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- This technical drawing illustrates the installation of a water meter. The top portion shows a side view of the water main with a saddle and stop, a 1" service line, and a lockable shutoff. A top view shows the meter's 18" diameter and 12"-18" spacing. The bottom portion is a cross-section showing the meter set at final grade, with a 6" stone bed (VDOT 57) and a 1" service line. It also shows a 1" corporation stop with a CTS compression connection, a tracer wire, and a 3/4" x 6" stake. Dimensions include 3'-0" for the meter depth, 15" for the stone bed, and 2'-0" for the service line depth.
- WATER MAIN  
 VARIES  
 RIGHT-OF-WAY EASEMENT LINE  
 PRIVATE PROPERTY  
 18" DIA.  
 12"-18"  
 SADDLE & STOP  
 1" SERVICE  
 LOCKABLE SHUTOFF  
 DUAL CHECK VALVE  
 METER SETTER & BOX TO SET AT FINAL GRADE OF  
 FINAL GRADE  
 METER BY PARTICIPATING UTILITY  
 6" STONE VDOT 57  
 3'-0"  
 30°-45°  
 1" SERVICE  
 15"  
 2'-0"  
 15"  
 3/4" Ø x 6" TO BE CAL MARKED STAKED  
 TRACER WIRE SEE GENERAL DETAIL  
 1" CORPORATION STOP WITH CTS COMPRESSION CONNECTION SEE #4

## 09/07/17

- TRAFFIC BEARING LOCATION**

TRAFFIC BEARING VAULT AND H-20 RATED HATCH SHALL BE SIZED IN ACCORDANCE WITH DIMENSIONAL REQUIREMENTS SHOWN BELOW.

ANGLE DUAL CHECK VALVE  
BRONZE DISK METER  
LOCKABLE SHUTOFF  
6" TYP.  
3'-0"  
2'-6"

SEE NOTE 5 HATCH SHALL BE BILCO MODEL J-3ALH20 (30"x26") OR APPROVED EQUIVALENT  
SEE NOTES 2 & 3

**NON TRAFFIC BEARING LOCATION**

**SIZING CHART LID**

METER BOX SIZE	DIA. (MIN.)	LID DIA. (MIN.)	COVER & LID MODEL (OR APPROVED EQUIVALENT)
5/8"	18"	11 1/2"	FORD "A" SERIES FRAME & NICOIR DOMESTIC 12.25 CK LID WITH SENSUS RECESS AND WYWA LOGG
3/4" - 1"	24"	20"	FORD MC-24-T OR AT MC DONALD 74M24 T
1 1/2" - 2"	30"	20"	FORD MC-30-T OR AT MC DONALD 74M30 T

BRONZE DISK METER  
LOCKABLE SHUTOFF  
6" TYP.  
3'-0"  
2'-6"

SEE NOTE 5  
SEE NOTES 2 & 3  
ANGLE DUAL CHECK VALVE

**FINAL GRADE**

3'-0"  
22" MIN.  
SEE NOTE 6  
6" MIN.  
MIN. 6" STONE VDOT 57  
TRACER & GROUND WIRES

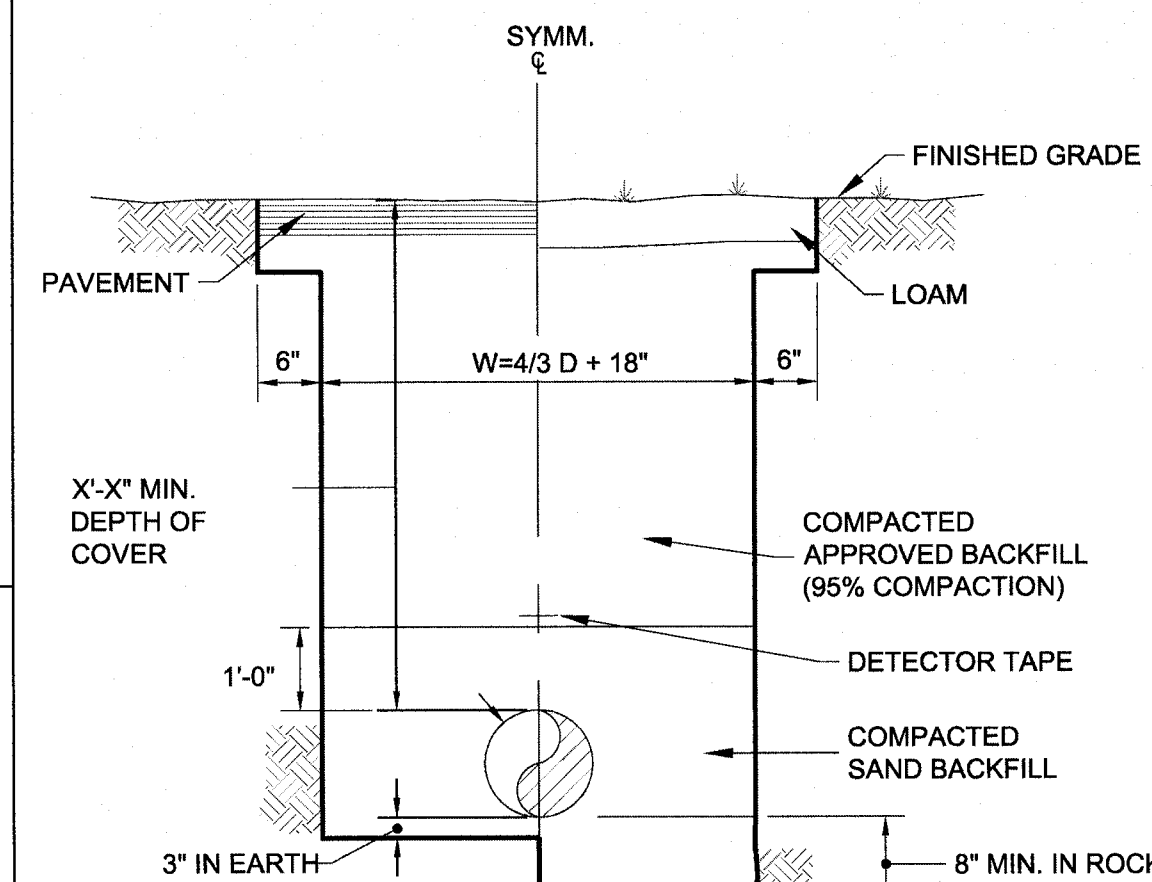
**FINAL GRADE**

3'-0"  
22" MIN.  
SEE NOTE 6  
6" MIN.  
MIN. 6" STONE VDOT 57  
TRACER & GROUND WIRES SEE GENERAL

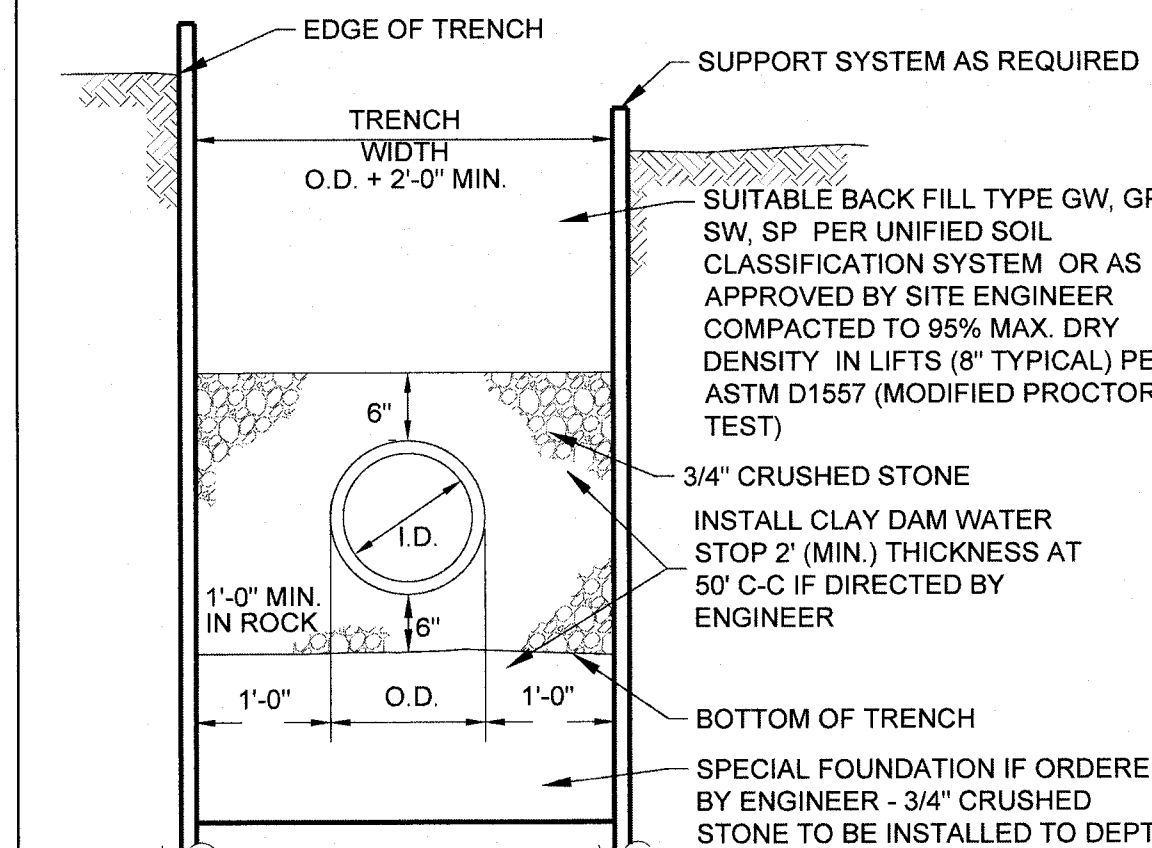
## W-5

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- STAINLESS STEEL SCREEN  
WAGER MODEL 1600FAA  
(NO COLOR COATING)  
OR APPROVED EQUAL  
- INSTALL APPROVED  
EROSION PROTECTION AT  
DISCHARGE
- DUCTILE IRON  
MJ 90° BEND
- EPOXY COATED STEEL  
PIPE SUPPORTS WITH  
STAINLESS STEEL ANCHORS  
(TYP.) OF 2
- 4" BLOCKOUT FOR  
DRAIN (TYP. OF 4)
- 2'-0" MIN. ABOVE GROUND
- FLANGED DUCTILE  
IRON 90° BENDS
- 8" MIN.
- 6" MIN.
- 4'-11"
- PRV (SEE NOTE 6)
- 6'-0"
- 6" MIN.
- OUTLET
- SMOOTH HOLE WITH  
LINK SEAL (TYP.) OF 3
- 6" MIN.
- 12'-6"
- FL X FL REDUCING TEE  
PRV (SEE NOTE 6)
- 12" Min.
- FL X FL GATE VALVE  
WITH HANDWHEEL  
(SEE NOTE 5)
- 2" LOW FLOW  
BYPASS
- TYPE K COPPER
- NPT GATE VALVE
- PRV NOTE 3
- 12" Min.
- TURBO METER
- NPT GATE VALVE
- 4" BLOCKOUT FOR  
DRAIN (TYP. OF 4)
- 16" Min.
- FL X FL GATE VALVE  
WITH HANDWHEEL
- 18" Min.
- MAIN LINE PRV (SEE NOTE 4)
- TURBO METER  
(SENSU OMNI T<sup>®</sup>)  
OR APPROVED EQUAL
- 72" x 48" DOUBLE DOOR  
GUTTER-FRAME  
H20 RATED ACCESS HATCH
- FL X FL GATE VALVE  
WITH HANDWHEEL
- 16" Min.

1/26/16

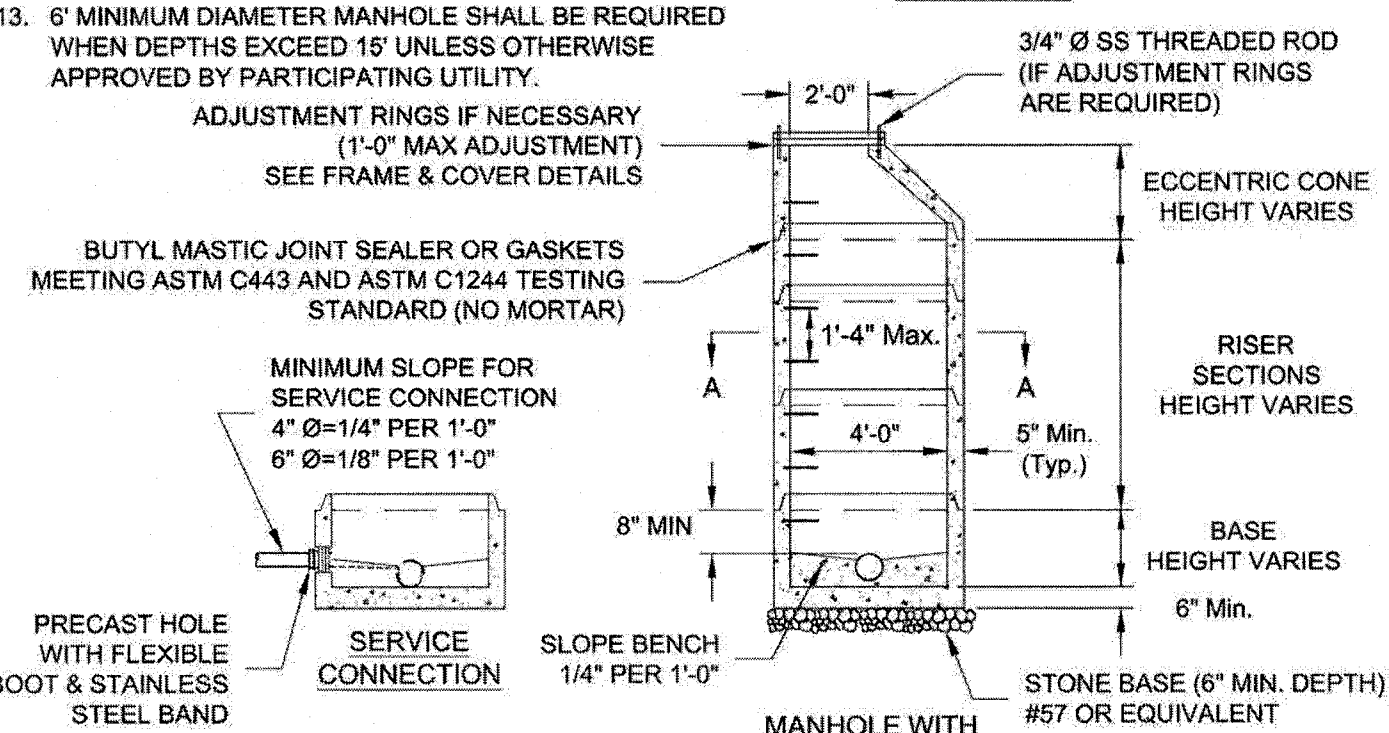


**TYPICAL WATER MAIN & SERVICE TRENCH SECTION**  
NOT TO SCALE



NOT TO SCALE

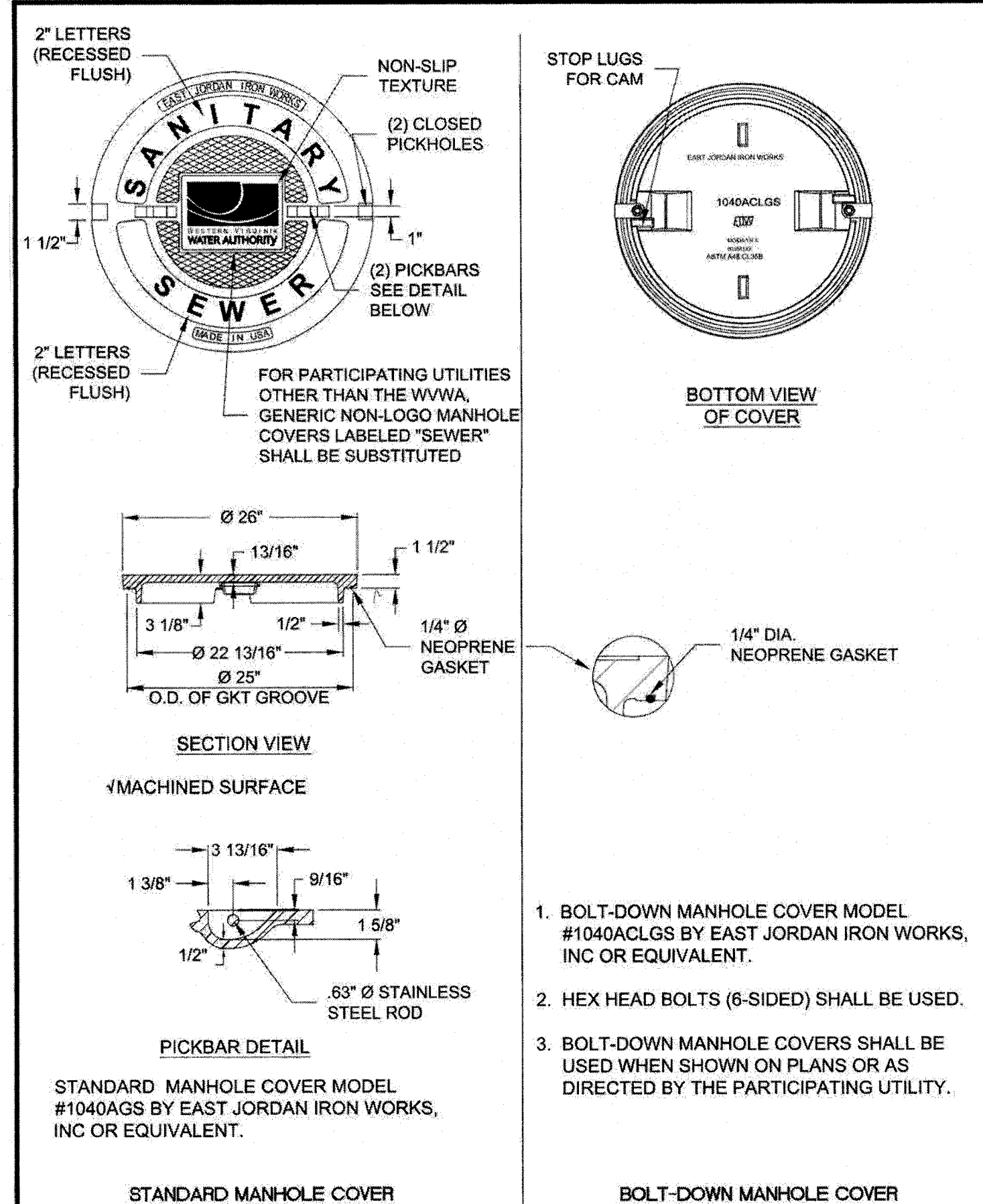
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- Diagram illustrating the components of a manhole assembly (Section A-A):
- PRECAST HOLE (TYP.)
  - GROUT ANNULAR SPACE (TYP. INLET & OUTLET)
  - 4'-0"
  - FLEXIBLE BOOT WITH STAINLESS STEEL BAND (TYP.)
  - SECTION A-A



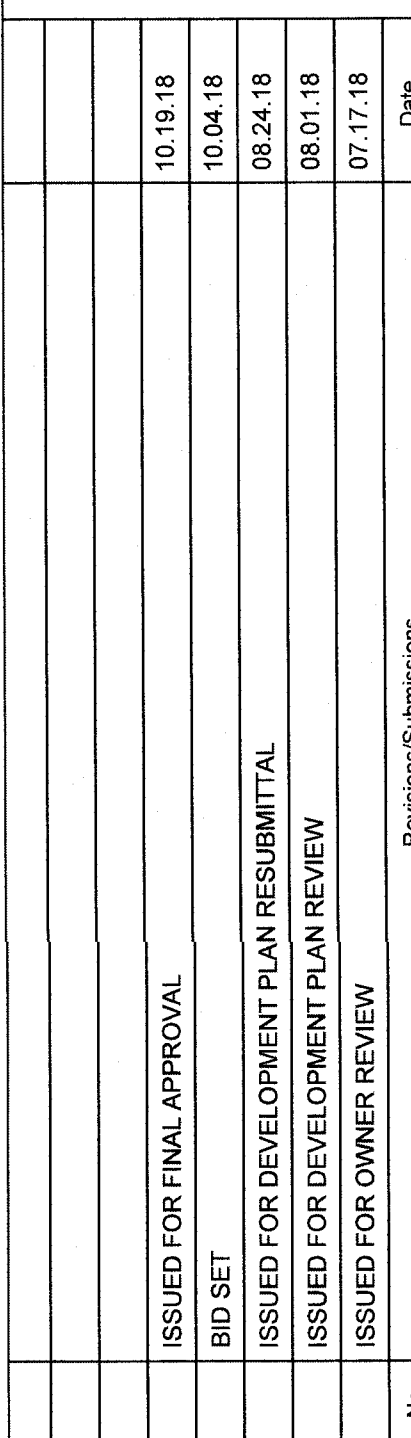
**S-1**

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- PRIVATE PROPERTY**
- RIGHT OF WAY OR LIMITS OF EASEMENT**
- CLEAN-OUT BOX AND LID (SET TO FINISHED GRADE)**
- CLEAN-OUT TO EXTEND ABOVE GROUND A MIN. OF 3 FEET DURING INSTALLATION OF MAIN LINE. PLUMBER SHALL CUT STACK TO FINISHED GRADE AS SHOWN WHEN BUILDING SEWER IS CONNECTED TO LATERAL**
- SOLID GLUE CAP**
- ROUGH GRADE**
- FINISHED GRADE**
- PLASTIC BODY CLEAN-OUT & CAP**
- CLEAN-OUT STACK (SEE NOTES #2 & #8)**
- 45° OR 22.5° BELL & SPIGOT BEND (IF NEEDED)**
- 45° WYE (TEE NOT ACCEPTABLE) (SEE NOTE #2)**
- 45° MAX.**
- SEWER MAIN**
- 1/4" PER 1'-0" MINIMUM GRADE**
- HORIZONTAL SECTION SHALL EXTEND A MINIMUM OF 5' OR AS DIRECTED BY THE PARTICIPATING UTILITY**
- (SEE NOTE #6)**
- 4" MINIMUM GRAVEL BEDDING #57 OR EQUIVALENT**
- TEE, WYE, TEE/WYE OR COMBINATION OF WYE & 45° BEND FITTINGS SHALL BE SIZED AS REQUIRED**
- 2'-0" MIN.**
- 2'-0" MIN.**
- 45° MAX.**
- 11.25° OR 22.5° BEND**
- SAME AS ABOVE**
- SANITARY SEWER LATERAL FOR DEEP SEWER**

**S-6**



## S-5



A circular professional engineer seal for the Commonwealth of Virginia. The outer ring contains the text "COMMONWEALTH OF VIRGINIA" at the top and "PROFESSIONAL ENGINEER" at the bottom. In the center, the name "JEFFREY A. TIBBITTS" is printed above the license number "Lic. No. 60897". A stylized signature is written across the center of the seal.

Project No.	755208
Scale	AS NOTED
Drawn	JJL
Checked	EJB
Date	07/17/18
Drawing Title	

Drawing No. **C6.1**