

CHAPTER 11

STORM DRAINAGE

1101.0 General.

1101.1 Where Required. Roofs, paved areas, yards, courts, and courtyards shall be drained into a separate storm sewer system, or into a combined sewer system where a separate storm sewer system is not available, or to some other place of disposal satisfactory to the Authority Having Jurisdiction. In the case of one- and two-family dwellings, storm water shall be permitted to be discharged on flat areas, such as streets or lawns, so long as the storm water shall flow away from the building and away from adjoining property, and shall not create a nuisance.

1101.2 Storm Water Drainage to Sanitary Sewer Prohibited. Storm water shall not be drained into sewers intended for sanitary drainage only.

1101.3 Material Uses. Rainwater piping placed within the interior of a building or run within a vent or shaft shall be in accordance with the applicable standards referenced in Table 7-1 or equivalent International Standard(s) approved by the Authority Having Jurisdiction for above ground drain, waste and vent piping, and changes in direction shall conform to the requirements of Section 706.0. ABS and PVC DWV piping installations shall be installed in accordance with applicable standards referenced in Table 14-1 or equivalent International Standard(s) approved by the Authority Having Jurisdiction, and Chapter 15 "Firestop Protection." Except for individual single-family dwelling units, materials exposed within ducts or plenums shall have a flame-spread index of not more than 25 and a smoke developed index of not more than 50, when tested in accordance with NFPA 255, *Test for Surface-Burning Characteristics of Building Materials* or equivalent International Standard(s) approved by the Authority Having Jurisdiction.

1101.4 Expansion Joints Required. Expansion joints or sleeves shall be provided where warranted by temperature variations or physical conditions.

1101.5 Subsoil Drains.

1101.5.1 Subsoil drains shall be provided around the perimeter of buildings having basements, cellars, or crawl spaces or floors below grade. Such subsoil drains shall be permitted to be positioned inside or outside of the footing, shall be of perforated or open-jointed approved drain tile or pipe not less than 80mm (3 in.) in diameter, and shall be laid in gravel, slag, crushed rock, approved 20mm (3/4 in.) crushed, recycled glass aggregate, or other approved porous material with not less than 100mm (4 in.)

surrounding the pipe on all sides. Filter media shall be provided for exterior subsoil piping.

1101.5.2 Subsoil drains shall be piped to a storm drain, to an approved water course, to the front street curb or gutter, or to an alley, or the discharge from the subsoil drains shall be conveyed to the alley by a gutter. Where a continuously flowing spring or groundwater is encountered, subsoil drains shall be piped to a storm drain or an approved water course.

1101.5.3 Where it is not possible to convey the drainage by gravity, subsoil drains shall discharge to an accessible sump provided with an approved automatic electric pump. The sump shall be not less than 375mm (15 in.) in diameter, 46cm (18 in.) in depth, and provided with a fitted cover. The sump pump shall have an adequate capacity to discharge all water coming into the sump as it accumulates to the required discharge point, and the capacity of the pump shall be not less than 1L/s (15 gpm). The discharge piping from the sump pump shall be not less than 40mm (1-1/2 in.) in diameter and have a union or other approved quick-disconnect assembly to make the pump accessible for servicing.

1101.5.4 For separate dwellings not serving continuously flowing springs or groundwater, the sump discharge pipe shall be permitted to discharge onto a concrete splash block with not less than a length of 60cm (24 in.). This pipe shall be within 100mm (4 in.) of the splash block and positioned to direct the flow parallel to the recessed line of the splash block.

1101.5.5 Subsoil drains subject to backflow when discharging into a storm drain shall be provided with a backwater valve in the drain line so located as to be accessible for inspection and maintenance.

1101.5.6 Nothing in Section 1101.5 shall prevent drains that serve either subsoil drains or areas of a detached building from discharging to a properly graded open area, provided that:

- (1) They do not serve continuously flowing springs or groundwater;
- (2) The point of discharge is not less than 3m (10 ft.) from any property line; and
- (3) It is impracticable to discharge such drains to a storm drain, to an approved water course, to the front street curb or gutter, or to an alley.