Information for the Engineering and Construction Industry

CONTRACTOR Briefing

A publication from Ernst & Young's Construction Industry Services Practice

Summer/Fall • 1995

Project*Finance*

by John L. Heffron

The paradox of global construction is immediately apparent: *the world's big-ticket projects in emerging markets are starved for capital and subject to varying degrees of political risk. Domestically, there is a growing gap between infrastructure needs and the ability of government to finance construction. In both markets, innovative project financing is fast becoming as integral a part of the constructor's agenda as structural analysis.* ■ *"We don't want to be in the businesses our clients are in, nor do we want to be in the banking business," says Mack Torrence, vice president, project finance, the Fluor Corporation, Irvine, Calif. "But you can't be out there selling E&C services today and be competitive if you are not willing to play at least some role in project financing."* ■ *By the end of 1994, Bechtel Enterprises, Inc. (BEn), the project development and financing arm of Bechtel Group, Inc., had ownership interests in 23 projects either in operation or under construction, with a total asset value of $7.1 billion. Bechtel Financing Services, Inc., a subsidiary, now raises financing not only from traditional U.S. commercial sources, but from multi-lateral and bilateral lenders and export credit agencies. Since 1990, Bechtel Enterprises has arranged $8.2 billion in project financing, $4.5 billion of which were for projects in which Bechtel has an equity interest.*

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SCORE Retrieval File No.
W00129

"We are prepared to invest equity in well structured projects," says Dan Chao, associate managing director of Bechtel Enterprises. The $630 million refinancing of a 330-megawatt cogeneration plant in Indiantown, Fla., owned by US Generating Company, a subsidiary of Bechtel Enterprises and PG&E Enterprises, was one of the largest project financings ever to come to the public capital markets. It was designated one of the 10 Most Creative Deals of 1994 by Infrastructure Finance and deal of the year by both Project Finance International and Project & Trade Finance magazines. The first pure project financing in the public capital markets, the Indiantown deal involved the sale of more than $500 million in taxable bonds, $125 million in tax exempts, and the commitment of $140 million in an equity bridge loan by GE Capital.

Fluor's involvement in developing the financing for the $2 billion Rayong oil refinery in Thailand, owned by Shell and the Petroleum Authority of Thailand, represented a major example of a complex international limited recourse financing. "The deal structure was not completely unique, but it was big," says Torrence. "It involved more than 50 banks led by Chase, Société Generale, NatWest and Mitsubishi, and drew on commercial bank debt as well as export credit agency debt and political risk guarantees. Selecting the team early allowed contractors, banks and owners to work closely together in an integrated team approach. This approach now serves as a model for us on how such projects should be developed and financed effectively. Financings have become so complex, they must be started early in the process and integrated with engineering and procurement."

"Instead of bidding the project then looking for financing—that process doesn't work well anymore—Rayong got everybody into the process early," says Torrence. "It took us less than a year to get key financing commitment. A more (traditional) process would have taken us much longer."

Most of the visible deals are in the power sector. Of Infrastructure's 10 Best Deals of 1994, for example, seven were power projects; all were limited-or-non-recourse in that lenders' repayment security was in the form of contracts for cash flows and/or a security interest in project assets.

"Those mechanisms are necessary in Third World countries, and to some extent in the infrastructure and facilities markets in the U.S. But those are not the markets we play in," says John Prosser, senior vice president finance and administration, Jacobs Engineering Group, Inc., Pasadena, Calif. Nearly 60 percent of Jacobs' revenue is derived from domestic industrial and petrochemical facilities, a market, Prosser says, "where we are dealing with companies with considerable capital base and resources." Project finance, for Jacobs, "is not a driver," says Prosser.

"Financings have become so complex, they must be started early in the process and integrated with engineering and procurement."

But for Fluor, which is very active in the international market, "about half of everything we do, one way or another, requires some financing input," says Torrence. "If you look at our list of (big-ticket) projects, the number is a lot higher than that."

Fluor is currently participating as a 10 percent equity partner in a company that will build, own and operate a $500 million copper smelter project in Gresik, East Java, near the Indonesian port of Surabaya. Fluor will serve as the engineering and construction contractor of the project. Mitsubishi Materials Corporation and Freeport-McMoRan Copper & Gold, Inc., will own 70 percent and 20 percent respectively.

"We are not interested in taking that long-term risk on our balance sheet," says Jacobs' Prosser. "We have said that the market requires it, that the market is growing, and that we have to become more pro-active," says Torrence. "If you look at

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the changes in the marketplace and the shift to emerging markets, it becomes apparent that project financing has become a factor in almost every project, and we feel that is what we need to do in order to be a competitive global company. We are not in the financial services business, but you have to be a catalyst, and to be competitive with, say, the Japanese, you have to have the financial capability and be able to help owners understand how they can make these projects happen. You have to become relatively sophisticated about project finance."

Today's complex international deals nearly all demand cash for interim debt and the assumption of permanent equity to cut long lead times. But even in the domestic marketplace, limited corporate capital is forcing owners to leverage their own capital in novel ways. "Many financially strong multinational corporations, who once financed their projects almost exclusively with corporate cash, are increasingly looking at limited recourse project financing as an option. It allows them to spread their limited capital further and share the political risks of a project with other project participants," says Torrence. "Now, they are spreading risk and capital around in an attempt to manage overall financial risk."

Torrence says the recent evolution of project financing as a major financing option "can be attributed to the desire or the need to: achieve off-balance sheet limited-recourse financing to cope with weak balance sheets and limited internal capital; share the risks on major projects, especially in high political risk countries; improve financial returns through the financial leverage inherent in limited recourse financing structures; allocate a project's tax benefits to efficient use of such benefits; and/or reduce the earnings per share dilution effect that results from a corporate equity offering to finance a project that will not generate immediate earnings."

With the creation last year of International Generating Company, a joint venture with PG&E Enterprises, Pacific Gas & Electric Company's non-utility subsidiary, Bechtel hoped to do globally what it had already done in the domestic power market. In 1989, Bechtel Enterprises teamed with PG&E to create U.S. Generating Company, a development and ownership entity that today owns and operates 17 electric power and cogeneration facilities with a combined capacity of about 3,400 megawatts, making the joint venture firm the nation's second-largest independent power producer.

A larger market, though, may be in U.S. infrastructure work. The Bechtel Group has always had a long reach, and its success in the power market led Bechtel to team with Peter Kiewit Sons, Inc., Omaha. There are transportation and water projects out there, and Bechtel and Kiewit have created United Infrastructure Co. to figure out how to develop and finance them.

Taxpayer insurgence and legislative indirection, however, have inhibited the nation's early attempts at transportation privatization, and Bechtel, like many others, has had to take a wait-and-see approach. Its nearly $1.3 billion in proposed transportation projects in Washington State vaporized this year with a change in legislative makeup. "We were very disappointed, but remain optimistic that the market will mature in the not too distant future," says Chao, who oversees infrastructure development and finance for Bechtel Enterprises. Washington State's once-promising transportation privatization program is all but dead today. Legislation signed this summer by Gov. Mike Lowry subjects privatization projects to heightened legislative scrutiny, public review, and local elections that would not take place for at least two years, say state officials.

Chao calls the U.S. privatization process a "tortuous maze" in which development risks,

albeit different in nature, can be every bit as great as those experienced overseas. "The Chinese bureaucracy is imposing, but the U.S. is just as difficult to penetrate when it comes to privatized infrastructure projects," added Chao.

There are key pieces of legislation, says Chao, that will enable the private sector to participate effectively in infrastructure development in the U.S. The politically conservative, 3,000-member American Legislative Exchange Council, is working on model legislation that would open some doors to privatization—easing the requirement that federal debt be repaid before airports could be privatized; eliminating a 3-year federal limit on wastewater operation and maintenance contracts. "If we can effect regulatory change," says Chao, "the U.S. market will be huge."

Consider transportation alone: the Federal Highway Administration estimates it would take $457 billion a year just to maintain our highways, another $31.2 billion to improve them. All government agencies now spend less than $40 billion annually on transportation. "Look at power as the precursor," says Chao. "It took a while for the power regulatory apparatus to be put into place. Now it is a very efficient, very competitive market. That is what we want to get to on the infrastructure side. But market forces are not the only forces at work. There are regulatory barriers that now make development extremely difficult."

Bechtel's new infrastructure partner had been the majority equity partner in the new 4-lane, $126 million State Route 91 toll project outside Los Angeles. The Kiewit deal was the first privately financed highway project in the U.S. in 50 years. It illustrated the global breadth of the new financial alliances—a $65 million bank tranche was funded by Citicorp U.S.A., Banque Nationale de Paris, Société Generale, and Deutsche Bank AG. The project is noteworthy today, in light of repeated failures elsewhere, because it will be the first transportation privatization project completed. SR 91 and Virginia's 14-mile Dulles Greenway, whose $258 million long-term fixed rate financing was provided by a consortium of 10 international lenders, both are to be finished this year.

Internationally, says Chao, there are other obstacles to privatization—ministries accustomed to controlling their own facilities, artificially-controlled prices of resources like water, legal questions about contract obligations, and problems of foreign exchange. "In situations like that which occurred in Mexico, if your revenues are in pesos, and your debt is in dollars, you are taking a major risk," says Chao.

"In Hong Kong, and in the United Kingdom," he says, "there is good experience at project finance." "Otherwise," he says, "it's a relatively young market, and both the private and public sectors are still learning. You have export credit agencies, multilateral agencies, and the World Bank all focussing today on issues of political risk, and the commercial banks are looking to the other agencies to provide certain support mechanisms. The deals that have been done to date have been done under umbrellas. Only in the last couple of years have these financial structures begun to become comfortable with limited-recourse deals."

Will Bechtel continue to take equity positions? "Absolutely," says Chao. "We have been pioneers in using our own equity to make deals go, and that has been extremely successful on the power side. We are pushing hard to make the same thing happen on the infrastructure side as well." ■

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James L. Kirk *is chairman, president and CEO of OHM Corporation, the largest hazardous waste remediation firm in the U.S. Its 1995 revenues will be in excess of $500 million. Founded 26 years ago, the firm has completed more than 30,000 remediation projects for clients ranging from Fortune 100 industrial companies to U.S. government agencies and departments. Its backlog of projects with the Department of Defense is more than $1 billion. OHM has more than 3,100 employees and 30 offices nationwide.*

"We are now poised at a critical juncture in the evolution of environmental cleanup."

Over the past 25 years, the evolution of legislation, standards and results in cleaning up hazardous wastes in the U.S. has been slow, costly and in many ways counterproductive. Most civic leaders want to see economic revitalization of former industrial sites (so-called "brownfield" sites). But the reality is that because of stringent cleanup regulations, multiple agency involvement and liability issues, developers as well as investors and lenders have been reluctant to tackle projects on most of these sites.

The fact is, far too many of our environmental dollars have been spent on overhead and studies and not enough on actual site cleanup. A Superfund site, for example, may require as much as 10 years to get investigative and litigative work done, and another five to do remediation. (And bear in mind that contamination migrates over a period of time, requiring further study.) As a result, it is not unusual to spend 40 to 60 percent of the cost of a cleanup before actual remediation work gets underway.

We are now poised at a critical juncture in the evolution of environmental cleanup. Hazardous waste continues to be an important public health and safety issue; the government need look no further than itself for examples. The process of closing military bases, for example, has made it clear that the military's commitment to "housekeeping" was not what it could have been.

Where should we go from here? We believe that voluntary cleanups — in which owners and regulatory authorities would negotiate a cleanup plan tailored to individual site conditions — would address public health and safety issues but would accomplish results more quickly and cost-effectively.

According to the EPA, more than 100,000 remedial sites could benefit from an aggressive voluntary cleanup program.

The benefits of voluntary cleanup include:

- Enhancing property value, creating jobs and building a solid tax base;
- Focusing primarily on actual remediation, not on studies; and
- Teaching new skills to local citizens who are hired and trained during the remediation process.

Although some 20 states have adopted voluntary cleanup programs, federal legislation is needed to remove roadblocks caused by overly stringent and complex federal requirements. We have seen, first hand, numerous well-intentioned companies set out to solve their environmental problems. Much to their horror, they realize regulations have tied their hands so tightly they can proceed only with inferior remedies, or cannot take any action at all.

The Resource Conservation and Recovery Act (RCRA) is at the heart of the problem because:

- RCRA encourages prevention as opposed to cleanup, with most of its requirements aimed at newly-generated waste, not historic

Viewpoint JAMES K

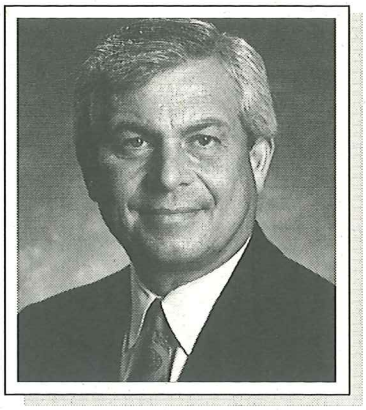
remedial waste. In particular, RCRA's Land Disposal Restrictions encourage many industries to reduce the amount of waste they generate. Although this is good, it creates a strong incentive for land-owners to leave remedial waste in place and untreated in order to avoid costly RCRA requirements.

- RCRA's permitting requirements and facility-wide corrective action provisions are grossly inappropriate for "one-time, one-shot" remediation projects.
- In order to gain exemptions from burdensome RCRA permit requirements, property owners must comply with overly stringent Land Disposal Restrictions at Superfund sites. At "brownfield" sites, RCRA exemptions are not available, so the negative synergy between Superfund and RCRA is more pronounced.
- RCRA stifles the use of innovative treatment technologies. Its standards are inflexible and do not accommodate the evolution of innovative treatment technologies that would provide cost-effective and environmentally sound solutions to contamination problems.

Most of the innovative environmental technologies available today — such as bioremediation, thermal destruction and soil washing techniques — have been developed in the U.S. These technologies enable you to do cleanup on site rather than removing the soil, and therefore are highly cost-effective.

But given the current lack of incentive for use, these technologies may follow the path to foreign shores much as the U.S. microchip industry did in the 1980s. Europe may be five to seven years behind us on environmental regulations and technology, but it is catching up fast. Our own company's experience reflects increasing interest in environmental cleanup not only from Europe, but also from the Pacific Rim.

We believe that federal legislation should call for enforceable Remedial Management Plans, not RCRA permits. All sites, both private sector and federal facilities, should be eligible for the voluntary cleanup program, except Superfund National Priorities List sites for which Records of Decision have been issued. RCRA corrective actions should not be triggered unless the facility is already subject to these provisions.



We need cleanup standards, not Land Disposal Restrictions, that recognize the inherent difficulties in treating contaminated areas and the unique nature of each site. High concentrations (or "hot spots") should be treated and permanently brought to levels that protect human health and the environment so long as treatment is economically and technologically feasible. After all, there can be no realistic, "one size fits all" standard for hazardous waste cleanups. Leaking underground storage tanks are a significant problem in Florida, for example, and would require a different solution than would be needed in a state like New Jersey, where conditions such as population density and depth of ground water are vastly different.

States and EPA should be authorized to implement voluntary corrective actions. Whichever governmental entity takes the lead should not be second-guessed by the other.

The voluntary cleanup program could be a part of a new and improved Superfund because both Superfund and voluntary cleanups are remedial in nature and RCRA is not.

The goal of hazardous waste cleanups should be to reach negotiated settlements that will benefit the environment and public health and safety, while achieving results in a cost-effective, timely way. ■

"We need cleanup standards, not Land Disposal Restrictions, that recognize the inherent difficulties in treating contaminated areas and the unique nature of each site."

The Winning Cost Segregation Team

Owner, Construction/Tax

Although the direct benefit of performing a cost segregation study belongs to the owner, a contractor can also benefit from understanding the methodology. A contractor can potentially differentiate itself from its competition by reflecting this value-added service.

What is Cost Segregation?

Cost Segregation is an analysis of project construction expenditures where costs of a construction project are classified into their proper class category according to IRS regulations, revenue rulings and case law.

In addition to the shorter lives, the costs for the land improvements and personal property can be depreciated using a 150% depreciation calculation instead of a straight-line depreciation.

The following items are examples of different class categories:

Building masonry walls
— 39-yr real property

Parking lot lighting
— 15-yr land improvements

Decorative chandeliers
— 7-yr personal property

Special computer room HVAC units
— 5-yr personal property

Approaching the Cost Segregation

An organized approach to cost segregation maximizes the dollar value of qualifying properties assigned to accelerated property classes. Such items as retail display cases and vending cabinets are readily identifiable as personal property. However, most contractors' invoices or payment requests will likely contain a single line item that may include a variety of items. To optimize tax savings, it is important to take a more in-depth look to find qualifying shorter-lived components that are not readily identifiable.

One good example would be a dedicated outlet for a copy machine. In addition to the copy machine qualifying as 7-yr personal property, the cost of the installation and material for the outlet, conduit and wiring to the panel board, and terminations would qualify as 7-yr personal property. Most often these costs are not specifically identified in a contractors' payment request and are included in a general line item simply entitled "Electrical".

by Jeffrey E. Fuchs and Stephen Redlich

Advisor, and Contractor

In such cases, a contractor can facilitate an "engineer's estimate" and calculate the costs of this component. These costs, when segregated from the lump sum item "Electrical," will be treated as personal property and offer a much more favorable depreciation result than the 39-year base electrical installation for the building.

Conclusion

Many corporations invest large capital expenditures in constructing new facilities or renovating old ones. These corporations can maximize their tax benefit with a team of construction/tax consultants and contractors who are thoroughly familiar with cost segregation. ■

Actual Benefits of the Cost Segregation

Some of the recent engagements that Ernst & Young has completed in the Mid-Atlantic region include the following types of facilities/clients:

Type of Facility	Total Cost	Incremental PV Savings
Bank Operations Center	$107,800,000	$3,100,000
Bio-Technology Plant	5,500,000	180,000
High-Technology Facility	6,600,000	440,000
Meat Packing Facility	20,000,000	1,300,000
Retail Mall	35,000,000	1,200,000
Computer Processing Facility	15,800,000	1,060,000
Apartment Complex	28,200,000	260,000

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Toxics and Property Taxes:

A Silver Lining in an Otherwise Black Cloud?

by Timothy G. Doss

The scenario is all too familiar: an owner or tenant of real property has learned that the parcel contains asbestos or a leaking underground fuel tank. Thousands of dollars immediately are spent on reports to ascertain the extent of the contamination and the estimated cost of clean-up. Attorneys are contacted to determine the potential allocation of those costs among responsible parties. Portions of the property are cordoned off and business operations are interrupted. In the midst of this crisis, it is easy to ignore one possible "upside" — a reduction in property taxes.

"In the midst of this crisis, it is easy to ignore one possible 'upside' — a reduction in property taxes."

Toxics and other forms of environmental contamination have become a major concern throughout the real estate industry. Buyers, sellers, owners, tenants and lenders must ascertain the most cost-effective method of clean-up. Consultants — and techniques — abound to formulate the cost of removal and the appropriate allocation of that cost among the affected parties. But scant attention has been given to the effect which toxic contamination has on the value of real estate. Nowhere is that more apparent than in the assessment of contaminated properties for property tax purposes.

California and most other states mandate that all real property shall be assessed at the same percentage of fair market value. A cost to cure approach could be used in simple cases where the contaminants can be removed easily and quickly with minimal or no disruption of the normal business conducted on the property. A simple tabulation of the costs fails to address the additional intangible burdens an owner or tenant must bear in most toxics cases, however. Business interruption, loss of lease revenue and the public stigma associated with contaminated properties cannot adequately be measured by the cost approach. In a commercial office structure that contains asbestos ("ACM"), it may be necessary to vacate the building for the entire ACM removal or encapsulation project. The owner's loss would include the physical cost of removal as well as the loss of revenue for the duration of the abatement process.

Methods that measure this type of loss must be incorporated. The income approach to valuation measures a revenue stream and then capitalizes that stream, using a specified capitalization rate, into an expression of value. This approach also can be used to measure the loss of revenue caused by contamination. If contamination abatement requires an interruption of the business, project absorption time is extended and the expenses or re-leasing the unoccupied space increase. The loss of revenue can be measured by the contract rent actually lost, if rents are at market; or the appropriate rents may be determined through a normal rent survey process. Expenses can be handled in a similar fashion. Absorption rates may be based on current market conditions.

Recent experience indicates that contaminated properties are, at best, difficult to market; consequently a market-derived capitalization rate will be hard to extract. But that obstacle is not insurmountable. As noted in an article, "... with its mortgage equity measurement techniques, the capitalization rate appears to offer a means of valuing contaminated property."[1] Patchin utilizes the Ellwood capitalization method.[2]

The basic elements of the Ellwood capitalization method involve an analysis of the relationship between:

1. Equity yield rate
2. Mortgage terms available
3. Anticipated future value appreciation or depreciation

It is logical to assume that if a contaminated property is unmarketable, there will be little or no available financing or anticipated future appreciation in value, leaving only equity yield. Thus, by default, the equity yield rate becomes the capitalization rate. The rate must be adjusted for such factors as contingent future liabilities and should incorporate an illiquidity factor for lack of marketability.

This equity yield capitalization note method offers some sensitivity to the difficult task of making market adjustments where a "market" clearly is lacking. Assessors may question this approach to formulating a capitalization rate; however, support for this analysis is growing as the real estate industry gains more experience with contaminated properties.

Marketability and methodology aside, contaminated properties likely will become more of an enigma in coming years. Property tax laws in most states mandate assessments based on some function of market value. Absent legislative or judicial enactments to the contrary, toxic contamination will remain a cause for reduction of a property's market value, however, difficult to measure. Property owners, appraisers and real estate professionals therefore must develop creative and reliable means of quantifying that loss of value which, in turn, translates into reduced property taxes. ■

"It is logical to assume that if a contaminated property is unmarketable, there will be little or no available financing or anticipated future appreciation in value, leaving only equity yield."

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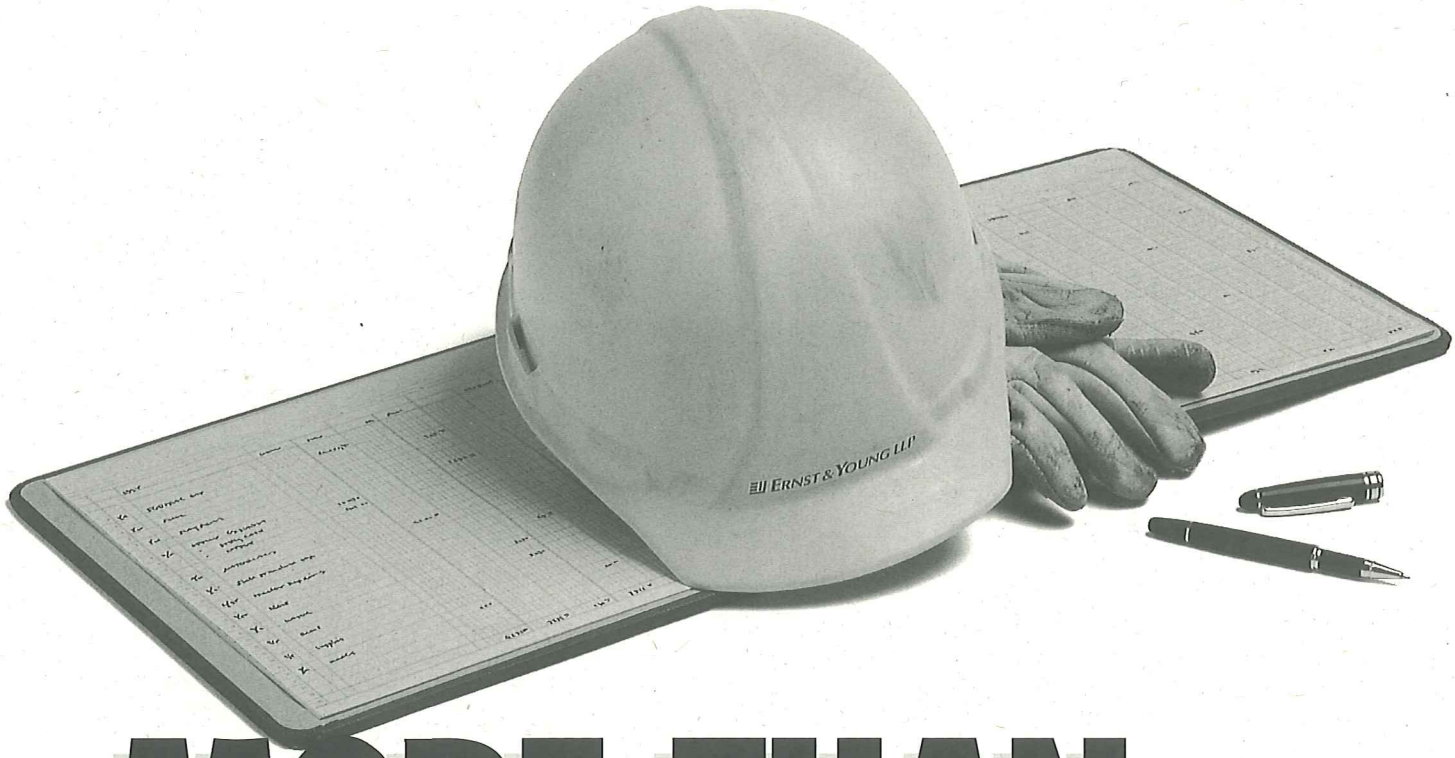
(1) Patchin, Peter J., MAI The Appraisal Journal (January, 1988).

(2) The Ellwood capitalization method is widely used by real estate appraisers in the determination of capitalization rates.



MORE THAN JUST NUMBERS

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