

Town of Perryville, Maryland
Water Distribution and Sanitary Sewer Collection Systems
Supplemental Specifications
May 26, 2009

The following specifications shall supplement and amend the Cecil County, Maryland, Department of Public Works, Standard Specifications and Details for Water Mains & Sewer Mains. All work shall be in accordance with the Cecil County Standard Specifications unless otherwise noted herein.

Water Distribution System

Piping: Class 52, DIP, Push Joint or Mechanical Joint below grade, Flanged connections above grade.

Fittings:

1. Below grade: Ductile Iron, Mechanical Joint AWWA C153
2. Above grade: Cast Iron, Flanged Joint AWWA C110

Gate Valves: shall be iron body, resilient-seated, non-rising stem, 2-inch square operating nut which shall turn left (counter-clockwise) to open, with ample strength to withstand and operate under a working pressure of 150 psi, unless otherwise noted. The thrust collar shall be effective for both opening and closing. Valves shall be manufactured in accordance with AWWA C509 and shall be furnished with mechanical joint ends unless flanged or other type ends are indicated on the Plans.

Valve Boxes: Cast Iron Valve box, two piece construction, screw type body for adjustment, drop in type lid marked "water", Item no.: SCREW/XTN as manufactured by Capitol Foundry of VA.

Tapping Sleeves and Valves: Tapping sleeves shall be iron body mechanical joint type, or as approved by the Town. All tapping sleeves shall be furnished with an outlet for testing. Valves for tapping service shall meet all the requirements for gate valves. In addition, the body seat rings shall have a clear opening equal to the nominal size of the tapping valve. Tapping valves for ductile iron pipe shall have flange by mechanical type ends unless otherwise shown on the Plans.

Fire Hydrants: M&H, Reliant Model 929 or Kennedy Guardian K81D, operating nut shall turn left (counterclockwise) to open, outlets shall be provided with national standard thread.

Testing and Disinfection: All new mains shall be tested at 150 psi, in accordance with AWWA C600. Mains shall be disinfected, flushed and bacteria tested in accordance with AWWA C651. No new main shall be permanently connected to any existing main until all testing is completed to the satisfaction of the Town. Temporary connections to the Town's system for filling and flushing shall be made with water meter (provided by Town) and a backflow preventer (provided by Contractor) in accordance with AWWA C651. All test water shall be de-chlorinated prior to discharging.

Commercial / Industrial / Institutional / Multi-family Water Services

Individual building water services shall be generally in accordance with Town of Perryville, Maryland, Department of Public Works, Standard Detail W-5. Water meters up to and including 2" shall be Neptune T-10 Cold Water Meters / Displacement Type, Magnetic Drive, with registration in gallons. Water meters above 3" and above shall be TRU/FLO® Compound Meters, with registration in gallons. Meters 3" and above shall be equipped with plate strainers. Each water meter shall be provided with a R900 Pit MIU mounted on the vault cover.

Water services for private fire mains on commercial property shall be in accordance with the Town of Perryville Department of Public Works, Standard Detail W-5A (Master Meter Pit). Each master meter pit shall be installed at the property line. Fire meters 6" to 10" shall be Neptune High Performance Protectus III Fire Service Meters, Magnetic Drive, with registration in gallons. Water meters for the bypass line shall be the appropriate size T-10 Cold Water Meters / Displacement Type, Magnetic Drive, with registration in gallons. Each fire meter shall be provided with a R900 Pit MIU mounted on the vault cover.

Where water pressure at the street is in excess of 80 psi, a pressure reducing valve shall be provided on the water service line by the applicant, within the structure.

Commercial, Industrial, Institutional and Multi-family water meters shall be purchased by the applicant and delivered to the project site. A temporary spool piece shall be installed by the applicant within the meter pit for testing purposes. The applicant shall provide the information of the meter identification tag and submit the completed tag to the Town. Upon satisfactory pressure testing, chlorination, flushing, bacteriological testing and meter tag submittal by the applicant, and provided that all other concerns of the Town are addressed, the Town of Perryville shall provide written approval to proceed with the meter installation. The applicant shall then install the water meter.

Residential Water Services

Residential water services shall be generally in accordance with Town of Perryville, Maryland, Department of Public Works, Standard Detail W-1. Single Family Home Water Services: shall be provided with 1-1/2" diameter, Ford Catalog Number F1000-6 corporation stops, Type "K" soft copper tubing, and Ford Catalog Number B44-666 Ball Valve Curb Stop. Curb Box shall be Capitol Foundry Model VB-143R, 4-1/4" diameter with locking lid. Water meters shall be located adjacent to the property line of each home in accordance with Cecil County, Maryland, Department of Public Works, Standard Specifications and Details for Water Mains & Sewer Mains, Standard Detail W-1. Meters shall be Neptune T-10 Cold Water Meters / Displacement Type, Magnetic Drive, 1" size, with registration in gallons. Each water meter shall be provided with a R900 Pit MIU mounted on the vault cover.

Town Home Water Services: shall be provided with 1-1/2" diameter, Ford Catalog Number FB1000-6 corporation stops, Type "K" soft copper tubing, and Ford Catalog Number B44-666 Ball Valve Curb Stop. Curb Box shall be Capitol Foundry Model VB-143R, 4-1/4" diameter with locking lid. Water meters shall be located adjacent to the property line of each home in accordance with Cecil County, Maryland, Department of Public Works, Standard Specifications and Details for Water Mains & Sewer Mains, Standard Detail W-1. Meters shall be Neptune T-10 Cold Water Meters / Displacement Type, Magnetic Drive, 1" size, with registration in gallons. Each water meter shall be provided with a R900 Pit MIU mounted on the vault cover.

Where water pressure at the street is in excess of 80 psi, a pressure reducing valve shall be provided on the water service line by the applicant, within the structure.

Residential water meters shall be paid for and provided as part of the connection fee paid to the Town of Perryville. A temporary spool piece shall be installed by the applicant within the meter pit for testing purposes. Upon satisfactory pressure testing, chlorination, flushing and bacteriological testing by the applicant, and provided that all other concerns of the Town are addressed, the Town of Perryville shall remove the spool piece and install the water meter.

Sanitary Sewers

Manhole Frames and Covers: shall be in accordance with the attached Standard Detail S-18P2.

END OF SPECIFICATIONS



1. ALL FITTINGS TO BE COMPRESSION FITTINGS. PIPE AND METER SIZES VARY FOR TOWN HOUSES WITH FIRE SPRINKLERS.
2. SERVICE LINE FROM MAIN TO METER SHALL BE CONTINUOUS PIECE (NO JOINTS).
3. PROVIDE 3'-6" OF COVER OVER MAIN.
4. PROVIDE 3'-6" (MIN.) COVER OVER SERVICE LINE EXCEPT WHERE SHOWN OTHERWISE.

STANDARD SEWER & WATER DETAILS

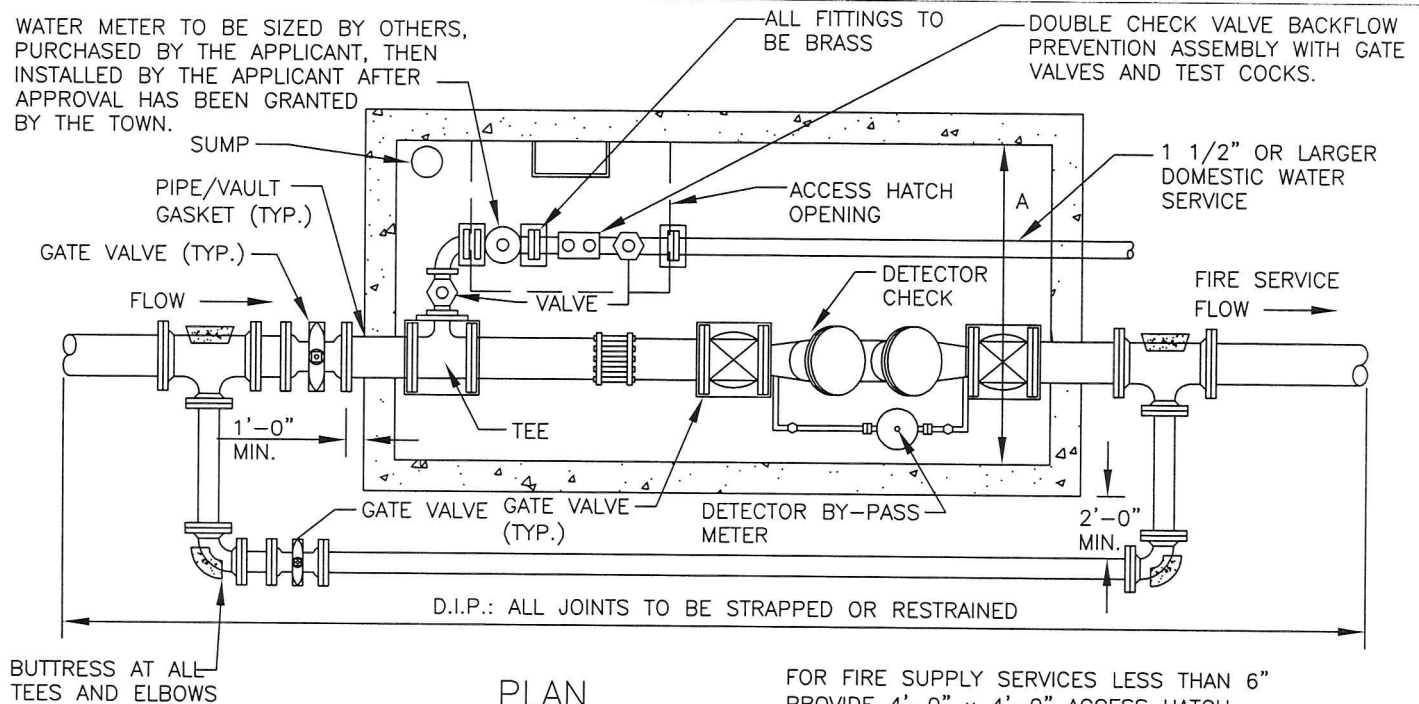
1-1/2" SUPPLY WITH 1" OUTSIDE SETTING METER

TOWN OF PERRYVILLE, MD
DEPARTMENT OF
PUBLIC WORKS

REVISÉ

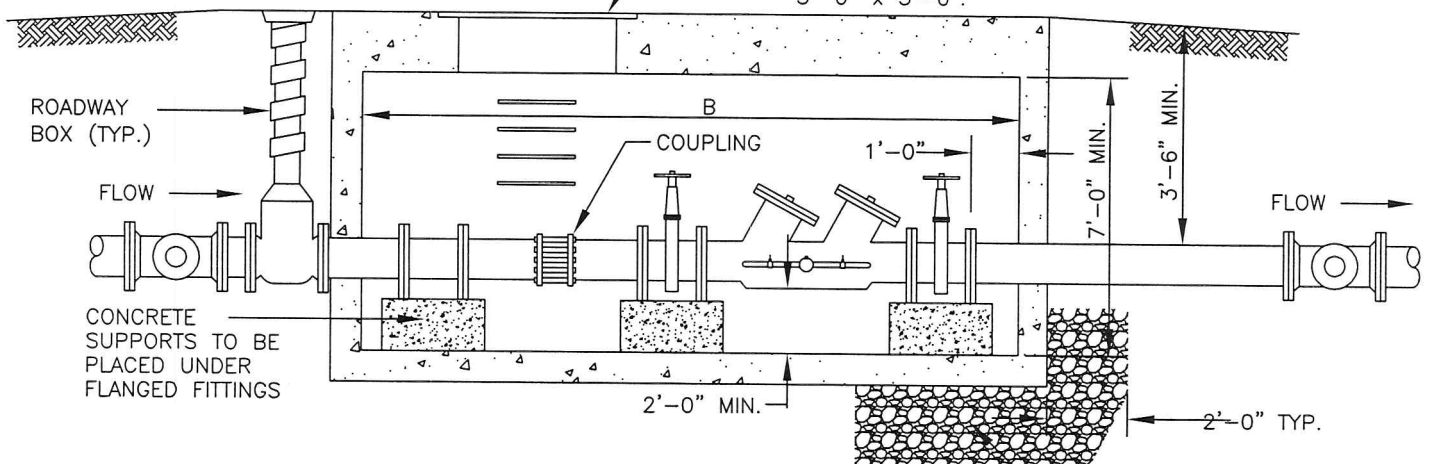
 $W-1$

WATER METER TO BE SIZED BY OTHERS, PURCHASED BY THE APPLICANT, THEN INSTALLED BY THE APPLICANT AFTER APPROVAL HAS BEEN GRANTED BY THE TOWN.



PLAN
NO SCALE

FOR FIRE SUPPLY SERVICES LESS THAN 6" PROVIDE 4'-0" x 4'-0" ACCESS HATCH WITH H-20 LOAD DESIGN, NON-CORROSIVE OSHA APPROVED LADDER EXTENSION SAFETY POST AND FRAME DRAIN. HATCH SIZES FOR LARGER FIRE SUPPLY SERVICES SHALL BE 5'-0" x 5'-0".



SECTION
NO SCALE

NOTES:

1. LOADS: L.L. = AASHTO H-20, D.L. = EARTH @110 LBS. PER CU. FT. AND 42 LBS PER CU. FT. EQUIVALENT FLUID PRESSURE.
2. CONCRETE REINFORCING SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 03300.
3. PROVIDE POSITIVE DRAINAGE AWAY FROM VAULT.
4. METERS 3" AND ABOVE SHALL BE EQUIPPED WITH PLATE STRAINERS.
5. ALL FLANGES SHALL RECEIVE STAINLESS STEEL BOLTS AND NUTS.
6. ALL PIPES SHOWN WITHIN RESTRAINT LIMITS AND NOT WITHIN THE VAULT SHALL BE DUCTILE IRON PIPE.
7. PROVIDE 2'-0" AGGREGATE PER CECIL CO. STDS. SEC. 02240 AROUND ENTIRE VAULT.

FIRE SERVICE SIZE	A	B
6"	6'	10'
8"	6'	10'
10"	8'	12'
12"	8'	12'

TOWN OF PERRYVILLE, MD
DEPARTMENT OF
PUBLIC WORKS

STANDARD SEWER & WATER DETAILS

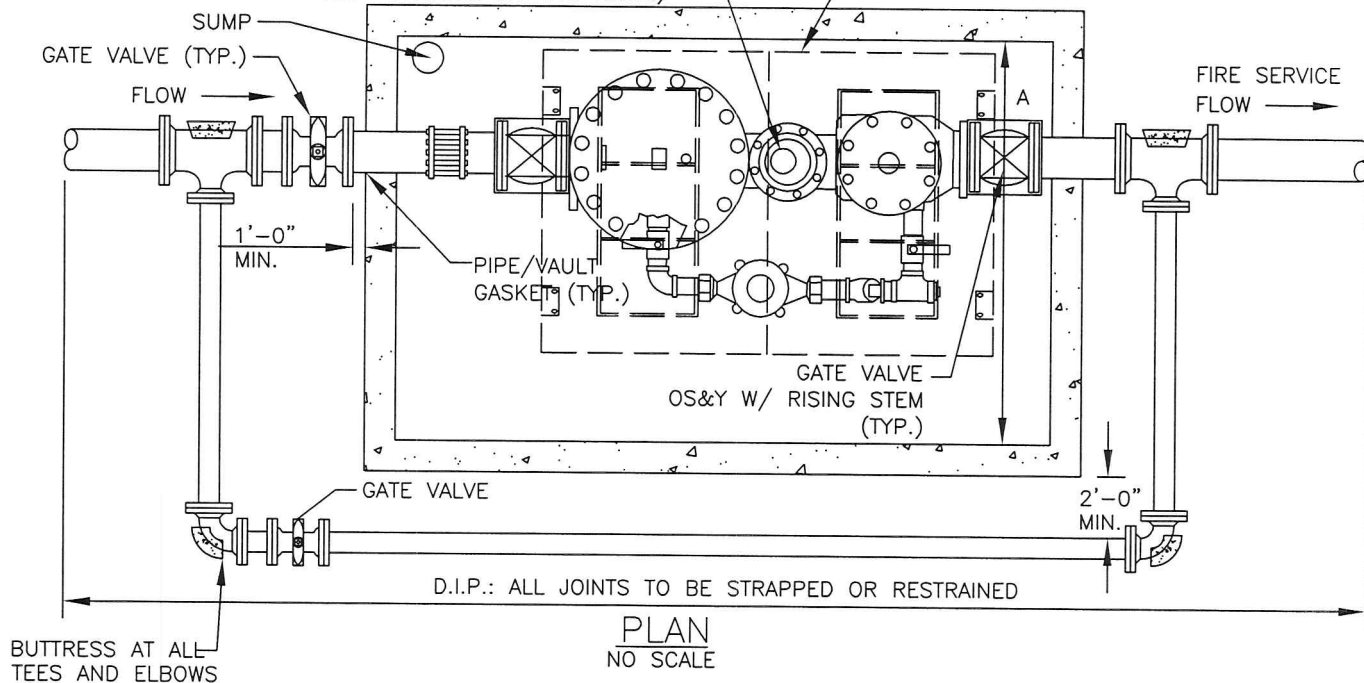
COMMERCIAL/INDUSTRIAL WATER SERVICE
INDIVIDUAL BUILDING METER PIT

REVISED

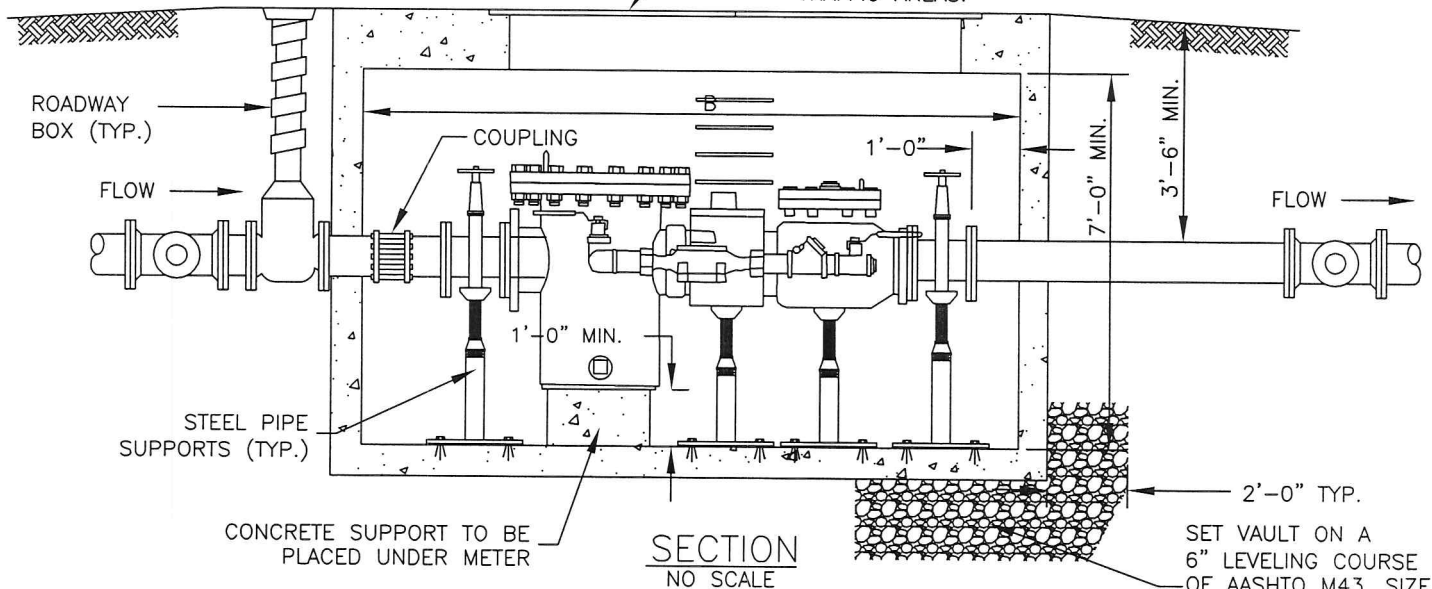
W-5

NEPTUNE HIGH PERFORMANCE PROTECTUS III FIRE SERVICE METER (METER SHALL BE SIZED BY OTHERS, PURCHASED BY THE APPLICANT, THEN INSTALLED BY THE APPLICANT AFTER APPROVAL HAS BEEN GRANTED BY THE TOWN.)

ACCESS HATCH
OPENING (CENTERED
OVER FIRE SERVICE METER)



PROVIDE 4'-0" x 6'-0" ACCESS HATCH WITH NON-CORROSIVE OSHA APPROVED LADDER EXTENSION SAFETY POST AND FRAME DRAIN. PROVIDE H-20 LOAD DESIGN IN VEHICULAR TRAFFIC AREAS.



NOTES:

1. LOADS: L.L.= AASHTO H-20, D.L. = EARTH @110 LBS. PER CU. FT. AND 42 LBS PER CU. FT. EQUIVALENT FLUID PRESSURE.
2. CONCRETE REINFORCING SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 03300.
3. PROVIDE POSITIVE DRAINAGE AWAY FROM VAULT.
4. ALL FLANGES SHALL RECEIVE STAINLESS STEEL BOLTS AND NUTS.
5. ALL PIPES SHOWN WITHIN RESTRAINT LIMITS AND NOT WITHIN THE VAULT SHALL BE DUCTILE IRON PIPE.
6. PROVIDE 2'-0" AGGREGATE PER CECIL CO. STDS. SEC. 02240 AROUND ENTIRE VAULT.

SET VAULT ON A 6" LEVELING COURSE OF AASHTO M43, SIZE 57 AGGREGATE. PER CECIL CO. STDS. SEC. 02240.

FIRE METER SIZE	A	B
6"	6'	7'
8"	6'	8'
10"	7'	10'

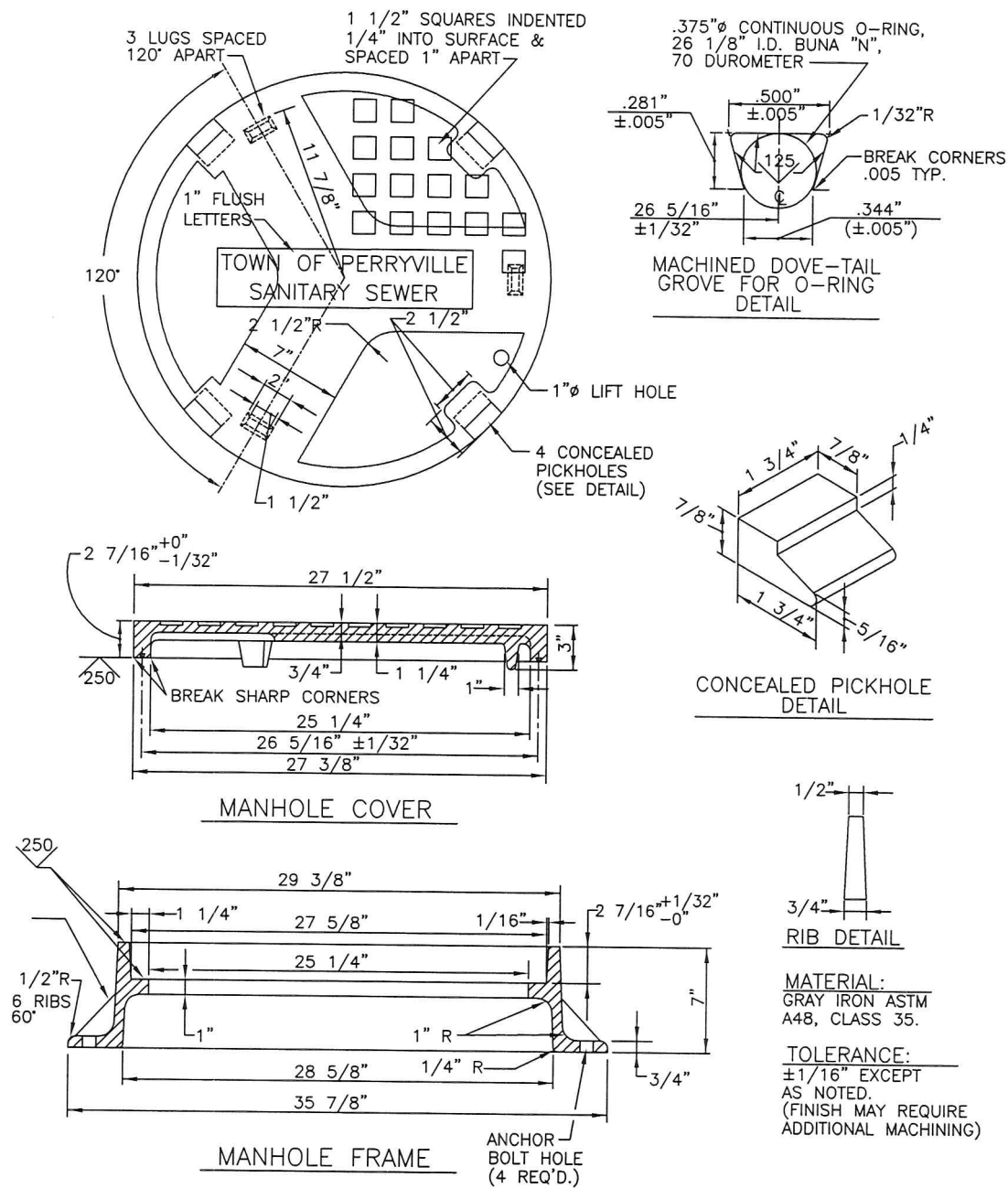
TOWN OF PERRYVILLE, MD
DEPARTMENT OF
PUBLIC WORKS

STANDARD SEWER & WATER DETAILS COMMERCIAL/INDUSTRIAL WATER SERVICE MASTER METER PIT

REVISED

5/29/09

W-5A



- HEAVY DUTY
- MAT'L ASTM A48 CL 30B

- MACHINE BEARING SURFACES
- MANUFACTURER'S MARKING
ON FRAME AND COVER

NOTES:

1. APPROVED SEAL COATING SHALL BE APPLIED TO THE PRECAST MANHOLE TO 12" BELOW PROPOSED GROUND ELEVATION.
2. MANHOLES RIMS LOCATED IN IMPROVED AREAS SHALL BE CONSTRUCTED 1/4" BELOW SURFACE PAVING.
3. MANHOLE COVERS SHALL BE PROVIDED WITH HDPE INFLOW PROTECTOR COVER WITH ONE WAY DIFFUSER VALVE AND STRAP HANDLE.

TOWN OF PERRYVILLE
DEPARTMENT OF
PUBLIC WORKS

STANDARD SEWER & WATER DETAILS
SANITARY SEWER WATERTIGHT
MANHOLE FRAME AND COVER

REVISED

S-18P2