Tips for a successful AWP/WFP Implementation

Houston AWP Conference
October 7th 2014

Presenter – Lloyd Rankin COAA WFP Committee
RT 272: AWP
(ADVANCED WORK PACKAGING)

- RS 272 Research Summary
- RT 272 Vol. 1 Design through WorkFace Execution
- RT 272 Vol. 2 Implementation Guidance
- RT 272 Vol. 3 Implementation Case Studies and Expert Interviews
Key Factors in Successful Project Implementation

- Clear Deliverables
- Alignment
- Transparency & Predictability
- Construction Readiness
- Planning for Phase Transition
Clear Deliverables:

- Your Organization – AWP Maturity Model
- Your Project – Project Definition Assessment Tool
ADVANCED WORK PACKAGING MATURETY MODEL

- Two pages:
  - Maturity Model
  - Maturity Stages

- Subjective self-evaluation

- Three levels:
  - AWP Early Stages
  - AWP Effectiveness
  - AWP Business Transformation
Aids in assessing readiness to begin an AWP Project

Similar Function to PDRI
Alignment – Internal

- Understand the resource requirements and organizational commitments involved
- Establish an AWP Champion
- Create the AWP policies, procedures and supporting documents
Alignment – External

- Selecting Engineering, Procurement, and Construction Contractors competent in AWP/WFP
- Contractor Prequalification
- Realizing that you may need to help the contractor develop competency
PREQUALIFICATION

- Questions fundamental components of AWP
- Can be added to existing prequalification forms
- First step to gauge maturity and abilities

- Create the contractor qualification assessment tool (10 questions)
  1. List your work practices tools and procedures
  2. Describe the content of a typical field work package
  3. How do you ensure that materials deliverables support the sequence of installation of field work packages?
  4. How do you ensure that engineering deliverables supports construction sequence?
  5. When do you do formal constructability reviews?
  6. Who defines the design areas in your model?
  7. When in your project development process is the path of construction determined?
  8. Describe your material management system
  9. Describe your schedule development process
  10. Provide a project organizational chart from previous projects similar to this project

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Starting early gives greater influence and allows construction to establish engineering and procurement priorities.
Stage 1 Preliminary Planning /Design
AWP & WFP PROJECT INTEGRATION FLOWCHARTS

Stage 2 Detailed Engineering
Stage 3 Construction Execution

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Develop a roll-out plan (fit to measure)

Based on the project

- Determine required performance
- Determine the training requirements
- Ensure parties have solutions to satisfy those requirements
- Audit to those requirements
Contractual Guidance and Strategies

- Consider Contracting Strategy
- Deliverables
- Compensation Type
- ETC.
AWP IMPLEMENTATION CONSIDERATIONS: CONTRACT STRUCTURE & COMPENSATION SELECTION

- FEED by Owner
- FEED by Contractor

- Lump Sum / Fixed Price
- Reimbursable Cost

EP-C

EPC
# Major AWP Deliverables by Type

<table>
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<tr>
<th>Deliverables</th>
<th>FEED by Owner</th>
<th>FEED by Contractor</th>
<th>Detailed Engineering</th>
<th>Construction</th>
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* Additional deliverable for AWP

1. Owner  
2. EP Contractor  
3. C Contractor  
4. FEED Contractor  
5. EPC Contractor
Transparency and Predictability
Measuring performance

- Use rules of credit for engineering, procurement and construction and forecasting when it will be complete
- Using package based confirmation
Making sure the Engineering, Procurement, and all other constraints are satisfied prior to releasing work in the field
The Construction Contractor is the customer of Engineering and Procurement.

Without the Construction Contractor there won’t be an operating facility.

They have the experience to deliver a safe, cost effective project but they need the other stakeholders help.
Alignment

Owner
- Decides what they want

Engineer
- Designs it

Procurement
- Orders for it

Constructor
- Builds it, as the owner wants it, and the engineer and procurement supply information and materials to support how it will be built
Transitioning from Area to Systems

- Early system identification and developing a plan for transition
- System for clearing punchlist as items are identified
- Rules of credit to support transitioning from area to system