

FIRE SERVICES NOTES

1. HOSE REEL SYSTEM

1.1 MODIFIED HOSE REEL SYSTEM SHALL BE PROVIDED IN ACCORDANCE WITH THE CODE OF PRACTICE FOR MIN. FIRE SERVICE INSTALLATIONS AND EQUIPMENT 2022.

1.2 HOSE REEL SHALL BE PROVIDED AT POSITIONS OF THE WAREHOUSE, HOSE REEL LOCATION SHALL BE AS INDICATED ON PLANS.

1.2 WATER SUPPLY FOR THE MODIFIED HOSE REEL SYSTEM TO BE SINGLE END FEED FROM THE GOVERNMENT TOWN MAIN.

1.3 A MODIFIED HOSE REEL SYSTEM OF 2,000 LITRES WATER TANK TO BE PROVIDED AS INDICATED ON PLAN.

1.4 TWO HOSE REEL PUMPS (ONE DUTY & ONE STANDBY) SHALL TO BE PROVIDED AT FS PUMP ROOM.

1.5 NO FIRE SERVICES INLET TO BE PROVIDED FOR THE MODIFIED HOSE REEL SYSTEM.

1.6 SUFFICIENT HOSE REELS SHALL BE PROVIDED TO THE PREMISES. HOSE REELS SHALL BE PROVIDED TO ENSURE THAT EVERY PART OF THE WAREHOUSE CAN BE REACHED BY A LENGTH OF NOT MORE THAN 30 M OF HOSE REEL TUBING. ONE ACTUATING POINT AND ONE AUDIO WARNING DEVICE TO BE LOCATED AT EACH HR POINT.

2. SPRINKLER SYSTEM

2.1 AUTOMATIC SPRINKLER SYSTEM SHALL SUPPLIED BY A 135,000L UNDERGROUND SPRINKLER WATER TANK AND COVERED TO THE ENTIRE WAREHOUSES S1 & S3 IN ACCORDANCE WITH LPC RULES INCORPORATING BS EN12845 : 2015 AND FSD CIRCULAR LETTER 5/2020. THE SPRINKLER WATER TANK, SPRINKLER PUMP ROOM, SPRINKLER INLET AND SPRINKLER CONTROL VALVE GROUP SHALL BE AS INDICATED ON PLANS.

2.2 ALL INSTALLED SPRINKLER SHOULD BE CONVENTIONAL TYPE AND THE TEMPERATURE RATING OF SPRINKLER HEAD SHALL BE 68°C UNLESS OTHERWISE SPECIFIED.

2.3 ALL SPRINKLER PIPE SIZE SHOULD BE Ø32MM UNLESS SPECIFY.

3. FIRE ALARM SYSTEM

3.1 FIRE ALARM SYSTEM SHALL BE PROVIDED THROUGHOUT THE ENTIRE COVERED AREA OF WAREHOUSES IN ACCORDANCE WITH BS 5839-1 : 2017 AND FSD CIRCULAR LETTER 6/2021. ONE ACTUATING POINT AND ONE AUDIO WARNING DEVICE SHOULD BE LOCATED AT EACH HOSE REEL POINT. THE ACTUATION POINT SHOULD INCLUDE FACILITIES FOR HOSE REEL PUMP START AND AUDIO / VISUAL WARNING DEVICE INITIATION.

3.2 AN ADDRESSABLE TYPE FIRE ALARM PANEL TO BE PROVIDED AND LOCATED IN S2 FS PUMP ROOM ON G/F.

4. EMERGENCY LIGHTING

4.1 SELF-CONTAINED TYPE EMERGENCY LIGHTING SYSTEM COMPLYING WITH H.K.F.S.D.'S CODE OF PRACTICE AS WELL AS BS 5266-1: 2016, BS EN 1838: 2013 AND THE FSD CIRCULAR LETTER NO. 4/2021 WILL BE PROVIDED, AND PERMANENTLY MAINTAINED IN EFFECTIVE WORKING ORDER FROM NORMAL SUPPLY & TO BE PROVIDED.

4.2 EMERGENCY LIGHTING SHALL BE PROVIDED THROUGHOUT THOSE WAREHOUSES AND ALL EXIT ROUTES LEADING TO EXIT OF BUILDING.

5. EXIT SIGN

5.1 SUFFICIENT SELF-CONTAINED TYPE DIRECTIONAL AND EXIT SIGNS SHALL BE PROVIDED IN ACCORDANCE WITH BS 5266-1:2016 AND THE FSD CIRCULAR LETTER NO.5/2008 TO ENSURE THAT ALL EXIT ROUTES FROM ANYWHERE WITHIN THOSE WAREHOUSES ARE CLEARLY INDICATED AS REQUIRED BY THE CONFIGURATION OF EXIT ROUTE SERVING THE BUILDING.

6. EMERGENCY GENERATOR

6.1 NO EMERGENCY GENERATOR TO BE PROVIDED FOR SERVING THE EMERGENCY POWER. A.C. SUPPLY SOURCE WITH SECONDARY SUPPLY SHALL FEED BEFORE MAIN SWITCH.

6.2 DUPLICATED POWER SUPPLIES FOR ALL FIRE SERVICES INSTALLATIONS COMPRISING A CABLE CONNECTED FROM ELECTRICITY MAINS DIRECTLY BEFORE THE MAIN SWITCH.

7. PORTABLE HAND-OPERATED APPROVED APPLIANCE

7.1 FIRE EXTINGUISHER WITH SPECIFIED TYPE AND CAPACITY TO BE PROVIDED AT LOCATIONS AS INDICATED ON PLANS.

7.2 FIRE EXTINGUISHER SHALL BE PROVIDED TO EVERY LAEVEL OF STRUCTURE S3.

8. STATIC OR DYNAMIC SMOKE EXTRACTION SYSTEM

8.1 SMOKE EXTRACTION SYSTEM SHALL NOT BE PROVIDED AS THE AGGREGATE AREA OF OPENABLE WINDOWS OF THE COMPARTMENT PROVIDED SHALL BE MORE THAN 6.25% OF THE FLOOR AREA OF THOSE COMPARTMENT.

9. VENTILATION/AIR CONDITIONING CONTROL SYSTEM

9.1 WHEN A VENTILATION/ AIR CONDITIONING CONTROL SYSTEM TO A BUILDING IS PROVIDED, IT SHALL STOP MECHANICALLY INDUCED AIR MOVEMENT WITHIN A DESIGNATED FIRE COMPARTMENT.





TYPE OF STORAGE METHOD FOR THOSE WAREHOUSES ARE AS FOLLOWS:

- i) STORAGE CATEGORY : CATEGORY (III)
- ii) STORAGE HEIGHT : NOT EXCEEDING 2.1M
- iii) STORAGE : ST1

PIPEWORK SCHEDULE

SYSTEM	SIZE		JOINTING METHOD
F.S. SYSTEM & SPRINKLER SYSTEM ABOVEGROUND	PIPES UP TO AND INCLUDING #200	GALVANISED MILD STEEL PIPE OF MEDIUM GRADE TO BSEN 10255:2004 (EQUIVALENT TO BS1387)	SCREW JOINT / FLANGE JOINT/ GROOVED JOINT /
INCOMING PIPES FROM GOVERNMENT MAINS TO WATER TANK	PIPES UP TO #100	GALVANISED MILD STEEL PIPE OF MEDIUM GRADE TO BSEN 10255:2004 (EQUIVALENT TO BS1387)	SCREW JOINT / FLANGE JOINT/

LEGEND:

	68°C SPRINKLER UNDER CEILING		GATE VALVE (NORMAL CLOSED)
	GATE VALVE (NORMAL OPEN)		NON-RETURN VALVE
	FLOW SWITCH		GATE VALVE C/W PLUGGED OFF (N.C.)
	PRESSURE SWITCH		FLEXIBLE CONNECTOR
	PRESSURE GAUGE C/W COCK		SPRINKLER INLET
	GATE VALVE (NORMAL OPEN)		SPRINKLER WATER MOTOR ALARM GONG
	DIRECT READING FLOW METER		W.S.D CHECK METER ASSEMBLY
	PRESSURE RELIEF VALVE		SPRINKLER CONTROL
	FLASHING LAMP		Y TYPE STRAINER
	5KG CO2 F.E.		SUBMERSIBLE PUMP PANEL
	4KG DRY POWER F.E.		FS CONTROL PANEL
	BUTTERFLY VALVE (N.O.) MICRO-SWITCH		HOSE REEL (SCHEMATIC)
	BUTTERFLY VALVE (N.C.) MICRO-SWITCH		HOSE REEL (LAYOUT)
	STOP VALVE WITH MONITORING MICRO-SWITCH (N.O.)		BALL FLOAT VALVE
	STOP VALVE WITH MONITORING MICRO-SWITCH (N.C.)		PUMP SET
	Y-STRAINER		0.5m ³ SPRINKLER GRP. PRIMING TANK
	WATER TANK ACCESS		2m ³ F.S GRP. TANK (FOR HOSE REEL SYSTEM)
	FLOAT TYPE LEVEL SWITCH		EXIT SIGN C/W 2 HRS SELF MAINTAINED TYPE EMERGENCY POWER PACK
	AIR VENT PIPE		EMERGENCY LIGHTING C/W 2 HRS SELF MAINTAINED TYPE EMERGENCY POWER PACK
	VORTEX INHIBITOR		
	AUTOMATIC AIR VENT		

ABBREVIATION

SPR.	SPRINKLER
F.H.	FIRE HYDRANT
H.R.	HOSE REEL
F.E.	FIRE EXTINGUISHER
CO ₂	CARBON DIOXIDE
L.P.C.	LOSS PREVENTION COUNCIL
F.S.I.	FIRE SERVICES INSTALLATION
H/L	HIGH LEVEL
M/L	MID LEVEL
L/L	LOW LEVEL
F/A	FROM ABOVE
F/B	FROM BELOW
T/A	TO ABOVE
T/B	TO BELOW
U/G	UNDERGROUND
F.S.	FIRE SERVICES

COLOUR CODE

PIPE SIZES	COLOUR
Ø25mm	LIGHT GREEN
Ø32mm	RED
Ø40mm	PURPLE
Ø50mm	YELLOW
Ø65mm	BLUE
Ø80mm	GREEN
Ø100mm	LIGHT BROWN
Ø150mm	DEEP BROWN

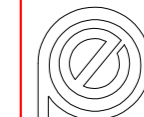
DRAWING LIST

DRAWING NO	DESCRIPTION
DD129-FS01	FS NOTES, LEGEND, ABBREVIATIONS AND DRAWING LIST
DD129-FS02-1	FIRE SERVICES INSTALLATION LAYOUT PLAN (PART 1 OF 2)
DD129-FS02-2	FIRE SERVICES INSTALLATION LAYOUT PLAN (PART 2 OF 2)
DD129-FS03	SCHEMATIC DIAGRAM FOR HOSE REEL SYSTEM
DD129-FS04	SCHEMATIC DIAGRAM FOR SPRINKLER SYSTEM
DD129-FS05	OPENABLE WINDOW AREA CALCULATION

1	TPB RESUBMISSION	06-11-2024	HY
0	TPB SUBMISSION	07-09-2024	HY
REV	DESCRIPTION	DATE	BY

FSI CONTRACTOR

East Power Engineering Limited



PROJECT

PROPOSED TEMPORARY LOGISTICS CENTRE FOR A PERIOD OF 3 YEARS AT LOTS 2438 S.A. RP (Part), 2455 S.B ss.1 S.C (Part), 2455 S.B ss.1 RP (Part), 2958(Part), 2961 S.A ss.1 (Part), 2961 S.A RP (Part), 2961 RP (Part) in D.D. 129, Ha Tsuen, Yuen Long, N.T.

DRAWING TITLE

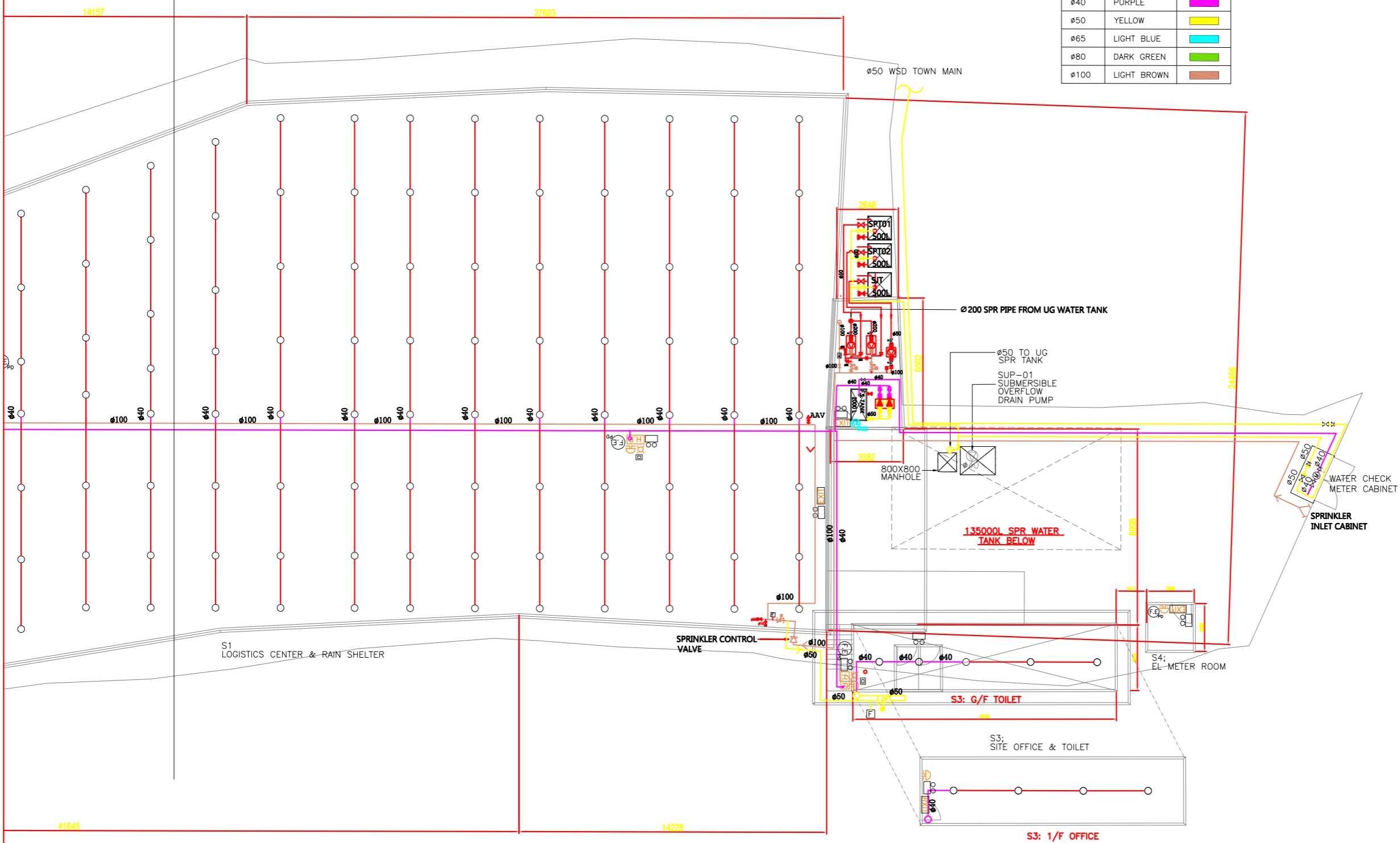
FS NOTES, LEGEND, ABBREVIATIONS AND DRAWING LIST

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SCALE	N. T. S.	REVISION	1

MATCH LINE REFER TO FS02-2 | MATCH LINE REFER TO FS02-1

COLOR CODES FOR PIPE SIZES

PIPE SIZE	COLOR	
Ø25	GREEN	█
Ø32	RED	█
Ø40	PURPLE	█
Ø50	YELLOW	█
Ø65	LIGHT BLUE	█
Ø80	DARK GREEN	█
Ø100	LIGHT BROWN	█



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1	TPB RESUBMISSION	06-11-2024	HY
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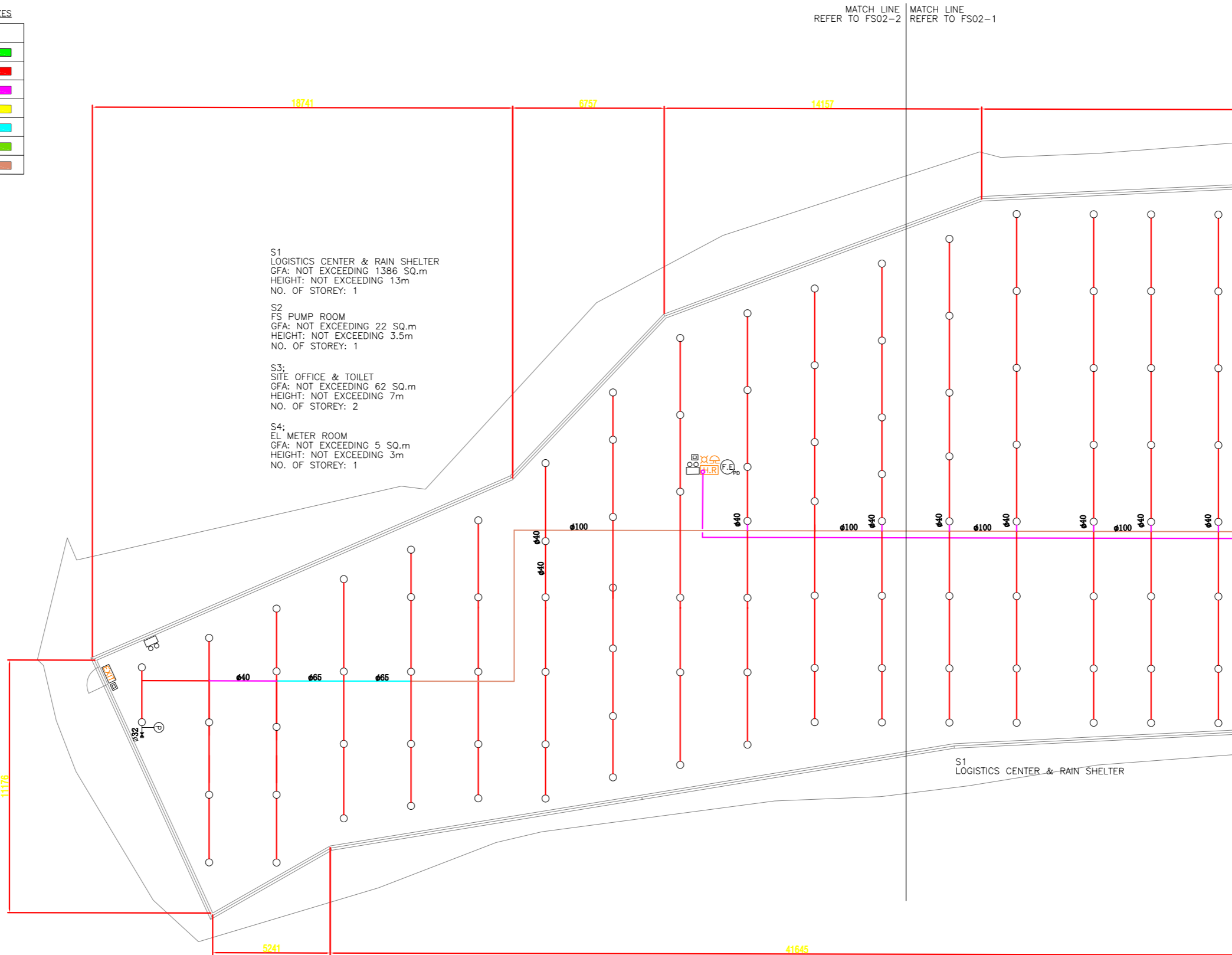
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FIRE SERVICES INSTALLATION LAYOUT PLAN Part 1 of 2

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PAPER SIZE	A1		

SCALE	REVISION	
1:200		1

COLOR CODES FOR PIPE SIZES

PIPE SIZE	COLOR	
ø25	GREEN	█
ø32	RED	█
ø40	PURPLE	█
ø50	YELLOW	█
ø65	LIGHT BLUE	█
ø80	DARK GREEN	█
ø100	LIGHT BROWN	█



S1
LOGISTICS CENTER & RAIN SHELTER
GFA: NOT EXCEEDING 1386 SQ.m
HEIGHT: NOT EXCEEDING 13m
NO. OF STOREY: 1

S2
FS PUMP ROOM
GFA: NOT EXCEEDING 22 SQ.m
HEIGHT: NOT EXCEEDING 3.5m
NO. OF STOREY: 1

S3:
SITE OFFICE & TOILET
GFA: NOT EXCEEDING 62 SQ.m
HEIGHT: NOT EXCEEDING 7m
NO. OF STOREY: 2

S4:
EL METER ROOM
GFA: NOT EXCEEDING 5 SQ.m
HEIGHT: NOT EXCEEDING 3m
NO. OF STOREY: 1

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FIRE SERVICES INSTALLATION LAYOUT PLAN
Part 2 of 2

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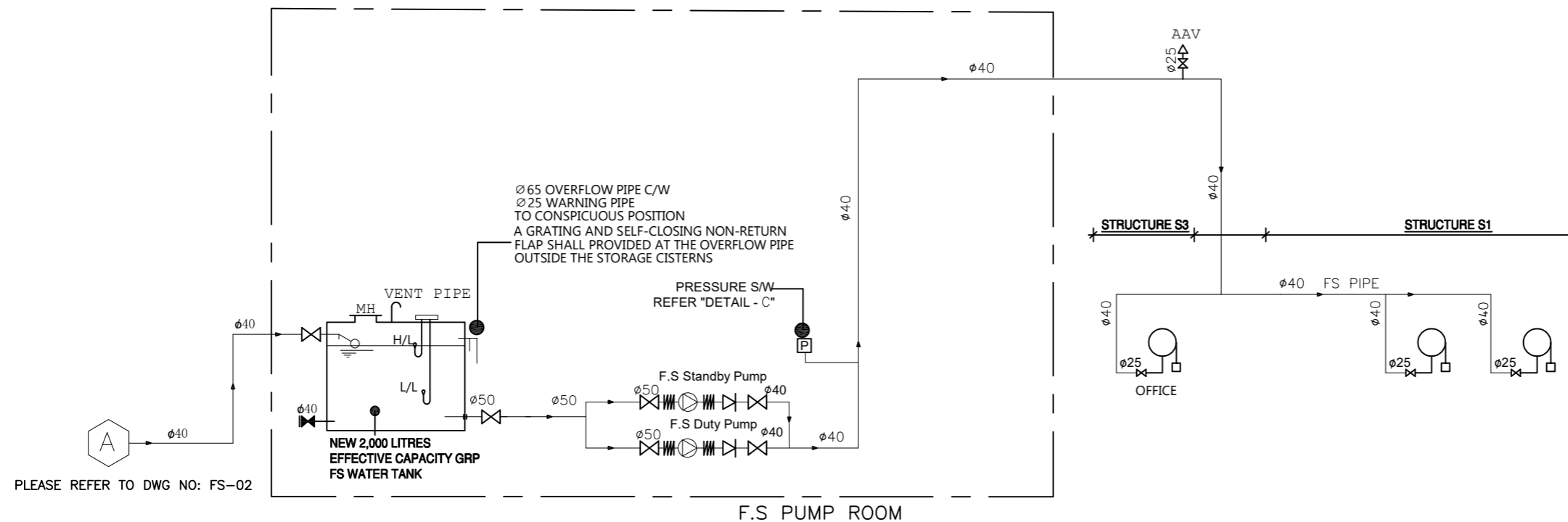
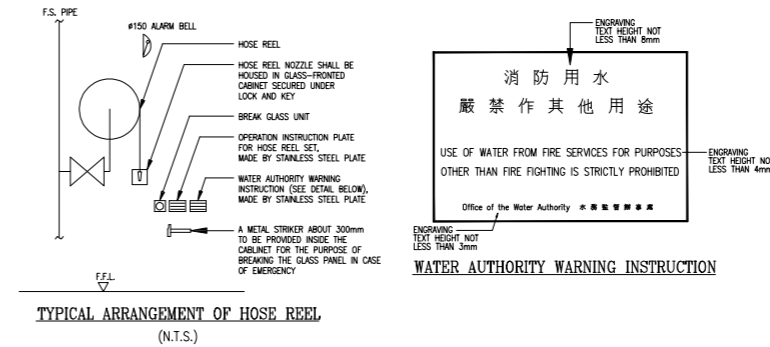
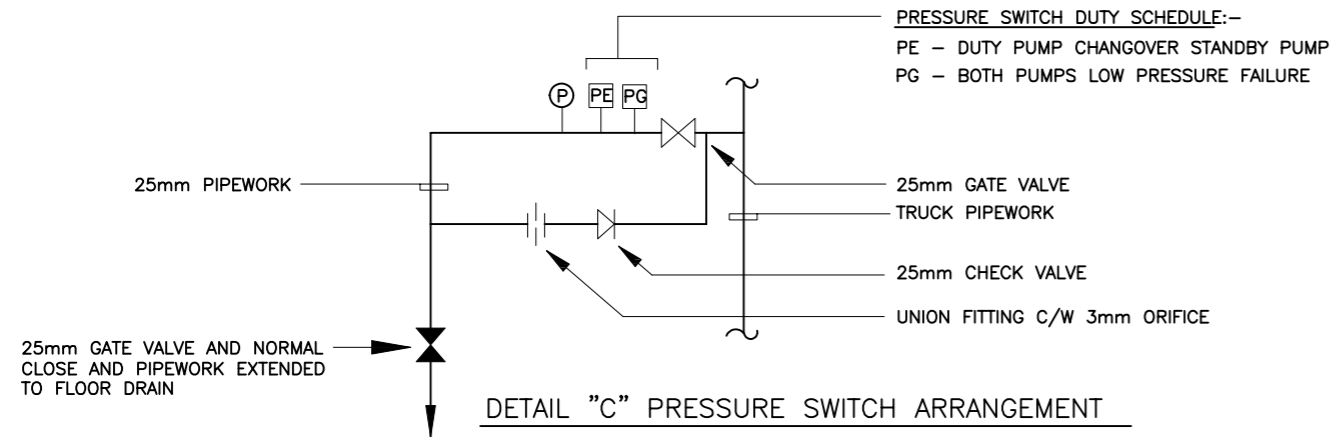
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PAPER SIZE	A1 1:200

DRAWING NO.
DD129-FS02-2

SCALE	1:200	REVISION	1
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FIRE SERVICES PUMP'S SCHEDULE:-

TYPE OF PUMP	PUMP'S DESIGNATION	RUNNING PRESSURE (m HEAD)	FLOW RATE (L / s)	PUMP'S MOTOR POWER (kW)
FIXED FIRE PUMP	FSP-1 (DUTY PUMP)	82m Head	3 L/s	4 kW
	FSP-2 (STANDBY PUMP)	82m Head	3 L/s	4 kW



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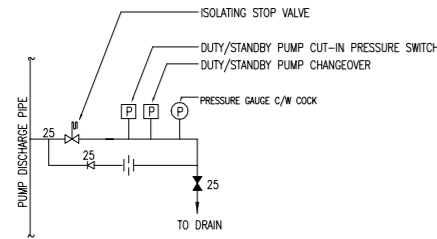
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DRAWING TITLE
 SCHEMATIC DIAGRAM FOR HOSE REEL SYSTEM

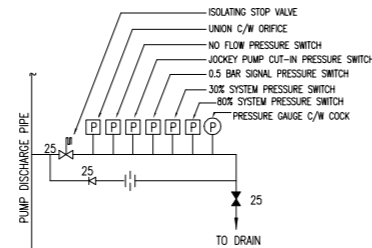
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SUMP PUMP SCHEDULE				
PUMP DESIGNATION	PRESSURE (BAR)	FLOW (L/MIN)	PUMP SPEED (RPM)	PUMP'S MOTOR POWER (kW)
SUP-01	SPRINKLER PUMP FOR UG/F			
OUTLET G/F	0.5	30	2900	0.75 kW

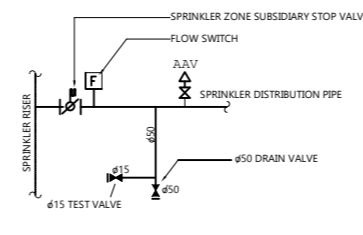
SPRINKLER PUMP SCHEDULE				
PUMP DESIGNATION	PRESSURE (BAR)	FLOW (L/MIN)	PUMP SPEED (RPM)	PUMP'S MOTOR POWER (kW)
SP-01 & SP-02	SPRINKLER PUMP FOR G/F			
OUTLET G/F	1.2 / 2.2 / 2.5	900 / 540 / 375	2900	7.5 kW
SJP	JOCKEY PUMP			
SJP	5	30	2900	1.1 kW



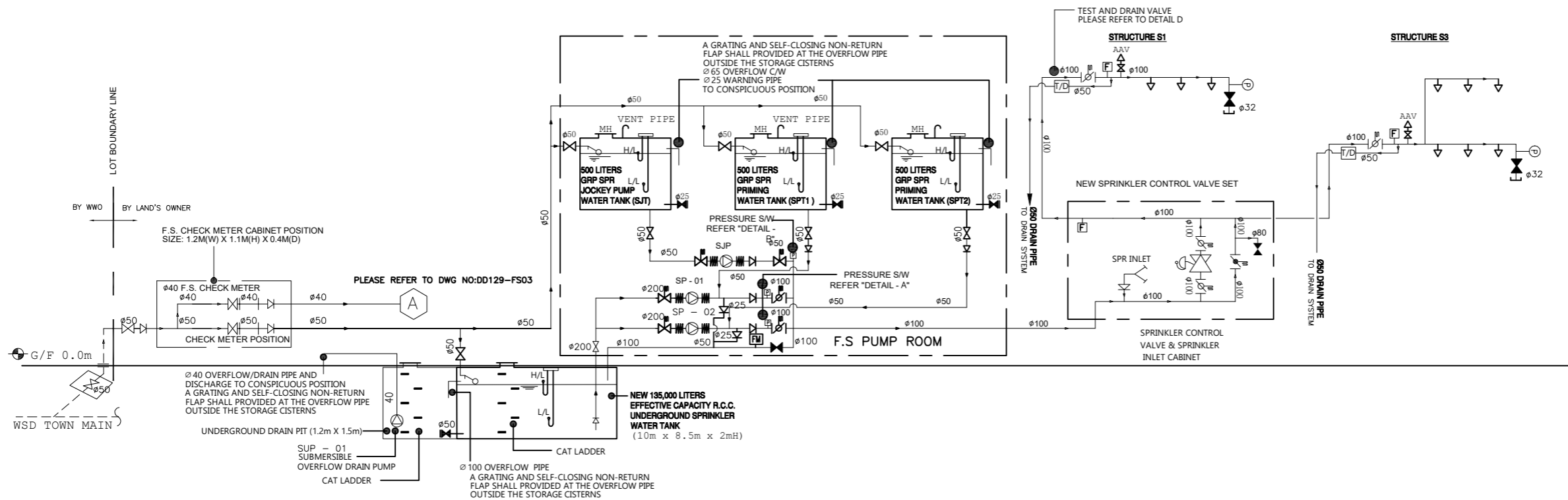
DETAIL A OF PRESSURE SWITCH ASSEMBLY FOR SPRINKLER MAIN PUMP



DETAIL B OF PRESSURE SWITCH ASSEMBLY FOR SPRINKLER JOCKEY PUMP SYSTEM



TYPICAL DETAIL D OF TEST AND DRAIN VALVE ASSEMBLY



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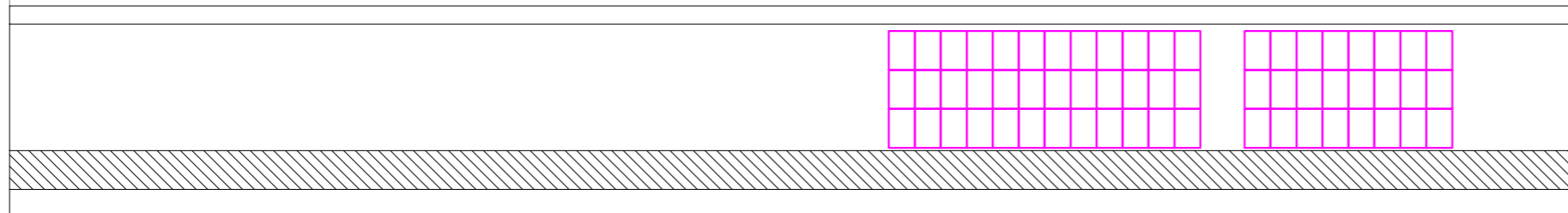
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SCHEMATIC DIAGRAM FOR SPRINKLER SYSTEM

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S1
LOGISTICS CENTER & RAIN SHELTER

□ WINDOW SIZE = 1m X 1.5m (TYPICAL)
TOTAL 60 NOS.



OPENABLE WINDOW AREA CALCULATION UNDER F.S.D. REQUIREMENT FOR COMPARTMENT EXCEEDING 7000 m²

LOCATION	USABLE FL. AREA (m ²)	OPENABLE WINDOW AREA REQUIRED (m ²)	OPENABLE WINDOW AREA PROVIDED (m ²)	
STRUCTURE S1	1292	1292 X 6.25% = 80.75	1 M X 1.5M = 1.5M ² X 60 = 90 M ²	TOTAL = 90 > 80.75

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OPENABLE WINDOW AREA CALCULATION

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