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Tasks And Tools To Be Used For Redesign:

- Task 1—Compound all prior information and enter information into SAP
- A. Check and confirm all information regarding gravitational loading from technical reports
 - B. Determine load distribution of building
 - C. Model the building in SAP
- Task 2—Run SAP to find needed lateral support
- A. Check and confirm all information regarding lateral loading from technical reports
 - B. Model lateral loading constraints in SAP
 - C. Find loading on individual members
 - D. Locate needed lateral bracing
- Task 3—Determine allowable placement of all lateral braces and moment connections
- A. Find acceptable locations for lateral cross bracing without affecting current architecture
 - B. Using AISC LRFD manual, size the members and connections
 - C. Find necessary locations of moment connections
 - D. Using AISC LRFD manual, size the members and connections
- Task 4—Determine deflection and vibration caused by loading conditions on designed members
- A. Enter all lateral resistive systems into SAP and find resulting deflections
 - B. Research vibration limitations and reduction alternative
 - C. Find new foundation systems needed based on lightened loading of steel system
- Task 5—Determine needed vibration controls and slab thicknesses
- A. Find slab thickness needed to equate thickness of concrete structural system
 - B. Find reductions of vibration available through external systems
 - C. Find best combined solution to slab thickness and vibration controls
 - D. Find new foundation systems needed based on middle loading of controlled system
- Task 6—Find pricing of systems using R.S. Means
- A. Find labor/material pricing and duration of original system
 - B. Find labor/material pricing and duration of new system without vibration controls
 - C. Find labor/material pricing and duration of new system with vibration controls
- Task 7—Study existing cost and duration with proposed cost and duration
- A. Determine total cost of all systems using ICE 2000 Estimating
 - B. Determine total duration of all systems using Primavera
 - C. Compare overall cost of concrete system and steel system
 - D. Compare overall cost of concrete system and vibration controlled steel to find economical system
 - E. Compare overall time of projects to compare time savings in producing the most economical system

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Task 8—Study new architectural design

- A. Research possible material to produce traditional exterior used on surrounding buildings
- B. Calculate overall loading of new façade as compared to current façade
- C. Change structural system as needed by the redesigned façade
- D. Change foundation system as needed by the redesigned façade
- E. Find changed pricing based on new materials and foundation systems
- F. Finalize best façade system based on image, building loading, and cost
- G. Prepare rendering of the building with new façade

Task 9—Prepare final presentation

- A. Prepare final report with printing and binding
- B. Prepare final presentation using Microsoft PowerPoint

Proposed Schedule:

Week	Tasks To Be Accomplished
8-Jan	Task 1
15-Jan	Task 2
22-Jan	Task 3
29-Jan	Task 4
5-Feb	Task 5
12-Feb	Task 5
19-Feb	Task 6
26-Feb	Task 7
5-Mar	Spring Break
12-Mar	Task 7
19-Mar	Task 8
26-Mar	Task 8
2-Apr	Task 9
9-Apr	Presentations