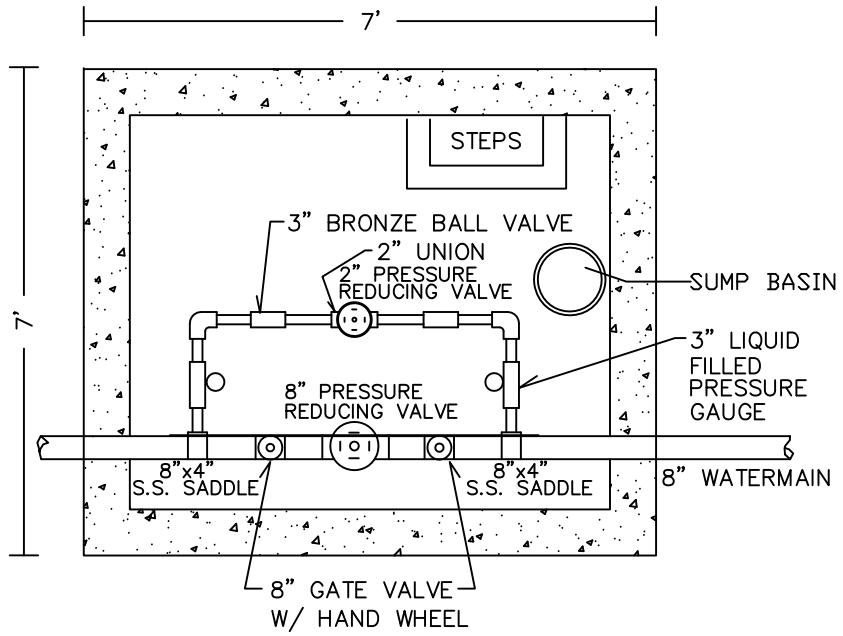
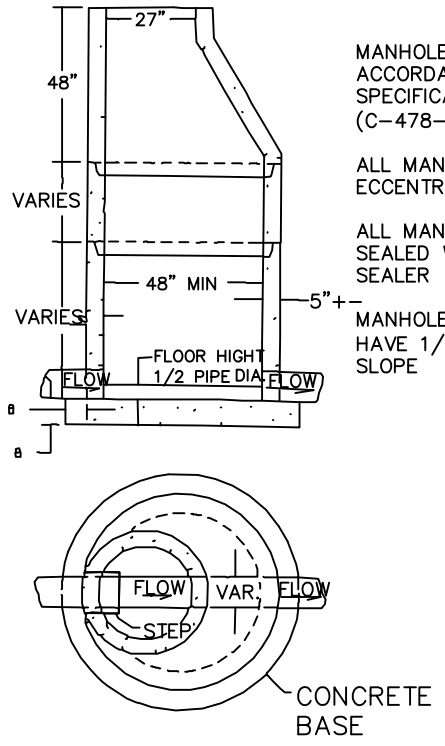


-3" BRONZE BALL VALVES
-2" PRV (PLUMB FOR 3" - OPTION TO UPSIZE TO 3"PRV)
-USE BRONZE ONLY PIPING & FITTINGS ON 4" PRV
-USE ADJUSTABLE METAL BRACKETS TO SUPPORT PILOT PAINT VALVE PIT AND UNISTRUT TIE GATE VALVE, PRV, AND PIPE ONTO BOTTOM OF PRECAST CONCRETE BOX

PRV MANHOLE



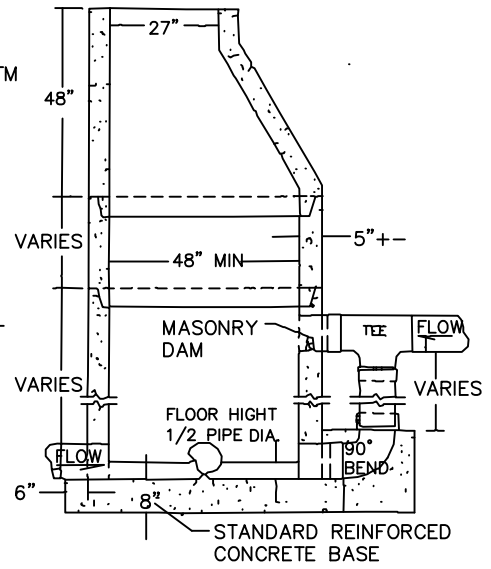
TYP. MANHOLE NON-INTEGRAL

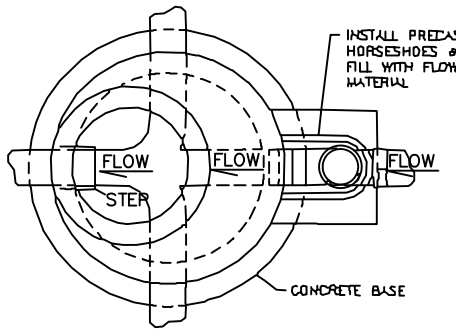
MANHOLES TO BE IN ACCORDANCE WITH ASTM SPECIFICATIONS (C-478-73)

ALL MANHOLES TO BE ECCENTRIC CONES

ALL MANHOLES TO BE SEALED WITH KENT SEALER

MANHOLE FLOOR SHALL HAVE 1/2" PER FOOT SLOPE





TYP. DROP OR JUNCTION MANHOLE

Concrete Thrust Blocking Detail

1326

Not to Scale

NOTE 1: Blocking of typical horizontal bend will include all bends 11-1/4° (1/32) to 90° (1/4).

NOTE 2: Block tee as shown. In the event that one side of Watermain is plugged, two thrust blocks will be required.

NOTE 3: Blocking of plug is to include plywood between the plug and concrete.

NOTE 4: Blocking of cross with two plugs is as shown. With only one plug proceed same as tee.

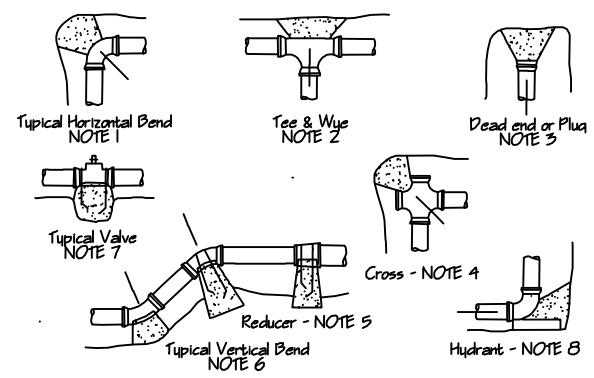
NOTE 5: Install concrete anchor and tie downs as per gate valve if size is reduced two pipe sizes or more.

NOTE 6: All vertical bends to be blocked and tied down as shown.

NOTE 7: All valves in Watermain and on hydrant leads, gate valve, butterfly or tapping, will be tied down as shown. Care shall be taken to keep concrete off of nuts and bolts to insure future maintenance.

NOTE 8: All hydrants to be blocked as shown. Keep concrete away from weep holes.

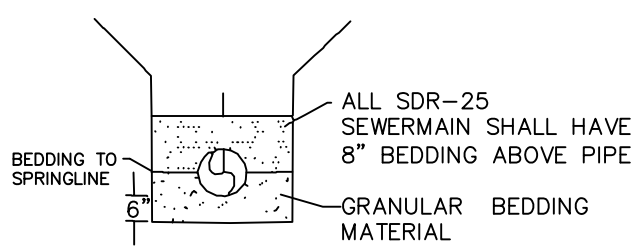
NOTE 9: The end area of concrete thrust blocks will be determined from the chart on standard detail 1525 of the standard specifications.



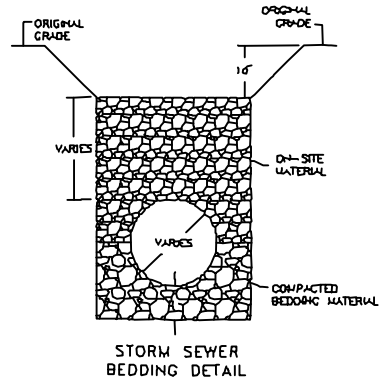
PRV MANHOLE

MAX. SIZE OF OUTLET	
NOMINAL PIPE SIZE	(CLASSES 100-160-200) DOUBLE STRAP
4"	1"
6"	1 1/2"
8"	2"
10"	2"
12"	2"

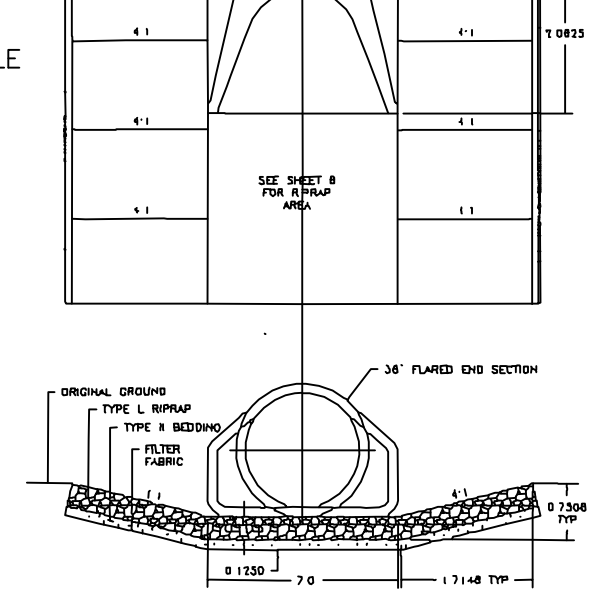
SADDLES FOR PVC WATERMAINS



WATERMAIN AND SEWER BEDDING DETAIL



STORM SEWER BEDDING DETAIL



TYPE L % SMALLER THAN GIVEN SIZE BY WEIGHT	RIPRAP INTERMEDIATE ROCK DIMENSION (INCHES)
70-100	15
50-70	12
35-50	9
2-10	3

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MB@MBinvestors.com

WATER & SEWER DETAILS 2
MACEDONIA HILLS-FIRST ADDITION
PROJECT NUMBER 2013-21
CITY OF MANDAN
MORTON COUNTY, NORTH DAKOTA

SHEET C-12
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