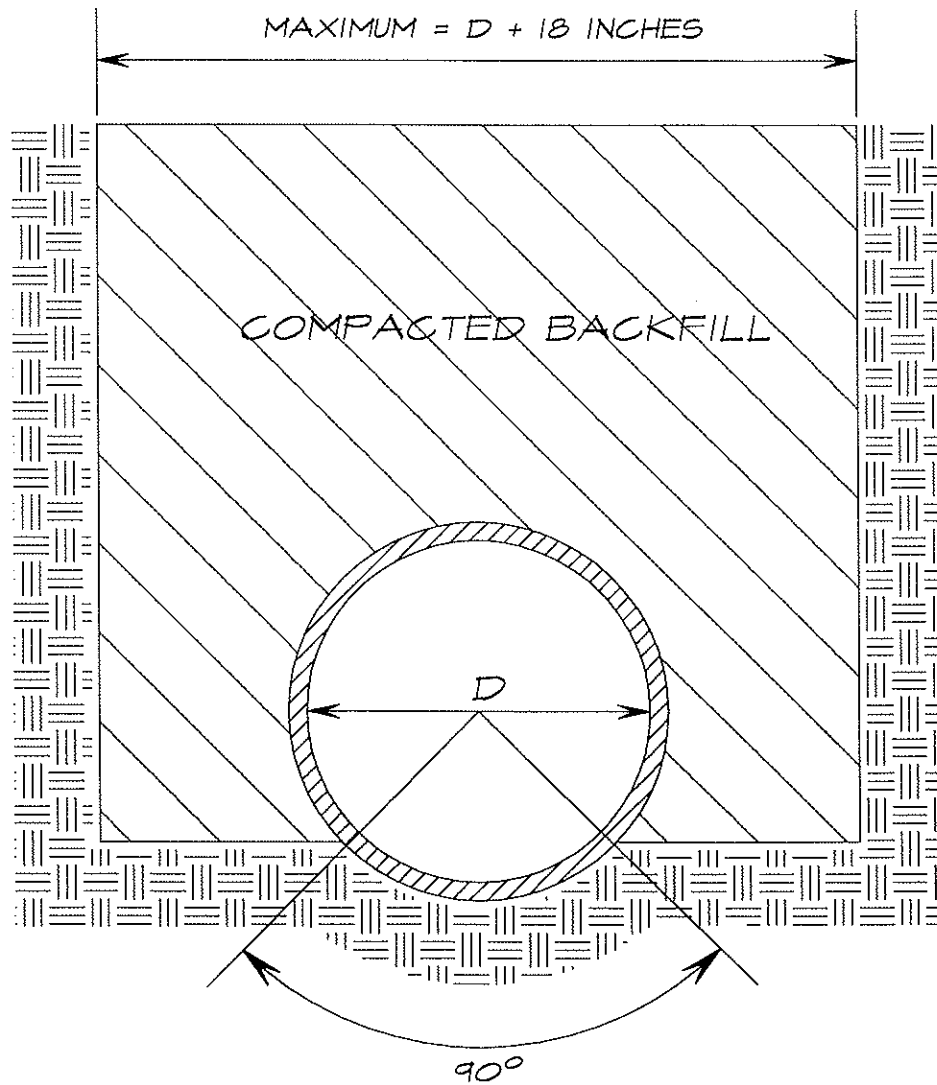


TRENCH EXCAVATION IN SOIL



NOTE: BOTTOM OF TRENCH TO BE SHAPED TO FIT PIPE

NOTE: SEE SPECIALS FOR ANY SPECIAL BACKFILL REQUIREMENTS

CITY OF PENDLETON

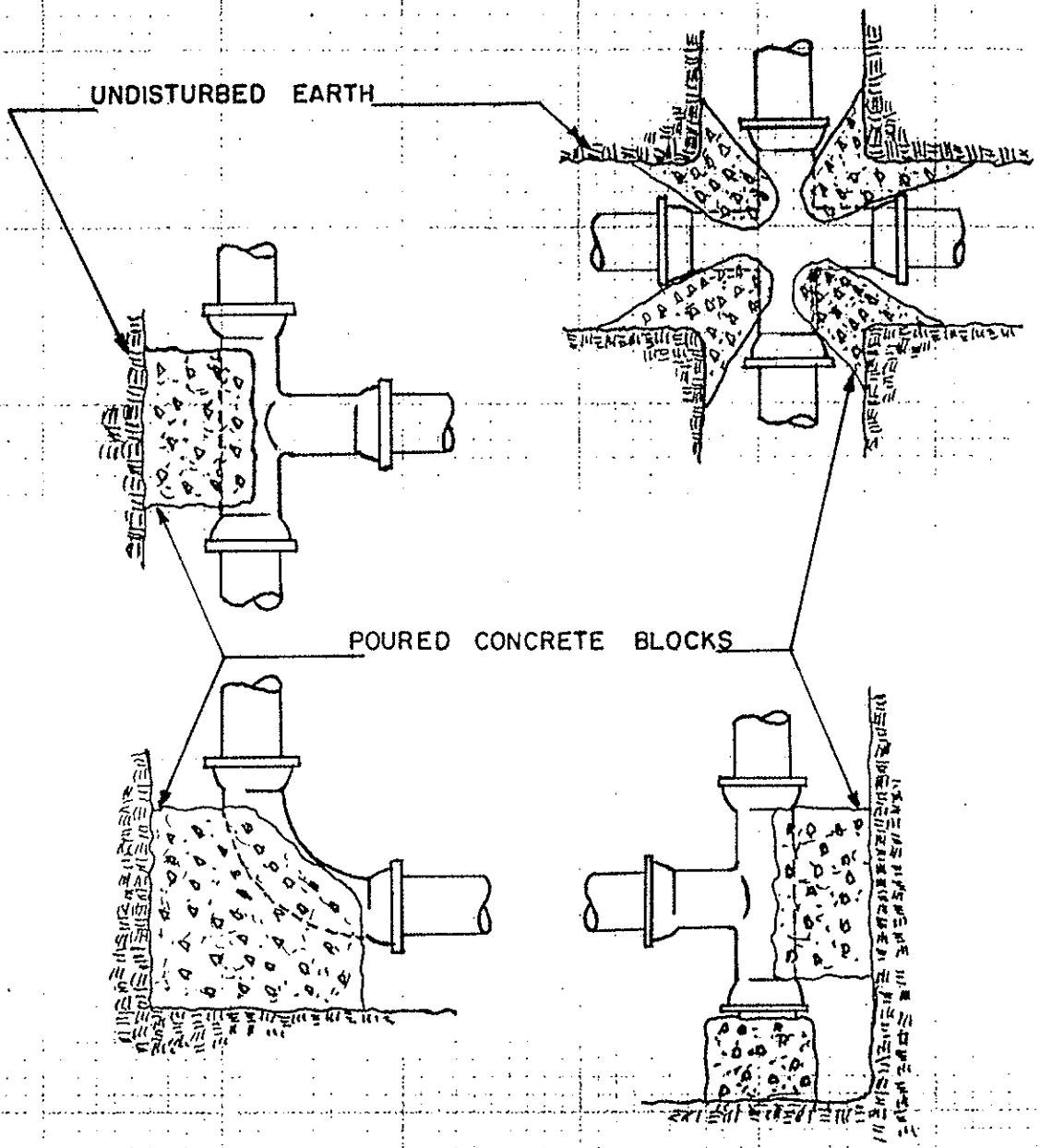
ENGINEERING DEPARTMENT

DRAWN BY: RICK B.

DATE: DECEMBER 1995

TITLE: WATER PIPE BEDDING
(SOIL) STANDARDS

APPROVED: *[Signature]* SCALE: NOT TO SCALE



NOTE: ALL BENDS MUST BE THRUST BLOCKED.

BEARING AREA OF THRUST BLOCKS SHALL BE DETERMINED BY THE ENGINEER - BASED ON PIPE SIZE, TYPE OF FITTING AND TYPE OF SOIL.

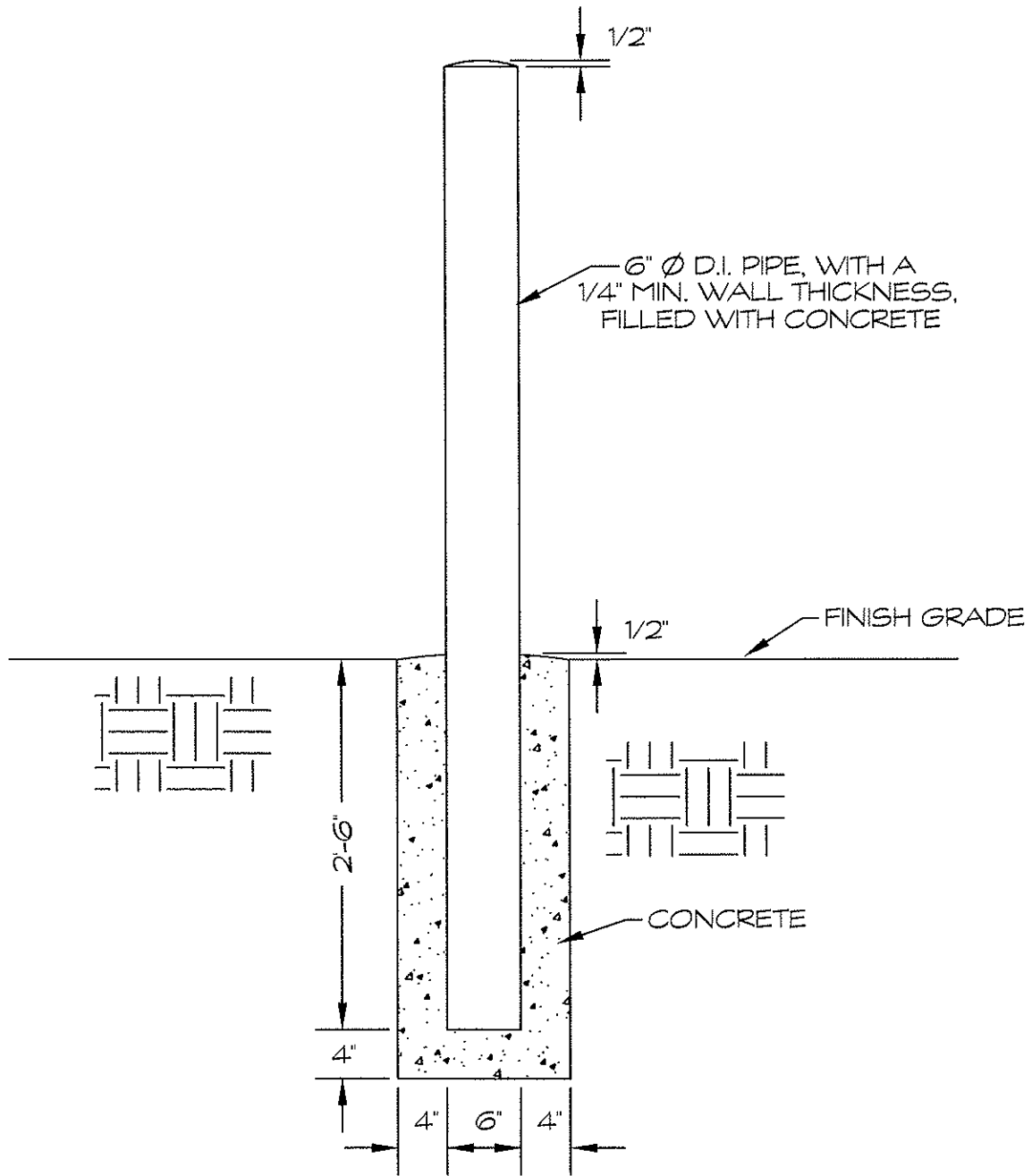
PLACE PLASTIC SHEET AROUND TEES, CROSSES, PLUGS, CAPS AND BENDS TO PROVIDE ADHESIVE BARRIER.

CITY OF PENDLETON

ENGINEERING DEPARTMENT

DN: M.P.M. DATE: 8/24/73
 APPV'D. *David Johnson* SCALE: NONE
 CITY ENGINEER

TITLE: TYPICAL THRUST BLOCKS



CITY OF PENDLETON

ENGINEERING DEPARTMENT

DRAWN BY: RICK B.

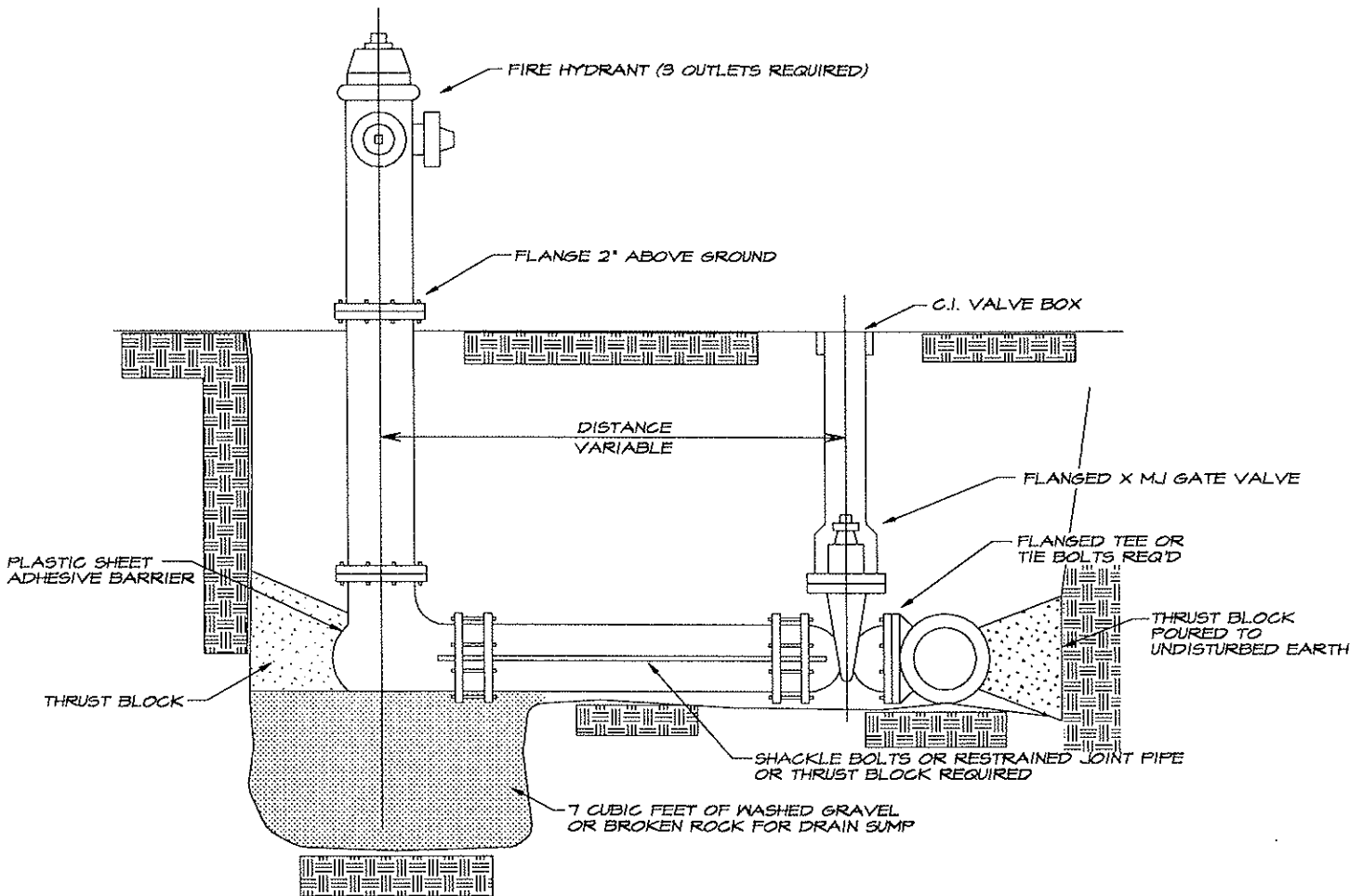
DATE: APRIL 2005

APPROVED: 

SCALE: NOT TO SCALE

TITLE: TYPICAL BOLLARD DETAIL

THE CITY WILL ACCEPT ONLY THE FOLLOWING BRAND NAME HYDRANTS:
 M & H No. 929, MUELLER CENTURION No. 200, CLOW No. 2500,
 WATEROUS No. WB-90, OR KENNEDY No. K-81A



FIRE HYDRANT SPECIFICATIONS:

5 1/4" COMPRESSION TYPE HYDRANTS, TRAFFIC MODEL, (BREAK OFF FLANGE)
 4 FT. BURY, 6" MJ SHOE, TWO 2 1/2" NST DISCHARGES, ONE 4 1/2" PUMPER
 NOZZLE, OPEN LEFT, PAINTED PER PENDLETON FIRE DEPT. REQUIREMENTS

NOTE: FIRE HYDRANT TO BE LOCATED ON PUBLIC RIGHT-OF-WAY
 2 FEET BACK OF SIDEWALK TYPICAL

REVISED: 4/2000 RB

CITY OF PENDLETON

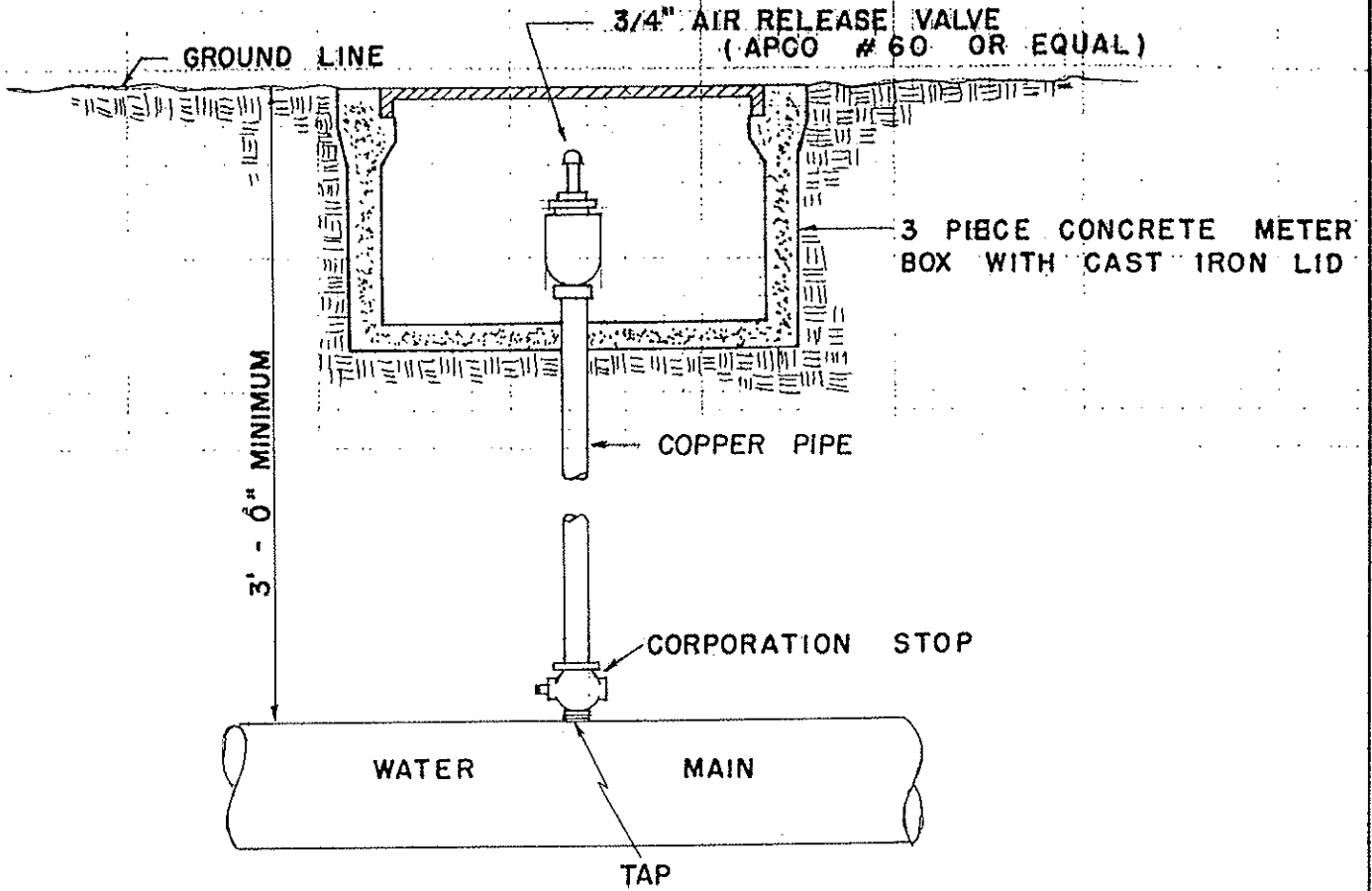
ENGINEERING DEPARTMENT

DRAWN BY: RICK B. DATE: DEC. 15, 1995

APPROVED: *[Signature]* SCALE: NOT TO SCALE

TITLE: TYPICAL FIRE HYDRANT
 ASSEMBLY

OUT OF STREET AREA



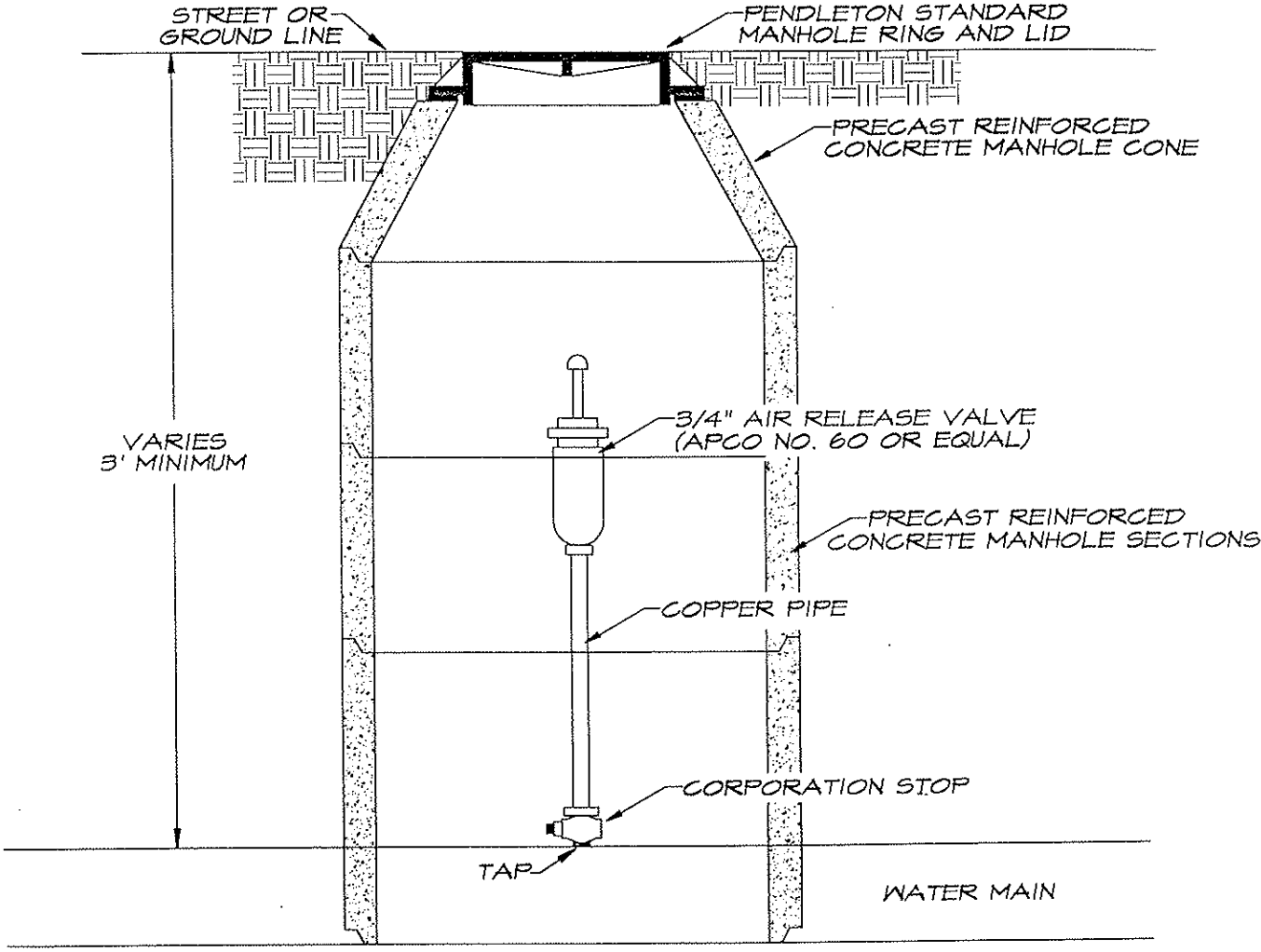
CITY OF PENDLETON

ENGINEERING DEPARTMENT

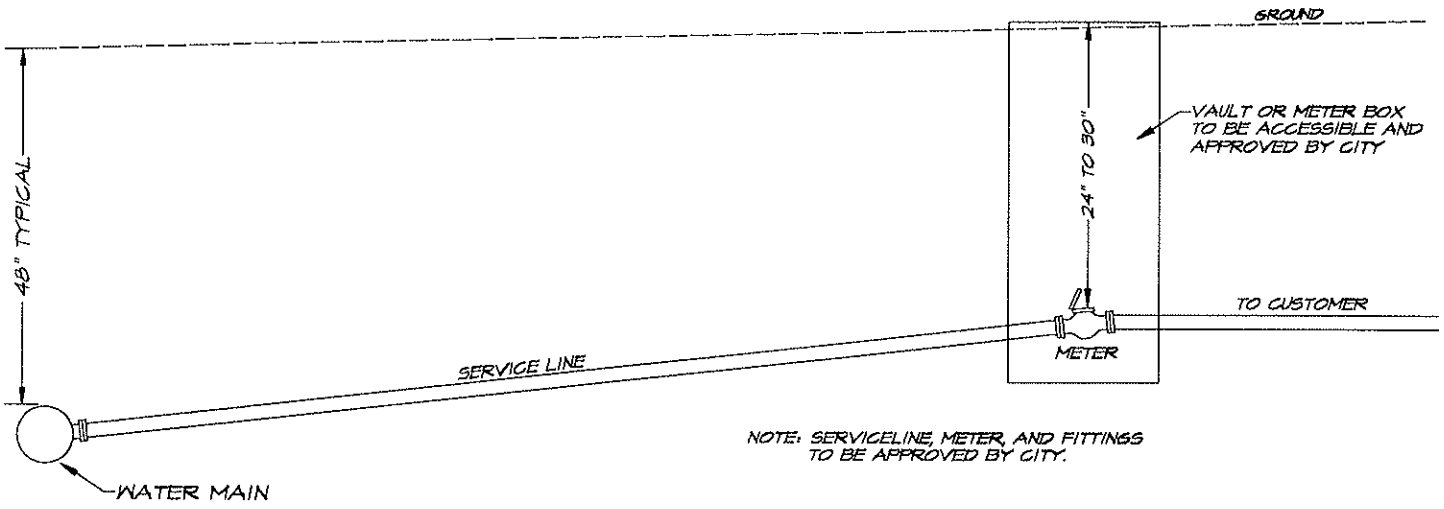
DN: R L V
 APPV'D: *David Shover*
 CITY ENGINEER

DATE: 8-23-71
 SCALE: NONE

TITLE: TYPICAL AIR RELEASE
 VALVE ASSEMBLY



CITY OF PENDLETON	ENGINEERING DEPARTMENT
DRAWN BY: RICK B. DATE: JUNE, 2000 APPROVED: <i>[Signature]</i> SCALE: NOT TO SCALE	TITLE: TYPICAL AIR RELEASE VALVE ASSEMBLY (STREET LOCATED)



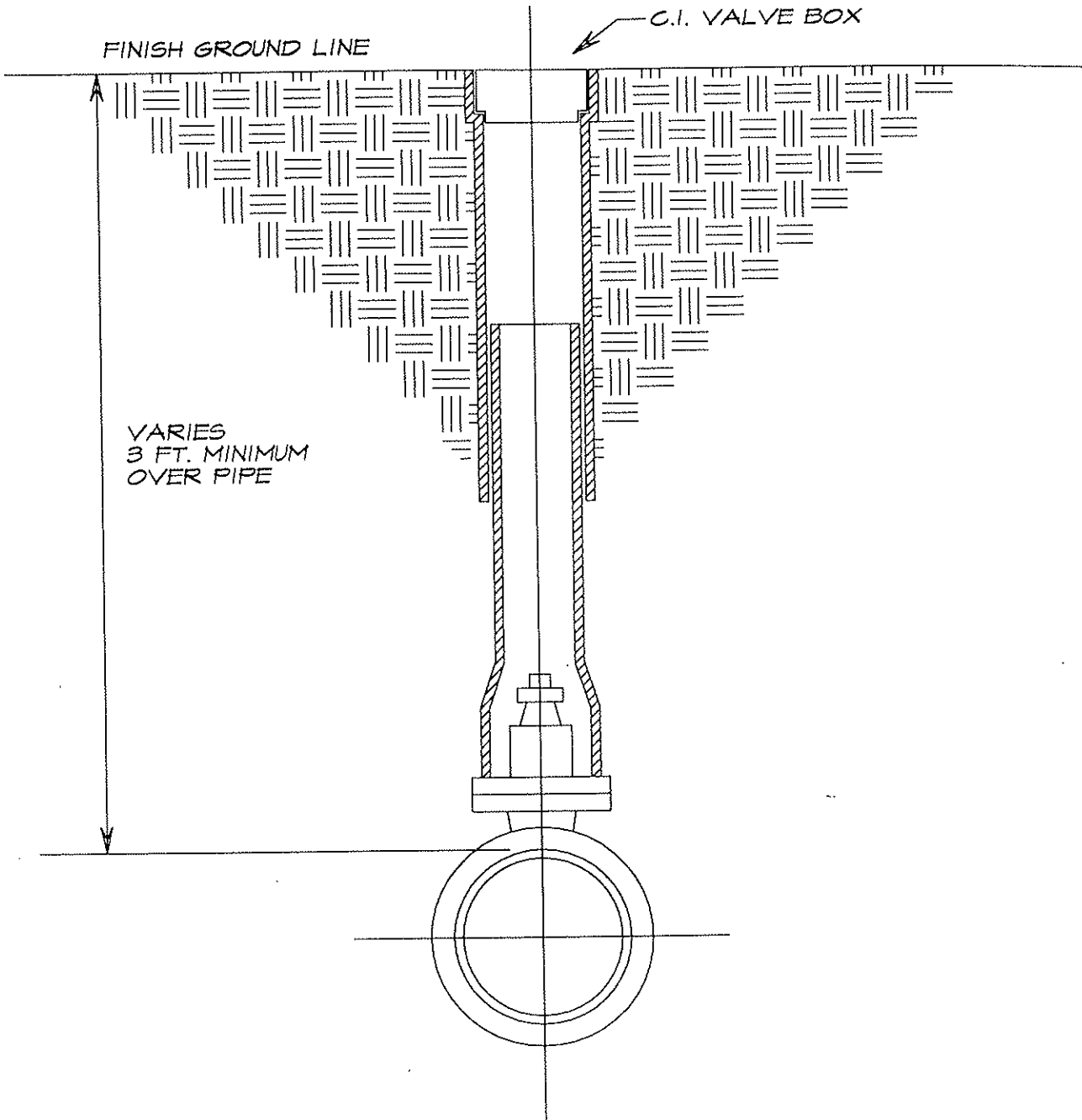
CITY OF PENDLETON

ENGINEERING DEPARTMENT

DRAWN BY: RICK B
 APPROVED: *[Signature]*

DATE: AUGUST, 2001
 SCALE: NOT TO SCALE

TITLE: TYPICAL IN-LINE METER
 DETAIL



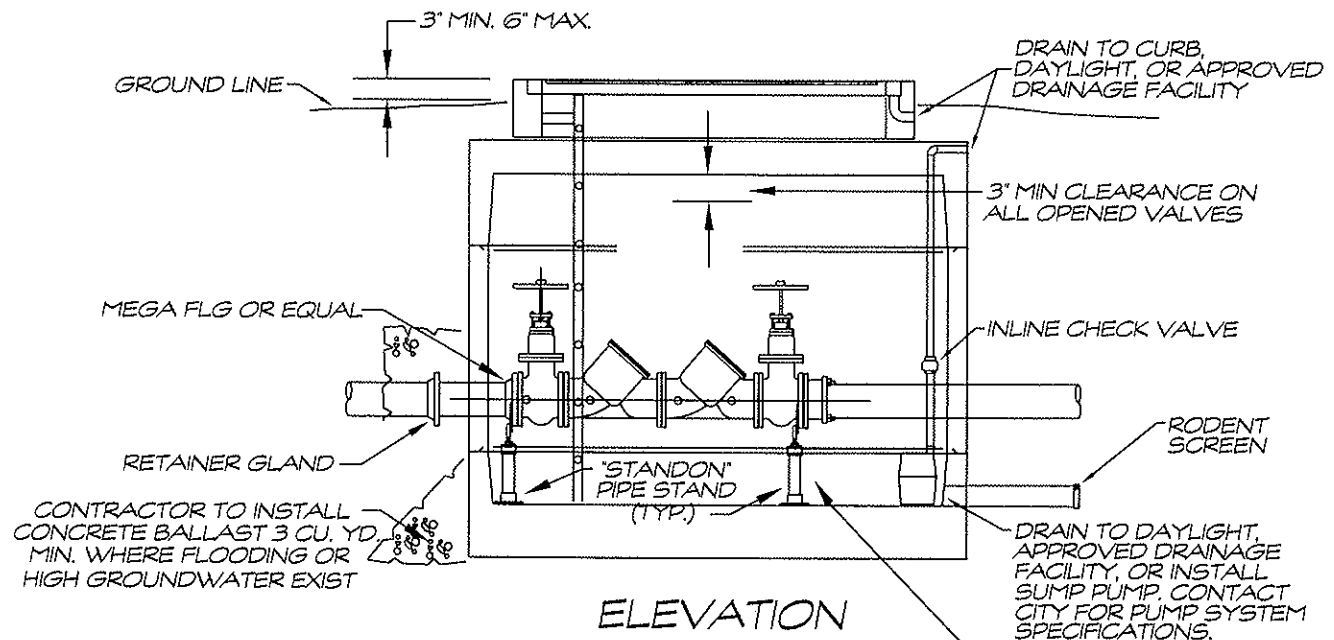
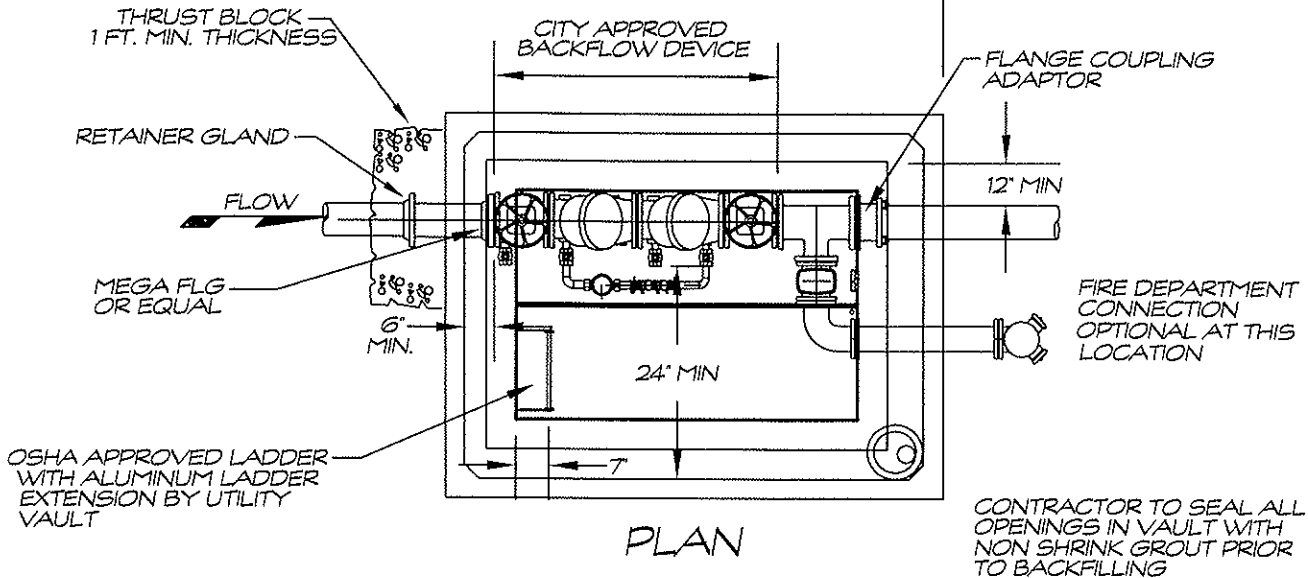
CITY OF PENDLETON

ENGINEERING DEPARTMENT

DRAWN BY: RICK E. [Signature]
APPROVED: [Signature] DATE: DEC. 15, 1995
SCALE: NOT TO SCALE

TITLE: TYPICAL VALVE AND
VALVE BOX SETTING

CITY WATER DEPT STANDARDS PLUMBING CODE



NOTES:

1. DETECTOR METER SHALL BE FACTORY WIRED WITH SEALED TERMINAL AND SENSOR FOR TOUCH READ SYSTEM. METER SHALL READ IN 100 CU FT INCREMENTS AND SHALL BE ABLE TO BE READ WITH A SENSUS AUTO GUN 4090.
2. DOUBLE DETECTOR CHECK VALVE SHALL BE INSTALLED IN A LOCATION APPROVED BY THE CITY, AND SHALL BE HORIZONTAL AND PLUMB.
3. IF DOUBLE DETECTOR CHECK VALVE IS NOT INSTALLED IN AN UNDERGROUND VAULT, THE BUILDING OR ENCLOSURE SHALL HAVE A HEAT SOURCE AND/OR INSULATION IN ORDER TO KEEP THE FACILITY ABOVE 40°F.
4. ALL CLEARANCES APPLY TO VAULT, BUILDING, OR OUTSIDE ENCLOSURE INSTALLATION.

FIRE DOUBLE CHECK VALVE ASSEMBLY

SIZE	UTILITY VAULT OR 'EQUAL		BILCO DOOR OR 'EQUAL
	WITH F.D.C.	WITHOUT F.D.C.	
4	676-WA	577-WA	J-5AL
6	687-WA	676-WA	J-5AL
8	5106-LA	687-WA	JD-3AL
10	5106-LA	2106-LA	JD-3AL

* CITY ENGINEER APPROVED EQUAL



ENGINEERING DEPARTMENT
500 S.W. DORION AVENUE
PENDLETON, OREGON 97801
VOICE: (541) 966-0203
FAX: (541) 966-0251

APPROVED BY:

CITY ENGINEER

May 3, 2005

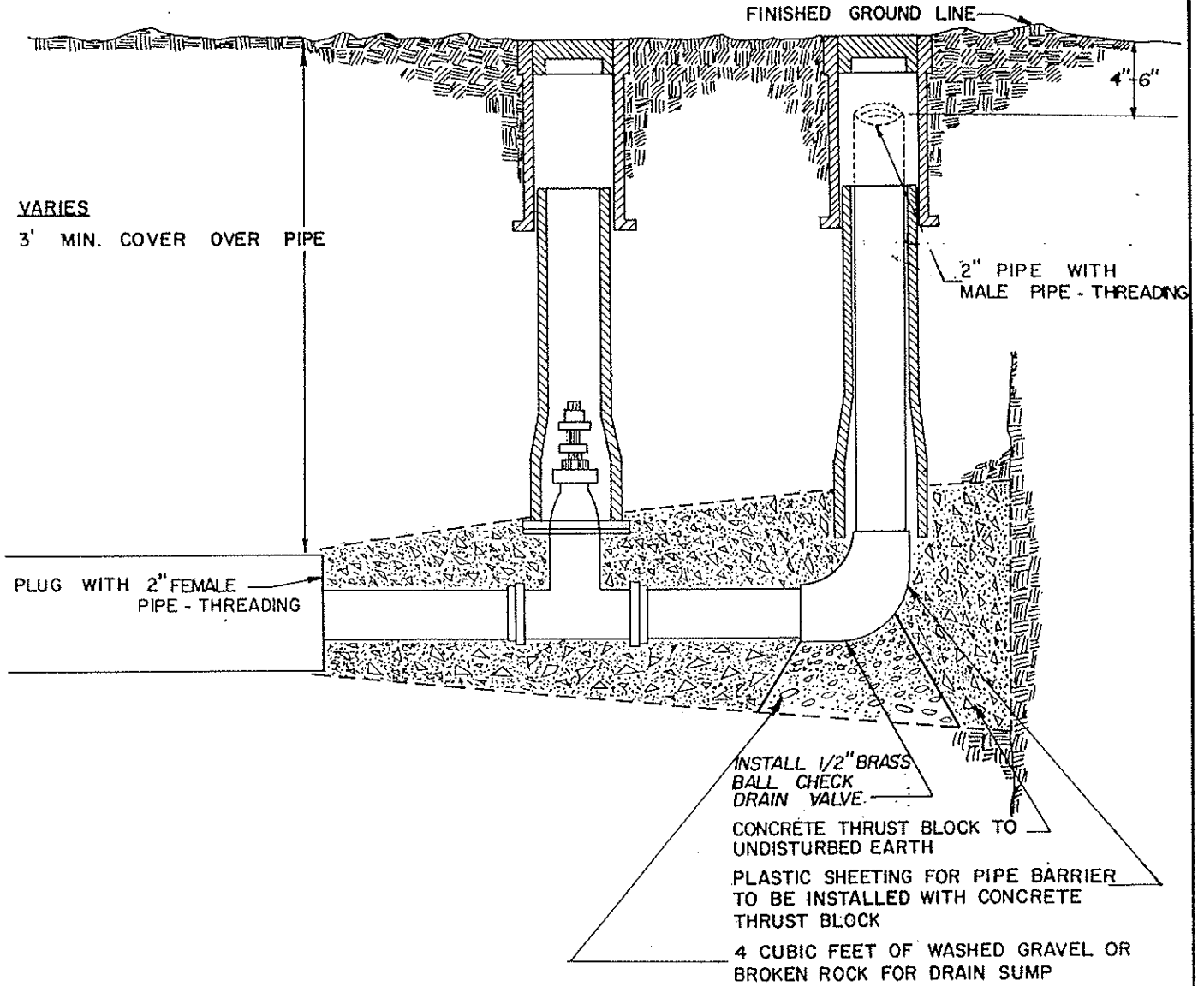
APPROVAL DATE

DOUBLE DETECTOR
CHECK VALVE
ASSEMBLY

NO SCALE

DWG. NO.

409



NOTE: IF RESTRAINED JOINT PIPE IS USED, THE THRUST BLOCK CAN BE ELIMINATED

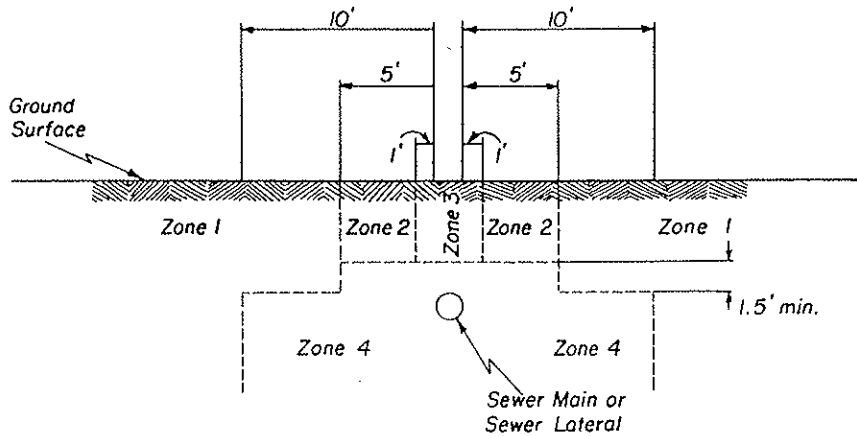
CITY OF PENDLETON

ENGINEERING DEPARTMENT

DN. *RJK* DATE: 3/5/80
 APPV'D. *David L. Lomen* SCALE: NONE
 CITY ENGINEER

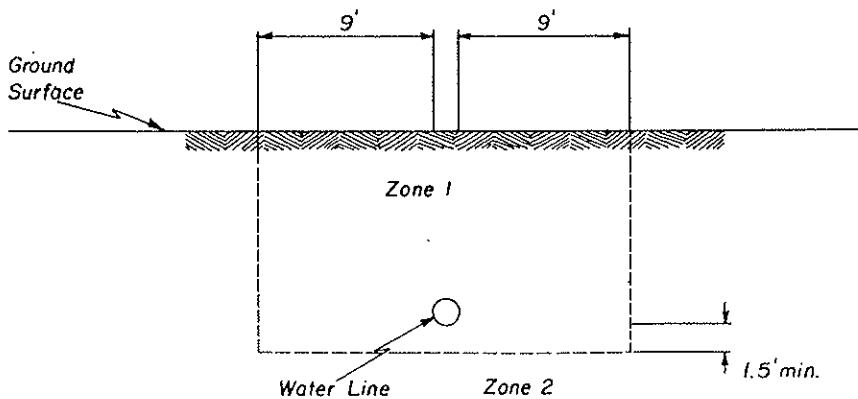
TITLE: STANDARD PLAN FOR BLOW-OFF VALVE

WHEN A WATER LINE IS PARALLEL TO A GRAVITY SEWER MAIN OR SEWER LATERAL THE SEPARATION BETWEEN THE TWO SHALL BE:



- ZONE 1: ONLY CROSSING RESTRICTIONS APPLY
- ZONE 2: CASE-BY-CASE DETERMINATION
- ZONE 3: PARALLEL WATER LINE PROHIBITED
- ZONE 4: PARALLEL WATER LINE PROHIBITED

WHEN A GRAVITY SEWER MAIN OR SEWER LATERAL CROSSES A WATER LINE THE CROSSING SHALL BE AT AN ANGLE OF APPROXIMATELY 90° AND THE SEPARATION BETWEEN THE TWO SHALL BE:



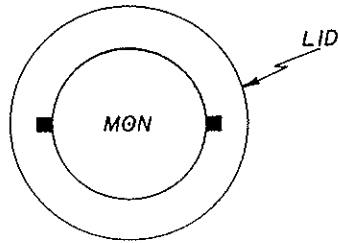
- ZONE 1: DUCTILE IRON SEWER W/WATER TIGHT JOINTS
- ZONE 2: APPROVED SANITARY SEWER MATERIAL

CITY OF PENDLETON

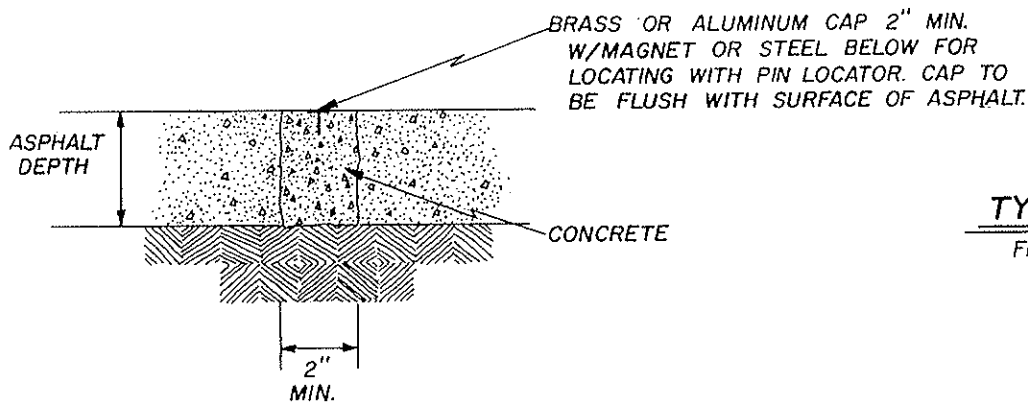
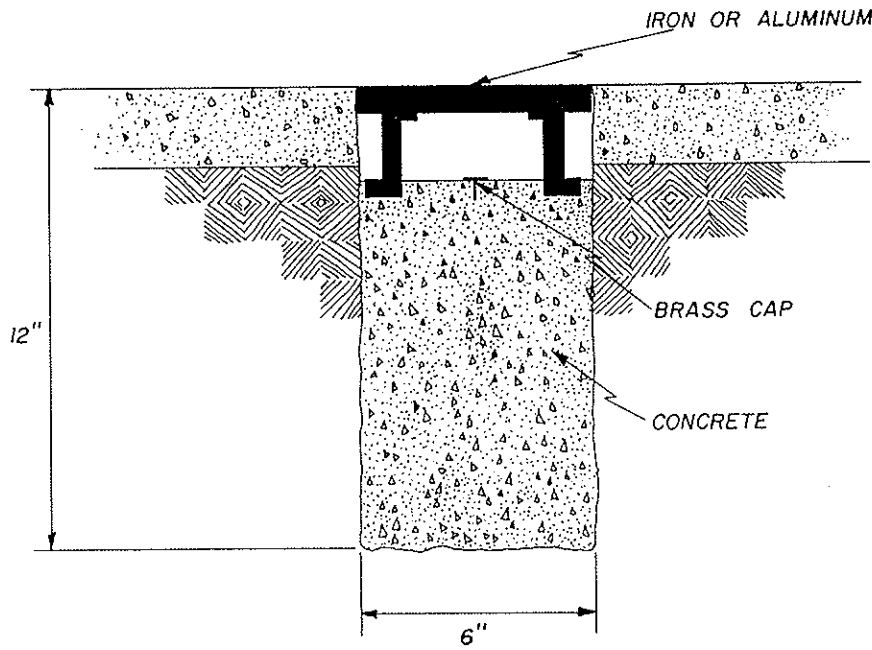
ENGINEERING DEPARTMENT

DN. *CSD* DATE: 3/19/82
 APPV'D *[Signature]* CITY ENGINEER
 SCALE: 1" = 10'

UTILITY LINE LOCATION



TYPE A
ENCLOSED



TYPE B
FLUSH

CITY OF PENDLETON

ENGINEERING DEPARTMENT

DN. C50
 APPV'D. *David L. ...* DATE: 4/12/82
 CITY ENGINEER SCALE: 1" = 5"

TITLE: SURVEY MONUMENTS