
In-House; Architect-Bid-Contractor; Design-Build; Owner's Representative... What works best for building your sports field?

Your organization has decided to build a new sports field and has determined which type of field is needed. Whether it is a single synthetic field, or a natural grass field, or a multi-use sports complex with both field types, one of your next steps is to determine the best method to get your project built.

As the sports turf manager, you have the knowledge to advise the owner. What will your recommendation be?

- Should your organization complete the project in-house?
- Hire a design professional, and when the plans are completed, bid it and subsequently hire a contractor?
- Or, is your project better suited to hiring one firm to design and build the project?
- Do you need to hire an owner's representative?

All options can provide your owner with a quality outcome, but each has unique considerations. There are also many variations on these models with some approaches using elements from several models. This technical bulletin will outline the advantages and disadvantages of the four conventional models.

The Sports Turf Managers Association (STMA) is developing a series of advisory bulletins. The bulletins are sequenced to provide information and resources throughout the process of selecting and building a new sports field. Often decisions that seem small and insignificant in the short-term can affect the quality of the fields for years to come. For more information, contact the STMA, ph. 800-323-3875. For specific information on architectural/design firm selection, contact the American Institute of Architects (AIA) www.aia.org. For detailed information on the design-build process, contact the Design-Build Institute of America (DBIA) at www.dbia.org

The content of this bulletin is intended for informational purposes and is not intended as a substitute for specific professional consultation.

Basic Definitions

Following are general definitions for the professionals who may be involved with your project:

Architect: One who has completed a course of study in building and design, served an internship, and is licensed as an architect. The architect typically produces a set of plans and specifications on which the construction contract is based and is a member of the project team.

Certified Sports Field Manager (CSFM): The professional designation for a sports turf manager who has met the education and experience requirements of the certification program and successfully passes the rigorous four-hour exam. Once certified, a combination of continuing education and industry service is required.

Construction Manager: May be involved in overseeing scheduling, cost control, construction, bidding, or the entire project. A construction manager is most useful on a large, complex project which requires a good deal of oversight and coordination.

Design Professional: Generally refers to architects, engineers, landscape architects; and others whose services are “professional” activities, require licensing or registration by the state, or otherwise require the knowledge and application of design principles appropriate to the problem at hand.

Landscape Architect: A licensed design professional who plans, designs, manages, preserves and rehabilitates land. He/she provides design services for urban design, parks and recreation, environmental restoration, golf courses, etc.

Owner’s Representative: Typically educated as a planner, architect, certified cost analyst, or construction manager, he/she is responsible for coordinating all aspects of the project including master planning, design, preconstruction and construction administration. This person essentially takes the project from conception through completion with the express purpose of protecting the owner’s financial interest. On smaller projects, this consultant may actually complete all phases him/herself.

Professional Engineer: Has fulfilled the education and experience requirements and passed the exams that permit him/her to offer engineering services. PEs take legal responsibility for their engineering designs and are bound by a code of ethics to protect the public health and safety. They have the authority to sign and seal or “stamp” engineering documents (drawings and calculations) for a design or a structure, thus taking legal responsibility for it.

Request for Proposal (RFP): A document that a company or organization sends to vendors to elicit a bid for products or services. An organization typically issues an RFP in order to assess competing bids. The RFP language should convey the full scope of the work desired and must produce responses complete enough for the issuing organization to make distinctions between competing vendors and determine which vendor is the right fit for the project. When used for a construction bid, the response to the RFP provides to the client a recommendation from the contractor on the best method of construction. Each project and site is different and each RFP should also be unique. Usually requires a representative, staff member, or hired consultant who is knowledgeable in the scope of work covered by the RFP to assess the responses.

Request for Qualifications (RFQ): Usually a more basic request, asking for much of the information that would typically appear on the federal government’s Standard Forms 254 and 255, with some additional information. It is often the first stage of a two-stage procurement process that results in identifying companies that are qualified to do the work by their experience, financial strength, and organizational resources. In such cases, only these pre-qualified companies are permitted to respond with pricing proposals. The process narrows the field allowing the client to only review bids and evaluate bids from companies that are determined to be qualified to perform the work. Organizations that are not required to take the lowest bid may use a more detailed RFQ process and do not subsequently develop an RFP. Usually requires a representative, staff member, or hired consultant who is knowledgeable in RFQ’s to assess and validate the qualifications.

Key Considerations

Generally, three major factors can influence the decision about which type of professional service you select:

1. Complexity of the project

The complexity of your project can be a major decision-making factor for selecting in-house or another model for your project.

Consider the answers to these questions:

- Do you need any site use and utility studies completed? Environmental impact or analysis studies? Marketing and economic feasibility studies? Special cost or energy analysis?
- Are there zoning and planning approvals necessary? Will you need help with preparing materials for public referenda or any special drawings, models and presentations?
- Do you need help with developing financing opportunities?
- Are there any community concerns?
- Will your project be challenged by any climatic impacts? Unusual topography? Geotechnical characteristics? Ecological features? Water issues or drainage accessibility?

2. Time you have to complete the project

The project's timeline can be another factor that influences which project process you pursue. All projects must have a realistic timeline that allows for appropriate approvals and decision making. Answer these questions to help direct you:

- Do you have adequate time to complete the project in-house while managing other responsibilities?
- Do you have time to select the architectural/design firm, have the design completed and subsequently hire a contractor?
- Do you need to fast track a project, overlapping design and construction phases?
- Do you need the time efficiencies a consultant may provide by effective coordination?

3. In-house expertise/resources available

Another major factor in considering the right delivery model is the availability and knowledge base of staff assigned to your project.

- Does your staff have the appropriate design, construction and project management experience? Easy access to equipment and materials?
- Do you have an in-house representative, such as a CSFM, who can monitor the project's progress? Or, are you willing to hire one?
- How involved in the process does the owner wish to be?

In-House

For organizations that are renovating or building a new field or complex, handling it in-house is an ideal solution, if time and resources are available. Many organizations have architects, purchasing departments, and construction expertise on staff for the sports turf manager to utilize. However, some sports turf managers are unable to place on-hold the other duties of their jobs to undertake a project. It is challenging to design, manage, build a field, and continue with daily responsibilities.

Advantages of In-house

- Provides total control of the project
- Well suited to urgent projects and less definitive scoped projects
- Allows for quicker and more nimble decision-making
- Permits fast mobilization of resources
- Streamlines the budgeting process
- Creates a team with a single sense of purpose
- Protects the owner's investment because the owner is in charge

Disadvantages of In-house

- Not well suited to large, complex projects
- Must be able to prioritize the project within the organization's structure
- Must have design and construction management experience on staff
- Must have construction labor on staff with access to the necessary equipment

Architectural/Design firms

Typical Services

Architectural firms offer a wide range of services. The owner first contracts for the design of the project. The design professional:

- Determines and oversees any site planning and evaluation services
- Prepares plans and specifications
- Usually assists in the bidding stage
- May provide oversight of the project during the construction phase
- May provide facility administration services following construction

The design of the project is complete before the contractor is selected. The owner contracts separately with the contractor and retains the responsibility for overall project management.

Contract Management Function

In an architect-bid-contractor model, the architect/designer may have a key role in assisting the owner with the hiring of the contractor and in managing the construction project. The architect/designer may:

- evaluate the work for compliance with the drawings and specifications
- approve shop drawings, materials and project samples
- review the results of material tests and inspections
- approve the contractor's requests for payment
- handle requests for design changes during construction; and
- administer the completion, startup and close out process of the project.

Advantages of Architect-Bid-Contractor

- Minimizes risk through the owner's control of the design and construction phases
- Offers checks and balances between the construction participants
- Provides the owner with significant opportunity for input into the process
- Is a well-understood and widely used model
- Brings together a wide range of resources to solve complex problems

Disadvantages of Architect-Bid-Contractor

- Can be a lengthy process
- Requires significant front-end economic commitment (since design is completed prior to bidding the construction phase, the bids could exceed owner's budget.)
- Requires in-house expertise to coordinate and arbitrate between separate design and construction contracts (or must be willing to hire an independent representative).
- May place owner in an arbitrator position between design and construction
- May require more change orders and ensuing costs as the project is constructed
- May still require hiring an owner's representative to review plans and make recommendations to help reduce change orders and other potential expenses.

Design-Build

A design-build firm has full accountability for design, engineering and construction – taking the project from concept to completion. Consider the following when deciding if this “single source” service is right for your project:

Advantages of Design-Build

- Provides a single point of responsibility for design, construction, cost, quality and schedule adherence
- Takes the owner out of the middle of disputes between architect and contractors
- Allows for earlier knowledge of costs because the same team simultaneously estimates construction costs
- May provide for faster completion due to the elimination of bidding periods and the overlap of design and construction

Disadvantages of Design-Build

- May require specialized in-house staff or a consultant to develop the RFP or RFQ, oversee the project, and maintain quality control. It can be complex to write a comprehensive RFP for design and construction.
- May not be allowed by your owner. Some government entities may require the traditional architect-bid-construction process.
- May not be able to purchase liability coverage. Some liability insurance/payment bond carriers may not be familiar with design-build and adequate coverage may not be available.
- With the same firm designing and building the project, there may not be an independent, third party providing the necessary ‘checks and balances’ to protect the owner.

Owner’s Representative

This model employs a consultant, such as a CSFM, who ensures that plans are prepared correctly, and construction is sequenced properly and executed as intended. For larger projects, this person may be hired in conjunction with a traditional architect-bid-construction service or to monitor a design-build project. For smaller projects, this person may fulfill all roles.

Advantages of an Owner’s Representative

- Removes owner from conflict resolution between the architect/designer and contractor
- Protects the owner’s interests because sole allegiance is to the owner
- More efficient coordination may result in less change orders, thus reducing costs
- Highly knowledgeable consultant can save time and money
- Well suited to large, complex projects or small projects where there is limited in-house expertise

Disadvantages of Owner’s Representative

- Adds another tier of decision-making.
- Contributes to the overall expenses of the project.

These are just a few considerations that may help you to determine the appropriate process to build your sports fields. Many options and variations exist. It is recommended that you further investigate these options with the AIA and DBIA.