Presentation Outline
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Construction Management
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Cardinal Wuerl North Catholic High School
Cranberry Township, PA
Wednesday, April 2nd, 2014

Introduction (0:15)

1. **Project Overview** (1:30)
    a. Project History
    b. Project Delivery System
    c. Building Statistics
2. **Analysis I – Sto Panel Prefabricated Masonry Panels** (4:00)
    a. Problem Identification
        i. Quality Control intensive façade assembly
        ii. Opportunity to save money by reducing critical path & substantial completion date
    b. Suggestions
        i. Sto Panel Brick Insulated system to reduce overall project duration and increase quality
    c. Results
        i. Sto Panel Brick Insulated system greatly reduces project duration
        ii. Panelized system is much more expensive but reduces critical path
        iii. Architectural Breadth
        iv. Structural Breadth
    d. Recommendation
        i. Do not use Sto Panel system. Cost savings are not significant enough for owner to yield usage on project where schedule is not critical.
3. **Analysis II – Lifetime VE Finish Costs** (2:00)
    a. Problem Identification
        i. $800,000 of accepted VE reduction ($2,740,000) focused on finishes
        ii. Did not consider lifecycle cost of maintenance, replacement, cleaning, etc.
    b. Suggestions
        i. Lifecycle costs of tile reduction, linoleum reduction, linear wood reduction in upstairs corridors, VCT reduction, and Ultima Ceiling Tile change may cost more throughout lifecycle
    c. Results
        i. Tile/linoleum/linear wood/VCT/Ceiling Tile Reductions cost more over lifetime
    d. Recommendations
        i. Use originally suggested alternatives materials.

4. **Analysis III – Efficient & Effective Turnover of FM Information** (2:00)
    a. Problem Identification
        i. Critical Industry Research
        ii. FM planned to be heavily integrated with BIM at CWNCHS
    b. Suggestions
        i. Determine best way to go about training FM
        ii. Determine best course of action to implement FM software
    c. Results
        i. Onuma Software being used at CWNCHS is best fit
        ii. Training and Software implementation have areas of improvement
        iii. Owner's Guide Developed
    d. Recommendations
        i. Follow owner's guide when considering
        ii. Clearly define goals from the beginning of the project
5. **Analysis IV – Alternative Roofing Systems Analysis** (3:00)
    a. Problem Identification
        i. TPO Roofing could not be installed during winter months. Caused critical path problems
    b. Suggestions
        i. Evaluate alternative systems such as Built-Up Roofing and PVC
        ii. Use Duro-Last PVC prefabrication methods
    c. Results
        i. Duro-Last PVC is competitively priced and saves time
        ii. Overall cost savings reported in general conditions savings
    d. Recommendations
        i. Use Duro-Last PVC system as originally suggested
6. **Conclusions & Recommendations** (1:00)
7. **Acknowledgements** (0:15)

Total Estimated Time (14:00)

PROJECT OVERVIEW | Building Statistics

Project Overview
Prefabricated Masonry Panels
Breadths – Arch & Structural
Lifetime Costs of VE Finish
Efficient/Effective FM Info Turnover
Alternative Roof Systems Analysis
Final Recommendations
Acknowledgements

SIZE | **177,129 SF**

PROJECT COST | **$72.5 million**

CONTRACT TYPE | **GMP**

DELIVERY METHOD | **Design-Bid-Build, Multiple Prime, GC Lead with CM Agency**

SCHEDULE | **June 2012 – June 2014**

OWNER | **Catholic Diocese of Pittsburgh**

GENERAL CONTRACTOR | **Mascaro Construction Company**

CM AGENCY | **Campayno Consulting Services**

ARCHITECT | **Astorino**

PREFAB PANELS | Problem Identification

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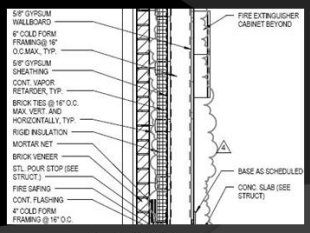
Existing System

- Stick-built cold-formed metal framing with sheathing, continuous vapor barrier, insulation and brick veneer
- Very congested jobsite
  - Scaffolding
  - Equipment
  - Manpower
- $1,516,000 to complete
- Critical path item for 62 days



Typical Wall Section

PREFAB PANELS | Problem Identification

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Scaffolding Congestion – Area E North Elevation