

**NC Department of Insurance
Office of the State Fire Marshal - Engineering Division
1202 Mail Service Center, Raleigh, NC 27699-1202
919-647-0000**

Maximum Prescriptive Point Load on Slab

Code: 2018 NC Residential Code
Section: R403

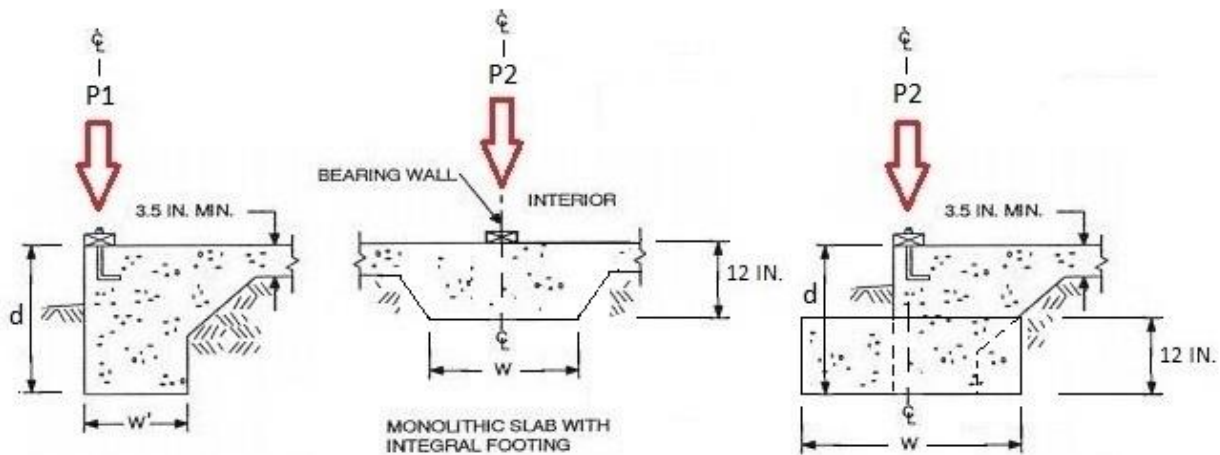
Date: January 24, 2020

Question:

Is there a maximum prescriptive point load on a concrete slab?

Answer:

Yes. The maximum prescriptive point loads on a slab are shown on the tables. If point loads exceed the table, an engineering design will be required by a design professional. The following tables are not intended for and should not be used for designing pier footings.



Notes:

1. Reinforcing is not shown for clarity. See the NCRC for reinforcing requirements.
2. Point load P1 is a concentrated point load on the turned edge of the slab.
3. Point load P2 is a concentrated point load in the center of a square footing.
4. If the actual point load is more than the values in the table for the turned down edge situation, then a square footing could be placed as shown above using the values for P2 centering the load.

Maximum Prescriptive Point Load on a Slab (P1)		
Based upon 2000 psf allowable bearing pressure and 3000 psi concrete		
Turned Down Edge - d (in)	Width of footing - w' (in)	Maximum point load (pounds)
16	12	2000
20	12	2600
24	12	3100
Based upon 2500 psf allowable bearing pressure and 3000 psi concrete		
Turned Down Edge - d (in)	Width of footing - w' (in)	Maximum point load (pounds)
16	12	2600
20	12	3000
24	12	4000
Based upon 3000 psf allowable bearing pressure and 3000 psi concrete		
Turned Down Edge - d (in)	Width of footing - w' (in)	Maximum point load (pounds)
16	12	3000
20	12	4000
24	12	5000

Maximum Prescriptive Point Load on a Slab (P2)		
Based upon 2000 psf allowable bearing pressure and 3000 psi concrete		
Square footing - w x w (in)		Maximum point load (pounds)
24	24	7500
36	36	10000
48	48	12500
Based upon 2500 psf allowable bearing pressure and 3000 psi concrete		
Square footing - w x w (in)		Maximum point load (pounds)
24	24	9000
36	36	12500
48	48	15500
Based upon 3000 psf allowable bearing pressure and 3000 psi concrete		
Square footing - w x w (in)		Maximum point load (pounds)
24	24	11000
36	36	15000
48	48	19000

Keywords: