Thesis Presentation Outline

Alyssa Adams – Mechanical Option – March 23, 2009 – Dr. William Bahnfleth

<u>Presentation Type - Three Screens:</u> The first screen will show an outline and the sections will become hi-lighted as they are being discussed. It will also be used as an extension to the other two screens when necessary. The central screen will be the main focus, showing the majority of graphs, site plans, and other illustration tools. The third screen will be used for supporting data, as well as an extension to the main screen, if necessary.

<u>Presentation Outline:</u>

1. Title Page (1 slide)
2. Building Overview (1 slide)
3. Thesis Outline (1 slide)
4. Mechanical Depth – Sustainable Retrofit
    a. Water Efficiency (5 slides)
        i. Make-up water utilization for Cooling tower
        ii. Annual rainfall for Harrisburg, PA
        iii. Design of rainwater collection and utilization
        iv. Design costs and Payback (CM Estimate/Schedule)
        v. Recommendation and Reflection
    b. Energy Efficiency (5 slides)
        i. Current WSHP loop design overview, including schematics
        ii. WSHP Loops pumps and controls discussion
        iii. Energy comparison to a similar system, utilizing VFD (Variable Frequency Drives)
        iv. Design costs and Payback of VFDs (CM Estimate/Schedule)
        v. Recommendation and Reflection
    c. Indoor Environment Quality (5 slides)
        i. Overview of current ventilation system and ERVs (Energy Recovery Ventilators)
        ii. Proposed solution for improved IEQ
        iii. Layout and re-design of ventilation air distribution
        iv. Design costs and benefits/deficiencies to Redesign (CM Estimate/Schedule)
        v. Recommendation and Reflection
5. Sustainable Results and Life Cycle Analysis Compilation (3 Slides)
    a. LEED
    b. Energy Star
    c. Architecture 2030
6. Conclusion/Acknowledgements/Questions (3 slides)   **Total Slides: 24 slides**

<u>Breadth Analysis:</u> I will discuss the construction management breadth with each sustainable retrofit design (Rainfall collection, VFDs, and Ventilation Redesign). The architecture breadth will not be covered in my presentation.