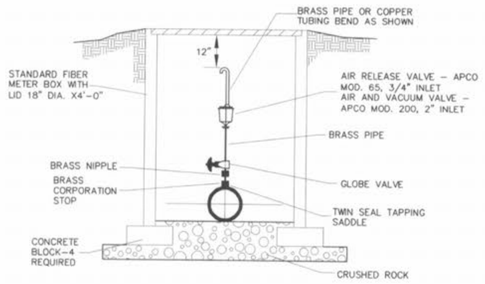
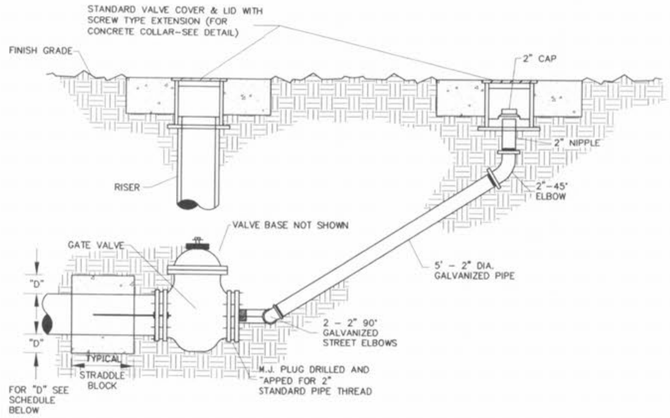


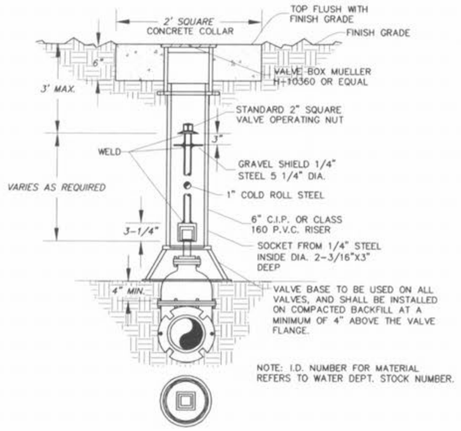
MANUAL AIR VALVE DETAIL

NOT TO SCALE



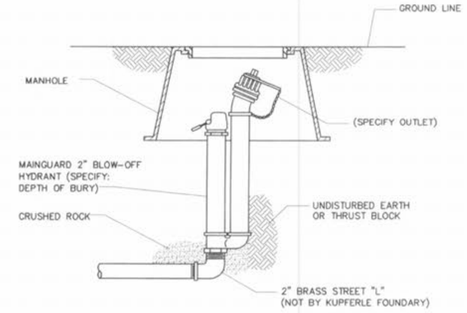
FLUSHING ASSEMBLY

NOT TO SCALE



WATER VALVE DETAIL

NOT TO SCALE

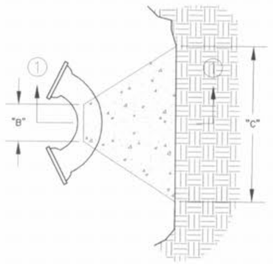


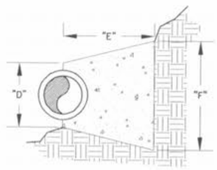
BLOW-OFF HYDRANTS SHALL BE NON-FREEZING, SELF DRAINING TYPE, WITH AN OVERALL LENGTH OF ': SET UNDERGROUND IN A METER BOX, THESE HYDRANTS WILL BE FURNISHED WITH A 2" FIP INLET, A NON-TURNING OPERATING ROD, AND SHALL OPEN TO THE LEFT. ALL OF THE WORKING PARTS SHALL BE OF BRONZE-TO BRONZE DESIGN, AND BE SERVICABLE FROM ABOVE GRADE WITH NO DIGGING. THE OUTLET SHALL ALSO BE BRONZE AND BE 2-1/2" NST. HYDRANTS SHALL BE LOCKABLE TO PREVENT UNAUTHORIZED USE AS MANUFACTURED BY KUPFERLE FOUNDRY CO., ST. LOUIS, MO, OR APPROVED EQUAL.

(SPECIFY OVERALL LENGTH 6" SHORTER THAN NORMAL DEPTH OF BURRY. MINIMUM OPENING IN METER BOX SHOULD BE 10".)

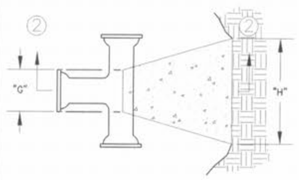
BLOW-OFF HYDRANT

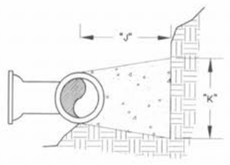
NOT TO SCALE





SECTION 1-1





SECTION 2-2

BENDS	"B"	"C"	"D"	"E"	"F"
6"-11 1/4°	8"	15"	12"	24"	10"
6"-22 1/2°	8"	19"	12"	24"	13"
6"-45°	8"	30"	12"	24"	14"
6"-90°	8"	30"	12"	24"	27"
8"-11 1/4°	8"	20"	12"	24"	10"
8"-22 1/2°	8"	22"	12"	24"	17"
8"-45°	8"	30"	12"	24"	24"
8"-90°	8"	38"	12"	24"	36"
12"-11 1/4°	8"	30"	12"	24"	15"
12"-22 1/2°	8"	35"	12"	24"	25"
12"-45°	8"	40"	12"	24"	40"
12"-90°	8"	60"	12"	24"	52"

NOTES:
1. 2"& 4" FITTINGS EQUIVALENT TO 6" FITTINGS.
2. TAPPING SLEEVES TO HAVE BACKING BLOCKS SAME SIZE AS REQUIRED FOR TEES.

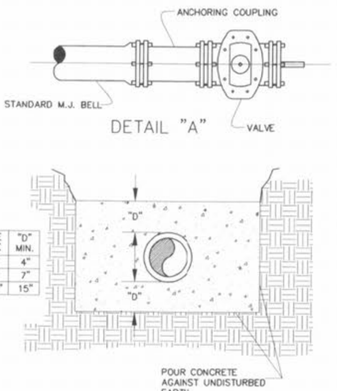
TEES	"G"	"H"	"J"	"K"
6"X6"X6"	12"	24"	24"	18"
8"X8"X6"	12"	24"	24"	18"
8"X8"X8"	12"	24"	24"	24"
12"X12"X6"	12"	24"	24"	18"
12"X12"X8"	12"	24"	24"	24"
12"X12"X12"	12"	36"	24"	36"

CUBIC FEET OF CONCRETE REQUIRED				
BEND	11 1/4°	22 1/2°	45°	90°
6"	1.7	2.4	3.5	5.5
8"	2.1	3.1	5.0	8.5
12"	3.7	5.9	9.7	17.5

TEE X	6"	8"	12"	PLUG
6"	40	~	~	4.0
8"	40	5.0	~	5.0
12"	40	5.5	10.5	10.5

BACKING BLOCKS

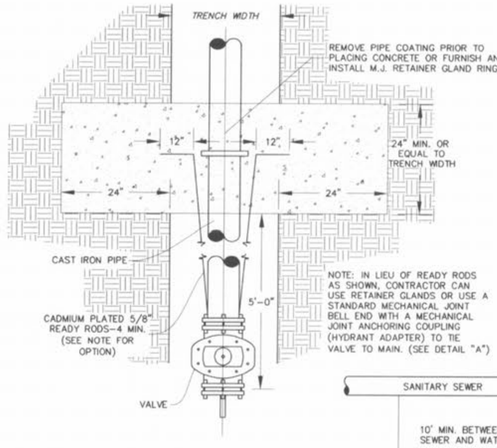
NOT TO SCALE



PIPE SIZE	"D" MIN.
6"	4"
8"	7"
12"	15"

POUR CONCRETE AGAINST UNDISTURBED EARTH

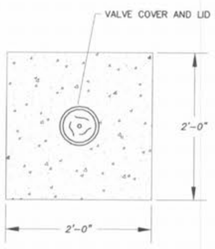
DETAIL "A"



NOTE: IN LIEU OF READY RODS AS SHOWN, CONTRACTOR CAN USE RETAINER GLANDS OR USE A STANDARD MECHANICAL JOINT BELL END WITH A MECHANICAL JOINT ANCHORING COUPLING (HYDRANT ADAPTER) TO TIE VALVE TO MAIN. (SEE DETAIL "A")

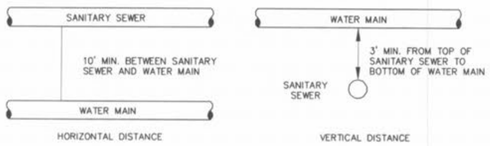
STRADDLE BLOCK DETAIL

NOT TO SCALE



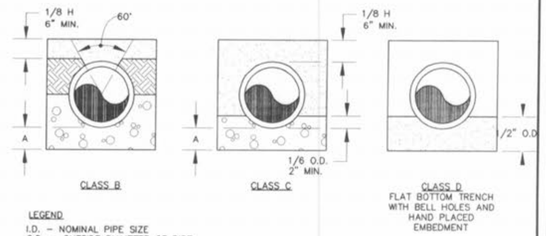
TOP VIEW CONCRETE COLLAR

NOT TO SCALE



TYPICAL WATER AND SEWER SEPARATION

NOT TO SCALE



LEGEND
I.D. - NOMINAL PIPE SIZE
O.D. - OUTSIDE DIAMETER OF PIPE
H - COVER ABOVE TOP OF PIPE
A - EMBEDMENT BELOW PIPE (SEE TABLE)

TAMPED BACKFILL
COMPACTED BACKFILL
GRANULAR BEDDING

TABLE OF EMBEDMENT DEPTHS BELOW PIPE

I.D.	A MIN. SOIL	A MIN. ROCK
27" & SMALLER	3"	6"

GRANULAR BEDDING SHALL BE CRUSHED ROCK OR PEA GRAVEL WITH NOT LESS THAN 95% PASSING 1/2" (95% PASSING 3/4" FOR 30" AND LARGER PIPE) AND NOT LESS THAN 95% RETAINED ON A #4; TO BE PLACED IN NOT MORE THAN 6" LAYERS AND COMPACTED BY SLICING WITH A SHOVEL OR VIBRATING.

COMPACTED BACKFILL SHALL BE FINELY DIVIDED JOB EXCAVATED MATERIAL FREE FROM DEBRIS, ORGANIC MATERIAL AND STONES, PLACED IN UNIFORM LAYERS NOT MORE THAN 6" THICK, COMPACTED TO 95% MAXIMUM DENSITY AS DETERMINED BY A.S.T. D698, OR GRADED AGGREGATE. GRANULAR BACKFILL MATERIAL MAY BE SUBSTITUTED FOR ALL OR PART OF COMPACTED BACKFILL.

TAMPED BACKFILL SHALL BE FINELY DIVIDED JOB EXCAVATED MATERIAL FREE FROM DEBRIS, ORGANIC MATERIAL AND STONES, HAND PLACED IN UNIFORM LAYERS NOT MORE THAN 8" THICK AND TAMPED AROUND CONDUIT PIPE. GRANULAR BACKFILL MATERIAL MAY BE SUBSTITUTED FOR ALL OR PART OF TAMPED BACKFILL.

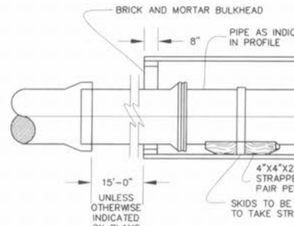
TRENCH BACKFILL SHALL BE AS REQUIRED IN THE "LAYING AND BACKFILL" SECTION OF THE DETAILED SPECIFICATIONS.

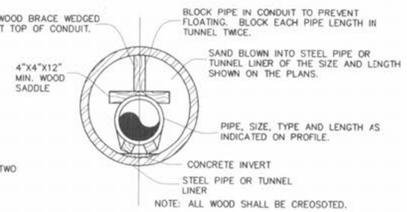
EMBEDMENT THE TYPE OF EMBEDMENT TO BE USED SHALL BE AS SPECIFIED IN THE PLANS AND SPECIFICATIONS.

TRACER WIRE REQUIRED ON ALL WATER MAINS.

WATER MAIN EMBEDMENT

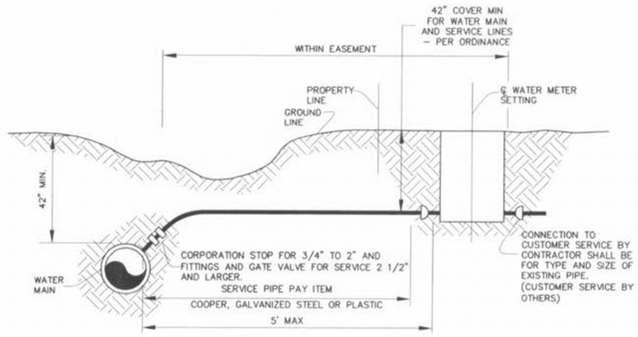
NOT TO SCALE





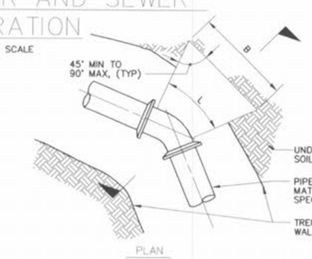
TUNNEL LINER DETAIL

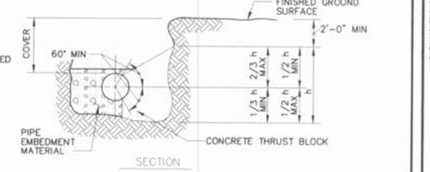
NOT TO SCALE



TYPICAL SERVICE ASSEMBLY

NOT TO SCALE





NOTES:
1. AREA OF BLOCK, A = Bxh. BLOCK AREAS ARE SHOWN ON GENERAL LAYOUT OR TABLE.
2. B = h = $\sqrt{A}$, EXCEPT WHERE TOP OF BLOCK IS WITHIN 2 FEET FROM GROUND SURFACE, THEN B = A/h.
3. MINIMUM BLOCK DIMENSION (B & h) SHALL BE AT LEAST OD OF PIPE OR 1 FOOT FOR PIPE OD 12" OR LESS.
4. THE BOTTOM OF THE BLOCK SHALL EXTEND AT LEAST TO THE BOTTOM OF THE TRENCH IN ALL CASES.
5. L=FITTING LENGTH MINUS CLEARANCE FOR BELLS.
6. DETAIL IS SHOWN FOR CAST IRON PIPE; DETAIL IS SIMILAR FOR OTHER TYPES OF PIPE.
7. DIMENSIONS FOR THRUST BLOCKS FOR FIRE HYDRANT ASSEMBLY ARE SHOWN FIRE HYDRANT ASSEMBLY DETAIL.

SIZE	BEND	THRUST AREA	B	H
16"	11 1/2° 22 1/2°	4 SF	2'	2'
16"	45°	8 SF	2.8'	2.8'

CONCRETE THRUST BLOCKING

NOT TO SCALE

PICKETT RAY & SILVER
CIVIL ENGINEERS
PLANNERS
LAND SURVEYORS
333 Mid Rivers Mall Drive
St. Peters, MO 63376
Phone (636) 397-1211
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WELLINGTON PARK

Prepared For:

THE JONES COMPANY
Building Homes Since 1927
A CENTEX Company

16460 CHESTERFIELD GROVE BLVD.
CHESTERFIELD, MO 63005
(314) 235-7387

CONSTRUCTION DETAILS

REVISIONS NO.	DATE

ENGINEERS AUTHENTICATION
The responsibility for professional engineering liability on this project is hereby limited to the set of plans authenticated by the seal, signature, and date hereunder attached. Responsibility is disclaimed for all other engineering plans involved in this project and specifically excludes revisions after this date unless reauthenticated.
PICKETT, RAY & SILVER, INC

DRAWN	DATE
E.J.S.	03-04-03
CHECKED	DATE

PROJECT # 02077.JCCH.00R
TASK # 6 FIELD 1997B BOOK 821

WELLINGTON PARK CONSTRUCTION DETAILS
SHEET 23 OF 23

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