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Construction Cost Update 2006: Commercial Office Buildings and Parking Structures

Market conditions in the construction economy are constantly changing, perhaps even more dramatically with last year's storm tragedies along the Gulf Coast. In 2004 and 2005, we witnessed volatile costs for construction materials, with more inflation on the whole than in previous years. Potential cost reductions from spikes in late 2005 will probably not occur, and we could potentially see increases due to certain material shortages and a regional building boom.



Hines Southwest Regional Office

Local economists, however, are predicting good things for Houston's building industry in 2006 — perhaps reaching record highs in terms of construction dollars. Interest rate increases seem to be slowing, employment rates are on the rise, and the city is experiencing enormous growth, both financially and geographically.

To gauge current market conditions, we periodically poll local general contractors. Using several generic building types, we recently compiled the following construction costs, representative of market conditions in and around the Houston area:

One-Story Flex Office Buildings—\$50 to \$60/sf

One-story shell buildings designed to accommodate uses ranging from traditional offices to light assembly, high technology lab applications. Typical projects are steel structures with tilt-up concrete skins and punched openings. Cost includes \$6 to \$8/sf for sitework and surface parking lot, depending on parking density and detention requirements.

Low-Rise Office Buildings

\$65 to \$75/sf

Two to three-story, larger footprint shell buildings designed with speculative building features. Typical projects are composite steel structures, bar joist roof structures with tilt-up concrete skins and punched openings. Cost includes \$6 to \$7/sf for sitework and surface parking lot, depending on parking density and detention requirements.

Mid-Rise Office Buildings

\$80 to \$90/sf

Four to six-story, 25,000-sf footprint shell office buildings designed with speculative building features. Typical projects are composite steel structures with precast concrete and glass skins. Cost includes \$4 to \$5/sf for sitework and minimal (visitor) surface parking.

High-Rise Office Buildings

\$85 to \$100/sf

Eight to 25-story, 25,000-sf footprint shell buildings. Typical projects are cast-in-place concrete structures with articulated precast or curtainwall glass skins. Costs include less than \$3/sf for sitework and minimal (visitor) surface parking.

Commercial Tenant Improvements—\$28 to \$35/sf

Costs typical of a 25,000-sf full floor office tenant buildout. Reception lobby and executive areas have upgraded finishes. The remainder of the space is about 50 percent enclosed offices and 50 percent open plan areas with tenant standard finishes.

Medical Office Buildings—\$75 to \$105/sf

- Low-rise, 2 to 3-story - \$75 to \$85/sf
- Mid-rise, 4 to 6-story - \$85 to \$95/sf
- High-rise, 7 to 25-story - \$95 to \$105/sf

In general, medical office shell buildings have similar features to corporate office buildings described above. Unique MOB features include larger parking requirements, larger floor-to-floor heights, and increased base MEP systems with redundancies and emergency power.



Memorial Hermann Medical Plaza, est. completion October 2006

Parking Structures

- Cast-in-place concrete - \$26 to \$35/sf, without basement
- Precast concrete - \$22 to \$26/sf, without basement
- Steel - \$19 to \$22/sf, without basement

Most commercial projects continue to build precast or cast-in-place garages. Precast concrete availability is variable, and shortages are likely in the very near future. The lower cost range examples would typically be for more efficient suburban sites. Small urban downtown and medical center sites with limitations may have higher costs than our ranges show. Only extremely low budget projects consider steel garages. Many low-rise

projects are providing inexpensive canopies to meet market demands for covered parking.

Green Buildings

Becoming less of a trend and more mainstream within the commercial building industry, LEED® (Leadership in Energy and Environmental Design) Certification and green buildings have become more serious considerations for an increasing number of office building projects. Intelligent design practices and required energy codes in recent years have minimized green building costs, which are likely to continue decreasing as the technology becomes more widespread. We estimate the actual hard cost burden to be around 2 percent of construction cost, with documentation and commissioning fees adding another 2 percent.

Savings realized from decreased building operation and maintenance costs associated with green buildings, however, far outweigh this estimated additional 4 percent, which begins to pay itself back in as little as two years (assuming new construction). Other than the obvious environmental benefits, there are significant economic benefits that can be realized by building green. Operating costs can be reduced by up to 60 percent by employing aggressive energy and water conservation techniques. Building valuation can increase due to operating cost reduction. Improved indoor environments can increase employee productivity by up to 15 percent. Employees in buildings with healthy interiors are absent less and tend to stay in their jobs longer, which are important factors, given that the cost of employee turnover averages 1½ times employee salaries. All of these factors in aggregate create a market advantage.

From experience, we have found that the payback from typical energy and water savings strategies can be realized in two to 10 years. Soft costs for the documentation and cost saving evaluation depend on project type and scope, but they are typically between 1 percent and 2 percent. These fees easily pay for themselves when considering the long-term economic benefits. Only 5 – 20 percent of the total cost of building, owning, and

operating a typical office building is for design and construction. Yet that small percentage has a huge impact on the other 80 percent it takes to own and operate a building.

Though these figures are typical of new construction and major renovation projects, the United States Green Building Council has created additional opportunities for obtaining LEED® Certification of commercial buildings through their LEED-EB (Existing Building operations), LEED-CI (Commercial Interiors projects), and LEED-CS (Core and Shell projects) Programs.

What's Next?

Though current forecasts appear positive for Houston commercial construction, there remain a number of unknowns that could work against this building boom. For these reasons, predictions for 2006 remain cautiously optimistic. High energy costs, material and labor shortages, and a predicted active storm season are all areas for concern.

While energy costs seem to be leveling somewhat, they still pose challenges in the delivery of materials. To further concerns of high energy costs and possible material shortages, the National Oceanic & Atmospheric Administration (NOAA) released a statement May 22, 2006 that a “very active hurricane season is looming” for the north Atlantic hurricane region (which includes the Gulf Coast). “For the 2006 north Atlantic hurricane season, NOAA is predicting 13 to 16 named storms, with eight to 10 becoming hurricanes, of which four to six could become ‘major’ hurricanes of Category 3 strength or higher,” added retired Navy Vice Adm. Conrad C. Lautenbacher, Ph.D., Undersecretary of Commerce for Oceans and Atmosphere and NOAA administrator. (2005 was also a “very active” season for the north Atlantic hurricane region, which reported a record 28 storms, 15 of which were hurricanes.)

Labor shortages, while not probable, are still a concern because of the “Kat-Rita effect” on the available workforce in the Houston area, particularly highly skilled laborers and craftspeople. Like material supply, this factor is highly dependent on storm activity in the coming months. Additionally for the Gulf Coast region and Texas, specifically, new immigration regulations could be troublesome for the labor supply.

While any of these factors could delay and perhaps even cancel some proposed construction projects in 2006, economists and forecasters hold a generally positive outlook for the Houston building industry. According to a recent Market Forecast prepared by the Associated General Contractors of America, Inc.’s Houston Chapter, Reed Construction Data is forecasting a \$1.2 trillion construction market for 2006. Of that, \$341 billion is non-residential. With Houston typically averaging 1 percent of national dollars, we could potentially witness a record year of around \$3.4 billion in commercial construction dollars. Great news for us all.

Statistics for cost data provided by: Brookstone Corporation, Burton Construction, DE Harvey Builders, EE Reed Construction, Hoar Construction, the Kirksey Center for Sustainable Architecture™, Linbeck Construction Corporation, Manhattan Construction Company, Metzger Construction Company, Mission Constructors, Pannatoni Constructors, Pepper-Lawson Construction, Rosenberger Construction, Satterfield & Pontikes Construction, SpawGlass Construction Corporation, SpawMaxwell Company, Tellepsen Corporation, and Tribble & Stephens.

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