

12. Where three-point bearings are used, each specimen shall be accurately marked in halves, with pencil or crayon lines, prior to the test.

The lower bearings shall consist of two wooden strips having a corner rounded to a radius of approximately $\frac{1}{2}$ in. They shall be straight and shall be securely fastened to a rigid block in a position such that the bearing lines of a cylinder of 24-in. diameter laid along the rounded edge of the strips shall be 2 in. apart.

The upper bearing shall be a wooden block, straight and true from end to end.

The test load shall be applied through the upper bearing block in such a way as to leave the bearing free to move in a vertical plane passing between the lower bearings.

In testing a tile which is "out of straight," the lines of the bearings chosen shall be from those that appear to give most favorable conditions for fair bearings.

Proposed Specifications for Quality.—1. Specimens to be tested shall be selected by the inspector from the tile to be used on the work; these specimens to be selected at the factory, shipping destination, or at the trench location. The tile shall be measured, sounded and examined by inspection. Five specimens of each materially different class noted shall be selected for a test. If, in the judgment of the inspector, it is necessary either before or after the testing of the specimens, additional specimens may be selected, but in no case shall these additional specimens exceed 1 ft. in length for each 100 linear feet of tile to be laid. These additional specimens shall be furnished by the contractor free of charge at the point of selection, provided that, in case the specimens tested meet the specifications, not more than 1 per cent. shall be required to be furnished free.

2. Each tile shall be of a cylindrical section, the size being designated by the interior diameter. The average diameter shall not be more than 3 per cent. less than the specified diameter. The maximum and minimum diameters of the same tile or average diameters of adjoining tile shall not differ more than 80 per cent. of the thickness of the wall.

3. The minimum length of the tile shall not be less than 12 in. In tile 12 in. or above in diameter, up to 30 in. in diameter, the length shall not be less than the diameter. Tile above 30 in. in diameter need not have a greater length than 30 in.

4. Tile designed to be straight shall not vary from a straight line more than 3 per cent. of its length.

5. Tile shall be reasonably smooth on the inside, and free from cracks and checks extending into the body of the tile in such a manner as to appreciably decrease the strength.

Tile stood on end and tapped with a light hammer when dry shall give a clear ring.

Tile shall be free from chips or broken pieces which will decrease its strength or admit earth into the drain. The end shall be regular and smooth and admit of the making of a close joint when properly turned and pressed together.

6. In a standard test, if one or more specimens fall more than 25 per cent. below the required strength as specified, the class of tile represented by the failing specimens shall be rejected, and other specimens tested to complete the standard test.

7. (a) *Class No. 1B.*—No. 1B tile are intended to be suitable for supporting the load in the worst material in a trench having a grade line 5 ft. deep. They shall have

minimum average ordinary supporting strengths calculated as prescribed in Section 8 of the proposed Standard Specifications for Strength Tests of Drain Tile, in accordance with the following table:

Required Average Ordinary Supporting Strength for Class No. 1B Tile.

Diameter of tile, in.	Lb. per linear foot.
10	600
12	700
14	800
16	900
18	1,000
20	1,100
22	1,100
24	1,200

(b) *Class No. 1A.*—No. 1A tile shall be made of good materials by the most approved method, and are intended to be suitable for supporting the load in the worst material in a trench having a grade line 7 ft. deep.

The inner surface of the tile shall be free from defects. The outer surface shall be free from broken blisters, lumps or flakes which are thicker than 20 per cent. of the thickness of the tile, or whose diameter is greater than 15 per cent. of the inner diameter of the tile, and such defects as are allowed shall not be of such nature as to appreciably weaken the tile when laid in the ditch.

The tile shall have minimum average ordinary supporting strengths (calculated as prescribed in Section 8 of the proposed Standard Specifications for Strength Tests of Drain Tile) in accordance with the following table:

Required Average Ordinary Supporting Strength for Class No. 1A Tile.

Diameter of tile, in.	Lb. per linear foot.
12	900
14	1,000
16	1,200
18	1,300
20	1,400
22	1,550
24	1,700
26	1,800
28	1,900
30	2,000
32	2,050
34	2,150
36	2,250

(c) *Class No. 1 Extra A.*—No. 1 Extra A tile shall be extra good, and are intended to be suitable for supporting the load in the worst material in a trench having a grade line 10 ft. deep. They shall be either vitrified, salt-glazed, clay tile, or thoroughly seasoned concrete tile, made of the best materials, by the most approved method.

The inner surface of the tile shall be free from defects. The outer surface shall be free from broken blisters, lumps or flakes which are thicker than 16 per cent. of the thickness of the tile, or whose diameter is greater than 12 per cent. of the inner diameter of the tile, and such defects as are allowed shall not appreciably weaken the tile when laid in the ditch.

The tile shall have minimum average ordinary supporting strengths (calculated as prescribed in Section 8 of the proposed Standard Specifications for Strength Tests of Drain Tile) in accordance with the following table: