Advanced Work Packaging: An EPC Approach
It is an integrated approach that encompasses all aspects of a project.

» Safety
» Quality
» Engineering
» Procurement/Contracts
» Materials Management
» Project Controls
» Completions
» Client input
The Client’s Role

» Specify in RFPs that AWP is part of the selection process

» Participate in AWP in phases FEL2 through to Detail Design and Procurement

» Project team understanding of business objectives and requirements

» Provide system and subsystem requirements

» Participate in the AWP process through:
  − Workshop(s)
  − Bridging document
AWP Overview

AWP begins in FEL2 and is further refined through each project phase.

» Assign a Construction Manager at the beginning in FEL2
» Leverage Jacobs’ Global WorkFace Planning (WFP) experts
» Utilize established procedures, templates, logs, and systems aligned with JSTEPS
» Utilize Jacobs’ benchmark standards
» Conduct AWP workshop(s) with defined deliverables
» Train project teams such as engineering, construction, procurement, project controls, etc.
AWP Planning Process

Client Project

Construction Alignment

Engineering

Procurement/Vendors

Construction

Systems Alignment
Jacobs AWP Strategy Workshop

» Establishes construction sequence

» Takes into consideration:
  – Client project and business requirements
  – Engineering constraints
  – Accessibility/logistics
  – Long lead equipment
  – Modularization and heavy lift requirements
  – System turnover and commissioning

» Outputs:
  – Construction work areas and modularization plan
  – Engineering (engineering priorities/field need dates)
  – Procurement and expediting plan
  – Jacobs Rapid Project Modeling Report
Flexibility

AWP can be tailored to the:

» Type of project and its complexity
  – Greenfield and Brownfield
  – Pharmaceutical, Chemical and Refining

» Size of project
  – $ 300 million and greater
  – $ 50 million or smaller

» Automated or manual

» Capabilities of contractors
  – Direct Hire
  – Subcontractor

» Worldwide applications
  – Local
  – Work share
Automation Tools

3D/4D Model

- Cost Controls
- Material Mgt.
- Turnover
- Scheduling
- QA/QC
Field Install Work Packages

FIWPs use project unit rates and work steps:

» Pipe
» Steel
» Equipment
» Foundations
Simple Work Package Creation
Status Visualization

- Spool fabrication
- Equipment installation
- ISO release status
- Pipe material availability
- Advance revision notices
- Work step tracking
- Test pack status
- QA/QC status
- FIWP constraints
Status Visualization
Status Visualization

BOCCARD SPOOL FABRICATION
- ISO DWG NOT RECEIVED
- ISO DWG RECEIVED: 78
- SPOOL ON HOLD: 2
- MATERIAL HOLD
- MATERIAL CONTROL: 57
- SHOP
- COMPLETE: 2
- IN PAINT: 71
- SHIPPED
- RECEIVED ON SITE

ISOMETRIC RELEASE
- IN ENGINEERING: 2
- ISSUED FOR STRESS: 1
- OUT FOR COMMENT: 39
- ISSUED FOR CHECK: 40

ISOMETRIC INSTALLATION
- NOT STARTED: 1801 LF
- INSTALL STARTED: 149 LF
- INSTALL COMPLETE: 343 LF
- HYDROTEST STARTED: 343 LF
- HYDROTEST COMPLETE

JACOBS
Dashboard Reports

Work Package Summary

Unique Lines/Isos By Transmittal Date

Fabrication Duration

Work Package Count By Discipline

Work Package Average Hours
AWP Benefits

- Safety
- Consistency
- Visibility
- Predictability
- Productivity
- Quality
Q & A Discussion