

11" x 17" sheet size

BUILDING TECHNOLOGY III: FINAL PROJECT, PART I STRUCTURAL DESIGN

Identify the key structural element you will design. Investigate possible solutions for the same element using different support conditions, load assumptions (such as the tributary area supported by your structural element), or materials. Propose three possible structural forms and illustrate one solution in greater detail. For example, if your element is a roof truss, investigate alternative geometries for the roof truss based on different column spacing, depth of the truss, size of the truss panels, etc. You should choose one solution based on structural performance as well as architectural considerations.

<p>Design Alternate I</p> <p>Clearly illustrate the support conditions and the dominant loads acting on the element. Propose one possible solution. (Elevation alone will be sufficient in most cases.)</p>	<p>Design Alternate II</p> <p>Propose a second possible solution for the same element based on different support conditions, geometry, materials, or loading assumptions.</p>
<p>Design Alternate III: Proposed Solution</p> <p>Illustrate a third possible solution in greater detail. Give the dimensions of the structure, including the approximate member sizes. Estimate the loads acting on your element to the nearest 1,000 pounds (kip) based on the loads defined in your final assignment or on a load case that you determine to be critical. Provide an elevation view as well as a cross-section.</p>	
<p>Design Description</p> <p>Write a brief paragraph describing your design. Justify your choice of the structural solution, with specific reference to materials, dimensions, support conditions, and the dominant load case acting on your structural element. Clearly state any assumptions you have made for your design, such as the assumed allowable stress in the material. Briefly mention any architectural considerations which influenced your design choice.</p>	<p>Connection Detail</p> <p>Propose a solution for a relevant connection detail. Clearly illustrate the dimensions and materials.</p>

NOTE: USE ARIAL NARROW FONT FOR ALL TEXT