Cost Estimating Services

July 2007

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Owner's Concerns with Preconstruction Services

- Construction Manager's Not Proactive – Waits for Information to Announce Problems
- Unpredictable Fluctuation of Estimates
- Value Engineering = scope cutting or changes in Finishes, No Value Added or Life Cycle Costs Provided
- Construction Managers Do Not Have Local Market Cost Data
- Construction Managers Do Not Understand the Design Process
- Too Much Reliance on Subcontractor Input, i.e., – Do Not Understand Costs
- No Leadership!!!

Preconstruction in Today's Environment

- Clients information and execution moves faster
- A/E teams are challenged to utilize technology to speed information
- CM Preconstruction approach needs to provide new concepts
- Differs from a manufacturing industry environment

What is Precon and How Would You Define the Service?

- ***Design to Budget Management***
  - "Financial Advisor" During the Design and Delivery of Project
  - Provide In-Depth Estimating Capabilities
  - Conceptualize Complete Design ("Bridge" Design-to-Date to Final Design Intent)
  - Define Building Systems in Explicit Scope Definition Narratives
  - Provide Accurate Cost Tracking and Benchmarking
- ***Provide Creative Solutions***
  - Implement Design to Budget Management Cost System
  - In-depth Knowledge of Local Subcontractor Markets
  - Escalation and Contingency Controls
  - Value Engineering of Assemblies and Materials
  - Constructability Reviews with Design Team
- ***Open Communication with Client and Entire Team***

The Value of Preconstruction

- A Proactive Design to Budget Management Plan
- Scope is Defined and Change is Managed
- Value Engineering and Constructability are Employed to Identify Creative Cost Solutions

Results of Preconstruction…

- Communication Methods in Place that Allow Project Team to be Aware of Project Cost and Schedule at all Times
- Design Deliverables are issued to Support the Construction Schedule and Budget
- No Surprises so that Team Moves to Construction with Confidence

Attributes of a Successful Preconstruction Team

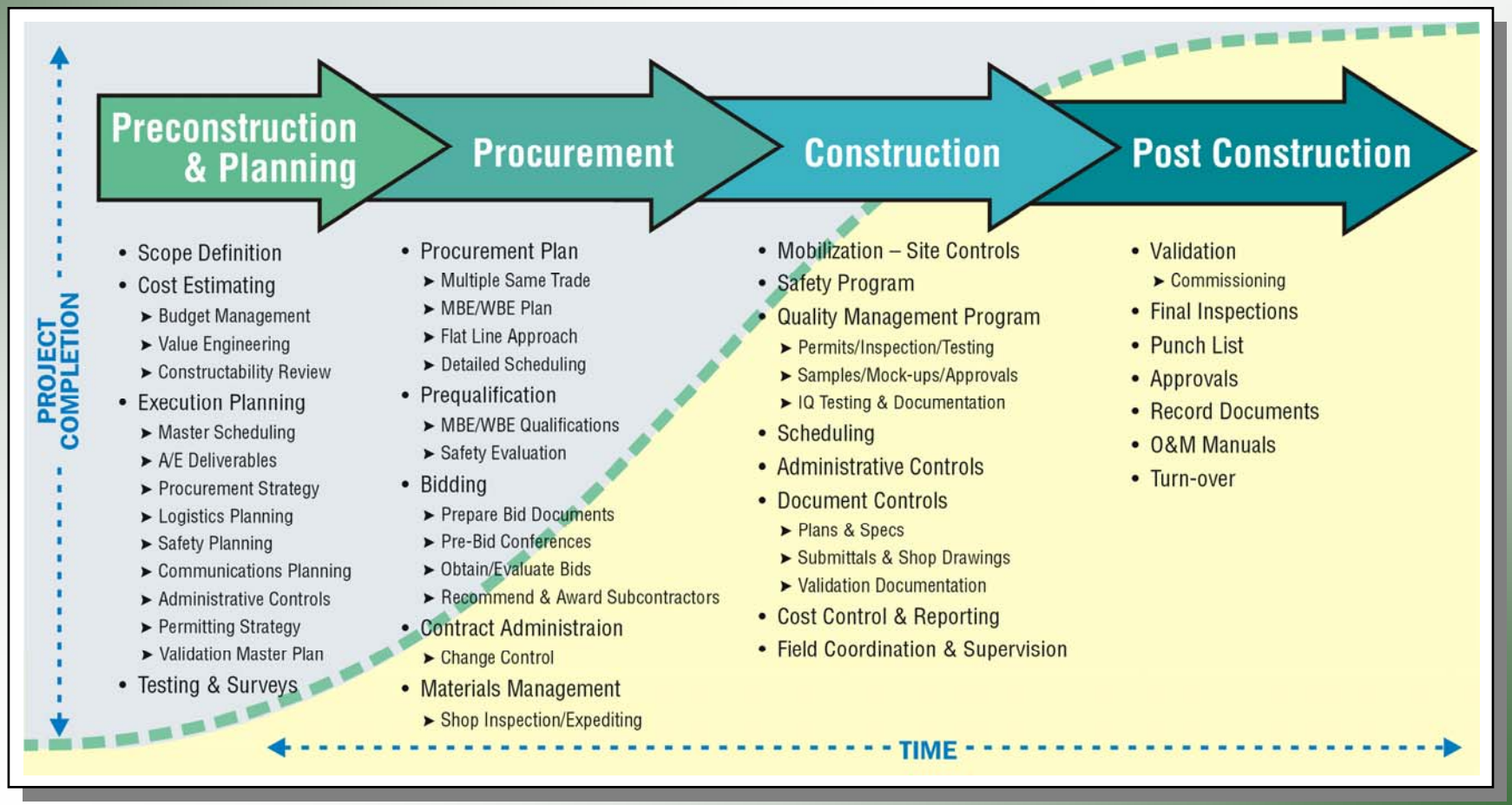
- Aggressive Design Management
  - Frequent Meetings and Reviews
  - Clear Client Authority
  - Continuity Through Preconstruction
- Proactive in Discovering Solutions
  - Access to all the Consultants
  - Clear and Aligned Owner Representation
  - Vendor/Market Involvement
- Clear and Continuous Team Communication

Keys to Successful Projects

Design Optimum Project Delivery

- Establish Clear Project Objectives
- Build Project Team in Terms of Objectives
- Create Execution Plan to Achieve Objectives
- Design Procedures to Support Execution Plan
- Create and maintain Win-Win Environment

Scope of Services



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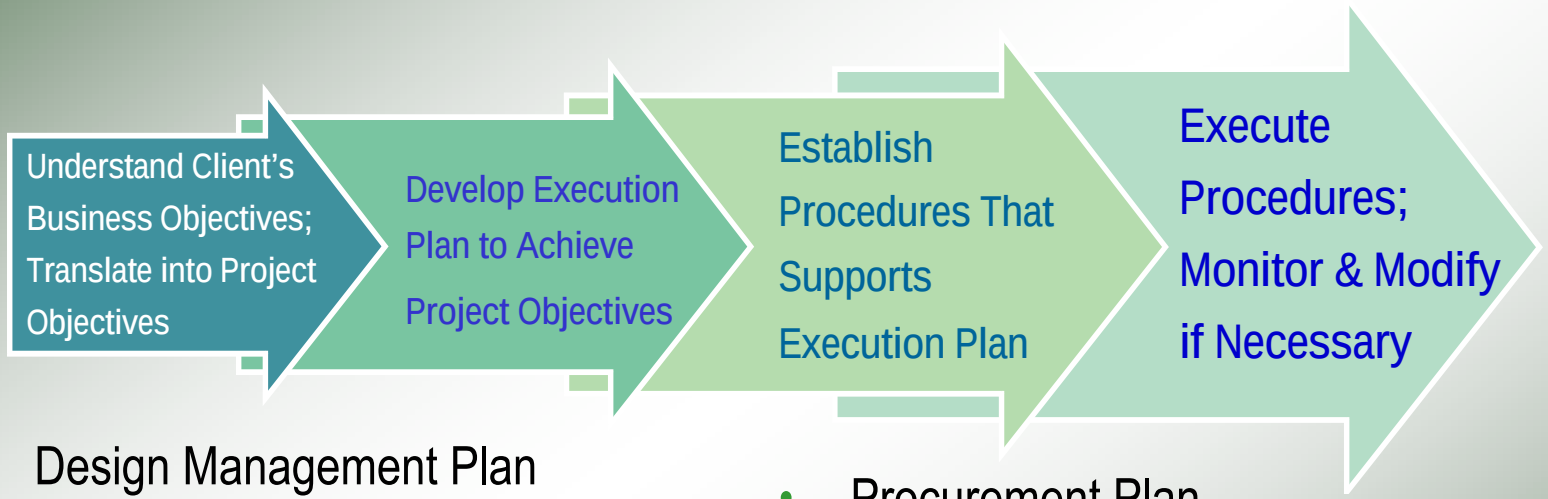
Execution Planning Process



- Design Management Plan
- Budget Management Plan
- Schedule Management
- Permitting Plan
- Project Communication Plan
- Validation Master Plan

- Procurement Plan
- Field Management Plan
- Quality Management Plan
- Safety Management Plan
- Commissioning Plan

Establish a project specific Execution Plan that serves as a road map to a successful outcome!

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Defining and Achieving Objectives

- Establish Clear Project Objectives
- Build Project Team in Terms of Objectives
- Develop Execution Plan to Achieve Objectives
  - Design Management
  - Budget Management Plan
  - Schedule Management
  - Agency Approval Plan
  - Procurement
  - Field Management
  - Quality Management
  - Safety Management
- Design Procedures to Support Execution Plan
- Create and Maintain an Environment of Open and Frequent Communication with all Team Members

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Preconstruction Cost Management

- Review Current Cost Model to Verify Scope/ Intent
- Develop Comprehensive Control Estimate and Narrative as Basis for Budget Management
- Design Phase Estimates
- Budget Control System
- Scheduled Design Reviews/Cost Control and Project Coordination Meetings
- Integrated Value Engineering, Life Cycle Studies and Constructability Inputs
- Design Progress Reviews
- Benchmark Comparisons

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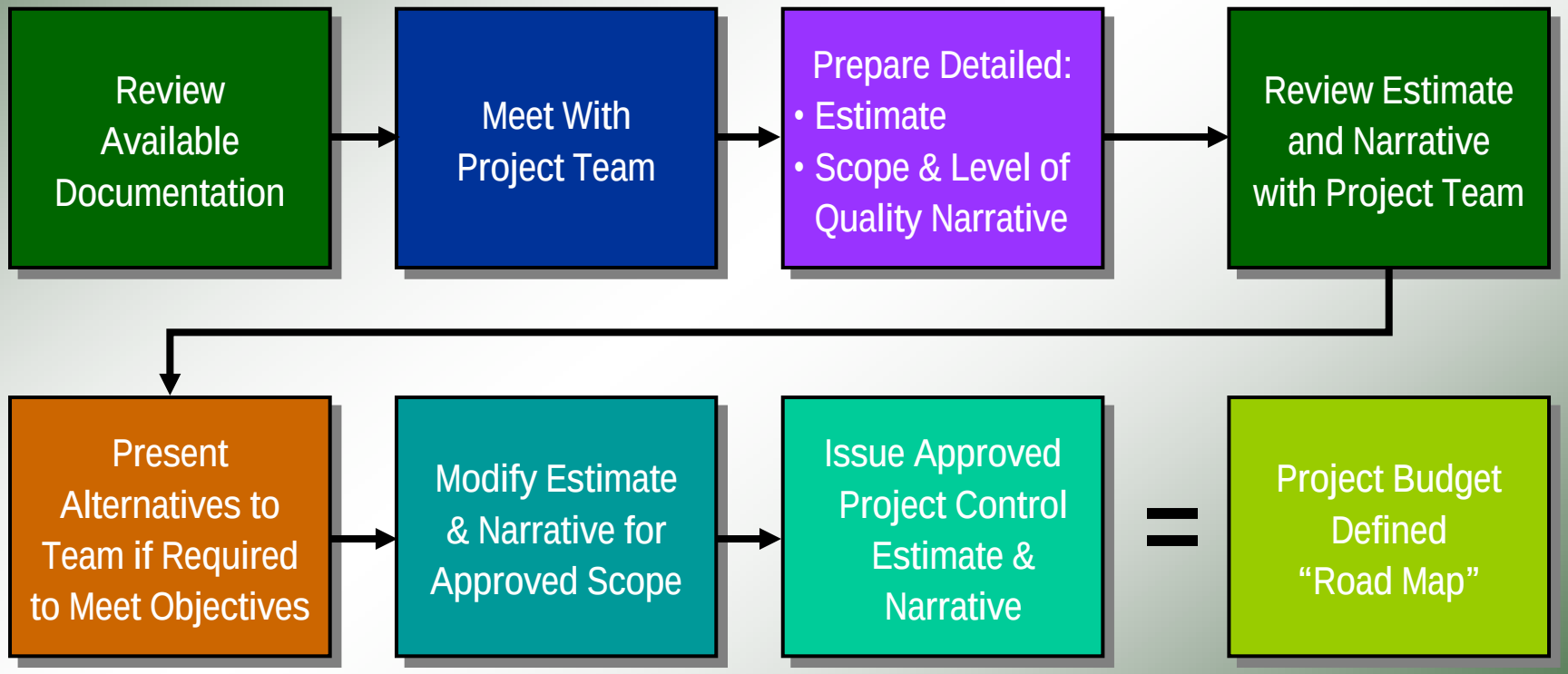
Control Estimate and Narrative Development



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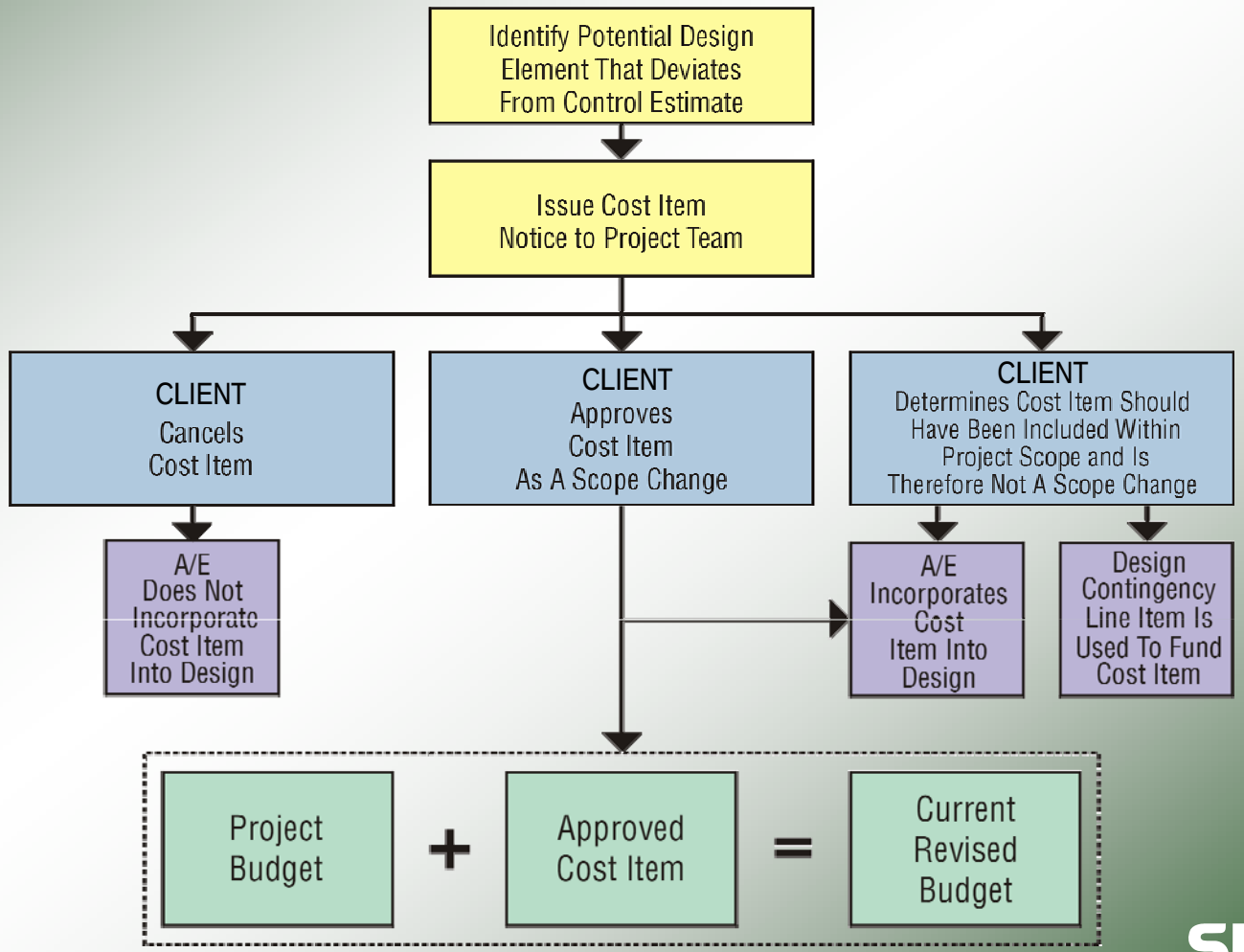
Preconstruction Cost Control



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Design Input Strategy

- Establish Specific Design Deliverables
- Communicate These Expectations Early
- Participate in All Project Design Meetings
- Provide Schedule and Cost Comparisons Between Options
- Monitor the Design for Cost and Schedule Impact
  - Preconstruction Cost Item System
  - Monthly Project Schedule Updates

Total Integrated Project Scheduling is Imperative!

- Design Deliverables
- Approvals and Permitting
- Procurement, Submittals & Fabrication
- MEP Systems Coordination
- Construction (including area phasing)
- Facilities Interface (Tie-Ins, etc.)
- Start-Up, Commissioning and Certification
- FF&E
- Occupancy

Design is Driven by Deliverable Dates to Support Construction

…All Driven by Your Facility Need Date

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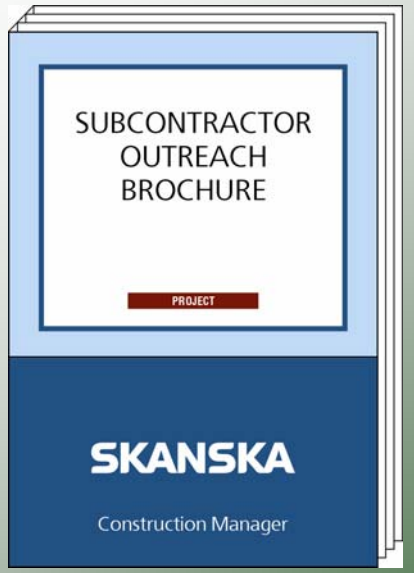
Subcontracting Plan

Design Deliverable/Bid Package Approach

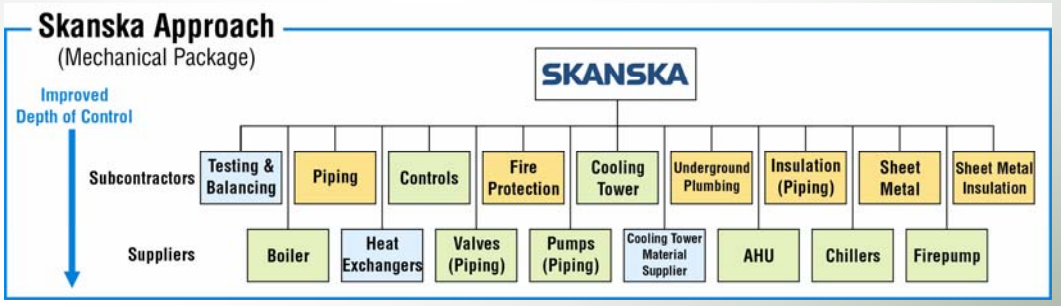
- Coordinated & Complimentary
- Consider the Following:
  - Market Size
  - Location
  - Schedule
  - Budget
  - Small Business Goals
  - Project Goals

Other Projects at Same Time

- Campus or Site
- State of Florida
- South Florida Area



Flat Procurement Approach



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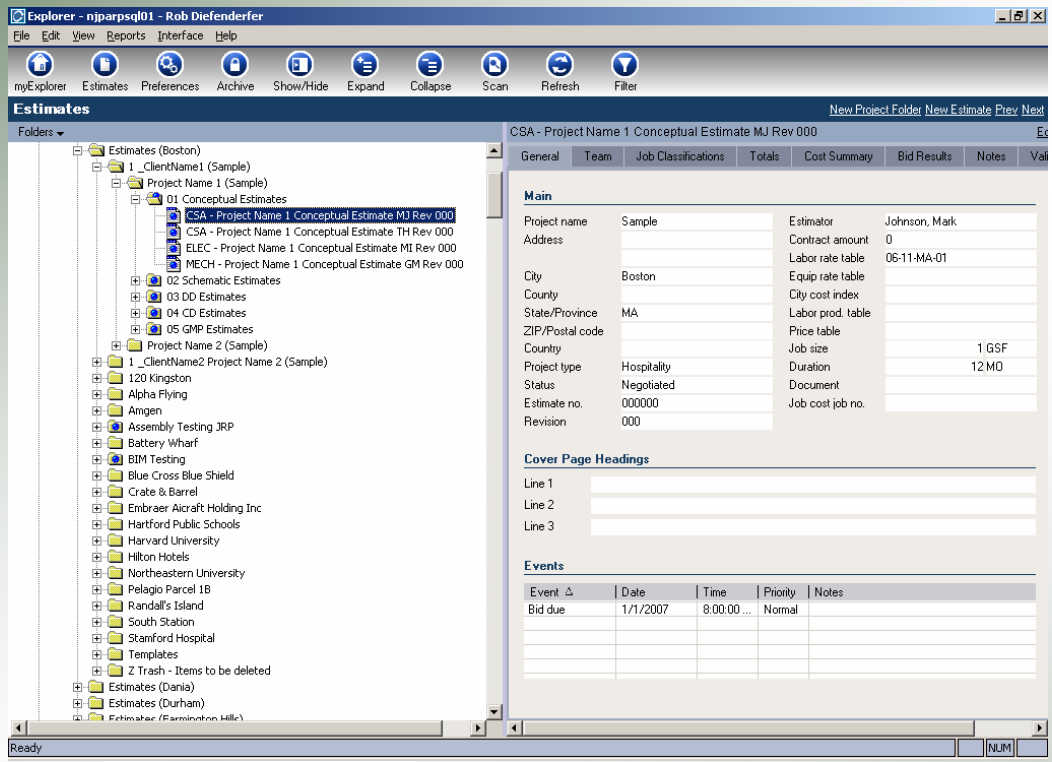
Applications: Eos Explorer



- Manage All Preconstruction Projects
  - Timberline
  - SPARTA
  - WBS Manager
  - Drawings
- Standard Folder Structure
- Preview Estimate Information
- Copy and Move Files
- Launch Timberline, WBS Manager, SPARTA
- Accessible via Citrix (Internet based)
  - Allows National Precon Collaboration
- Built in Security and User Management
- Personalize User Settings

BENEFIT: File Organization and sharing amongst multiple offices.

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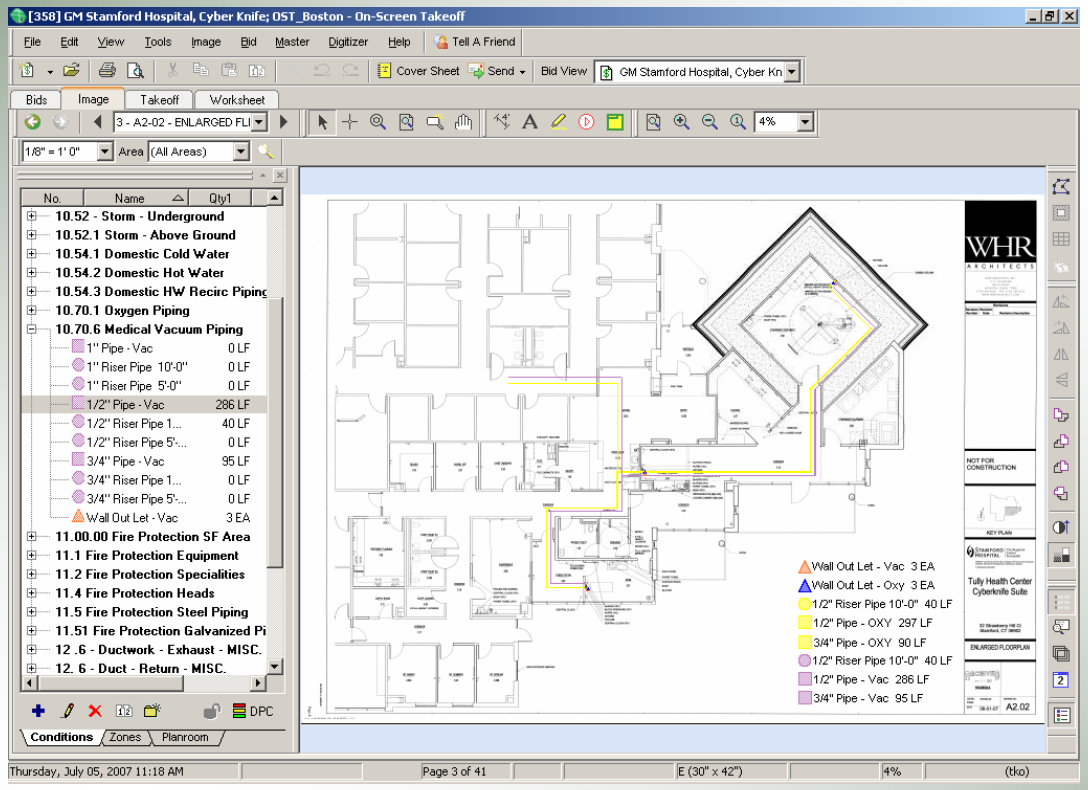
Applications: On Screen Takeoff (OST)



- Manage Conditions used for Takeoff
- View and Trace Image on Screen
- Display Quantities immediately
- Print Images
  - Takeoff
  - Markup
- Export Takeoff Data to Excel
- Manage Layers
- Control Image Scale
- Document Review
  - Overlay Old vs New

BENEFIT: Ability to reconcile takeoff and provide Owners graphical representation of quantities.

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