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General Utility Notes

- The contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records and where possible measurements taken in the field. This information is not to be relied upon as being exact or complete. The contractor must call Virginia One Call and any utility that does not subscribe to One Call at least 72 hours before any excavation, to request exact field location of the utilities. It shall be the responsibility of the contractor to relocate all existing utilities which conflict with the proposed improvements shown on the plans.
- All water construction shall comply with the latest Prince George County standard specifications.
- Maintain 10' horizontal separation between water and sanitary lines. Where waterlines cross sanitary lines, the water line shall be a minimum of 18" above the sanitary line.
- All trenching and shoring shall comply with OSHA standards.
- Blocking shall be per the Prince George County specifications.
- Minimum depth of cover over sewer line is 36".
- A minimum bedding layer of 6" of type 57 stone will be installed around the circumference of all pipe and fitting outside the limits of the roadway surface. Stone backfill to grade is required under all proposed roadways.
- All existing utility covers shall be adjusted to match new grades.
- All underground fire lines shall be designed and installed by a licensed sprinkler contractor.

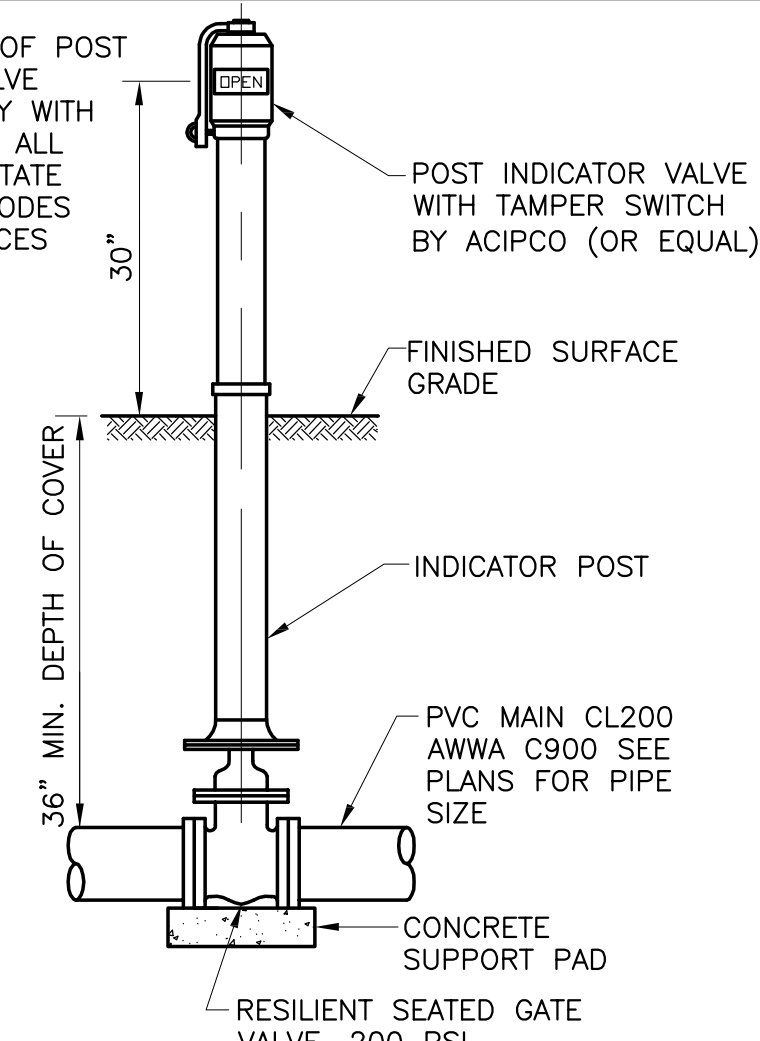
Notes

- Coordinate water installation with other utilities to avoid conflicts.
- It is the responsibility of the contractor to obtain all permits and licenses. The contractor shall be responsible for all tap fees and coordination with local utility companies. Contractor shall furnish and install water meter.
- No landscaping shall be placed within a 3' radius of any fire hydrant, fire department connection for fire protection systems or fire suppression system control valve. Landscaping shall be of a type that will not encroach in the 3' radius at maturity.

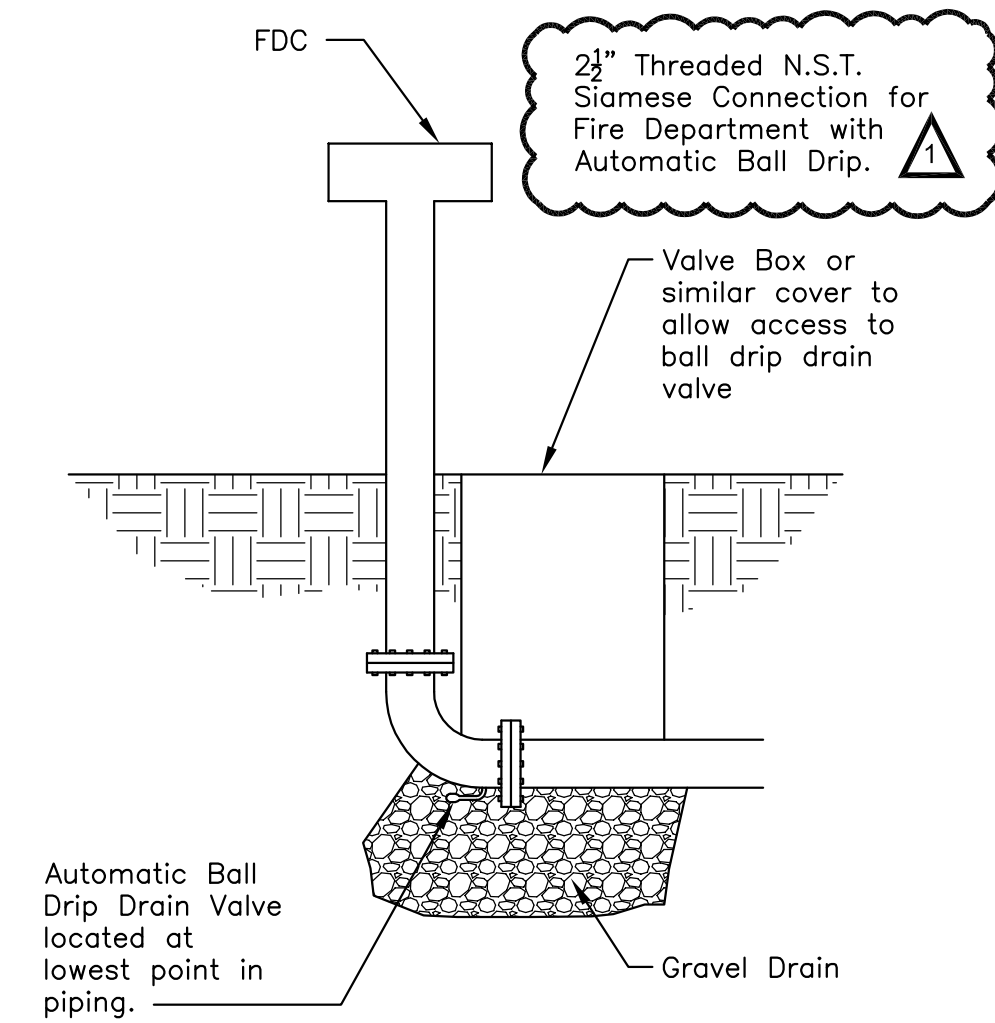
Prince George County - Dept. of Public Utilities - Standard Utility Notes

- All materials for sewer and water systems shown shall be supplied and installed in accordance with the latest specifications of Prince George County applicable at the time of the Notice to Proceed.
- For sewer and water installation within existing VDOT R/W; utility contractors must notify VDOT when installation begins so that density can be tested on trench backfill (95% ASTM D-698 @ optimum moisture +/- 2%).
- The installation of a sewer backflow device is required for all service connections where the finished floor elevations is lower than the nearest down grade and/or upgrade manhole top elevations. This device will be inspected by the Building Inspection Department.
- All water service connections below the elevation contour or where the pressure is greater than 80 psi will require individual pressure regulators as required by BOCA Code.
- Vertical Datum is based on mean sea level (USC & GS Datum). Horizontal controls are based on Virginia State Plane Coordinate Grid, South Zone, North American Datum of 1983 (NAD 1983).
- Contractor shall properly notify all property owners two (2) weeks prior to the start of any construction (including land clearing). Notification shall be in the form of a letter similar to the "SAMPLE" reflected in the county's latest Water and Sewer specifications (NOT-1).
- The engineer will certify that the roads are within 6-inches of subgrade before waterline construction can begin.
- For sewer and water installation within existing VDOT R/W; utility contractors shall notify VDOT 48 hours in advance when installation begins so that density can be tested (95% @ optimum Moisture + 20%).
- Contractor shall verify location and elevation of all underground utilities shown on the plans in areas of construction prior to starting the work. Contact engineer immediately if Location or elevation is different from that shown on the plan, or if: There appears to be a conflict, and upon discovery of any utility not shown on the plan call Miss Utility of Virginia at 1-800-552-7001 (toll free). The installation of a backflow device is required in all houses where the finished floor elevation is lower than the top upgrade manhole. This device will be inspected by the county building inspector.
- Individual water services shall be 1".
- All waterline valves must be located on the tee or cross when applicable.
- All manholes in utility easements are to have the concrete section extended one foot above the ground or Detail MAN-2B shall be used.
- A smooth transition of a drop manhole must be provided for each lateral or sanitary sewer entering a sanitary manhole.
- All fire hydrants shall be O.S.H.A. red in color.
- Meter boxes provided shall be cast iron 12"x18"x24" high with cast iron lids. The meter assemblies are to be supplied with Neptune Proread Encoders and R9001 PR MIU (RF) attached to the lid. Meters are to be compatible with the proposed system. A wand type visual reader compatible with the Proread system will be supplied to the Utility Department with the water meters.
- All sanitary sewer laterals that are installed outside of the R/W are to have cleanouts installed at the edge of the easement. A Carsonite marker shall also be installed to indicate their location.
- All hydrants and bends shall be equipped with Mega Lugs, kickers and thrust blocks.
- Pressure reducing valves shall be used on lots where the static pressure in the system exceeds 80 psi or as required by building code.
- Cleanouts are to be installed on all sanitary laterals in accordance with Prince George County Specifications. These cleanouts should be installed at the edge of the R/W.
- Utility inspector shall be contacted before individual service connections are covered.
- All manholes within 1,000 feet of a force main discharge shall be coated as required in the latest County Specifications.
- All individual water and sewer connections shall be made using double banded, stainless steel, epoxy coated saddles.
- A "W" and "S" shall be stamped in the curb while the concrete is still wet. These marks shall indicate the actual location of the water and sewer connections for each lot.
- All manholes shall be sealed at the joints with an external rubber sleeve similar to the Infil-Shield Seal Wrap as manufactured by Sealing Systems, Inc. The seal shall be made of EPDM (Ethylene Propylene Diene Monomer) rubber with a minimum thickness of 65 mils. Each unit shall have a 2-inch wide mastic strip on the top and bottom edge of the rubber wrap. The mastic shall be non-hardening Butyl Rubber Sealant, with a minimum thickness of 125 mils.
- The boxes for sanitary sewer connections must be marked as sewer connections rather than water meter.
- All gate valve boxes located outside of the pavement need to be enclosed in 12"x12"x6" concrete enclosure.

INSTALLATION OF POST INDICATOR VALVE SHALL COMPLY WITH NFPA 96 AND ALL APPLICABLE STATE AND LOCAL CODES AND ORDINANCES



2 Post Indicator Valve
N.T.S.

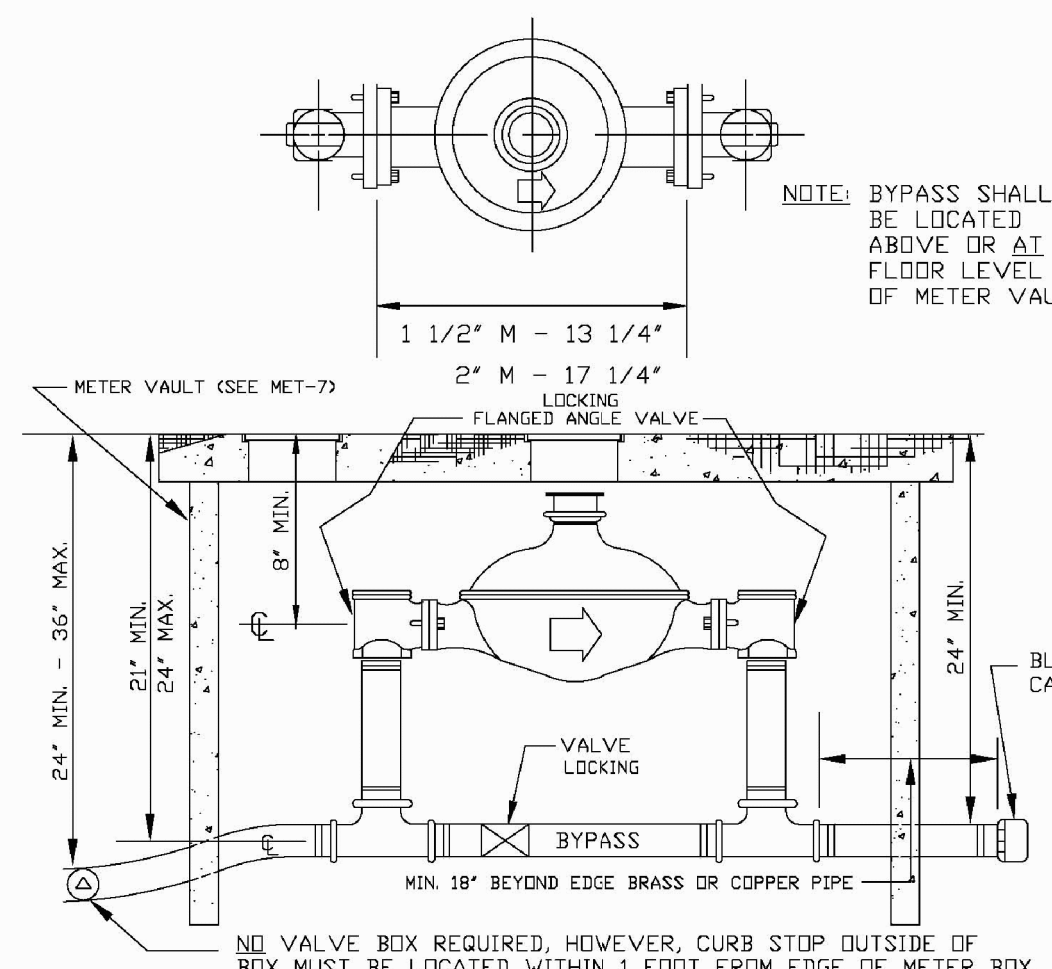


3 Fire Department Connection
N.T.S.

5 Water Service Connection Detail
N.T.S.

PRINCE GEORGE COUNTY DEPARTMENT OF PUBLIC UTILITIES

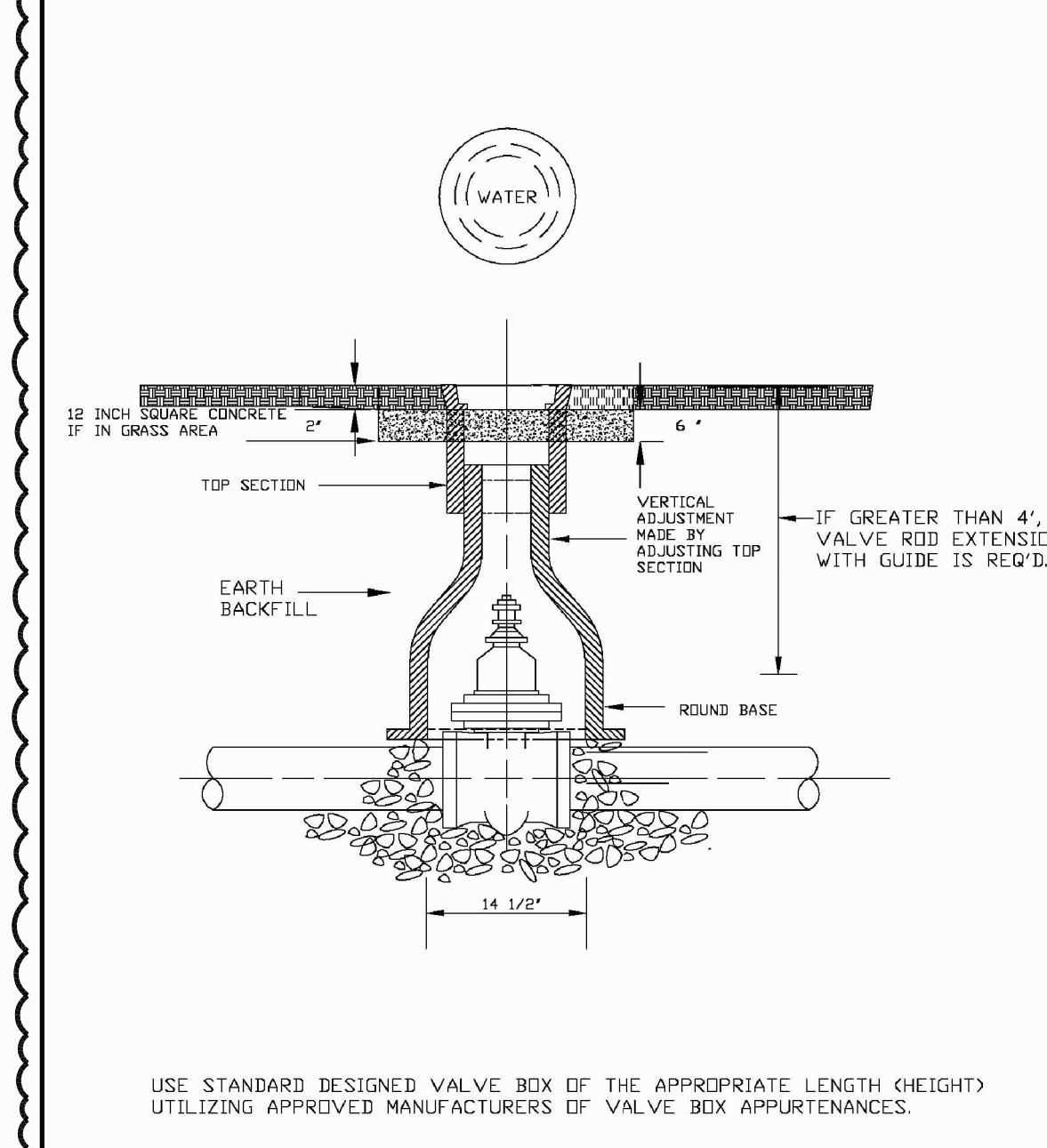
- NOTES:
- SADDLES SHALL BE USED FOR ALL 1 1/2" AND 2" TAPS.
 - WATER SERVICE LATERALS FOR 1 1/2" AND 2" SERVICES WILL BE TYPE-K HARD COPPER. CONNECTIONS FOR 1 1/2" AND 2" SERVICES WILL BE APPROVED COMPRESSION FITTINGS. ALL CONNECTIONS AT CORPORATION STOP SHALL BE APPROVED COMPRESSION FITTINGS.
 - TAPS SHOULD BE MADE AT THE SPRING LINE OF THE MAIN LINE.
 - FOR DETAIL OF VAULT, SEE MET-7.
 - YOE MUST BE INSTALLED WITH A METER SPACER THAT WILL BE FURNISHED TO THE CONTRACTOR BY THE METER SUPPLIER. THE SPACER WILL BE REMOVED BY THE UTILITIES DEPARTMENT WHEN THE METER IS SET.



1 1/2" OR 2" DISC METER SETTINGS
DATE: JAN. 2008
REVISIONS: DRWG. NO. MET-4

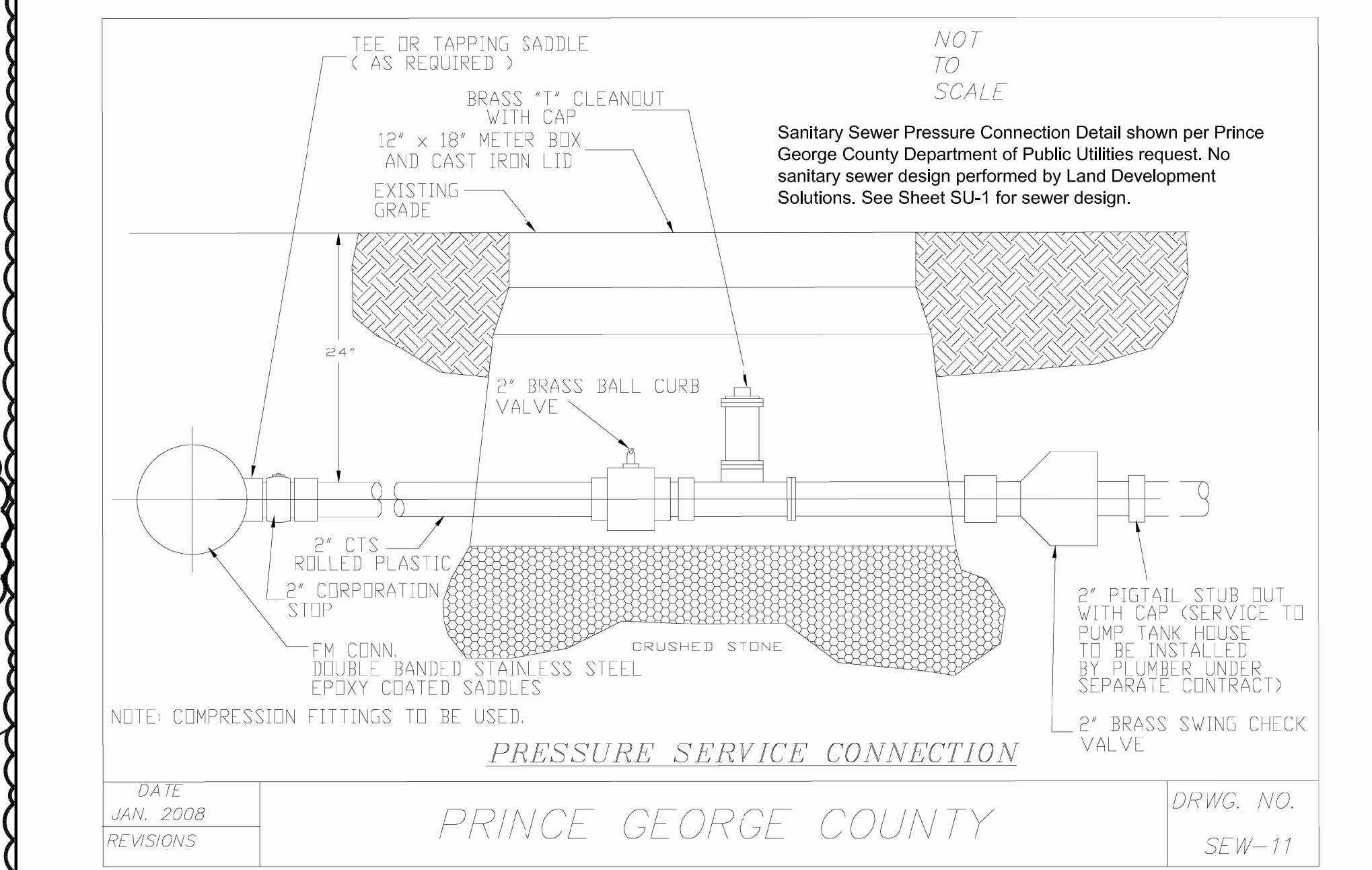
4 Water Meter Detail
N.T.S.

PRINCE GEORGE COUNTY DEPARTMENT OF PUBLIC UTILITIES



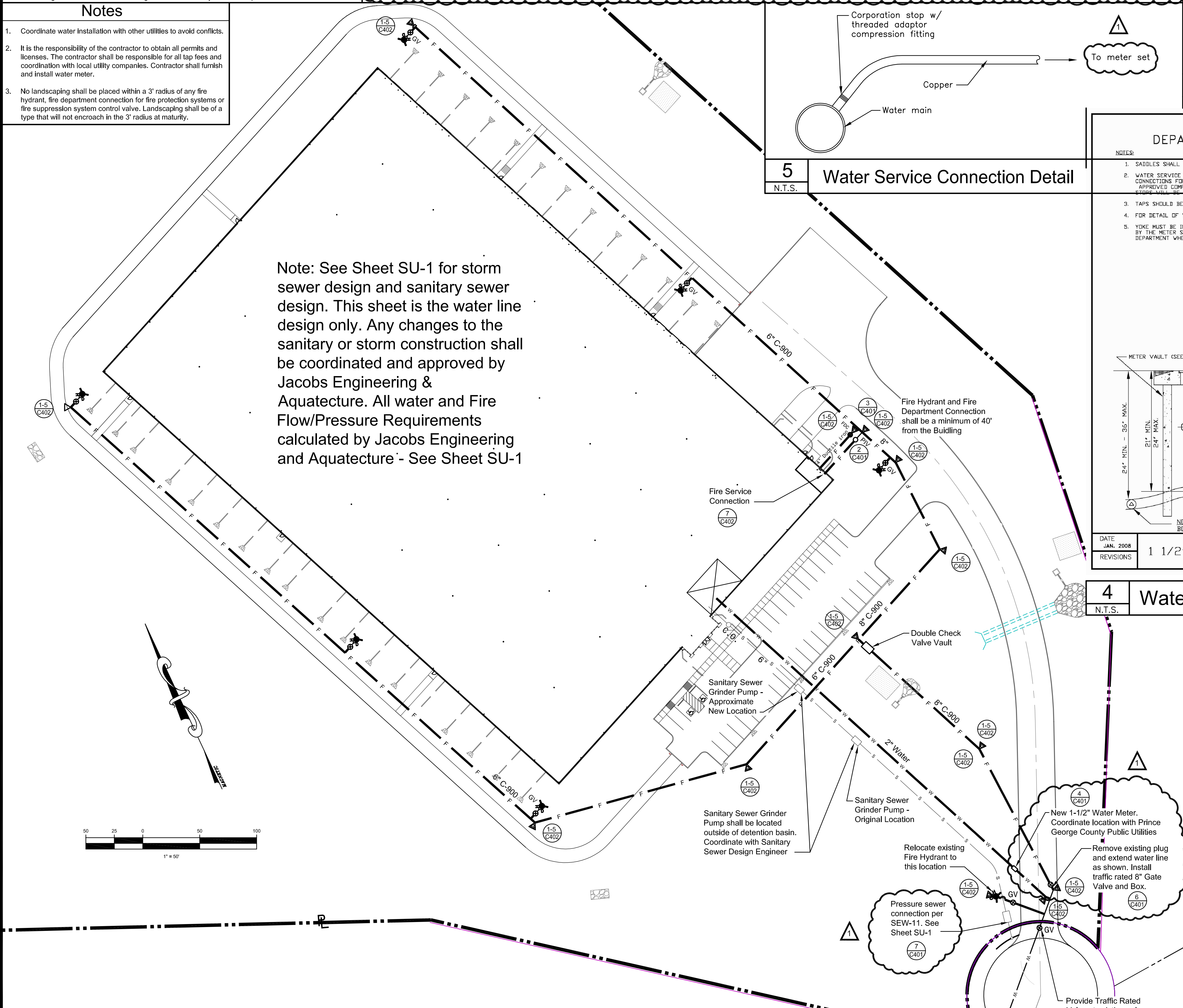
SMALL VALVE BOX
DATE: JAN. 2008
REVISIONS: DRWG. NO. WAT-7

6 Valve Box Detail
N.T.S.



7 Sanitary Sewer Pressure Connection
N.T.S.

Note: See Sheet SU-1 for storm sewer design and sanitary sewer design. This sheet is the water line design only. Any changes to the sanitary or storm construction shall be coordinated and approved by Jacobs Engineering & Aquatecture. All water and Fire Flow/Pressure Requirements calculated by Jacobs Engineering and Aquatecture - See Sheet SU-1



1 Site Water Plan
1"=50'

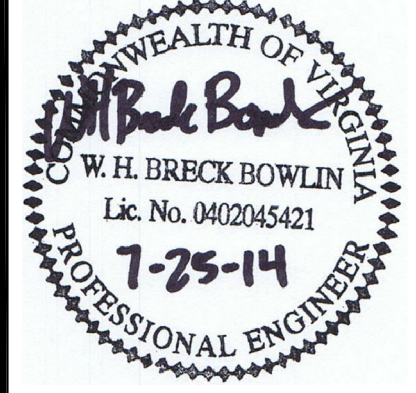
Project:
The Hollingsworth Companies
Building 8, Lot 12 VP-145
Southpoint Business Park
Prince George, Virginia

LAND DEVELOPMENT SOLUTIONS
Land Development Solutions - USA, Inc. VA License #0407006092
310 SIMMONS RD., SUITE K KNOXVILLE, TENNESSEE 37922
PH. 865-671-2281



Drawing Description:
Site Water Plan & Details

Revision	Date	By	Comments
No. 1	7-25-2014		Prince George County Comments



Drawn By	CDB
Checked	WHBB
Approved	WHBB
Job No.	
As Noted	6-23-13
Scale	Date

C401
Sheet No.