

CE 461 – STRUCTURAL ANALYSIS

Fall, 2006

Ill-Defined Problem for Lesson Plan No. 7:

Please refer to the ill-defined problem from Lesson Plan One, concerning the Allen Fieldhouse Parking Garage. Using the uniformly-distributed load calculated in that problem, estimate the midspan deflection of one of the loaded, interior double-tee beams running in the E-W direction on the parking level circled.

- Use the conjugate beam method to determine the midspan deflection.
- You will need to assume a valid Young's Modulus for the beam, as well as calculate the bending moment of inertia, I , for the double-tee section.
- Include shear, moment, slope, and deflection plots describing behavior of the loaded beam.
- You may reference the posted solution from Assignment 1, but be sure to credit the source.

List all of your assumptions and any outside references you use as part of your engineering investigation. Include any photographs, sketches, or measurements that may aid you in your engineering investigation.

