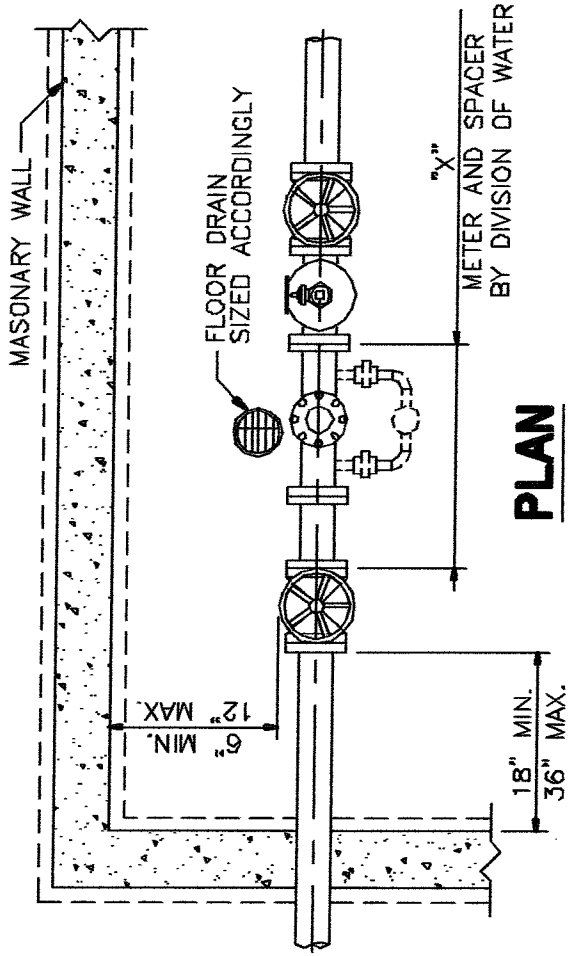


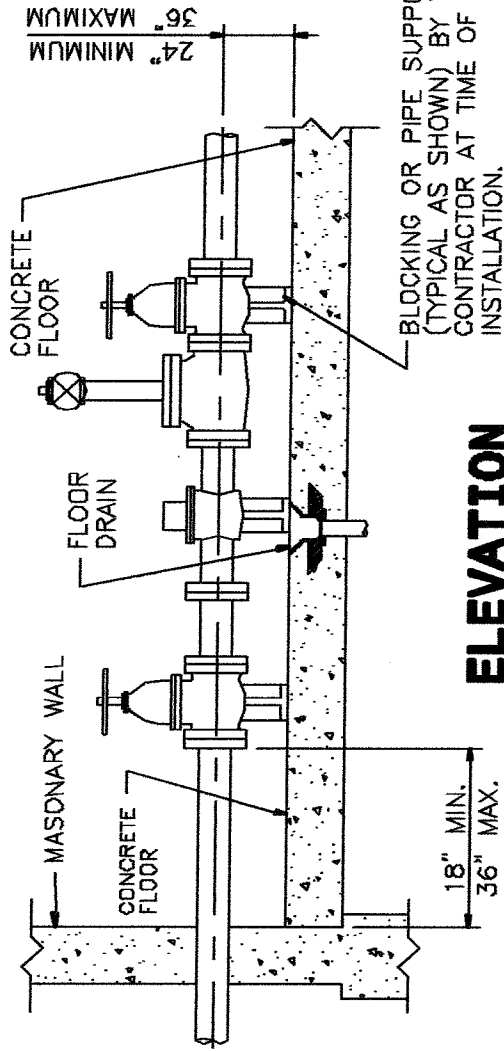


# Vault Arrangement





**PLAN**



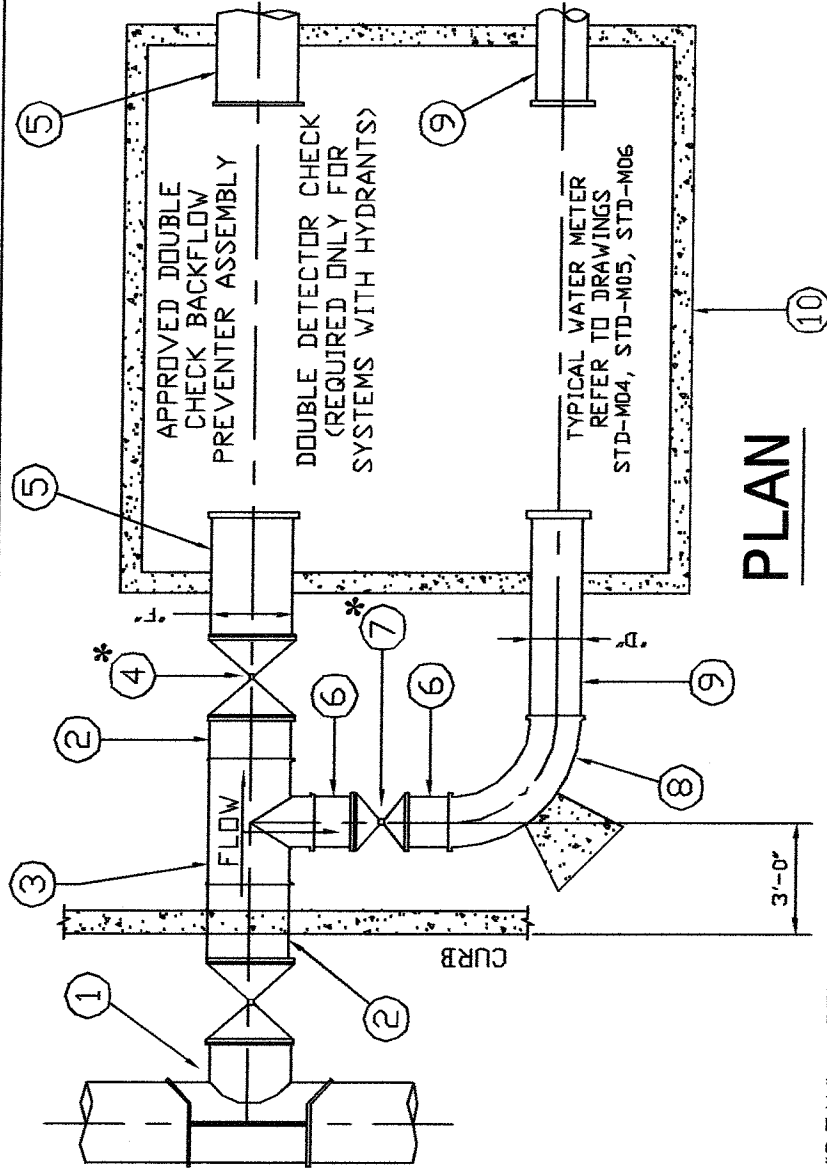
**ELEVATION**

SIZE	DIM. "X"
3"	2'-0" WITH 2" DISPLACEMENT METER
3"	2'-0" WITH TURBINE METER AND COMPOUND METER
4"	2'-5" WITH TURBINE METER AND COMPOUND METER
6"	3'-1" WITH COMPOUND METER AND TURBINE METER
8"	3'-6" WITH COMPOUND METER AND TURBINE METER
12"	3'-6" WITH TURBINE METER

NOTE: FOR MATERIAL REQUIRED CONSULT ASSOCIATED MATERIAL LIST FOR STANDARD METER SETTINGS FOR VAULTS AND DELETE MATERIAL FOR THE BYPASS, I.E. (1) O.S.&Y. VALVE, (2) ELBOWS, (2) TEES, GALVANIZED PIPE, GASKETS AND BOLTS.

**STANDARD DETAILS**

DEPARTMENT OF PUBLIC UTILITIES	
DIVISION OF WATER	
CLEVELAND, OHIO	
SUBJECT: TYPICAL METER SETTINGS	
3" METER SETTING AND LARGER	
FOR INSIDE BUILDINGS	
DRAWN BY	RSK
DATE	10-1-1997
CHECKED BY	MJS DATE 10-1-97
-SCALE-	NONE
<b>STD-V02</b>	



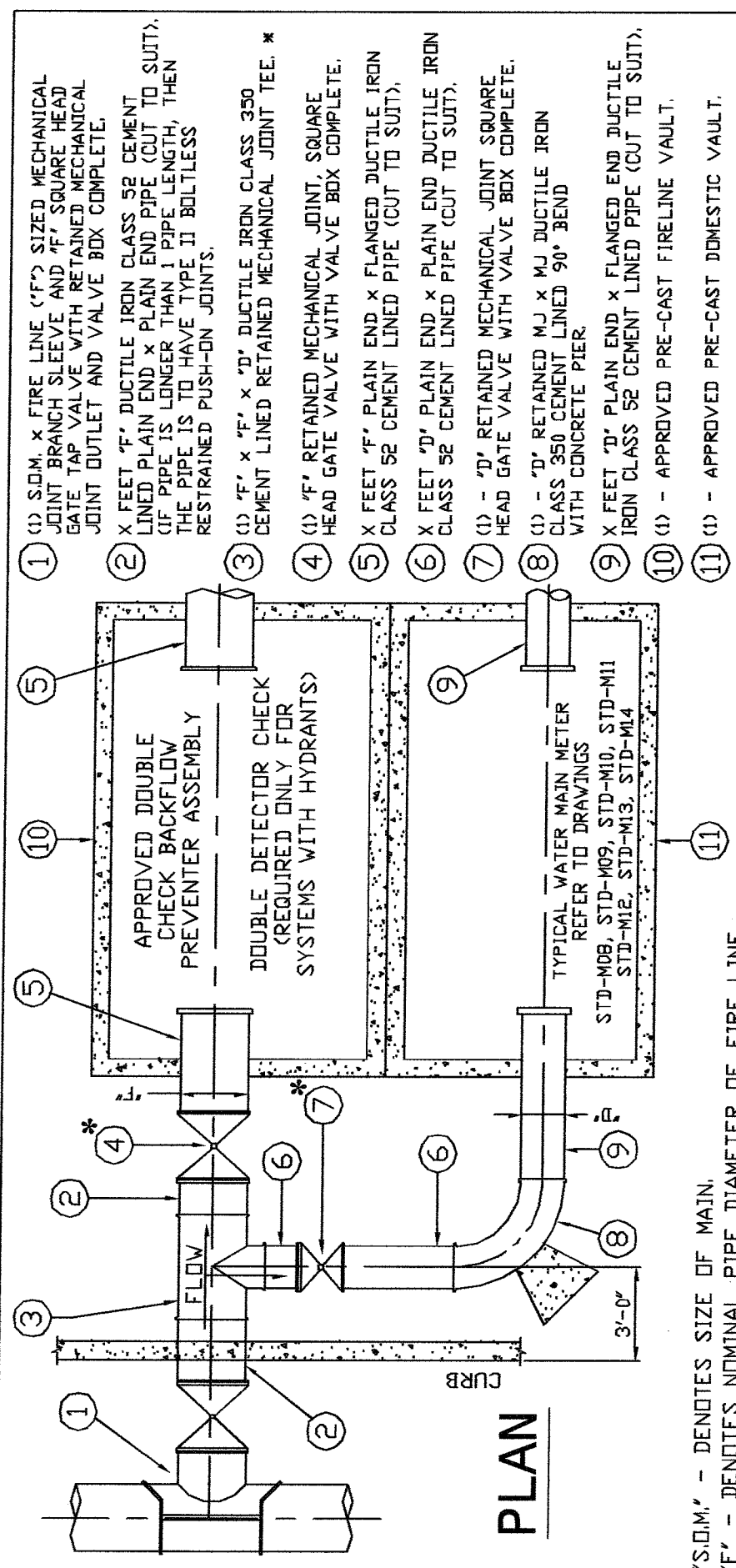
- ① 1/2" S.O.M. x FIRE LINE (F) SIZED MECHANICAL JOINT BRANCH SLEEVE AND (F) SQUARE HEAD GATE TAP VALVE WITH RETAINED MECHANICAL JOINT OUTLET AND VALVE BOX COMPLETE.
- ② X FEET (F) DUCTILE IRON CLASS 52 CEMENT LINED PLAIN END x PLAIN END PIPE (CUT TO SUIT) (IF PIPE IS LONGER THAN 1 PIPE LENGTH, THEN THE PIPE IS TO HAVE TYPE II BOLTLESS RESTRAINED PUSH-ON JOINTS).
- ③ (F) x (F) x (D) DUCTILE IRON CLASS 350 CEMENT LINED RETAINED MECHANICAL JOINT TEE. \*
- ④ (F) RETAINED MECHANICAL JOINT, SQUARE HEAD GATE VALVE WITH VALVE BOX COMPLETE.
- ⑤ X FEET (F) PLAIN END x FLANGED DUCTILE IRON CLASS 52 CEMENT LINED PIPE (CUT TO SUIT).
- ⑥ X FEET (D) PLAIN END x PLAIN END DUCTILE IRON CLASS 52 CEMENT LINED PIPE (CUT TO SUIT).
- ⑦ (D) RETAINED MECHANICAL JOINT SQUARE HEAD GATE VALVE WITH VALVE BOX COMPLETE.
- ⑧ (D) RETAINED MJ x MJ DUCTILE IRON CLASS 350 CEMENT LINED 90° BEND WITH CONCRETE PIER.
- ⑨ X FEET (D) PLAIN END x FLANGED END DUCTILE IRON CLASS 52 CEMENT LINED PIPE (CUT TO SUIT).
- ⑩ (D) - APPROVED PRE-CAST COMBINATION VAULT.

\* CURB VALVES MUST BE LOCATED IN THE RIGHT OF WAY

③

"S.O.M." - DENOTES SIZE OF MAIN.  
 "F" - DENOTES NOMINAL PIPE DIAMETER OF FIRE LINE.  
 "D" - DENOTES NOMINAL PIPE DIAMETER OF DOMESTIC LINE.  
 \* MAY SUBSTITUTE "F" x "F" x "F" DUCTILE IRON CLASS 350 CEMENT LINED RETAINED MECHANICAL JOINT TEE AND "F" x "D" DUCTILE IRON CLASS 350 CEMENT LINED RETAINED MECHANICAL JOINT PLAIN END x PLAIN END REDUCER FOR ITEM ③.  
 \*\* METERS IN VAULTS MUST BE ABLE TO BE READ FROM ABOVE WITHOUT ENTRY. IF NO CLEAR LINE OF SITE TO THE METER CAN BE ACHIEVED BY PLACEMENT OF THE ACCESS MANHOLE, AS DETERMINED BY THE DIVISION OF WATER, A 12" DIAMETER VIEWING PORT MUST BE PROVIDED THAT IS CENTERED OVER THE METER FOR READING PURPOSES IN ADDITION TO THE MANHOLE NEEDED FOR ACCESS. CONTRACTOR MAY ORDER PRECAST MANHOLE WITH VIEWING PORT OPENING OR CORE OPENING ON-SITE. ALL TRAFFIC BEARING AND NON-TRAFFIC BEARING VAULTS MUST MAINTAIN THEIR DESIGNED STRUCTURAL INTEGRITY AND CASTING SHALL BE SECURE FOR ROAD TRAFFIC. CONTRACTOR IS REQUIRED TO CALL THE PERMITS AND SALES UNIT OF THE DIVISION OF WATER AT 216-664-2444 EXT. 5206 FOR INSPECTION OF ANY VAULT SET.

<b>STANDARD DETAILS</b>	
DEPARTMENT OF PUBLIC UTILITIES DIVISION OF WATER CLEVELAND, OHIO	
SUBJECT SINGLE FEED/COMBINATION VAULT	
DOMESTIC - FIRELINE CONNECTION	
3' DOMESTIC/4'-8" FIRELINE	
DRAWN BY: ESK	-SCALE-
DATE: 12-10-2004	NONE
CHECKED BY: _____	DATE: _____
<b>STD-V03</b>	



- ① 1 (1) 3/8" M. X FIRE LINE ('F') SIZED MECHANICAL JOINT BRANCH SLEEVE AND 'F' SQUARE HEAD GATE TAP VALVE WITH RETAINED MECHANICAL JOINT OUTLET AND VALVE BOX COMPLETE.
- ② 2 X FEET 'F' DUCTILE IRON CLASS 52 CEMENT LINED PLAIN END X PLAIN END PIPE (CUT TO SUIT). (IF PIPE IS LONGER THAN 1 PIPE LENGTH, THEN THE PIPE IS TO HAVE TYPE II BOLTLESS RESTRAINED PUSH-ON JOINTS.)
- ③ 3 (1) 'F' X 'F' X 'D' DUCTILE IRON CLASS 350 CEMENT LINED RETAINED MECHANICAL JOINT TEE. \*
- ④ 4 (1) 'F' RETAINED MECHANICAL JOINT, SQUARE HEAD GATE VALVE WITH VALVE BOX COMPLETE.
- ⑤ 5 X FEET 'F' PLAIN END X FLANGED DUCTILE IRON CLASS 52 CEMENT LINED PIPE (CUT TO SUIT).
- ⑥ 6 X FEET 'D' PLAIN END X PLAIN END DUCTILE IRON CLASS 52 CEMENT LINED PIPE (CUT TO SUIT).
- ⑦ 7 (1) - 'D' RETAINED MECHANICAL JOINT SQUARE HEAD GATE VALVE WITH VALVE BOX COMPLETE.
- ⑧ 8 (1) - 'D' RETAINED MJ X MJ DUCTILE IRON CLASS 350 CEMENT LINED 90° BEND WITH CONCRETE PIER.
- ⑨ 9 X FEET 'D' PLAIN END X FLANGED END DUCTILE IRON CLASS 52 CEMENT LINED PIPE (CUT TO SUIT).
- ⑩ 10 (1) - APPROVED PRE-CAST FIRELINE VAULT.
- ⑪ 11 (1) - APPROVED PRE-CAST DOMESTIC VAULT.

\* CURB VALVES MUST BE LOCATED IN THE RIGHT OF WAY

③

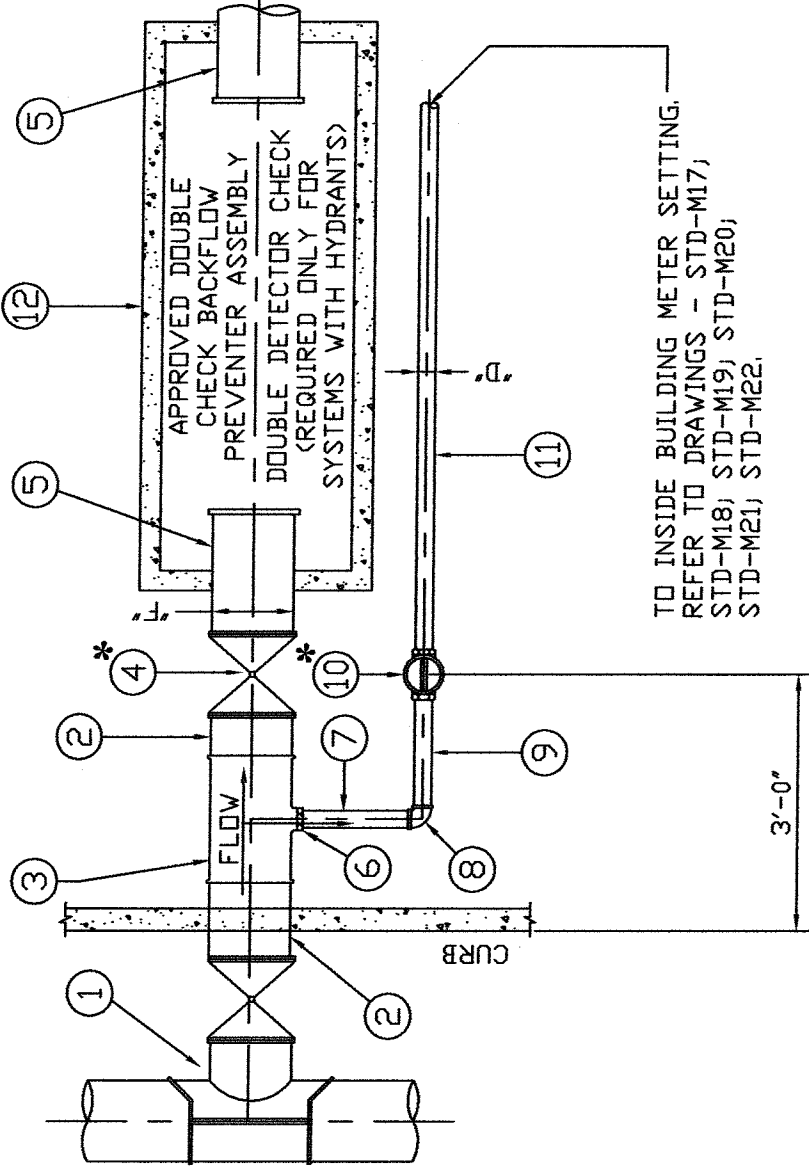
"S.O.M." - DENOTES SIZE OF MAIN.  
 "F" - DENOTES NOMINAL PIPE DIAMETER OF FIRE LINE.  
 "D" - DENOTES NOMINAL PIPE DIAMETER OF DOMESTIC LINE.  
 \* MAY SUBSTITUTE "F" X "F" X "F" DUCTILE IRON CLASS 350 CEMENT LINED RETAINED MECHANICAL JOINT TEE AND "F" X "D" DUCTILE IRON CLASS 350 CEMENT LINED RETAINED MECHANICAL JOINT PLAIN END X PLAIN END REDUCER FOR ITEM ③.

\*\* METERS IN VAULTS MUST BE ABLE TO BE READ FROM ABOVE WITHOUT ENTRY. IF NO CLEAR LINE OF SITE TO THE METER CAN BE ACHIEVED BY PLACEMENT OF THE ACCESS MANHOLE, AS DETERMINED BY THE DIVISION OF WATER, A 12" DIAMETER VIEWING PORT MUST BE PROVIDED THAT IS CENTERED OVER THE METER FOR READING PURPOSES IN ADDITION TO THE MANHOLE NEEDED FOR ACCESS. CONTRACTOR MAY ORDER PRECAST MANHOLE WITH VIEWING PORT OPENING OR CORE OPENING ON-SITE. ALL TRAFFIC BEARING AND NON-TRAFFIC BEARING VAULTS MUST MAINTAIN THEIR DESIGNED STRUCTURAL INTEGRITY AND CASTING SHALL BE SECURE FOR ROAD TRAFFIC. CONTRACTOR IS REQUIRED TO CALL THE PERMITS AND SALES UNIT OF THE DIVISION OF WATER AT 216-664-2444 EXT. 5206 FOR INSPECTION OF ANY VAULT SET.

<b>STANDARD DETAILS</b>	
DEPARTMENT OF PUBLIC UTILITIES	
DIVISION OF WATER CLEVELAND, OHIO	
SUBJECT SINGLE FEED/SEPARATE VAULTS	
DOMESTIC - FIRELINE CONNECTION	
4'-12" DOMESTIC/4'-12" FIRELINE	
DRAWN BY RSK	-SCALE-
DATE 12-10-2004	NONE
CHECKED BY _____	DATE _____
<b>STD-V04</b>	

- ① ①) S.O.M. x FIRE LINE 'F' SIZED MECHANICAL JOINT BRANCH SLEEVE AND 'F' SQUARE HEAD GATE TAP VALVE WITH RETAINED MECHANICAL JOINT OUTLET AND VALVE BOX COMPLETE.
- ② X FEET 'F' DUCTILE IRON CLASS 52 CEMENT LINED PLAIN END x PLAIN END PIPE (CUT TO SUIT). (IF PIPE IS LONGER THAN 1 PIPE LENGTH, THEN THE PIPE IS TO HAVE TYPE II BOLTLESS RESTRAINED PUSH-ON JOINTS.)
- ③ ①) 'F' x 'F' x 'D' DUCTILE IRON CLASS 350 CEMENT LINED RETAINED MECHANICAL JOINT TAPPED TEE WITH CONCRETE PIER.
- ④ ①) 'F' RETAINED MECHANICAL JOINT, SQUARE HEAD GATE VALVE WITH VALVE BOX COMPLETE.
- ⑤ X FEET 'F' PLAIN END x FLANGED DUCTILE IRON CLASS 52 CEMENT LINED PIPE (CUT TO SUIT).
- ⑥ OPTIONAL ①)-THREADED REDUCING BUSHING
- ⑦ X FEET 'D' THREADED END x THREADED END TYPE 'K' COPPER.
- ⑧ ①)-THREADED BRASS 90° ELBOW.
- ⑨ X FEET 'D' THREADED END x THREADED END TYPE 'K' COPPER.
- ⑩ ①)-'D' THREADED TYPE ORISEAL CURB VALVE WITH VALVE BOX COMPLETE.
- ⑪ X FEET 'D' TYPE 'K' COPPER PIPE (CUT TO SUIT).
- ⑫ ①)-APPROVED PRE-CAST FIRELINE VAULT.

\* CURB VALVES MUST BE LOCATED IN THE RIGHT OF WAY



TO INSIDE BUILDING METER SETTING.  
REFER TO DRAWINGS - STD-M17;  
STD-M18; STD-M19; STD-M20;  
STD-M21; STD-M22.

## PLAN

'S.O.M.' - DENOTES SIZE OF MAIN.

'F' - DENOTES NOMINAL PIPE DIAMETER OF FIRE LINE

'D' - DENOTES NOMINAL PIPE DIAMETER OF DOMESTIC LINE

## STANDARD DETAILS

DEPARTMENT OF PUBLIC UTILITIES

DIVISION OF WATER  
CLEVELAND, OHIO

SUBJECT SINGLE FEED/SINGLE VAULT FOR  
FIRELINE CONNECTION/DOMESTIC CONNECTION WITH

REMOTE METER/ 1'-2" DOMESTIC/4"-12" FIRELINE

DRAWN BY RSK -SCALE-

DATE 11-16-2009 NONE

CHECKED BY DATE

STD-V05

