

Utility Pre-Construction Approach

As part of our pre-construction services that come standard on all CEI projects, we offer insight gained from intimately understanding our client's goals and ensuring everyone involved with the project is on the same page.

I. PROJECT EVALUATION

During the project evaluation phase, we cement project expectations and provide a solid foundation for project success during the pre-construction phase of utility projects by:

- Creating a project program that pinpoints our customer's needs and expectations
- Finalizing conceptual design/size
- Generating conceptual plans for Substation and Transmission line work
- Identifying key project team members, including engineers, subject matter experts, consultants and inspectors

II. SITE ANALYSIS

To avoid surprises, our team of engineers, project managers, safety professionals and other stake holders analyze the site to ensure conformity with utility project requirements. Specifically, we:

- Perform job walks to evaluate a project site
- Review environmental reports with consultants
- Evaluate existing infrastructure, location and proposed line routing

III. PERMITTING AGENCY APPROVAL ASSISTANCE

Our relationships with local and Federal agencies on projects allows us to meet permitting and other requirements. The processes we help facilitate include:

- Permitting
- Site plan approvals, land use authorization, Environmental (NEPA/ESA) and state approvals
- Tie-in and connection permits with utility providers



Utility Pre-Construction Approach



IV. VALUE ENGINEERING

At key points in a project, we look closely at the scope of work to ensure it conforms to the proposed budget, and make suggestions for cost savings based on past project experience. Typical activities during this stage include:

- Preparing a detailed conceptual project estimate utilizing skilled in-house estimators
- Analyzing the conceptual estimate vs. budget requirements
- Providing life cycle cost analysis of high-value equipment
- Suggesting alternative solutions to reduce cost, schedule and quality impacts

V. CONSTRUCTABILITY REVIEW

To ensure projects are delivered on schedule and on budget, our subject matter experts conduct a review to ensure what is being designed is reflected accurately in the plans. This review includes:

- Providing alternate solutions
- Examining design documents for inaccuracies, missed items and thoroughness
- Evaluating proposed materials, systems and product delivery methods
- Identifying/targeting areas of concern
- Soliciting subcontractors and supplier input

VI. COST CONTROL

At this phase, our utility team takes a deep look at project scope and cost to make sure budgets align before a design is finalized. This stage includes:

- Refining conceptual estimating / cost budgeting
- Conducting a detailed review of the cost estimate with the design team and project management
- Soliciting supplier input relative to market conditions
- Preparing a final project cost estimate
- Providing cash flow management

Utility Pre-Construction Approach

VII. SCHEDULING

Due to our decades of construction project management experience, we will devise a detailed schedule from project start to finish. By identifying key milestones, we can drive toward project completion in an organized and predetermined manner. Steps at this phase include:

- Outlining all design and construction activities, including project milestones as a project control tool
- Preparing preliminary and final CPM schedules using Unifier and Primavera software
- Developing a project sequencing plan
- Soliciting supplier input

IX. PROCUREMENT MANAGEMENT

Though this is an often-overlooked area during construction of utility projects, we use this process to eliminate senseless delays by directly procuring long-lead items and storing them until needed at the site. Typical activities include:

- Identifying long-lead delivery material and equipment
- Pre-qualifying equipment and material vendors
- Soliciting proposals and awarding purchase orders, depending on schedule
- Coordinating equipment package submittals
- Verifying and expediting fabrication and delivery

X. BID PACKAGING

Our dedicated procurement department competitively bids all trade work for our utility projects to ensure we obtain complete bids at competitive prices. Due to our approach, we're able to eliminate change orders by closing loop holes during the bidding phase. This typically involves:

- Developing comprehensive bid packages for each trade
- Holding prequalification supplier interviews
- Evaluating up to three (3) qualified bidders
- Distributing bidding documents and receiving proposals
- Performing a detailed analysis to develop a baseline for comparison
- Including customers and subject matter experts in the evaluation process
- Awarding work selected firms

XI. SAFETY MANAGEMENT

With our industry-leading safety program, utility customers can rest assured that the safety of every worker on the site is being considered, enforced and managed. Our safety management approach includes:

- Verifying compliance with federal, state and local regulations
- Providing project-specific safety plans
- Communicating safety plans to suppliers and site visitors
- Providing constant safety monitoring to ensure best practices
- Implementing a heat illness prevention program
- Drafting an emergency response program

XII. PARTNERING

A construction project is a team effort and a project's stakeholders need to create a foundation based on trust, mutual respect and open communication to ensure a successful (and enjoyable) result. To promote a partnership atmosphere, we:

- Conduct an official partnering kick-off meeting between stakeholders
- Emphasize a true "team" concept at every opportunity