

BY-LAW NO. 001-2000 OF THE CITY OF CORNWALL

A By-law regulating the installation of sanitary and storm sewers contributing to the Corporation's sewers to be known as **"The Sewer Construction By-law"**

WHEREAS the Corporation of the City of Cornwall deems it necessary in the interest of sanitation and public health under the authority of the Municipal Act, R.S.O. 1990, Chapter M. 45, Section 210 subsection 83 governing the installation of sanitary and storm sewers contributing to the sewers of the Corporation:

NOW THEREFORE, the Council of the Corporation of the City of Cornwall enacts as follows:

DEFINITIONS

- 1. In this by-law,
 - (a) "building drain" means the horizontal piping of gravity drainage piping in or adjacent to a building or other structure that receives the discharge from drainage piping and conveys it to the building sewer.
 - (b) "building sewer" means that part of drainage piping outside a building or other structure that,
 - (i) connects a building drain to the main sewer or, where the place of disposal of the sewage is on the property, to the place of disposal on the property; and
 - (ii) commences at a point one metre from the outer face of the wall of the building or other structure and terminates at the property line or place of disposal on the property.
 - (c) "Chief Building Official" means the Chief Building Official, Planning Department, Housing Division of the Corporation, or his/her authorized subordinates or assistants.
 - (d) "combined sewer" means a sewer intended to receive domestic sewage, industrial waste and surface and storm water.
 - (e) "catchbasin" means a drain installed to collect surface water from an open area.
 - (f) "Corporation" means the Corporation of the City of Cornwall.
 - (g) "Manager of Public Works" means the Manager of the Public Works Department of the Corporation, or his authorized subordinates or assistants.
 - (h) "Plumbing Inspector" means the Private Property Plumbing Inspector, Planning Department, Housing Division of the Corporation, or his authorized subordinates or assistants.

- (i) "Right of way Inspector" means the Public Property (Right of Way) Inspector, Engineering Department of the Corporation, or his authorized subordinates or assistants.
- (j) "roof drain" means a storm water drain on a flat roofed building.
- (k) "sanitary sewer" means a sewer which carries sewage and to which storm, surface, and ground waters are not intentionally admitted.
- (l) "sewage works" means all facilities for collecting, pumping, treatment, and disposing of sewage.
- (m) "sewer" mean a pipe or conduit for carrying sewage.
- (n) "sewer main" means a public sewer and its branches, and where there is a private sewer, includes the private sewer.
- (o) "sewer lateral" means that part of storm or sanitary drainage piping that extends from the sewer main to the inner side of the foundation wall of the building, or from the sewer main to a catchbasin or manhole structure.
- (p) "storm drainage" means storm runoff water from rain storms and melted snow or ice, and water in the subsoil.
- (q) "storm sewer" means a sewer which carries surface and storm water and unpolluted cooling water, but excludes sewage and polluted industrial waste.
- (r) "watercourse" means a channel in which a flow of water occurs either continuously or intermittently.
- (s) "installer" means a person, corporation or firm that undertakes to construct, extend, alter, renew or repair any sewage works.
- (t) "sanitary sewage" means waste of domestic origin which is human body waste, toilet or other bathroom wastes, wastes from showers, tubs, liquid or water borne from culinary and sink or laundry waste.

PROTECTION FOR SEWAGE WORKS AND WATERCOURSES

2. No person shall maliciously, wilfully, or negligently break, damage, destroy, uncover, deface, or tamper with any structure, appurtenance, or equipment which is a part of the sewage works of the Corporation.
3. Subject to Section 4, no person shall wilfully or negligently obstruct or otherwise impede the flow in existing piped or open watercourses draining any area.

4. The piping or the filling-in of any watercourse on private property shall:
 - (a) be done only with the written consent of the Manager of Public Works ; and
 - (b) conform to the design and specifications of the Manager of Public Works ; and
 - (c) be performed under the supervision of the Manager of Public Works.

STORM DRAINAGE

5. Except as provided in Section 8, where a storm sewer main exists adjacent to a building or property for which storm drainage from foundation drains, window wells, roof drains and/or catchbasins is required, all runoff water shall be connected to the storm sewer main.
6. Where a combined sewer main exists adjacent to a building or property for which storm drainage from foundation drains, window wells, roof drains and/or catchbasins is required, all runoff water shall be discharged to ground or connected to the combined sewer main by a storm sewer lateral separate from the sanitary sewer lateral.
7. Where only a sanitary sewer main exists adjacent to a building or property for which storm drainage from foundation drains, window wells, roof drains and/or catchbasins is required, all runoff water shall be discharged to ground and no storm water from any source shall be directed to the sanitary sewer main.
8. All buildings with eaves troughs shall discharge downpipe contents to the ground at a distance of at least one meter away from the foundation.
9. Regulation of flow quantities to storm and/or combined sewers :
 - (a) All areas to be paved, which exceed 100 square meters, shall require a lot drainage plan including lot size, slope, elevations, and location of lateral(s), This plan is to be submitted to the Permits Office of the Corporation. Work will not commence until the drainage plan has been approved and necessary permits have been obtained.
 - (b) The discharge connections from roof drains or catchbasins shall be limited to the flow as determined using the same calculation and variables, excluding area, that were used to design the trunk sewer main that the runoff water from roof areas or open areas is to enter. The area substituted in the calculation will be the area to be developed.
 - (c) Storm runoff from roof and /or parking areas shall not be permitted to discharge to abutting properties, including municipal right-of-ways. Runoff shall be collected and discharged to a suitable conveyance system (municipal drain, natural water source, roadside ditch, or storm sewer).
 - (d) Clear, unpolluted cooling water will be permitted to the storm sewer or the combined sewer at the discretion of the Manager of Public Works, but this flow must be included in the total amount of water permitted to the sewer as determined by Subsection 9 (b).

- (e) If, upon examination of the plans submitted, the capacity of the proposed storm lateral is found to be excessive as determined by Subsection 9(b), the Manager of Public Works may require that the capacity be reduced to limit flow to the acceptable rate.
10. Properties under separate ownership utilizing joint parking areas or driveways may have a common storm sewer, subject to the following conditions:
- (a) the shared portion of the system is completely contained on an easement or right-of-way which is registered on title;
 - (b) a Maintenance Agreement is registered on title for all shared services.
11. Foundation drainage may not be conveyed to a storm or combined sewer via a single storm sewer lateral except for each single family dwelling, each semi-detached building, each row house of up to six (6) units and each apartment building, office building, factory or other similar building.

REPAIR/ RE-USE/ OF SEWER LATERAL

12. (a) No existing sewer lateral shall be used for a connection to a new building unless it has first been examined and tested by the Manager of Public Works and found to be in good condition and in compliance with all the requirements of this by-law, The re-use of existing bitumious fiber pipe will not be permitted.
- (b) Every person who is the owner of a property that has a sewer lateral connected to the Corporation's sewers shall be responsible for the maintenance of the entire sewer lateral.
- (i) If it is determined by the owner/user of the sewer lateral and then later verified by the Corporation that the blockage is due to a broken and/or collapsed pipe on the Corporation's right-of-way, and this blockage was not a result of the owner/user's lack of maintenance, then the Corporation will schedule repair and/or replacement of same.

CORPORATION WORK FORCES TO CONNECT SEWERS

13. All connections to Corporation sewer mains shall be made by Corporation forces, or an approved contractor under supervision of the Manager of Public Works.
14. A minimum of one working day notice shall be given to the Manager of Public Works before sewer connections can be done.
15. Trenchs must be excavated to Occupational Health and Safety Act requirements, de-watered and free of debris and mud before a sewer connection is made by Corporation forces.
16. All necessary manhole and catchbasin construction shall be done in accordance with the Corporation Specifications.

TESTING PRIOR TO CONNECTION

17. It shall be the installer's responsibility to identify and test the sewer lateral to ensure that the connection of the sanitary and storm sewer lateral is made to the proper sewer main

CONSTRUCTION

18. (a) No person shall construct or repair a sewer lateral without first obtaining a permit on the necessary form from the Chief Building Official.
- (b) Bedding shall be placed in accordance with Schedule "A"
- (c) Bedding shall be of approved material in accordance with Schedule "A"
- (d) Materials used for a sewer lateral shall be in accordance with Ontario Building Code Regulation and amendments thereto, and includes :
- (i) cast iron soil pipe;
 - (ii) vitrified clay sewer pipe;
 - (iii) concrete pipe;poly (vinyl chloride) (P.V.C.) sewer pipe;
 - (iv) acrylonitrile-butadiene-styrene (A.B.S) sewer pipe.
- (e) The use of bituminous fiber pipe in the sewer lateral is prohibited.
- (f) Sewer laterals shall be identified and installed in accordance with the following colour schedule:
- (i) all sewer laterals carrying or designed to carry sanitary sewage shall be of white pipe;
 - (ii) all sewer laterals carrying or designed to carry storm sewage shall be other than white pipe.
- (g) (i) Jointing of each class of pipe shall comply with Ontario Building Code Regulation.
- (ii) Sewer pipe shall be installed with the bell end of the pipe upgrade.
- (h) The building sewer shall be laid at constant grade and in straight alignment insofar as possible, and any change in direction shall be made only with properly curved pipe and fittings.
- (i) (i) The slope of the sanitary sewer lateral on the municipal right-of-way shall be a minimum of 1%;
 - (ii) The slope of the storm lateral on the municipal right-of-way shall be a minimum of 0.5%
- (j) No pipe shall be laid on blocking or shimmed.

- (k) (i) The sewer lateral should be brought to the building at an elevation below the basement floor; or
- (ii) In the case where the sanitary or combined sewer main is too high to permit gravity flow from the lowest point in the building, the sanitary sewer lateral shall be brought through the foundation wall at an elevation which will permit gravity flow to the sanitary sewer main, and be lifted by artificial means and discharged to the sanitary sewer lateral.
- (iii) Where the storm or combined sewer main is too high to permit gravity flow from window wells, foundation drains or other storm water source, connection to the storm or combined sewer main shall be as detailed in Schedule "B"
- (l) (i) All storm building drain connections to storm or combined sewers shall flow through an adequate backwater valve as detailed in Schedule "C" hereto annexed.
- (ii) All sanitary building drain connections to combined sewers should flow through a backwater valve.
- (iii) All backwater valves shall be located so as to be readily accessible for cleaning and maintenance.
- (m) All excavations required for the installation of a sewer lateral shall be open trench work, unless approval is obtained from the Manager of Public Works to bore under a roadway.
- (n) (i) Where a soil of low bearing capacity is encountered in the trench, the trench shall be excavated below the required grade, the trench bottom shall be brought up to grade with compacted granular fill, providing the base will support such granular fill.
- (ii) If the soil is too soft to support granular fill, the pipe shall then be laid in accordance with Ontario Building Code Regulation, and amendments thereto.
- (o) (i) The contractor shall take precautions and care in exposing the sewer main so that no damage to said sewer will occur. If the sewer main is damaged, it shall be repaired by Corporation work forces. All costs for said repairs shall be done on a time and material basis. The bill for said repairs shall be paid by the contractor responsible for the damages.
- (ii) The contractor shall be responsible for any damage to other properties resulting from sewer back-ups due to the damaged Corporation sewer.
- (iii) No one shall break into or drill a hole into a Corporation sewer to drain a trench or a construction site at any time unless authorized to do so by the Manager of Public Works, said authorization to be had in writing.
- (p) (i) That portion of pipe trench which occupies boulevard space and private property shall be filled with material selected from the trench excavation providing these materials are satisfactory to the inspector having jurisdiction.

- (ii) That portion of trench which crosses the travelled portion of a road shall be backfilled and compacted to original condition using native backfill material, providing such materials are satisfactory to the Right-of-way Inspector, a minimum of 200 mm depth of acceptable granular material is required over the trench.
- (q) (i) The excavation for the trench for the construction of storm and sanitary sewer connections from the street line to the building wall shall not be made until the basement floor has been placed and the complete building excavation is properly backfilled.
- (ii) Notwithstanding the provisions of the preceding subsection, the trench may be excavated and the pipes laid prior to the basement floor being placed, and the complete building excavation being properly backfilled providing that the openings of the connection of the sanitary sewer and storm sewer are effectively sealed by means of a watertight plug.
- (r) (i) Subject to the provisions of Subsection (r) (ii) hereof, a separate and independent sanitary sewer lateral shall be provided for every single family home, each unit in semi-detached homes, each unit in row housing or tenement, and each apartment building, office building, factory, or other similar building, except where one building stands at the rear of another on an interior lot and no private sewer is available or can be constructed to the rear building through an adjoining alley, court, yard or driveway, in which case, the building sewer from the front building may be extended to the rear building and the whole considered as one sewer lateral.
- (ii) In the case of a group building project or row housing where the units in the group building project or row housing do not abut on a Corporation owned street and all the land being developed as group building project or row housing is in one ownership, then each unit shall be provided with separate and independent laterals and the laterals shall extend to private sewer main located a minimum of three meters clear of any adjacent building, and the private mains will be connected to Corporation sewer mains. The private mains shall be equipped with manholes and constructed in accordance with City of Cornwall Engineering Standards.

FEES

19. Sewer connection and inspection fees are as contained in Schedule "D"

INSPECTION

20. No connections to a Corporation sewer, manhole construction, or installation of sewer lateral on public property shall be backfilled until inspected and approved by the Right-of-Way Inspector. A minimum of twenty-four (24) hours notice will be required prior to the inspection.
21. No building sewers or drains on private property shall be backfilled until it has been inspected and approved by the Plumbing Inspector.

22. The installer shall provide a minimum of forty-eight (48) hours notice to the Chief Building Official in advance of the required inspection on private property.
23. If the construction of the sewer lateral is not approved as aforesaid, the permit holder shall make the necessary rectifications to the satisfaction of the authority having jurisdiction.

PENALTY

24. Any person who contravenes any of the provisions of this By-law is guilty of an offence and upon conviction is liable to a fine as provided for in the Provincial Offences Act, R.S.O., c. P.33, as amended.

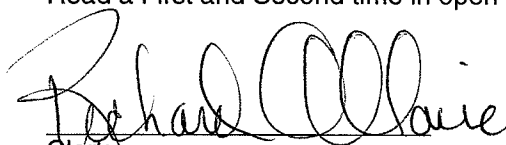
VALIDITY

25. (a) If any section of this by-law is for any reason held to be invalid, the remaining sections shall remain in effect until repealed.
- (b) Where a provision of this by-law conflicts with the provisions of another by-law in force in the Corporation, the provisions that establish the higher standards to protect the health, safety, and welfare of the general public prevails.
- (c) This by-law shall come into force and take effect on its passing.

REPEAL OF PREVIOUS BY-LAWS


26. By-law No. 125-1990, Section 3 and 4 of By-law 029-1996 and any other by-laws of the Corporation of the City of Cornwall which are inconsistent, are hereby repealed.

Read a First and Second time in open Council this 10th day of January 2000.


Clerk


Mayor

Read a third and final time, signed and sealed in open Council this 10th day of January 2000.


Clerk

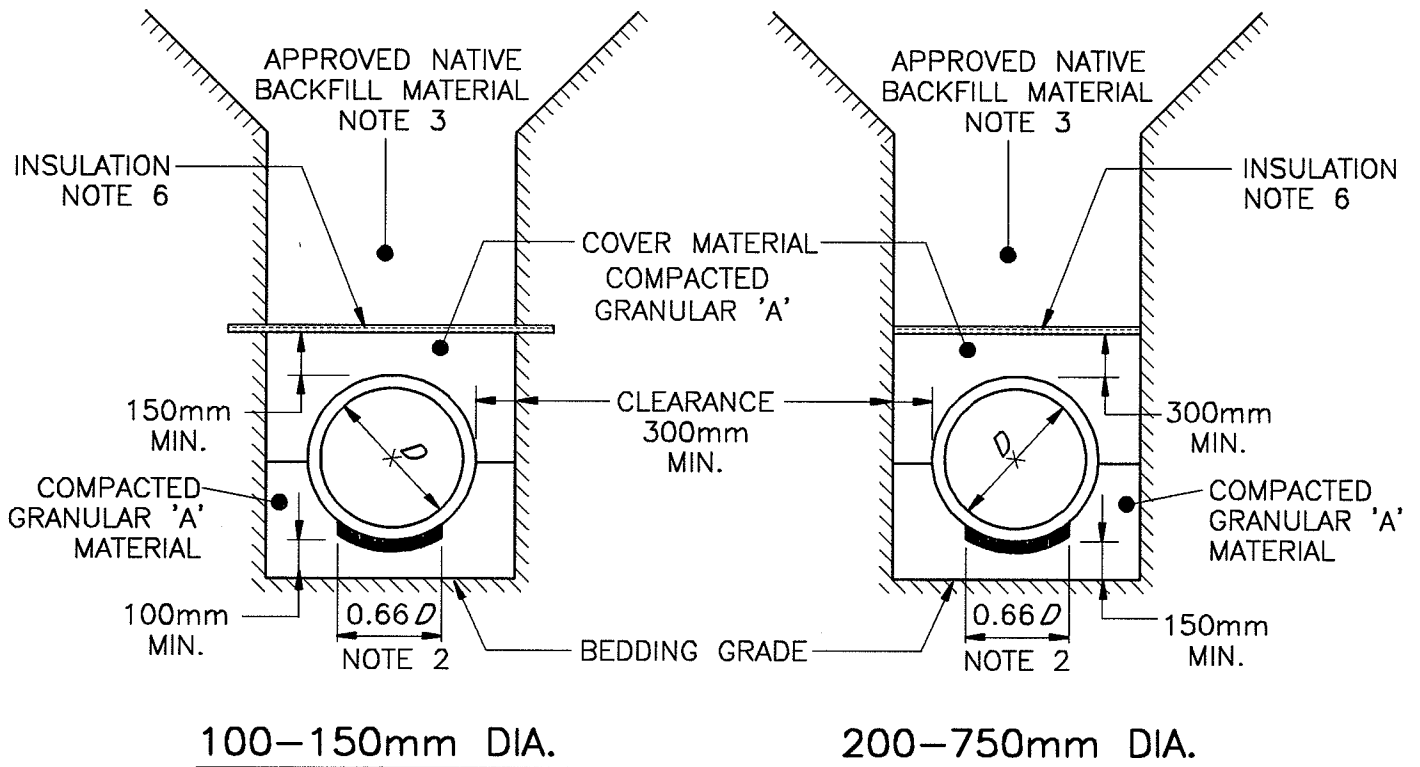

Mayor

**SEWER CONSTRUCTION BY-LAW
001-2000
CORPORATION OF THE CITY OF CORNWALL**

SCHEDULE "D"

FEES FOR SEWER CONNECTIONS

- (a) The fee for the connection of a sewer of 100 mm and 150 mm shall be \$110.00. Included in the cost is the tap and the installation of the saddle, where applicable.
- (b) All sewer taps greater than 150 mm diameter shall be made on a time and material basis, all costs to be established by the Manager of Public Works.
- (c) Before any work begins, the Contractor shall sign a Job Authorization Form to cover the cost of all time and material supplied by Corporation forces.



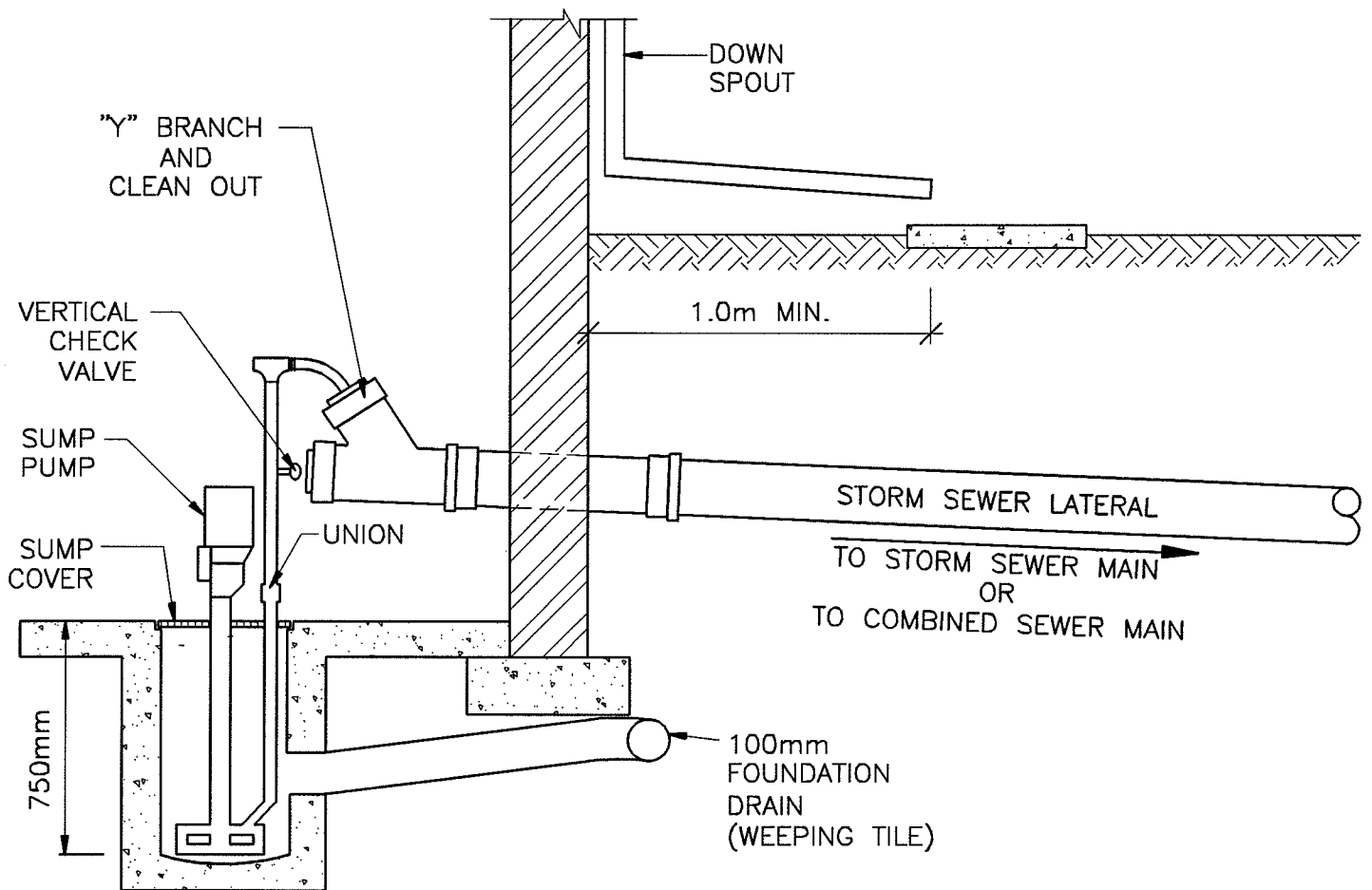
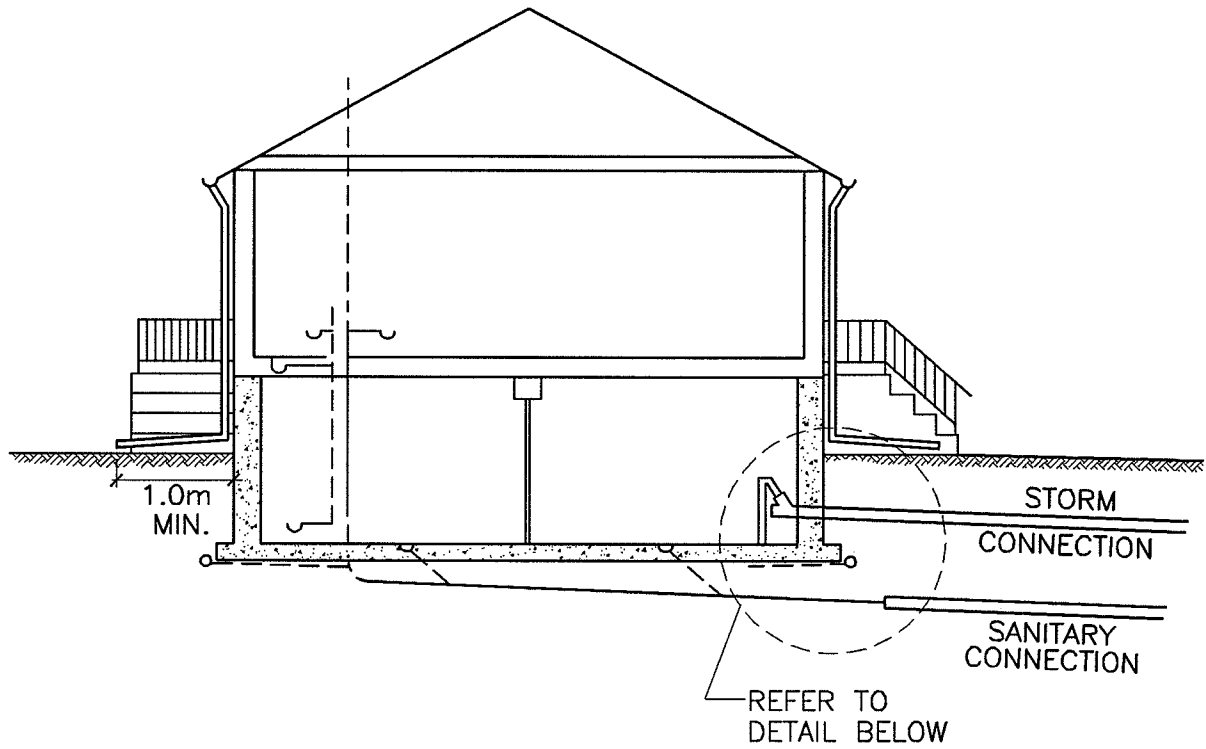
NOTES:

1. THIS STANDARD TO BE APPLIED IN STABLE CONDITIONS OR AFTER TRENCH HAS BEEN BROUGHT TO STABLE CONDITIONS.
2. THE PIPE BED IS TO BE CAREFULLY SHAPED TO RECEIVE THE BOTTOM OF THE PIPE.
3. BACKFILL SHALL BE APPROVED NATIVE MATERIAL OR APPROVED IMPORTED MATERIAL AND SHALL MEET THE REQUIREMENTS OF OPSS 514.
4. GRANULAR 'A' SHALL BE COMPACTED TO 100% STANDARD PROCTOR DENSITY.
5. BACKFILL MATERIAL SHALL BE PLACED IN 300mm LIFTS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.
6. RIGID HIGH DENSITY STYROFOAM INSULATION SHALL BE INSTALLED ON TOP OF THE COVER MATERIAL WHERE THE DEPTH FROM THE FINISHED SURFACE TO TOP OF PIPE IS LESS THAN 1.35m. THE THICKNESS OF THE INSULATION SHALL BE AS PER TABLE 1. THE WIDTH SHALL BE 1.2m.
7. ALL TRENCHES AND OTHER EXCAVATIONS SHALL MEET THE REQUIREMENTS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT.
8. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SHOWN.

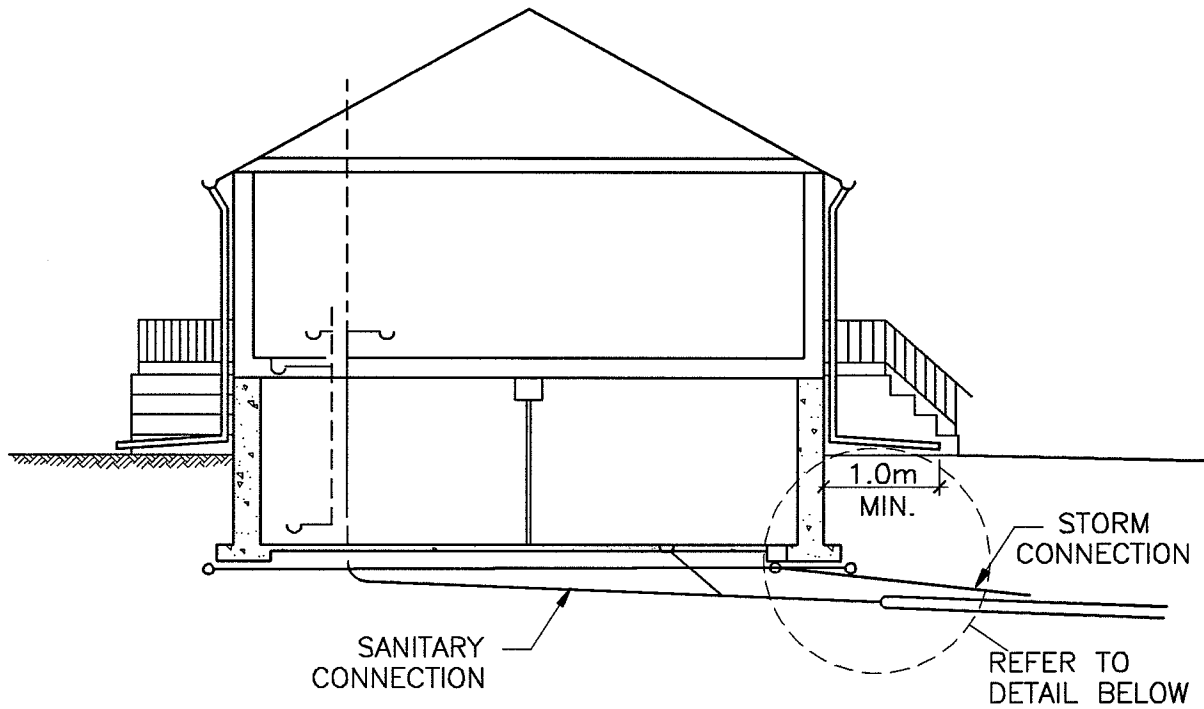
TABLE 1.

INSULATION REQUIREMENT	
DEPTH OF COVER	INSULATION THICKNESS
1.35m	NOT REQUIRED
1.34m–1.0m	25mm
0.99m–.075m	50mm

CITY OF CORNWALL ENGINEERING DEPARTMENT	DRAWN BY: A.J.A.
	DATE: 99–12–07
LATERAL BEDDING AND COVER MATERIAL	SCALE: N.T.S.
	SCHEDULE A

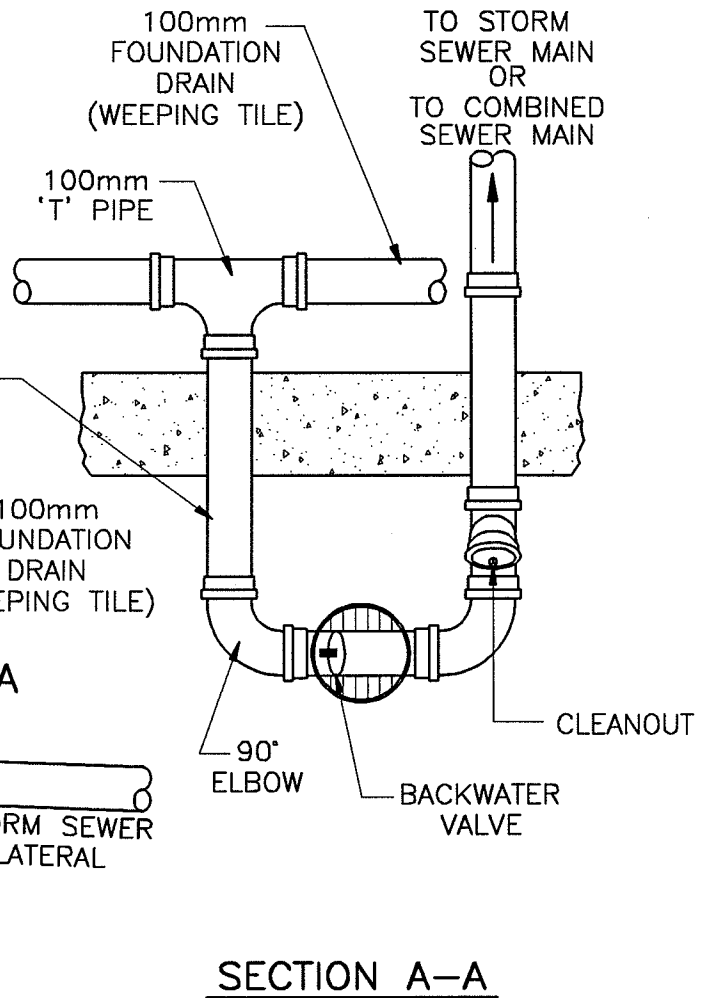
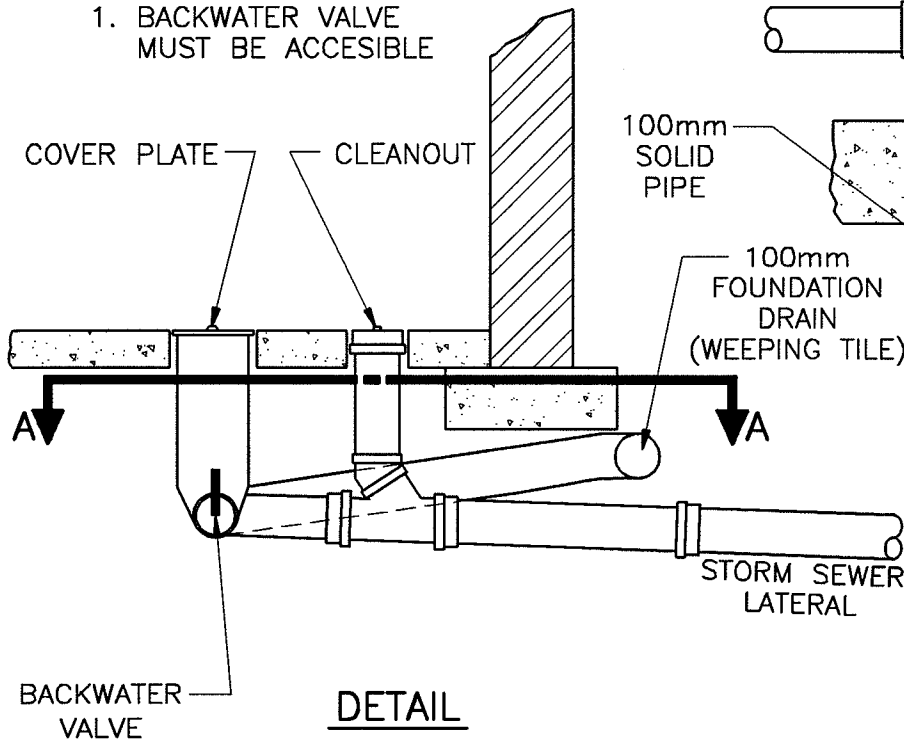


CITY OF CORNWALL ENGINEERING DEPARTMENT	DRAWN BY: A.J.A.
	DATE: 99-12-07
HOUSE STORM CONNECTION WITH SUMP PUMP	SCALE: N.T.S.
	SCHEDULE B



NOTES:

1. BACKWATER VALVE MUST BE ACCESSIBLE



CITY OF CORNWALL ENGINEERING DEPARTMENT	DRAWN BY: A.J.A.
	DATE: 99-12-07
STORM DRAIN CONNECTION BY GRAVITY	SCALE: N.T.S.
	SCHEDULE C