How the Crushed Stone Footing Works

The physics of the crushed stone footing:

1. The purpose of any wall footing is to distribute the wall's load over a sufficiently large area of soil so that the weight-bearing capacity of the soil is not exceeded.
2. The load of the building is carried by the Superior Walls panel and is transferred to the 1/2" clean crushed stone.
3. The load distribution path through the crushed stone is at an angle approximately 60 degrees from the horizontal.
4. As the depth of the crushed stone layer increases, the effective bearing width on the underlying soil also increases. (See Figure 1.)
5. The tables in this booklet identify the required depth of the crushed stone footing for various wall loads and soil bearing capacities.

Code Reference:
2009 IRC Section: R403.4

R403.4 Footings for precast concrete foundations. Footings for precast concrete foundations shall comply with Section R403.4. (See Section R403.4.1 Crushed stone footings.)

Crushed Stone Footing / Effective Bearing Width Chart

Crushed Stone Footing Depth (inches)	Effective Bearing Width (inches)
4	14-7/8
5	16
6	17-3/16
7	18-5/16
8	19-1/2
9	20-5/8
10	21-13/16
11	22-15/16
12	24-1/8
13	25-1/4
14	26-7/16
15	27-9/16
16	28-3/4
17	29-7/8
18	31-1/16
19	32-3/16
20	33-3/8
21	34-1/2
22	35-5/8

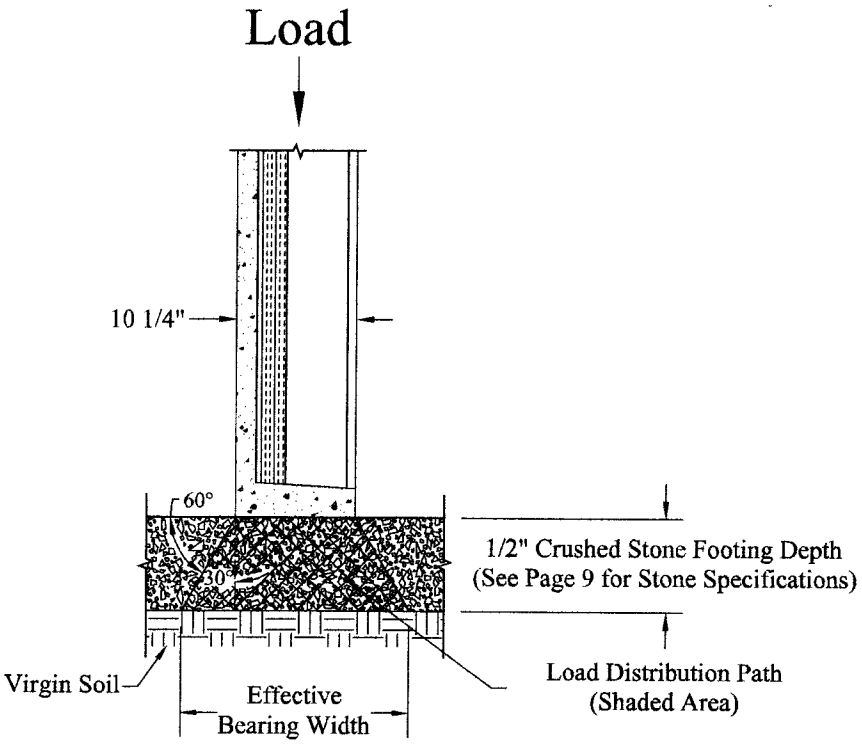

Figure 1