



The Portsmouth Middle School Joint Building Committee
cordially invites you to the
Ribbon Cutting Ceremony
to
celebrate the re-surfacing of the
TOM DAUBNEY FIELD

Friday, September 10, 2010
at
6:50 pm



Portsmouth High School Synthetic Turf Improvements – Executive Summary

Due to the lack of regulation size athletic fields available for competitive play for the Portsmouth Middle School and to extend play on the over used Portsmouth High School field, the existing natural grass field at the Portsmouth High School football field is being replaced with a synthetic turf field as part of the Portsmouth Middle School addition and renovation project.

The synthetic turf field improvements include the resurfacing of the field, the installation of a drainage system along the inside perimeter of the existing track surface as well as the reconstruction of the high jump area located in the north D area of the field. The synthetic turf surface will include permanent inlaid lines for field hockey, football and soccer boundaries along with permanent inlaid register points for men's and women's lacrosse boundary corners, line intersections and radius points as well as football hash marks for painted lines. The synthetic turf surface will be a tufted monofilament polyolefin, grass like fabric coated with an acrylic secondary backing with a 2.5 inch pile height. The surface will be infilled with a mixture of sand/rubber fill. The surface will have a slight pitch from the center of the field to the sidelines.

Construction of the field will commence mid-June 2010 with a targeted early September 2010 completion date in time for the Portsmouth High School Clipper's first home football game.

Synthetic Turf - General

Questions and Answers courtesy of the Synthetic Turf Council

Q: What is synthetic turf?

The latest generation of synthetic turf is a grass-like surface covering that replicates lush natural grass in appearance and function. When used on athletic fields, it provides a consistent year-round, all-weather playing surface built to withstand extended use without downtime for recovery. As a landscape cover, synthetic turf provides a low maintenance, weed-free ground cover that doesn't need to be watered or fertilized.

Q: How is synthetic turf made?

Most synthetic turf systems installed today include a drainage layer, a multi-layered backing system, and resilient "grass" blades that are infilled with a granular filler to resemble natural turf. "Infilled" means that the man-made grass blades are interspersed with a top soil created with sand and/or granulated recycled tire rubber or other infill materials that provide the necessary stability, uniformity, and resiliency. Each blade customarily stands above the infill material. The typical blade length and system

characteristics are determined by the specific activity requirements. In some applications, the synthetic turf system includes a pad or elastic layer underneath the turf, often in combination with lower pile height and less infill.



Q: Why has synthetic turf become so popular over the past few years?

Synthetic turf is a smart solution for overused, unsafe playing fields. A grass field simply cannot remain lush and resilient if it is used more than three to four days a week, or in the rain, or during the six months of the year when grass doesn't grow – otherwise the surface will become an unsafe, rock-hard, dirt field. This fact, coupled with an escalating need for durable fields that accommodate multiple sports teams, increased maintenance costs, water conservation needs and climatic shifts, have prompted a rising number of schools and parks to turn to synthetic turf to balance their program needs. Today's synthetic turf is designed to simulate the experience of practicing and playing on a grass-like surface year round.

Demand has grown to the point where more than 5,500 multi-use synthetic turf sports fields are now enjoyed in North American schools, colleges, parks and professional sports stadiums. About half of all NFL teams currently play their games on synthetic turf, and it is approved for World Cup soccer matches.

Q: Which sports can be played on synthetic turf?

Synthetic turf sports fields for football, soccer, field hockey, baseball, tennis, lacrosse and rugby has traditionally represented the greatest percentage of the synthetic turf market. However, drought conditions and low water in many areas has prompted irrigation restrictions, which has dramatically increased the demand and regulation for synthetic grass in landscape and golf applications.

Q: How is the new generation of synthetic turf different from that of the past?

Increasing demand for higher quality playing surfaces and intense competition for field accessibility has given rise to a new generation of synthetic turf systems that replicate the look and feel of lush, natural grass. While the first artificial turf systems used in the 1960's and 1970's were hard, significant advancements have been made during the past few decades. By the 1990's, player comfort and performance became the top priority and the first synthetic turf systems with sand and rubber infill were introduced. Today's synthetic turf, supported by many NFL franchises, UEFA, FIFA and other international sports federations, combines the playing characteristics, look and feel of natural turf, with the advantages of increased playability, safety, longer playing seasons and fewer canceled games.

Q: Can synthetic turf be used outside of the playing fields?

Using synthetic grass for landscape and golf has become increasingly popular over the past few years. Thousands of homes, businesses, golf courses, municipalities, parks and tourist attractions like Disneyland and Steve Wynn's Las Vegas resorts have turned to synthetic grass to provide a lush, attractive landscape solution that requires minimal resources and maintenance while saving millions of gallons of water each year. It is also a smart way to beautify public spaces such as highway medians and airport landing strips that would otherwise be difficult and expensive to maintain. Synthetic grass reduces city maintenance costs, freeing tax dollars for other purposes.

Health and Environmental Impact

Q: How does synthetic turf impact the environment?

Synthetic turf has a measurable, positive impact on the environment. A typical grass sports field can use between 500,000 to a million gallons of water each year. Synthetic turf allows communities to conserve that water, which is particularly critical during times of drought. Annually, more than 2.2 billion gallons of water is saved in North American schools, parks and professional sports stadiums. At the same time, a typical lawn of 1800 square feet can require 56,000 gallons of water for maintenance each year. Synthetic grass enables homeowners to conserve that water, which

is particularly critical during times of drought. Tax credits and rebates are being offered to residential and corporate users by an increasing number of local governments in light of the tremendous impact on water conservation. Residential, business and sports field synthetic turf also eliminates the use of millions of pounds of potentially harmful pesticides and fertilizers each year while reducing emissions from gas lawnmowers.

Q: Is synthetic turf safe?

More than 75 studies have already validated synthetic turf's safety, many of which can be found at www.syntheticurfCouncil.org. In the words of Davis Lee, Ph.D. in synthetic organic chemistry, "With all the objective evidence, there is little doubt that synthetic turf is safe. In many instances, it is a better environmental and health alternative to natural grass." During the past decade, much independent, credible research about synthetic turf has been conducted worldwide, and is ongoing. In December 2009, a U.S. Environmental Protection Agency (EPA) scoping study of the health risks from inhalation, ingestion, and dermal contact with synthetic turf and crumb rubber found a low level of concern.

Several months earlier, the California EPA released a report dated July 2009 which indicated there is a negligible human health risk from inhaling the air above synthetic turf. In May 2009, independent tests conducted by the New York State Department of Environmental Conservation and New York State Department of Health proved there were no significant health concerns at synthetic turf fields. In July 2008, a U.S. Consumer Product Safety Commission staff report approved the use of synthetic turf by children and people of all ages. For 40 years, under EPA oversight and OSHA-regulated manufacturing, not one person has ever reported ill effects related to any materials associated with synthetic turf.

Q: Should I be concerned about lead in my field?

Absolutely not. In April 2008, concerns about lead in synthetic turf arose when elevated levels were found in several New Jersey fields. However, those findings were factually inaccurate as the criteria for measuring lead levels in soil, which is very different than synthetic turf, were applied. The lead chromate used to promote colorfastness in synthetic turf is encapsulated to prevent it from being readily absorbed by the body or released into the environment. In over 40 years there has never been an instance of human illness or environmental damage caused by synthetic turf. On July 30, 2008, the issue was resolved when a U.S. Consumer Product Safety Commission staff report concluded that "young children are not at risk from exposure to lead in these fields." Their full statement is accessible at:

<http://www.cpsc.gov/cpsc/pub/prerel/prhtml08/08348.html>.

Today, synthetic turf is made without lead as a pigment ingredient. This change in the pigment formulations was a voluntary and responsible

response by the industry to the CPSC's request to all industries that lead be removed from all products, if possible.

Q: Is crumb rubber safe?

Crumb used tire rubber, made from reclaimed tires, is a popular infill option for many synthetic turf fields. It has been safely utilized since being introduced in 1997, and in playgrounds and tracks for much longer. This resilient material provides enhanced durability and cushioning to prevent injuries and keep playing surfaces safe for the community. Aside from its use in synthetic turf sports fields, crumb rubber is something many people encounter on a daily basis. It's found in a variety of products from children's rubber toys to surgical gloves to food packaging, and even in chewing gum. To give context, one charcoal-grilled hamburger has more than three times the amount of harmful effects from chemicals than an artificial turf field. So you're exposed to more of a health risk at your neighbor's barbeque than you are at a local soccer game on synthetic turf.

With the growing popularity of synthetic turf, questions have arisen about the little black pellets that can sometimes be seen being kicked up during athletic play. Crumb rubber has been critically examined and studied since the late 1980's. Science has proven it to be safe for children and people of all ages. A December 2009 U.S. Environmental Protection Agency (EPA) scoping study of the health risks from inhalation, ingestion, and dermal contact with synthetic turf and crumb rubber found a low level of concern. It reinforced a July 2009 California EPA report that indicated there is a negligible human health risk from inhaling the air above synthetic turf. In May 2009, an independent study conducted by the New York State Department of Environmental Conservation and New York State Department of Health concluded that there were no significant public health or environmental risks arising out of ingestion, dermal contact, and inhalation of chemicals in or released from crumb rubber infilled synthetic turf fields. A U.S. Consumer Product Safety Commission staff report issued in July 2008, along with officials in New Jersey, Massachusetts, California and numerous international groups, all found synthetic turf fields with crumb rubber infill are safe.

Q: What impact does heat have on my synthetic turf field?

During the summer months in hot climates, some synthetic turf fields have reported surface temperatures significantly hotter than the surface temperature of a natural turf field. While some field managers might opt to water their fields, many industry professionals advocate misting the athletes and keeping them properly hydrated. A misting station normally needs only five gallons of water per hour based on full use. On a typical day, when the heat is at its peak for four to six hours, that equals 20 to 30

gallons of water. Many coaches will schedule practices and games for the cooler times of day, and limit the number and duration of practices.

Q: Does synthetic turf impact the spread of MRSA/staph?

MRSA and other staph infections strike due to inadequate hygiene practices, regardless of synthetic turf or natural grass usage. That's because it is spread by people in close contact with each other, like athletic team members, healthcare providers and patients, children in day care centers, military recruits, firefighters, and many other groups. Recent studies are in agreement. A California EPA report dated July 2009 stated "it is unlikely that the new generation of artificial turf is itself a source of MRSA."

A Penn State University study released in January 2009 found there was no difference in survival rates of staph on natural grass and synthetic turf surfaces. In addition, it stated that synthetic turf is not a hospitable environment for microbial activity such as staph. The issue goes beyond abrasions, since athletes can get cuts on any playing field – from the most well-manicured or dirt-compacted natural grass to state-of-the-art synthetic turf fields that are regularly irrigated and cleaned.

Q: How can I learn more about scientific studies that have been conducted on the health and environmental impact of synthetic turf?

Individuals need to weigh the facts themselves to determine if synthetic turf best meets their needs. Visit [Research and Latest Thinking](#) on our web site to view unfiltered international studies, links to industry resources and new position statements as materials are developed.

Player Usage and Injuries

Q: What impact does synthetic turf have on playing time?

Synthetic Turf playing fields exponentially increase playing and practice time because they can be used daily and in all types of weather, without worry of damage. Playability is enhanced since the fields remain uniform and consistent, season after season. They can also be used within hours of installation. In addition, while turf grass managers recommend against using a natural field for more than 20 – 24 hours per week or 680 – 816 hours per year for a three-season window, synthetic turf can be utilized around 3,000 hours per year with no "rest" required.

Q: How does synthetic turf compare to natural turf when it comes to player injury rates?

Because synthetic turf is infilled with resilient materials that provide a level of impact attenuation that is difficult to sustain on worn down, over-used

natural turf fields, its usage can enhance player safety and reduce the amount of injuries. Traction, rotation and slip resistance, surface abrasion and stability meet the rigorous requirements of the most respected sports leagues and federations. In fact, the NCAA published the results of a study among schools nationwide comparing injury rates between natural and synthetic turf and the injury rate during practice was 4.4% on natural turf, and 3.5% on synthetic turf. During games, the injury rates were 11.5% and 11.4%, respectively.

More recently, FIFA's Medical Assessment and Research Centre conducted a comprehensive study of the incidence of injuries sustained on grass and synthetic turf during two FIFA U-17 World Championships. FIFA reported, "The research showed that there was very little difference in the incidence, nature and causes of injuries observed during games played on artificial turf compared with those played on grass."

Cost, Installation, and Maintenance

Q: How long can a synthetic turf field be used?

With regular maintenance, synthetic turf fields usually last up to 10 years, and are typically warranted for seven to eight years.

Q: How does the cost of a synthetic turf field compare to a natural turf field?

Purchasing a synthetic turf field may seem expensive initially, but the field pays for itself over time, proving to be a highly cost-effective investment. Synthetic turf fields are typically utilized for about 3,000 hours of play per year, with no "rest" required, the equivalent of three to four well-maintained natural turf fields. In addition, synthetic turf maintenance costs are two to three times less than natural turf, since no mowing, irrigation or chemicals are needed. Because of its consistent availability, a synthetic turf field is also a reliable source of rental revenue for schools and communities.

Q: Are all synthetic turf products the same?

No, there are a variety of different types of synthetic turf products that range in feel as well as infill materials. You can find out more about these products at www.syntheticurfCouncil.org, which features a list of certified synthetic turf manufacturers and systems builders.

Q: Can synthetic turf hold up under heavy use?

Yes, synthetic turf can hold up under very heavy use. While natural turf can't be played on in pouring rain or during the months of dormancy, synthetic turf allows for more playing time and has a durability that outlasts

that of natural turf. Regular maintenance is important to enable synthetic turf to withstand the heavy use that it is often subjected to.

Q: Does synthetic turf fade?

Synthetic turf is U.V. stabilized to provide colorfastness and longevity.

Q: How do I install synthetic turf?

Installation guidelines are available from turf manufacturers. However, it is recommended that the synthetic turf is installed by a team of professional contractors that you select with the help of a landscape architect and engineer or independent consultant.

Q: What goes underneath the synthetic turf?

The turf must be laid on a suitable base, depending on its application. For sport usage, this may include a shock pad, while in landscape applications the turf can just be laid on a flat hard base. In children's playgrounds and sporting fields, a shock pad is recommended to meet Critical Fall Height legislation. The laid turf can be 'infilled' with a combination of sand and/or granular rubber, or other available materials, to stabilize and create specific playing characteristics. It is important to consult a professional about this process.

Q: Which type of synthetic turf do I need?

If you have determined that synthetic turf is the way to go for your organization, determine the type of field needed based upon its desired usage. STC has prepared an information sheet online called Advice for Selecting Synthetic Turf to help you evaluate this decision and select the best provider for your needs.

Q: Is maintenance of synthetic turf required?

While much less work is required than with a natural grass field, synthetic turf needs to be maintained as well to maximize playability and life of the product. Minimal maintenance would include brushing the fiber up, clearing the area of leaves and litter on a weekly basis. Depending upon the type of surface and the amount of use, more vigorous work could be required, normally from specialists in maintenance, to remove contamination and de-compact the infill on a regular basis. Details on maintenance are available from manufacturers, field builders, and professional maintenance services companies.