Northeast’s Tallest EIFS Building

Hard Times in New England

As you drive around New England, you aren’t likely to see much construction activity. For a variety of reasons the banks don’t have the money to finance projects of any magnitude. Mention the ‘Massachusetts Miracle’ and you’ll hear snickers from the local residents, a record number of whom are looking for jobs. Sometimes it seems like the only people working outdoors are the road crews, driving from pothole to pothole with their temporary solution to one of the region’s perennial problems.

A Point of Hope

However, near the peak of one of the highest hills in Worcester, Massachusetts, a new 24-story apartment tower rises in stark contrast to both the blighted surrounding neighborhood and the regional economy. Visible for miles, the Franklin Square Apartment Tower is the cornerstone of developer James J. Soffan’s blueprint for revitalizing a city’s modern commercial center.

Sitting on land formerly occupied by dingy bars, rooming houses and underutilized commercial space, the tower is the first major step in Soffan’s plan. The area will become known as Franklin Square when renovation of several run down properties flanking the tower is completed. Total project cost will approach $39 million, an enormous investment by present local standards.

The Tower is Franklin Square’s exclamation mark, emphasizing that change is happening, that better things are on the way. According to Soffan, “It does exactly what I wanted. I wanted to shock the whole area into a new presence. It’s really an intimidating factor here. People will be more respecting of the whole area because of its presence.”

Although the overall Franklin Square budget was $39 million, the budget for the 24-story tower was set at only $16 million. The project team was eventually comprised of the developer, the architects (The Vitols Group of Boston), the general contractor (Stone Company of Canton, Massachusetts), the exterior wall subcontractor (Lassiter Plaster Co., Inc. of Murray, Kentucky), and other subcontractors. Together they exhibited a belief that this landmark project could be completed on a modest budget with the complete cooperation of all team members and vendors and through paying stricter attention than ever before to the cost of all construction products and methods used.
Sensible Solutions

In order for Franklin Square Tower to get beyond the concept stage in the tight economy, every item in the budget was scrutinized. One early decision which had a major impact on the cost of the project was the selection of an exterior insulation and finish system rather than brick, as had been first planned. The EIFS was not only less expensive per square foot, but its light weight contributed to reduced costs for the foundation and supporting steel. The EIF system which was selected was the System I from Sto Industries.

Sto’s involvement in the project dated back to 1987 when Tom Johnson of J.E. McLaughlin, Sto’s distributor for the territory, first heard about the developer’s plans. He immediately developed a relationship with the project architects which was cemented by his valuable suggestions and support. According to David Willy of the Vitols Group, “Whenever we needed information, technical assistance, color samples, etc., Tom and the people behind him at Sto were always very responsive.”

Tom Silvan, project manager for Stone, the architects and Johnson had decided that it would be best if the exterior wall panels be prefabricated away from the job sites. This mode of construction was selected for several reasons: work on the exterior would begin in late summer or early fall, significantly reducing the number of good working days before cold weather set in on the project; panelizing the project greatly limits the impact of weather on scheduling; panelizing permits the use of two or three shifts if necessary; in a panel shop the work surface of the wall is uniformly accessible to the plasterer, facilitating tighter quality control; and panelizing also reduces scaffolding and labor costs.

Based in Vermont, Johnson was very familiar with panelized projects and shared his experience with the architectural staff. Although they had never been involved in a panelized project, the Vitols Group had observed the method and knew that it could help keep the project on schedule. The timing of this stage of project planning coincided with ongoing construction of another project that Johnson was involved with in Springfield, Massachusetts, only a 90 minute drive from the Vitols office. He arranged for the project team to tour that site.

The panelized project in Springfield consisted of the renovation of the downtown Marriott Hotel. Exterior walls were being supplied by Lassiter Plaster Company of Murray, Kentucky, using the same Sto System I as had been selected for the Franklin Square Tower.

A trip to the site enabled the Vitols group to observe the swift erection that occurs when panels arrive at the job site. Although the building was located on a very busy street in the middle of the commercial downtown area, construction moved swiftly. On average about sixteen 9’ by 32’ panels were put into place each day. The hotel was only losing the use of each room for about four days.

A Key Player Joins the Team

The trip also afforded the architects their first opportunity to meet the Lassiter people. And although they were to investigate other panel manufacturers, they remained most impressed with Lassiter. Lassiter had been a regional company earning a strong reputation for quality throughout the Southeast and lower Midwest for many years. However, in the mid ‘80s their work on the 500 unit Omni Hotel contained within St. Louis’s restoration of the Union Terminal provided them association with a project which gained national and international attention.

That association led to their being considered for and then awarded the exterior work on a 16 story tower at the Marriott Hotel in Memphis.

Their work in Memphis exceeded Marriott’s expectations. They completed the erection of the exterior walls only three weeks after the first panel arrived on the job site. This performance led to other work with Marriott including building, shipping and erecting panels for a hotel in San Diego, 2000 miles from Kentucky.
The finished tower is the tallest EIFS-clad building in the Northeast.

According to Richard Knight, president of Lassiter, “The company had so successfully completed the Marriott in San Diego that the Marriott people were comfortable about coming to Lassiter for any project in North America. “A project in Springfield or Worcester would be no problem even though both cities are 1000 miles from Lassiter’s western Kentucky home. As Knight also points out, “We are even looking across the Atlantic, into Israel and the Persian Gulf emirates as potential markets.”

Impressed with the site work, the Vitols Group and Stone also sent members of the team to Kentucky to personally inspect the plant operation. There they saw a very efficient and comprehensive operation. Lassiter employed 75-150 tradesmen who were veterans of hundreds of projects which had been shipped all over the country. Not only could they produce panels, but they also offered the ability to assume complete responsibility for engineering, construction, transportation and erection of the exterior panels. (They actually offer additional services which would not come into play on this project.)

Whenever Knight talks about the value of Lassiter’s experience and
The EIFS cladding affords superior insulation properties.

quality, he also stresses its progressive attitude toward new materials and processes. “We’ve been in the plastering business since the 1920s when the father of Len Lassiter, our Chairman, founded the company. We’ve been panelizing for over 25 years and we did our first exterior insulation and finish system in 1974. We operate in a part of the country where labor costs are very attractive and the type of people we employ are devoted to a country work ethic that assures quality. But we aren’t a backwoods company—we have been among the earliest adopters of new technology. We feel that we can deliver a quality, state-of-the-art product at a competitive price anywhere in the world.”

Lassiter had first become involved in EIFS when energy costs went through their first round of rapid escalations. Knight asserted that EIFS became doubly attractive to his company at that point. “We could not only offer a more energy efficient wall system, we could also transport it to the job site more economically--the EIFS panels only weigh seven pounds per square foot. That translates into a lot less diesel fuel and less wear on the tractor trailers that leave our plant.”

Quick to realize the value which Lassiter could bring to the project, Vitols and Stone agreed that Lassiter
was the right company for the construction team. Their bid for the exterior walls was accepted and Lassiter went to work on the panels in Kentucky while the building’s steel skeleton was erected in Worcester.

A Logistical Problem is Solved

The location of the Franklin Square Tower presented a tactical problem. Like the Marriott project in Springfield, the streets around the building were downtown thoroughfares. There was only one good place to unload panels and no room for a crane large enough to hoist them above the fourteenth floor.

Lassiter came up with a plan for constructing a monorail around the perimeter of the roof of the tower. From atop the building a hoist could move along the rail from a position above the unloading area to locations above any other point on the building. Panels were hoisted from the street level to the floor level on which they would be attached. They could then be moved around the building to the point at which they would be attached.

This method proved to be very successful and efficient. It required only two people on the ground to unload the panels and hook them onto the cable, one monorail operator, three people to set the panels in place and two welders to immediately follow, permanently securing the panels. From trailer to welding took about fifteen minutes.

The project team also decided that the wall assemblies would be shipped
The building was completed at significant savings with the aluminum sliding windows already mounted. Although this sounds like a risky proposition considering the long distances involved, because of Lassiter’s acquired expertise, not one of the hundreds of sheets of glass was broken or chipped during transport or during installation of the panels. Virtually every one of the 350 9’ by 30’ panels contained a window or windows. Installing them on site would have meant caulking them on site as well. By installing the windows at the panel plant, the caulking could be done much more easily, carefully and consistently than if the caulk had been applied story by story on site. The estimated savings in labor came to between $300,000 and $400,000.

Working Around and Through the New England Winter
The erection of the steel only began in September 1990. If the walls had been assembled on site rather than in the controlled environment of the panel shop, scheduling would have been left to the mercy of the weather. Abrupt shifts in the weather are likely in Worcester in the early autumn. The first frosts can come in September, and by November the arctic winds can blow hard, frigid winds through the area. Wisely the project manager avoided dependence upon clear, warm days.
Instead of worrying about rain and cold which would either require tenting and heating the job or would stop work altogether, Stone was able to start unloading and hoisting into place two or more truckloads of panels per day. On all but the windiest of days they were able to install 22-25 panels per day—nearly 7,000 square feet of walls—using only the one hoist or crane and eight workers. The top 21 stories were enclosed within a six week period.

With the completion of each floor, the general contractor was able to begin the interior work. The exterior insulation and finish panels were all installed by the middle of February and the stone panels for the first three floors began arriving in late February. Interior work will be able to run through the winter and the building is on schedule for occupancy during the summer. This type of schedule at the unheard-of cost of $16 million for a 24-story project would not have been possible without a unified approach incorporating the most efficient materials and methods under the management of a single-minded team of professionals.

**Outstanding in the Truest Sense**

Not only is Franklin Square Tower one of Worcester’s tallest buildings (and by far the tallest within several blocks), it is also the tallest building in New England to ever be clad in an exterior insulation and finish system. With the tower’s visibility, the architects and ownerwisely took advantage of one of the Sto EIFS’ benefits—the wide range of color.

The first three floors were constructed using the Cignus system with a 3/4 inch facade of Italian granite. The look of the granite was so important that Richard Knight had taken James Soffan, Liviu Brill, Tom Silva and Bill Docheno, Director of Operations for The Stone Company, to visit the quarry in Carrara to personally select the compatibility of the EIFS colors to the stone which would be used. The precise compatibility of the EIFS colors to the stone was extremely important.

When it came to color options, Sto offers extensive selection and comprehensive information about the proper use of colors. Sto’s color chart of 351 standard colors (since then expanded to 390) offers technical information which is the result of years of solid research into color use and chemical properties and performance of pigmented coatings. The selection chart is also organized to help architects and owners choose colors which are mutually compatible based on reflectance, monochromatic hue or polychromatic hues.

Franklin Square Tower presently stands in contrast to many of the as yet untouched buildings surrounding it. However, as plans for restoring the local economy are discussed it seems inevitable that the benefits which new construction and renovation have on attracting new businesses will create a demand that the neighborhood improvements be continued. And it seems equally likely that the success of this project will be noticed by developers in other areas who share Soffan’s vision.