1. Three different load cases will be considered (Section 9.2, ACI 318-99)

Load case 1: gravity loads only $U = 1.4D + 1.7L$

$$P_u = 320 \times 1.4 + 400 \times 1.7 = 1128 \text{ kips}$$
$$M_u = 40 \times 1.4 + 175 \times 1.7 = 354 \text{ ft-kips}$$
$$M_{1ns} = M_{2ns} = 354 \text{ ft-kip}$$

For this load case the frame is considered "braced" if no appreciable deflection occurs.

In our case the frame is symmetrical and hence gravity loads will not cause appreciable sidesway. δ_s is not considered in this load case; design the column for P_u and $M_c = \delta_{ns} M_2$.

Load case 2: gravity and wind loads $U = 0.75(1.4D + 1.7L + 1.7W)$

The frame deflects laterally under wind

$$P_u = 0.75(1.4 \times 320 + 1.7 \times 400 + 1.7 \times 50) = 910 \text{ kips}$$
$$M_{2ns} = 0.75(1.4 M_{DL} + 1.7 M_{LL}) = 0.75(1.4 \times 40 + 1.7 \times 175) = 265 \text{ ft-kip}$$
$$M_{2s} = 0.75(1.7 M_{WL}) = 0.75(1.7 \times 150) = 191 \text{ ft-kip}$$

Load case 3 gravity and wind loads $U = 0.9D + 1.3W$

The frame deflects laterally under wind

$$P_u = 0.9D + 1.3W = 0.9 \times 320 + 1.3 \times 50 = 353 \text{ kips}$$
$$M_{2ns} = 0.9 M_D = 0.9 \times 40 = 36 \text{ ft-kip}$$
$$M_{2s} = 1.3 M_W = 1.3 \times 150 = 195 \text{ ft-kip}$$

In this design problem Load case 3 will be ignored since it is clear that load case 2 is more critical.