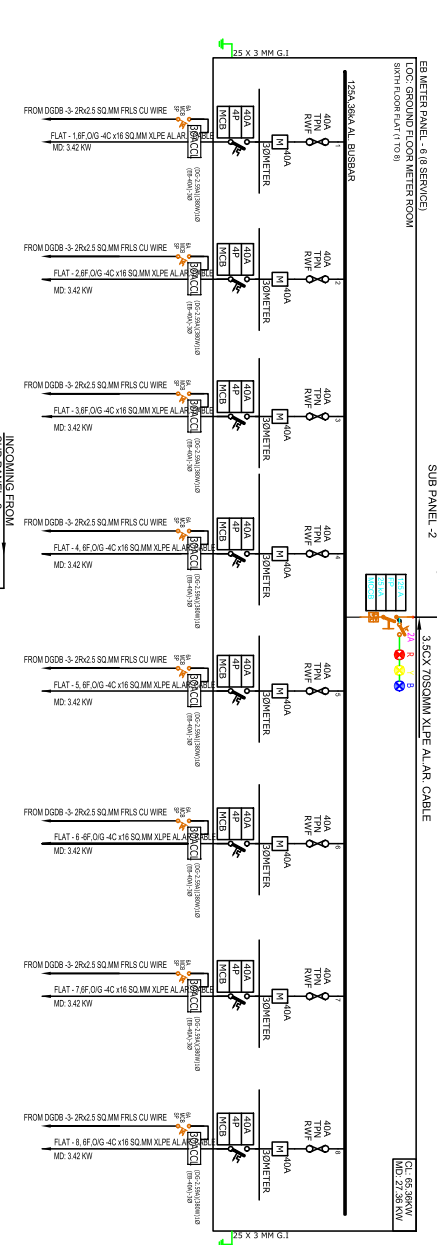
**ROOF PLAN**

OWNER-GENERAL SECTION		SITE DETAILS		APPLICANT	FIRE CONSULTANT	FIRE FIGHTING SYSTEM CONTRACTOR	FIRE APPROVAL
1. Applicant Name	Cochin Shipyard Limited	2. Survey No.	900-41369-7/2016-1				
2. Permanent Address	Cochin Shipyard Limited, Ernakulam, Pin-682015	3. Village	Elamkulam				
3. Communication address	Same As Above	4. Taluk	Kannur				
4. Contact No (Mobile)	9072593992	5. District	Ernakulam				
5. Email ID	hydrotech11@gmail.com	6. Corporation/Municipality/ Gramapanchayat	Cochin Corporation				
		7. Nearest Permanent Landmark	Aravind rose dale apartment				

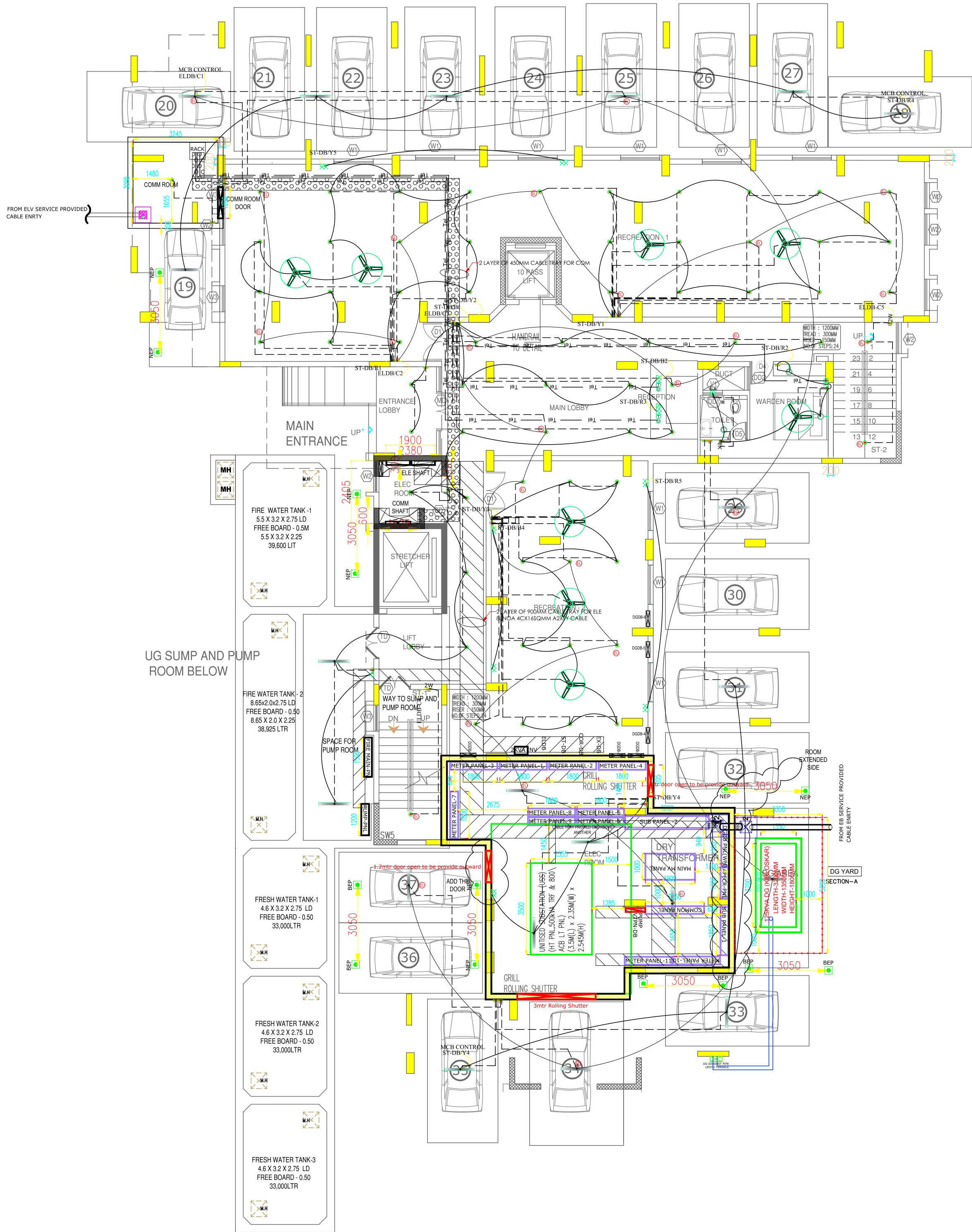












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S.no	GENERAL NOTES
01.	ALL DIMENSIONS ARE IN mm. AND ALL LEVELS ARE IN METRE.
02.	ONLY WRITTEN DIMENSIONS TO BE FOLLOWED.
03.	FOR DIMENSIONS AND LOCATIONS OF ALL STRUCTURAL MEMBERS,REFER TO STRUCTURAL DRAWINGS.
04.	ANY DISCREPANCIES NOTICED SHOULD BE BROUGHT TO THE CONSULTANTS IMMEDIATELY
05.	ALL LEVELS SHOWN IN DRAWING ARE FINISHED LEVELS UNLESS OTHERWISE MENTIONED

SCHEDULE OF JOINERY			
S.NO	TYPE	OPENING SIZE	DESCRIPTION
DOORS			
01.	MD	1500 X 2100	MAIN DOOR TO DETAIL
02.	D1	1490 X 2100	WOODEN FRAME WITH FLUSH DOOR
03.	D2	1200 X 2100	WOODEN FRAME WITH VIEW PANEL
04.	D3	1050 X 2100	WOODEN FRAME WITH FLUSH DOOR
05.	D4	900 X 2100	WOODEN FRAME WITH FLUSH DOOR
06.	D5	750 X 2100	PVC DOOR
07.	FD	200 X 2400	FIRE DOOR TO DETAIL
08.	DD	800 X 1200	DUCT DOOR TO DETAIL
09.	DD1	750 X 1200	DUCT DOOR TO DETAIL
10.	DD2	650 X 1200	DUCT DOOR TO DETAIL
WINDOW			
01.	W1	1500 X 1200	WINDOW TO DETAIL
02.	W2	1200 X 1200	WINDOW TO DETAIL
03.	W3	1000 X 1200	WINDOW TO DETAIL
04.	W4	900 X 1200	WINDOW TO DETAIL
05.	V	750 X 600	VENTILATOR
06.	V1	600 X 600	VENTILATOR

01	DRAWING REVISED (G+12 TO G+11)	S.S	G.S.P	25.11.2025
00	FOR DISCUSSION	H.S	G.S.P	17.04.2025
REV	DESCRIPTIONS	DRN	CHK	DATE

Project Name:  
  
**PROPOSED NEW EMPLOYEES QUARTERS  
AT CHERIYAKADAVANTHARA, KOCHI**

Clients :  
  
**COCHIN SHIPYARD LIMITED**

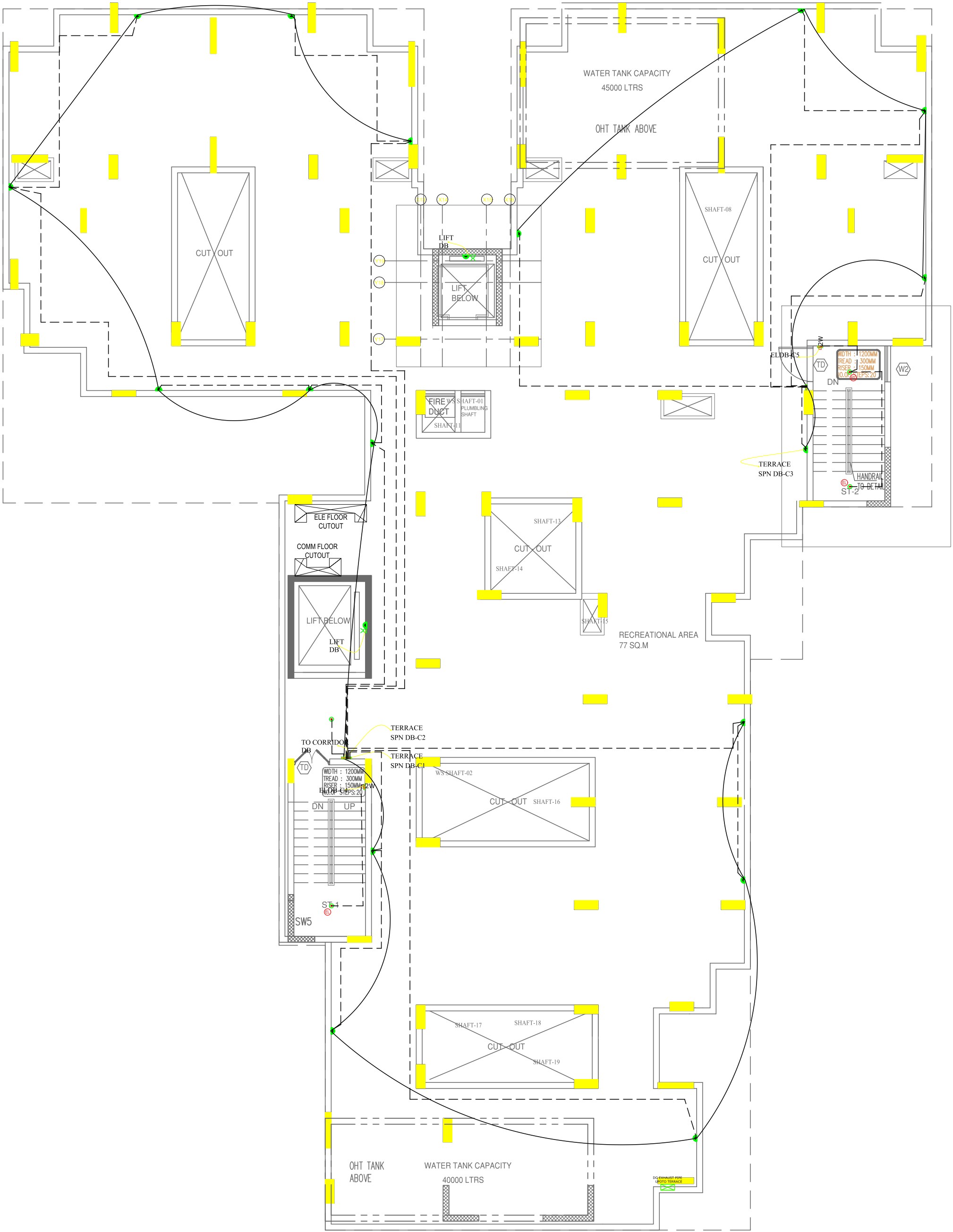
DRAWING TITLE:  <b>STILT FLOOR PLAN</b>			
JOB NO: 487/18	DRG NO: 487/SQTRS/AR-01	REV: 01 DATE: 25.11.25	REF.CODE: WOR

Consultants:  
 **TECHNICALIYA CONSULTANTS PVT. LTD.**  
#25/41,VASANTHA AVENUE,M.R.C NAGAR,CHENNAI-28.  
PH: 044-24933278, 24933287 FAX: 044-24937341  
Email - admin@technicaliya.com

Drawn: H.S	Checked: G.S.P	Approved: N.G.K
Scale: 1:100 A2	Date: 17.04.25	Designed: N.G.K

STILT FLOOR PLAN





TERRACE FLOOR PLAN

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03.	FOR DIMENSIONS AND LOCATIONS OF ALL STRUCTURAL MEMBERS,REFER TO STRUCTURAL DRAWINGS.
04.	ANY DISCREPANCIES NOTICED SHOULD BE BROUGHT TO THE CONSULTANTS IMMEDIATELY
05.	ALL LEVELS SHOWN IN DRAWING ARE FINISHED LEVELS UNLESS OTHERWISE MENTIONED

SCHEDULE OF JOINERY			
S.NO	TYPE	OPENING SIZE	DESCRIPTION
DOORS			
01.	MD	1500 X 2100	MAIN DOOR TO DETAIL
02.	D1	1490 X 2100	WOODEN FRAME WITH FLUSH DOOR
03.	D2	1200 X 2100	WOODEN FRAME WITH VIEW PANEL
04.	D3	1050 X 2100	WOODEN FRAME WITH FLUSH DOOR
05.	D4	900 X 2100	WOODEN FRAME WITH FLUSH DOOR
06.	D5	750 X 2100	PVC DOOR
07.	FD	200 X 2400	FIRE DOOR TO DETAIL
08.	DD	800 X 1200	DUCT DOOR TO DETAIL
09.	DD1	750 X 1200	DUCT DOOR TO DETAIL
10.	DD2	650 X 1200	DUCT DOOR TO DETAIL
WINDOW			
01.	W1	1500 X 1200	WINDOW TO DETAIL
02.	W2	1200 X 1200	WINDOW TO DETAIL
03.	W3	1000 X 1200	WINDOW TO DETAIL
04.	W4	900 X 1200	WINDOW TO DETAIL
05.	V	750 X 600	VENTILATOR
06.	V1	600 X 600	VENTILATOR

01	DRAWING REVISED (G+12 TO G+11)	S.S	G.S.P	25.11.2025
00	FOR DISCUSSION		H.S	G.S.P 17.04.2025
REV	DESCRIPTIONS	DRN	CHK	DATE

Project Name:

PROPOSED NEW EMPLOYEES QUARTERS  
AT CHERIYAKADAVANTHARA, KOCHI

Clients :

COCHIN SHIPYARD LIMITED

DRAWING TITLE:			
TERRACE FLOOR PLAN			
JOB NO:	DRG NO:	REV: 00	REF.CODE:
487/18	487/SQTRS/AR-03	DATE: 17.04.25	WOR

Consultants:

TECHNICALIYA CONSULTANTS PVT. LTD.  
#25/41,VASANTHA AVENUE,M.R.C NAGAR,CHENNAI-28.  
PH: 044-24933278, 24933287 FAX: 044-24937341  
Email - admin@technicaliya.com

Drawn:	H.S	Checked:	G.S.P	Approved:	N.G.K
Scale:	1:100 A2	Date:	17.04.25	Designed:	N.G.K

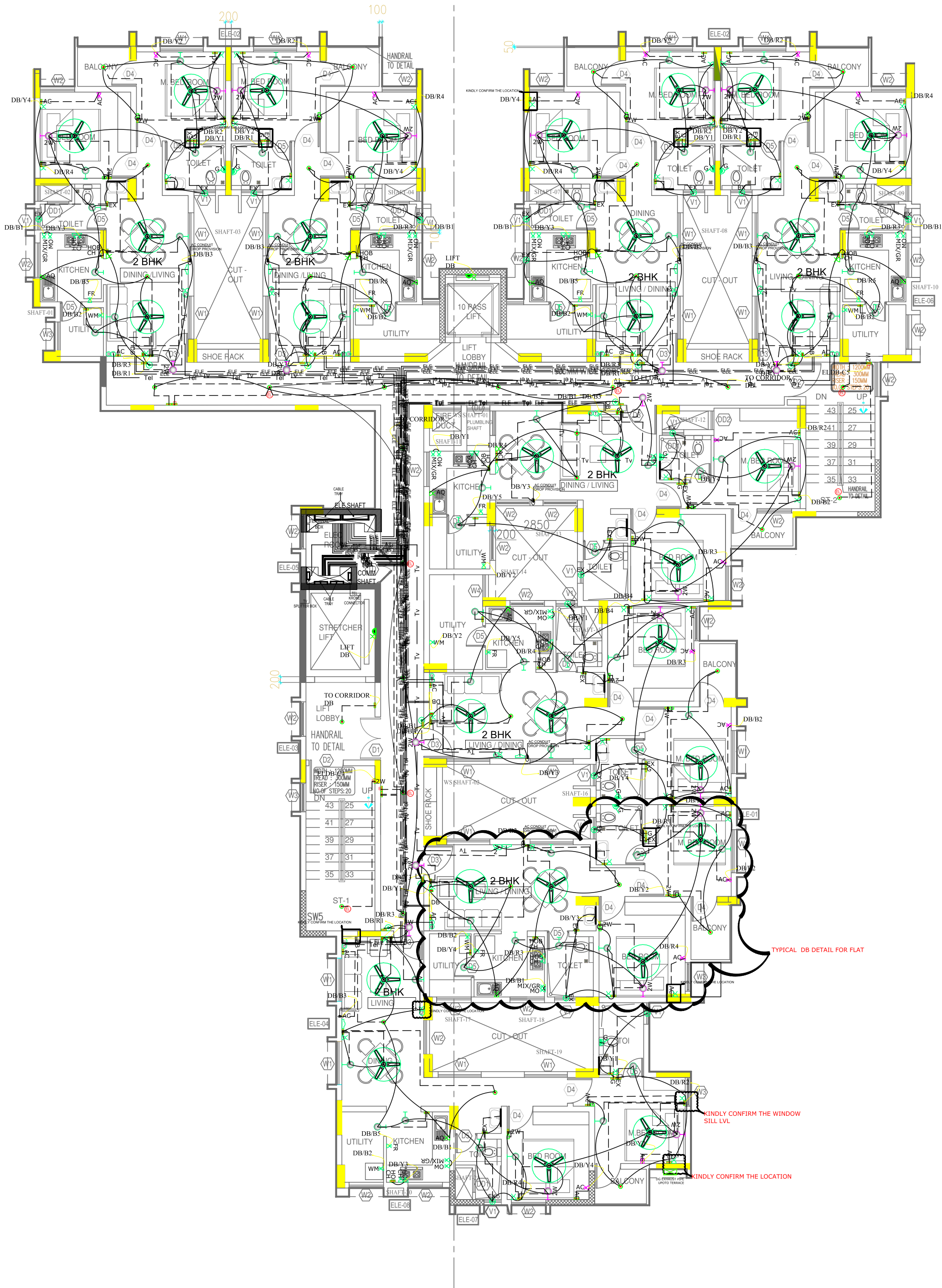


NOTE:  
IN LIVING ROOM 600 MM LENGTH  
WALL REQUIRED TO MOUNT THE TV  
SOCKETS & OUTLETS

ELECTRICAL LEGEND:-		
SYMBOL	DESCRIPTION	MOUNTING HEIGHT DETAILS
	18W LED RECESSED DOWNLIGHT	CEILING
	18W LED RECESSED DOWNLIGHT 2WAY LIGHT POINT	CEILING
	18W LED WALL LIGHT	2300MM
	18W LED WALL LIGHT 2WAY LIGHT POINT	2300MM
	18W LED WALL LIGHT	2300MM
	CEILING FAN POINT(ELDC FAN)	2800 MM/AS PER VENTILATOR LEVEL
	EXHAUST FAN	2800 MM/AS PER VENTILATOR LEVEL
	2 NOS OF TV SWITCHED SOCKET	600 MM
	GENERAL 6A SWITCHED SOCKET	KITCHEN-300 MM FROM THE COUNTER @600MM IN LIVING @900MM IN BEDSIDE
	16A SWITCHED SOCKET	KITCHEN-300 MM FROM THE COUNTER
	GEYSER SOCKET	ABOVE FALSE CEILING 150MM FROM EDGE OF THE WALL
	16A AC SOCKET	2400 MM
	KSEB INDICATION LAMP	1200 MM
	TV POINT	600 MM
	DATA POINT	600 MM
	AC CONDUIT PROVISION	2400 MM
	MIRROR WALL LIGHT	1950 MM
	DISTRIBUTION BOARD	MATCH WITH LINTEL(2100 MM)
	AC SWITCH	@ 1200MM IN LIVING & DINING @900MM IN BEDSIDE
	NORMAL LIGHT SWITCH	1200MM
	2WAY LIGHT SWITCH	1200/ BED SIDE 600MM
	CHIMNEY SOCKET	1800MM
	HOB SOCKET	COUNTER BELOW 300mm
	CHIMNEY SWITCH	1150MM
	HOB SWITCH	1150MM
	CALLING BELL	2400 MM
	CALLING BELL PUSH BUTTON	1350 MM
	BULK HEAD LIGHT	2400 MM
	FRIDGE POINT IN KITCHEN	1600MM
	MIXINDER & MICRO OVEN & GENERAL SOCKET	COUNTER ABOVE 300mm
	AQUA GUARD SOCKET	1650MM
	WASH MACHINE SOCKET	1200MM
	GEYSER SWITCH	1200 MM
	EXHAUST FAN POINT	2150 MM
	WEATHER PROOF 6A SWITCHED SOCKET	600 MM
	NIGHT LAMP	300 MM
	TELEPHONE POINT	600 MM
	CAMERA 20METER COVERAGE 2.0 MP OF CMOS FIXED DOME	

Wiring Information:  
\* All lighting circuits main from DB to SB 3Rx1.5 Sq.Mm  
after looping SB to Points 3Rx1.5Sq.mm  
\* All Geyser circuits From DB to Respective SB 2Rx2.5 Sq.Mm & 1 Rx1.5 Sq.mm.  
\* Living/Dining AC circuits From DB to Respective SB 3Rx2.5 Sq.Mm  
\* Bedrooms AC circuits From DB to Respective SB 3Rx2.5 Sq.Mm  
\* Kitchen Power Circuit From DB to First 16Amps Socket 3Rx2.5 Sq.Mm  
after Looping 6Amps Socket 3Rx1.5Sq.mm.

INTERNAL FLAT CONDUIT DETAILS	
	2way switch control
	Normal switch control
	Emergency switch control
	circuit control
	DC inverter circuit control
	Emergency circuit control
	CAT6 cable For CCTV
	Tel 20mm Conduit For Telephone
	TV 20mm Conduit For TV
	ELE 32mm Conduit For EB incomer
	ELE 25mm Conduit For DG incomer
	COMM 25mm Conduit For communication



TYPICAL ( 1ST TO 11TH) FLOOR PLAN


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05.	ALL LEVELS SHOWN IN DRAWING ARE FINISHED LEVELS UNLESS OTHERWISE MENTIONED

SCHEDULE OF JOINERY				
S.NO	TYPE	OPENING SIZE	DESCRIPTION	
DOORS				
01.	MD	1500 X 2100	MAIN DOOR TO DETAIL	
02.	D1	1490 X 2100	WOODEN FRAME WITH FLUSH DOOR	
03.	D2	1200 X 2100	WOODEN FRAME WITH VIEW PANEL	
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05.	D4	900 X 2100	WOODEN FRAME WITH FLUSH DOOR	
06.	D5	750 X 2100	PVC DOOR	
07.	FD	200 X 2400	FIRE DOOR TO DETAIL	
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WINDOW				
01.	W1	1500 X 1200	WINDOW TO DETAIL	
02.	W2	1200 X 1200	WINDOW TO DETAIL	
03.	W3	1000 X 1200	WINDOW TO DETAIL	
04.	W4	900 X 1200	WINDOW TO DETAIL	
05.	v	750 X 600	VENTILATOR	
06.	v1	600 X 600	VENTILATOR	

01	DRAWING REVISED (G+12 TO G+11)	S.S	G.S.P	25.11.2025
00	FOR DISCUSSION	H.S	G.S.P	17.04.2025
REV	DESCRIPTIONS	DRN	CHK	DATE

Project Name:				
PROPOSED NEW EMPLOYEES QUARTERS AT CHERIYAKADAVANTHARA, KOCHI				
Clients :				
COCHIN SHIPYARD LIMITED				

DRAWING TITLE:			 <b>N</b>
<div>TYPICAL ( 1ST TO 11TH)</div> <div>FLOOR PLAN</div>			
JOB NO:	DRG NO:	REV: 00	REF.CODE:
<div>487/18</div>	<div>487/SQTRS/AR-02</div>	<div>DATE:17.04.25</div>	WOR

Consultants:				
TECHNICALIYA CONSULTANTS PVT. LTD. #25/41,VASANTHA AVENUE,M.R.C NAGAR,CHENNAI-28. PH: 044-24933278, 24933287 FAX: 044-24937341 Email - admin@technicaliya.com				
Drawn: H.S	Checked: G.S.P	Approved: N.G.K		
Scale: 1:100 A2	Date: 17.04.25	Designed: N.G.K		





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SCHEDULE OF JOINERY

S.NO	TYPE	OPENING SIZE	DESCRIPTION
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02.	D1	1490 X 2100	WOODEN FRAME WITH FLUSH DOOR
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04.	W4	900 X 1200	WINDOW TO DETAIL
05.	V	750 X 600	VENTILATOR
06.	V1	600 X 600	VENTILATOR

01	DRAWING REVISED (G+12 TO G+11)	S.S	G.S.P	25.11.2025
00	FOR DISCUSSION	H.S	G.S.P	17.04.2025
REV	DESCRIPTIONS	DRN	CHK	DATE

Project Name:  
  
**PROPOSED NEW EMPLOYEES QUARTERS  
AT CHERIYAKADAVANTHARA, KOCHI**

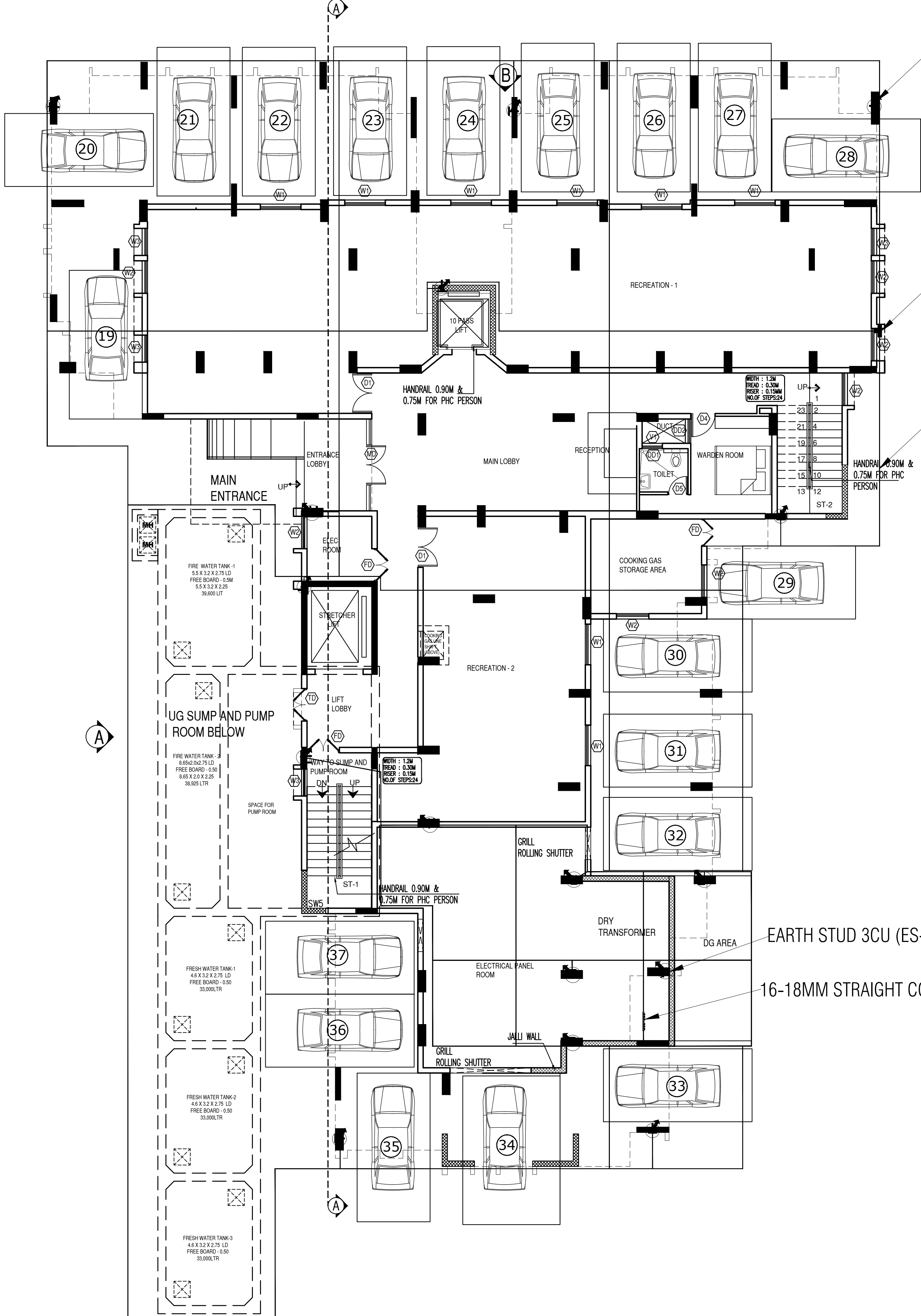
Clients :  
  
**COCHIN SHIPYARD LIMITED**

DRAWING TITLE:  <b>STILT FLOOR PLAN</b>			
JOB NO: 487/18	DRG NO: 487/SQTRS/AR-01	REV: 01 DATE: 25.11.25	REF.CODE: WOR

Consultants: <b>TECHNICALIYA CONSULTANTS PVT. LTD.</b> #25/41,VASANTHA AVENUE,M.R.C NAGAR,CHENNAI-28. PH: 044-24933278, 24933287 FAX: 044-24937341 Email - admin@technicaliya.com			
Drawn: H.S	Checked: G.S.P	Approved: N.G.K	
Scale: 1:100 A2	Date: 17.04.25	Designed: N.G.K	



GROUND FLOOR PLAN



VERTICAL RISER FOR 10MM DIA COPPER BONDED STEEL ROUND CONDUCTOR

EXOTHERMIC WELDING

10MM DIA COPPER BONDED STEEL ROUND CONDUCTOR INSIDE THE SOIL

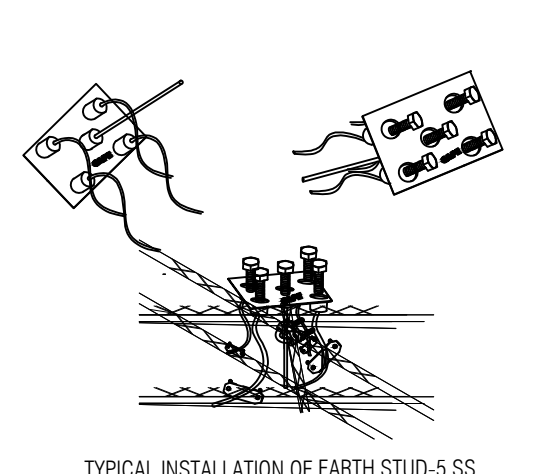
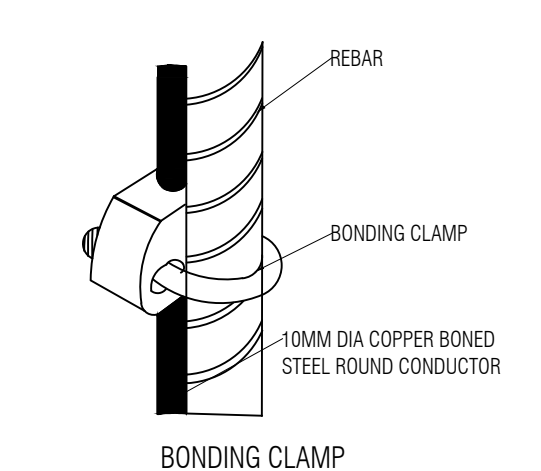
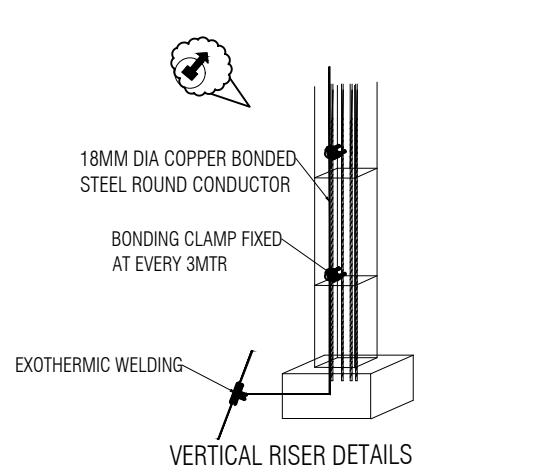
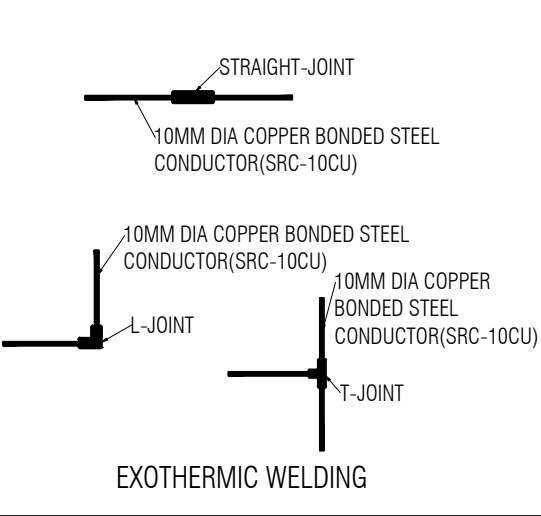
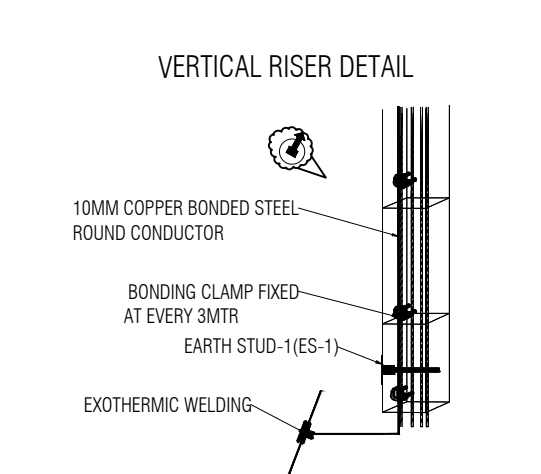
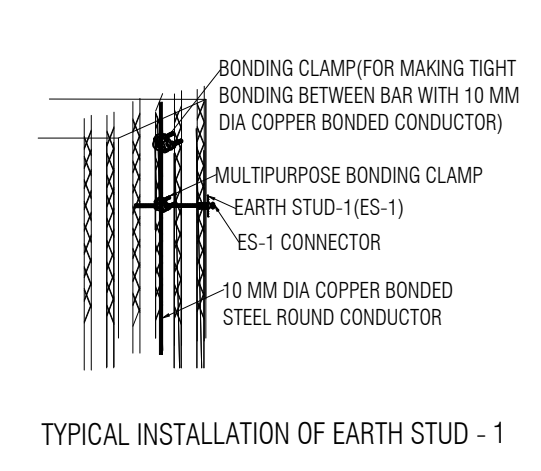
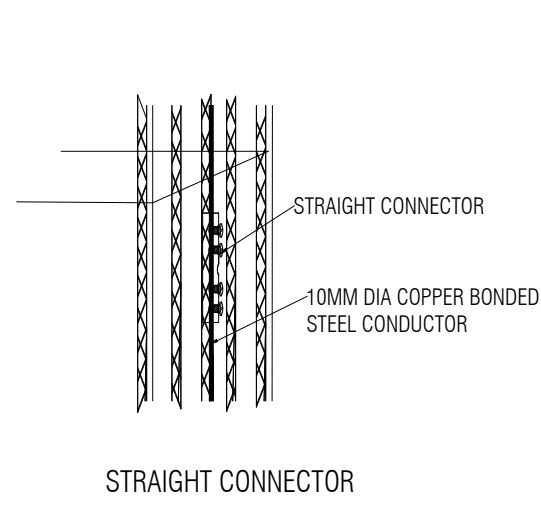
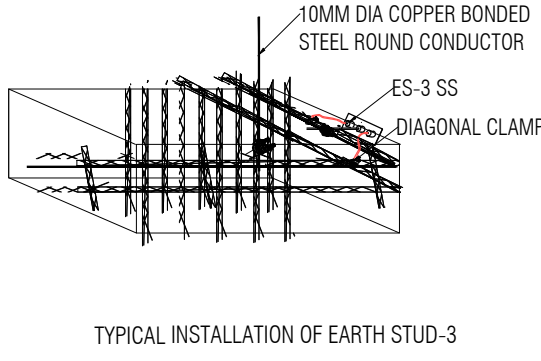
EARTH STUD 3CU (ES-3CU)

16-18MM STRAIGHT CONNECTOR

LEGEND	
	10 MM DIA COPPER BONDED STEEL ROUND CONDUCTOR
	18 MM DIA COPPER BONDED STEEL ROUND CONDUCTOR
	VERTICAL RISER FOR 10MM DIA COPPER BONDED STEEL ROUND CONDUCTOR
	VERTICAL RISER FOR 18MM DIA COPPER BONDED STEEL ROUND CONDUCTOR
	EARTH STUD (ES - 1)
	10MM STRAIGHT CONNECTOR
	BONDING CLAMP
	EARTH STUD 3 (ES-3SS)
	EARTH STUD 3CU (ES-3CU)
	EARTH STUD 5SS (ES-5SS)
	EXOTHERMIC WELDING

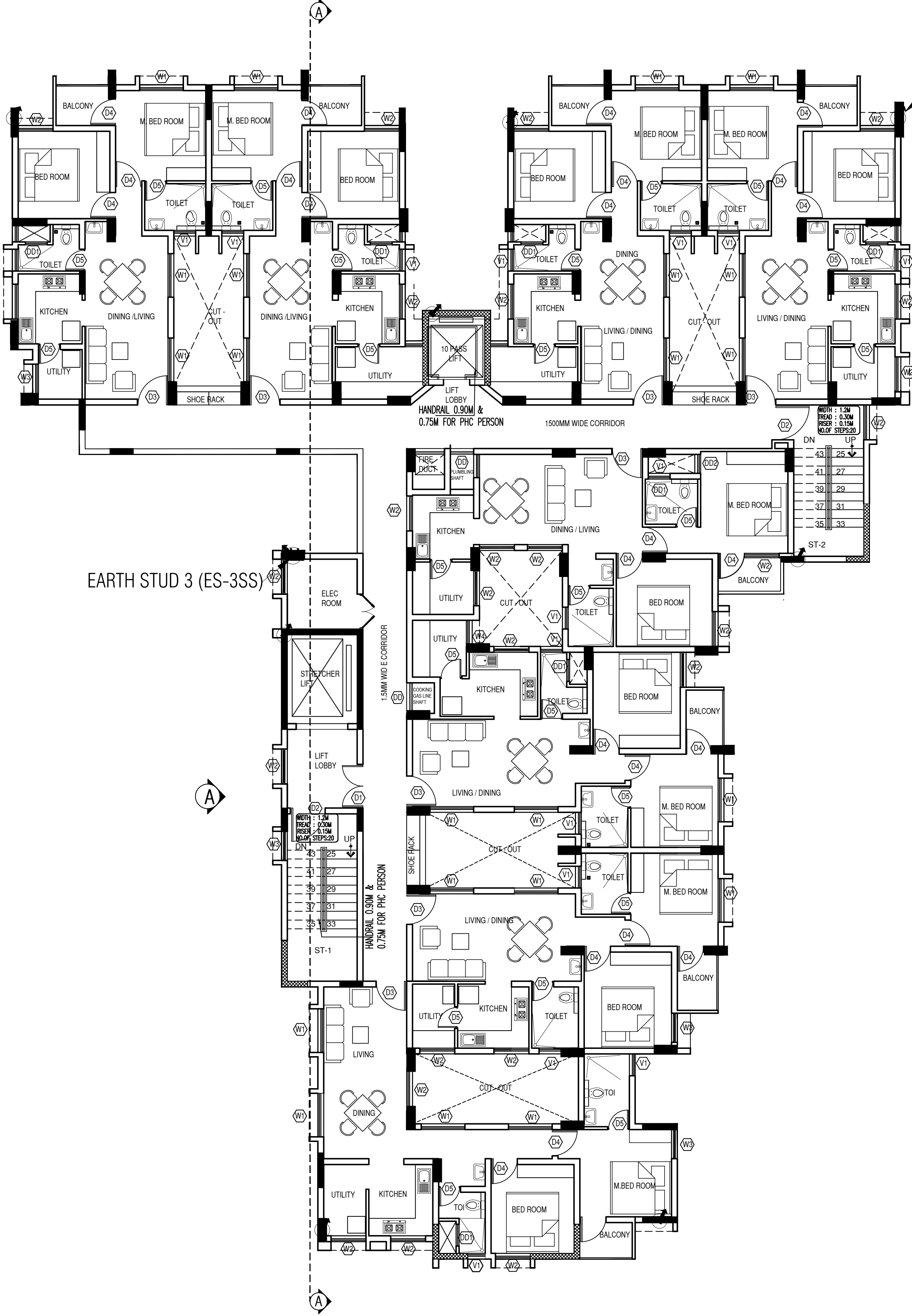
NOTE:-  
AIR TERMINATION :  
1) Level III Protection based on the risk assessment.  
2) Vertical air terminal at the top of the building covering all corners based on Angle of protection method.  
3) Fixing support for the conductor considered at every 1 mtr.  
4) 8mm dia Round Solid Aluminium alloy considered as conductor.  
5) Expansion joints as well as accessories such as cross connectors, straight connectors included conforming IS/IEC 62305.

PROJECT : New Employees Quarters at Cheriyakadavanthara			
CONSULTANT : M/s.SR ASSOCIATES			
SHEET TITLE : GROUND FLOOR PLAN			
DRAWING TITLE : TNS -PME INTEGRATED EARTHING SYSTEM CONFORMING TO IS 732, IS 3043,IS/IEC 62305-3, NBC 2016 & IEC60364-5-54			
DRAWING NO : CEPL-TN-EMPLOYEES QUARTERS-SR-5900		JOB NO : 2025-5900-TN	
DRAWN		SHEET NO	1
CHECKED		PAPER SIZE	A0
DATE	27-01-2026	REVISION NO	R0
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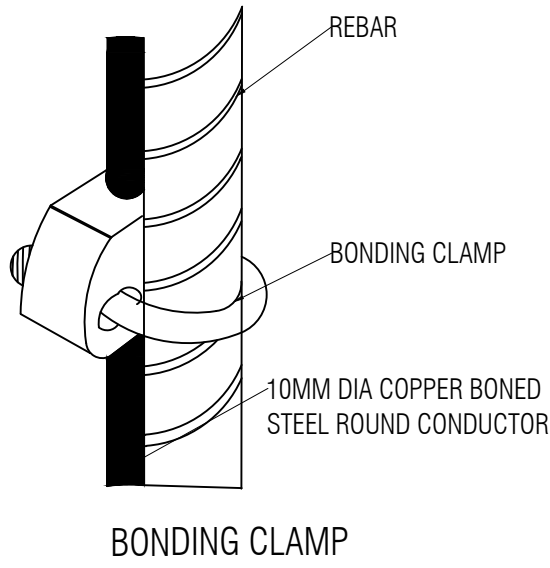




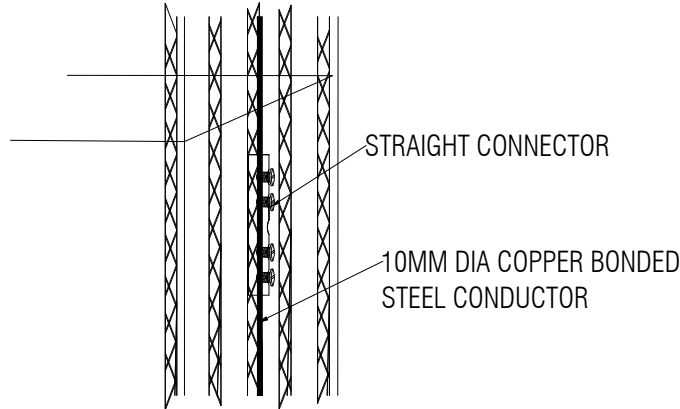
TYPICAL FLOOR PLAN (1ST TO 11TH)



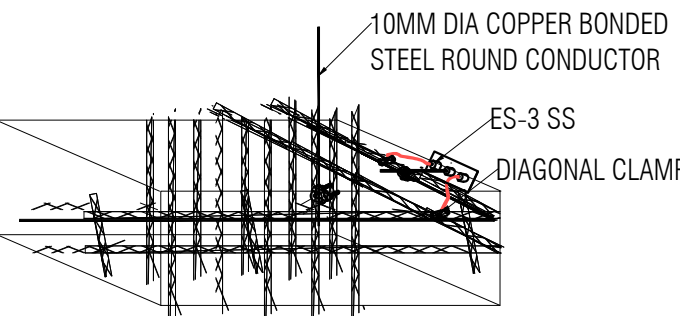
VERTICAL RISER FOR 10MM DIA COPPER BONDED STEEL ROUND CONDUCTOR



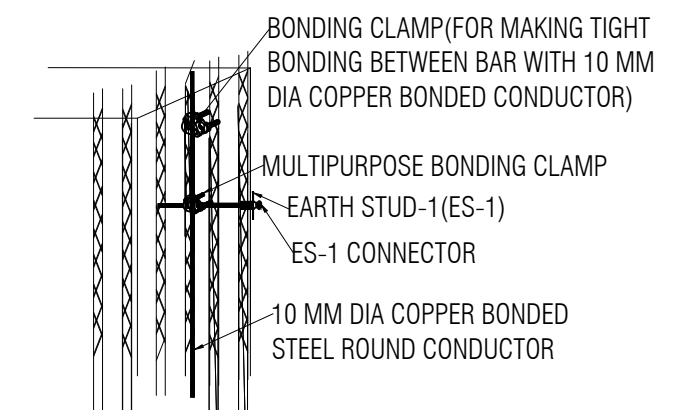
BONDING CLAMP



STRAIGHT CONNECTOR

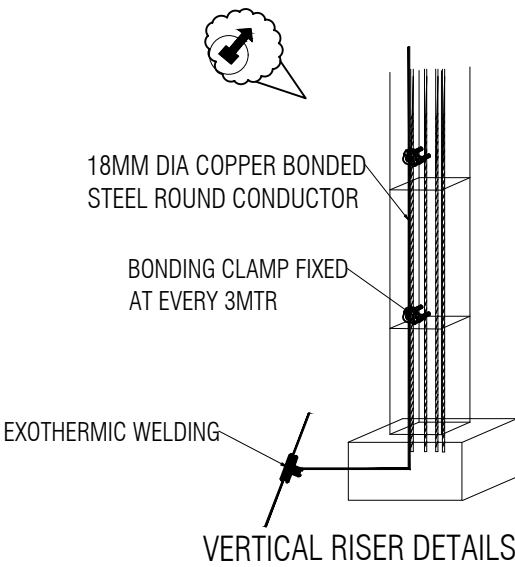
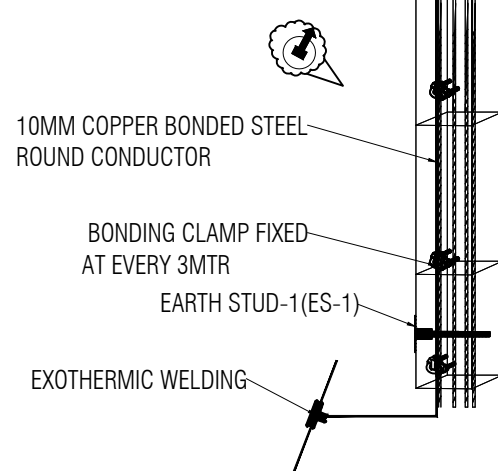


TYPICAL INSTALLATION OF EARTH STUD-3



TYPICAL INSTALLATION OF EARTH STUD - 1

VERTICAL RISER DETAIL



VERTICAL RISER DETAILS

LEGEND

	10 MM DIA COPPER BONDED STEEL ROUND CONDUCTOR
	18 MM DIA COPPER BONDED STEEL ROUND CONDUCTOR
	VERTICAL RISER FOR 10MM DIA COPPER BONDED STEEL ROUND CONDUCTOR
	VERTICAL RISER FOR 18MM DIA COPPER BONDED STEEL ROUND CONDUCTOR
	EARTH STUD 3 (ES-3SS)
	10MM STRAIGHT CONNECTOR
	BONDING CLAMP

NOTE:-

AIR TERMINATION :

- 1) Level III Protection based on the risk assessment.
- 2) Vertical air terminal at the top of the building covering all corners based on Angle of protection method.
- 3) Fixing support for the conductor considered at every 1 mtr.
- 4) 8mm dia Round Solid Aluminium alloy considered as conductor.
- 5) Expansion joints as well as accessories such as cross connectors, straight connectors included conforming IS/IEC 62305.

PROJECT :

New Employees Quarters at Cheriyakadavanthara

CONSULTANT :

M/s.SR ASSOCIATES

SHEET TITLE :

TYPICAL FLOOR PLAN (1ST TO 11TH)

DRAWING TITLE :

TNS-PME INTEGRATED EARTHING SYSTEM CONFORMING TO IS 732, IS 3043, IS/IEC 62305-3, NBC 2016 & IEC60364-5-54

DRAWING NO :

CEPL-TN-EMPLOYEES QUARTERS-SR-5900

JOB NO :

2025-5900-TN

DRAWN

CHECKED

DATE

27-01-2026

DIM

ALL IN MM

SHEET NO

1

PAPER SIZE

A0

REVISION NO

R0

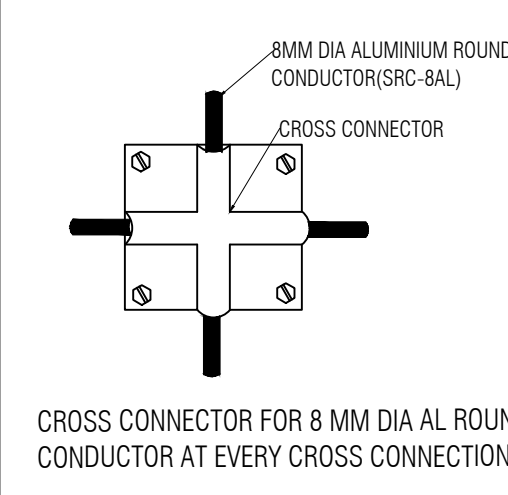
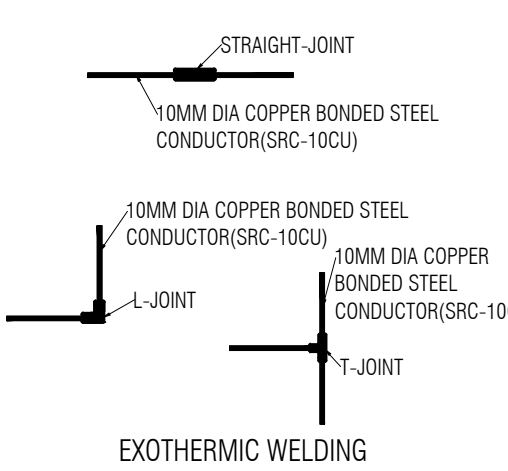
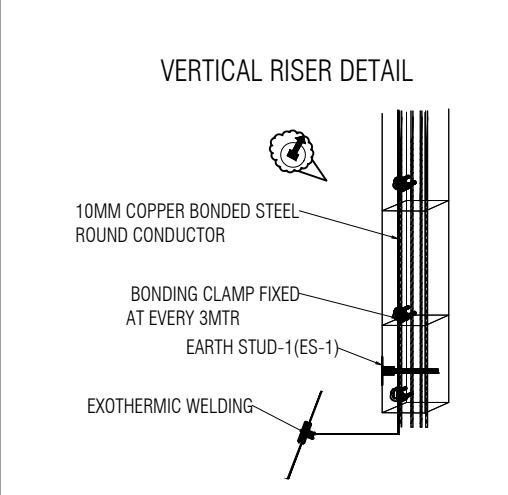
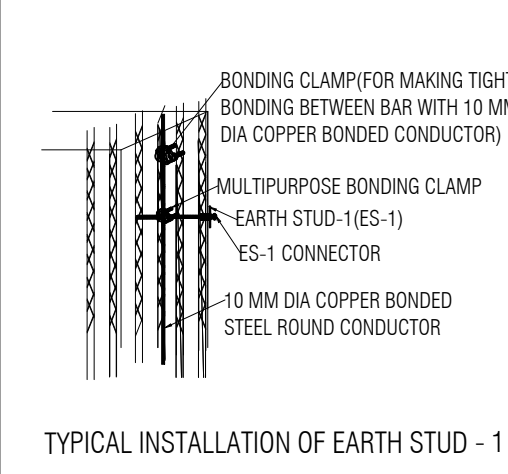
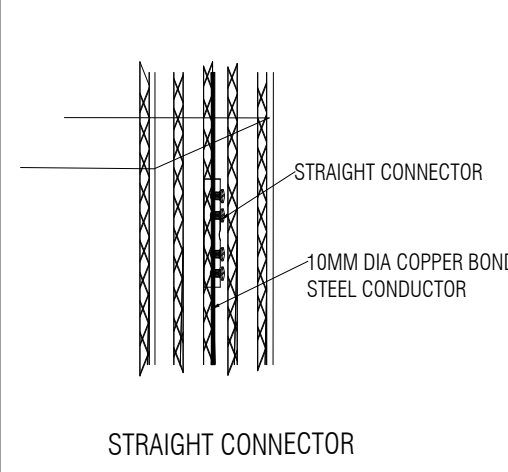
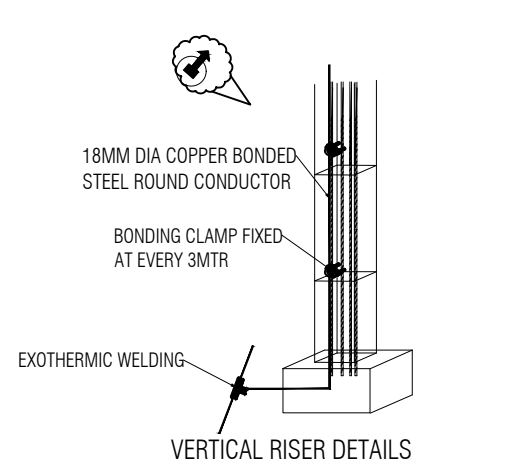
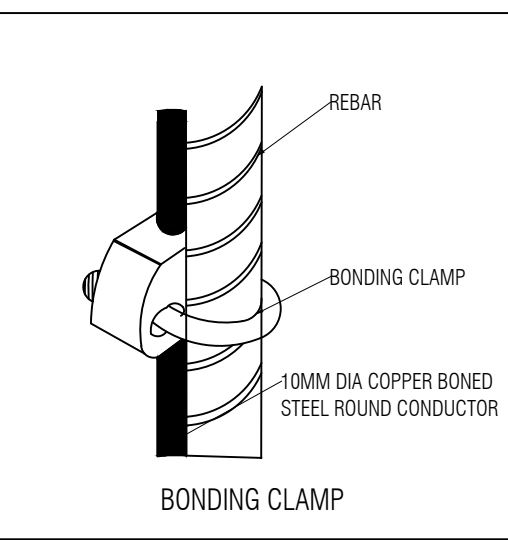


SECTION



SECTION A-A

LEGEND	
	8 MM DIA ALUMINIUM ROUND CONDUCTOR
	10 MM DIA COPPER BONDED STEEL ROUND CONDUCTOR
	CROSS CONNECTOR (CCSS 8-10 MM)
	PARAPET CONDUCTOR HOLDER
	VERTICAL RISER FOR 10MM DIA COPPER BONDED STEEL ROUND CONDUCTOR
	VERTICAL RISER FOR 18MM DIA COPPER BONDED STEEL ROUND CONDUCTOR
	EARTH STUD (ES - 1)
	10MM STRAIGHT CONNECTOR
	BONDING CLAMP
	EXOTHERMIC WELDING

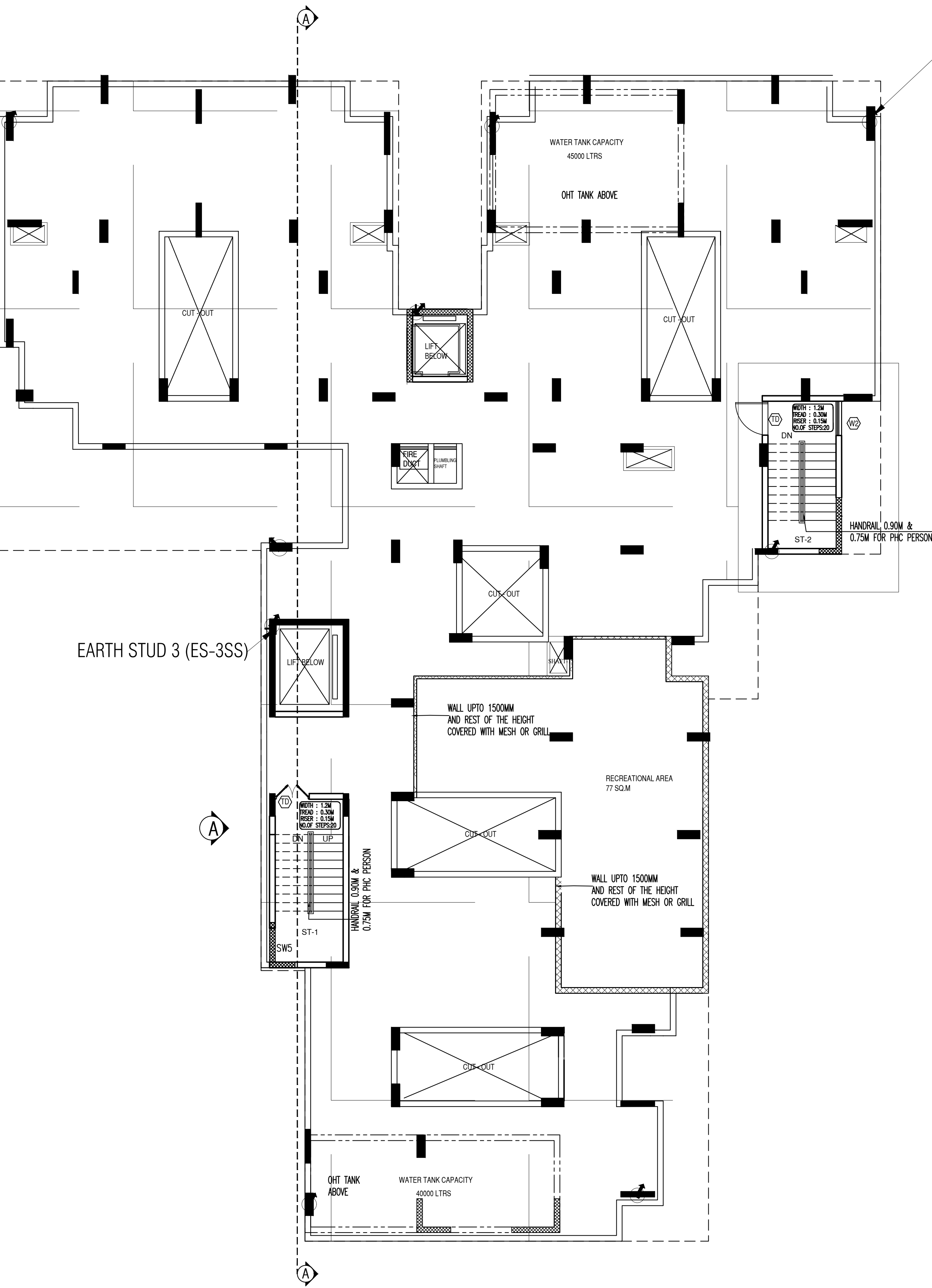


- NOTE:-
- AIR TERMINATION :
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  - 4) 8mm dia Round Solid Aluminium alloy considered as conductor.
  - 5) Expansion joints as well as accessories such as cross connectors, straight connectors included conforming IS/IEC 62305.

PROJECT :			
New Employees Quarters at CheriyaKadavanthara			
CONSULTANT :			
M/s.SR ASSOCIATES			
SHEET TITLE :			
SECTION			
LIGHTNING PROTECTION DESIGN :			
DRAWING TITLE :			
TNS-PME INTEGRATED EARTHING SYSTEM CONFORMING TO IS 732, IS 3043,IS/IEC 62305-3, NBC 2016 & IEC60364-5-54			
DRAWING NO :		JOB NO :	
CEPL-TN-EMPLOYEES QUARTERS-SR-5900		2025-5900-TN	
DRAWN		SHEET NO	1
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DATE	27-01-2026	REVISION NO	RO
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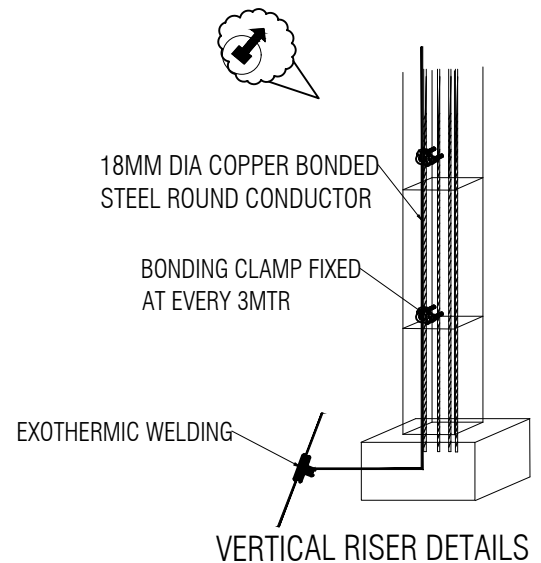
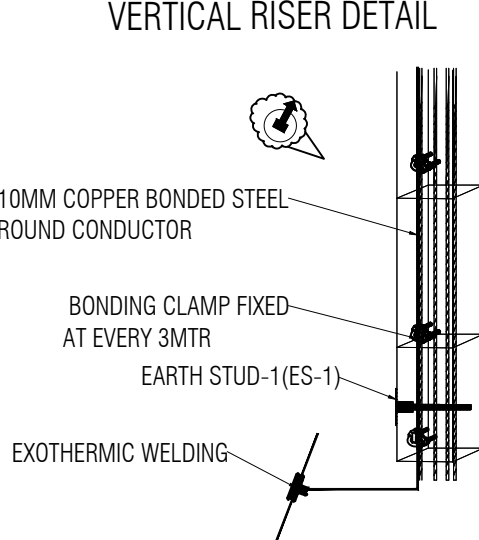
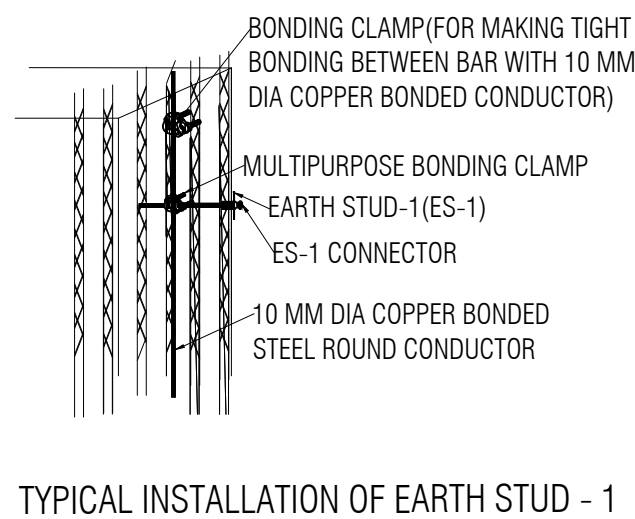
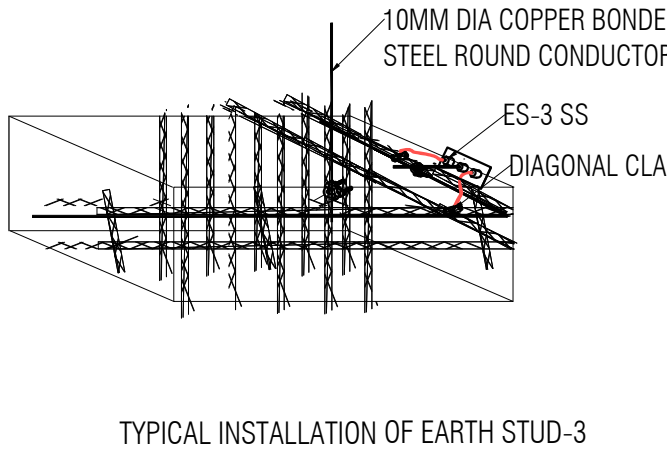
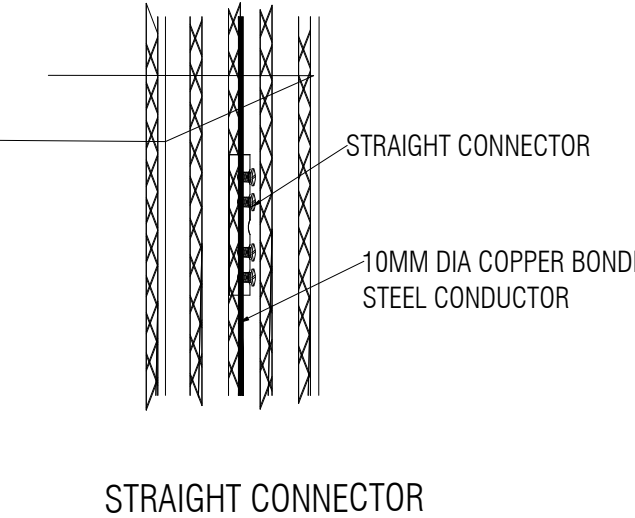
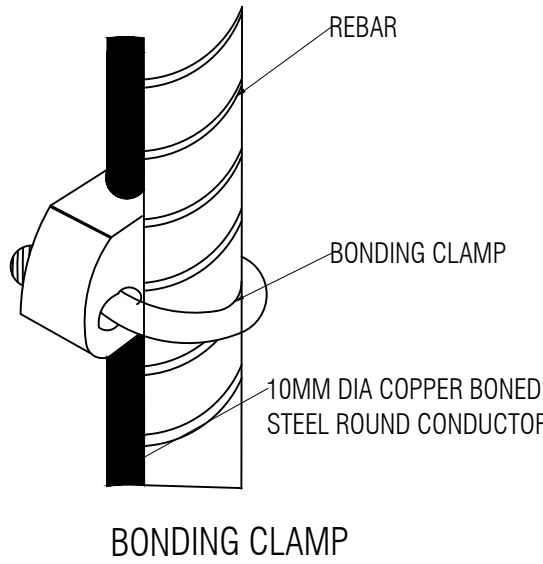


TERRACE FLOOR PLAN



VERTICAL RISER FOR 10MM DIA COPPER BONDED STEEL ROUND CONDUCTOR

EARTH STUD 3 (ES-3SS)



LEGEND	
	10 MM DIA COPPER BONDED STEEL ROUND CONDUCTOR
	18 MM DIA COPPER BONDED STEEL ROUND CONDUCTOR
	VERTICAL RISER FOR 10MM DIA COPPER BONDED STEEL ROUND CONDUCTOR
	VERTICAL RISER FOR 18MM DIA COPPER BONDED STEEL ROUND CONDUCTOR
	EARTH STUD 3 (ES-3SS)
	10MM STRAIGHT CONNECTOR
	BONDING CLAMP

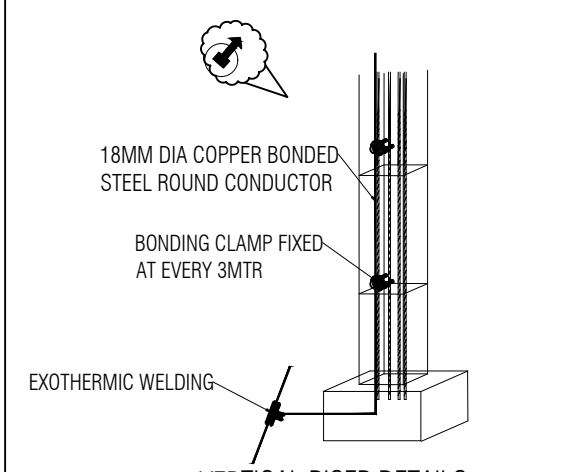
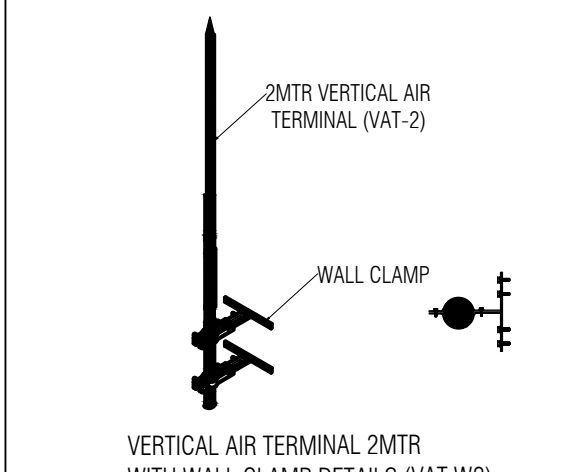
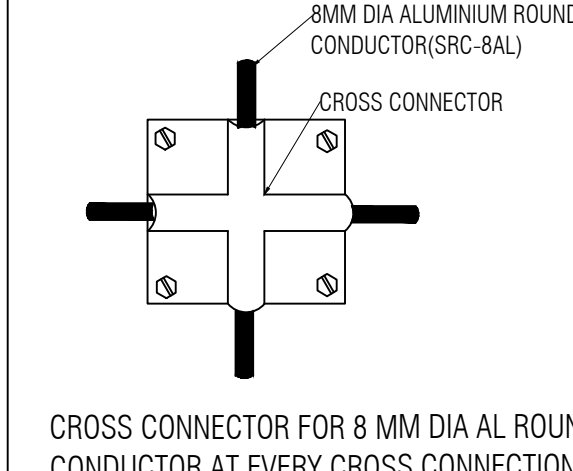
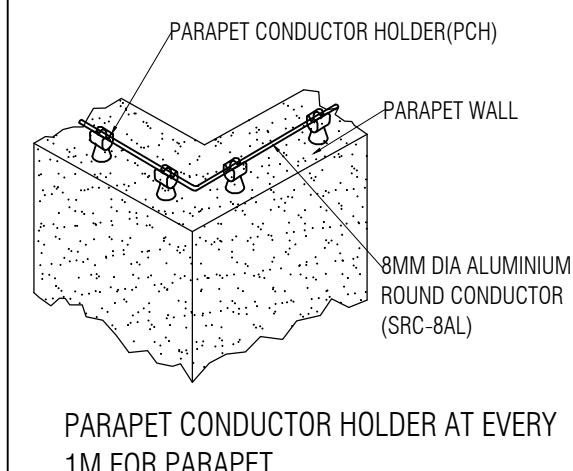
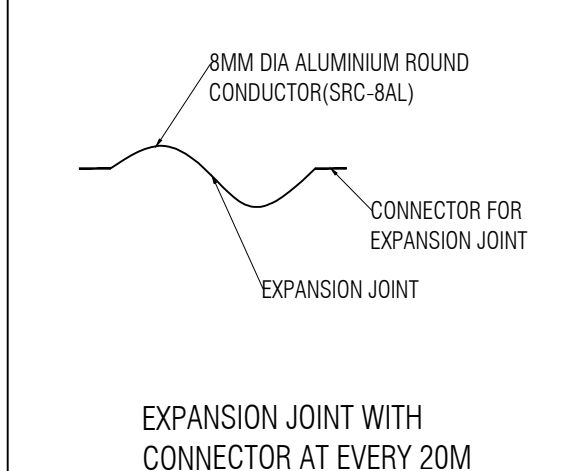
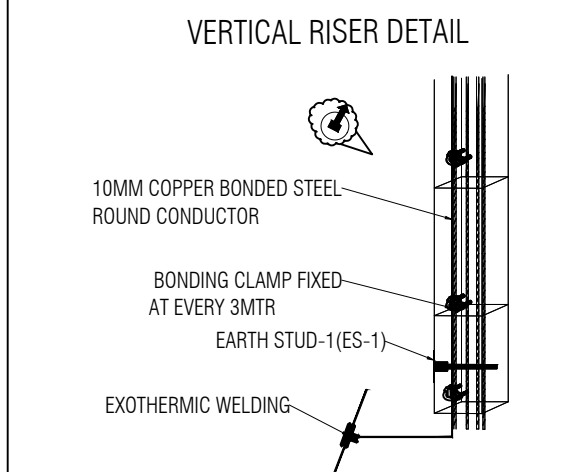
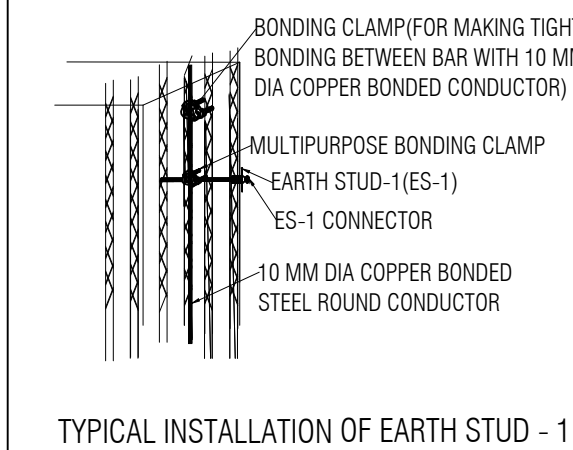
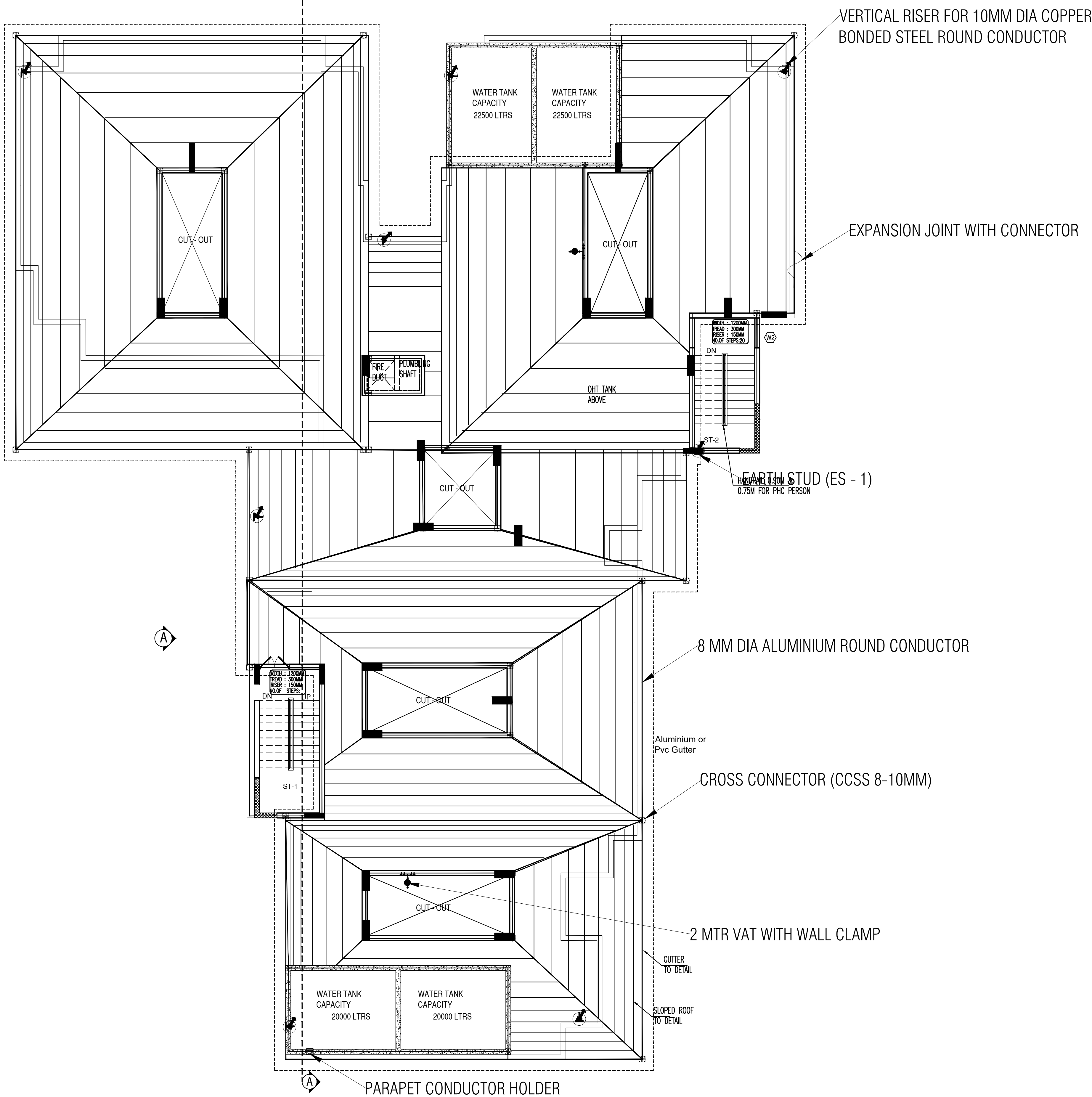
- NOTE:-
- AIR TERMINATION :
- Level III Protection based on the risk assessment.
  - Vertical air terminal at the top of the building covering all corners based on Angle of protection method.
  - Fixing support for the conductor considered at every 1 mtr.
  - 8mm dia Round Solid Aluminium alloy considered as conductor.
  - Expansion joints as well as accessories such as cross connectors, straight connectors included conforming IS/IEC 62305.

PROJECT :	New Employees Quarters at Cheriya Kadavanthara
CONSULTANT :	M/s.SR ASSOCIATES
SHEET TITLE :	TERRACE FLOOR PLAN

DRAWING TITLE :			
TNS-PME INTEGRATED EARTHING SYSTEM CONFORMING TO IS 732, IS 3043, IS/IEC 62305-3, NBC 2016 & IEC 60364-5-54			
DRAWING NO : CEPL-TN-EMPLOYEES QUARTERS-SR-5900		JOB NO : 2025-5900-TN	
DRAWN		SHEET NO	1
CHECKED		PAPER SIZE	A0
DATE	27-01-2026	REVISION NO	RO
DIM	ALL IN MM		



ROOF PLAN



LEGEND	
	8 MM DIA ALUMINIUM ROUND CONDUCTOR
	10 MM DIA COPPER BONDED STEEL ROUND CONDUCTOR
	18 MM DIA COPPER BONDED STEEL ROUND CONDUCTOR
	CROSS CONNECTOR (CCSS 8-10 MM)
	EXPANSION JOINT WITH CONNECTOR
	PARAPET CONDUCTOR HOLDER
	2MTR VAT WITH WALL CLAMP
	VERTICAL RISER FOR 10MM DIA COPPER BONDED STEEL ROUND CONDUCTOR
	VERTICAL RISER FOR 18MM DIA COPPER BONDED STEEL ROUND CONDUCTOR
	EARTH STUD (ES - 1)

- NOTE:-
- AIR TERMINATION :
- Level III Protection based on the risk assessment.
  - Vertical air terminal at the top of the building covering all corners based on Angle of protection method.
  - Fixing support for the conductor considered at every 1 mtr.
  - 8mm dia Round Solid Aluminium alloy considered as conductor.
  - Expansion joints as well as accessories such as cross connectors, straight connectors included conforming IS/IEC 62305.

PROJECT :			
New Employees Quarters at Cheriakadavanthara			
CONSULTANT :			
M/s.SR ASSOCIATES			
SHEET TITLE :			
ROOF PLAN			
LIGHTNING PROTECTION DESIGN :			
DRAWING TITLE :			
TNS-PME INTEGRATED EARTHING SYSTEM CONFORMING TO IS 732, IS 3043,IS/IEC 62305-3, NBC 2016 & IEC60364-5-54			
DRAWING NO :		JOB NO :	
CEPL-TN-EMPLOYEES QUARTERS-SR-5900		2025-5900-TN	
DRAWN		SHEET NO	1
CHECKED		PAPER SIZE	A0
DATE	27-01-2026	REVISION NO	R0
DIM	ALL IN MM		