

***Early Contractor Involvement  
(ECI)  
Contracting Tool***

***Info Briefing  
Omaha SAME Industry Day  
04 August 2009***



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# Agenda

- Briefing Objectives
- ECI Overview
- ECI Details
- Questions



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# Objectives

- Stimulate discussion on the use of ECI as an acquisition strategy.
- Discuss the pros and cons of ECI and provide examples of its use within Northwestern Division.
- Provide info on the use of ECI in future projects.



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# Early Contractor Involvement or ECI (aka: CM@Risk) is...

- A project delivery method where the Corps engages the services of a general contractor to provide “preconstruction services” concurrent with design effort executed by A-E firm selected by normal Brooks Act procedures or in-house design team.
- The contract includes the option to construct the facility. Government may reserve the right to bid completed design competitively.
- Contract includes terms and conditions to allocate risk among the parties.
- A Fixed Price Incentive contract IAW FAR 16.403-2
- Useful tool to deliver projects and achieve customer goals by leveraging industry input and innovation combined with cost/time savings, resulting in an on time, within budget high quality facility.



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## ECl is not a....

- **Design Contract** - Corps retains design responsibility either through in-house or with a separate A-E contract. Preconstruction services to a construction contractor are not “Brooks Act” services. Construction Contractor solicitation and award via Best Value RFP Source Selection.
- **Non-competitive Acquisition** – ECl contract is procured IAW FAR 15 and application of FAR 16.403. Price and non-price factors are evaluated to determine best value.
- **Design-Build Contract** - Two separate entities (designer & construction manager/general contractor) both report to the owner (Corps).



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# When is ECI the right Acquisition Strategy?

- End user or customer need to have input throughout design process.
- Expedited schedules and cost containment are primary goals
- Large public infrastructure projects where contractors are unwilling to assume design liability (as opposed to a Firm Fixed Price Design Build approach).



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# When is ECI the right Acquisition Strategy?

- Complex “one of a kind” project, with no standard design
- When incentives can significantly improve results over alternate approaches (*required per FAR 16.403*)
- Customer wants to provide input/shape design solution during design phase (*“I’ll know it when I see it”*)



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# When is ECI the right Acquisition Strategy?

- Challenging site, schedule, or other unique aspects that would benefit with a builder's input during design phase
- When you want a collaborative effort during design and construction between Designer, Builder, Owner, User to be assured of project success



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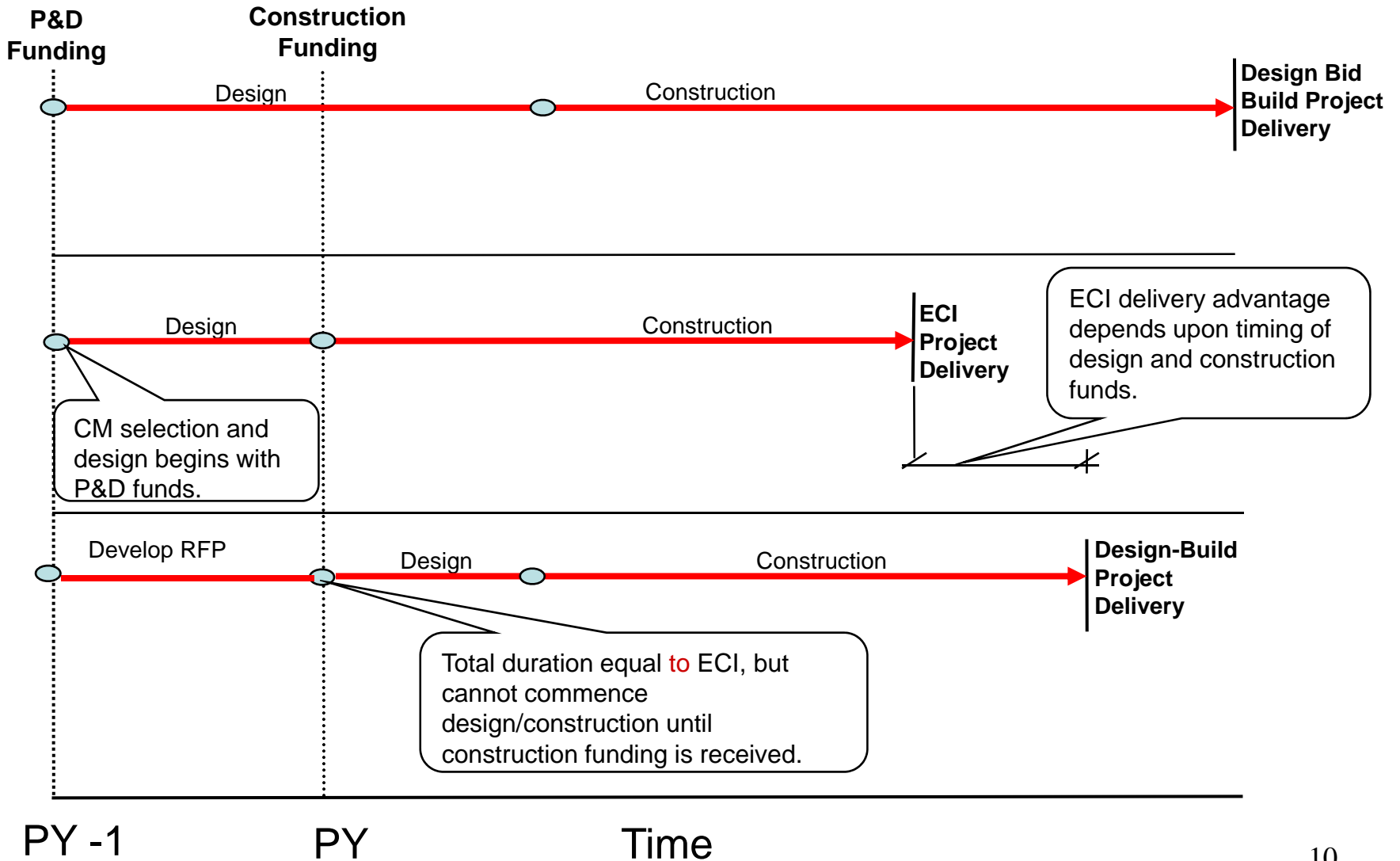
# When ECI may not be the right Acquisition Strategy?

- If you have time to develop detailed design and you want to get it at the lowest competitive price, use Design Bid Build.
- If you know what you want by at least the 35% design, and can develop an RFP that clearly defines your performance and prescriptive facility requirements, want it fast, and are willing to accept solution delivered in the end, use Design Build.
- If you don't know what you want and you need it fast, ECI might be best option, however if what you want cannot be achieved within budget you may have to accept trade offs in building systems, components, square footage, site improvements or aesthetics.



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# Relative Project Delivery Timelines





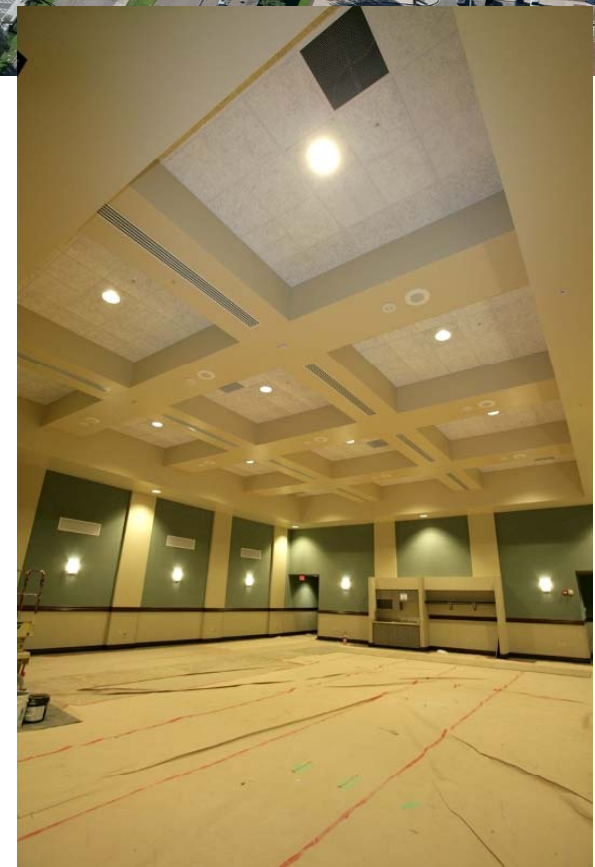
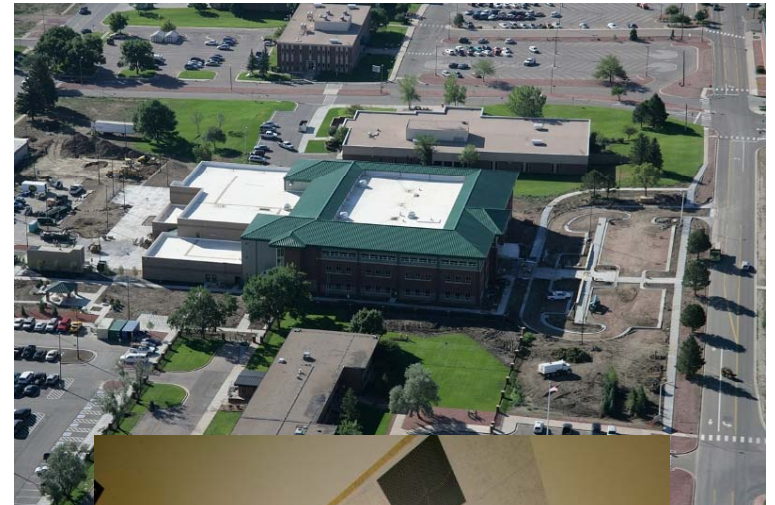
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# Ft Carson, CO

## Div HQ

### Cmd & Control Facility

#### ECI Results





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## ECI Results

# Ft Carson Div HQ C2F

- **Project Features:**
  - 135,000 sq ft Administrative HQ – Home of the 4<sup>th</sup> Infantry Division and Post Headquarters
  - IT intensive (3 separate networks)
  - SCIF, JOC, NOC spaces
  - Selected construction manager before Design Kick-off
- **ECI Results:**
  - Changed Floorplan significantly at 65% design based on late customer input with no cost impact
  - Started construction 12+ months sooner than D-B or D-B-B method
  - Facility completed on time in Sep 08 and about ten percent under original budget
  - Highly satisfied customer!

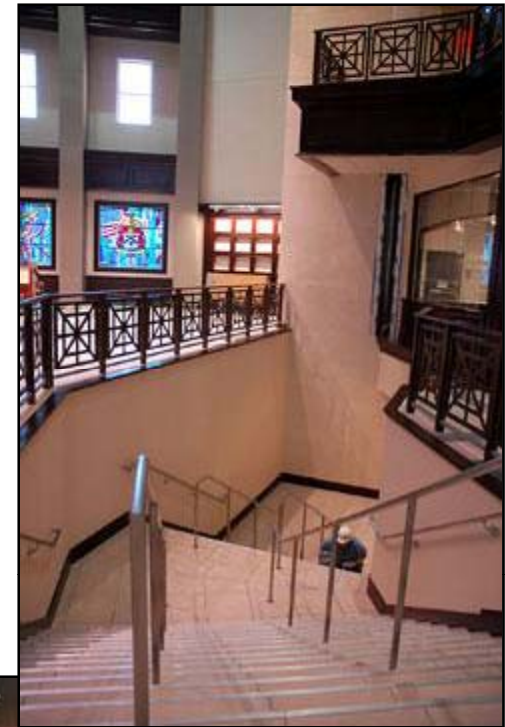


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# Ft Leavenworth, KS

## Lewis & Clark Center

### ECI Results





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ECI Results

# Lewis & Clark Center

- **Project Features:**
  - 420,000 sq ft college level educational facility – home of the Command and General Staff College
  - IT intensive
  - Progressive collapse
  - Selected construction manager at 35% design
- **ECI Results:**
  - Moved building at 65% design to avoid \$10M cost overrun (contractor input)
  - Started construction 12+ months sooner than D-B or D-B-B method
  - School completed (Jan 07) in time for Aug 07 classes and under original budget
  - Satisfied customer!



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# Early Contractor Involvement Details

- **Selection of Contractor**
- **Preconstruction Services**
- **Use of “Escape Clause”**
- **Incentive Price Revision Methodology**
- **Construction Reserve**



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# Early Contractor Involvement

## Selection of Contractor

- 1. Corporate Experience**
  - a. Complex Building Construction**
  - b. Preconstruction Services**
  - c. Local Market Knowledge**
- 2. Past Performance**
- 3. Organizational Business Management Plan**
  - a. Precon Services Plan**
  - b. Construction Plan**
- 4. Price**



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# Early Contractor Involvement

## Selection of Contractor

### Other Potential Evaluation Factors -

- **Oral Interviews**
- **Preconstruction Services Major Subcontractor Involvement (Details)**
- **Project Specific Experience**



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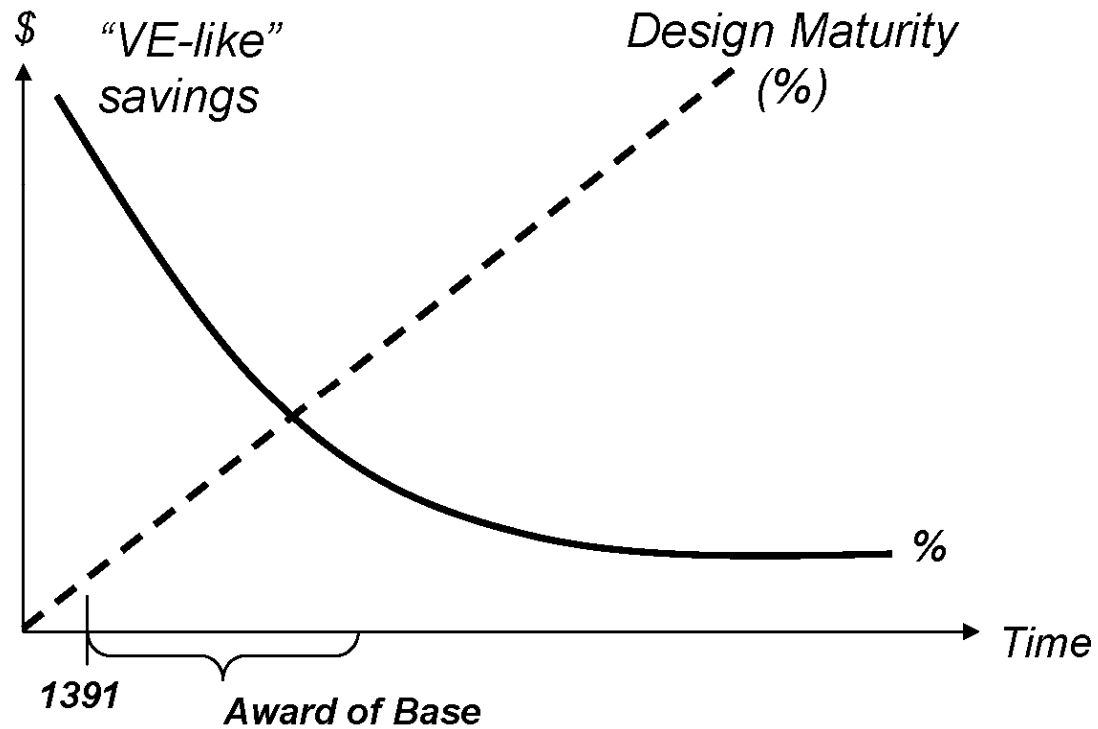
# Early Contractor Involvement Preconstruction Services

- **Constructability Reviews**
- **VE**
- **Risk Management**
- **Design**
- **Phasing**
- **Pricing**
- **Scheduling**
- **Consultation**



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## ***Attainable Cost Savings vs. Design Maturity***



***Earlier Prime Contractor Input  
Affords Greater Savings***



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# Early Contractor Involvement

## Use of “Escape Clause”

### **Award of construction option is contingent on several factors, to include:**

- **The ability to negotiate a construction price within funds available.**
- **Congressional authorization and appropriation.**
- **Participation of the contractor during the preconstruction services.**
- **Excessive team turnover and lack of team commitment.**



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# Early Contractor Involvement Incentive Price Revision Methodology

**Initial Target Price (ITP) includes:**

**Initial Target Cost (ITC)**

**Initial Target Profit (ITp)**

**Construction Reserve (CR)**

**$ITP = ITC + ITp + CR$**

- **$ITP < \text{Ceiling Price or Construction Cost Limitation}$**



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# Early Contractor Involvement Incentive Price Revision Methodology

**Final Target Price (FTP) includes:**

**Final Target Cost (FTC)**

**Final Target Profit (FTp)**

**Construction Reserve (CR)**

**FTP = FTC+FTp+CR**

- **Usually established after 100% Design Documents**
- **FTC includes three subcontractor quotes for any item > \$100k**



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# Early Contractor Involvement Incentive Price Revision Methodology

## ITC to FTC Comparison:

**Incentive to keep the FTC at or lower than the ITC through the design process**

**If FTC is less than ITC, then FTP increases**

**If FTC is greater than ITC, then FTP decreases**

**FTP is the basis for converting to FFP by contract modification**



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# Early Contractor Involvement Incentive Price Revision Methodology

**Midway Target Price (MTP) includes:**

**Midway Target Cost (MTC)**

**Midway Target Profit (MTp)**

**Construction Reserve (CR)**

**$MTP = MTC + MTp + CR$**

- **Beneficial to request a MTP at about 65% Design**
  - Major design decisions made
  - May award construction option based on MTP as a NTE amount – Allows fast tracking



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# Early Contractor Involvement Construction Reserve

## Construction Reserve

- Typically 2% of ITC
- Jointly managed by contractor and Corps
- At end of job, contractor keeps 45% of remainder
- Incentive for the contractor to solve problems (hence fewer RFI's)
- Design Deficiency cost borne by government

Issue	Project Contingency	Construction Reserve	Contractor Cost of Work
User requested change	X		
Differing site conditions	X		
Design errors and omissions related to calculation mistakes, code violations, or similar issues	X		
Errors and omissions related to coordination, dimension discrepancies, or similar issues (See Section 01010, paragraph 1.3.7.2)		X	
Rework due to damage not caused by Contractor's negligence and not reasonably recoverable from lower tier		X	
Rework due to damage caused by Contractor negligence			X
Acceleration due to unusually severe weather	X	X	
Overtime premium used, or Additional testing required, to insure BOD (Needs to be supported by schedule critical path)		X	
Scope gap, with adequate documentation.		X	
Replace lost or stolen work			X
Unforeseen temporary protection or facilities to avoid damage, disruption or delay		X	
Road Repair to permanent roads or walkways not otherwise within the Project scope, not due to negligence of Contractor or lower tiers.	X	X	
Road Repair to permanent roads or walkways due to contractor negligence			X



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# Early Contractor Involvement Future Direction

- **USACE HQ has expressed concerns –**
  - **Construction Reserve not allowed**
  - **Earned Value Management System required**
  - **Not applicable to smaller projects**
  - **ECI Training required before use**
  - **Extensive review of acquisition plans**
  
- **Omaha District Projects**
  - **None identified beyond Lackland Hospital**



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# Questions/Comments?

