









DIGITAL PARK

*MECHANICAL SERVICES
DRAWINGS*

LEGEND	
SYMBOL	DESCRIPTION
	WATER SUPPLY PIPE
	SOIL PIPE
	WASTE PIPE
	CHAMBER
	WATER CLOSET
	WASH HAND BASIN
	SPRINKLER HEAD
	EXTRACTOR FAN

ABBREVIATIONS	
CW	COLD WATER
HW	HOT WATER
FU	FIXTURE UNIT
GPM	GALLON PER MINUTE
DWS	DOMESTIC WATER SUPPLY
WAS	WASTE WATER EXTRACT PIPE
SLP	SOIL WATER EXTRACT PIPE

NOTE :

PROJECT TITLE DIGITAL PARK	ARCHITECT	OLADIPUPO C.O.	DRAWING TITLE: LEGENDS	
	DRAWN BY	IWEIBO S.E		
CLIENT	CHECKED BY		DRAWING SCALE: N.T.S.	DRAWING NO: M01
	APPROVED BY			
LOCATION	DATE	NOVEMBER, 2021.		

PLUMBING SYSTEM

1-DRAWINGS SHOWING THE LOCATIONS OF PLUMBING EQUIPMENT, PIPING, ETC. ARE DIAGRAMMATIC AND JOB CONDITIONS. THE DRAWINGS SHOW THE GENERAL ARRANGEMENTS OF EQUIPMENT, PIPING, ETC. AND SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONSTRUCTION AND THE WORK OF OTHER TRADES WILL PERMIT.

2-PIPE SIZES INDICATED ARE OUTER DIAMETER IN mm AND ALL INVERT LEVELS ARE MEASURED FROM FINISHED FLOOR LEVEL.

3-ALL VALVES AND ACCESSORIES SHALL BE FULL LINE SIZE, PROVIDE ALL NECESSARY UNIONS, REDUCERS, STOPS AS REQUIRED WHEN CONNECTING TO EACH FIXTURE AND/OR EQUIPMENT AND USE BALL VALVE FOR ALL PIPE VALVE.

4-SLOPE OF 1/4 TO 1/2 BY FOOT SHOULD BE MAINTAINED FOR ALL DRAIN AND WASTE PIPES AS VENT PIPE ARE UPVC 4 BAR WHILE DRAINAGE PIPES ARE UPVC 6 BAR.

5-VENT PIPES BETWEEN THE THE SINKS DRAIN AND WASTE PIPES INTERSECTION MUST BE 50mm IN DIAMETER AS WERE DESIGN TO ACTS AS BOTH WASTE AND DRAIN VENT.

6-ALL TOILET WASTE PIPES MUST MAKES A T OR Y WITH THE VENT BOTTOM SUCH THAT THE VENT PIPES GOES VERTICALLY UPWARD FROM THE HORIZONTAL WASTE PIPES

7-ALL WASTE LINES MUST HAVE A Y-SHAPED CLEANOUTS TO AVOID ANY SERIOUS OBSTRUCTIONS WITHIN THE SYSTEM

8-ALL SINKS DRAIN PIPES ARE 40mm IN DIAMETER WHICH CONNECTS TO THE VERTICAL VENTS.

9-WHERE MAIN PIPE SIZE IS NOT INDICATED BETWEEN BRANCH CONNECTIONS ON THE DRAWING, THE PIPE SIZE SHALL BE OF THE LARGER PRECEDING PIPE SIZE.

SUPPRESSION SYSTEM

1-THE DESIGN IS A WET STAND ALONE SYSTEM OF LIGHT HAZARD CONFIGURATION (Tree Configuration).

2-STANDARD OF NFPA 13D #13R.

3-THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE OTHER MECHANICAL SERVICES, ELECTRICAL , STRUCTURAL AND ARCHITECTURAL DRAWINGS.

4-PIPES SHALL BE CPVC SCH 80 AND TO BE CARRY A RATED WORKING PRESSURE OF 175psi AT 150F AND JOINT ARE VICTAULIC.

5-DISTRIBUTION AND RANGE PIPES SIZES ARE INDICATED IN THE DIAGRAM WHILE ALL SPRINKLER PIPES ARE 25mm FOR THE SPRINKLERS.

6-PIPE SUPPORT HANGER ON CROSS MAINS REQUIRE TRAPEZE HANGERS WHILE FIRST HANGER SHOULD NOT EXCEED 900 MM FROM THE BEGINNING OF BRANCH.

7-HYDRO TEST THE SYSTEM TO 150% OF THE WORKING PRESSURE FOR AT LEAST FOUR (4) HOURS WITH CLEAN WATER, NO LEAKAGE ALLOWED DURING THIS PERIOD.

8-ALL PIPES PASS THROUGH WALL OR SLAB SHALL BE THROUGH PIPE SLEEVES.

9-THE PIPING NETWORK SHALL BE INSTALLED SO THAT THE SYSTEM MAY BE DRAINED.

10-ALL EXPOSED PIPES SHALL BE PROPERLY INSULATED ACCORDING TO SPECIFIED INSULATING MATERIAL.

11-PROVIDE EXPANSION LOOP/ CONNECTION WHERE NECESSARY AND ALL PIPES SHALL BE GROUNDED.

NOTE :

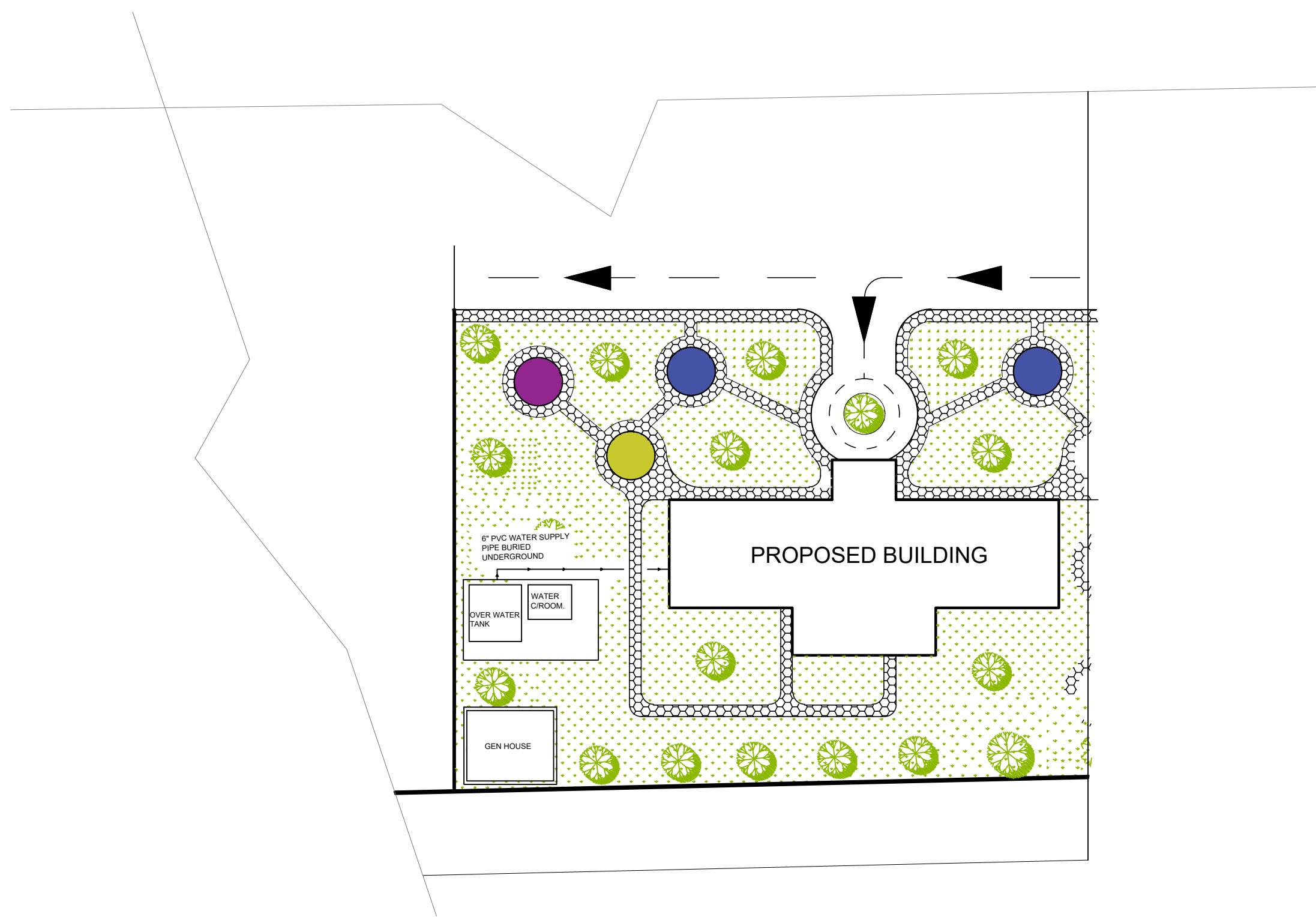
PROJECT TITLE DIGITAL PARK	ARCHITECT	OLADIPUPO C.O.	DRAWING TITLE: GENERAL NOTES	
	DRAWN BY	IWEIBO S.E		
CLIENT	CHECKED BY		DRAWING SCALE: N.T.S.	DRAWINNG NO: M02
LOCATION	APPROVED BY			
	DATE	NOVEMBER, 2021.		

WATER AND WASTE MAINS CALCULATIONS						
FIXTURE TYPE	NO.	WASTE		WATER		
				CW	HW	
		FU	TOTAL	FU	FU	TOTAL
WASH HAND BASIN (W.H.B)	10	2	20	1	1	10
KITCHEN SINK	1	2	2	2		2
URINALS	3	2	6	2		6
WATER CLOSET	18	4	72	3		54
TOTAL FIXTURE UNITS			100			72
MINIMUM REQUIRED 'WATER' PIPE SIZE (INCHES)						1.0
MINIMUM REQUIRED 'WASTE' PIPE SIZE (INCHES)						3.0

WATER PIPE SIZING CHART					
PIPE SIZES CALCULATED BASED ON UPC/CPC APPENDIX A					
SIZE		COLD WATER		HOT WATER	
NOMINAL DIAMETER	INTERNAL DIAMETER	GPM	FU	GPM	FU
1/2"	0.545	21.4	7.5	21.4	4.5

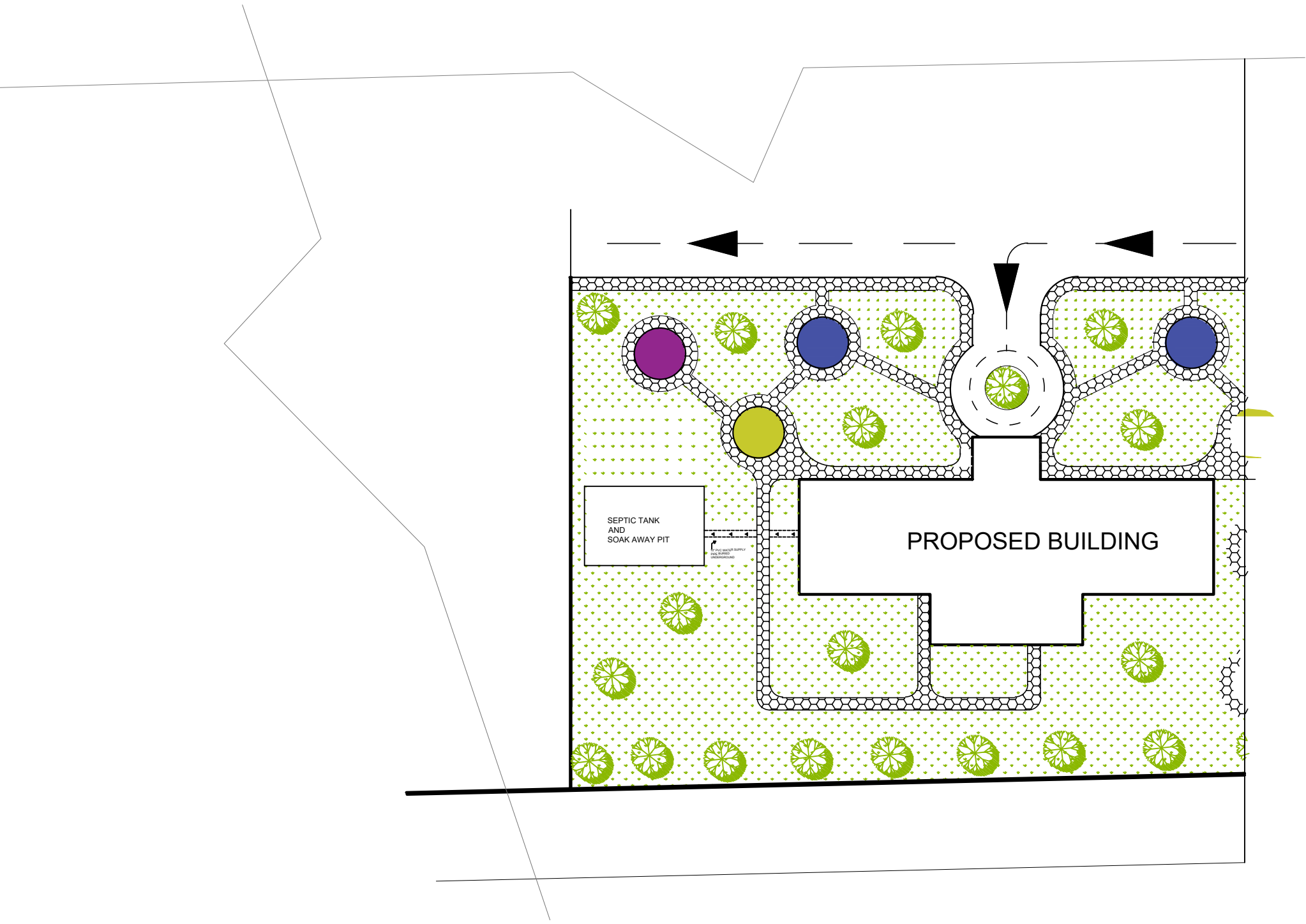
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LOCATION	APPROVED BY			
	DATE	NOVEMBER, 2021.		



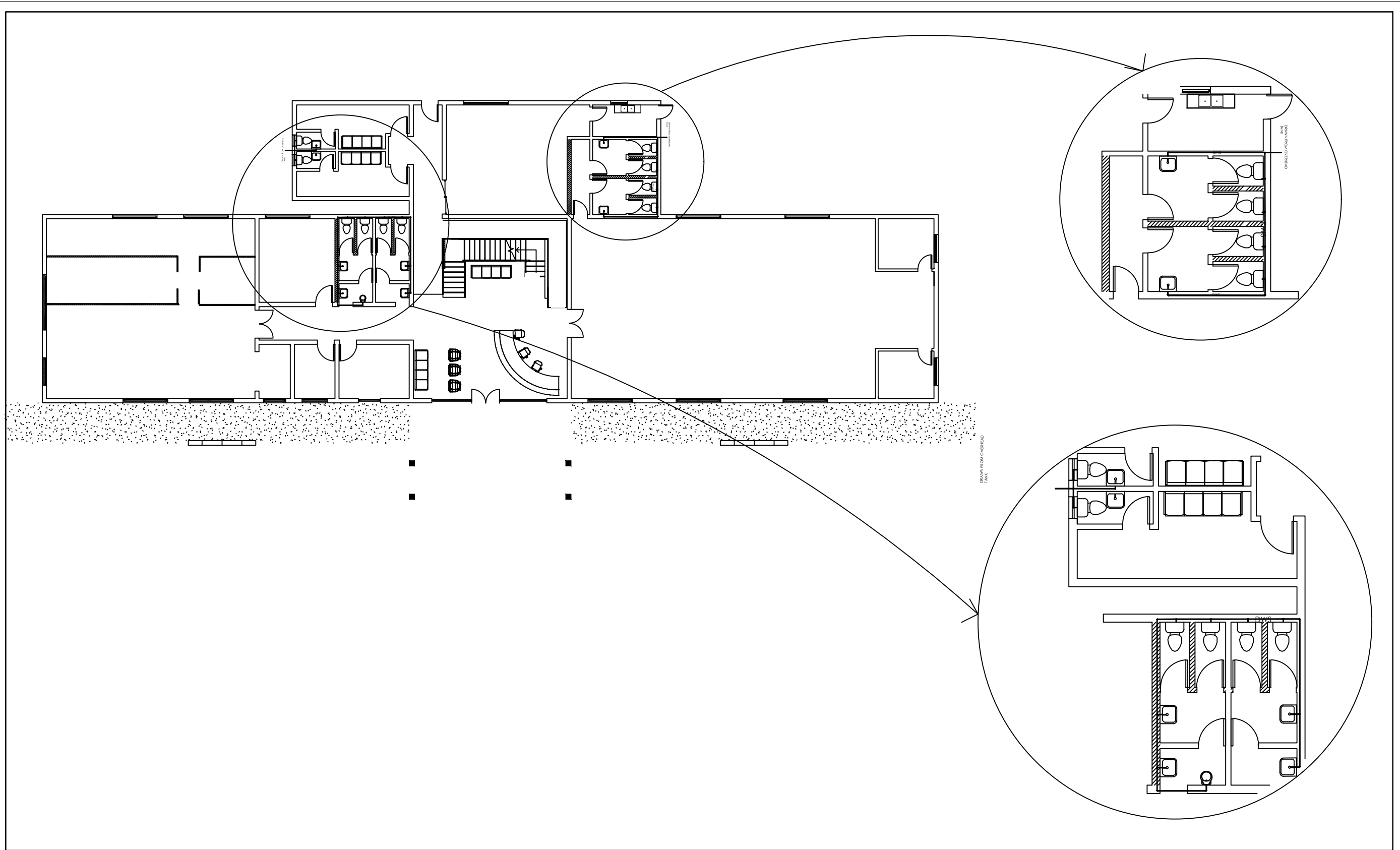
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	DRAWN BY	IWEIBO S.E		
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LOCATION	APPROVED BY			
	DATE	NOVEMBER, 2021.		



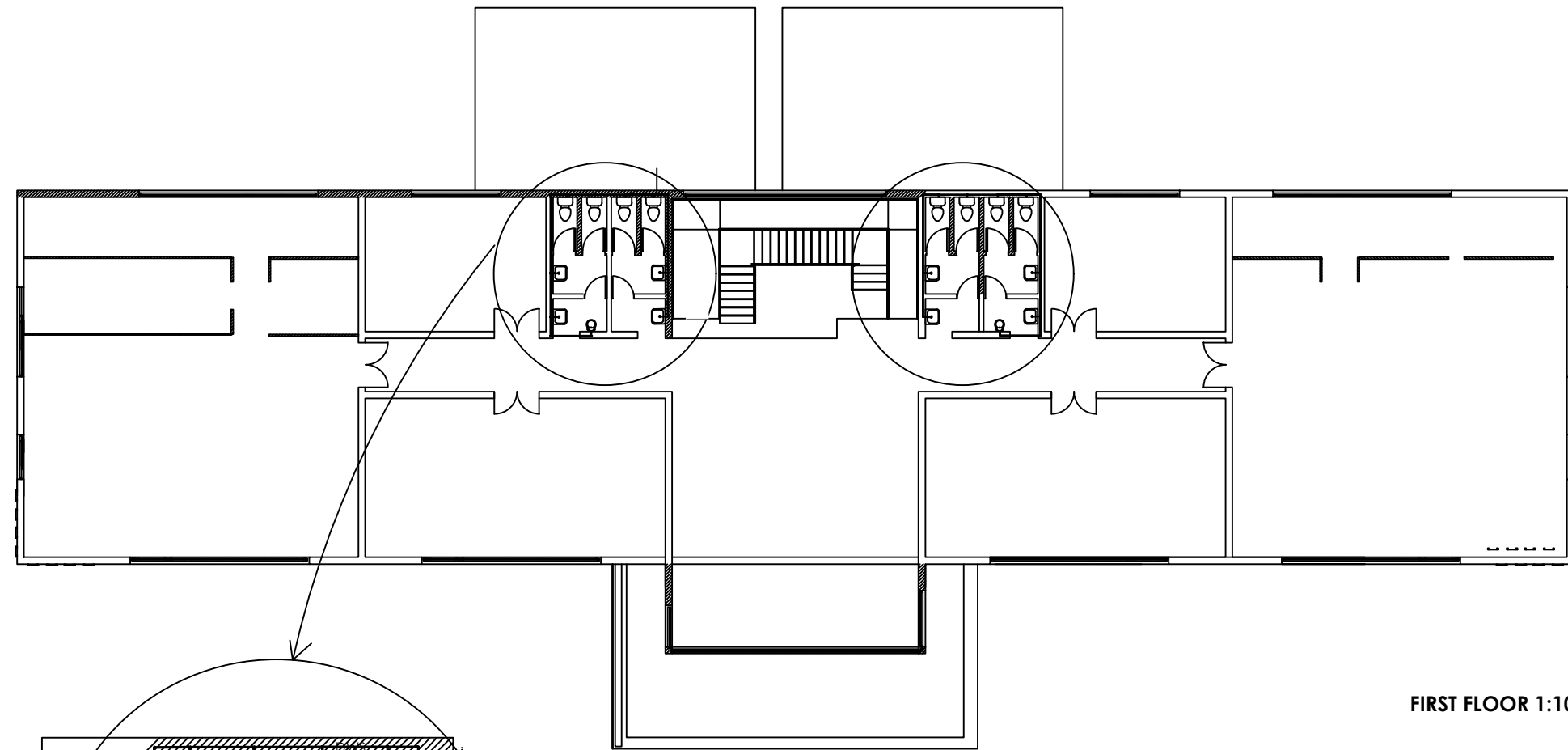
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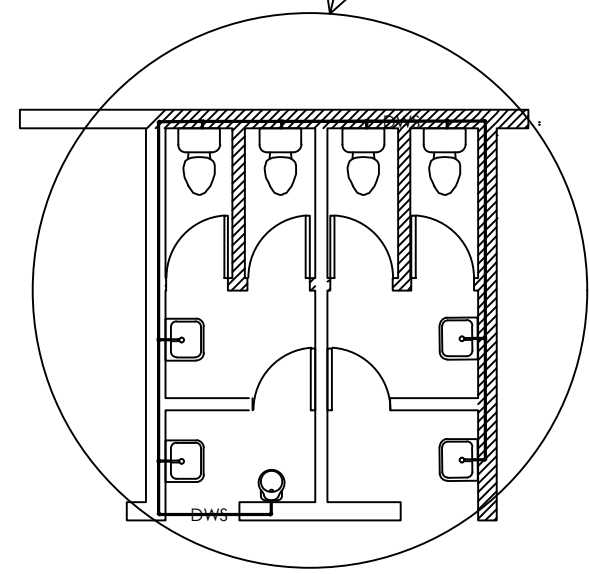


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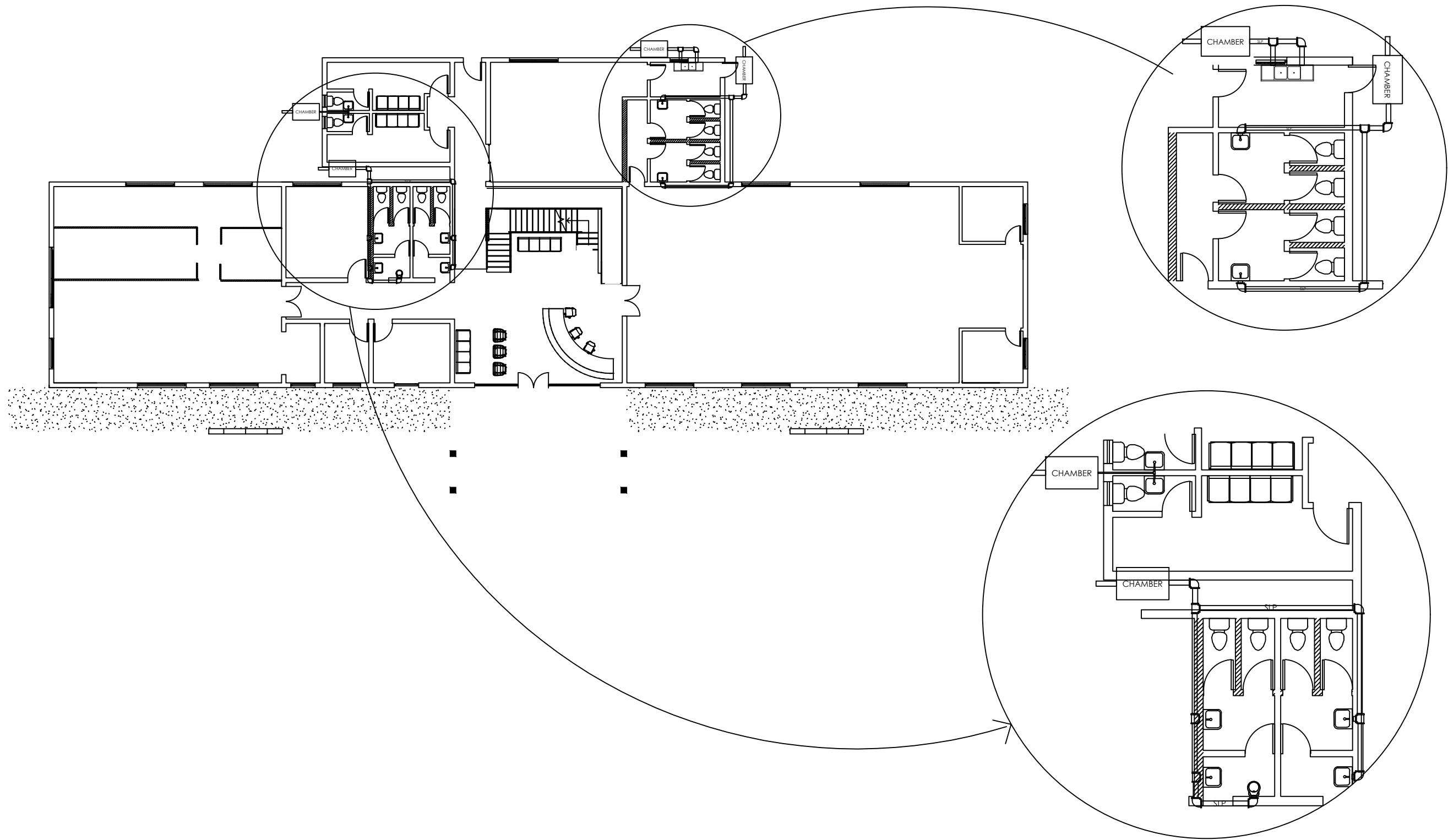
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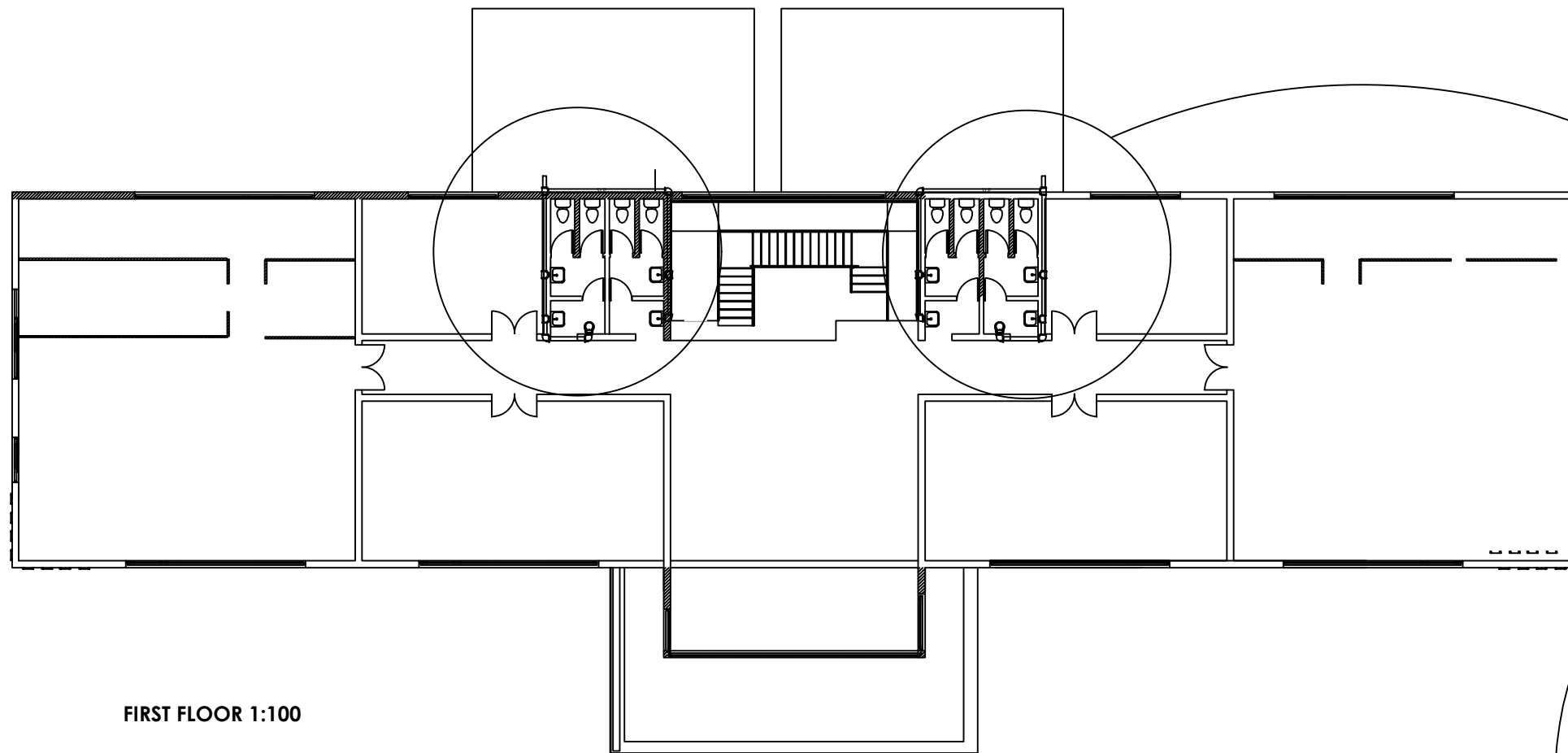
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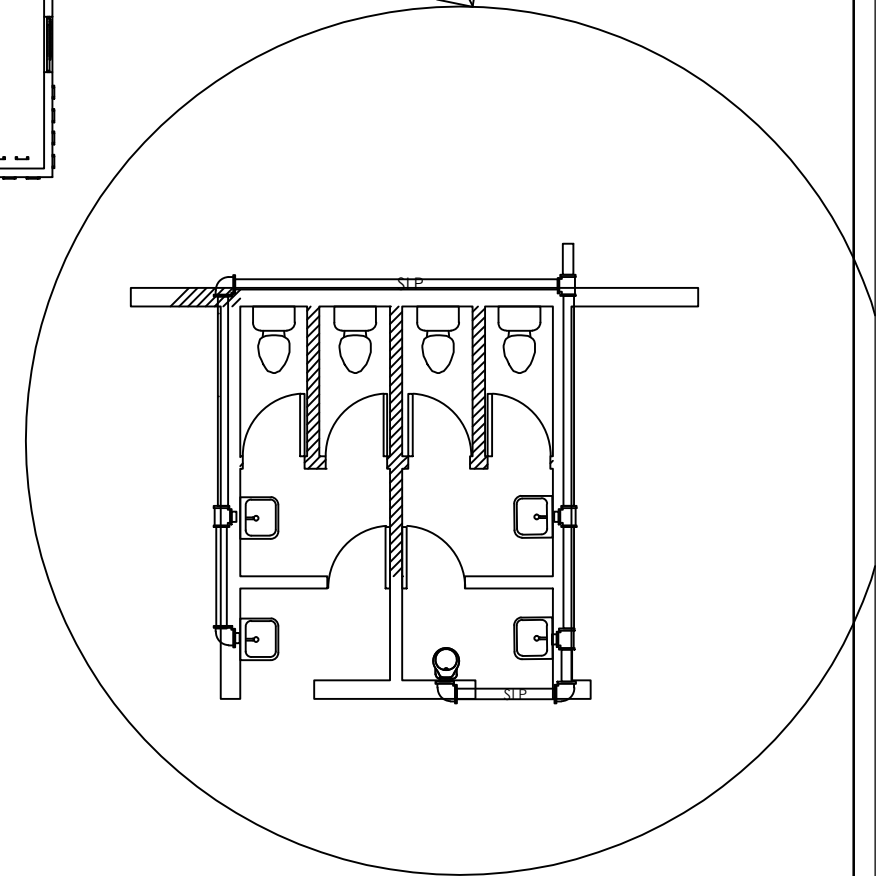


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		DRAWN BY	IWEIBO S.E		
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	DATE	NOVEMBER, 2021.			



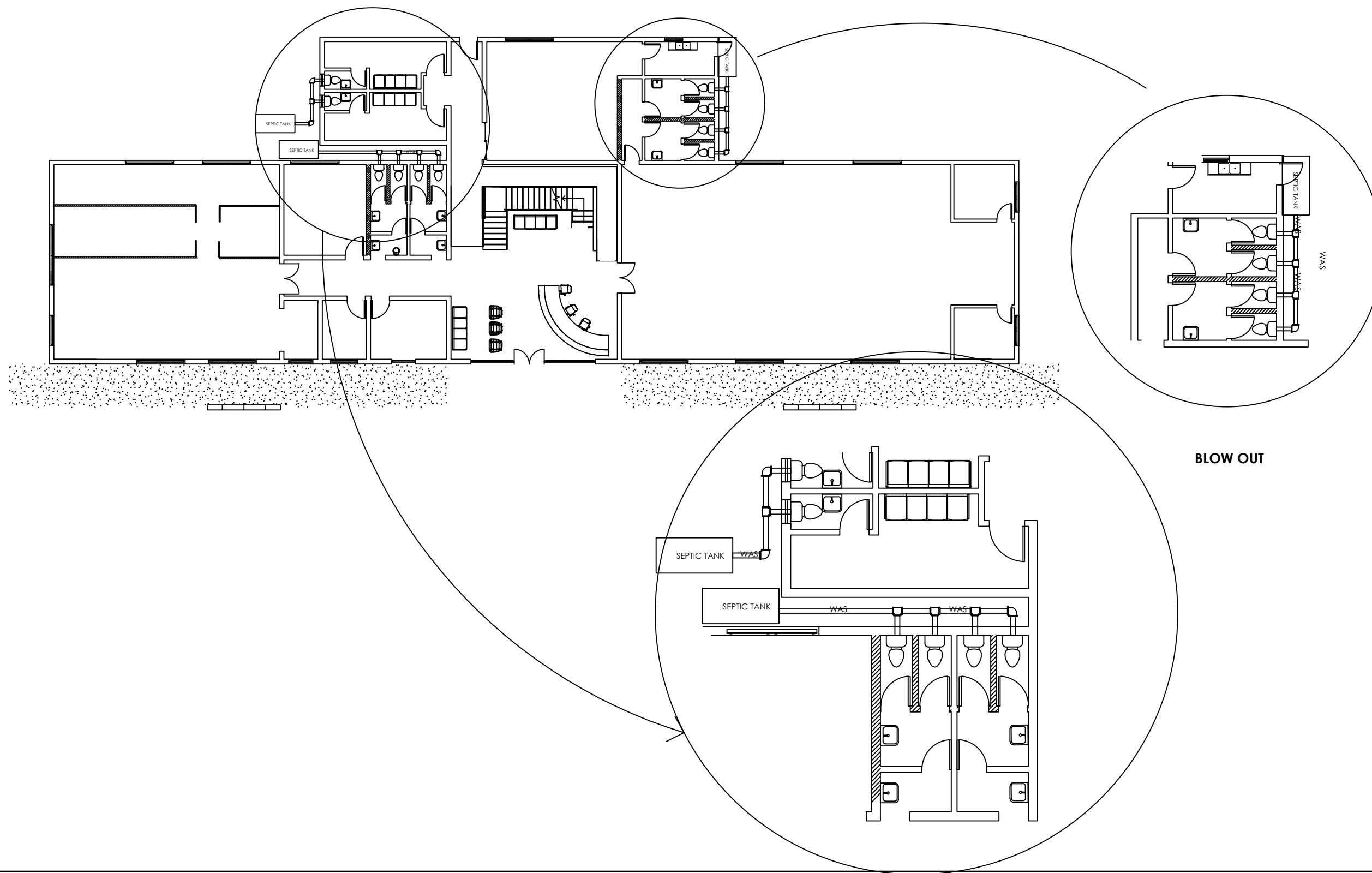
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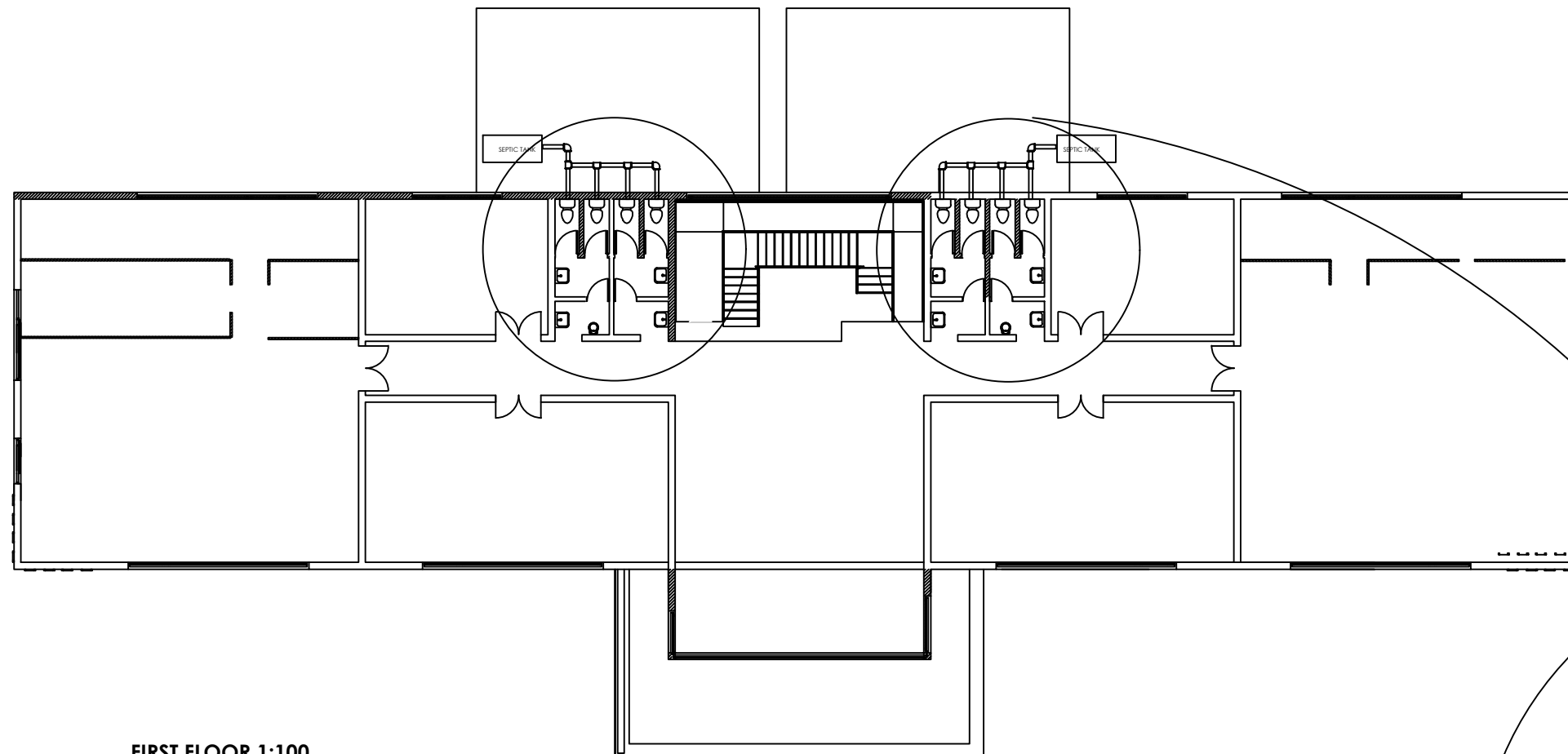
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	DRAWN BY	IWEIBO S.E		
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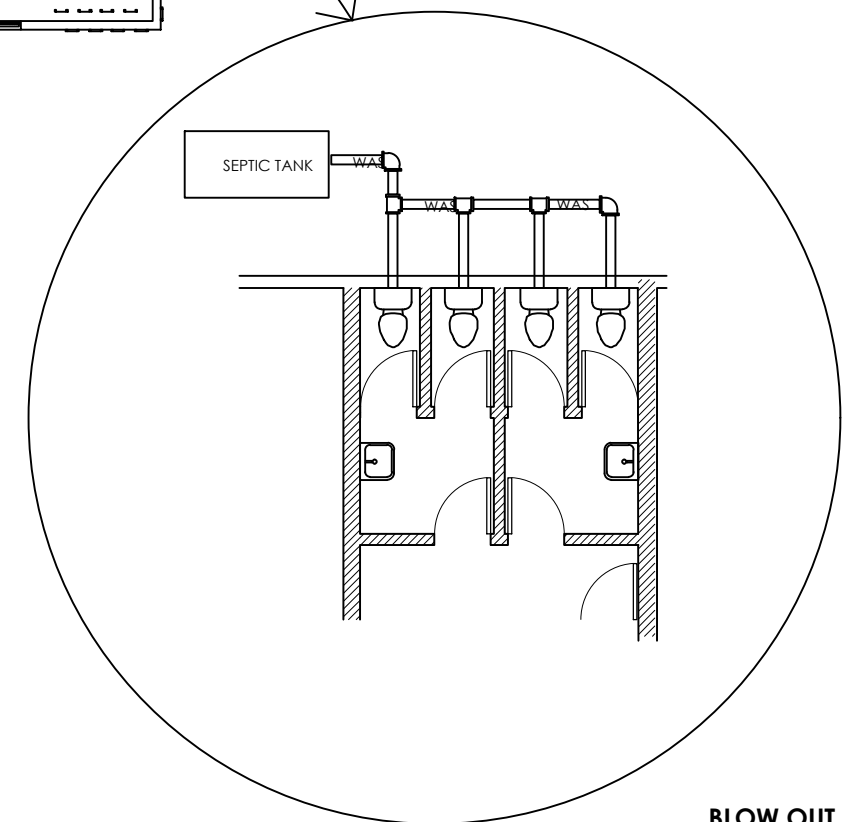


NOTE :

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	DRAWN BY	IWEIBO S.E		
CLIENT	CHECKED BY		DRAWING SCALE: N.T.S.	DRAWINNG NO: M10
LOCATION	APPROVED BY			
	DATE	NOVEMBER, 2021.		



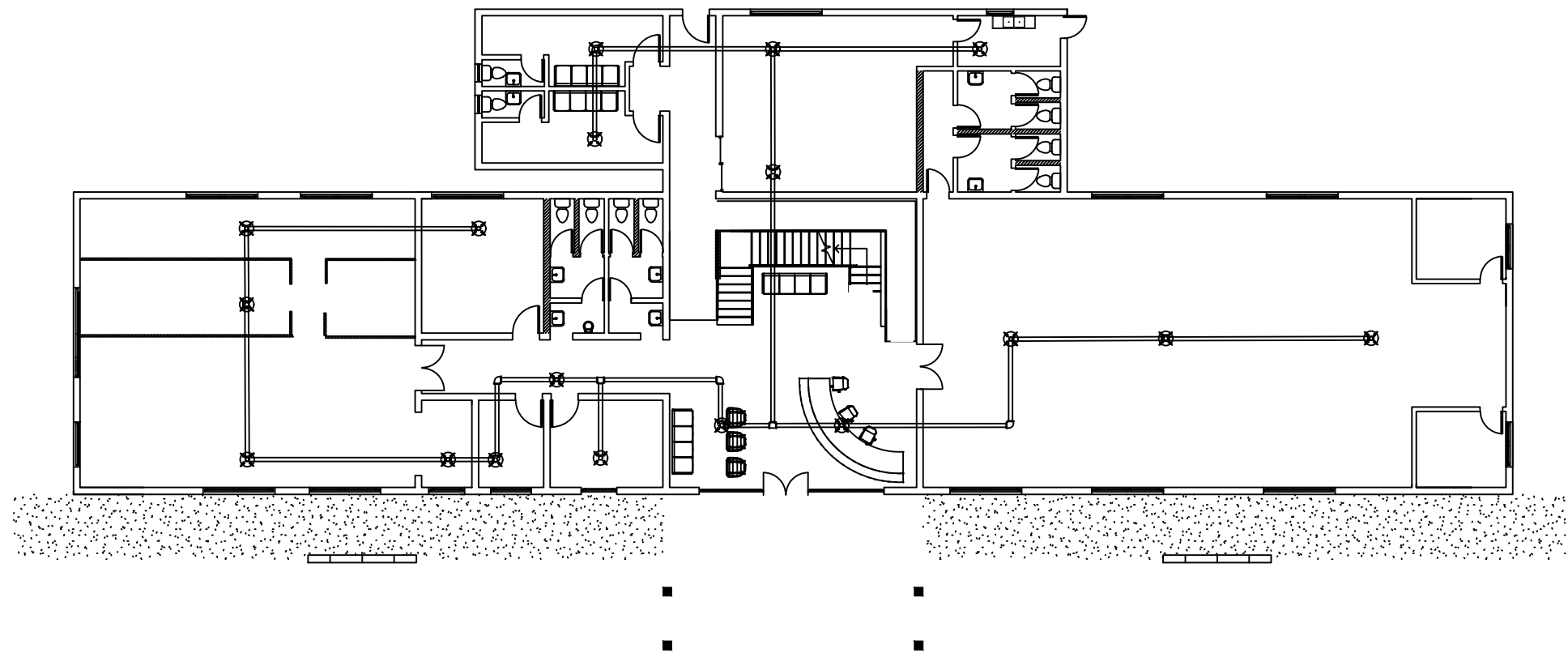
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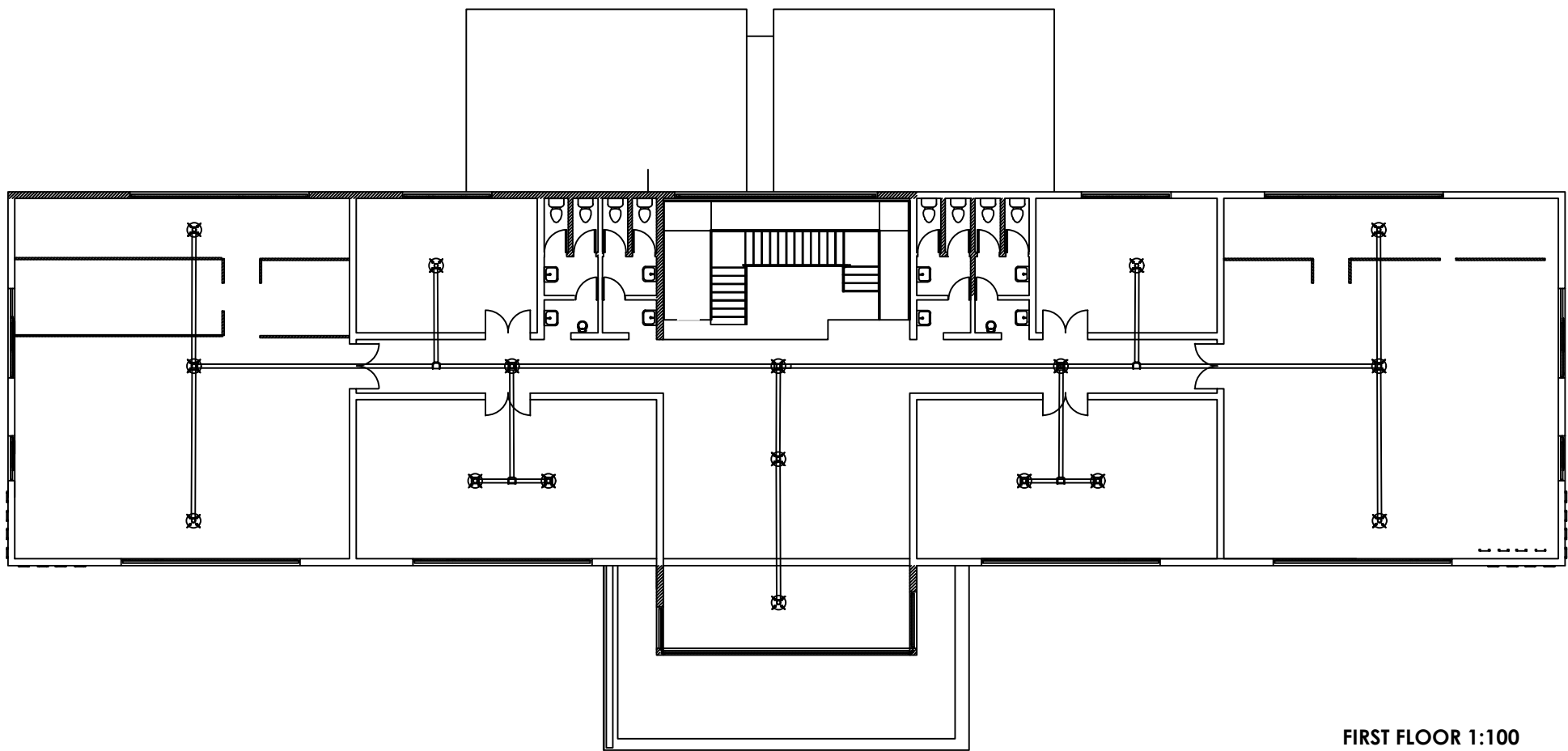
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CLIENT		CHECKED BY		DRAWING SCALE: N.T.S.	DRAWINGNO: NO: M11
LOCATION		APPROVED BY			
		DATE	NOVEMBER, 2021.		



GROUND FLOOR 1:100

NOTE :

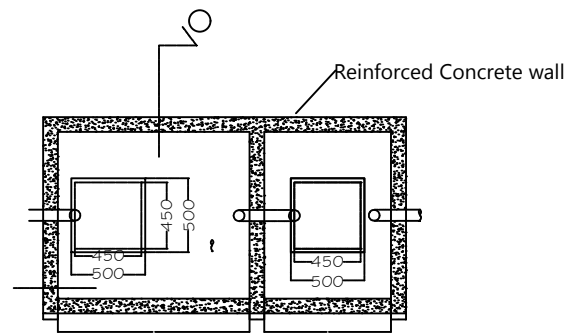
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CLIENT			DRAWN BY	IWEIBO S.E	DRAWING SCALE:	DRAWING NO:
LOCATION			CHECKED BY			
			APPROVED BY		N.T.S.	M12
			DATE	NOVEMBER, 2021.		



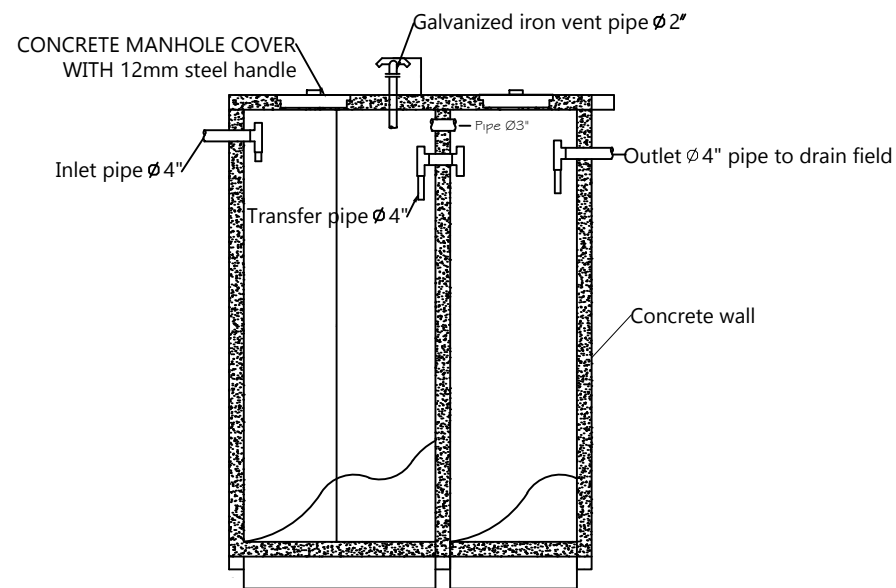
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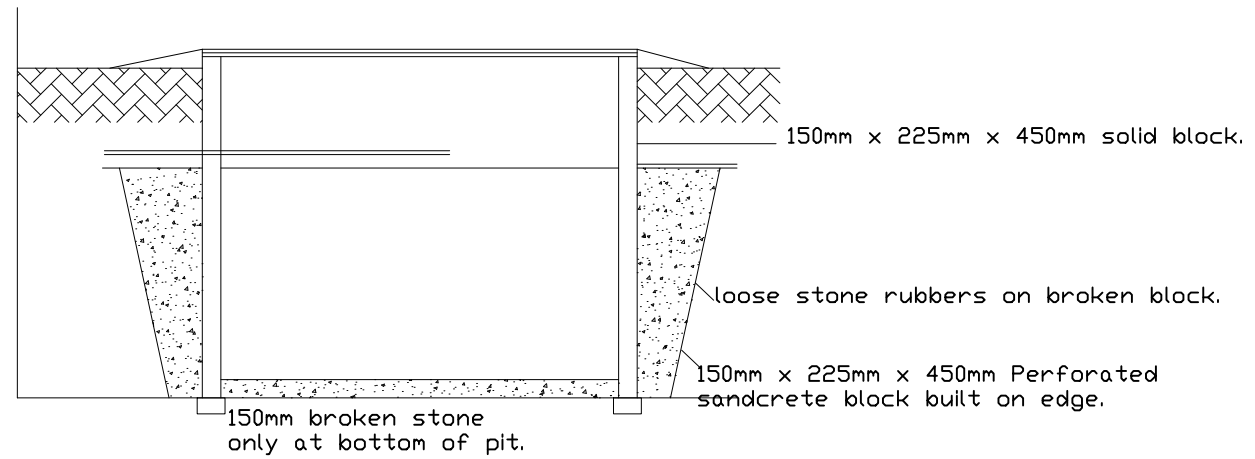
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	DRAWN BY	IWEIBO S.E		
CLIENT	CHECKED BY		DRAWING SCALE: N.T.S.	DRAWINNG NO: M13
LOCATION	APPROVED BY			
	DATE	NOVEMBER, 2021.		



PLAN OF SEPTIC TANK



Section A-A



SECTION OF SOAKAWAY PIT

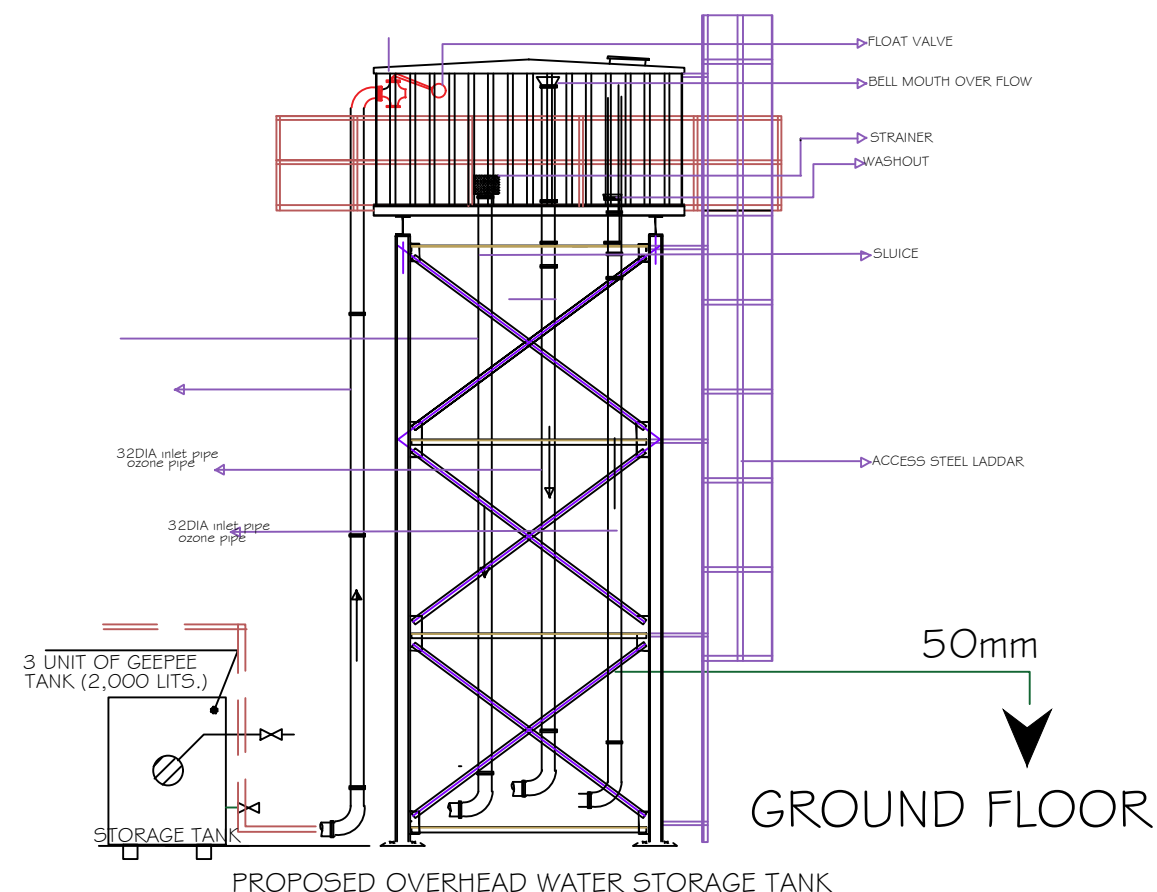
SEPTIC TANK CALCULATIONS	
NO. OF LITRES PER HEAD PER 24 HR USAGE	85 LITRES
NO. OF OCCUPANTS	≈ 180 USERS
LIQUID DEPTH	1800mm <=> 1.8m
FLOOR AREA	17.1sqm
LENGTH	8.24m
BREATH	2.06m

*NO OF USERS ASSUMED TO BE 150. FIGURE IS SUSCEPTIBLE TO CHANGE.

*CLEANIGN OF SEPTIC TANK SHOULD DONE EVERY 2 YEARS.

NOTE :

PROJECT TITLE DIGITAL PARK		ARCHITECT	OLADIPUPO C.O.	DRAWING TITLE: SEPTIC PLAN AND SECTION	
		DRAWN BY	IWEIBO S.E		
CLIENT		CHECKED BY		DRAWING SCALE: N.T.S.	DRAWINGNG NO: M14
LOCATION		APPROVED BY			
		DATE	NOVEMBER, 2021.		



PUMPING POWER	
FLOW RATE	135cbm/sec
TOTAL HEAD	10m

*RECOMMENDED TO INSTALL A PUMPING MACHINE WITH A MINIMUM RATING OF 5HP.

S/NO.	SANITARY APPLIANCES	NO. OF APPLIANCES	LOADING UNITS (L)	STORAGE (L)
1	Water closet (WC)	18	180	3240
2	Wash hand basin(WHB)	10	170	1700
3	DOUBLE BASIN KITCHEN SINK	1	170	170
4	SPRINKLER HEAD	39	195	7605
5				
TOTAL				12715
ADD 30% FOR FIRE FIGHTING, EXTERNAL WATER USE				3814.5
# FUTURE EXPANTION				2000
TANKS STORAGE SIZE				18529.5liters
BUILDING WATER DEMAND PER DAY				500 Liters
TANK SIZE				5 SET OF 3500LITRES PLASTIC STORAGE TANK 4m x 4m x 4m STEEL BUILT STORAGE TANK
				17,500 Liters 20,000 Liters

*NO OF USERS ASSUMED TO BE 180. FIGURE IS SUSCEPTIBLE TO CHANGE.

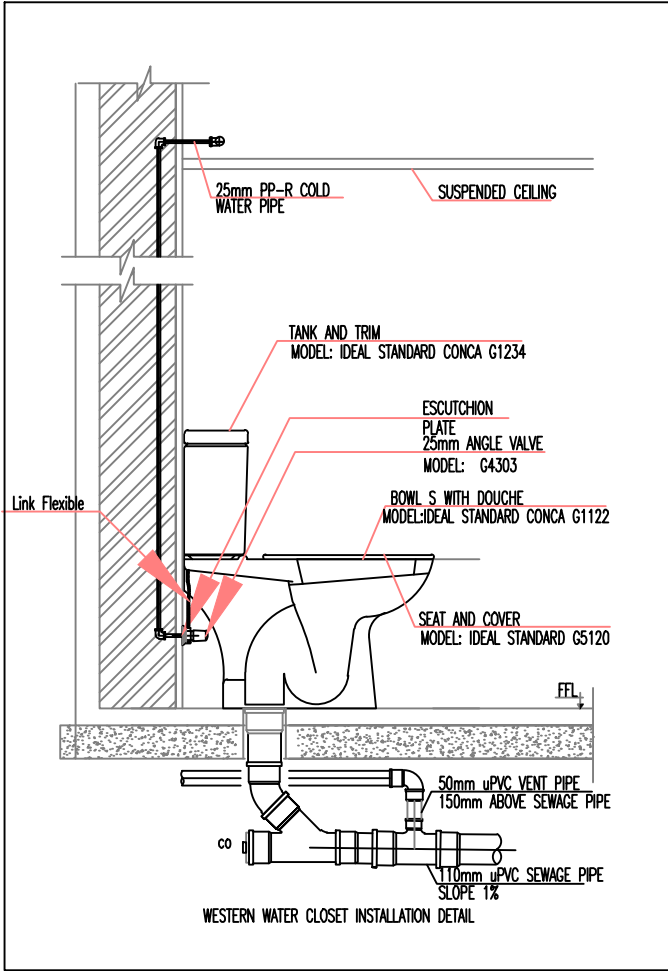
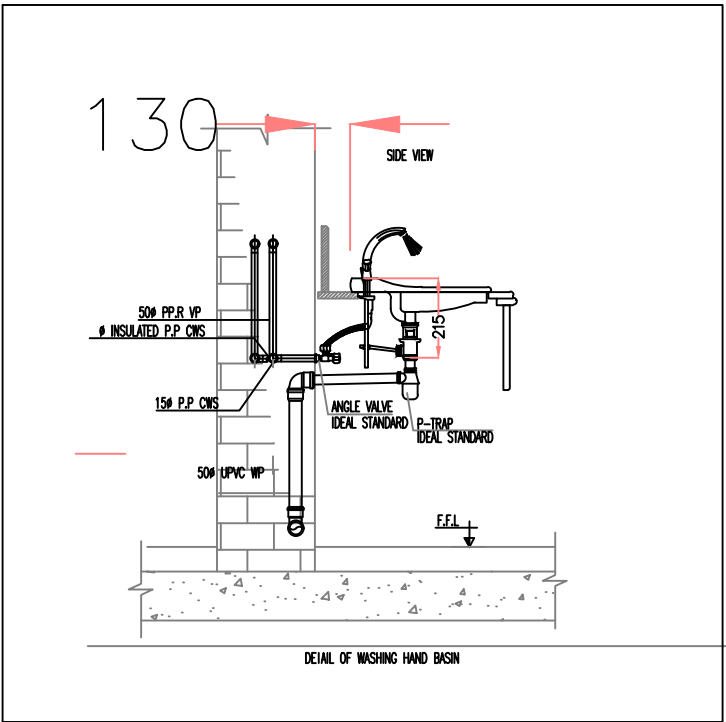
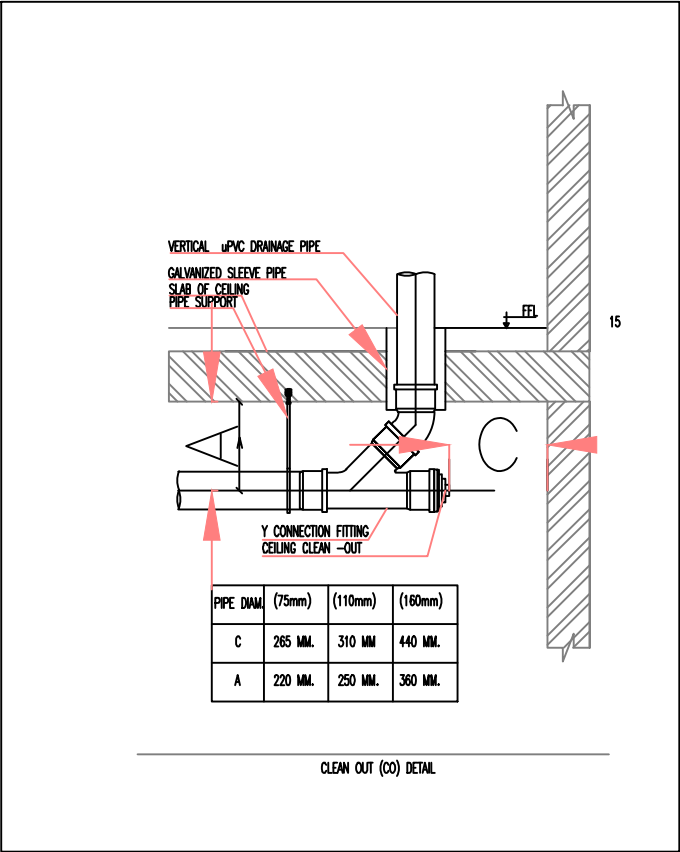
SIDE NOTE:

IN LIEU OF ERECTING STEEL OVERHEAD TANK, AN EQUIV0ALENT DESIGN OF PVC WATER TANKS HAVE BEEN DONE WITH THE VALUE OF "5 SETS OF 3500LITRES PVC STORAGE TANK" IS RECOMMENDED TO BE USED TO SATISFY WATER SUPPLY NEEDS OF THE STRUCTURE.

SELECTION OF TYPE IS SUBJECTED TO THE SPECIFICATION OF THE CLIENT.

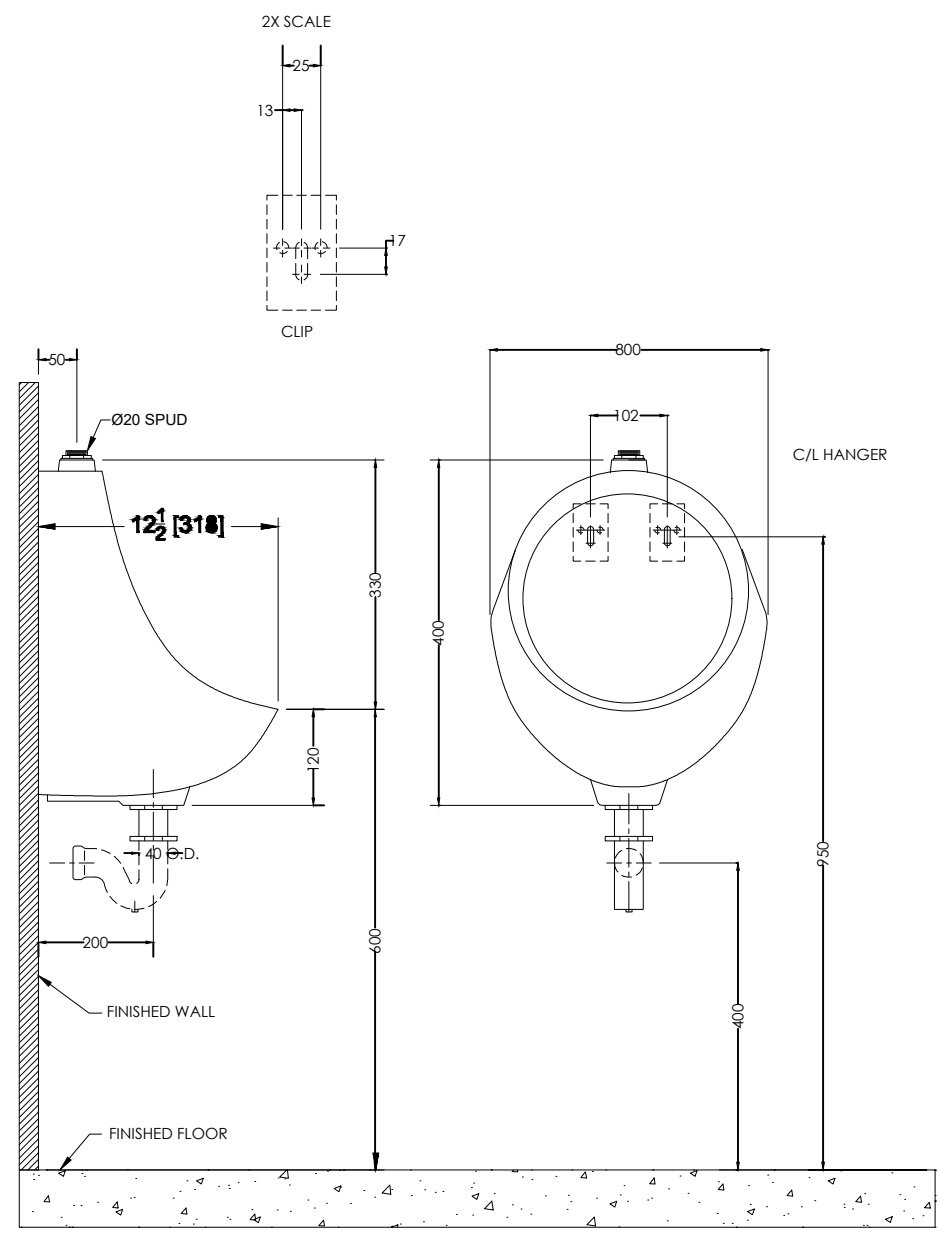
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					OVERHEAD TANK & WATER SUPPLY SPECIFICFATIONS	
CLIENT			DRAWN BY	IWEIBO S.E	DRAWING SCALE:	DRAWINGG NO:
LOCATION			CHECKED BY			
			APPROVED BY		N.T.S.	M15
			DATE	NOVEMBER, 2021.		



NOTE :

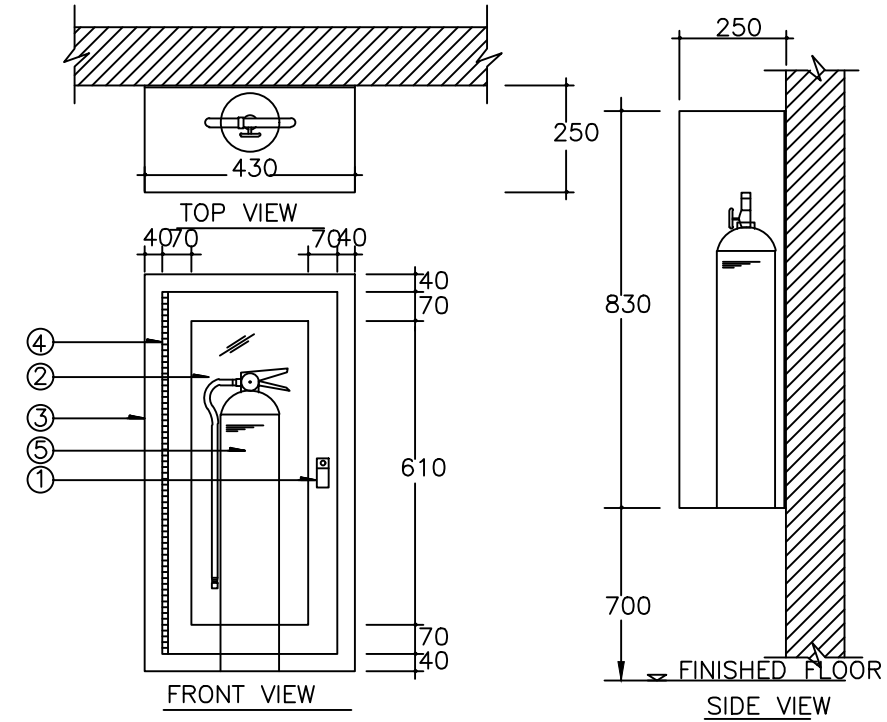
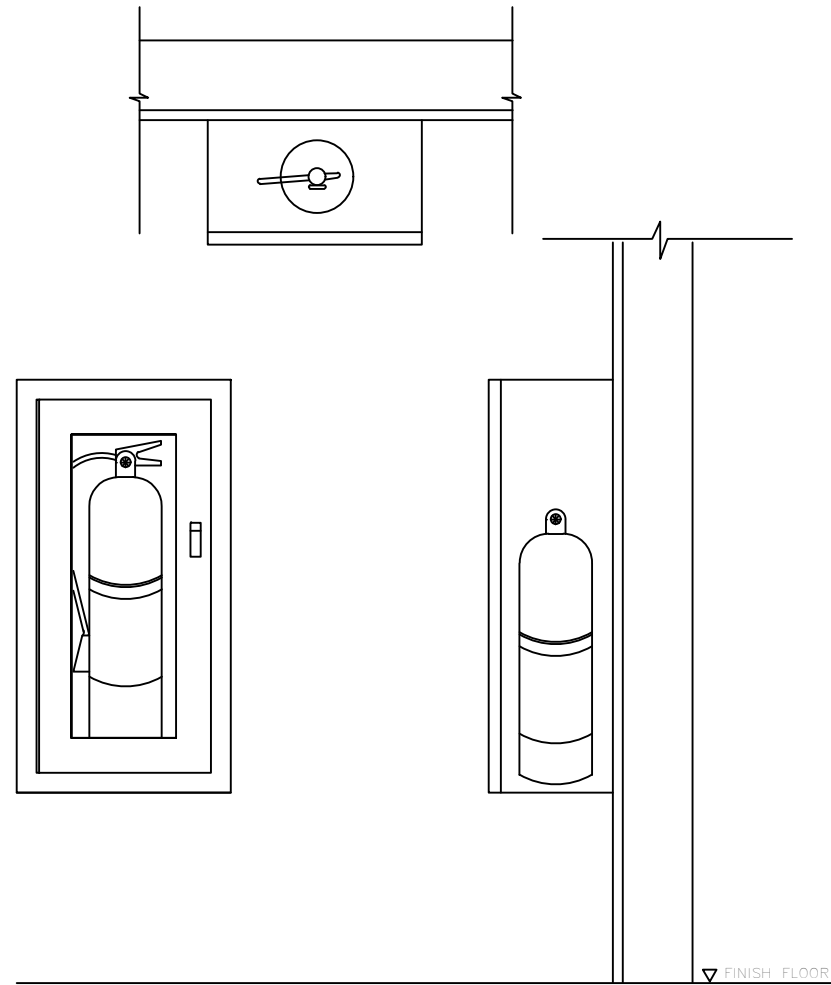
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CLIENT		CHECKED BY		DRAWING SCALE: N.T.S.	DRAWINNG NO: M16
LOCATION		APPROVED BY			
		DATE	NOVEMBER, 2021.		



URINAL ELEVATION AND DETAIL

NOTE :

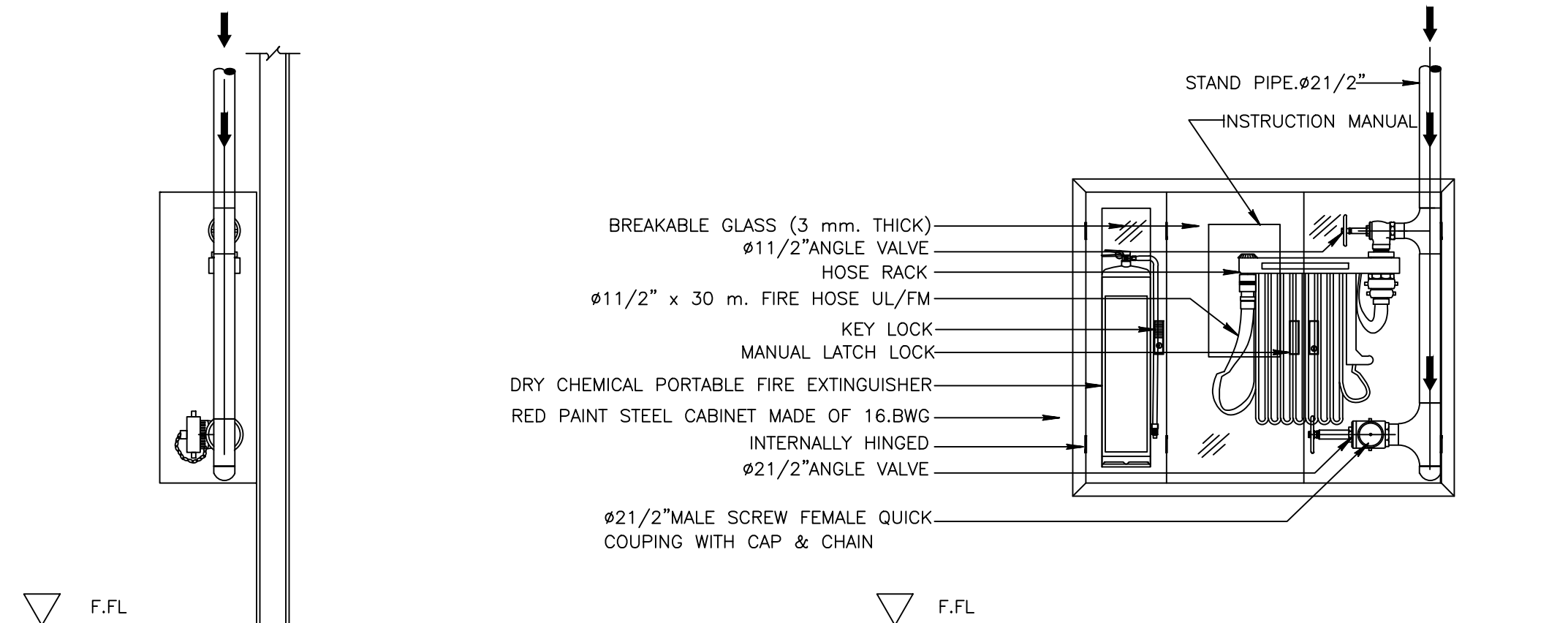
PROJECT TITLE DIGITAL PARK	ARCHITECT	OLADIPUPO C.O.	DRAWING TITLE: SANIATARY FITTINGS SECTIONS	
	DRAWN BY	IWEIBO S.E		
CLIENT	CHECKED BY		DRAWING SCALE: N.T.S.	DRAWINNG NO: M17
LOCATION	APPROVED BY			
	DATE	NOVEMBER, 2021.		



1. PUSH TO OPEN LOCKABLE DEVICE, KEYED LOCK, FINISHED CHROMED.
2. SAFETY GLASS 5 mm. THICK DOOR PANEL.
3. SURFACE TYPE CABINET MADE OF 1.6 mm.(16 GAUGE) STEEL WITH STEEL TRIM & DOORFRAME, DOOR TO BE FURNISHED WITH CONTINUOUS STEEL HING (BRASS PIN), WITH PUSH TO OPEN LOCKABLE DEVICE, KEYED ALIKE, CABINET SHALL BE CLEANED & COATED WITH PHOSPHATE SOLUTION PRIOR TO BEING FINISHED WITH BAKED ON RED PAINTING (OSHA RED)
4. CONTINUOUS STEEL HINGE WITH BRASS PIN.
5. ABC DRY CHEMICAL (AMMONIUM PHOSPHATE BASE) FIRE EXTINGUISHER, 4.5 kg.(10 LB), UL/FM LISTED

NOTE :

PROJECT TITLE DIGITAL PARK		ARCHITECT	OLADIPUPO C.O.	DRAWING TITLE: FIRE HYDRANT DETAILS	
		DRAWN BY	IWEIBO S.E		
CLIENT	CLIENT NAME	CHECKED BY		DRAWING SCALE:	DRAWING NO:
LOCATION		APPROVED BY			
		DATE	NOVEMBER, 2021.	N.T.S.	M18



DETAIL FIRE HOSE CABINET SURFACE MOUNTED

NOTE :

PROJECT TITLE	DIGITAL PARK	ARCHITECT	OLADIPUPO C.O.	DRAWING TITLE: FIRE HOSE REEL DETAILS	
		DRAWN BY	IWEIBO S.E		
CLIENT	CLIENT NAME	CHECKED BY		DRAWING SCALE: N.T.S.	DRAWING NO: M19
LOCATION		APPROVED BY			
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