

By Nancy B. Solomon, AIA, and Charles Linn, FAIA

Architects usually can't say enough about what they've been up to. But when the subject turns to offshoring, the volume of the conversation often drops to a whisper. That's because the practice of paying less-expensive workers located beyond the borders of the U.S. to do tasks once done here by architects and interns is extremely controversial.

When one of the largest firms in the country was contacted for this story, its media-relations director responded, "We do not do any offshoring." Despite that declaration, the firm's title block can clearly be seen on a working drawing in a Powerpoint promotion produced by an offshore drafting and design company. A principal of another large firm was willing to talk, but only on the condition of anonymity. Even some service providers are ambivalent about implications of sending work abroad. A representative of a U.S.-owned drafting service that sends some of its work abroad spoke extensively to ARCHITECTURAL RECORD about the practice, but several days later asked that the company not be named in this article. Other offshore providers were willing to speak about the practice, but said they couldn't reveal the names of the architecture firms for whom they work.

Like many of his colleagues, HOK's C.E.O. Patrick MacLeamy, AIA, has serious concerns about what he calls "traditional" offshoring: Contracting "someone in India for the purpose of saving money may be an idea that has some merit, but it can lead to unintended problems," he says. He adds that HOK has no plans to venture into this form of offshoring—although it does share work among its multiple international offices—and warns other firms to be very careful. "You get what you pay for," he says succinctly.

Not all practitioners, however, feel the need to cover up or avoid the practice. Kimberly D. Patton, AIA, a partner at GBBN Architects, a 100-person firm in Cincinnati, dismisses the inflammatory connotations that have come to be associated with the term *offshoring*. Says Patton, "Architects are skittish about all sorts of things. There is a shame in making money in this industry." He encourages his colleagues to look at the larger picture: "This transformation will be bigger than the computer. We will see radical changes in process and delivery." Patton sees the engagement of overseas workers as an

Contributing editor Nancy B. Solomon, AIA, writes about computer technology, building science, and topics of interest to the architectural profession.

efficient application of resources and believes that the documents his firm now delivers through offshoring are better because of the extra preparation, organization, and communications his firm gives in an offshored project. He suggests that offshoring may provide even better quality than work done here because it allows architects more time for quality control. "The dirty little secret is that no one has time to check," says Patton of documents made here.

The gains, losses, and tough questions

To be fair, U.S. architects have made millions selling their services abroad for decades. It has taken the emergence of the World Wide Web and a generation of experienced, highly educated foreign architects to allow architectural work to start flowing back to the U.S. For some architects, the promise of high-quality services like overnight CAD drafting and rendering beckons like a siren—it might be the key to survival in an environment where clients are squeezing fees, and labor and overhead costs are on the rise.

But questions regarding the downside are also immediately apparent, and they have caused firms to be leery about publicizing the fact that they are even flirting with the practice: Will sending work abroad cause architects to lose jobs at home? Will the entry-level jobs that have always been the training ground for the profession disappear? Can architects honestly say that documents created offshore were produced under their direct supervision? How will clients react, if indeed they find out?

In fact, at the present time, it is not clear whether architects who are already using offshore labor are necessarily telling their clients about it. Some worry that clients will ques-

Are We Exporting

tion the quality of foreign work, or wonder if the practice will cast an unpatriotic shadow on their reputation. Joan Capelin, president of Capelin Communications in New York, doesn't think clients really care: "If the standard of performance is agreed upon at the start, it shouldn't matter to anyone. If the architect sees no moral conflict with it, the practice should be viewed simply as a business decision."

Others fear that their clients may want even more tasks to be offshored to reduce schedule times and design fees even further. And some architects might want to preserve their



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profits and competitive edge as long as possible. According to Michael Jansen, a Chicago-born entrepreneur who a few years ago founded Satellier, an Indian production shop, “None of our clients want to be open, because they are making a lot of money by working with us. They don’t want anyone else to.” Jansen says his firm charges about \$150,000 for production work that would cost a U.S. firm \$400,000 to do in-house.

The difference between outsourcing and offshoring

The terms *offshoring* and *outsourcing* are frequently used interchangeably, but this is misleading. *Offshoring* refers to work being done beyond our borders, no matter who is doing it—branch offices, associated architects located offshore, or offshore service providers. *Outsourcing* refers to work being done by people who are not employees of the architecture firm. For the purpose of this article, *offshoring* is defined as the practice of relying on people or firms based outside of the U.S. to undertake some portion of a project that would be built on U.S. soil.

There are several variations of the offshoring model, including firm-owned branch offices located in other countries, and long-term partnerships with foreign architecture firms. Services can also be contracted through direct relationships with one or more offshore specialty consultants who provide services as needed, or through U.S. brokers who act as middlemen between U.S. firms and overseas workers. Some firms seem to use more than one model, or at least have tested out a few different approaches.

The services offered run the gamut, from rendering, animation, and model making to elementary CAD drafting, on up to complete sets of construction documents. GBBN’s Patton believes that, depending on the project, team skills, and

communication established between the U.S. firm and foreign consultant, as much as 40 percent of a project can be done offshore, “from renderings to door schedules.”

Of all the models discussed, those involving firm-owned branch offices, and partnerships with foreign associate firms, seem to be less controversial than those in which work is offshored to foreign services providers or to services brokers. Branch office and foreign partnership arrangements are typically initiated because of the promise of work abroad, so there is some chance that over the long term there will be a financial quid pro quo. So, while foreign employees can contribute work to a project that will be built on U.S. soil, the offshore office could also be awarded work in its country that would enable U.S. designers involved in it to be hired here. Presumably, the offshore workers will be familiar with the U.S. firm’s CAD standards, and the offshore work will be subject to the firm’s quality controls.

Work involving service providers and brokers seems to be much more controversial. There seems to be little chance that a U.S. firm that sends a job offshore, either directly to a contractor or through a U.S. broker, will in return ever be hired by those companies. This creates a kind of professional-services trade imbalance that is easy to criticize if American architects start losing jobs on account of offshoring—as have software engineers, for example. Quality control is another issue. The U.S. architect is at least one step removed from the people doing the work, so direct supervision during the creation of the product is difficult if not impossible. Another concern is that American architects have no control over the working conditions of their foreign counterparts. As companies like Nike can attest, the slightest hint that an American company is exploiting foreign workers can be a public relations nightmare.

ARCHITECTURAL RECORD’s Offshoring Questionnaire

In August, 2004, ARCHITECTURAL RECORD sent a confidential questionnaire to each of the top 25 architecture firms listed in the 2004 *Engineering News Record Top 500 Design Firms Sourcebook*. It asked, “Are you offshoring (i.e., relying on people or firms based outside the U.S. to fulfill work on projects that will be built in the U.S.), or have you ever done so?” Nancy Solomon, one of the authors of our story, did the polling, making an effort to identify a person in each firm who could answer the survey with some authority.

Here are some of the results:

- Eight firms said that they are or have sent work offshore. Eleven said that they have never sent work abroad,
- although five of these said that they would consider doing so under certain conditions in the future. Six did not reply to our questionnaire.
- Of the eight firms that offshore, five contract directly with service providers; four send work to their own offices; one uses foreign architecture firms with which it has an ongoing relationship; and one said it went through a broker. (The total adds up to more than eight because some firms have tried more than one arrangement.)
- Three out of the six firms who answered our question about the kind of work they are sending offshore said 100 percent of it is construction documents. One said 100 percent is presentation drawings and models. The other two firms are offshoring schematic design, design development, and presentation work, in addition to construction documents.
- Firms that said they are sending work offshore say work is going to China, India, Canada, Mexico, Britain, the Philippines, Romania, and Colombia.
- Four firms responded to a question about whether offshoring saved money. Three said yes.
- Three firms responded to a question about whether offshoring saved time. Two said yes.
- Three responded to a question about quality. Two said it is problematic; one found it good.



Stephen A. Fiskum, AIA, of Hammel, Green and Abrahamson, says these renderings made in China cost about one sixth of those made here.

The offshoring of renderings and presentation models seems to be least controversial, and people interviewed for this article were very open about doing it. Many architects already outsource this work anyway, so sending the work abroad is just a matter of getting the best price, and the perception is that their employees will probably not lose jobs on account of it. Workers for U.S. rendering and model shops may feel differently.

How much work is going abroad?

At this point it is impossible to determine how much work is being sent offshore, but several informal surveys conducted over the past year suggest that a surprising number of firms have or are considering doing it. Kermit Baker, Hon. AIA, the AIA's chief economist, wrote in the May 17, 2004, issue of *AIArchitect* that 11 percent of the approximately 200 U.S. architecture firms responding to a Work-on-the-Boards business survey in early 2004 said they had sent work at least once to independent offshore providers. An additional 14 percent had seriously considered it.

Tom Larsen, AIA, of Larsen Associates, a Milford, Connecticut-based design-management consulting firm, conducted other surveys in 2004. With help from AIA chapters, he polled 86 members in Connecticut and another 77 in Chicago and found that 2 percent were currently engaged in the practice and 5 percent were exploring it. In August, he surveyed 122 people through the Boston Society of Architects and found that 20 percent were engaging in offshoring and 25 percent were exploring it.

Last fall, ARCHITECTURAL RECORD sent confidential questionnaires to 25 of the largest U.S. architecture firms (see sidebar, opposite) and found that eight of them acknowledged offshoring to some degree, although typically in small amounts to test the waters. Five had not yet used services offshore but seemed open to doing so in the future; six said they had never used them and gave no indication that they ever planned to; and six firms declined to answer the questionnaire or did not respond. Of the eight firms that said they sent work abroad, two of these only sent work to overseas offices they owned, two sent to both firm-owned offices and other types of providers, and four had sent work to individuals or offices that were independent of the U.S. firm.

Admittedly, these surveys are extremely limited, both in their sampling sizes and methodological rigor, but at a minimum they suggest that the rumors of people sending work outside the U.S. do have basis in fact. The appearance of offshoring seminars at national and local conferences also suggests that practitioners are curious about the phenomenon.

Why firms are offshoring

Of course, it all boils down to time and money. U.S. architects who have engaged offshore providers indicate that the turnaround time is quick for any number of reasons: It can be because foreign workers are more efficient, are accustomed to working longer hours, or can work when U.S. workers are asleep. Since lower wages are being paid, more workers can be



The above rendering and presentation model were made in China for the Hillier Group. Architects report that even with handling charges, high-quality models cost 15 to 20 percent of what they would if made in the U.S.

put on a given task. In any event, U.S. practitioners say that with faster production, they can spend more time fine-tuning designs, ensuring quality control, and pursuing new work.

A couple of years ago, when staff at RTKL's U.S. offices were all busy, chairman Paul Jacob III, AIA, says the large firm decided to enlist the services of an Indian drafting company, both to relieve time pressure and to satisfy a curiosity about the novel practice. He says that the endeavor was "moderately successful," although RTKL has chosen not to actively pursue this form of offshoring.

Small firms can also benefit from quick turn-around times. Paul Krause Architects, a five-person firm in Katonah, New York, does residential additions and renovations. As a result, it often needs to convert existing drawings from paper to CAD. Partner Michael Tierney says that about two years ago, "We ran into a time crunch. It would have been too time-consuming for our guys to do this." They tested out a U.S.-based drafting service that sends some of their work abroad: Pleased with the quality of the work, the turn-around time, and the cost, they have been using the drafting service ever since. Tierney estimates that the service can reduce by about three months the time required to complete a project that previously would have lasted six to twelve months.

There can be financial savings, as well. Tierney says the work he sends out "costs about one third of what we would have paid to do it in-house." Stephen A. Fiskum, AIA, chief operating officer of Hammel, Green and Abrahamson in Minneapolis, says that the high-quality renderings generated by its Chinese

provider cost about one sixth the price of renderings made here. And Thomas K. Fridstein, FAIA, the chief executive officer of the Hillier Group, reports that a set of construction documents produced by an Indian firm for a small trial project cost \$12,000 initially—plus \$4,000 to fix. But even with the added cost of revisions, Fridstein says, "it was quite successful," largely because it would have cost about \$54,000 to outsource the production to another U.S. firm, and about \$150,000 to accomplish in-house.

Whether U.S. firms are large or small, balancing staff workloads is another reason commonly cited for offshoring. This is the primary reason why HOK sends work to its branch offices abroad, says MacLeamy. The surplus work is sent to Canada or Mexico: Canadian staff costs about two thirds to three quarters of its U.S. staff, and Mexican staff costs a little less than half.

Another reason why architects are looking to offshore is that "most firms in the country are dealing with labor shortages," says Robert G. Packard, Assoc. AIA, who is a partner at the Zimmer Gunsul Frasca Partnership in Portland, Oregon, and chair of the AIA Large Firm Roundtable. Packard explains that many U.S. firms had been complementing their U.S.-born staff with foreign architects in recent years, but since 9/11, foreign employees and students have had greater difficulty obtaining visas.

Some firms feel their competition is forcing them to try offshoring. The chief operating officer of a large Midwestern firm, who did not want to be named for this story, believes that his firm is being underbid—particularly within the hospitality sector—by competitors who are relying on overseas firms. He says, "There is no question in my mind that we are competing with India," and indicates that his firm will have to use offshoring if they want to remain competitive within that particular market.

Foreign workers are experienced and motivated

Although the term *offshoring* seems to evoke the image of a sweatshop full of anonymous workers, the reality can be far different, at least in the architectural world. Several American architects commented that they are impressed by the work ethic of service providers abroad, and caution U.S. architects not to underestimate their skill level. According to Patton, the Chinese architects he has come to know are "intelligent, very well trained

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people who are willing to work at a schedule and pace that we can't match."

Robert W. Vanech, chairman of CADFORCE, a drafting service headquartered in Marina Del Rey, California, believes that the overseas career draftsman is far more dedicated to his or her particular tasks than the typical American architectural intern. Referring to the foreign drafters, he states, "They love what they do and want to do more and be better, as opposed to young architects who want to be designing award-winning projects."

The most common—and most promising—way U.S. firms have started offshoring is through already-established relationships. Sometimes the work goes to a former employee who came to the U.S. to study and work before returning to his or her home country. The former U.S. employer is not taking much of a risk by sending tasks to this person overseas, because the employer is familiar with their capabilities. Another avenue taken by many U.S. firms is to nurture ties with a foreign architecture firm that they may have worked with on a design they did for an overseas location. “That relationship may open doors for additional work in the foreign region for the U.S. firm,” notes Packard.

Offshore firms that claim they can do different aspects of production work at cut-rate prices are bombarding U.S. architects. Most risky are those potential suppliers the architecture firm has never heard of, with whom it has never worked, or for whom it has no recognizable references. Obviously, potential suppliers must be carefully vetted.

Management challenges for firms that offshore

Clearly, the economic pressure to offshore work must be balanced with the many serious challenges presented by the process—especially when the task in question is the production of working drawings. Hillier’s Fridstein sees that there can be a value in using overseas workers to draft and pick up red-lines while architects sleep. “But send all the contract documents? That is a little bit scary.”

It is critical, for example, that firms find someone they can trust. Patton suggests that after the initial qualification process

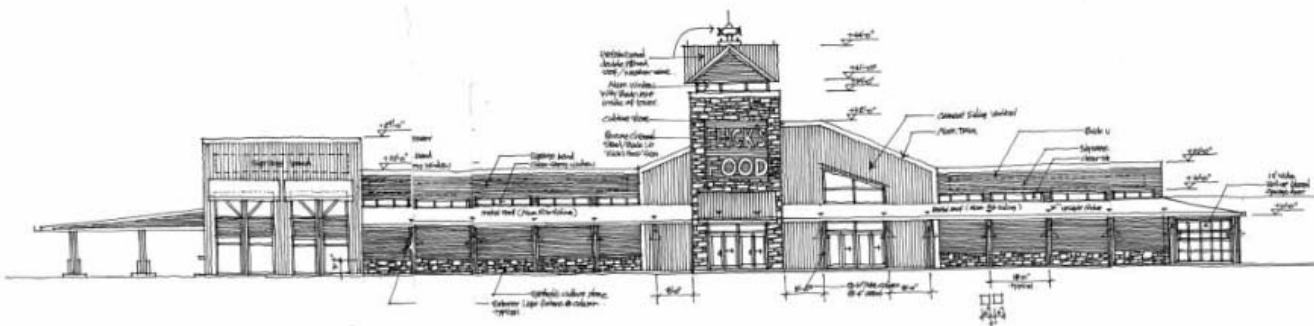
that one would typically do for any consultant—reviewing their work, contacting references, and the like—initially, architects should view the offshore office as an intern. It must be monitored closely, and assignments must be doled out to it incrementally in keeping with its level of expertise. Patton has identified tasks—ranging from simple to complex—at every

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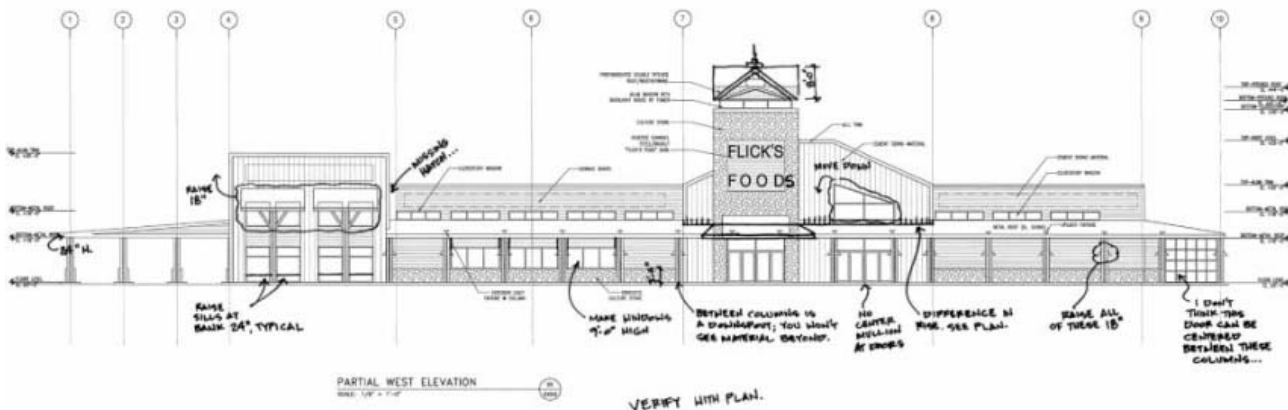
phase of a project that can be handled offshore once the provider demonstrates its mastery of a particular skill.

Then there is the need to establish and maintain standards. Fiskum says that if HGA were to offshore contract documents to India, the firm “would send one of our key architects over for two weeks to teach the unique ways we customize our software, including our standard details.” And the firm would dedicate one person in the States to review and mark-up what was done offshore on a daily basis. After all, the U.S. firm is ultimately responsible for the finished product, no matter where it is drawn. James Katz, president of CADFORCE, says architects need to understand the limits of a drafting service. “You can’t ask us to do your decision making for you,” he says.

Moreover, the project must be managed long-distance across not only time zones but also linguistic and cultural divides. Such differences may require anything from hiring interpreters to training providers in the American way of doing business.



GBBN architects sent the above design-development sketch to an offshore drafting firm, which returned the CAD drawing below in a day. The hand-lettered notes on the CAD version indicate revisions and corrections GBBN made to the CAD drawing before it was sent back for completion.





Satellier's offices look just like those of any American firm—except that they're in India. The company employs about 125 architects and engineers there.

Long-term challenges to the entire profession

Assuming a firm has no ethical or political reluctance about hiring foreign workers, it would seem that the principals could size up pretty quickly whether the opportunities are worth the risks. Professionwide, however, offshoring poses more complex questions. At the top of the list is whether entry-level work, which has always been done by interns, will be shipped overseas. Says Fridstein: "Typically, schools of architecture focus on theory and design and count on an architect-intern's first few years in an office to learn the nuts and bolts. If that part of the profession disappears, how can you train them? I think people are looking for ways of saving money without thinking it all the way through. I don't think it is really healthy in the long term." Many top leaders in the profession are currently struggling with this dilemma.

Different people have entertained different scenarios. Will American schools of architecture be forced to teach the "nuts and bolts" in the future, instead of assuming that firms will do it? Or, as a speaker on a panel at *Engineering News Record's* Top 500 Leadership Conference held in New York last November asked, "What are we going to do? Send our graduates to India to train by working on our own jobs?"

Tom Larsen theorizes that, if the offshoring of documents catches on, U.S. architects in the future would handle design as well as the "face-to-face" portions of the work—marketing, contact with the client and contractor, and site visits—but that little document production would be done here. He suggests that there will be fewer jobs for U.S. graduates, so competition in the schools will be fierce. Communication skills will be more highly valued than the ability to generate construction documents. Those who are talented and lucky enough to land jobs will pass very quickly through repetitive tasks and onto design and fieldwork. Small firms will be of two types: boutique firms that will take on unique or highly specialized projects, and firms that handle straightforward designs, manage offshore document production, coordinate with consultants, and administer contracts. Firms that do large-scale commercial, government, and institutional projects and do not do repetitive design will prosper. Larsen warns that medium-

size firms will be hit very hard by the change.

Some echo Larsen's beliefs. According to Fiskum, "The real value that design firms bring to their clients is in the more intellectual aspects of the work—design, programming, strategic facility planning. Good construction documents are becoming more of a commodity. It has less of a future than the more up-front services." But others disagree: "The production of drawings is not a commodity," argues Fridstein. "A lot of skill and art are required to develop drawings. We sell the skills and talents of the people we have."

Alexander Wu, director of marketing and business development at Kaplan McLaughlin Diaz (KMD) in San Francisco, says, "One inherent problem with [international] outsourcing is that architectural ideas and designs are not translated through the construction document, so the project doesn't end up being what was intended in the beginning. There are better ways to service clients than buying cheaper labor."

The bottom line, maybe

Obviously, many conflicting and complicated issues swirl around the practice of sending abroad architectural work that had previously been handled in the U.S. But ultimately, the debate seems to boil down to one's fundamental view of architectural practice. If one regards buildings as commodities that can be dissected into basic generic parts, then it seems that there is little to be lost—other than thousands of U.S. architecture jobs—by sending work offshore. Firms that do so will learn to harness the global machine effectively in order to efficiently turn out repetitive, and therefore prosaic, commercial and industrial buildings. Residential builders, and modular-home and metal-building manufacturers, are already well along in doing just that, mostly without the help of U.S. architects or foreign workers.

If, however, one regards buildings as creative solutions to site- and client-specific needs, then it seems that there is a great deal at stake. How can a structure adequately respond to the complexities of environment, function, and culture unless the design and construction documents evolve together and are

**"WHAT ARE WE GOING TO DO?
SEND OUR GRADUATES TO INDIA
TO TRAIN ON OUR OWN JOBS?"**

refined holistically in real time? How can so many construction-document tasks be ceded to overseas workers without the American architectural profession risking the loss of at least some of the skills required to shape authentic, poetic, and compassionate forms? And if those skills are no longer needed here, will there be anyone left in our schools of architecture who can teach them? It appears to be a slippery slope.

There isn't any doubt that offshoring is here to stay. But at this point, only time will tell what it will do to our profession. ■