Exterior Wall System Proves Best Option For Florida’s Grand Cypress Resort

Designers Find the EIF System Provides Flexibility in Finish and Application Which Provides Unique Mediterranean-Style Appearance

The Grand Cypress Resort features a Jack Nicklaus-designed 27-hole golf course, considered by many to be one of the finest courses in the world. By capturing the spirit of great Scottish courses, where he won three British Opens, Nicklaus created a beautiful and demanding golf course that presents new challenges at each hole. Although many of the villas border the edge of the golf course, flying golf balls hitting the villas’ exterior walls will not cause damage because of the high impact resistance of Ispo’s R-Wall EIF System.

To Floridians—or anyone visiting Orlando’s spectacular Grand Cypress Resort—it’s a touch of class with the flavor of the Mediterranean.

What it is, is the Grand Cypress Gold Club and Villas, the 1500-acre resort reflects a remarkable demonstration of what can be accomplished by a good designer familiar with the at-
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tributes of an exterior insulation and finish system (EIFS)—and a famous name.

Featuring a Jack Nicklaus-designed 27-hole golf course, a recreation complex, a sparkling man-made lake, Grand Cypress Resort’s most notable feature are the 48 luxurious, Mediterranean-style villas that are available to those who want to stay on the resort grounds for a night, a week, or a month.

The use of the EIF system enabled the resort’s architect to create the traditional beige stucco appearance closely associated with the Mediterranean architectural style. The flexibility of the system opened related other design opportunities such as patio archways and support columns.

The villas, single level and townhouse, border the lake, with wide decks extending over the shoreline with the look and charm of Mediterranean-styled homes, thanks to the EIFS finish applied on each villa’s exterior wall, fencing wall and patio or deck, as well as to other architectural features.

No details were spared in the design and construction of the resort’s villas. At certain points, the interconnected units stand one-story high. Here, the sloping roofs are supported by impressive columns. The decks and patios, which roll out to the lake on one side and four holes of the course on the other are partially covered with the red clay tile roofs as well, supported by traditional Mediterranean archways. The second story balconies on the townhouse villas feature two side walls, also supported by columns.

The finishing touches are added to the Grand Cypress Resort’s Golf Villas, and the ground is prepared for landscaping and sidewalks. Orlando’s Grand Cypress Resort consists of a Jack Nicklaus-designed golf course and 48 luxury guest villas.

Mediterranean-Style Architectural Design

Completed in early 1987, the $10 million Grand Cypress Villas project was designed by the Atlanta, Georgia-based architectural firm of Thompson Hancock Whitte and Associates, Inc. The project’s construction was a joint venture between Southern States Contracting Corporation and Walker and Company, Inc., both of Orlando. C & F Drywall and Plastering Company, Inc., of Orlando, applied Ispo’s R-Wall Exterior Insulation and Finish System.

The architectural firm and the contractors wanted to design and build a community that incorporated various
architectural features, such as columns, archways, curving walls and other configurations which portray a Mediterranean appearance.

As a Thompson Hancock Whitte spokesman pointed out, “The overall design called for a stucco look, but stucco cracks easily and is more expensive than EIFS. With the availability of Ispo’s Exterior Insulation and Finish System, we were able to create our desired impression and keep the costs down.”

**A Touch of EIF . . .**

The exterior insulation and finish system is a laminate system applied to building exteriors or interiors. The system provides aesthetic design flexibility and significant insulation, moisture resistance and cost advantages over other types of cladding materials.

For the Grand Cypress Resort project, approximately 256,000 square feet of EIFS was used. Selecting from Ispo’s five different textures and 101 standard colors, the architectural firm specified a medium finish texture in beige.

Another consideration for using EIFS in this particular project was the ever-present heat and humidity of Orlando. According to the architectural spokesman, “The EIF system has superior insulating qualities that helps retard heat absorption in the villas. We used concrete blocks to construct the units and then covered them with the complete exterior insulation and finish system.”

The general contractors broke ground for the project in early 1985 and completed it in March 1987. According to Bill Schrope, president of Southern States Contracting Corporation, the structural method of the design was “very irregular, with numerous recesses which meant a longer than normal construction period.”

This, however, did not impede the progress of the EIFS application. “C & F Drywall’s applicators worked right alongside us during the construction, applying the EPS insulation board and the other EIFS components as soon as each building was blocked,” Schrope adds.

“Any other skin that could have been used would have been more difficult and more expensive to work with. Stucco would have cracked because of the design specification for Grand Cypress,” Schrope says. “Therefore, a synthetic finish system was the only other material that could have worked practically and aesthetically within our design parameters.”

**A 4-Part System . . .**

For the Grand Cypress Resort project, the EIFS application began after the concrete blocking and framing were completed. The system attached to the concrete consists of four components: the Primer/Adhesive; the R-Wall expanded polystyrene (EPS) insulation board; the reinforcing mesh; and the 100 percent acrylic-based finish.

The Primer/Adhesive is mixed on the job site with Portland Cement. This Primer/Adhesive mixture has two functions. It is used to adhere to insulation board to approved substrate materials, such as the villas’ concrete, and to embed a glass fiber reinforcing mesh to the insulation board. This reinforcement layer seals and protects the insulation board from impact and water penetration. It also provides a base for the finish coat of the system.

The insulation board is a one pound
density expanded polystyrene (EPS) rigid insulation board. Typically, it comes in 2 ft. x 4 ft. sheets in varying thicknesses depending on desired R-values, detail restrictions and aesthetic design. Any required designs, signage or shapes are formed from the EPS prior to application.

The R-value of the insulation board is 4.17 per inch. Because the insulation is placed on the outside of the exterior walls, it maintains a more consistent temperature within the wall and prevents moisture penetration. Dew points also can be controlled more easily because of the exterior placement of the insulation.

Thermal resistance or insulation value is not the only function of the board. EPS is a resilient material that acts as a cushion to building movements. It reduces stress on the exterior cladding and prevents cracks. This, in turn, gives the system greater efficiency in maintaining a water-tight skin for the building.

Impact Resistance . . .

Impact resistance of EIFS is an important consideration, especially for the resort’s villas at the edge of the golf course. The system’s EPS features strong resiliency and prevents the shock of a forceful blow, such as a golf ball, from spreading beyond a very localized area.

Constructed with one or two layers of impact-resistant fabric applied to the EPS with an adhesive before the finish is applied with a High Impact Plus option, the walls can withstand localized impact up to 600 psi. Although the majority of the protection is provided by the reinforcing fabrics and coatings, a resilient insulation board working in conjunction with the fabrics increases resistance to punctures and cracking in EIFS as it is subjected to impact, abuse and building movements.

According to Rob Fox of C & F Drywall, the resort’s developers initially were reluctant to use a synthetic system. “They were concerned that flying golf balls hitting the villas might cause severe damage to the walls. We demonstrated to them the characteristics of the system’s impact resistance, which eliminated their fears.”

Fox elaborates, “We brought into the developer’s office an EIFS sample and a conventional cementicious stucco sample, put them on the floor, stood on chairs, raised our hands to the ceiling, and proceeded to drop a three-pound steel ball on each sample. The stucco cracked, but the EIFS only had a small, minor dent as a result of the impact. Then the developer gave us the green light.”

EIFS Benefits . . .

The exterior insulation and finish system originated in Europe more than two decades ago. Over the last few years, it has received high praise from architects, contractors and building owners around the United States because of its attractiveness and design flexibility. And its use has dramatically increased during the past five years. Other reasons for this increase include its low cost, high insulation value, light weight and ability to be attached to almost any surface.

Architects specify EIFS because it provides building owners, developers, contractors and applicators a building system which is attractive, cost efficient and effective.

The system reduces energy costs by having the expanded polystyrene insulation on the outside of the framing or substrate. Not only does this reduce the energy load requiring smaller, less expensive heating systems, but reduces expansion-contraction movement. This reduction also decreases stresses that can create moisture and thermal breaks in the skin. A more stable inside temperature provides dramatic energy cost savings.

EIFS also reduces related costs because it is a lightweight material needing less foundation and structural requirements for its support than other materials.

A Unique Resort . . .

The Grand Cypress Resort is the type of place that offers something for just about everyone. Guests and visitors can enjoy its golf course and other recreational activities and facilities, including its Racquet Club, lake, nature and audubon area, and equestrian center. Or guests can just relax and enjoy the peaceful and impeccably-designed guest villas.

They can also visit Florida’s most famous attractions. Walt Disney World, Epcot Center, Sea World and Spaceport USA are all just a short drive away.