

Tips for Individual House Construction

We have taken the liberty to provide you with some tips on how to go about constructing your residence/home.

Firstly, we would recommend getting in touch with professionals to design and construct your house.

Using the services of a professional is as important as using the services of a medical doctor. Considering that you are likely to spend lakhs of rupees, it is prudent on your part to use the services of a professional when you are spending, maybe, your life savings. Moreover, professionals can ensure that your dream space is made according to your preferences.

How is a ‘construction project’ unique as compared to other projects?

All construction projects are unique and one of its kind, each construction project goes through four major phases in its life cycle:

1. Concept Phase
2. Design and Tendering Phase
3. Execution Phase
4. Finishing Phase

Let us walk you through a hypothetical project so you know what to anticipate and can prepare accordingly.

Step 1: How much can you spend on this Project?

- What is the maximum amount of money that you wish to spend to commission the house and make it liveable? You should be able to walk into the house and start living immediately. Your budget should provide for fixed and loose furniture, and soft furnishings such as curtains, etc. Once you have arrived at this figure, you will have a rough basis to make decisions for your design requirements.

Step 2: Space Requirements

You must have an idea as to what your space requirements are, here’s a set of questions you can ask yourself to derive an extensive understanding of all you need.

- How many Bedrooms do you need?
- What is the size of the Living Room? What is the size of the Kitchen? Do you need a separate Pooja Room? Make a list of all your requirements.

Step 3: Select an Architect

- An Architect is a professional who designs space efficiently. It is necessary for you to engage the services of a good Architect. You would be able to identify one by discussing

it with your friends and relatives who have used the services of an Architect. Select an Architect after looking at some of the projects he has executed. Make sure his style of architecture is in sync with your taste and style of what you want your house to be.

- Preferably select an Architect who is registered with a professional body of Architects such as the 'Institute of Indian Architects' or a local body of Architects.
- The Architect's scope shall normally include the following:
 - Architectural Design of the proposed house. Specify the number of alternate designs he can come up with for you to make a decision.
 - Structural Design
 - Plumbing and Electrical Services
 - Preparation of Bill of Quantities (BOQ) for all the Design Services
 - Preparation of Cost Estimates
 - Preparation of Drawings 'For Approval' to the Authorities
 - Preparation of a Tender Document with Terms and Conditions (we will address this in detail later)
 - Periodic Construction Supervision
 - Checking and Certification of Contractors' Bills
- Enter into a formal Contract Agreement with an Architect specifying the terms of appointment. The Contract Agreement shall specify the role and responsibilities of the Architect and his Associates, Terms of Payment of their Professional Fee, etc.

Step 4: Concept Phase

- **Design**
 - Having selected and appointed an Architect, give him/her your requirements
 - The Architect shall present various (specify the number) concepts for your approval
 - Finalise the Architectural Design
 - Based on the finalised Architectural Design, the other consultants will develop their design
 - Appoint a Landscape and Interior Designer, if need be
- **Project Budget**
 - Based on the Final Design in terms of space requirement and the finishes, arrive at a Budgetary Cost

Detail Design and Tendering Phase:

- **Detail Design**
 - Now that the concept is finalised, the Architect further develops on the concept and gets into the Detail Design wherein every aspect of the house is given a thought and incorporated.
 - Based on the Architectural drawings the Structural Engineer, the Plumbing, and Electrical Consultants develop on the design and details.

- This is the stage when one decides as to what flooring material one wishes to use. For example: is it a marble floor, vitrified tiles, wooden floor, etc. Similarly, one has to decide on the type of Ceramic Fixtures (WC, Washbasin), CP (Chromium Plated), and Fittings (Taps).
- Decisions have to be taken on your requirement of Light Points, Power Points, TV Cable Outlets, Internet, Telephone Outlets, Ceiling Fans, Air-conditioning, Geysers, etc. These details are required to arrive at the Total Power Requirements and have to be shown on the Electrical Construction Drawings.

- **Statutory Approvals from Concerned Authorities**

- Once you have finalised on the Concept Drawings, make sure that the design meets the statutory requirements laid out by the Authorities.
- Obtain Statutory Sanctions by submitting the drawings for approval to the Authorities and obtain formal approval for construction.
- Drawings for approval have to be prepared by the Architect.
- Obtain sufficient copies of these Sanctioned Drawings, as these will be required to be submitted to the authorities for obtaining, power, water, and sewage connections.

- **Tender Phase**

- This is the phase wherein one has to decide as to how you can go about the construction. This is also the phase, when you may get a lot of unsolicited advice.
- There are many models of contracts ('Contracts' in itself is a very vast subject, this will be dealt with in detail separately), which may be adopted to get the work done. The most common form of contract that is adopted in this country is called the 'Item Rate Contract' or 'Re-measurable Contract'.
- The normal tendency is to go for a 'Square Foot Rate' Contract.
- The Architect along with his consultants shall prepare a detailed Bill of Quantities (BOQ).
- The Architects and the Consultants shall submit a Cost Estimate based on the BOQ prepared by them.
- The estimate shall be as accurate as possible, considering that all the requirements are finalised.
- Shortlist the Contractors suitable for this Project. The Architect may recommend a few and your acquaintances may recommend a few.
- Pre-qualify Contractors by checking their financial and technical background. Do a background check.
- The Architect shall prepare a simple tender document with terms and conditions (this shall be dealt with separately in detail) which shall specify the terms of payment.

- The Tender Document shall be issued to the Pre-qualified Contractors to submit their bids.
- The Pre-qualified Contractors submit the completed bid to the Client.
- A Comparative Statement of the bids received will be prepared. This Comparative Statement has to be prepared by the Architect.
- The Contractors are invited for negotiations. This meeting helps in not only creating a rapport and understanding of each other but also to clarify all doubts both the parties may possess.
- Few crucial points that have to be discussed and finalised during the negotiations are:
 - Define and understand the Scope of Work
 - Terms of Payment
 - Date of Commencement and Completion
 - Are there any materials the client wishes to supply which the Contractor can incorporate in the works?
 - Are there any extras that the Contractor will have to do but is not provided for in the Tender?
 - The Contractor has to meet all the Statutory Requirements and indemnify the client against any claims
- Award work to the Contractor
- Enter into a Formal Agreement

- **Construction Phase**

- This is the phase when three aspects of the Project are monitored, namely the Time, Cost, and Quality.
- The Contractor mobilises his infrastructure to commence work.
- Construction Drawings for the commencement of work must be made available immediately.
- Architects and other Consultants shall submit a schedule for the release of drawings. This will facilitate the Contractors to plan his activities.
- All the Construction Drawings shall be released ahead of time progressively.

- **Time Management**

- This is when you draw up a Programme Schedule to complete the project within the time frame that you want to.
- The Contractor has to submit an overall Project Plan for the completion of the Project.
- This Project Plan shall indicate all his requirements in terms of Drawings, Details, and Decisions.

- **Cost Management**

- Based on the Project Schedule, the Contractor shall prepare a Cash Flow.
- The Cash Flow shall take into consideration all the terms of payment, materials to be procured, etc.
- A constant vigil on the Budget and actual expenditure have to be kept every month.
- Contractors' bills shall be checked and certified for payment.
- If any materials are supplied by you to the Contractor, they have to be accounted for in the bills produced by the Contractor.

- **Quality Management**

- Quality of materials used and the workmanship shall be checked.
- Concrete and steel shall be checked as per the IS code requirements.
- The quality of work has to be checked by an Engineer at the site during construction.
- A set of checklists may be used to check the quality of work being executed.

- **Close-out or Finishing Phase**

- In this phase, all the documents that are connected with the project, such as final Architectural, Structural and Services Drawings, Final Bills of various Vendors, Warranties, and Guarantees are collected.
- Ensure that all Statutory Drawings such as Building Sanction Drawings are filed safe and secure.
- These will be your records for posterity