1) Consider the cross section shown below. The actual $f'c = 3730$ psi (taken from cores) and the actual yield stress of the #11 reinforcing steel $f_y = 66.5$ ksi (determined from tension coupons). Develop the moment-curvature interaction for the cross section.

![Cross Section Diagram]

2) Using the moment-curvature response from part 1, if the beam is supported and loaded as shown below, predict the load-displacement response (develop a plot of $P$ vs centerline displacement). Provide at least 4 points: First cracking, elastic after cracking, steel first yield, and ultimate.

![Load-Displacement Diagram]