Furniture, furnishings, and equipment are a significant part of most commercial and institutional building projects. By selecting, specifying, and sometimes managing FF&E acquisition, architects can provide their clients with a more comprehensive set of services.

Furniture and furnishings play an essential role in the use and operation of buildings. In addition to contributing to how users perceive and feel about a building, they are often necessary to achieve the functional requirements programmed for interior spaces. In essence, appropriate furniture and furnishings reinforce the design concept of the building. As well, functional and aesthetic FF&E solutions can enhance the appeal of the overall interior environment.

FF&E refers to a wide assortment of products that includes systems furniture, loose furniture, artwork, accessories, signage, planters, and window coverings. Sometimes FF&E products can also include custom furniture, millwork, awnings, specialty equipment, audiovisual equipment, or custom lighting. When existing furniture is a consideration, refinishing or reupholstering can be part of FF&E packages.

Clients without facility management or purchasing departments frequently turn to interior designers or furniture dealers for FF&E selection and procurement services. Even clients with these internal resources will sometimes engage outside assistance for these tasks. It is for these groups of clients that architects and design firms will have the opportunity to offer services for FF&E selection, and in some instances, FF&E acquisition management.

When vendors help clients with the selection of FF&E, they may not make selections based on the overall project design concept envisioned by the architect. Many purchasing agents look for low-cost, “quick-ship” items that are easily obtained. Furniture dealers often steer clients toward lines for which they have higher quotas—whether or not the product meets quality, ergonomic, or aesthetic expectations. Architects knowledgeable about FF&E are often better prepared to recommend more appropriate solutions for a client’s functional, aesthetic, and budgetary needs.

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In some buildings, the cost of FF&E can exceed the cost of the interior construction.

For the architect, the benefits of offering FF&E services include more control of the design integrity for the overall project; better budget control; quicker access to pricing, status, and shipping information; and expanded fees. On the other hand, architects and design professionals should not provide FF&E services when they lack the expertise, prefer to maintain business relationships with local dealers only, or do not fully understand the risks of offering such services.

CLIENT NEEDS
Both public- and private-sector clients seek FF&E services for a variety of reasons. To respond to client FF&E needs, architects can offer a set of basic services as well as expanded services that also include managing the acquisition of FF&E products. Some firms may even act as FF&E resellers to provide a client with a single point for dealing with their procurement needs.

Reasons Clients May Need FF&E Services
Some large corporations and public agencies with in-house facility and purchasing departments have gone through downsizing or have elected to outsource FF&E selection and procurement efforts. Smaller companies, of course, rarely employ someone to carry out these functions. In either case, such clients frequently turn to outside consultants, including architects, to provide for their FF&E needs. Described here are the primary reasons clients seek FF&E services.

To furnish new spaces. Whether clients are moving, expanding, downsizing, or reorganizing, their project needs may include purchasing new furniture, reconfiguring existing furniture, or a combination of both. Like building design, the FF&E acquisition process involves defining needs, developing concepts, specifying products, estimating costs, soliciting bids, and overseeing installation. Often clients require assistance to assess the quality, value, and appropriateness of their existing furnishings for use in a new or upgraded facility. The process of selecting and installing FF&E must be synchronized with the overall project design and construction schedule.

To replace or upgrade existing FF&E. At times, clients need to upgrade existing furnishings to accommodate new technology and/or outdated equipment. Many new products have been developed over the past decade to accommodate changing requirements for communication system components. Clients may also need to replace worn furniture or update the company image. For clients moving to a new space, the architect can thoroughly evaluate the hard and soft costs of relocating a large existing systems furniture installation. This research may reveal it is more cost-effective to purchase new products than to move the old. The cost of any new items can be offset by choosing products from the large market of refurbished or reengineered furniture.

To refurbish existing furniture. Some clients want to refurbish existing furniture for reuse in an updated interior scheme or for other aesthetic reasons. The architect may need to evaluate the costs and benefits of purchasing new furnishings versus refurbishing, reupholstering, or refinishing existing furniture. Sometimes it is desirable to restore antique, classic, or other well-made pieces. To offer clients the best options for their projects, the architect should be familiar with the resources available to provide these services as well as with the general cost for them.

To expedite FF&E procurement. Some clients may want to expedite the FF&E procurement process for a variety of reasons, such as facilitating the start-up of a new work group by a certain date or opening a new facility ahead of the competition. The schedule demands of fast-track projects also require expedited furniture procurement, often making it necessary to short-circuit the traditional bid-to-dealer process. By working directly with manufacturers, architects can help speed up the bid process by offering acquisition management services that include quoting, ordering, and procuring products directly. Applying a “design-build” approach to furniture acquisition can save the client time and money and make it possible to meet a fast-track schedule.

To simplify FF&E procurement. Many furniture dealers offer or focus on only one major product line, and they may not have access to others. In an effort to assemble
the most appropriate selections for their needs, clients often have to deal with multiple
dealers or many different manufacturers. To simplify FF&E procurement and reduce the
number of contacts they need to make, clients often look for a single source to manage
the process. By offering furniture acquisition management services, the architect can ful-
fill this need.

After FF&E services have been completed for a given project, a client is likely to
have an ongoing need to maintain and periodically update FF&E products. Sometimes a
simple reorganization of a department will require further FF&E consideration that
could result in modifications to the building structure itself. Thus, an architecture firm
that stays attuned to the FF&E needs of a client will often get a “heads up” on upcoming
projects involving building renovation or new facility design. Continuing to service FF&E
needs can also help architects forge valuable and lasting client relationships.

Agreements for FF&E Services

Clients with considerable FF&E selection and procurement experience and facility manage-
ment resources often have their own agreements for FF&E services. When clients require
the use of such agreements, architects are strongly advised to review them carefully, including
review by the firm’s attorney.

When the client does not require use of its own agreement for FF&E services, archi-
tects may use one of two AIA standard forms of agreement for this purpose. When FF&E
acquisition services are part of interior design services, B171 ID-2003, Standard Form of
Agreement Between Owner and Architect for Furniture, Furnishings, and Equipment
Design Services, can be used. The FF&E increments of work in this agreement are
closely aligned with those for building design and construction. If FF&E services are pro-
vided as a stand-alone service, architects can use B175 ID-2003, Standard Form of Agree-
ment Between the Owner and the Architect for Furniture, Furnishings, and Equipment
Design Services.

Related AIA documents are A275 ID-2003, General Conditions of the Contract for
Furniture, Furnishings, and Equipment, and B775 ID-2003, Invitation and Instructions
for Quotation for Furniture, Furnishings, and Equipment.

Some clients desire a single point of project control or turnkey service for FF&E selection
and acquisition. In such cases, a design firm can act as a reseller of furniture by entering
into purchasing agreements directly with manufacturers. In this role, the design firm
takes on responsibilities and tasks generally provided by furniture dealers. This broker
arrangement requires additional skills and knowledge and proper disclosure of the firm’s
responsibilities to avoid the appearance of a conflict of interest. It is also important for
architects to consult with their insurance brokers to ensure they are adequately insured
for providing these services and to evaluate any risk or liability associated with them.

The total volume of furniture produced for the U.S.
office market in 2004 was
more than $10 billion,
according to the Business and
Institutional Furniture Manu-
facturer's Association (BIFMA).

For a more complete
discussion of client-generated
contracts, see the back-
grounder “Responding to
Client-Developed Contracts”
in the 13th edition of The
Architect’s Handbook of
Professional Practice.
SKILLS
Architectural knowledge and skills associated with programming, design, documentation, and construction administration are applicable to FF&E services. However, additional specialized knowledge is required with respect to furniture construction, fabric types, available product lines, specification of furniture and fabrics, furniture installation procedures, codes and regulations governing furniture and fabrics in commercial projects, and other topics. A firm can develop this FF&E capability by hiring individuals who already have the requisite knowledge and skills or by training interested staff in-house.

Knowledge of Furniture Products
Architects offering FF&E services must be knowledgeable about systems furniture, case goods, seating, and freestanding (“loose”) furniture, as well as many specialty items. Knowledge of ergonomics, furniture construction, and fabric characteristics such as durability, flammability, and applied coatings is essential to providing appropriate recommendations to the client. Most product information is readily available through manufacturers’ representatives or online resources. When evaluating furniture, architects should also pay close attention to product warranties and the manufacturer’s financial viability.

Industry trade shows are a good place to gather information and view a large variety of FF&E products firsthand. NEOCON, an annual trade show in Chicago, is one of the largest and most comprehensive of these events. Others include NEOCON East in Baltimore and NEOCON West in Los Angeles. A number of industry-specific furniture shows, such as the Hospitality & Design Show, are typically listed on the Web calendars of ASID and IIDA. Most furnishing vendors provide product information, including extensive technical information, on Web sites as well.

Assigning one or two staff members to focus on creating and managing a firm’s furniture library is helpful. Local sales representatives are the best resource for pricing and follow-up information. Most vendors encourage their sales staff to call on design firms to inform them about the costs and benefits of their particular lines. These companies also will provide samples and mock-ups of their products for evaluation, often at no charge. Many sales representatives provide “lunch-and-learn” presentations for design firms and regularly host designers on factory trips to highlight lines appropriate for a specific project.

Providing furniture procurement services also requires good knowledge of local furniture dealers, including the services they offer and the lines they carry. For example, for workstation systems projects, dealers often provide final detailed layouts and specifications to the architect’s design requirements. They also may inventory existing furniture for evaluation by the architect or coordinate installation. Architects can sometimes find it helpful to create a partnering arrangement with local dealers and to work with different companies to fill the needs of different projects.

Ability to Define FF&E Requirements
To determine the client’s furniture requirements, the architect must ascertain the client’s FF&E budget and then undertake a careful evaluation of individual workspace needs, including spatial constraints, and overall equipment needs. Programming skills are necessary to gather, process, and document this information, which is usually done with the use of customized survey forms. Many systems furniture companies have their own sample forms, which can be used as a starting point.

Ability to Develop FF&E Solutions
The architect should be able to evaluate alternative furniture products and make appropriate recommendations with respect to the client’s overall furniture needs. This ability comes with experience and requires knowledge of available resources for all types of furniture and furnishings. Research skills are needed to find alternative products in various price ranges; this task sometimes requires a clear understanding of the costs and benefits of various alternative products, as well as persistence and creativity.
Ability to Prepare Cost Estimates

The architect must be able to estimate costs to provide the client with figures for a furniture budget. Pricing estimates can be calculated by applying an appropriate discount to current list price information obtained from the manufacturer. More accurate pricing can be obtained directly from manufacturer’s representatives, dealers, or the manufacturer itself. To make budget estimates as accurate as possible, the architect must consider applicable taxes, shipping and storage costs, access fees, installation costs, fuel charges, and so on, in addition to the cost of the product. It may be also useful for the architect to understand the financial and tax implications associated with methods of procurement (e.g., purchase vs. lease).

Ability to Prepare FF&E Specifications

An essential part of FF&E acquisition services is the preparation of accurate and clearly written furniture specifications for all types of furniture and furnishings. Specifications for freestanding furniture pieces are the simplest to prepare, and most vendors will assist with the preparation. Systems furniture can be specified in general terms, since most systems vendors prepare full and detailed parts lists for individual orders. Specification preparation also requires specifying COM (customer’s own material) and COL (customer’s own leather) fabrics. Sample forms for this purpose are available through professional interior design associations. Specifications for furniture and furnishings include the following types.

**Proprietary specifications.** Proprietary specifications identify products and materials by manufacturer’s name, model number, or part number. This is a “closed” specification and does not allow for substitution. Many designers use this type of specification to control aesthetics, function, and quality.

**Descriptive specifications.** Descriptive specifications describe in detail the performance characteristics, materials, finishes, workmanship, and fabrication of a particular product and list several comparable manufacturers. This type of specification is used in an “open” bid situation, usually to allow for more competitive bidding. It does not offer the level of design and quality control that proprietary specifications provide.

**Performance specifications.** These specifications describe only the desired or required results and neither prescribe product characteristics nor reference manufacturers. This allows vendors to propose products they feel will best meet the performance requirements.

Knowledge of Furniture Bidding Procedures

Knowledge of FF&E bidding processes for both private and public projects is needed. As with building construction bidding, private FF&E bidding differs significantly from public FF&E bidding. In private bidding, the submittal and evaluation process can be tailored to meet the client’s project-specific needs. In public bidding, established processes often do not allow for negotiation, split bids, or the evaluation of alternates.

Knowledge of FF&E Installation Practices

Knowledge of installation requirements for furniture and furnishings is key to planning a successful project. Many issues can arise during furniture installation. Who is responsible for delivering, receiving, and inspecting the products? Who is responsible for removing trash and making final electrical and data connections? Who is responsible for filing freight damage claims, rectifying warranty issues, completing repairs? The architect needs to understand and clarify the responsibilities of the manufacturer, dealer, and shipper. What type of facility will the furniture be stored in? Is the facility bonded? Humidity controlled? What are the delivery constraints (size of elevator, access schedule, etc.)? All of these issues should be addressed ahead of time in a written installation specification that becomes part of the installation bid.
PROCESS

FF&E services can encompass a variety of services tailored to the specific needs of the client. As presented here, the major activities and tasks are described under two headings: “FF&E Selection Services” and “FF&E Acquisition Management Services.” Clients may contract for the latter group of services after a successful bidder for the specified products is chosen.

FF&E Selection Services

Increments of work for FF&E selection services are somewhat similar to the increments and flow of work for the building design process.

Evaluation of client needs. The architect works with the client and users to determine and document FF&E requirements for the project. The evaluation identifies FF&E needs for all functional spaces, including individual workstations in projects that use systems furniture. If the project includes existing furniture, evaluation of furniture to be reused, refinished, or reupholstered also takes place at this time.

Numerous factors are considered in the FF&E programming process. The major ones are listed here:

- Functions and types of spaces (including personal, common, and support)
- Number of assigned staff
- Numbers of visitors
- Types and quantities of items to be stored
- Signage requirements
- Desired artwork and interior plantings
- Quantity, condition, and types of existing furniture to be reused

Cost estimate. After evaluating the client’s FF&E needs, the architect prepares a line-item cost estimate to establish a budget for furniture, artwork, accessories, interior signage, and other items. The budget is usually based on the current prices of items comparable to those requested. The budget should indicate the quantity and unit costs anticipated for each type of product and, if applicable, estimated costs for reupholstering or refinishing existing furniture. It should also include costs for freight, delivery, and installation, as well as a design contingency. The client should approve the initial FF&E budget prior to product selection so the architect has a cost benchmark for considering products. Once product selections have been made, the architect may revise the initial estimate to reflect anticipated final costs and to ensure the project remains within budget.

Furniture selection. After approval of the budget, the architect presents preliminary options for new furniture and furnishings selections, then obtains samples of fabrics and finishes for selected items and presents them to the client for review and approval. Furniture selection decisions are based on several requirements: function (what the client needs), durability (how long the client wants the products to last), aesthetics (what the architect or designer feels will enhance the design), and budget (what the client can afford). The style of the suggested furniture should complement the project design and have proper scale, size, and proportion for the space.

Systems Furniture Standards

For projects using systems furniture, it is helpful to establish standards for prototypical workstation sizes and configurations. Some clients will be able to provide such standards, but others will require professional help to develop them. Once the client approves these standards, they can be used to compare the products of a variety of systems furniture manufacturers with respect to functionality and cost.

Standards for systems furniture should identify sizes and finishes for work surfaces, panels, and vertical surfaces; storage types; lighting types; accessories such as keyboard trays and CPU hangers; hardware types; and electrical and data requirements. Once each workstation type has been designed, the architect and client can choose the workstations to be used as the basis for project bids. Sometimes the architect may have the manufacturer with the successful bid mock up an actual workstation for hands-on analysis.
Whenever possible, the client should view the product firsthand. It is especially critical for clients to test most types of chairs for comfort and function. Fabric and finish selection are also critical. Patterns and colors should complement the furniture, but keep in mind that the size of the pattern repeat directly affects the quantity of fabric needed and that some fabrics must be approved for use with a particular manufacturer’s products. Fabrics should be sufficiently durable for the intended use of the product as well. High-traffic areas require fabrics that have met performance tests for heavy commercial use, while fabrics for guest seating or decorative pieces should meet the less rigorous industry standard Wyzenbeek abrasion test. Selection of furniture finishes must also balance aesthetic, maintenance, and durability criteria. The species of wood used for furniture is generally related at least in color to the wood veneers used for paneling, wood doors, and other wood finishes in the project. Metal or painted finishes should also blend with the overall color scheme established for the interior design of the space.

Preparing FF&E specifications. For competitive bids, product specifications must be written and issued along with instructions to bidders and requirements for delivery, installation, warranties, and punch list procedures. This information is best presented in a one- or two-page format and includes product name, model number, plan tag, finish type, submittal requirements, fabric or COM information, order price, and other pertinent information. If possible, it is advisable to include a photograph of the item, along with a copy of the specified fabric or finish swatch. One specification sheet should be prepared for each individual product ordered. In addition, each bid package should include full furniture plans, indicating items included in the bid and tagged to reference the specifications. Both the architect and the client should review each specified item for accuracy. Individual bidders are responsible for quantity takeoffs. Incorrectly specified products that are delivered to the site may result in claims against the design professional.

Solicitation of bids. After approval of the budget, the architect assembles the final bid packages for issuance to dealers and vendors. For public bid projects, it is important to mention any statutory requirements for procurement in the package.

The bid documents describe factors such as site conditions, elevator access, Dumpster use, and so on, so the installer can perform its services in the most efficient and professional manner. Two weeks is a reasonable bid period for midsize projects of up to 20,000 square feet. For large-scale systems furniture projects (more than 100 workstations), three weeks is a preferable time frame. After bids have been received, the architect may prepare a spreadsheet to help analyze them for the client. Bids are generally awarded to a single dealer. However, a project may be split between providers of systems furniture and loose furniture, depending on specific requirements.

FF&E contract administration. Once the client accepts and approves the successful bid, the client will enter into a contract with the selected dealer(s) and issue purchase orders. The dealer sends submittals to the architect for review and approval. Submittals may include fabrics, finishes, custom shop drawings, detailed system furniture layouts, and so on. The architect is copied on acknowledgments to verify items that have been ordered and put into production and notified of items with a long lead time or discontinued items. The architect should help establish an installation schedule and arrange for a final punch list once the dealer has completed its own punch list.

FF&E Acquisition Management Services

After the client has chosen the successful bidder, the architect may provide expanded FF&E services to the client to manage the furniture acquisition process, which includes the following activities and tasks:

Ordering phase

• Review and approve dealer’s final bid keyed to the architect’s furniture plan, which indicates the product types, quantities, and prices for all the individual products specified by the design team.
• Review detailed systems furniture list.
• Review invoices for FF&E products ordered and recommend payment by client.
• Review submittals to check finish and fabric selections (especially COM items).
Tracking and scheduling phase

• Check acknowledgments supplied by furniture dealers for accuracy and completeness.
• Record estimated delivery dates.
• If necessary, recommend substitutions or changes to the client for items with a long lead time to meet the move-in schedule.
• Coordinate the delivery and installation schedule through the contracted furniture dealer(s).

Delivery and installation coordination phase

• Coordinate the new furniture installation schedule with the contracted furniture dealer(s) to ensure installation into the completed space or to arrange for storage in a secured temporary space.

Terms Used in FF&E Services

<table>
<thead>
<tr>
<th>Case goods.</th>
<th>Furniture items generally used for storage that have a case as the primary construction component. The case space may contain drawers, shelves, and/or doors.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer’s own material (COM).</td>
<td>Fabric specified from an alternate source rather than a standard fabric provided by the original manufacturer.</td>
</tr>
<tr>
<td>Customer’s own leather (COL).</td>
<td>Leather specified from an alternate source rather than a standard material normally provided by the original manufacturer.</td>
</tr>
<tr>
<td>Ergonomics.</td>
<td>An applied science concerned with designing equipment and furniture to maximize productivity by reducing user fatigue and discomfort.</td>
</tr>
<tr>
<td>Free-on-board (FOB).</td>
<td>A shipping term that identifies when the responsibility for damages to goods shifts from the seller to the purchaser. Merchandise is generally shipped prepaid on private carriers to an installer. The merchandise becomes the property of the purchaser when it leaves the manufacturer’s dock, unless otherwise specified. Any subsequent freight damage and any freight claims must be reported to the carrier by the purchaser promptly upon receipt, and the purchaser must settle any claims with the carrier.</td>
</tr>
<tr>
<td>Freestanding furniture.</td>
<td>Individual tables, chairs, and case goods that are not built in. Sometimes referred to as “loose” or “conventional” furniture.</td>
</tr>
<tr>
<td>Furnish.</td>
<td>To supply and deliver products to the project site that are ready for unloading, unpacking, assembly, installation, and similar operations.</td>
</tr>
<tr>
<td>Systems furniture.</td>
<td>Furniture components that can be assembled, configured, and reconfigured to create workstations and other workspace environments. Components include non-load-bearing panels, load-bearing panels, work surfaces, shelving, storage units, and various accessories. Systems furniture accommodates power and data cabling to support computers, communication systems, and other equipment and devices.</td>
</tr>
<tr>
<td>Task lighting.</td>
<td>Independently switched lighting that illuminates a specific surface or area. Task lighting is intended to conserve energy by lighting work areas only when they are occupied.</td>
</tr>
<tr>
<td>Workstation.</td>
<td>A workspace created from systems furniture components. Workstations normally contain freestanding furniture such as chairs, cabinets, and files.</td>
</tr>
</tbody>
</table>
• Provide on-site supervision during major furniture installation.
• Coordinate with the design team during punch list preparation.
• Contact furniture manufacturers, dealers, or installers—if necessary—to make repairs and/or corrections as required.
• File and monitor freight and/or damage claims.
• Arrange for installation of artwork and accessories.

COMPREHENSIVE SOLUTIONS
Provision of FF&E services gives architects greater opportunity to enhance the overall functionality of the buildings they design and to influence the way that people use and interact with those buildings. Acquisition management for FF&E can further round out the architect’s involvement in this aspect of a project. Architects providing these services in conjunction with basic building design have the chance to achieve more comprehensive solutions that can bring added value and benefits to building owners, occupants, and users.
The AIA provides contract documents designed especially for these types of architectural services. B153-2007 is a stand-alone document, while B253-2007 is a scope of services document which can be attached to the prime agreement in order to provide additional services.

**B153–2007, Standard Form of Agreement Between Owner and Architect for Furniture, Furnishings and Equipment Design Services**


**B253–2007, Standard Form of Architect’s Services: Furniture, Furnishings and Equipment Design**

AIA Document B253™–2007 establishes duties and responsibilities where the architect provides design services for furniture, furnishings and equipment (FF&E). The scope of services in AIA Document B253–2007 is substantially similar to the services described in AIA Document B153™–2007. Unlike AIA Document B153™–2007, AIA Document B253–2007 is a scope of services document only and may not be used as a stand-alone owner/architect agreement. B253–2007 may be used in two ways: (1) incorporated into the owner/architect agreement as the architect’s sole scope of services or in conjunction with other scope of services documents, or (2) attached to AIA Document G802™–2007, Amendment to the Professional Services Agreement, to create a modification to an existing owner/architect agreement. B253 was revised in 2007 to align, as applicable, with AIA Document B101™–2007. NOTE: B253–2007 replaces AIA Document B253™–2005 (expired May 31, 2009).

For more information about AIA Contract Documents, visit [www.aia.org/contractdocs/about](http://www.aia.org/contractdocs/about)