

Pipe Thickness Tables

Design Manual
Chapter 1
General Information
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This section provides pipe thickness tables designers can use for estimation purposes. The values for concrete pipe are based on the AASHTO specifications in effect at the time of publication of this section.

Refer to [DR-202](#) for concrete arch and elliptical pipe thicknesses.

**Table 1: Nonreinforced Circular Pipe
(AASHTO M 86)**

inside diameter (inches)	wall thickness (inches)		
	Class 1	Class 2	Class 3
4	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{3}{4}$
6	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$
8	$\frac{3}{4}$	$\frac{7}{8}$	$1\frac{1}{8}$
10	$\frac{7}{8}$	1	$1\frac{1}{4}$
12	1	$1\frac{3}{8}$	$1\frac{3}{4}$

**Table 2: Reinforced Circular Pipe
Class 1500D to Class 3750D
(ASTM C 76/AASHTO M 170, Wall B)**

inside diameter (inches)	wall thickness (inches)
12	2
15	$2\frac{1}{4}$
18	$2\frac{1}{2}$
21	$2\frac{3}{4}$
24	3
27	$3\frac{1}{4}$
30	$3\frac{1}{2}$
33	$3\frac{3}{4}$
36	4
42	$4\frac{1}{2}$
48	5 ^a
54	$5\frac{1}{2}$ ^a
60	6 ^a
66	$6\frac{1}{2}$ ^a
72	7 ^a
78	$7\frac{1}{2}$ ^{a,b}
84	8 ^{a,b}
90	$8\frac{1}{2}$ ^{a,b}
96	9 ^{a,b}
102	$9\frac{1}{2}$ ^{a,b}
108	10 ^{a,b}

^a 3750D Requires special design.
^b 3000D Requires special design.

**Table 3: Steel Pipe
(Materials IM 440)**

nominal diameter (inches)	nominal thickness (inches)
3¼ and under	0.188
14	0.250
16	0.281
18	0.312
20 and 22	0.344
24	0.375
26	0.406
28	0.438
30	0.469
32	0.500
34 and 36	0.531
38	0.562
40	0.594
42	0.626
44 and 46	0.656
48	0.688
50	0.719
52	0.750
54	0.781
56 and 58	0.812
60	0.844
62	0.875
64	0.906
66 and 68	0.938
70	0.969
72	1.000

Chronology of Changes to Design Manual Section: 001B-005 Pipe Thickness Tables

3/30/2023 Revised
Added in table for steel pipe. Changed title.

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