

New panel technology for field bases

Editor's note: This article was written by the designer of a new field base panel system. The system was first installed earlier this year at the Tampa Bay Rays spring training facility.

HAVE YOU EVER ASKED YOURSELF, "Why isn't there an alternative to rock and gravel for building bases for athletic fields?" For more than 10 years I have pursued the science of manufacturing polymeric interlocking panel base systems to replace traditional stone base work. With more than 2 million square feet of Tour Links panels installed around the globe, I began to concentrate my efforts on panel systems for athletic field construction, from rooftops to natural turf retrofits.

This spring at the Port Charlotte, FL training home of the Tampa Bay Rays, UltraBaseSystems made its debut after we were contacted by our friends at AstroTurf to help retrofit a practice infield at the Rays facility. The goal was simple: allow the team to practice on the same AstroTurf Game Day Turf 3D system that was being installed at the team's permanent home in St. Petersburg. One little hitch, however; we only had a few days to accomplish the task before the team reported to spring training.

We made quick work of removing the existing sod, being certain to excavate exactly 2 1/2 inches down, which would allow the finished panel and turf system to sit slightly above the existing base paths. Once the sod was removed, the area was scraped clean to assure a smooth, properly pitched base on which to construct the system.

BASE PREP WORK

The AstroTurf engineers requested a simple drainage system be installed around the perimeter of the base paths, and then the entire field was meticulously groomed and thoroughly compacted. Other than the drainage ditch fill, no additional material was used to build the sub-base, only the existing soils that remained after the turf removal. The entire area was then covered with our permeable, 6-ounce spun polypropylene textile which not only blocks new organics from growing but more importantly acts as a panel stabilizer, helping to distribute the panel load evenly, creating stability underfoot. The entire base prep work and drain system installation took about 10 hours with a three-man crew.

>> Below Left: OTHER THAN THE DRAINAGE DITCH FILL, no additional material was used to build the sub-base, only the existing soils that remained after the turf removal. **Below Middle: THE AREAS AROUND THE BASES** and mound were carefully measured, marked and easily trimmed using a jigsaw. **Below Right: THE TURF** was carefully seamed, rolled and allowed to dry.



>> Below: Starting at second base and working evenly towards first and third base, the panels were installed symmetrically to ensure the area remained perfectly square.



PANEL INSTALLATION

The next morning our crew of seven installed the panel base. Starting at second base and working evenly toward first base and third base, the panels were installed symmetrically to ensure the area remained perfectly square. Expansion joints engineered into each molded panel allow for a smooth base profile regardless of temperature swings.

A 1-inch expansion gap was left between the panels and clay base paths in which the turf would be wrapped over the panel's edge, secured and buried. The areas around the bases and mound were measured, marked and trimmed using a jigsaw. The majority of this crew had never even seen our UltraBase panel system before, yet in 3 hours the entire 6,700-square foot area was installed, trimmed and ready for turf.

The new base was measured and marked and the crew went to work



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rolling the large rolls of turf into place across the base structure. In less than 3 hours the team had the turf positioned, trimmed and ready for seam glue. Our molded (patent pending) turf barb system

reduces any unwanted turf movement during installation and play. These tiny barbs stop filled or non-filled turf during play but allow for natural expansion and contraction of the turf and panels. The turf was carefully seamed, rolled and allowed to dry.

After drying overnight, the next step was to secure the turf to the top edge of the panel system between first and second base. The turf grain was running in this direction so this was the starting point. Stainless steel staples shot directly into the panels secure the turf without the need for a nailer board installation. The panels act as a nailer board, base structure, drainage system and shock pad all in one.

The process of filling the turf was accomplished by moving across the field from first and second to the third base line with a SandMatic machine; a total of 6 pounds of rubber and sand per square foot was deposited. The final step was to staple the entire perimeter of the turf into the panel's top surface and edge. The turf is only se-

cured around the perimeter of the panel mass and around the pitching mound; the weight of the infill and the molded turf barbs keep the turf in place. Lastly, the base paths were groomed, backfilling the small gap in which the turf was tucked, in essence burying the rolled turf edge and creating a finished look.

A true testimonial to the system is that immediately after a 2-inch rain fall, the field was completely drained and the only area at the facility that was playable. Rick Nafe, vice president of operations for Tropicana Field, said, "The field installation was completed extremely fast with no mess to our facility. This field feels great underfoot, and the ball bounces and rolls just like real grass, what more could you want from a synthetic turf field. We love it!" ■

Dave Barlow is president of Creative Sport Concepts, Inc., St. Petersburg, FL www.ultra-basesystems.com.



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