

NOTE: FOR HYDRANT, VALVE AND VALVE BOX SEE MATERIAL SPECIFICATIONS.

HYDRANT TO BE PLACED WITH STEAMER NOZZLE FACING STREET

5'-0" FROM
 C OF MAIN TO
 TOP OF LOWER
 BARREL

DISTANCE FROM
 TOP OF LOWER
 BARREL TO GROUND
 LEVEL TO BE
 MINIMUM OF 2" }
 MAXIMUM OF 6" }

GROUND
 LEVEL

MJ ANCHORING TEE
 (CLOW FIG. 1217 OR EQUAL)
 OR MJ ANCHORING COUPLING
 (CLOW FIG. 1211 OR EQUAL)

MJ ANCHORING COUPLING
 (CLOW FIG. 1211 OR EQUAL)

CONCRETE
 BLOCKING

NOTE: ALL EXPOSED BOLTS AND FITTINGS INCLUDING LOWER BARREL OF HYDRANT TO BE WRAPPED IN 8 MIL POLYETHYLENE.

FILE NAME: DPN1

CITY of LIMA, DEPT. of UTILITIES
 WATERLINE GENERAL SPECIFICATIONS

TYPICAL HYDRANT INSTALLATION

DRAWN: K.SHOEMAKER	DATE: 12/15/99	DETAIL PAGE NUMBER 1
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DETAIL PAGE
 NUMBER 1

NOTE: FOR HYDRANT, VALVE AND VALVE BOX SEE MATERIAL SPECIFICATIONS.

HYDRANT TO BE PLACED WITH STEAMER NOZZLE FACING STREET

DISTANCE FROM TOP OF LOWER BARREL TO GROUND LEVEL TO BE MINIMUM OF 2" } MAXIMUM OF 6" }

5'-0" FROM ϕ OF MAIN TO TOP OF LOWER BARREL

GROUND LEVEL

MJ ANCHORING HYDRANT TEE (CLOW FIG. 1224 OR EQUAL)

MJ ANCHORING COUPLING (CLOW FIG. 1211 OR EQUAL)

CONCRETE BLOCKING

NOTE: ALL EXPOSED BOLTS AND FITTINGS INCLUDING LOWER BARREL OF HYDRANT TO BE WRAPPED IN 8 MIL POLYETHYLENE.

FILE NAME: DPN2

CITY of LIMA, DEPT. of UTILITIES
WATERLINE GENERAL SPECIFICATIONS

HYDRANT INST. (COMB. HYD. TEE & 90° BEND)

DRAWN: K.SHOEMAKER

DATE: 12/15/99

DETAIL PAGE NUMBER 2

DETAIL PAGE NUMBER 2

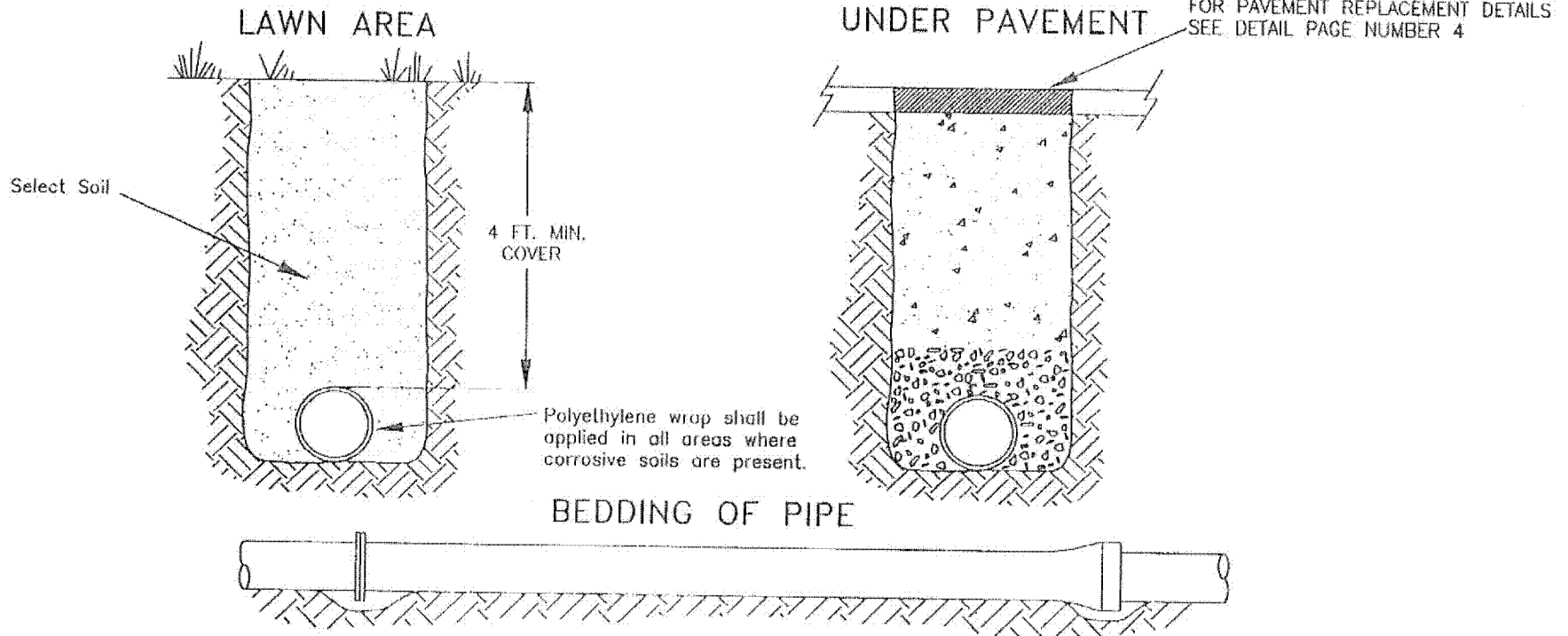
WATER LINE TRENCH DETAILS

NOTE: All water lines shall have a minimum of 4'-0" of cover and shall be laid 2 FT. behind the curb unless a waiver is given by the Department of Utilities. A minimum of 1 FT. clearance shall be required from any structure.

Contractor or developer shall place field stakes at 10 FT. offset showing center line and grade of water line. Inspectors will require contractor to adhere to approved plans and field staking in all cases unless changes are approved by Utilities Director or designated representative.

If construction is by Utilities Department personnel, street must be subgraded by contractor prior to water line construction.

All valves and fittings shall have polyethylene wrap applied prior to backfilling trench with either granular material or select soil.



COUPLINGS - NEVER ALLOW COUPLINGS TO REST ON OR TO SETTLE DOWN TO ORIGINAL TRENCH BOTTOM
 PIPE - MAKE CERTAIN THAT PIPE BARREL IS GIVEN AN EVEN BEARING FOR ITS FULL LENGTH

Laying conditions: In accordance with AWWA C600

Lawn area - Type 1 (flat bottom trench - select soil backfill)

Pavement area - Type 1 (flat bottom trench - 1ft. minimum granular with poly wrap and controlled density fill)

Rock area - Type 5 (pipe bedded in compacted granular to 1 ft. above pipe with poly wrap)

FILE NAME: DPN3

**CITY of LIMA, DEPT. of UTILITIES
 WATERLINE GENERAL SPECIFICATIONS**

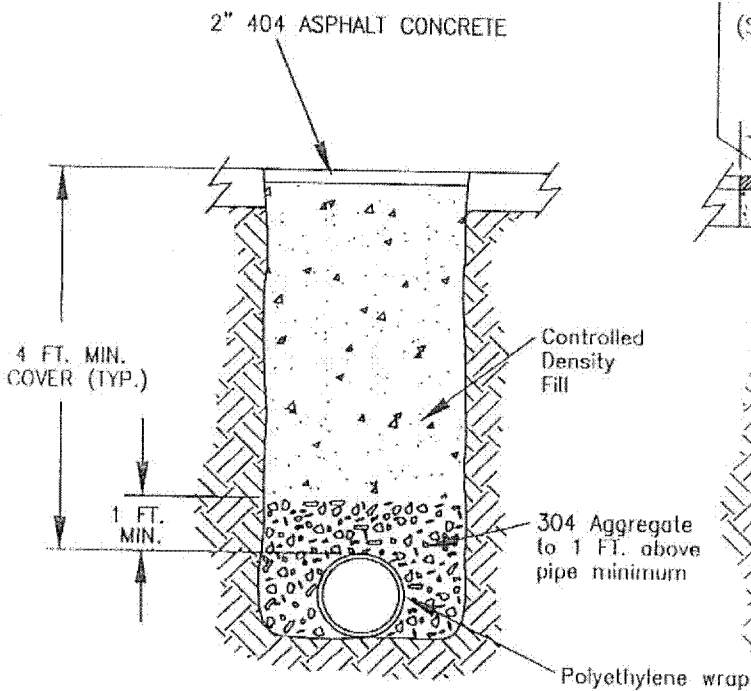
WATER LINE TRENCH DETAILS

DRAWN: K.SHOEMAKER	DATE: 12/15/99	DETAIL PAGE NUMBER 3
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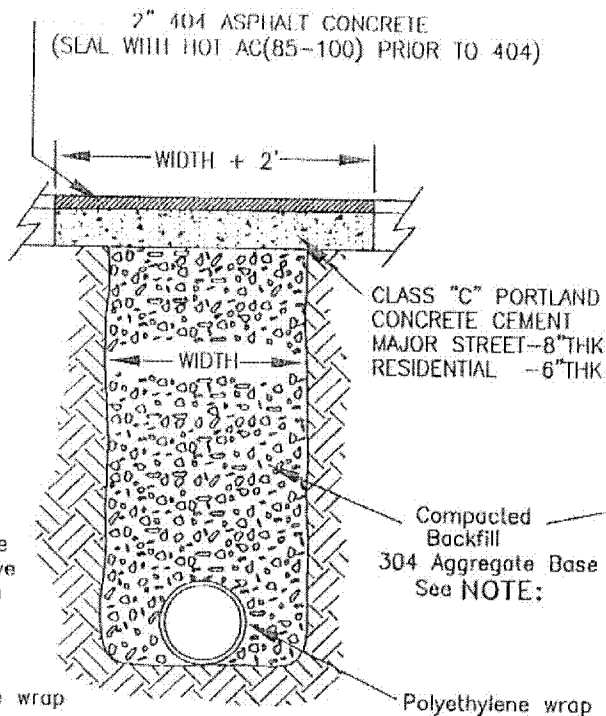
DETAIL PAGE
NUMBER 3

PAVEMENT REPLACEMENT DETAILS

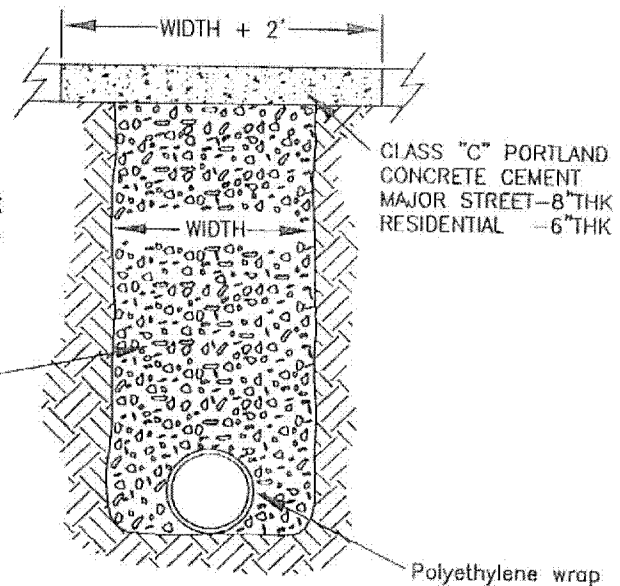
TAR & CHIP SURFACE



FLEXIBLE PAVEMENT



CONCRETE PAVEMENT



NOTE: All backfill shall be compacted in 6" lifts to the top of the pipe by tamping. Above pipe compaction may be completed by same method or by jetting trench by acceptable method.

FILE NAME: DPN4

CITY of LIMA, DEPT. of UTILITIES
WATERLINE GENERAL SPECIFICATIONS

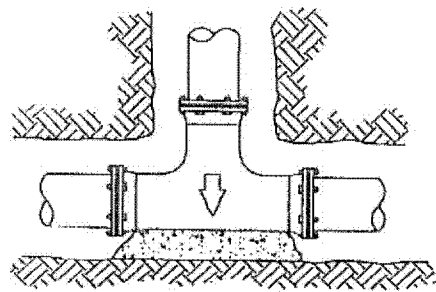
PAVEMENT REPLACEMENT DETAILS

DRAWN:
K. SHOEMAKER

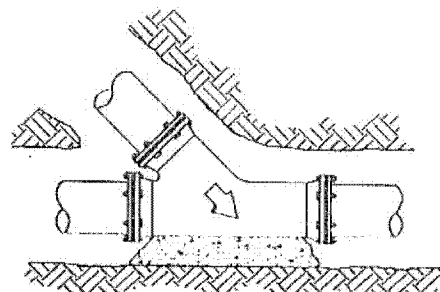
DATE:
12/15/99

DETAIL PAGE NUMBER 4

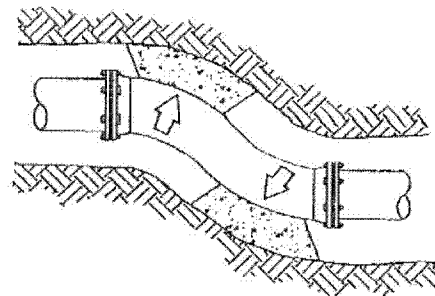
DETAIL PAGE
NUMBER 4



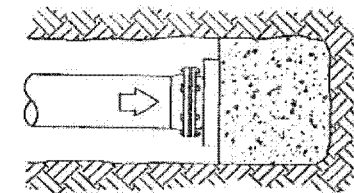
TEE



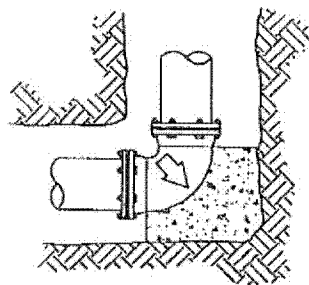
"Y" BRANCH



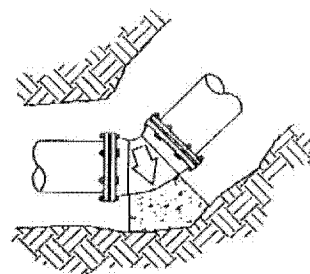
OFFSET



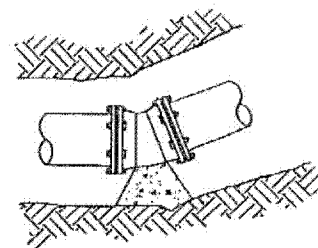
CAP/PLUG



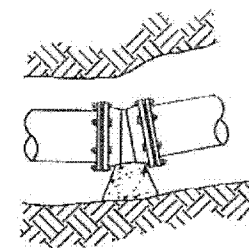
90° BEND



45° BEND



22 1/2° BEND



11 1/4° BEND

NOTE:
 THESE ILLUSTRATIONS FOR REFERENCE ONLY
 ACTUAL DIMENSIONS OF THRUST RESTRAINT
 TO BE DETERMINED BY ENGINEER OR DEPT.
 OF UTILITIES REPRESENTATIVE

FILE NAME: DPN5

CITY of LIMA, DEPT. of UTILITIES
 WATERLINE GENERAL SPECIFICATIONS

CONCRETE THRUST RESTRAINT

DRAWN:
 K.SHOEMAKER

DATE:
 12/15/99

DETAIL PAGE NUMBER 5

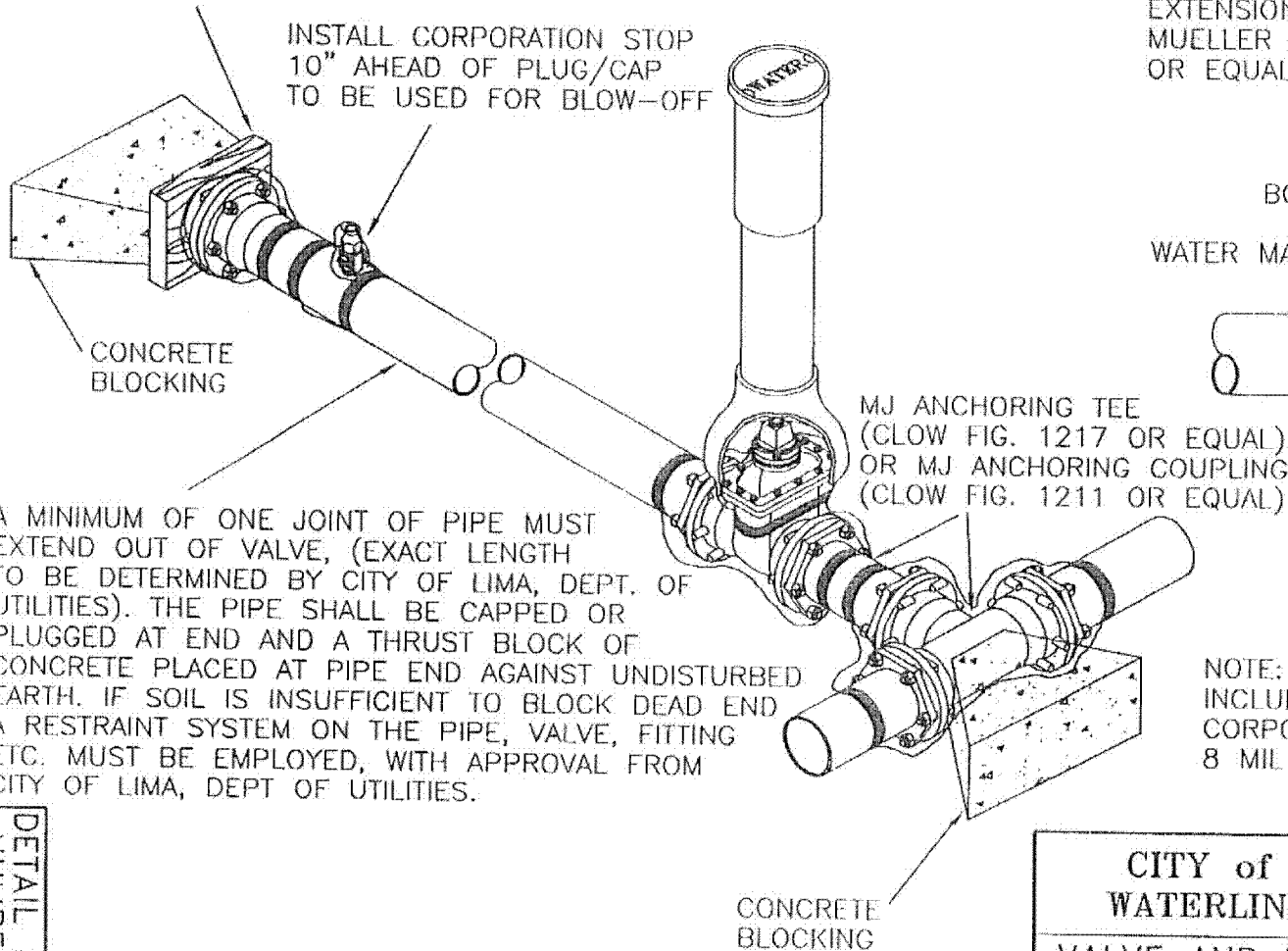
DETAIL PAGE
 NUMBER 5

TYPICAL VALVE AND DEAD END INSTALLATION

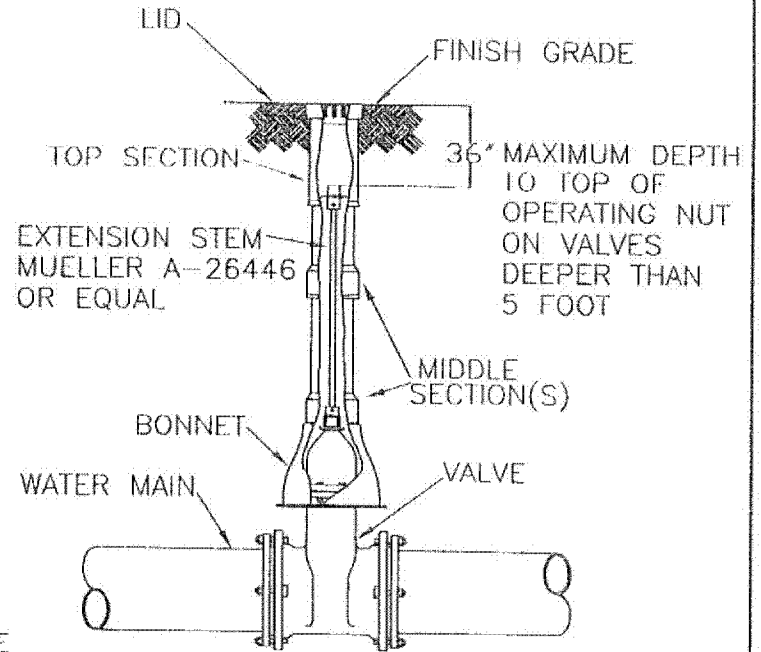
NOTE: FOR VALVE AND VALVE BOX
SEE MATERIAL SPECIFICATIONS

SEPARATE PLUG/CAP AND
POURED CONCRETE BLOCKING
WITH SLAB OF HARDWOOD TIMBER

INSTALL CORPORATION STOP
10" AHEAD OF PLUG/CAP
TO BE USED FOR BLOW-OFF



A MINIMUM OF ONE JOINT OF PIPE MUST
EXTEND OUT OF VALVE, (EXACT LENGTH
TO BE DETERMINED BY CITY OF LIMA, DEPT. OF
UTILITIES). THE PIPE SHALL BE CAPPED OR
PLUGGED AT END AND A THRUST BLOCK OF
CONCRETE PLACED AT PIPE END AGAINST UNDISTURBED
EARTH. IF SOIL IS INSUFFICIENT TO BLOCK DEAD END
A RESTRAINT SYSTEM ON THE PIPE, VALVE, FITTING
ETC. MUST BE EMPLOYED, WITH APPROVAL FROM
CITY OF LIMA, DEPT OF UTILITIES.



NOTE: ALL EXPOSED BOLTS AND FITTINGS
INCLUDING PLUG/CAP AND BLOW-OFF
CORPORATION STOP TO BE WRAPPED IN
8 MIL POLYETHYLENE.

FILE NAME: DPN6

CITY of LIMA, DEPT. of UTILITIES
WATERLINE GENERAL SPECIFICATIONS

VALVE AND PLUGGED/CAPPED DEAD END

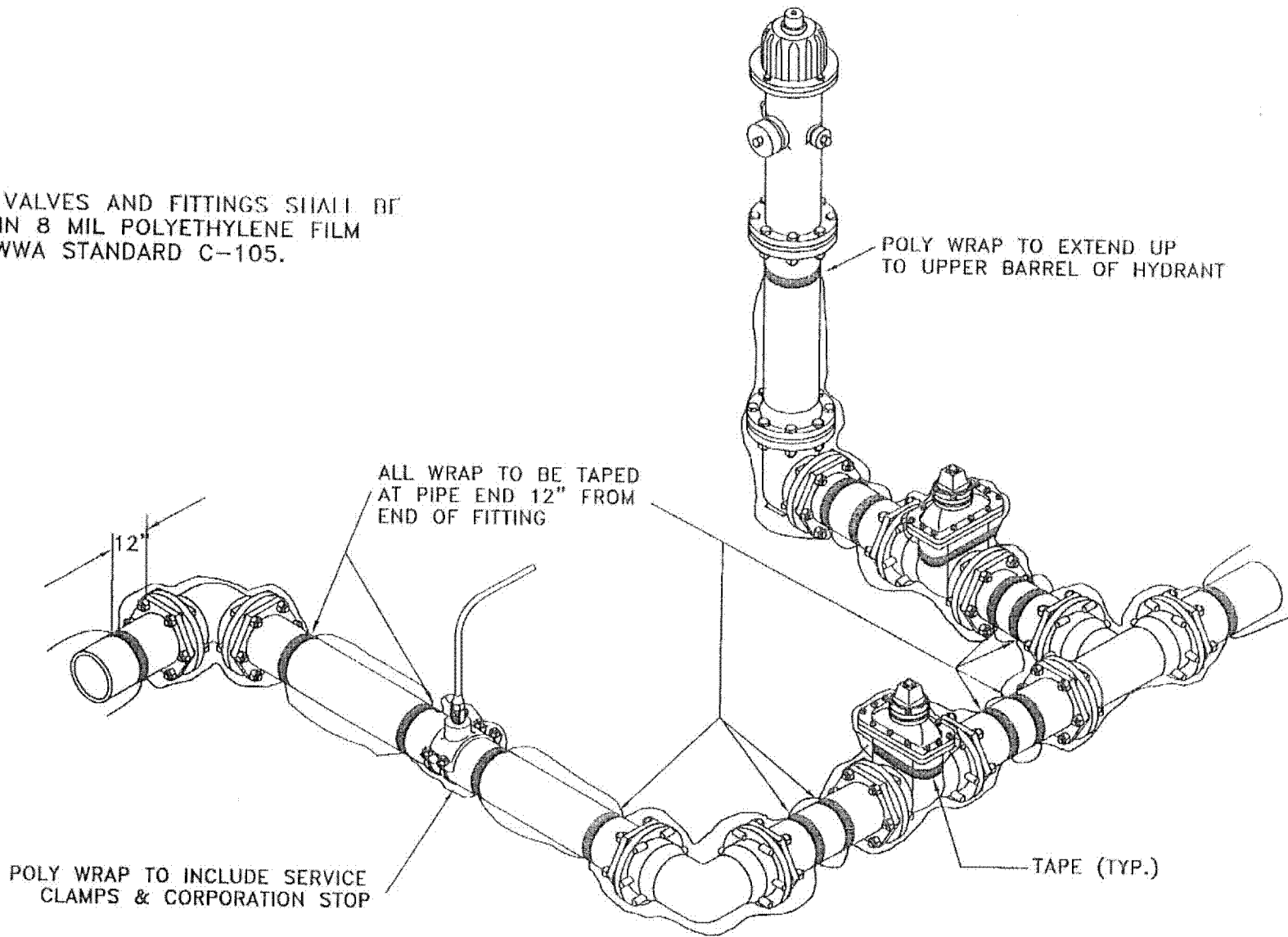
DRAWN:
K.SHOEMAKER

DATE:
12/15/99

DETAIL PAGE NUMBER 6

DETAIL PAGE
NUMBER 6

ALL PIPE, VALVES AND FITTINGS SHALL BE WRAPPED IN 8 MIL POLYETHYLENE FILM AS PER AWWA STANDARD C-105.



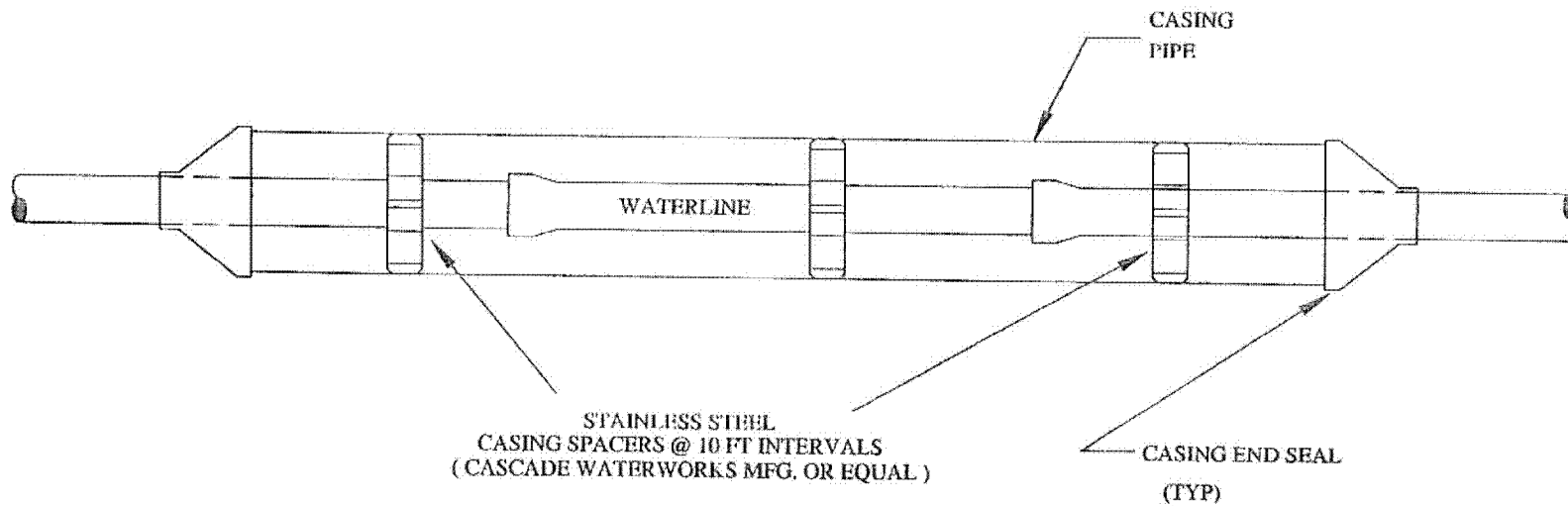
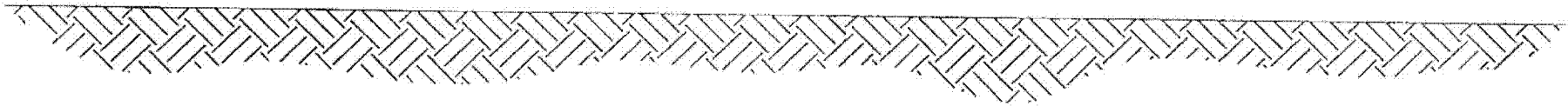
FILE NAME: DPN7

CITY of LIMA, DEPT. of UTILITIES
WATERLINE GENERAL SPECIFICATIONS

POLY WRAP INSTALLATION

DRAWN: K.SHOEMAKER	DATE: 12/15/99	DETAIL PAGE NUMBER 7
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DETAIL PAGE
NUMBER 7



DETAIL PAGE
NUMBER 8

FILE NAME: DPN8

CITY of LIMA, DEPT. of UTILITIES
WATERLINE GENERAL SPECIFICATIONS

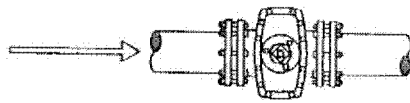
CASING DETAIL

DRAWN:	DATE:	DETAIL PAGE NUMBER 8
K.SHOEMAKER	12/15/99	

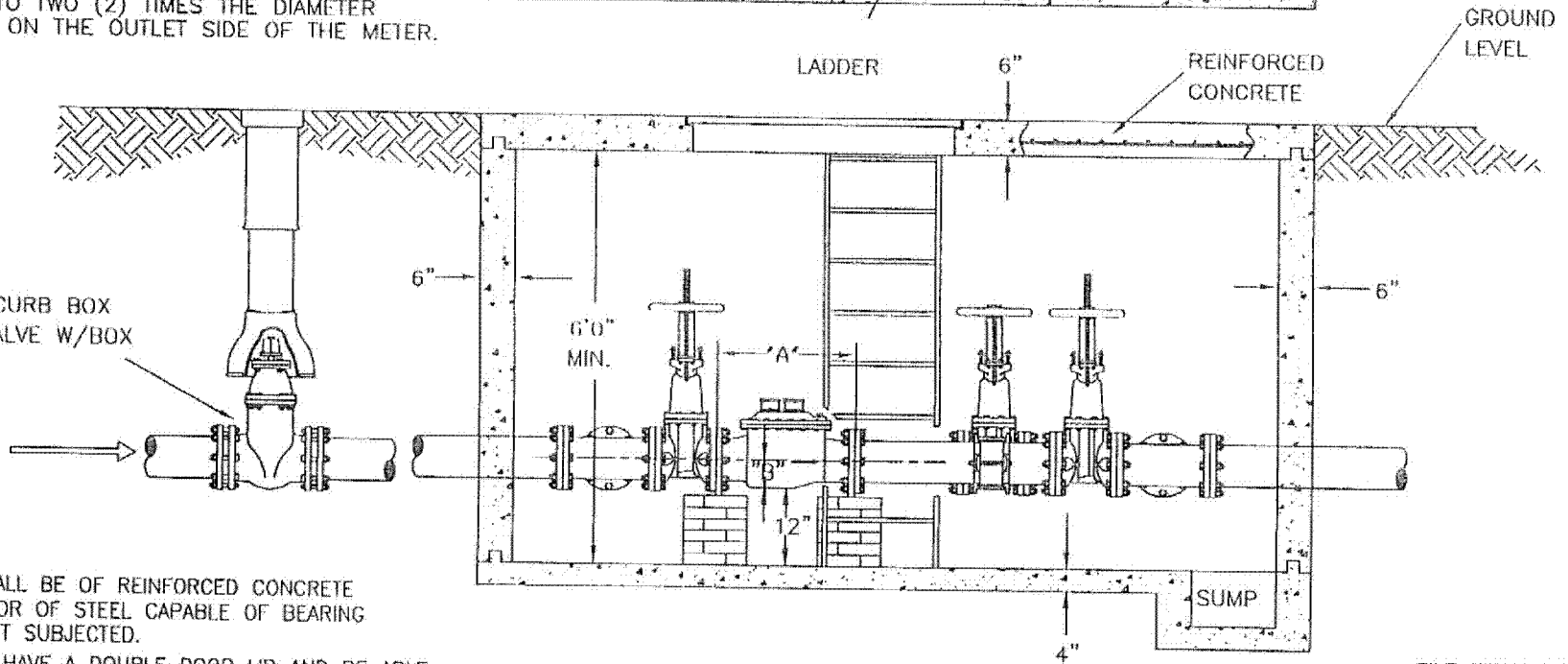
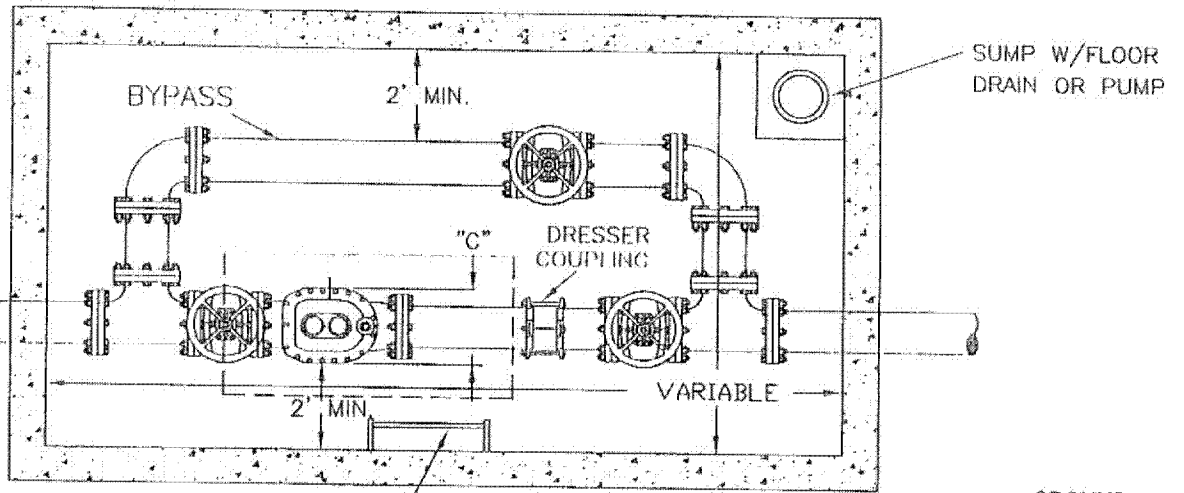
SEE ADDITIONAL INFORMATION IN GENERAL SPECIFICATIONS PAGE 8

Schlumberger NEPTUNE TRU/FLO COMPOUND

METER SIZE	DIMENSION		
	"A"	"B"	"C"
2"	15.25"	2.50"	6"
3"	17"	3.75"	8.5"
4"	20"	4.5"	9.125"
6"	24"	5.5"	12.75"



ALL METERS SHALL HAVE STRAIGHT PIPE EQUAL TO EIGHT (8) TIMES THE DIAMETER OF THE PIPE ON THE INLET SIDE, AND STRAIGHT PIPE EQUAL TO TWO (2) TIMES THE DIAMETER OF THE PIPE ON THE OUTLET SIDE OF THE METER.



COVER SHALL BE OF REINFORCED CONCRETE (6" MIN.) OR OF STEEL CAPABLE OF BEARING ANY WEIGHT SUBJECTED.

PIT SHALL HAVE A DOUBLE DOOR LID AND BE ABLE TO ACCOMMODATE REMOVAL OF METER AND BE ABLE TO WITHSTAND THE WEIGHT OF TRAFFIC. PLEASE CONTACT DEPT. OF UTILITIES FOR APPROVAL.

VALVES, PIPING & DRESSER COUPLING FURNISHED BY CONSUMER.

SEE ADDITIONAL INFORMATION IN GENERAL SPECIFICATIONS PAGE 12 & 13

FILE NAME: DPN9

CITY of LIMA, DEPT. of UTILITIES
WATERLINE GENERAL SPECIFICATIONS

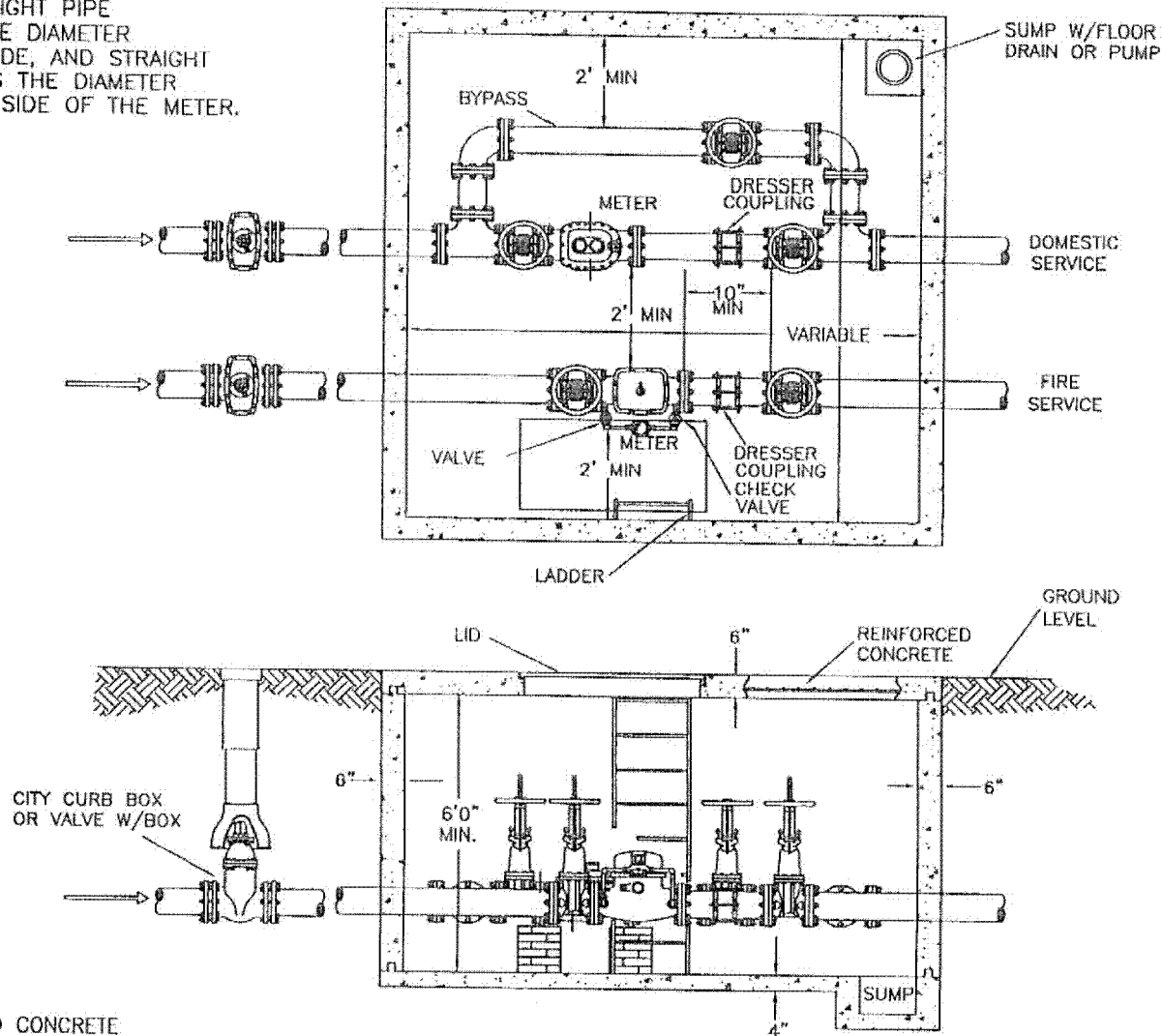
DOMESTIC COMPOUND METER PIT

DRAWN: K.SHOEMAKER
DATE: 12/15/99

DETAIL PAGE NUMBER 9

DETAIL PAGE NUMBER 9

ALL METERS SHALL HAVE STRAIGHT PIPE EQUAL TO EIGHT (8) TIMES THE DIAMETER OF THE PIPE ON THE INLET SIDE, AND STRAIGHT PIPE EQUAL TO TWO (2) TIMES THE DIAMETER OF THE PIPE ON THE OUTLET SIDE OF THE METER.



COVER SHALL BE OF REINFORCED CONCRETE (6" MIN.) OR OF STEEL CAPABLE OF BEARING ANY WEIGHT SUBJECTED.

PIT SHALL HAVE A DOUBLE DOOR LID AND BE ABLE TO ACCOMMODATE REMOVAL OF METER AND BE ABLE TO WITHSTAND THE WEIGHT OF TRAFFIC. PLEASE CONTACT DEPT. OF UTILITIES FOR APPROVAL.

VALVES, PIPING & DRESSER COUPLING FURNISHED BY CONSUMER.

SEE ADDITIONAL INFORMATION IN GENERAL SPECIFICATIONS PAGE 12 & 13

DETAIL PAGE
NUMBER 10

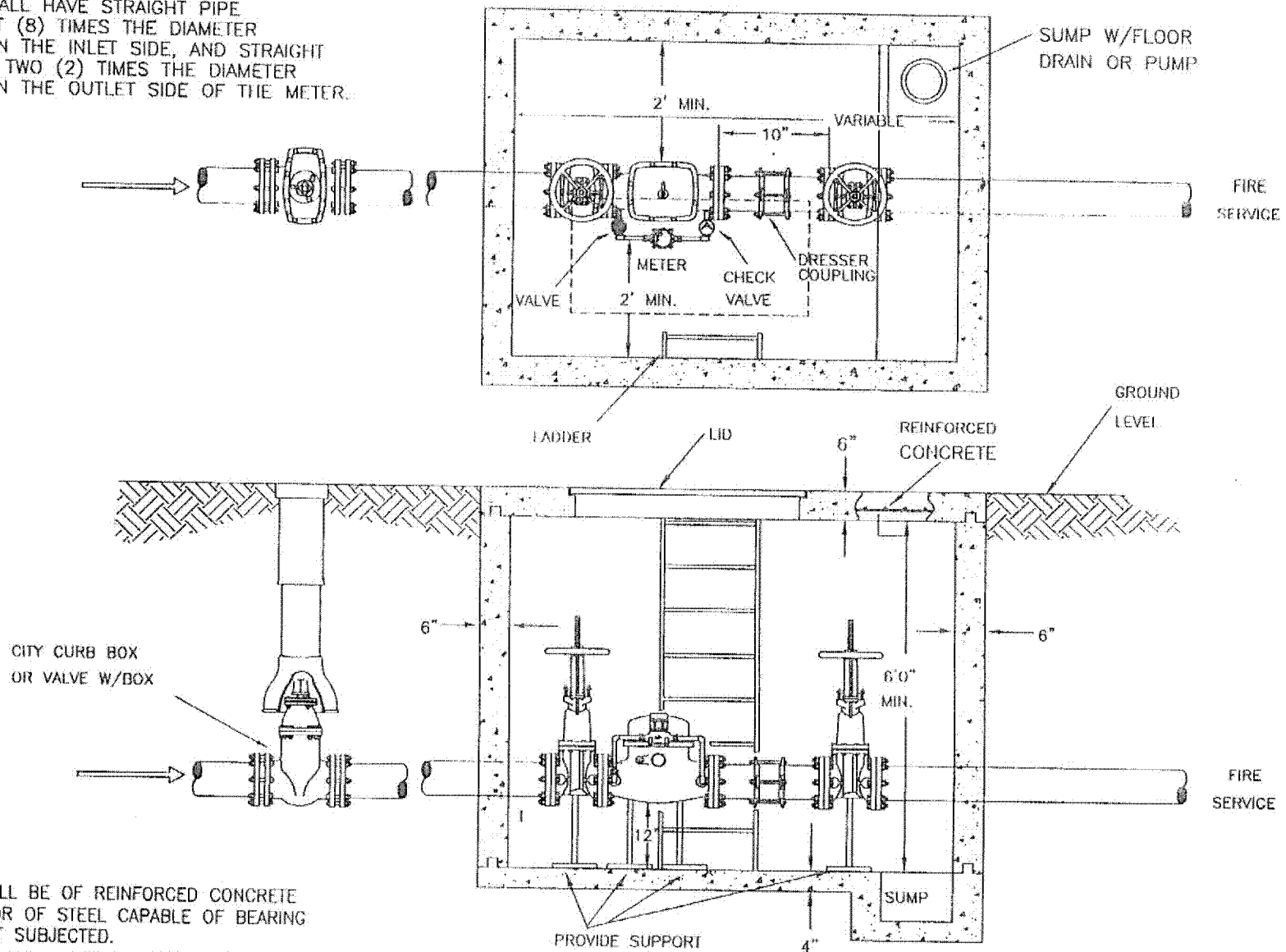
FILE NAME: DPN10

CITY of LIMA, DEPT. of UTILITIES
WATERLINE GENERAL SPECIFICATIONS

DOMESTIC & DETECTOR CHECK PIT

DRAWN: K.SHOEMAKER	DATE: 12/15/99	DETAIL PAGE NUMBER 10
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ALL METERS SHALL HAVE STRAIGHT PIPE
 EQUAL TO EIGHT (8) TIMES THE DIAMETER
 OF THE PIPE ON THE INLET SIDE, AND STRAIGHT
 PIPE EQUAL TO TWO (2) TIMES THE DIAMETER
 OF THE PIPE ON THE OUTLET SIDE OF THE METER.



COVER SHALL BE OF REINFORCED CONCRETE
 (6" MIN.) OR OF STEEL CAPABLE OF BEARING
 ANY WEIGHT SUBJECTED.

PIT SHALL HAVE A DOUBLE DOOR LID AND BE ABLE
 TO ACCOMMODATE REMOVAL OF METER AND BE
 ABLE TO WITHSTAND THE WEIGHT OF TRAFFIC. PLEASE
 CONTACT DEPT. OF UTILITIES FOR APPROVAL.

VALVES, PIPING & DRESSER COUPLING
 FURNISHED BY CONSUMER.

SEE ADDITIONAL INFORMATION IN GENERAL SPECIFICATIONS
 PAGE 12 & 13

FILE NAME: DPN11

CITY of LIMA, DEPT. of UTILITIES
 WATERLINE GENERAL SPECIFICATIONS

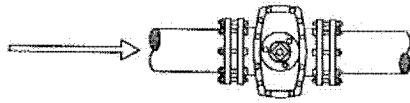
DETECTOR CHECK PIT

DRAWN: K.SHOEMAKER	DATE: 12/15/99	DETAIL PAGE NUMBER 11
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DETAIL PAGE
 NUMBER 11

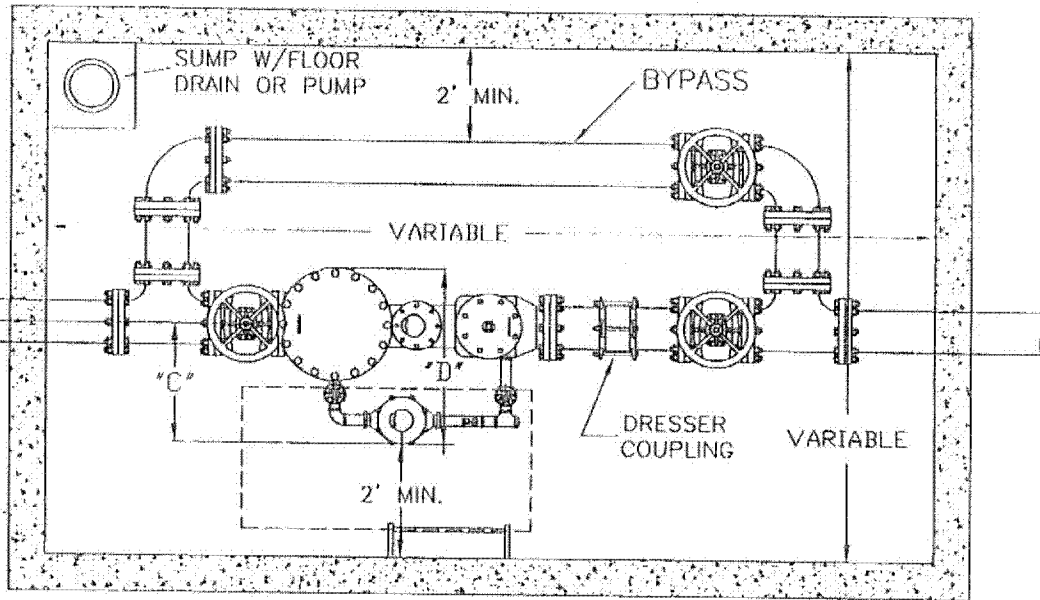
Schlumberger NEPTUNE HP PROTECTUS III

METER SIZE	DIMENSION			
	"A"	"B"	"C"	"D"
4"	33"	10"	15.25"	22"
6"	45"	11"	19.5"	29"
8"	53"	12"	21.75"	34.25"
10"	68"	15"	22.5"	36.25"

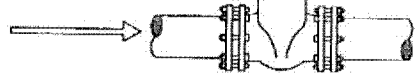


ALL METERS SHALL HAVE STRAIGHT PIPE EQUAL TO EIGHT (8) TIMES THE DIAMETER OF THE PIPE ON THE INLET SIDE, AND STRAIGHT PIPE EQUAL TO TWO (2) TIMES THE DIAMETER OF THE PIPE ON THE OUTLET SIDE OF THE METER.

FLANGED PIPE AND FITTINGS SHALL BE USED FOR METER SETTING AND BYPASS.



CITY CURB BOX OR VALVE W/BOX

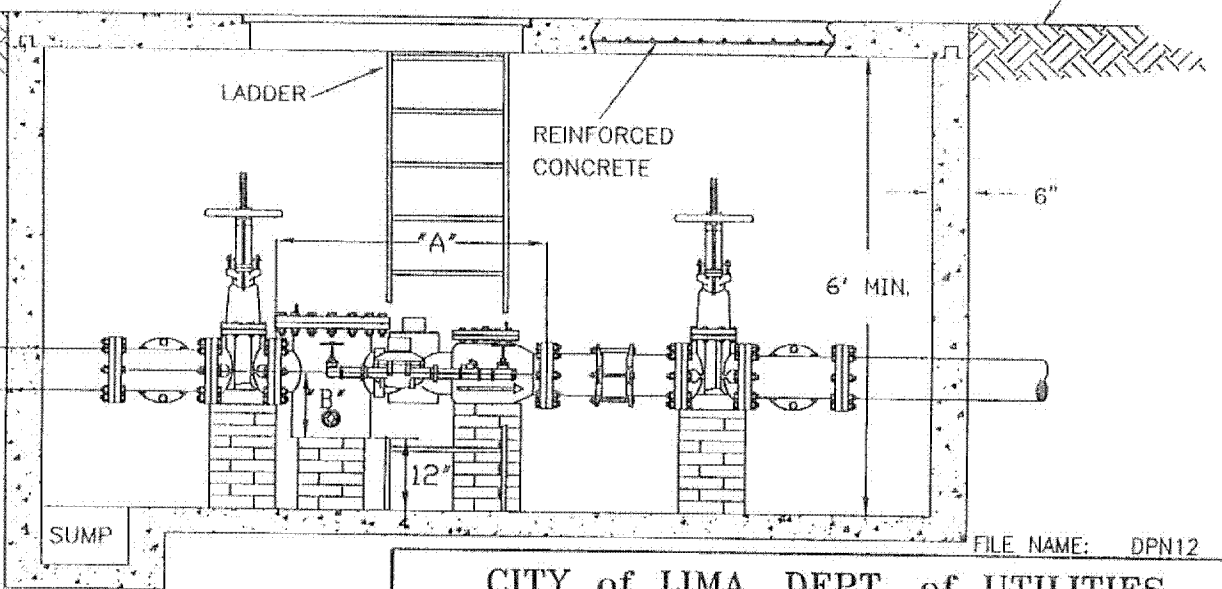


COVER SHALL BE OF REINFORCED CONCRETE (6" MIN.) OR OF STEEL CAPABLE OF BEARING ANY WEIGHT SUBJECTED.

PIT SHALL HAVE A DOUBLE DOOR LID AND BE ABLE TO ACCOMMODATE REMOVAL OF METER AND BE ABLE TO WITHSTAND THE WEIGHT OF TRAFFIC. PLEASE CONTACT DEPT. OF UTILITIES FOR APPROVAL.

VALVES, PIPING & DRESSER COUPLING FURNISHED BY CONSUMER.

SEE ADDITIONAL INFORMATION IN GENERAL SPECIFICATIONS PAGE 12 & 13



FILE NAME: DPN12

CITY of LIMA, DEPT. of UTILITIES
WATERLINE GENERAL SPECIFICATIONS

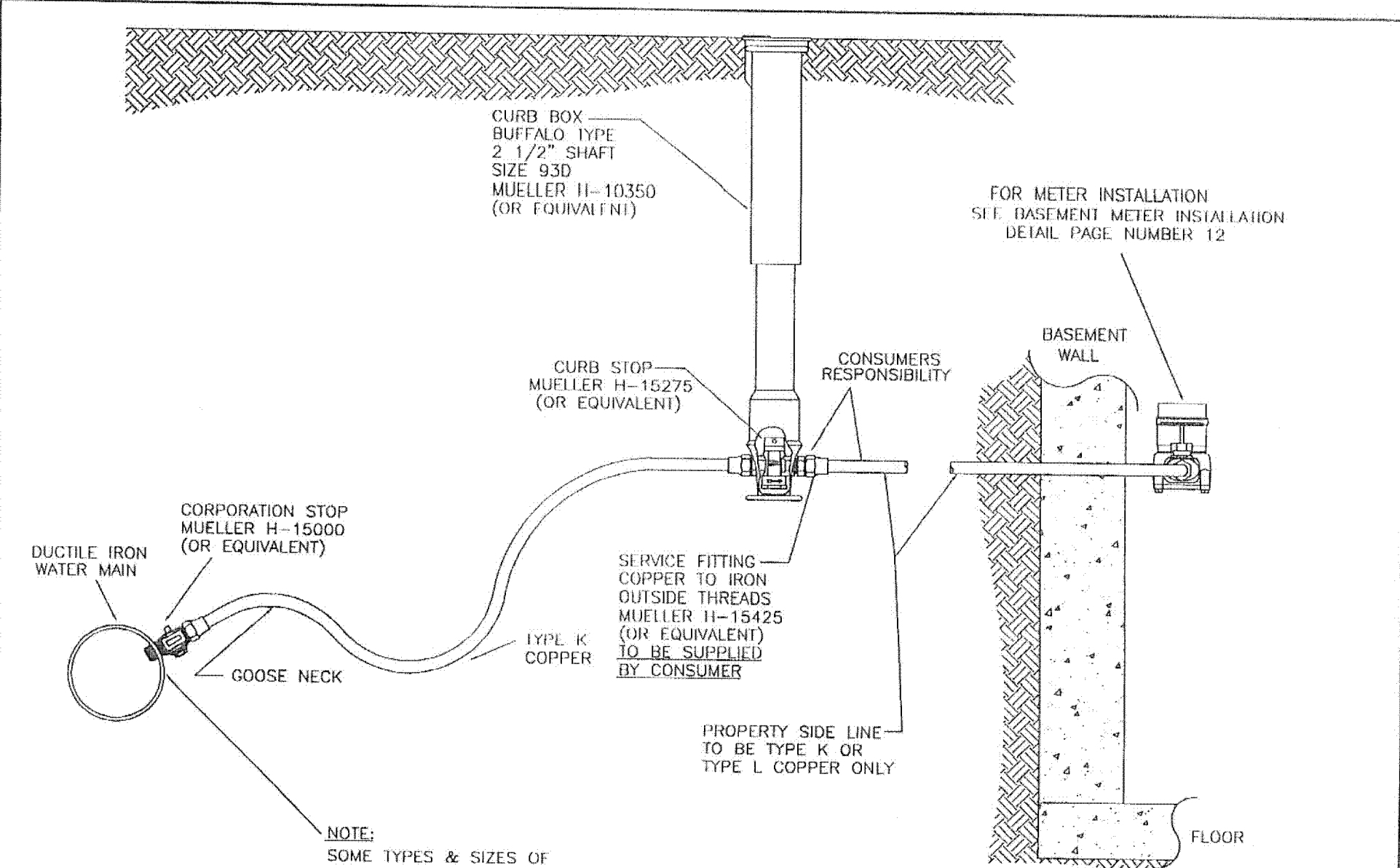
FIRE METER PIT

DRAWN:
K.SHOEMAKER

DATE:
12/15/99

DETAIL PAGE NUMBER 12

DETAIL PAGE
NUMBER 12



CURB BOX
BUFFALO TYPE
2 1/2" SHAFT
SIZE 93D
MUELLER H-10350
(OR EQUIVALENT)

FOR METER INSTALLATION
SEE BASEMENT METER INSTALLATION
DETAIL PAGE NUMBER 12

CURB STOP
MUELLER H-15275
(OR EQUIVALENT)

CONSUMERS
RESPONSIBILITY

BASEMENT
WALL

DUCTILE IRON
WATER MAIN

CORPORATION STOP
MUELLER H-15000
(OR EQUIVALENT)

SERVICE FITTING
COPPER TO IRON
OUTSIDE THREADS
MUELLER H-15425
(OR EQUIVALENT)
TO BE SUPPLIED
BY CONSUMER

TYPE K
COPPER

GOOSE NECK

PROPERTY SIDE LINE
TO BE TYPE K OR
TYPE L COPPER ONLY

FLOOR

NOTE:
SOME TYPES & SIZES OF
MAINLINE MATERIAL & TAPS
MAY REQUIRE A DOUBLE STRAP
SERVICE CLAMP

NOTE:
SEE ADDITIONAL INFORMATION
IN GENERAL SPECIFICATIONS
PAGE 12 & 13.

FILE NAME: DPN13

CITY of LIMA, DEPT. of UTILITIES
WATERLINE GENERAL SPECIFICATIONS

STANDARD CURB BOX INSTALLATION

DRAWN: K.SHOEMAKER	DATE: 12/15/99	DETAIL PAGE NUMBER 13
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DETAIL PAGE
NUMBER 13

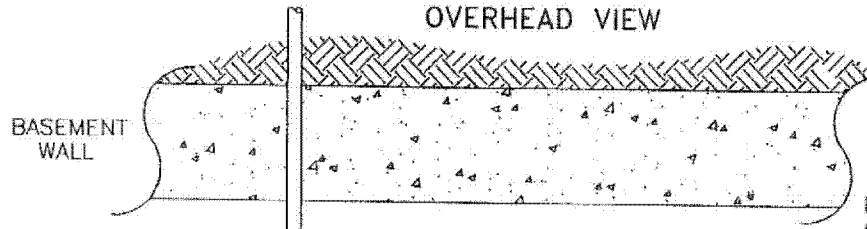
MOUNTING DIAGRAM FOR:

5/8" METER }
 3/4" METER } DOMESTIC USE &
 1" METER } LAWN SPRINKLER USE.

CENTER LINE OF METER & TAIL PIECES TO BE A MINIMUM OF 4" FROM OUTSIDE WALL.

CENTER LINE OF METER & TAIL PIECES TO BE A MIN. OF 24" AND A MAX. 48" ABOVE FLOOR.

ALL INSIDE METERS REQUIRE REMOTE READING RECEPTACLE TO BE INSTALLED BY WATER DISTRIBUTION PERSONNEL.

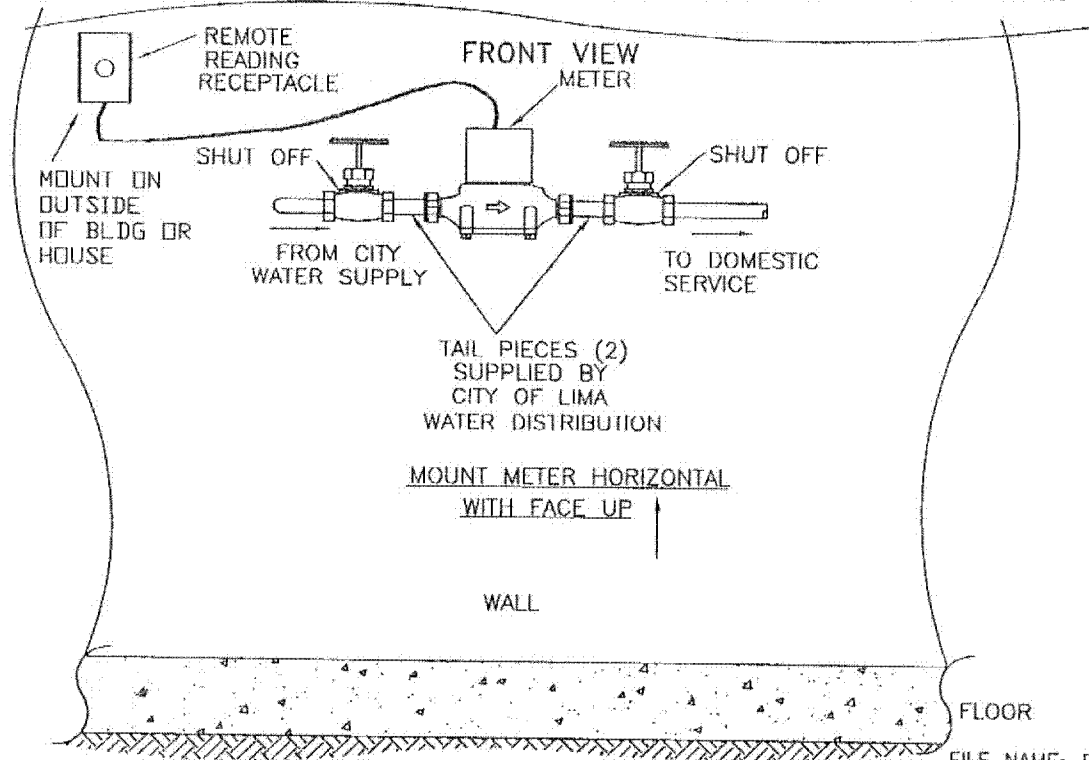
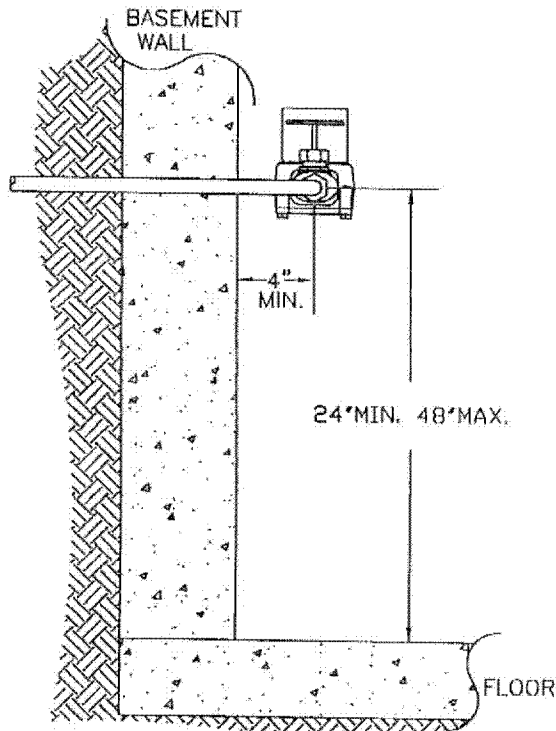


INLET PIPING TO BE TYPE (K) OR TYPE (L) COPPER

"X" METER LAYING LENGTH
 5/8" METER-7 1/2"
 3/4" METER-9"
 1" METER-10 3/4"

NOTE:
 FOR METER LAYING LENGTH OF 1 1/2" & 2" METERS CONTACT CITY OF LIMA WATER DISTRIBUTION

SIDE VIEW



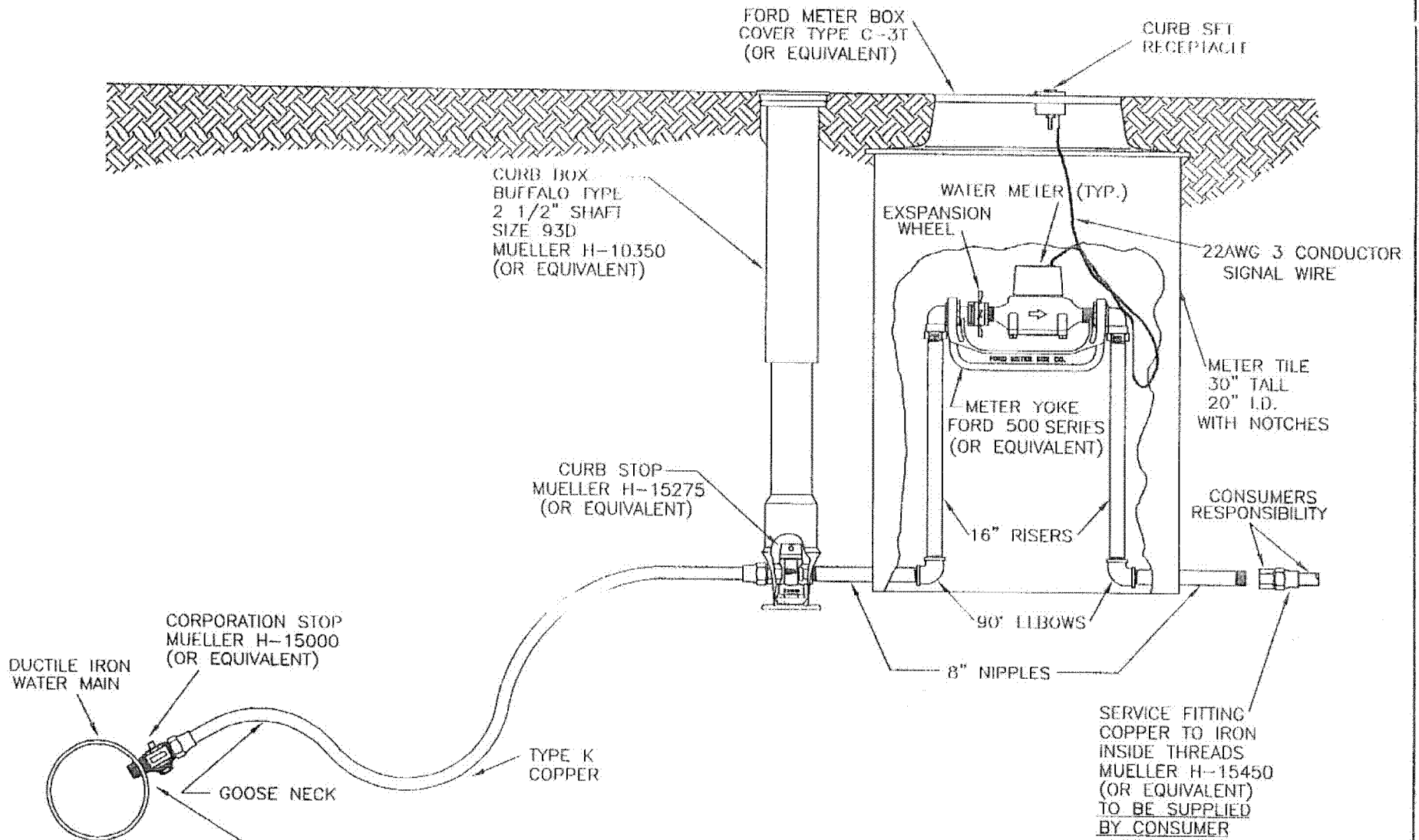
MOUNT METER HORIZONTAL WITH FACE UP

FILE NAME: DPN14

DETAIL PAGE NUMBER 14

NOTE:
 SEE ADDITIONAL INFORMATION IN GENERAL SPECIFICATIONS PAGE 12 & 13.

CITY of LIMA, DEPT. of UTILITIES		
WATERLINE GENERAL SPECIFICATIONS		
BASEMENT METER INSALLATION		
DRAWN: K.SHOEMAKER	DATE: 12/15/99	DETAIL PAGE NUMBER 14



FILE NAME: DPN15

CITY of LIMA, DEPT. of UTILITIES
WATERLINE GENERAL SPECIFICATIONS

CURB METER SET

DRAWN: K.SHOEMAKER	DATE: 12/15/99	DETAIL PAGE NUMBER 15

DETAIL PAGE
NUMBER 15

NOTE:
SEE ADDITIONAL INFORMATION
IN GENERAL SPECIFICATIONS
PAGE 12 & 13.

NOTE:
SOME TYPES & SIZES OF
MAINLINE MATERIAL & TAPS
MAY REQUIRE A DOUBLE STRAP
SERVICE CLAMP

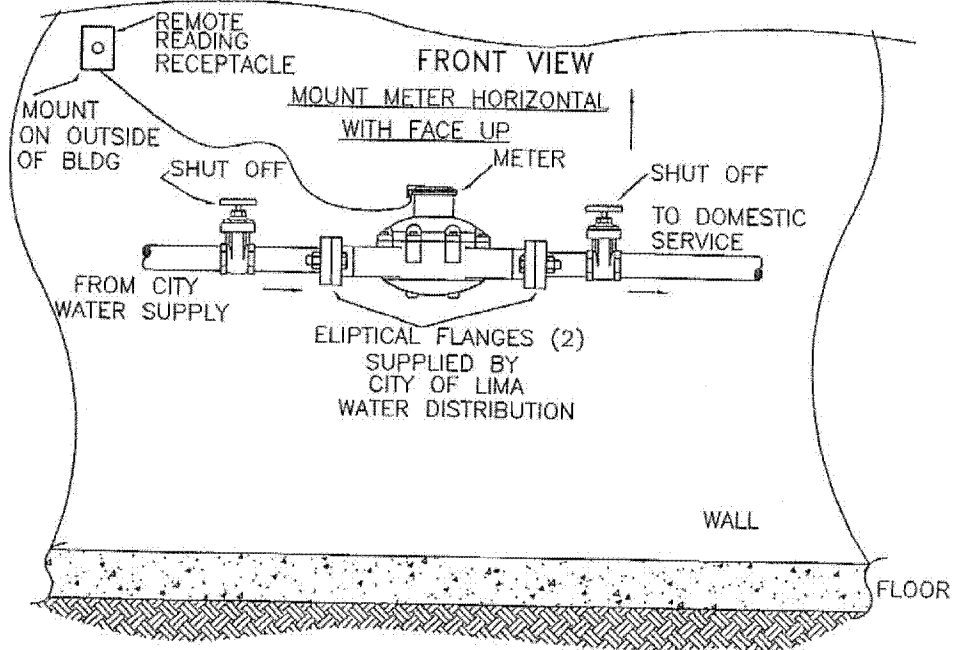
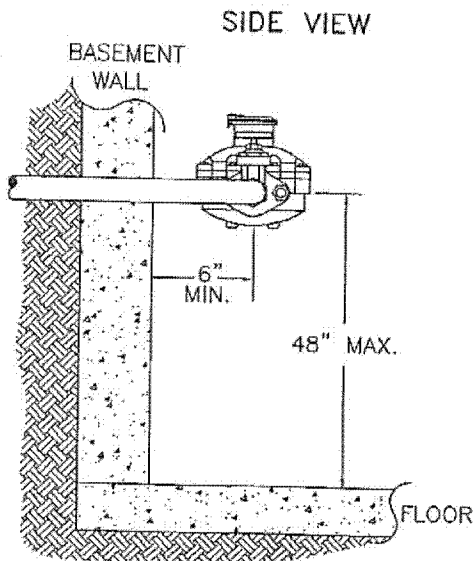
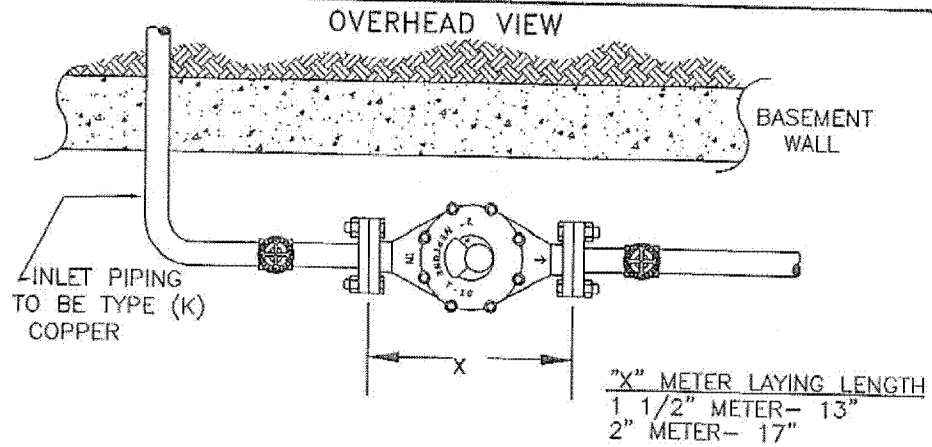
MOUNTING DIAGRAM FOR:

1 1/2" METER
2" METER DOMESTIC USE

CENTER LINE OF METER AND ELIPTICAL FLANGES TO BE A MINIMUM OF 6" FROM WALL.

CENTER LINE OF METER ABOVE FLOOR TO BE A MAX. OF 48" .

ALL INSIDE METERS REQUIRE REMOTE READING RECEPTACLE. TO BE INSTALLED BY WATER DISTRIBUTION PERSONNEL.



FILE NAME: DPN16

**CITY of LIMA, DEPT. of UTILITIES
WATERLINE GENERAL SPECIFICATIONS**

1 1/2" & 2" METER INSALLATION

DRAWN: K.SHOEMAKER
DATE: 6/29/00

DETAIL PAGE NUMBER 16

NOTE:
INLET AND OUTLET PIPING
MAY REQUIRE SUPPORT.

DETAIL PAGE
NUMBER 16