

**FIRE LEGEND**

- FIRE EXTINGUISHER
- (F.H.R) FIRE HOSE REEL
- FIRE DOOR
- FIRE HYDRANT

**GENERAL ENGINEERING NOTES:**

1. DRAWINGS MUST NOT BE SCALED
2. DRAWINGS TO BE READ WITH THE GENERAL NOTES DRAWINGS AND ALL TYPICAL DETAIL DRAWINGS WHERE APPLICABLE
3. DRAWINGS TO BE READ WITH THE ARCHITECT'S DRAWINGS AND ALL DISCREPANCIES TO BE REPORTED TO THE RESPONSIBLE ENGINEER IMMEDIATELY
4. DRAWINGS TO BE READ WITH THE PROJECT SPECIFICATIONS AND APPLICABLE SANS 1200 CODES

**LEGEND**

**STANDARD MECHANICAL NOTES:**

This drawing shall not be used as a construction/ installation drawing. Routes and zones have been allocated to this service, locations dimensions are indicated of these.

To prepare his construction/ installation drawing, the (sub) contractor shall adhere to this co-ordination principle and shall inspect all the architect's drawings, including structural and other services design drawings pertaining to the works. The (sub) contractor shall acquaint him/herself with the general arrangement of all other services and ensure that in fixing his/her work it shall not obstruct the fixing of future and maintenance of other services.

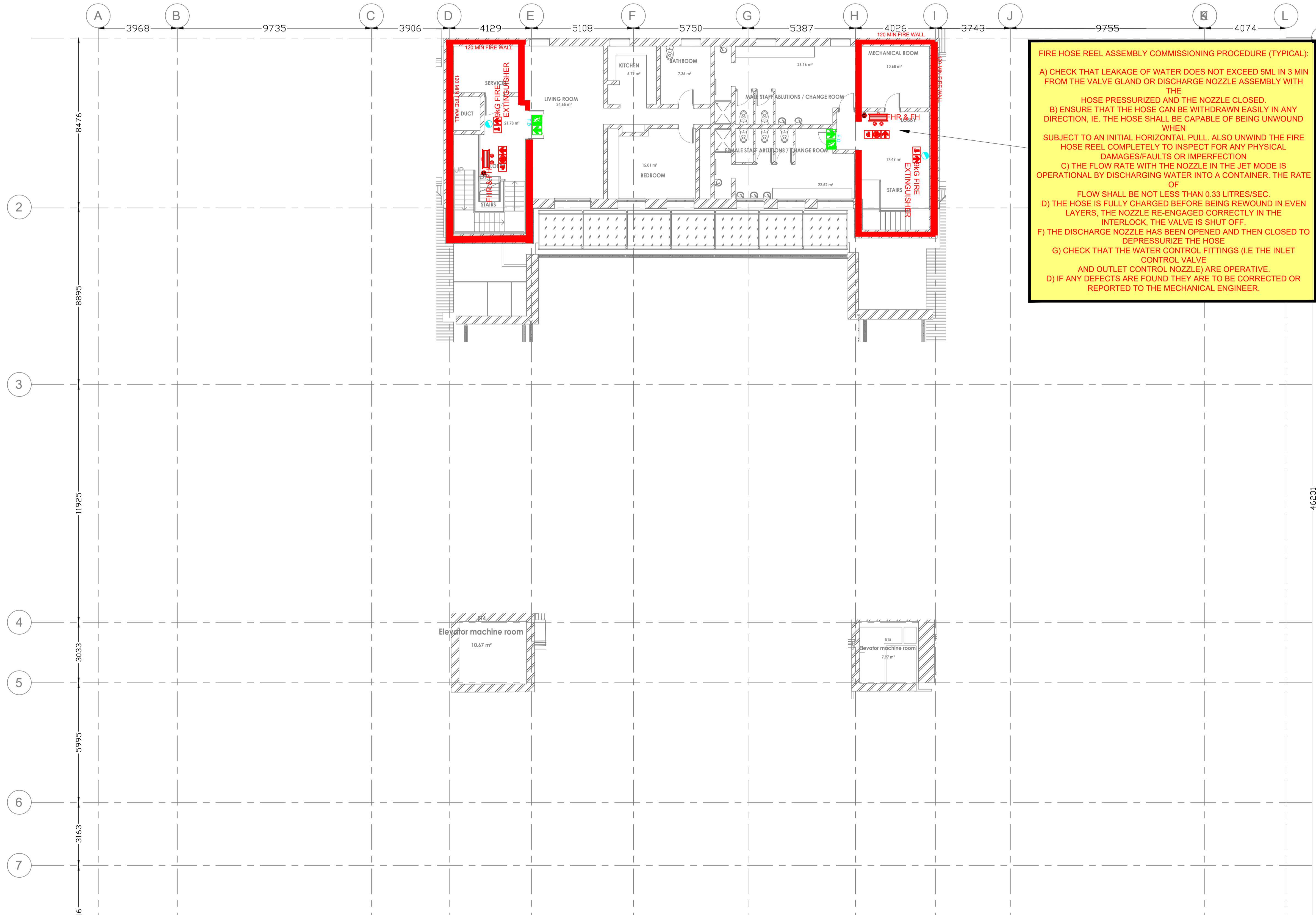
The (sub) contractor shall be responsible for the correct field dimensions: clearances and heights, quantities, fabrication processes and techniques of construction co-ordination of his/her work with that of all other trades, providing all devices necessary for safe and satisfactory operation.

**Fire Protection Notes**

1. FIRE PROTECTION TO SANS 10400 PART-T, DEEM TO SATISFY SET OF RULES APPLICABLE, AS SET OUT IN T1.
2. OFFICES AND LIBRARY.
3. MAIN OCCUPANCY CLASSIFIED AS C2, G1 AND H3.
4. 1 PERSON PER 15.0M<sup>2</sup>(G1) / OR NUMBER OF SEATS.
5. SAFETY DISTANCES ARE IN ORDER FOR G1, C2 AND H3.
6. STRUCTURAL STABILITY, 120 MINUTES, AS PER SANS 10400: PART-T, TABLE 6. ALL FLOORS AND EMERGENCY ESCAPE ROUTES ARE CONSTRUCTED FROM CONCRETE WITH A STRUCTURAL STABILITY OF 120 MINUTES.
7. ALL ESCAPE ROUTES TO COMPLY TO SANS 10400 PART M&S, BE 1500MM WIDE, HANDRAILS ON BOTH SIDES OF A STAIRWAY, MAX 170 STEP RISE, LANDING EVERY 1530MM OF LEVEL CHANGE, RAMP 1:12 ON FINAL EXIT, DOORS TO OPEN IN DIRECTION OF ESCAPE.
8. EMERGENCY STAIRWAYS TO BE NATURALLY VENTILATED WHERE POSSIBLE, IF NOT POSSIBLE MECHANICAL VENTILATION TO BE PROVIDED.
9. AUTOMATIC FIRE DETECTION TO BE INSTALLED TO SANS 10139 CATEGORY L3/M1 TO PRIMARILY SHUTDOWN VENTILATION SYSTEMS, HOME LIFT AND NOTIFY OCCUPANTS OF A FIRE CONDITION WITHIN REASONABLE TIME.
10. EMERGENCY LIGHTING TO BE PROVIDED IN ALL ENCLOSED ESCAPE PASSAGES AND EMERGENCY ROUTES TO SANS 10114-2 AND 1464-22.
11. FIRE EXTINGUISHERS, FIRE HOSE REELS AND FIRE HYDRANTS TO SANS 10400: PART-T AND BE SERVICED BY A CERTIFIED INSTALLER BEFORE OCCUPATION OF THE BUILDING.
  - 11.1. 1 X 9 KG EXTINGUISHERS, PER 100M<sup>2</sup> OR PART THEREOF, TO BE INSTALLED IN ACCORDANCE WITH SANS 10105 AND CLAUSE 4.38
  - 11.2. 1 X 30 M HOSE REELS, PER 500M<sup>2</sup> OR PART THEREOF, TO BE INSTALLED IN ACCORDANCE WITH SANS 543 AND CLAUSE 4.34
  - 11.3. HYDRANTS TO BE INSTALLED IN ACCORDANCE WITH SANS 1128: PART 1 AND CLAUSE 4.35
12. FIRE SIGNAGE TO SANS 1186, PHOTO LUMINESCENT TYPE. 190X190MM FOR G1 AND 290X290MM FOR J1 AREA. INTERNALLY ILLUMINATED "EXIT" SIGNS WITH 60 MINUTE BATTERY BACKUP TO BE PROVIDED, EXCEPT WHERE EMERGENCY LIGHTING IS CLOSE ENOUGH TO PROVIDE SUFFICIENT LIGHT ON PHOTO LUMINESCENT SIGNS.
13. THE AUTOMATICALLY OPENABLE PANELS/LOUVERS ARE ACTIVATED BY HEAT OR SMOKE AND WILL BE DISTRIBUTED IN SUCH A WAY THAT SMOKE WILL EVENLY BE EXTRACTED FROM ALL PARTS OF THE FLOOR.
14. VENTILATION TO BE DESIGNED AND INSTALLED IN ACCORDANCE WITH EN 12101 AS PER 4.42.
15. ROOF VOID SUBDIVIDED WITH NON-COMBUSTIBLE FIRE STOPS, WITH A STABILITY AND INTEGRITY RATING OF AT LEAST 20 MINUTES, INTO AREAS NOT EXCEEDING 250M<sup>2</sup>
16. SUSPENDED CEILING AND ITS SUPPORTING MEMBERS SHALL BE OF NON-COMBUSTIBLE MATERIAL.
17. CEILING VOID SUBDIVIDED WITH NON-COMBUSTIBLE FIRE STOPS, WITH A STABILITY AND INTEGRITY RATING OF AT LEAST 20 MINUTES, INTO AREAS NOT EXCEEDING 250M<sup>2</sup>.
18. AN APPROVED SPRINKLER SYSTEM, COMPLYING WITH ATTACHED DEEMED TO SATISFY DESIGN, TO BE INSTALLED.
19. INSULATION MATERIAL TO COMPLY WITH SANS 428: 2006.
20. AN APPROVED GAS SUPPRESSION SYSTEM, COMPLYING WITH ATTACHED DEEMED TO SATISFY DESIGN, TO BE INSTALLED AT THE BASEMENT.

**FIRE HOSE REEL ASSEMBLY COMMISSIONING PROCEDURE (TYPICAL):**

- A) CHECK THAT LEAKAGE OF WATER DOES NOT EXCEED 5ML IN 3 MIN FROM THE VALVE GLAND OR DISCHARGE NOZZLE ASSEMBLY WITH THE HOSE PRESSURIZED AND THE NOZZLE CLOSED.
- B) ENSURE THAT THE HOSE CAN BE WITHDRAWN EASILY IN ANY DIRECTION, IE. THE HOSE SHALL BE CAPABLE OF BEING UNWOUND WHEN SUBJECT TO AN INITIAL HORIZONTAL PULL. ALSO UNWIND THE FIRE HOSE REEL COMPLETELY TO INSPECT FOR ANY PHYSICAL DAMAGES/FAULTS OR IMPERFECTION
- C) THE FLOW RATE WITH THE NOZZLE IN THE JET MODE IS OPERATIONAL BY DISCHARGING WATER INTO A CONTAINER. THE RATE OF FLOW SHALL BE NOT LESS THAN 0.33 LITRES/SEC.
- D) THE HOSE IS FULLY CHARGED BEFORE BEING REWOUND IN EVEN LAYERS, THE NOZZLE RE-ENGAGED CORRECTLY IN THE INTERLOCK, THE VALVE IS SHUT OFF.
- F) THE DISCHARGE NOZZLE HAS BEEN OPENED AND THEN CLOSED TO DEPRESSURIZE THE HOSE
- G) CHECK THAT THE WATER CONTROL FITTINGS (I.E THE INLET CONTROL VALVE AND OUTLET CONTROL NOZZLE) ARE OPERATIVE.
- D) IF ANY DEFECTS ARE FOUND THEY ARE TO BE CORRECTED OR REPORTED TO THE MECHANICAL ENGINEER.



ISSUED FOR INFORMATION

REV	DATE	REVISION DETAILS
00	14.10.2022	PRELIMINARY DESIGN
1	03.06.2024	ISSUED FOR APPROVAL

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**JOHANNESBURG CENTRAL LIBRARY**

**THIRD FLOOR LEVEL FIRE EQUIPMENT LAYOUT**

DATE	02/06/2022	SCALE	1:100
DESIGNED	N. MABUZA	DESIGNED	K. LLOYD

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