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FEATURES Building the Recovery

By Elizabeth Newell enewell@govexec.com *Government Executive* April 1, 2009

The pressure is on federal agencies to figure out how to manage billions of dollars in economic stimulus funds for construction projects.

With staggering unemployment rates crippling the nation during the Great Depression, President Franklin Delano Roosevelt established the Works Progress Administration, the largest of the New Deal agencies, to provide work on public projects. In addition to creating 8 million jobs on more than a million projects between 1935 and 1943, WPA left a legacy that tied construction and economic stimulus in Americans' minds.

Construction and maintenance spending under President Obama's economic recovery plan likely will eclipse the inflation-adjusted spending by WPA during the Great Depression. According to Engineering News-Record, a construction industry publication, the American Recovery and Reinvestment Act allocates approximately \$131 billion for construction-related spending. WPA spending was almost \$10 billion, which is about \$122 billion in 2009 dollars, according to the Bureau of Labor Statistics.

The hope is that an infusion of big bucks will bring big job growth in the second-largest sector of the economy. A study by the Center for Regional Analysis at George Mason University found that each \$1 billion in construction spending supports 28,500 full-time jobs. Other analyses have put the figure as high as 47,000 jobs. Barry LePatner, a New York-based construction attorney, says while job creation figures are hard to pin down exactly, the influx of spending "can't but be helpful" for a sector of the economy that has been particularly hard hit by the recession.

The Obama administration also is touting the stimulus package as a way to meet some of the country's most pressing needs. LePatner says few priorities are higher than infrastructure investment. He notes that 150,000 of the 600,000 bridges in the country have fallen into such

disrepair that they are classified as either "structurally deficient" or "functionally obsolete." Since 1989, approximately 600 bridges have failed, or about 20 a year.

Not only must the federal government dole out the massive amount of funding in the Recovery Act to address such infrastructure needs, agencies - particularly the General Services Administration - must launch and manage billions of dollars' worth of their own projects to build and upgrade federal facilities. In doing so, they will have to address a decidedly mixed track record in overseeing construction projects.

INCORPORATING INNOVATION

Paul Prouty, GSA's acting administrator, told Congress in February that stimulus funds will allow the agency, the nation's largest landlord, to address a significant backlog of "well-planned, worthy and needed" infrastructure projects. The spending is designed not only to create jobs but also to increase the value of the government's property assets and prolong the life of federal buildings.

At the same time, the stimulus provides almost \$5 billion in funding to make federal buildings more energy efficient, an investment Prouty says will reduce consumption and improve the environmental performance of agency buildings. This can result in significant savings. According to a 2003 study by the clean energy consulting firm Capital E, an initial investment of \$100,000 to include green features in a \$5 million construction project leads to savings of at least \$1 million during the 20-year life of the building.

Agencies now have billions of dollars at their disposal to make such investments and launch other construction programs.

Barbara Heller, president and CEO of the Washington firm Design and Construction Strategies, which advises agencies on how to make building projects more efficient, says they have traditionally struggled to manage such efforts.

Two of the greatest challenges involve implementing new technologies to increase efficiency and reduce cost, and managing the overwhelming amount of data that comes from contractors and their vast array of subcontractors.

"I've seen a lot of innovation, I've seen a lot of creativity, and I've also seen how our political leadership has, in some cases, sort of squashed a lot of that innovative drive among the government personnel," Heller says. "It's to the point where I think that some of the agencies are suffering from a form of battered wife syndrome and now they're being asked to make a U-turn and become change agents. It's a huge emotional shift."

Agencies are not entirely averse to incorporating new technologies and practices, Heller says. For example, government has taken the lead in adopting building information modeling, which

uses three-dimensional, real-time modeling software in lieu of architectural drawings. "When used effectively, building information modeling is a huge cost saver," Heller says.

GSA, the Army Corps of Engineers, and the State and Veterans Affairs departments have begun using the technique, which can save up to 20 percent of the cost of a building and 15 percent of construction time.

The catch here, as with many areas of government, is management. Adopting new technologies and effectively overseeing construction projects, says Heller, requires government personnel to understand the "odd" construction industry culture. The industry consists of predominantly small businesses. Large infrastructure programs bring together hundreds of these companies in temporary arrangements.

"It's a project-based industry with no central management," Heller says. "Groups of companies come together to do a project - they may never work together again - and then they go their own ways. The idea of applying management protocols or accountability across the whole process, that's not in anybody's job description."

Overseeing ad hoc teams on multibillion-dollar projects requires federal managers to carefully track data from a range of sources and establish solid benchmarks of progress.

Prouty (who declined to be interviewed for this article) told Congress that GSA will form a nationally managed, regionally structured program management office to oversee infrastructure investments on an "aggressive schedule." He said the office will draw, as needed, from staff of GSA's Federal Acquisition Service and Public Buildings Service.

To get a running start, federal agencies, like state and local organizations, are focusing first on programs deemed "shovel ready," indicating they've gone through the contract award process and now are waiting for funding. While the term has been casually used by Obama administration and agency officials, it's more of "an aspiration," Heller says.

"It's very rare that a job is put on the shelf, or awarded and all the contracts are signed, sealed and delivered and all the approvals are gained, then for some reason there's been a hiatus, so that you can just pick up instantly and work on it," she says.

FIXED-PRICE PUSH

Another potential sticking point in the management of largescale construction projects is the Obama administration's clearly stated preference for using fixed-price contracts. In guidance to agencies on implementing the Recovery Act, Office of Management and Budget Director Peter R. Orszag strongly urged them to use such contracts whenever possible, saying they "provide maximum incentive for the contractor to control costs and perform effectively and . . . expose the government to the least risk."

In fixed-price contracts, payments are not adjusted based on the cost incurred by the contractor over the life of the acquisition. Unlike cost-plus contracts, under which firms charge the government for expenses incurred, fixed-price contracts place full fiscal responsibility - and the resulting profit or loss - on the contractor.

That in turn provides the maximum incentive for contractors to keep costs down. The Recovery Act says contracts that are not fixed-price will be singled out for heightened scrutiny on the administration's Recovery.gov Web site, along with contracts that are not subject to full competition.

LePatner says this approach is fraught with peril when it comes to construction work. "Nowhere in this act have they indicated that they know what a contract for true fixed-price construction looks like," he says. "Unless they get an infrastructure czar who is not aligned with the construction industry and who independently understands how to structure these contracts, we'll face overruns, and we can't afford 20 percent to 30 percent in cost overruns."

Until engineering drawings for a project are finished in every detail, LePatner says, an agency cannot issue a fixed-price construction contract.

Even then, the industry remains deeply opposed to such contracts. Construction firms have a long tradition of submitting bids below cost to win awards, then adding extra charges as costs build up.

"These mom-and-pop shops are not able to accept the risk," LePatner says.

"They don't use technology to operate efficiently, they don't have deep pockets of capital. . . . This is the construction industry as it operates today and has for hundreds of years."

Heller says strong incentives are the most effective way to ensure contractors meet time and budget benchmarks. "The construction industry tends to be very heavy on the punitive side - lots of liquidated damages, lot of language devoted to dispute management and contract change orders and that negative side of things," she says.

She cited the recent Pentagon restoration project as an example. Its incentive structure encouraged contractors to bring the project in two years ahead of schedule and under budget. Firms were eligible for substantial bonus award fees on a quarterly basis for reaching clearly delineated goals. They "succeeded in meeting the goals almost every time," Heller says.

GSA is putting into practice a variety of already available, customizable acquisition tools, such as blanket purchase agreements and indefinite delivery-indefinite quantity contracts to get stimulus money out the door quickly.

These procurement tools allow agencies to go through the contract award process in advance of a specific acquisition and have contractors at the ready when the need arises. The agency is

working to award national contracts, against which regions can place task orders quickly, Prouty told Congress.

GSA also will use more design-build contracts, which overlap the design and construction phase of projects.

With these contracts "we can start work quickly and make simultaneous improvements to the existing designs," Prouty said.

Prouty has ordered GSA acquisition officials to monitor contract awards based on three measures: the number and percentage of contracts awarded competitively; performance against national socioeconomic targets; and the time frames in which the contracts were let.