



# MASTERING THE FIELD TURNAROUND

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■ BY JIMMY FOX

**S**uper Bowl Sunday, February 1, 2015 put the eyes of the world on the football field of the University of Phoenix in Glendale, AZ, again. Super Bowl XLIX, 2015, was a follow up to Super Bowl XLII played at the same site in 2008. Evergreen Turf, Inc., Chandler, AZ, played a key role in the preparation of both events, having become the masters of turnaround in sodding that field.

The story starts before the stadium opened in 2006. The entire movable field system was a new concept and quite a feat of engineering. Evergreen Turf collaborated on the development of the

original turf technology still in use today. The soil profile is USGA spec sand combined with StaLok synthetic fibers that help the grass roots bind tightly together. The irrigation system uses Hunter I-40s and I-25s.

The base turf is Tifway 419 bermudagrass known for its resilience to wear and tear as well as fluctuations in temperature. We overseed it with grasses selected through our own seed trials: Paragon and Pangea perennial ryegrasses from Turf Merchants, Inc. and Jump Start bluegrass from Pure-Seed Testing, Inc. We chose those varieties for their good wear tolerance, fine texture and

▲ **Reverse rolling** and removing a perfectly good Fiesta Bowl field, with only two games played on it.

dark color. We overseed at the rate of 100 pounds of bluegrass to 600 pounds of perennial rye per acre. That density ratio of the bluegrass to the rye improves the footing a bit for the players. The typical height of cut is one-half inch.

The relationship between Evergreen Turf and the Arizona Cardinals, started during the field design and construction, has continued strong over the years as well. Few sod growers have the opportunity to work with a professional sports team. We know that we're blessed, because for us, it's a true partnership. We now make the decisions together on how to maintain the stadium field and the field we grow specifically for the Cardinals on the sod farm—an exact match of same turfgrasses grown on the same USGA spec sand with the StaLok fibers mixed in at the same ratio.

The stadium field sod starts its work in August, when the Cardinals' training camp begins. In 2014, that consisted of

18 practices and two preseason home games by August 24. The Cardinals are dedicated to a field that not only plays well but looks good, so they may resod before other teams do. When we do resod, we go from sideline to sideline and goal line to goal line, to avoid the unsightly look of a sod job between the hash marks, and to insure consistent footing across the field. It takes between 50,000 to 60,000 square feet of sod.

New sod is always scheduled to be installed on the field in December shortly after the state's two high school playoff games. The pro players warm up at about 75%. The high school players are pumped up and thrilled to be on the field. They warm up and play at 100% plus and put almost double the number of players on the field as the pros. The turf gets trampled and pretty worn between the hashes. The Fiesta Bowl takes place in late December. The contract with them stipulates that only one pro game can be played on the newly resodded field before the Fiesta Bowl game.

When a stadium hosts the Super Bowl, the NFL takes over. They take over operations of the stadium facilities. And they take over the field. Ed Mangan, NFL field director, runs the field-related operations from the point of take over through the post-Super Bowl celebration. At his right hand is the legendary George Toma, who has provided his expertise on field preparation for every Super Bowl game. They bring in their own crew of sports field managers from across the US and around the world. Andy Levy, turf manager for the Arizona Cardinals, and his top notch crew are on hand to assist in any capacity they can, but until after the final Super Bowl event, they do not make the field decisions.

It's the NFL's facility, the NFL's field, the NFL's decisions, the NFL's responsibility, and the NFL's liability should anything go wrong. While it's tough for those involved with the facility and field full-time to observe, it's a fact of life for every Super Bowl host.

The Fiesta Bowl field must be removed to make way for the Super Bowl field, with the timing of the removal based on how well the Cardinals did regarding the playoffs. Had they continued playing after the Fiesta Bowl, we'd have resodded the end zones for that game or games. Unfortunately, the Cardinals didn't make the playoffs this year, so the NFL got the field 2 weeks earlier than originally anticipated.

That meant we needed to find a home for the post-Fiesta Bowl field on fairly short notice. Typically, a useable field that will be removed goes to a local high school that can qualify to take it. They should have a field that needs renovation with at least a little bit of money budgeted to do that. Buckeye Union High School, Buckeye, AZ fit the criteria. The Cardinals and school district covered most of the costs and we kicked in some, too.

Their field, like most of those selected, had worn out turf and fairly-rutted, poor soil. Our crews, along with a local contractor, went in and removed about 1.5 to 1.75 inches of the existing soil to accommodate the thick-cut sod and prepared the soil surface. That's usually a couple days of prep work.

After the Fiesta Bowl, it takes a day for the stadium staff to take down the south end zone bleachers and then roll the field outside. The day after that, we reverse rolled the sod, took it to the high school and installed it there. That process took 2 days for the rollup and 2 days for the installation.

At that point, the NFL took over and brought in the sod from the same Foley, AL source they've used for the past several Super Bowls.

It's tough to swallow that after being the top-rated field in the NFL for 7 years, the NFL didn't select our sod for the Super Bowl. Yet, we realize there's a tremendous amount of pressure on that game and there have been field failures in the past. There is a certain degree of comfort in working with what you know.

Bringing in the two top teams and coordinating everything for the championship game is complex enough. But they also must coordinate all the media's pre-game hype, the pre-game show and half time. The half time show takes almost as much precision as the game. They're moving in thousands of pounds of stage that takes up a good portion of the field. They have people running across the field to connect the electricity, sound systems and such. Then nearly 3,000 people move out on the field to perform. Just minutes later, all the people and staging move off again.

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If the grass or subsurface is not strong enough, the field will rut. That's the last thing anyone wants when those 320-pound lineman and super swift pass receivers get back into the game.

The Super Bowl is the biggest on-field sports event of the year, watched on television around the world. It's not surprising the NFL feels the need to be in control. And they once again selected Evergreen Turf to handle the sod installation.

For the Super Bowl, the entire tray of turf is replaced, 93,000 square feet. While some of our crews installed the high school field, other crews brought in a KORO FieldTopMaker machine and picked up the remainder of the grass around the perimeter of the field that we hadn't removed. Then we tilled the field, so it would be ready for laser leveling the next morning.

The Super Bowl sod showed up one-half day early. We started working on installation in the south side end zone Thursday night and finished the installation on Friday and Saturday.

Resodding the entire tray brings some unique challenges. We have very limited access on how to lay out the sod. We must be extremely careful not to create ruts or put traffic on it, so we need to be strategic in how we lay out the plywood. There's also the issue of elevation as we work around the edges of the tray. There's a 39-inch drop off to the concrete with only one entry ramp for the entire field. Laying the last four lines can take 4 or 5 hours. It took approximately a week, from the start of the Fiesta Bowl sod removal to the wrap up of the Pro Bowl/Super Bowl sod installation.

Our crews are always seeking input from other sod producers, sports field managers and players, seeking ways to do things better. It's a pleasure to be around people who push you and share your drive for continual improvement. We've fine-tuned our installation processes, incorporating what we've learned from

▲ **Laser leveling** took place right on schedule following an overnight rototilling of the field.

those interactions, working with the Cardinals, doing a bunch of bowl games, and the 2008 Super Bowl. Our seams are the tightest. We've never had a failure or seam pop in 7 years. That's one of the reasons that the NFL chose to use us for the Super Bowl field; we did bring that expertise to the table. The second go round was far better and much easier than the first one.

We take a lot of pride in the fact, that when the resodding is completed, most people don't realize that it's been done. Still, we don't relax until after the first quarter, when there's been no slip, no problem. The best compliment we can get is when nobody says anything about the field.

The NFL brought in 100,000 square feet of new grass, in expectation of the need to resod at least the end zones and perhaps other sections following the Pro Bowl. We had three extra truckloads of sod. We had it trucked to our farm and laid it out on plastic, where we maintained it for the next week.

The Pro Bowl field rolled into the stadium on Friday. It rolled back out on Monday morning. That's the same timing generally used for a Sunday afternoon Cardinal's game.

Field crews like to cover all the variables, making sure the field maintains even color and the lines pop for pre-game festivities. Paint is cheap insurance. If it's used for Cardinal's games with our sod on the field, a typical rate would be about 7.5 gallons of paint. The NFL field crew put 112 gallons of paint on the field for the Pro Bowl.

We had installed the sod so we could take up the end zones after the Pro Bowl. We reverse rolled the end zones and replaced them with the sod we'd brought back from our farm. By afternoon, the NFL grounds crew was rolling it and prepping it for the Super Bowl.



▲ The Pro Bowl pre-game show puts an incredible amount of traffic on and off the field, to be repeated plus stages and props at half time.

On Wednesday, the Super Bowl field rolled into the stadium where it would stay throughout the remainder of the Super Bowl festivities. By the end of the game, it had been indoors for 7 days out of the 10-day span.

The field goes into shock each time it's rolled in or out of the stadium, with temperatures dropping from more than 105 degrees in full sunlight to 65 degrees in the shade. It grows slower indoors, just as it does during the winter time. It takes 3 or 4 days for the turf to start growing again once it's rolled back into the heat.

Once all the Super Bowl festivities are wrapped, the NFL facility and field crews pack up their things and go home. The Cardinal's organization takes back the stadium and Andy Levy and his crew take back the field.

One more event was held on that field 10 days after the Super Bowl. That gave us a little more time to select a high

school, which this year was Tolleson Union High School, Tolleson, AZ. It also allowed a little more time to prepare their field to receive it. We were also working with more sod, nearly 100,000 square feet of it, to reverse roll, transport and install.

The Super Bowl sod had been grown on plastic, so it was fairly root-bound. It creates a very dense and stable surface that is great for that game. But it's not so good long term, especially if the field has a USGA sand profile. It will slow the percolation rate and slow up the system over time. So we'll follow up with the high school crew, making sure they do enough aerification during the first year to break up the rootzone to keep the field strong and performing well in the years to follow. It's a point of pride for a high school to have their teams play on a former Super Bowl field.

After the sod removal, we tilled the Cardinal's field, laser leveled it and brought in the sod we'd been growing just for them, getting everything ready for next season.

While all the Super Bowl work was taking place, we had a bit to do for another high profile event. We also custom-grow the sod used for repairs by TPC Scottsdale, the golf course that hosted the 2015 Waste Management Phoenix Open January 29 through February 1. It's the highest attended sporting event in the world, with over 600,000 people on-site during that week and up to 160,000 people at the course on the Saturday alone. It's televised, too.

Putting that all into perspective, with a Super Bowl, Pro Bowl, and the Phoenix Open in the same week, it's been a very good showcase for all natural turfgrass. It could even be called super. **ST**

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Crews are replacing the end zone with fresh sod for the Super Bowl under the supervision of George Toma (in the white hat).