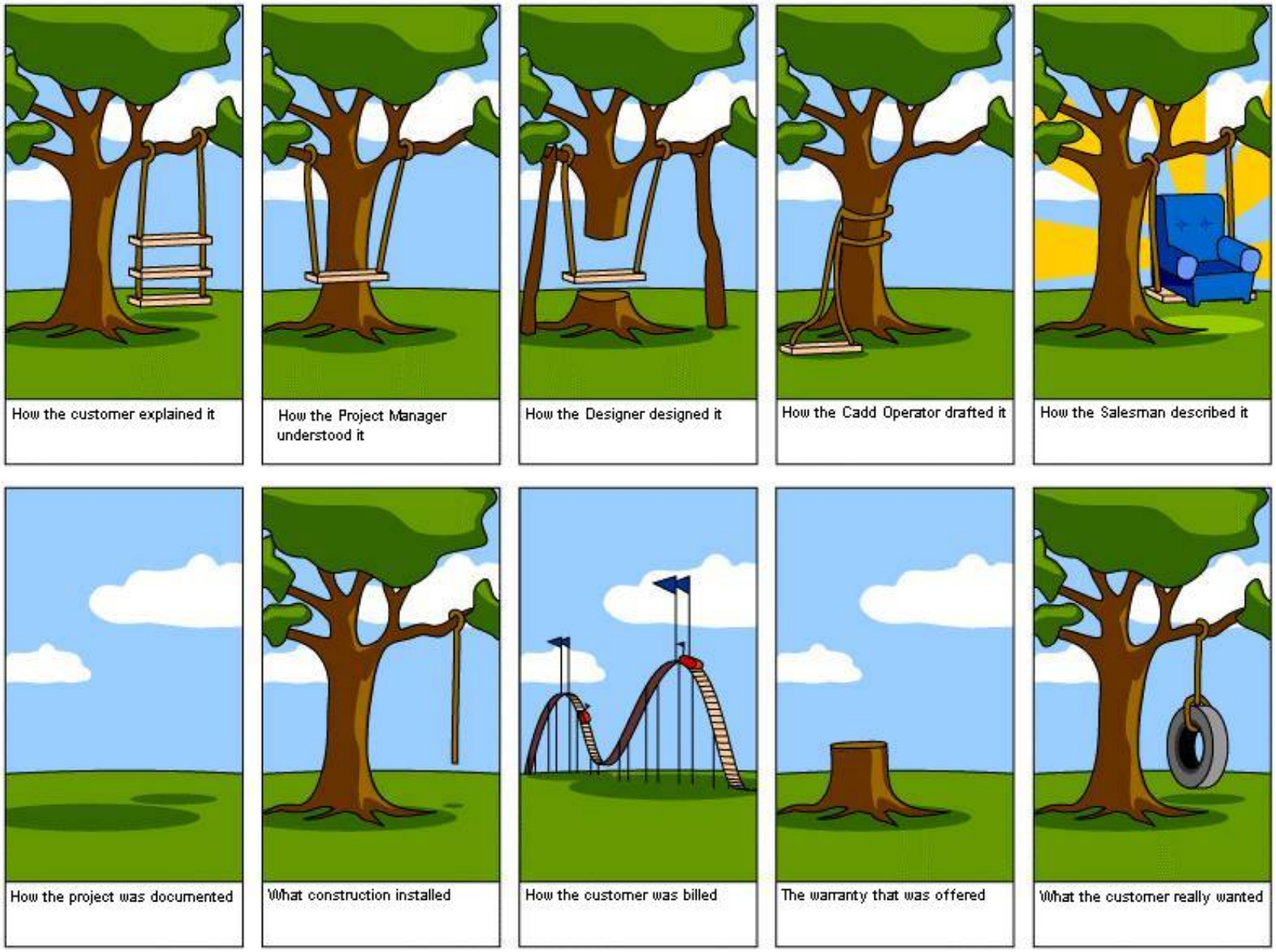
PRECONSTRUCTION SERVICES… LEVERAGING A BUILDER DURING DESIGN

ATHLETIC BUSINESS CONFERENCE

December 4, 2008

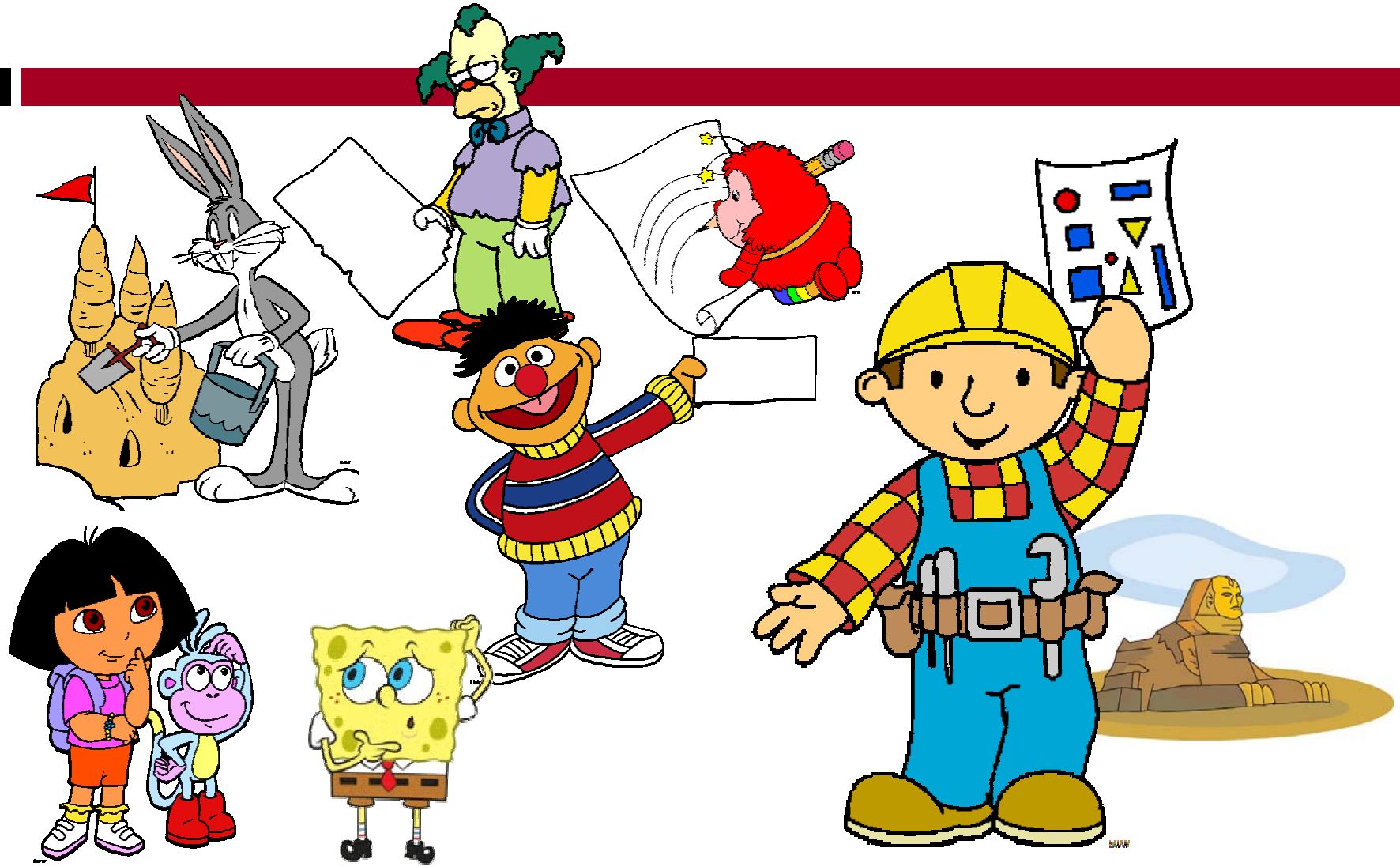

How the customer explained it
How the Project Manager understood it
How the Designer designed it
How the Cadd Operator drafted it
How the Salesman described it
How the project was documented
What construction installed
How the customer was billed
The warranty that was offered
What the customer really wanted

Outline

- Introductions
- When and Why of Preconstruction Services
- Role of Builder in LEED
- Preconstruction Service Agreement
- Summary
- Q&A

Introductions

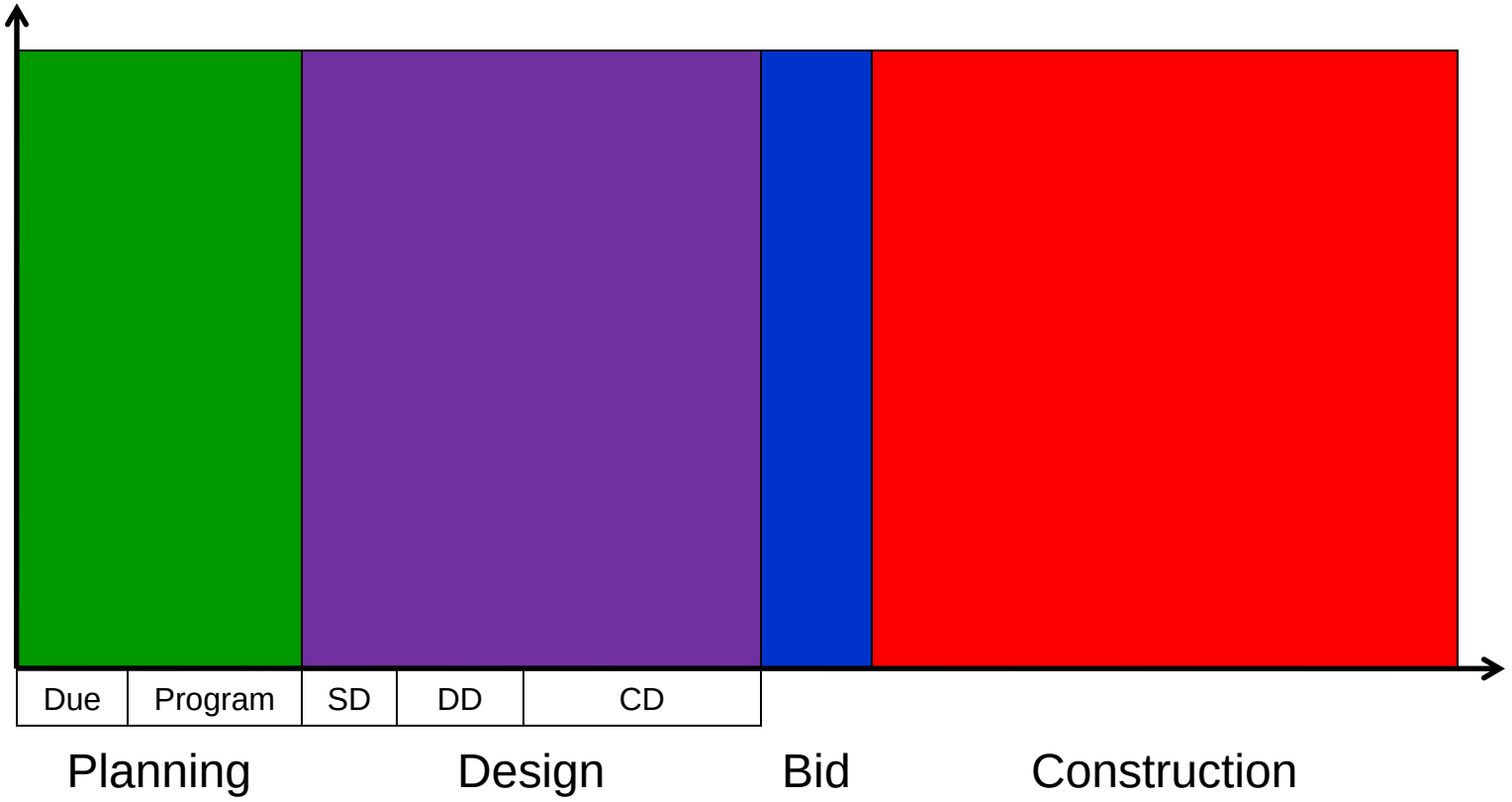
- **Brad Noyes** - Vice President, B&D
  - Architecture and real estate background
  - Taken over $1billion in projects from initial concept to ribbon-cutting
- **Ann Drummie** – Senior Project Manager, B&D
  - Engineering and architecture background
  - Managed the selection and implementation of preconstruction services for numerous projects over the last seven years



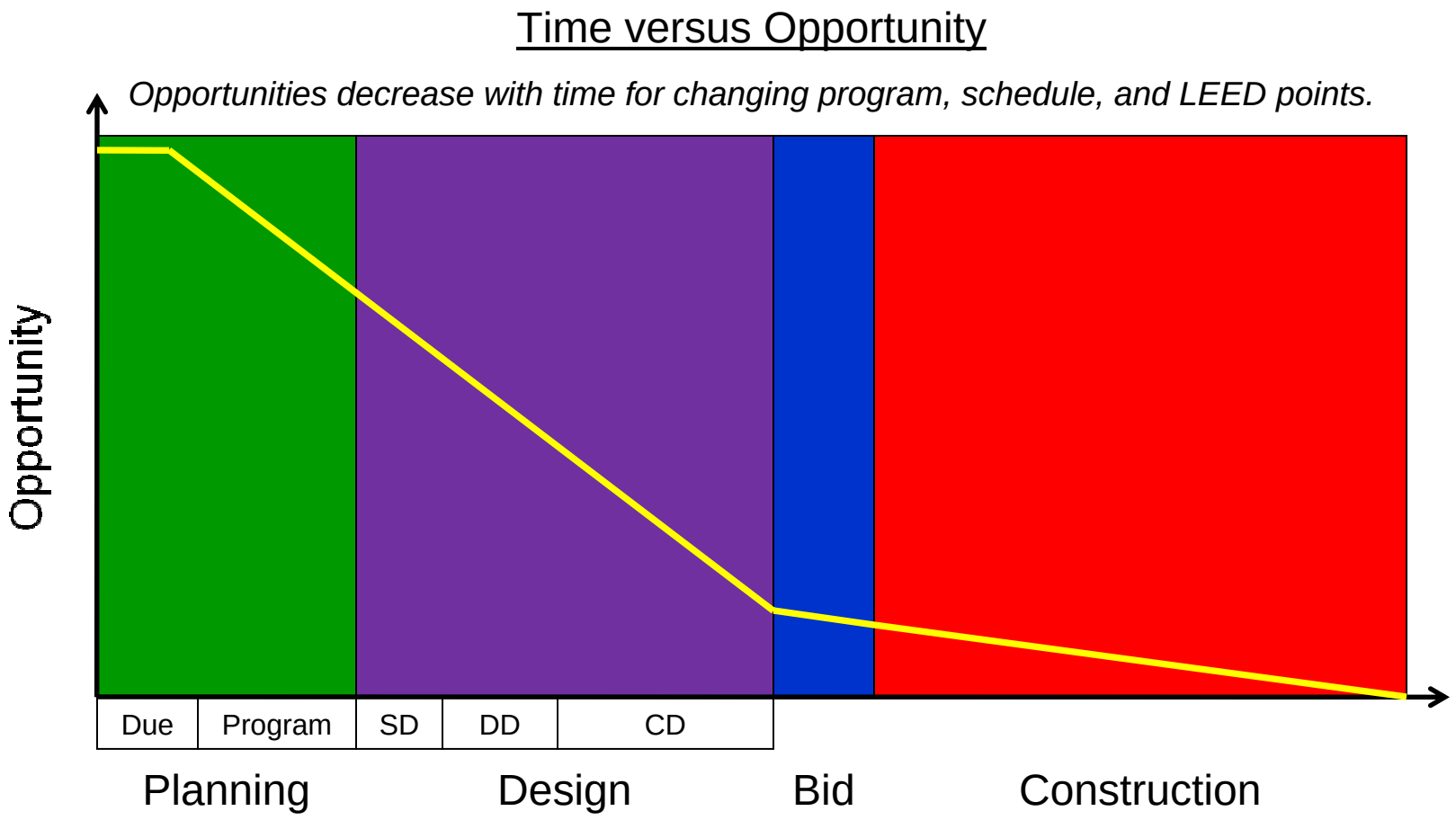
Preconstruction Services…Leveraging a Builder During Design

When and Why

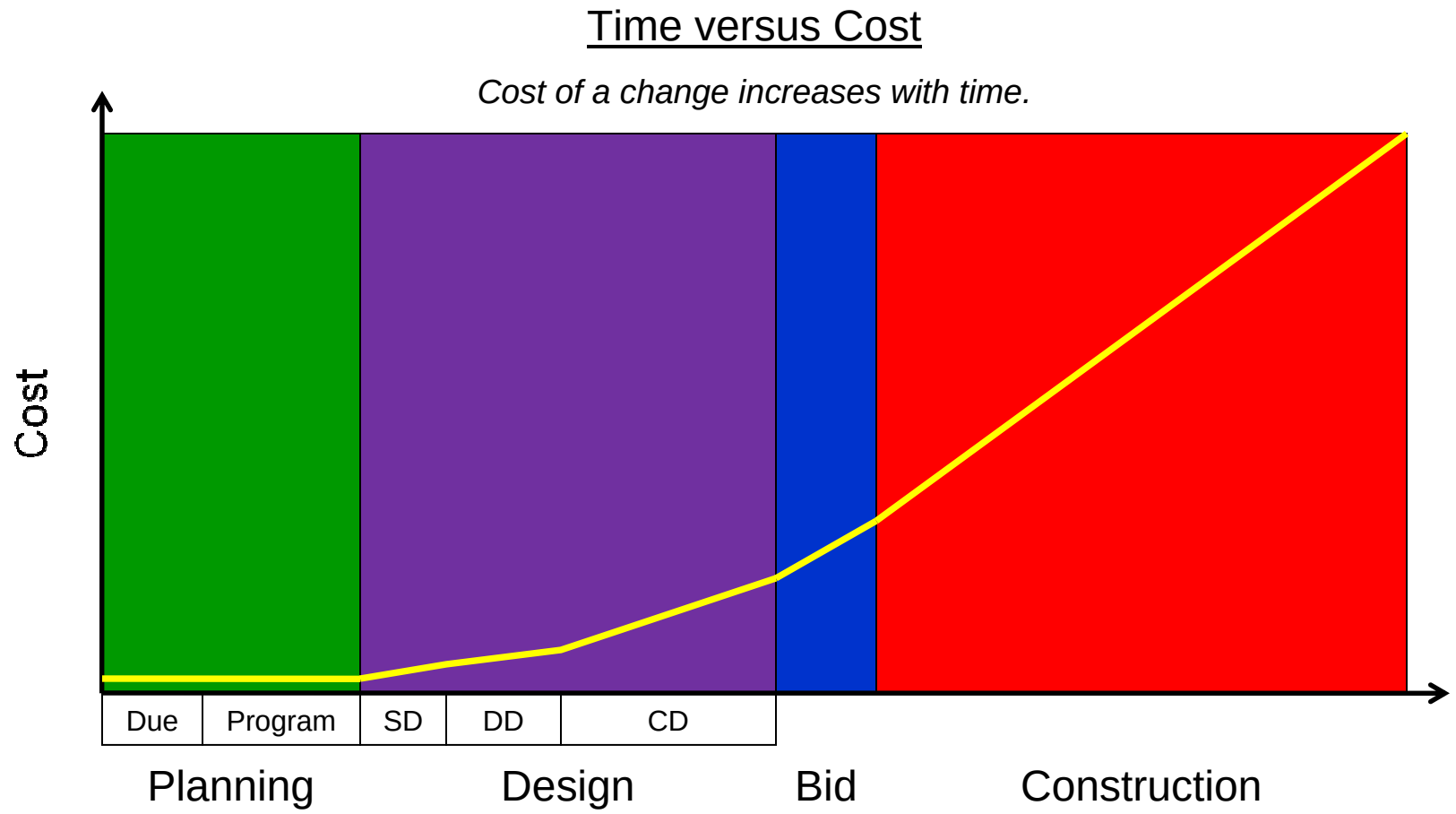
Project Timeline



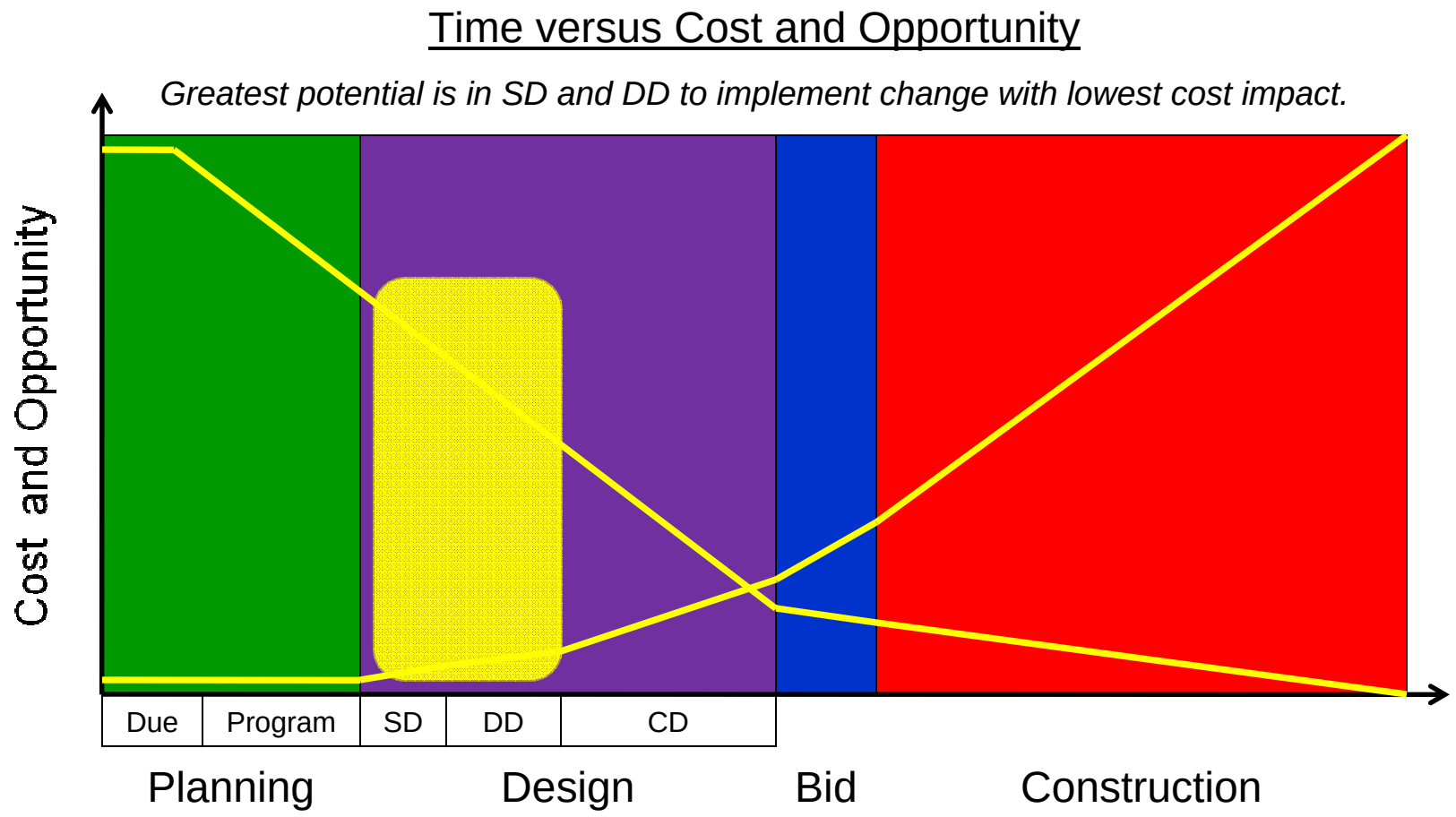
When and Why


Time versus Opportunity
Opportunities decrease with time for changing program, schedule, and LEED points.
Opportunity
Due
Program
SD
DD
CD
Planning
Design
Bid
Construction

When and Why


Time versus Cost
Cost of a change increases with time.
Cost
Due
Program
SD
DD
CD
Planning
Design
Bid
Construction

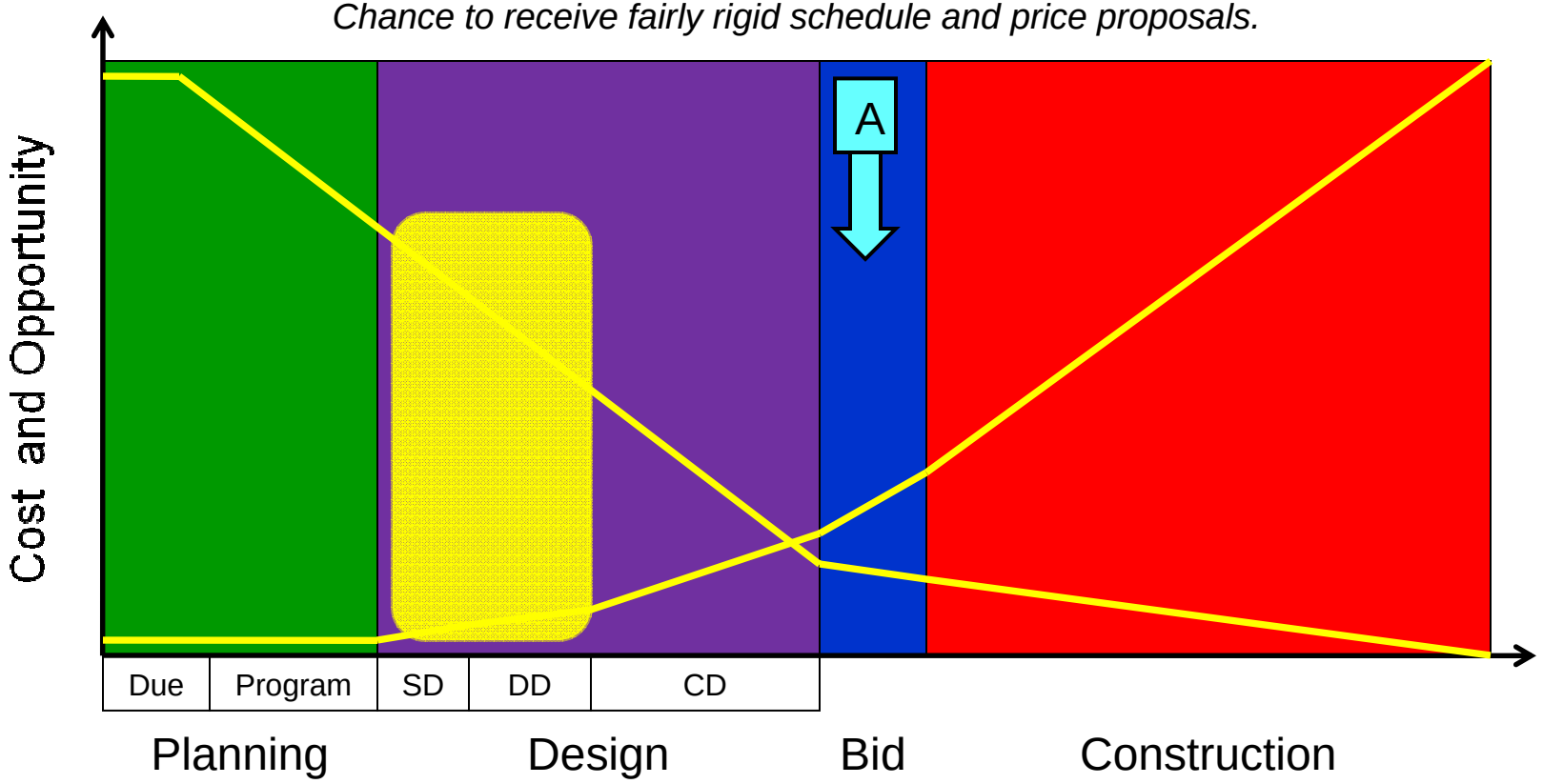
When and Why


Time versus Cost and Opportunity
Greatest potential is in SD and DD to implement change with lowest cost impact.
Cost and Opportunity
Due
Program
SD
DD
CD
Planning
Design
Bid
Construction

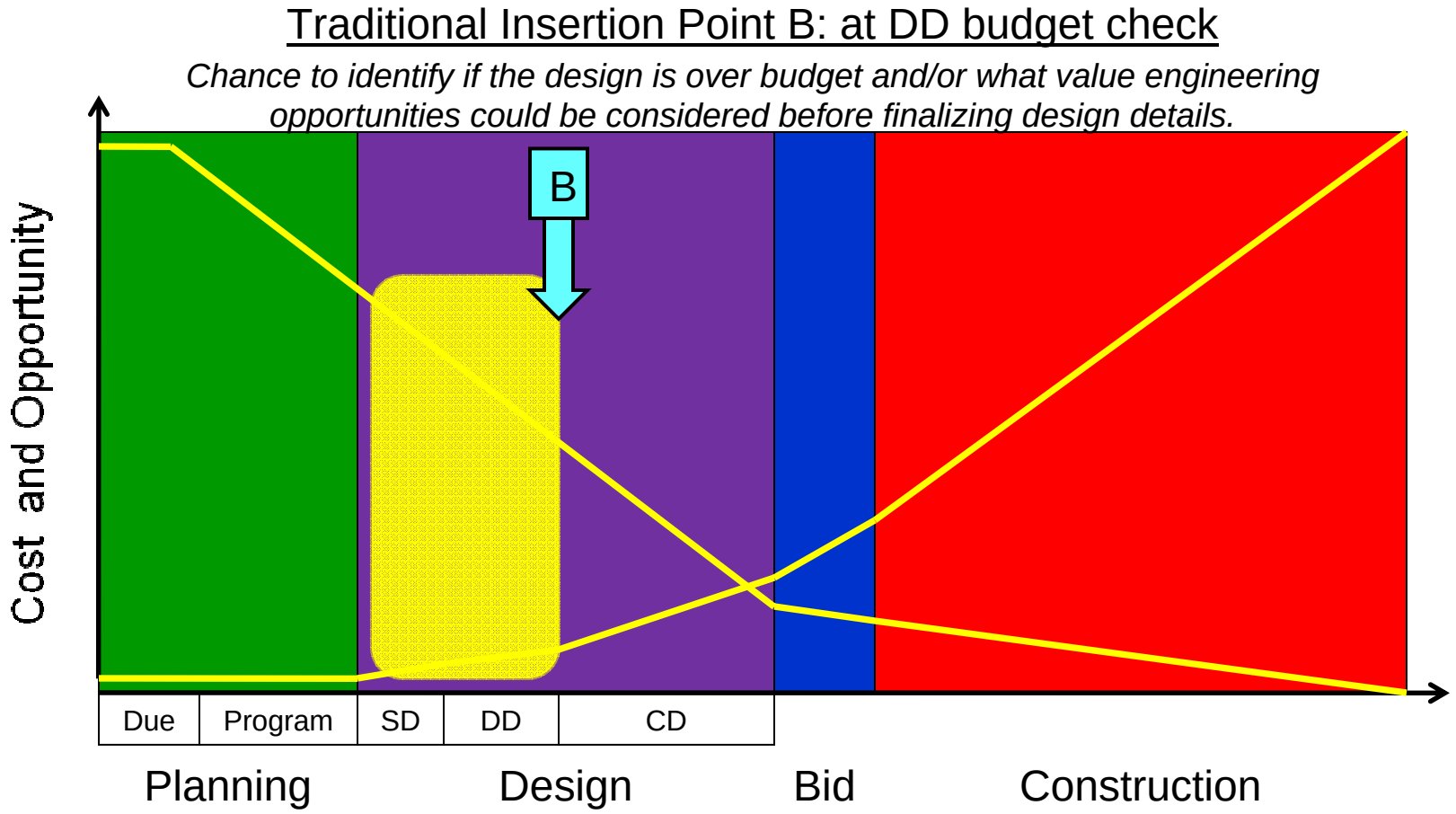
When and Why

Traditional Insertion Point A: at Bidding

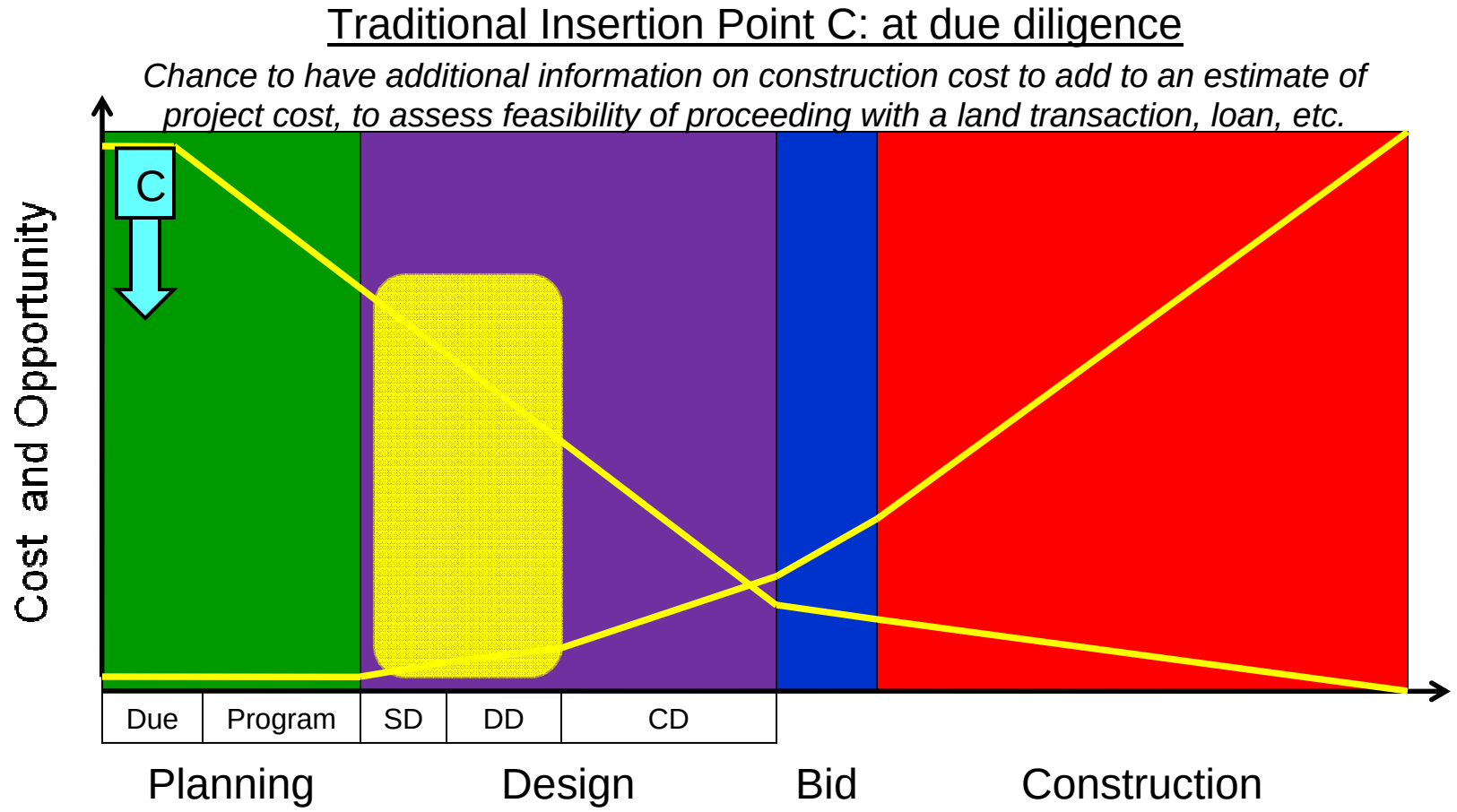
Chance to receive fairly rigid schedule and price proposals.



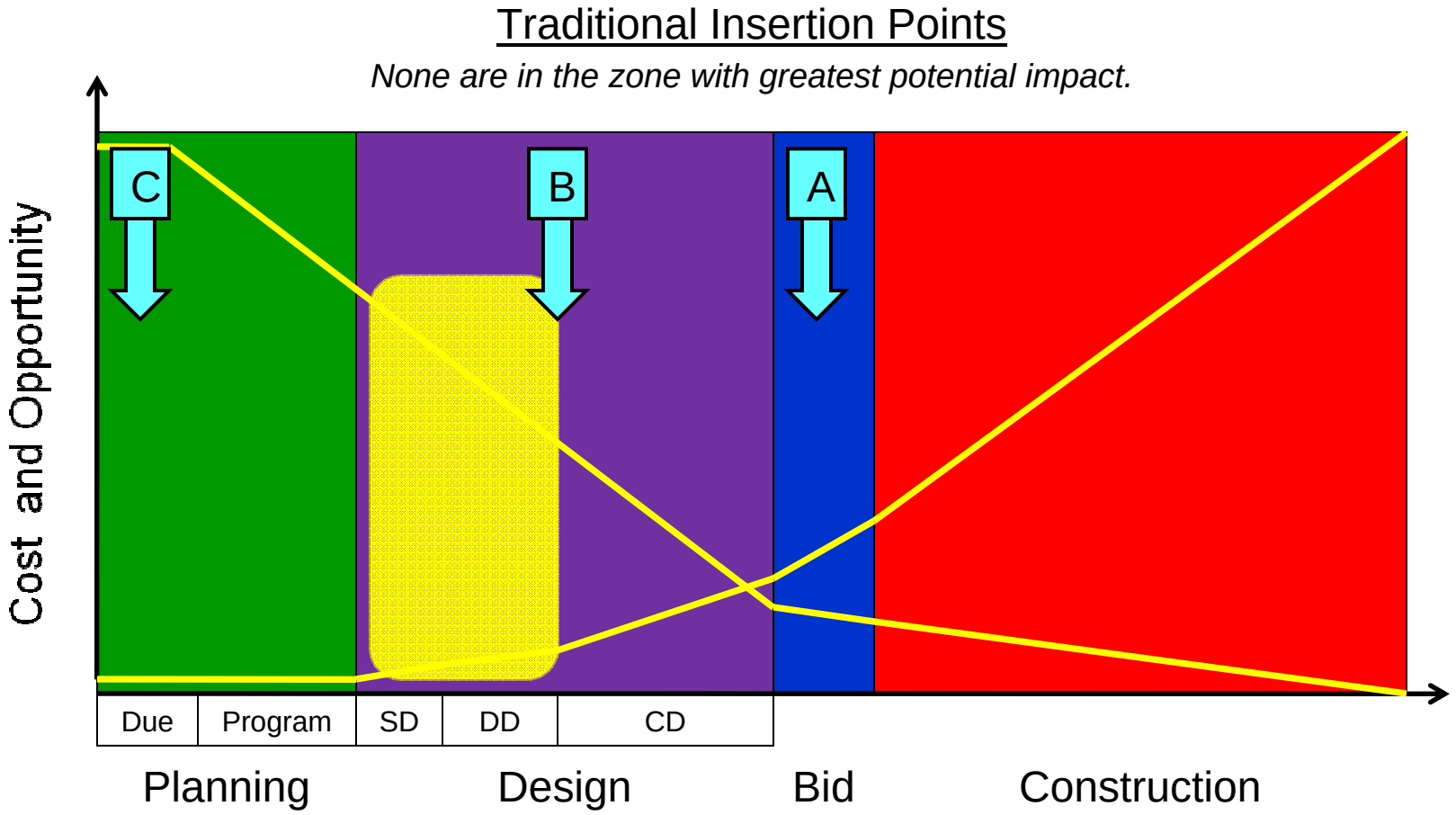
When and Why


Traditional Insertion Point B: at DD budget check
Chance to identify if the design is over budget and/or what value engineering opportunities could be considered before finalizing design details.
Cost and Opportunity
B
Due
Program
SD
DD
CD
Planning
Design
Bid
Construction

When and Why


Traditional Insertion Point C: at due diligence
Chance to have additional information on construction cost to add to an estimate of project cost, to assess feasibility of proceeding with a land transaction, loan, etc.
C
Cost and Opportunity
Due
Program
SD
DD
CD
Planning
Design
Bid
Construction

When and Why


Traditional Insertion Points
None are in the zone with greatest potential impact.
Cost and Opportunity
C
B
A
Due
Program
SD
DD
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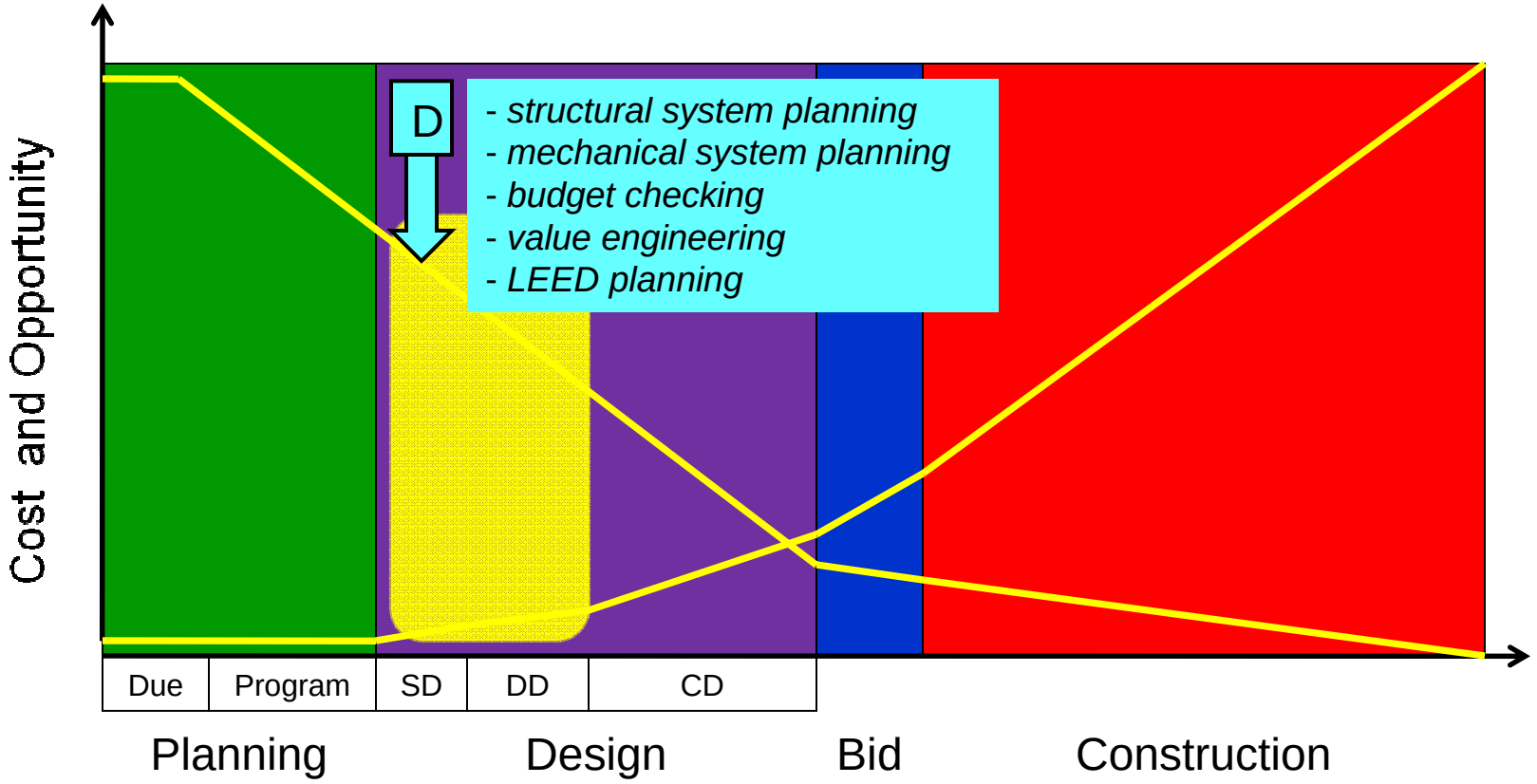
Planning
Design
Bid
Construction

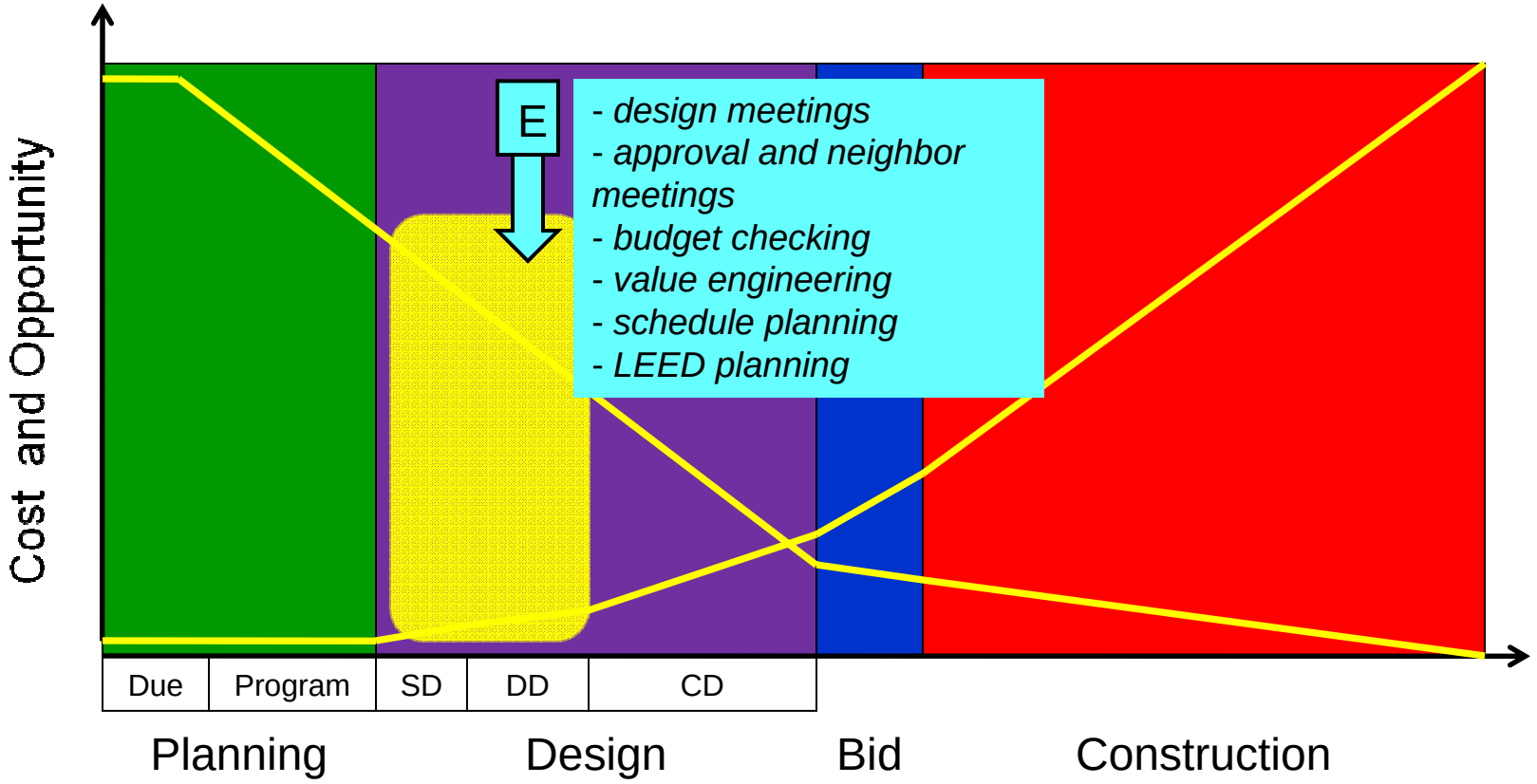
When and Why

Recommended Insertion Point D: Schematic Design

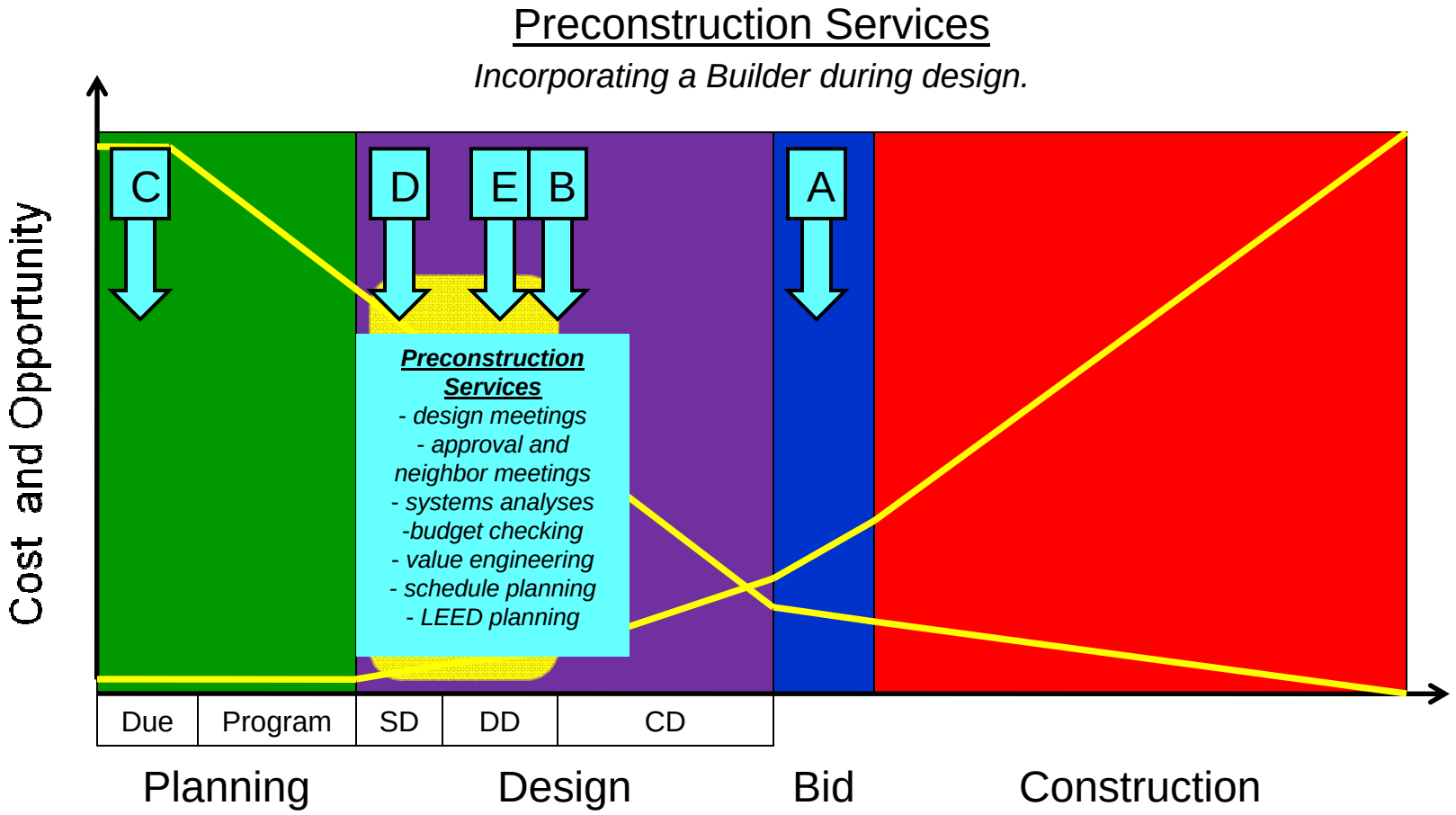


When and Why

Recommended Insertion Point E: Design Development



When and Why


Preconstruction Services
Incorporating a Builder during design.
Cost and Opportunity
C
D
E
B
A
Preconstruction Services
- design meetings
- approval and neighbor meetings
- systems analyses
-budget checking
- value engineering
- schedule planning
- LEED planning
Due
Program
SD
DD
CD
Planning
Design
Bid
Construction

When and Why

- Possible preconstruction services deliverables
  - Structural and mechanical systems options analyses
  - Cost estimate at end of SD and/or DD
  - Value engineering meeting and follow-up cost analyses at end of SD and/or DD
  - Gantt chart construction schedule at end of SD and/or DD
  - # of approvals and neighbor meetings
  - # of design meetings
  - # of LEED planning sessions (approx. every 3 months)

Role of Builder in LEED

- General overview of LEED
  - Leadership in Energy and Environmental Design Green Building Rating System™
  - U.S. Green Building Council
  - Initial focus: new construction; gone through various versions; now on version 2.2
  - Developing programs for existing buildings, commercial interiors, schools, retail, healthcare, homes, and neighborhood development

Role of Builder in LEED

- Example for this presentation
  - New construction
  - Version 2.2
  - Points:
    - 26 to 32: Certified
    - 33 to 38: Silver
    - 39 to 51: Gold
    - 52 to 69: Platinum

Role of Builder in LEED

- 69 possible points, plus 7 required items:

Sustainable Sites

Construction Activity Pollution Prevention	Required
Site Selection	1
Development Density & Community Connectivity	1
Brownfield Redevelopment	1
Alternative Transportation, Public Transportation Access	1
Alternative Transportation, Bicycle Storage & Changing Rooms	1
Alternative Transportation, Low-Emitting & Fuel-Efficient Vehicles	1
Alternative Transportation, Parking Capacity	1
Site Development, Protect or Restore Habitat	1
Site Development, Maximize Open Space	1
Stormwater Design, Quantity Control	1
Stormwater Design, Quality Control	1
Heat Island Effect, Non-Roof	1
Heat Island Effect, Roof	1
Light Pollution Reduction	1

Water Efficiency

Water Efficient Landscaping, Reduce by 50%	1
Water Efficient Landscaping, No Potable Use or No Irrigation	1
Innovative Wastewater Technologies	1
Water Use Reduction, 20% Reduction	1
Water Use Reduction, 30% Reduction	1

Energy & Atmosphere

Fundamental Commissioning of the Building Energy Systems	Required
Minimum Energy Performance	Required
Fundamental Refrigerant Management	Required
Optimize Energy Performance	1 to 10
10.5% New Buildings or 3.5% Existing Building Renovations	1
14% New Buildings or 7% Existing Building Renovations	2
17.5% New Buildings or 10.5% Existing Building Renovations	3
21% New Buildings or 14% Existing Building Renovations	4
24.5% New Buildings or 17.5% Existing Building Renovations	5
28% New Buildings or 21% Existing Building Renovations	6
31.5% New Buildings or 24.5% Existing Building Renovations	7
35% New Buildings or 28% Existing Building Renovations	8
38.5% New Buildings or 31.5% Existing Building Renovations	9
42% New Buildings or 35% Existing Building Renovations	10
On-Site Renewable Energy	1 to 3
2.5% Renewable Energy	1
7.5% Renewable Energy	2
12.5% Renewable Energy	3
Enhanced Commissioning	1
Enhanced Refrigerant Management	1
Measurement & Verification	1
Green Power	1

Materials & Resources

Storage & Collection of Recyclables	Required
Building Reuse, Maintain 75% of Existing Walls, Floors & Roof	1
Building Reuse, Maintain 100% of Existing Walls, Floors & Roof	1
Building Reuse, Maintain 50% of Interior Non-Structural Elements	1
Construction Waste Management, Divert 50% from Disposal	1
Construction Waste Management, Divert 75% from Disposal	1
Materials Reuse, 5%	1
Materials Reuse,10%	1
Recycled Content, 10% (post-consumer + ½ pre-consumer)	1
Recycled Content, 20% (post-consumer + ½ pre-consumer)	1
Regional Materials, 10% Extracted, Processed & Manufactured Re	1
Regional Materials, 20% Extracted, Processed & Manufactured Re	1
Rapidly Renewable Materials	1
Certified Wood	1

Indoor Environmental Quality

Minimum IAQ Performance	Required
Environmental Tobacco Smoke (ETS) **Control**	Required
Outdoor Air Delivery Monitoring	1
Increased Ventilation	1
Construction IAQ Management Plan, During Construction	1
Construction IAQ Management Plan, Before Occupancy	1
Low-Emitting Materials, Adhesives & Sealants	1
Low-Emitting Materials, Paints & Coatings	1
Low-Emitting Materials, Carpet Systems	1
Low-Emitting Materials, Composite Wood & Agrifiber Products	1
Indoor Chemical & Pollutant Source Control	1
Controllability of Systems, Lighting	1
Controllability of Systems, Thermal Comfort	1
Thermal Comfort, Design	1
Thermal Comfort, Verification	1
Daylight & Views, Daylight 75% of Spaces	1
Daylight & Views, Views for 90% of Spaces	1

Innovation & Design Process

Innovation in Design: Provide Specific Title	1
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LEED® Accredited Professional	1

Role of Builder in LEED

- Builder **input:** 60-70% of points and 100% of reqs

Sustainable Sites

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Development Density & Community Connectivity	1
Brownfield Redevelopment	1
Alternative Transportation, Public Transportation Access	1
Alternative Transportation, Bicycle Storage & Changing Rooms	1
Alternative Transportation, Low-Emitting & Fuel-Efficient Vehicles	1
Alternative Transportation, Parking Capacity	1
Site Development, Protect or Restore Habitat	1
Site Development, Maximize Open Space	1
Stormwater Design, Quantity Control	1
Stormwater Design, Quality Control	1
Heat Island Effect, Non-Roof	1
Heat Island Effect, Roof	1
Light Pollution Reduction	1

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Water Efficient Landscaping, Reduce by 50%	1
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Forms of input:

- potential vendors and products
- previously analyzed systems
- pricing implications of design choices

Role of Builder in LEED

- Builder **commitment:** 30% of points and 1 req

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Forms of commitment:

- appropriate submittal and shop drawing paperwork
- construction waste and site management practices
- affidavits

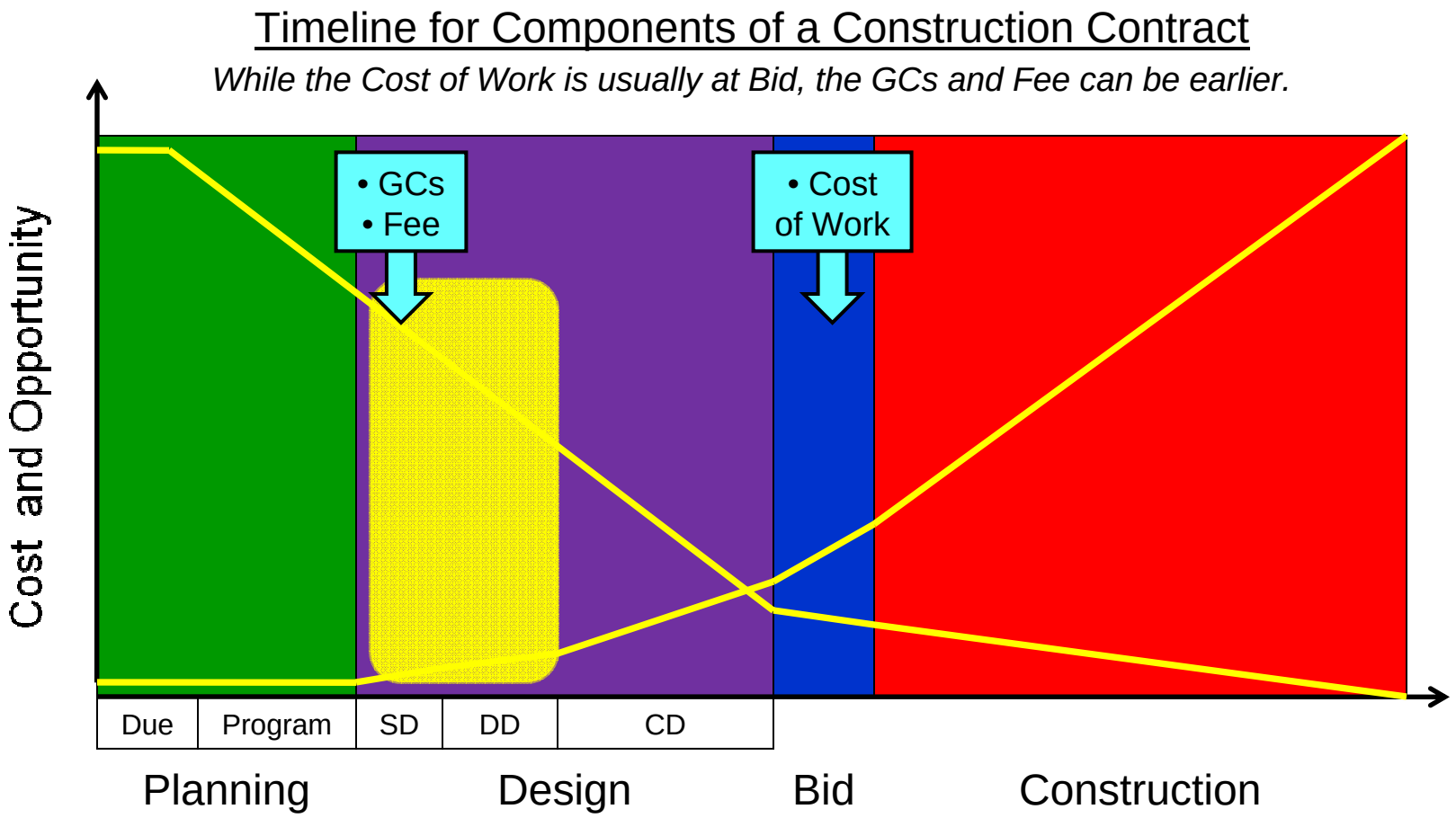
Precon Services Agreement

- Outline
  - Review of construction contract
  - Timetable
  - Components of an RFP
  - Components of an agreement

Precon Services Agreement

- Review of **construction** contract
  - Cost of Work
    - Material and labor, and internal contingency
  - General Conditions
    - Direct expenses ex. trailers, port-o-potties, cell phones, vehicles, salaries
  - Overhead and Profit aka Fee
    - % of Cost of Work (and sometimes general conditions too)

Precon Services Agreement



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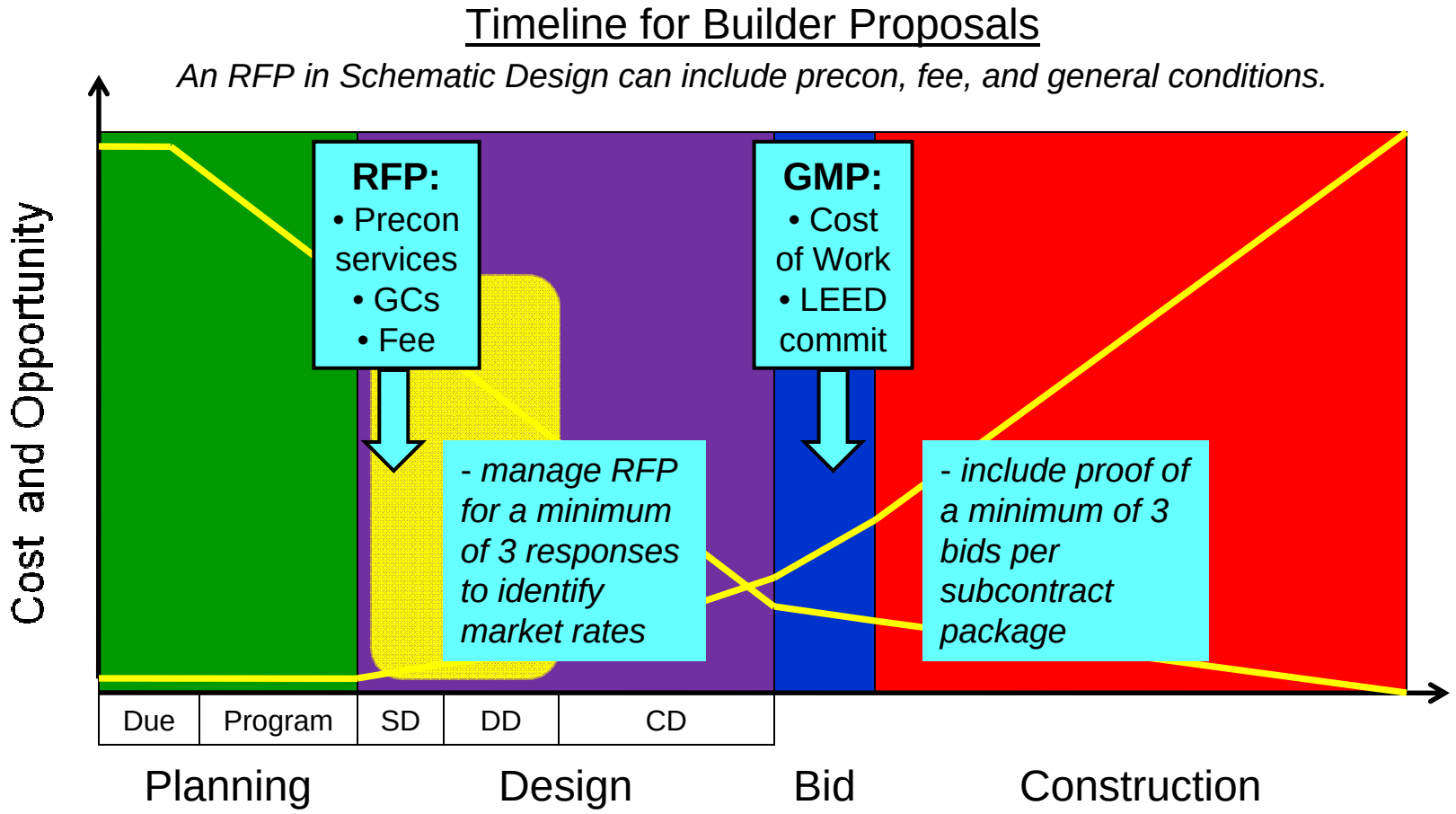
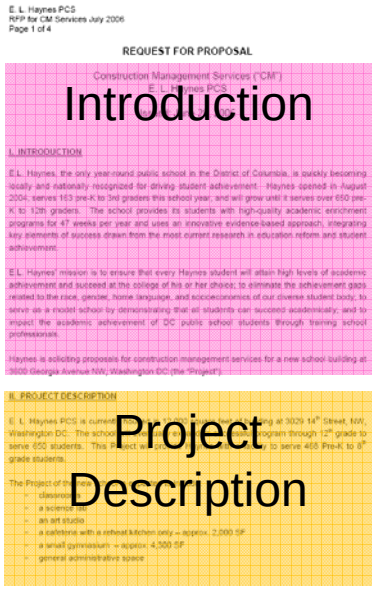
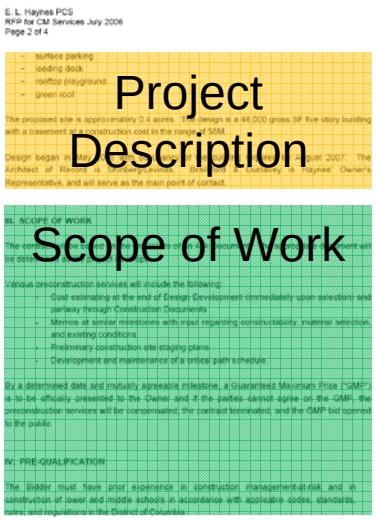
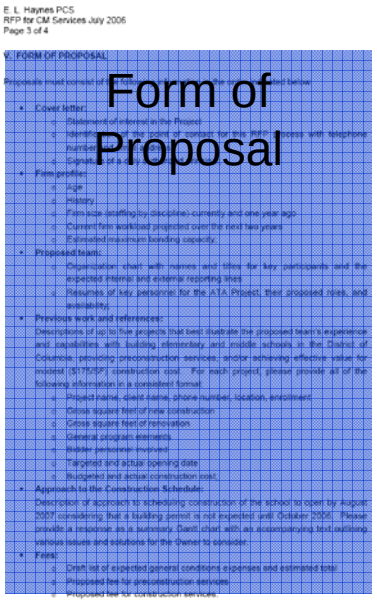


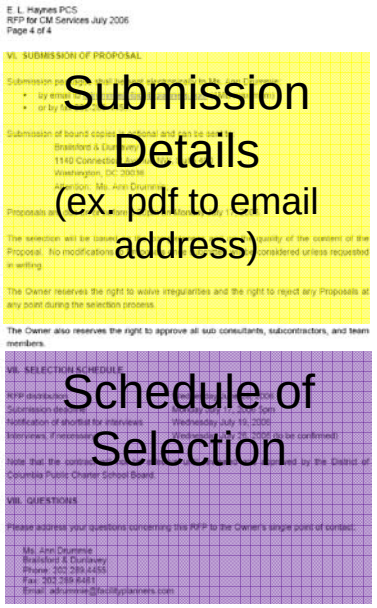
Precon Services Agreement

- Components of an RFP









Precon Services Agreement

- Components of an RFP
  - **Project Description:**
    - SF of new vs. renovation, and types of spaces
    - construction budget range (inclusive of gc's and fee)
    - location
    - architect (if known)
    - Owner's Rep
    - expected date for completion

Precon Services Agreement

- Components of an RFP
  - **Scope of Work:**
    - Identify expected number of cost estimates, Gantt charts, value engineering sessions, design meetings, LEED planning sessions, approvals and neighbor meetings, etc.

Precon Services Agreement

- Components of an RFP
  - **Proposal Format:**
    - Qualifications and experience with preconstruction services, including involvement in LEED projects
    - Approach to preconstruction services
    - Proposed fee for precon, how it is calculated, and how it would be billed
    - Itemized proposed items and costs for general conditions
    - Proposed overhead and profit (fee) as % of Cost of Work

Precon Services Agreement

- Components of an RFP
  - **Notes about precon fees:**
    - shouldn't be zero, so that you have a valid release mechanism
    - may be almost zero as a marketing cost but your team may not be available for extra meetings or be fully engaged
    - may be billed at direct time and materials. If you ask for lots of meetings and analyses, this may add up

Precon Services Agreement

- Components of an RFP
  - **Notes about selecting/negotiating:**
    - Apples-to-apples:
      - reconcile general conditions lists
      - reconcile general conditions totals with durations
    - Consider approach and experience
    - Consider 'fit' of people proposed with your own team

Precon Services Agreement

Preconstruction Services leading to a GMP

Wonderful University (Owner) is in the design phase of a new construction project located at Lovely Lane, Washington, DC. The preferred delivery method is a Construction Manager-at-Risk, therefore engaging a general contractor to participate during design and be best informed to provide a Guaranteed Maximum Price proposal. Accordingly, whereas Owner desires to engage Awesome Construction Company (Contractor) for this purpose and Awesome Construction Company desires to perform the work, the parties mutually agree as follows:

Scope of Work:

The scope of work shall include, without limitation, the following:

- Attend Design Committee meetings, cost estimate review meetings, general progress meetings, and other meetings as needed.
- At all meetings, actively participate in identifying value engineering strategies for achieving a project within the Owner's construction budget.
- Based on drawings issued on March 17, 2008, provide: a detailed construction cost estimate; a memo or chart of recommended critical path and construction schedule milestones; a memo sharing input regarding constructability, material selection, and existing conditions; and a memo or sketch of input regarding preliminary construction site staging.
- Near the end of the Design Development phase, provide: a detailed construction cost estimate; a revised schedule; and a revised staging plan.
- Provide pricing and input on related project impacts of value engineering ideas during Schematic Design, Design Development, and GMP value engineering exercises.
- Identify early trades and bid packages and arrange for procurement subject to Owner written approval.
- Assist in procurement of applicable County approvals.
- Provide a detailed Guaranteed Maximum Price proposal at a mutually agreeable date in the Construction Documents phase, incorporating the general conditions (labor and supervision, and general requirements) as indicated on the attached Exhibit A and a 3.0% fee on a construction budget up to $60.0M, and a 2.0% fee for any construction costs beyond $60.0M.

Points of Contact:

Joe Goodfellow shall serve as point of contact for the Contractor, and shall not be reassigned or substituted without Owner written consent. Shirley Best of Braisford & Dunlavey shall serve as point of contact for this scope on behalf of the Owner. Bit Vision shall serve as point of contact for Drawing LLC, Project Architect.

Timetable, Compensation and Payment:

April 1, 2008 to GMP prior to March 1, 2009: By a determined date and mutually agreeable milestone, prior to March 1, 2009, a Guaranteed Maximum Price ("GMP") is to be officially presented to the Owner. The Contractor will be paid for all services and expenses rendered to that date, and this Agreement will be superseded by an AIA A111. Compensation for the above scope of work shall not exceed $300,000.00 for services. Services shall be billed monthly reflective of the level of effort in a month based upon activities and phasing milestones. The maximum monthly fee for services shall be as shown in Exhibit B. Monthly reimbursable expenses will be submitted at cost against a total capped allowance of $30,000.00.

Extension if GMP is beyond March 1, 2009: If the date for the GMP is extended and preconstruction services are requested by the Owner past March 1, 2009, the Contractor will be compensated for preconstruction services on a prorated basis per this Agreement.

Termination at GMP: If the parties cannot agree on the GMP, the Contractor will be paid for all services and expenses rendered to that date, this Agreement will be terminated, and the GMP bid will be opened to the public.

General Termination: The Owner has the right to terminate the Contractor's participation at any time and for any reason without prior notice, subject to payment for all services and expenses rendered to the date of termination.

Agreed,

Wonderful University		Awesome Construction Company	
Signed:	_____	Signed:	_____
Name:	_____	Name:	_____
Title:	_____	Title:	_____
Date:	_____	Date:	_____

- Opening, identifying parties
- Scope of Work, identifying deliverables
- GCs and Fee expected with GMP
- Points of Contact
- Compensation for Precon Services
- Release, if parties can't agree on GMP
- Owner's right to terminate at any time

Precon Services Agreement

- Components of an **Agreement**
  - Coordinate with:
    - Legal counsel – agreement language
    - Procurement manager – application within policies for public notices and selection procedures

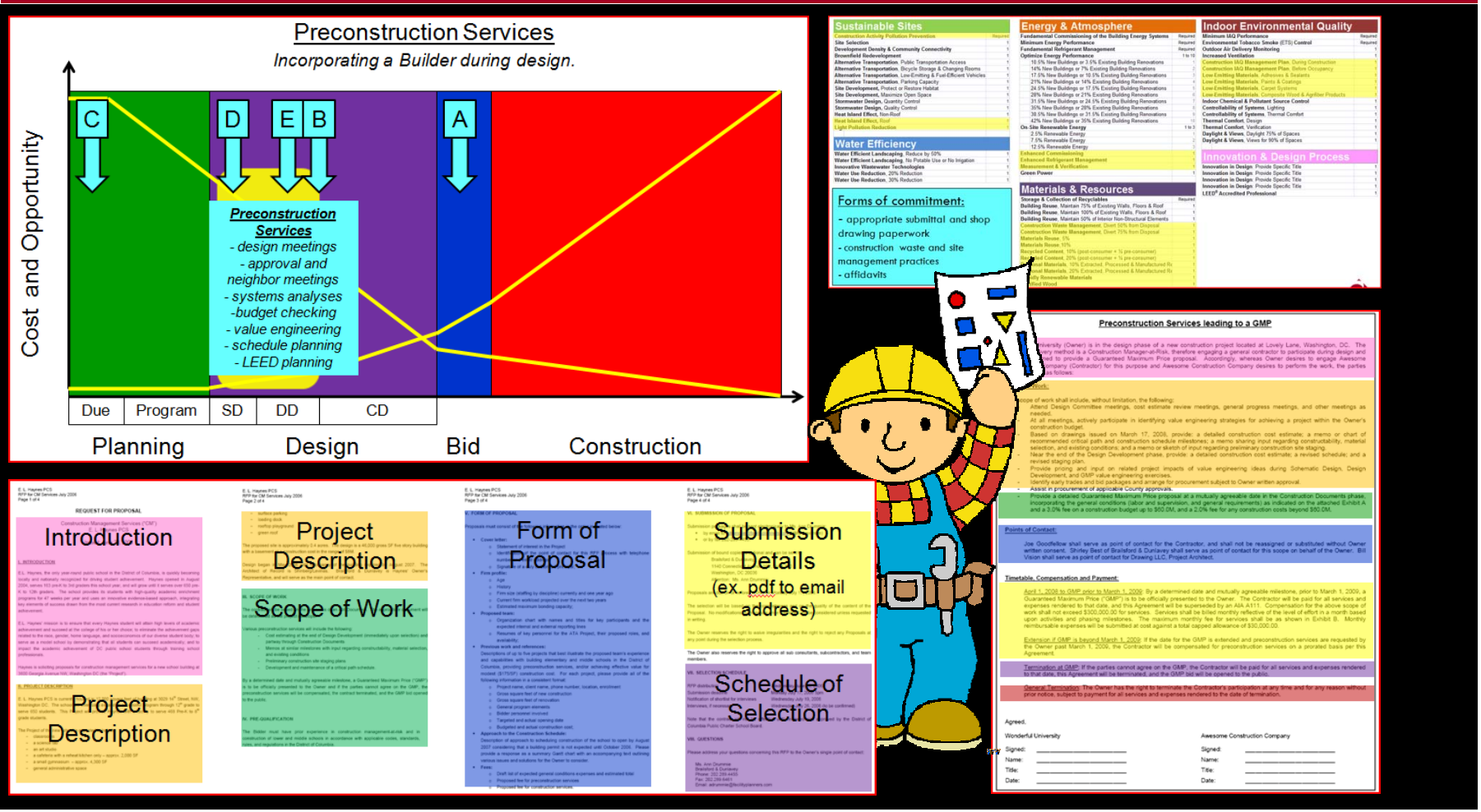
Learning Objectives

- *Identify in a project schedule when to involve preconstruction services.*
- *Acknowledge the role of the builder in achieving LEED goals.*
- *Prepare a scope and contract terms for preconstruction services.*

Summary

- When and Why of Precon Services
  - Schematic Design offers the greatest opportunities for management of quality & program, use of budget, and coordination of schedule.
- Role of Builder in LEED
  - Assist with choices and commit to specific points
- Precon Service Agreement
  - Can be a basic letter, with a release clause.

Discussion


Preconstruction Services
Incorporating a Builder during design.
Cost and Opportunity
C
D
E
B
A
Preconstruction Services
- design meetings
- approval and neighbor meetings
- systems analyses
-budget checking
- value engineering
- schedule planning
- LEED planning
Due
Program
SD
DD
CD
Planning
Design
Bid
Construction
Sustainable Sites
Energy & Atmosphere
Indoor Environmental Quality
Water Efficiency
Materials & Resources
Innovation & Design Process
Forms of commitment:
- appropriate submittal and shop drawing paperwork
- construction waste and site management practices
- affidavits
Preconstruction Services leading to a GMP
Introduction
Project Description
Project Description
Scope of Work
Form of Proposal
Submission Details (ex. pdf to email address)
Schedule of Selection

PRECONSTRUCTION SERVICES… LEVERAGING A BUILDER DURING DESIGN

ATHLETIC BUSINESS CONFERENCE

December 4, 2008