SYNTHETIC TURF SAFETY AND ENVIRONMENTAL INFORMATION

Safety of Athletes and Field Users

The synthetic turf product selected for all planned TUHSD athletic field projects is FieldTurf 50mm Vertex Prime (Vertex) for most of the field surface and 40mm Vintage (Vintage) for the baseball field warning tracks and homeplate batters' boxes. This synthetic turf product is commonly used on high school and middle school sports fields throughout the San Francisco Bay Area. The product uses sand mixed with ground 100% organic cork or olive pits, as infill, to emulate the soil between the synthetic tufts of grass. The cork product is used in the Vertex-style synthetic turf and the olive pit product is used in the Vintage-style synthetic turf to help distinguish a textural difference underfoot in the warning track. The sand, olive pit and cork products used in the synthetic turf installation are all 100% natural products that can be disposed of in a compost pile. The synthetic turf fibers are rated one of the strongest in the industry, and will last a decade or more. Once installed, the field has a tolerance for planarity (levelness) of ¼-inch for every 10 feet (0.02% slope). This consistent pitch provides a much safer playing surface when compared to natural grass fields that are more difficult to maintain, often have poor drainage, bare spots of compacted earth, patches of weeds and gopher holes, and may not be mowed evenly.

The synthetic turf product also includes a padded underlayment for player safety and drainage. This underlayment provides a 25-year warranty to comply with the American Society of Testing Materials (ASTM) protocol F1936 (Standard Specification for Impact Attenuation of Turf Playing Systems as Measured in the Field). This underlayment greatly reduces the risk of concussions from players contacting the ground. The synthetic turf product comes with an 8-year insured and non-prorated warranty to protect it from degradation, which ensures a consistent and safe playing surface. The average cost (including water) to maintain a living grass athletic field in the San Francisco Bay Area is $1.50 per square foot. At 100,000 square feet, the school district would have to spend approximately $150,000 per year to maintain an athletic field in a safe and playable condition. FieldTurf synthetic turf fields are engineered to be the most advanced synthetic turf systems in the industry. Their constant focus on safety led to numerous injury-reducing innovations and product improvements. As a result, their products provide the safest playing field possible for student-athletes and community users. Independent multi-year research continues to validate their efforts to provide student-athletes and community users with the safest sports fields possible.

Environmental Safety

FieldTurf products are continuously tested and meet all federal Environmental Protection Act (EPA), State of California and local environmental standards. The synthetic turf materials (turf, sand, cork/olive pit fill) are completely recyclable at the end of service life, which is expected to be 8 to 12 years for the Bay Area climate. The olive pit and cork fill products are an organic infill that does not require any water for maintenance. The padded underlayment has a 25-year warranty, is certified and is manufactured from food-grade polyethylene (like Tupperware). Each planned TUHSD synthetic turf field replacement project will save over 2,000,000 gallons of potable water for irrigation per year as well as require zero fertilizer products or fuel for lawn maintenance.

FieldTurf is committed to recycling and utilizes an aggressive plan called "Goal Zero", which ensures that, by 2025, all manufacturing and end-of-life synthetic turf waste will not go to a landfill. With this forward-leaning vision, it is the first synthetic turf company to take such a position to protect the environment. Today, FieldTurf is recycling aged-out synthetic turf field products in a dedicated industrial plant in Sacramento. Per- and Polyfluorinated Substances (PFAS) are a group of chemicals used to make fluoropolymer coatings and products that resist heat, oil, stains, grease and water. These chemicals are very long-lasting and break down very slowly over time. PFAS has become a huge industry concern due to their potential negative health impact from long exposure to high PFAS concentrations. FieldTurf regularly tests its synthetic turf fibers in accordance with U.S. Environmental Protection Agency (EPA) Method 537 Modified (537M), the standard test performed to determine the presence of PFAS in drinking water. The test results indicated FieldTurf's synthetic turf fibers used in its synthetic turf products did not contain any traceable amounts of PFAS. In contrast, detectable levels of PFAS have been measured in the soil of some natural grass playing fields at other school facilities.

Environmental Impact of Using Synthetic Turf Fields vs. Natural Grass Fields

A synthetic turf athletic field can be used up to 3,000 hours per year. Per the 2022 Green Building Alliance "Organically Managed Grass Athletic Fields" article, natural grass fields are usable up to 1,000 or 1,100 hours of use per year before severe damage occurs from overuse if maintained properly. Based on this data, the synthetic turf field provides almost three times as much use as a natural grass field. In other words, the use of one synthetic turf field equals the use of three natural grass fields, and as a result provides a smaller environmental impact. Synthetic turf fields also manage rainwater very efficiently and are designed to detain and slowly release rain runoff to reduce excessive storm water drain flow that could lead to flooding. In addition, the cork, olive pit and sand fill material absorb moisture and mitigate the urban "heat island" effect from excessive heat generated on hot days on the turf fields.