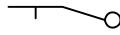
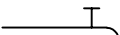
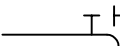
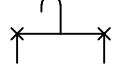
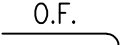
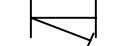


LIST OF SYMBOLS (1 OF 2)

	ANGLE VALVE
	LOOSE JUMPER TYPE STOPCOCK
	GATE VALVE
	STORAGE CISTERN
	FLOAT SWITCH
	BALL VALVE / FLOAT OPERATED VALVE
	NON-RETURN VALVE / CHECK VALVE
	DOUBLE NON-RETURN VALVE / CHECK VALVE
	WATER METER
	DRAW OFF POINTS – COLD WATER
	DRAW OFF POINTS – HOT WATER
	DRAW OFF POINT – COLD & HOT WATER
	DRAW OFF POINT – COLD & HOT WATER (SHOWER TYPE)
	WASHOUT PIPE
	OVERFLOW PIPE
	PUMP SET
	CALORIFIER
	BOILER
	Y TYPE STRAINER

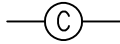
LIST OF SYMBOLS (2 OF 2)



BASIN



FLUSHING CISTERN & WATER CLOSET



CHECK METER POSITION (FOR CHECKING AND WASTE DETECTION PURPOSES)



INSTANTANEOUS GAS WATER HEATER



PRESSURE REDUCING VALVE (SMALL END DENOTES LOW PRESSURE)



PRESSURE RELIEF VALVE / SAFETY VALVE



TEMPERATURE RELIEF VALVE



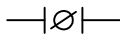
COMBINED TEMPERATURE AND PRESSURE RELIEF VALVE



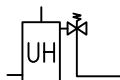
ANTI-VACUUM VALVE



EXPANSION VESSEL



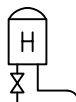
BUTTERFLY VALVE



UNVENTED ELECTRIC THERMAL STORAGE WATER HEATER



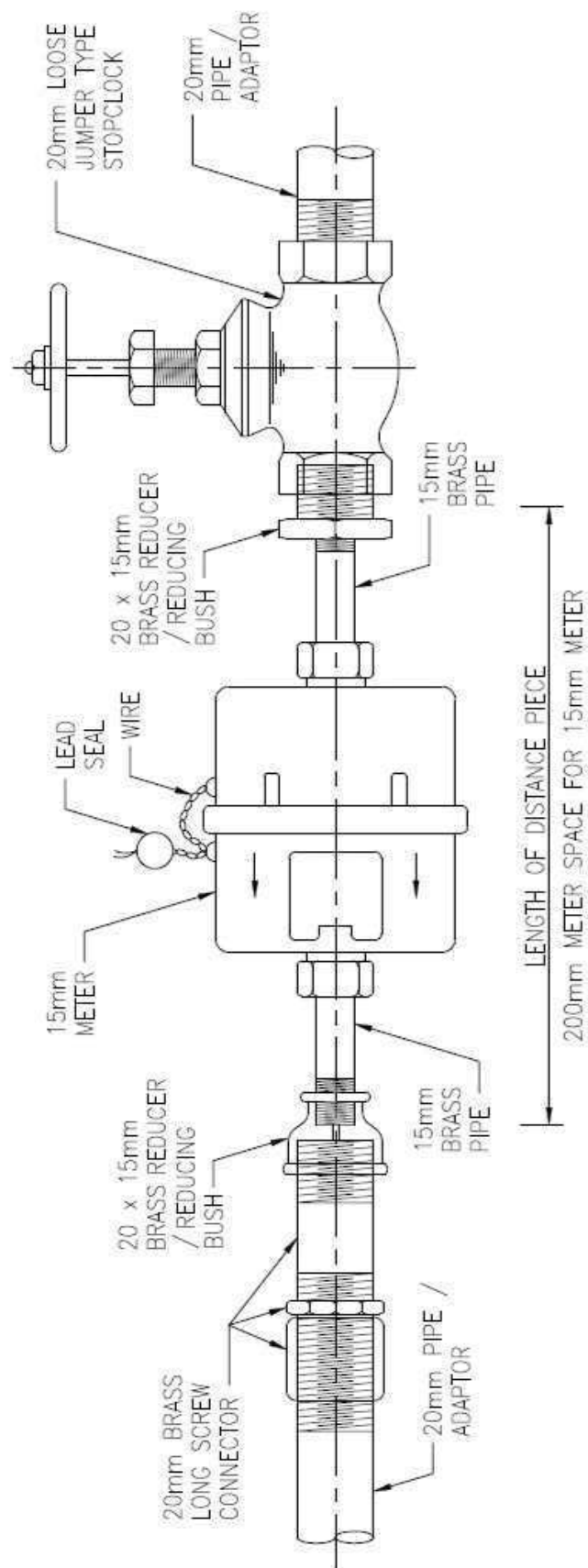
PRESSURE TYPE THERMAL STORAGE WATER HEATER



NON-PRESSURE TYPE HEATER



BACKFLOW PREVENTER

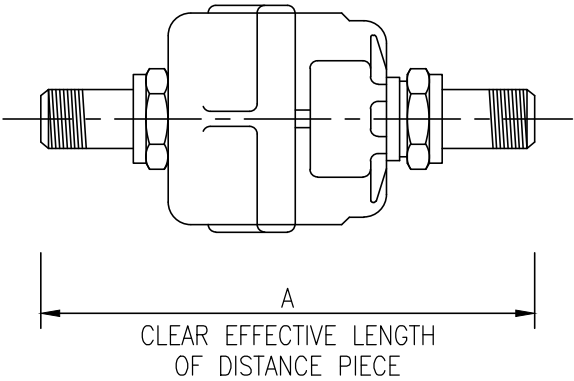


NOTES:

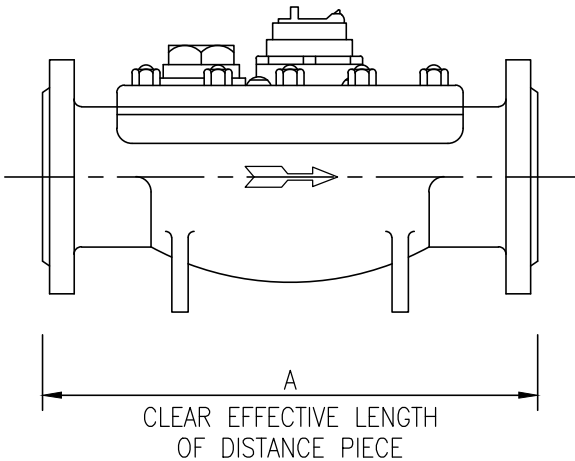
1. ALL THREADING TO BS 21.
2. METER POSITION TO BE USED FOR LINED C.I., COPPER AND THERMOPLASTIC INSIDE SERVICE.

TYPICAL INSTALLATION OF A 15mm DIAMETER WATER METER

METER SIZE (mm)		15	25	40
<u>DIMENSION (mm)</u>	NON-AMR METERS	200	311	346
	AMR METERS	200	370	421

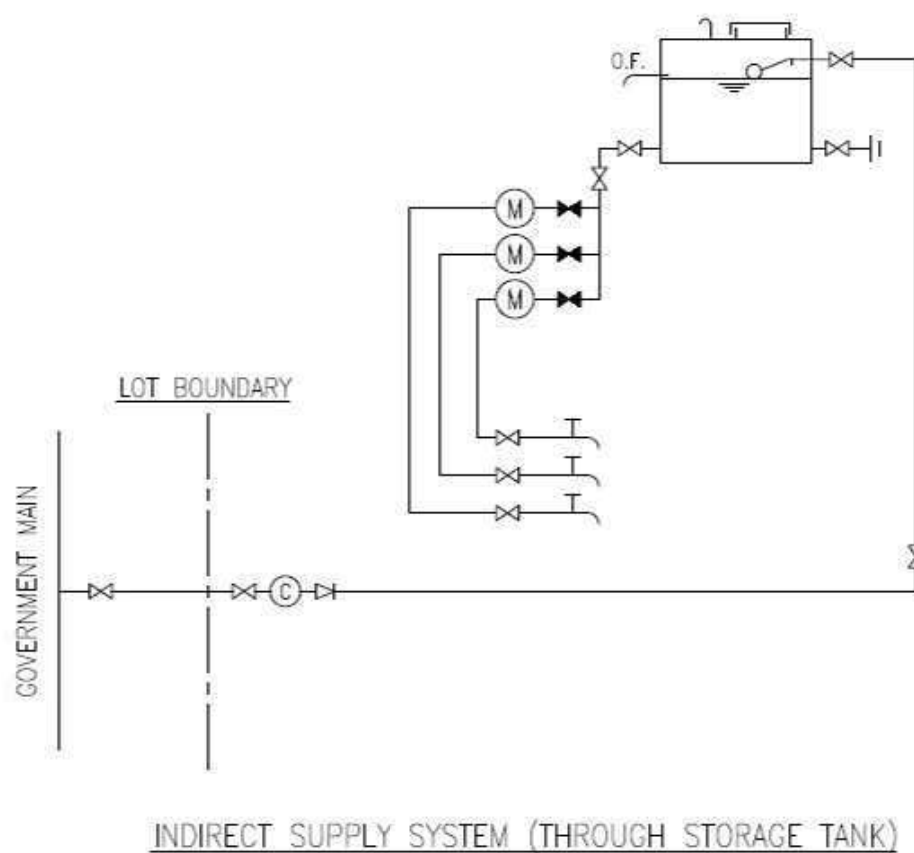
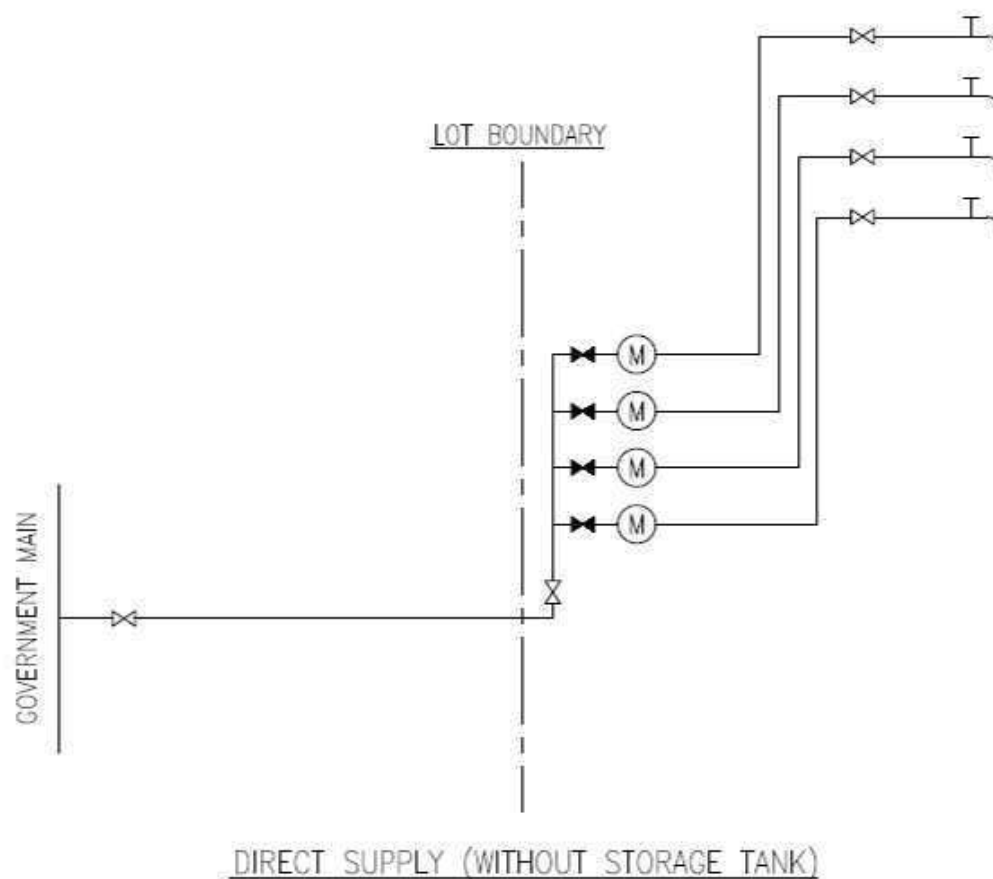


METER SIZE (mm)	50	80	100	150
<u>DIMENSION (mm)</u>				
A	310	413	483	500



METER DIMENSIONS

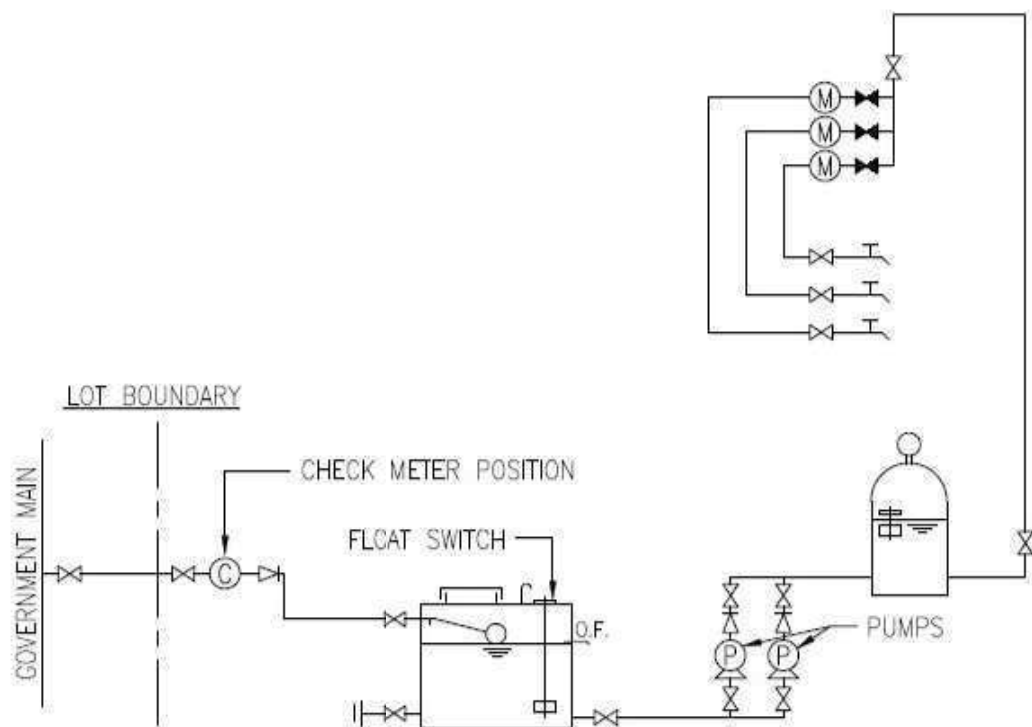
FIG. 4



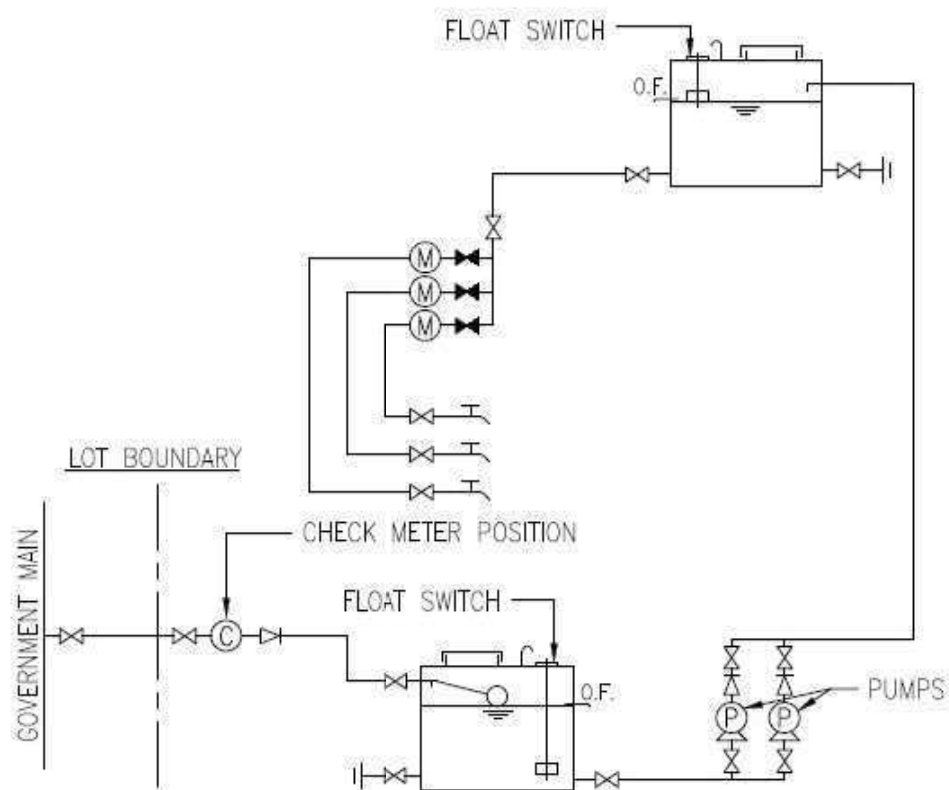
NOTES:

1. IN CASE THE METERS ARE SITED AT ROOF LEVEL AND THE SYSTEM PRESSURE IS LESS THAN 15M, FULLWAY GATE VALVES INSTEAD OF LOOSE JUMPER STOPCOCKS SHALL BE FITTED BEFORE METER POSITIONS.

FIG. 5



HYDRO PNEUMATIC PUMP SYSTEM

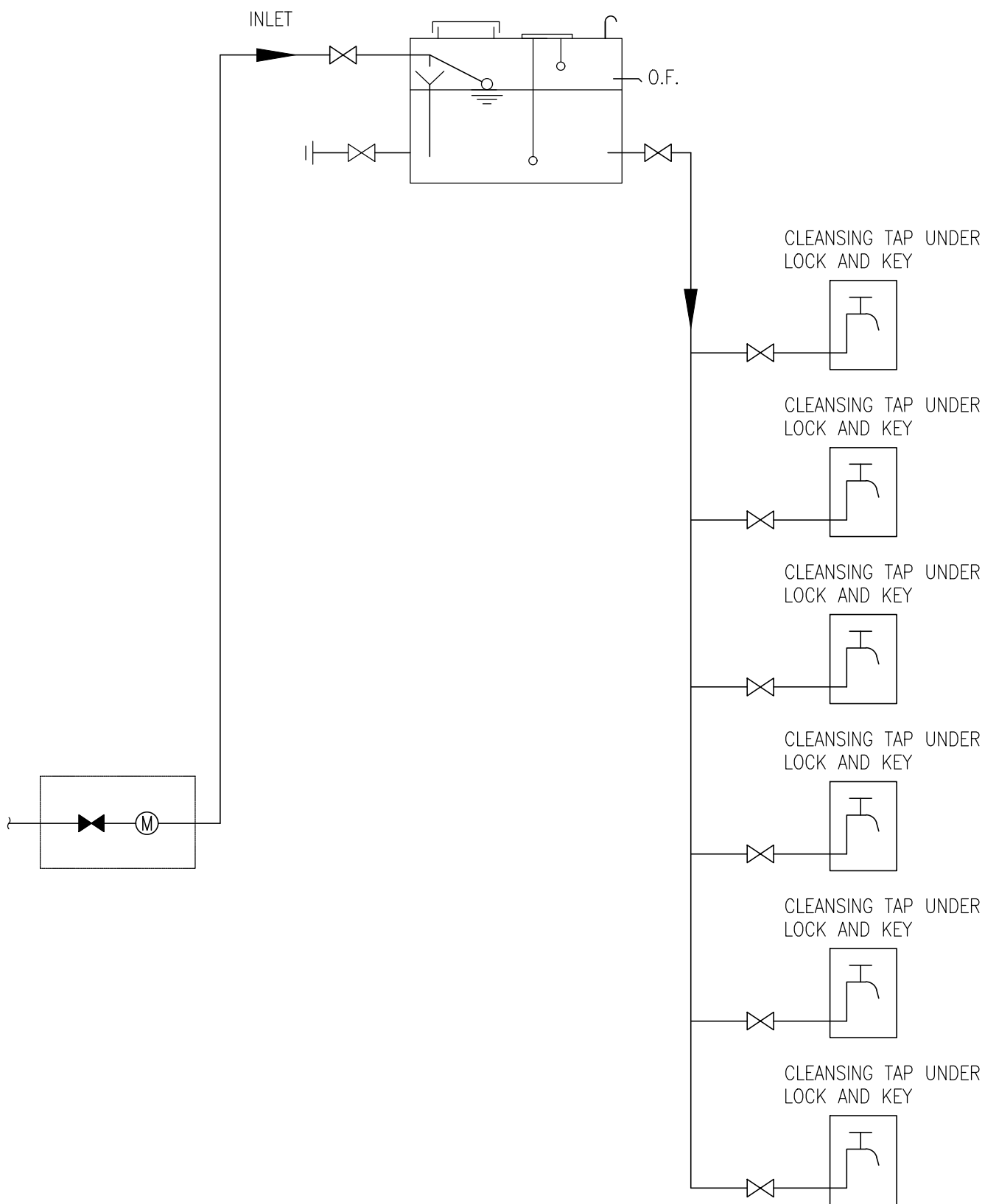


SUMP AND PUMP SYSTEM

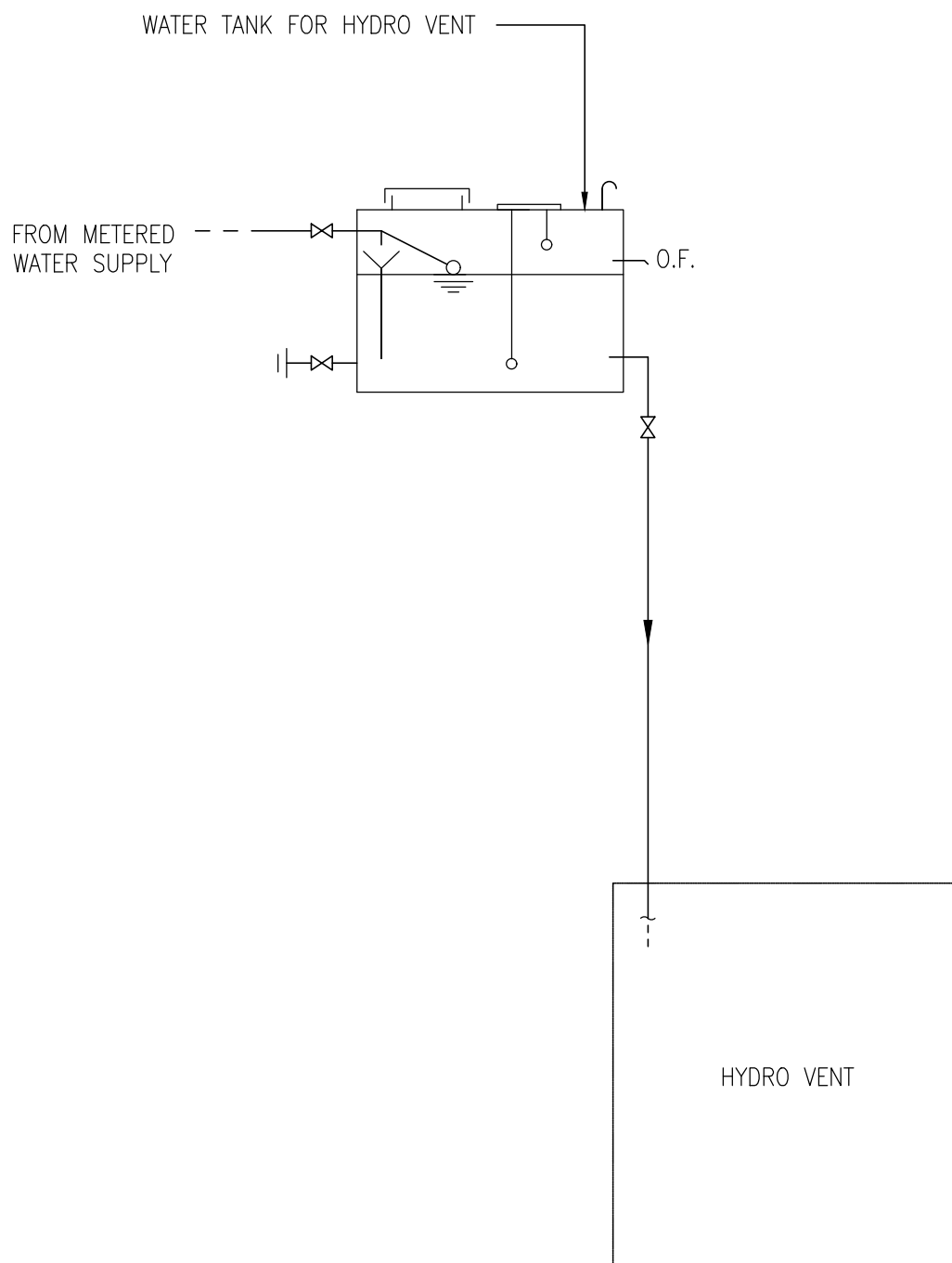
INDIRECT SUPPLY SYSTEM

NOTES:

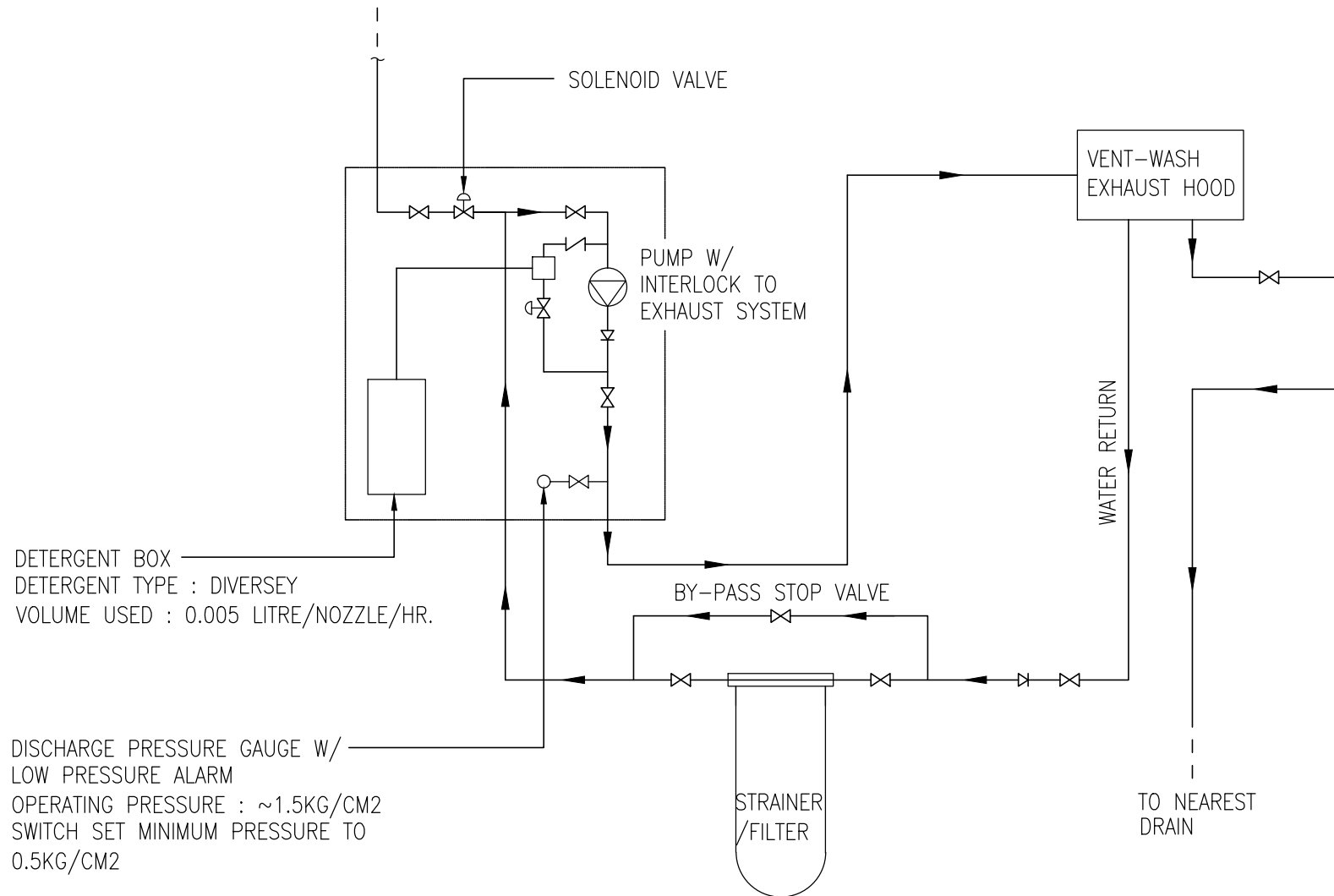
1. IN CASE THE METERS ARE SITED AT ROOF LEVEL AND THE SYSTEM PRESSURE IS LESS THAN 15M, FULLWAY GATE VALVES INSTEAD OF LOOSE JUMPER STOPCOCKS SHALL BE FITTED BEFORE METER POSITIONS.



SCHEMATIC DIAGRAM FOR CLEANSING (TYPE I)



SCHEMATIC LAYOUT OF HYDRO-VENT
RE-CIRCULATION SYSTEM
(SHEET 1 OF 2)

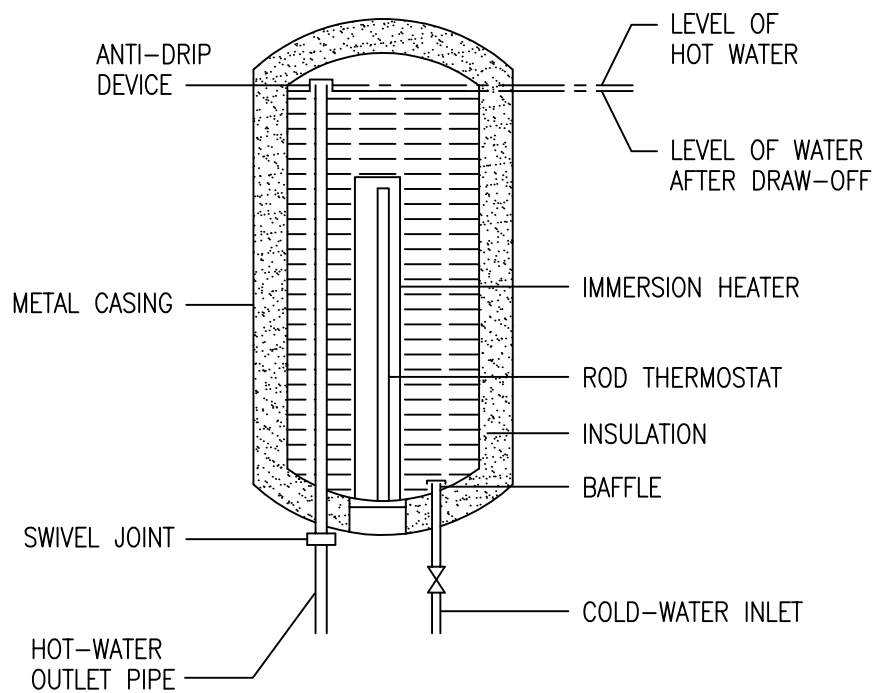


SCHEMATIC LAYOUT OF HYDRO-VENT

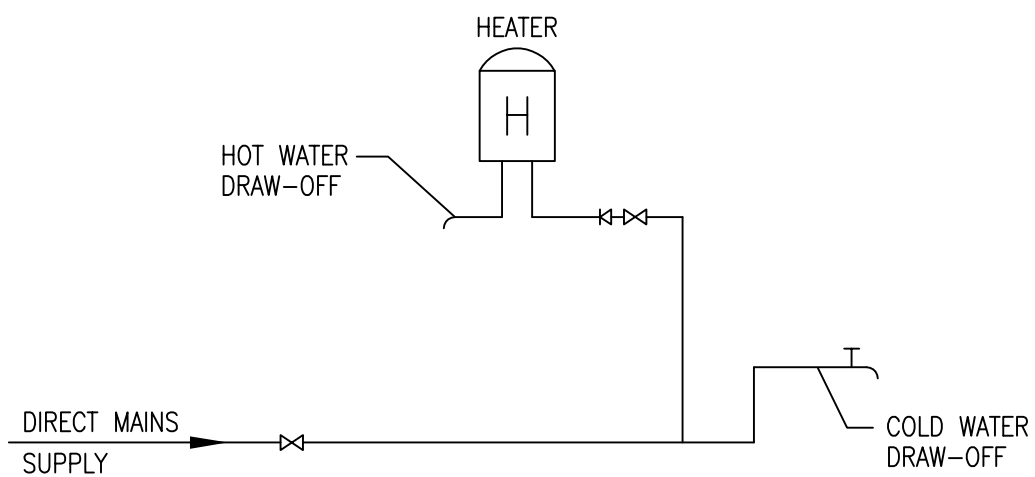
RE-CIRCULATION SYSTEM

(SHEET 2 OF 2)

REFERENCE ONLY AND THE DETAIL ARRANGEMENT
SHALL BE SUBJECTED TO INDIVIDUAL DESIGN

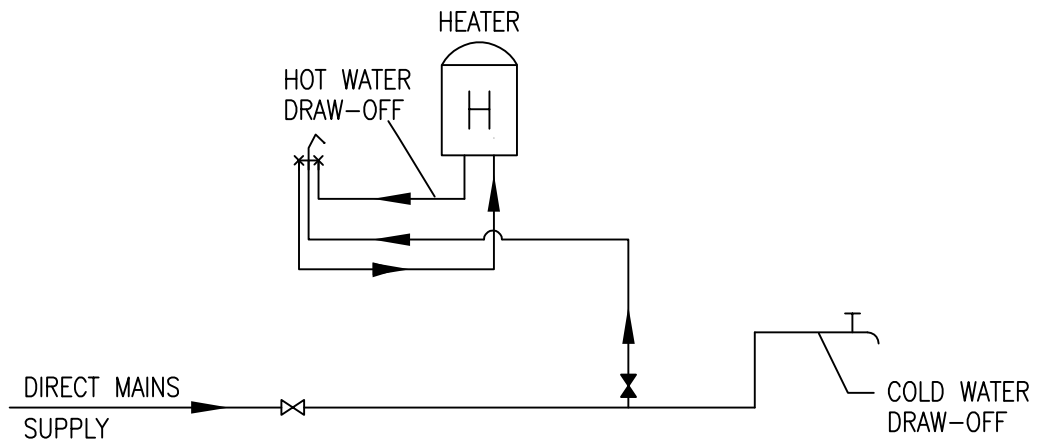


ESSENTIAL COMPONENTS OF A NON-PRESSURE TYPE HEATER

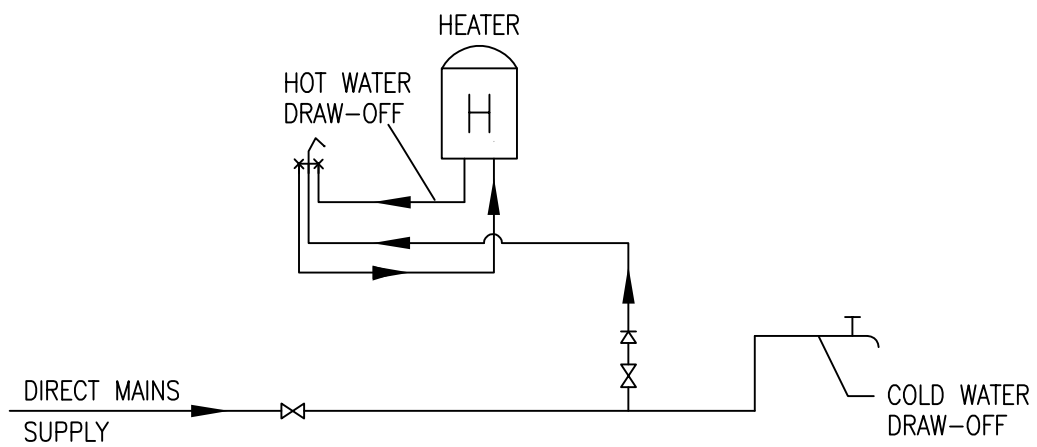


LAYOUT OF A NON-PRESSURE TYPE DISPENSER

NON-PRESSURE TYPE HEATER / DISPENSER (SHEET 1 OF 2)

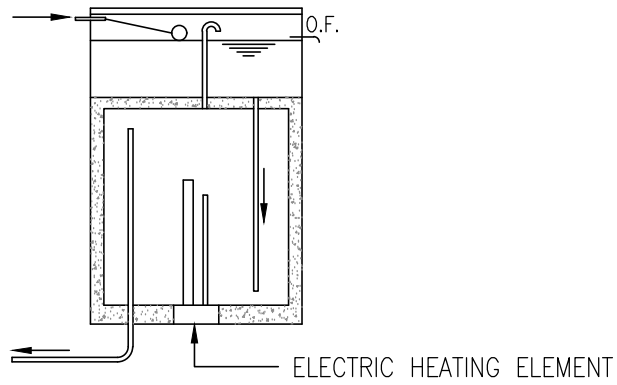


LAYOUT OF A NON-PRESSURE TYPE HEATER
WITH LOOSE JUMPER TYPE STOPCOOK

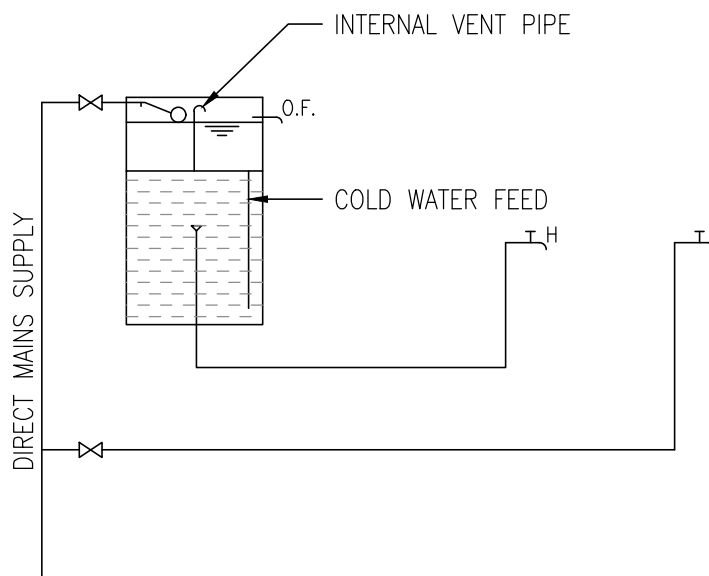


LAYOUT OF A NON-PRESSURE TYPE HEATER
WITH GATE VALVE AND NON-RETURN VALVE

NON-PRESSURE TYPE HEATER / DISPENSER (SHEET 2 OF 2)

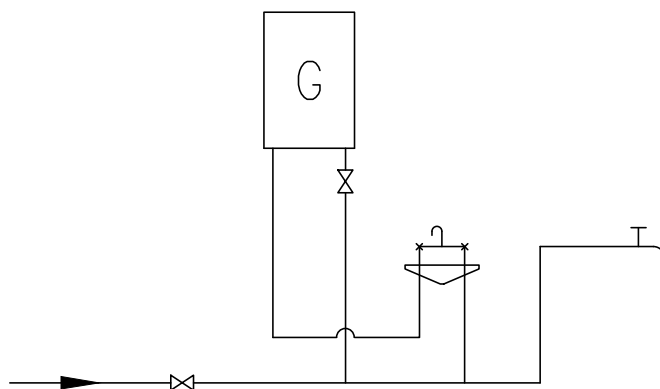


SECTION THROUGH A CISTERN TYPE WATER HEATER / DISPENSER

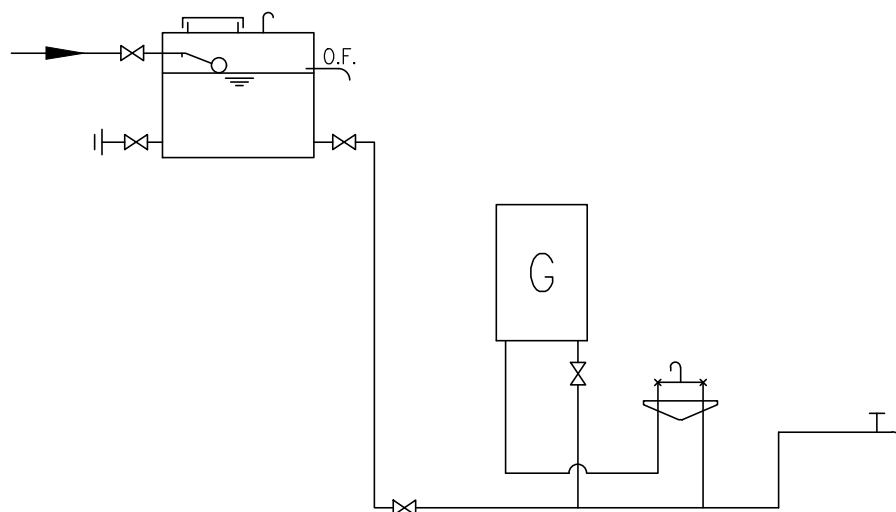


LAYOUT OF A CISTERN TYPE WATER HEATER / DISPENSER

CISTERN TYPE WATER HEATER

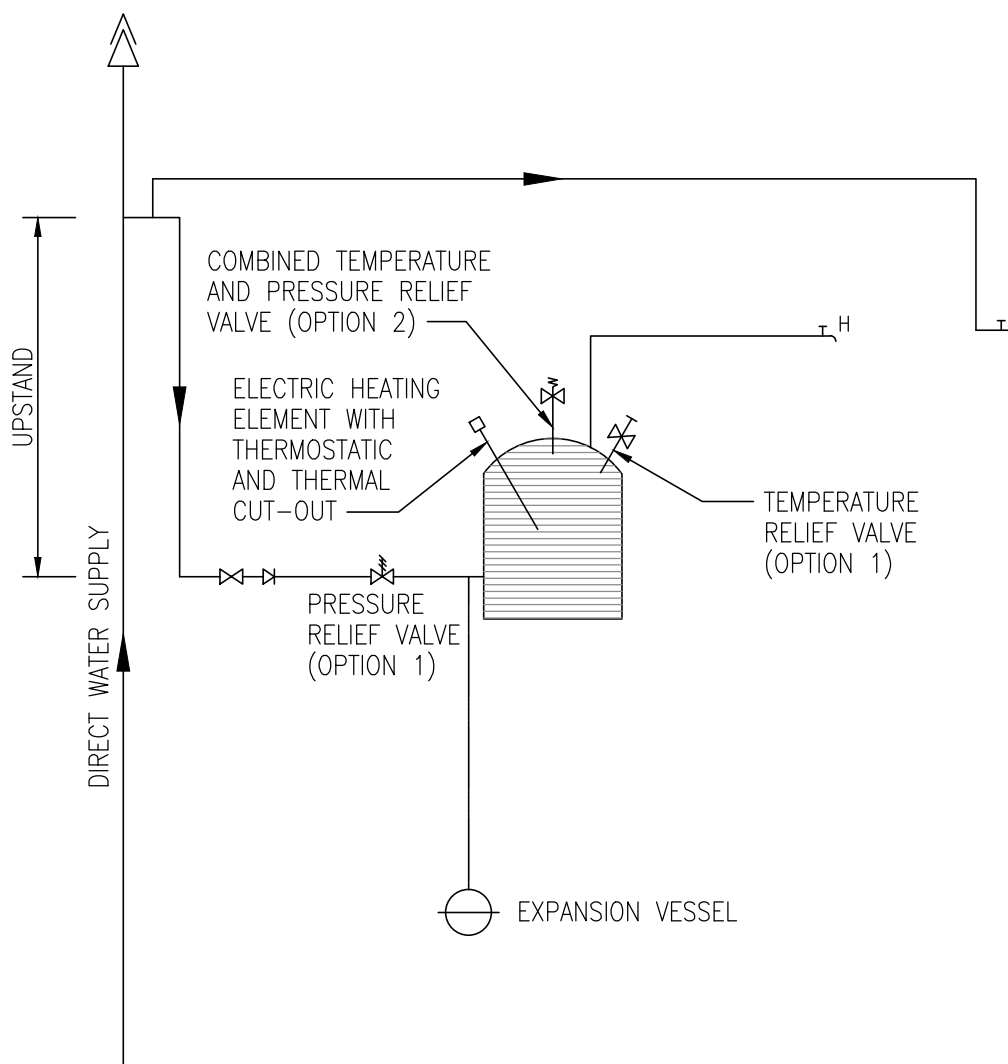


INSTANTANEOUS GAS WATER HEATER
CONNECTED DIRECTLY TO MAINS SUPPLY



INSTANTANEOUS GAS WATER HEATER
CONNECTED INDIRECTLY TO MAINS SUPPLY

INSTANTANEOUS GAS WATER HEATER



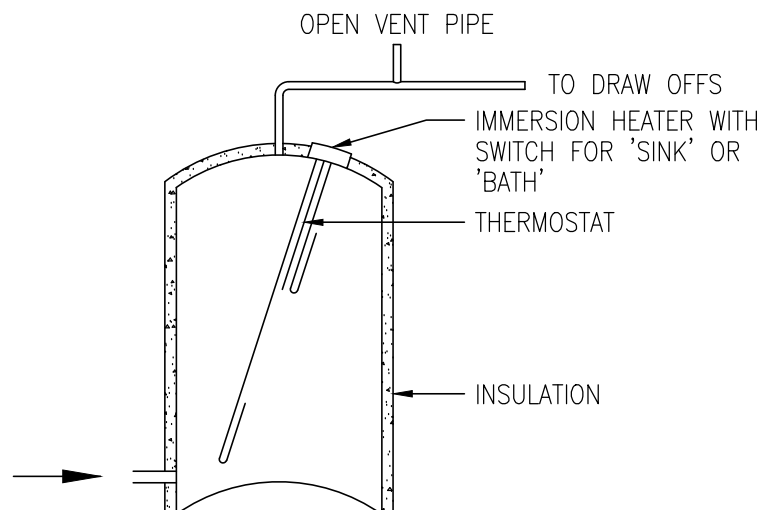
LEGEND :

— OPTIONAL

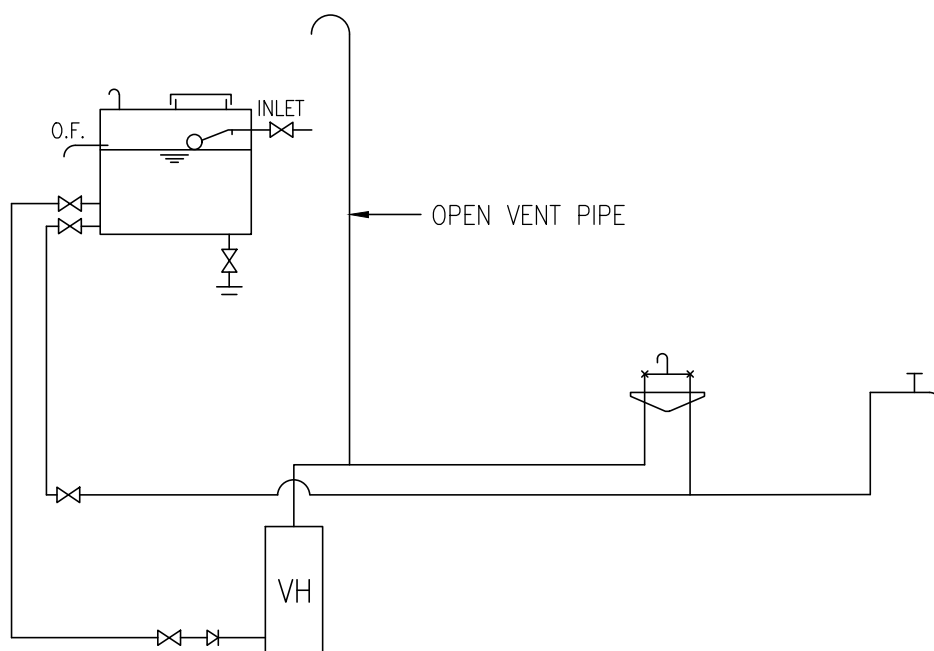
NOTES :

1. THE FACTORY TEST PRESSURE OF THE HEATER SHALL BE IN EXCESS OF 1.5 TIMES THE MAXIMUM STATIC PRESSURE AT THE MAINS WATER SUPPLY POINT.
2. A COMBINED TEMPERATURE AND PRESSURE RELIEF VALVE (OPTION 2) MAY BE USED IN LIEU OF A TEMPERATURE RELIEF VALVE AND A PRESSURE RELIEF VALVE (OPTION 1).
3. THE SAFETY DEVICES ARE UNDER THE CONTROL OF THE ELECTRICAL PRODUCTS (SAFETY) REGULATION ADMINISTERED BY THE ELECTRICAL AND MECHANICAL SERVICES DEPARTMENT.
4. EXPANSION VESSEL IS ONLY REQUIRED WHEN A NON-RETURN VALVE OR A PRESSURE REDUCING VALVE OF THE NON-BACKFLOW TYPE IS FITTED IN THE COLD WATER INLET.

LAYOUT OF UNVENTED ELECTRIC THERMAL STORAGE TYPE WATER HEATER



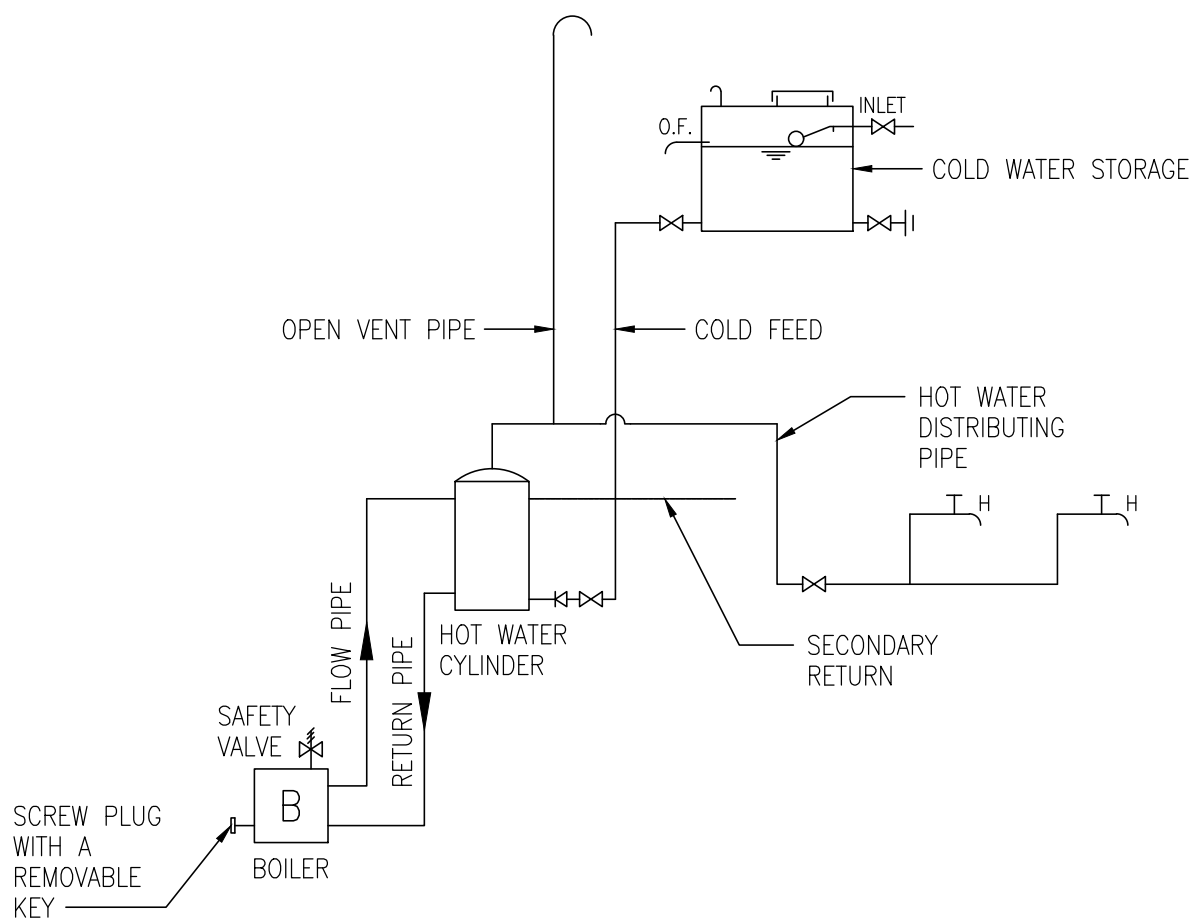
ESSENTIAL COMPONENTS OF A PRESSURE TYPE
THERMAL STORAGE WATER HEATER



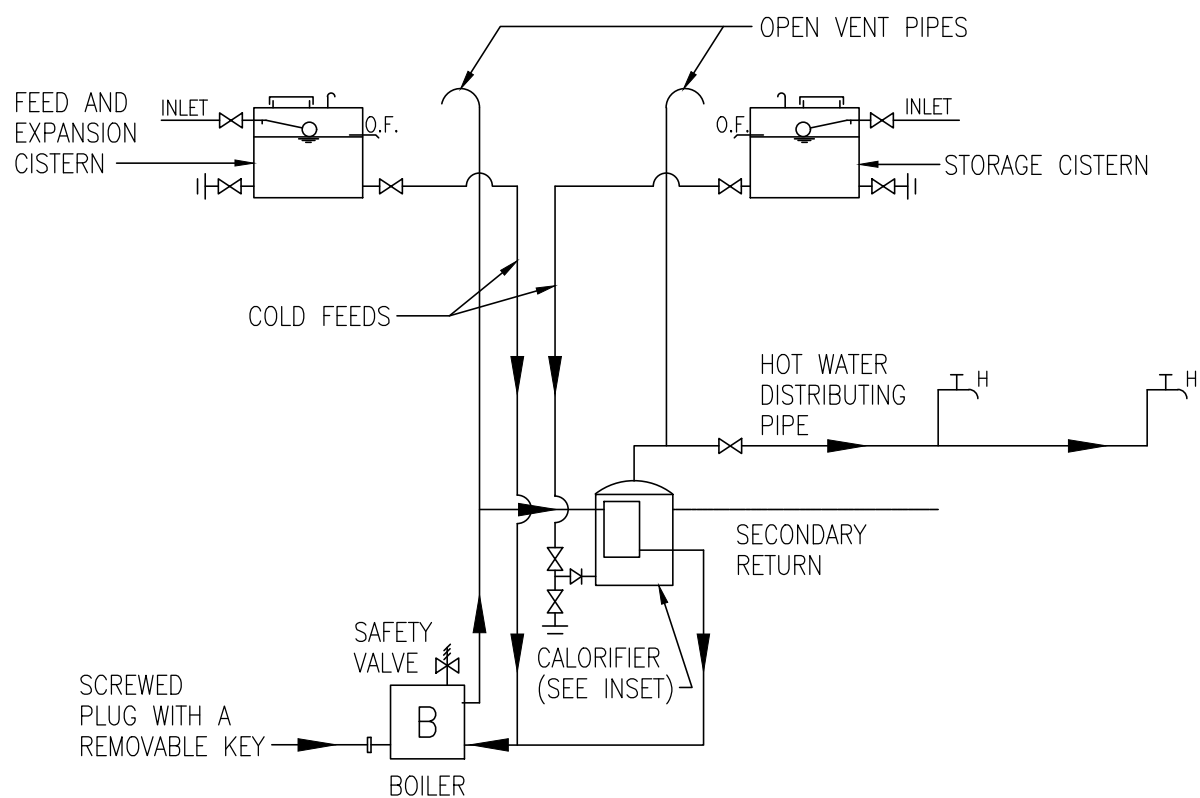
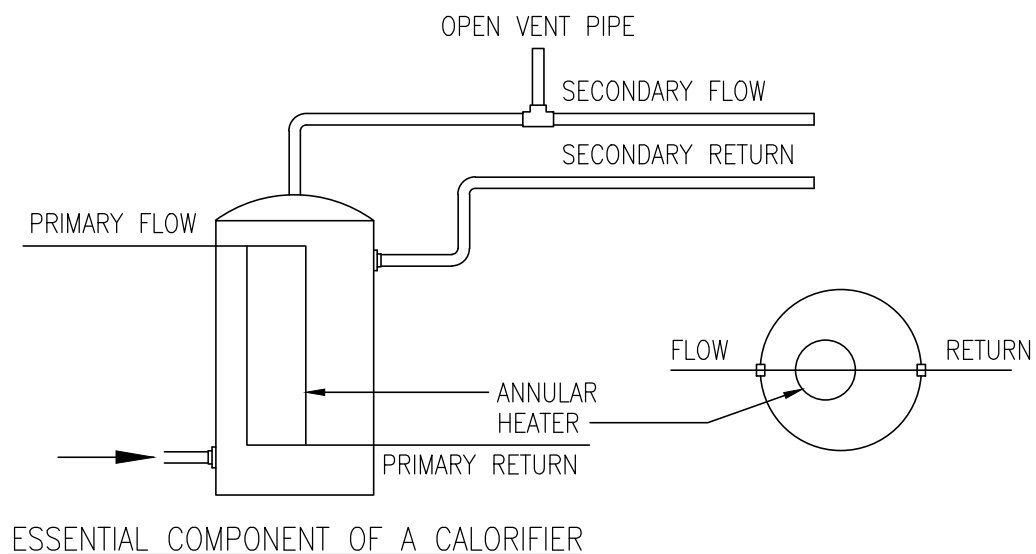
LAYOUT OF A PRESSURE TYPE THERMAL STORAGE WATER HEATER

NOTE: THIS TYPE OF HEATER SHALL BE SUPPLIED FROM A STORAGE CISTERN, EXCEPT IT IS INSTALLED IN FLATS SUPPLIED THROUGH THE INDIRECT OR SUMP AND PUMP SYSTEM.

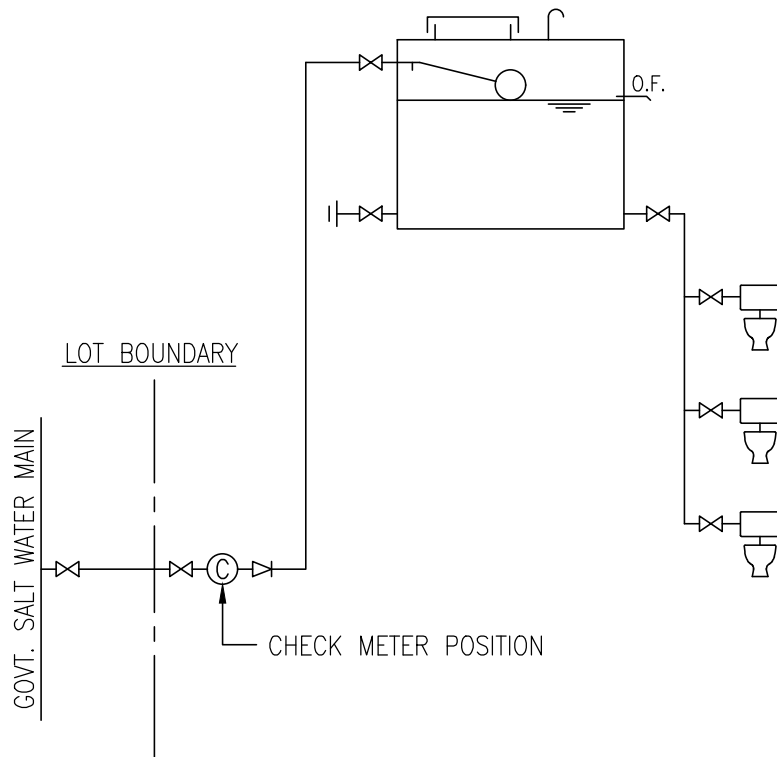
PRESSURE TYPE THERMAL STORAGE WATER HEATER



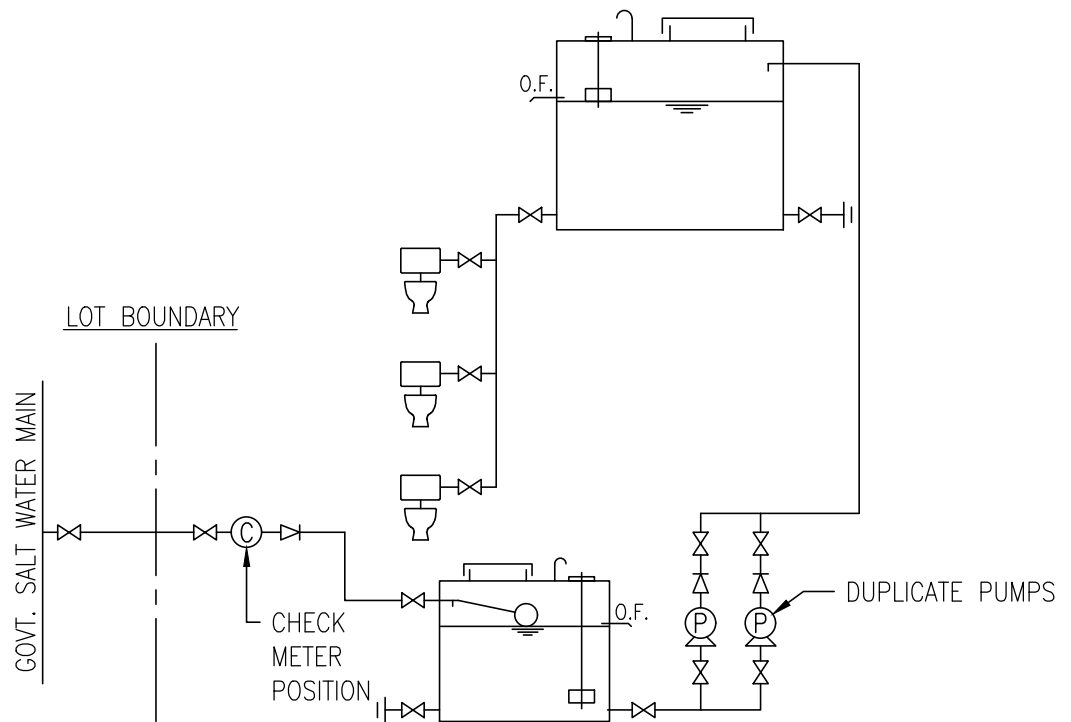
DIRECT CENTRALISED HOT WATER SYSTEM



INDIRECT CENTRALISED HOT WATER SYSTEM

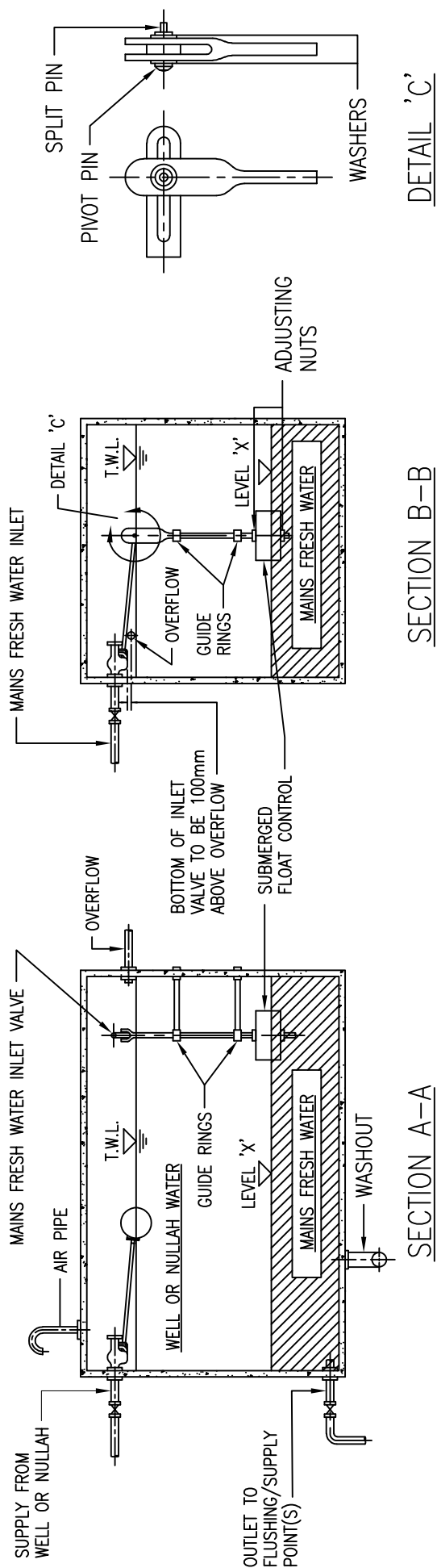


INDIRECT SALT WATER FLUSHING SUPPLY SYSTEM
(WITH DIRECT SUPPLY TO ROOF STORAGE TANK)



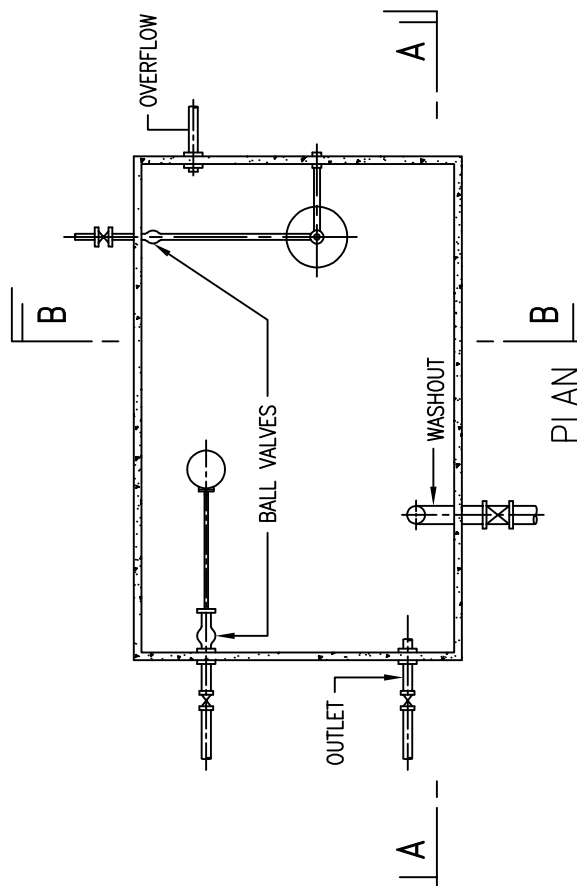
INDIRECT SALT WATER FLUSHING SUPPLY SYSTEM
(WITH SUMP AND PUMP SYSTEM)

SALT WATER FLUSHING SUPPLY SYSTEM



NOTES :

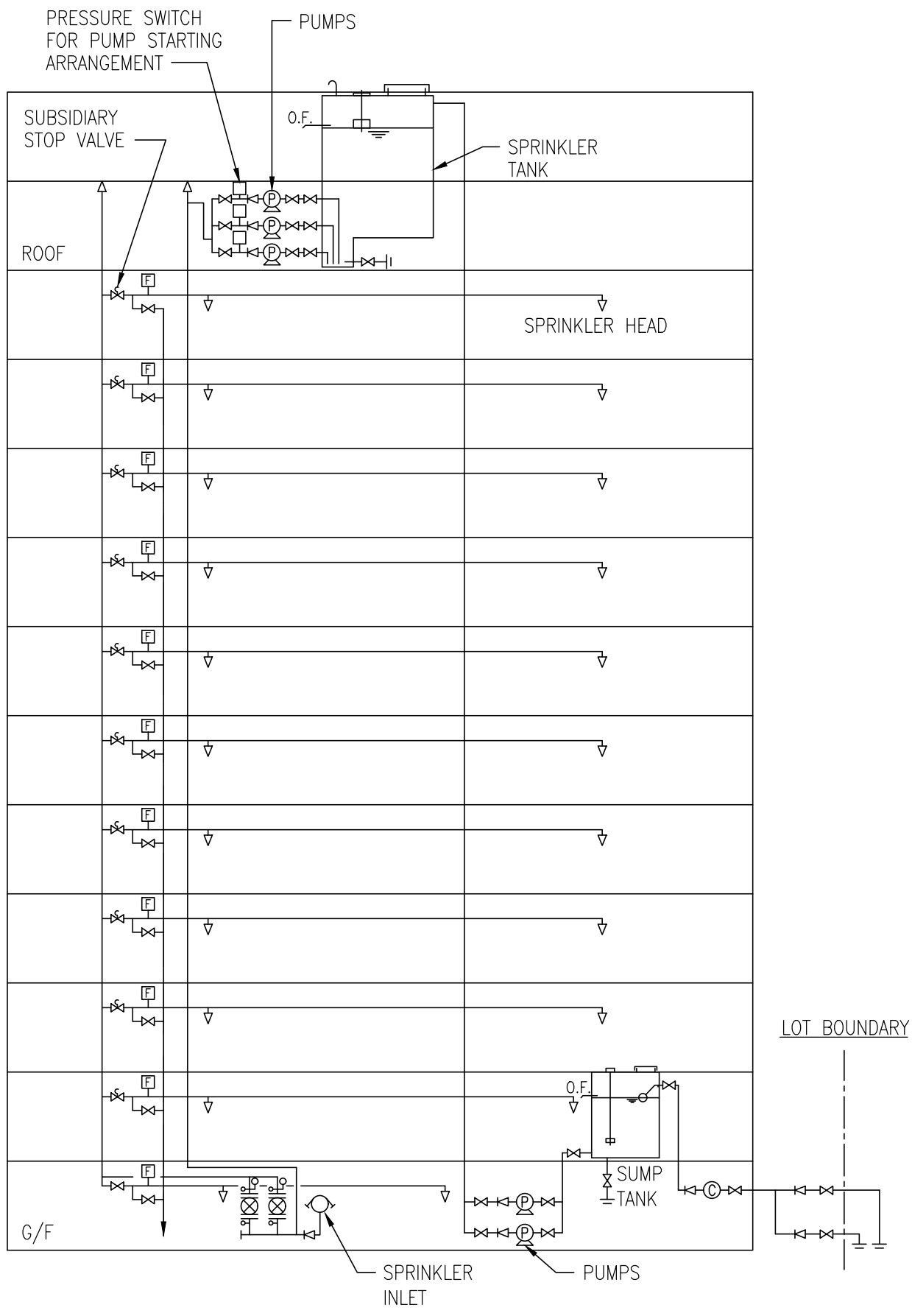
1. VOLUME BELOW LEVEL 'X' FOR MAINS FRESH WATER STORAGE SHALL BE APPROVED BY WATER AUTHORITY.
2. OVERFLOW SHALL BE TWICE THE DIAMETER OF LARGEST INLET OR OF 40mm DIAMETER WHICHEVER BE THE GREATER.
3. MATERIALS USED SHALL BE CAPABLE OF WITHSTANDING THE CORROSIVE ACTION OF SALT WATER.
4. THIS DRAWING IS EXTRACTED FROM W1543/5B.



FLUSHING SUPPLY STORAGE CISTERN – MIXED SUPPLY

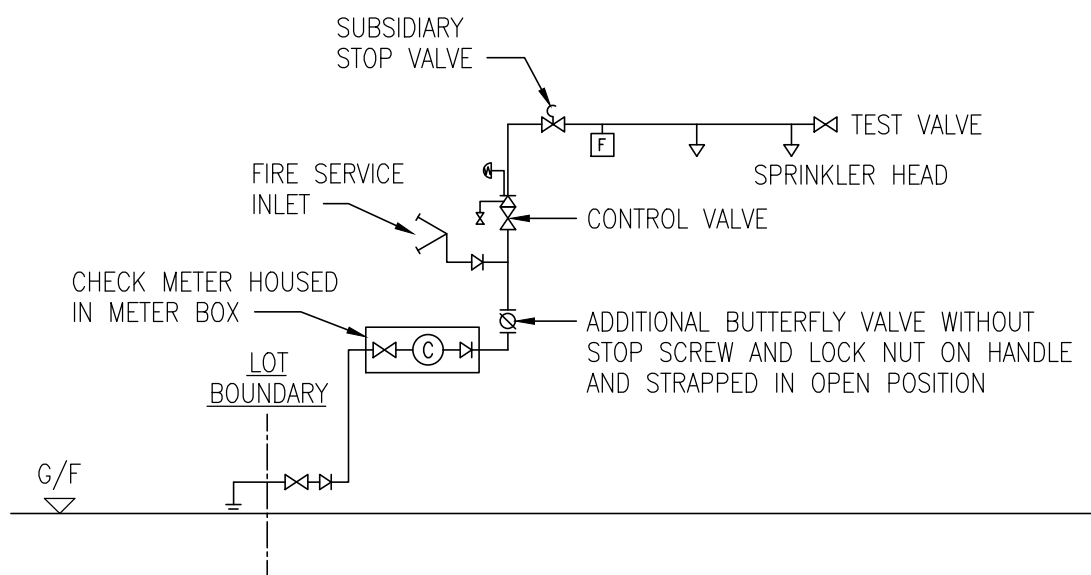
(NOT TO SCALE)

FIG. 15

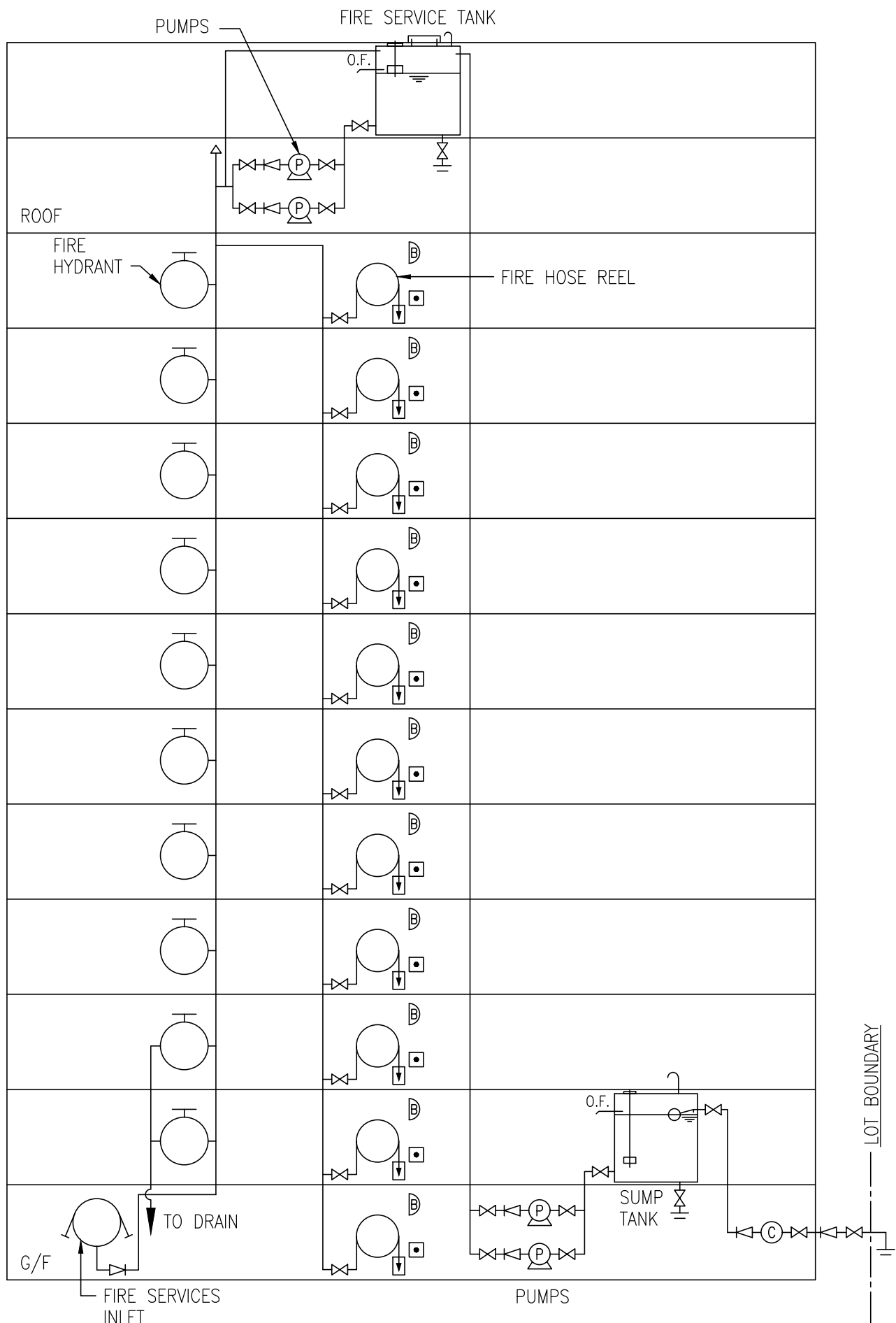


LAYOUT DRAWING FOR SPRINKLER SYSTEM

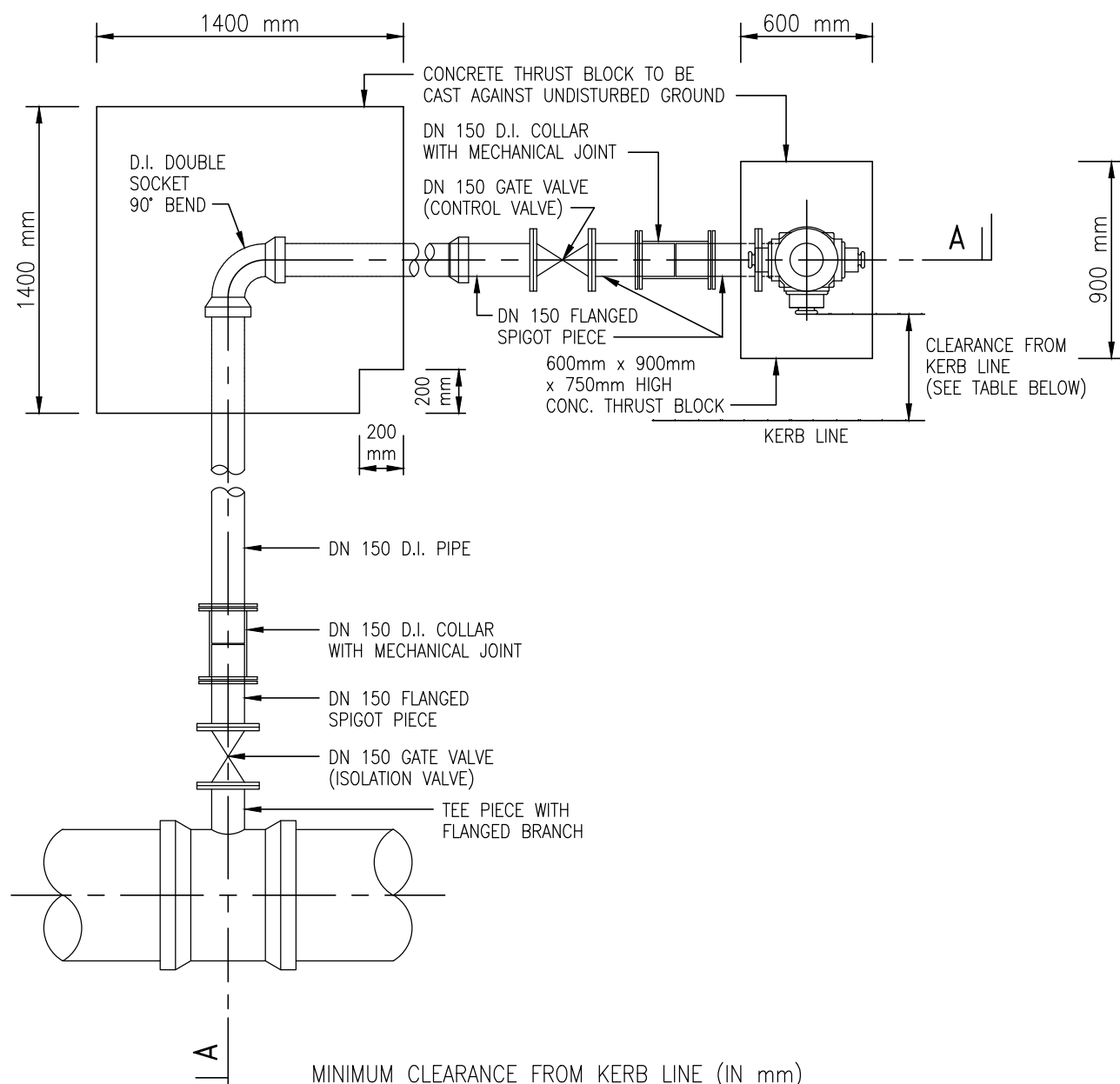
FIG. 16



LAYOUT DRAWING FOR IMPROVISED SPRINKLER SYSTEM



LAYOUT DRAWING FOR FIRE HYDRANT/HOSE REEL SYSTEM

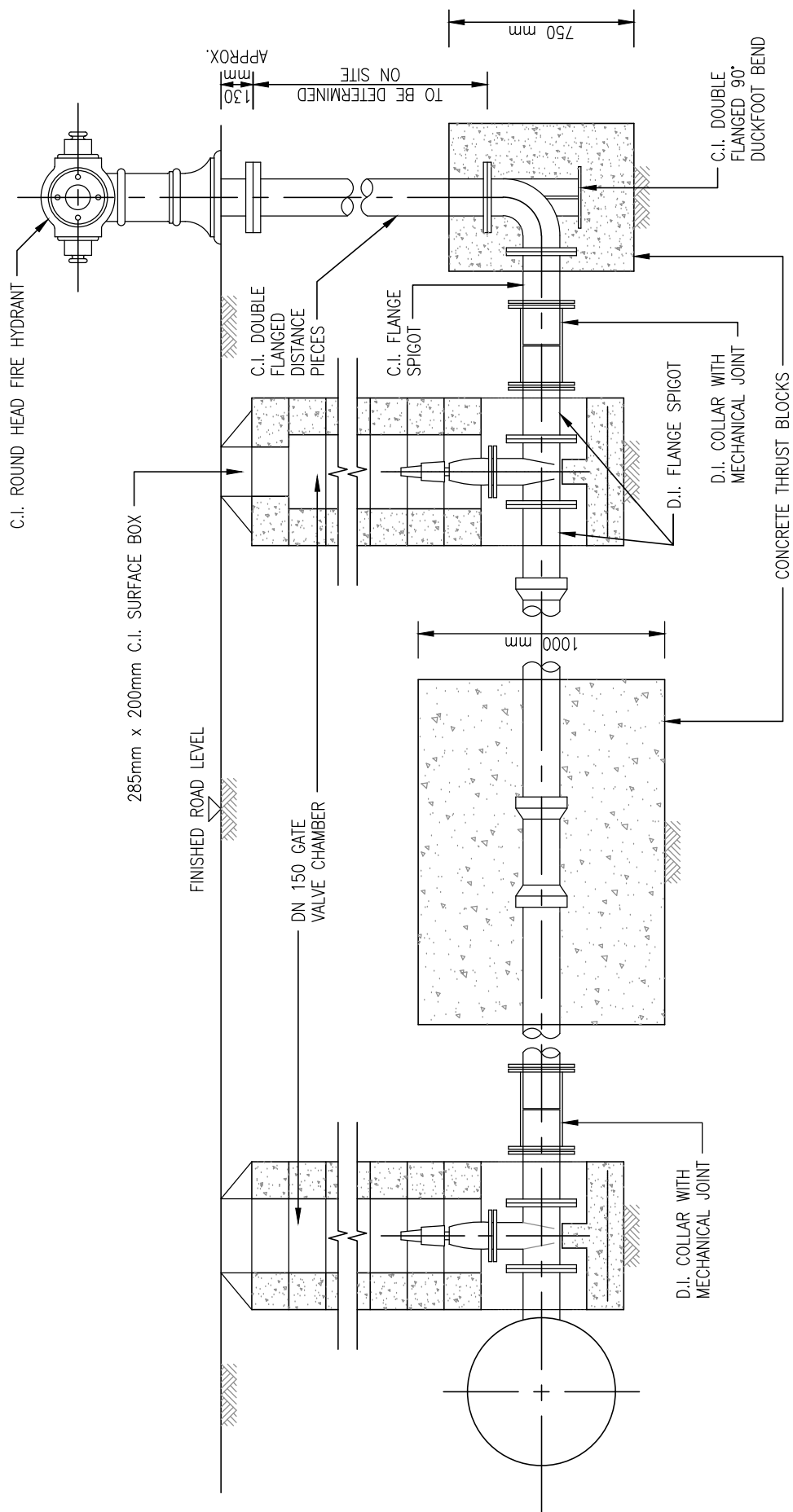


MINIMUM CLEARANCE FROM KERB LINE (IN mm)

CARRIAGEWAY DESIGN SPEED (IN km/h)	WHERE CARRIAGEWAY CROSS FALL IS	
	AWAY FROM HYDRANT OR TOWARDS HYDRANT BUT NOT STEEPER THAN 2.5%	TOWARDS HYDRANT AND STEEPER THAN 2.5%
≤50	500	600
>50 AND <80	600	600
≥80	1000	1000

NOTES : FOR ROADS (SUCH AS DISTRICT AND LOCAL DISTRIBUTOR ROADS, RURAL ROADS B AND FEEDER ROADS) WITH FOOTWAY ONLY AND WITHOUT VERGE, HYDRANTS CAN BE ERECTED CLOSER TO THE EDGE OF THE CARRIAGEWAY BUT NOT LESS THAN 200mm FOR ANY PART OF THE INSTALLATIONS. FOR ROADS WITH A SPEED LIMIT OF 70km/h OR ABOVE. STRICT COMPLIANCE WITH THE REQUIREMENTS OF THE ABOVE TABLE IS REQUIRED.

**LAYOUT PLAN OF THE TYPICAL INSTALLATION
OF DN 150 STREET FIRE HYDRANT**

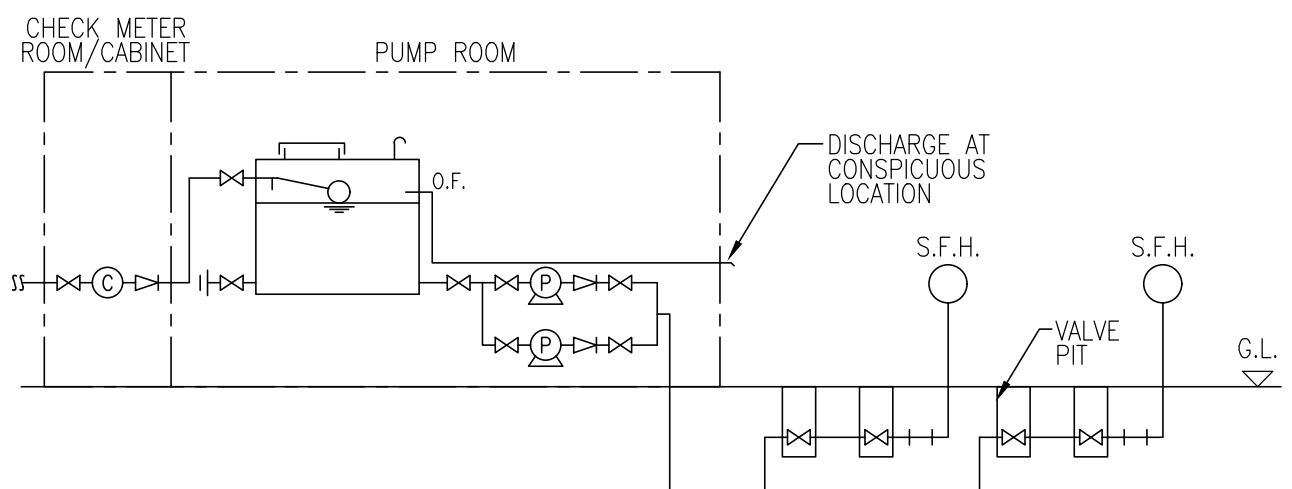


SECTION A - A

NOTES :

1. THE CAP OF THE CONTROL VALVE SPINDLE SHOULD BE AT 250mm APPROX. BELOW THE VALVE COVER AND IN NO CASE SHOULD THE DISTANCE BE MORE THAN 500mm.

SECTION OF THE TYPICAL INSTALLATION OF DN 150 STREET FIRE HYDRANT

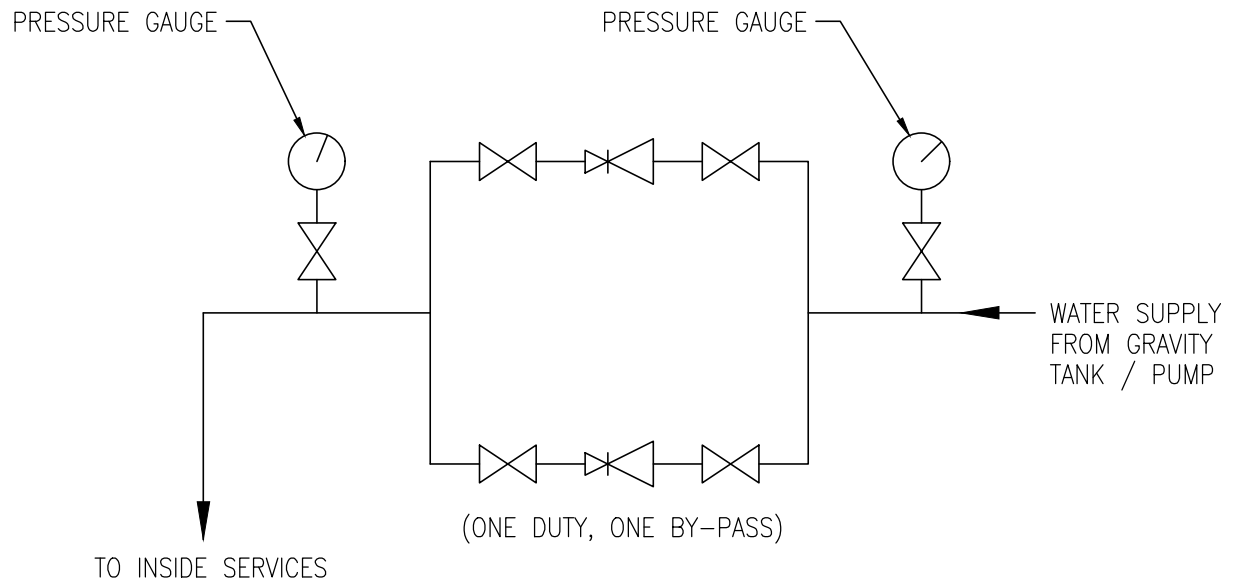


ABBREVIATION :

S.F.H. STREET FIRE HYDRANT

LAYOUT DRAWING FOR STREET FIRE HYDRANT SYSTEM

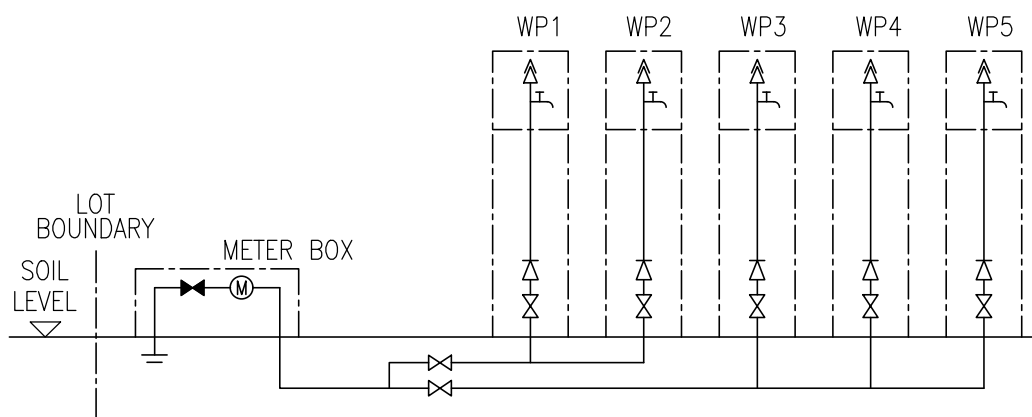
FIG. 21



NOTES :

1. A BYPASS ARRANGEMENT WITH THE PROVISION OF A SECOND PRESSURE REDUCING VALVE TO ENABLE ISOLATION OF ANY DEFECTIVE PRESSURE REDUCING VALVE FOR REPAIR AND REPLACEMENT IS USED.
2. THE PRESSURE REDUCING VALVES FOR USE WITH FRESH WATER SHOULD BE MANUFACTURED FROM MATERIALS SUITABLE FOR USE IN CONTACT WITH POTABLE WATER.
3. THE PRESSURE REDUCING VALVES FOR USE WITH SALT WATER SHOULD BE MANUFACTURED FROM MATERIALS CAPABLE OF WITHSTANDING THE CORROSIVE EFFECT OF SALT WATER.

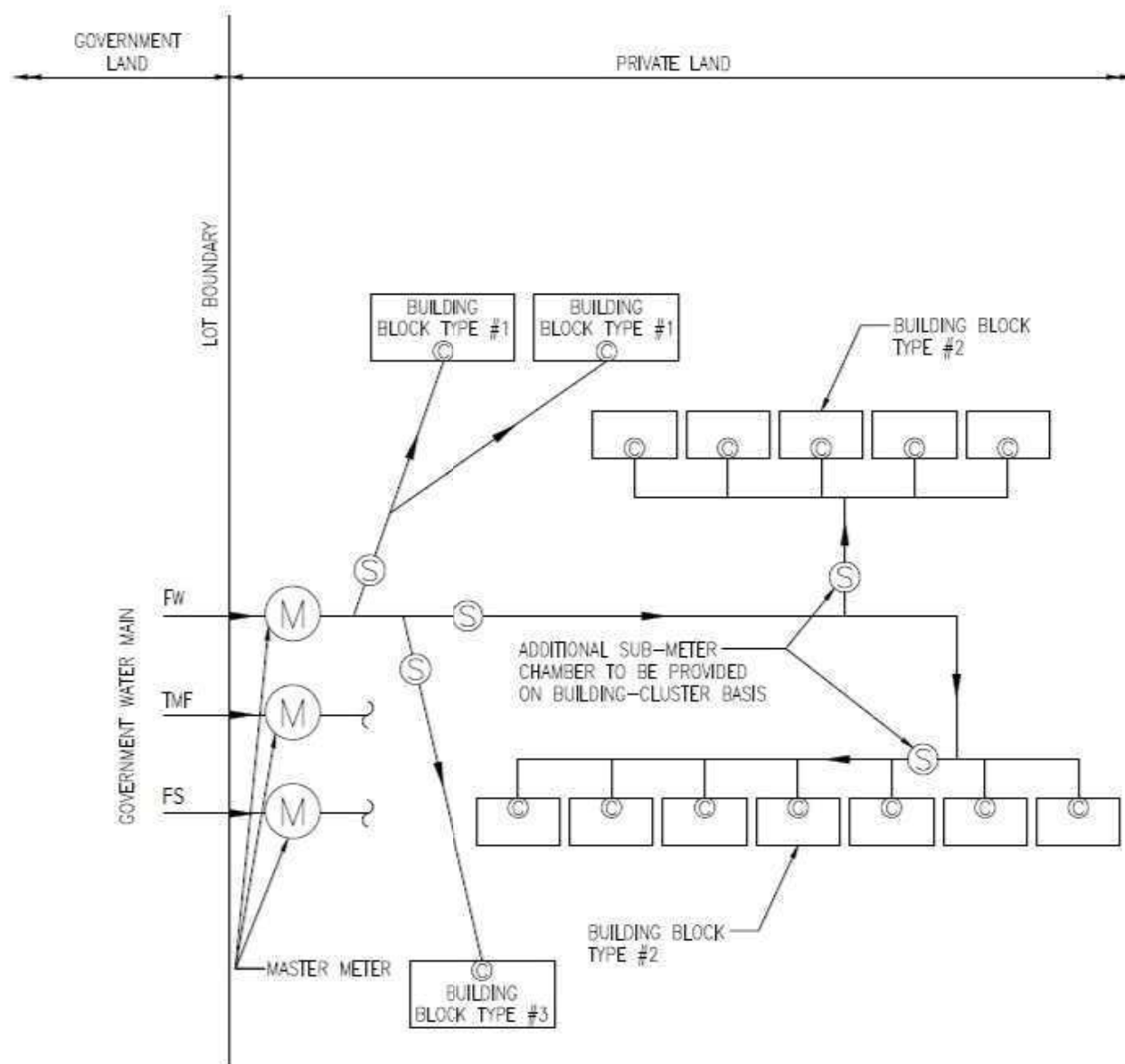
SCHEMATIC LAYOUT OF PRESSURE REDUCING VALVES



ABBREVIATION :

WP WATER POINT

WATERING FLOWER BEDS PLUMBING SYSTEM



TYPICAL CONFIGURATION OF MASTER METER AND SUB-METER CHAMBERS IN MULTIPLE-BLOCK DEVELOPMENT

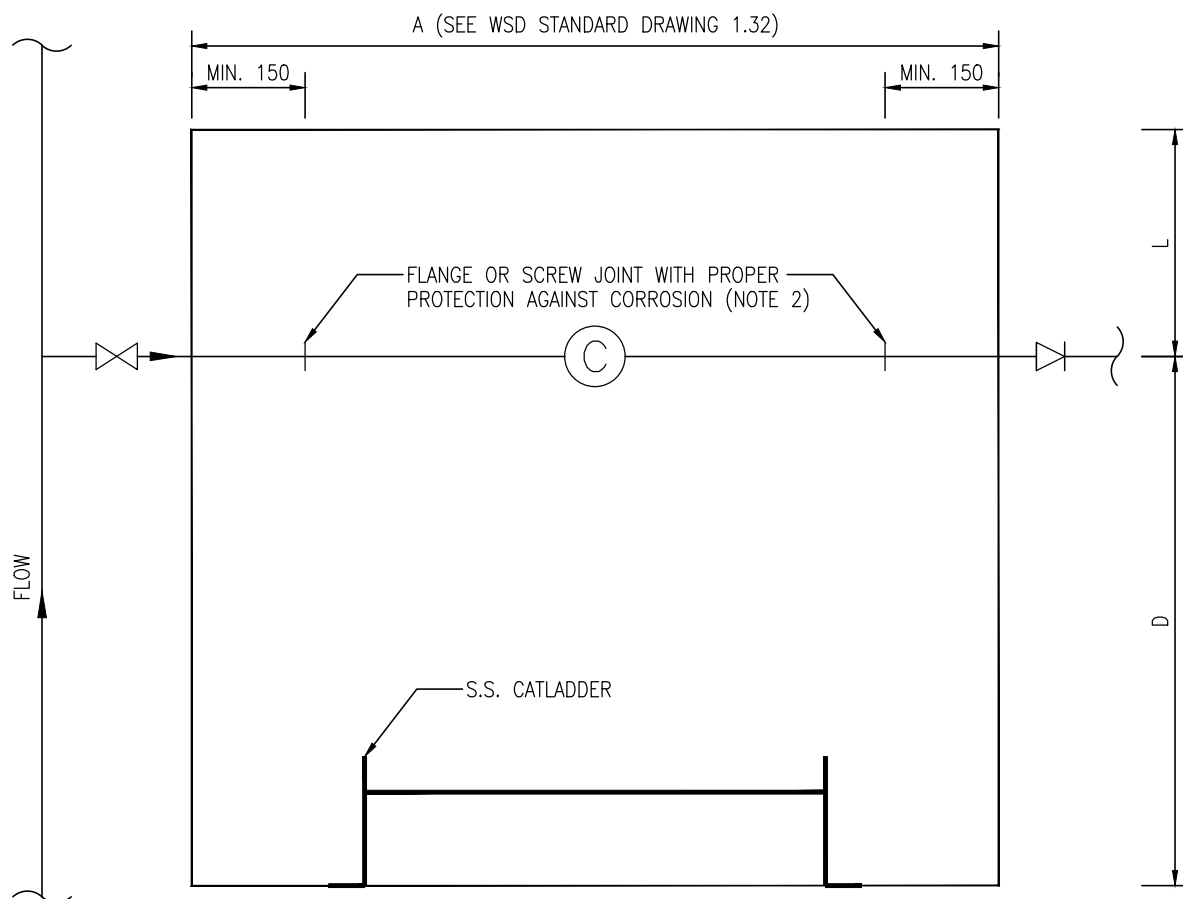
NOTES :

1. SUB-METER CHAMBERS FOR FIRE SERVICE NOT SHOWN FOR CLARITY.
2. SUB-METER CHAMBERS NOT REQUIRED FOR TMF

LEGEND :

- (M) MASTER METER
- (S) CHECK METER POSITION IN SUB-METER CHAMBER / BOX / CABINET
- (C) CHECK METER POSITION IN BUILDING BLOCK

FIG. 24

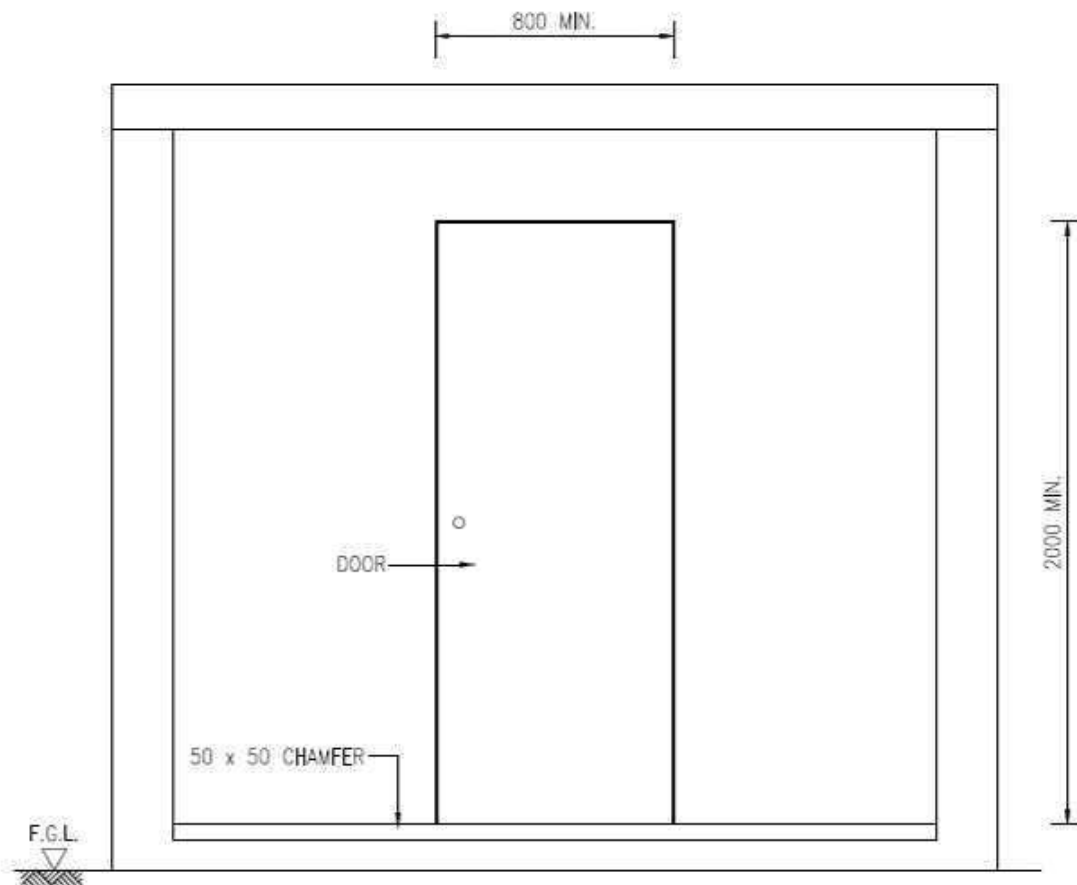


PLAN OF TYPICAL SUB-METER CHAMBER

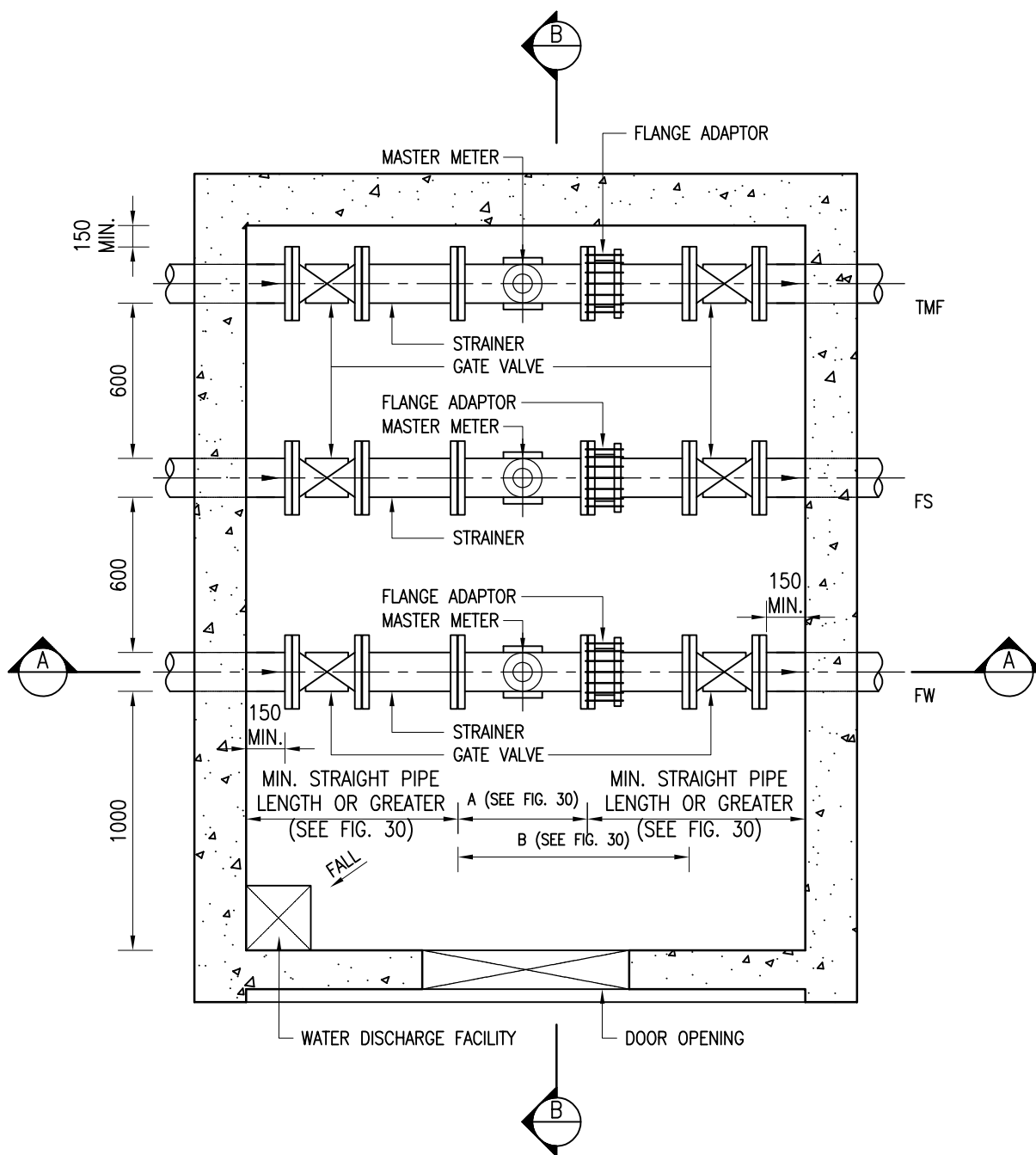
MAX PIPE DIAMETER (mm)	MIN. WORKING CLEARANCE L (mm)	MIN. DISTANCE BETWEEN CENTRELINE OF PIPE AND INTERNAL WALL FACE D (mm)
50	310	700
80	380	
≥100	400	

NOTES :

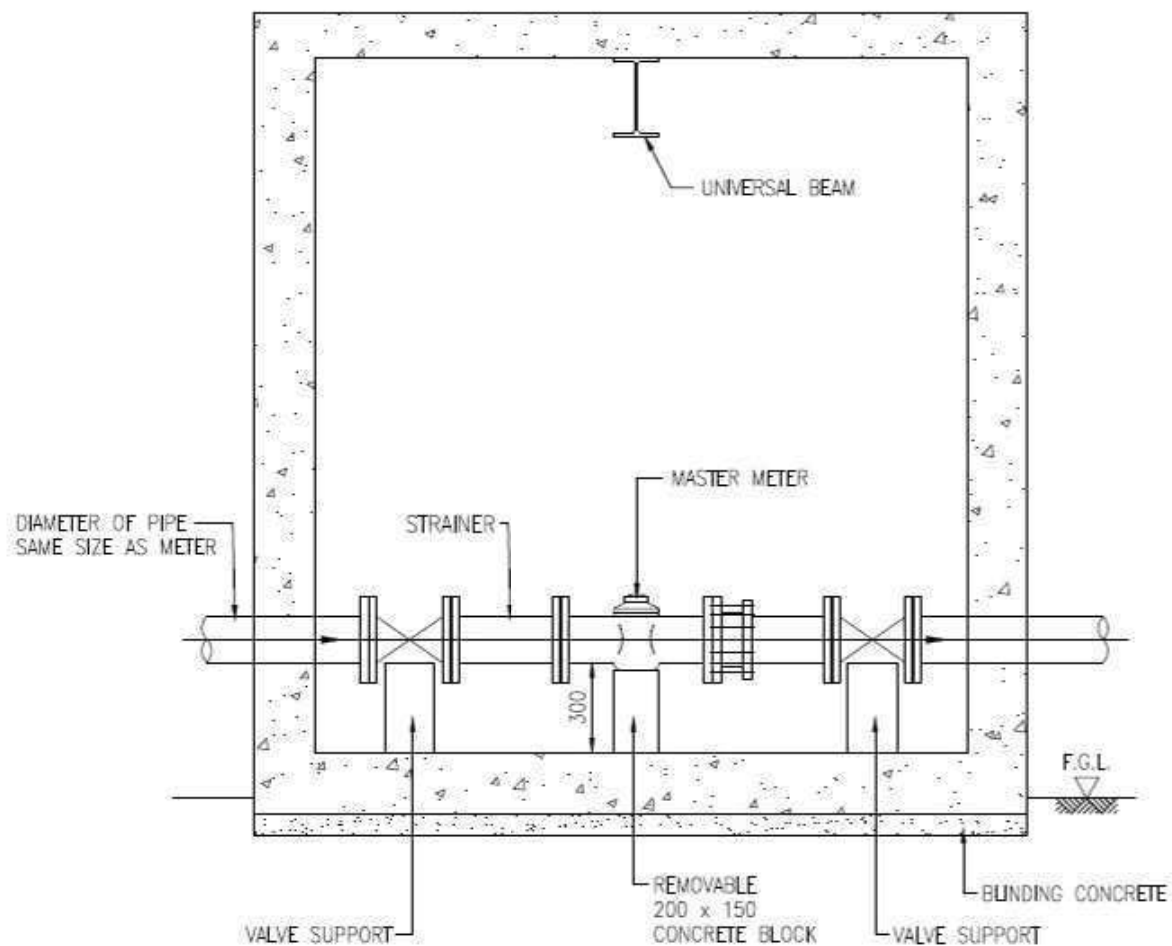
1. DETAILS OF THE CHAMBER SIMILAR TO WASTE DETECTION CHAMBER AND SHALL BE REFERRED TO WSD STANDARD DRAWING 1.32.
2. PROTECTION TO FLANGE JOINT / COUPLING / ADAPTOR SHALL BE PROVIDED USING PETROLEUM ANTICORROSION TAPES WITH PRIMER AND MASTIC FILLER.



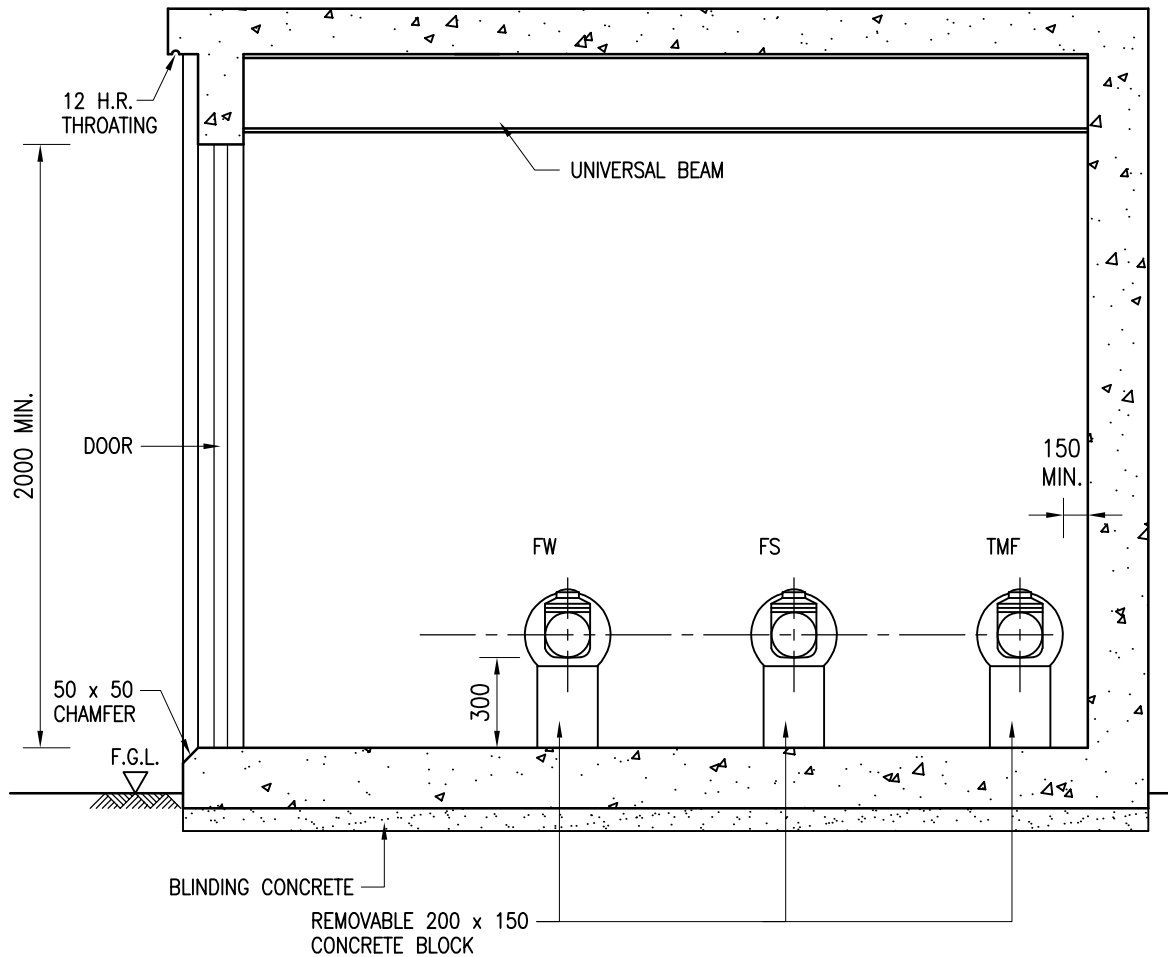
FRONT ELEVATION OF MASTER METER ROOM



SECTIONAL PLAN OF MASTER METER ROOM



SECTION A - A OF MASTER METER ROOM



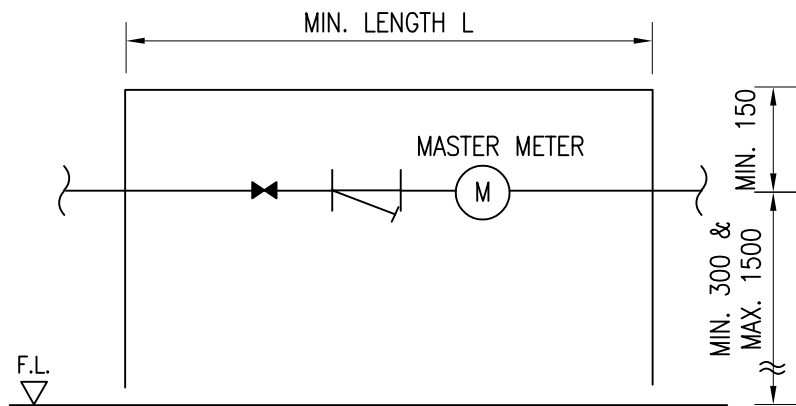
SECTION B – B OF MASTER METER ROOM

MASTER METER OF VARIOUS SIZES

METER TYPE	SIZE (mm)	DIMENSIONS (mm)		STRAIGHT PIPE LENGTH REQUIREMENT	
		A	B (Minimum)	UPSTREAM	DOWNSTREAM
SINGLE JET	50	300	450	5D	2D
	80	350	720		
	100	350	730		
ULTRASONIC	50	200	450	3D	2D
TURBINE / WOLTMANN	50	310	450	5D	2D
	80	413	720		
	100	483	730		
	150	500	900		
	200	520	980		
	250	450	900		
	300	500	1000		
ELECTROMAGNETIC	50	200	450	3D	2D
	80	200	720		
	100	250	730		
	150	300	1000		
	200	350	1000		
	250	450	1000		
	300	500	1000		

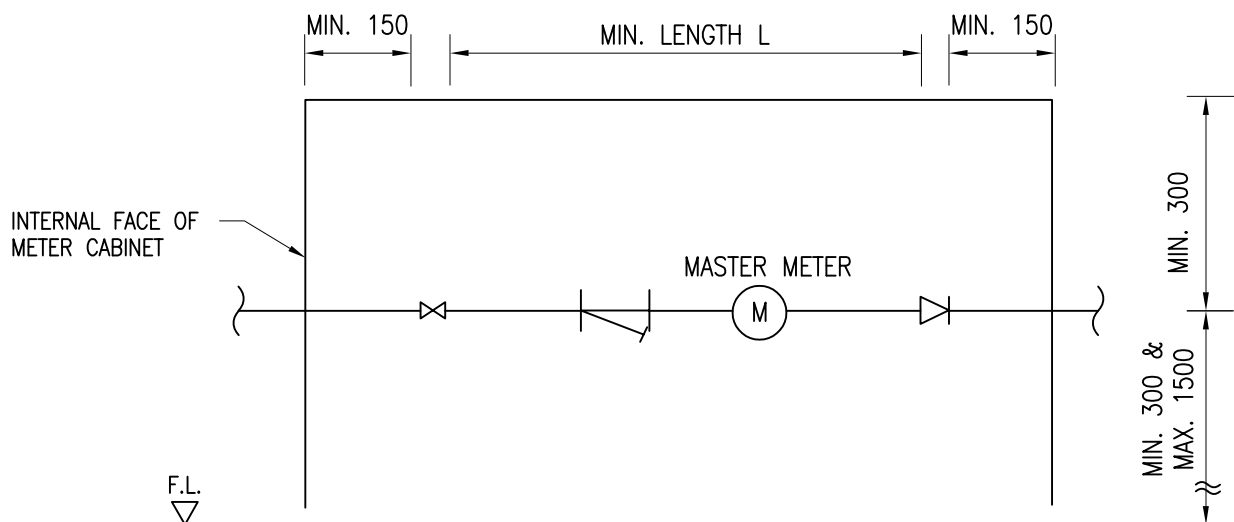
NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. THIS SET OF DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE TECHNICAL REQUIREMENTS FOR PLUMBING WORKS IN BUILDINGS. IN PARTICULAR, THE REQUIREMENT RELATED TO INSTALLATION OF METER AS SPECIFIED IN CHAPTER 3 OF THIS TR.
3. UNIVERSAL BEAM(S) SHALL BE ABLE TO LIFT UP 2.5 TIMES THE WEIGHT OF THE METER AS ADVISED BY WATER AUTHORITY.
4. THE CENTRE-LINE OF THE PIPEWORK MUST BE HORIZONTAL.
5. ALL NEWLY LAID WATER MAINS MUST BE CLEANED AND STERILIZED BEFORE THE INSTALLATION OF SPECIFIED METER OR PRODUCT HAVING EQUIVALENT FUNCTIONS OR PERFORMANCE INSIDE THE ROOM.
6. DRAIN PIPE FOR METER ROOM SHALL BE PROVIDED.
7. THE TABLE SHALL BE READ IN CONJUNCTION WITH FIG. 27.
8. WHERE TMF SUPPLY IS GIVEN, A COMMUNAL TMF METER SHALL BE PROVIDED TO EACH INDIVIDUAL BLOCK OF BUILDING.
9. MASTER METERS FOR SIZE OF FRESH WATER SUPPLY MAIN NOT EXCEEDING 100mm IN DIAMETER COULD BE HOUSED IN A BOX OR CABINET INSTEAD OF IN A ROOM OR CHAMBER. FIG. 31 SHALL BE REFERRED FOR DETAILS OF MASTER METER BOX AND CABINET.



**ELEVATION FOR TYPICAL MASTER METER BOX
FOR PIPE DIAMETER 40mm OR BELOW**

PIPE DIAMETER (mm)	MIN LENGTH OF METER BOX(mm)
15	700
25	800
40	900



**ELEVATION FOR TYPICAL MASTER METER CABINET
FOR PIPE DIAMETER 50mm TO 100**

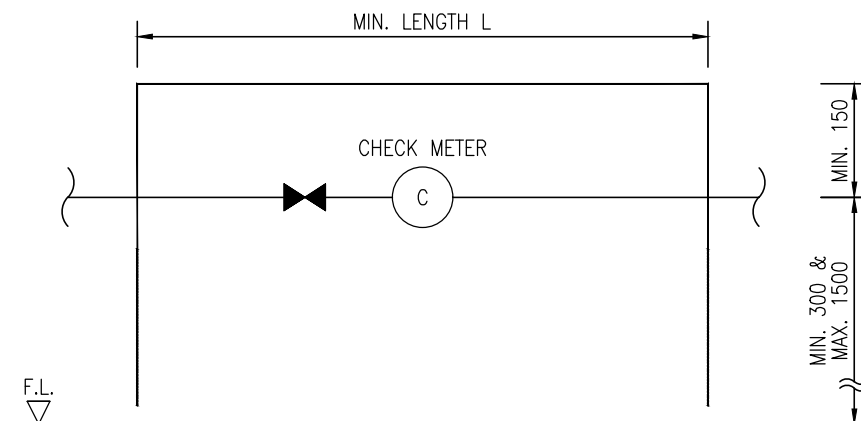
PIPE DIAMETER (mm)	MIN LENGTH BETWEEN GATE VALVE AND NON-RETURN VALVE (mm)
50	670
80	1000
100	1040

LEGENDS

-  LOOSE JUMPER TYPE STOPCOCK
-  GATE VALVE
-  NON-RETURN VALVE
-  Y TYPE STRAINER

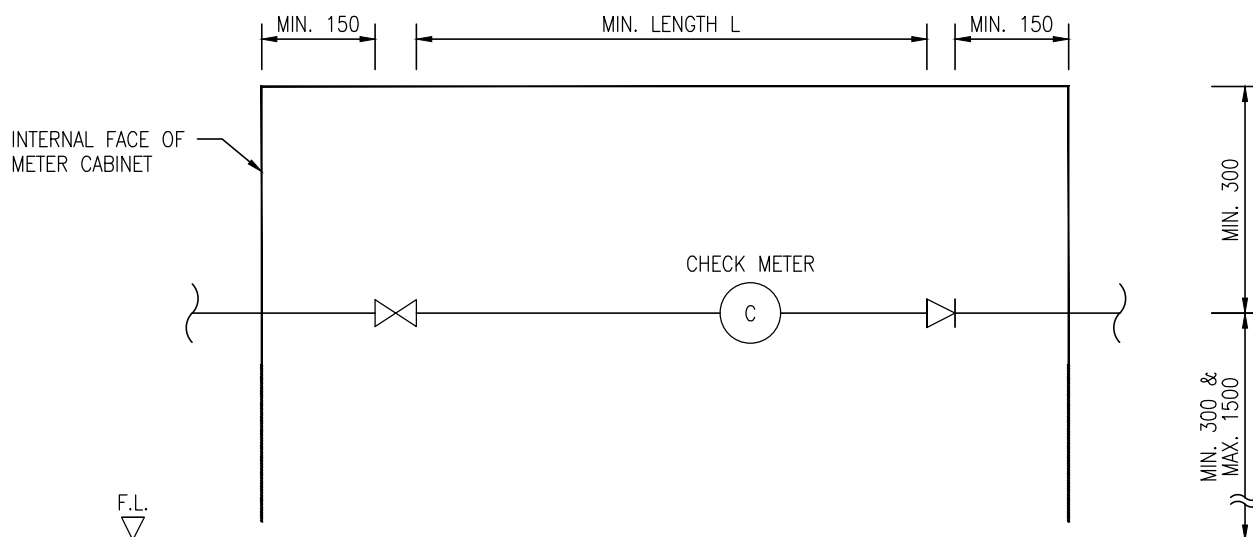
DETAILS OF MASTER METER AND CABINET

FIG. 31



ELEVATION FOR TYPICAL SUB-METER BOX
FOR PIPE DIAMETER 40mm OR BELOW

PIPE DIAMETER (mm)	MIN. LENGTH OF METER BOX (mm)
15	700
25	800
40	900



ELEVATION FOR TYPICAL SUB-METER CABINET
FOR PIPE DIAMETER 50mm TO 150mm

PIPE DIAMETER (mm)	MIN. LENGTH BETWEEN GATE VALVE AND NON-RETURN VALVE (mm)
50	450
80	770
100	855
150	1235

LEGEND :



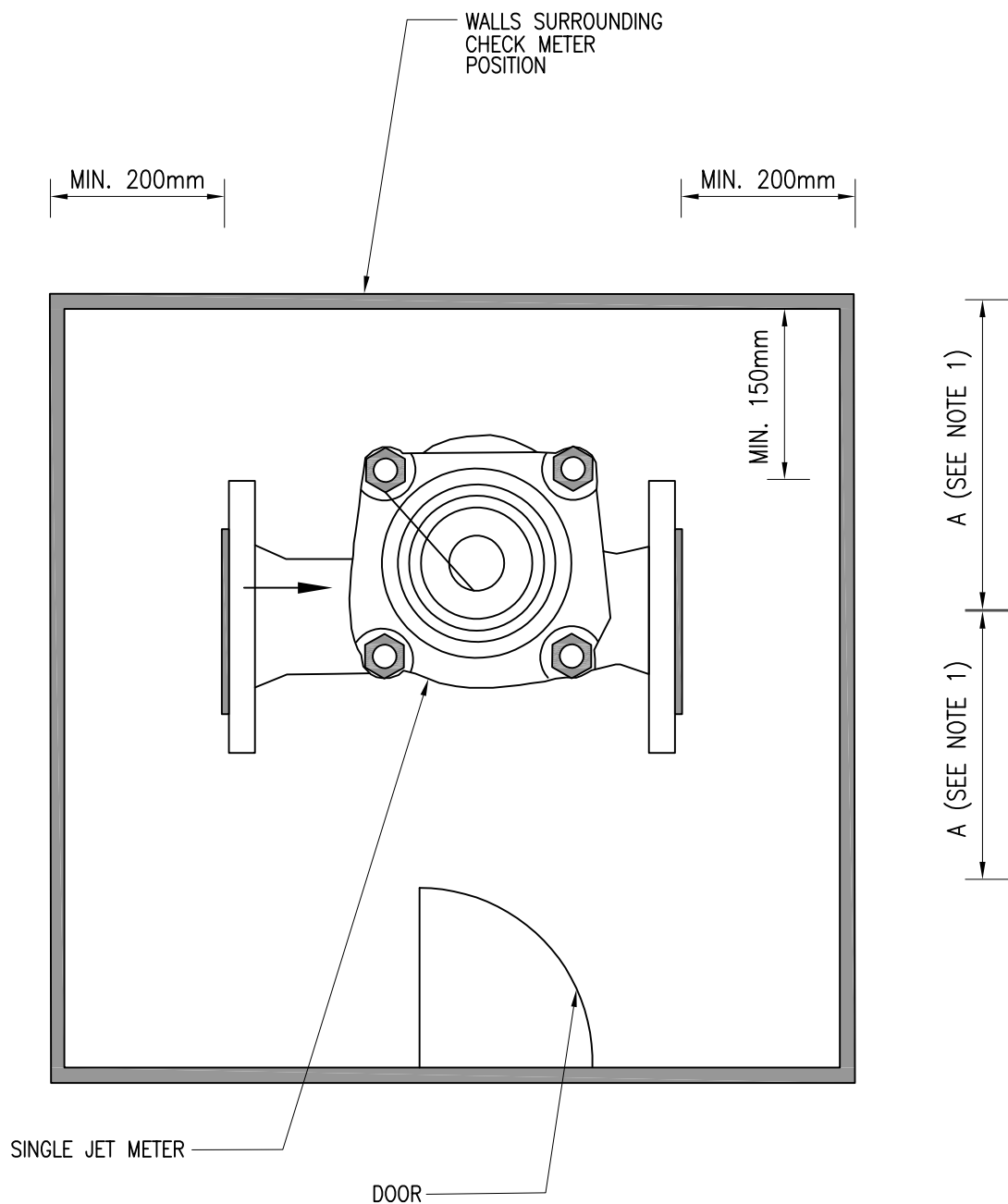
LOOSE JUMPER STOPCOCK



GATE VALVE



NON-RETURN VALVE



NOTES:

1. "A" REFERS TO THE SHORTEST DISTANCE BETWEEN THE LONGITUDINAL CENTRE LINE OF CHECK METER POSITION AND A WALL OR ANY EDGE OF A DOOR WHEN OPENED.

WORKING CLEARANCES FOR CHECK METER POSITION

FIG. 33

Typical Schematic Plumbing Diagram (Food Business (Restaurant) / Kitchen)

Restaurant / Kitchen

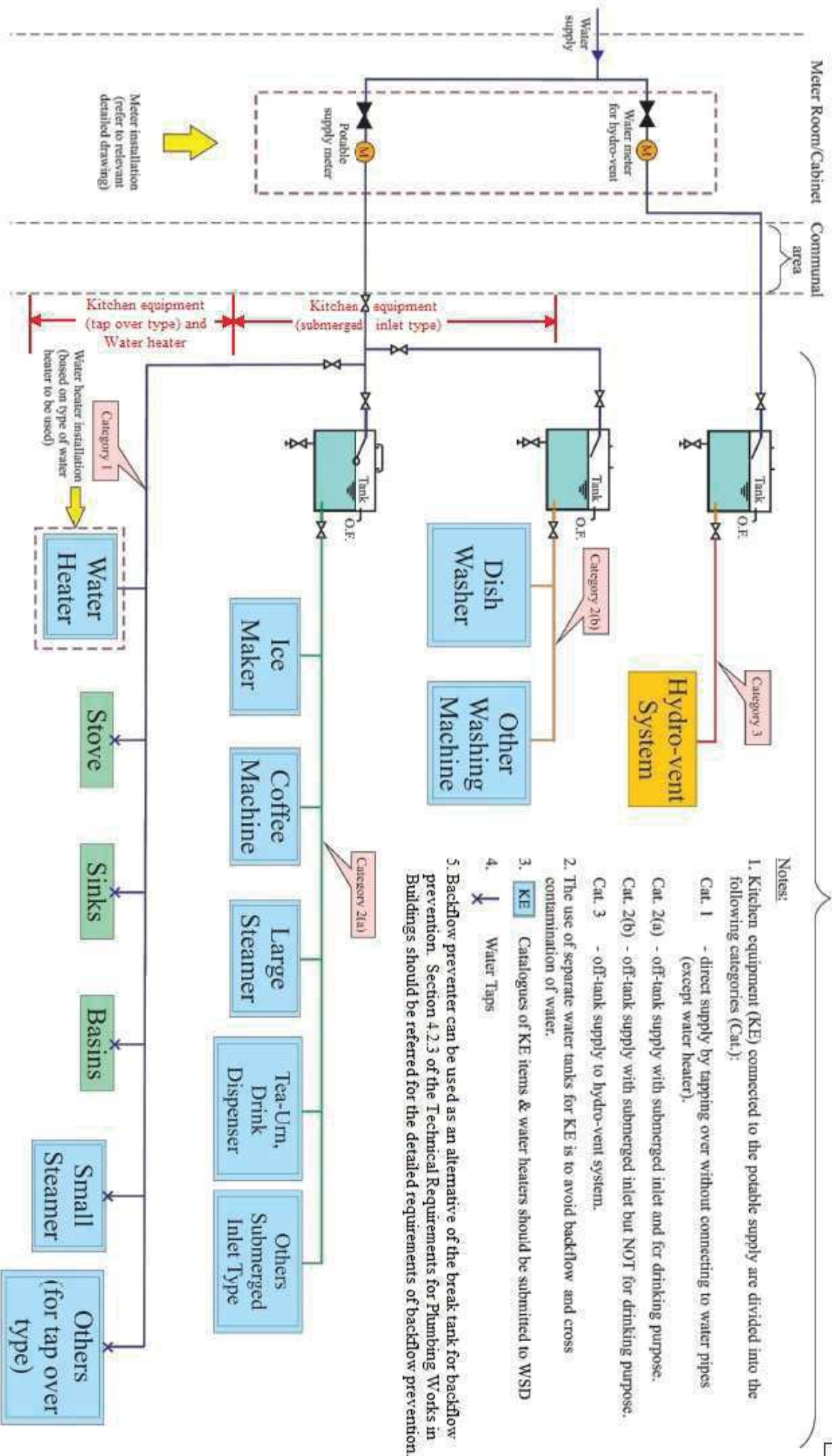


FIG. 34

**更換水錶工程
暫停食水／臨時沖廁淡水*供應通告**

**Meter Replacement Works
TEMPORARY SUSPENSION OF**

FRESH WATER SUPPLY / TEMPORARY MAINS WATER FOR FLUSHING

受影響 地區 / 樓宇 AFFECTED AREAS / BUILDINGS :

日期 :
DATE :

時間 :
TIME :

至
To

日期 :
DATE :

時間 :
TIME :

水務署將於上述期間暫停供應食水／臨時沖廁淡水*予上述地區／樓宇，以便進行更換水錶工程。因暫停供水而引致不便之處，謹此致歉。

本署將可能提前恢復供水或因緊急情況而取消是次暫停供水，而恕不另行通告。如有任何查詢，請致電_____與本署職員_____或致電 **2824 5000** 與本署客戶電話諮詢中心聯絡。

In order to allow meter replacement work to be carried out, the fresh water supply/temporary mains water for flushing to the above areas/buildings will be temporarily suspended on the above-mentioned date and time. We apologize for any inconvenience caused.

Please note that without further notice the supply may be restored earlier than scheduled or the suspension of supply may have to be cancelled in case of unforeseen circumstances or emergencies.

Please call our staff _____ at Tel. No. _____ or our Customer Telephone Enquiry Centre at Tel. No. **2824 5000** if you require further information.

for Water Authority : (_____)

水務監督 : (_____ 代行)



水務署
香港灣仔告士打道七號入境事務大樓
Water Supplies Department
Immigration Tower, 7 Gloucester Road, Wanchai, Hong Kong.
Web Site 萬維網址 : <http://www.info.gov.hk/wsd/>
E-Mail 電子郵件 : wsdinfo@wsd.gov.hk

日期 :

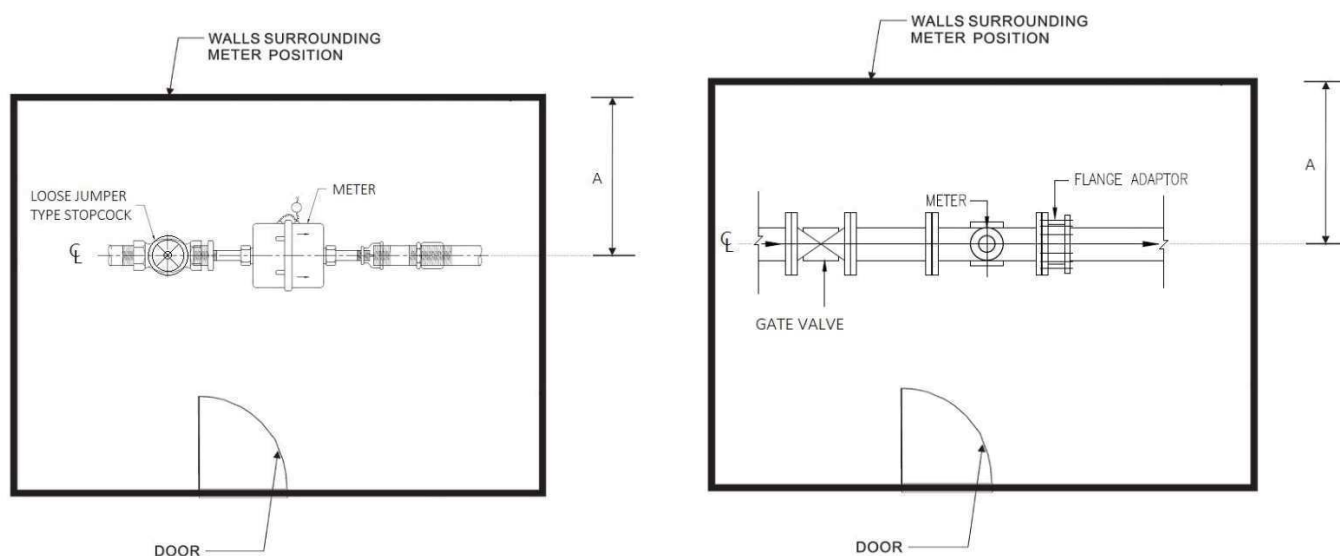
Date : _____

把不適用 刪去 Delete as appropriate

NOTE: WHEN REPLACEMENT OF MASTER METER FOR FIRE SERVICE IS REQUIRED, A COPY OF ABOVE SUSPENSION NOTICE SHOULD BE SENT TO FIRE SERVICE COMMUNICATION CENTRE OF FIRE SERVICES DEPARTMENT (FAX NO.: 2311 0066).

SUSPENSION NOTICE OF FRESH WATER SUPPLY/
TEMPORARY MAINS WATER FOR FLUSHING

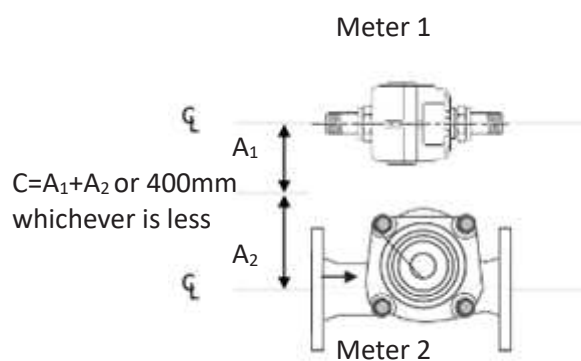
FIG. 35



SMALL SIZED METERS (15MM – 40MM)

LARGE SIZED METERS (50MM AND ABOVE)

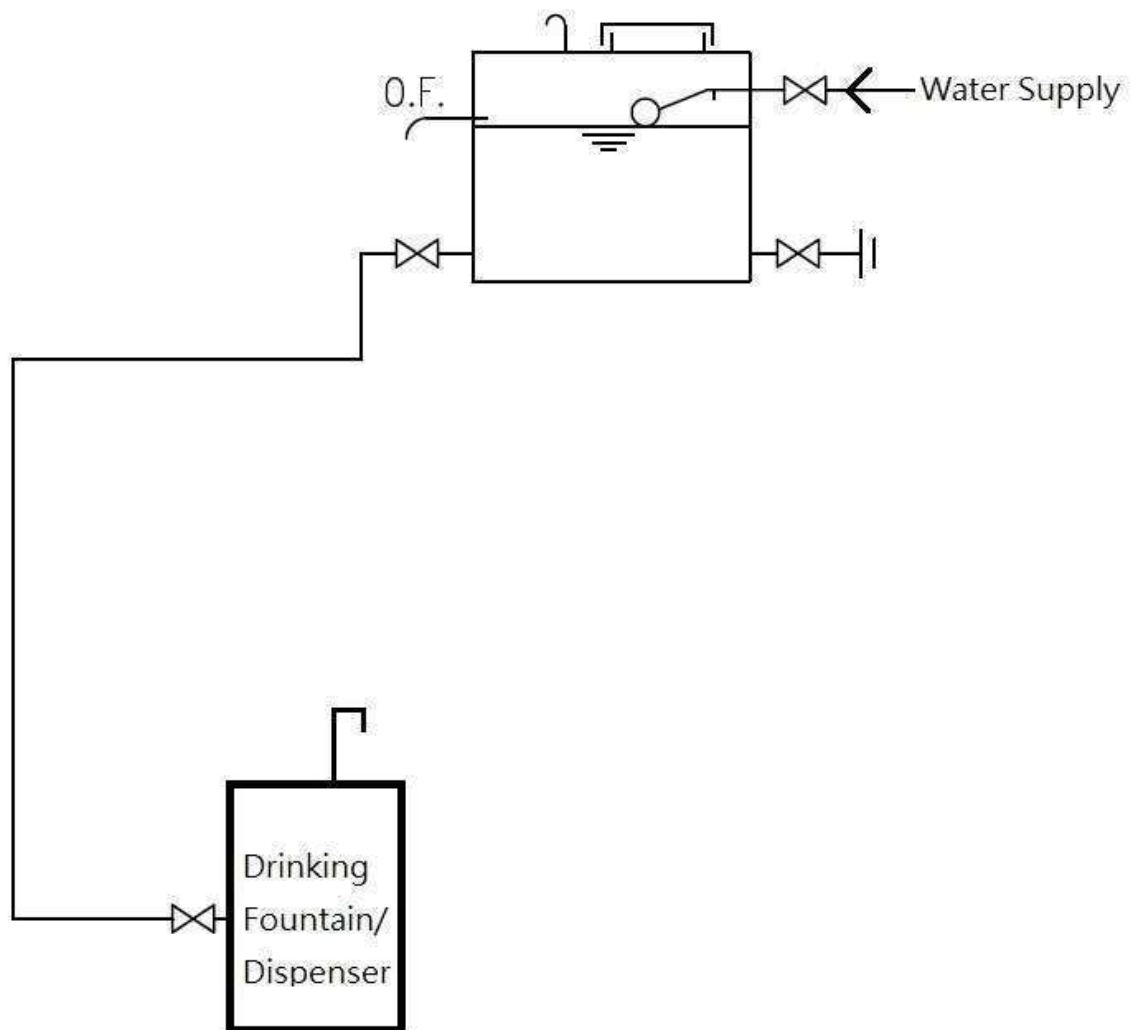
SECTIONAL PLANS SHOWING MINIMUM CLEARANCE FROM WALL FOR TRADE SUPPLY METER POSITIONS



MINIMUM DISTANCE OF A TRADE SUPPLY METER FROM OTHER METERS

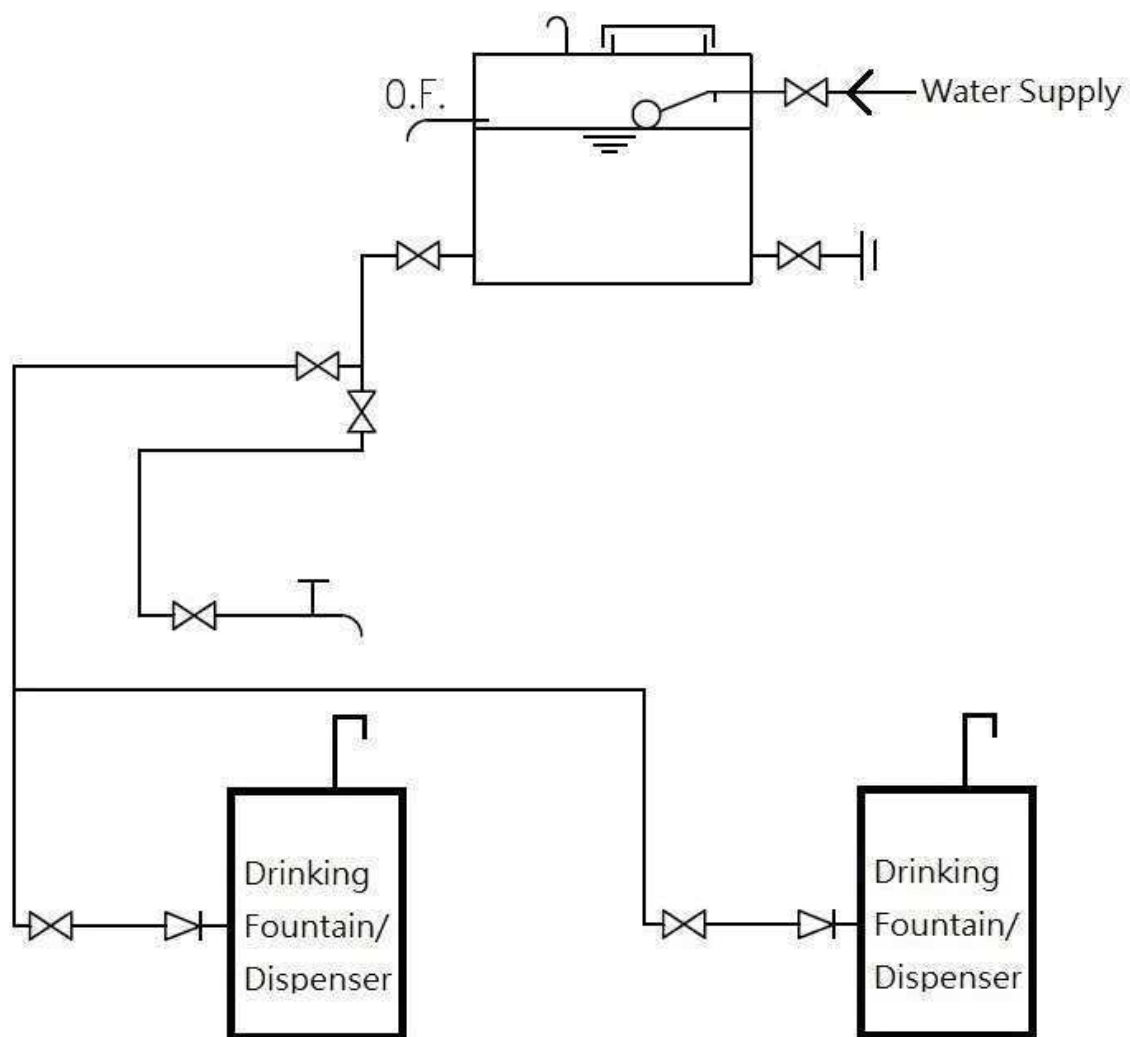
NOMINAL SIZE OF WATER METERS (MM)	MIN. DISTANCE BETWEEN CENTERLINE OF TRADE SUPPLY METERS AND THE SURROUNDING WALL (MM) [A]	MIN. DISTANCE OF A TRADE SUPPLY METER FROM OTHER METERS (MM) [C]
15	100	$A_1 + A_2$ or 400MM Whichever is less (A ₁ & A ₂ REPRESENT THE CORRESPONDING DIMENSION 'A' OF THE METERS, SEE ABOVE ILLUSTRATION)
25	100	
40	125	
50	380	
80	400	
≥ 100	400	

Fig. 36 -



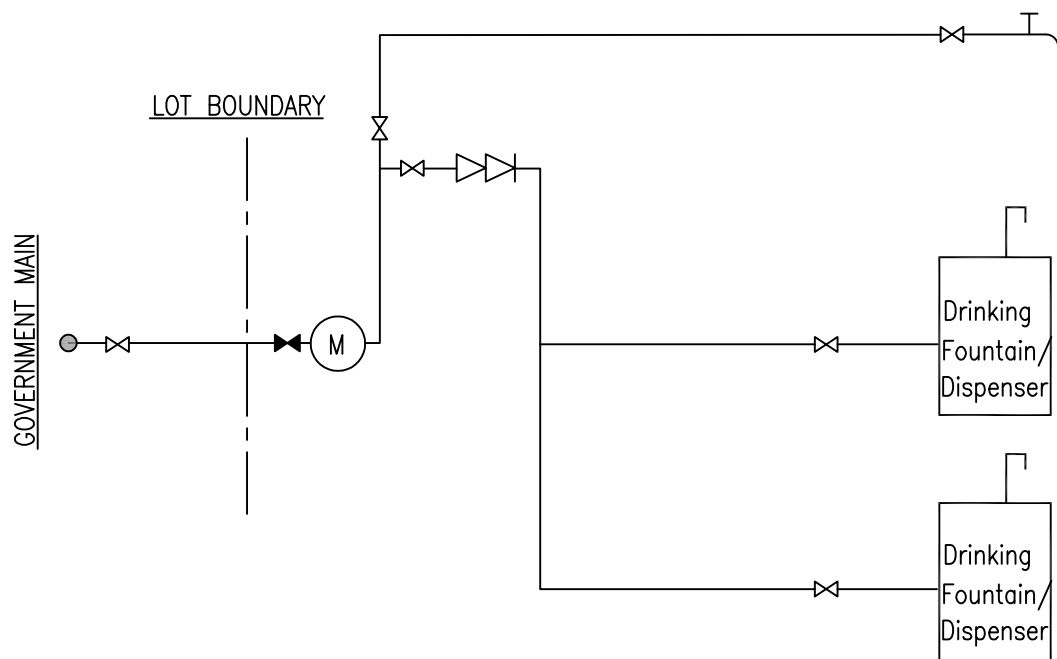
EXAMPLE OF WATER DISPENSER/DRINKING FOUNTAIN -
(NOT LOCATED AT STREET SIDE) -
SUPPLIED BY A WATER TANK WITHOUT OTHER DRAW-OFF POINT -

FIG. 37 -

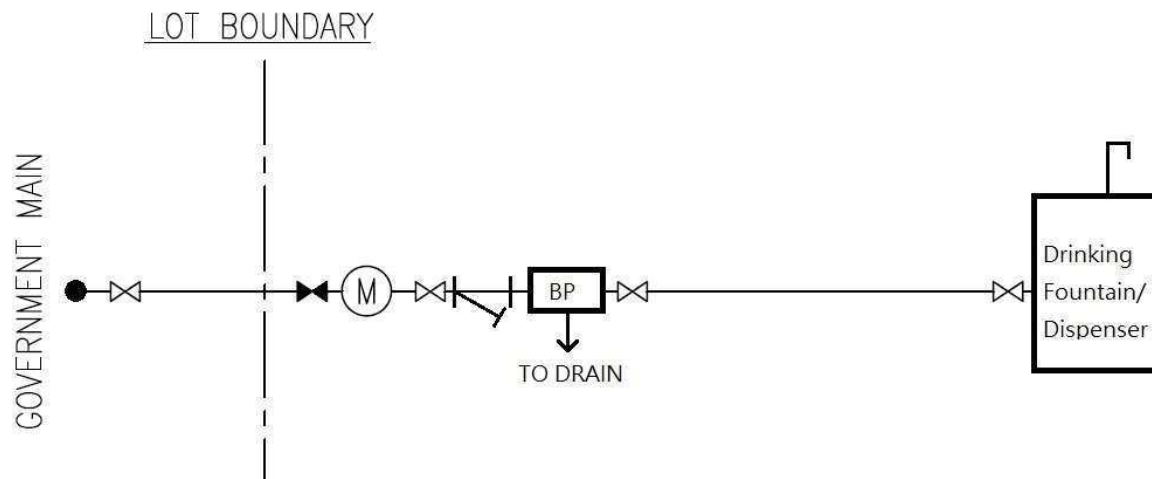


EXAMPLE OF WATER DISPENSER/DRINKING FOUNTAIN -
(NOT LOCATED AT STREET SIDE) -
SUPPLIED BY A WATER TANK WITH OTHER DRAW-OFF POINT -

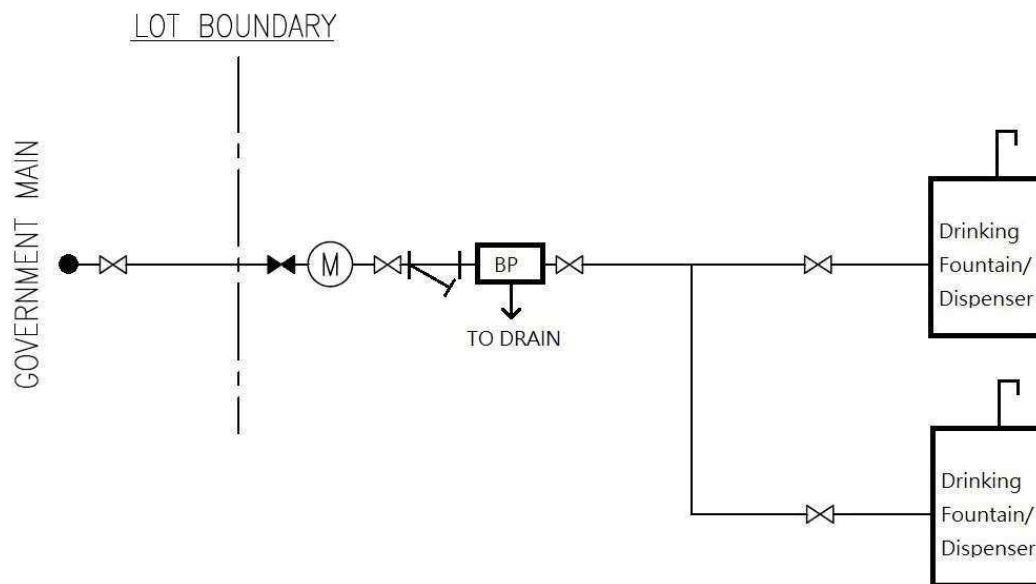
FIG. 38 -



EXAMPLE OF WATER DISPENSER/ DRINKING FOUNTAIN
(NOT LOCATED AT STREET SIDE)
IN DIRECT SUPPLY SYSTEM (USE OF DOUBLE CHECK VALVE)



A) SINGLE DRINKING FOUNTAIN/DISPENSER -



B) MORE THAN ONE DRINKING FOUNTAIN/DISPENSER

EXAMPLE OF WATER DISPENSER /DRINKING FOUNTAIN -
(LOCATED AT STREET SIDE) -
DIRECTLY CONNECTED TO THE MAINS -
(USE OF BACKFLOW PREVENTOR) -