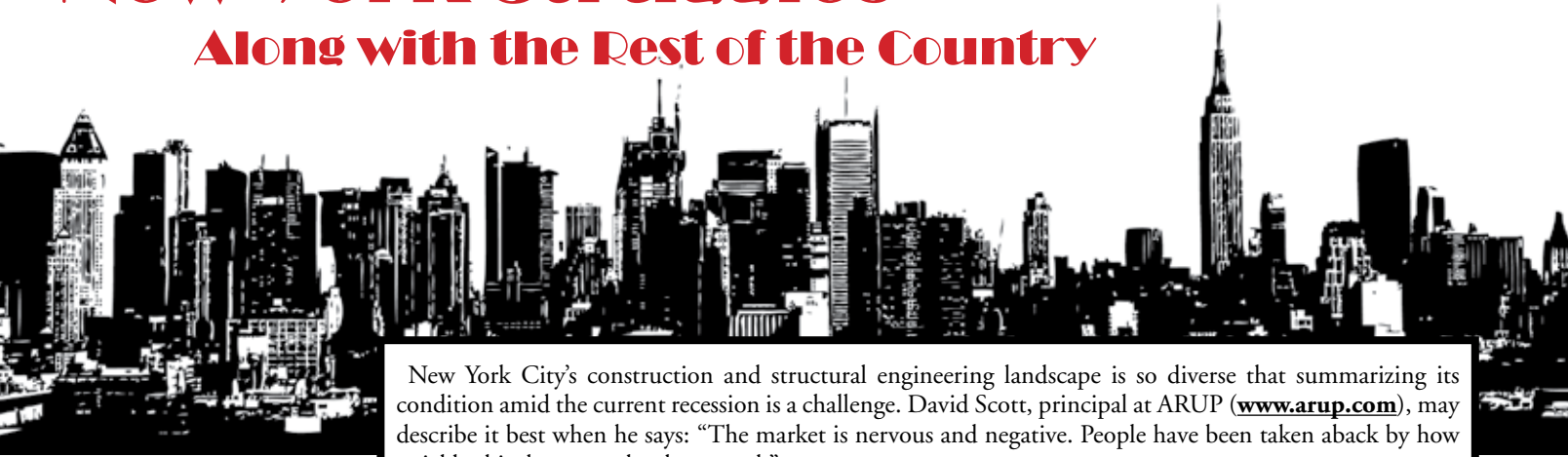


# New York Struggles

## Along with the Rest of the Country



By Larry Kabaner

New York City's construction and structural engineering landscape is so diverse that summarizing its condition amid the current recession is a challenge. David Scott, principal at ARUP ([www.arup.com](http://www.arup.com)), may describe it best when he says: "The market is nervous and negative. People have been taken aback by how quickly this downturn has happened."

To be sure, many firms have projects in the pipeline; but what happens after these jobs are completed? That is the question on everyone's mind.

What makes forecasting so difficult, as Scott notes, is that conditions are deteriorating rapidly, not just in New York but around the world. Already reeling from high fuel costs (which have since been mitigated but are still at record highs), a scarcity of labor, and a lack of available credit to fund new projects, this year is shaping up to be a major challenge. In New York State, "construction starts" are estimated to fall by 22 percent this year, compared to 2008. In the New York metropolitan region alone, which includes New York City and parts of New Jersey and Connecticut, construction projects are estimated to drop 15 percent, based on McGraw Hill's Construction Outlook 2009 report. In addition, the NYC Department of Buildings has seen the number of construction permits drop by a third, from almost 5,000 in 2007 to less than 3,200 last year.

New York City-based construction firms traditionally relied on work outside the United States to help smooth out domestic conditions. If the U.S. market faltered, they were still working on projects in other countries. When those jobs dried up, they were able to increase their domestic work. This time, however, it's different. Scott notes, "As financial markets consolidated, you would get countries going through cycles. Parts of the world would still be busy. This is much less apparent than before. Diversity previously helped international-based New York companies, but not so much these days."

ARUP is typical of structural engineering firms that have a diverse international presence. The firm has over 10,000 staff working in more than 90 offices in 37 countries. More than 10,000 projects are running at the same time. The company maintains a staff of 350 people in New York City, says Scott. Currently, the company, which handles all aspects of engineering, from basic structural work to special services such as fire engineering, acoustics, lighting design and more, is working on tunnel projects in New York and, in particular, The Second Avenue Subway and extension of the No. 7 subway line. The Second Avenue Subway project will include a two-track line along Second Avenue, from 125<sup>th</sup> Street to the Financial District in Lower Manhattan. It will also include a connection from Second Avenue through the 63<sup>rd</sup> Street tunnel to existing tracks, for service to West Midtown and Brooklyn. The No. 7 line extension will expand the IRT Flushing Line westward, from its current terminus at Times Square, and be part of the Hudson Yards Redevelopment Project to aid redevelopment of the area around the Long Island Railroad's Caemmerer Railyards. Originally proposed as part of the West Side Stadium to house the New York Jets and bolster a bid for the 2012 Summer Olympics, the stadium was scratched; however, the extension project continues. The extension will also serve the newly expanded Jacob K. Javits Convention Center.

Brian Falconer, Principal at Severud Associates ([www.severud.com](http://www.severud.com)), an 80-year old structural engineering firm in New York, agrees that New York City firms have benefited, not only from cultivating work around the globe but from working in a city that attracts foreign investments. "New York City has remained in a bubble longer because of foreign money," he says. "Many firms have been surviving on that." He adds, however, that this resiliency has attracted many firms to the city, making the market extremely competitive. "Because of the



Moynihan Station exterior at night. Courtesy of SOM/Archimation.



Madison Square Garden renovation exterior. Courtesy of Brisbin Brook Beynon.

success New York has been enjoying, other people have moved into this market. It brings pressure to the industry and makes everyone lean. There was a lot of work to go around two years ago, but not so much now. Fortunately, we have a diverse practice.”

Currently, Severud, which operates mainly out of New York with 75 people, has been working on the renovation of Madison Square Garden, to put it on an equal footing with other sports venues. “We are upgrading the suites and redoing the seating, offering better services within the Garden.” The firm did Garden renovations in the 1980s and 90s, and the current work is being phased in, to limit the impact on the regular sports season. The company is also working on the Moynihan Station Project, which would renovate the landmark Farley Post Office building into a train station and multi-use buildings. “Ongoing renovations are keeping us very busy,” adds Falconer.

With or without a recession, working in New York City brings its own unique challenges, according to Caroline Weiss, Managing Partner of the New York office of KPFF ([www.kpff.com](http://www.kpff.com)). The 900-person firm, which does structural and civil engineering work, opened a New York office about two years ago. They have nine people.

Despite the consumer recession and the number of retail outlets failing, Weiss’ company is doing quite a bit of retail renovation, including the Apple Store, Banana Republic and American Eagle. “There are no malls in New York, so buildings are stand alone projects,” she says, “and these older buildings bring special challenges.”

Founded in Seattle in 1960 and known mainly on the west coast, KPFF found conditions in New York that they had not previously encountered. Doing studies on very old buildings in the downtown area, for example, can be exciting but difficult. The firm is currently working on a 150-year old brick and timber building in the SOHO area of lower Manhattan. “We know nothing about what’s there,” says Weiss, who had previously worked in New York City for 15 years. She adds: “For the most part, you cannot get blueprints; and even when you can get these drawings, the buildings have been worked on so many times that half of what they’ve done is not on the drawings.” LaGuardia Airport is another example of a site that has been worked on so many times that blueprints are inaccurate. Weiss’ firm does a lot of work at the airport, and Weiss states, “Over the past 50 years, it has been changed so many times.”

KPFF is also working on reconfigurations for car rental companies that are consolidating facilities at Newark Airport. As holders of GSA Delivery/Indefinite Quantity (IDIQ) contracts, they are studying seismic and progressive building collapses. “There was a mandate after 9/11 to upgrade buildings,” says Weiss. The firm completed a study of the Alexander Hamilton Customs House near the Battery and worked on recommendations for the Alfonse M. D’Amato United States Courthouse in Long Island.

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Moynihan Station Intermodal Hall. Courtesy of SOM/Archimotion.



Madison Square Garden renovation interior (view from a mid-level suite). Courtesy of Brisbin Brook Beynon.

Similar work is keeping Scott busy. As chair of the Council on Tall Buildings and Urban Habitat ([www.ctbuh.org](http://www.ctbuh.org)), an industry group which collects best practices information around the world, Scott notes that CTBUH's most active group is the Seismic Working Group. The group notes that, with a resurgence of high rise and ultra-high rise building construction around the world, building designs in seismically active areas vary from region to region. Aside from Japan and China, many countries do not require anything more than traditional design practice, based on fundamental mode response and force reduction factors. "We have been trying to make it known

that both American and European design codes for tall buildings are inadequate and inappropriate. We advocate performance-based design for buildings in seismically active areas."

Many projects in New York have been put on hold, delayed until economic conditions improve. For example, the Connecticut Department of Transportation has postponed asking for a second round of bids for a new Pearl Harbor Memorial Bridge over the Quinnipiac River and will wait until spring, hoping that the economy will improve. Officials say that the postponement will not delay the \$500 million span, which is scheduled to be built by 2016.

New York Mayor Michael Bloomberg's plan, to create or preserve 165,000 low and moderate income housing units by 2013, has been delayed by at least one year due to a lack of financing. The project, begun in 2003 and now about half-financed, is part of a 10-year, \$7.5 billion overall effort to build or renovate housing for up to 500,000 low- and moderate-income people.

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Public works projects, like housing and bridges, have traditionally kept construction going during downturns. So have institutions such as hospitals and schools, but their lowered endowments are preventing even these projects from going forward. "Some schools have been badly hit because their investment portfolios have been hit," says Scott. Adds Falconer: "People usually consider institution work stalwart in lean times, but a number of institutions have put a hold on campuses, museums and so forth. It's unusual."

Some big projects are moving ahead, albeit with some uncertainty. The \$8.7 billion Trans-Hudson Express Tunnel, known in local parlance as "The Tunnel," is a proposed railroad tunnel under the Hudson River, connecting New York and New Jersey. Actual construction is expected to begin this year, with completion in 2017. Currently, the project is waiting for about \$3 billion in federal monies.

The project's Executive Director, Richard Sarles, testified before the New Jersey Assembly Transportation Committee in January that the project is "shovel ready." "Within months of receiving a federal funding commitment, we can advertise some \$600 million worth of construction contracts, with another \$3 billion to follow shortly thereafter. Actual construction will start, not just design work."

Federal stimulus may be the key to keeping New York City's construction industry as vibrant and diverse as it has been, despite the various cyclic downturns the Big Apple has endured. President

Barack Obama's stimulus package includes \$54 billion to make the energy grid more efficient, improve the energy efficiency of the public, and weatherize homes. Says Scott: "There is a great deal of hope that the new administration will create opportunities, especially in helping to build energy sustainable buildings. If so, we expect to see refurbishing work increase and bring energy sustainability into the marketplace."

The package provides about \$90 billion for infrastructure, which includes building and repairing highways, modernizing federal buildings, transporting clean water, and improving public transit and rail. The Obama Administration is making a point of injecting money into infrastructure as quickly as possible; and groups are scrambling to present their "ready-to-go" projects. The National Governors' Association has designated \$57.4 billion in projects "ready-to-go"; and the American Association of State Highway Transportation Officials has identified \$64 billion in projects that they say are "shovel ready".

Where do we go from here? Because we are in uncharted territory, all forecasts are suspect.



Moynihan Station Train Hall. Courtesy of SOM/Archimotion.

However, most economists agree that the stimulus spending package will jumpstart the economy, offering short and long-term pay backs. Already, some structural engineers have expressed optimism. "What I see starting to happen is that people are not getting as worried, because they've been living with it awhile," says Scott. "There's a kind of wait-and-see attitude, which is somewhat positive, in addition to a great deal of interest in infrastructure projects." ■



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