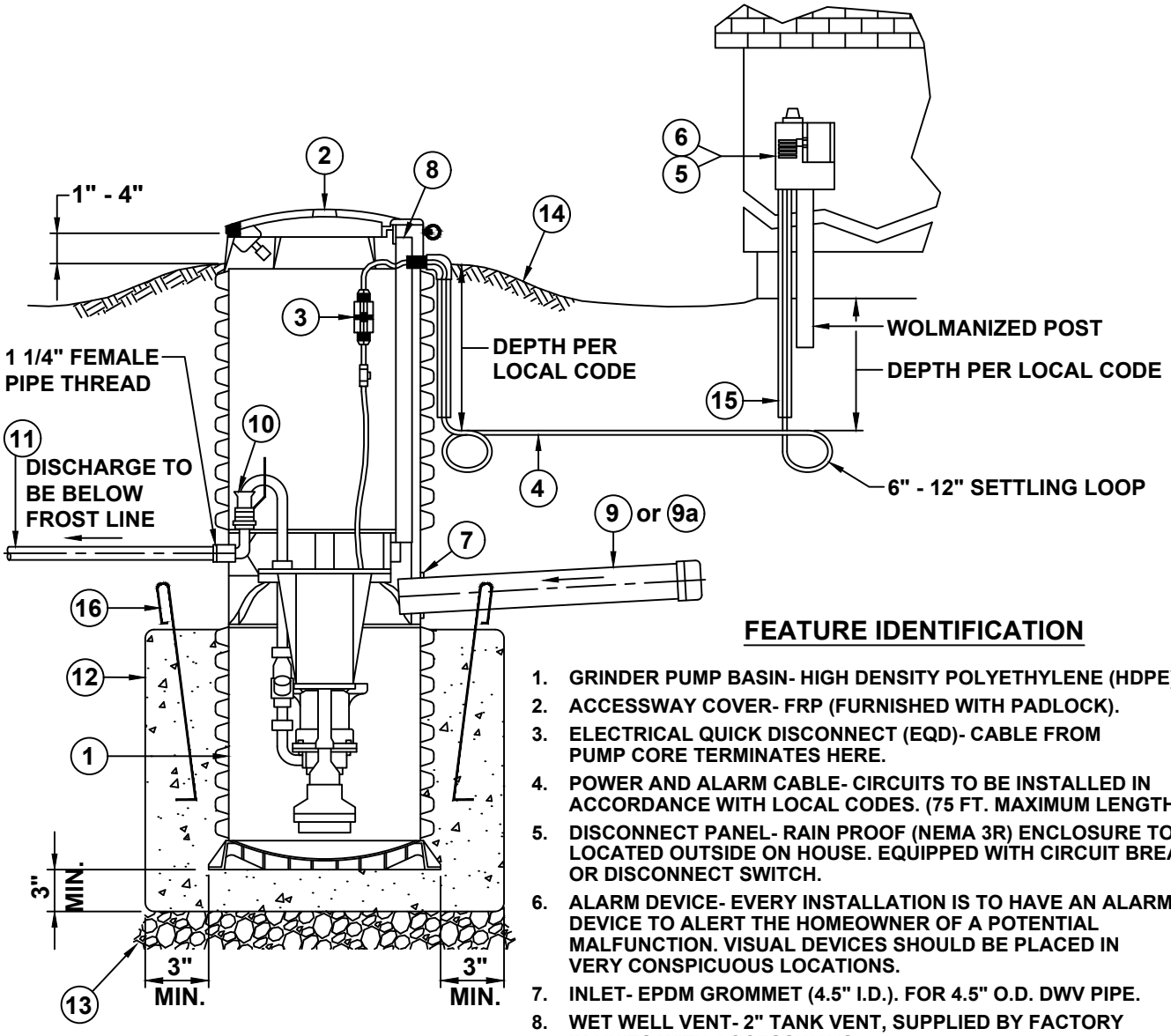


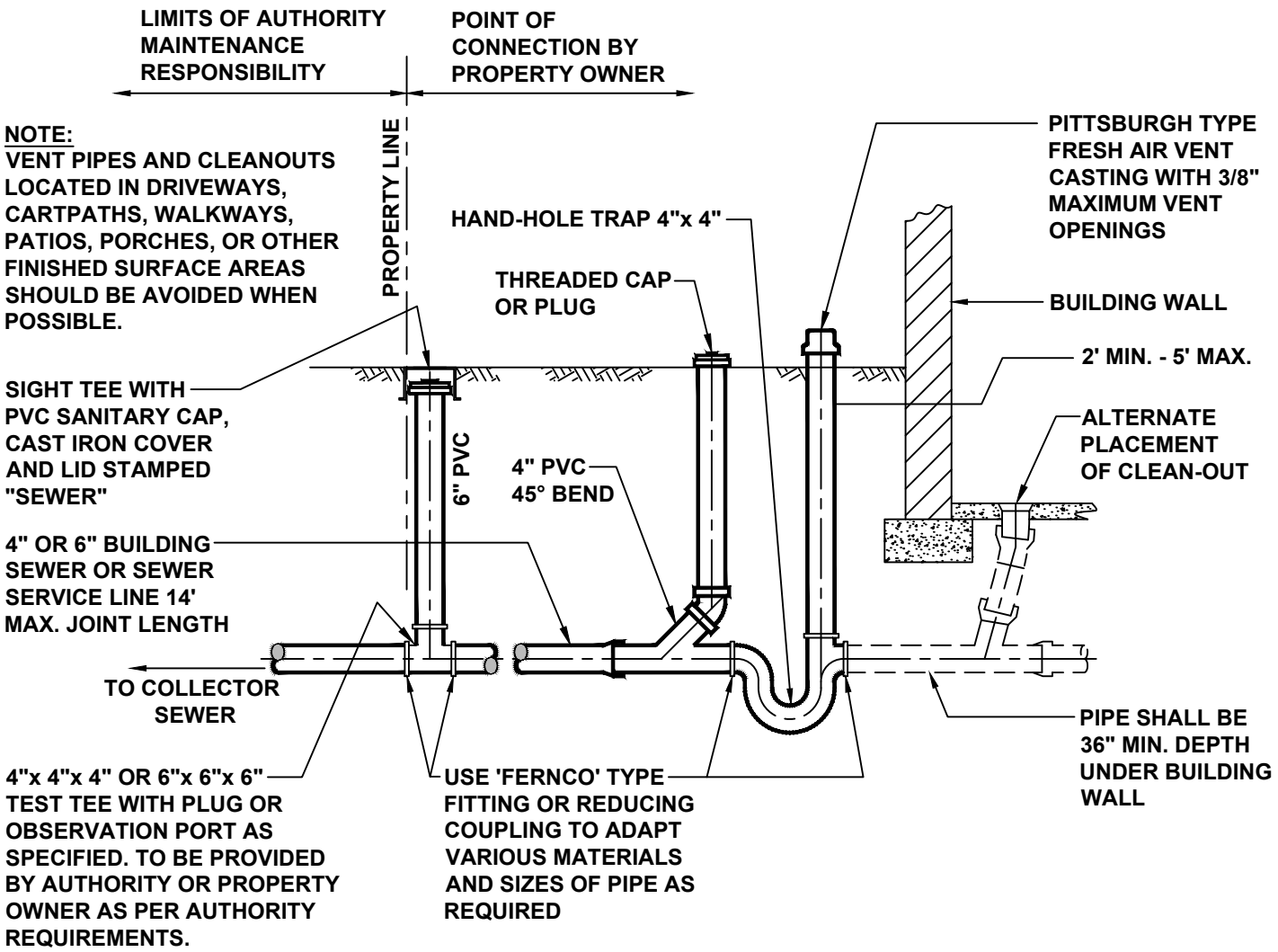
FEATURE IDENTIFICATION

1. GRINDER PUMP BASIN- HIGH DENSITY POLYETHYLENE (HDPE).
2. ACCESSWAY COVER- FRP (FURNISHED WITH PADLOCK).
3. ELECTRICAL QUICK DISCONNECT (EQD)- CABLE FROM PUMP CORE TERMINATES HERE.
4. POWER AND ALARM CABLE- CIRCUITS TO BE INSTALLED IN ACCORDANCE WITH LOCAL CODES. (75 FT. MAXIMUM LENGTH)
5. DISCONNECT PANEL- RAIN PROOF (NEMA 3R) ENCLOSURE TO BE LOCATED OUTSIDE ON HOUSE. EQUIPPED WITH CIRCUIT BREAKERS OR DISCONNECT SWITCH.
6. ALARM DEVICE- EVERY INSTALLATION IS TO HAVE AN ALARM DEVICE TO ALERT THE HOMEOWNER OF A POTENTIAL MALFUNCTION. VISUAL DEVICES SHOULD BE PLACED IN VERY CONSPICUOUS LOCATIONS.
7. INLET- EPDM GROMMET (4.5" I.D.). FOR 4.5" O.D. DWV PIPE.
8. WET WELL VENT- 2" TANK VENT, SUPPLIED BY FACTORY IN UNITS WITH ACCESSWAYS.
9. GRAVITY SERVICE LINE- 4" DWV, (4.5" O.D.). SUPPLIED BY OTHERS.

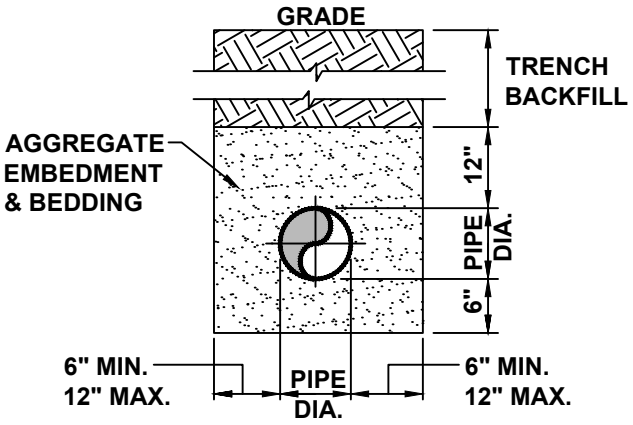
9a. STUB-OUT- 4" X 5' LONG WATERTIGHT STUB-OUT, TO BE INSTALLED AT TIME OF BURIAL UNLESS THE GRAVITY SERVICE LINE IS CONNECTED DURING INSTALLATION. SUPPLIED BY OTHERS.

10. DISCHARGE VALVE- 1 1/4" FEMALE PIPE THREAD.
11. DISCHARGE LINE- 1 1/4" NOMINAL PIPE SIZE. SUPPLIED BY OTHERS.
12. CONCRETE ANCHOR-
    VOLUME OF CONCRETE REQUIRED- 13.2 FT^3. (.48 YD^3.)
    WEIGHT OF CONCRETE REQUIRED- 2000 LBS. (1985 LBS.)
13. BEDDING MATERIAL- 6" MIN. DEPTH, ROUND AGGREGATE, (GRAVEL).
14. FINISHED GRADE- GRADE LINE TO BE 1 TO 4 INCHES BELOW REMOVABLE LID AND SLOPE AWAY FROM THE STATION.
15. CONDUIT- 1" OR 1 1/4", MATERIAL AND BURIAL DEPTH AS REQUIRED BY LOCAL CODE.
16. REBAR- REQUIRED TO LIFT TANK AFTER BALLAST (CONCRETE ANCHOR) HAS BEEN ATTACHED, 4 PLACES, EVENLY SPACED AROUND TANK.

WASHINGTON-EAST WASHINGTON JOINT AUTHORITY		GRINDER PUMP (OUTSIDE INSTALLATION)		
KLH ENGINEERS, INC.	Not to scale	December 2016	Standard Detail SD-38	33



NOTE:
ALL PIPE SHALL BE 4" OR 6" SCH. 40 PVC OR ABS. SLOPE SHALL BE MIN. 1/4" PER FOOT FOR 4" LINE AND 1/8" PER FOOT SLOPE FOR 6" LINE.

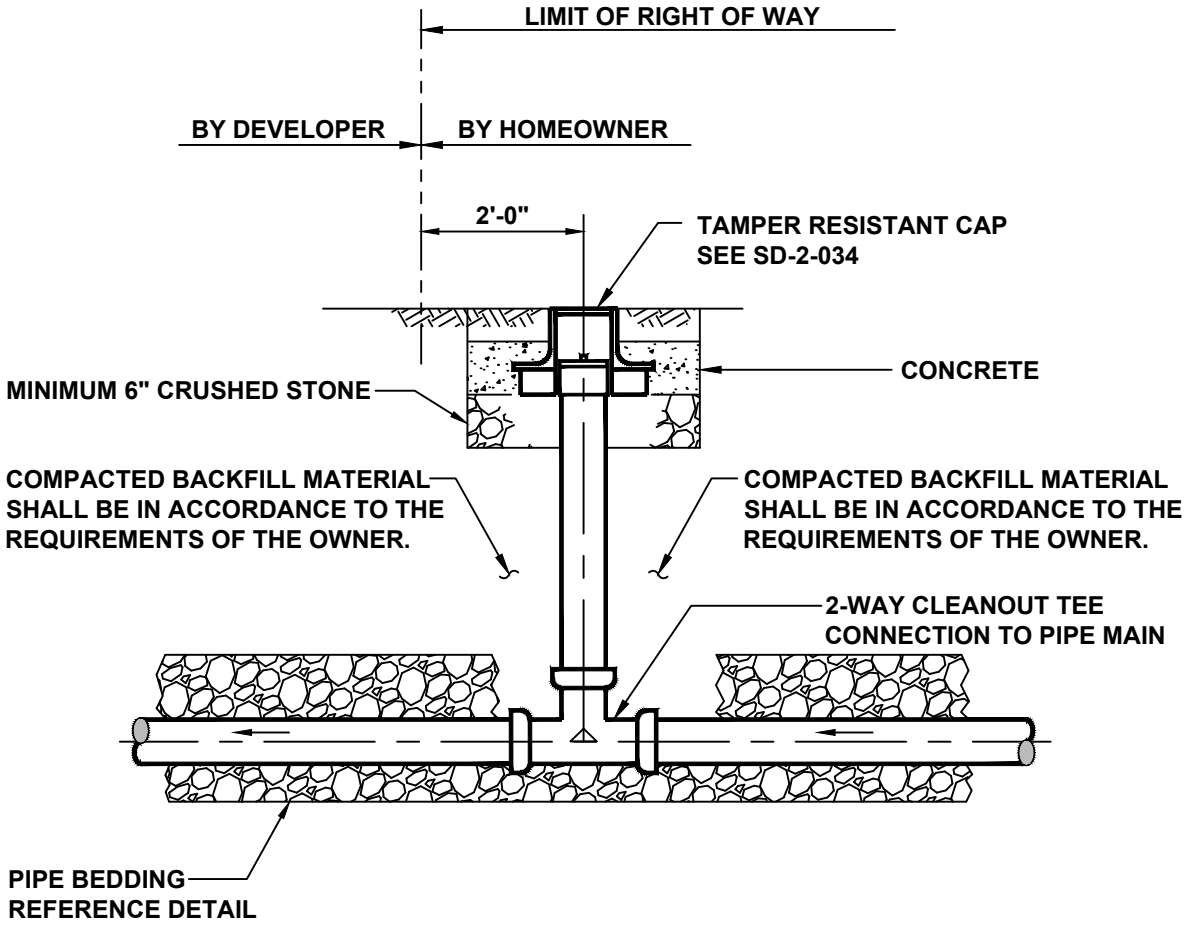


CONDENSED INSTALLATION SPECIFICATIONS
SEWER SERVICE LINE AND SEWER SERVICE CONNECTIONS SHALL BE INSTALLED BY SKILLED WORKMEN AT THE COST OF THE CUSTOMER IN ACCORDANCE WITH APPENDIX II OF THE RULES AND REGULATIONS AND DETAILED SPECIFICATIONS OF THE AUTHORITY.

SEWER SERVICE LINE PIPE:

MATERIAL	ASTM SPECIFICATIONS	JOINT	ASTM SPEC.
PVC	D-3034 SDR-35	ELASTOMERIC	D-3212
PVC	D-1875 SCH-40	SOLVENT WELD	D-2564

WASHINGTON-EAST WASHINGTON JOINT AUTHORITY		SERVICE CONNECTION TO SANITARY SEWER FROM A NEW INSTALLATION		
KLH ENGINEERS, INC.	Not to scale	December 2016	Standard Detail SD-35	30



OBSERVATION PORT DETAIL 2-033-A

WASHINGTON-EAST WASHINGTON JOINT AUTHORITY		**SEWER SERVICE LINE OBSERVATION PORT**		
KLH ENGINEERS, INC.	**Not to scale**	**December 2016**	**Standard Detail SD-33**	**28**

SECTION 5 - BUILDING LATERAL SANITARY SEWER AND TAP CONNECTIONS

5.01 No unauthorized person shall uncover or make any connections with or openings into, use, alter or disturb any sewer owned by the Authority without first having obtained written permission from an authorized official. Permission to use the building lateral sanitary sewer will not be granted until after an inspection has been made of the installation and a determination made that said building lateral sanitary sewer and/or building drain have been constructed to exclude all storm water, downspout, subsoil drains and such other illegal connections, and all industrial wastes prohibited herein are excluded. The types of inspections and testing which the Authority may conduct are set forth in Sections 3.15 (b), (c) and (d) and the procedures which the Authority may utilize are set forth in 3.16.

5.02 All systems, other than those owned by the Authority, shall be subject to the regulations set forth herein or to regulations establishing higher standards.

5.03 All costs and expenses incidental to the installation and connection of the building lateral sanitary sewer shall be borne by the owner. The owner shall indemnify the Authority from any loss or damage that may directly or indirectly be caused by the installation of the building lateral sanitary sewer. All costs and expenses incident to maintenance, repair, replacement and other work in connection with building lateral sanitary sewers shall be borne by the owner.

5.04 All work relating to the installation of sewer tap connections and/or building lateral sanitary sewers shall be performed by the Authority or the owner as the Authority shall determine, but in either case, at the cost of the owner.

5.05 All work in public streets, roads, alleys, rights-of-way, and other property shall be approved by the governing agency controlling such areas and the Authority reserves the right to do all work with respect to connection to the main sewer and bill the owner for such work.

5.06 The use of existing building lateral sanitary sewers in connection with new structures erected upon any premises will be permitted only when they are found, upon examination and testing by the Authority or persons approved by the Authority or agencies, to meet all requirements set forth herein. When existing septic tanks or other private sewage disposal systems are being abandoned the Authority will require the owner to demonstrate all interior plumbing is watertight and free of extraneous water from foundation drains or any other nonconforming use. Furthermore, the abandonment of septic tanks, or other hollow leaching structures, shall be performed in such a manner as to eliminate the danger of structure collapse in the future. The responsibility for abandonment shall be with the premises owner. When structures are abandoned, the premises owner shall take steps to have a licensed waste hauler empty the chamber of all septage wastes, cave in or remove the lid, drill holes in the bottom of the tank to permit the exit of surface water infiltration, and fill the tank with suitable materials such as soil,

gravel, sand or rock, thereby restoring the original grade of the ground surface. The premises owner may also desire to break up the top, bottom and sides of the tank as much as possible and then backfill the excavation to the ground surface with suitable material. The proper abandonment of all septic tanks must be verified by the Authority.

5.07 The drainage system of every premises shall be separately and independently connected to the main sewer. Where one premises exists or is erected in the rear of another having common ownership, and no private sewer is available or can be constructed to the rear premises through an adjoining alley, court yard, or driveway, the building lateral sanitary sewer from the front premises may be extended to the rear premises and the whole considered as one building lateral sanitary sewer.

5.08 The plumbing system serving the premises shall be designed and constructed in accordance with the Uniform Construction Code as modified by the Authority, insofar as said code does not conflict with the requirements hereinafter set forth. Said requirements shall govern and shall control the design and construction of the plumbing system except in matters where said requirements are silent.

5.09 All sewers below floors of premises and 5 feet outside the premises shall be Schedule 40 Polyvinyl Chloride (PVC) or Acrylonitrile Butadiene Styrene (ABS). Co-mingling of PVC and ABS is prohibited. A running trap with vent shall be installed at the end of the building drain. Vents shall be installed 6" above grade to prevent the inflow of water into the sewer line and may not be located in driveways or other impervious surfaces.

5.10 Adaptors from building drains to the building lateral sanitary sewer or building sewer tap connection shall be approved adaptors, shielded and with stainless steel banding clamps with 3000-psi concrete encasement such as donuts or couplings by Calder or Fernco Inc.

5.11 Building lateral sanitary sewers may be constructed of the same material as used in the public sewer system.

5.11.1 DUCTILE IRON PIPE

(a) All ductile iron pipe shall have an ultimate tensile strength of 60,000 pounds per square inch (psi) minimum, a yield point of 42,000 psi minimum and an elongation of 10 percent minimum. Ductile iron pipe shall be manufactured in accordance with ANSI Specification A21.51 and A21.50, AWWA C151 and H3, latest edition.

(b) All ductile pipe shall be Class 50, unless the Plans call for another class, and double cement lined conforming to ANSI A21.4.

(c) Joints shall be "push-on" type joints, as shown on Plans or specifically called for.

(d) Push-on joints shall be in accordance with ANSI A21.4.

(e) Fittings may be of ductile iron with a pressure rating of 250 p.s.i.

5.11.2 POLYVINYL CHLORIDE (PVC) PIPE

(a) PVC pipe 6 inches in size and larger and fittings shall conform with the requirements of the latest revisions of ASTM Specification D3034-SDR35. Four-inch pipe shall be Schedule 40 PVC.

(b) A bell and spigot ring type of joint shall be provided. The bell shall consist of an integral wall section with a solid cross-section rubber ring, factory assembled, securely locked to prevent displacement.

(c) All bells on branch wyes or fittings shall be factory assembled.

(d) An "O" ring coupling with stainless steel tightening band and rubber gasket water stop shall be provided for installation in manhole walls for pipe connections.

(e) Lengths shall not exceed 12.5 feet.

(f) Pipe and fittings shall be in compliance with this standard. Pipe at maximum intervals of 51-011, and fittings shall be marked:

a. Manufacturer's Name or Trademark

b. Nominal Size

c. Material Designation "PVC"

d. ASTM Spec. (D 3034)

(g) The rubber ring for the bell and spigot joint shall be the elastomeric gasket joint providing a watertight seal.

5.12 The building lateral sanitary sewer shall be minimum six (6) inches in diameter for commercial premises and minimum four (4) inches in diameter for residential premises provided pipe is laid on minimum slope of 1/8 inch/foot and 1/4 inch/foot, respectively. Cleanouts shall be placed at intervals of not more than one hundred (100) feet for commercial premises and not more than fifty (50) feet for residential premises. All building lateral sanitary sewers shall conform to the specifications set forth in Appendix A attached hereto.

5.12.1 Cleanouts consisting of a wye branch, curve, riser and watertight plug are required at intervals specified above, or at all direction changes greater than 45 degrees. The wye branch and curve must be encased in at least 6 inches of concrete. Cleanouts shall not be located in driveways or other impervious surfaces.

5.12.2 Prior to excavation of any trench, the contractor should first expose the building sewer tap connection and the building drain. The trench width shall be kept to minimum width and have a uniform slope at approved grade, and as near as possible at right angles to the street. No 90 degree bends shall be permitted except on an inside vertical end of run. All trenches must be excavated at least 6 inches below the invert of the pipe. Granular 2B limestone backfill (minimum 3/4 inch gravel size) shall be placed in the trench to grade of pipe and after providing bell holes and laying pipe, backfill to a minimum height of 12 inches over the top of the pipe. Granular backfill must be carefully tamped along both sides of the pipe. Remaining backfill, if satisfactory, may be material from the original excavation. Underground detectable marking tape shall be installed a minimum of 2 feet above the pipe along the alignment of the building lateral sanitary sewer. Marking tape shall be minimum 3 inches wide, vivid green with foil backing and marked “Gravity Sewer Line”. The building lateral sanitary sewer trench shall have minimum 3 feet horizontal separation and 18 inch vertical separation from other pipelines such as water service lines, gas lines, french drains or storm sewers. Building lateral sanitary sewers shall have minimum 3 feet of cover. An Authority inspector must be present to visually inspect the backfilling of the building lateral sanitary sewer trench. A test tee shall be installed in the building lateral sanitary sewer immediately before the wye, or manhole stub, if connection is to be made directly to a manhole. If unusual trench conditions exist, such as excessive depth, unstable soil, under a stream or other water course, the Authority may require the owner, at his own expense, to encase the building sewer in concrete or take such other steps which, in the opinion of the Authority, are necessary for proper installation. The Authority may refuse a permit to allow a connection directly to the main intercepting sewer and require extensions and connections to a manhole, the manhole, sewer and other work to be accomplished at

the expense of the owner. In no event will a connection be made through a hole cut in the sewer.

In no case shall a building lateral sanitary sewer be laid parallel to a cartway along the same alignment as the main sewer thereby acting as an extension of the main sewer. In such instance, the main sewer shall be extended, per Section 8.04.2, along the cartway and the building lateral sanitary sewer run perpendicular to the main.

5.13 In all premises in which any building drain is too low to permit gravity flow to the public sewer, sanitary sewage carried by such drain shall be lifted by approved artificial means (pumped) and discharged to the building lateral sanitary sewer, the capacity of such units to be subject to approval by the Authority.

5.14 The applicant for the building lateral sanitary sewer permit shall notify the Authority when the building drain, building sewer and related facilities are ready for inspection and connection to the public sewer but prior to connection to the trap, and prior to backfilling. Final inspection will not be scheduled until all tapping fees or other charges due and payable have been remitted to the Authority. The inspection of the building drain, building lateral sanitary sewer and related facilities shall include but may not be limited to the following:

5.14.1 Inspection of installation to insure that proper bedding and embedment of the pipe has been accomplished. Concrete encasement has been placed where required. An air test of the lines at a pressure of 5 psi for 15 minutes without any loss of pressure, or a hydrostatic test when no water is lost from a filled service lateral subjected to a minimum of 10 feet of water head for 15 minutes.

5.15 All excavations shall be performed in accordance with the latest edition of the OSHA Standards-Employer-Employee Safe Practices for Excavation and Trenching operations.

5.16 All building lateral sanitary sewers shall be maintained by the owner or customer at his cost, and the sewer shall be protected properly and maintained by the owner or customer. When repairs, renewals or replacements or other necessary work is required in the aforesaid facilities, the owner or customer shall employ, without delay, competent tradesmen to do the work, at his expense. All leaks shall be repaired immediately. No work shall be done, however, without the approval of and supervision by the Authority.