


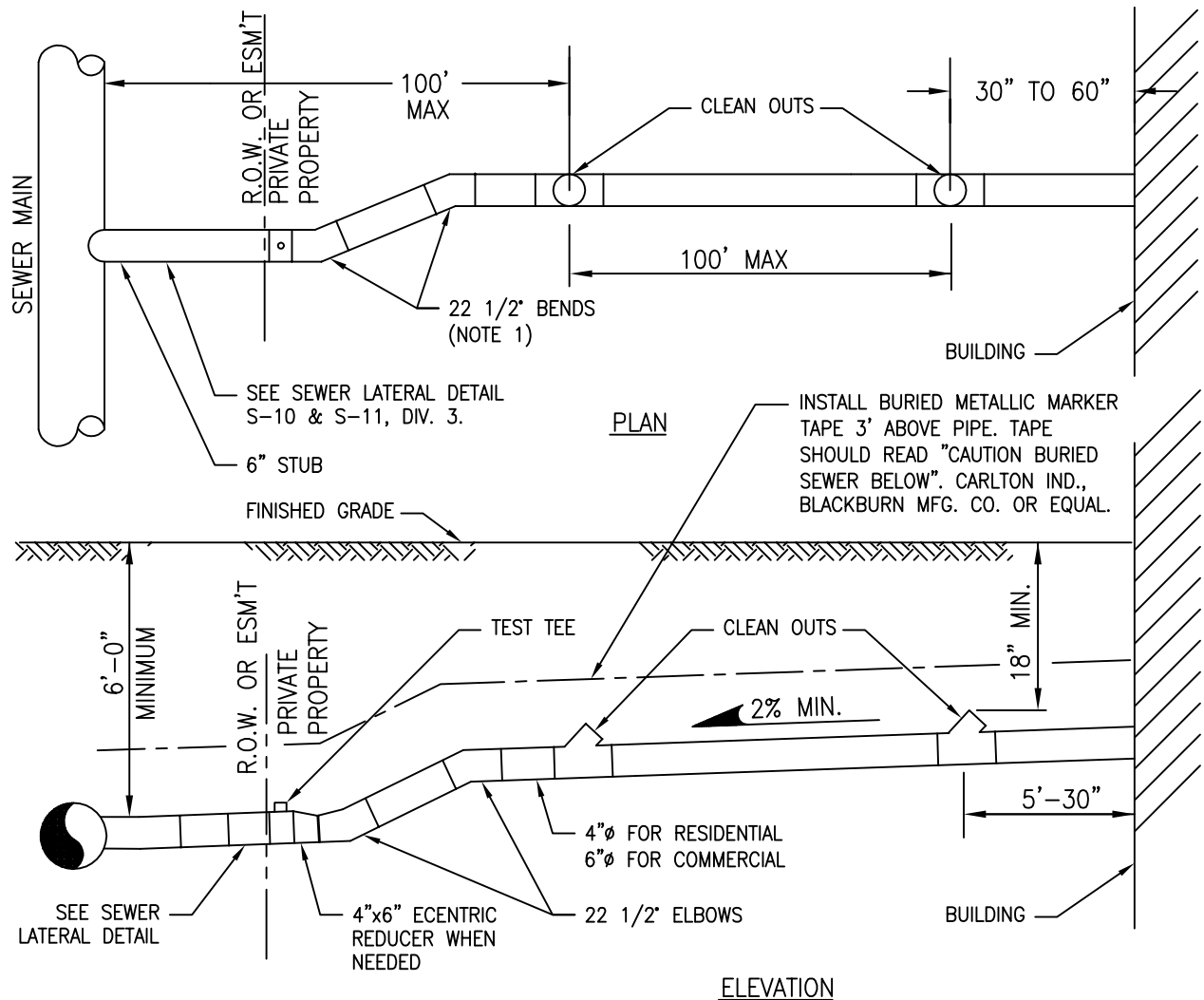
GENERAL INFORMATION ONLY. REFER TO DISTRICT STANDARDS FOR MORE DETAILED INFORMATION.

GENERAL NOTES:

- A. A DISTRICT PERMIT IS REQUIRED FOR ALL SIDE SEWER INSTALLATIONS. MAIN LINE SEWER SHALL BE IN USE AND OPERATION.
- B. LEGAL DESCRIPTION AND ADDRESS REQUIRED TO OBTAIN PERMIT.
- C. NO DOWNSPOUTS, FOOTING DRAINS, OUTSIDE DRAINS OR ANY SOURCE OF GROUND OR SURFACE WATERS ARE ALLOWED TO CONNECT TO SIDE SEWER.
- D. SIDE SEWER IS INSTALLED BY A CONTRACTOR, A CURRENT STATE LICENSE NUMBER IS REQUIRED ON PERMIT. THE PROPERTY OWNER INSTALLING THE SIDE SEWER SHALL INDICATE SO ON THE PERMIT. ALL WORK WITHIN PUBLIC RIGHT-OF-WAY WILL REQUIRE A STATE LICENSED CONTRACTOR TO INSTALL.
- E. MAXIMUM OF 100 FEET BETWEEN CLEANOUTS. CLEANOUTS REQUIRED AT CONNECTIONS TO BUILDINGS AND FOR AGGREGATE BENDS GREATER THAN 45°, (AGGREGATE BENDS BEING A COMBINATION OF BENDS GREATER THAN 45° WITH LESS THAN 4' OF STRAIGHT PIPE BETWEEN BENDS.) SEE DEVELOPMENT GUIDELINES FOR INFORMATION ON CLEANOUTS. CLEANOUT SHALL BE A WYE LATERAL AND SHALL BE BROUGHT TO WITHIN 18" OF SURFACE IN LANDSCAPED AREAS. IN PAVED & CONCRETE AREAS CLEANOUTS SHALL BE BROUGHT TO SURFACE WITH A LOCKING FRAME AND COVER IN ACCORDANCE WITH DISTRICT STANDARDS.
- F. PIPE SHALL BE BEDDED WITH PEA GRAVEL OR 5/8 MINUS, CRUSHED ROCK IF APPROVED BY THE DISTRICT. OVER-EXCAVATION SHALL BE BROUGHT TO GRADE WITH SELECT BACKFILL AS DIRECTED BY THE DISTRICT.
- G. ALL JOINTS SHALL BE RUBBER GASKET TYPE, EXCEPT ABS & PVC SCHEDULE 40 MAY BE SOLVENT WELDED TYPE.
- H. PARALLEL WATER AND SEWER LINES SHALL BE 10 FEET APART HORIZONTALLY WHEREVER POSSIBLE.
- I. SIDE SEWER SHALL BE VISUALLY INSPECTED AND TEST WITNESSED BY DISTRICT. SIDE SEWER SHALL BE PLUGGED AND TESTED IN PRESENCE OF DISTRICT. AFTER BEDDING, PRIOR TO BACKFILLING. AFTER 15 MINUTES THERE SHALL BE NO VISIBLE OR MEASURABLE LEAKAGE. THE SYSTEM SHALL BE WATERTIGHT. AIR TESTING AFTER PIPE IS SECURED, AT 4 PSI FOR 5 MINUTES WITH NO PRESSURE LOSS IS ACCEPTABLE IN LIEU OF WATER TEST.
- J. ALL MATERIALS AND WORKMANSHIP TO COMPLY WITH UNIFORM PLUMBING CODE AND APPLICABLE DISTRICT DEVELOPMENT GUIDELINES AND STANDARDS. CONTACT THE DISTRICT FOR MORE INFORMATION.
- K. A PRE-CONSTRUCTION MEETING IS REQUIRED FOR ALL WORK OCCURRING IN PUBLIC RIGHT-OF-WAY, AND/OR WHEN A TAP ON THE EXISTING MAIN IS REQUIRED.
- L. SEE DIVISION 3 FOR ADDITIONAL STANDARDS APPLICABLE TO SIDE SEWERS AND SEWER LATERALS.
- M. SLOPE FOR SIDE SEWERS SHALL BE 2% MIN. TO (45',100%) MAX.

- 1 IF APPLICABLE, TAPPING SADDLES SHALL BE: ON DUCTILE IRON MAIN: ROMAC, FORD OR SMITH-BLAIR SST. ON CONCRETE OR PVC; ROMAC CB OR APPROVED EQUAL.
- 2 CONNECTION TO MAIN LINE TO BE OF LIKE MATERIALS, EXCEPT WHEN MAIN IS CONCRETE. CONSULT THE DISTRICT. ALL SEWER LATERALS LOCATED WITHIN EASEMENTS & RIGHT OF WAY, SHALL BE 6" OR LARGER. FOR MATERIALS SEE SECTION 3-2.020. OUTSIDE OF RIGHT-OF-WAY OR EASEMENT, SIDE SEWER PIPE SHALL BE 4" OR LARGER FOR SINGLE FAMILY AND 6" OR LARGER FOR ALL OTHER USES.
- 3 TRANSITIONS OF DIFFERENT MATERIAL TYPES SHALL BE WITH ROMAC STYLE 501 COUPLING OR EQUAL.
- 4 TEST TEE REQUIRED AT PROPERTY LINE. INSTALL SAME SIZE AS SEWER STUB.
- 5 6" BY 4" OR 8" BY 6" REDUCER, WHERE REQ'D.
- 6 45° BEND, IF NEEDED (TYP).
- 7 ON PRIVATE PROPERTY, MINIMUM COVER SHALL BE 18".
- 8 CLEANOUT (SEE NOTE "E")
- 9 CONNECT WASTE-LINE TO SIDE SEWER CONNECTION WITH APPROVED ADAPTORS. CONNECTION WITH CLEANOUT TO BE 2.5'-5' OUT FROM STRUCTURE.
- 10 IF AN EXISTING SEPTIC TANK IS PRESENT, CAP AND PLUG PIPE AND ABANDON TANK PER APPLICABLE COUNTY/CITY HEALTH DEPARTMENT.
- 11 COMPLY WITH RESTORATION REQUIREMENTS SET FORTH IN RIGHT-OF-WAY PERMIT AND/OR DISTRICT DEVELOPMENT GUIDELINES.

	
<h2 style="margin: 0;">STANDARD SIDE SEWER</h2>	
DATE: 05-2017	DWG. SS-1
APPROVED BY: _____ DLH _____ DISTRICT ENGINEER	



NOTES:

1. BENDS SHALL NOT BE GREATER THAN 45°.
2. CLEAN OUT IS REQUIRED FOR EACH PIPE LENGTH GREATER THAN 100' AND FOR EACH 90° ACCUMULATED BEND.
3. RIGHT-OF-WAY RESTORATION SHALL MATCH OR EXCEED THE ORIGINAL CONDITION.
4. ONLY PLUMBING OUTLETS SHALL BE CONNECTED TO THE SEWER. NO DOWNSPOUTS, FOOTING DRAINS OR STORM DRAINAGE MAY BE CONNECTED TO THE SEWER SYSTEM.
5. 18" MINIMUM COVER OF PIPE.
6. 6' MINIMUM COVER AT PROPERTY LINE.
7. LAY PIPE IN STRAIGHT LINE BETWEEN BENDS. MAKE ALL CHANGES IN GRADE OR LINE WITH A BEND OR WYE. 90° CHANGE WITH A BEND AND WYE.
8. 6" SEWER PIPE MINIMUM SIZE IN R/W & EASEMENTS.
9. 2% MINIMUM SLOPE. 45° (100%) MAXIMUM SLOPE. IF SLOPE EXCEEDS 45° FOR MORE THAN 3', SEE AWWD DETAIL S-10A.
10. CONSTRUCTION IN RIGHT-OF-WAY SHALL BE PERFORMED BY A REGISTERED LICENSED CONTRACTOR.
11. ALL CONSTRUCTION REQUIRES A PERMIT AND PAYMENT OF FEE. COMPLETE LEGAL DESCRIPTION OF PROPERTY AND DIMENSIONS.
12. RECORD DRAWING SHOWING LOCATION OF SIDE SEWER IN RELATION TO THE HOUSE IS REQUIRED AFTER INSTALLATION. PREPARED BY DISTRICT'S INSPECTOR.
13. SIDE SEWER MAINTENANCE FROM BUILDING TO PROPERTY LINE OR ESM'T, SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER.
14. SEE DIVISION 3 FOR ADDITIONAL STANDARDS ON PUBLIC SEWER.



**PRIVATE SIDE
SEWER INSTALLATION**

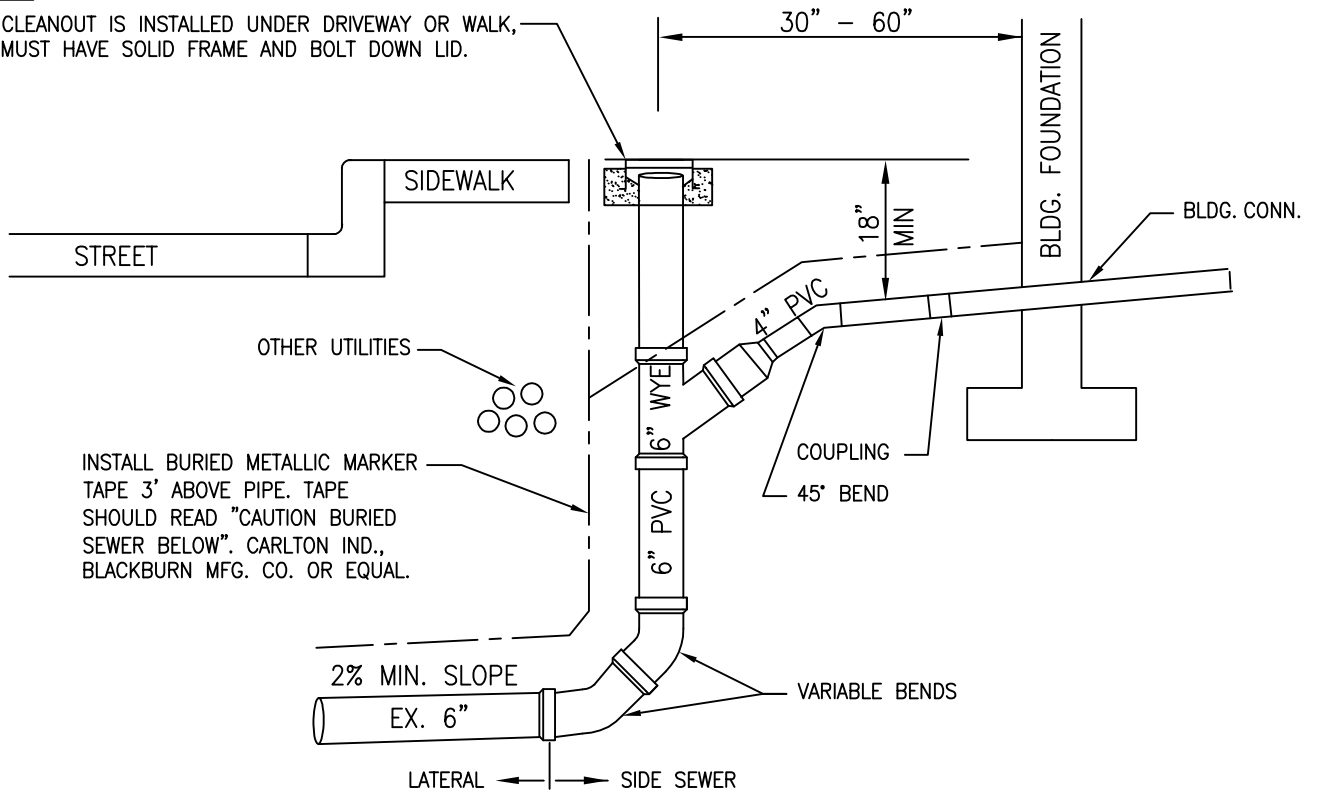
DATE: 11-2015

DWG. SS-2

APPROVED BY: DLH
DISTRICT ENGINEER

NOTE:

IF CLEANOUT IS INSTALLED UNDER DRIVEWAY OR WALK, IT MUST HAVE SOLID FRAME AND BOLT DOWN LID.




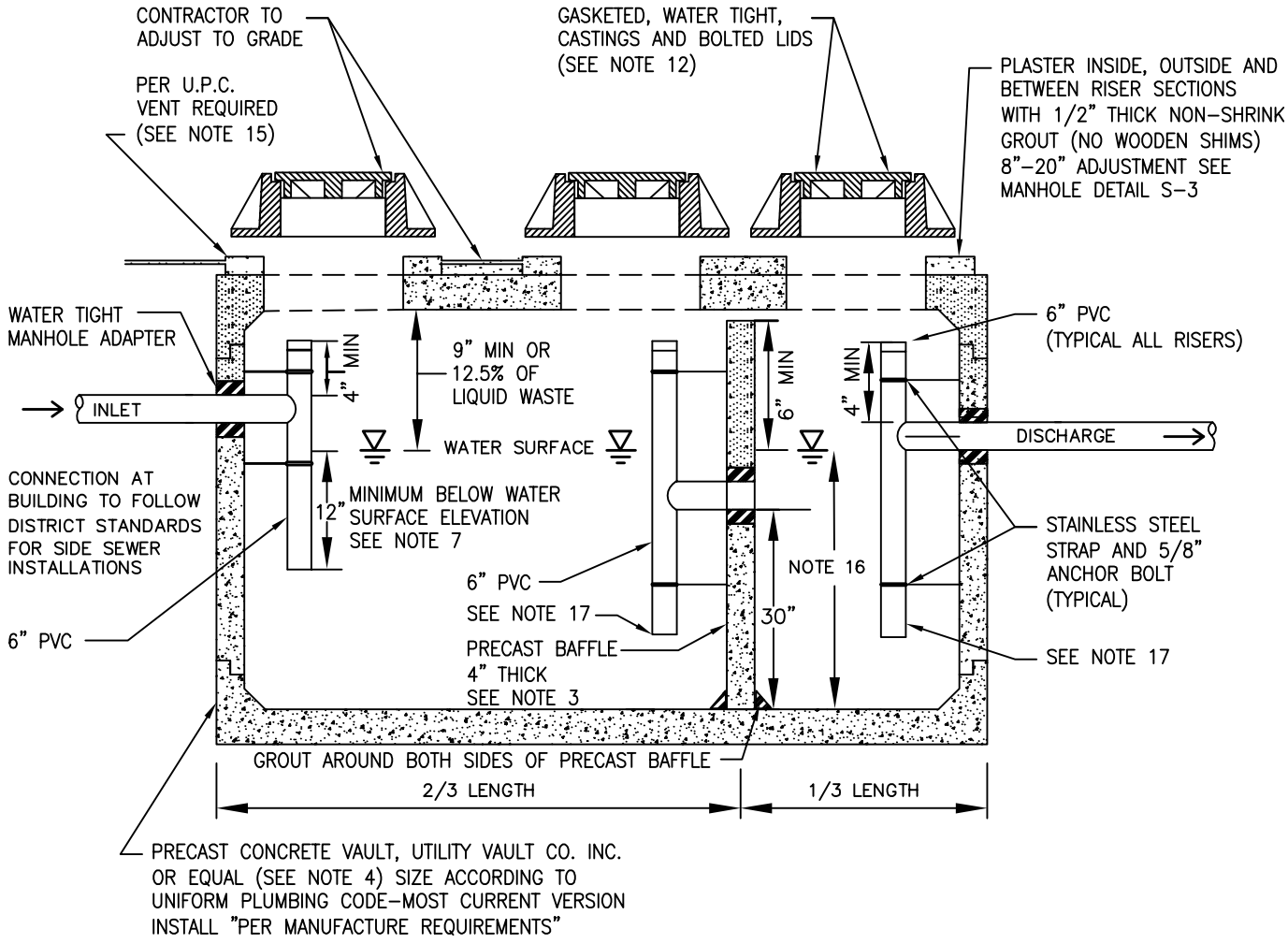
INSTALL BURIED METALLIC MARKER TAPE 3' ABOVE PIPE. TAPE SHOULD READ "CAUTION BURIED SEWER BELOW". CARLTON IND., BLACKBURN MFG. CO. OR EQUAL.

NOTES:

THIS METHOD MAY ONLY BE USED WITH PRIOR APPROVAL FROM THE DISTRICT AND ONLY WHEN STANDARD SIDE SEWER INSTALLATION PER DWG SS-1, OR SS-2 ARE NOT POSSIBLE BY EITHER:

1. CUTTING THE SIDE SEWER STUB BACK, ENABLING THE PIPE TO BE INSTALLED AT 100%, (45°, 1:1), OR LESS SLOPE (2% MIN) TO THE BLDG. CONNECTION
-OR- LOCATED 30" FROM FOUNDATION AT MINIMUM OF 18" DEEP.
2. ROUTING THE SIDE SEWER PIPE TO EXTEND ALONG THE SIDE OF THE BUILDING TO DECREASE SLOPE.

 ALDERWOOD WATER & WASTEWATER DISTRICT	
ALTERNATE SIDE SEWER INSTALLATION	
DATE: 11-2015	DWG. SS-3
APPROVED BY: _____ DLH _____ DISTRICT ENGINEER	



NOTES:

1. GRAY-WATER ONLY. BLACK-WATER SHALL BE CARRIED BY SEPERATE SIDE SEWER.
2. LOCATE INTERCEPTOR WITHIN CLOSE PROXIMITY OF DRIVE FOR ACCESS BY A MAINTENANCE VEHICLE.
3. IF VAULT IS NOT SLOTTED TO ACCEPT PRECAST CONC. BAFFLE THEN PRECAST CONC. SHALL BE HELD IN PLACE BY (2) 3"x3"x3/8" ANGLE (4FT. LONG) ATTACHED TO VAULT WALL WITH (4 EA) 1/2" BOLTS AND NUTS (WITH WASHERS) SPACED 14" O.C. ANGLE AND FASTENERS SHALL BE STAINLESS STEEL.
4. PRECAST VAULT AND BAFFLE SHALL HAVE KNOCKOUTS AT ALL PIPE OPENINGS. IF KNOCKOUTS ARE NOT PRESENT THEN PIPE OPENINGS SHALL BE 2" LARGER THAN PIPE DIAMETER.
5. POSITION PIPE RISERS BELOW ACCESS OPENINGS TO ALLOW CLEAR ACCESS TO RISER AND VAULT CHAMBER FOR SAMPLING & INSPECTION.
6. TOP OF INLET PIPE SHALL BE ONE PIPE DIAMETER HIGHER THAN THE TOP OF THE DISCHARGE PIPE.
7. INLET INSPECTION TEE/RISER MUST EXTEND A MINIMUM OF 12" BELOW THE DESIGNED WATER LEVEL.
8. ALL INTERNAL PIPING (RISER/INSPECTION TEE) SHALL BE A MINIMUM OF 6" PVC PIPE. EACH RISER SHALL BE CONNECTED TO THE WALL OF THE VAULT IN TWO (2) PLACES USING STAINLESS STEEL OR ALUMINIUM STRAPS.
9. ALL FITTINGS SHALL BE DESIGNED TOR GREASE RETENTION.
10. CONNECTIONS THROUGH CONCRETE WALLS REQUIRE WATER TIGHT MANHOLE ADAPTERS. SEAL ALL PIPE CONNECTIONS WITH NONSHRINK GROUT.
11. VAULT AND FITTINGS SHALL BE WATER TIGHT.
12. LIDS, FRAMES AND BOLTS SHALL MEET DISTRICT STANDARDS FOR MANHOLE LIDS WITHOUT DISTRICT LOGO. MANHOLE ACCESS REQUIRED TO ALL VAULT CHAMBERS.
13. FILL WITH CLEAN WATER PRIOR TO START UP OF SYSTEM.
14. DISCHARGE REQUIRED TO COMPLY WITH DISTRICT DISCHARGE LIMITS.
15. INTERCEPTORS SHALL BE VENTED PER UNIFORM PLUMBING CODE.
16. LIQUID DEPTH SHALL MEET THE UNIFORM PLUMBING CODE REQUIREMENTS.
17. DISCHARGE AND TRANSITION TEES/RISERS SHALL EXTEND TO. WITHIN 12"-18" OF THE VAULT BOTTOM.



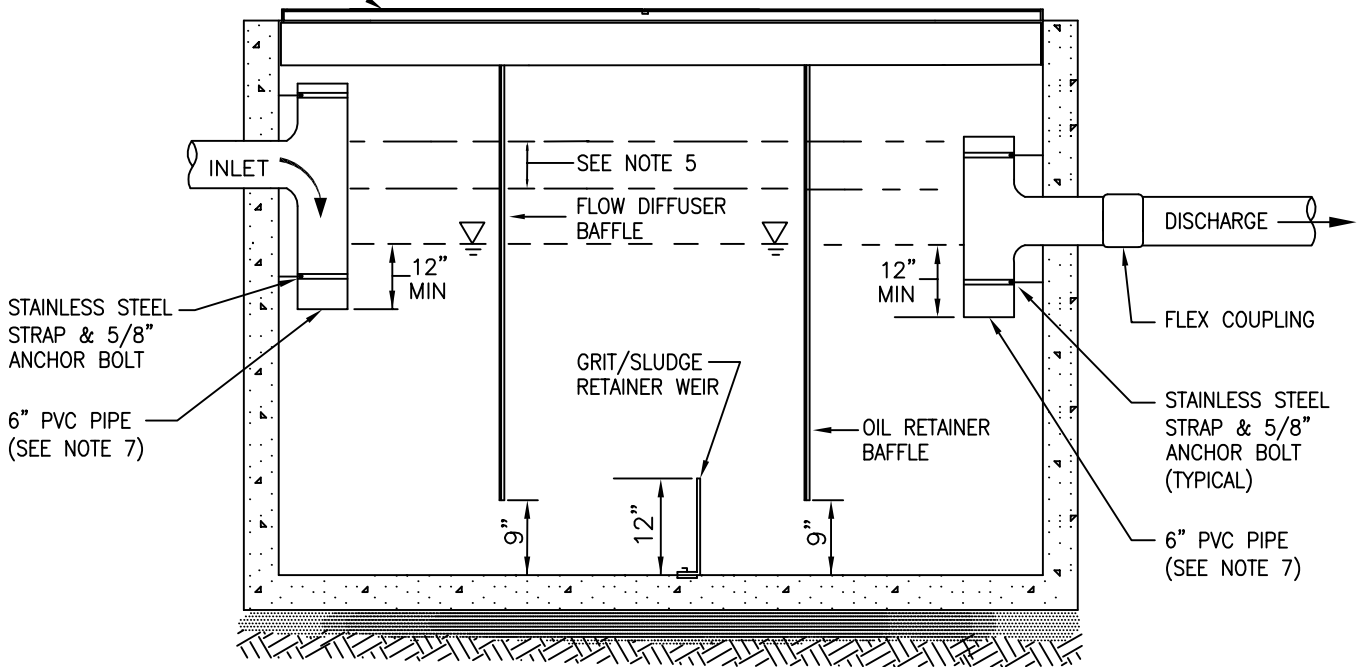
GREASE INTERCEPTOR

DATE: 11-2015

DWG. SS-4


APPROVED BY: DLH
DISTRICT ENGINEER

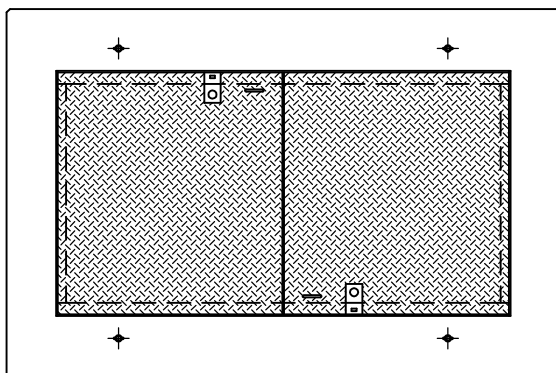
SEE SHEET SS-5A
FOR LID DETAILS



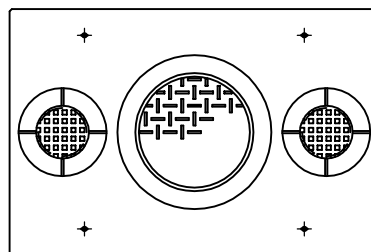
NOTES:

1. GRAY-WATER ONLY. BLACK-WATER SHALL BE CARRIED BY SEPERATE SIDE SEWER.
2. LOCATE SEPARATOR WITHIN CLOSE PROXIMITY OF DRIVE FOR ACCESS BY A MAINTENANCE VEHICLE.
3. PRECAST VAULT AND BAFFLE SHALL HAVE KNOCKOUTS AT ALL PIPE OPENINGS. IF KNOCKOUTS ARE NOT PRESENT THEN PIPE OPENINGS SHALL BE 2" LARGER THAN PIPE DIAMETER.
4. POSITION PIPE RISERS/INSPECTION TEES BELOW ACCESS OPENINGS TO ALLOW CLEAR ACCESS TO RISER & VAULT CHAMBER FOR SAMPLING & INSPECTION.
5. TOP OF INLET PIPE SHALL BE ONE PIPE DIAMETER HIGHER THAN TOP OF DISCHARGE PIPE.
6. INLET & DISCHARGE INSPECTION TEES/RISERS MUST EXTEND A MINIMUM OF 12" BELOW DESIGNED WATER LEVEL.
7. ALL INTERNAL PIPING (RISER/INSPECTION TEE) SHALL BE A MINIMUM OF 6" PVC PIPE. EACH RISER SHALL BE CONNECTED TO THE WALL OF THE VAULT IN TWO (2) PLACES USING STAINLESS STEEL OR ALUMINUM STRAPS.
8. ALL FITTINGS SHALL BE DESIGNED FOR OIL RETENTION.
9. CONNECTIONS THROUGH CONCRETE WALLS REQUIRED WATER TIGHT MANHOLE ADAPTERS. SEAL ALL PIPE CONNECTIONS WITH WATER TIGHT GROUT.
10. VAULT AND FITTINGS SHALL BE WATER TIGHT.
11. LIDS, FRAMES AND BOLTS SHALL MEET DISTRICT STANDARDS FOR MANHOLE LIDS WITHOUT DISTRICT LOGO AND/OR CLEANOUTS AS APPLICABLE.
12. FILL WITH CLEAN WATER PRIOR TO START UP OF SYSTEM.
13. DISCHARGE REQUIRED TO COMPLY WITH DISTRICT DISCHARGE LIMITS.
14. INTERCEPTORS SHALL BE VENTED PER THE UNIFORM PLUMBING CODE.
15. ACCESS REQUIRED TO ALL INTERNAL COMPONENTS TO ALLOW FOR MAINTENANCE.

	
OIL / WATER SEPARATOR	
DATE: 11-2015	DWG. SS-5
APPROVED BY: _____ DLH _____ DISTRICT ENGINEER	



REQUIRED



ALTERNATE (DISTRICT APPROVAL REQUIRED)

NOTES:

1. COVERS TO HAVE SPRING ASSISTED AND FULL 180° OPENING DOORS, LOCKING LATCH & HOT DIPPED GALVANIZED DIAMOND PLATING. USE LW PRODUCTS HD ACCESS HATCH (H-20) RATED COVER OR EQUAL.
2. LID MUST BE RATED FOR LOAD REQUIREMENTS AND BE WATER TIGHT.

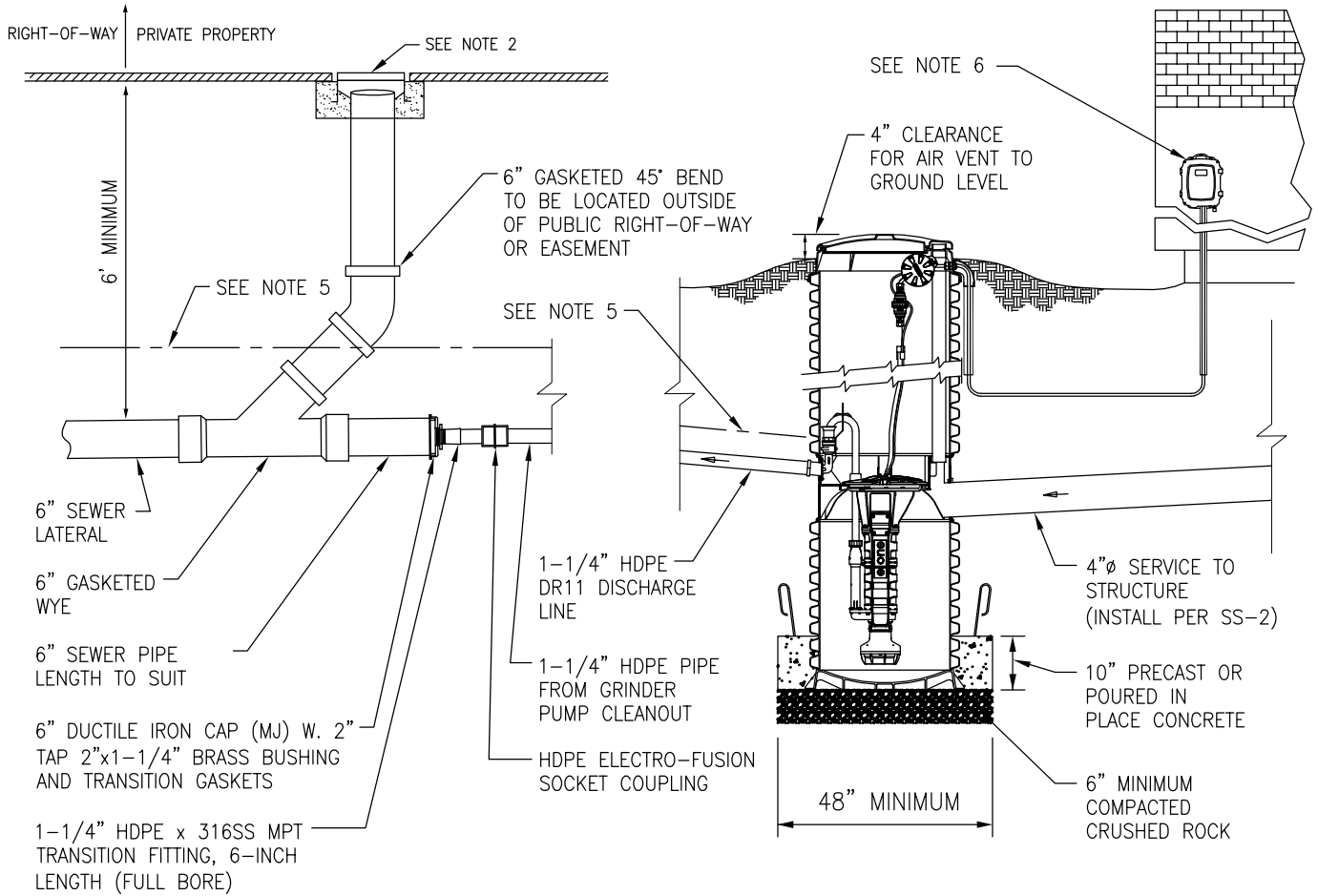


**OIL / WATER SEPARATOR
(COVER OPTION DETAILS)**

DATE: 11-2015


DWG. SS-5A

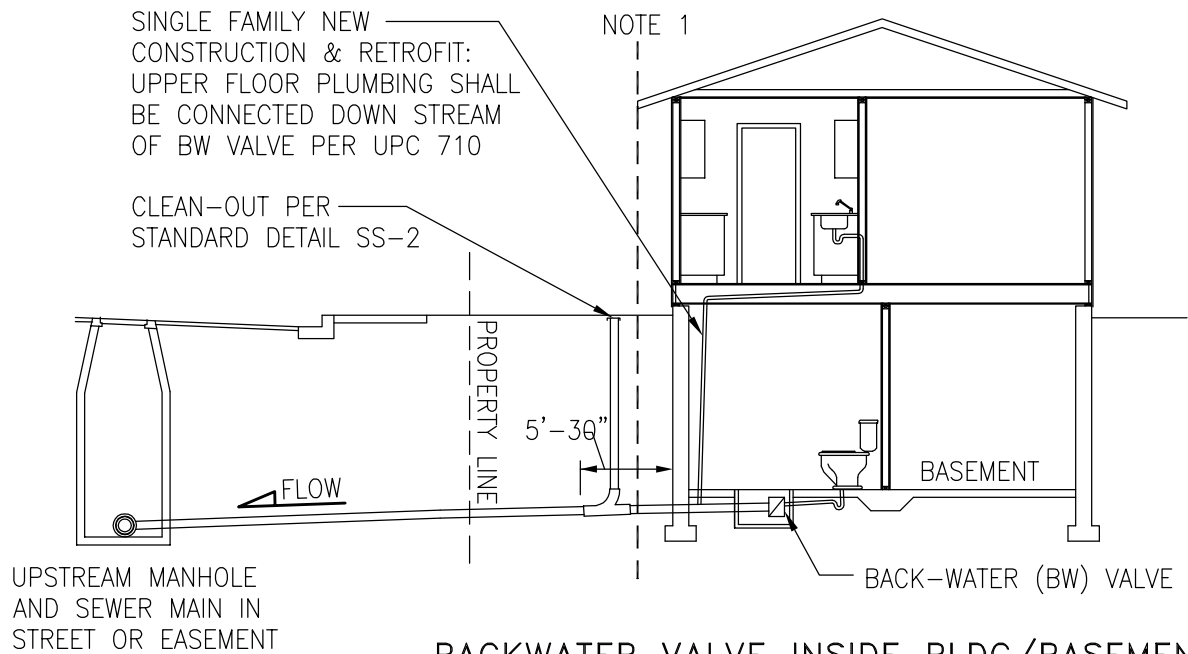
APPROVED BY: _____ DLH
DISTRICT ENGINEER



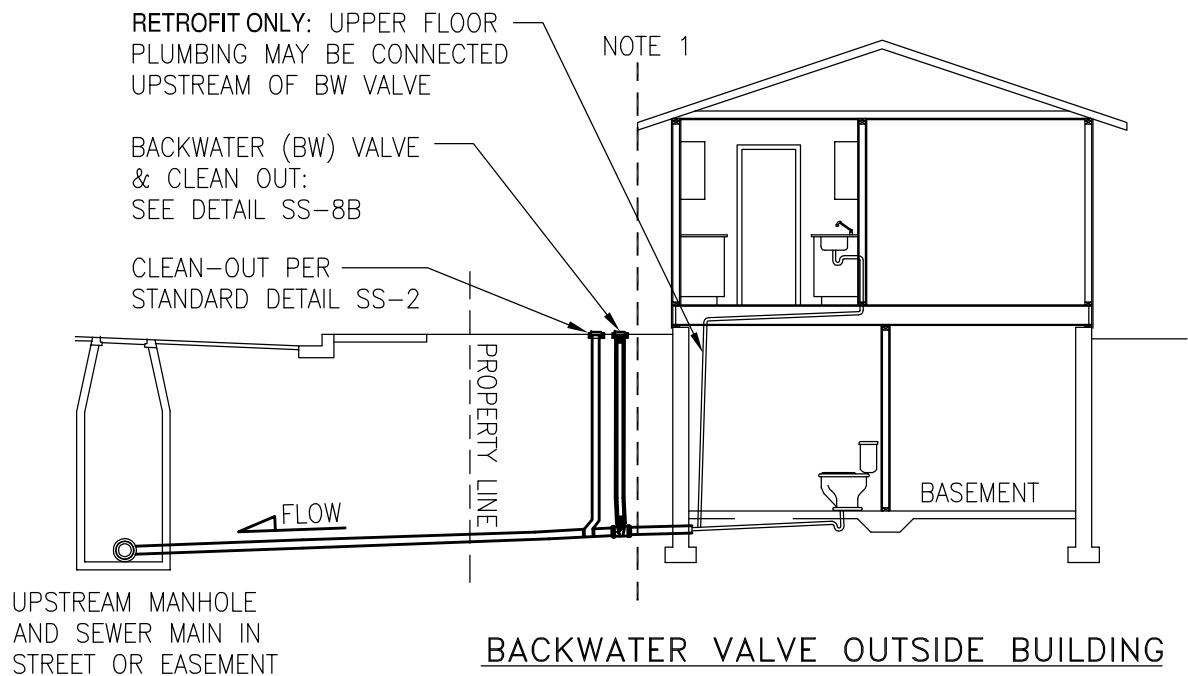
NOTES:

1. FOR SINGLE RESIDENTIAL/UNIT CONNECTION. ANY DEVIATION MUST BE REVIEWED AND APPROVED BY THE DISTRICT PRIOR TO INSTALLATION. ALL PIPE AND FITTINGS MUST BE INSTALLED PER DISTRICT STANDARDS.
2. 6" LAMP HOLE/CLEANOUT IS REQUIRED FOR VISUAL INSPECTION OF THE PUMP LINE FLOW AND TO AID IN CLEANING OF THE SEWER SYSTEM. THE LAMP HOLE/CLEANOUT MUST BE INSTALLED PER STANDARD SS-1 PRIOR TO TESTING OF THE PUMP SYSTEM AND PERMIT SIGN-OFF. THE LAMP HOLE/CLEANOUT TO HAVE A LOCKING RING COVER.
3. FLEXIBLE COUPLINGS ARE NOT ALLOWED ON THE CONNECTION OF THIS SYSTEM.
4. ALL HDPE PIPE AND FITTINGS SHALL BE DR11 WITH ELECTRO-FUSION WELDED SOCKET JOINTS. HDPE PIPE SHALL BE WATER TESTED TO 80 PSI FOR 5 MINS.
5. INSTALL BURIED METALLIC MARKER TAPE 1' ABOVE PRESSURE LINE. TAPE SHOULD READ "CAUTION BURIED SEWER BELOW".
(CARLTON IND., BLACKBURN MFG CO. OR EQUAL.)
6. ALARM PANEL & ELECTRICAL INSPECTED BY OTHERS.
7. INSTALL E-ONE TANK ASSEMBLY AND SENTRY PANEL PER MANUFACTURERS INSTALLATION MANUAL AND FOLLOW REQUIREMENTS FOR MANUFACTURER'S WARRANTY.(DH071 OR DR071 MODELS APPROVED ONLY)

 ALDERWOOD WATER & WASTEWATER DISTRICT	
SINGLE RESIDENTIAL CONNECTION GRINDER PUMP AND PRESSURE CONNECTION TO GRAVITY SYSTEM	
DATE: 05-2017	DWG. SS-7
APPROVED BY: _____ DLH _____ DISTRICT ENGINEER	



BACKWATER VALVE INSIDE BLDG/BASEMENT



BACKWATER VALVE OUTSIDE BUILDING

NOTES:

1. PLUMBING INSPECTIONS INSIDE THE BUILDING ARE THE RESPONSIBILITY OF THE COUNTY OR CITY IN ACCORDANCE WITH THE UNIFORM PLUMBING CODE.

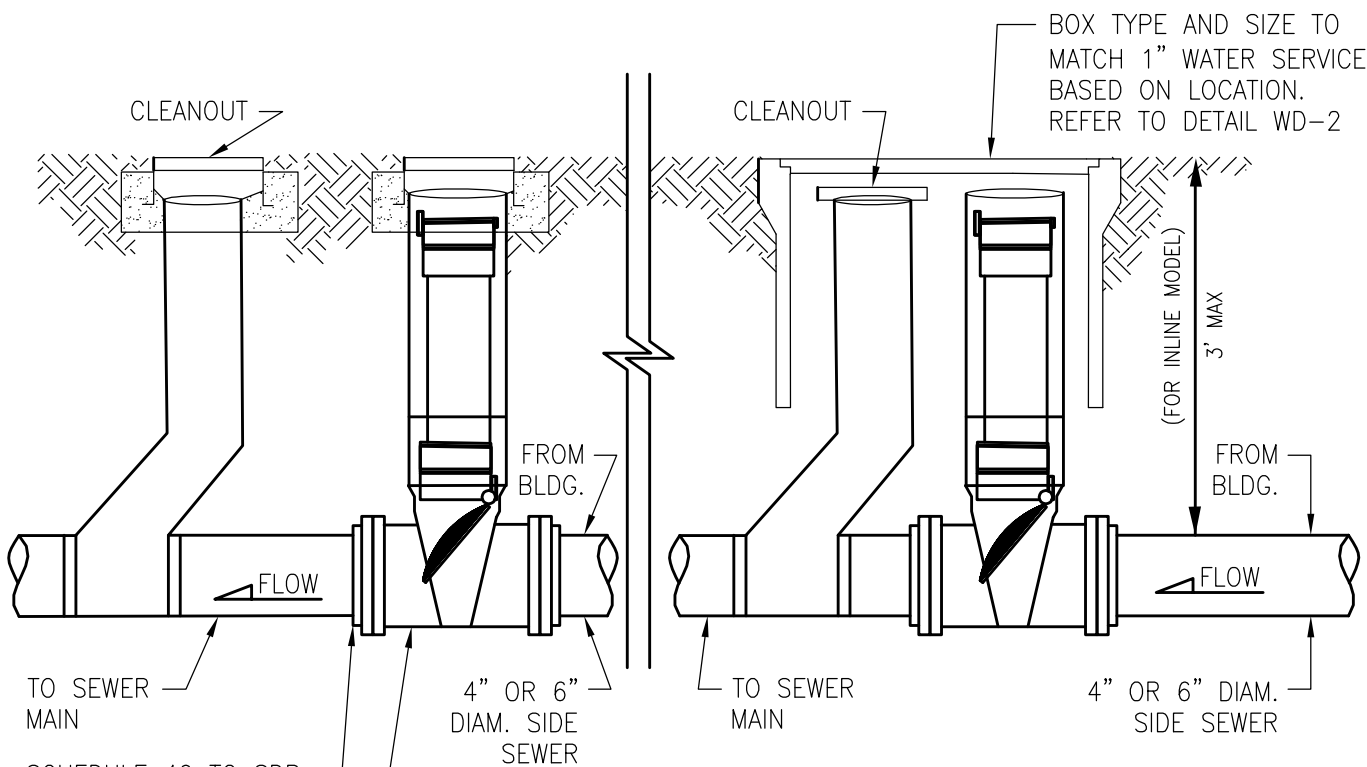


**PRIVATE BACKWATER VALVE
INSTALLATION TO SANITARY SEWER**

DATE: 05-2017

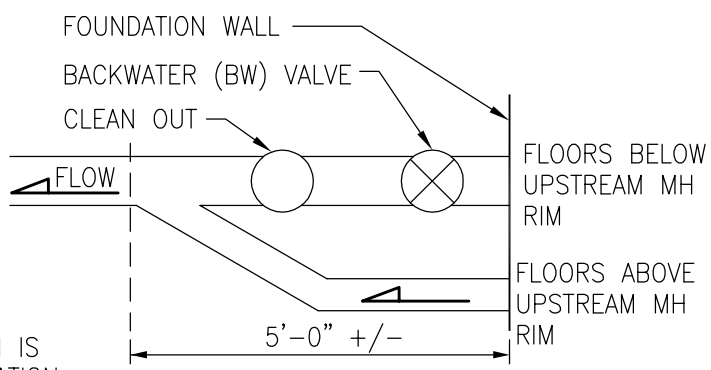
DWG. SS-8A

APPROVED BY: DLH
DISTRICT ENGINEER



STANDARD APPLICATION

TRAFFIC APPLICATION

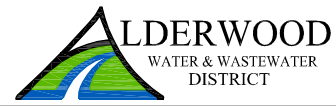


**BACKWATER VALVE
OUTSIDE PLAN VIEW**

SCHEDULE 40 TO SDR 35 ADAPTER BUSHING IF NEEDED ON EITHER SIDE
 RECTORSEAL BACKWATER VALVE OR EQUAL, EXTENDABLE INLINE STYLE

NOTES:

1. TO BE INSTALLED WHEN FINISH FLOOR ELEVATION IS LOWER THAN THE UPSTREAM MANHOLE RIM ELEVATION.
- A. ALL ACCESS LIDS SHALL BE BROUGHT TO FINISH GRADE. PROPERTY/BUILDING OWNER SHALL TAKE OWNERSHIP AND RESPONSIBILITY FOR CLEANING AND MAINTAINING.
- B. IF PLACED IN CONCRETE, ASPHALT, OR TRAFFIC AREAS; A TRAFFIC BEARING LOCKING CASTING AND LID MARKED "SEWER" IS REQUIRED BY THE DISTRICT.
- C. PLASTIC BOXES MARKED "SEWER" ARE ACCEPTABLE IN LANDSCAPE AREAS.
- D. A SEPARATE BOX MAY BE USED FOR THE CLEANOUT BASED ON FIELD LOCATIONS.
- E. BACKWATER VALVE SIZE TO MATCH PLUMBING SIZE.



**PRIVATE BACKWATER VALVE
ASSEMBLY OUTSIDE INSTALLATION**

DATE: 05-2017 DWG. SS-8B

APPROVED BY: _____ DLH _____
 DISTRICT ENGINEER