

AstroTurf®

GET IN THE
ROOTZONE

Consistent, Uniform, Resistant Fiber Matrix

astroturf.com

GET IN THE ROOTZONE

It's science ... and an art.

AstroTurf®'s RootZone® is a layer of texturized fiber that curls down to roughly the height of the infill. The crimped fibers form a net-like matrix that encapsulates the infill and holds it in place, reducing infill splash and migration. Infill stability provides:

- More consistent footing
- Enhanced cleat release
- More uniform shock absorption
- Better field resistance to wear

AstroTurf® invented the first RootZone® back in 1998. It involved texturizing a fiber to form it into a shape and giving it a memory to maintain that shape throughout its life.

The process is more complicated than it sounds.

Each individual batch of RootZone® fiber is run through a series of proprietary texturizing processes. However, texturizing it is dependent upon a number of other factors. These include managing the delicate balance of temperature, humidity, pressure and time.

AstroTurf experts are artists in bringing their decades of experience and millions of square feet to play in selecting only the 'perfect batch' of texturized fiber for use in RootZone turf systems.

The Art of Thatch

Optimal texturization is vital, ensuring that the fibers draw down to the exact height. If the RootZone fibers are too tight, it's difficult to get the infill in, and if the RootZone fibers are too loose, they won't do their job of holding the infill in place.) During and after each process, the individual fiber batches are carefully measured. This individual measurement determines which batch becomes a fiber used for pets or landscape, tennis or field hockey, or many other turf manufacturing programs.

No other manufacturer follows this process. And although many claim to have "thatch" type products that they introduced to follow our lead, they aren't even close. AstroTurf has manufactured and installed more than 50,000,000 square feet of RootZone athletic fields over the last decade. No one else has this level of experience with RootZone.

AstroTurf



sportgroup
THE SURFACE SPECIALISTS

SportGroup is today's true global sports surfacing giant, with manufacturing facilities around the world. Active in 70 countries, SportGroup has installed more than 15,000 artificial turf fields and 17,000 running tracks. SportGroup was created by selective acquisitions of the leading turf, track, indoor and outdoor sports surface manufacturers.

This amalgamation of innovation and technology also includes the manufacturers and marketers of key raw materials used in all aspects of the sports surfacing industry. AstroTurf is now in the enviable position of enjoying a completely vertical and fully integrated environment where all of its ideas can be brought to life in a market hungry for innovation.



Get your money's

worth

Artificial turf fields are expensive. No doubt about it. So make sure you get your money's worth.

Fiber is the most expensive part of any field. Infill materials like sand and rubber are the least expensive parts of your field. It's the fiber that's the beef in your burger.

Although many claim that heavy infill systems are better, they are simply less expensive to produce. Studies have not proven them to be any safer or better. In fact some studies show the opposite.

Get the product that you're paying for, not just the marketing spin.

The cost in producing a heavy infill system is significantly less than the cost of producing a high fiber system. If that is true, why are you paying the same or higher for it than a better engineered, more durable system?

Profit is profit, but maybe the competition should think more about their customers than about their bottom line.

ROOTZONE

Why pay a lot

... if you're only getting a little?

COMMODITY - HEAVY INFILL SYSTEM 2"



Polyethylene
36 oz per sq yd



Cryogenic Rubber
2.6 lbs per sq ft



Sand
3.65 lbs per sq ft

ASTROTURF - 3D ROOTZONE 2"



Polyethylene
42.6 oz per sq yd



Nylon
174 oz per sq yd



Ambient Rubber
2.35 lbs per sq ft



Sand
2.35 lbs per sq ft

If fiber is the most expensive thing in a synthetic turf system, then why do they sell the heavy infill system for the same price – or higher than AstroTurf?

AstroTurf®

It's all about performance

ROOTZONE

Our RootZone is like a powerful turf web, that entangles the infill and keeps it where it's supposed to be. It reduces splash during play and more infill stays in place than conventional systems. ASTM testing proves that wherever infill moves there is a big difference in GMAX.

RootZone is a unique enhancement to artificial turf. It improves player security by delivering more predictable footing and more uniform shock absorption and energy restitution than conventional turf systems provide.

KEEP YOUR **INFILL** WHERE IT'S SUPPOSED TO BE



LESS SPLASH
ASTROTURF



MORE SPLASH
COMPETITION

Infill **MIGRATION**

With RootZone your infill stays in place to provide an "as built" system even long after your field is installed. That means everything when it comes to performance, safety, maintenance costs and long term durability.



Spin **TEST**

A 1' x 1' sample is spun on its axis for one minute.



AstroTurf RootZone 3D
Lost 19.3% of starting infill

Competition
Lost 75.4% of starting infill

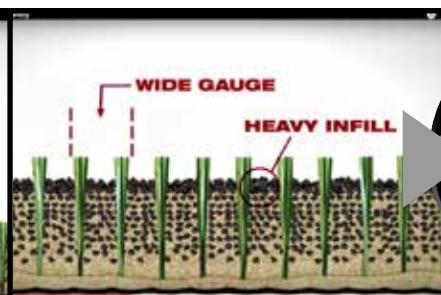
IMPROVE PLAYER SAFETY

An independently funded study by Michigan State found that the RootZone significantly reduced torque transmitted to knees and ankles, at levels similar to natural grass. Conversely, an independent study by the NFL showed that heavy weight infill systems yielded 67% more ACL injuries and 31% more high ankle sprains than natural grass.

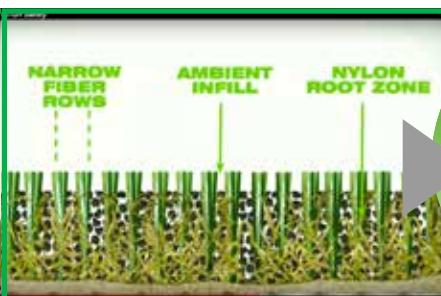


Conventional infilled turf fields exhibit constant infill migration which leaves empty holes, divots, and dangerous spots if not carefully maintained.

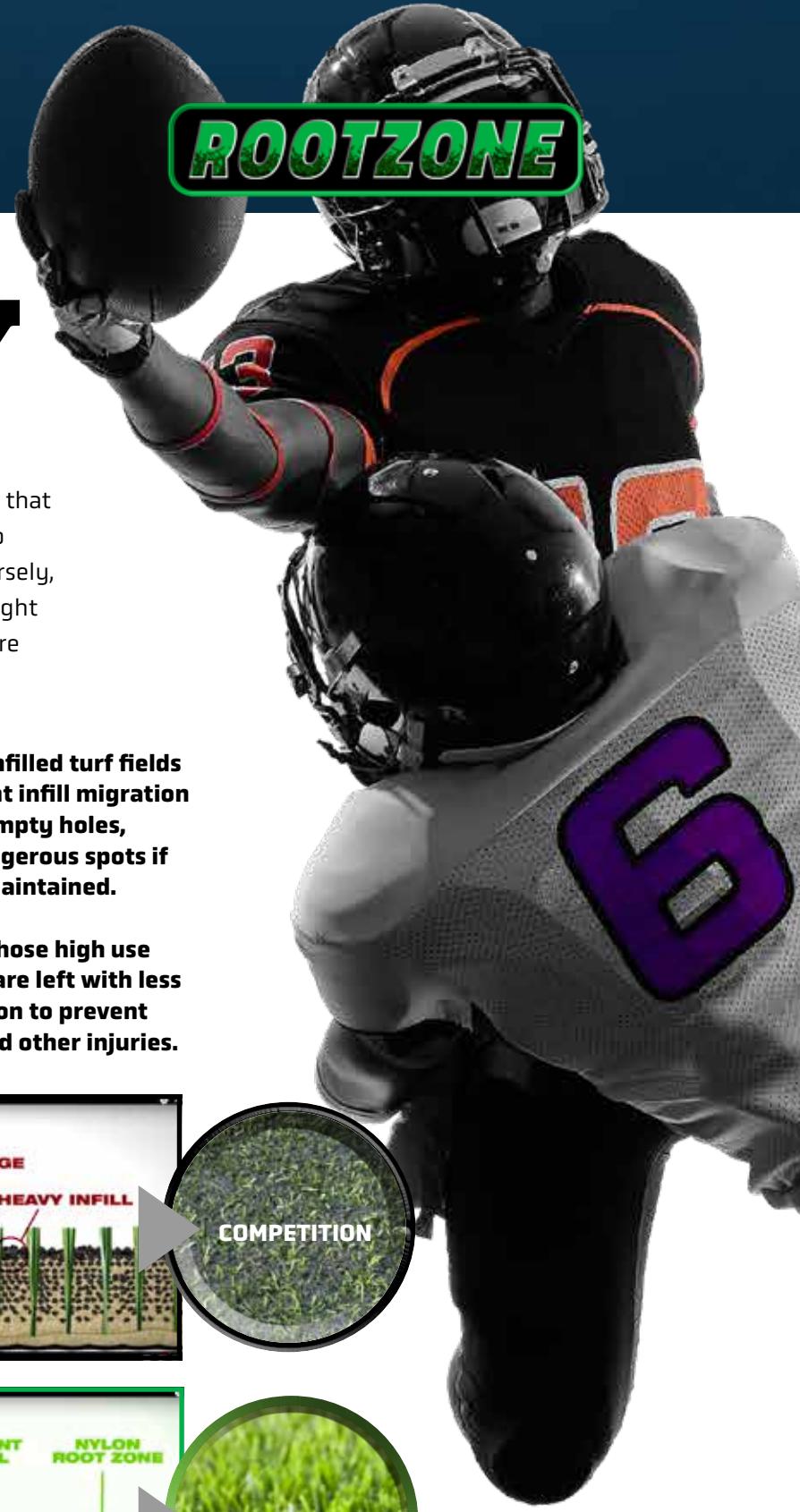
As a result, in those high use areas, players are left with less shock absorption to prevent concussions and other injuries.



COMPETITION



ROOTZONE



ANALYSIS, QUOTES, STUDIES.

The American Journal of Sports Medicine



An Analysis of Specific Lower Extremity Injury Rates on Grass and FieldTurf Playing Surfaces in National Football League Games

Safety Panel Investigation performed at the National Football League Injury and Safety Panel, NFL, New York, New York.

- Elliott B. Hershman, MD★, Robert Anderson, MD, John A. Bergfeld, MD, James P. Bradley, MD, Michael J. Coughlin, MD, Robert J. Johnson, MD, Kurt P. Spindler, MD, Edward Wojtys, MD, John W. Powell, PhD, ATC, for the National Football League Injury and Safety Panel.

“Specifically, the observed injury rates of ACL sprains and eversion ankle sprains on FieldTurf surfaces were 67% and 31% higher than on grass surfaces and were statistically significant.”

Proceedings of the Institution of Mechanical Engineers, Part P: Journal of Sports Engineering and Technology



The effects of various infills, fibre structures, and shoe designs on generating rotational traction on an artificial surface.

- M R Villwock, E G Meyer, J W Powell, A J Fouty, R C Haut

“An artificial surface with a nylon root zone yielded significantly lower peak torques than similar fibre surfaces without a nylon root zone.”

“The cryogenically processed SBR infill yielded significantly higher peak torques than the ambient ground SBR. The size of infill particles and the presence of a nylon root zone may influence the compactness of the infill layer.”

“Injuries to the lower extremity are among the most frequent injuries for all levels of sports, and often account for more than 50% of reported injuries.”

“A nylon root zone is a simulated thatch layer at the base of the tufted turf. The zone provides fibre support and reduces infill compaction.”

“Monofilament polyethylene fibres in conjunction with a nylon root zone produced significantly lower peak torques than other fibre types.”

“Peak torques were significantly affected by infill type. The differences in torque may be due to the fineness of the infill, which is determined by the manufacturing process. A finer particle, such as cryogenically processed SBR crumb infill may develop a relatively compacted structure of infill that leads to more cleat contact and greater rotational traction.”



Michigan State Study - Funded by NFL Charities

“If the rotational traction characteristics of natural grass are the gold standard upon which artificial surfaces should be compared... the artificial surface constructed with polyethylene fibres in conjunction with a nylon root zone and ambient ground SBR crumb infill generated a lower peak torque.”

A PUBLICATION OF THE AMERICAN ORTHOPAEDIC SOCIETY FOR SPORTS MEDICINE
In Motion SPRING 2010

Orthopedic Society for Sports Medicine

“More than 70% of ACL injuries occur without contact. Non-contact injuries happen during landing or a sharp cutting maneuver.”

“Lower extremity injuries account for 50% of all sports injuries.”

Reduce Maintenance Costs

ROOTZONE

Get more life out of Your Field

With RootZone the benefits are obvious. reduce maintenance costs, while your field lasts longer and looks better.

Every infilled turf field requires maintenance. Most of the money budgeted for equipment and grooming of conventional infill turf fields is spent to replace infill that has migrated out of position.

With RootZone your infill stays put, and so do your maintenance crews.

Also, every time your crew is out brushing and grooming your field, they are actually wearing out the fibers. The more your infill moves, the more grooming you have to perform. That means more wear and tear on your fibers.

Over time, conventional polyethylene fibers will lay over and break down from harmful UV rays. It's a fact of life. But not so with a RootZone system.

It has more fiber to begin with. Lots more. Plus the RootZone includes a nylon material made exclusively by AstroTurf. It is 10 times more durable than polyethylene fibers. Because the nylon RootZone won't break down, even years later, your field will continue to look and play like just like it did when you installed it.

Conventional fields may survive their warranty, but they end up looking like a field of black rubber and play nothing like they did when new. It is in years 5-8 when RootZone really stands out from the crowd, providing a far more consistent playing surface and far better looking field.



FOOTBALL



INSTALLATIONS

- ◆ Appalachian State
- ◆ Arizona State University
- ◆ Boston College
- ◆ University of Buffalo
- ◆ Central Michigan University
- ◆ Charleston Southern University
- ◆ University of North Carolina-Charlotte
- ◆ Camping World Stadium
- ◆ University of Delaware
- ◆ Fresno State University
- ◆ Florida A&M University
- ◆ Kent State University
- ◆ Liberty University
- ◆ Marshall University
- ◆ University of Memphis
- ◆ Michigan State University
- ◆ McNeese State University
- ◆ Missouri University
- ◆ University of North Carolina
- ◆ Ohio University
- ◆ University of Oklahoma
- ◆ Penn State University
- ◆ Purdue University
- ◆ Rice University
- ◆ San Jose State University
- ◆ Stephen F. Austin University
- ◆ South Dakota State University
- ◆ Sam Houston State University
- ◆ University of South Alabama
- ◆ University of Tennessee
- ◆ UCLA
- ◆ University of Massachusetts
- ◆ University of Washington
- ◆ Washington State University

What they're SAYING!

"This is an exciting time for Boston College, and we feel that our new facilities will propel our athletic program well into the next decade. It makes sense that we would enlist AstroTurf to help us realize this vision. The technology behind their RootZone products is unrivaled in the market, and over the course of our relationship with AstroTurf we've seen that their commitment to client satisfaction is second to none."

Matt Conway – Associate Ad of Facilities & Operations, Boston College

"We love our AstroTurf 3D3 field. It is fast underfoot for our pro-tempo offense. It's got a great look to it and it appears like natural grass. We are really excited to play on it this fall."

Eliah Drinkwitz – Head Football Coach, University of Missouri

"We are extremely excited to have AstroTurf provide our playing surface at Jerry Richardson Stadium. Through AstroTurf we are providing a high-level playing surface for our football team. On top of the great product for our student-athletes, we have been able to highlight our bold new brand in an attractive fashion that will capture attention across the country. Definitely gold standard!"

Cass Ferguson – Assistant Athletic Director of Facilities & Events, University of North Carolina-Charlotte

"One of the best settings in college football just got even better! We are committed to providing a world-class experience for our student-athletes, which includes the surfaces on which they train and compete for championships. We are excited to partner with AstroTurf on this beautiful new playing field at Kidd Brewer Stadium".

John Welch – Associate Athletic Director for Internal Operations, Appalachian State University

"We are excited to continue our relationship with AstroTurf with the installation of a new field at Husky Stadium. Our student athletes and staff have been thrilled with the performance, durability and aesthetics of our practice field. The new field will be a tremendous enhancement to The Greatest Setting in College Football".

Dan Erickson – Associate Athletic Director, University of Washington



Boston College



Appalachian State



University of Washington



Fresno State University



Rice University



McNeese State



University of North Carolina



University of Missouri

SOCCER



INSTALLATIONS

- ◆ Boston College
- ◆ Brigham Young University
- ◆ Camping World Stadium
- ◆ Central Michigan
- ◆ Chicago Fire
- ◆ Colorado Rapids
- ◆ University of Delaware
- ◆ Duke University
- ◆ El Pomar Soccer Complex
- ◆ Evergreen SportsPlex
- ◆ Eugene Civic Par
- ◆ ForeKicks Soccer Complex
- ◆ Global Premier Soccer Complex
- ◆ Highmark Stadium
- ◆ LA Galaxy
- ◆ Liberty University
- ◆ Libertyville Soccer Complex
- ◆ Lewis & Clark College
- ◆ Los Positas College
- ◆ Lynchburg College
- ◆ Mercer University
- ◆ Metro State University
- ◆ Midwestern State University
- ◆ Monterey Bay FC
- ◆ Princeton University
- ◆ Queens University
- ◆ UC Riverside
- ◆ University of Pittsburgh
- ◆ Stanford University
- ◆ Starfire Sports Complex
- ◆ South Dakota State University
- ◆ Viera Soccer Park
- ◆ Virginia Youth Soccer Association
- ◆ West Texas A&M University

What they're SAYING!

"AstroTurf did a beautiful job returfing our field. Their product met all of our needs as a soccer club, a county park, and an NCAA Division I Men's and Women's Soccer program. In addition to being competitive on price, AstroTurf's technology of incorporating an additional thatch layer of fiber to add density and help reduce filler "splash" made sense. The result is a soccer playing surface that best resembles plush natural grass. Everyone involved from AstroTurf has been a pleasure to work with. Installing an artificial surface is a big investment, and we feel really good about AstroTurf's commitment to maintaining and servicing our new field for the next 10-15 years or more."

Rick Suyao – Executive Director, High Country Soccer

"AstroTurf's innovative products and top of the line resources provide the performance and quality that is needed for our Academy and Juniors to train on the best surface available,"

Paul Cadwell – Chicago Fire FC Senior Vice President of Community Programs, Engagement and Facilities

"Our AstroTurf field is the best soccer field in the country!"

Jay Vidovich – University of Pittsburgh Soccer

"The decision to go with AstroTurf was unanimous. We felt that the quality of their RootZone product, the technology behind it, and the experience of their team were unrivaled among synthetic turf companies."

Mike Werner – Mayor of Gatlinburg, TN
(Home of Rocky Top Sports World)



Chicago Fire Pitch – Chicago, IL



Highmark Stadium – Pittsburgh, PA



Los Positas College – Livermore, CA



Monterey Bay FC – Seaside, CA



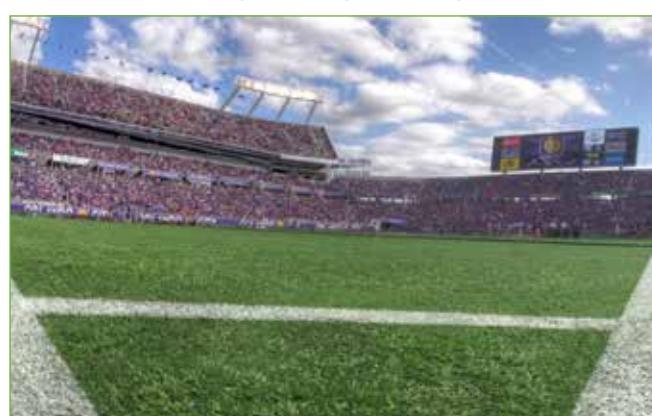
Princeton University – Princeton, NJ



University of Pittsburgh – Pittsburgh, PA



UC Riverside – Riverside, CA



Camping World Stadium – Orlando, FL

BASEBALL



INSTALLATIONS

- ◆ Abilene Christian University
- ◆ Appalachian State University
- ◆ Ball State University
- ◆ Boston College
- ◆ University of Connecticut
- ◆ Dallas Baptist University
- ◆ Campbell University
- ◆ University of Delaware
- ◆ Duke University
- ◆ Eastern Michigan
- ◆ University of Evansville
- ◆ University of Incarnate Word
- ◆ University of Iowa
- ◆ Jacksonville State University
- ◆ University of Kansas
- ◆ University of Kentucky
- ◆ Liberty University
- ◆ University of Michigan
- ◆ University of Missouri
- ◆ Northwestern University
- ◆ University of Oklahoma
- ◆ Oklahoma State University
- ◆ Oral Roberts University
- ◆ University of Pittsburgh
- ◆ University of Portland
- ◆ University of Richmond
- ◆ Sam Houston State University
- ◆ Seattle University
- ◆ Slippery Rock University
- ◆ Southern Illinois University
- ◆ Southeastern Louisiana University
- ◆ St Johns University
- ◆ St Josephs University
- ◆ Ohio State
- ◆ Toronto Blue Jays
- ◆ Tulane University
- ◆ Vanderbilt University
- ◆ Valparasio University
- ◆ Virginia Tech University
- ◆ Washington State University
- ◆ University of Washington
- ◆ Western Kentucky University
- ◆ West Virginia University

What they're
SAYING!

"Moving to turf was not an easy decision for us and came with a great deal of research. We wanted a surface that would bring harmony to both the offensive and defensive components of the game. AstroTurf's product allowed us the best opportunity to do this without compromising any aspect of our field."

Tim Corbin – Head Coach, Vanderbilt University

"It's hard to put into words what this is going to for our program and the school recruiting wise. This field is as good or better than any D1 school's field out there. Without question, no hesitation at all, it is the premier DII facility in the country. AstroTurf did an outstanding job for us."

Jeff Messer – Head Coach, Slippery Rock University

"The collaboration, the effort, the technology and the data that they give you, with the rubber and sand infill, the compaction of it – these guys have nailed it. They have nailed the technology, they have nailed the fibers and infill that we are using, but they have nailed the science of baseball."

Mike Bell – Head Coach, University of Pittsburgh

"We are thrilled with the outcome of our new AstroTurf Diamond Series playing surface. From the playing field to the logo, the attention to detail is top-shelf stuff. The colors are vibrant, the lines are crisp and the look and playability of the field will be second-to-none in college baseball."

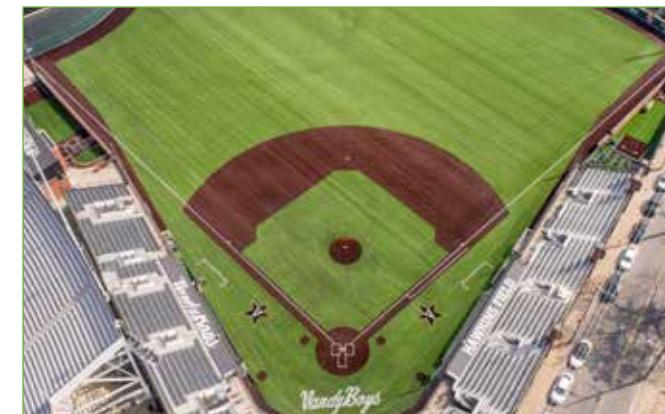
Kermit Smith – Head Coach, Appalachian State University

"I think AstroTurf is an absolute necessity in the Midwest. We love the playability and speed of the Diamond Series surface we have at Michigan. I think if you're re-doing your playing surface, the way our climate is, dealing with AstroTurf is the answer."

Erik Bakich – Head Coach, University of Michigan



University of Evansville – Evansville, IN



Vanderbilt University – Nashville, TN



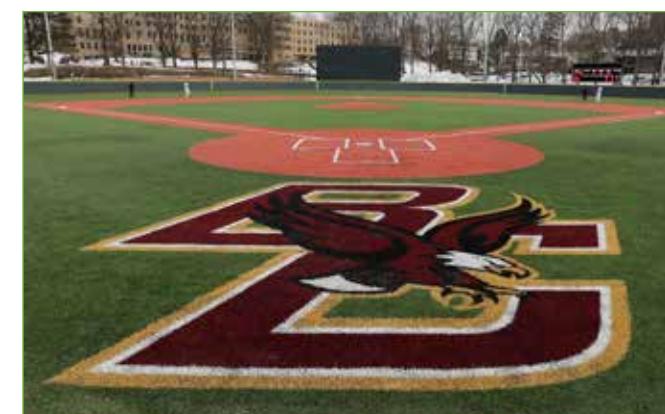
Washington State University – Pullman, WA



Rogers Centre – Toronto, ON



Appalachian State University – Boone, NC



Boston College – Chestnut Hill, MA



University of Pittsburgh, Pittsburgh, PA



University of Connecticut, Storrs, CT

MULTI-FIELD COMPLEXES



INSTALLATIONS

- ◆ Athenia Park
- ◆ Athletes In Action Complex
- ◆ Collier County Regional Park
- ◆ Cyclone Sports Park
- ◆ DE Turf Kent County Sports Complex
- ◆ Evergreen SportsPlex
- ◆ ForeKicks Soccer Complex
- ◆ Fountain Bluff
- ◆ Global Premier Soccer
- ◆ Grand Park
- ◆ John B. Lewis Soccer Complex
- ◆ Kansas City Royals Urban Youth Academy
- ◆ Maryland SoccerPlex
- ◆ Mecklenburg County Sports Complex
- ◆ Montour Junction
- ◆ Morgan Hill Sports Complex
- ◆ Northeast Regional Park
- ◆ Rocky Top Sports World
- ◆ Sand Mountain Sports
- ◆ Schaumburg Parks and Rec
- ◆ Shipyard Baseball Park
- ◆ Silverlakes Equestrian and SportsPlex
- ◆ SOZO Sportsplex
- ◆ Starfire Sports Complex
- ◆ Total Sports Park
- ◆ Ultimate Soccer Arenas
- ◆ Union Point
- ◆ United Sports Training Center
- ◆ University Liggett School
- ◆ USSSA Space Coast
- ◆ Viera Regional Park
- ◆ Virginia Beach Field Hockey Complex
- ◆ Virginia Youth Soccer Association HQ
- ◆ Wide World of Sports
- ◆ Woodside Sports Complex

What they're SAYING!

"We strive for excellence in every aspect of the sports experience at Fore Kicks, and a cutting-edge AstroTurf synthetic turf system achieves that standard and then some."

Tom Teager – President, Fore Kicks [MA]

"In order to realize our vision, we knew our athletic fields had to be impeccable. After an exhaustive eight month review process, our Ownership at Evergreen chose Astro Turf. The technology and testimonials behind AstroTurf's next generation synthetic turf systems left no doubt in our minds."

Chris Bourassa – Head of Operations, Evergreen Sportsplex [VA]

"The Space Coast Complex gives us the ability to bring all of our athletes together in one place for training, games, and tournaments. It was imperative from day one that our complex needed to be multi-purpose and have the most advanced playing surface possible, and that's why AstroTurf's Diamond Series was the clear choice for us."

Don DeDonatis – Chairman of the Board & CEO, USSSA [FL]

"Aside from a superb end product, we've been impressed by how responsive the AstroTurf team has been. From the feasibility study to the turf installation, expert guidance was there at every stage. We constantly receive positive feedback on our playing surfaces from athletes, coaches, and tournament directors."

Jamie Cox – General Manager, Panama City Beach Sports Complex



Sand Mountain Sports Complex – Albertville, AL



USSSA Space Coast Sports Complex – Melbourne, FL



The Shipyard – Charleston, SC



Panama City Beach Sports Complex – Panama City Beach, FL



Rocky Top Sports Complex – Gatlinburg, TN



Fountain Bluff Sports Complex – Liberty, MO



Ridgefield Recreation Complex – Ridgefield, WA



Cyclone Sports Park – Pecos, TX



Consistent, Uniform, Resistant Fiber Matrix



AstroTurf Corporation

THE WORLD LEADER IN SPORTS & RECREATION SURFACES

AstroTurf
FIELDS

Rekortan
TRACKS

Laykold
COURTS

SYNLAWN
LANDSCAPE

AstroTurf Corporation 2680 Abutment Rd, Dalton, GA 30721 (800) 723-TURF

help@astroturf.com www.astroturf.com AstroTurfUSA