SYNTHETIC TURF OR NATURAL GRASS SPORTS FIELDS?

WHAT ARE CONSTRUCTION COSTS?

**SYNTHETIC TURF**
Single-field building costs range from $6.00-$10.25/sq ft.

**NATURAL GRASS**
Single-field building costs are dependent on soil used:
- On-site native soil: $0.60-$1.50/sq ft
- Native soil: $1.50-$3.00/sq ft
- Sand cap: $2.75-$4.00/sq ft
- Sand: $5.50-$8.00/sq ft

WHAT ARE MAINTENANCE COSTS?

**SYNTHETIC TURF**
A K-12 School in Kansas spends $6,800 on maintenance annually. Additionally, the field averages 360 labor hours.

Michigan State University spends about $22,760 on maintenance and labor annually. The field averages 280 hours in labor.

**NATURAL GRASS**
A native soil field at a K-12 School in South Carolina spends roughly $9,450 on maintenance annually. Additionally, the field averages 300 labor hours.

Duke University spends roughly $24,550 annually on maintenance and labor for a sand-based field. The field averages 480 hours in labor.

WHAT ARE THE COSTS TO RESURFACE?

**SYNTHETIC TURF**
Recarpeting of synthetic fields typically occurs every 8-10 years. The average cost is $4.60/sq ft. This includes the price of labor, removal, carpet, rubber, and the cost of disposing the old synthetic infill surface.

**NATURAL GRASS**
If a natural grass field is built and maintained correctly, resurfacing may not need to take place within a 20 year period. If resurfacing is necessary, cost is roughly $0.24/sq ft. This includes removal, rolling, topdressing, and seeding.

WHAT CAUSES FIELD HARDNESS AND WHAT IS THE THRESHOLD?

**SYNTHETIC TURF**
Areas that lose infill, such as inlays, painted areas, seams, and high-use areas can have increased surface hardness. The values of 100 Gmax* (Clegg Impact Tester, ASTM 1702) and 164 Gmax* (ASTM F355 missile A) are the upper limits.

**NATURAL GRASS**
Gmax* of natural grass fields can vary greatly over short periods of time due to changes in soil water content and the amount of field usage. The same values of Gmax* apply to natural grass fields.

*Gmax is the value generated when testing surface hardness and provides an indication if a field is safe for play or if steps must be taken to reduce surface hardness. Gmax testing should occur annually, with more frequent testing suggested on heavily-used fields.

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