

Existing Conditions

Larry A. Paul, AIA
San Francisco

Issue Number 5
October 1995

Photographing Existing Construction
See page 2.

What Is Your Benchmark?
See page 4.

Analysis of Existing Conditions
See page 4.

Nashawtuc Architects
A firm with a social conscience
See page 5.

An Architect's Level
See page 6.

On Being the Cause of Existing Conditions
See page 7.

A People Ain't Simple
See page 8.

The Survey
See page 9.

Member-to-Member
See page 10.

Tips and Techniques
See pages 11 and 12.

Just as footings serve as the foundation for a building, a project's existing conditions serve as the foundation for any new work and affects the results of the finished product. With planning and permit processes increasingly complex, it pays to document properly the existing context in which you are building. Often, your project is analyzed in regard to its impact on neighboring properties and conditions. To attempt to plan and design any new building or remodeling to an existing building without proper and complete information is a prescription for disaster, leading to inevitable conflicts and, ultimately, change orders from the contractor. These changes can be very expensive in time and money for all parties, sometimes requiring new drawings, additional approvals and even going back to the drawing board for a whole new design.

When starting a project, our firm first determines the planning and zoning restrictions to analyze feasibility. We accurately document the site, including access, orientation, drainage, trees, and contours; measure existing buildings in plan, elevation, and section; and locate neighboring structures. We then carefully record the existing structural, electrical, mechanical, and plumbing systems and locate utilities. We also sketch details that will be matched, remodeled, or interfaced with the construction. The owners or occupants are questioned for information they have regarding the existing conditions, since they are usually most familiar with them. Finally, numerous photographs are taken to record the existing conditions for future reference and refresh our memories. All this investigation takes considerable up-front time (sometimes several site visits) but is extremely valuable to the architect, client, and contractor throughout the design and construction process.

We also usually bring a contractor out to the site in the beginning stages to alert us to existing conditions from their point of view. They may see something that is particularly important for us to respect in our design work to produce a cost-effective solution. This enables us to consider alternatives and make changes before the project is fully designed, drawn, specified, and bid out. Being thoroughly knowledgeable from different points of view about existing conditions avoids problems requiring last-minute changes and costly extras.

Once the existing conditions are thoroughly known and documented, the fun (i.e., work) begins. To build new or remodel efficiently, we carefully examine everything we have to work with from the outset to avoid designing something that doesn't fit with the existing conditions. No two buildings or sites are exactly alike. The context and existing conditions become major components in a project's program and a priority consideration for what is built, how, and at what cost. Myriad design decisions are based on the influences of these conditions. Sometimes they even dictate what can and can't be done within the design without exceeding the budget. It certainly can be done, but designing without regard to what's existing can be embarrassing for the architect and expensive for the client.

Photographing Existing Construction

*Donald Wardlaw, AIA
Oakland*

Much of my work involves remodeling and additions to existing construction, mostly residential. I rely on photographs I take on initial site visits for development of as-built plans, development of design ideas, and problem identification and solving during the

construction document process. There is always something I did not photograph or cannot quite see in my photographs that complicates or adds some measure of uncertainty to my work. It may require that additional time be spent revisiting the site. I was curious whether other architects had devised better methods for photographing existing conditions.

We have mentioned previously in this newsletter that Small Project Forum members may conduct investigations on practice issues of interest to them, write about the results for others in the forum, and nail down continuing education credits for the effort. This brief report is intended to share what was learned in interviews with a few architects about photographing existing conditions and to illustrate by example what such a report might be like. As an interactive self-study effort, this work will qualify for level-two credits, which means that two AIA/CES learning units accrue for each hour invested. A 6-hour effort yields 12 learning units, which is a third of the learning units that must be accrued by January 1998.

I interviewed five architects by phone in sessions lasting about 20 minutes each. A sixth architect phoned in a series of observations on the topic. There was a surprising variation in methodologies among the architects. At the outset I expected that the subject would be fairly well fathomed after a couple of interviews. It became

apparent that more interviews would broaden still further the range of thinking and practice I could document about the topic. I found that drawing and measurement were in some cases too closely related to photographic aims to be ignored. Here are my other principal findings.

- *Needed views go unphotographed and it is a common experience.* The survey group devised strategies to minimize or mitigate this fact.

- *Some architects devised methods to discipline their efforts.* One architect works in a logical path (say north end to south end of the house), photographing each room from the center and with straight on views of each wall. Other architects stress the relationship between drawing, measuring, and photographing. One noted that the first task is to draw all the rooms in plan and then measure them. Photographs are taken last, which allows the architect to take into account unusual or noteworthy aspects of the layout that were discovered in the process of drawing and measuring.

- *Some architects prefer making additional visits over attempting to document everything on one pass.* One noted that client meetings are purposely held on-site, which allows additional data to be gathered as needed. Another notes that project scope is often too undefined when initial measurements and photo-

graphs are taken and that it is better to focus on the areas where information gathered is known to be pertinent to the work.

- *Some architects note a concern for efficiency in the process.* One notes that photographs are taken not from room centers, but from corners so as to see two walls at once. In many instances this architect finds two shots per room sufficient. Another architect has the client hire someone else to measure and photograph the house. Notes this architect: "It's always a shock to my clients when I tell them they need as-builts. I have a former employee who on balance was not a good fit for my office, but was exceptionally skilled at making measured drawings, and I introduce this person to my clients. My client's appreciate this because the hourly rate is much less than my own. Early on in the job, when our relationship is still new and untested, they see I'm looking out for things that are important to them."

- *Photographic equipment typically consists of a 35mm camera, a wide-angle lens and often a flash.* Common are 24 and 28 millimeter lenses for interior shots. One architect keeps a 20 mm lens on hand for small rooms like bathrooms. That architect carries two cameras to have both wide and ultra-wide angle lenses available without lens changes. Another architect uses a simple camera with

35-70mm zoom that automatically date stamps each print. All shoot print film.

- *Inexpensive print processing is favored over labs with reputations for professional-quality work.* Costco and Fox Photo were both prized for their quick and cheap prints. One architect makes numbered sets for himself and the client and uses them as a discussion aid in phone conversations. (Another architect I know makes computer-generated Avery labels—there are some real small ones—noting the job name, date, and photo number, and sticks them on the back.)

- *Individual shots are often taped together to create panoramic views.* One architect notes that 360-degree panoramas are taken from the center of proposed new rooms. This requires roof work when second-story additions are proposed. The panoramas are useful in locating favorable and unfavorable view features.

- *"Before" photos do not receive special attention.* They are usually culled from the group taken to document existing conditions. Noted one architect, "I want the before photos to look awful."

- *Some projects require special attention to existing details and trim conditions.* Special window trim, eaves, cabinetry, and railings are features that may influence the design of new work. One architect

takes trim close-ups with a tape measure showing in the view.

- *Photos of existing conditions can live on as marketing instruments.* One architect notes that at the completion of a project he presents the client with a three-ring binder containing photos (neatly displayed in plastic sleeves) taken prior to and during construction. In the clear plastic sleeve on the cover there is a humorous and lighthearted certificate from the architect ("...valor in the face of, etc."). This leaves the owner with a handy visual aid for explaining their project to all their friends. Oh, and there are a few business cards here and there among the photographs. Another architect gives the client an album of photographs showing features exposed and then hidden, pipes, ducts, wires etc.

Many thanks to the following California architects for sharing their secrets. Alex Bergtraun, AIA, Berkeley; John "Mac" McClean, AIA, San Francisco; Richard Morrison, AIA, Menlo Park; Linda Randolph, AIA, Fremont; Cathy Roha, AIA, Berkeley; and Pamela Siefert, AIA, Orinda.

What Is Your Benchmark?

*Gabriel Durand-Hollis, AIA
San Antonio*

It is possible that your benchmark is not what it seems to be. Here is a small-projects tale of woe. A do-it-yourself client wanted us to design a house for him. He asked for a bare-bones set of plans and a bare-bones fee too! No site visits, no soils tests, no permit. Our choices back then were to help him out or come even closer to going out of business. So we agreed to design his house. His topo information was a grid of pencil dots with numbers like "3," "1," "7," etc. We found two zeros. I took the zero figures and found that the numbers showed a pattern of contours with slope down from front to back with the middle being higher than the sides. We designed his "builders set" of plans.

Imagine my surprise when the sitework contractor found the site sloping up from the street and a depression in the middle of the site! It turns out that the do-it-yourself surveyor was showing the difference from his transit to the ground and we thought that the higher numbers meant higher land! After a quick redesign, sitework started and construction proceeded smoothly. We became more thorough in asking for survey information before starting any future work.

Analysis of Existing Conditions

*Jerry S. Rubin, AIA
Bethesda, Md.*

My practice is devoted entirely to residential remodeling and additions. I measure existing conditions with my trusty 25-foot Stanley powerlock tape, a clipboard and 8½" x 11" clearprint graph paper. I sketch the floor plan first, then fill in all the dimensions and notes, finishes, ceiling heights, HVAC, electrical, and so on, depending on the project. I take some photos inside and out, 35mm automatic, and drop it off at the one-hour place.

Measurements and photos are only skin deep, and sometimes you have to do a bit of investigating to analyze and uncover existing conditions. This is an area easily neglected. When all else fails, I'm not afraid to drill a hole or cut an opening to locate structure or systems. I recently cut a hole in a clients ceiling to locate some steel beams that would support the floor of a future second-story addition. The beams were supposed to be W 10 x 15, according to some old plans. It turns out they were W 10 x 33. Never trust those old blueprints. Better to find out for sure now than to have your client get hit with a change order later.

Plumbing vents through the roof usually reveal how they run through the house. Take a look at the roof outside. Water closet tanks often have the date of manufacture stamped inside, a good clue as to when a house was built. I note the Btu output of the boiler to do a quick check to see if it's big enough to heat the addition.

I always try to get a house location survey from my client. I tell them to look for it with their deed. If they don't have it, sometimes the local government might have a copy on file and will mail it for a small fee. (Montgomery County, Md., does it for a buck, going back about 30 years.) I don't rely entirely on a survey done for settlement purposes when building an addition close to required setbacks (usually side yards). I'll have a local surveyor shoot the property line in question, which costs about \$150 in my area and avoids potential disputes between neighbors. Once the addition is built it's too late. I keep a copy of local zoning regulations up to date and don't rely on verbal interpretations from the local zoning plans reviewer. A quick review of the regs can reveal grandfather regulations that grant more leeway in expanding older residences.

I also check to see if the project is located in an historic district, homeowners association, incorporated town, special waterfront jurisdiction or whatever before I lift a pencil on design. The amount of regulation and review seems to

increase every year.

I usually do a site sketch on a copy of the house location survey to locate trees, improvements, and rough existing topo. If you want fairly accurate existing grades, I recommend buying a sight level (about \$20) and shooting them yourself. If I am uncertain about the existence of a footing under an existing slab or porch I plan to build on top of, I dig a hole and see for myself. I have asked clients to do this themselves, which helps the enthusiastic client to feel very involved!

Future Issues/Forum Business

Forum members are welcome to send in comments and suggestions on these Small Project Forum Reports. We have set the theme for issue No. 7, June 1996, as "business planning." Hopefully we can shed some light on a subject about which some of us remain to this day, innocent. There is as yet no theme for Issue No. 8, October 1996. You are welcome to contribute your ideas.

We are nearing the end of our second year in existence. It feels as though we have gained some strength. Early next year we will be revisiting our member survey that we conducted in February 1994. We will use this information in the planning of our programs and information focus for the following two years. We hope those of you

who choose to stay on with the Small Project Forum next year will make a point of airing your views in the survey.

One of our goals for this report is to include photographs and graphics. This goal fits nicely with one of the physical constraints of the report. We publish reports like this in four-page increments, which means that inevitably we end up with some fraction of the four-page increment vacant. We would like to begin filling this space with photos, drawings, sketches, cartoons, and technical drawings by forum members. You are invited to contribute to a collection of material being created for this purpose. Bear in mind that selection will be weighted to graphics that are either related to an article, rich in content, of special appeal to architects in small project practice, or in some rare instances insanely beautiful. All submittals must be in either 35mm slide format, or in flat format not exceeding 8½" x 11". Submitted materials will not be returned. Send graphic submittals to Donald Wardlaw, AIA, 460A Santa Clara Avenue, Oakland, CA 94610, (510) 268-9524. Credit will be noted to contributors published. Where space permits, additional credits may be possible.

Firm with a Social Conscience

*H. Chris Chu, AIA
Boston*

Located in the historic Wright Tavern, with the Chamber of Commerce steps away in the heart of Concord, Mass., Nashawtuc Architects, Inc., seems to be in the center of action. Information-seeking tourists walk right in to ask for directions and information, not realizing that they have walked into an architecture firm. The firm even obliges by dispensing maps when the chamber is closed.

Started in 1988 by Holly B. Cratsley, the firm has grown into a busy practice (annual construction costs are roughly around \$1.6 million) with 20 to 25 active projects, primarily residential additions, remodeling, and some retail and institutional in various stages at any given time. The firm consists of an unusual mix of architects and other designers (all women), an office manager (male), and an interesting mix of part-time and full-time staff, numbering from 5 to 10. Holly strongly believes in hiring apprentices, often a high school student who wants architectural experience. She also has a flexible attitude toward hiring outside architects to help with fluctuations in the work load. Following are excerpts from a recent conversation I (HCC) had with Holly Cratsley (HBC).

HCC: Why did you start your own firm?

HBC: Because the other firms I had experience with did not think that a service-oriented firm could be profitable. I think of my firm as a storefront architectural shop providing aesthetic problem solving.

HCC: You do primarily residential work now. Do you plan to expand in other directions?

HBC: Making money in residential work is difficult but possible. You have to be willing to be interrupted. There are inefficiencies in switching from job to job. You are under incredible pressure and have to work very fast. You have to give the clients something interesting, more than they expected, something unique such as ridge skylights and heated towel bars, to add a special touch to each job. You have to stay on top of innovative products and materials through magazines, home shows, etc. Also, you have to have a willingness to sublimate your own personality, although I always tell clients if they are making a mistake. Critical to success in residential architecture is having good negotiating skills. You talk and talk through clients' concerns and nonconcerns. There is also often a practical advantage to being a woman when it comes to clients who are pregnant or wives who have been ill. My goal is to have small-town projects, including

more retail and restaurant projects. I am worried about going stale.

HCC: What kind of office would be your ideal?

HBC: I would base my ideal on the model set by two landscape designers that I know; two women who alternate administrative work one year with design work the next. Also, I would pair project managers on projects so that if one is called away, the other can cover. Right now, I'm the fallback for all the project managers.

HCC: How do you maintain good client relations and public relations?

HBC: I try to show clients that I value their patronage. My standard is to give all active clients seasonal gifts, such as a case of fruit during the holidays and doorside giant mums in the fall. At the end of jobs, I always give clients a present for their home. Clients have come to expect innovative Christmas cards from us every year. Most of my advertising is word-of-mouth. I do advertise though through pro-bono work for not-for-profit concerns. It is important to maintain visibility in the community. Being a publicly spirited citizen and good neighbor translates into good PR. Find ways you can participate in the community and use your skills. I'm on the building committee of my church, I'm an elected official on the Concord

Housing Authority. As an office we just did a pro-bono project for the Pine Street Inn, designing and getting materials donated for two rooms in a new residence for people with AIDS. I have incorporated into our office personnel policy a provision that each person may spend the equivalent of one day per year, office-paid, on a not-for-profit project of their choice. This year many of us will work together painting furniture and stenciling walls at the AIDS hospice.

HCC: What is the most difficult aspect of being a small firm?

HBC: The administrative aspect is the most challenging. It is important to find out how other small firms handle administrative matters. I find it useful to get and share information with other small firms through the Boston Society of Architects Small Firm Committee's activities.

An Architect's Level

*John Ploss, AIA
San Francisco*

About two years ago a contractor told me about bitter experiences with residential additions trying to resolve designs in the field when the existing grading did not match conditions as shown on the architect's drawings. He then asked me

how I handle these problems. I indicated that unless the owner was willing to pay for surveying, I use an eye level, which is only good for small sites and is not terribly accurate. I also remembered a job where I assumed a retaining wall would be 3' high and it turned out to be 4.5', causing me some embarrassment.

I then decided to take the plunge and buy a good builder's level and wound up spending about \$700 for a Pentax automatic level, 25-foot telescoping fiberglass measuring rod, and sturdy aluminum tripod.

Based on my experience over the last two years I am totally sold on having this equipment. If I was going to purchase today, however, I would research laser equipment, which has been dropping in price. Also, I might purchase a transit (which has a scope that angles to determine the height of objects) instead of an automatic level.

Here are some examples of how I put the level to good use:

- A new remodel job with drainage problems—I was able to take shots of the back of the property, back of the house, and the elevation of the gutter where a box drain can be installed. This allowed me to determine in 15 minutes that there was adequate fall to make the proposed drainage system work without needing a sump.
- A proposed addition where a garage would be added with the garage being installed into an uphill grade—I was able to determine the height of the required

retaining walls so a contractor could estimate the cost for the owners approval.

- A planning submittal for a municipality that has a slope ordinance that ties the allowable floor area ratio to the slope of the lot—I was able with the owner to establish the existing slope in a manner acceptable to the local planning department.

- A job with extensive site paving—I showed the existing and proposed grades and a drainage pattern. The contractor in the field said that grading-related extras would be required, which the owner was prepared to pay. When I told the contractor that no additional extra grading was required and that he should review the grading information shown on the site plan he decided that no extra work was required and the client was delighted.

- A job with ponding at the entry—I was able to take some quick shots and determine how to modify the front yard paving to solve the problem.

- I frequently use the 25-foot rod for taking off the heights of portions of homes.

Most of my jobs are remodels and additions that have limited fees. Using a surveyor for this work often would take extra uncompensated work for me to arrange, would take more time, and often the clients say it is not necessary (because they don't want to pay for the extra expense) but they may be unhappy later if there is a problem.

All of my clients are delighted to act as my "rod man" and seem impressed by the thoroughness of my investigations.

John Ploss, ALA, is a sole proprietor specializing in residential work in San Francisco, (415) 626-8790.

On Being the Cause of Existing Conditions

*Hy Applebaum, ALA
Houston*

Poor decisions are made from the lack of experience; proper decisions are made from the experiences of poor decisions. I read that somewhere and I believe it.

Recently I was asked to do some renovation work on a unique, large residence I had designed about 30 years ago. The owners recently bought the house from my original clients and showed their love and appreciation of this design by honoring me with this commission. Of course they expected me to also remember all that was involved with the construction of the building. The new work included a sauna, solarium, and exercise room addition; the redesign of the master dressing room and its large walk-in closets and master bath; the redesign of the built-ins of the family room to include a state of the art media center; and redesign of the

lighting system in the dining room and entry. Over the years I have developed an expertise in lighting design so this aspect of the work was very important to me as it isn't often you can go back to redo a portion of a project you thought was a good lighting design and later realize it was just adequate by today's standards.

I thought I was doing a pretty good set of documents with the first residences I designed. My framing plans were adequately shown on the floor plans in a typical fashion as taught to me by my mentors. The problem I was running into was very typical during construction, the general contractor and his framer paid no attention to the placement of recessed lights and equipment. I was always in a hassle with the framer to move joists to properly center or line up the light fixtures. Yes, I had a note on the drawings with instructions to adjust the framing as required, but the GCs always claimed that the note was either too small or too remote to pay attention to it.

For my next houses I would hold a preconstruction meeting and review these instructions as well as other items I found necessary to pound into their memories with a 2x4. I explained to them how finicky I was about elements lining up and being centered as per plans.

Well, from my experiences of these events, I decided it would be best to do a separate and thorough framing plan" to be a part of the

construction documents that would include the placement of recessed fixtures, equipment, and the routing of the ducts. There was no way the framer would be unaware of the other items in the building.

Fortunately, I learned this lesson quickly as the house I was about to renovate was drawn with just such a detailed framing plan. Everything of importance was documented and checked during construction. I was able to resolve the redesign easily, economically, and with minimal reframing and drywall work. The work went quickly and the owners didn't need to move out of the house during construction.

The best part, and the lesson I learned from this experience, was that the clients thought I had anticipated future changes in the original design because of the documentation. They think I'm a genius for being so prepared to handle their needs. I would appreciate your keeping this story to yourselves as I would like to keep this illusion for as long as I can.

A People Ain't Simple

*Samuel E. Osborn, AIA
Atlanta*

"TO PRODUCE GOOD ARCHITECTURE, MAKE SOME MONEY, AND TO HAVE SOME FUN WHILE DOING IT. No great manifesto: nor philosophical elaboration ... pretty down home

stuff" is the way Mr. Caudill expressed his goals in *The TIB's of Bill Caudill*. This book puts forth his personal reflections on many subjects, but most importantly his personal approach to the principles that guided his life and business. As "a people ain't simple" implies, he surely understood that one of the most difficult obstacles we all face is our relationship with others. Of all the existing conditions that we confront on a job, the one that is the hardest to get a handle on is, much too often, the client.

As architects, most of us will take on almost any project with the attitude and confidence that we can be successful. Unfortunately the history of most firms is littered with client relationships that resulted in anything but producing good architecture, making some money, and having some fun.

Before surveying the site, taking the photographs and measuring for as-built drawings, we need to examine the EXISTING CONDITIONS OF OUR (PROSPECTIVE) CLIENTS. Can they pay for our services? Will they pay for our services? Can they afford the project? Are they the decision maker? Are they part of an organization where politics will be involved, whether it may be a corporate structure, a building committee, or a husband and wife? (Even armed police fear a call to mediate during a domestic quarrel). Is the prospect one who will let us practice architecture or are they looking for us to be "construction

documentationers"?

Most of us are continually looking for that next imaginative client who will let us fulfill our goals that provide us some measure of what we have understood to be success. But how do we know when we come face to face with those individuals? Developing a checklist would be helpful, but to know really that we can work with a company, an individual, or a couple, we need to understand their perspective and principles and whether they are backed by conviction. More importantly, we need to be sure we can accept that perspective and those principles and can back them with our own convictions.

In other words, we first take survey of OUR OWN EXISTING CONDITIONS. We need to define that set of principles that governs our practice and by which we can determine if a client will allow us an environment in which we can provide the services they require and at the same time fulfill our personal and professional goals. We may be able to influence our clients and sell our designs, but most of us really can't expect to change people. Analyzing and getting a feel for the true character of a client is a very complex and difficult process. On the other hand the uneasy gut feeling is usually pretty simple. So simple that it is usually overridden by other factors such as our economic condition and egos that may dictate that we need a specific project.

Be it design or client relationships, "professional maturity relates to having achieved the wisdom and judgment to exert the right self-controls at the right time. Expediency is for the hour, principles are for the ages."

All quotes are taken from, The TIBS of Bill Caudill, by Bill Caudill, Copyright 1984 by CRS SIRRINE, Inc., reprinted by ALA PRESS May 1985.

The Survey

Rachel Simmons Schade, ALA Philadelphia

Our firm works primarily in renovations and additions, so it is critical that we have excellent survey information from the very start.

If there are no existing drawings to work from, we start by making a good sketch of the floor plan. We typically will survey a space so we can create base drawings at $\frac{1}{2}"=1'-0"$ for kitchen and bath renovations, $\frac{1}{4}"$ usually suffices for all other work. This means measuring things to the nearest $\frac{1}{2}"$ in the field. I like to be the one who does the writing, so I hold the dumb end of the tape and let my assistant read out dimensions. Any areas of special detail will require an additional plan, elevation, or section to describe the conditions. In older buildings it is often useful to take two dimensions for the

overall size of a room. We often find that our rooms are not square or true, which can really foul us up down the road if we aren't aware of it from the beginning.

Often, some of the projects are localized within a building, so doing a survey of the entire structure may be too costly for the client. We will get overall dimensions of the building to locate the specific area of work.

I also like to have some idea of how a building is situated on its site. Often clients don't have or don't want to pay for a complete survey, so we'll do our best creating one from whatever information is available. This is usually at least a deed description found in the owner's home records. We then use our longer tapes and locate critical items such as property lines with relation to any new work proposed. I have had limited and not very satisfying experience with electronic measuring equipment.

We also make a thorough photographic record of existing conditions, which assists us in preparing base drawings. Our camera has a date/time memo built in so it's easy to remember the sequence. Back at the office, I prefer to make copies of the survey notes and put the originals away in a safe file.

Member-to-Member Question

In Small Project Forum Report No. 4, June 1995, we posed the question: "Share a humorous, remarkable or bizarre experience you had during an initial site visit." Thanks to Samuel Osborn, AIA, and John Reese, AIA, for sharing.

Not Everybody Thought It Was Funny

*Samuel E. Osborn, AIA
Atlanta*

One last cold November evening, I met with a couple to discuss their dreams to renovate and enlarge their home. Or maybe not, since they had spent the afternoon at a marriage counseling session trying to come to some agreement on the issue. This project is on hold.

Another time I found myself discussing grandiose changes to a house with the husband while the wife excused herself to putter around in the next room, throwing in a critical comment every now and then. After I thought we had finished, the husband excused himself and explained it was now his wife's turn to explain her ideas. The debate as to what to do to the house had become so heated they could not be in the same room when the other was talking. Nothing was compatible, not their ideas, needs, nor budget. This was a project I could easily walk away from, or maybe it wasn't even a project.

The Floor Is Not Always Level

*John Reese, AIA
Carrollton, Tex.*

During one site visit to an office finish-out project, I discovered that the electrician was lowering numerous light switches that had been installed adjacent to the lever side of the office doors. As I discovered more and more of these conditions, I questioned the project superintendent. He reminded me that our drawings called for the light switches, when adjacent to the door, to be located 38 inches above the floor so that they would align with the door levers. He then pointed out that the building standard full height door frames went up to the ceiling, which had been installed level by using a laser. On the other hand, the floor was not level. In fact, he stated that the floor in this prestigious high-rise steel-framed office building (built during the construction boom of the mid-1980s in Texas) was as much as three inches high in many areas! The contractor had trimmed the bottoms of the doors and frames when they had installed them at the high points of the floor, and now some door levers were only 35 inches above the floor. The superintendent had instructed the electrician to go back and measure down from the level ceiling, rather than up from the uneven floor, to establish the mounting height for all the light switches.

John Reese, AIA, is the sole proprietor of The Office of Reese Architects, which provides design services for retail and office interiors and small commercial projects, (214) 394-8585.

New Member-to-Member Question

Our next issue has as a special focus architect/builder relations. Articles, tips related to this topic, responses to the member-to-member question or any other materials for publication are due no later than November 24. The issue is scheduled for delivery February 1, 1996. All written materials should be sent to the coordinator, Gabriel Durand-Hollis, AIA, at Davis Durand-Hollis Rupe, 7800 N.W. IH 10, Suite 835, San Antonio, TX 78230, (210) 377-3365. Submittals should include a hard copy and a text file on PC-formatted disk. Articles may also be sent via *AIAOnline* at 48350, or Internet at 48350@t-mail.telescan.com.

Members submitting articles should note that the tone we are looking for is: "This is what in my experience I have found to be true" or "This is what has worked well for me," as opposed to "This is what you should believe or do."

The member-to-member question for the next issue is: "What qualities do you note in builders you refer business to repeatedly?"

TIPS AND TECHNIQUES

That's It, Your Out'a Here!

*Samuel E. Osborn, AIA
Atlanta*

An attorney friend of mine once shared with me the wisdom of annually firing your worst client. Profit wasn't an issue, some clients are just not worth the time and effort that could better be spent elsewhere.

Getting a Head Start on Measurements

*Mark L. Robin, AIA
Nashville*

Before measuring an existing home for renovation, I ask the homeowner for the home mortgage survey, which is almost always included in their mortgage closing documents. These surveys will show the footprint of the home with outside perimeter dimensions, decks, patios, sidewalks, and driveways.

Prior to taking measurements on site, I use these dimensions to draw the perimeter of the house. Once on site, I have a scaled drawing and can more easily document field dimensions and notes. Using a scale to freehand the exterior fenestrations, interior walls, and fixed items, I can see problems and opportunities. This method has saved me the necessity of a second visit to verify an existing condition.

A Few Good Tools

*Richard Morrison, AIA
Menlo Park, CA*

Among the tools I carry with me when I measure up a site are:

- An "Accu-line" pad (Doll Products, Knoxville/Musson Theatrical, Santa Clara, Calif. (408) 986-0210) with 11x17 gridded 1000H paper. This pad has a bumpy surface, which causes the pencil to move in mostly straight lines.
- A hand-held sonic measuring device (Dimension Master Plus, Calculated Industries, 800-854-8075/800-231-0546 in California) for measuring distances between walls.
- A tape measure for measuring distances along walls.
- A dust mask for crawling through attics.
- A pocket mirror.
- A circuit tester.
- Two flashlights, one large battery-powered fluorescent (available at camping supply stores), which gives a wide spread of light and is good for setting on an attic or crawlspace floor, and one small Mag-Lite for bright focused light.
- A roof protractor. You'd be amazed at how many roofs are neither 4 nor 5 in 12.

What's missing from my kit is a pair of coveralls. I keep telling myself I'm going to buy some coveralls. I really am going to buy some coveralls.

Photographs of Existing Conditions

*John Reese, AIA
Carrollton, Tex.*

We all know that photographs of existing conditions can be a highly effective reference tool in any project, but I have found a way to make them even more productive for me. After making multiple prints of the photographs of a project site, I number the back of each photograph in each of the sets. Then I create a rough site plan (or floor plan for interiors projects) showing where each numbered photograph was taken. A set of numbered photographs, along with a copy of the plan is then sent to the client, consulting engineers, etc., so that we can all reference the same photograph when trying to describe an existing condition or the proposed design solution over the phone. Documenting photographs in this manner can also help members of your staff, who may not have the opportunity to visit the site, become familiar with the existing conditions at their own pace and without having to ask questions.

Low-Tech Tool for High-Tech Drawings

*Donald Wardlaw, AIA
Oakland*

Like many CAD programs, the one I use (MiniCad, a Macintosh program, also available as GraphsoftCad for Windows, Graphsoft, (410) 290-5114) allows the easy generation of perspective views of architectural models created within the program. It is simply a matter of graphically indicating in plan view where one is standing, how high the eye level is, what direction one is looking, and at what height some distance out one is looking. Recently I created a photomontage of the CAD model superimposed into a photograph of a project site. The photograph was scanned into digital format and imported into an image editing program (Adobe Photoshop). The key to success of this process is knowing where the original photo was taken. This I noted using a Suunto compass available at many camping supply stores (about \$30). It features a rotating dial which allows me to assign a reference direction (a line parallel to one of the exterior walls worked well). I could then note the angle between the point where I stood to take the photograph and a known point on the proposed building (the nearest corner). Once I have the angle off this corner, and the distance to the camera (by pacing), I then had the necessary information to instruct MiniCad what perspective view to generate that will fit naturally into the photograph.

Digital Camera Exposed

*Gabriel Durand-Hollis, AIA
San Antonio*

We've always struggled with documenting existing building conditions and having enough fee to do the new work. One big advantage we now have is our digital camera (Photoman). It snaps pictures like any other camera but then we can load the images onto the computer back at the office and manipulate it to show or highlight the work that needs to be done. We often find that the images illustrate special conditions that we don't recall from our site visit. Contractors appreciate knowing what they are getting into when they are bidding the plans. Most importantly, clients can visualize the scope of work to their building.