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WHOSE SERVICES DO YOU NEED IN BUILDING A HOUSE?



Among persons who have built homes, some remember housebuilding as a pleasant experience. Others look back upon it with displeasure and disappointment because of unanticipated costs and perhaps lawsuits. The difference between pleasant and troublesome building is usually due to the amount of care exercised by the owner in business matters. Equally important are the ability and the integrity of the people engaged to plan and build the house.

Each step in building is an important transaction involving large sums of money. To build without professional advice and written agreements is foolhardy.

Business agreements and procedures in home building with which homeowners are concerned are described in this circular as are the services offered by architects and contractors. (See SHC circulars, B2.1—"Selecting the Homesite" and A1.3—"Financing the Home," for procedures in buying land and arranging a loan.) By acquainting yourself with the services of architect and contractor, you—as a prospective homeowner—can make the most of the guidance of both or one, depending on the professional aid you choose in building your house. While the description of services and documents may seem complex, they take on a logical and uncomplicated order when the owner has the help of a capable architect and a reliable contractor.

Planning and building a house entails 1) the obtaining of a workable set of plans and specifications; 2) the drafting and letting of contracts; 3) building operations; and 4) satisfactory completion of the building and conclusion of contracts.

OBTAINING PLANS AND SPECIFICATIONS

A good set of house plans and specifications is essential. Regardless of where you obtain these plans and specifications, you should first develop an intelligent listing of your needs — the number of rooms, size, type, location, arrangement — and fit these needs to your building budget.

Plans and specifications may be secured from:

 An architect. By engaging an architect, you can be assured that drawings and specifications will be complete and accurate, and the house, well planned and designed for you individually.

Use as guideposts to select your architect:

- 1. Recommendations from satisfied clients of architects.
- The architect's tastes and yours. The type of work which the architect does should agree with your tastes. Study houses which architects have done.
- A plan service agency. "Stock" house plans prepared by such agencies can be purchased from magazines or secured from material dealers. Many of these agencies employ architects, and their plans and specifications are satisfactory. A number of stock plans, however, are inferior in design; their specifications, incomplete. The owner must judge whether the plan is well designed and rely on his material dealer or contractor as to the adequacy of the plans and specifications.

An owner, who selects a stock plan and then tries to change it, is likely to encounter trouble unless he has the help of a competent person trained to give the needed service. All revisions must be recorded and must be fully understood by a contractor before the revised plans or specifications are used as contract documents.

If the house is to be a "prefab," or if it is to be built by a builder giving "complete service" (one who furnishes plans, specifications and all building operations), the owner is usually limited in his selection to a few basic plans with several choices of exterior treatment. Changes are seldom allowed. In selecting a prefabricated house, check on the type of construction, its conformance to building codes, and material and equipment not furnished by the manufacturer, — i.e., steps, foundations, mechanical work, terraces.



DRAWING UP THE CONTRACT DOCUMENTS

With plans and specifications completed, you, as owner, now become concerned with preparing and letting the contracts for construction. Plans and specifications must be approved by your loan agency before the contract is let. If you have an architect, he will supply the necessary technical information for contracts to be drawn up by the owner and his attorney. The architect will assist in letting the contract. (See page 7.) The architect should be retained to supervise construction.

Without an architect, you must select and engage a contractor yourself, and with him draw up the necessary documents. Upon signing the contract, the general contractor becomes responsible for the building operations. The owner who knows nothing about building should not try to supervise.

Written agreements are necessary to describe definitely the obligations of the various parties concerned with planning and building operations so that nothing is taken for granted. Such agreements protect the interests of all parties. Each signer of a document should have a signed copy of the contract.



SELECTING A CONTRACTOR

The usual method of selecting a contractor when you have an architect is through competitive bidding by equally competent and responsible contractors. The architect issues plans and specifications to each contractor invited to submit a bid. Instructions must clearly state the basis on which the bid is to be let. The lowest bidder is usually selected. If the lowest bid is not low enough, you can either: 1) ask two or three of the lowest bidders to refigure from a list of cuts and substitutions to be made in the plans and specifications; or 2) ask the lowest bidder to confer with you and your architect as to what changes can be made to cut costs (usually more satisfactory). All changes should be made a part of the plans and specifications.

Another way to select a contractor is on the basis of recommendations of material dealer, lending agency, or friends. This method is preferred if there is no architect since most owners are not qualified to select a contractor by competitive methods. Don't "shop around" on your own for contractors to build your house for less money; you are likely to fall into the hands of a contractor who practices "gyp" methods.

Sometimes an owner attempts to plan and build a house himself with the aid of sub-contractors. Don't try this if you are inexperienced in building.

Some Rules for Trouble-Free Building

- Have a good set of working drawings and specifications which fit your site and your needs, and which describe all work involved. Be sure that you know what is to be done, such as the number of coats of paint specified.
- 2. Don't urge your architect, if you have one, to get bids from every contractor. He should not permit unqualified contractors to bid. Neither should he ask a contractor to bid merely for the benefit of having his estimate. Estimating takes time and costs money.
- 3. Make written agreements with your architect and the contractor, listing responsibilities and duties. Use standard legal contract forms.
- 4. Deal with the "boss" (your architect, or the contractor if you have no architect). Don't ask favors of, issue orders to, or raise cain with workmen or sub-contractors.
- 5. If you believe that something is wrong, get the matter settled. If your contractor is the kind he should be, he will correct his mistakes.
- Do not blame the contractor for delays beyond his power. Do expect him to finish his work promptly.



THE ARCHITECT AND THE SERVICES HE PERFORMS



The architect will plan your house and will also supervise its construction if you wish.

His title of "architect" is a legal one, indicating that he has proved himself professionally competent by examination and is registered — or licensed — to practice architecture. Designers and draftsmen are employed by architects to design and to make drawings necessary for construction purposes. Generally they have no license to practice architecture independently.

Because an architect understands design, construction, and business procedures of building, he makes the building of a house an efficient operation.

The usual duties of the architect are to:

- 1. Analyze the family's living needs and relate these to the building budget.
- 2. Visit the site to determine the desirable location of house and rooms. (The architect may even advise the owner in choosing a site.)
- 3. Draw preliminary sketches (general plan and appearance of house).
- 4. Prepare preliminary working drawings for estimates of costs, if requested.
- Prepare working drawings and details (exact dimension drawings showing floor plans, exteriors, structural details, mechanical installations). Blueprints are made from these drawings.
- 6. Prepare specifications. (See page 7.)
- 7. Provide the necessary technical information for contracts relating to the work of the general contractor and, in special cases, to the work of subcontractors. (See page 7.)
- 8. Advise on the selection of the contractor. In competitive bidding, the architect takes bids and analyzes these bids for the owner.

If the owner wishes to give the responsibility for the entire construction job to the contractor, the architect concludes his services at this point. The owner and the general contractor then work together. The usual procedure, however, is to have the architect carry on supervision through to the completion of the house. If he does this, then his further duties are to:

- Supervise construction to see that the work is carried out according to plans and specifications; assist in selection of hardware, lighting fixtures.
- 10. Examine requests from owner, contractor, and sub-contractor for changes and substitutions of materials; make written recommendations to owner for approval of proposed changes; issue orders for these changes.
- Check requests from the contractor for payments, and issue orders for such payments in writing. Keep accurate accounts.
- 12. Make final inspection to be sure the job is complete.
- 13. Prepare notice of completion; ascertain that all bills are paid and no liens exist; issue orders for final payment.

Fees and Payments

Many people hesitate to ask an architect about his services because they fear their inquiry will place them under obligations; however, no obligation is incurred until a contract is signed with the architect. A retainer fee is sometimes requested then.

The fee* for an architect who designs and supervises varies from 6 to 15% of the total cost of the house; for one who does not supervise, from 3½ to 8%. When the architect prepares no plans, but only supervises, he usually is paid on a per diem or hourly basis.

The usual schedule of payments is: first, on completion of preliminary sketches; second, on completion of working drawings and specifications; third, during construction (monthly); final, on completion.

If the owner decides not to build at any point during his dealings with the architect, this decision does not release him from paying the fees incurred up to that point.

^{*} FHA permits loan agencies to include the architect's fee in the evaluation of the house.

OWNER-ARCHITECT AGREEMENT

The owner-architect agreement should:

- 1. Define the relationship of the owner and the architect during construction.
- 2. Describe the architect's duties; state the time and the method of paying the architect's fees.
- 3. Set forth the owner's duties. These are to:
 - Provide the architect with information regarding restrictions, easements, boundaries of site, sewerage, utilities.
 - Have a survey made of site contours, grades, adjoining properties, streets.
 - Give prompt, careful consideration to all papers submitted by architect.

An Owner-Architect agreement will clear up such misunderstandings as those relating to:

- The architect's function. The architect's business is not to "draw blueprints," but to perform a service to the owner. He sells his services by designing a house and supervising construction. All drawings, blueprints, and specifications furnished by him remain his property and are not to be used for other than the specific house for which they were made.
- The use of the word "architect." This term, when used in a contract, implies the architect himself or any person he designates to represent him.
- The architect's role as arbitrator. If owner and contractor disagree, the architect (if he supervises construction) becomes the arbitrator. Owner and contractor must report their dissatisfactions to him. The owner is too apt to think that all decisions should be in his favor because he pays the architect.
- The difference between supervision (regular and reasonably frequent visits to the job) and superintendence (constant attendance of the architect or his representatives during all working hours while the job is in progress). Supervision is more usual to residential construction than superintendence.

THE ARCHITECT AS THE OWNER'S AGENT

Some architects offer owners complete service in the building of a home. In addition to designing the house, such an architect takes on the duties commonly performed by a general contractor. He acts as the owner's agent, and superintends and coordinates the work of the separate trades. For his services, he is paid an additional percentage above his usual fee for designing the house.

The architect who offers this service has the specifications and contract documents for the individual trades written in such a form that each trade becomes a contractor. Each provides its own permits, pays any sales tax, carries necessary insurance and workmen's compensation, complies with all laws, ordinances and codes.

Bids are requested from several contractors for each trade. The architect assembles the several bids and then, with the owner, selects the contractors. The lowest bidders are usually selected unless the time element or quality of workmanship become a factor. The owner signs the contracts with the separate contractors — usually ten or twelve, each of whom represents a different trade. The architect takes out the general building permit for the owner; the owner pays for it. The trades are notified by the architect when to begin work.

The architect or his representative visits the job each day to see that the work of the trades is correlated and that specifications are being carried out.

As the owner's agent, the architect writes certificates for payment when the trades are to be paid. He sends the certificates to the owner who makes out checks payable to the contractors. The architect distributes the checks and collects waivers of liens. (See page 6.) When there is a construction loan, the loan agency distributes the checks and collects the waivers.



THE CONTRACTOR AND THE SERVICES HE PERFORMS



The contractor assumes the job and responsibility of constructing a house. He is in charge of all building operations.

The contractor must be competent in his work, in his financial affairs, and in his business relationships. Rate all contractors whom you are considering to do the job according to:

Financial resources; credit.

Reputation in general: integrity, cooperation, and fair dealings.

Ability to get the job done on schedule.

Experience and intelligence. (Years in business, work done, type of structures built, knowledge of existing conditions.)

Relations with labor, sub-contractors, and material men. (Sub-contractors must like to work with the contractor.)

The contractor furnishes all material and performs all the work for the job shown on the drawings and described in the specifications. Specifically, he:

- 1. Carries out the provisions of the contract documents. (See page 7.)
- 2. Orders and pays for materials.
- 3. Coordinates shipment of materials to site.
- 4. Awards sub-contracts to various trades and schedules work of each.
- 5. Directs construction.

Fees and Payments

The usual arrangements for payment are:

- Lump sum. The contractor agrees (through his bid) to build the house for a fixed sum which includes all costs and the contractor's profit. Owner pays this sum plus any "extras."
- Cost-plus. Contractor is paid the actual cost of materials and labor plus a fixed fee (or fixed percentage of costs — usually 10% to 15% for his overhead and profit).
- "Maximum total" (rare). The maximum total cost of the house is agreed upon by owner and contractor. This includes the contractor's fees. Any saving in total cost is divided equally between owner and contractor.

The usual schedules for making payments are:

- "Partial payment." This plan is generally used when the owner is paying for the house from his own funds or when he can get a construction loan from his lending agency. Payments are sometimes made monthly, but more usually the schedule is: first payment, when foundation is laid; second, when building is framed, roofed and enclosed (plumbing, wiring, heating installations roughed in); third, when plastering is completed; final, when building is accepted.
- "On completion." Contractor receives entire payment upon completion of house.

Liens and Waivers of Lien

Papers involved in payment are liens and waivers of lien.

A lien (a charge against a house under construction whereby the real estate is made security for material or labor) gives contractor, workmen, or material dealers a claim against the owner for material or labor supplied prior to payment by owner.

A waiver of lien (an affidavit certifying that all bills for labor and material have been paid) protects the owner. Owner, architect or loan agency should insist that the contractor present this evidence (that sub-contractors and material dealers have been paid) each time he asks for payment.



SUB-CONTRACTORS

Sub-contractors contract to do a portion of the construction job under the direction of the general contractor.

Each sub-contractor does that part of the work which pertains to his trade and which is described in the specifications. Each is responsible to the general contractor for his men — mechanics and skilled labor — and the work they do. The general contractor selects sub-contractors on the basis of ability, reliability and price; pays them usually on a lump sum basis.

CONTRACT DOCUMENTS

All business arrangements relating to the actual construction are between the owner and the contractor, no matter whether or not an architect is engaged to design the house and to follow it through to completion.

The usual documents between the owner and the contractor are the three listed. All should be signed by the owner and the contractor.

- Agreement. This should state all points agreed on by the owner and the contractor—i.e., scope of work, method and time of payment, time of completion. Because it avoids misunderstandings, an agreement helps to create and maintain pleasant relationships between the owner and the contractor. Should misunderstandings arise in cases where no architect is engaged, the services of an impartial arbitrator (a lawyer, an architect) should be obtained.
- General conditions (prefixed to specifications). This lists 1) duties and obligations of contractor and owner to each other (page 8); and 2) duties of architect (if there is one) in relation to contractor.
- Plans and specifications. The plans consist of all drawings in connection
 with the work; the specifications consist of 1) a description of all materials and their quality; and 2) a description of work to be done and the
 trades to be employed. The plans and specifications supplement each
 other.

What the Specifications Include

The contractor is responsible only for the materials and construction of the house as described in the specifications and drawings.

The specifications should include every item of material wanted. Check carefully. Items forgotten or omitted purposely in listing become "extras" — you pay for them over and above the contract. In addition to materials, the specifications describe the work to be done by listing all the necessary building operations under major classifications; namely, excavating and grading, concrete work, masonry, carpentry and millwork, roofing and sheet metal, plumbing, heating, painting, etc. Under concrete work, for example, would be listed such items as footings, foundation, basement floor, walks.

Be sure every part of the house is included in this listing. Get a sample specification from an architect or a contractor; study it.

Common practices in certain trades often give rise to misunderstandings when the homeowner is not familiar with these practices. The electrical work includes installations, such as electrical outlets, and, if specified, kitchen fan, connection to furnace motor and range, doorbell. Lighting fixtures can be purchased separately, the owner paying for installation; or, a lump sum allowance can be provided for fixtures and installation. (When a "lump sum" is provided, savings or payments in excess of the allowance should revert to, or be paid by, the owner.) Allowances should be sufficient to provide quality fixtures.

Hardware specifications usually include only rough hardware — i.e., garage and sliding door hardware, and all nails, bolts and screws. Finish hardware is usually covered by a cash allowance and is selected by the owner and the architect when construction is under way. To insure an allowance that is ample to cover cost of quality hardware, the owner should make a check-list of items required. (See SHC circular, F15.0 — "Hardware for the Home.")





General Conditions of the Contract

The General Conditions are important because they define the rights and responsibilities of owner and contractor. Don't overlook them. Below is a digest of the usual provisions of the General Conditions.

	CONTRACTOR	OWNER
Insurance and Compensation	Maintains and pays for workmen's com- pensation, public and private liability, and property damage insurance. Contractor is responsible for any damage or injury due to his act or neglect, or that of his employees.	Maintains and pays for fire and extended coverage insurance during construction. Insurance should cover materials, scaffolding and stages, forms and miscellaneous materials and supplies necessary to the work — but not tools.
	If lump-sum contract, contractor owns material and, therefore, he pays theft insurance (or runs his own risks).	If cost-plus agreement, owner owns material and pays for theft insurance. May carry liability insurance against "attractive nuisance" suits — i.e., boy playing in house gets hurt; parents suc.
Building Ordinances	Is responsible for observing local, state and federal ordinances and laws relating to the work, and for protecting owner from all damage due to violations.	
Permits	City building permits: Sometimes contractor takes out permit	
	Utilities (gas, electricity, water, sanitary sewer Sometimes contractor obtains and pays for pe company's regulations.	r): ermits; sometimes owner — depends on utility
Surveys		Provides adequate survey of property.
Taxes	Pays: Social security tax (his share). All taxes for materials (including sales tax). All other federal, state and municipal taxes.	Pays property tax. (Usually only the land is taxed during construction. No levy is made on improvements until beginning of tax year following completion.) If cost-plus agreement, owner owns material and pays all taxes on materials.
Other Expenses of Contractor	Provides and pays all labor, water, power, equipment, temporary heat, tools and scaffolding necessary during construction. Provides and maintains necessary sanitary facilities. Pays royalties and license fees; defends all claims for infringement of patent rights. Pays necessary expenses in connection with protecting his work from damage. If requested: Furnishes surety bond guaranteeing completion of contract and house.	
Other Responsibilities of Contractor	Supervises the work continuously; is responsible for its correct execution. Leaves the house "broom clean" — ready for owner to move into. Guarantees all work; makes good all defects due to labor and materials for 1 year or more after acceptance; is responsible for damages caused by his negligence.	

Changes and Change Orders

Probably more trouble and misunderstandings during construction are caused by changing the original plans and specifications than by any other act.

If changes are to be made during construction by either the owner or the contractor, or if extras are to be added, the instructions should be put in writing before the change is made. Have a written agreement on the cost of the change, whether an addition or deduction. Be sure that changes can be paid for from your cash or included in the loan.

When an architect is employed, the instructions and authorization for the change are issued by the architect in the form of a change order.

Terminating the Contract

Both owner and contractor may end a contract before the house is completed under circumstances varying according to state statutes and terms provided in the General Conditions of the contract. Written notice must be given.

Generally, the owner can terminate a contract if the contractor neglects to do work properly or fails to perform any provision of the contract. The owner must, however, pay the contractor for work done, less damages.

The contractor may end a contract if 1) the owner fails to pay him within a certain time after a payment is due; 2) the work is stopped for any length of time by any public authority, or through act or neglect of the owner.

