

Homework 10: Due Thu., Apr. 15, 2021

Given: The same three-story steel frame office building encountered in previous lecture and homework. Design dead load=100 psf. Design floor live load=50(office)+15(partition)=65 psf. Design roof live load=20 psf. Allowable soil bearing capacity is 3,000 psf. Concrete f_c' =4,000 psi. Reinforcing steel f_y =60 ksi. Design the column footing at grid B/2. Hint: Try 12'X12'X24" footing w/ 12#8 rebars each way. The column footprint is 12"X12". Concrete cover from bottom of footing to center of reinforcing steel is 3".

