



PRESENTATION OUTLINE:

- I. PROJECT BACKGROUND
- II. ANALYSIS #1: Bring BIM into the Field
 - I. Critical Industry Issue
- III. ANALYSIS #2: Curtain Wall Redesign
 - I. Electrical Breadth #1
- IV. ANALYSIS #3: AHU Redesign
 - I. Mechanical Breadth #2
- V. LESSONS LEARNED
- VI. ACKNOWLEDGEMENTS



PENN STATE AE SENIOR CAPSTONE PROJECT
MICHAEL GALLAGHER | CONSTRUCTION MANAGEMENT
DR. RILEY | CM ADVISOR

| CHEMISTRY BUILDING MICHAEL GALLAGHER CONSTRUCTION MANAGEMENT | CURTAIN WALL REDESIGN | CHEMISTRY BUILDING MICHAEL GALLAGHER CONSTRUCTION MANAGEMENT |
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| <p>PRESENTATION OUTLINE:</p> <ul style="list-style-type: none">I. PROJECT BACKGROUNDII. ANALYSIS #1: Bringing BIM into the Field<ul style="list-style-type: none">I. Critical Industry IssueIII. ANALYSIS #2: Curtain Wall Redesign<ul style="list-style-type: none">I. Electrical Breadth #1IV. ANALYSIS #3: AHU Redesign<ul style="list-style-type: none">I. Mechanical Breadth #2V. LESSONS LEARNEDVI. ACKNOWLEDGEMENTS |  <p>AREA'S TO CHANGE</p> <ul style="list-style-type: none">• Decrease glass size to reduce cost and produce in US• Heat entrained glass for stair towers from beginning• Integrate PV glass into curtain wall system• Use BIM and Vela Systems for tracking materials <p>Effects</p> <ul style="list-style-type: none">• Schedule Impacts• Reduction to General Conditions• Cost impacts• Payback period for PV glass |  |

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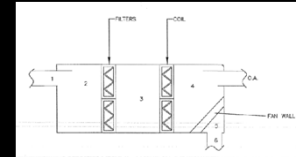
- I. PROJECT BACKGROUND
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PROBLEMS:

- Fan wall blows into corner
- Exhaust Duct is too small
- Additional 2" of Static Pressure from 5 to 6

RESULT

- Increased fan speed to achieve proper air flow for the labs
- Increased energy cost due to increased fan speed



Plan View of Lab Penthouse AHU