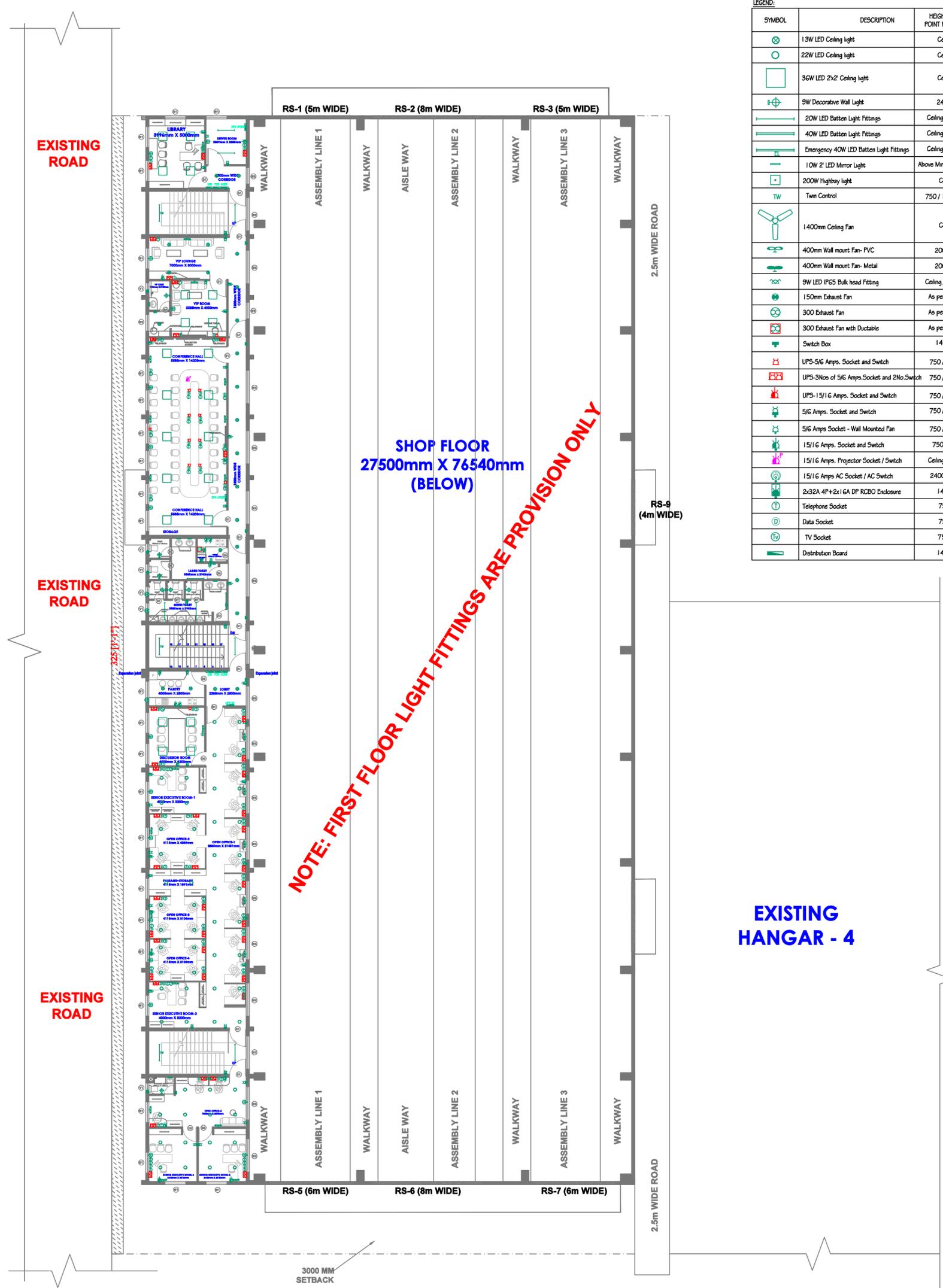


LEGEND:

SYMBOL	DESCRIPTION	HEIGHT OF THE POINT FROM F.F.L.
⊗	13W LED Ceiling light	Ceiling
○	22W LED Ceiling light	Ceiling
□	36W LED 2x2' Ceiling light	Ceiling
⊕	9W Decorative Wall Light	2400mm.
—	20W LED Batten Light Fittings	Ceiling / 2400mm.
—	40W LED Batten Light Fittings	Ceiling / 2400mm.
—	Emergency 40W LED Batten Light Fittings	Ceiling / 2400mm.
—	10W 2' LED Mirror Light	Above Mirror / 2000mm
—	200W Highbay light	Ceiling
TW	Twin Control	750 / 1450mm.
⊗	1400mm Ceiling Fan	Ceiling
⊗	400mm Wall mount Fan- PVC	2000mm
⊗	400mm Wall mount Fan- Metal	2000mm
⊗	9W LED IP65 Bulk head Fitting	Ceiling / 2000mm.
⊗	150mm Exhaust Fan	As per Civil Plan
⊗	300 Exhaust Fan	As per Civil Plan
⊗	300 Exhaust Fan with Ductable	As per Civil Plan
⊕	Switch Box	1450mm.
⊕	UPS-5/6 Amps. Socket and Switch	750 / 1450mm.
⊕	UPS-3Nos of 5/6 Amps.Socket and 2No.Switch	750 / 1450mm.
⊕	UPS-15/16 Amps. Socket and Switch	750 / 1450mm.
⊕	5/6 Amps. Socket and Switch	750 / 1450mm.
⊕	5/6 Amps Socket - Wall Mounted Fan	750 / 2400mm.
⊕	15/16 Amps. Socket and Switch	750 / 1450mm.
⊕	15/16 Amps. Projector Socket / Switch	Ceiling / 750mm.
⊕	15/16 Amps AC Socket / AC Switch	2400 / 1450mm.
⊕	2x32A 4P+2x16A DP RCBO Enclosure	1450mm
⊕	Telephone Socket	750mm.
⊕	Data Socket	750mm.
⊕	TV Socket	750mm.
⊕	Distribution Board	1450mm.

GROUND FLOOR ELECTRICAL LAYOUT

PROJECT TITLE-	CLIENT-	CONSULTANCY-
HANGAR-5	BEML	 <small>53, M.A. Patiswamy Street, K.K. Pudur, Coimbatore - 57 PH: 0422-2450245, 2453323. Email:prof@sg1968@gmail.com www.sgstructural.com</small>

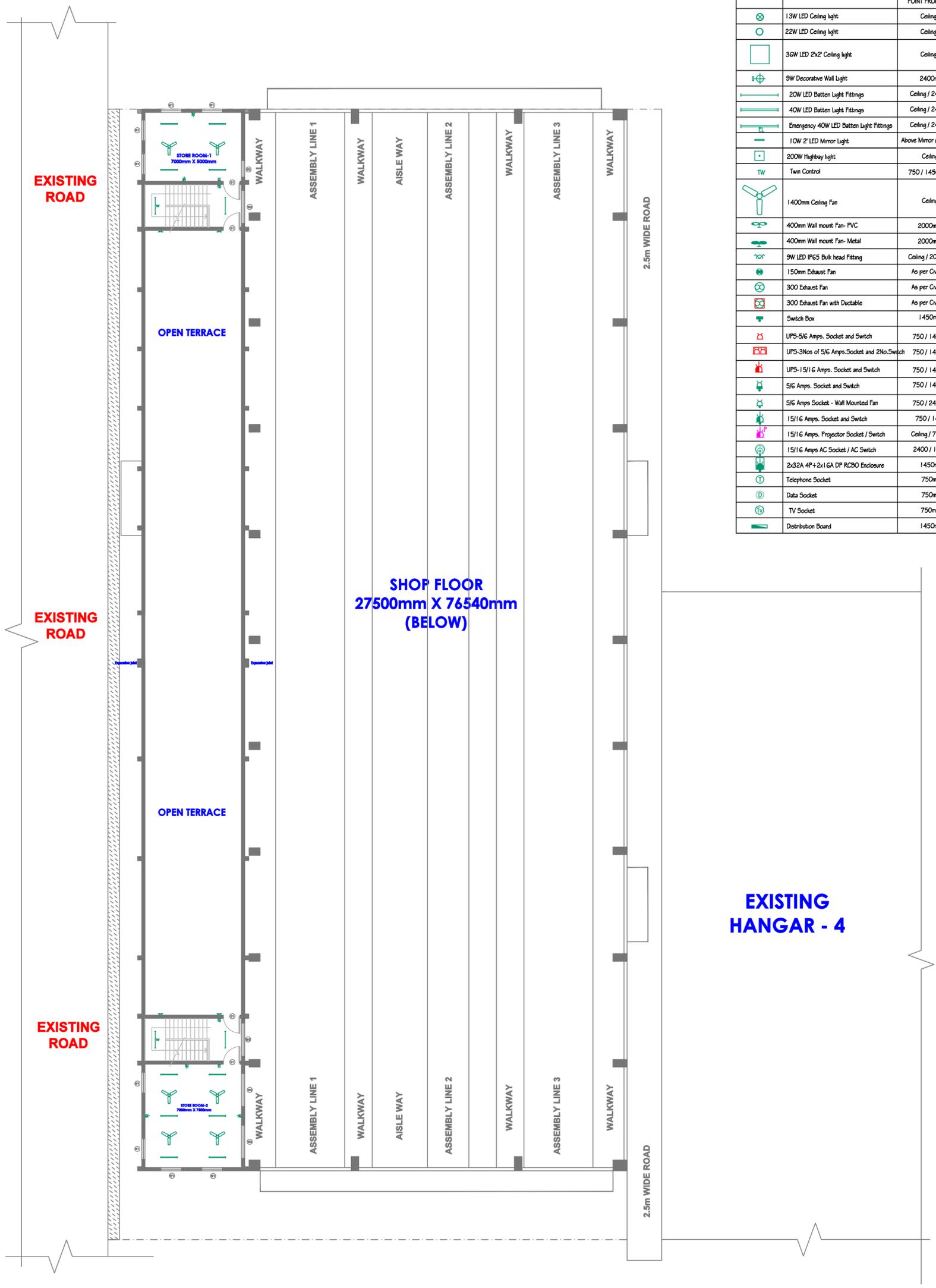


LEGEND:

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⊗	13W LED Ceiling light	Ceiling
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—	20W LED Batten Light Fittings	Ceiling / 2400mm.
—	40W LED Batten Light Fittings	Ceiling / 2400mm.
—	Emergency 40W LED Batten Light Fittings	Ceiling / 2400mm.
—	10W 2' LED Mirror Light	Above Mirror / 2000mm
□	200W Highbay light	Ceiling
TW	Twin Control	750 / 1450mm.
⊕	1400mm Ceiling Fan	Ceiling
⊕	400mm Wall mount Fan- PVC	2000mm
⊕	400mm Wall mount Fan- Metal	2000mm
⊕	9W LED IP65 Bulk head Fitting	Ceiling / 2000mm.
⊕	150mm Exhaust Fan	As per Civil Plan
⊕	300 Exhaust Fan	As per Civil Plan
⊕	300 Exhaust Fan with Ductable	As per Civil Plan
⊕	Switch Box	1450mm.
⊕	UPS-5/6 Amps. Socket and Switch	750 / 1450mm.
⊕	UPS-3Nos of 5/6 Amps.Socket and 2No.Switch	750 / 1450mm.
⊕	UPS- 15/16 Amps. Socket and Switch	750 / 1450mm.
⊕	5/6 Amps. Socket and Switch	750 / 1450mm.
⊕	5/6 Amps Socket - Wall Mounted Fan	750 / 2400mm.
⊕	15/16 Amps. Socket and Switch	750 / 1450mm.
⊕	15/16 Amps. Projector Socket / Switch	Ceiling / 750mm.
⊕	15/16 Amps AC Socket / AC Switch	2400 / 1450mm.
⊕	2x32A 4P+2x1 GA DP RCBO Enclosure	1450mm
⊕	Telephone Socket	750mm.
⊕	Data Socket	750mm.
⊕	TV Socket	750mm.
⊕	Distribution Board	1450mm.

FIRST FLOOR ELECTRICAL LAYOUT

PROJECT TITLE-	CLIENT-	CONSULTANCY-
HANGAR-5	BEML	 <p>SG STRUCTURAL ENGINEERS ARCHITECTS S3, W.A. Praiseworthy Street, K.K. Puder, Coimbatore-33 Ph: 0422-2450245, 2453323. Email:sgpre@1988@gmail.com www.sgstructurals.com</p>



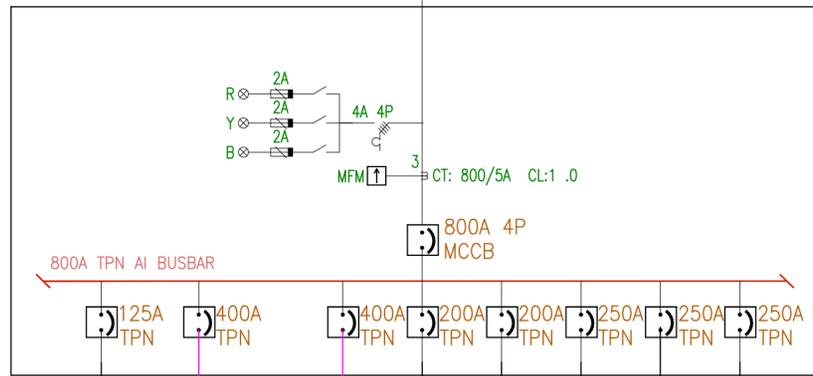
LEGEND:

SYMBOL	DESCRIPTION	HEIGHT OF THE POINT FROM F.F.L.
⊗	13W LED Ceiling light	Ceiling
○	22W LED Ceiling light	Ceiling
□	36W LED 2x2' Ceiling light	Ceiling
⊕	9W Decorative Wall Light	2400mm.
—	20W LED Batten Light Fittings	Ceiling / 2400mm.
—	40W LED Batten Light Fittings	Ceiling / 2400mm.
—	Emergency 40W LED Batten Light Fittings	Ceiling / 2400mm.
—	10W 2' LED Mirror Light	Above Mirror / 2000mm
—	200W Highway light	Ceiling
TV	Twin Control	750 / 1450mm.
⊗	1400mm Ceiling Fan	Ceiling
⊗	400mm Wall mount Fan- PVC	2000mm
⊗	400mm Wall mount Fan- Metal	2000mm
⊗	9W LED IP65 Bulk head Fitting	Ceiling / 2000mm.
⊗	150mm Exhaust Fan	As per Civil Plan
⊗	300 Exhaust Fan	As per Civil Plan
⊗	300 Exhaust Fan with Ductable	As per Civil Plan
⊕	Switch Box	1450mm.
⊕	UPS-5/6 Amps. Socket and Switch	750 / 1450mm.
⊕	UPS-3Nos of 5/6 Amps.Socket and 2No.Switch	750 / 1450mm.
⊕	UPS-15/16 Amps. Socket and Switch	750 / 1450mm.
⊕	5/6 Amps. Socket and Switch	750 / 1450mm.
⊕	5/6 Amps Socket - Wall Mounted Fan	750 / 2400mm.
⊕	15/16 Amps. Socket and Switch	750 / 1450mm.
⊕	15/16 Amps. Projector Socket / Switch	Ceiling / 750mm.
⊕	15/16 Amps AC Socket / AC Switch	2400 / 1450mm.
⊕	2x32A 4P+2x16A DP RCBO Enclosure	1450mm
⊕	Telephone Socket	750mm.
⊕	Data Socket	750mm.
⊕	TV Socket	750mm.
⊕	Distribution Board	1450mm.

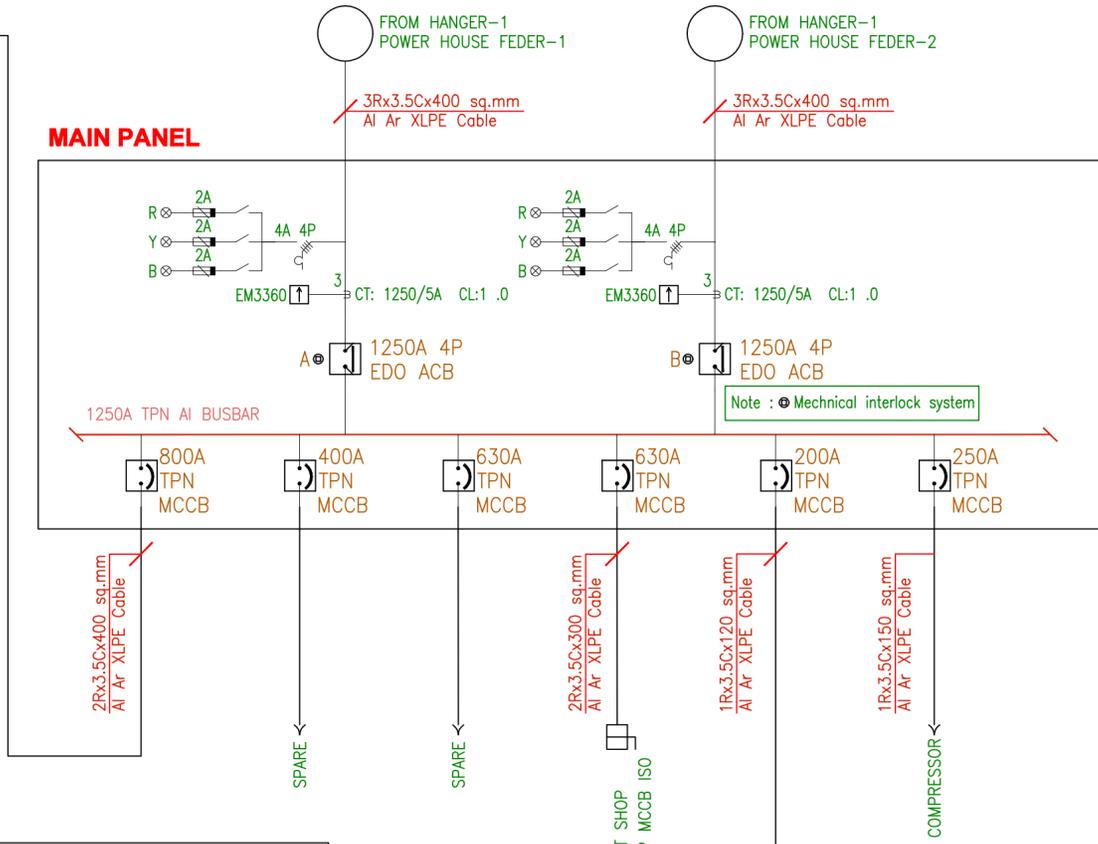
SECOND FLOOR ELECTRICAL LAYOUT

PROJECT TITLE-	CLIENT-	CONSULTANCY
HANGAR-5	BEML	 <small> S.G. S.A. Palanisamy Street, K.K. Nagar, Coimbatore-38 Ph: 0422-2450245, 2453323, Email:sgstructural@gmail.com www.sgstructural.com </small>

SSB-1

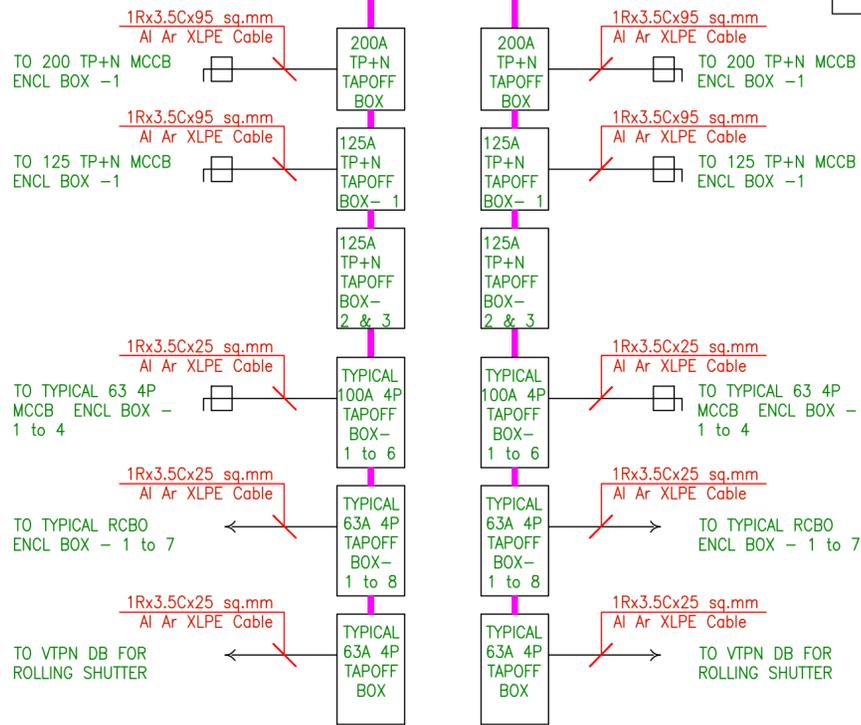


MAIN PANEL

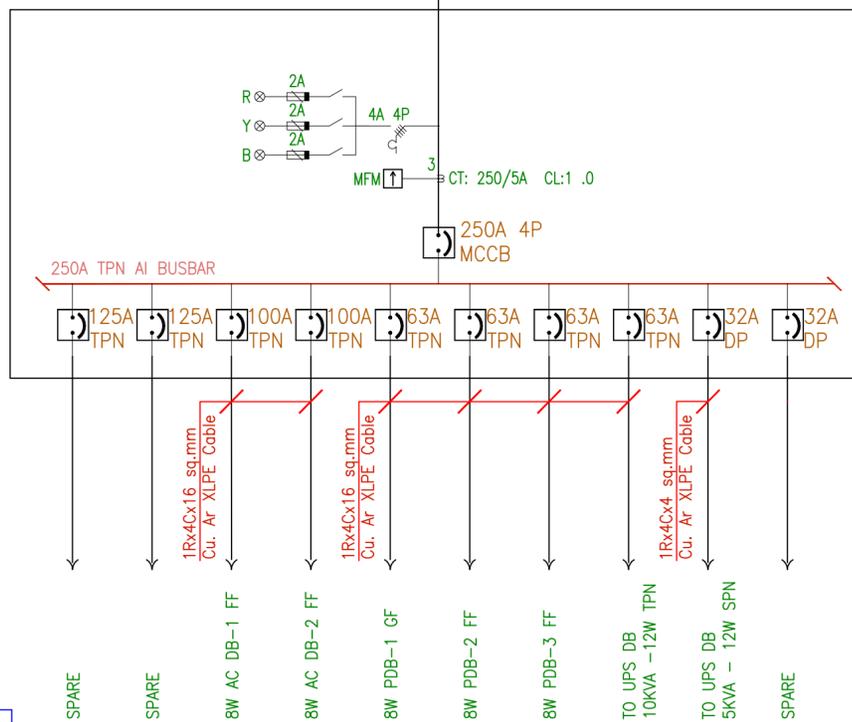


LEGEND: -

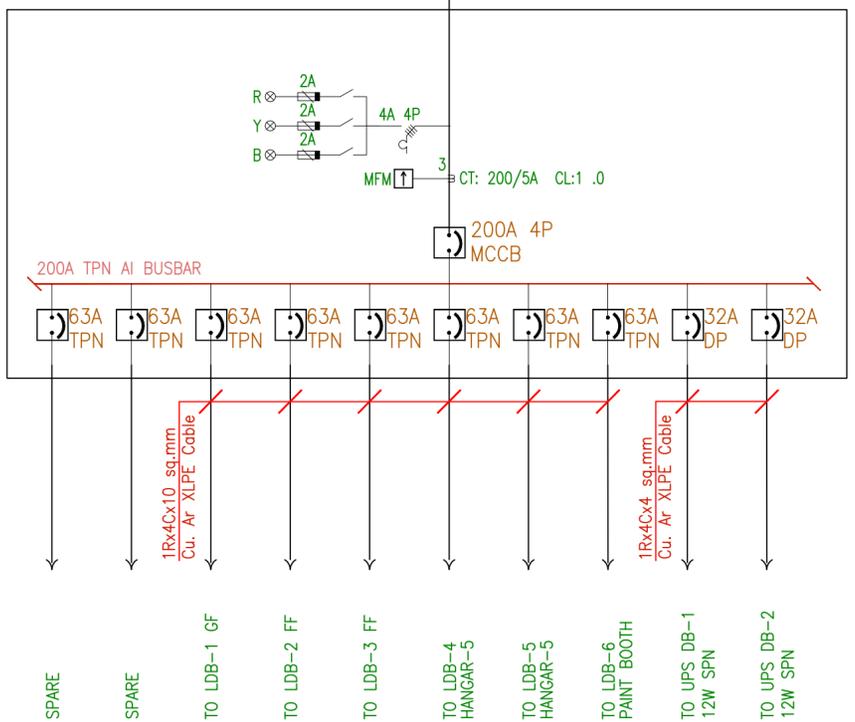
SYMBOL	DESCRIPTION
	ACB
	MCCB
	4P ELCB
	DP ELCB
	4P MCB
	SP MCB
	MULTIFUNCTION METER
	TIMER
	CURRENT TRANSFORMER
	FUSE
	SWITCH FUSE UNIT
	ISOLATOR
	CONTACTOR
	INDICATION LAMP
	INTERLOCK
	ISOLATOR



PSB-1



LSB-1

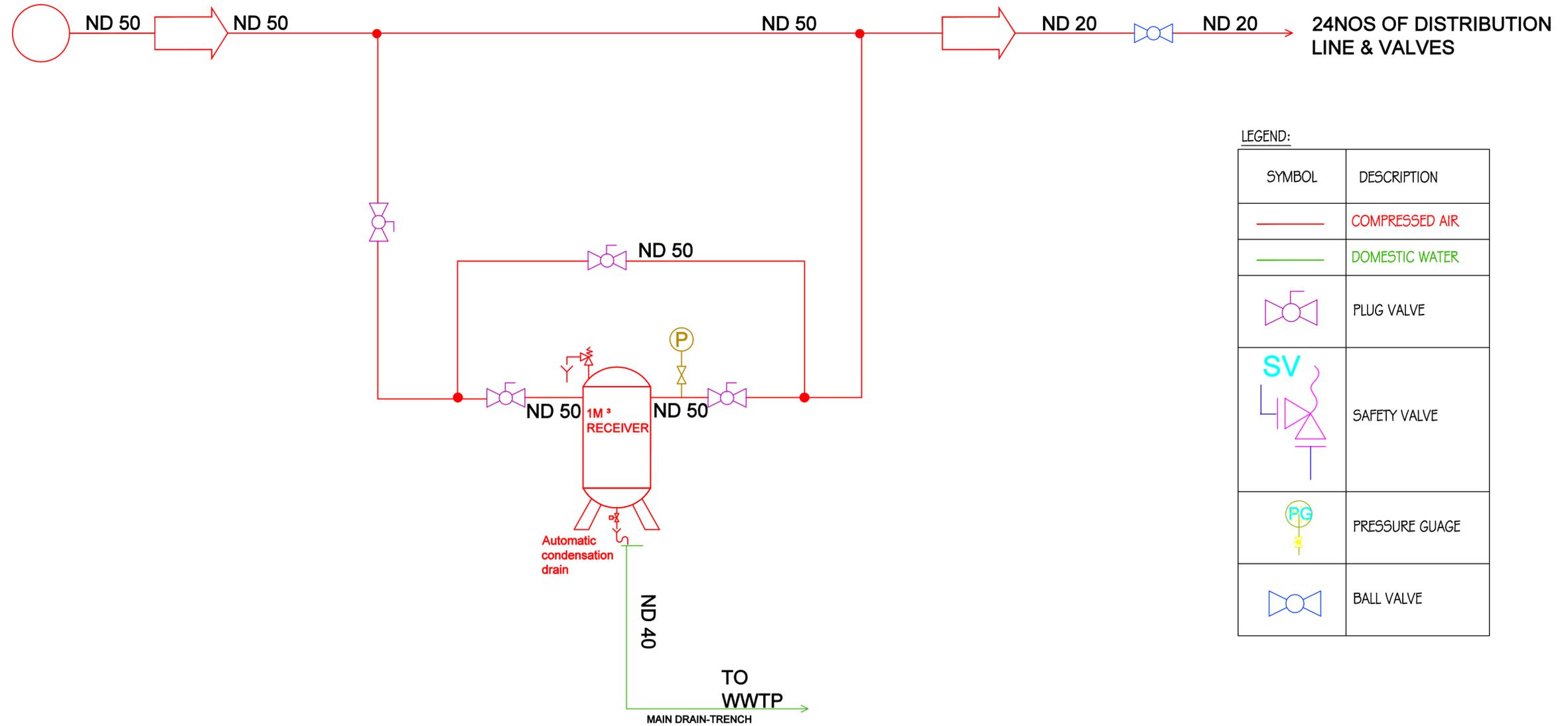


MAIN SINGLE LINE DIAGRAM

PROJECT TITLE-	CLIENT-	CONSULTANCY-
HANGAR-5	BEML	<p>SG STRUCTURAL ENGINEERS ARCHITECTS S3, M.A. Pokanewany Street, K.K. Purur, Coimbatore-38 Ph: 0422-2450245, 2453323. Email:profprgav1986@gmail.com www.sgstructural.com</p>

FROM EXISTING HANGAR-2 & 4
COMPRESSOR AIRLINE

DISTRIBUTION TO HANGAR-5



LEGEND:

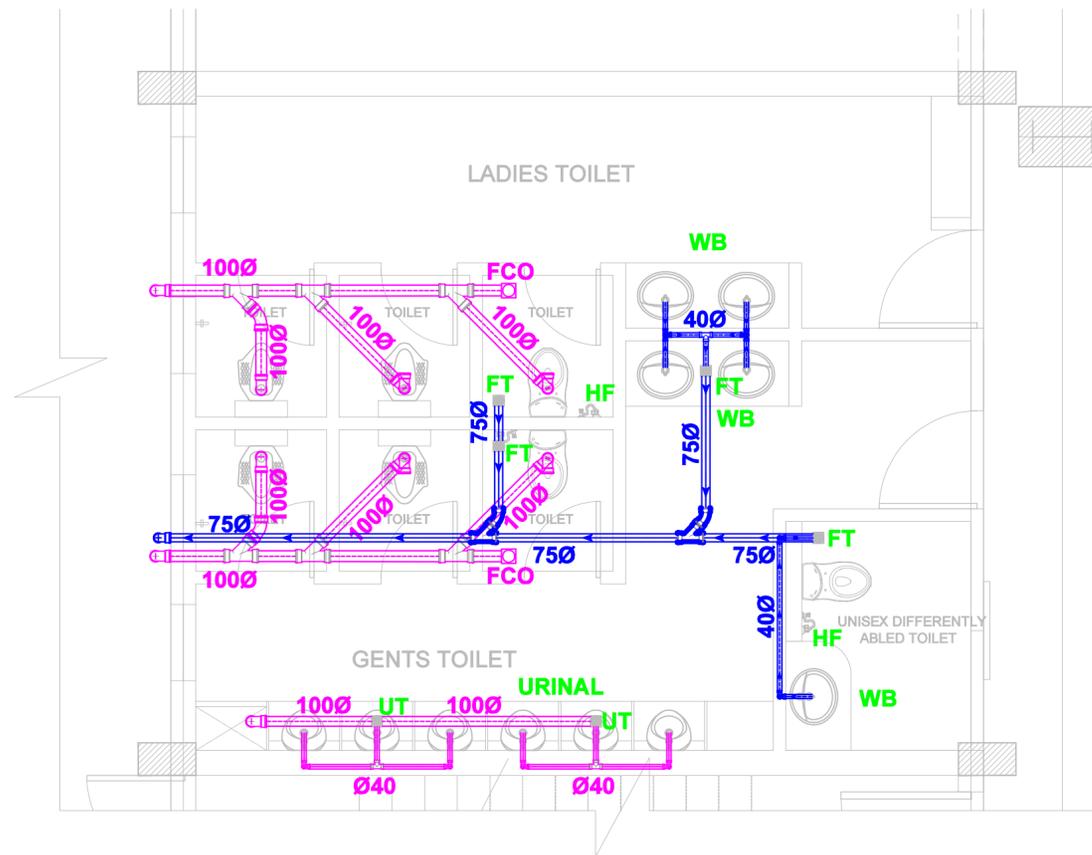
SYMBOL	DESCRIPTION
	COMPRESSED AIR
	DOMESTIC WATER
	PLUG VALVE
	SAFETY VALVE
	PRESSURE GAUGE
	BALL VALVE

COMPRESSED AIR -SYSTEM SCHEMATIC

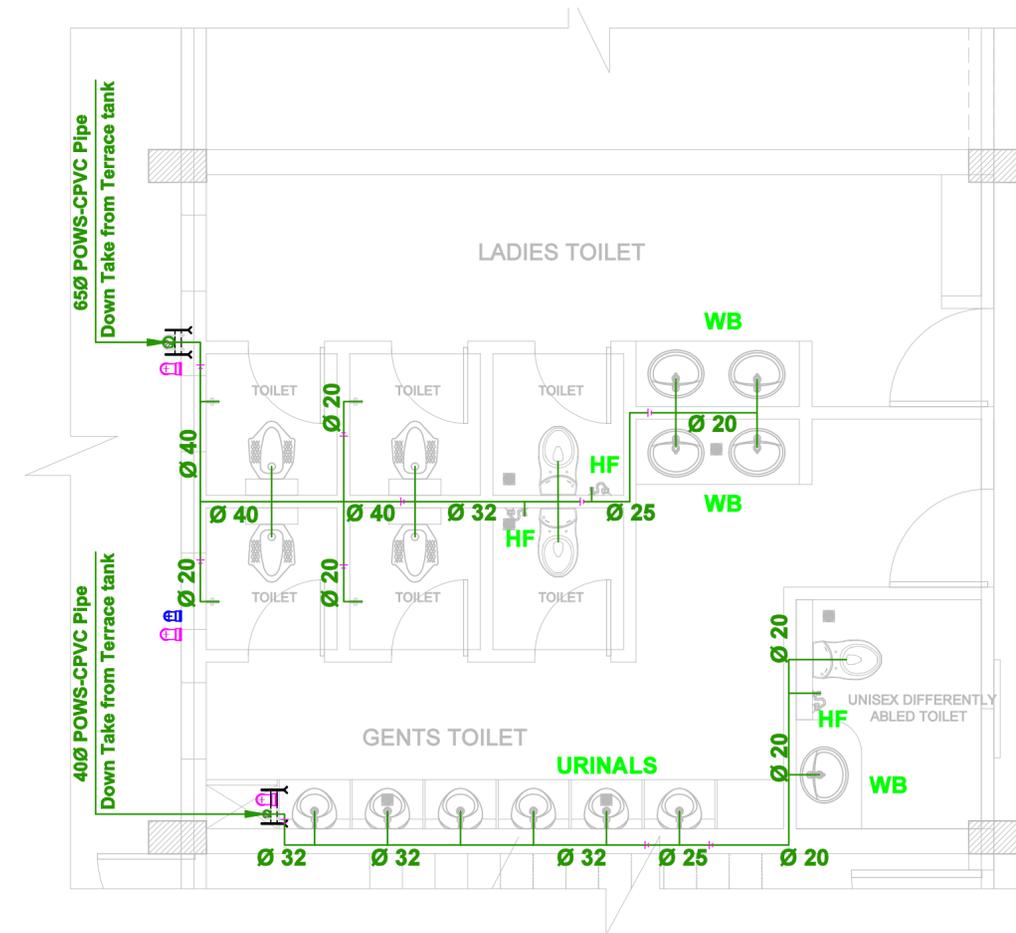
PROJECT TITLE-	CLIENT-	CONSULTANCY-
HANGAR-5	BEML	 SG STRUCTURAL ENGINEERS <small>ENGINEERS/ARCHITECTS</small> <small>53, M.A. Palaniswamy Street, K.K. Purur, Coimbatore-38</small> <small>Ph: 0422-2450245, 2453323. Email: profsgv1969@gmail.com</small> <small>www.sgstructurals.com</small>

NOTE:

1. All levels mentioned are of BOP
2. Reference Dimensions are to the centre of Pipe Line
3. Flange joints to be provided for AIR PIPE at every 30 m/ As per site condition
4. TEEs, Reducer & Elbow to provided where it required
5. Valves 50 mm and above flanged end joints & Valves below 50 mm threaded end joints



GROUND FLOOR PLAN
Internal Sanitary Arrangement Detail



GROUND FLOOR PLAN
Internal Water Supply Arrangement Detail

Legend :-

Identification	Descriptions	Change in diameter of CPVC Pipe
WB	Wash Basin	Ball Valve
IWC	Indian water Closet	MR Mirror
EWC	European water Closet	POWS Potable WS - CPVC Pipe
SK	Sink	
BC	Bib Cock	
UT	Urinal Trap	
FT	Floor Trap	

Legend :-

S.No.	Identification	Descriptions
1.	WB	Wash Basin
2.	IWC	Indian water Closet
3.	EWC	European water Closet
4.		Laboratory Sink
5.	UT	Urinal Trap
6.	FT	Floor Trap with Cockroach arrest
7.		(SWR)110mmØ - CI Pipe
8.		(SWR) 75mmØ - CI Pipe
9.		(SWR) 40mmØ - CI Pipe

PROJECT TITLE-

HANGAR-5

CLIENT-

BEML

CONSULTANCY-

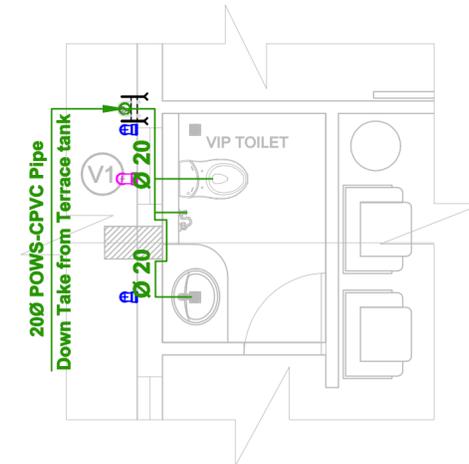
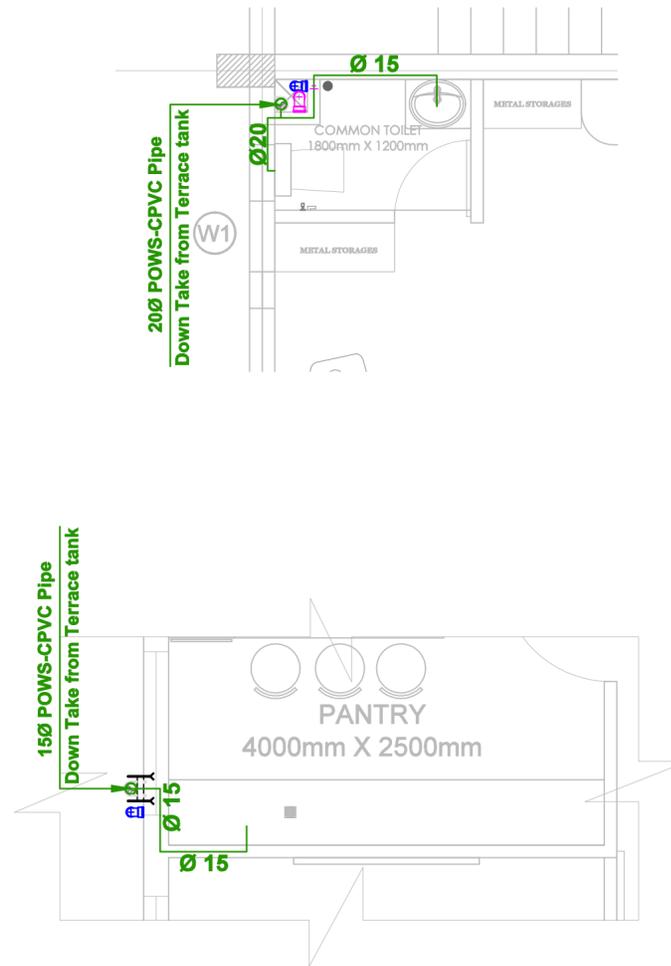
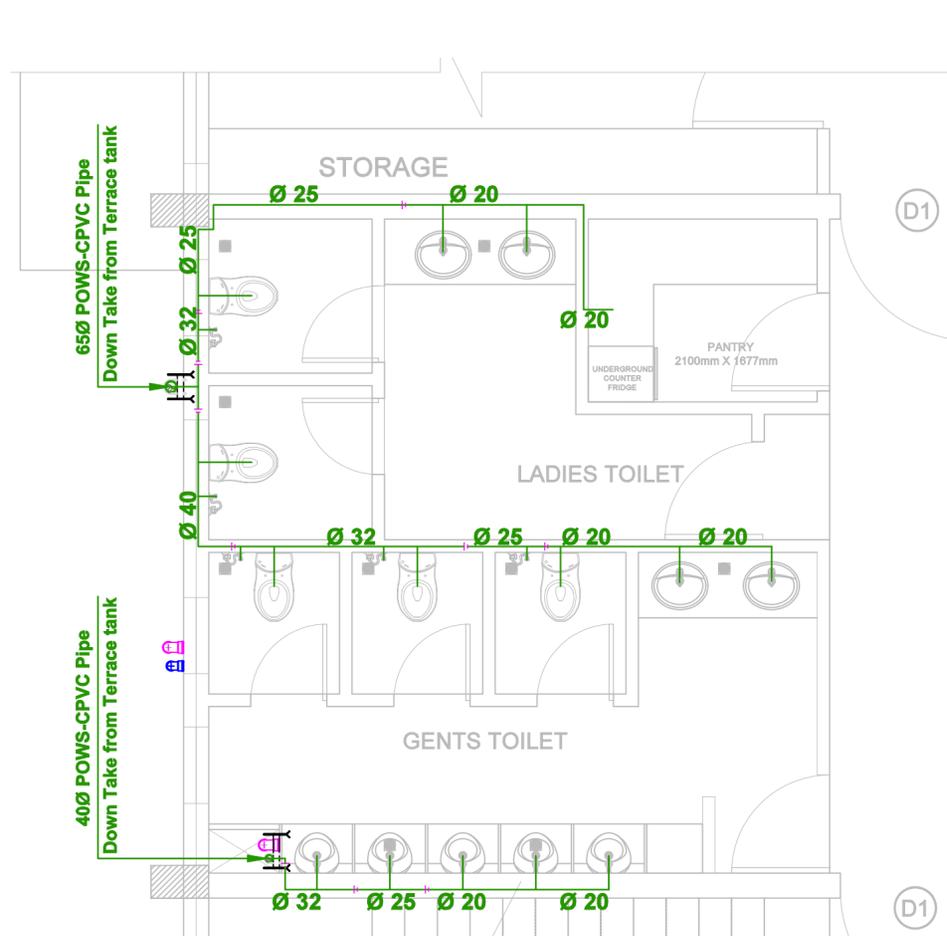


Notes :

- All Valves and fittings shall be of Approved make.
- All final water outlet pipe shall be reduced to 15mmØ for final connection to Taps/Fittings.
- CPVC Water pipe concealed in wall (internal) are shown in the centre of brick wall for the purpose of clarity. However during execution, the walls are to be chased to a minimum depth and pipes are to be concealed.
- Standard heights of Taps : (from FFL)
 - IWC - 450mm
 - Bath rooms - 800mm
 - Wash basin - 800mm
- The flushing cistern shall be installed at 835mm from FFL
- Towel Rods , Soap Dish, Soap tray to be located as per site conditions.

Notes :

- Top level of GT & IC's shall be kept 25mm above FGL around the building.
- Specials at junctions of lateral pipes and vertical stack of PVC (SWR) soil waste must have access door for inspection.
- All 80&110mmØ PVC(SWR) down take pipes shall be taken upto roof level & provided with cowl inside the duct.
- No grating shall be punctured to connect waste pipe to FT (floor trap).The mouth of waste pipe discharge end shall be below grating.
- All fittings shall be of Approved make.
- All Wash Basins shall be provided with Bottle Trap and Waste Coupling.
- Pipe sleeves with socket shall be provided at the appropriate levels where ever the sewer line crosses the concrete beam/wall.
- Maintain minimum 1 in 80 slope in the Pipe lines form Fixtures to 1'st Manhole.
- For all joineries details refer relevant Architectural drawings.
- All vertical stacks to be provided with vent cowl on all odd floors and at top level.



FIRST FLOOR PLAN
Internal Water Supply Arrangement Detail

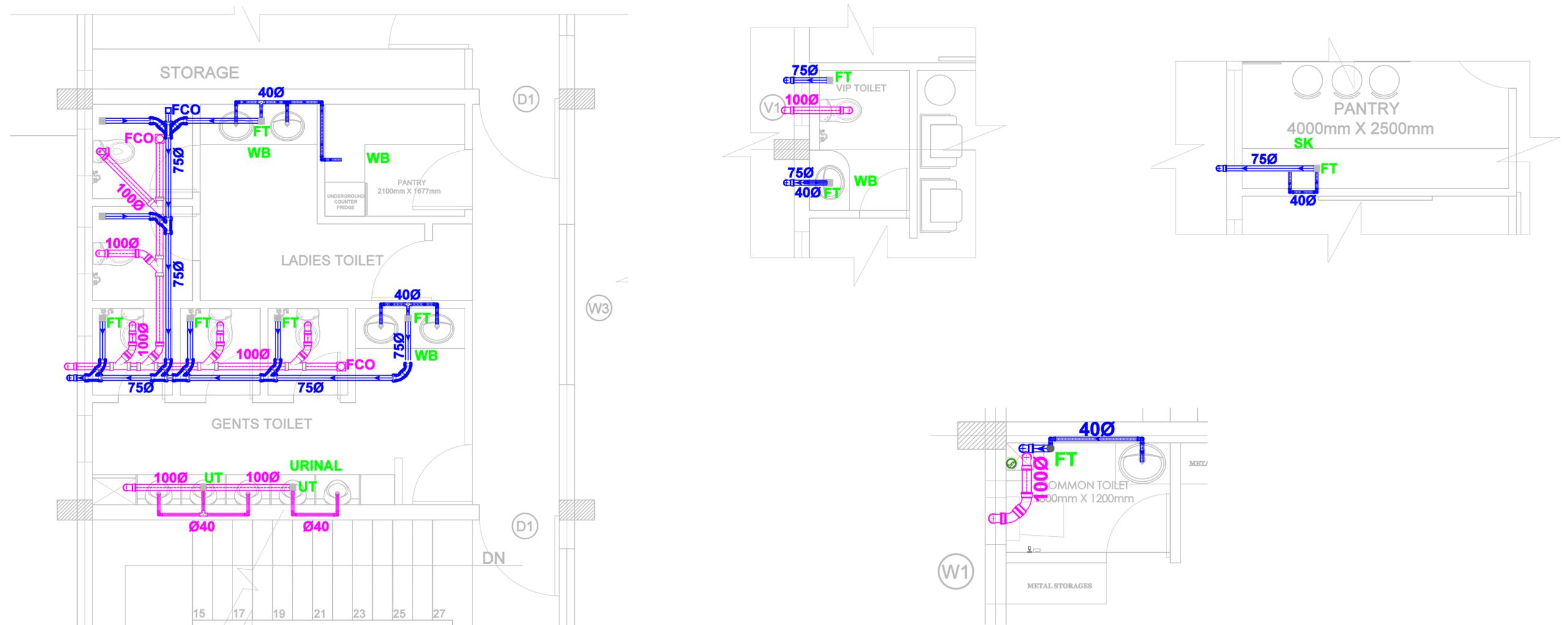
Legend :-

Identification	Descriptions	Change in diameter of CPVC Pipe
WB	Wash Basin	Change in diameter of CPVC Pipe
IWC	Indian water Closet	Ball Valve
EWC	European water Closet	MR Mirror
SK	Sink	POWS Potable WS - CPVC Pipe
BC	Bib Cock	
UT	Urinal Trap	
FT	Floor Trap	

Notes :

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- All final water outlet pipe shall be reduced to 15mmØ for final connection to Taps/Fittings.
- CPVC Water pipe concealed in wall (internal) are shown in the centre of brick wall for the purpose of clarity. However during execution, the walls are to be chased to a minimum depth and pipes are to be concealed.
- Standard heights of Taps : (from FFL)
 - IWC - 450mm
 - Bath rooms - 800mm
 - Wash basin - 800mm
- The flushing cistern shall be installed at 835mm from FFL
- Towel Rods , Soap Dish, Soap tray to be located as per site conditions.

PROJECT TITLE-	CLIENT-	CONSULTANCY-
HANGAR-5	BEML	 SG STRUCTURAL ENGINEERS ARCHITECTS <small>53, M.A. Palaniswamy Street, K.K. Pudur, Coimbatore-38 Ph: 0422-2450245, 2453323. Email: profgsv1968@gmail.com www.sgstructurals.com</small>



FIRST FLOOR PLAN
Internal Sanitary Arrangement Detail

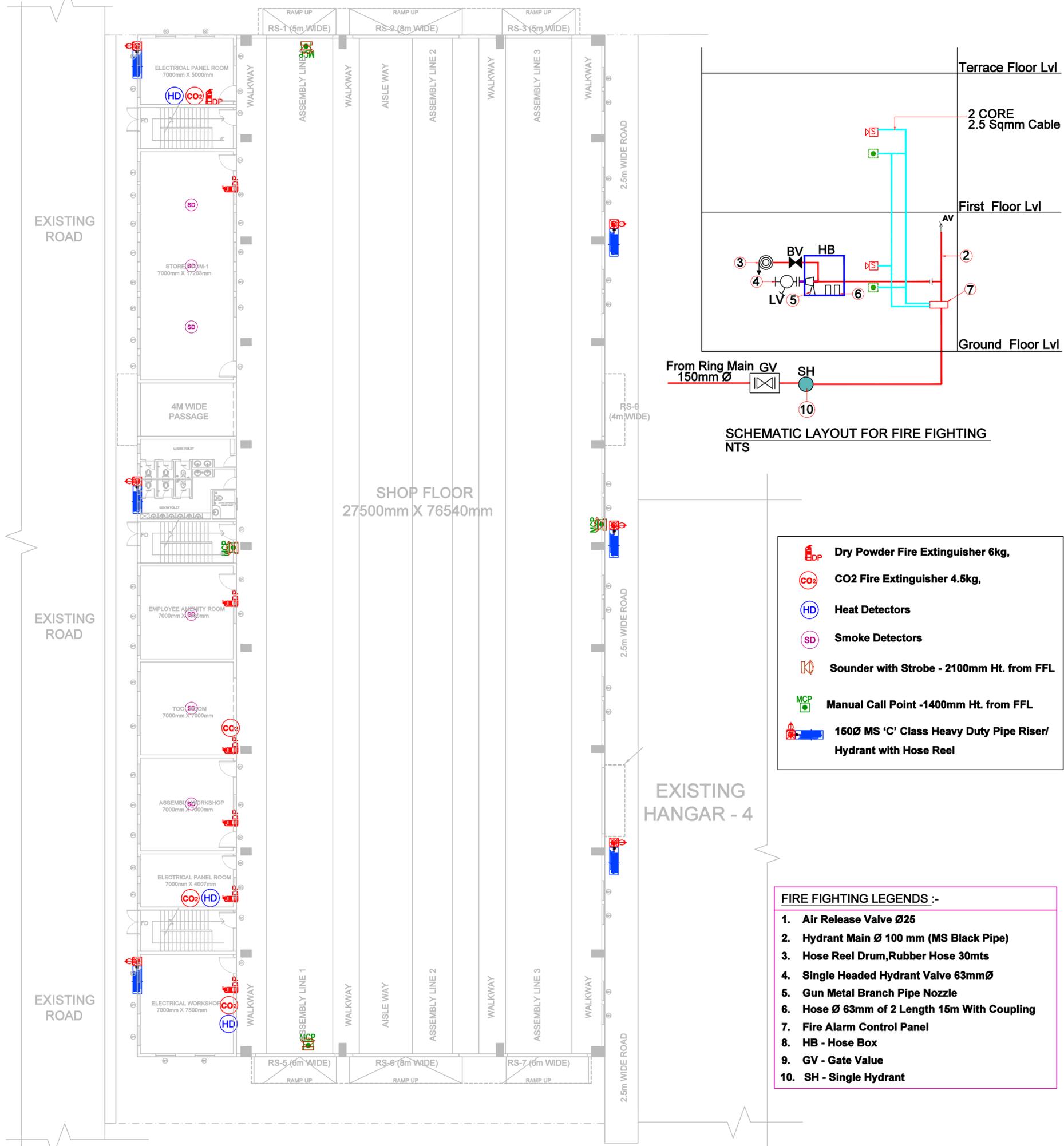
PROJECT TITLE-	CLIENT-	CONSULTANCY-
HANGAR-5	BEML	 SG STRUCTURAL ENGINEERS ENGINEERS/ARCHITECTS <small>53, M.A. Palaniswamy Street, K.K. Pudur, Coimbatore-38 Ph: 0422-2450245, 2453323. Email: profgsv1968@gmail.com www.sgstructuralds.com</small>

Legend :-

S.No.	Identification	Descriptions
1.	 WB	Wash Basin
2.	 IWC	Indian water Closet
3.	 EWC	European water Closet
4.		Laboratory Sink
5.	 UT	Urinal Trap
6.	 FT	Floor Trap with Cockroach arrest
7.	 (SWR)110mmØ - CI Pipe	
8.	 (SWR) 75mmØ - CI Pipe	
9.	 (SWR) 40mmØ - CI Pipe	

Notes :

1. Top level of GT & IC's shall be kept 25mm above FGL around the building.
2. Specials at junctions of lateral pipes and vertical stack of PVC (SWR) soil waste must have access door for inspection.
3. All 80&110mmØ PVC(SWR) down take pipes shall be taken upto roof level & provided with cowl inside the duct.
4. No grating shall be punctured to connect waste pipe to FT (floor trap).The mouth of waste pipe discharge end shall be below grating.
5. All fittings shall be of Approved make.
6. All Wash Basins shall be provided with Bottle Trap and Waste Coupling.
7. Pipe sleeves with socket shall be provided at the appropriate levels where ever the sewer line crosses the concrete beam/wall.
8. Maintain minimum 1 in 80 slope in the Pipe lines form Fixtures to 1st Manhole.
9. For all joineries details refer relevant Architectural drawings.
10. All vertical stacks to be provided with vent cowl on all odd floors and at top level.



- Dry Powder Fire Extinguisher 6kg,
- CO2 Fire Extinguisher 4.5kg,
- Heat Detectors
- Smoke Detectors
- Sounder with Strobe - 2100mm Ht. from FFL
- Manual Call Point -1400mm Ht. from FFL
- 150Ø MS 'C' Class Heavy Duty Pipe Riser/ Hydrant with Hose Reel

- FIRE FIGHTING LEGENDS :-**
1. Air Release Valve Ø25
 2. Hydrant Main Ø 100 mm (MS Black Pipe)
 3. Hose Reel Drum, Rubber Hose 30mts
 4. Single Headed Hydrant Valve 63mmØ
 5. Gun Metal Branch Pipe Nozzle
 6. Hose Ø 63mm of 2 Length 15m With Coupling
 7. Fire Alarm Control Panel
 8. HB - Hose Box
 9. GV - Gate Valve
 10. SH - Single Hydrant

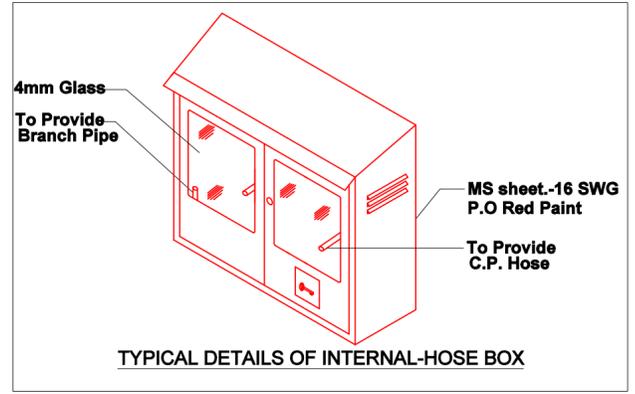
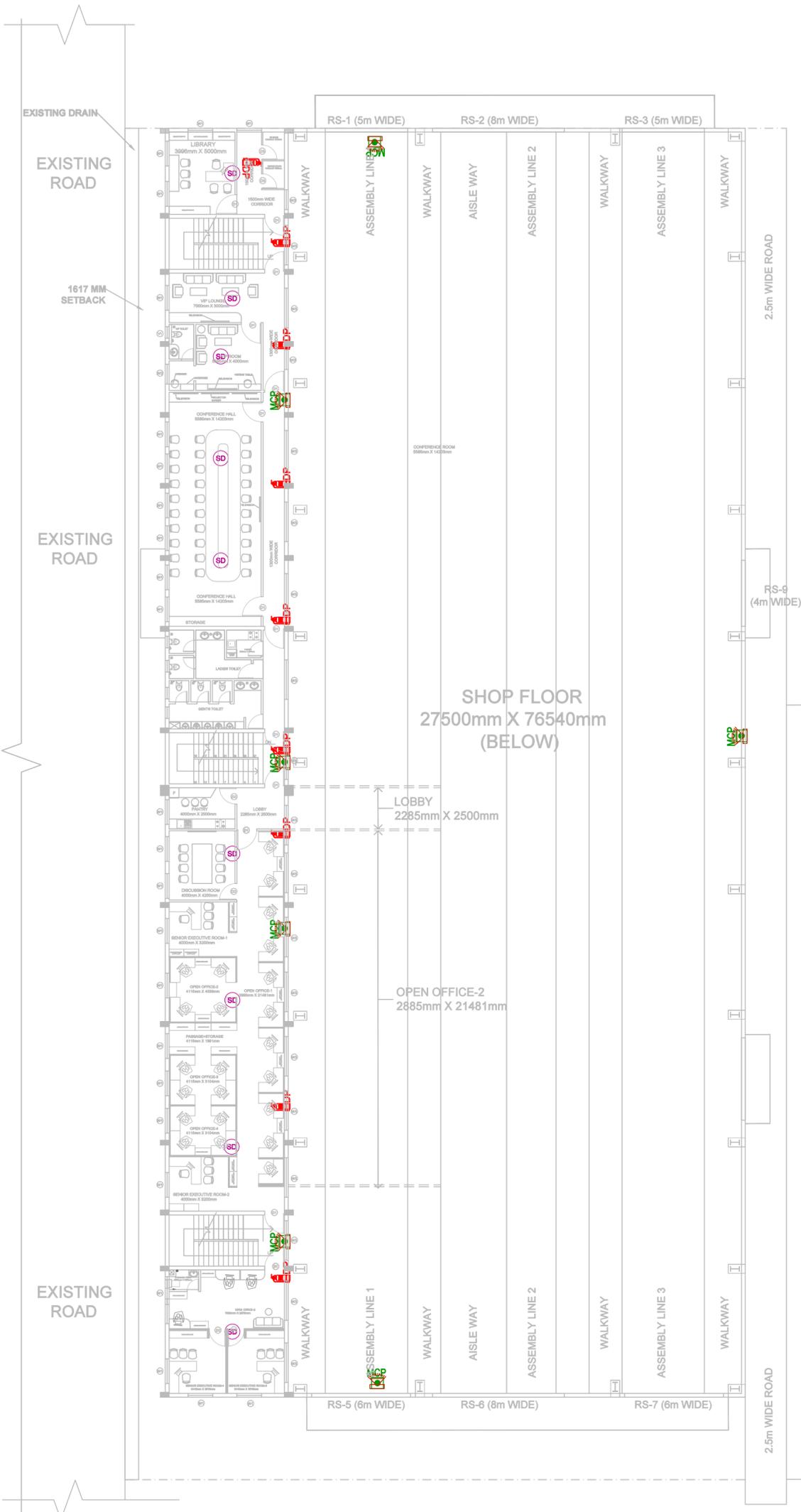
Industrial Buildings (G)
Low Hazard (G1)

S.No.	Type of Building	Type Of Installation								Water Supply (Litre)		Pump Capacity (Litre/min)	
		Fire Extinguisher	First Aid Hose Reel	Wet Riser	Down Comer	Yard Hydrant	Automatic Sprinkler System	Manually Operated Electric Fire Alarm Systems	Automatic Detection And Alarm System	Under Ground Static Tank	Terrace Tank	Pump Near Under Ground Static Tank	Terrace Tank Level
1.	Covered area more than 500 m2 (for building height up to 15 m)	R	R	NR	R	NR	R (see Note 4)	R	Provided	NR	20000 (5000) (see Note 6)	NR	450 (450) (see Note 6)

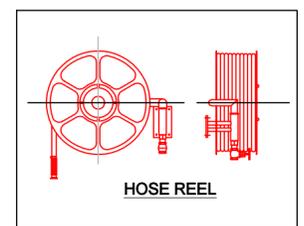
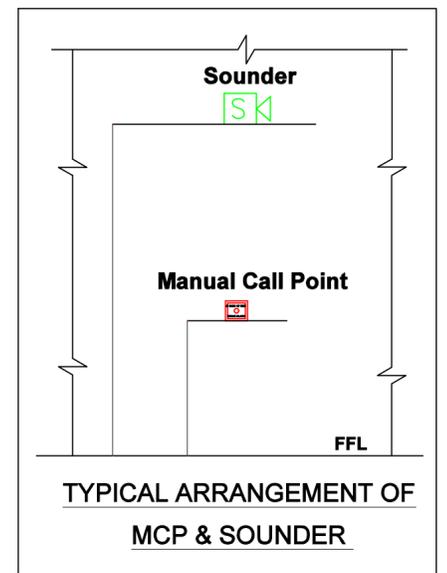
Note:- R- Required NR- Not Required
 Note 4 - Required to be installed in basement, if area of basement exceeds 200 m2.
 Note 6 - Additional value given in parenthesis shall be added if basement area exceeds 200 m2 •
 Note 10 - Provide required number of sets of pumps each consisting of one electric and one diesel pump (stand by) of capacity 2280 litre/min and one electric pump of capacity 180litre/min.

GROUND FLOOR FIRE FIGHTING LAYOUT

PROJECT TITLE-	CLIENT-	CONSULTANCY-
HANGAR-5	BEML	SG STRUCTURAL ENGINEERS <small>ENGINEERS/ARCHITECTS</small> <small>53, M.A. Palaniswamy Street, K.K. Pudur, Coimbatore-38</small> <small>Ph: 0422-2450245, 2453323. Email: profsgv1968@gmail.com</small> <small>www.sgstructurals.com</small>

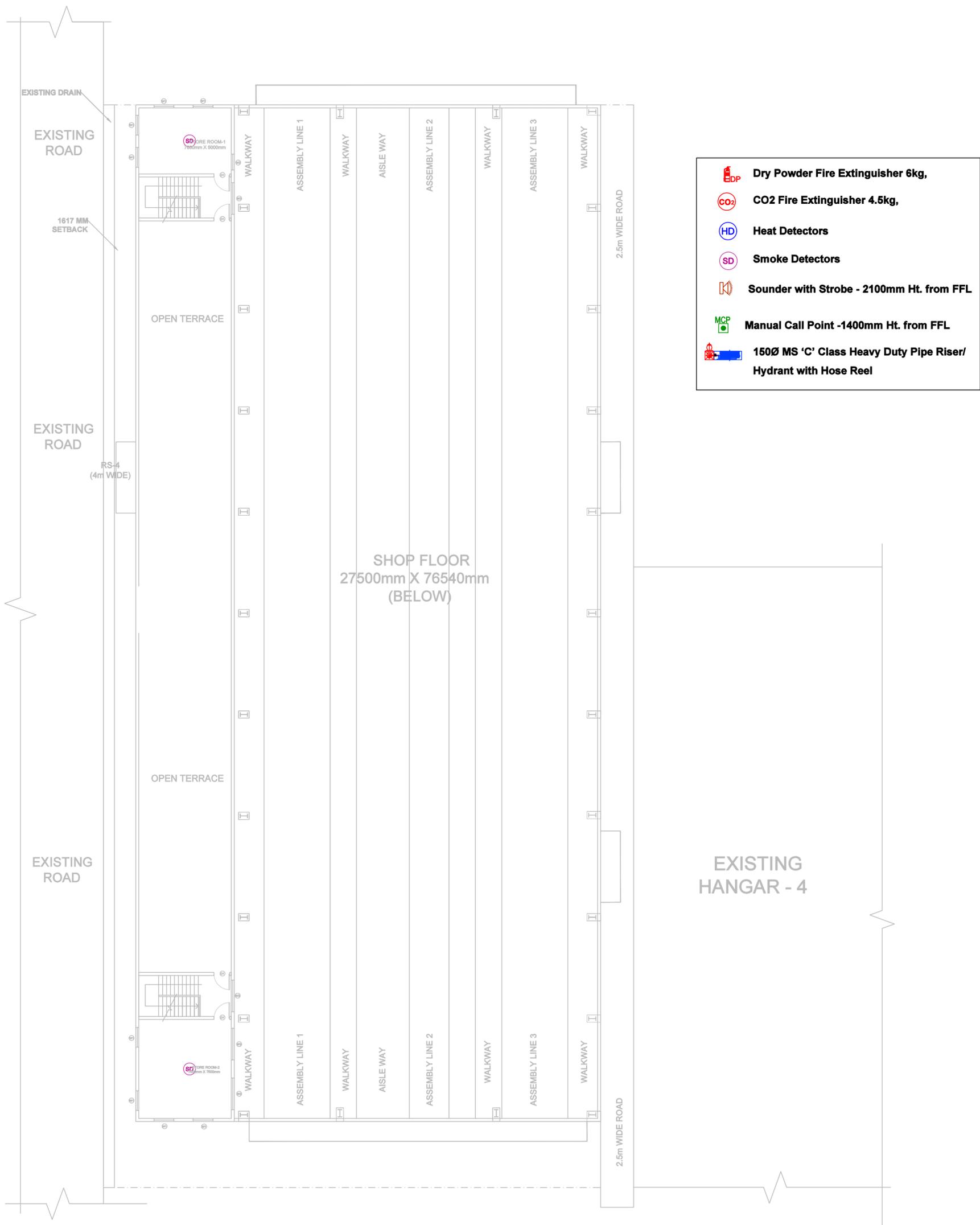


- Dry Powder Fire Extinguisher 6kg,**
- CO2 Fire Extinguisher 4.5kg,**
- Heat Detectors**
- Smoke Detectors**
- Sounder with Strobe - 2100mm Ht. from FFL**
- Manual Call Point -1400mm Ht. from FFL**
- 150Ø MS 'C' Class Heavy Duty Pipe Riser/ Hydrant with Hose Reel**



FIRST FLOOR FIRE FIGHTING LAYOUT

PROJECT TITLE-	CLIENT-	CONSULTANCY-
HANGAR-5	BEML	 SG STRUCTURAL ENGINEERS ENGINEERS/ARCHITECTS <small>53, M.A. Palaniswamy Street, K.K. Purur, Coimbatore-38 Ph: 0422-2450245, 2453323. Email: profsgv1968@gmail.com www.sgstructurals.com</small>



SECOND FLOOR FIRE FIGHTING LAYOUT

PROJECT TITLE-	CLIENT-	CONSULTANCY-
HANGAR-5	BEML	 <p>SG STRUCTURAL ENGINEERS ENGINEERS/ARCHITECTS 53, M.A. Palanisamy Street, K.K. Purur, Coimbatore-38 Ph: 0422-2450245, 2453323. Email: profsgv1968@gmail.com www.sgstructurals.com</p>