Standard Definitions of Terms Relating to

Concrete Pipe and Related Products

AASHTO Designation: M 262-23[1]

Technically Revised: 2023 **Editorially Revised: 2023**

Technical Subcommittee: 4a, Concrete Drainage Structures

ASTM Designation: C822-21

AASHTO

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1. TERMINOLOGY

1.1. *absorption*—The increase in mass of concrete resulting from the penetration of water into the concrete.

1.2. *absorption test*—A test made to determine the absorption of concrete.

1.3. *admixture*—A material other than water, aggregates, cement, and fiber reinforcing used as an ingredient of concrete and added to the batch immediately before or during its mixture.

1.4. *ambient conditions*—Common, prevailing, and uncontrolled atmospheric and weather conditions in a room or place.

1.5. *annular space*—The space between the inner surface of the female end and the outer surface of the male end of an assembled pipe joint.

1.6. *bell*—See *female end of pipe*.

1.7. *blend*—A combining of various cementitious materials.

1.8. *box section*—A concrete pipe with a rectangular cross section.

1.9. *box section bottom slab*—Lower horizontal portion of a box section in the installed condition (M 259, M 273).

1.10. *box section top slab*—Upper horizontal portion of a box section in the installed condition (M 259, M 273).

1.11. *box section wall*—Vertical sides of a box section in the installed condition (M 259, M 273).

1.12. *cage*—An assembled unit of steel reinforcement consisting of circumferential and longitudinal bars or wires.

1.13. *circular reinforcement*—A circular-shaped line of reinforcement.

1.14. *circumferential reinforcement*—Reinforcement that is approximately perpendicular to the longitudinal axis of the concrete pipe, box, or structure.

1.15. *combined sewer*—A pipeline intended to convey sewage and storm water.

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1.16. *compressive strength*—The maximum resistance of a concrete specimen to axial compressive loading; or the specified resistance used in design calculations.

1.17. *compression test*—A test made on a concrete specimen to determine the compressive strength.

1.18. *concrete*—A mixture of portland cement, fine aggregate, coarse aggregate, and water. The mixture may also contain admixtures, fiber reinforcing, or other cementitious materials, or a combination thereof.

1.19. *convoluted steel*—A sinusoidal wave wire typically attached on one end of a wire cage. The sinusoidal wave wire permits one end of the wire cage to be expanded, accommodating the increased size required for the bell.

1.20. *core*—A cylinder of concrete obtained from concrete by means of a core drill.

1.21. *crown*—The top or highest point of the internal surface of the transverse cross section of a pipe.

1.22. *culvert*—A pipeline intended to convey water under a highway, railroad, canal, or similar facility.

1.23. *cylinder (test)*—A cast cylindrical specimen of concrete.

1.24. *designated size*—The dimensional name for a particular size that may or may not be equal to or related to the dimensions used for design purposes or dimensions of the manufactured product.

1.25. *design strength*—The minimum acceptable 0.3-mm (0.01-in.) crack D-load.

1.26. *D-load*—The supporting strength of a pipe loaded under three-edge-bearing test conditions expressed in newtons per linear meter per millimeter of inside diameter or horizontal span (pounds per linear foot per foot of inside diameter or horizontal span).

1.27. *D-load, 0.3-mm (0.01-in.) crack*—The maximum three-edge-bearing test load supported by a concrete pipe before a crack having a width of 0.3 mm (0.01 in.) occurs, measured at close intervals, throughout a continuous length of 300 mm (1 ft) or more measured parallel to the longitudinal axis of pipe barrel expressed as D-load.

1.28. *D-load ultimate (D_u)*—The maximum three-edge-bearing test load supported by a pipe, expressed as D-load.

1.29. *distribution reinforcement*—Reinforcement, typically running 90 degrees to the main or circumferential reinforcement, intended to disperse concentrated loads to larger areas of a structural member.

1.30. *drain tile*—Pipe for collecting and conveying surface and subsurface water from an area.

1.31. *elliptical reinforcement*—A line of reinforcement in the approximate shape of an ellipse.

1.32. *exfiltration*—The volume of pipeline flow leaving a sewer and its connections into the soil from pipe, joints, connections, and appurtenances.

1.33. *external load-crushing strength test*—A test of the pipe in which external crushing forces are exerted in specified directions and locations on a specified length of pipe.

1.34. *external sealing bands*—Flexible wrappings that are applied to the outside of a concrete pipe, box section, or manhole section joint intended to control the movement of fluids or solids through the joint.

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