An Energy Efficiency Workshop & Exposition

Palm Springs, California

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and

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Palm Springs, California

United States Courthouse Super ESPC Collaboration

Roger Wright – NW GSA

Robert Rogers – JCI

Tim Kehrli – DOE/NREL Subcontractor

Presentation Outline

- Project Summary – Wright
- New Construction ESPC and Energy Baseline Development – Kehrli
- Prime Contract Integration – Rogers
- Mechanics of Project Development – Rogers / Kehrli
- Questions

Seattle, WA Federal Courthouse

U.S. Courthouse Seattle

- 615,000 square feet
- 20 stories
- Downtown location
- $150 M construction cost
- Design started in 1998
- Construction started in 2001
- Occupancy anticipated in Spring 2004

ESPC Specifics

- Contractor Identified Proposal
- Initial Proposal to Award – 6 months
- Investment Amount - $1.5 Million
- Contract Term – 2 ½ yrs. Construction, 13 years Performance
- Direct Savings to Project - $1.38 Million
- Additional Project Savings - $700 K

Energy Conservation Measures

- Chiller Plant Design Improvements
- Building Automation System Improvements
- Enhanced Lighting Controls
- Variable Frequency Drives

ESPC Benefits

- Equipment and Control Enhancements reduced btu's/sqft by 20%
- Maintained LEEDS Silver Rating and may warrant upgrade to LEEDS Gold
- Improved quality of proposed equipment that had been specified during value engineering
- Qualified for $200k utility rebate

Project Overview

- A / E selected in accordance with Brooks Act
- CM selected through Term Contract
- Specialized CM & Commissioning through GSA National IDIQ Commissioning Contract
- Construction Contractor selected using Best Value Source Selection Competitive Negotiation Method

Best Value Construction Source Selection Process

- Technical proposals
- Interview of Contractor Team
- Evaluated total cost bid form with incentive award fee and constructability pool
- Selected BEST VALUE Contractor
- Awarded site/foundation

Best Value Construction Source Selection Process

- Major Value Engineering effort
- ESPC Integrated with VE solutions
- A/E Revised Contract Documents
- Negotiated Final ESPC Contract
- Negotiated Final Construction Price
- Exercised Option for constructing the rest of the Courthouse

Team Approach
The Formula for Success

- Develop strategy that fits the team
- Promote innovation & creativity
- All parties in decision-making loop
- Financial incentive programs
- Select the right individuals for the job
- Be flexible to circumstantial changes
- Bring experiences from past projects
- **BE CUSTOMER FOCUSED!!!**

New Construction ESPC and Energy Baseline Development

ESPC in New Construction Process

- Agency authorizes ESCO to propose scope of work
- Agency reviews and issues NOIA for final proposal
- ESCO develops final ECM's, energy and O&M baseline and prime contractor integration plan
- Contract award and work begins

New Construction Challenges

- Baseline Development – Energy and O&M
- Coordination with Prime Contractor
- Dealing with budget shortfalls
- O&M Budgeting / Financial Impact
- Revisions to design documents
- Project Timeline

Baseline Issues In-depth

- Energy Baseline Model – DOE 2.1E
- Certification of Energy Efficiency – ASHRAE 90.1, 10 CFR 435-436, UBC, UMC
- O&M Costs
- Non-Recurring Maintenance Costs
- O&M Personnel (Govt. or Contracted)

Prime Contract Integration

Prime Contract Integration

Question - How is a Super ESPC contract effectively integrated into a Construction Contract?

Typical Construction Organization

General Contractor
Division 1 (General Requirements) ***GC retained***

Division 2 (Site Construction)
Excavation Contractor
Landscape Contractor

Division 3 (Concrete Contractor)

Division 4 (Masonry Contractor)

Typical Construction Organization (cont.)

Division 14 (Conveying Systems Contractor)

Division 15 (Mechanical Contractor)
- **Ducting Contractor**
- **Boiler Contractor**
- **Chiller Contractor**
- **Fire Protection Controls**
- **Building Automation System Contractor**
  - **Variable Frequency Drive Contractor**

Division 16 (Electrical Contractor)
- **Engine Generator Contractor**
- **Lighting Contractor**
- **Telco Contractor**
- **Structured Cable Contractor**
- **Lighting Controls Contractor**

U.S. Courthouse Seattle Construction Organization

General Contractor **J.A. Jones/Absure**
Division 1 (General Requirements) ***GC retained***

Division 15 (Mechanical Contractor)	**W.A. Botting**
Ducting Contractor	**Holiday Parks**
Boiler Vendor	**Lochenvar**
Chiller Vendor	**Trane**
Fire Protection Controls	
Building Automation System Contractor	**JCI &JCI**
Variable Frequency Drive Vendor	**Graham**

Division 16 (Electrical Contractor)	**Valley Electric**
Engine Generator Contractor	
Lighting Contractor	
Telco Contractor	
Structured Cable Contractor	
Lighting Controls Contractor	**JCI & JCI**

General Services Administration

General Contractor

Mechanical & Electrical Sub contractor

JCI – Controls Contractor ($0.9 million)

ESCO (Energy Service Company)

JCI – ESCO ($1.5 million)

Mechanics of Project Development

Super ESPC Timeline for U.S. Courthouse Seattle

Request for Proposal	**6/20/2001**
Proposal Presentation	**6/27/2001**
Initial Proposal	**7/7/2001**
Detailed Energy Study	**7/25/2001 – 9/7/2001**
Final Proposal	**10/25/2001**
Award	**11/27/2001**

Leverage, Controls and Empowerment

	Plan & Spec	EPSC
Contractual	W.A. Botting **Jones/Absure**	GSA
Coordination	**W.A. Botting & Jones Absure**	GSA
Warranty	1 year	13 years
Quality Criteria	Spec	Performance

QUESTIONS?