GETTING THE PROJECT YOU WANT

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NEIL GORDON – CEO, DISCOVERY MUSEUM
NEIL’S PROJECTS

- Boston Children’s Museum
- Expansion and Renovation 10,000 sgft
- $50M
- Completed 2007
NEIL’S PROJECTS

- Discovery Museum, Acton
- Expansion and Renovation, Outdoor Playscape
- $9M
- Completed 2018
WHAT IS THE PROJECT YOU WANT?

- Prestige New Construction
WHAT IS THE PROJECT YOU WANT?

- Major Additions
WHAT IS THE PROJECT YOU WANT?

• Interior Space Planning
• Exhibit Construction
WHAT IS THE PROJECT YOU WANT?

- Major Building Upgrades
- Deferred Maintenance
WHAT IS THE PROJECT YOU WANT?

- Accessibility Upgrades
WHAT IS THE PROJECT YOU WANT?

- General Maintenance
- Keeping the Lights On
RECOGNIZING NEEDS VS WANTS

• Needs:
  • Environmental comforts (keeping the heat on)
  • Safety Related Items
  • ADA Accessibility
  • Space that meets the needs of the team
  • Space that meets the needs of the program

• Wants:
  • Everything else!
RECOGNIZING NEEDS VS WANTS - EXAMPLE MEASUREMENTS OF SUCCESS

• Visitor WOW
• Maintain Operations During Construction
• Integrate Exhibits with Design
• Complete Project on Time
• Meet Financial Goals
• Create Team Camaraderie
• Achieve Project Objectives
• Delight Board and Donors
THE CONSTRUCTION PROCESS

• Planning and Design Phase
  • Identify Delivery Method
  • Programming your needs – every space counts!
  • Scoping limits of work – need to draw the line somewhere.
  • Design Narrative - Written expectations for all critical design items.
  • Ask questions until you understand.
  • Your consultants time is valuable – come prepared.

• Understand Necessary Owner’s Consultants
  • Geotech, Wetlands Scientists, Commissioning Engineers, Special Inspectional Services, Hazardous Material Abatement Contractor…..
THE CONSTRUCTION PROCESS – EXAMPLE DESIGN GOALS

- Boston Children’s Museum
  - Consolidate and renovate exhibitions on few floors
  - Extract the visitor circulation from the exhibitions
  - Build a new traveling exhibitions gallery
  - Enhance and increase tenant space
  - Make Museum’s entrance easier to find from all points
  - Create a group entrance with storage and orientation space
THE CONSTRUCTION PROCESS

• Procurement and Permitting Phase
  • Award Construction Contract – Standard Documents vs Custom Forms (or contractor’s own agreement)
  • Understand project schedule realities – Once a project is awarded, expect between 30-45 days until the project begins.
    • Contractor Awards Sub Contracts.
    • Initial material approvals (shop drawings and submittals)
  • Permitting
    • Beware the AHJ (Authority having Jurisdiction) – Be prepared for surprises in the permitting process.
THE CONSTRUCTION PROCESS

• Construction and Occupancy Phase
  • Submittals, Samples, and Mock Ups – What is going into the project?
  • Owner’s Change Orders and “Scope Creep” – Don’t be your own worst enemy.
  • Speak up – If something doesn’t look right, or you have concerns, communicate with the contractor.
  • Commissioning – Does everything work right?
THE CONSTRUCTION PROCESS – EXAMPLE PROJECT ORG CHART
THE CONSTRUCTION PROCESS – EXAMPLE TYING FUNDRAISING AND PROJECT PHASES

<table>
<thead>
<tr>
<th>Campaign Milestone</th>
<th>Construction Milestone</th>
<th>Approximate Cost/Risk Phase</th>
<th>Cumulative Cost/Risk</th>
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SELECTING A DELIVERY METHOD

• Should be one of the first decisions made during the planning process.

• Different projects and different owners have different needs.

• Ask yourself and your team:
  • What services do we require?
  • How flexible are we on costs?
  • How flexible are we on schedule?
  • How much input do we want to have?
SELECTING A DELIVERY METHOD

• Design – Bid – Build
  • Advantages
    • Traditional and Understood
    • Lower Initial Cost (?)
    • Requires Less Owner Experience
    • Allows for Owner to fully engage design process
  • Disadvantages
    • Time intensive
    • Requires complete and coordinated drawings (not good with unknowns)
    • Can create a negative atmosphere between parties
SELECTING A DELIVERY METHOD

- Construction Management (At-Risk)
  - Advantages
    - Able to handle complex and extensive coordination
    - Allows for a project to “fast-tracked”
    - Can bring contractor into design process
    - Allows ability to see cost during design
    - CM review of design can potentially reduce costs (constructability)
  - Disadvantages
    - May not be effective in small projects
    - More services = More costs
    - Typically more administrative
SELECTING A DELIVERY METHOD

• Design – Build
  • Advantages
    • Work with a single entity (one agreement)
    • Single entity is responsible for any errors
    • Allows for a project to “fast-tracked”
    • Great for simple projects
  • Disadvantages
    • Requires preparation of detailed project requirements ahead of agreement
    • Potentially less design services
    • Architect works for builder and not owner
MINIMIZE THE IMPACT

• Begin with the right project team.
  • Who is capable of representing your non-profit?
    • Board Members, internal staff, or volunteers with construction industry experience?
    • If not, buy those services with the project.
  • Who is the decision maker for your non-profit?
    • May or may not be your representative.
    • Empower them to make decisions.
MINIMIZE THE IMPACT – EXAMPLE DECISION MAKING HIERARCHY

Flow of Decisions

- Board of Trustees
- Executive Committee
- Building Committee
- Finance Committee

Cap Campaign Committee

Exhibit Plan Review

Feasibility Review
MINIMIZE THE IMPACT

- Construction Inflation has been accelerating since great recession. Budget accordingly!
MINIMIZE THE IMPACT

- Changes – They only get more expensive as you go!
MINIMIZE THE IMPACT

• Communication is Key
  • Formal meetings should be insisted on, with well kept minutes.
  • Where possible, task one person internally with communications. This will prevent dual messaging or misinterpretations.
  • Communicating with all shareholders keeps them involved in the process and understanding of changes.
  • Always keep the line of communication open between Owner, Design, and Contractor.
MINIMIZE THE IMPACT – EXAMPLE
COMMUNICATING LOGISTICS AND EXPECTATIONS

Logistics – Movement of Workers and Patrons

Temporary Walls and Protection

Logistics – Movement of Workers and Patrons

- Sensitivity Training Required
  - of all Contractor, Subcontractor & Design Team Staff on Site
- Picture ID Badges Required
  - for all Contractor, Subcontractor & Design Team Staff on Site

When adults are in contact with young people, the rights, needs and dignity of the young people are paramount!
MINIMIZE THE IMPACT

- Plan for the unexpected – Be aware of potential pitfalls before construction begins:
  - Zoning – Can you (legally) do what you want to do?
    - Asbestos – Be very suspicious of materials between 1900 & 1970.
    - Encapsulation is OK!
  - Poor Soils – Don’t forget the Geotech.
  - Code Requirements – Be aware of triggering additional improvements.
  - Winter Conditions – Understand their extent.
NEIL’S LESSONS LEARNED

• Practical Advice
  • Develop comprehensive budget and schedule early in the project.
  • Hire a design team that is experienced in your building type.
  • Engage a preconstruction advisor, preferably one that is capable of building your project.
  • Develop contingencies based on an assessment risk.
  • Invest money during design/preconstruction to explore existing conditions.
  • Allow sufficient time for the design process.
  • Minimize owner changes by involving the owner’s internal team early.
  • Focus on a forward-looking cost projection.
  • Single point of contact to facilitate communication and decision-making.
  • Hire legal counsel that is experienced in the construction industry.

• Achieve Project Objectives
  • Establish and Verify Clarity of Project Goals
  • Have key decision-makers pay attention during design
  • Confirm understanding of key decision-makers during value engineering process
  • Enforce constant contact with Key Users / Museum Staff
  • Touch Base / Oversee Daily Construction Choices
THANK YOU!

• Questions?