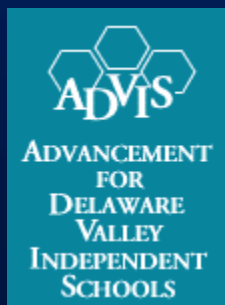


# Process Management: Effective Oversight of Design and Construction Projects

*Chestnut Hill Academy  
October 19, 2001*



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# INTRODUCTION

- Development Process Overview
- Programming
- Design
- Construction
- Wrap Up



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# INTRODUCTION

- About Brailsford & Dunlavey
  - *Clients*
    - *Private Secondary Schools*
    - *Professional Teams*
    - *Colleges & Universities*
    - *Municipalities*
  - *Assignments*
    - *Project Management*
    - *Feasibility & Programming*
    - *Strategic Planning*



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# INTRODUCTION

- Meet the Presenters
  - *Chris Dunlavey - President*
    - *Founding partner*
    - *Extensive project management experience*
  - *Brad Noyes - Vice President*
    - *Private secondary school practice*
    - *6 current independent school assignments*
  - *Julie Skolnicki - Associate*
    - *Architecture & construction background*
    - *ADVIS member project manager*



# INTRODUCTION

- Presentation Objectives
  - *De-mystify development process*
  - *Internal and external participation*
  - *Managing people and logistics*
- Project “Teams”
- Sample Projects
  - *Academic*
  - *Athletic*
  - *Performing Arts*



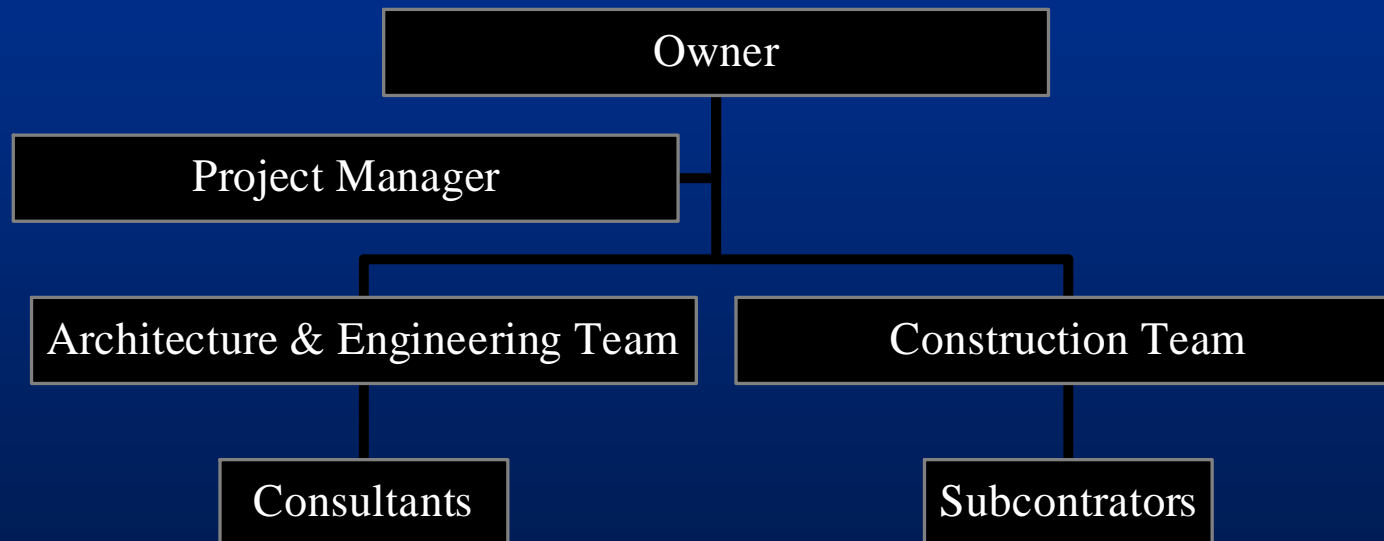
# PROCESS OVERVIEW

- Institutional Players
  - *Administration*
  - *Trustees*
  - *Faculty & Staff*
  - *Students*
- Outside Players
  - *Consultants*
  - *Architects & Engineers*
  - *Builders*
  - *Vendors & Contractors*

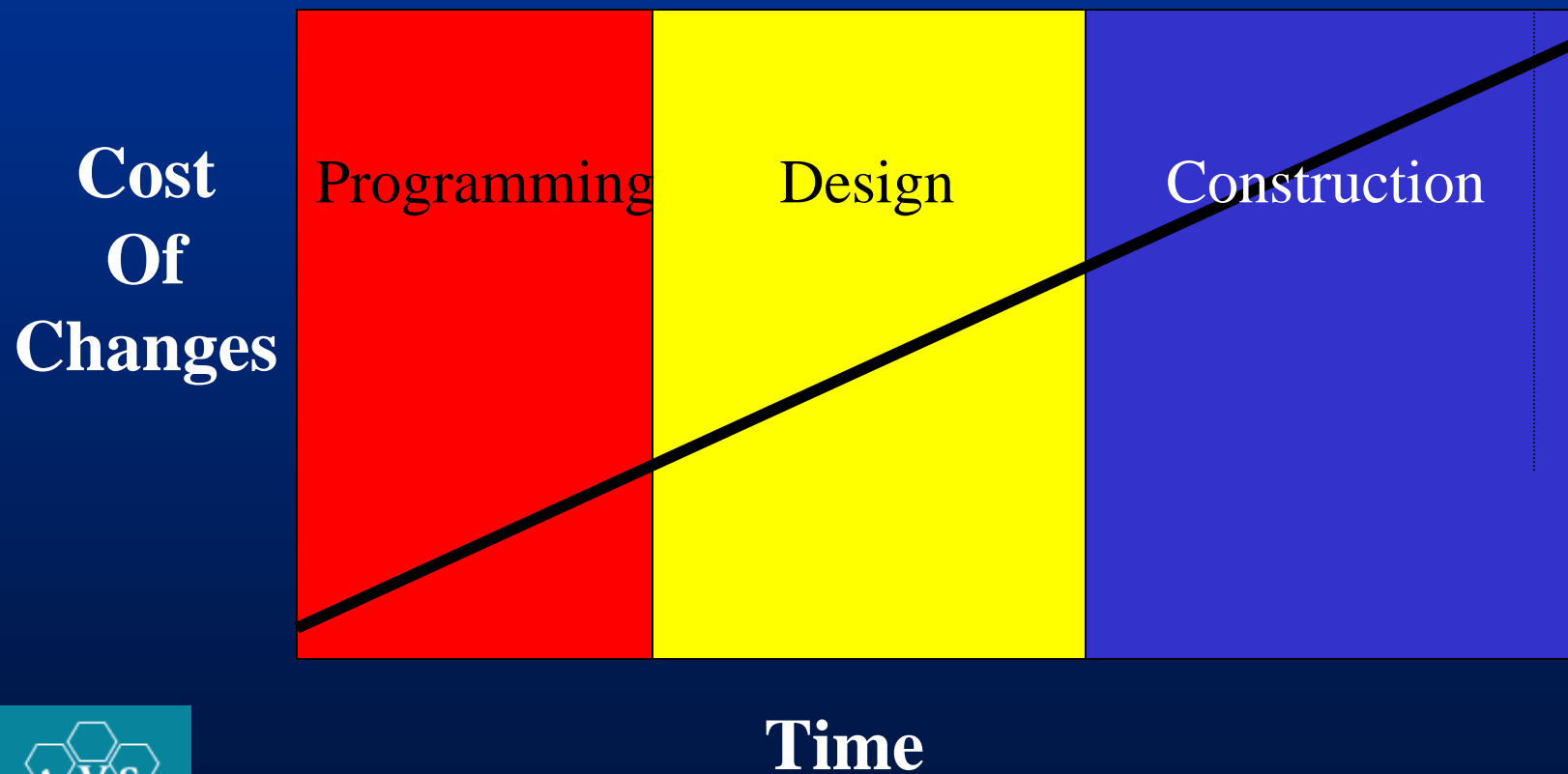


# PROCESS OVERVIEW

## Project Team



# PROCESS OVERVIEW





# PROCESS OVERVIEW

- Programming
  - *Project Vision*
  - *Project Context*
  - *Project Definition*
  - *Consensus Building*
- Design
  - *Project Specification*
- Construction
  - *Project Realization*



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# PROCESS OVERVIEW

Programming is the process of **seeking** and refining the requirements to be met by the final building design.



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# PROCESS OVERVIEW

Design is the process of **solving** the requirements established by the program document under the parameters of budget, schedule & quality.



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# PROCESS OVERVIEW

- Common Terms
  - *Feasibility*
  - *Programming*
  - *Schematic Design*
  - *Design Development*
  - *Construction Documents*
  - *Zoning*
  - *Bidding*
  - *GMP, Change Orders, etc.*
  - *RFI's, Submittals, etc.*
  - *RFPs, RFQs*





# PROGRAMMING

- Selecting the Working Group
  - *Role of Group*
    - *Ask Questions*
    - *Represent Users*
    - *Stay Involved*
  - *Size of Group*
  - *Broad Representation*
  - *Significant Time Commitment*
  - *Establish Milestones & Expectations*



# PROGRAMMING

- Selecting an Outside Firm
  - *Necessary?*
  - *Selection Process*
  - *Relevant Experience*
  - *Comprehensive Capabilities*
  - *Chemistry*
  - *Proposed Process*
  - *Independent Facilitator*



# PROGRAMMING

- Planning with a Mission
  - *Uniqueness of Independent Schools*

“All of the project's benefits must be expressed in specific terms that demonstrate their relevance to furthering the school's *mission*, reinforcing institutional *values*, responding to institutional *commitments and responsibilities*, and improving the school's competitive *market position*.”



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# PROGRAMMING

- Required Research
  - *Comparable Schools*
  - *National Trends*
  - *Focus Groups – Students/Parents/Staff*
  - *Schedule Analysis*
  - *Fundraising Parameters*
  - *Financial Analysis*



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# PROGRAMMING

- Required Output
  - *Outline Program*
  - *Development Budget*
  - *Program Document*
  - *Project Schedule*
  - *Financing Plan*
    - *Fundraising*
    - *Bonds*
    - *Additional Income*
  - *Consensus*



# PROGRAMMING

- Comprehensive Development Budget
  - *Hard Costs*
    - *Construction Contract*
    - *Other Contracts*
    - *FF&E*
  - *Soft Costs*
    - *Design & Professional Fees*
    - *Regulatory Fees*
    - *Contingency*
    - *Start Up Costs*
    - *Financing Fees*



# PROGRAMMING

- “Program Document”
  - *Project Objectives*
  - *Design Philosophy*
  - *Location & Site Requirements*
  - *Outline Program*
  - *Development Budget*
  - *Functional Relationships*
  - *Detailed Space Requirements*
  - *Outline Specifications*



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# PROGRAMMING

## WORK SESSION #1



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# DESIGN

- Selecting a Design Team
  - *Open and Fair Process*
  - *Selection Schedule*
  - *Develop Clear RFP/RFQ*
  - *Site Tour & Interviews*
  - *Key Factors*
    - *Experience*
    - *Approach*
    - *Cost*
    - *Personality*



# DESIGN

- Negotiating Contracts
  - *Role of A/E Team*
  - *Memo of Understanding (MOU)*
    - *Cost*
    - *Schedule*
    - *Services*
  - *Use of AIA Contract Documents*
  - *Legal Review*
  - *Additional Services*



# DESIGN

- Managing the A/E Team
  - *Meeting Schedule*
  - *Phases of Design*
  - *Contract Factors*
    - *Cost*
    - *Schedule*
    - *Program*
  - *Review of Drawings & Specifications*
  - *Cost Estimates*
  - *Value Management*





# DESIGN

- Construction Documents
  - *General Requirements*
  - *Site Plans*
  - *Floor Plans*
  - *Reflected Ceiling Plans*
  - *Exterior Elevations*
  - *Interior Elevations*
  - *Building Sections*
  - *Window & Door Schedule*
  - *Specifications*



# DESIGN

- Furniture, Fixtures, Equipment (FF&E)
  - *Budgeting*
  - *Research*
  - *Specifications*
  - *Bidding*
  - *Procurement*
  - *Delivery Schedule*
  - *Drawing Coordination*



# DESIGN

- Neighbor Relations & Zoning
  - *Meet with Governing Bodies & Interested Parties*
  - *Open Space & Impervious Surface*
  - *Variance vs. Zoning Compliance*
  - *Divide and Conquer*
  - *Schedule*
    - *Early*
    - *Design Update*
    - *Before Construction*
  - *Identify Point Person*
  - *Contract Key Consultants*



# DESIGN

- Common Design Issues
  - *Compatibility with Program*
  - *Compatibility with Campus & Schools Values*
  - *Interior and Exterior Adjacencies*
  - *Flexibility – Long term Objectives*
  - *Structural Integrity*
  - *Safety & Code Requirements*
  - *Constructability and Trade Sequence*
  - *Fabrication and Installation Methods*
  - *Building Movement and Substrate Attachment*
  - *Resistance to Moisture, Weathering, Thermal Efficiency*



# DESIGN

## WORK SESSION #2



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# CONSTRUCTION

- Selecting a Builder
  - *Delivery Method*
    - *General Contractor*
      - *GMP vs. Cost Plus*
    - *Design Build*
    - *Construction Manager*
  - *Selection Process*
    - *Qualifications*
    - *Competitive Bid*
  - *Control vs. Cost*



# CONSTRUCTION

- Selecting a Builder
  - *Staging Plan*
    - *Traffic*
    - *Limits of Construction*
    - *Storage*
  - *Critical Path Method*
  - *Schedule*
  - *“Fast Tracking”*



# CONSTRUCTION

- Negotiating Contracts
  - *Role of Construction Team*
  - *Staff Roles*
    - *Project Manager*
    - *Site Superintendent*
    - *Support Staff*
  - *Use of AIA Contract Documents*
  - *Legal Review*
  - *Overhead & Profit*
  - *Damages*
  - *Savings*





# CONSTRUCTION

- Furniture, Fixtures, Equipment (FF&E)
  - *Management Approaches*
    - *Internal*
    - *External*
  - *Bidding*
  - *Procurement*
    - *Additional Charges*
    - *Delivery, Certificate of Occupancy*
    - *Long Lead/Large Items*
  - *Audio Visual, Security, etc.*



# CONSTRUCTION

- Neighbor Relations & Zoning
  - *Maintain Relations with Locality*
  - *Permit Process*
  - *Follow Up Neighbor Meeting*
  - *Construction Traffic Route*
  - *Contact Person*
  - *Site Safety*
  - *Security*
  - *Days/Hours of Operation*



# CONSTRUCTION

- Move In
  - *City Inspections*
  - *Certificate of Occupancy*
  - *Don't Schedule Too Tight*
  - *Punch List*
  - *Release of Liens*
  - *Retainage*
  - *Stay Positive*



# CONSTRUCTION

## WORK SESSION #3



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# TRICKS OF THE TRADE

- Up Front Research
- Broad Involvement
- Build Consensus
- Consistent Leadership/Management
- Hire Experienced Partners
- Comprehensive and Conservative Budgeting
- Documentation
- Enjoy the Process



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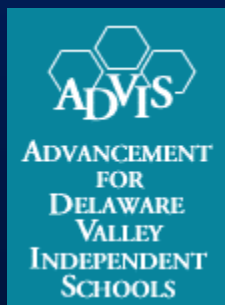
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