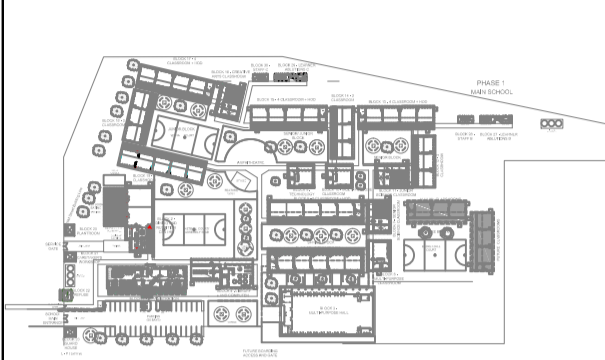


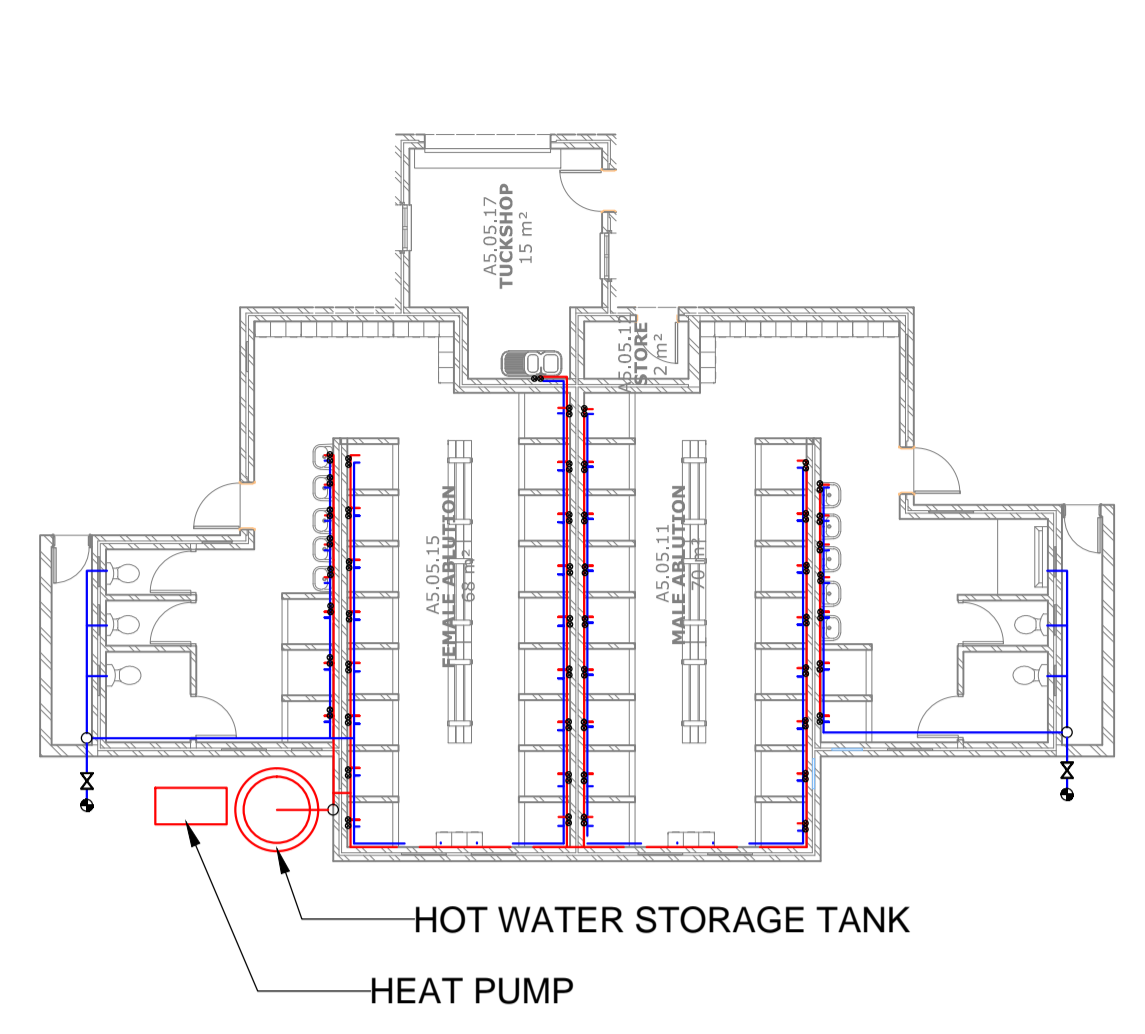
NOTE:  
 PIPING INSTALLATION TO COMPLY WITH SANS 10252-1  
 ALL DOMESTIC PIPING TO BE THAT OF PEX-AL-PEX  
 REFER TO SPECIFICATIONS DRAWING FOR FIXING  
 METHODS, LAGGING REQUIREMENTS AND BENDING  
 SPECIFICATION

SUPPLY WATER LINE TYPE LEGEND	
	COLD WATER SUPPLY IN CEILING VOID ABOVE
	COLD WATER SUPPLY SURFACE
	MOUNTED COLD WATER SUPPLY CHASED IN WALL
	COLD WATER SUPPLY UNDERGROUND

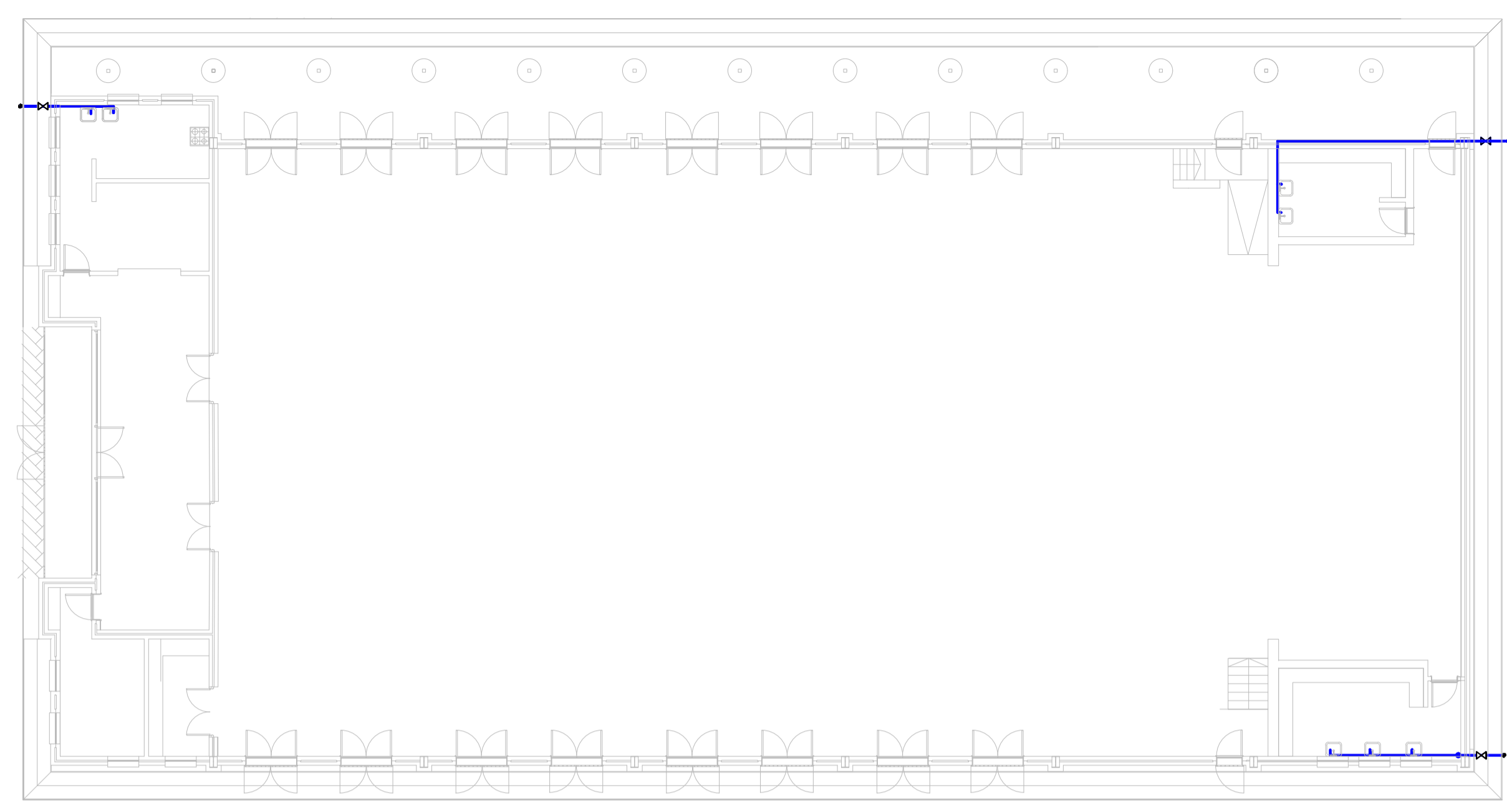
SYMBOL LEGEND	
	CIVIL CONNECTION
	RISER
	DROPPER
	ISOLATION VALVE (I-V SIZE MM)



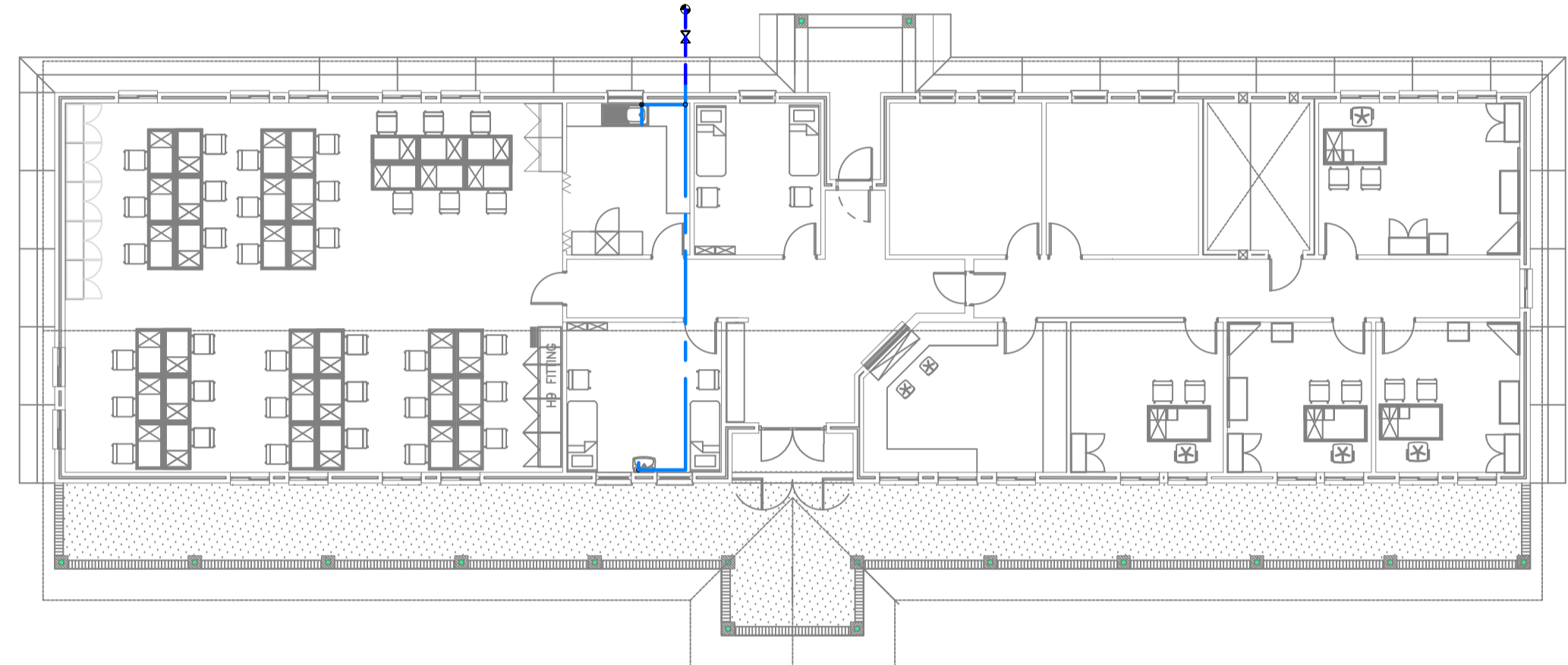
KEY PLAN



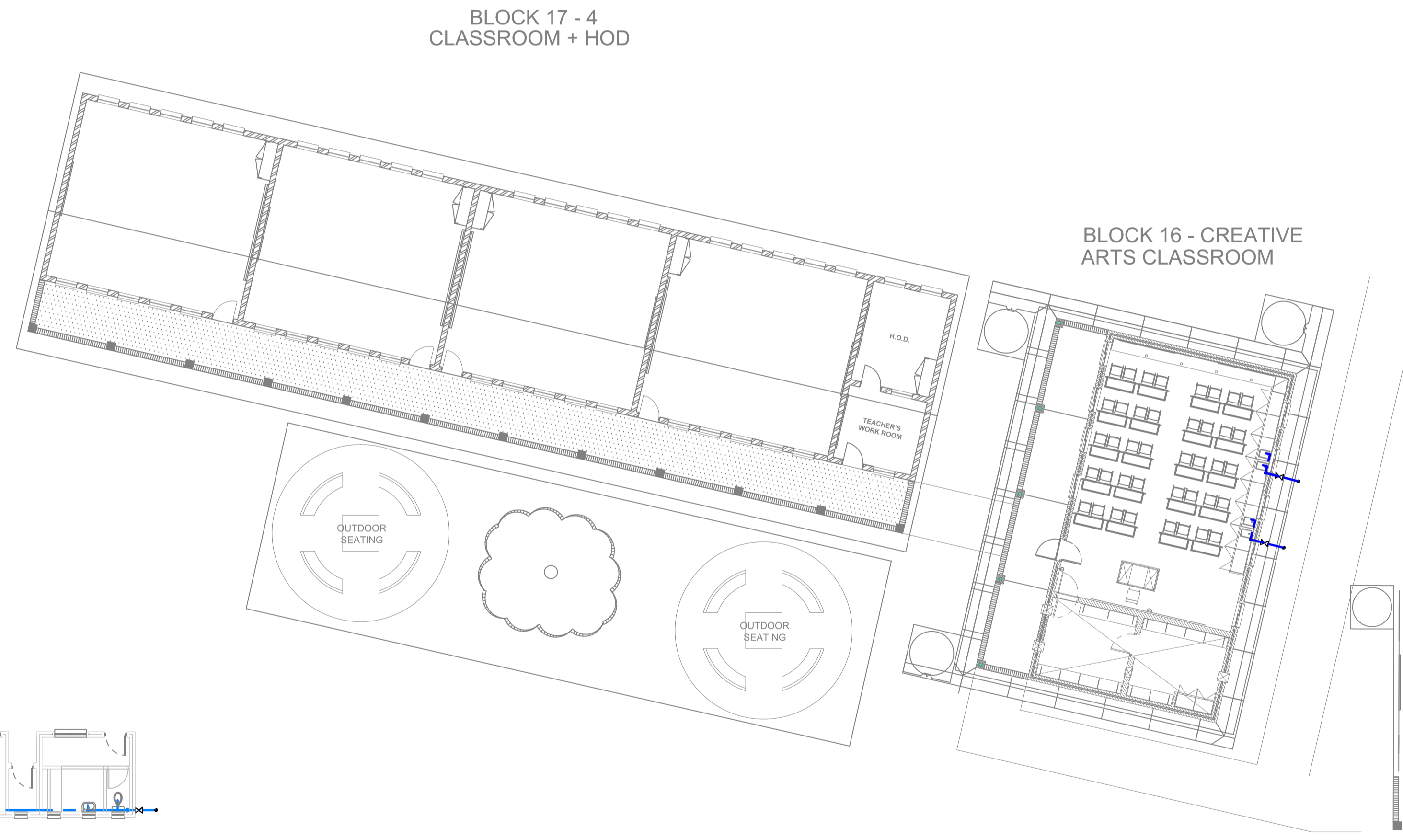
BLOCK 7 - SENIOR SCIENCE CLASSROOM



BLOCK 3 - MULTI-PURPOSE HALL

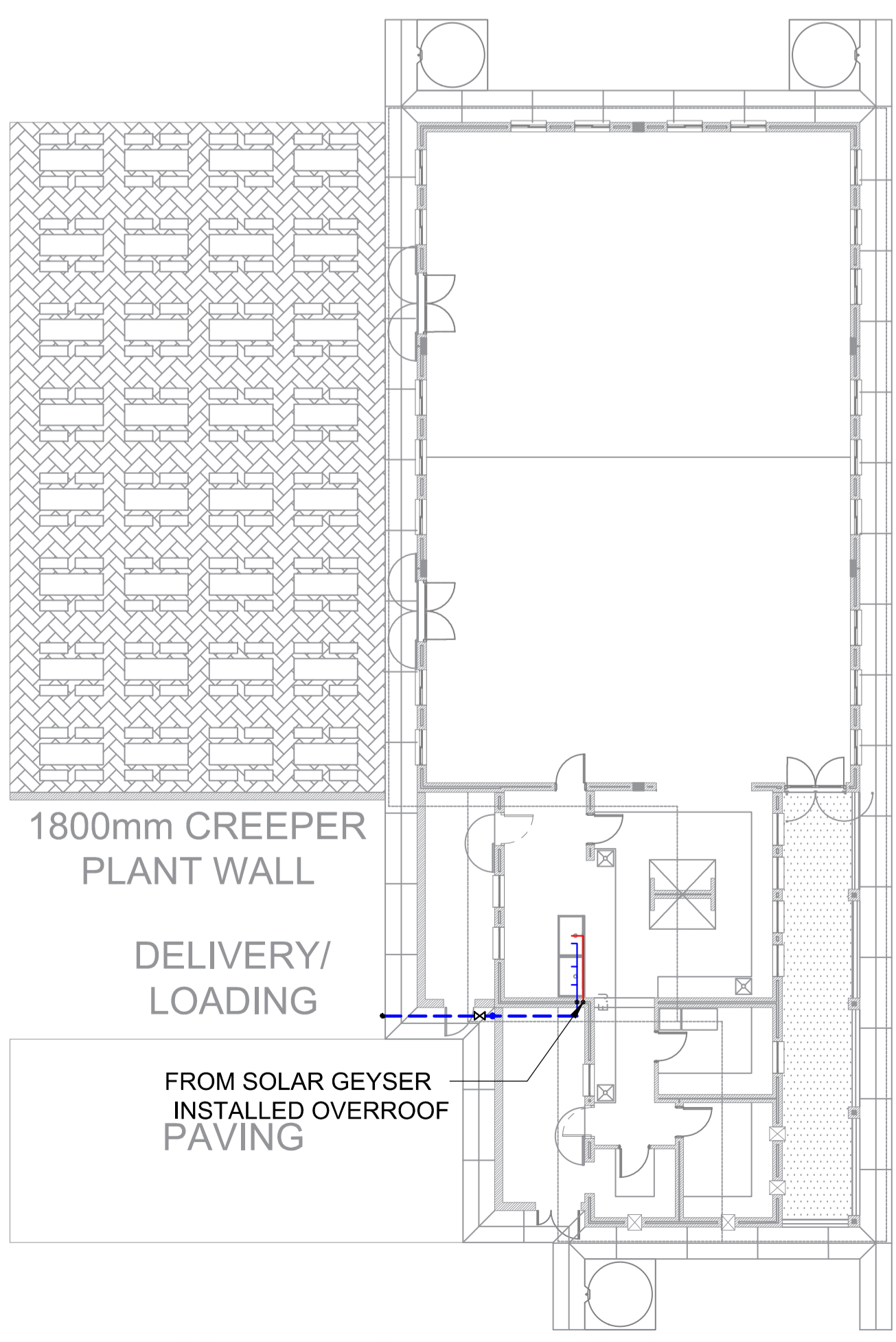


BLOCK 1 - ADMINISTRATION

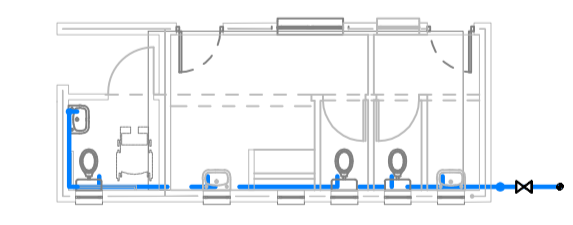


BLOCK 16 - CREATIVE ARTS CLASSROOM

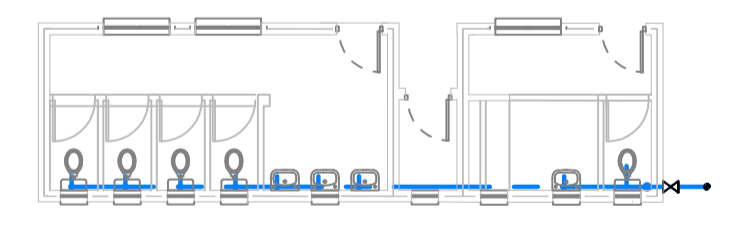
BLOCK 17 - 4 CLASSROOM + HOD



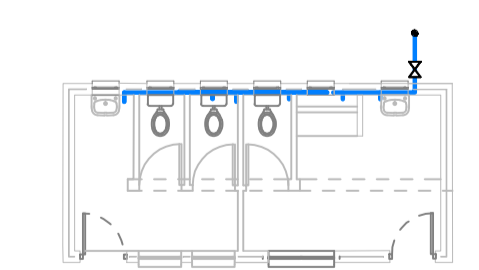
BLOCK 2 - DINING AND NUTRITION CENTRE



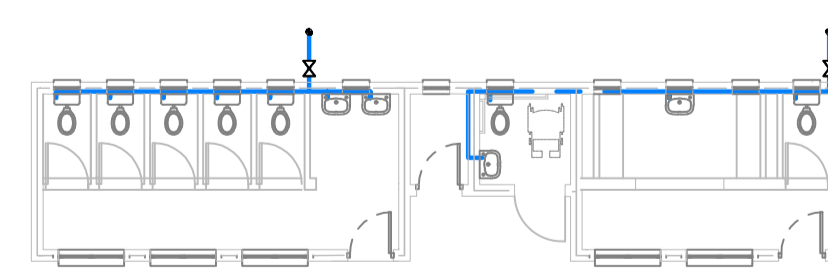
BLOCK 25 - STAFF A



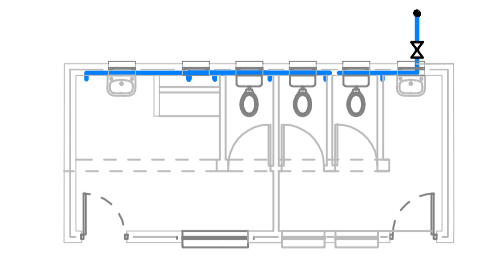
BLOCK 26 - LEARNER ABLUTIONS A



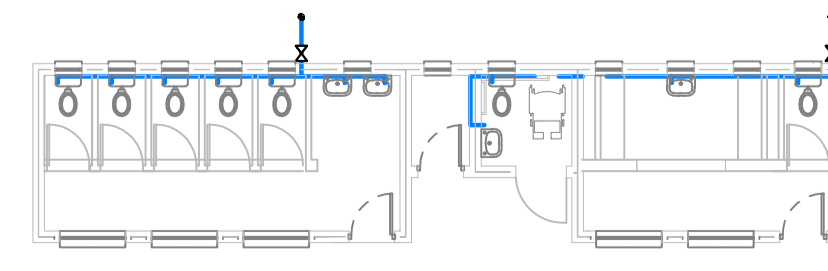
BLOCK 28 - STAFF B



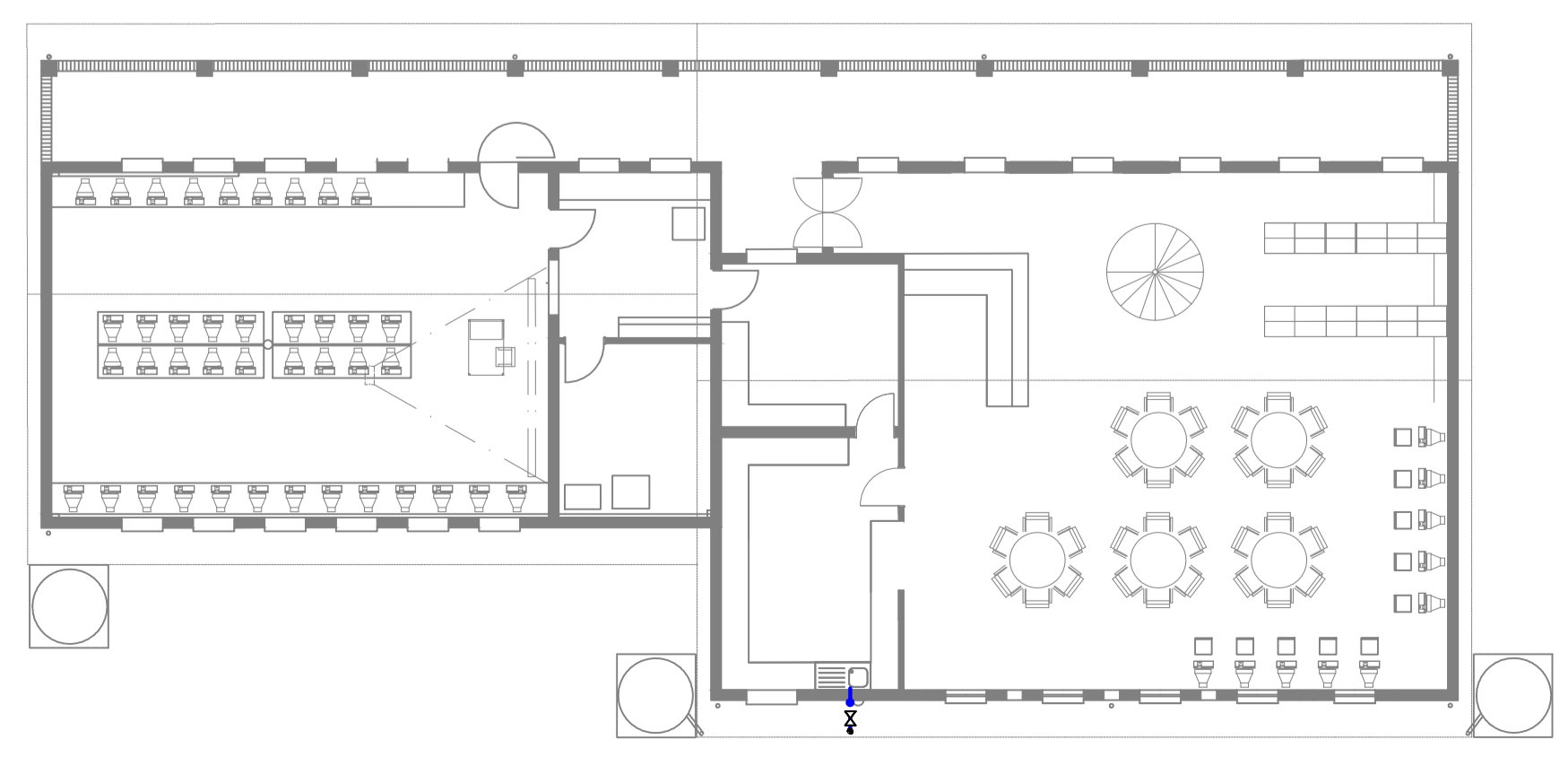
BLOCK 27 - LEARNER ABLUTIONS B



BLOCK 30 - STAFF C



BLOCK 29 - LEARNER ABLUTIONS C



BLOCK 4 - LIBRARY AND COMPUTER

A	02-08-2024	ISSUED FOR INFORMATION
NO.	DATE	AMENDMENT



**MECHANICAL**

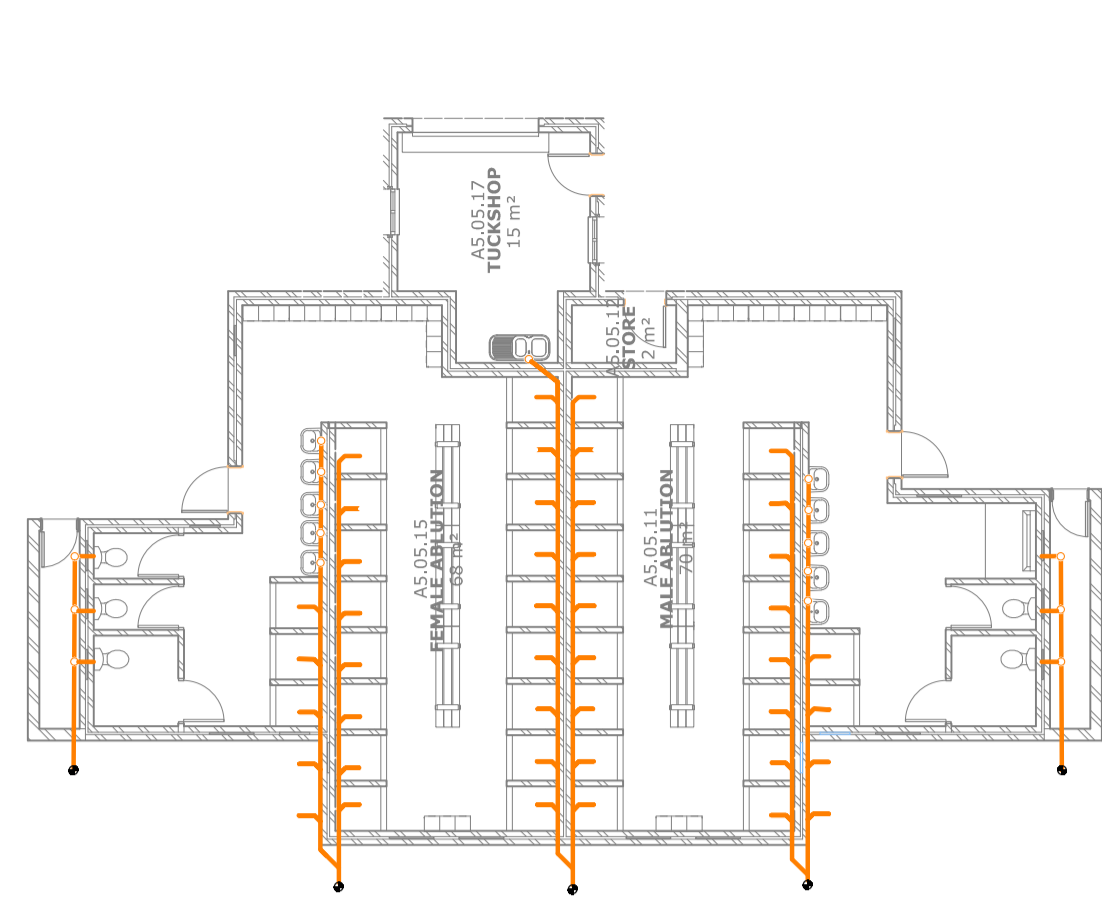
Project:  
 RAPID INFRASTRUCTURE PROGRAMME:  
 PROPOSED CONSTRUCTION OF  
 PAKAMANI SENIOR SECONDARY  
 SCHOOL, ENGCOCO

Drawing Title:  
**GROUND FLOOR WATER SUPPLY LAYOUT**

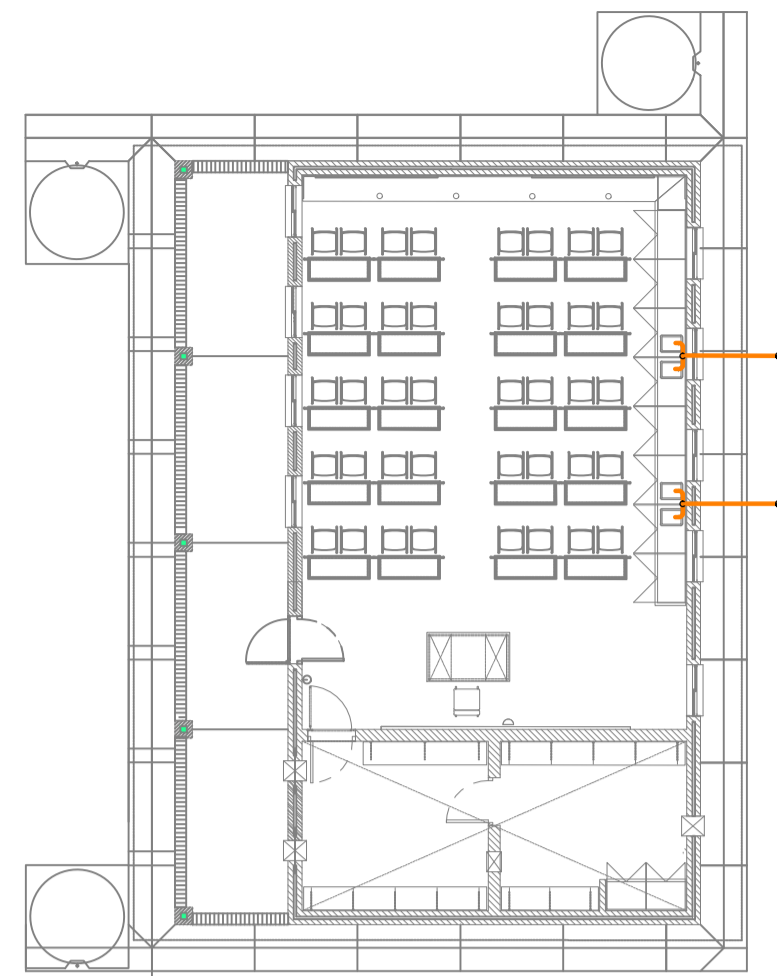
Prof. Registered Signature	Client Signature
T THENGA	Client Name
2018300205	

Date:	29-07-2024	Designed:	L. MHLAMBI
Size:	A1	Drawn:	T. MONOBE
Scale:	1:150	Checked:	T. THENGA
Building Occupancy:	A1	Climate Zone:	05
Stage:	02	Sheet No.:	1 of 1

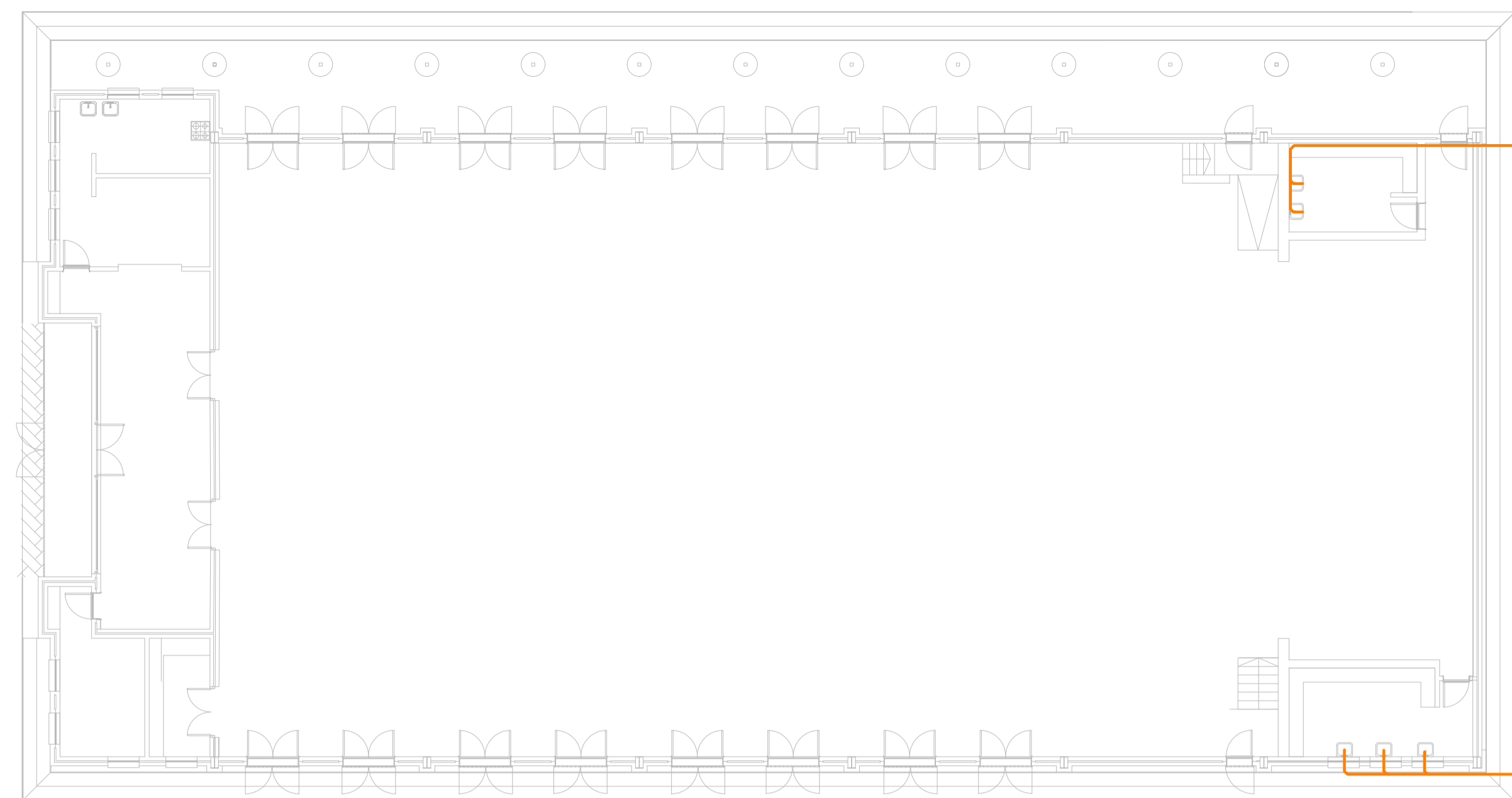
Project #:	Discipline:	Drawing #:	Rev.:
7019507G	M	100	A
For: <b>CONCEPT DESIGN</b>			



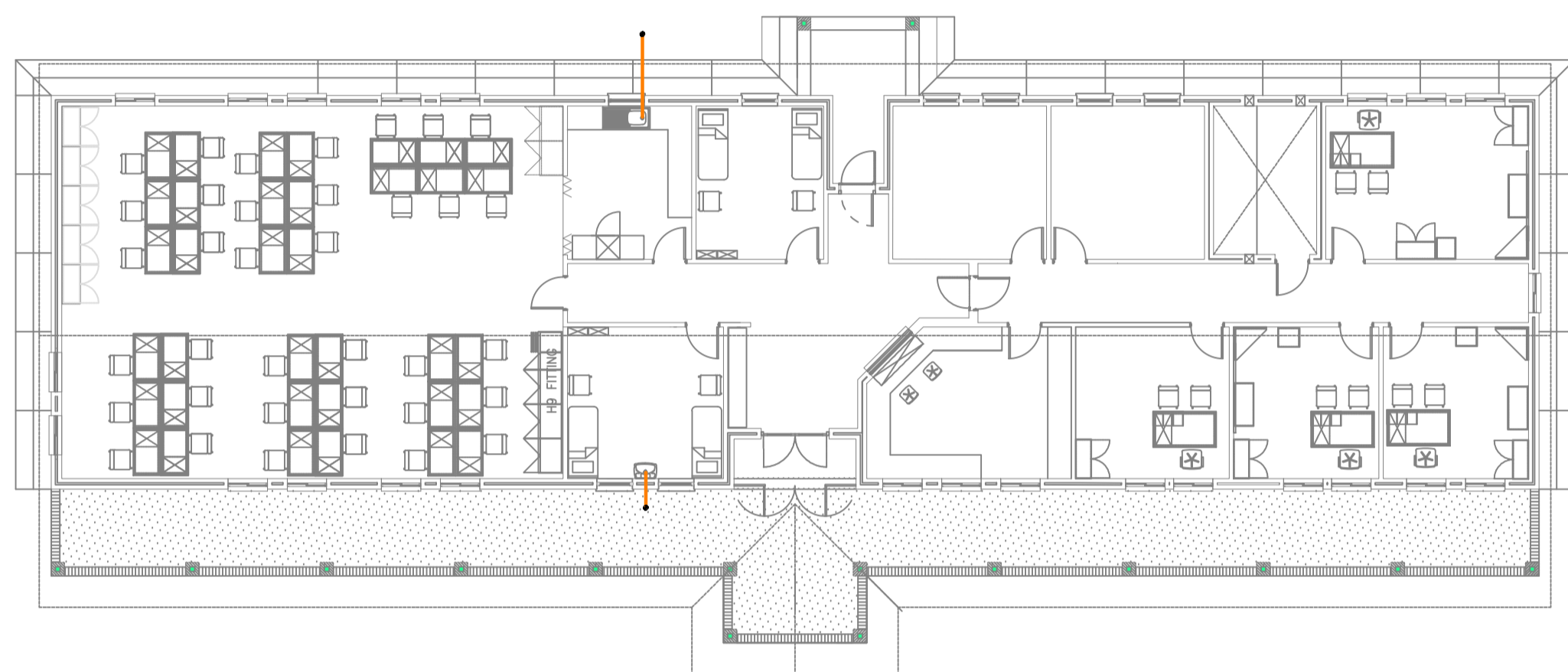
BLOCK 24 - CHANGEROOM AND TUCKSHOP



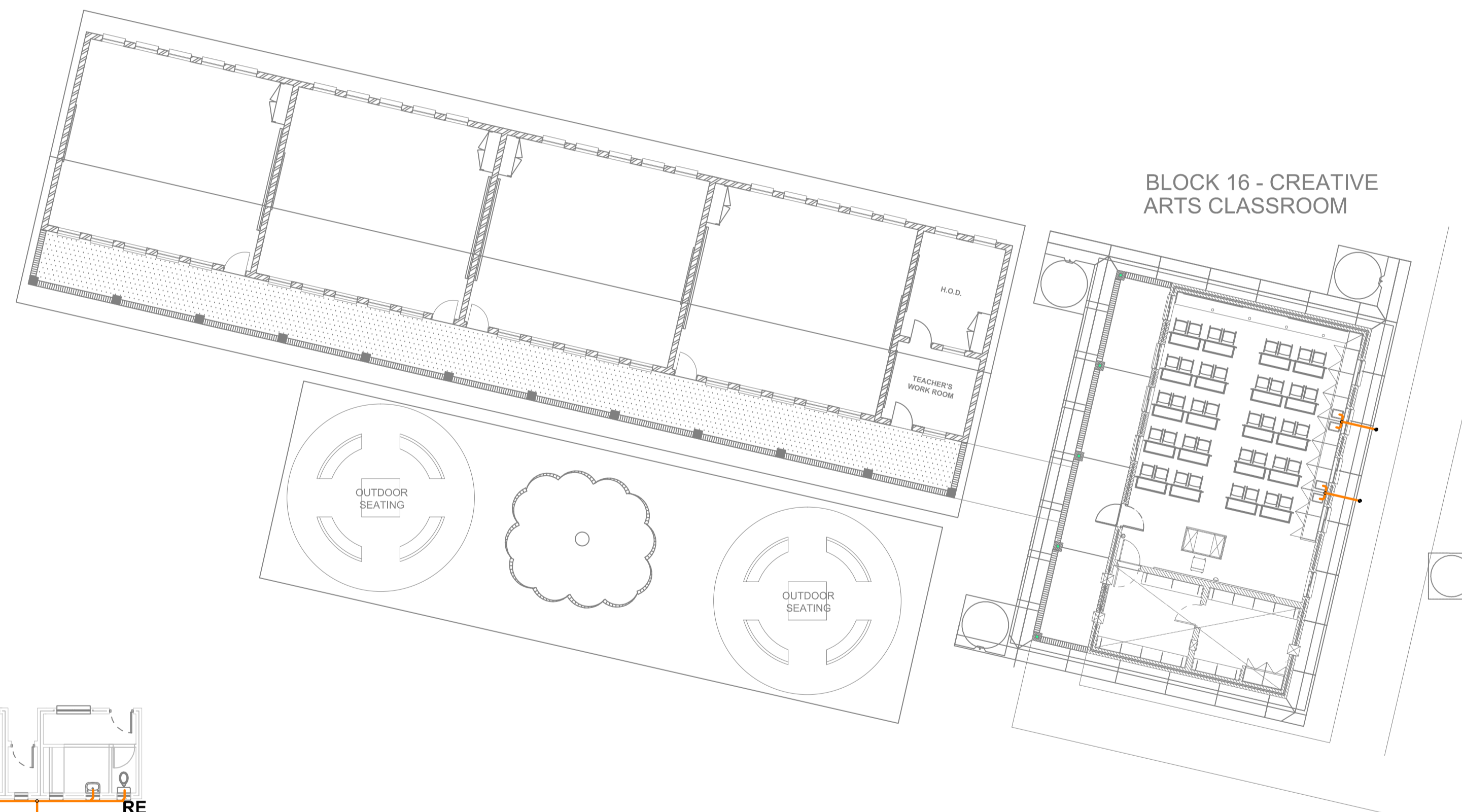
BLOCK 7 - SENIOR SCIENCE CLASSROOM



BLOCK 3 - MULTI-PURPOSE HALL

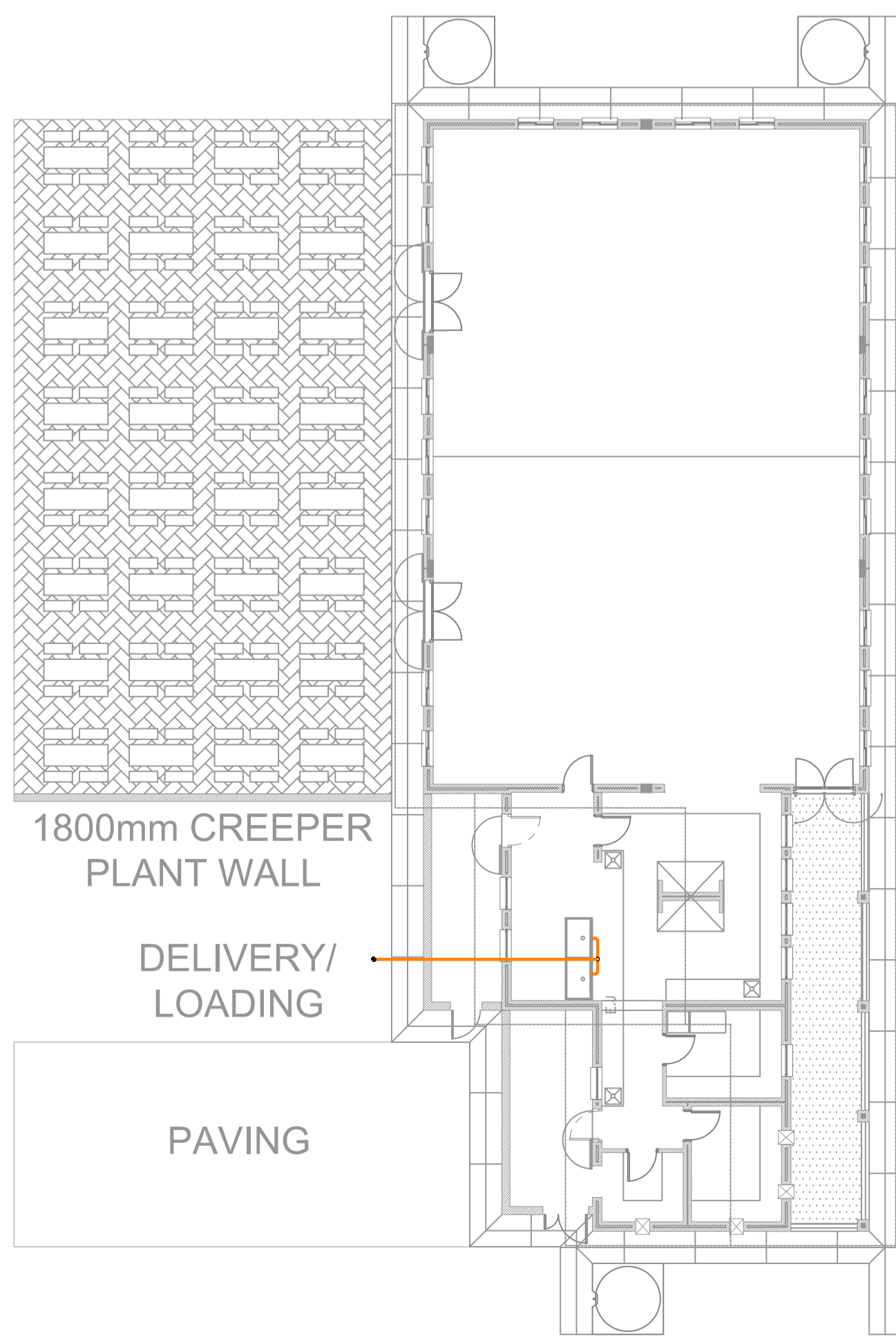


BLOCK 1 - ADMINISTRATION

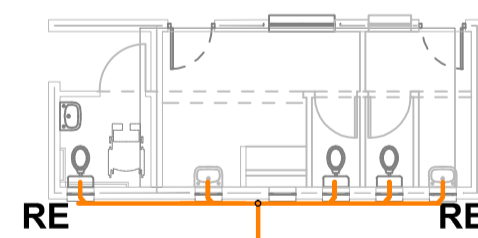


BLOCK 16 - CREATIVE ARTS CLASSROOM

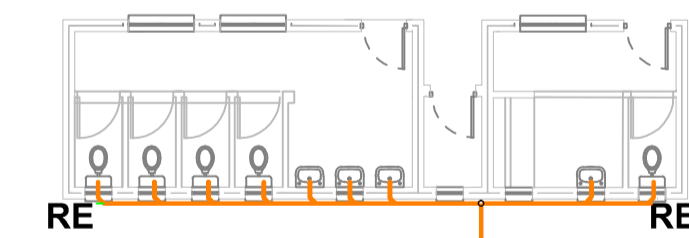
BLOCK 17 - 4 CLASSROOM + HOD



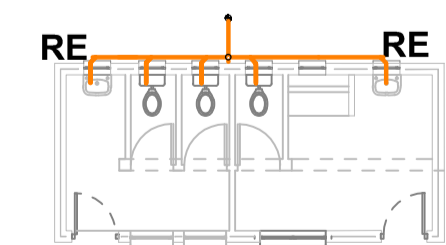
BLOCK 2 - DINING AND NUTRITION CENTRE



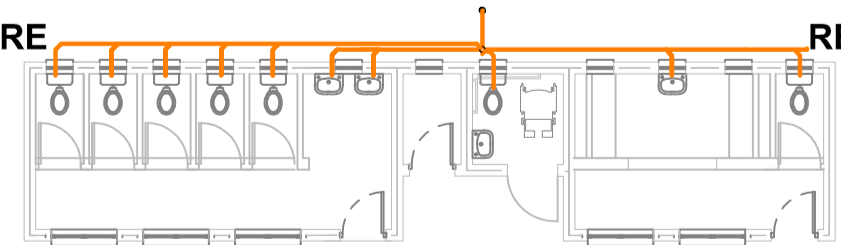
BLOCK 25 - STAFF A



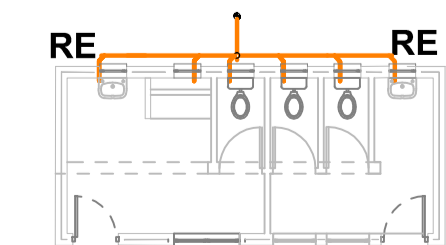
BLOCK 26 - LEARNER ABLUTIONS A



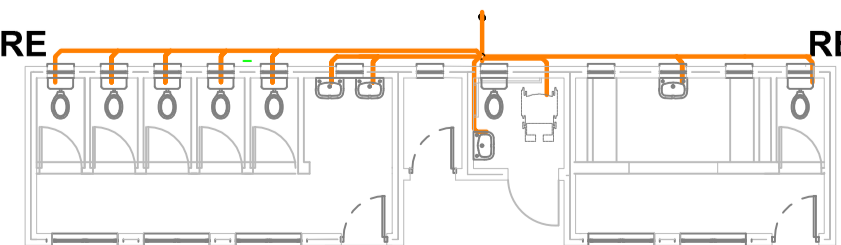
BLOCK 28 - STAFF B



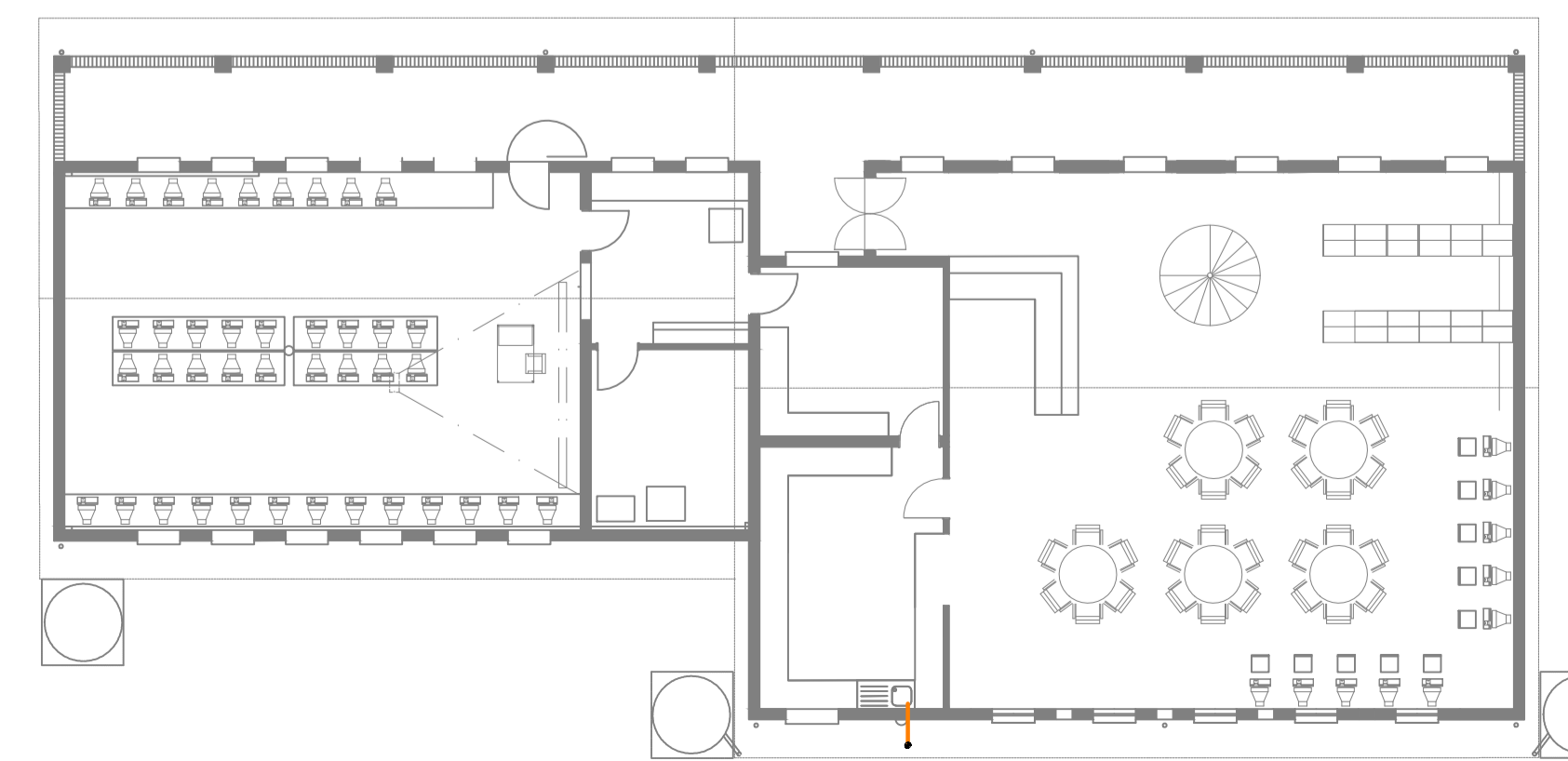
BLOCK 27 - LEARNER ABLUTIONS B



BLOCK 30 - STAFF C



BLOCK 29 - LEARNER ABLUTIONS C

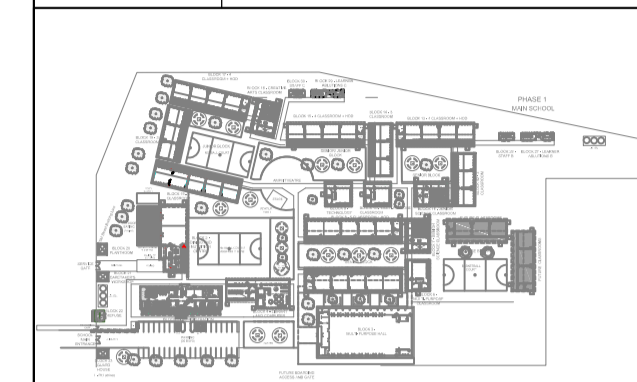


BLOCK 4 - LIBRARY AND COMPUTER

DRAINAGE LINE TYPE LEGEND	
	DRAINAGE BELOW GROUND/SLAB
	DRAINAGE ABOVE GROUND

**NOTE:**  
 ALL DRAINAGE IS TO HAVE A GRADIENT OF 1:40 UNLESS OTHERWISE INDICATED  
 ALL DRAINAGE TO CONFORM TO 10252-2  
 DRAINAGE TO BE THAT OF uPVC CLASS 51.  
 ALL SOIL PIPING WILL BE Ø110MM  
 ALL DRAINAGE TO BE VENTED IN ACCORDANCE WITH SANS 10252-2.  
 ALL EXPOSED FITTINGS SHALL MAKE USE OF INSPECTION FITTINGS

SYMBOL LEGEND	
	CIVIL CONNECTION
	DROPPER
RE	ROLLING EYE



KEY PLAN

A	09-05-2024	ISSUED FOR INFORMATION
NO.	DATE	AMENDMENT



**MECHANICAL**

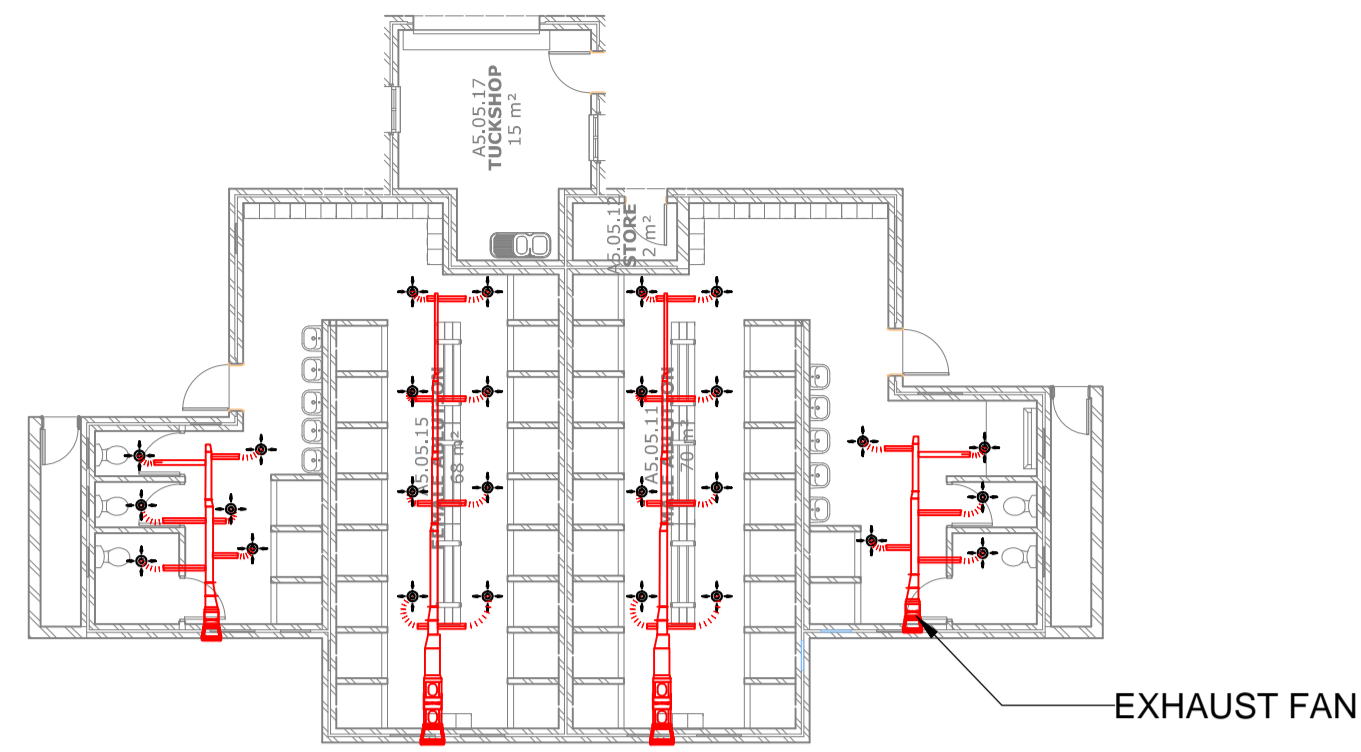
Project:  
**RAPID INFRASTRUCTURE PROGRAMME  
 PROPOSED CONSTRUCTION OF  
 PAKAMANI SENIOR SECONDARY  
 SCHOOL, ENGOBO**

Drawing Title:  
**DRAINAGE LAYOUT**

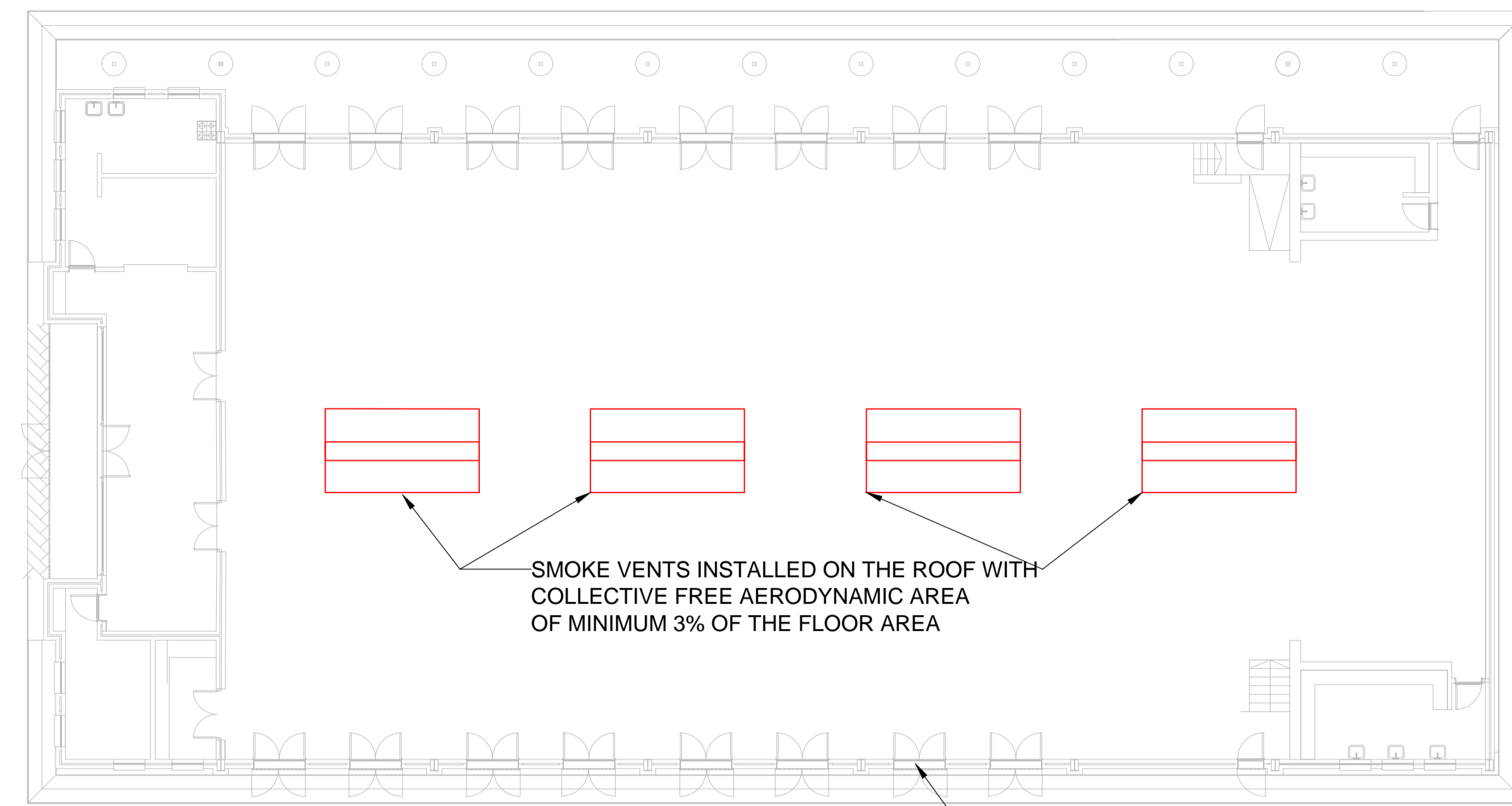
Prof. Registered Signature 	Client Signature
T. THENGA 2018300205	Client Name

Date: 09-05-2024	Designed: L. MHLAMBI
Size: A1	Drawn: T. MONOBE
Scale: 1:150	Checked: T. THENGA
Building Occupancy: A1	Climate Zone: 05
Stage: 02	Sheet No: 1 of 1

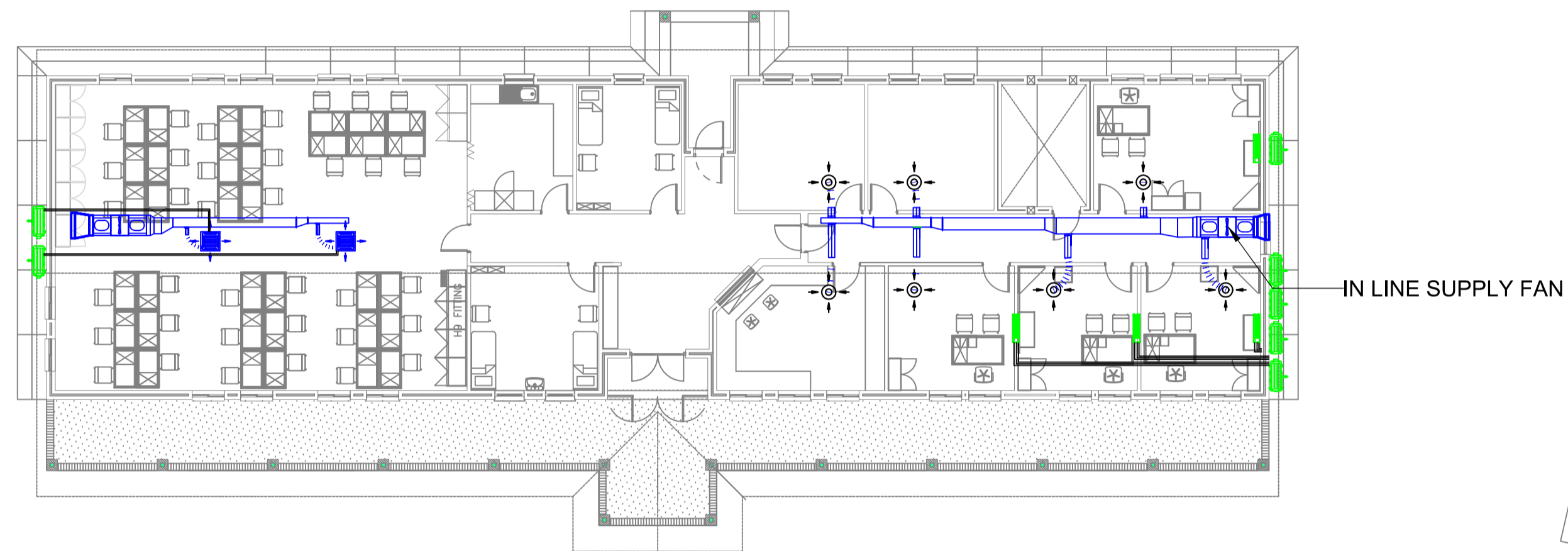
Project #: 7019507G	Discipline: M	Drawing #: 300	Rev: A
For: CONCEPT DESIGN			



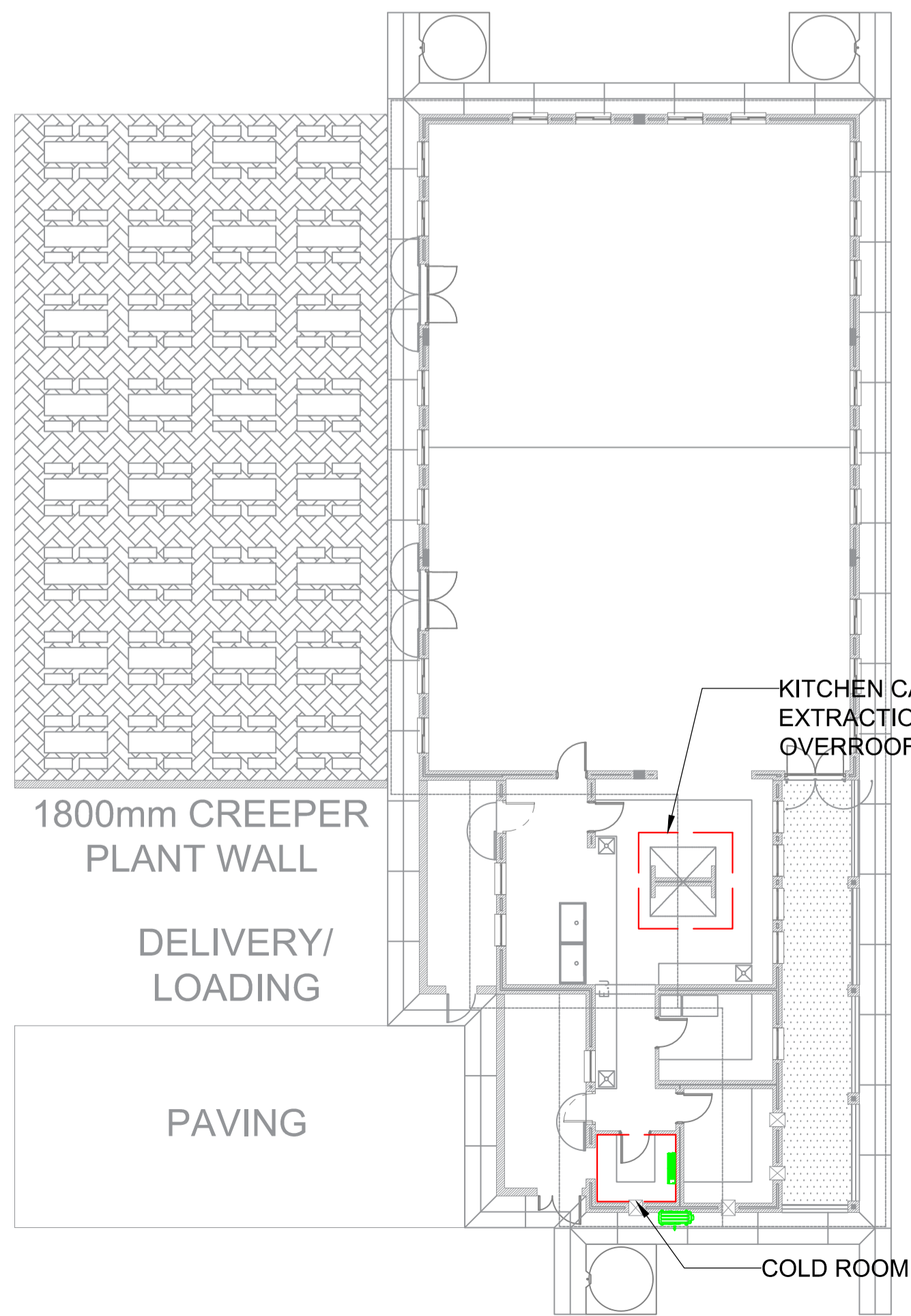
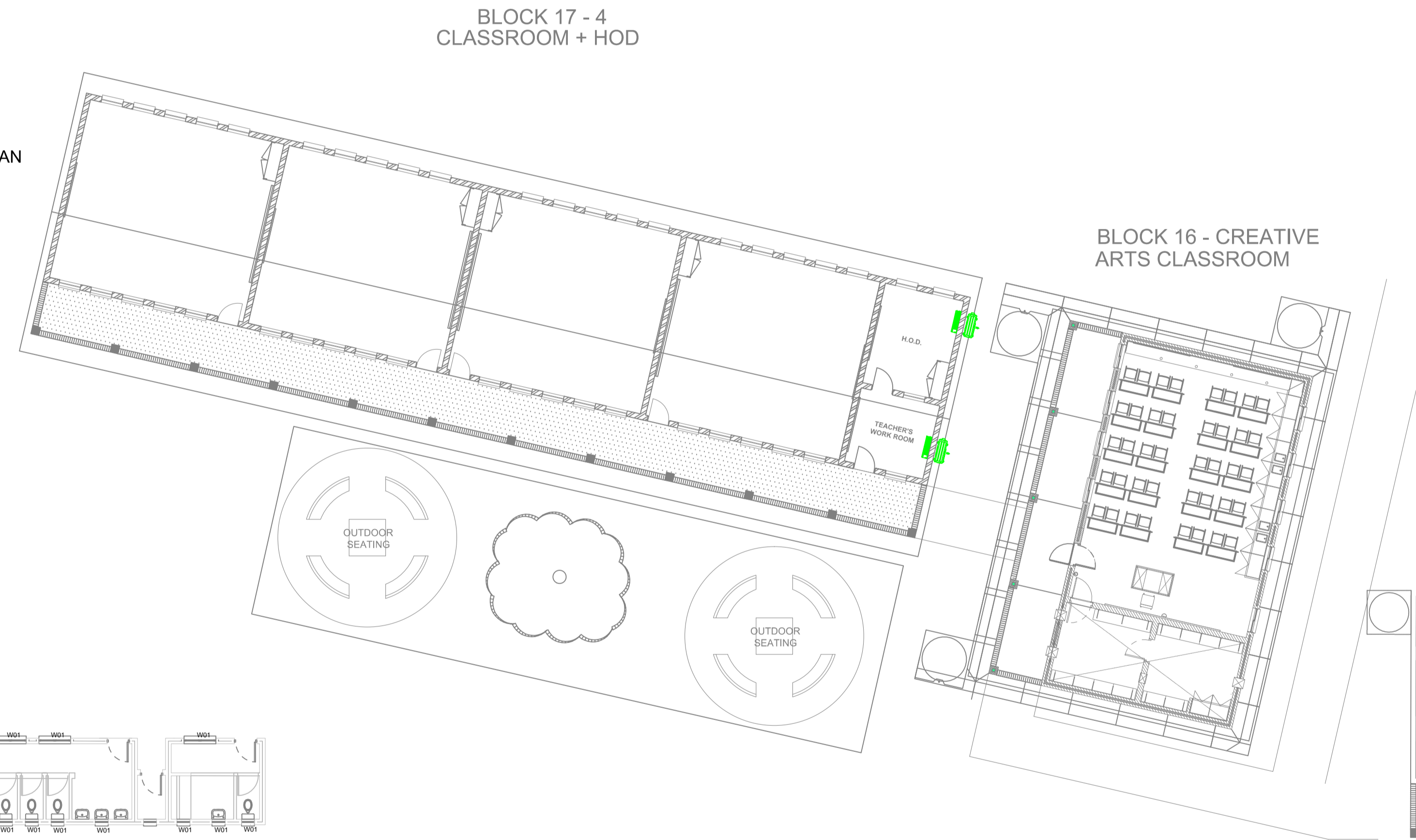
BLOCK 24 - CHANGEROOM AND TUCKSHOP



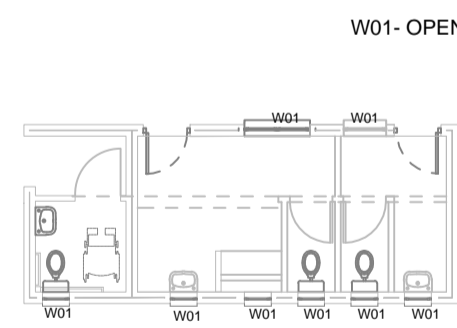
BLOCK 3 - MULTI-PURPOSE HALL



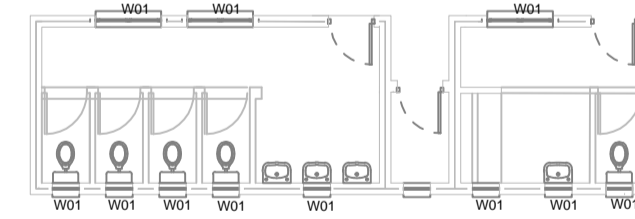
BLOCK 1 - ADMINISTRATION



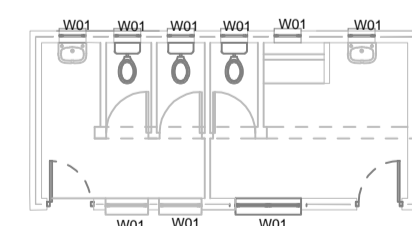
BLOCK 2 - DINING AND NUTRITION CENTRE



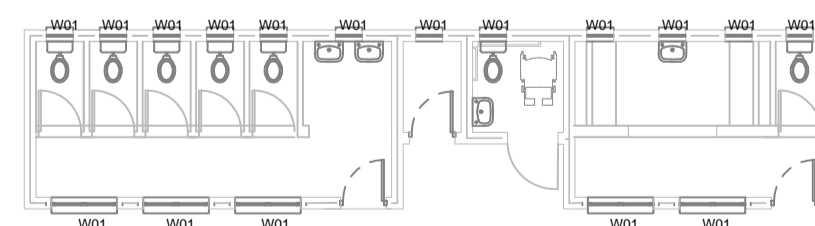
BLOCK 25 - STAFF A



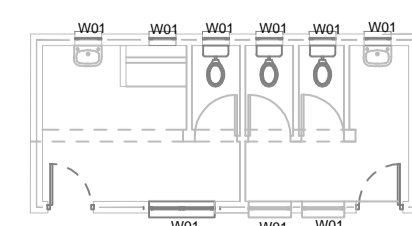
BLOCK 26 - LEARNER ABLUTIONS A



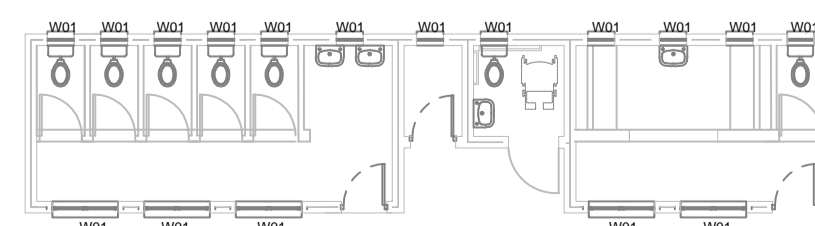
BLOCK 28 - STAFF B



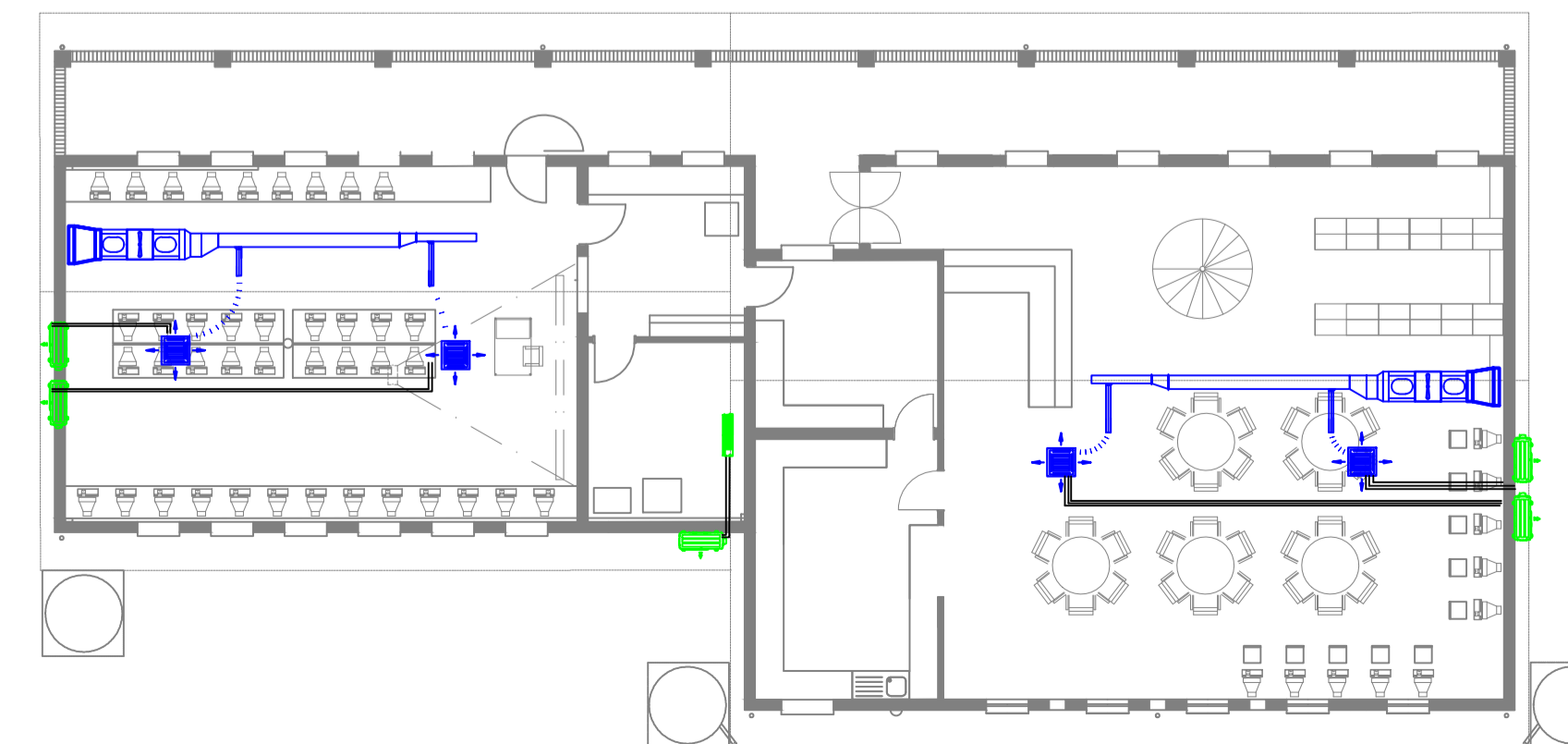
BLOCK 27 - LEARNER ABLUTIONS B



BLOCK 30 - STAFF C

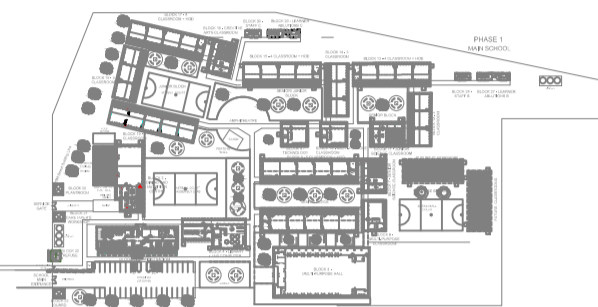


BLOCK 29 - LEARNER ABLUTIONS C



BLOCK 4 - LIBRARY AND COMPUTER

SYMBOL LEGEND	
	MID WALL SPLIT UNIT
	CASSETE AIRCON UNIT
	OUTDOOR UNIT
	IN LINE DUCTED FAN
	SMOKE ROOF VENT



KEY PLAN

A	09-05-2024	ISSUED FOR INFORMATION
NO.	DATE	AMENDMENT

Client:



Consultant:



MECHANICAL

Project:  
RAPID INFRASTRUCTURE PROGRAMME  
PROPOSED CONSTRUCTION OF  
PAKAMANI SENIOR SECONDARY  
SCHOOL, ENGCOCO

Drawing Title:

HVAC & R  
LAYOUT

Prof. Registered Signature	Client Signature
T THENGA	Client Name
2018300205	

Date: 09-05-2024	Designed: L. MILAMBI
Size: A1	Drawn: T. MONOBE
Scale: 1:150	Checked: T. THENGA
Building Occupancy: A3	Climate Zone: 04
Stage: 02	Sheet No: 1 of 1

Project #:	Discipline:	Drawing #:	Rev:
7019507G	M	400	A
For:	CONCEPT DESIGN		

**GENERAL FIRE REQUIREMENTS**

FLOOR: GROUND  
 DESCRIPTION OF USE: PLACE OF INSTRUCTION  
 TOTAL FLOOR AREA: ## M<sup>2</sup>  
 PREDOMINANT OCCUPANCY: A3-PLACE OF INSTRUCTION  
 TOTAL POPULATION: 1600 PEOPLE (ESTIMATE)  
 EVACUATION: SIMULTANEOUS EVACUATION  
 EXITS: ESCAPE DOORS  
 SPRINKLER PROTECTION: N/A  
 SMOKE DETECTION: (REFER TO ELECTRICAL ENGINEER'S LAYOUTS)  
 SMOKE CONTROL: NATURALLY VENTILATED  
 FIRE FIGHTING:

DESCRIPTION:	MIN. # BASED ON AREA:	DESIGN #:
4.5KG DRY CHEMICAL FIRE EXTINGUISHER		

- STANDARD FIRE PROTECTION NOTES.**
- THE PROJECT FIRE ENGINEERING DESIGN IS BASED ON SANS10400-T.
- A. DESCRIPTION OF BUILDING:**  
 NATIONAL BUILDING REGULATION SECTION A21 OCCUPANCY CLASSIFICATION - A3
- B. NORMATIVE REFERENCES:**  
 SANS 10400 PART A  
 SANS 10400 PART S  
 SANS 10400 PART T  
 SANS 10400 PART W  
 SANS 10139  
 BS 9999
- C. STRUCTURAL STABILITY:**  
 FIRE AND STRUCTURAL STABILITY RATING OF STRUCTURAL ELEMENTS TO BE MINIMUM 30 MINUTES.
- D. OCCUPANCY SEPARATION:**  
 OCCUPANCY SEPARATING ELEMENTS TO HAVE FIRE RATING OF MINIMUM 30 MINUTES.
- E. TENANCY SEPARATION:**  
 N/A
- F. FIRE STOPPING:**  
 FIRE STOPPING OF INACCESSIBLE CONCEALED SPACES AND PROTECTION OF SERVICE SHAFTS BY BUILDER, BETWEEN FLOORS AND ALL FIRE RATED WALLS MINIMUM 30 MINUTES.
- G. LOCKING DEVICE:**  
 ALL MAG-LOCK LOCK DEVICES IF FITTED TO RELEASE WHEN ALARM ACTIVATED (INTERLOCKED WITH THE FIRE DETECTION AND ALARM SYSTEM).
- H. STATUTORY SIGNAGE:**  
 MARKING AND SIGNPOSTING TO BE INSTALLED IN ACCORDANCE WITH SANS 1186 AND SANS 10114.
- I. EMERGENCY LIGHTING:**  
 ARTIFICIAL LIGHTING PROVIDED IN ACCORDANCE WITH SANS 10400-T. LIGHTS TO ILLUMINATE AT 50LX 100MM ABOVE FFL. SUCH LIGHTING TO BE PROVIDED ABOVE ALL EXIT DOORS AND ALONG ESCAPE ROUTES.
- J. FIRE HYDRANTS:**  
 HYDRANTS TO BE INSTALLED AT A RATE OF 1/1000M<sup>2</sup> IN ACCORDANCE WITH SANS 1128. HYDRANTS TO BE LOCATED AT NEAR FIRE ESCAPES AS INDICATED ON PLAN. HYDRANTS SHALL BE PROVIDED WITH A 30M HOSE WITH COUPLING AND 16MM INTERNAL DIAMETER NOZZLE.
- K. FIRE HOSE REELS:**  
 HOSE REELS TO BE INSTALLED AT A RATE OF 1/500M<sup>2</sup> IN ACCORDANCE WITH SANS 543 AND SANS 10105, OR 30 METER REACH. WATER SUPPLY TO THE HYDRANT AND HOSE REELS TO BE DESIGNED AND INSTALLED IN ACCORDANCE WITH SANS 10400 PART W AND SANS 10252
- M. FIRE EXTINGUISHERS:**  
 FIRE EXTINGUISHERS TO BE INSTALLED AT A RATE OF 1/200M<sup>2</sup> IN ACCORDANCE WITH SANS 10400-T.
- N. INTERFACE:**  
 INITIATE FLOOR EVACUATION, FULL SIMULTANEOUS EVACUATION.  
 RELEASE ALL ELECTRONIC LOCKING AND DOOR HOLDING DEVICES.  
 ELEVATOR TO GROUND WHEN ALARM IS ACTIVATED.  
 ALL HVAC SYSTEMS SWITCH TO OFF STATE WHEN ALARM IS ACTIVATED.
- O. SMOKE DETECTION:**  
 REFER TO ELECTRICAL ENGINEER'S DESIGN
- P. SMOKE CONTROL:**  
 NATURAL VENTILATION ON ALL FLOORS.
- Q. EVACUATION STRATEGY:**  
 EVACUATION TO BE SIMULTANEOUS EVACUATION.
- R. FIRE CABINETS:**  
 CABINET DOORS LOCKING CAPABILITY - PROHIBITED
- S. SIGNAGE:**  
 SIGNAGE DIMENSIONS TO ALL BE 200x200 IN ACCORDANCE WITH SANS 10114-2 WITH RESPECT TO VIEWING DISTANCES. ALL SIGNAGE IS INDICATED ON THE DRAWING IN THE DIRECTION OF INSTALLATION.

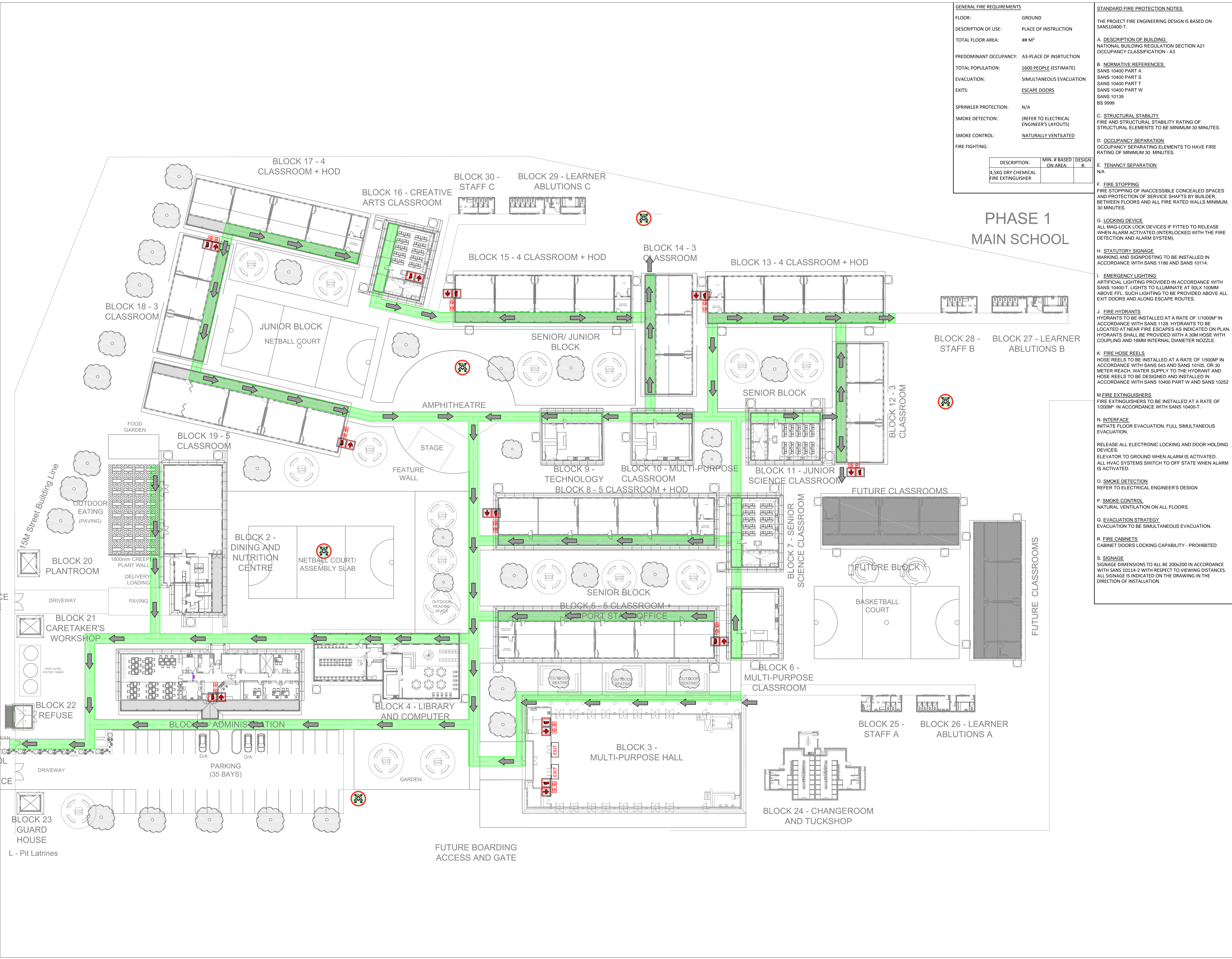
**STANDARD FIRE SIGNAGE LEGEND**

E1		E2		F1		F2	
E3		E4		F3		F4	
E5		E6		F5		F6	
E7		E8		F7		F8	
E10		E11		F9		F10	
E12		E13		F11		F12	
E14		E15A		F13		F14	
E16		E15B		F15		F16	
E17		E18		F17		F18	
E18		E19		F19		F20	
E20		E21		F21		F22	
E25		E26		F23		F24	
E27		E28		F28		F29	
E29		E29		F30		F31	
F13		F14		F32		F33	
F16		F17		F36		F37	
F19		F20		F38			

**ASSEMBLY POINTS**

**HOSE LENGTH FROM NEAREST CABINET**

**NEAREST EXIT DISTANCE TO NEAREST EXIT**



A	09-08-2024	ISSUED FOR INFORMATION
NO.	DATE	AMENDMENT

Client:

Consultant:

Tel: +27(0) 861 878 252  
 www.csmeng.co.za

**MECHANICAL**

Project:

RAPID INFRASTRUCTURE PROGRAMME: PROPOSED CONSTRUCTION OF PAKAMANI SENIOR SECONDARY SCHOOL, ENGCOCO

Drawing Title:

**FIRE PROTECTION LAYOUT**

Prof. Registered Signature	Client Signature
T THENGA	
2018300205	Client Name

Date:	07-09-2024	Designed:	L.MHLAMBI
Size:	A1	Drawn:	L.MHLAMBI
Scale:	1:350	Checked:	T THENGA
Building Occupancy:	A3	Climate Zone:	--
Stage:	02	Sheet No:	1 of 1

Project #:	Discipline:	Drawing #:	Rev:
70195207G	M	500	A

For: INFORMATION