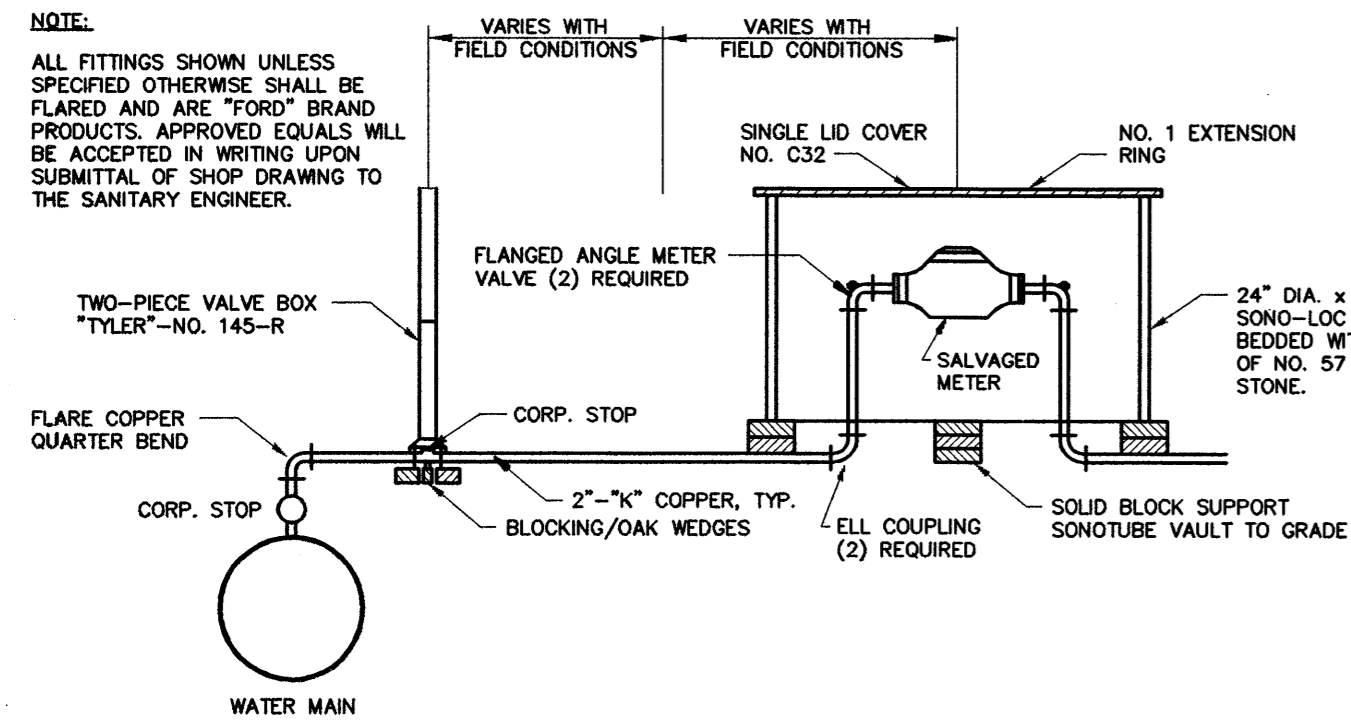
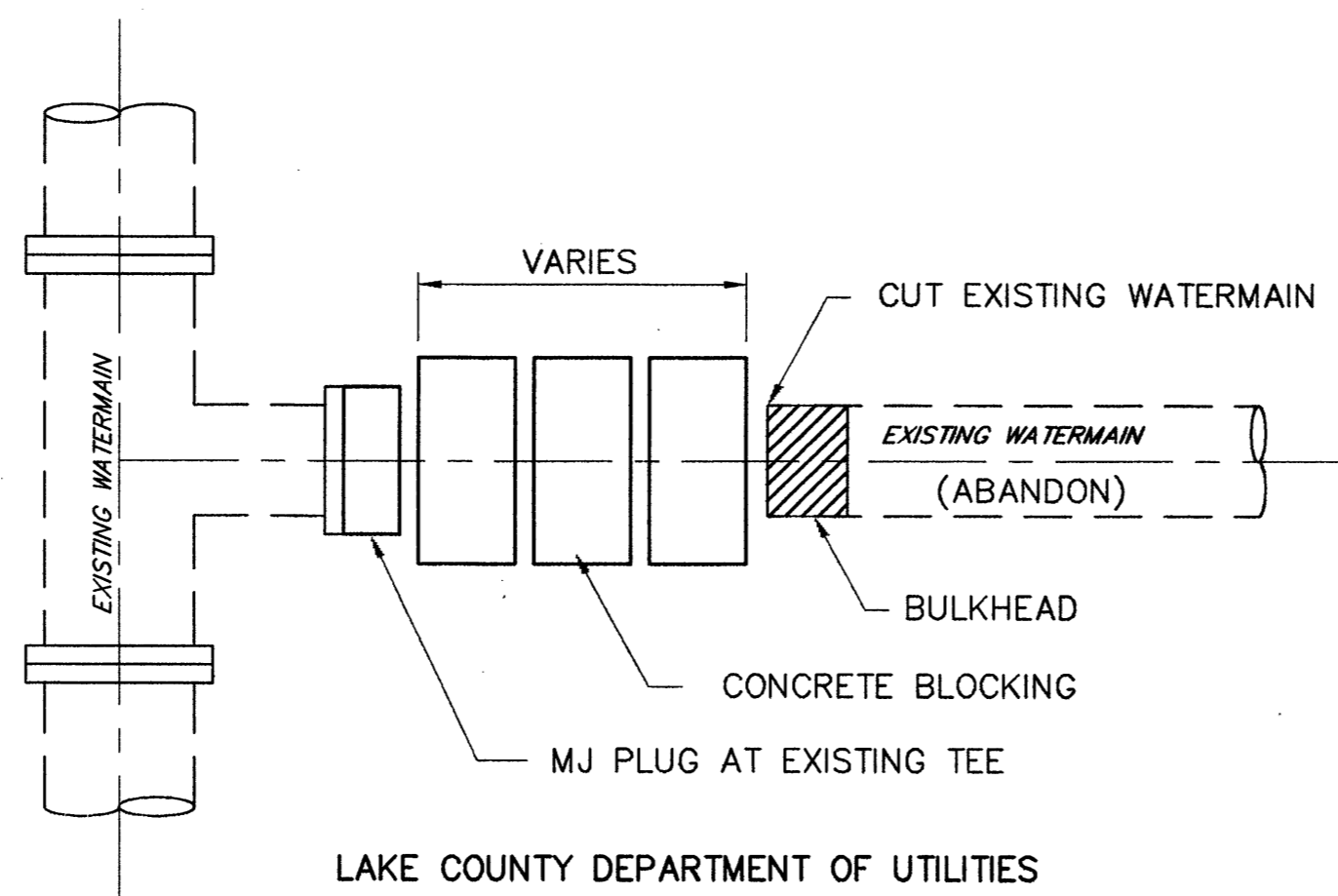


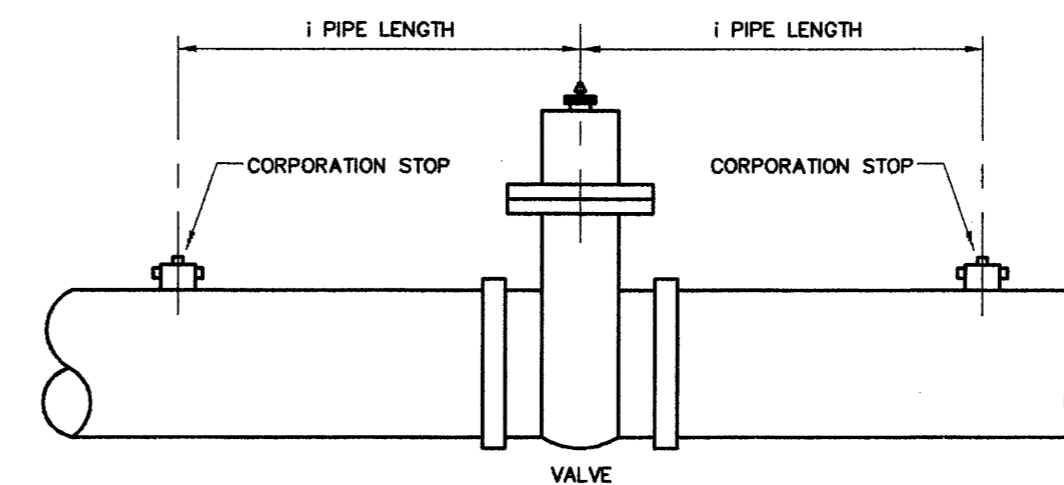
NOTE:
ALL FITTINGS SHOWN UNLESS SPECIFIED OTHERWISE SHALL BE FLARED AND ARE "FORD" BRAND PRODUCTS. APPROVED EQUALS WILL BE ACCEPTED IN WRITING UPON SUBMITTAL OF SHOP DRAWING TO THE SANITARY ENGINEER.



2" NON-TRAFFIC BEARING METER SETTING

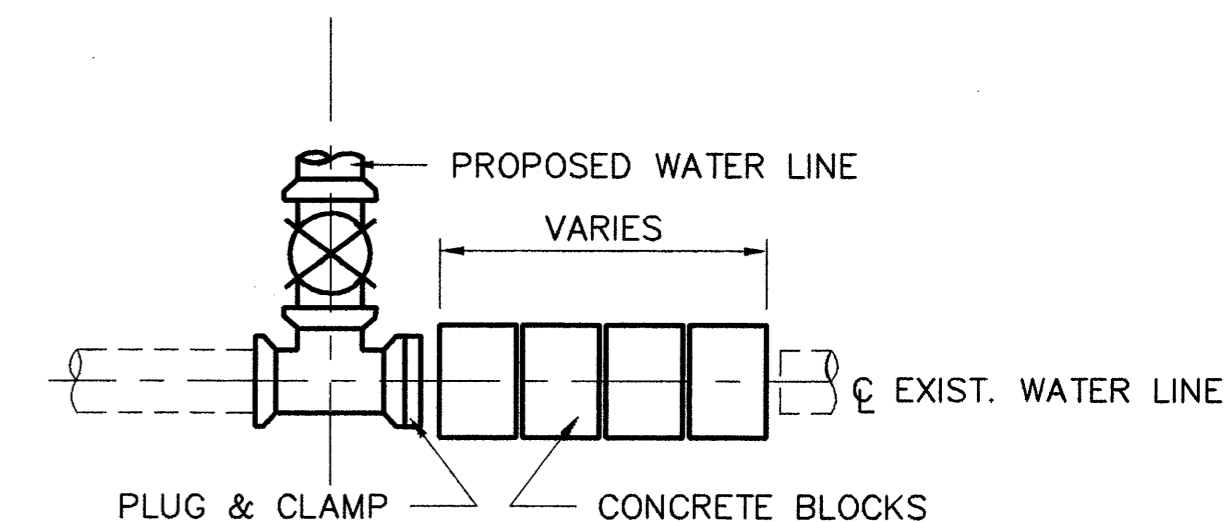


LAKE COUNTY DEPARTMENT OF UTILITIES WATERMAIN ABANDON DETAIL

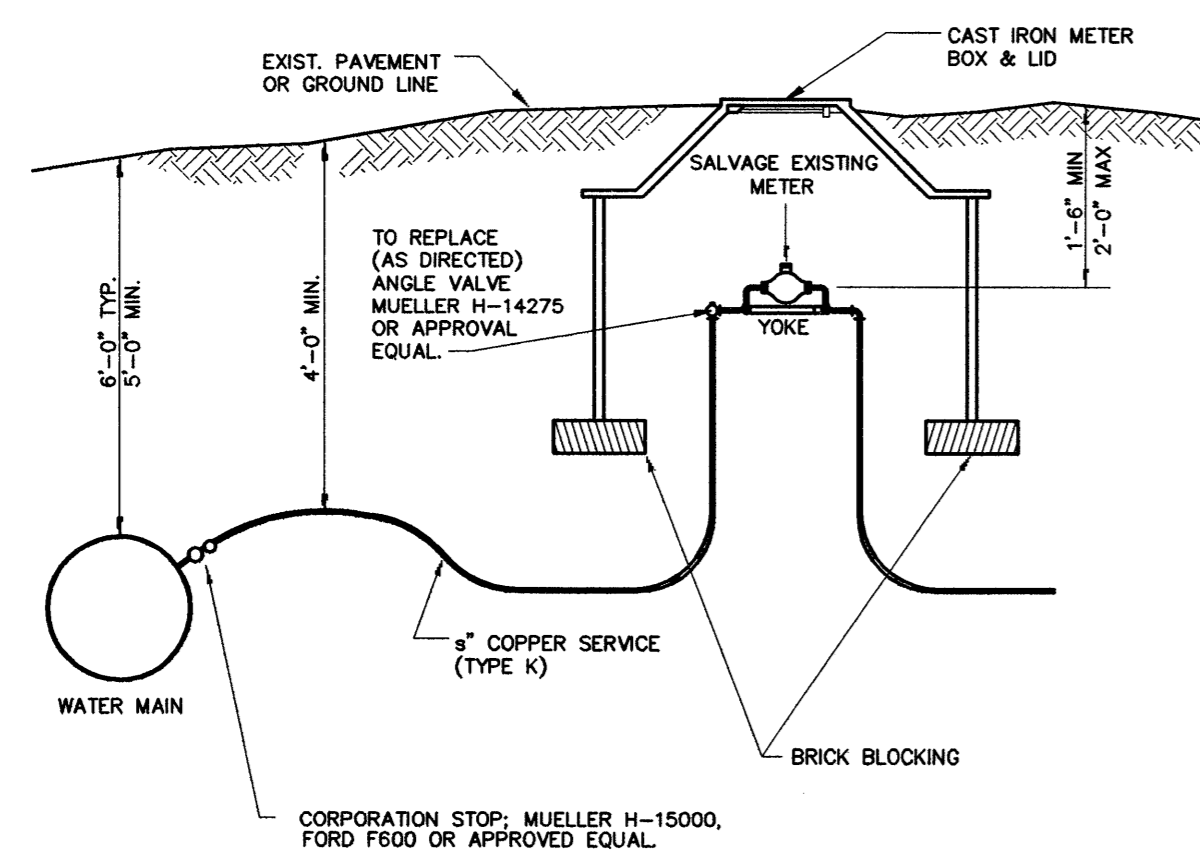


NOTE:
1 1/2" CORPORATION STOPS ON ALL LINES 16" & GREATER
1" CORPORATION STOPS ON ALL LINES 12" & LESS
CORPORATION STOPS TO BE PLUGGED AFTER STERILIZATION & TESTING

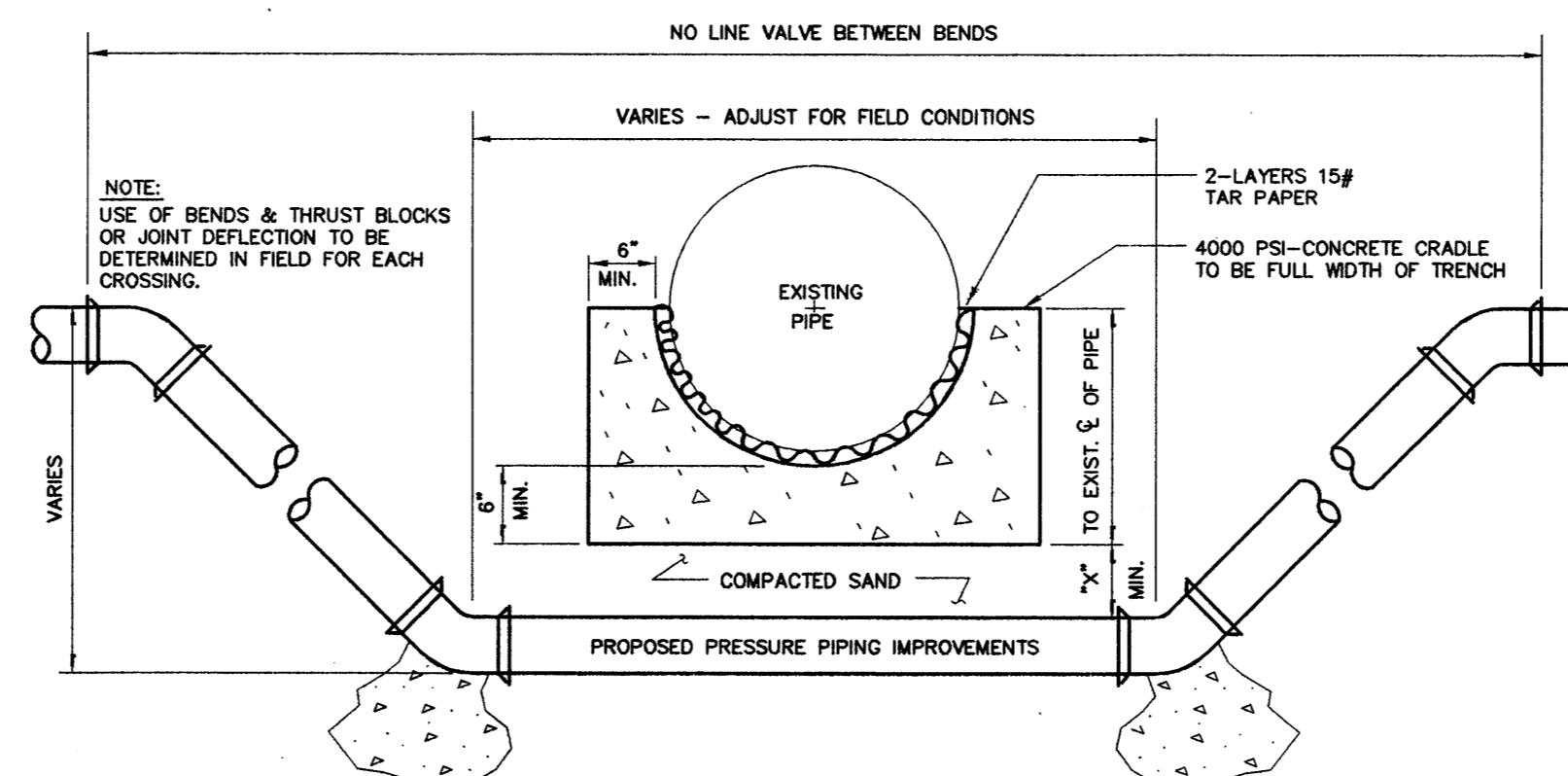
STERILIZATION & TESTING CONNECTIONS AT VALVES



SOLID BLOCKING DETAIL



SERVICE TIE IN FOR OUTSIDE METER DETAIL



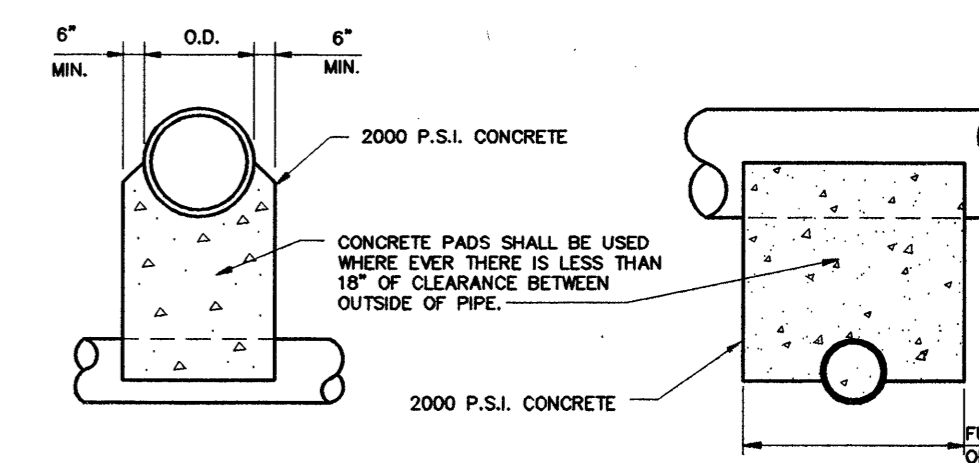
NOTE:
USE OF BENDS & THRUST BLOCKS OR JOINT DEFLECTION TO BE DETERMINED IN FIELD FOR EACH CROSSING.

CONCRETE CRADLE CONDITIONS:

- IF SANITARY OR STORM SEWER PIPE JOINT IS WITHIN PROPOSED IMPROVEMENT TRENCH LIMITS
- IF CROSSING A WATER LINE AT ANY POINT
- IF CROSSING SPACE IS LESS THAN MIN. SPACE OF CRADLE BELOW PIPE BOTTOM PLUS "X" DIMENSION THEN OMIT SAND FILL AND USE CONCRETE.

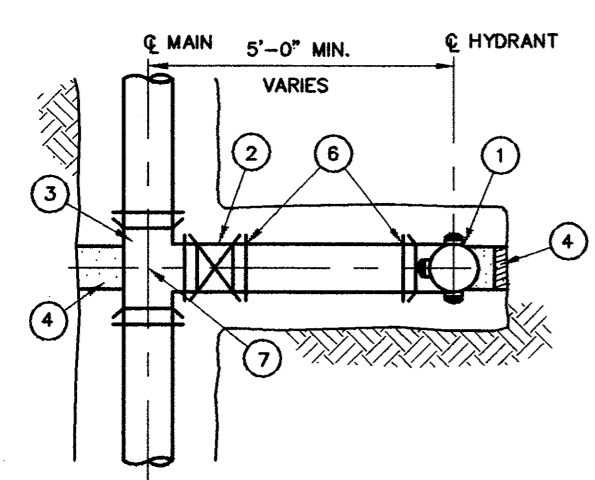
"X" DIMENSION REQUIREMENTS:

- 6" FOR WATER LINE CROSSING (ALSO FOR GAS & O.B.T. LINES w/NO CRADLE NEEDED)
- 18" FOR SANITARY OR STORM SEWER PIPE
- IF CROSSING SPACE IS MORE THAN MIN. SPACE OF CRADLE BELOW PIPE BOTTOM PLUS AFOREMENTIONED "X" DIMENSION THEN EXTEND "X" DIMENSION TO MAKE UP DIFFERENCE.

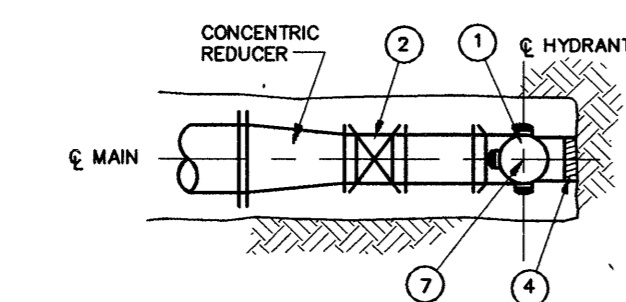


NOTE:
UNLESS OTHERWISE DIRECTED BY THE ENGINEER, WHERE TWO PIPES (SEWER & WATER) CROSS EACH OTHER, A CONCRETE PAD AND GRADLE SEPARATOR SHALL BE PLACED BETWEEN THEM AS INDICATED ABOVE. WHERE PERMISSION IS GRANTED TO OMIT THE CONCRETE PADS, GRANULAR BACKFILL SHALL BE TAMPED IN 6" LAYERS AROUND BOTH PIPES. SUCH TAMPED BACKFILL SHALL BE CONTINUOUS FROM THE CRADLE OF THE LOWER PIPE TO THE TOP OF THE UPPER PIPE AND AT THE BOTTOM SHALL EXTEND IN BOTH DIRECTIONS, FOR THE FULL WIDTH OF THE TRENCH.

PIPE CROSSING DETAIL

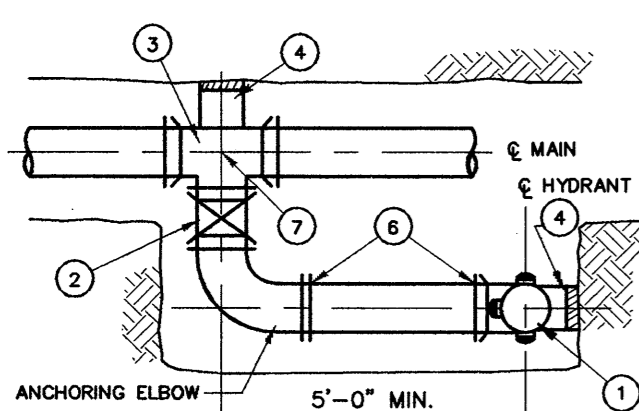


TYPE "A" HYDRANT ASSEMBLY



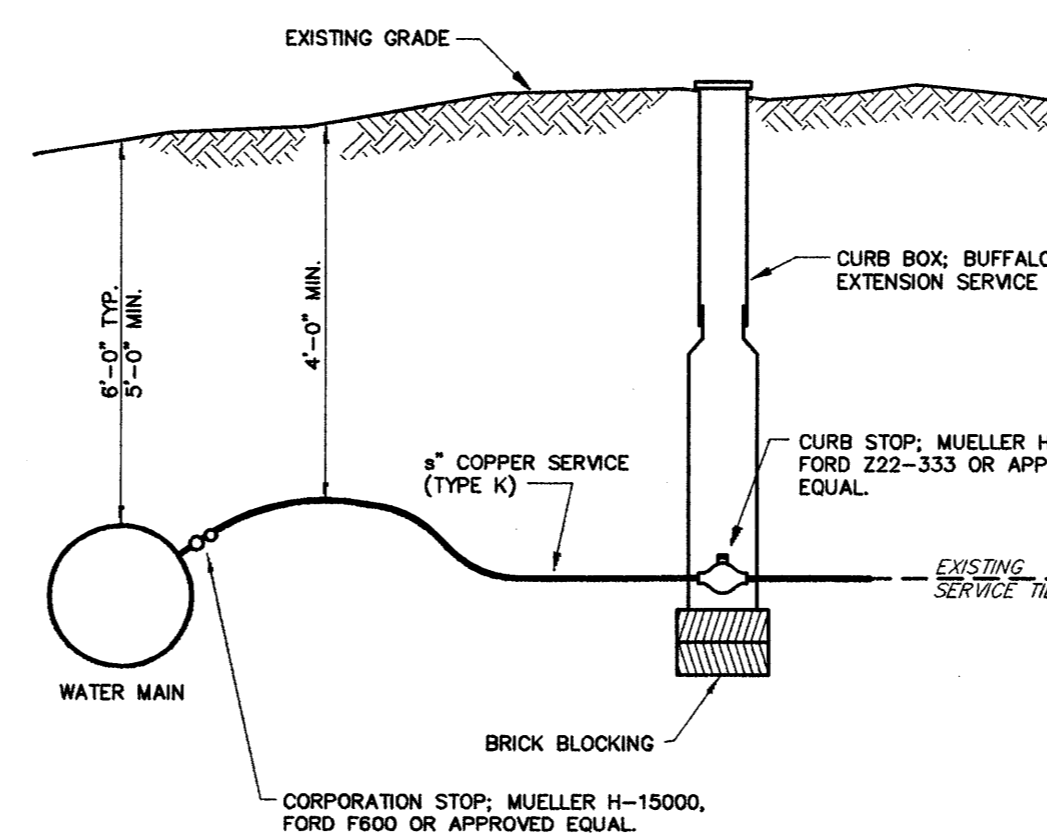
TYPE "C" HYDRANT ASSEMBLY

NOTE: CLEVELAND STANDARD HYDRANTS WITH FROST CASING SHALL BE USED. HYDRANTS SHALL HAVE CLEVELAND STANDARD THREAD NOZZELS OF TWO - 2 1/2" HOSE AND ONE 4" PUMPER SIZE.

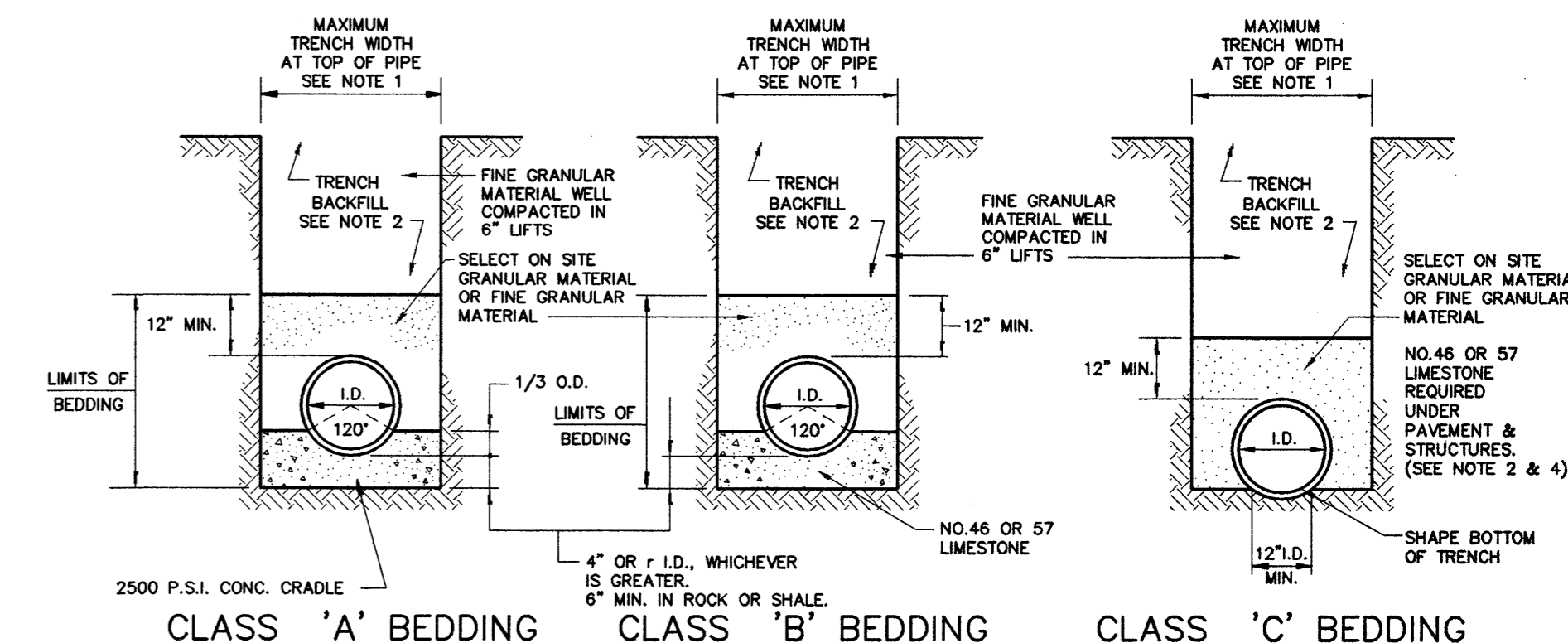


TYPE "B" HYDRANT ASSEMBLY TYPICAL HYDRANT ASSEMBLY ELEVATION
STANDARD LAKE COUNTY WATER DEPARTMENT

HYDRANT DETAILS



SERVICE TIE-IN FOR INSIDE METER



CLASS 'A' BEDDING CLASS 'B' BEDDING CLASS 'C' BEDDING

NOTES:

- MAXIMUM TRENCH WIDTH AT TOP OF PIPE SHALL BE O.D.+24" FOR ALL PIPES UP TO AND INCLUDING 24" I.D.; O.D.+30" FOR PIPE LARGER THAN 24" I.D.
- PIPE BACKFILL UNDER PAVEMENT AND STRUCTURES SHALL BE NO. 46 OR NO. 57 LIMESTONE COMPACTED TO TOP OF TRENCH. THE BACKFILL MATERIAL SHALL EXTEND A MINIMUM OF 3 FEET BEYOND EACH EDGE OF PAVEMENT OR STRUCTURE IN AREAS OUTSIDE OF PAVEMENT; BACKFILL SHALL BE AS PER SPECIAL JOB REQUIREMENTS NOTES 2.07, 2.08 & 2.09.
- ALL BEDDING SHALL BE CLASS "B" UNLESS OTHERWISE NOTED ON THE PLANS OR AUTHORIZED BY THE ENGINEER.
- SLAG BEDDING SHALL NOT BE USED.
- WATER LINE BEDDING SHALL BE CLASS "C".
- CLAY DAMS SHALL BE REQUIRED WHEN AND WHERE NECESSARY PER THE SOLE DISCRETION OF THE LAKE COUNTY SANITARY ENGINEER.

LAKE COUNTY DEPARTMENT OF UTILITIES TRENCH & BEDDING DETAILS

REV. NO.	DESCRIPTION	DATE	BY	CHK'D.

DATE:	2-15-00
DRAWN BY:	J.R.R.
CHECKED BY:	P.J.F.
APPROVED BY:	P.J.F.
F.B. No.	PG. 16

SCALE	NONE
CONTRACT No.	98367
SHEET NO.	16
OF	20