

Outlook

McDONOUGH BOLYARD PECK

Achieving Quality Through Teamwork

Construction Cost

Are your projects budgeted to withstand another round of price increases? We anticipate that the answer for many owners will likely be "No." In the first quarter of 2006, the growth rate of the US economy was almost 4.9%. Also in the first quarter, consumers boosted spending at the brisk rate of 5.5%. Both the US economy and the construction industry are moving along at a strong clip, thanks to many factors.

The next year is expected to be very similar to the previous twelve months for the construction industry. In 2005 we saw construction price escalation of approximately 9.5% in the Mid-Atlantic States. Forecasts to 2006 predict a 9% to 12% annual increase. Material price increases are still the primary reason for rising construction costs. As a result, the strong construction climate continues to pull bid prices even higher, often to the point where the low bid significantly exceeds the construction budget.

Construction costs have experienced major increases over the past several years. Based on the BCI and CCI indexes, it is clear that construction costs have increased significantly in the last 6 years. Between 2002 and 2003, construction costs (as measured by the BCI) increased from a cumulative 3% to 6%. Between 2003 and 2004, the BCI increased from a cumulative 6% to 16%, which was followed by a jump to 20% in 2005. Meanwhile labor costs have increased 3% to 4% consistently each year, so most of these increases appear to be due to material price increases.

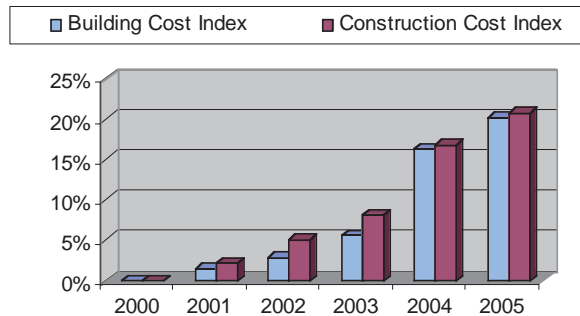
Labor Costs

Recently, in the Federal Government's "Beige Book," it was noted that construction economic activity continued to expand at a solid pace, the housing market was still at a strong level, and temporary work agencies reported a strong demand for workers in the Mid-Atlantic States. In the Southern Atlantic

current pace, we anticipate an increase in construction hourly wages beyond the present rate.

In addition, a number of areas in the country are also experiencing a shortage of subcontractors. Subcontractors are overwhelmed with work and their inflated pricing reflects this. Many general contractors can only obtain one price on bid day from certain trade subcontractors.

Percentage Change in Construction Costs Since 2000 (ENR Index)



and Eastern Gulf Coast the demand for temporary workers exceeded the supply and contractors reported shortages of carpenters, brick masons, plumbers, and electricians. These labor shortages were spreading north to the 5th District.

In recent years, construction employment has increased by more than twice the rate of overall employment. In January 2006, the construction industry added 46,000 jobs, accounting for nearly 25% of the nation's employment gains. Yet, the wage growth for a construction worker has been moderate and steady. Over the next several years, if construction employment continues at its

Material Costs

However, it is the significant increase in material prices that is most responsible for the recent cost increases. For example, structural steel prices increased 11% between August and December 2005, resulting in an overall increase of 13% in 2005. In addition, within the last year, inventories of raw steel shapes decreased from 3 months to just over 1 month. Steel price increases have started to ease in the first quarter of 2006, but are likely to continue to increase later in the year.

In addition, cement continues its steady rise in price - up 4.6% in 2005 and 3.9% in 2004. Last year, 32 states reported shortages of cement and concrete. While US cement production

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rose about 2%, consumption increased 7% so the industry has turned to importing cement in an attempt to alleviate shortages.

During the past 2 years, gypsum prices have increased by more than 10% each year and the demand for gypsum wall board (GWB) by the housing market has nearly exhausted present production capacity. Additional GWB production is anticipated to come on line in 2006, which will hopefully relieve the shortages and ease the dramatic price increases.

Site construction and transportation-related products are also expected to rise in 2006. Crude oil prices continue to push the cost of asphalt paving higher. In February 2006 alone, asphalt paving prices increased 5.1%. Asphalt prices have increased 17% in the last 12 months and are anticipated to continue to increase. Concrete paving prices have also risen 8% during the past year.

Reinforced concrete pipe prices are up 2.5% and ductile iron pipe prices are up 19%. As the price for energy and petroleum products has climbed so have PVC pipe costs. PVC sewer and water pipe prices have recently increased by as much as 16% and PVC pipe is up between 26% and 40% from 12 months ago. In addition, the price for copper pipe is up 28% and is expected to continue to increase.

In 2006, materials prices will likely be affected by increases in fuel and energy prices, shortages of petroleum and petroleum-based construction materials, shortages of natural gas, increased transportation costs, and a higher demand for energy efficient products and systems.

Outlook

Residential work is anticipated to decline slightly (about a 1/2%) in 2006 and be offset by an increase in multi-family unit residential construction. Both public and private sector construction is likely to increase 5% to 10%. Some material shortages are anticipated with possible relief in material prices towards the end of 2006. The demand for qualified labor will likely increase and labor shortages will grow. This will result in an increase in wages. Construction costs will continue to rise at a higher rate than other industries, with cost escalation likely to be 3/4 to 1% per month. Prices will be competitive, just at values higher than owners had budgeted if they do not review estimates.

With all this in mind, there are ways in which owners can effectively mitigate the impact of rising costs on their construction program:

- Update your capital improvement plan with new budgets adjusted for construction escalation, not the CPI.
- Require constructibility reviews to reduce controllable changes and change orders.
- Obtain an accurate cost estimate that is detailed and prepared by an independent and experienced firm. Also, request more frequent cost estimates during the design stage.
- Seek value in the design in the early phases through value analysis, value engineering, and life cycle cost analysis.
- Require "design within budget" Clauses in the contracts with designers.
- Shorten design durations to reduce the impact of price escalation.
- "Design to" structural materials that are available.
- Market your project to local contractors before bid time.
- Time and check the bid market to increase the number of competitive bids.
- Identify bid alternates, preferably additive and deductive alternates, to keep your project within budget.
- Consider early purchase of some key materials with short-term storage and or long-term bulk purchases.
- Utilize innovative construction contracts with material price escalation clauses, which share the risk with the contractor, and cost reduction and savings incentive clauses.

About the Author

Edward M. Kopp III, AIA, CCC, PSP, CCM

Mr. Kopp is a Senior Project Manager for MBP in its Williamsburg office and has authored articles and presentations on construction costs, quality assurance, project controls, project management, and other topics.

Want to Learn More? Save the Date!

MBP Seminar: Successfully Managing Construction Project Costs

A one-day seminar focused on issues and solutions for managing construction costs. November 2, 2006 in Atlanta, Georgia.

Contact psoyka@mbpce.com for more details.

Team Member

MBP is pleased to announce the following promotions:

- **Mike Bagshaw, PE to Associate**
Mike joined MBP in June 2001 as a Lead Engineer in the Fairfax Branch. Mike earned his PE in 2001 and his LEED certification for sustainable building, and "Green Buildings" in 2002. Mike is currently managing special projects for one of our federal clients.
- **Kevin Bocock, PE to Associate**
Kevin joined MBP's Roanoke office in 1996. In 2002 Kevin transferred to MBP's Raleigh office and played a key role in the early development of the analytical group. In Fall 2005 he

returned to Roanoke as Branch Operations Manager.

- **Mike Mihelic to Associate**
Mike joined MBP in August 1995 as an Engineer Aide and member of the graphics team. With his background in detailed architectural drafting, he was instrumental in moving MBP's graphics capabilities forward into the digital age. Mike became a Certified Network Engineer, and has achieved additional certifications that include A+ and MCP.

Virginia Department of Transportation

has awarded MBP's Williamsburg office a contract to provide turn-key consultant inspection services for the \$98 million I-64 Battlefield Boulevard Interchange project in Chesapeake, VA. This is a highly visible and extremely complex project.

Ft. Valley State University, Georgia

has selected MBP to provide Construction Management services for the Academic Classroom and Laboratory Building. This \$18 million project is approximately 75,000 gross square feet of new construction and site work constructed on a site at the northwest corner of campus. The building will provide graduate level classrooms and laboratories for the university's School of Graduate Studies and Extended Education.

Arlington County Public Schools, Virginia

has selected MBP to provide Construction Management services for the \$85 million, renovation/addition of **Washington-Lee High School**. The project is to be completed in three phases over 3½ years while maintaining occupancy of the 1800-student high school. Project includes demolition of the approximately 250,000 square foot existing high school and construction of 350,000 foot new school

consisting of four-story classroom wing, cafeteria, media center, gymnasiums, auditorium, and an indoor swimming pool. Work also includes new ball fields, parking areas, access roads and bridges and utility infrastructure.

City of Durham, North Carolina

The MBP Raleigh office was recently awarded an Indefinite Delivery / Indefinite Quantity contract with the City of Durham. Under this contract, MBP will conduct independent study and objective project analysis of potential claims, as well as provide CPM schedule analysis, constructibility reviews, cost estimating, project monitoring, independent architecture/engineering analysis, alternative dispute resolution (ADR) support, litigation support and expert witness testimony as needed for various projects administered by the City of Durham General Services Department. MBP is currently negotiating the first task order which will be to provide cost estimating and constructibility review for the planned renovations to Durham's City Hall.

GSA's Sunbelt Region

MBP's Atlanta office has been awarded an indefinite delivery contract from GSA's Sunbelt Region to provide Construction Management services in Georgia, Florida, North Carolina and South Carolina.



The UVA Facilities Management Division

has selected MBP to serve as CM Advisor on its new **South Lawn Expansion project**, involving the construction of several new academic classroom/office buildings in the historic core of the U.Va. Grounds. As CMA, MBP will be involved over the next 18 months throughout the design stage to perform constructibility reviews, value engineering, cost estimating, phasing review, and CPM scheduling. We will also assist U.Va.'s project manager in coordinating design, utility relocation and other efforts.

City of Charlottesville has selected MBP as its Construction Manager!

MBP will assist the City of Charlottesville Facilities Management Division in providing project and construction management services on various governmental and educational projects.

University of Maryland

MBP's Columbia office has been awarded a contract to provide Program Management Services to the University of Maryland Department of Architecture, Engineering and Construction (DAEC). MBP, along with its subconsultants, Ewing Cole, Heery International and CONSERV, will be supporting the DAEC's construction program under this multi-year contract.

Army Corps of Engineers, Baltimore

The joint venture of MBP and KCI Technologies has been awarded its third consecutive three-year term contract to provide Construction Management services to the US Army Corps of Engineers, Baltimore District.

rs in the News

MBP would like to recognize the following Team Members for their professional achievements:

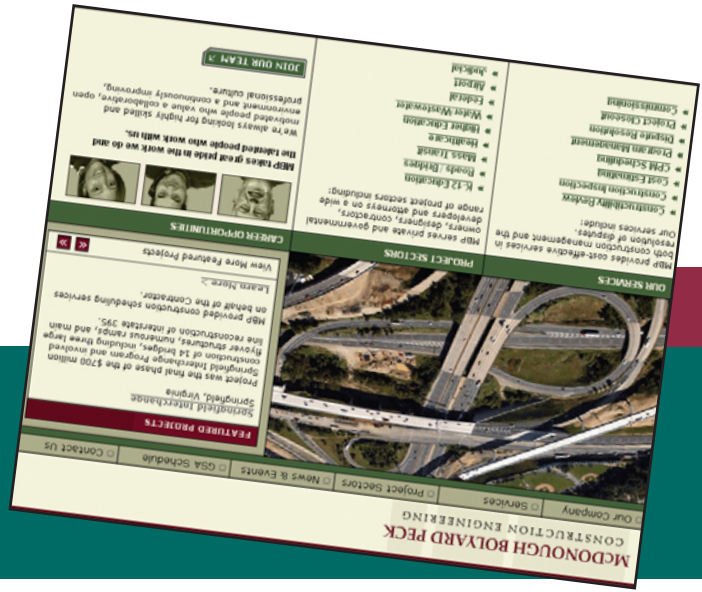
- **John MacKay, Roy Beeson and Jim Yatzeck** earn their Certified Construction Manager (CCM) designation from the Construction Management Association of America
- **Blake V. Peck, PE, CCM** was recently inducted in to the Academy of Distinguished Engineering Alumni by Georgia Institute of Technology in recognition of his dedication and service to the field of engineering.
- **Al-Nisa Aduwu** was selected by the Society of American Military Engineers to receive the 2005 Service Award for the Baltimore Post.
- **James Peck, PE, CCM** has been awarded the SAME, Washington DC Post Distinguished Service Award. James was recognized for the outstanding work he has accomplished in 2005, including the best fund-raiser ever for the Scholarship Fund, many excellent Training sessions, and the Annual Golf Event.



Joshua Lawrence, PE, PSP

Josh Lawrence is a Lead Engineer in MBP's Atlanta office; he joined MBP in 1998 as a co-op student while pursuing his civil engineering degree at Virginia Polytechnic Institute and State University. Josh also received his master's degree through Virginia Tech's Vecellio Construction Engineering and Management Program. There, he studied construction contracts, claims and impact analysis methods while attaining his master's degree. Mr. Lawrence has been fortunate to work with team leaders in each of our offices throughout his career, and attributes his success to close mentoring relationships. During his career, he has gained varied construction experience representing owners and contractors performing preconstruction, construction and post-construction tasks as well as training. His experiences have allowed him to develop skills in CPM scheduling, cost estimating, constructibility review, project management and administration, resident engineering, and claims and time impact analysis. Mr. Lawrence is a licensed Professional Engineer in the Commonwealth of Virginia.

In his spare time he enjoys spending quality time with Jessica, his fiancée, being outdoors, hiking, canoeing, and taking his pug dog, Porter, to the park. Josh has recently started playing paintball and has also recently taken up golf. While he can hit the golf ball very far and sometimes hits a fairway, he needs to work on hitting the fairway in front of him instead of having to bellow FORE! Being a Virginia Tech alum, Josh is naturally an avid Hokie football fan and is often found glued to a couch any time the Hokies are playing a game. Josh and his fiancée Jessica are planning for their wedding this August.



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