

Preservation Profile: The Church of the Messiah "What a Difference a Conditions Survey Made"

In the spring of 1989, we attended three half-day seminars, sponsored by the New York Landmarks Conservancy, on the maintenance of religious properties. Attending these seminars convinced us that we needed to undertake a thorough condition survey of our church building. This revelation was pivotal. It led to a fundamental change in the way we thought about our building and approached maintenance and repair concerns.

We are members of the Restoration Committee at the Episcopal Church of the Messiah, which is located in Rhinebeck, New York, about 100 miles north of New York City (Figure 1). Rhinebeck lies within a 16-mile long National Register historic district on the east bank of the Hudson River. It is also part of the New York State Scenic District, and the church itself is located within Rhinebeck's Local Waterfront Revitalization Project. Positioned prominently on Rhinebeck's main thoroughfare, the church makes an important contribution to the historic value of the town. We are a historic church, in a historic district, a picturesque church, in a picturesque district and a vital force in Rhinebeck's revitalization project.

The church was built in 1898 to the designs of Hoppin and Koen, architects from New York City. Its Neo-Gothic design recalls the picturesque medieval churches of rural England—the birthplace of the Anglican Church. Wealthy and well-known area families, such as the Astors, Mortons, Suckleys, and Delanos financed the construction of the church. The church's interior was enriched by a series of superb stained glass windows created by such masters as Tiffany, Gorham, Whitefriars, Lamb, Heinigke and Bowen, and LaFarge. Art historians, photographers, and other tourists frequently include the church on their itineraries because of its architectural quality and its superb stained glass.

Need for a Conditions Report

Although the initial construction costs of the church had been generously underwritten by the original families, an endowment fund for the maintenance of the building had never been established. By the 1980s, congregational pledging was sufficient only to meet the parish's basic operating needs. No money was available for major repairs. However, with roofs leaking and chimneys leaning, the need for substantial preservation and restoration became increasingly apparent.

Over the years we had attempted to obtain grants for building repairs, but we had been unsuccessful. Although we did not realize it then, we now believe that our lack of success had a direct correlation to our lack of a clear restoration plan. We didn't know what we were doing! We were content to allow contractors to solve specific problems.

This situation was exacerbated by the lack of any consistent maintenance plan. As the composition of the Vestry changed, so too did the approach to maintenance. When repairs became necessary, the most inexpensive methods available were often used because funds were so tight. Of course, every Vestry member felt he or she was making good decisions in the best interests of the parish. Nevertheless, many of the repairs ultimately proved to be destructive and consequently, far more expensive than the original costs would have indicated. Roofers unaccustomed to repairing slate roofs had patched leaks with bituminous mastic. The exterior walls, which are of bluestone quarried locally, had been repointed in places with a hard and impermeable Portland cement. Some copper downspouts had been removed, and the remaining downspouts were clogged, causing water to back up under the slate resulting in interior leaks.

In 1988 a Church Restoration Committee was formed. It investigated and recommended to the Vestry the best course of action for dealing with maintenance problems. Shortly after the Committee was assembled, Dr. Lucia Torian, a Committee member, suggested we attend four seminars being offered by the New York Landmarks Conservancy specifically on the maintenance and care of historic religious buildings. Since we had not been successful in obtaining financial assistance for the church's restoration, she believed that attending these seminars would help us determine what potential funds our project might be looking for and strengthen our chance of receiving significant financial assistance.

As a result of participating in these seminars, and in another one given by the New York State Office of Historic Preservation, we understood the need for having a coherent plan in place before proceeding with any work. However, in order to put a restoration plan together, we needed to find out more about the building's existing condition.

In May of 1989, the Restoration Committee recommended that the Vestry commission a conditions survey. Committee members pointed out that it was the lack of maintenance and preservation plan that was preventing the parish from receiving the grant support needed to make major repairs. For example the parish was clearly ineligible for an Environmental Quality Bond Act grant because no conditions survey of the building had been undertaken. We stressed the value of such a report for future Vestry members. We knew a condition report could serve as a guide and a workable maintenance plan, not only for the immediate future but also for many years to come. The condition survey would establish priorities for correct and long-term preservation procedures. The Vestry was convinced by these arguments and gave the Committee permission to solicit bids.

Our next step was to identify appropriate and competent architects or building conservators to prepare the survey. We began by contacting firms suggested either by the New York State Office of Historic Preservation or the New York Landmarks Conservancy. Some were not interested. Others sent proposals without first visiting the church. Still former clients did not favorably recommend others. However, the firm of Mesick, Cohen, Waite, Architects, impressed us with its professionalism and interest in the project. Firm members visited the church prior to submitting a proposal and came highly recommended by former clients.

Mesick, Cohen, Waite proposed conducting a survey that would evaluate existing conditions and make recommendations for conservation. This survey would also prioritize the work as well as outline appropriate repair and maintenance practices.

We asked the Vestry for permission to retain Mesick, Cohen, Waite. Members of the firm met with the Rector, the Wardens, and the Vestry to discuss their methodology and review the report's contents, including estimated costs for any recommended

work. As a result of these conversations and the recommendations of the Restoration Committee, the Vestry voted to retain Mesick, Cohen, Waite to prepare the report.

The architects conducted their survey work during the winter and spring of 1990. They observed the building at different times of day during varying weather conditions so as to get as comprehensive a picture as possible of the way the building handled weather. The architects also brought in outside consultants to examine the building's stained glass windows, and its mechanical, electrical, plumbing, and lifesafety systems. The original drawings for the church, which would have been extremely helpful in locating certain features, such as interior leaders, and identifying hidden structural anomalies, could not be located. However, Joanne Brunson, the church secretary, did retrieve some early photographs of the church that proved helpful in identifying changes and repairs made to the building over the years. These photographs also indicated that many of the building conditions being examined by our architects were problems of long standing. One old photograph shows wet masonry and roof leaks in areas that had been repaired many times in the past, but are still leaking today.

What the Conditions Report Provided

In June of 1990 the architects submitted their initial report. It was divided into four major sections, with appendices. The first section was an in-depth evaluation of the building's existing condition, with recommendations for conservation and repair techniques. The next section ranked the various recommendations and repairs outlined in the first section into "Priority One," "Priority Two," and "Priority Three" categories. The third section provided a chart listing the materials used in the construction of our building and their estimated life span. The last section was a recommended maintenance schedule, which outlined the tasks that needed to be performed every autumn and spring, every six months, every year, every five years, every ten years, and every twenty years. The tasks ranged from cleaning out gutters and downspouts every spring and fall to replacing all exteriors building sealant every twenty years.

The survey concluded with a series of appendices that included the full report from a stained glass conservator and complete reports from structural, mechanical, and electrical engineers.

Not unexpectedly, the architects found that water penetration was the principal cause of damage to the building's fabric. As stated in the report, the most serious problems were open and improperly pointed mortar joints, delaminating and exfoliating bluestone, a deteriorated chimney serving the boiler, condensation between protective glazing and the stained glass. Buckling of the stained glass windows, and standing water on the building's flat roofs and built-in gutters. The architects also found many safety violations, such as inadequate egress routes from the basement, the lack of an enclosure around the boiler, and an outdated electric distribution panel.

What we have done since

Subsequent to the receipt of the report, the Vestry asked the architects to prepare cost projections, which could then be used as a work budget. This allowed us to understand the magnitude of the project and divide it into phases. Planning for several restoration projects began immediately.

In August of 1990, the Restoration Committee met with the architects to review the priorities listed in their report and discuss our approach to dealing with the building's problems. Upon reviewing the list, we determined that members of our congregation were capable of doing some of the work. They also advised us of several contractors with whom they had worked in the past, encouraging us to invite them to bid on specific projects. The architects then began preparing specifications and bid documents for two of the items.

After the specifications had been drawn up, the bid documents for the replacement of the chancel and organ chamber roofs were sent out to qualified bidders recommended by our architects.

These documents specified that all existing materials in these two areas were to be removed and a single-ply membrane roof with copper flashing installed. This was listed as a "Priority One" repair in the condition report, and it was necessary to act without delay. Long-term leaking in both of these areas had caused interior damage to the organ chamber and other areas. This ongoing problem had been treated in a patchwork fashion over the years without success. While the single-ply membrane roof was not an appropriate treatment as a permanent replacement, we decided that it was necessary to stop the ongoing leaks in these areas as quickly as possible. A historically appropriate slate roof will be installed when the church's finances permit.

Another "Priority One" concern was the repair of the chimney serving the church's furnace. The scope of work outlined by the architects included relocating the furnace breaching and installing a clean-out door in the existing breaching, as well as repairing the masonry foundation wall. As noted in the condition report, the exterior masonry in this area had been repointed several times in the past with Portland cement, which is harder than the original mortar, and had been inappropriately applied. Consequently, the mortar was allowing moisture into the wall and then trapping moisture within the wall. The lab tests of the remaining original mortar showed that it was much softer than the Portland cement that replaced it, that it had a high lime content, and that the mortar joints were tooled with a wide-flat surface but beveled back to meet the edge of the stone. Several mortar samples were taken from within the wall to determine the color of the original mortar. From these, the architects concluded that the new mortar should be a creamy, light buff color with fine sand varying in color from dark gray to black. The proportions of sand and lime to cement recommended by the architects provided a mortar with a high-lime content, similar in composition and color to the original mortar used in the construction of the church. But with a minute amount of Portland cement added to improve the "workability" of the mix. The newly repointed area will stand out visually for a few years due to the "newness" of the mortar. However, weathering and the deposition of airborne pollutants and dirt will darken the mortar slightly over time. At its June 1991 meeting, the Vestry approved a bid of \$21,495 to perform this work.

We have now completed several more "Priority One" items, the existing chimney stack was inspected, a new flue lining installed, and the chimney rebuilt. The exterior of the east gable end wall of the nave has been repointed and damaged slates on the nave roof has been replaced. This work commenced in the summer of 1991 and continued through the spring of 1992. The chimney stack has just been completed. We will be able to start tackling other priority items, including the complete repointing of the church's exterior masonry and the repair of some of our historic stained glass (Figure 4), as funding permits.

This condition survey has had a far-reaching effect on the way we approach the maintenance and restoration of our church building. Our efforts are now focused and directed. We now know exactly what needs to be done to maintain the building from year to year. We can budget anticipated building expenses in one year, five-year, ten-year, and twenty-year increments and provide future members of our church with clear directions on maintenance and upkeep practices. Lastly, we will be leaving a record behind of exactly what we have done to maintain and restore the church, a record that will be invaluable to future Rectors, Vestry members, architects, building conservators, and contractors who work on our building.

The completion of this condition survey has also had a direct and positive effect on our fundraising efforts. Potential donors can now see that we know what we are doing. We have a well-thought-out plan for dealing with our building's restoration and maintenance, and donors can be assured that we will use their money well. For example, at the end of August 1991, the Church Restoration Committee submitted a grant application to the Sacred Sites and Properties Fund of the New York Landmarks Conservancy. We enclosed itemized estimates and job specifications with the application, an idea that wouldn't have even occurred to us back in 1988. In December of 1991, we were notified that we had been awarded a matching grant from the Conservancy. In March of 1992, the Restoration Committee notified the Conservancy that the grant had been matched. We believe that this is but the first of many such grants.

Project Management in Major Construction Projects

PART 1: PUTTING THE PROJECT OUT FOR BID

By Christopher Jenks, Consulting Editor for Common Bond

Religious institutions that engage in extensive restoration programs are frequently unprepared for the complexity of administering a major construction project. With a few exceptions, most religious institutions are small operations that rely on volunteers and a few staff members to do most administrative work. Major construction projects, however, are extremely complex and require a level of administrative expertise that goes far beyond that usually required by all but the largest religious institutions. In addition, the construction industry is a tough business. While there are many professional and honest contractors and construction managers, there are also occasional charlatans. This article will address many of the issues involved in managing a major construction project including setting up a project management team, preparing specifications and contract documents and choosing a contractor.

Setting Up Your Management Team

The first step in managing a construction project is to set up a project management team. The project management team is ideally a partnership between the Building Committee, Project Director, and any consultants whose insights are necessary to the successful completion of a project.

The first component of a project management team to be assembled is most often the Building Committee. This Committee is usually appointed by the institution's governing Board to oversee the building project. Typically the Committee is empowered to enter into contracts without the direct approval of the Board, subject to certain stipulations, such as a ceiling on a contract price. Some boards insist that all contracts be approved by the Board before proceeding. This practice should be used with caution. Projects can become hung up in internal bureaucracy if the Board tries to second-guess the decisions of the Committee. Except for very small-scale projects, it is usually not advisable for the governing board to serve as the Building Committee. The amount of time and energy required to manage a project can overwhelm the ability of the Board to deal with the ongoing business of the institution.

The members of the Building Committee need not be experts on building construction or restoration, although it is helpful if some members of the Committee have a basic knowledge of building systems and the ability to understand construction specifications and read technical drawings. It is far more important that Committee members be perceptive, professional in attitude and demeanor and good judges of character.

It is also important that none of the members of the Committee have potential conflicts of interests. If a member of the Committee, for example, works for a contractor, that contractor should not be invited to bid on the project as the potential for conflicting loyalties is too great. This could pose serious legal problems for the institution and place an enormous personal burden on the Building Committee member. Of course, no member of the Building Committee who is a contractor should be invited to bid on the project.

Many religious institutions have a rotating system of committees. While such a system has its advantages with regard to program and the normal operation of the church or synagogue, it is not a good idea for a Committee managing a construction project to completely change its composition during the course of the project. Although some change or attrition in a Building Committee is unavoidable, continuity is important in construction projects, and every effort should be made to allow the Committee to see the project through. If a completely new Committee rotates into position every one or two years, new members have to be brought up to speed in the midst of major construction, often just at the time when critical decisions need to be made. Without the history or knowledge of why certain approaches are being taken, the new Committee cannot manage the project and is likely to make unwise decisions.

The first responsibility of the Building Committee is to select a Project Director. This should be a person or firm experienced in building conservation techniques and construction management. Often the Project Director will be an architect or engineer, although this is not a necessary requirement provided he or she has the requisite experience and qualifications. If your Project Director is not an architect or engineer, he or she must retain the services of an architect or structural engineer for any planned structural work. If a condition survey has already been completed, the Project Director should probably be the person who conducted the survey. If not, the new Project Director may find it necessary to either conduct a new survey or extensively revise the one already completed. Many churches and synagogues have found it to be to their advantage to hire the Project Director as part of the institution's staff rather than as an outside consultant, at least for the construction phase of a project. This arrangement has several advantages. First, if a Project Director is paid on either an hourly basis or by salary, he or she will be representing the institution's interests directly as an employee rather than as an outside consultant. In addition, the Project

Director is covered by the institution's liability insurance and workman's compensation, thus reducing his or her own overhead costs—a savings that can be passed on to the institution. Architectural and engineering firms will not work under these circumstances because the requirements of their business dictate otherwise.

If you use either an architectural or engineering firm to manage the project, be sure the firm is reputable and has extensive experience managing construction projects of the type being undertaken by your institution. Also be sure that the contractual arrangements are clear. Most architects and engineers will charge a percentage of the construction cost as their fee for planning and managing the project. However, there may be exceptions to this arrangement, such as meetings related to fundraising or other activities not directly associated with construction. Know how much money you are spending before you spend it.

A final note on Project Directors. Most reputable Project Directors will not oversee work according to someone else's specifications. As the construction manager, the Project Director has legal responsibility for the quality of the work executed, and thus, in order to protect his or her own liability, will only implement specifications with which he or she is completely comfortable. To achieve this goal, the Project Director will often ask the Building Committee to retain specialists, such as structural engineers or stained glass conservators, to consult on and write specifications for certain specialized aspects of the project.

Preparing a Master Plan

As stated many times in this publication, a comprehensive condition survey is an absolute prerequisite for any repair or restoration work on an historic building. (See the Winter, 1986 issue of *Common Bond* for a complete discussion of conditions surveys.) A condition survey encourages a holistic approach to the building so that instead of struggling with a series of unrelated individual problems the owner deals with the entire building as organic system, each part of which has an effect on every other part.

Using the information provided in the condition survey the Project Director develops a master plan. The master plan is a tool that establishes budget guidelines and work categories, and organizes the construction project into a series of sequential contracts. The rationale behind the organization varies from project to project, but is usually based on the following criteria. 1) tackling first those areas of the building in the worst condition or which pose a clear and present danger to the building's occupants and the general public

2) avoiding addressing the same physical area of the building with multiple efforts, thus minimizing redundant costs associated, for example, with erecting and dismantling scaffolding; and 3) grouping the various scopes of work into the fewest number of contracts possible in order to prevent scheduling problems and inconsistencies in the quality of the work. Certain other factors may also be considered, such as the desire of the congregation to execute a highly visible project, even if only of a cosmetic nature, in order to garner publicity and stimulate the institution's fundraiser efforts. However, public safety concerns must always take priority over any other work.

The master plan should also include budget breakdowns for each portion of the work (Figure 1). These breakdowns should be fairly detailed. For example, if one contract includes several different scopes of work, budgets should be established for each scope of work, not just the entire contract. This gives the Building Committee the flexibility to budget for only a portion of a contract if fundraising considerations do not allow the entire contract to be executed at one time or if unexpected problems force the redirecting of energies to another portion of the project.

Besides direct construction costs, budgets need to include contingency allowances and planning and management costs. Restoration projects always have unknown building conditions that can dramatically increase the total cost of a project, no matter how well planned the project or how comprehensive the conditions survey. Therefore, budgets typically include a contingency allowance of between 15% and 20%. Obviously, the worse the condition of your building, the higher the potential for unknown conditions, and, consequently, the higher this figure is likely to be. Budgets must also include planning and management costs. Costs of between 10% and 15% are typical for repair and restoration work. A figure of much more than 15% is probably excessive. After the master plan and budget guidelines are completed, an accounting system can be designed with the assistance of an accountant or skilled bookkeeper. The accounting system sets up a series of numbered codes that are used to categorize all income and expenses. It should be as simple as possible and flexible enough to allow new codes and categories to be added as necessary. The categories should relate directly to the information you or potential donors will want to see in reports. Construction expenses are typically broken down by contract, portion of the building being worked on, or construction phases. Direct construction costs and planning and management costs should be separately coded. The institution's fundraising, counsel and campaign administrator should also be consulted when preparing an accounting system so the reports accurately reflect income sources and administrative costs. Further breakdowns are of course possible, but do not get too detailed about this. The purpose of the accounting system is to clarify, not mystify, the finances of the project.

MASTER PLAN SEQUENCE AND ESTIMATED BUDGET GUIDELINES ANALYSIS

1990 CONSTRUCTION SEASON

A. Contract 1

1. Scaffold Nave East elevation and entire Tower exterior to provide access to all exterior areas (erection & one year rent)
\$120,000

Contract 1 Total: \$120,000

B. Contract 2

1. Remove Nave East elevation roof line cornice; reset loose stones & general elevation projecting stones behind cornice area; install temporary spill edge system \$ 33,000

2. Install tower roof temporary spill edge system \$ 10,000
3. Reset all Tower elevation window surround stones and general elevation projecting stones; ventilate tower masonry interior coatings (upper decks) \$180,000
4. Add temporary vents to existing wood-filled windows opening in Tower elevations \$ 5,000

Contract 2 Total: \$228,000

PHASE 1 TOTALS

1. Direct Construction Costs: \$348,000
2. 20% Contingency Allowance: \$ 69,600
3. 10% Planning and Management: \$ 41,750
4. PHASE 1 GRAND TOTAL: \$459,350

Figure 1: Sample page from a master plan showing budgets for each contract or portion of a contract. Note that the budgets include a contingency allowance and planning and management costs.

Preparing Contract Documents

Before a project can be put out for bid, contract documents must be prepared. These typically include a standard contract form such as the AIA Standard Form of Agreement (Figure 2), specifications and working drawings, and other information the bidders may be required to submit, depending upon the nature of the project. The standard contract forms outline the basic requirements of the project. These include the duties of the contractor, the duties of the owner, the duties of the Project Director, the beginning and completion dates, the contract price, the manner of payment, and the conditions under which change work orders will be executed. The contract price can be figured as a fixed fee [a "stipulated sum"], or it can be figured on a time and materials basis ["Cost of Work Plus a Fee"], usually with a "not-to-exceed" price written into the contract. Each method has its advantages. Stipulated sum contracts are preferable when the scope of work is well defined, and there is little likelihood that any unknown conditions will be encountered during the construction process. For example, in a roof replacement project, most contractors will find it relatively easy to estimate the cost of a new roof based on the square foot area of the roof and the cost of labor to install the roof. Unless the initial conditions survey was inadequate, the contractor's standard contingency fee should cover any unexpected conditions encountered during the course of construction.

However, when many building conditions are unknown, for example in structural repair projects where the need for repairs has been established by engineering probes but the full extent of the problems cannot be established until construction actually starts, a time and materials contract, with a "not-to exceed" price, has many advantages. First it gives the Project Director and the contractor the flexibility to deal with unexpected problems without having to renegotiate the contract price, provided the work falls within the scope of the specifications. The owner is protected from going over budget by the "not-to-exceed" price while the contractor's profits are protected from a "runaway" scope of work since he or she is billing on a time and materials basis. This sort of an arrangement helps enlist the contractor as an ally rather than a potential adversary in the construction process because the contractor's profit margin is not affected by dealing with unknown or unexpected conditions. The two types of contracts can also be combined, with some portions of the scope of work billed on a time and material basis within a stipulated sum contract. This arrangement can be used when most of the planned work is clear-cut and easily budgeted, but some portion of the scope of work has too many unknown conditions to accurately budget.

Abbreviated Form of Agreement Between Owner and Contractor

FOR CONSTRUCTION PROJECTS OF LIMITED SCOPE WHERE THE BASIS OF PAYMENT IS A STIPULATED SUM 1987 EDITION

THIS DOCUMENT HAS IMPORTANT LEGAL CONSEQUENCES: CONSULTATION WITH AN ATTORNEY IS ENCOURAGED WITH RESPECT TO ITS COMPLETION OR MODIFICATION

This document includes abbreviated General Conditions and should not be used with other general conditions. It has been approved and been endorsed by The Associated General Contractors of America.

AGREEMENT

made as of the day of _____ in the year of Nineteen Hundred and Ninety-one.

BETWEEN the Owner:

(Name and address)

and the Contractor:

(Name and address)

The Project is:

(Name and location)

The Architect is:

(Name and address)

The Owner and Contractor agree as set forth below.

Figure 2: Cover page of a standard contract form published by the American Institute of Architects.

The specifications and working drawings are the basis upon which the contractors make their bid, and these form the heart of the contract documents. Specifications are detailed descriptions of the work to be executed and will typically include working drawings that graphically describe and expand upon the written specifications. The specifications usually are approved by the Building Committee before the remainder of the contract documents are put together.

The actual bid proposal presents the contractor's bid with supporting documentation. The supporting documentation includes the prices for materials, wage rates for the contractor's employees, and cost breakdowns. This information, which is basically the contractor's worksheet for figuring his or her bid, gives the Building Committee the opportunity to analyze the process whereby the contractor arrived at his or her figure.

The contract should also contain basic information on the protocol of the bidding process, including when and how the bids are to be submitted, and any information on special circumstances affecting the project. For example, when restoration work is being done on an historic building, the contract will typically include statements regarding the building's landmark status, information on any special approvals that are required to execute the work, and a statement confirming that the work must comply with The Secretary of the Interior's Standards for Historic Preservation.

Last but not least, have your legal counsel review the contract before the project is put out for bid. This is an essential step. Architects, engineers, and building conservators may have a strong background in construction law, but they are not lawyers and they may not be aware of special conditions affecting your project. Your legal counsel may notice omissions or inconsistencies that could jeopardize the entire project if not corrected. For example, at one church in New York City, the draft of a \$400,000 contract listed the parish corporation as the owner of the building. However, when reviewing the contract the parish's attorney pointed out that the building owner was actually the Diocese acting through the parish corporation as its agent, not the parish itself. Such an error, if not caught before the contract was signed, could have rendered the entire contract null and void and placed the parish and the Diocese in great financial jeopardy.

Putting the Project Out for Bid

The next step is soliciting bids from contractors. It is advisable to invite at least three contractors to bid on a project. More are preferable. The Project Director may suggest the names of several contractors he or she believe are qualified, or you may contact local preservation organizations, such as the New York Landmarks Conservancy, for the names of contractors who are skilled and experienced in the type of work called for in your specifications. In some cases special bidding requirements

may apply. For example, when a restoration project is being funded by government programs, you may need to issue an open invitation to all interested and qualified contractors and select the lowest qualified bidder. In these cases be sure to carefully follow the instructions of the government office with which you are working. Once prospective contractors have received the contract documents and had a chance to review them, the Project Director will usually arrange a walk-through of the site with all the contractors who are bidding on the project as well as any consultants who need to be present, to project, as the site and discuss the project. This walk-through tends to be quite formal in its character and most Project Directors will insist that it be tape recorded to form a legal record of the proceedings. Building Committee members do not usually need to be present for this walk-through, although they certainly may be.

After the "Official" walk-through the prospective contractors may request additional visits to the site while they are preparing their bids. This is, of course, perfectly acceptable. However, care must be taken during the bid preparation process that an appearance of collusion is avoided. For example, most any Project Directors will only accept phone calls from contractors who are bidding on a project at the offices of the owner, and then only in the presence of a witness who co-signs a statement, prepared by the Project Director, affirming the substance of the conversation. It is inappropriate for contractors to call members of the Building Committee directly or to seek to influence the outcome of the bidding process in any way other than through the official channels set up in the contract documents. The contract documents and the

Project Director should make clear to the contractors that any attempt to circumvent this process will result in the contractor's disqualification.

The deadline and the method for submitting bids, usually by registered mail, should be outlined in the contract documents. The contract documents should also name the time and place for the bid opening. Bids that arrive early should not be opened or examined until this time, and then only in the presence of witnesses. These witnesses should include the Project Director, the Chair of the Building Committee, the Chair of the governing Board, and any other individuals with legal responsibility for the project or whom the Project Director or the institution's legal counsel believe are appropriate. The Project Director should make a list of all the bids submitted and the total amount of each bid, along with any alternates, and each of the witnesses should sign the affidavit to form a legal record. If one of the witnesses is a notary, all the better. Copies of all bid documents should then be made available to the members of the Building Committee.

The bids should be evaluated on four criteria: 1) the qualifications of the contractor; 2) the contract price; 3) the ability of the contractor to work well with the other team members; and 4) how well the bid addresses the scope of work. These cannot, of course, be determined from the bid documents alone. The Building Committee needs to arrange interviews with each of the contractors being seriously considered for the project. Contractors who are demonstrably unqualified for the project or whose bids are unreasonably high or low, need not be interviewed by the Committee.

These contractor interviews are where the perceptiveness and discernment of the Building Committee members come into play. Gut feelings are as important, at this stage, as any technical knowledge or expertise. These gut feelings should be trusted. They are usually right. During the contractor interviews, the Project Director, engineer, and Building Committee members should

question the contractor closely on his or her understanding of the project and qualifications to execute the project. The contractor should be able to clearly state how she would handle specific conditions or problems that are anticipated on the project. Beware of vague answers, such as "we'll figure that out when we get to it" or "Don't worry. We know what we're doing-,". If a contractor cannot answer how certain conditions would be dealt with, he or she must at least be able to discuss how they would determine the best course of action.

Beware also of contractors who use high-profile projects that have little to do with the project you are executing to demonstrate their competence. For example, a contractor with extensive experience in brownstone repair, who flashes dramatic "before and after" photos of various buildings he or she has worked on, is not necessarily qualified to execute structural repairs or woodwork restoration. Rather, look for contractors who demonstrate significant expertise in the work you need to accomplish. If you are executing structural repairs, check to see if the prospective contractor has structural engineers on his or her staff. If not, did he or she prepare the bid in consultation the services with a structural engineer? Will he or she retain the services of a structural engineer as a project manager while working on your project?

Another sure sign of trouble is a patronizing attitude on the part of the contractor. There is a tendency in the construction industry to mystify the construction process. Some of this is unintentional. Like any field, the construction industry has its own "culture" and its own jargon. However, remember that contractors do not possess some "hidden knowledge" unknown to the rest of the world. If you, as a Building Committee member, have been doing your job properly, you have a far better understanding of the building's condition and what needs to be done in order to repair it than a contractor who has only read the specifications and visited the building two or three times. Don't allow yourself to be intimidated. After all the contractors have been interviewed, the Building Committee needs to make a selection. Any contractor who demonstrated in the interview process that he or she does not have the expertise to do the job should be disqualified, no matter how attractive the bid. It will not be in your institution's interest to go for the lowest bid, and then spend a fortune later on trying to manage an incompetent contractor, correct potentially disastrous errors, or deal with legal problems.

After the unqualified contractors have been eliminated, the remaining bidders should be evaluated for their level of expertise, their contract price, and the "chemistry" between the contractor and the project management team. If the Building Committee is particularly interested in one contractor, but his or her bid is too high, the Committee can always ask the contractor to reconsider the bid. Through careful analysis of the contractor's worksheets, the Project Director may be able to suggest areas where the contractor can cut costs.

Occasionally situations arise where none of the bids are acceptable. Either they are all too high, in which case the original budgets were probably not well conceived, or none of the contractors appears qualified for the job. If all the bids are too high, you may negotiate with the lowest qualified bidder to see if he or she will lower the price. You may also consider reducing the scope of work. If all the bidders were unqualified, you may need to find more qualified contractors to bid on the project.

Once the Building Committee has chosen a contractor, all the contractors who bid on the project should be notified by phone (for courtesy) and by registered mail (for legal purposes) of the decision of the Committee. Any last minute revisions to the contract documents can then be made and the contract signed.

Part 2 of this article, which will appear in the next issue of Common Bond, will deal with the process of managing a construction project, including inspecting work, executing change orders, and devising creative management solutions to difficult problems.