300+ Hour Experience: WSP USA Internship

Emilie Steinberg

Overview

Company: WSP USA

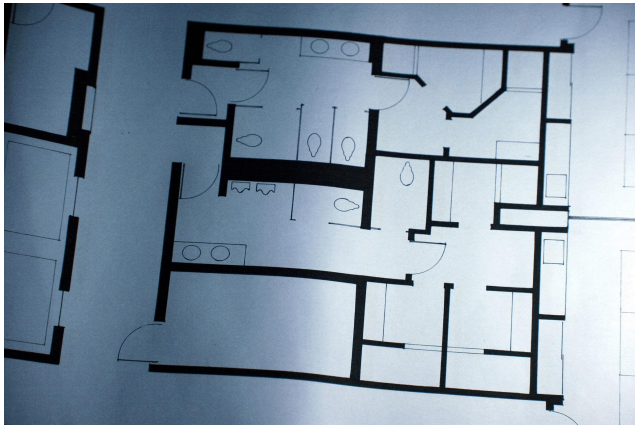
Role: Mechanical Engineering Intern

Team: Properties & Buildings

Timeframe: Spring 2023 – Summer 2023

Project Types: Healthcare buildings + transportation stations

Focus Area: HVAC system design and modeling



Project Scope

2 Main Projects:

- Transportation station
- Hospital Building

Responsibilities:

- Modeled ductwork and HVAC systems in Revit
- Performed airflow, pressure loss, and fluid flow calculations
- Reviewed architectural drawings and floor plans
- Visited on-site active construction projects

Impact

Collaboration:	***Contributions:***
• Worked with mechanical, electrical, plumbing, and structural engineers • Participated in multidisciplinary design coordination and reviews • Observed how different engineering disciplines interact	• Coordinated HVAC layouts to meet placement and code constraints • Modeled air-handling units and duct systems in Revit • Updated models and drawings based on engineering review feedback • Implemented senior engineer edits for final drawing sets

Skill Development

Challenges:	***Learnings:***
• Designing within tight spatial and regulatory constraints • Learning industry workflows early in engineering path	• HVAC fundamentals and system-level design • Reading construction plans and developing duct layouts in Revit • Translating models into real-world construction considerations

Reflection

- Engineering is an iterative process shaped by real-world constraints
- Early failures emphasized the importance of communication and collaboration
- Effective solutions come from balancing performance, safety, and feasibility
- Multidisciplinary work strengthened system-level thinking