

TITLE:

PROPOSED FES OFFICE BUILDING UPGRADE AND  
REMODELLING PROJECT.

CLIENT:

FES OFFICE

LOCATION:

CENTRAL AREA, FCT ABUJA.



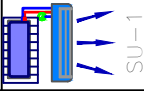


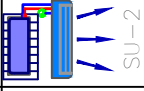


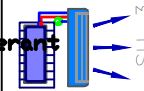


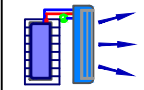









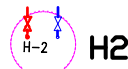


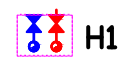















DATE:

JULY, 2020

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# LEGEND

APPROVAL COLUMN

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	CLOSE COUPLE WC Armitage Shank		COLD WATER PIPE (Technogreen)		Split Unit Air Conditioner (type one) Cooling Capacity = 2.6KW (9,000BTU/hr) Power Input= 0.9KW,220-240V,50HZ
	KITCHEN SINK		WASTE WATER PIPE		Split Unit Air Conditioner (type two) Cooling Capacity = 3.50KW (12,000BTU/hr) Power Input= 1.26KW,220-240V,50HZ
	BATH 1700 x 700 BATH (2 TAP GRIPS,SLIP RESIST, WITH LEGS)		75mm pvc sleeve pipe for refrigerant and condensate pipes,		Split Unit Air Conditioner (type three) Cooling Capacity = 5.25KW (18,000BTU/hr) Power Input= 2.0KW,220-240V,50HZ
	Wash Hand Basin (Armitage Shank)		SOIL WASTE PIPE UPVC PIPE		Split Unit Air Conditioner (type four) Cooling Capacity = 6.74KW (24,000BTU/hr) Power Input= 2.8KW,220-240V,50HZ
	INSPECTION CHAMBER		HOT WATER PIPE (Technogreen)		WALL FAN - GX6 Electrical Power Rating= 30W,220-240V,50HZ
	Ø50mm UPVC FLOOR DRAIN		FROM ABOVE		WALL FAN - GX9 Electrical Power Rating= 41W,220-240V,50HZ
	ISOLATION VALVES		FROM BELOW		WALL FAN - GX12 Electrical Power Rating= 41W,220-240V,50HZ
	15 Litres Water heater		TO BELOW		SINGLE LEVER MONO BLOC MIXERS(2.5litre) COMPLETE WITH POP-UP WASTE (ARMITAGE SHANKS)
	10 Litres Water heater		TO ABOVE		Ø20mm DECK MOUNTED BATH MIXER WITH 1525mm FLEXIBLE HOSE HANDSPRAY & BRACKET (ARMITAGE SHANKS)
	TOILET ROLL HOLDER		FROM BELOW TO ABOVE		KITCHEN MONO BLOC SINK MIXER (3LITRES) WITH DUAL FLOW SWIVEL NOZZL (ARMITAGE SHANKS)
	75mm Floor Drain		FROM ABOVE TO BELOW		9KG FIRE EXTINGUISHER (ABC type)
	Ø15mm EXTERNER BIB TAP		GATE VALVE		COURTY YARD DRAIN
	MONO BLOC MIXER AND POP-UP WASTE ARMITAGE SHANKS		HAND DRYER		
	SOIL WASTE VENT PIPE				
	WASTE WATER VENT PIPE				

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Client

Designed

SHITTU KENNETH

Checked

ENGR. M. U. LAWAL

Scale

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Sheet no

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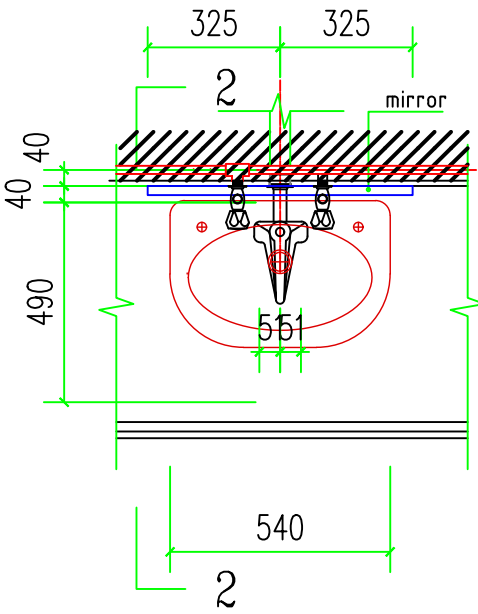
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UPGRADE AND REMODELLING PROJECT,  
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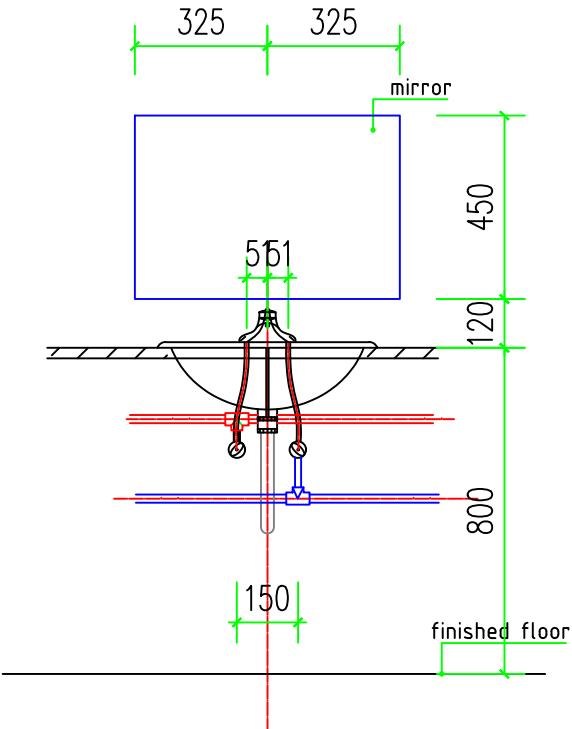
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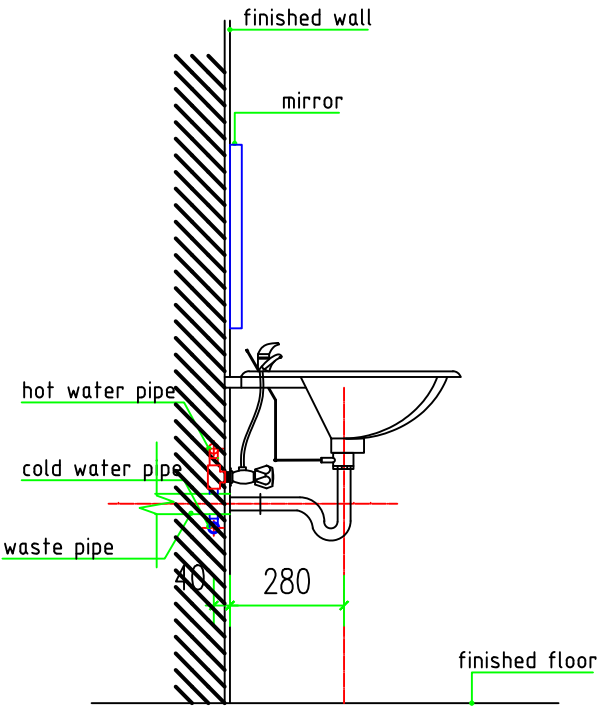
washhabalsin



PLAN

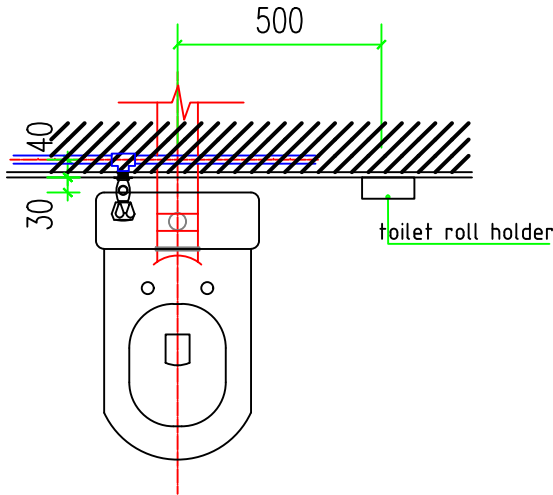


ELEVATION

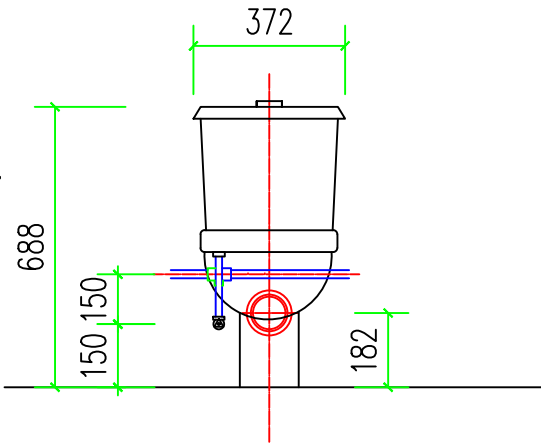


SIDE VIEW

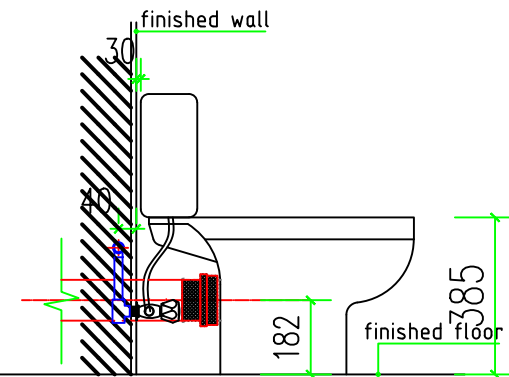
WATER CLOSET



PLAN



ELEVATION



SIDE VIEW

APPROVAL COLUMN



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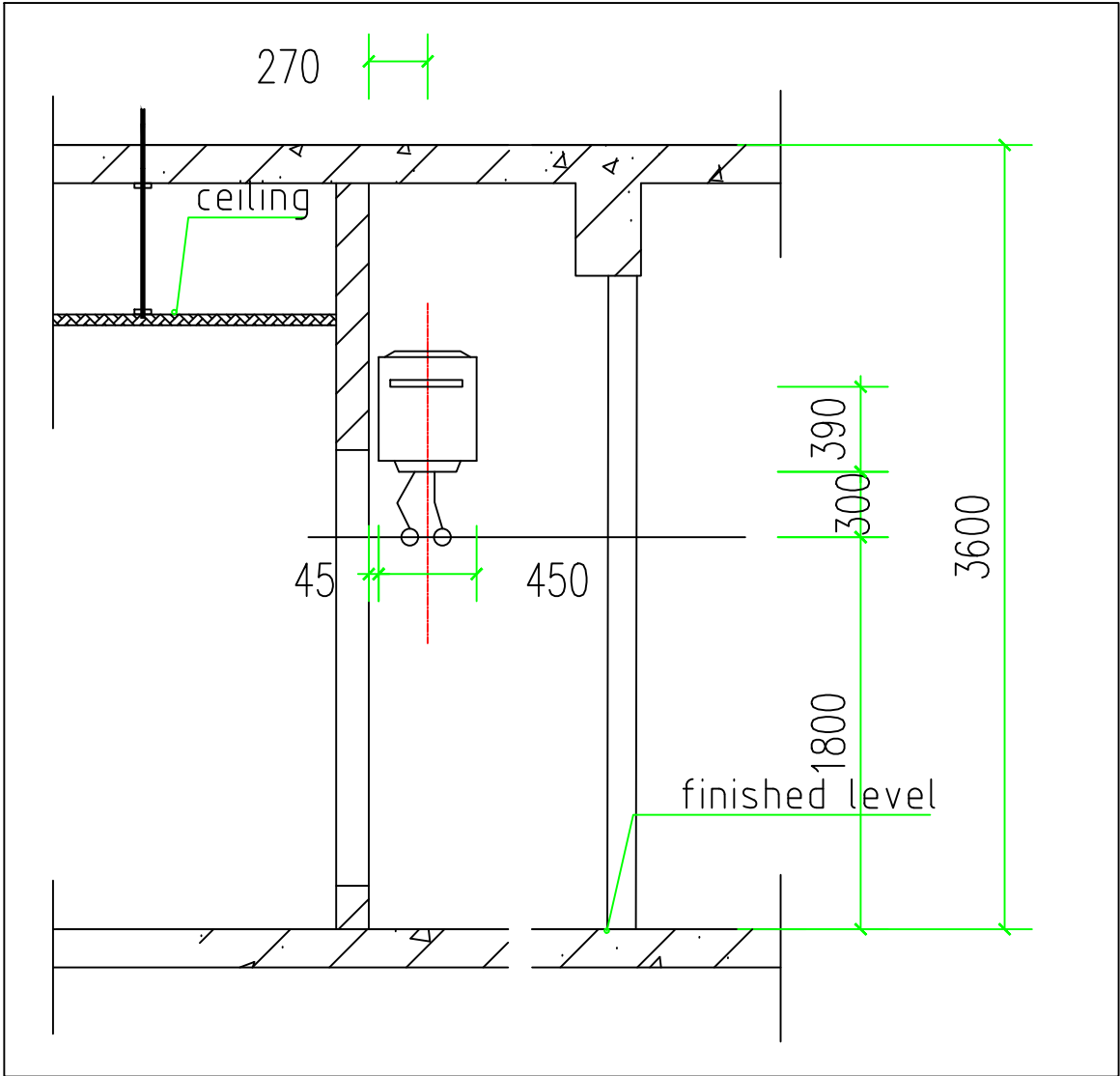
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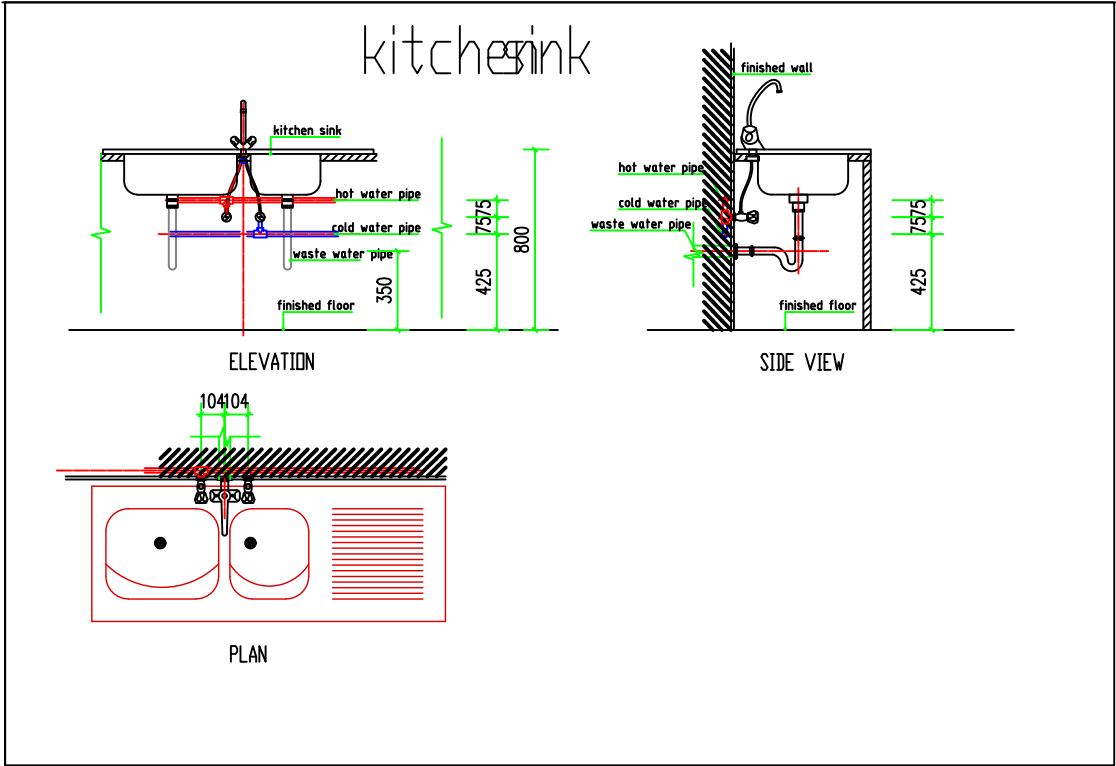
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CENTRAL AREA, FCT ABUJA

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TOILET FITTINGS



WATER HEATER



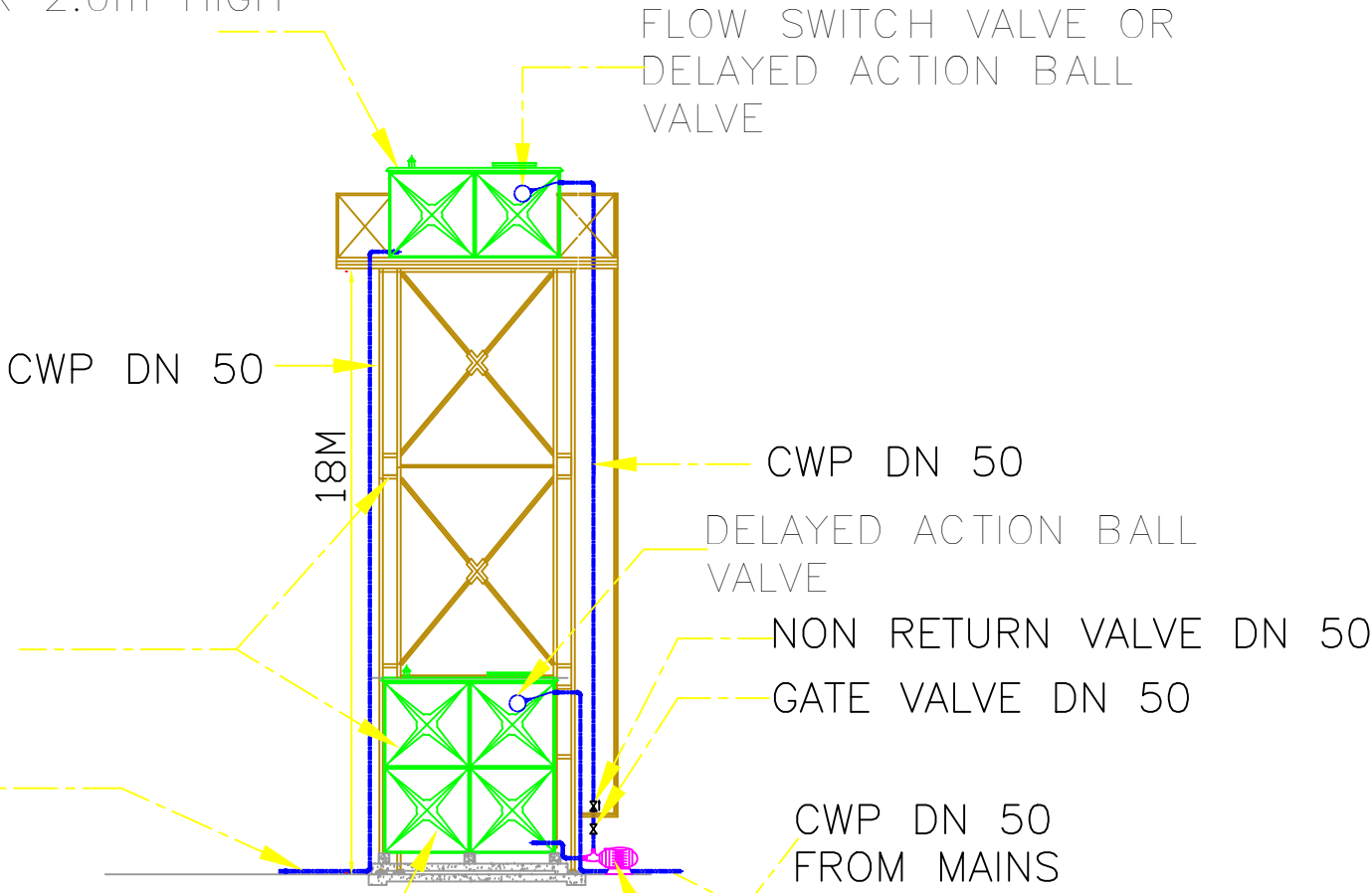
<div>SKY</div> <div>HABITAT LTD</div>	Services Engineers: Architects, Engineers and Project Management Consultants Suite 3, 1ST Floor, 1 Regent Street, Off Nnamdi Azikwe street Mabushi. SkyHabitatLtd@gmail.com 0803639982		Client			Project PROPOSED FES OFFICE BUILDING UPGRADE AND REMODELLING PROJECT, CENTRAL AREA, FCT ABUJA	
	Designed	Checked	Scale	Date	Sheet no	Drawing title KITCHEN SINK/WATER HEATER	
	SHITTU KENNETH	ENGR. M. U. LAWAL	NTS	JULY, 2020	ME - 00C		

10,000LITRES CAPACITY ELEVATED  
BRAITHWAITE WATER STORAGE TANK  
ON STRUCTURAL STEEL SUPPORT  
SIZE:2.5m X 2.0m X 2.0m HIGH

STRUCTURAL  
STEEL SUPPORT.[SEE  
STRUCTURAL ENGINEER  
FOR DETAIL'S]

CWP DN 63 TO SITE  
DISTRIBUTION NETWORK

20,000LITRES CAPACITY UNDERGROUND/GROUND  
BRAITHWAITE WATER STORAGE TANK  
ON STRUCTURAL STEEL SUPPORT  
SIZE:4.0m X 2.5m X 2.0m HIGH



Water Transfer Pump=0.00347m<sup>3</sup>/S  
2NOS[1DUTY,1STANDBY]  
HEAD:-18.75m  
POWER:-2HP

SECTION A-A  
DETAILS OF GROUND & ELEVATED WATER TANKS



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Project

PROPOSED FES OFFICE BUILDING  
UPGRADE AND REMODELLING PROJECT,  
CENTRAL AREA, FCT ABUJA

Drawing title

TANK DETAILS

SPECIFICATIONS

1.All water supply pipes are PPR pipe with specified thickness. Make: REDI or Approved equal  
DIN ISO 15874

S/N	(PPR PIPES)DIAMETER (mm)	THICKNESS(mm)
1	15	2.5
2	20	3.4
3	25	4.2

2.All drainage pipes are UPVC. Make: WAVIN or Approved equal. BS 1401-1: 2009

S/N	DIAMETER	THICKNESS(mm)
1	50	5.5
2	75	6.2
3	100	8.0

3.All UPVC connections shall be joined with tangit gum or approved equal. BS ISO 11413: 2019

4.All Inspection Chambers are (450 by 450) mm inner size and (600 by 600) mm for external size. BS EN 1917: 2002

5. All mounting height of water supply and drainage pipes shall conform as provided in the designs.

6. All refrigerant pipes shall be seamless copper tubing and shall be insulated with foam rubber insulation 25mm thick with suitable adhesive. ASHRAE 15. SECTION 15183. Make: MUELLER or Approved Equal

7. All condensate pipes shall be 25mm UPVC and shall be insulated with foam rubber insulation of 25mm thick. ASHRAE 90.1 - 2007

8. All refrigerant and condensate pipes in floors shall be insulated and enclosed in UPVC pipe sleeves.

9. Fire extinguishers shall be:

- i. 9Kg ABC Dry Chemical Powder (DCP), Make: SRI; Model.
- ii.9Kg Carbon Dioxide- (CO2), Make: SRI; Model or approved equal.

NFPA 10



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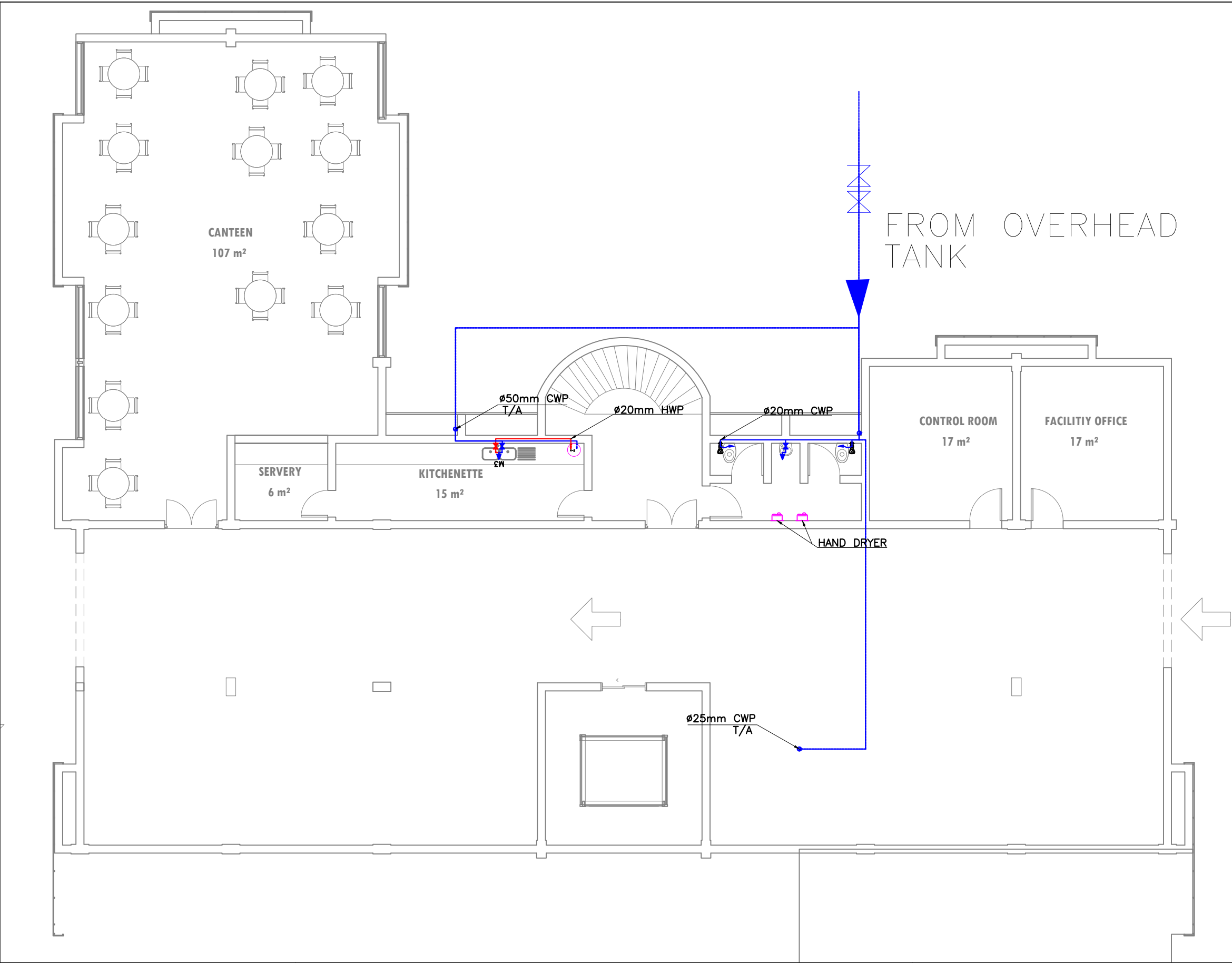
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Drawing title

SPECIFICATIONS



APPROVAL COLUMN



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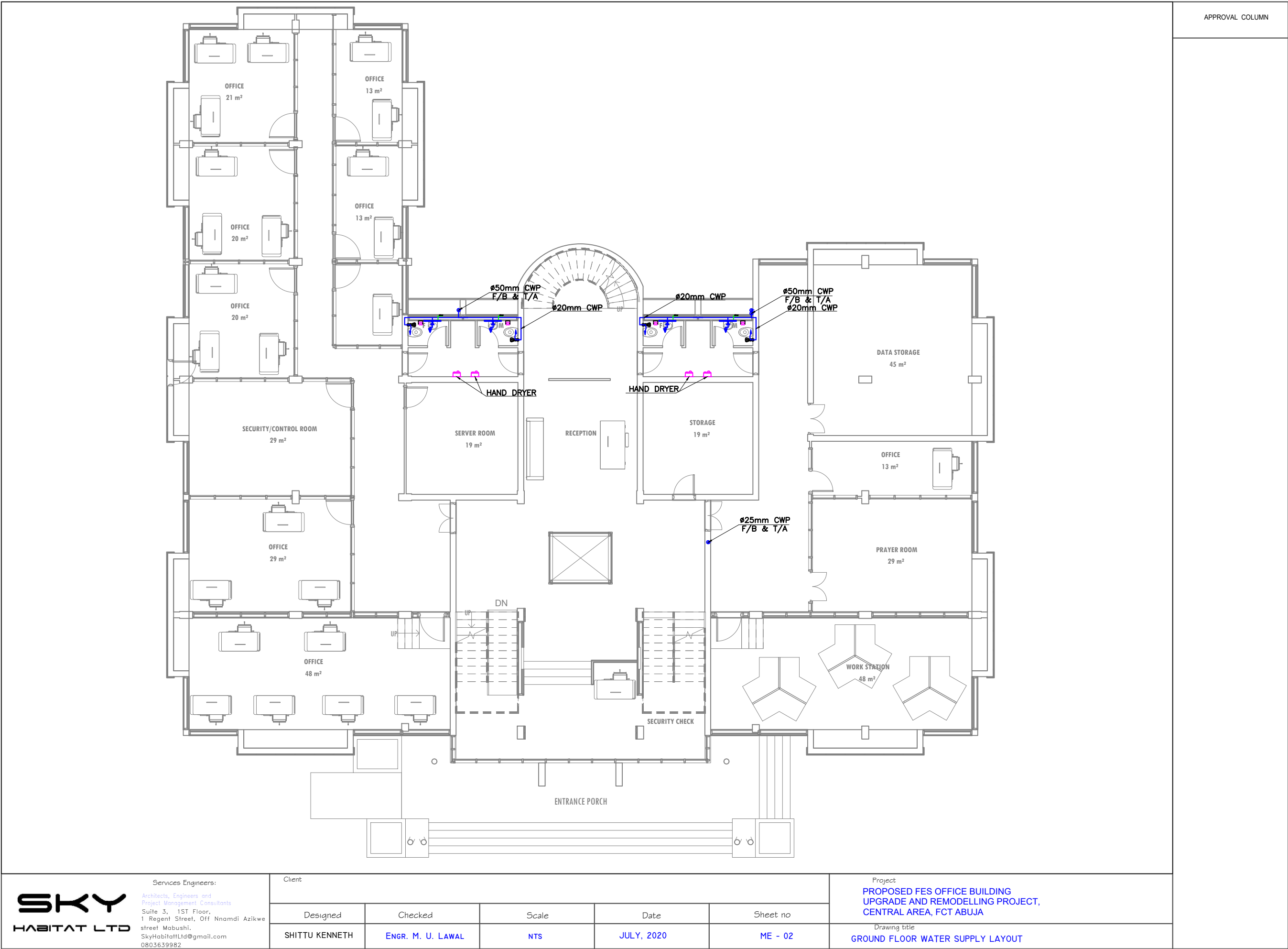
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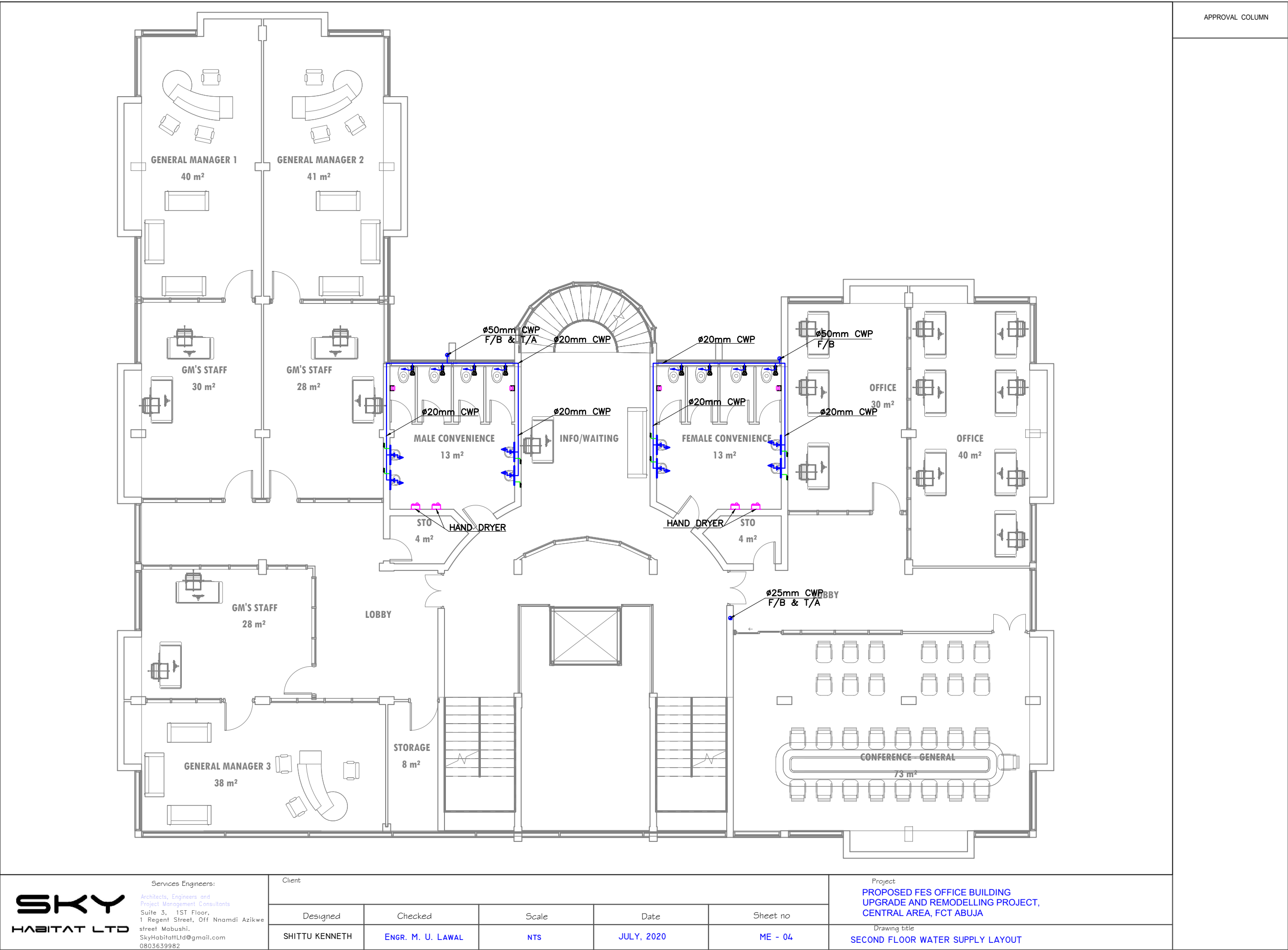
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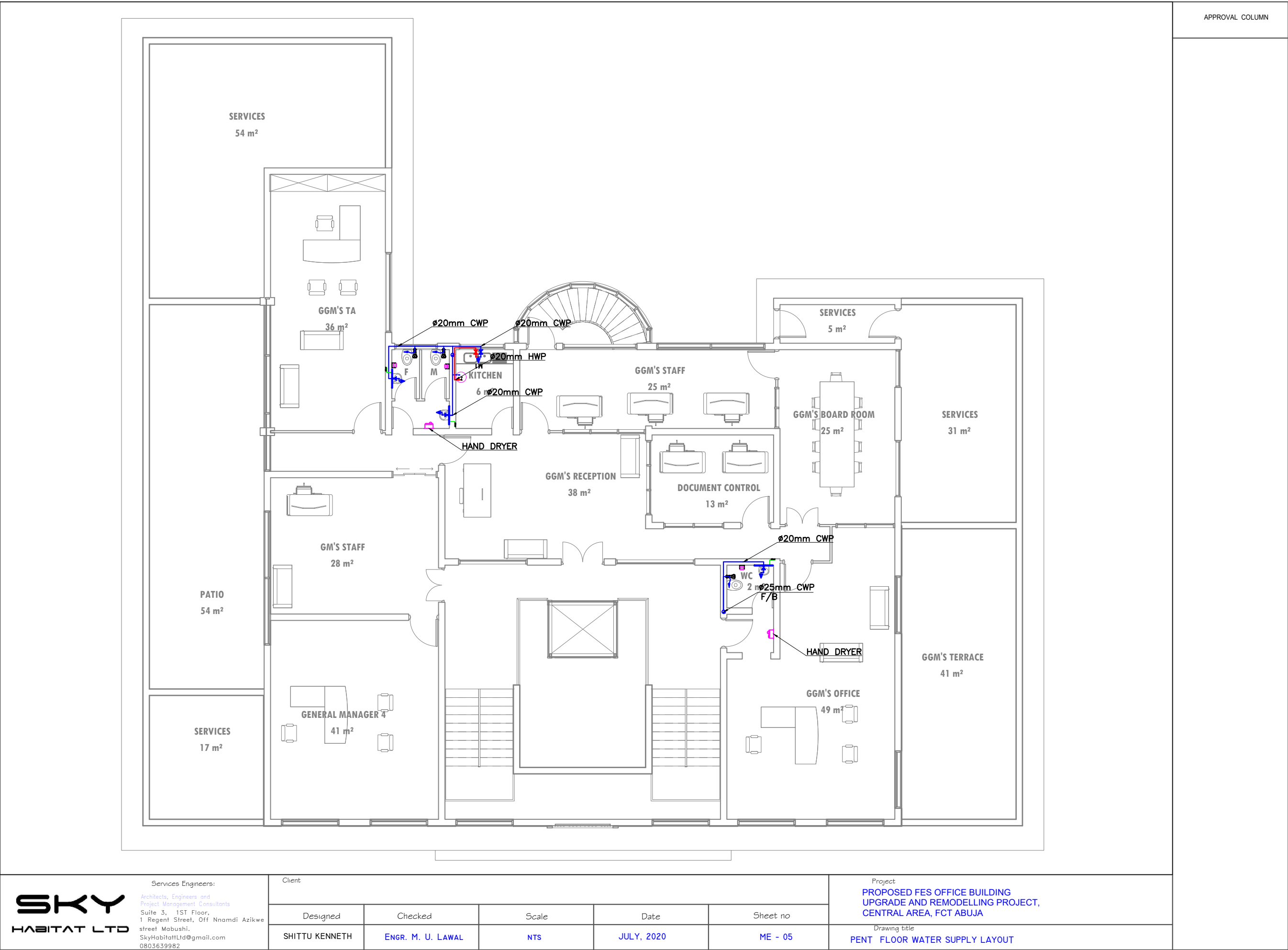
BASEMENT WATER SUPPLY LAYOUT

















APPROVAL COLUMN					



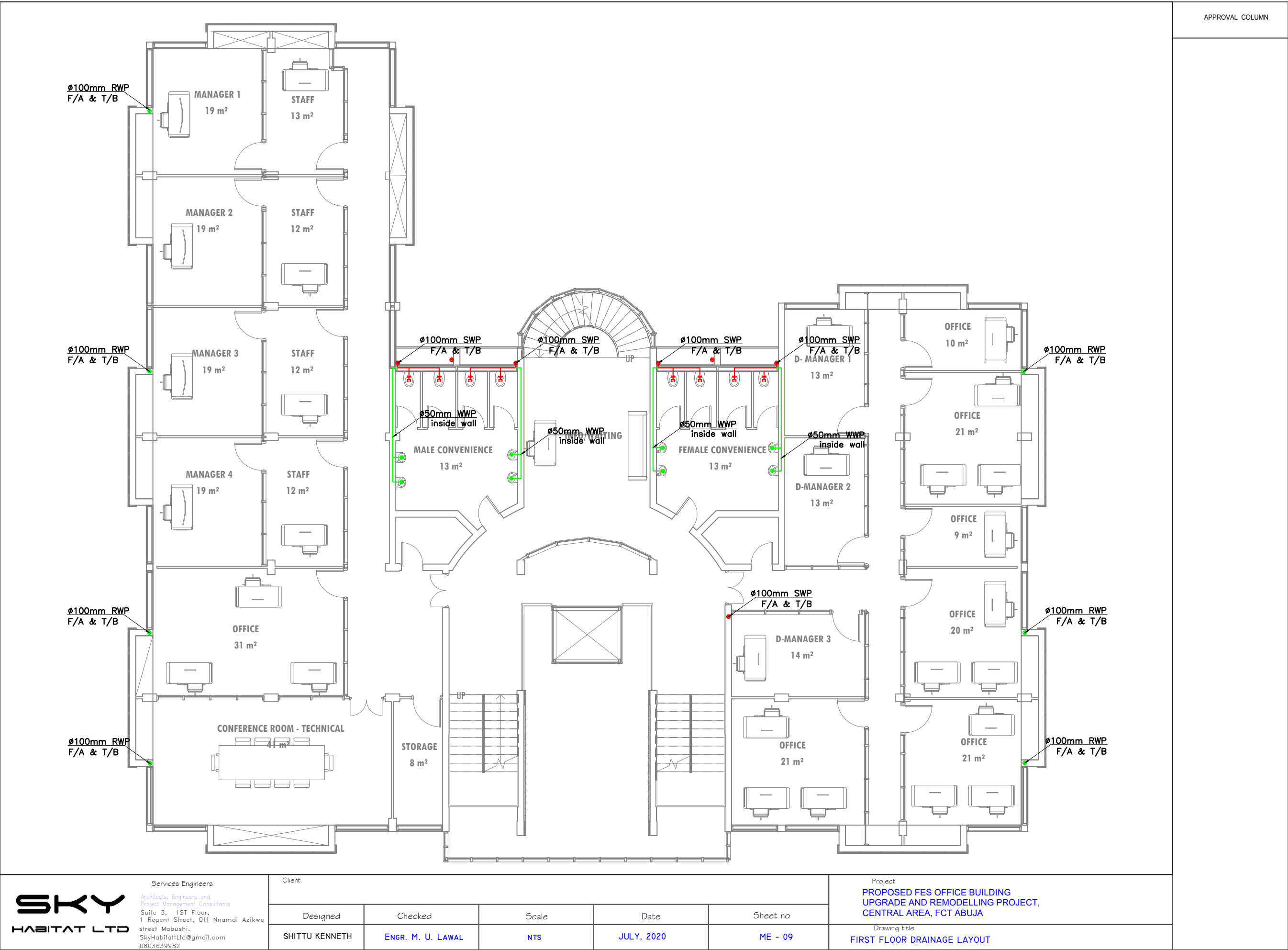
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UPGRADE AND REMODELLING PROJECT,  
CENTRAL AREA, FCT ABUJA

Drawing title  
GROUND FLOOR DRAINAGE LAYOUT


















# FIRE FIGHTING DESIGN

APPROVAL COLUMN

SYMBOL	DESCRIPTION
	Ø15mm SPRINKLER HEAD
	BLEECHING
	SPRINKLER PIPE BLACK STEEL SCHEDULE 40
	FIRE HYDRANT
	DRY RISER PIPE BLACK STEEL SCHEDULE 40
	9KG FIRE EXTINGUISHER (ABC type)
	DRY RISER LANDING VALVE(ENCLOSED IN A BOX)
	FIRE HOSE REEL
	Ø15mm SPRINKLER HEAD (SIDE)



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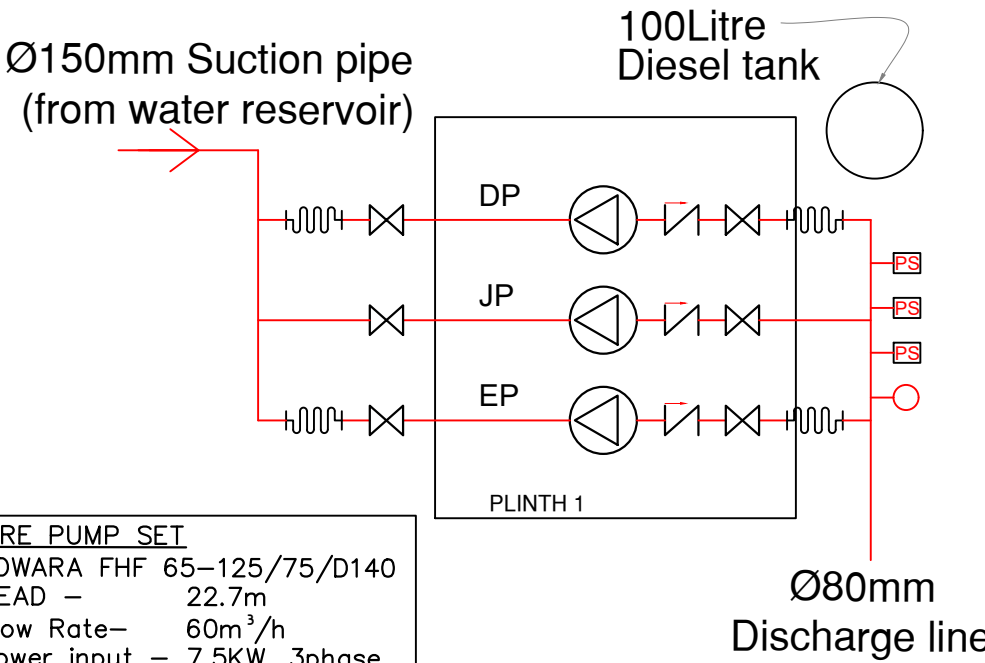
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Project

PROPOSED FES OFFICE BUILDING  
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Drawing title

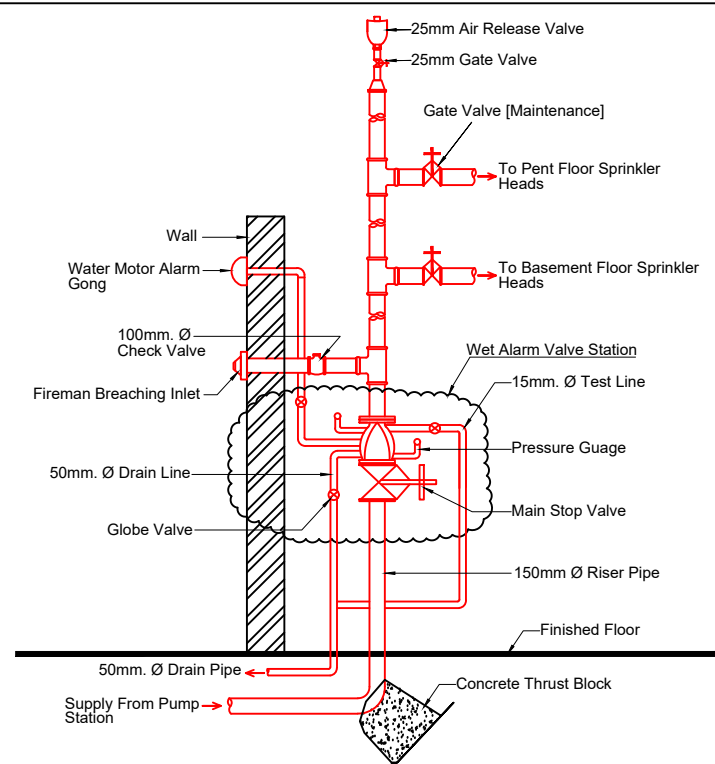
FIRE FIGHTING LEGEND



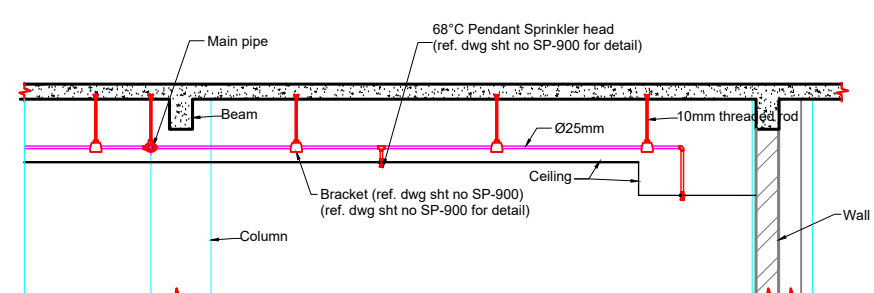
**FIRE PUMP SET**  
LOWARA FHF 65-125/75/D140  
HEAD – 22.7m  
Flow Rate– 60m<sup>3</sup>/h  
power input – 7.5KW, 3phase  
INLET DIA.– 150mm  
OUTLET DIA– 150mm

LEGEND	
ITEM	DESCRIPTION
	PUMP
	GATE VALVE
	CHECK VALVE
	FLEXIBLE COUPLING (Expansion Joint)
	PRESSURE SWITCH
	PRESSURE GUAGE
EP	60m³/h 6-BAR ELECTRICAL MOTOR DRIVEN FIRE PUMP
JP	JOCKEY PUMP
DP	60m³/h 6-BAR DIESEL ENGINE DRIVEN FIRE PUMP

**PLAN: FIRE PUMP HOUSE**



**TYPICAL FIRE SPRINKLER VALVE STATION  
AND RISER LINE ELEVATION  
NTS**



**SECTIONAL DETAIL**

APPROVAL COLUMN

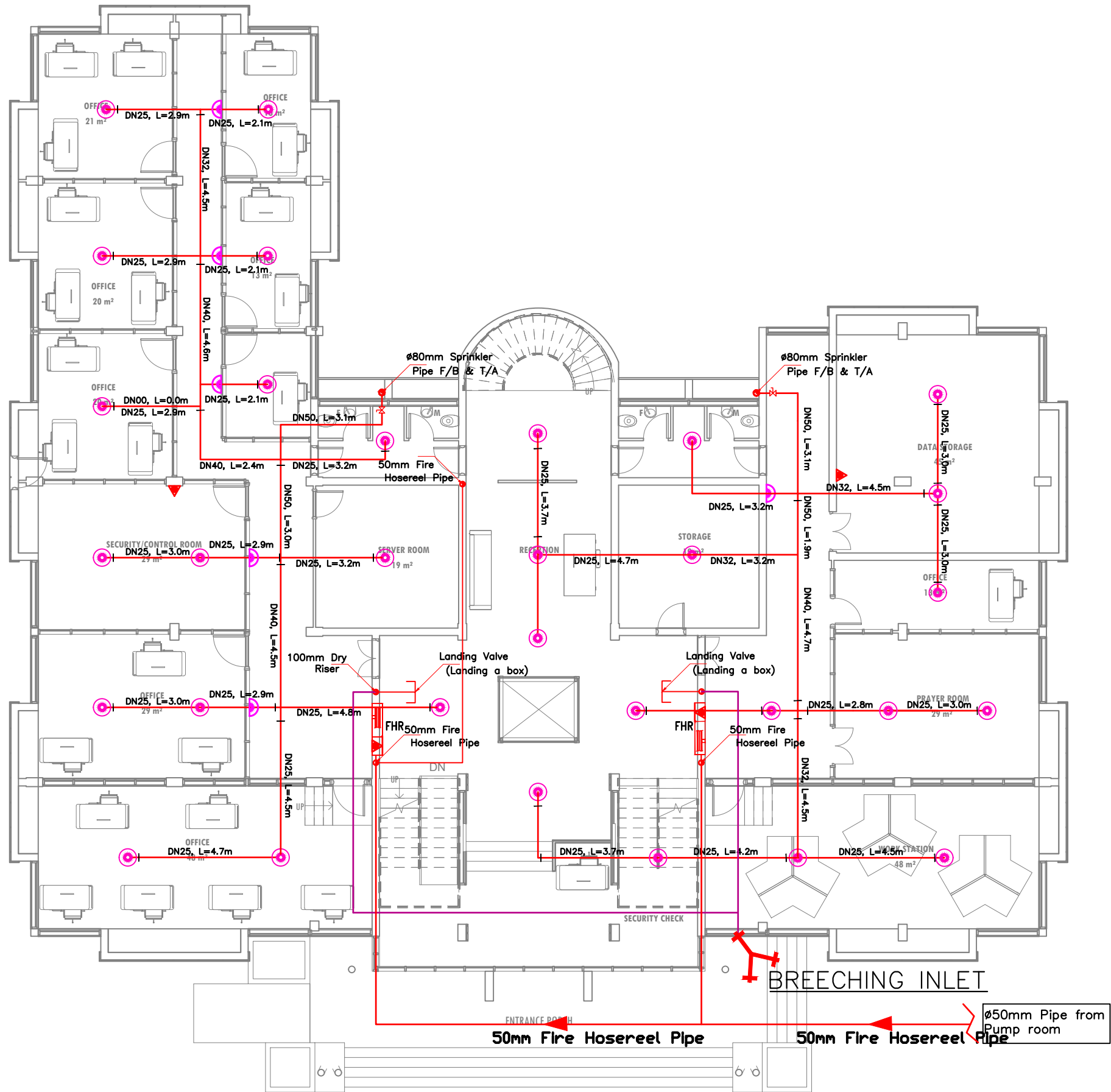


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**PROPOSED FES OFFICE BUILDING  
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CENTRAL AREA, FCT ABUJA**  
Drawing title  
**FIRE FIGHTING LEGEND**





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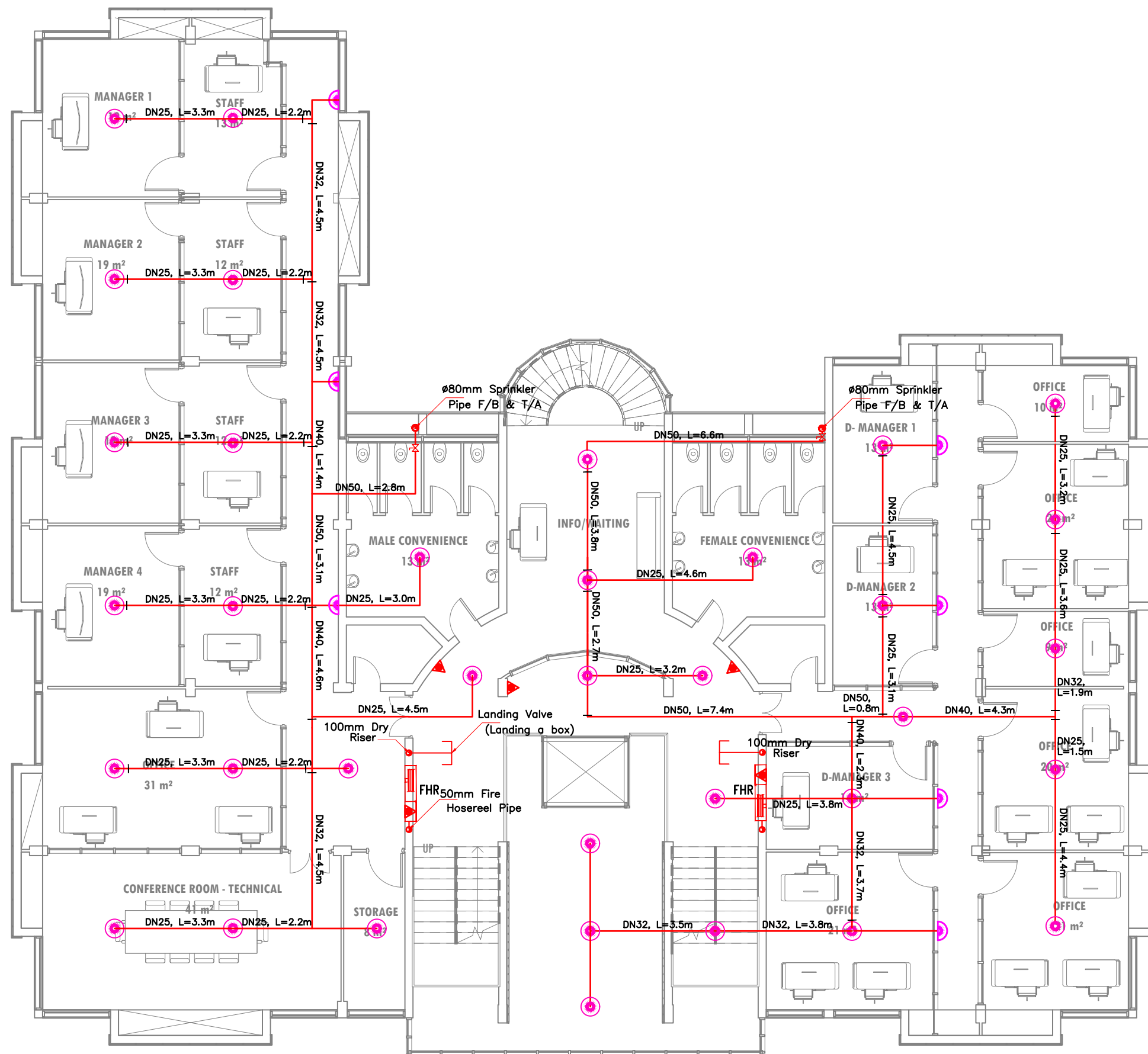
ME - 15

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GROUND FLOOR FIRE FIGHTING LAYOUT



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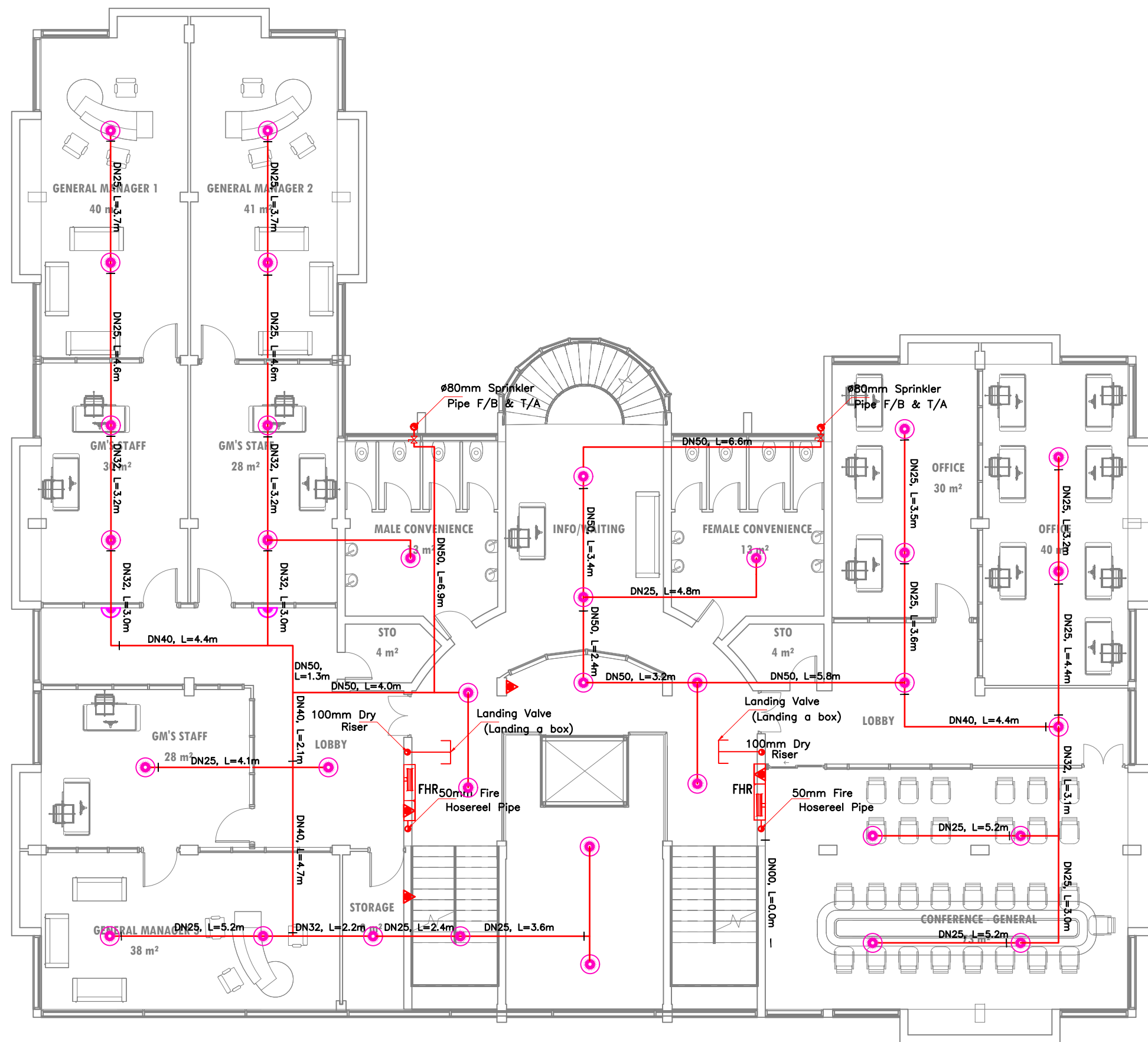
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Project  
PROPOSED FES OFFICE BUILDING  
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Drawing title  
FIRST FLOOR FIRE FIGHTING LAYOUT



APPROVAL COLUMN



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Project

PROPOSED FES OFFICE BUILDING  
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Drawing title

SECOND FLOOR FIRE FIGHTING LAYOUT

