

Firm footing

Setting the Olympic standard for equestrian and football grass

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A hi-tech approach to grass surface cultivation ensures that a competitor of Olympic class will put their best foot – or hoof – forward every time

The Olympic athlete relies on the competitive surface to provide firm, consistent support for his or her winning effort, whether riding a highly-trained horse in a demanding Olympic equestrian competition or preparing to deliver the winning shot during the medal round of the Olympic soccer tournament. Much as a professional golfer expects that the greens will putt consistently from the first to the eighteenth hole, meaning that the putting surface should be the same for all players, these Olympic athletes also demand that as the horse plants to clear an obstacle or as the soccer player prepares to drive the ball into the net, the surface must not let him or her down. To meet these expectations, architects, contractors and facility managers must work together to design, install and maintain playing surfaces that deliver this kind of quality and consistency.

Jean Louis Gregori, chairman of Gregori International, the sports turf and equestrian specialty contractor, believes that his company has been effectively addressing these requirements for the past 20 years. To do this, he developed, refined and began installing the patented FIBERsoil as the root-zone layer product for fine-grassed surfaces for equestrian venues and athletic fields around the world. As the FIBERsoil turf is grown-in – with the grass roots, the sand-growing medium and the special synthetic fibers becoming entwined – the surface becomes more consistent, more durable, resists shear and tear and displays

optimum drainage characteristics. This translates into a surface that will also endure more use – up to 25 hours per week on average – with little or no surface repair needed, as opposed to traditional surfaces.

Tailor-made turf

This product, the exact percentage mix of which can be tailored to meet the needs of the individual sporting event, has been primarily employed around the world for soccer, rugby and equestrian surfaces.

Gregori is now growing FIBERsoil Bermudagrass sod for US collegiate and major league sports teams' stadia for baseball and football in addition to soccer, rugby, equestrian and polo fields. At its Miami office, the company's staff recently completed assembly of a custom FIBERsoil mixing plant. This plant, capable of producing up to 20 tons per hour, was recently used to blend the system's sand root zone mix for a test plot of certified 419 Bermudagrass. This plant is fully mobile and can be moved to any site for rapid mixing and delivery of the product. This mix is spread by a tractor-drawn mobile unit applying the product in 1 in (2.5cm) layers per pass. The company has experience of producing the turf system in both warm season and cool season grasses.

FIBERsoil sand consists of graded silica sand randomly mixed with polypropylene fibers, providing a homogeneous blend, tailored to local conditions and to the demands of the particular sporting surface, with optimum binding characteristics. This mix is then installed over drainage and filtering layers, maximizing its already excellent drainage characteristics.

The mix, on its own, can provide excellent footing material for horse race tracks and exercise and competition arenas. Local temperature and rainfall conditions are taken into account as the mix is prepared. The fibers are resistant to water, rot-proof, stabilized against UV degradation and substantially inert. Intermittent or even prolonged exposure to extreme heat (up to 75°C) will not affect the structural stability of the polypropylene fibers; therefore the cohesion strength of the sand/fiber mix will not be affected. It is important to maintain a balanced moisture content on the surface, in the preferred range

of 4-12 per cent by weight, and to counteract the drying effects due to evaporative loss from the surface by controlled use of an irrigation system on a daily basis.

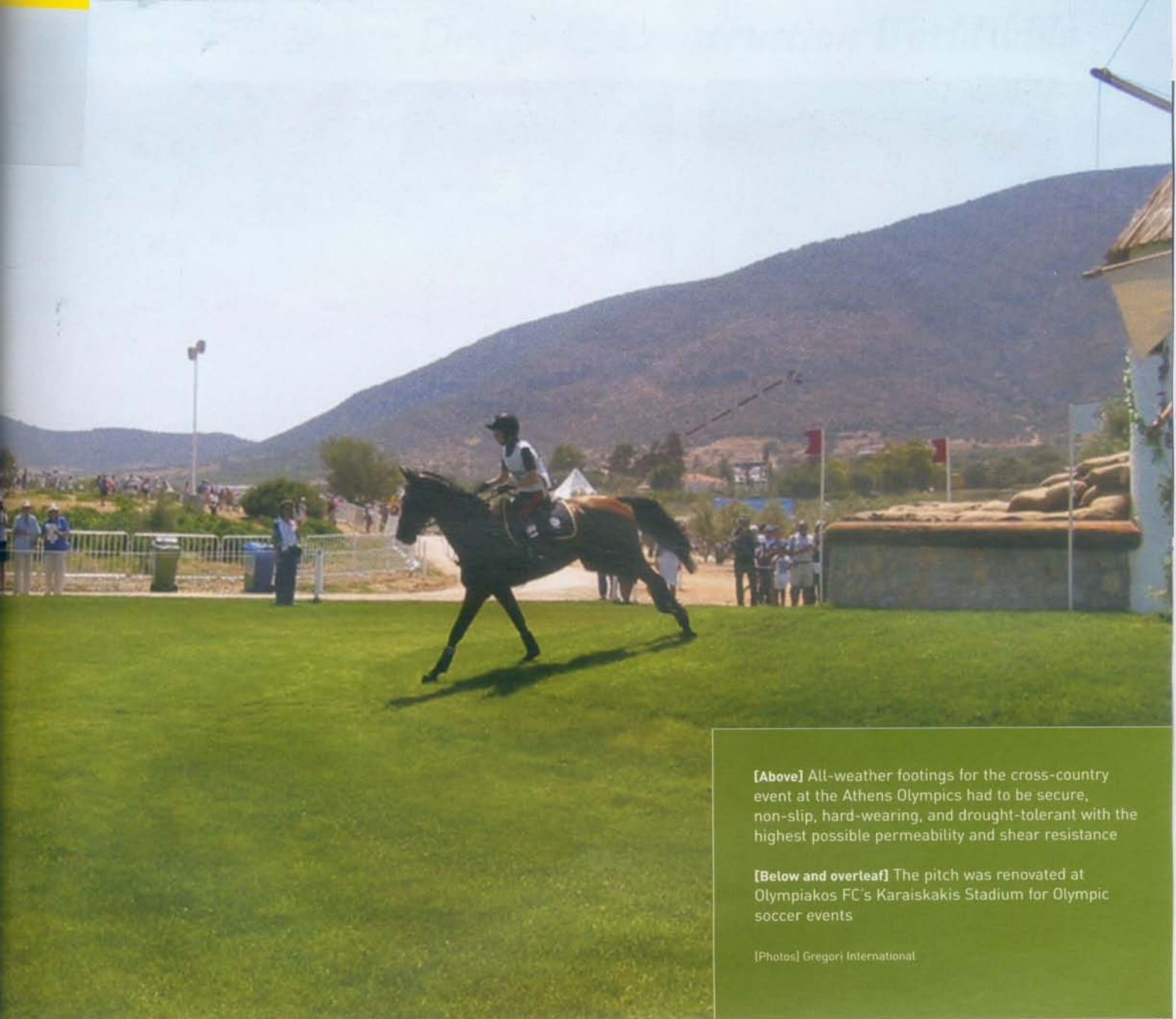
FIBERsoil turf is the result of growing grass on this fibered sand-growing medium, whether sprigged, seeded or sodded. A controlled percentage of organic matter, suited to the intended use, can be added to range from 0-20 per cent by weight of sand. The resulting medium, which by its very nature resists compaction and allows maximum air, water and nutrient exchange, provides for deeply rooted, healthy grass, leading to a firm, yet resilient, smooth surface resistant to shear and tear that drains exceptionally well. This allows

The turf solution allows for multiple events to be staged with minimal repair and maintenance

for extensive use of the sporting surface, even following heavy rainfall, allowing multiple competitive events to be staged on the same surface with minimal repair and overall maintenance. The maintenance regime followed after the turf is established can be exactly as field managers have learned to practice in the past, employing verticutting and aeration in addition to standard grass mowing. Top dressing with the FIBERsand is also possible – and recommended – to help maintain the overall quality of the field.

Olympic equestrian events

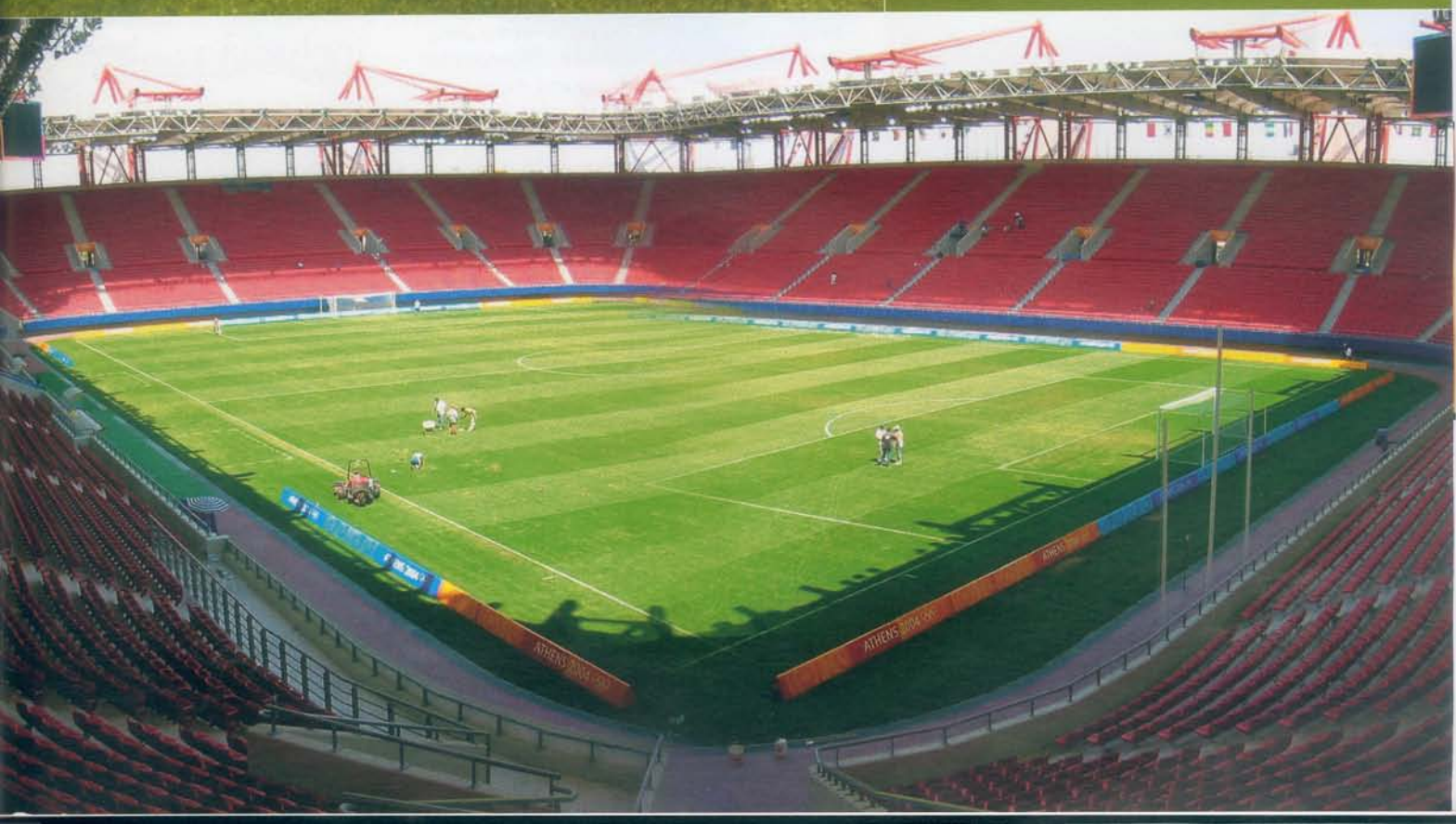
The Markopoulo Equestrian Center, site of the equestrian events for the 2004 Olympic Games in Athens, is Gregori's most recent project. Olympic organizers selected the company first of all as a specialized equestrian contractor and footings expert. In July of 2002, it was awarded the contract to perform all equestrian



[Above] All-weather footings for the cross-country event at the Athens Olympics had to be secure, non-slip, hard-wearing, and drought-tolerant with the highest possible permeability and shear resistance

[Below and overleaf] The pitch was renovated at Olympiakos FC's Karaiskakis Stadium for Olympic soccer events

[Photos] Gregori International



The work contracted included, for the race track:

- Main track, 67,000m², dirt;
- Training track, 30,000m², dirt;
- Inner track, 6,000m², concrete;
- Main paddock, 2,000m², rubber pavers;
- Saddle paddock, 1,400m², rubber pavers;
- Winner circle, 6,000m², rubber pavers;
- Small paddocks, 12,400m², sand on rubber structure;
- Large paddocks, 95,000 m², FIBERsoil sand;
- Fencing and gates, 16,000m;
- Drainage system, 46,000m;
- Irrigation system installation (automatic);
- Total control system, TV, video, timers, and so on;
- Provision of equipment to maintain track;
- Training of the local maintenance team.

For the Olympic Equestrian Center, the contract included:

- Main jumping arena, 12,000m², special sand mix over rubber pavers;
- Warm-up jumping arena, 3,200m² x 10 (as above);
- Training jumping arena, 8,100m² x 10 (as above);
- Training jumping arena, 8,100m² x 2, FIBERsoil sand;
- Main dressage arena, 3,200m², sand on rubber structure;
- Warm-up dressage arena, 1,200m² (as above);
- Dressage training arena, 7,200m² x 3, FIBERsoil sand;
- Indoor competition arena, 2,400 m², special sand with additives;
- Small paddocks, 2,000m² x 20, FIBERsoil sand;
- Big paddock, 900m² (as above);
- Cross-country track, 80,000 m², improved top soil;
- Obstacles, 40,000m², FIBERsoil turf;
- Ten minute box, 9,500m², improved top soil;
- Training areas, 12,000m², FIBERsoil turf/top soil;
- Galloping tracks, 4,200m², FIBERsoil turf.

For all areas, the company completed:

- Final design for footings, drainage and irrigation;
- Staking, earthmoving, top soil stripping and improvement, shaping, paver installation, total drainage and irrigation installation, installation of all working layers, grooming, grow-in, ongoing maintenance and consulting up to and during the Games in close collaboration with the International Equestrian Federation, the Greek Ministry of Sport and ATHOC 2004.



area construction by the Greek Ministry of Sport and by ATHOC 2004, the organizing committee. The company was directed to install all-weather footings throughout the equestrian grounds to the highest possible standard. This meant, for the cross country event, that the footing had to be secure, non-slip, hard-wearing, and drought-tolerant with the highest possible permeability and shear resistance.

For the dressage competition, an elastic surface with high resilience was required. And for the horse-jumping, the footing had to have a high load capacity but be shock-absorbent, to reduce incidence of leg injury; at the same time, the surface had to resist hoof penetration and still be highly permeable and shear-resistant. All of this was a tall order. Reports concerning the performance of these surfaces from participants and officials alike were extremely favorable. The standards of flexibility and resistance to damage, detailed earlier, were met and the expectations of the competitors were satisfied or exceeded.

Earlier examples of the use of FIBERsoil turf for equestrian and racing surfaces include the Ghantoot Racing and Polo Club in Abu Dhabi, UAE, the Abu Dhabi Equestrian Club, the Pau and Toulouse race tracks in France, and the Racing and Equestrian Club in Doha, Qatar. Gregori also recently completed a polo field construction in St Tropez, France, and built multiple fields for the 2004 World Cup of Polo, which was staged in France in October.

Turf tactics at Olympiakos

In addition to being awarded the Athens Olympics contract to complete all the equestrian surface construction work, the

company was also awarded the contract to install and completely renovate the 10,000m² playing field at Karaiskakis Stadium, home of Olympiakos Football Club. Complete renovation of this pitch, including subsurface drainage installation and complete re-grassing of the surface, was accomplished in a little over six weeks.

A major renovation of Olympiakos FC's pitch, including subsurface drainage, was done in about six weeks

For Gregori and its staff the experience of being chosen to work in Athens for the 2004 Olympics has been, as expected, a challenge and an honor. It gave the company the opportunity to display its design and construction capabilities and to implement its FIBERsoil range of products in two very different sporting venues. The projects show the advantages that this customized fiber subsoil product can bring in terms of durability and resilience, leading to higher quality turf, less interrupted play and fewer injuries to athletes. ■

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