EMCH 13D: DESIGN PROJECT - Status Report

Do as a team: Set assignments and deadlines for the team, page 1. Find data for at least one material and the primary load, page 2. **Do individually:** Each team member is to individually design a component per page 3 and attach their contribution to pages 1 and 2.

Team: ____
Member(s): _____ _____
_____ _____
_____ _____

General task assignments: All members contribute information to the Leader and Worker.

Task (for insertion in report)	**Task Leader (last name, I.)**	**Task Worker (last name, I.)**	**Deadline**
Project Drawings/Bill of Matl's			
Methods			
Assumptions/Warnings			
References			
Materials Data Table			
Loads/Other Data			
Calculations Section			
Response to Peer Review			
Report assembly/submission			

Calculation tasks assignments: Both Leader and Worker sign off for each component.

Component	**Task Leader (last name)**	**Task Worker (last name)**	**Deadline**

Note: Leaders and workers cooperate. Both do the task and check each other. The leader is responsible for setting the timeline, initiating work, helping the worker, ensuring the deadline is met and communicating results to the team. The worker is responsible for the detailed work.

Data Sections

Materials Data Table

Column headings depend upon the class of material. For metals, use σ_Y, σ_{All}, τ_Y, τ_{All}, E, ν, and others as appropriate. Include units in the header. For Ref., insert a number and cite details below the table. For allowables, add a sample calculation and explain other quantities for each different class of material. Allowables for most nonlinear materials are usually 50% of ultimates.

Material	**Ref**							

Key applied loads and other data that do not change (add a sheet if necessary)

Component _____ Name_____

Instructions (Use this calculations format for your final report also. Do not type.)

1. Write the name of the component above. Then show it in situ (sketch its location within the structure).
2. Sketch a model with load and label it for each loading scenario. Show support conditions symbolically.

For each model, do steps 3 and 4 (add extra sheets as necessary):

3. Free-body diagram.
4. Analysis for a particular cross section (you may have more than one). Give materials and allowables, assumptions/warnings and key references used. Report new data to the design team. Derive design equations from standard formulas. Use and update your team's data tables (materials, key loads, etc.).
5. Decision. Specify nominal sizes and other conclusions. Report to your team.
6. Sign Off. Both the task leader and task worker sign off after each decision. (Not for the Status Report.)