

# A Primer on Consultants/Contractors for Residential Construction

Contributed by AIA Knowledge Resources Staff

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## SUMMARY

Designing and building a home is a complex process, one that most people know very little about. As the owner, you will be asked to make numerous complicated and challenging decisions. This best practice provides a brief description of the roles and responsibilities of the many consultants/contractors required to produce a successful residential project.

You'll begin, of course, by selecting an AIA architect to design your house. The next important task is to spell out clearly the roles and responsibilities of all the participants (for example, contractors and subcontractors, engineers, interior designers, landscape architects, etc.) using the AIA contract documents appropriate for your project. AIA contract documents use clear, concise language that is widely known and accepted. Visit [AIA.org](http://AIA.org) to learn about owner-architect and owner-contractor agreements, as well as contract documents for small projects, construction management, and project administration. Your architect can help explain the pros and cons of your options.

The specific roles and responsibilities of the consultants/contractors listed below will depend on the contractual agreements for the project.

## CONSULTANTS

**Consultants** are qualified to provide professional advice and/or services, e.g., solving problems of management or design; they are usually licensed by the state after satisfying educational, experience, and examination requirements. The tasks associated with these services tend to be embodied in plans, specifications, and verification of work performed by contractors. Consultants are usually hired by the client/owner.

**Architect:** A licensed professional responsible for the overall design of the project. The architect prepares the construction and bidding documents. The General Conditions for construction, which are normally part of the construction documents, clarify the role of the general contractors and others involved in the construction of the project. In short, the architect knows and understands the details of the project and looks out for your interests.

**Audiovisual system designer:** Provides multimedia, acoustic, and information technology services; also establishes standards for installation of equipment.

**Building inspector:** Inspects projects for conformance with plans and specifications; includes but is not limited to structural, concrete, and other testing/observation functions. Inspectors may be either civil servants working on behalf of a municipality or hired privately. Inspectors who are civil servants represent the interests of the municipality and are not a consultant to the client.

**Civil engineer:** Performs detailed design calculations and analysis related to terra-forming, grading, surface and subsurface drainage, driving platforms, and related utility and infrastructure development.

**Electrical engineer:** Analyzes the project's requirements for electricity, electronics, and electromagnetism.

**Geotechnical engineer (aka site/soil consultants):** Helps with foundation design by determining soil-bearing capacities and pressures; determines whether there are unique soil or structural conditions that require engineering. Site conditions can affect construction costs, so completion of a site analysis is important.

**Interior designer:** Preferably a licensed professional; specializes in the design of finishes and furnishings for interior spaces. Provides detailed drawings and specifications for the interior portion of a project.

**Kitchen designer:** Specializes in kitchen layout and associated products and equipment. Plans for detailed materials and equipment and specifies final fit and finish for selections.

**Land planning consultant:** Assists with land-use code approvals and issues related to long-term development/preservation of properties. Is well versed in local planning codes and municipality master plans.

**Landscape architect:** Designs outdoor spaces and structures; determines appropriate land usage given,

among other considerations, soil and drainage conditions and whether irrigation system is needed; understands laws regarding building on wetlands, historic sites, and the like; chooses plants and trees that are compatible with the sun, soil, shade, and water conditions on the site.

**Lighting consultant:** Designs the way in which light will work within a given space. Specifies lighting, bulbs, and related controls and equipment; provides lighting and switch drawings and documentation.

**Mechanical engineer:** Designs, installs, and suggests maintenance schedules for the structure's heating, air-conditioning, and ventilation systems. Provides detailed plans and specifications for those systems.

**Security system consultant:** Designs and installs building security devices such as alarms and cameras. In addition, may provide guidance for continually monitored systems or services.

**Structural engineer:** Calculates loads and stresses on the structure and ensures its strength and stability; provides detailed calculations and drawings to the project architect.

**Surveyor:** Determines the boundaries of a site and locates easements and other site features. Surveyors are licensed by the state in which they work.

**Tester:** Performs tests required by project specifications, such as concrete-bearing capacity. Usually hired at the owner's expense to ensure conformance with the project's plans and specifications.

**Wildfire mitigation consultant:** Assists with wildfire mitigation approvals and planning contingencies; familiar with prevailing wind directions and other factors affecting the fire load for a particular site.

## CONTRACTORS

**Contractors and subcontractors** supply certain articles or perform physical work at a certain price or rate in the building and related trades. They may be licensed by the state as well, but the requirements are not as stringent as those for consultants. The tasks associated with these trades tend to be directly associated with physical production or assembly work. Contractors are usually hired by the general contractor or construction manager and are often considered subcontractors.

**Carpenter:** Cuts, frames, and joins the timbers or woodwork of a building or structure. Generally is responsible for the overall frame of a building.

Carpenters may specialize in a particular type of finish work.

**Drywall crew:** Installs the drywall surface on the interior framing, using such materials as gypsum board. As a specialized trade, drywallers are responsible for fire-resistant surfaces.

**Electrician:** Assists with design and installation of the lighting and other electrical systems equipment. All electrical system functions must comply with the local building code. Electricians are licensed in the state in which they work.

**Foundation builder:** Constructs the part of the structure that serves to transmit its load to the earth or rock, usually below ground level. The foundation system is engineered and must adhere to the plans and specifications as well as the local codes.

**General contractor:** The prime contractor who is responsible for the overall work at the construction site. The general contractor is responsible for hiring and supervising subcontractors and suppliers, such as plumbers and electricians.

**Heavy equipment operator:** Uses machinery to move construction materials, earth, and other heavy materials. Equipment can range from bulldozers to tower cranes.

**Laborers:** One of the construction trades traditionally considered unskilled manual labor. In the division of labor, laborers use hand tools, power tools, and air tools; run small equipment; and act as assistants to other trades.

**Landscaper:** Arranges features of the landscape or garden attractively and per the landscape architect's plans; may assist with ongoing maintenance of the final plantings.

**Mason:** Builds structures or parts of structures with such materials as brick, tile, stone, glass block, or concrete. The individual units are laid in and bonded together with mortar.

**Painter:** Applies paint, stain, and other brush or spray-on protection to the exposed interior and exterior finishes of the house or structure once it has been constructed.

**Plumber:** installs the pipes, fixtures, and other apparatus for bringing the water supply into the structure and removing liquid and waterborne wastes; usually a licensed trade under state authority.

**Septic system crew:** Installs a tank (usually concrete) and related equipment and piping on a property into which raw sewage is discharged when public sanitary sewers are not available. The crew is

responsible for movement of soil to accommodate the system and backfilling at the completion of the work.

**Well driller:** Drills a hole in the ground where water will be reached and pumped; may also drill ground source heat pump loops. The type of equipment used will vary by local soil conditions and anticipated depth of the well.

## RESOURCES

### For More Information on This Topic

See [You and Your Architect](#) on [www.aia.org](http://www.aia.org). See also

“Developing and Using Job Descriptions,” by Kathleen C. Maurel, in *The Architect’s Handbook of Professional Practice*, 14th edition, page 270.

*The Handbook* can be ordered from the AIA Bookstore by calling 800-242-3837 (option 4) or by sending an e-mail to [bookstore@aia.org](mailto:bookstore@aia.org).



### More Best Practices

The following AIA Best Practices provide additional information related to this topic:

- 18.03.05 Six Approaches to Building Your Dream House
- 18.09.05 The RFI’s Role in the Construction Process
- 23.01.02 Finding the Right Architect in Nine Easy Steps
- 23.01.03 An Architect by Any Other Name. . .

### Feedback

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### Key Terms

- Practice
- Design disciplines
- Construction disciplines