

Jon Krepps
Structural
AE Senior Thesis Presentation Outline
3/27/13

- I. Introductions
 - a. Introduce myself to the professors (One Slide)
 - b. Introduce my building (One Slide)
 - i. Location (Hershey, Pa.)
 - ii. Owners
 - iii. Size
 - iv. Completion date
 - v. Talk about the rest of the research park along with the owners future goals
 - c. Inform audience what will be talked about throughout the rest of the presentation (One Slide)
 - i. Depth – Structural Redesign
 - ii. Breadth One – Green Roof addition
 - iii. Breadth Two – More sustainable mechanical systems

- II. Depth - Structural Redesign
 - a. Actual design is steel, redesign is concrete (One Slide)
 - b. Background structural information (One Slide)
 - i. Loading
 - ii. Building type
 - c. Fall semester analysis information about the current steel frame (Two Slides)
 - d. Why the concrete redesign will be helpful (Two Slides)
 - i. Compare and contrast the systems to see which is the better option
 1. Cost
 2. Floor-to-Floor heights
 3. Sustainability
 - e. Details of redesign (Three-Four Slides)
 - i. One way slab
 1. Slab, beam, and girder depths
 2. Column sizes and layouts
 - ii. Effectiveness of design
 1. Load Combinations
 2. Load Cases
 - iii. Roof Design
 1. With Green Roof
 2. Without Green Roof
 3. Pros and Cons of each

- III. Breadth One – Green Roof
 - a. Why add a green roof (One Slide)
 - b. Different types of green roofs (One Slide)
 - c. Compare and Contrast possible solutions (Two-Three Slides)
 - i. Lifetime cost
 - ii. Sustainability
 - iii. Structural Effects

- IV. Breadth Two – Mechanical
 - a. Current Mechanical System (One Slide)
 - b. Why change the current systems (Two Slides)
 - i. Achieve LEED certification
 - ii. Owners future plans
 - c. New system possibilities (Two Slides)
 - d. Systems Comparison (Two Slides)
 - i. Lifetime Cost
 - ii. Sustainability
 - iii. Architectural Effects

- V. Conclusion
 - a. Was my redesign successful , why or why not (One Slide)
 - b. What changes I would have made (One Slide)
 - c. What I have learned during the thesis process (Two Slides)
 - d. Questions (One Slide)