Ecological Restoration
Design-Build
with Biohabitats


Silver Creek existing conditions


Silver Creek during construction


Silver Creek after restoration

Why project managers prefer design-build contracting.

SAVES MONEY
- Streamlines the design process, eliminates bid documents and procurement, and reduces administrative staff time
- Simplifies and strengthens communication and collaboration among designer, construction engineer, and all team members
- Reduces construction engineering and inspection (CEI) costs as quality control and risks are transferred to the contractor
- Virtually eliminates change and extra work orders: field data is complete and any errors or omissions are handled prior to construction
- Decreases potential for claims and litigation as issues are resolved by the contractor
- Shrinks project timeline and reduces staff time
- Prevents unexpected cost, as the total price of design and construction is known and guaranteed early on

ACCELERATES SCHEDULE
- Enables construction engineering considerations to be incorporated into the design phase, enhancing project constructability
- Fast-tracks design and construct by overlapping design and construction phases for different segments of the project
- Eliminates separate construction contractor bid

IMPROVES QUALITY
- Increases flexibility for implementing changes and contingency plans during construction
- Boosts contractor participation in the design process, yielding "value engineering" that results in better design
- Focuses on quality control and quality assurance throughout the project
- Fosters innovation uniquely fashioned by project needs and contractor capabilities

Completing your ecological restoration design-build project in two phases can minimize your cost and risk.

PHASE 1
Development of goals, objectives, performance standards, budget and timeframe; initial site investigations; concept design; and initial regulatory review. This can be done as a lump sum contract.

PHASE 2
Complete design, regulatory permitting, construction, maintenance and monitoring. This can be done as a second lump sum contract. The depth and breath of this contract is dictated by the outcome of Phase 1. Design drawings and specifications usually do not need to be 100% and no bidding documents are needed, so construction oversight time is reduced.

BIOHABITATS INTERDISCIPLINARY DESIGN-BUILD TEAM

Water resources engineers
Coastal restoratoin ecologists
Aquatic biologists/ecologists
Soil scientists
Fisheries biologists
Fluvial geomorphologists
Hydrogeologists
Conservation biologists
Landscape architects
GIS technicians

Chevy Branch before restoration

Chevy Branch after restoration

Valley Road stream channel during construction, a Biohabitats/Meadville design-build

Valley Road stream channel after restoration

Frequently Asked Questions about Design-Build

What is the ideal scope and scale of suitable ecological restoration design-build projects?

All ecological restoration projects, regardless of scale or complexity, are suitable for design-build. Whether your goal is stream restoration, coastal restoration or wetland creation, a strong partnership is critical between the designer and the contractor. For very large or multi-phase design-build projects, contractor selection would be based on staffing ability and equipment.

Can the design-build process save us time or money on the design or construction side?

Although savings can vary, based on owner review and multiple permitting agencies, time and money are typically saved on design, as final plans for a design-build project are equivalent to 60% design plans. More time and money are saved by eliminating the construction bid process. By incorporating contractor review throughout the design process, construction costs are often reduced by the resulting value engineering and reduction in change orders.

What are the typical procurement, bidding and award issues with design-build projects?

Combining design and construction services results in higher contract values and may contribute to additional administrative limitations. If matching funds are involved, there may be specific requirements from funding agencies and grant sources.

Are regulatory permitting procedures different for design-build projects?

Essentially, your project permitting requirements will be the same as for a design-bid-build project.

Does the design-build process help improve the design quality of ecological restoration projects?

Yes. Creative control, frequent client and agency interface, and early involvement of the construction contractor all aid in enhancing the quality of your project.

How should we structure a Request for Proposal for design-build ecological restoration projects?

Your RFP should be structured into two phases, as outlined on the previous page.

Are bonding and warranties required for design-build contracts?

Similar considerations must be given to bonding and warranties for the design-build approach as when using traditional design-bid-build construction contracts.

Do wage rates such as union requirements affect design-build procurement?

This depends on the funding sources and location of your project.

How does the pricing of design-build contracts typically work?

Several different ways, depending on your procurement policies. However, it is wise to build cost-savings incentives into your contracting mechanism. Some contracting options include:

- Cost plus incentive fee (sharing)
- Fixed price incentive (sharing)
- Guaranteed maximum price
- Firm, fixed price/lump sum
- Fixed price award fee
- Cost plus fixed fee
- Cost plus award fee

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