

GENERAL NOTES:

1.

ALL WORKS HEREIN INCLUDED SHALL BE IN ACCORDANCE WITH THE FOLLOWING CODES & REGULATIONS:

THE FIRE CODE OF THE PHILIPPINES & REGULATIONS
NATIONAL BUILDING CODE OF THE PHILIPPINES
PSME – PHILIPPINE SOCIETY OF MECHANICAL ENGINEERS
NFPA 10 – STANDARD FOR PORTABLE FIRE EXTINGUISHER
NFPA 13 – STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEM
NFPA 13R – STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEM IN RESIDENTIAL OCCUPANCIES UP TO AND INCLUDING FOUR STORIES IN HEIGHT
NFPA 14 – STANDARD FOR THE INSTALLATION OF STANDPIPE AND HOSE SYSTEM
NFPA 20 – STANDARD FOR THE INSTALLATION OF CENTRIFUGAL FIRE PUMP
NFPA 101 – LIFE SAFETY CODE
NFPA 5000 – BUILDING CONSTRUCTION AND SAFETY CODE UNDERWRITERS LABORATORIES, INC. (UL) FACTORY MUTUAL (FM)
ASTM – AMERICAN SOCIETY FOR TESTING AND MATERIALS
NEMA – NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION

2.

THE WORK SHALL BE EXECUTED IN CLOSE COORDINATION WITH ALL TRADES.

3.

THE DESIGN IS IN ACCORDANCE WITH THE RULES AND REGULATIONS OF NFPA 13R.

4.

SIZE OF RISER NIPPLE SHALL CONFORM TO THE PIPE SCHEDULE DELINEATED IN NFPA 13.

5.

CONTRACTOR MUST BE FULLY RESPONSIBLE FOR THE EXACT LOCATION & DIMENSION OF ALL REQUIRED WALL & DOOR OPENINGS.

6.

EXACT LOCATION OF ALL SPRINKLER HEADS SHALL BE COORDINATED WITH ARCHITECTURAL CEILING LAYOUT & SHALL BE SUBJECTED TO BOTH ARCHITECTS AND FIRE PROTECTION ENGINEERS APPROVAL.

7.

LOCATION OF THE DRAIN PIPES SHALL BE COORDINATED WITH PLUMBING CONTRACTOR.

8.

WATER FLOW PROVING DEVICES SHALL BE OF THE APPROVED TYPE.

9.

CONTROL WIRING AND TERMINATION FROM FLOW SWITCHES, SUPERVISORY SWITCH TO FIRE ALARM CONTROL PANEL SHALL BE DONE BY FDAS CONTRACTOR.

10.

ALL ISOLATING VALVES FOR THE SYSTEM SHALL BE:

a.

INDIVIDUALLY SUPERVISED AND MONITORED SUCH THAT THE CLOSING OF ANY PARTICULAR VALVE WILL RAISE A VISUAL AND AUDIO ALARM IN THE MAIN FIRE ALARM PANEL LOCATED IN THE COMMAND AND CONTROL CENTER PINPOINTING THE VALVE.

b.

LOCATED IN AREAS SUCH THAT THEY ARE EASILY ACCESSIBLE TO AUTHORIZED PERSONNEL FOR MAINTENANCE AND EMERGENCY OPERATION.

11.

PROVIDE PIPE FLEXIBLE/EXPANSION JOINTS FOR ALL SERVICES PASSING THRU TO ALL BUILDING EXPANSION JOINTS.

12.

ALL PIPE PENETRATIONS THRU FIRE RATED WALLS SHALL BE PROVIDED WITH FIRE STOPPING MATERIALS. ALL PIPE PASSING THRU SLAB, BEAM & WALL SHALL BE PROVIDED W/ FIRE RATED SEALANT.

13.

PROVIDE FLANGE CONNECTION @ 12M & ONE SIDE OF EVERY FITTING CONNECTION OR CHANGE OF DIRECTION.

14.

PROVIDE PIPE HANGER AT EVERY 2 MTRS, SWAY BRACE AND CLEVIS SUPPORT AT EVERY 12 MTRS.

15.

PIPING TO BE SCH.# 40 BLACK IRON PIPE, FITTINGS 50mm AND SMALLER SHALL BE SCREWED TYPE, 65mm AND LARGER SHALL BE WELDED OR FLANGED.

16.

THE LOWEST END OF THE SPRINKLER DRAIN PIPES SHALL HAVE VALVE WITH DRAIN PROVISIONS IN ALL THE FLOOR.

17.

ALL THE TEST DESIGNS SHALL BE CONNECTED TO THE NEAREST FLOOR DRAINS. COORDINATE WITH PLUMBING CONTRACTOR.

18.

INSPECTORS TEST POINTS TO BE PROVIDED AT THE REMOTE POINTS.

19.

ALL THE FIRE PROTECTION INSTALLATION SHALL BE SUITABLE FOR SEISMIC CONDITION. THE SEISMIC TYPE INSTALLATION DETAILS FOR ALL SUPPORTS SHALL BE APPROVED BY CONTRACTOR EMPLOYED APPROVED SPECIALIST.

20.

LATERAL BRACES SHOULD BE PROVIDED WITHIN 0.60M (2 FT.) FROM THE PIPE CHANGES IN DIRECTION FOR PIPE RUNS LONGER THAN 1–8M (6 FT.) IT SHOULD BE SPACED MAXIMUM 12.20M (40 FT.) CENTER OF THE PIPE. LATERAL BRACES SHOULD BE PROVIDED WITHIN 1.80M (6 FT.) OF THE PIPE END. (FEEDMAIN AND CROSSMAIN)

21.

ALL PIPES PASSING THROUGH WALLS O BEAMS MUST BE PROVIDED WITH PIPE SLEEVES.

22.

MUNICIPAL FIRE MARSHALL HAVING JURISDICTION SHALL DESIGNATE THE TYPE AND NUMBER OF FIRE EXTINGUISHER TO BE ADDED.

23.

FIRE SUPPRESSION TO BE DONE BY OTHERS. FIRE SUPPRESSION CONTRACTOR SHALL PROVIDE DETAILED DRAWING AND CALCULATION.

24.

ALL FIRE PROTECTION WORKS AND INSTALLATION SHALL BE SUPERVISED BY A LICENSED MECHANICAL ENGINEER.

DRAWING INDEX

FP–000	DRAWING INDEX, GENERAL NOTES, LEGEND & SYMBOLS, ABBREVIATIONS, EQUIPMENT SCHEDULE, DESIGN DATA AND SPRINKLER HEAD SCHEDULE
FP–001	SCHEMATIC RISER DIAGRAM
FP–002	SITE DEVELOPMENT FIRE PROTECTION LAYOUT
FP–003	GROUND FLOOR FIRE PROTECTION LAYOUT SECOND FLOOR FIRE PROTECTION LAYOUT
FP–004	THIRD FLOOR FIRE PROTECTION LAYOUT FOURTH FLOOR FIRE PROTECTION LAYOUT
FP–005	ROOF DECK FIRE PROTECTION LAYOUT
FP–006	MISCELLANEOUS DETAILS
FP–007	MISCELLANEOUS DETAILS

LEGEND & SYMBOLS

SYMBOLS	DESCRIPTIONS	SYMBOLS	DESCRIPTIONS
	PIPE		UPRIGHT SPRINKLER
	PIPE UP		10 LBS ABC DRY CHEMICAL FIRE EXTINGUISHER
	CAPPED PIPE		10 LBS HCFC FIRE EXTINGUISHER
	PIPE DOWN		DIRECTION OF FLOW
	GATE VALVE		CONTINUOUS PIPE
	ALARM CHECK VALVE		UNION PATENTE
	CHECK VALVE		PRESSURE GAUGE WITH COCK
	VALVE CONNECTION		FLOW SWITCH
	FIRE HOSE CABINET		HOSE VALVE HEADER
	PUMP		FIRE PUMP CONTROLLER
	FLOW METER		JOCKEY PUMP CONTROLLER
	PENDENT SPRINKLER		FLOOR CONTROL VALVE ASSEMBLY
	SIDEWALL SPRINKLER		

EQUIPMENT SCHEDULE

MARK	QTY.	SERVICE	TYPE	LOCATION	PUMP RATING			MOTOR RATING				REMARKS
					CAPACITY(GPM)	TDH(ft)	RPM	HP	VOLTS	PH	HZ	
FP–1	1	FIRE PUMP	VERTICAL TURBINE	PUMP ROOM	300 GPM	320	1770	40	400	3	60	VERTICAL TURBINE TYPE, ELECTRIC DRIVEN MOTOR, COMPLETE WITH STANDARD ACCESSORIES. THE DRIVER SHALL BE A HORIZONTAL, FOOT MOUNTED OPEN DRIP–PROOF (OR T.E.F.C.), BALL BEARING TYPE. AC. INDUCTION, SQUIRREL CAGE MOTOR. UL LISTED & FM APPROVED. PUMP SHALL DELIVER 150% OF RATED CAPACITY AT A PRESSURE OF NOT LESS THAN 85% OF RATED PRESSURE. FIRE PUMP SHALL BE CONNECTED LOAD TO THE EMERGENCY GENERATOR.
JP–1	1	JOCKEY PUMP	SUBMERSIBLE	PUMP ROOM	20 GPM	345	3500	3	400	3	60	SUBMERSIBLE PUMP, ELECTRIC DRIVEN MOTOR, COMPLETE WITH STANDARD ACCESSORIES. ENCLOSURE SHALL BE AS PER MANUFACTURER RECOMMENDATION. JOCKEY PUMP SHALL BE CONNECTED LOAD TO THE EMERGENCY GENERATOR.
FPC–1	1	FIRE PUMP CONTROLLER	–	PUMP ROOM	–	–	–		400	3	60	FIRE PUMP CONTROLLER SHALL BE SUITED FOR FIRE PUMP SPECIFICATION REQUIREMENTS. IT SHALL BE WYE DELTA REDUCED VOLTAGE STARTING OPEN DURING TRANSITION FROM START TO RUN, CONTROLLERS SHALL BE FLOOR MOUNTED ON NEMA TYPE 4 ENCLOSURE TO INCLUDE PUMP OPERATING PILOT LIGHTS, PUMP FAIL TO START, PUMP OVER–LOAD, ALARM, TEST TIMER WITH SOLENOID VALVE. UL/FM APPROVED.
JPC–1	1	CONTROLLER	–	PUMP ROOM	–	–	–		400	3	60	JOCKEY PUMP CONTROLLER SHALL BE SUITED FOR JOCKEY PUMP SPECIFICATION REQUIREMENTS. IT SHALL INCLUDE THE CIRCUIT BREAKER, OVER LOAD RELAY, PRESSURE SWITCH, RUNNING PERIOD TIMER, ALL NEMA TYPE ENCLOSURE, PRESSURE RECORDER, POWDER ON PILOT LIGHTS AND OTHER ACCESSORIES. UL/FM APPROVED.

SPRINKLER HEAD SCHEDULE

SPRINKLER TYPE	AREA OF COVERAGE	K FACTOR	TEMPERATURE RATING	SIZE
PENDENT SPRINKLER	OFFICES, TOILET, COMMON AREAS, HALLWAY	5.6	155 °F	1/2 NPT
SIDE WALL SPRINKLER	STAIRS	5.6	155 °F	1/2 NPT

DESIGN DATA FOR AUTOMATIC FIRE SPRINKLER SYSTEM

AREA	HAZARD CLASSIFICATION	DESIGN DENSITY DISCHARGE
OFFICES, TOILET, COMMON AREAS, HALLWAY	LIGHT HAZARD	0.1 GPM/FT²
DESIGN AREA	1500 FT²	
MAXIMUM PROTECTION AREA PER SPRINKLER	LIGHT HAZARD	225 FT²
MAXIMUM DISTANCE BETWEEN SPRINKLER	LIGHT HAZARD	14.8 FT. (4.5M)
MINIMUM DISTANCE BETWEEN SPRINKLER	6 FT. (1.8M)	
SPRINKLER MAXIMUM DISTANCE FROM WALL	7.5 FT. (2.3M)	
SPRINKLER MINIMUM DISTANCE FROM WALL	4 INCHES (102MM)	

ABBREVIATIONS

ABBREVIATIONS	DESCRIPTIONS	ABBREVIATIONS	DESCRIPTIONS
ACV	ALARM CHECK VALVE	F/B	FROM BELOW
A/G	ABOVE GROUND	GV	GATE VALVE
BV	BALL VALVE	GPM	GALLONS PER MINUTE
CM	CROSSMAIN	ITC	INSPECTOR TEST CONNECTION
CV	CHECK VALVE	JPC	JOCKEY PUMP CONTROLLER
C/W	COMPLETE WITH	M	METER
DSP	DRY STANDPIPE	PG	PRESSURE GAUGE
FCVA	FLOOR CONTROL VALVE ASSEMBLY	PRV	PRESSURE REDUCING/RELIEVE VALVE
FDC	FIRE DEPARTMENT CONNECTION	RN	RISER NIPPLE
FHC	FIRE HOSE CABINET	TYP	TYPICAL
FHV	FIRE HOSE VALVE	T/A	TO ABOVE
FV	FLUSHING VALVE	T/B	TO BELOW
F/A	FROM ABOVE	WFS	WATER FLOW SWITCH

Securities and
Exchange
Commission

PHILIPPINES

CHECKED AND SUBMITTED BY

ALDEN C. ONG

M.Eng., ASEPT

SEC–HTC

REG. NO.: 68251

TIN NO. : 168–950–786

PTR NO. : 10077889

DATE : JANUARY 05, 2024

PLACE :MAKATI CITY

ARTHUR Q. MERILLO JR.

PROFESSIONAL MECHANICAL ENGINEER

PROJECT TITLE/LOCATION

PROPOSED RETROFITTING AND RENOVATION OF THE SEC DAVAO EXTENSION OFFICE

UNIVERSITY AVENUE, JUNA SUBDIVISION MATINA, DAVAO CITY

RECOMMENDING APPROVAL

VHINCENT G. CAÑARES

SEC DIRECTOR, MSD

APPROVED BY

JAVEY PAUL D. FRANCISCO

COMMISSIONER

SHEET CONTENTS

DRAWING INDEX, LEGEND AND SYMBOLS AND ABBREVIATIONS, EQUIPMENT SCHEDULE

R.A. 9266 SEC. 33

DRAWINGS AND SPECIFICATIONS AND CONTRACT DOCUMENTS DULY SIGNED, STAMPED OR SEALED AS INSTRUMENTS FOR SERVICE ARE THE INTELLECTUAL PROPERTY AND DOCUMENTS OF ARCHITECT, WHETHER THE OBJECT FOR WHICH THEY ARE MADE IS EXECUTED OR NOT. IT SHALL BE UNLAWFUL FOR ANY PERSON TO DUPLICATE OR TO MAKE COPIES OF SAID DOCUMENTS FOR USE IN THE REPETITION OF AND FOR OTHER PROJECTS OR BUILDINGS, WHETHER EXECUTED PARTLY OR IN WHOLE, WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT OR AUTHOR OF SAID DOCUMENTS.

CADD

JFT

DESIGNED

JLDA

APPROVED

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DATE

JUL 2024

DATE

JUL 2024

DATE

JUL 2024

NO.

REVISIONS

CHK

DATE

PAPER SIZE

20X30

SCALE

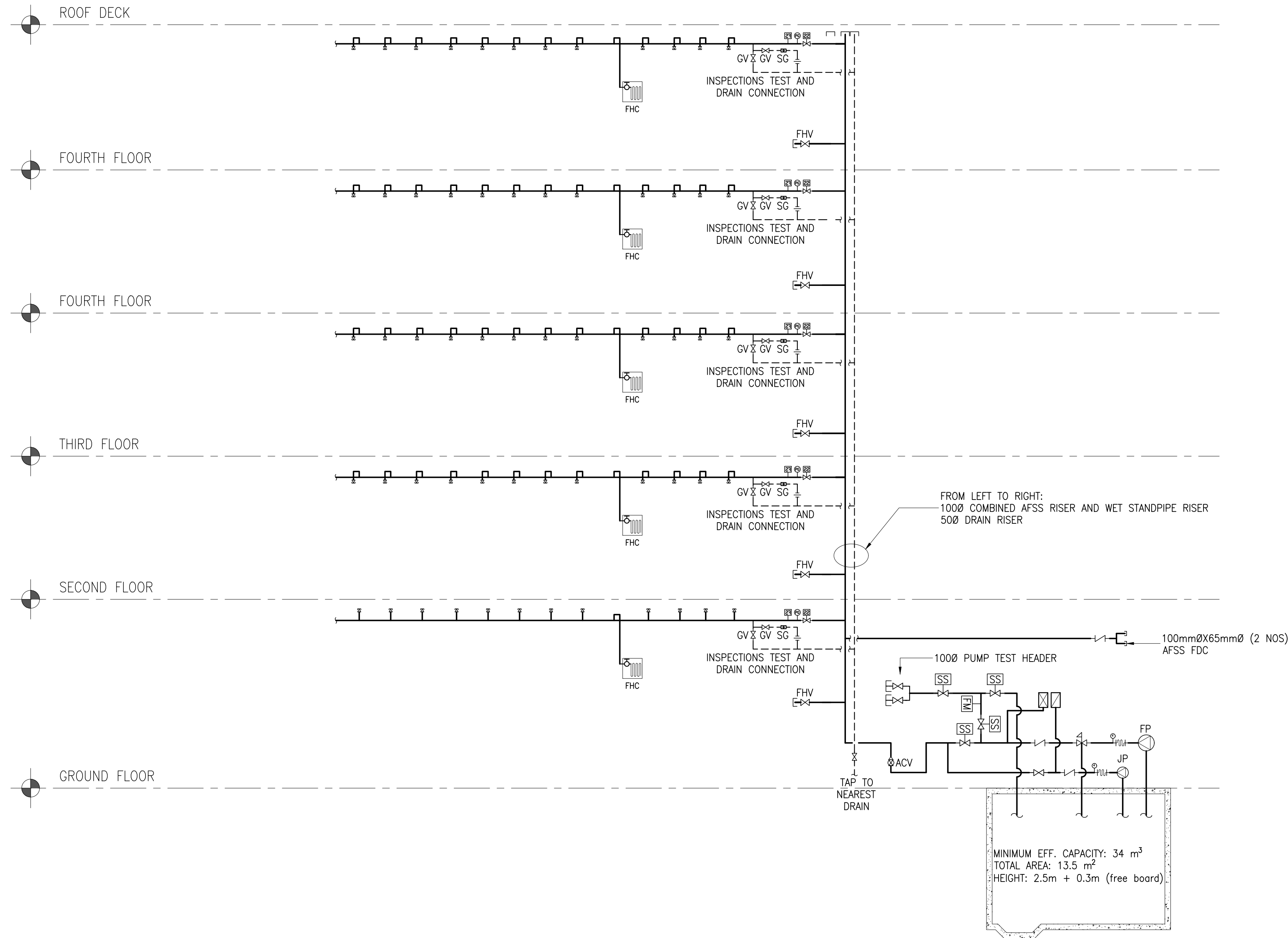
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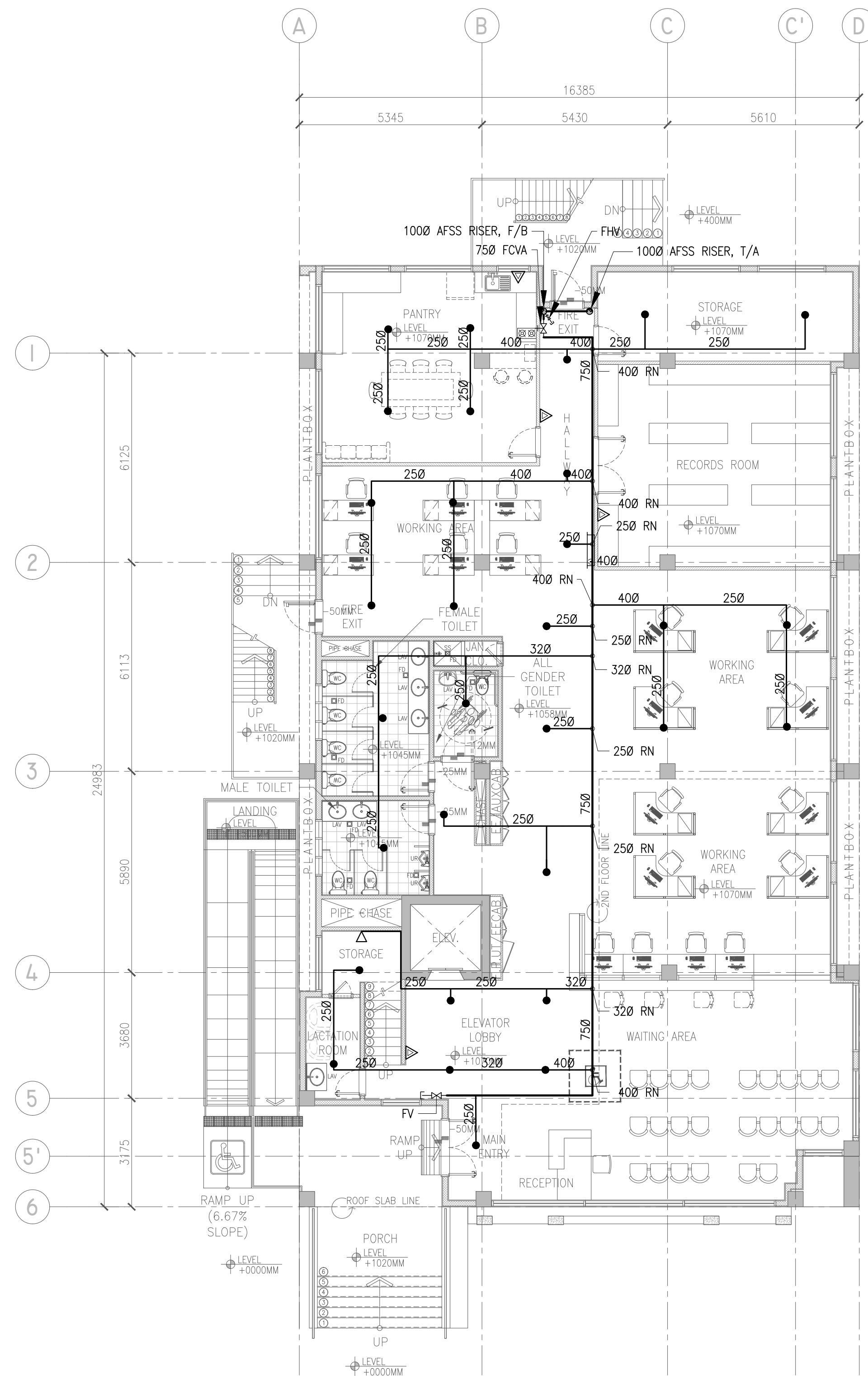
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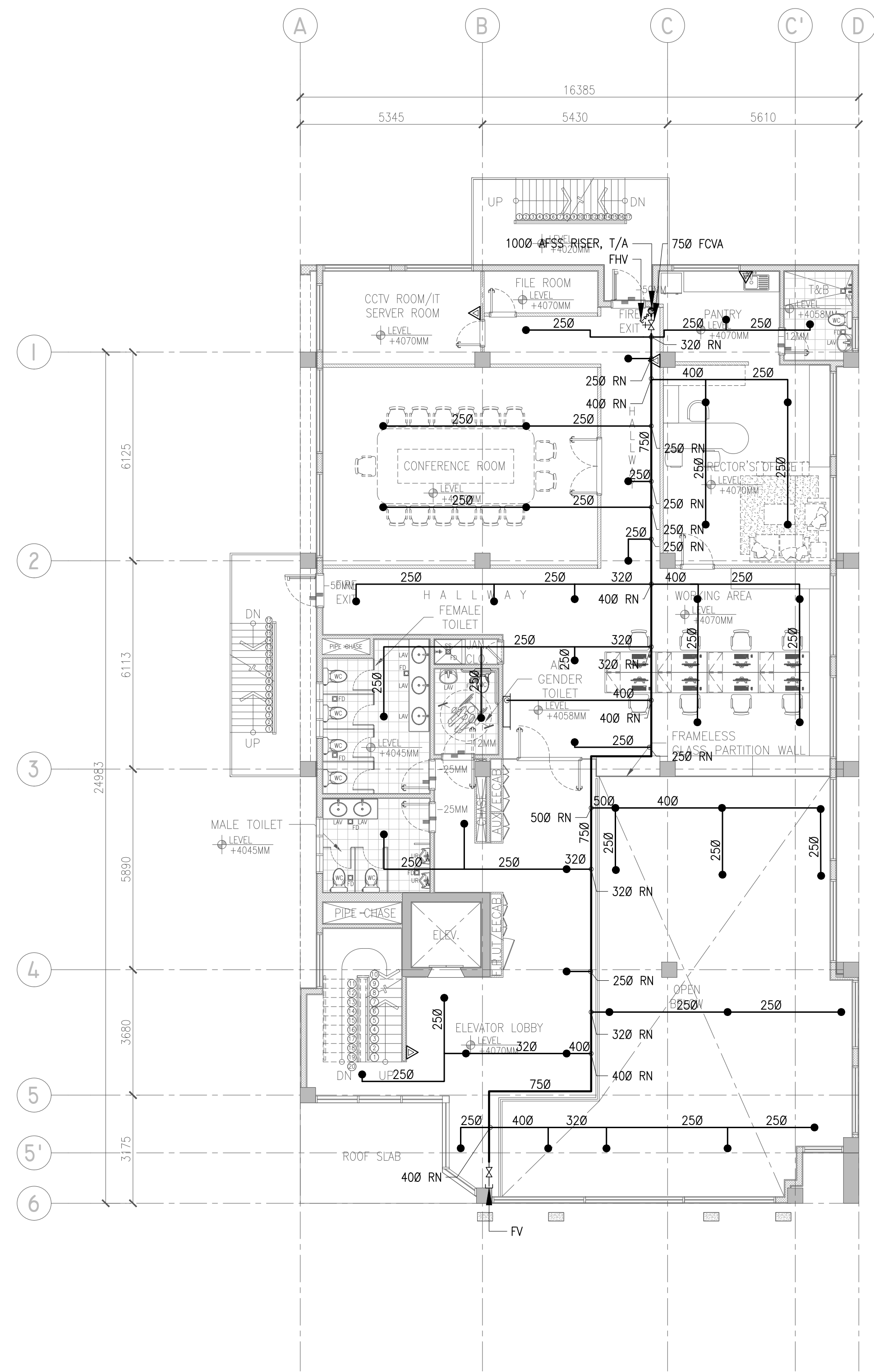
DE-G-24-006



I FIRE PROTECTION SCHEMATIC RISER DIAGRAM
FP-001 SCALE NTS

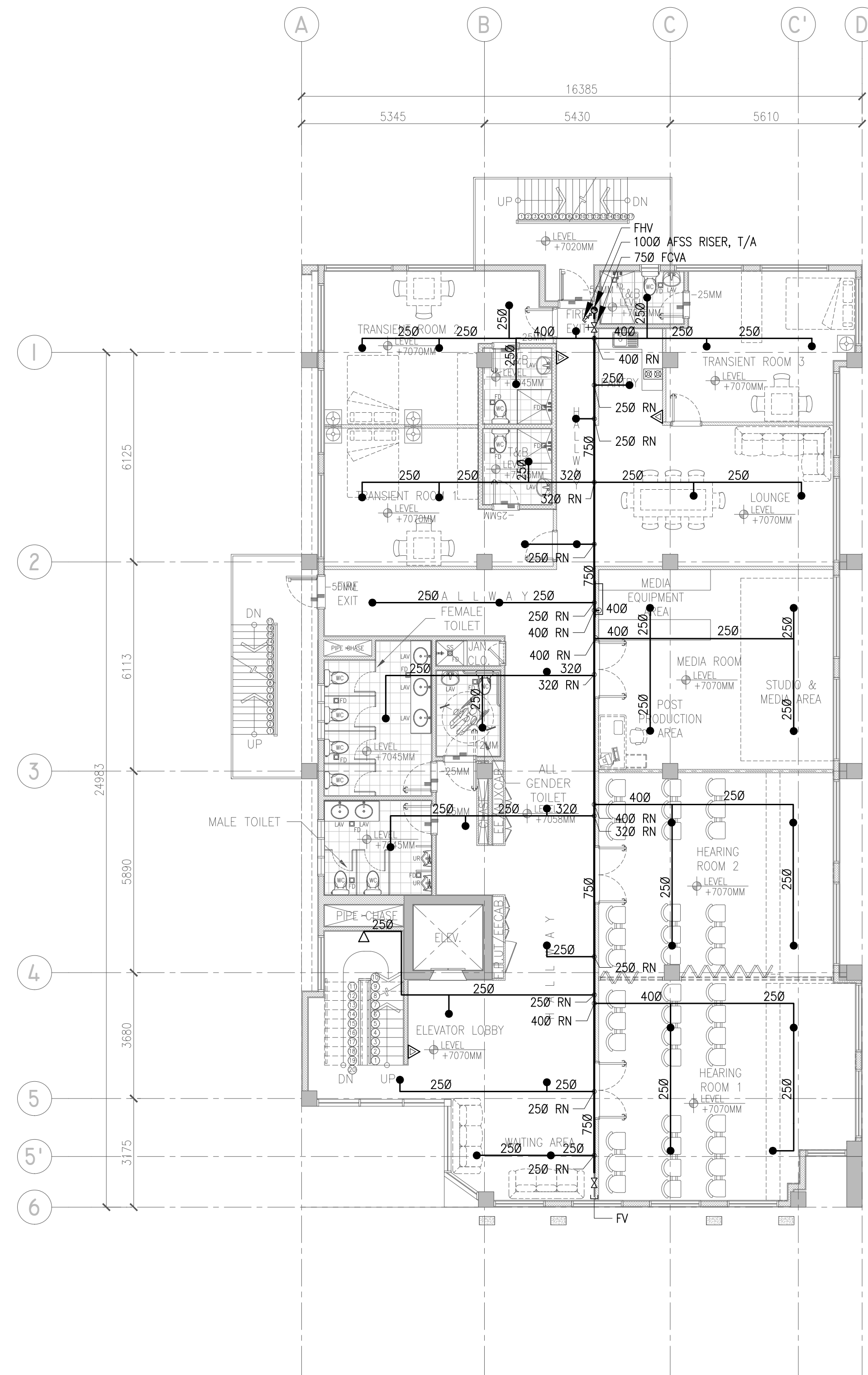


1 GROUND FLOOR FIRE PROTECTION LAYOUT
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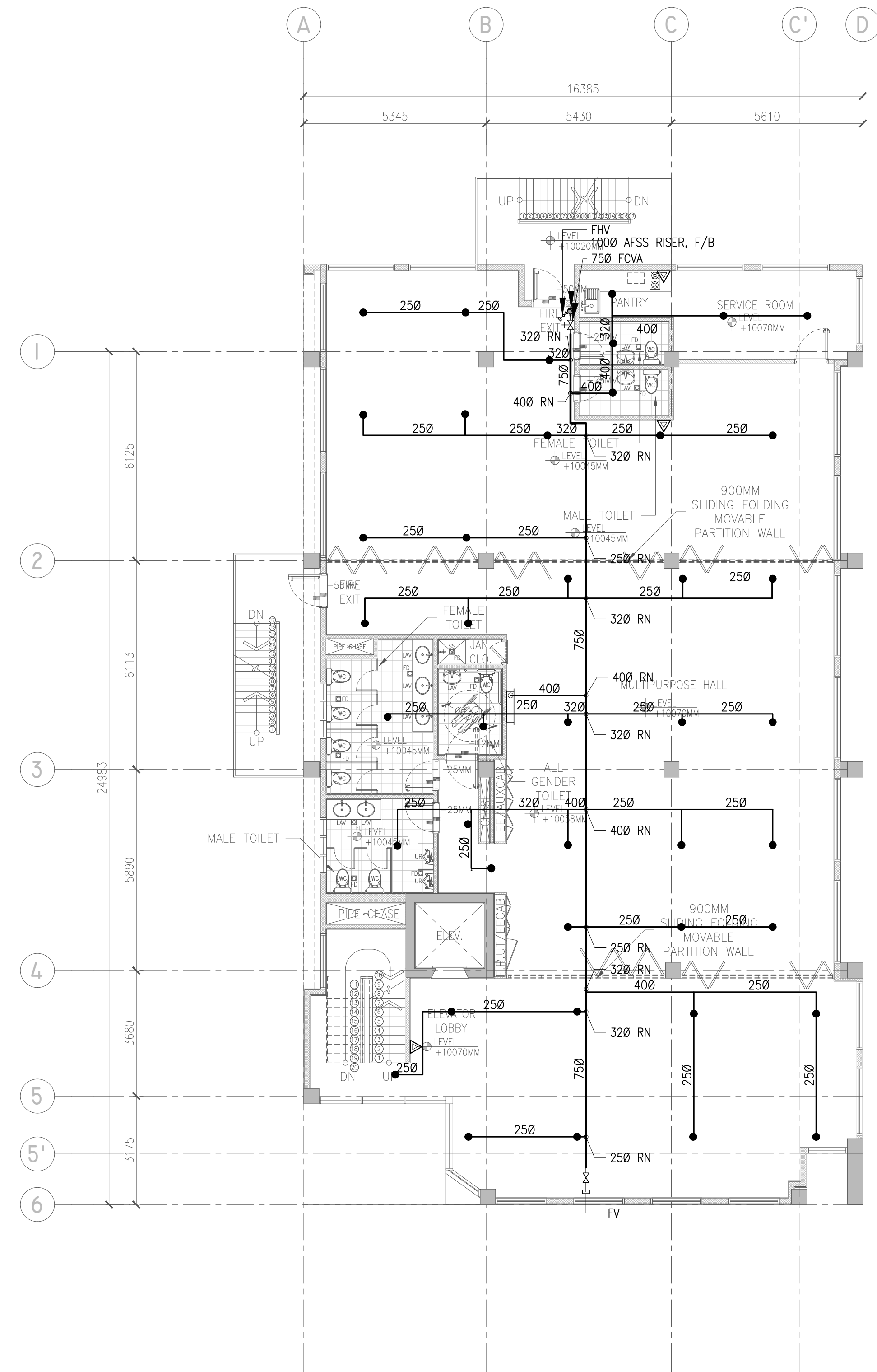


2 SECOND FLOOR FIRE PROTECTION LAYOUT
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	ALDEN C. ONG M.Eng., ASEP SEC-HTC		REG. NO. : 68251	PROPOSED RETROFITTING AND RENOVATION OF THE SEC DAVAO EXTENSION OFFICE		VHINCENT G. CAÑARES SEC DIRECTOR, MSD		JAVEY PAUL D. FRANCISCO COMMISSIONER		GROUND FLOOR FIRE PROTECTION LAYOUT SECOND FLOOR FIRE PROTECTION LAYOUT		DRAWINGS AND SPECIFICATIONS AND CONTRACT DOCUMENTS DULY SIGNED, STAMPED OR SEALED AS INSTRUMENTS FOR SERVICE ARE THE INTELLECTUAL PROPERTY AND DOCUMENTS OF ARCHITECT, WHETHER THE OBJECT FOR WHICH THEY ARE MADE IS EXECUTED OR NOT. IT SHALL BE UNLAWFUL FOR ANY PERSON TO DUPLICATE OR TO MAKE COPIES OF SAID DOCUMENTS FOR USE IN THE REPEITION OF AND FOR OTHER PROJECTS OR BUILDINGS, WHETHER EXECUTED PARTLY OR IN WHOLE, WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT OR AUTHOR OF SAID DOCUMENTS.		JFT	JUL 2024		AS SHOWN		DE-G-24-006	20X30	FP-003	
			TIN NO. : 168-950-786																			
			ARTHUR Q. MERILLO JR. PROFESSIONAL MECHANICAL ENGINEER																			
			UNIVERSITY AVENUE, JUNA SUBDIVISION MATINA, DAVAO CITY																			
			DATE : JANUARY 05, 2024																			
PLACE : MAKATI CITY																						

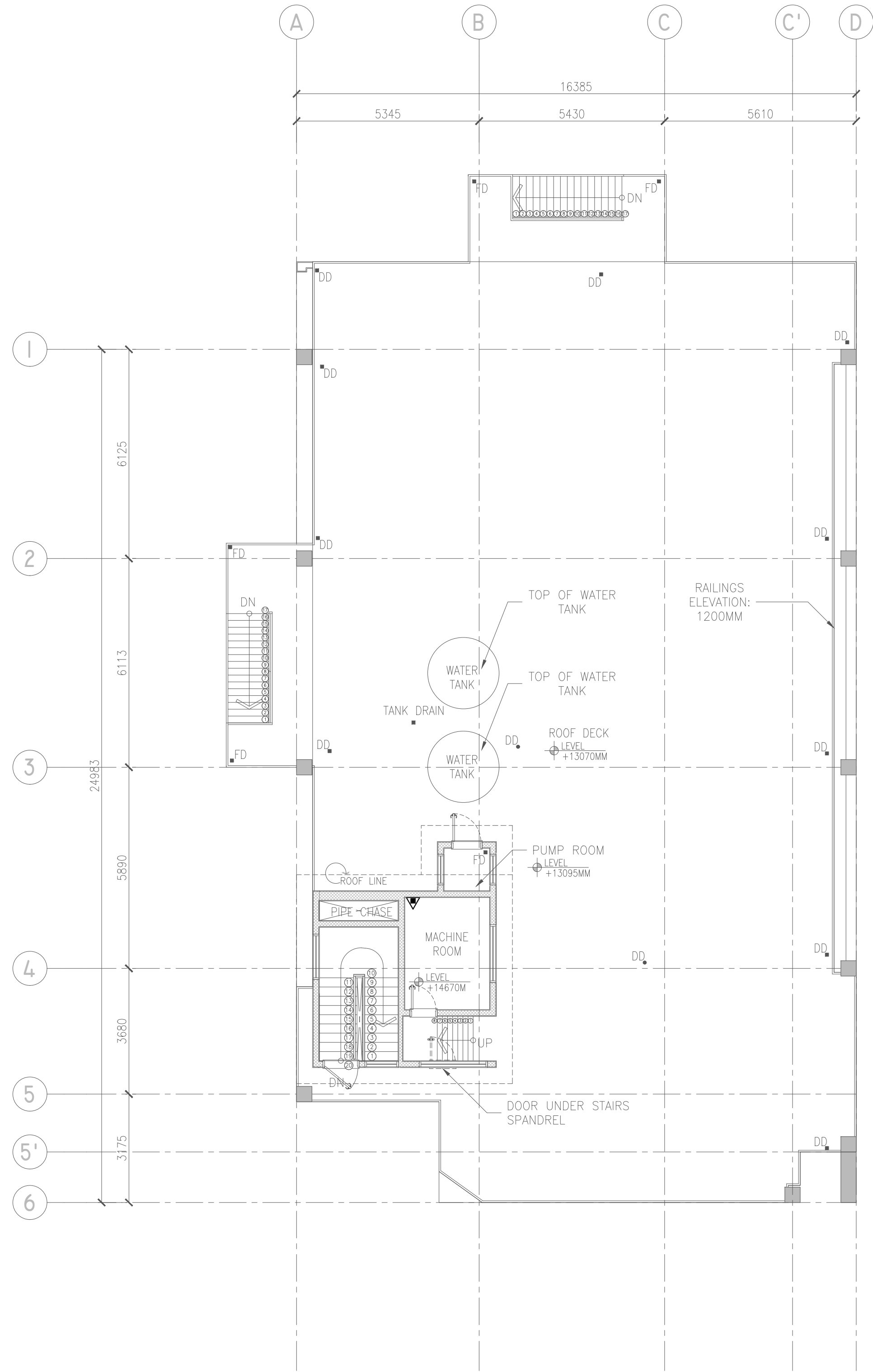


1 THIRD FLOOR FIRE PROTECTION LAYOUT
FP-004 SCALE 1:100M



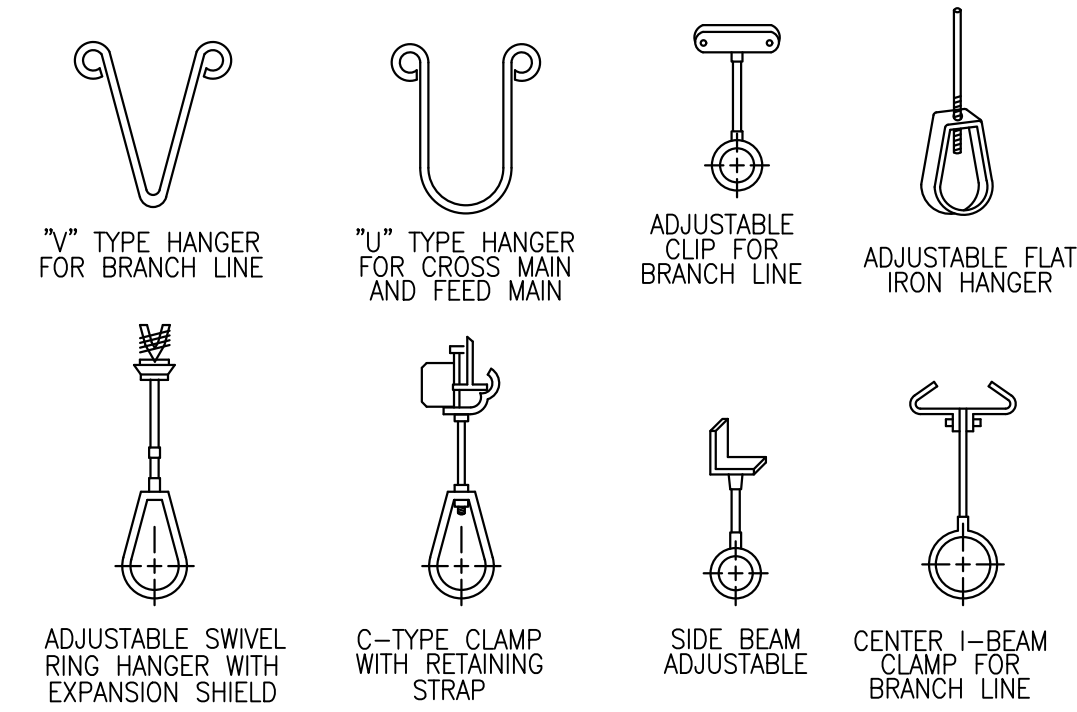
2 FOURTH FLOOR FIRE PROTECTION LAYOUT
FP-004 SCALE 1:100M

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	ALDEN C. ONG	M.Eng., ASEP	REG. NO.: 68251	ARTHUR Q. MERILLO JR.	PROPOSED RETROFITTING AND RENOVATION OF THE SEC DAVAO EXTENSION OFFICE	VHINCENT G. CAÑARES	JAVEY PAUL D. FRANCISCO	THIRD FLOOR FIRE PROTECTION LAYOUT FOURTH FLOOR FIRE PROTECTION LAYOUT	DRAWINGS AND SPECIFICATIONS AND CONTRACT DOCUMENTS DULY SIGNED, STAMPED OR SEALED AS INSTRUMENTS FOR SERVICE ARE THE INTELLECTUAL PROPERTY AND DOCUMENTS OF ARCHITECT, WHETHER THE OBJECT FOR WHICH THEY ARE MADE IS EXECUTED OR NOT. IT SHALL BE UNLAWFUL FOR ANY PERSON TO DUPLICATE OR TO MAKE COPIES OF SAID DOCUMENTS FOR USE IN THE REPERITION OF AND FOR OTHER PROJECTS OR BUILDINGS, WHETHER EXECUTED PARTLY OR IN WHOLE, WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT OR AUTHOR OF SAID DOCUMENTS.	CADD	DATE	NO.	REVISIONS		CHK	DATE	PAPER SIZE	SHEET NO.	
			TIN NO. : 168-950-786								JFT	JUL 2024					20X30	FP-004	
			PTR NO. : 10077889								DESIGNED	DATE					SCALE	PROJECT NO.	
			DATE : JANUARY 05, 2024								JLDA	JUL 2024					AS SHOWN	DE-G-24-006	
SEC-HTC		PLACE : MAKATI CITY	PROFESSIONAL MECHANICAL ENGINEER	UNIVERSITY AVENUE, JUNA SUBDIVISION MATINA, DAVAO CITY	SEC DIRECTOR, MSD	COMMISSIONER			APPROVED	DATE									
										LLG	JUL 2024								

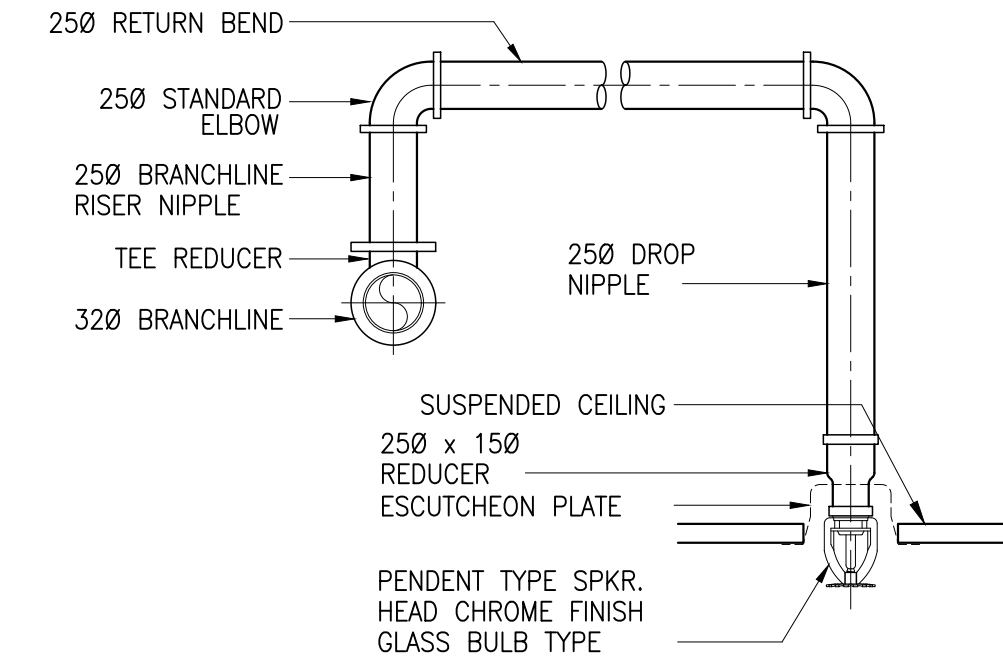


I ROOF DECK FIRE PROTECTION LAYOUT
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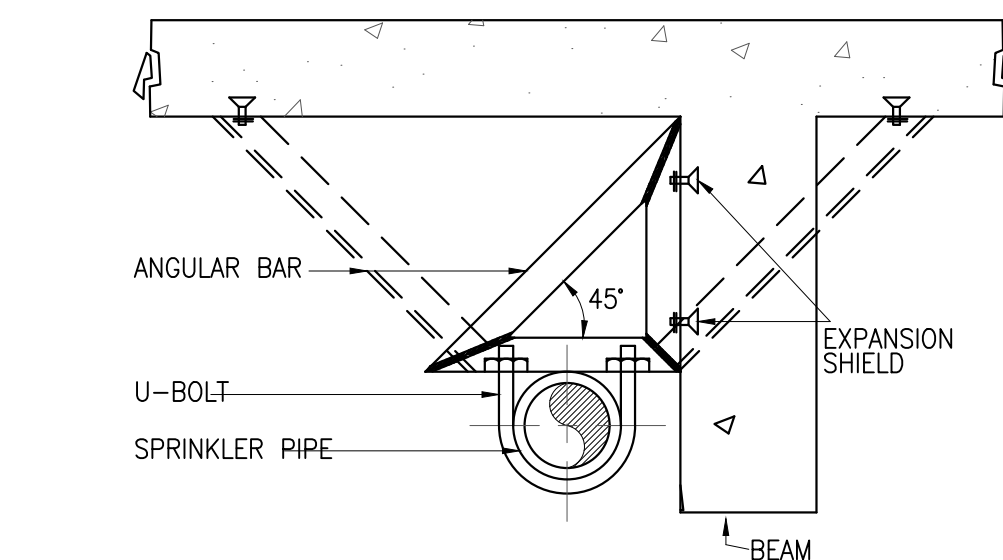
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	PLACE : MAKATI CITY																			
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													LLG	JUL 2024						



1 ACCEPTABLE TYPES OF HANGER
FP-006 SCALE NTS



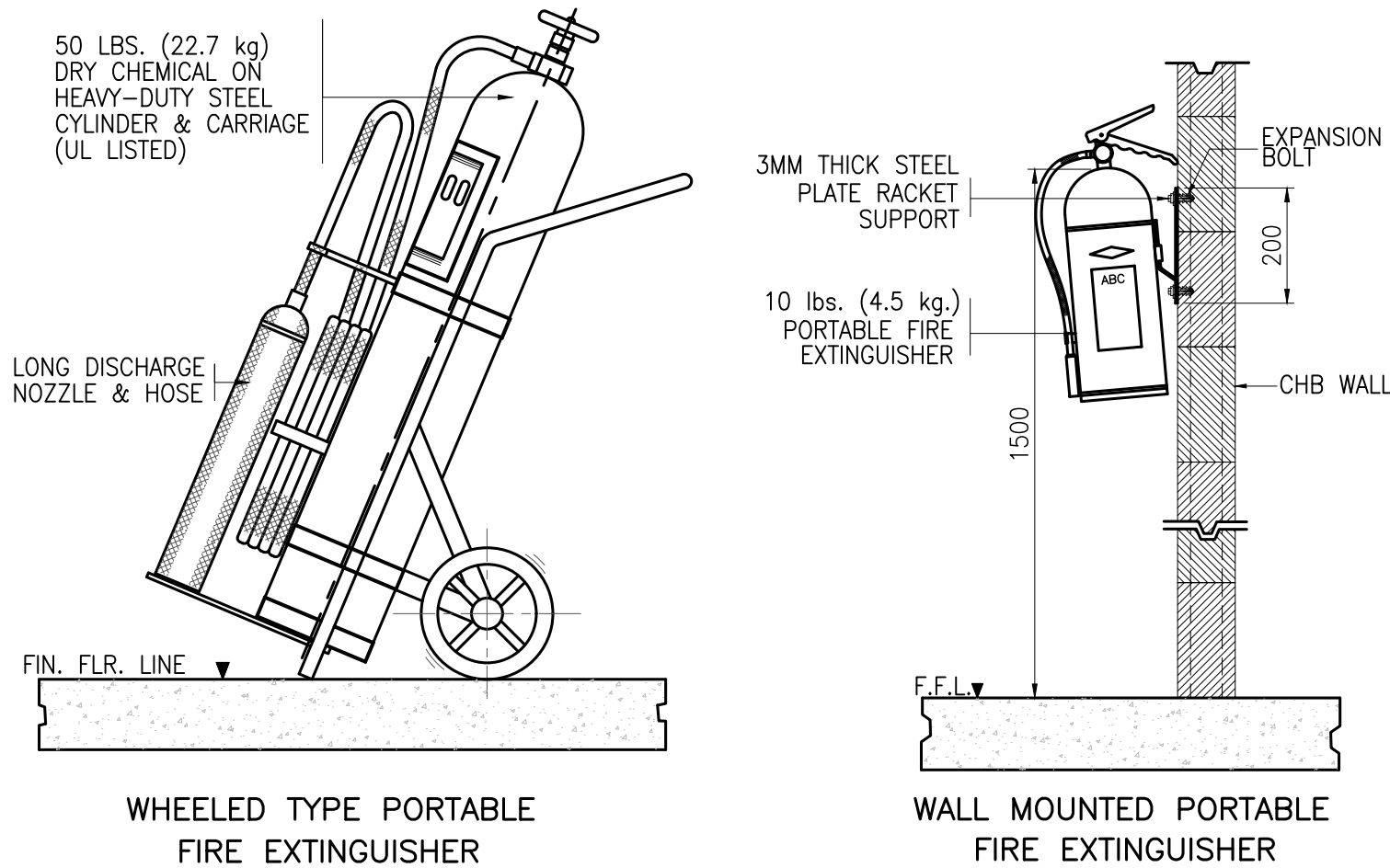
5 PENDENT SPRINKLER DETAIL
FP-006 SCALE NTS



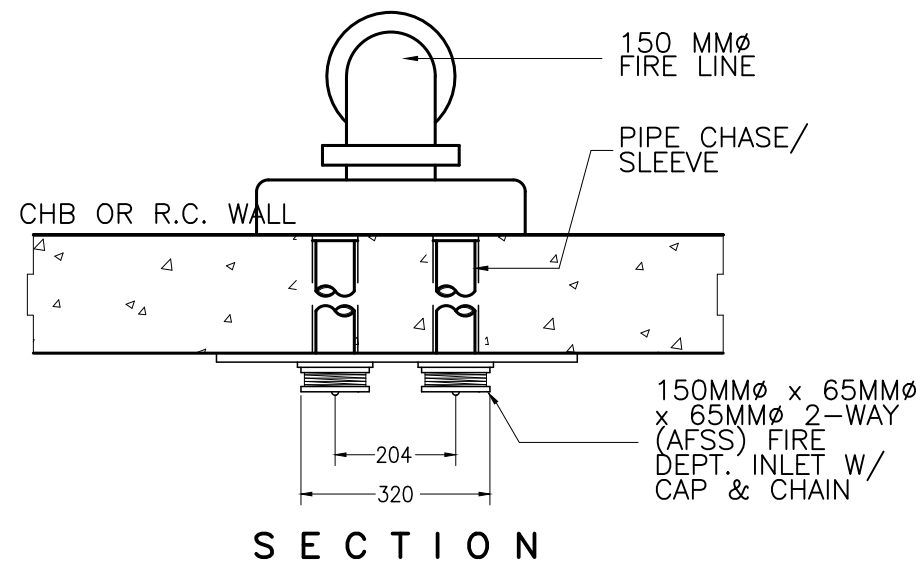
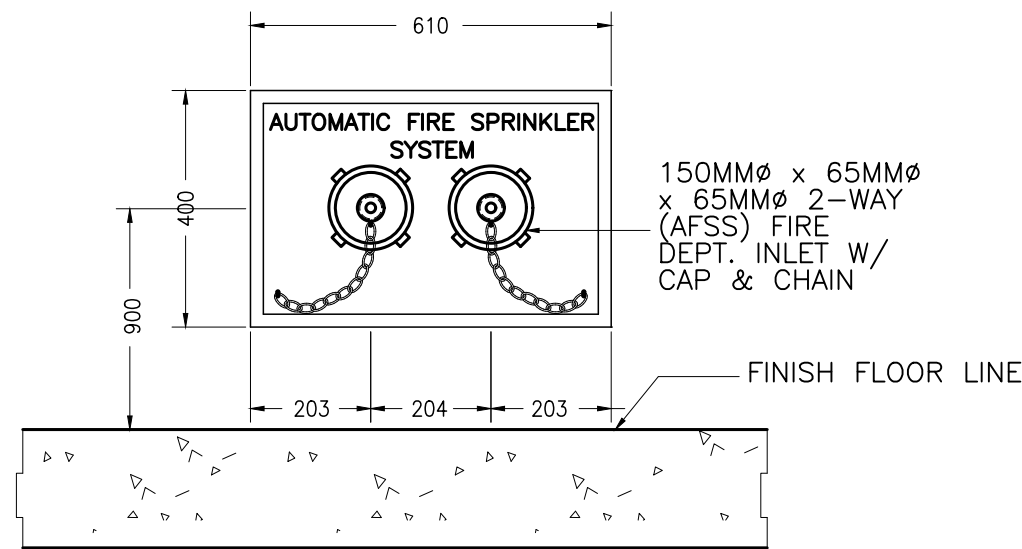
NOTE :
ATTACH SWAY BRACES TO BEAMS
OR FLOOR SLABS.

PIPE SIZE (MM)	U-BOLT ROD SIZE (MM)
50	10
65	10
80	10
100	12
125	12
150	16
200	16

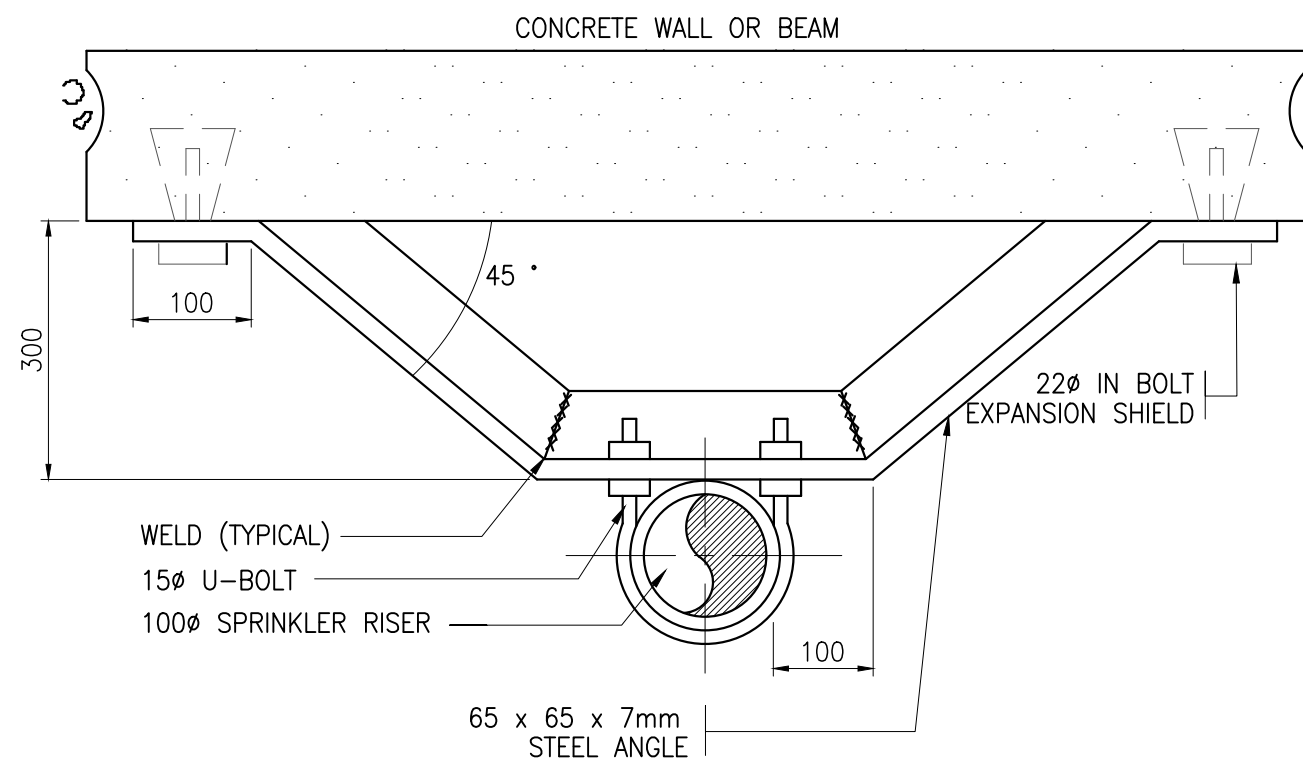
6 SWAY BRACE DETAIL
FP-006 SCALE NTS



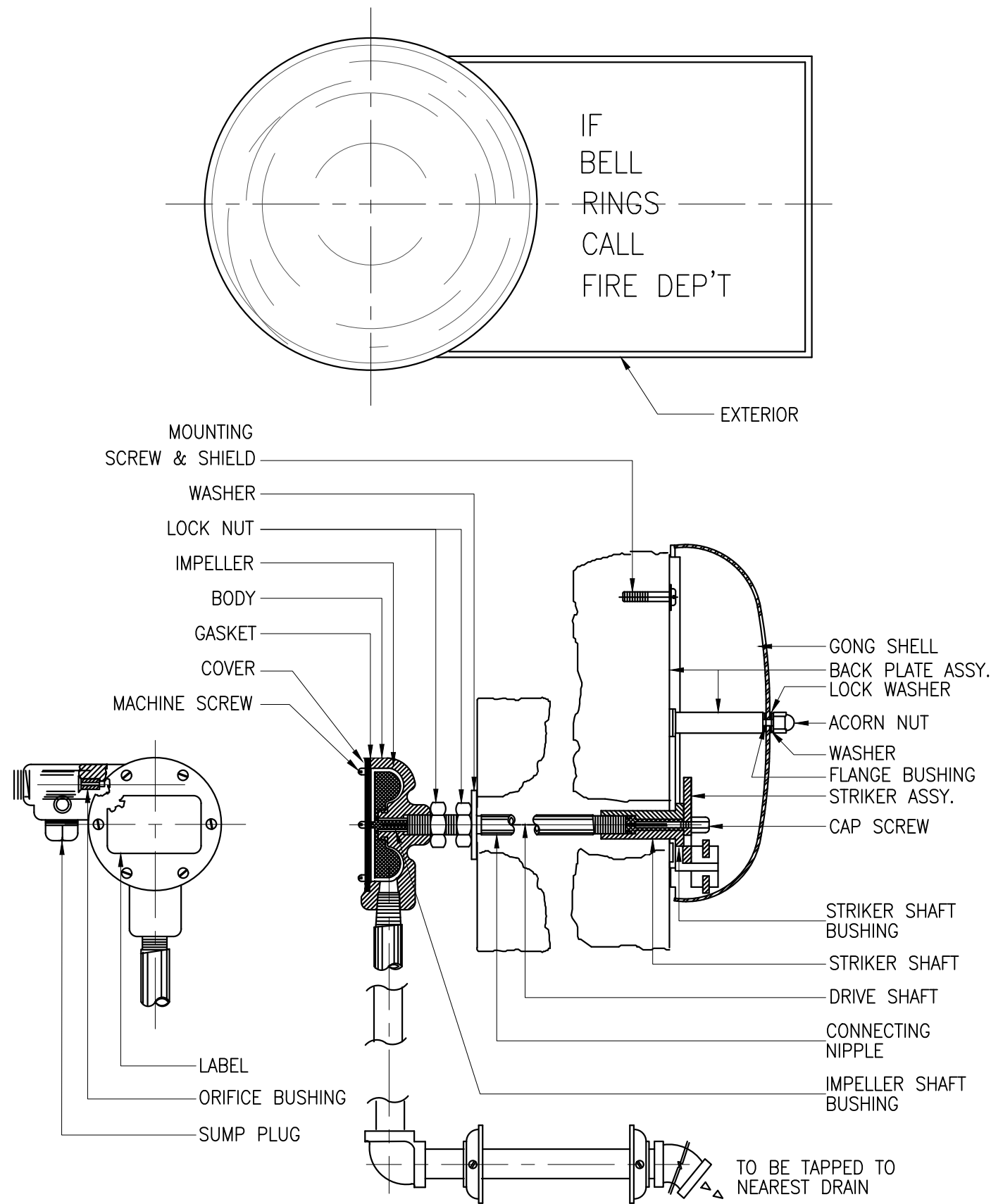
2 FIRE EXTINGUISHER MOUNTING DETAIL
FP-006 SCALE NTS



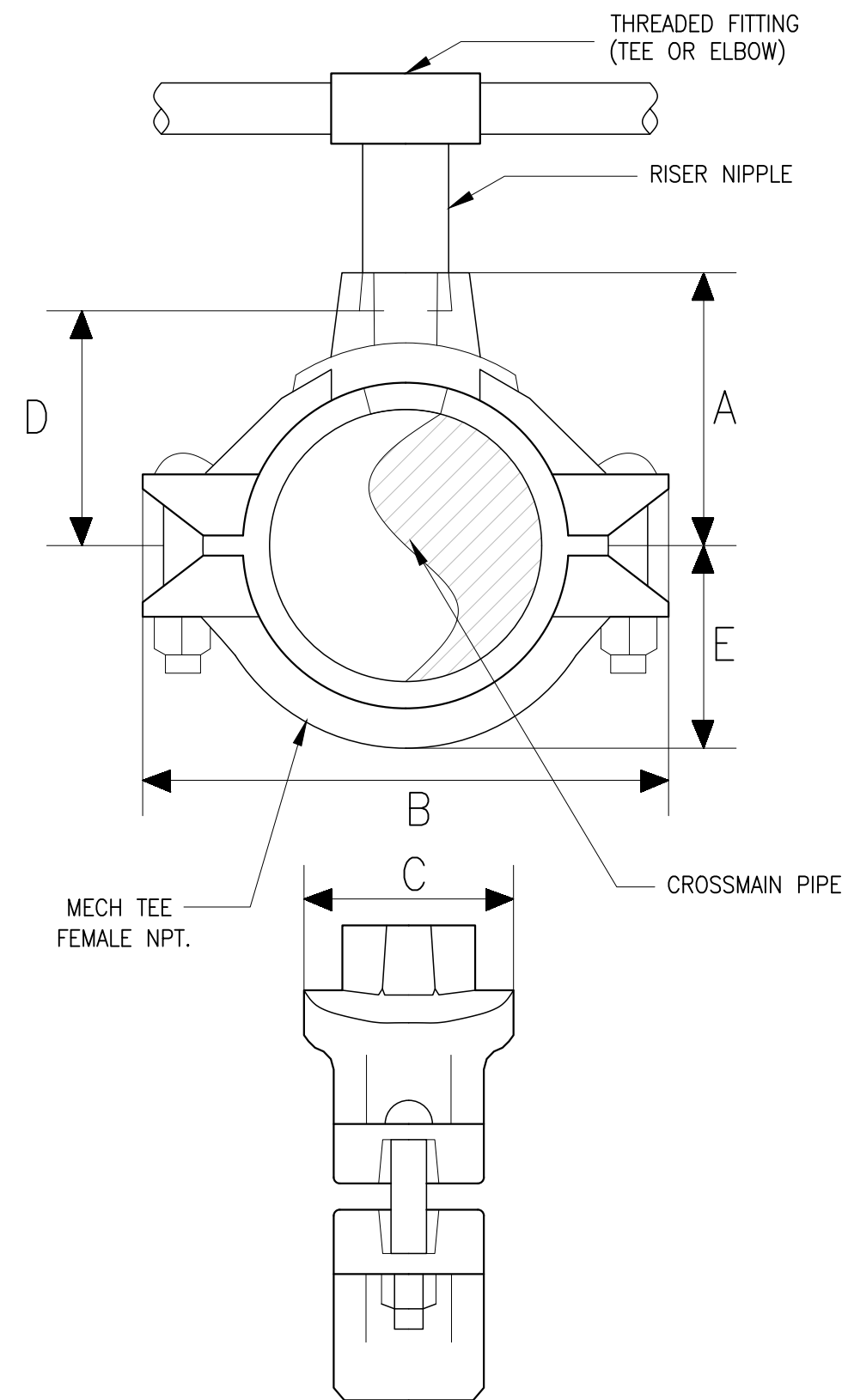
7 FIRE DEPT. INLET CONN. DETAIL
FP-006 SCALE NTS



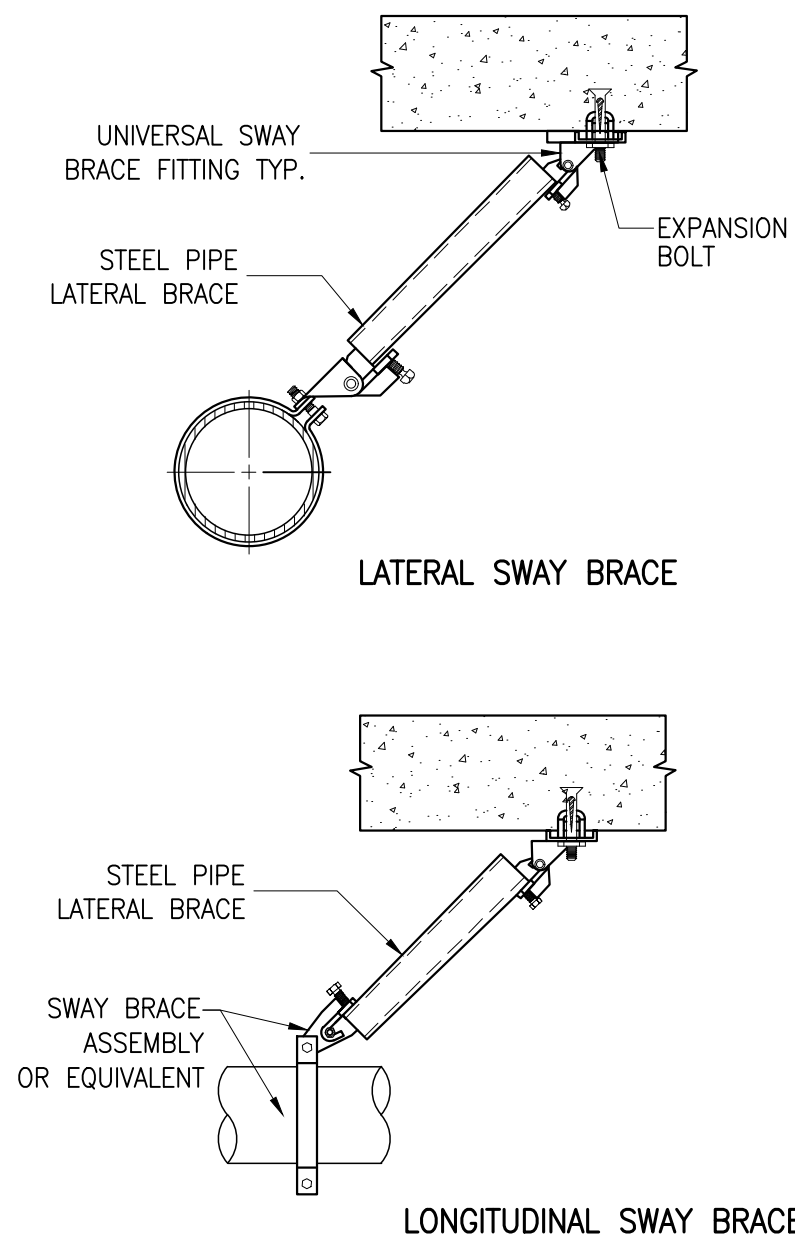
3 PIPE RISER BRACKET DETAIL
FP-006 SCALE NTS



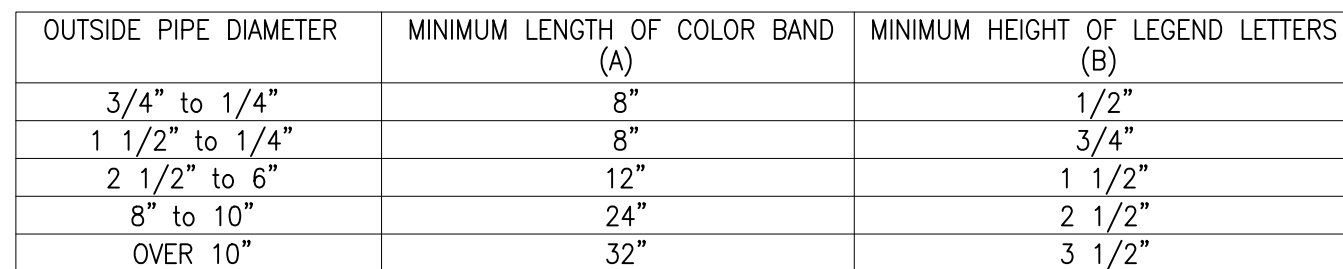
8 ALARM GONG DETAIL
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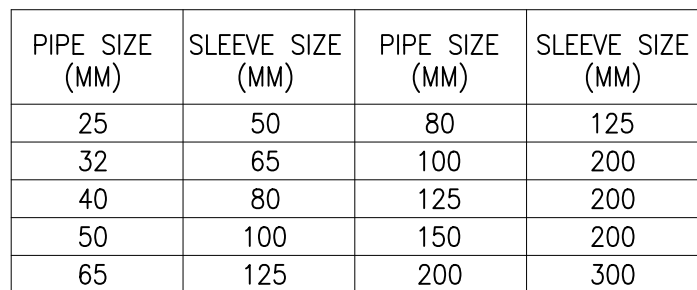
4 CROSSMAIN TO BRANCHLINE
CONNECTION DETAIL
FP-006 SCALE NTS



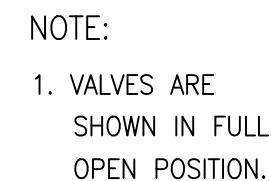
9 SWAY BRACE DETAIL
FP-006 SCALE NTS



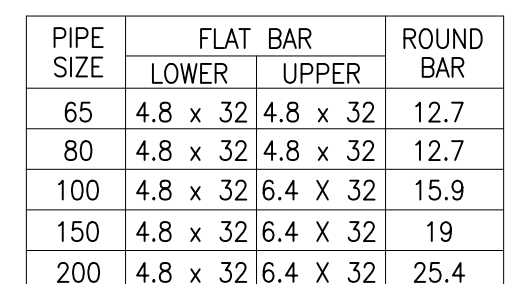
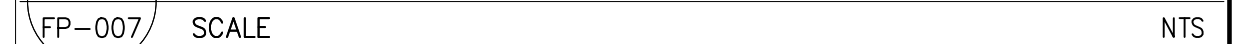
NOTE: FOR PIPES LESS THAN 3/4" IN DIAMETER, A PERMANENT LEGIBLE TAG IS RECOMMENDED.



(FP-007) SCALE NTS



FP-007 SCALE NTS



FP-007. SCALE NTS

