PREPARING FOR THE ATHENS OLYMPICS
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Michigan State University had the opportunity to be involved with the 2004 Olympics that took place in Athens, Greece. We were asked to act as consultants for the Olympic Stadium field. We were asked to be a part of the project because of our experiences with modular turf at Spartan Stadium and the Pontiac Silverdome. The field needed to be modular due to the special features of the opening ceremonies. The plan was to construct a world class athletic surface that could be grown offsite, transported by truck, and put into place in playable condition within a short time period.

The first contact was made in September of 2003 to select a rootzone. It was recommended by MSU to use a rootzone that was close to the specifications of that used in Spartan Stadium. The rootzone was selected and accepted as a 95 percent sand and 5 percent silt plus clay. Along with rootzone, it was also recommended by MSU that bermudagrass be used for the playing surface due to Athens’ transition zone climate. Bermudagrass was not a popular choice in Athens, but with some persuasion and education we were able to show that it was a wise choice.

In late March contracts were signed. This was much later than anticipated and put time at a premium. The manufacturing and ordering of the proper materials took about month so it wasn’t until mid-April that construction started for the August Olympics.

Construction took place about fifteen miles from the Olympic Stadium in a vineyard in a suburb of Athens called Spata. The site was a crushed stone base, not a smooth asphalt or concrete surface like we normally would build a modular field on. There were some initial concerns about the levels on the field once it was installed. These worries were calmed by using corrugated plastic sleeves on every other module that acted as grade stakes all across the field. The stadium was going to hold about 6000 modules so we constructed close to 7100. This allowed spares to ring the field, providing protection to the stadium field from the relentless drying winds found at the site.

The filling of the modules is very labor intensive and time consuming. It took close to four weeks to fill and level the modules. Once the field was ready, the sodding process began. Washed sod had never been produced in Greece before this project, and a local grower named HellaSod manufactured their own washing machine to do the job. The harvesting and washing process was very labor intensive and it took eight
days for the washed bermudagrass sod to be laid since only 1000m$^2$ of sod could be harvested and washed in a day. Upon delivery the sod was stressed because of the intense harvesting and washing occurring only 2 weeks after the bermudagrass broke dormancy. The field had a long way to go before it was going to be Olympic caliber.

The grow-in process was under intense time pressure. The bermudagrass was pushed as hard as it could with the available materials. Various fertilizers were applied on a bi-weekly basis in addition to rigorous topdressing and verticutting. Mowing was done with a triplex Jacobsen unit with mowing heights ranging from 18 to 30mm. Irrigation was a constant battle due to the wind. The irrigation system was two rain cannons each crossing the field in about 2 hours. With five runs needed to sufficiently water the entire field, a nighttime irrigation program was initiated in June. Once night watering began the field would be hand watered during the day with wetting agent to combat localized dry spots.

In June a test move was conducted to test the transport and logistical systems critical to the August move. The biggest question mark was a conveyor belt system designed to bring the modules from the trucks to the stadium floor. The system used steel rollers and a combination of gravity and motorized sections to gently move the 1500 pound modules into the stadium. A brake system was installed at the end to prevent modules from falling off the end before a fork truck could remove them. Once the conveyor was filled up, it worked very smoothly. Every module removed created room for one to be added from the truck allowing a constant flow of modules to the work crews.

With our transport systems tested the remaining time in July and August was spent creating a world class field. Fertilizing, topdressing, verticutting were continued at an aggressive pace. By early August the field began to look like the showpiece it would be.

The opening ceremonies took place on Friday August 13$^{th}$. The reason for the modular field was abundantly clear after seeing the ceremonies. An artificial lake with flaming Olympic rings created a spectacular image that would have been impossible with a traditional grass field underneath. 36 hours after the ceremonies were concluded the installation of the field began. The installation involved well over 100 individuals including laborers, equipment operators and advisors. The installation of the field of 6100 modules was completed after 62 hours of non-stop work. The installation was completed at around 4:00am on Wednesday the 18$^{th}$ of August. Cosmetic detailing continued for the next two days and on Friday the 20$^{th}$, track and field events began in the stadium. The showcase event for the field took place on the 28$^{th}$ of August when 41,116 watched
Argentina defeat Paraguay for the men's Olympic soccer gold medal on the field we helped create.