<u>Classroom Problem 3.8-1</u>: A steel truss is loaded with service load ***P*** at points B, C, and D. ***P*** = 70 kips, including 60% dead load and 40% live load. Member BC consists of two angles (**2L 6 × 4 × ½**) bolted to a ⅝-in.-thick gusset plate by six ¾-in.-diameter bolts in standard holes. Check whether member BC is safe based on all three limit states of the angles and the gusset plate block shear. Assume A_e =0.90A_n. **A572 Grade 50** steel (F_y = 50 *ksi*, F_u = 65 *ksi*) is used for all components.