

- I. Introduction of the following: (1 Slide)**
 - A. Name – Jonathan Torch
 - B. Major – Architectural Engineering – Structural Option – B.A.E./M.A.E Candidate
 - C. Project – Columbia University Northwest Science Building
 - D. Faculty Advisor – Dr. Ali M. Memari

 - II. Briefly Go Over Outline of Presentation (1 Slide)**
 - A. Existing Building Statistics
 - B. Description of Thesis Proposal for Spring 2010 Semester
 - a. Goals
 - b. Includes Existing Lateral System Analysis
 - c. Includes Lateral System Redesign
 - d. Building Enclosure Breadth
 - e. Architecture Breadth
 - C. Conclusions

 - III. Discuss Existing Building (3 Slides)**
 - A. Building Statistics
 - B. Building Architecture
 - C. Building Structure
 - D. Zoning Requirements
 - E. Applicable Codes

 - IV. Introduce Thesis Proposal (2 Slides)**
 - A. Explain Structural Depth
 - B. Building Enclosure Breadth Brief Description
 - C. Architectural Breadth Brief Description
 - D. Discuss Main Goals of Thesis Proposal

 - V. Existing Lateral Analysis for Miami, FL (2 Slides)**
 - A. Calculation of Wind Forces (Miami, FL)
 - B. Wind Drifts, Story Drifts, Overturning, & Strength Checks

 - VI. Lateral Redesign for Miami, FL (3 Slides)**
 - A. ETABS Model Creation
 - B. Frame Sketches, Initial Analysis, & Finalized Analysis

 - VII. Building Enclosure Breadth (4 Slides)**
 - A. Goals of Building Enclosure Breadth
 - B. Discuss Existing Curtain Wall System
 - C. Explain R-value, Condensation, & Air Leakage Analysis Results
 - D. Bare Material (Insulation) Cost Analysis
 - E. Conclude on Breadth Study

 - VIII. Architectural Breadth Study (6 Slides of Images)**
 - A. Goal of Architectural Breadth
 - B. Briefly Describe Existing Exterior Architecture of Building
 - C. Proposed Architecture for Miami, FL
 - D. Conclude on Breadth Study

 - IX. Conclusion of Senior Thesis (1 Slide)**
 - A. Reintroduce Proposed Goals of Thesis Spring Semester 2010 (Conclude on Each Goal)

 - X. Acknowledgements (1 Slide)**
 - A. Thank everyone that made this senior thesis project a positive learning experience.
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