

# **THE BUILDING PROCESS**

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## **PART I**

### **ARCHITECTURE: A BRIEF OVERVIEW**

The construction and/or renovations of our homes and businesses represent the largest single investment made in most of our lifetimes. Architects are the professionals that we entrust by law with the responsibility to create aesthetically-pleasing spaces that protect the health, safety and welfare of the public. This article is intended to provide an understanding of the architectural profession and the many considerations which the public should be aware of when undertaking a construction project. We begin with a brief overview of the profession and the laws which govern it, and take us through the actual building process in an attempt to educate the public of the potential pitfalls they may incur along the way and how to avoid them.

#### **A BRIEF HISTORY OF THE PROFESSION**

Historical records indicate that architects were practicing their art as far back as Ancient Egypt and Greece, where they were considered to be “learned” people with a “gift of invention.” During the 16<sup>th</sup> Century the term “profession” came into use, mainly through the implementation of formal university training in Europe.

In 1850, upon the completion of their studies at the Parisian Ecole Des Beaux Arts, two American practitioners, H.H. Richardson and Richard Morris Hunt established the foundation for American architectural education. During that period, architecture, along with all other principal professions in America, established professional organizations, licensing laws, codes of ethics and professional schools. In 1857, the American Institute of Architects (AIA) was founded and continues to serve as the primary association of the architectural profession.

The first School of Architecture opened at the Massachusetts Institute of Technology in 1865. In 1897, Illinois established the first licensing laws governing the practice of architecture. Over the next 50 years, architectural credentials were shaped through the adoption of national educational and licensing standards.

#### **ARCHITECTURAL EDUCATION**

Schools of architecture are accredited by the National Architectural Accreditation Board (NAAB). The NAAB is responsible for setting standards for accreditation and monitoring the schools’ programs to ensure that those standards are achieved in order to maintain their accreditation. While imagination is a necessary trait in any profession, creativity is essential to an architect, with aesthetic sensitivity his or her highest priority in creating our built environment. The architect’s training and appreciation of artistic matter establishes the professions close ties to the arts. However, unlike artists, architects produce well-designed structures and spaces which shape and affect our personal business and recreational attitudes and moods.

While architects are customarily considered “designers,” the general public is mostly unaware of the complex educational process architects are required to complete in order to obtain licensure. Architectural design not only requires sound creative sense, but a knowledge of how a building is constructed, how different materials function, plumbing and mechanical requirements for heating and

cooling, electrical systems, structural systems, etc. In addition, the architect must be fully knowledgeable of the local building and zoning laws which govern the design and construction of various building types to ensure the public's health, safety and welfare.

## **LICENSING**

In order for a person to obtain the title of "architect," he or she must be licensed by the State where he or she is performing services. Each state establishes the minimum standards necessary to achieve licensure based upon its constitutional authority to protect the health, safety and welfare of the public. Most states and national boards currently require that a person attain a five-year degree (bachelor of architecture) from an accredited school of architecture and, in addition serve an "apprenticeship" for a minimum of three years under the direct supervision of an architect after graduation in order to qualify for the licensing exam. The licensing exam is considered to be one of the most strenuous national professional examinations. It is administered over multiple days covering such topics as building and site design, building materials, structural and mechanical analysis, architectural history and professional practice.

## **PART II**

### **WHAT'S LEGAL, WHAT'S NOT**

Over the past years the New York metropolitan area, particularly Long Island, has experienced an influx of illegal practitioners. Too often we see advertisements and business cards for persons representing themselves as “architectural designers,” or “architectural drafting services.” Unless they are performing such services under the direct supervision of a registered architect, the simple truth is that these persons are not licensed to provide any architectural services and any individual who retains the services of these people severely jeopardize the quality and safety of the buildings they are constructing or altering. As a public service, the American Institute of Architects (AIA) New York State published a guideline to educate the public regarding illegal practice.

#### **THE PRACTICE OF ARCHITECTURE & USE OF TITLE “ARCHITECT”**

Title VIII of the State Education Law protects the practice of architecture and requires that only licensed, registered architects may render or offer to render architectural services (Article 147, Section 7301). New York State law also protects the use of the title “architect” and prohibits anyone who is not a licensed architect from using this title in any way (Article 147, Section 7302). This means that if you’re not a licensed architect, you may not use the title of “architect” or imply that you are an architect. If you are not a licensed architect, and not currently registered with the State Education Department, you may not provide architectural services to a customer or offer to provide architectural services by representing to the customer that you will retain an architect to do the design. You may not advertise or call yourself by such titles as “architectural draftsman” and/or offer services like “all phases of architectural design and drafting,” or provide “architectural design services,” etc. Should you wish to confirm that the person you are contemplating is a registered architect, you can verify licensure through the New York State Department of Education website at [www.op.nysed.gov/opsearches.htm](http://www.op.nysed.gov/opsearches.htm)

#### **UNAUTHORIZED ACTS ARE CRIMES**

The following acts are crimes under New York State Law (Article 130): Unauthorized practice of a regulated profession (Section 6512), unauthorized use of a professional title (Section 6513), aiding and abetting unauthorized practice (Section 6512 & 6513), or unauthorized use of a professional title (Section 7302), are class E felonies and subject to criminal proceedings (Section 6514).

#### **USE OF ARCHITECT’S OR PROFESSIONAL ENGINEER’S STAMP/SEAL**

New York State law requires that all plans, drawings, and specifications relating to the construction or alteration of buildings or structures, which must be filed with a local building official, must be stamped with a seal of an architect or professional engineer (Article 147, Section 7307).

#### **“RUBBER STAMPING” DRAWINGS, PLANS, AND SPECIFICATIONS**

The practice of certain persons who are not registered architects or professional engineers, who attempt to have construction documents “legitimized” with a seal of a licensed professional, is illegal. Such practice is known as “rubber stamping,” and the licensee is guilty of professional misconduct (Sec. 29.3a3). The penalties for professional misconduct may include, but are not limited to, censure and reprimand, suspension or revocation of the license, fines, etc. (Article 130. Sec. 6509 & 6510). In addition, the licensee may also be guilty of aiding and abetting an unlicensed person to practice

architecture illegally, or use the title “architect,” both of which are class E felonies (Sec.6514).

### **REPORTING PROFESSIONAL MISCONDUCT OR ILLEGAL PRACTICE**

You may verify the license/registration status of an architect or professional engineer through the New York State Education Department website ( [www.op.nysed.gov/opsearches.htm](http://www.op.nysed.gov/opsearches.htm)). If you suspect illegal practice by a non-licensed individual or business, or if you suspect that plans have been "rubber stamped," you may call the NYS Office of the Professions to report illegal practice or professional misconduct.

In my 35 years of practice, and 30 years as a part-time building official, I have seen countless projects which were "designed" by illegal non-licensed persons. My firm has been retained, too often, to redesign projects which were prepared by unlicensed persons that do not comply with the applicable laws and in some cases required variances for projects which were constructed contrary to the law. In some cases to the owner's astonishment, the projects were required to be demolished entirely or required to be substantially altered in order to comply with the applicable codes. All professionals agree that the owners are either uninformed of the importance of the architect's services or make such decisions merely to avoid paying a professional fee. In the latter case, the money spent to correct the problem is often greater than what the initial architectural fee would have been. When involved with such circumstances, I'm often reminded of the old popular commercial where the auto mechanic states "You can pay me now, or pay me later.

## **PART III**

### **R.A. vs. P.E.**

New York State and local municipal building laws mandate that construction plans and documents be signed and sealed by either a Registered Architect (RA) or Professional Engineer (PE). Since the professions are somewhat parallel there is an overlap in the services provided by both. However, there are significant differences in the professional qualifications and services provided by each one.

From the inception of the project, the architect works closely with the owner to identify the scope of the project, develop the project program, and prepare preliminary design drawings which accurately portray the relationships of interior space and the exterior views of the building. During this process, the architect will make various decisions relative to the project, including identification of the various code requirements applicable to the project, selection of building materials appropriate for the aesthetic implementation of the design, exterior and interior finishes, height relationships of the various elements of the structure, and make preliminary determinations as to the structural, plumbing and mechanical systems, which will be incorporated into the building design. Professional Engineers are educated and categorized by their specialty field, i.e. structural, electrical, plumbing, mechanical, civil, etc. Professional Engineers (P.E.) are usually employed or retained as consultants by the architect and assist the architect in refining the structural, plumbing and mechanical requirements of the building. These professionals work in concert with the architect, advise the architect in matters pertaining to their expertise and ultimately design and refine the various structural, plumbing, mechanical and electrical systems, which are mandated by the architect's design and codes applicable to the project.

In the final analysis, the architect serves as the leader of the design team and is responsible for the coordination and implementation of the construction project. The professional engineer works as part of the architect's team, under the architect's direction and supervision to establish the structural, plumbing, mechanical, and electrical requirements of the project, and to ensure the proper operation of those systems all within the aesthetic design parameters established by the architect.

An owner should be aware of the distinction between the two professions to ensure that he or she is dealing with the proper professional for his or her project. Generally speaking, I would strongly advise against retaining an architect to design your heating or air-conditioning system, as I would against retaining a professional engineer to design your building.

## **PART IV**

### **SELECTING THE ARCHITECT**

Like most professions, due to the complexity and diversity of the various building projects, architecture is experiencing a trend toward "specialization." Generally speaking, architectural projects can be categorized as residential, commercial, industrial, educational, recreational, religious etc. As one appreciates the great diversity of projects which may apply to each individual building type, we realize the care and caution one must take in choosing the right professional for a specific building project.

Residential projects may vary in scope from a simple addition to the construction of a new multimillion dollar custom residence or a multi story, multi family condominium. Construction of a new custom residence could range from a simple one family ranch "track house" to a palatial estate, or a high-rise urban project. Similarly, the scope of a commercial project could range from the construction of a simple one-story retail store to a multi-story office building or a large shopping complex. In order to ensure a successful building project, the owner must be certain that the professional selected for the project is capable of performing the services necessary and possesses a proven track record of successful projects of similar scope and size. The professional code of ethics now permits architects to advertise their services. While the Yellow Pages and newspaper ads will identify and locate architects in your area, such advertising does not ensure that their qualifications are suitable for your project. Most architectural selections continue to be decided through referral by clients of previous successful building projects, or through one's knowledge of the architect's work.

When interviewing an architect for your project, the initial conversation should focus on the architect's knowledge and experience with similar projects. In arranging the interview the owner should ask the architect for certain information pertaining to his/her firm and services provided. A firm resume or brochure, photographs or slides of projects of similar scope and size, location of similar projects, and names and telephone numbers of previous clients are typical examples of pertinent information which may be requested. Of additional concern and importance is the architect's ability to listen and evaluate the owner's perception of the project. Upon completion of the interview, the owner should have the confidence of knowing that this is the person they wish to entrust with the responsibility of successfully developing, designing and completing their project. There should be a sense of comfort in believing that the architect is well-qualified, easy to communicate with and responds well to all questions. The building process is a long and tedious one requiring many hours of communication and interaction between the owner and the architect. The owner must be certain that the architect has the knowledge and talent to perform the services required and will create a relaxed and comfortable atmosphere, which will make the building process as pleasant an experience as possible.

# **PART V**

## **THE ARCHITECT'S SERVICES**

The basic services of the architect are generally performed in five phases:

### **Phase I - Design Development**

The initial consultation with the architect will consist of a preliminary discussion of the project and review of the owner's program. Once the program is identified, the architect will research the applicable code requirements and prepare "schematic drawings" which graphically depict their representation of the project for review with the client. Based upon the clients comments revisions may be made. Once the client is satisfied that the schematic design is acceptable they will approve the design and authorize the architect to proceed to the next phase.

### **Phase II - Preliminary Design**

Upon approval of the schematic drawings, the architect prepares large scale drawings and outline specifications of the project indicating the building materials, finishes, final dimensions, and general requirements for the structural, plumbing, electrical, and mechanical systems. Once the preliminary drawings are approved by the client, the architect is authorized to proceed to the next phase.

### **Phase III - Construction Document Phase**

Based upon the approved preliminary drawings, the architect and their professional consultants prepares the final construction drawings and specifications for distribution to the various contractors who will be bidding the project. Generally, the architect will also prepare the required applications and file the construction drawings with the respective governmental agencies.

### **Phase IV - Bidding**

The architect coordinates the distribution of the drawings and specifications to qualified contractors for bid. On larger projects the architect may schedule a pre-bid walk through of the project on site so that the contractors can examine the existing conditions and familiarize themselves with the project. The architect will answer any questions the contractors may have, reviews and analyzes the bids submitted, and makes their recommendation relative to the award of the contract to the owner.

### **Phase V - Construction Administration**

The architect makes periodic visits to the project site to observe the work performed by the contractor. The architect will schedule and attend project meetings, instructs the contractor on matters pertaining to contract compliance, and reports the results of his or her findings to the owner. The architect also reviews all submissions, such as shop drawings, samples, change orders, certificates for payments, etc., and advises the owner accordingly. Upon completion of the construction work, the architect reviews the contractors compliance with the project requirements relating to guarantees, warranties, operational manuals, release of liens, etc., the issuance of the final acceptance by the local municipality (Certificate of Occupancy or Letter of Completion) and determine that the contractor has achieved final completion prior to recommending that the owner release the final payment to the contractor.

The services listed represent the architect's basic responsibilities for the successful completion of the project. In some cases, the owner may wish to expand the architect's services to include additional services, such as preparing a space analysis of an existing facility, interior design, assisting the owner in establishing the program for the new project, preparing color renderings or scale models of the project, environmental analysis, etc. Since the architect's fees are negotiable, the services may be expanded, or reduced to suit the size of the project and the owner's needs.

## **PART VI**

### **STARTING THE DESIGN PROCESS**

Prior to the initial meeting with the architect, the owner should be well-organized and prepared so that the architect will leave the meeting with a clear understanding of the owner's needs and expectations. The following examples represent information architects generally require in the initial meeting.

#### **Establish Current Problems and Projected Needs:**

The fundamental purpose of the initial meeting is to identify the owner's "program," which ultimately establishes the scope of the project. In preparing the program for residential projects, the owner should perform an in-depth analysis of their existing lifestyle, or for non-residential projects, their work habits and space requirements. It is most critical that the owners establish what is required and acceptable, what may need improvement or some aspect they may wish to abandon altogether. Typical comments may be, "Our current dining room is too small; we need a dining room that can comfortably seat 10 people." Or "We currently employ 10 people and need to expand for 25 people, eight of whom will have private offices, a larger conference room, etc." The more specific information you can supply the architect, the better. If you are not certain, or do not feel capable of developing this information, the architect is qualified to assist you in establishing the project program. It is not uncommon, particularly with office and institutional projects, to retain the architect to prepare an analysis of the current space. The architect will field measure the existing premises, inventory the furnishings and equipment, and present you with a comprehensive report.

#### **Be Realistic:**

The owner should have realistic expectations for the project. That spectacular family room which appeared in "House and Home" with expansive glass areas and dramatic views of Big Sur will probably be awkward overlooking your neighbor's garage. Although your "wish list" may project the need for 12,000 square feet of new office space, it will not fit into your 7,500 square foot building.

#### **Don't Force Current "Trends" Into Your Project:**

Reading magazines, watching movies, etc., we all notice buildings, interiors or architectural elements and details which appeal to our individual taste. Although they may be aesthetically powerful in those specific applications, they may not be appropriate for your project. "Palladian" (arched) windows and similar elements are dramatic only when they complement the existing architecture of the building.

#### **Have All Legal Documents Available:**

The owner should have all legal documents relating to the property and/or building available for the architect's review and use. As a minimum you should have a copy of a current survey, deed and the latest tax bill. These documents are essential to the architect in researching the municipal records and determining the zoning and building code requirements.

## **PART VII**

### **RESTRICTIONS AND BUILDING LAWS**

Property owners are limited to the extent that they can develop their properties by various restrictions and building laws. Typical examples are:

#### **1. Zoning Laws/Ordinances:**

Zoning laws, or ordinances, are the principle regulation adopted by a municipality to implement its "master plan." Generally speaking, zoning laws and ordinances are adopted in order to control the use of the land and buildings which occupy the land, the height and size of buildings (bulk), the density of population, the relationship of a building's lot coverage to its open space, the size and location of yards and setbacks, and accessory uses such as parking. Zoning laws further control the use of the land through the division of the land area within the municipality into districts such as residential, commercial, manufacturing, etc.

Based on needs and legal purposes, the municipality has the authority to establish "Special Purpose Districts," such as school, ambulance, fire, police, water, and "authorities," such as the Transit and Port of New York Authority.

#### **2. Building Codes:**

Building codes control the manner in which the building may be constructed by establishing minimum standards for the various building materials, and assemblies based upon the building's intended occupancy and fire resistive qualities. Typically, building codes control the quality of materials, the methods of construction, minimal habitable floor areas and heights, occupancy (use), imposed loads, allowable stresses, number, size and location of exits, mechanical equipment, electrical equipment and fire safety.

While zoning laws and ordinances establish the use, area and height of the permitted structure, building codes establish the construction standards which permit the safe occupancy and use of the building by maintaining minimal fire safety standards, adequate and safe exits in the event of an emergency and establishes minimal sanitation and mechanical standards.

**3. Easements:** A temporary or permanent right of one property owner to make use of another person's land in a specific way. Some examples of easements are:

Access or "Right of Way" Easement - Permits the right of one person to pass through another person's property for a specific purpose.

Utility Easement - Permits a utility company to install, and maintain lines across a person's property.

Light and Air Easement - Prevents the construction of another building on a common property line to ensure continued availability of natural light and fresh air.

Air Right Easement - Permission to erect a structure within the air space located above another existing structure.

With the exception of the Utility Easements, most restrictions are negotiated and mutually agreed upon by each of the respective parties. The agreement is subsequently recorded into each of the property owner's deeds, and is commonly referred to as "Deed Restrictions."

## **PART VIII**

### **THE APPROVAL PROCESS**

Regardless of the size, the best advice one can give relative to the approval process is *plan ahead!* The most common mistake property owners make in planning their projects is that they fail to allow sufficient time required by the municipality to properly review and approve the plans and applications in order to obtain a building permit. In fulfilling their responsibility to protect the health, safety and welfare of the public, municipalities and other governmental agencies are required to review the plans and applications submitted for construction projects in order to verify compliance with the applicable building laws. All projects require review by the building official for compliance with the local zoning and building ordinances. Depending upon the quality of the documents, the size of the municipality, the number of personnel employed in the building department and number of applications requiring review, this process may range from as little as 1 week to as much as 12 weeks.

Some projects may require further review by other governmental agencies, such as the Fire Marshal's office, Board of Health, State/County Department of Transportation, Landmarks, etc. Due to the broad territories these agencies are responsible for the review process is generally lengthy and often takes months.

In addition to the above, various other approvals may be required by the local municipality such as Town, City or Village Board, Planning Board, site plan review, Architectural Review Board, Board of Zoning Appeals, etc. Applications requiring review by such boards are very time consuming since the Boards usually meet on a monthly basis. Any corrections which may be required to the plans and/or applications, or any additional information which may be required by the agency, will result in substantial delays to the project since the Board may not convene for another month. Realizing how extensive and exhaustive the process may be will enable the owner to properly plan the project so that the anticipated starting date can be accurately and realistically established. In addition, realizing that the process often changes from one municipality to another reinforces the need for realistic planning and emphasizes the importance in selecting an architect who is qualified and familiar with the requirements of the municipality. Regardless of how distressing this process may be, it is reality and must be accounted for during the planning of the project.

## **PART IX**

### **BIDDING**

Prior to issuing the drawings and specifications (bid documents) for bid, the architect and owner will discuss various provisions which may be incorporated into the bid requirements regarding the contractor's performance and the final acceptance of the bid by the owner. Common requirements which may be discussed and considered include:

#### **Bid Bond:**

A bond issued by an approved surety that guarantees the contractor will honor the bid submitted, if selected for the project.

#### **Performance Bond:**

A bond issued by an approved surety that guarantees the work included in the bid documents will be completed for the amount of money stipulated in the construction contract.

#### **Liquidated Damages:**

A monetary penalty clause (daily, weekly or monthly) imposed upon the contractor in the event the project is not completed within the time restraints established by the contract for reasons solely attributed to the contractor.

#### **Substitutions and/or Alternates:**

Certain materials and/or assemblies may be specified, other than those detailed in the contract drawings and specifications, for cost analysis purposes affording the owner budgetary options.

#### **Insurance Requirements:**

In addition to the standard construction coverage, the architect will usually advise the client to speak with their insurance agent to inform him of the contemplated work and seek his advice as to the proper insurance coverage and limits which may be required of the contractor.

It should be noted that although the items listed under a, b and c, serve as great insurances relative to the final construction cost and contractor's performance, implementation of any, or all, of these requirements will result in a higher bid since the contractor will include the cost of those bonds in their bid.

Once the final contract drawings and specifications have been completed by the architect, they are distributed to "qualified" contractors for bidding (estimating) purposes. Although there is no limit to the number of qualified contractors bidding on the project, it is generally recommended to have no fewer than three. The rationale being that one contractor's price will be high, another low and the third bid serving as an indication of which of the previous two are realistic. Based upon the overall scope of the project, the bidding process may take as little as two weeks or as much as several weeks. Concurrently, the architect will usually use this time to file the plans and applications with the local municipality for review and approval.

During the bidding phase, the contractors will visit the project site to familiarize themselves with the field conditions. On large projects the architect will usually schedule a pre-bid site visit to physically walk through the site or structure with the various bidders and sub-contractors to review the project scope and conditions. Upon conclusion of their site investigation and review of the contract documents, the bidders may contact the architect to clarify issues noted during their inspection. All questions and responses are distributed to all of the bidders to ensure a uniform bid. I find this period to be extremely informative in that it affords me an opportunity to establish a sense of the contractor's qualifications for the project. Based upon the number and type of questions asked, an experienced architect can form an opinion as to the overall experience and knowledge of the contractor and their ability to execute the work required of them.

Once the bids are received by the architect they are opened in the presence of the owner and reviewed for compliance with the contract requirements and completeness. Upon completion of his or her review, the architect will make their recommendation to the owner as to which contractor, in their opinion, is best qualified for the project. The owner takes the architect's recommendation into consideration and selects the contractor.

### **WHO DO I CHOOSE?**

Once the bids are opened I make a rather uncomfortable statement to the client - "Please do not make the contractors price the primary reason for selecting the contractor." The statement is rather uncomfortable since it has the perception of my not being sensitive to the owners pocketbook. I carefully explain that, although the cost is very important, the contractors qualifications, workforce, quality of workmanship and his/her past record of completing similar projects within budget and on time is just as important. Unfortunately there are some contractors who are not qualified, have virtually no workforce and depend upon sub-contracting all of the trades required for the project, who "low ball" their estimates and rely on charging the owner for alleged additional work required and fail to come close to completing the project within the contract time. There is nothing more frustrating to an owner than to have a project only half finished when the anticipated completion date nears and/or the workmanship is not acceptable, or in the worse case scenario having to terminate the contract. When these circumstances exist the owner then appreciates my initial statement and wishes they would have selected the more qualified contractor who was a little more expensive but would have finished the project on time and within budget. You will notice that in all architectural and legal documents pertaining to the selection of a contractor the phrase "qualified contractor" is used for very good reason. It is imperative that the owner investigate the qualifications of the contractor, check their references, look at previous projects, speak with previous clients and check for complaints through the local municipality, Consumer Affairs and the Better Business Bureau, etc.

Once the contractor is selected a formal agreement is developed which legally establishes the conditions of the contract, including the start/finish dates, documents which make up the agreement, contractor's fee, payment schedule, etc. This document should be reviewed by the architect to ensure that all provisions of the drawings and specifications are included and the owner's attorney to ensure it legal standing. The American Institute of Architects has developed standard forms of the various agreements which may be used for the specific project with modifications if necessary, or the owner may choose to use an owner-generated agreement prepared by their attorney.

## **PART X**

### **THE CODE ENFORCEMENT OFFICIAL (CEO)**

Municipalities are granted "police power" under the Constitution to ensure that all laws, rules and regulations are enforced in order to protect the health, safety and welfare of the public. The persons responsible for the enforcement of the applicable zoning and building laws are known as Code Enforcement Officials (CEO) commonly referred to as the "Building Inspector".

The primary responsibility of the CEO is to ensure compliance with all applicable laws through the plan review process and during construction. In fulfilling this responsibility, the CEO reviews the architect's plans and applications, performs a general review of those documents and verifies that the primary code issues have been addressed. Upon completion of the review and satisfied that all applicable code issues have been complied with, the building official will grant an approval and issue a work permit. It is important to note that the building official's review is "cursory" and is not represented as a guarantee that the plans are 100 percent accurate. An application "approved in error" may be rescinded by the municipality at any time.

Depending upon the size of the municipality, the number of persons employed as building officials may differ significantly. In large municipalities, such as the City of New York, hundreds of persons may serve as CEOs, each performing a specific function such as plan examination, building inspector, plumbing inspector, etc. In smaller municipalities, such as an incorporated village, one person may serve in all capacities.

While CEOs are sometimes portrayed as being difficult, the truth of the matter is that they are the only impartial persons involved in the project since they have no personal or financial interest. Their sole responsibility is to ensure that the building complies with the applicable laws, and are safe to occupy for their intended use. Ensuring that all applicable laws are maintained ensures the safe occupancy and that the property owner's investment is protected. The following advice is offered to the various parties involved in the building project:

#### **Property Owner**

Always verify with the municipality that a permit is required for the work you are contemplating. When in doubt, or if there are any questions, call the local building official and make an appointment to discuss the project before getting started. It would be most helpful if you would bring a copy of a recent survey of your property to the meeting so that you can obtain specific answers. Retain a competent architect who is familiar with the local laws and codes.

#### **Architect**

Make sure you have the latest copy of the zoning and building laws applicable to the project. When in doubt, or if there are any questions, call the local building official and make an appointment to discuss the project before getting started. It would be most helpful if you bring a copy of a recent survey of the property and copies of your

preliminary drawings of the project to the meeting so that you can obtain specific answers.

### **Contractor**

Make sure you are building from true copies of the official plans which were approved by the municipality. Very often the bid drawings and approved drawings vary.

Make sure that the permit was issued prior to starting the work. Just because the plans were approved does not ensure that the permit was issued.

Build according to the approved plans. The owner may want to make modifications in the field. Such changes must be reviewed with the architect, and possibly the building official, to confirm code compliance prior to commencing the work. Depending on the scope of the change, amendments to the approved plans are usually required to be filed with the municipality.

Make sure you know which inspections are required by the municipality and what the required notification time is to arrange an inspection. The contractor should have the official approved plans available for the inspectors to review in the field.

When in doubt, or if there are any questions, call the local building official and make an appointment to discuss the problem and possible solution. *Do not assume anything!* The most successful building projects are those which include the building official from the preliminary stages through construction. I can assure you that if you take advantage of the services which are available through the building official you will find that the project will progress without unnecessary delays.

## **PART XI**

### **THE CONSTRUCTION PROCESS**

Once the contractor has obtained all of the required permits from the various agencies which may have jurisdiction over the project, the actual construction work may begin. During the construction phase of the project the most critical issues of concern center on the performance of the contractor. Some specific issues which must be continually monitored include:

- The quality of the contractor's work.
- Compliance with the approved schedule.
- Compliance with the contract documents.
- Scheduling the required inspections by the municipality.
- Obtaining the required sign-offs for each inspection.

In a full service agreement with the architect as outlined in Part V under "Contract Administration," the architect will monitor the contractor's performance, as well as reviewing the Certificates for Payment, product, sample and shop drawing submissions, any Change Orders involving additional charges or credits that may be submitted due to unforeseen circumstances or changes in the scope of the work, and determination of substantial and final completion of the project.

A common misconception of the general public is that the project is deemed complete when the physical construction work has been constructed. This could not be further from the truth. We've all heard the old saying, "The work is never done until the paperwork is complete." In construction, the work is not deemed complete until all final documentation has been submitted and accepted by the architect. At a minimum the final required documentation required of the general contractor will consist of a release of any liens, proof of payment to all sub-contractors, submission of all final warranties and guarantees, submission of any instruction manuals and proof that the project has been issued all of the required certificates from the respective governmental agencies having jurisdiction.

#### **SUMMARY**

The building process is a long and tedious undertaking with many twists and turns. Due to the complexity of the process and the many issues that must be addressed throughout the process, it is imperative that the owner retain a qualified, competent architect to assist and guide them through the process to ensure a successful project. You may contact the local Chapter of the American Institute of Architects within your area to obtain a list of architects in your area.