

Stantec IS SPORTS



Project Review Meeting

15 May 2019

Field Renovation Options
Nursery Field | Rye, New York



Agenda

1. Existing Conditions Review
2. Natural Grass Renovation
 - a. Natural Grass System
 - b. What the Reno Will Entail
3. Synthetic Turf Renovation
 - a. Synthetic Turf Components
 - b. What the Reno Will Entail
4. Renovation Differences, Pros and Cons Natural vs. Synthetic
5. Costs, Hours of Use
6. Other Questions/Concerns?

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Existing Condition Review



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Existing Condition Review



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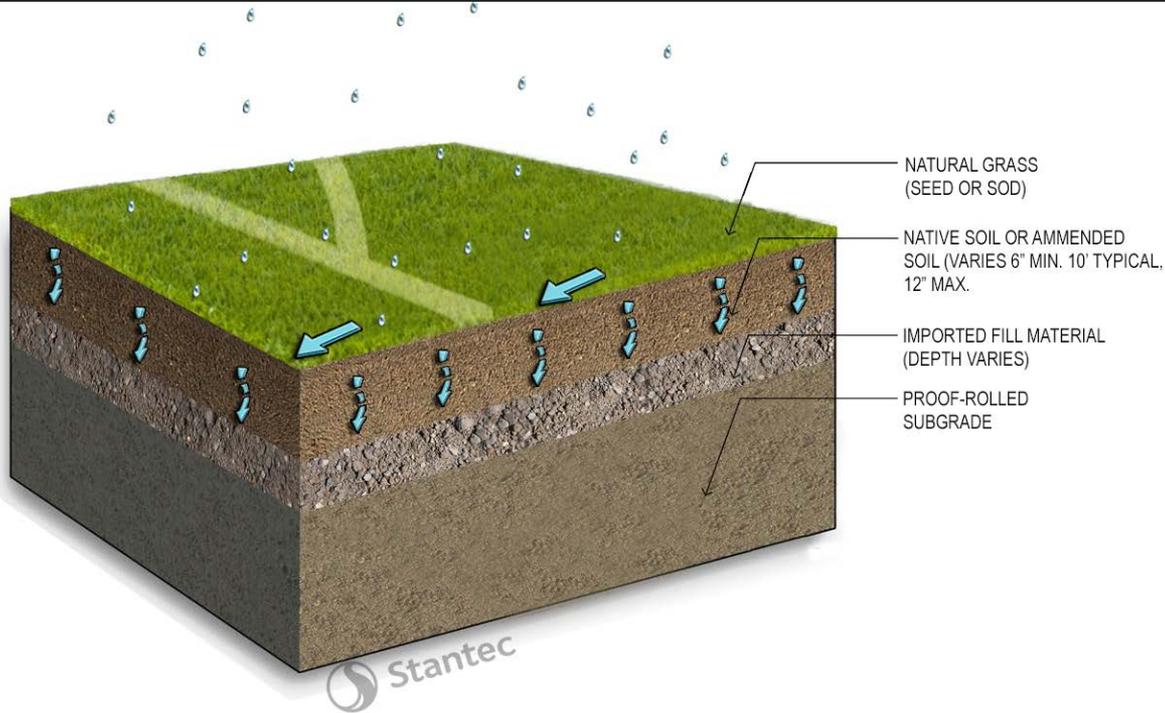


Natural Grass Renovation – Field Layout



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Natural Grass Renovation



Natural Grass Renovation : Seed vs Sod

» ADVANTAGES AND DISADVANTAGES

	Seed	Sod
PROS....	<ul style="list-style-type: none">▪ DEEP ROOTS SYSTEM▪ LOW INITIAL COST	<ul style="list-style-type: none">▪ IMMEDIATE GRASS COVERAGE▪ HIGH INITIAL COST▪ LESS MAINTENANCE DURING GROWN IN▪ IF INSTALLED FALL 2020, READY FOR PLAY SPRING 2021
CONS....	<ul style="list-style-type: none">▪ NOT IMMEDIATE GRASS COVERAGE▪ ESTABLISHMENT PERIOD IS 2 GROWING SEASONS▪ IF INSTALLED FALL 2020, READY FOR PLAY FALL 2021	<ul style="list-style-type: none">▪ TEND TO HAVE SHALLOW/ WEAKER ROOTS▪ MORE EXPENSIVE INITIAL COST

Synthetic Turf Renovation – Field Layout



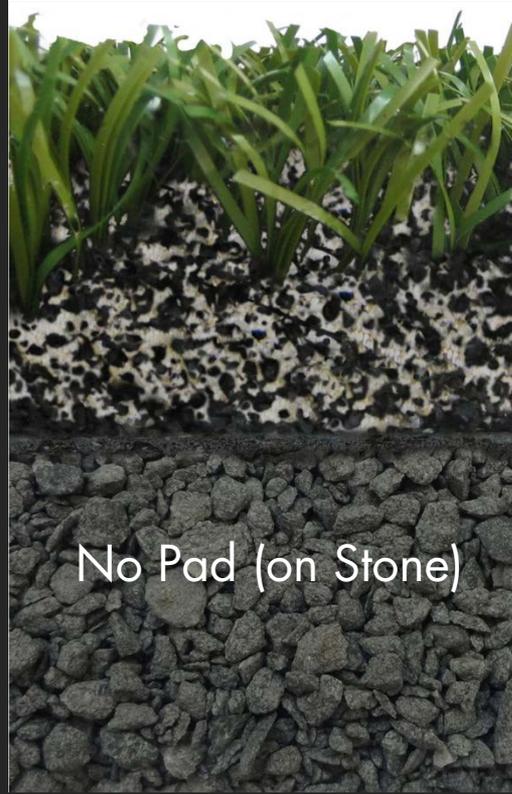
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Synthetic Turf to Emulate Natural Grass

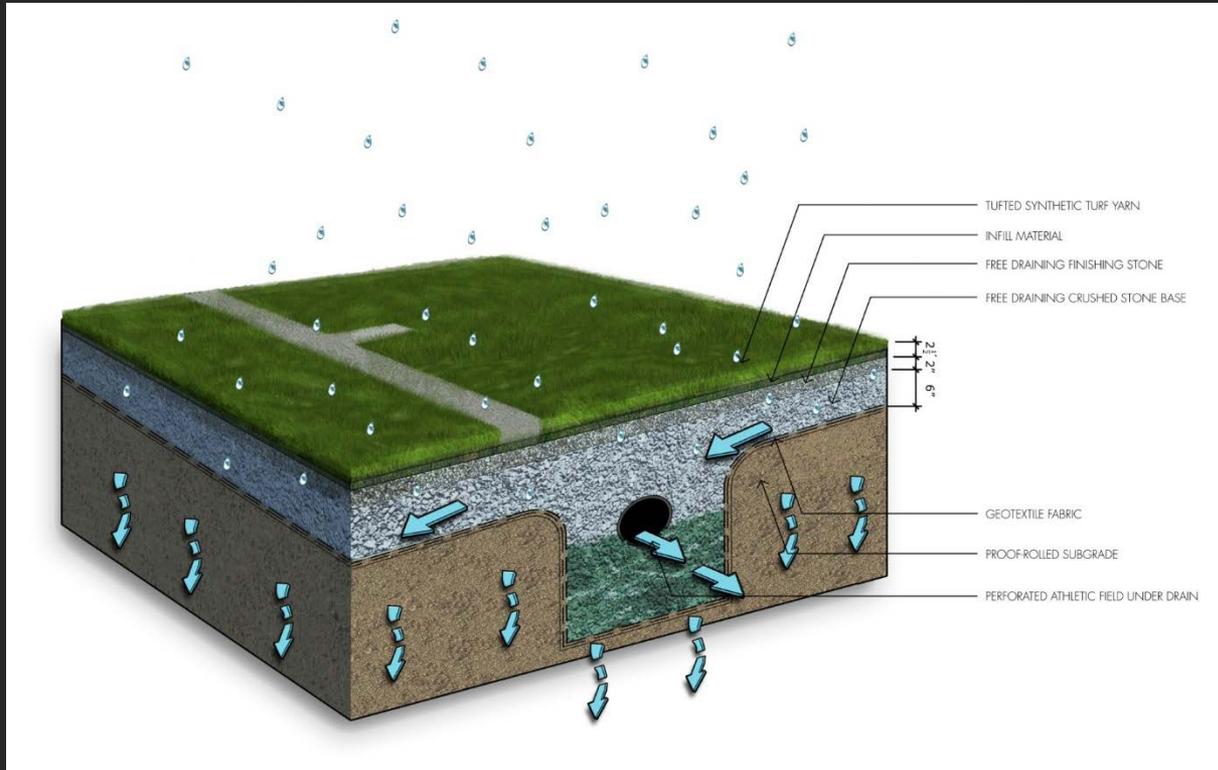
- Safety – Shock Attenuation
- Performance
 - Under foot
 - Ball interaction



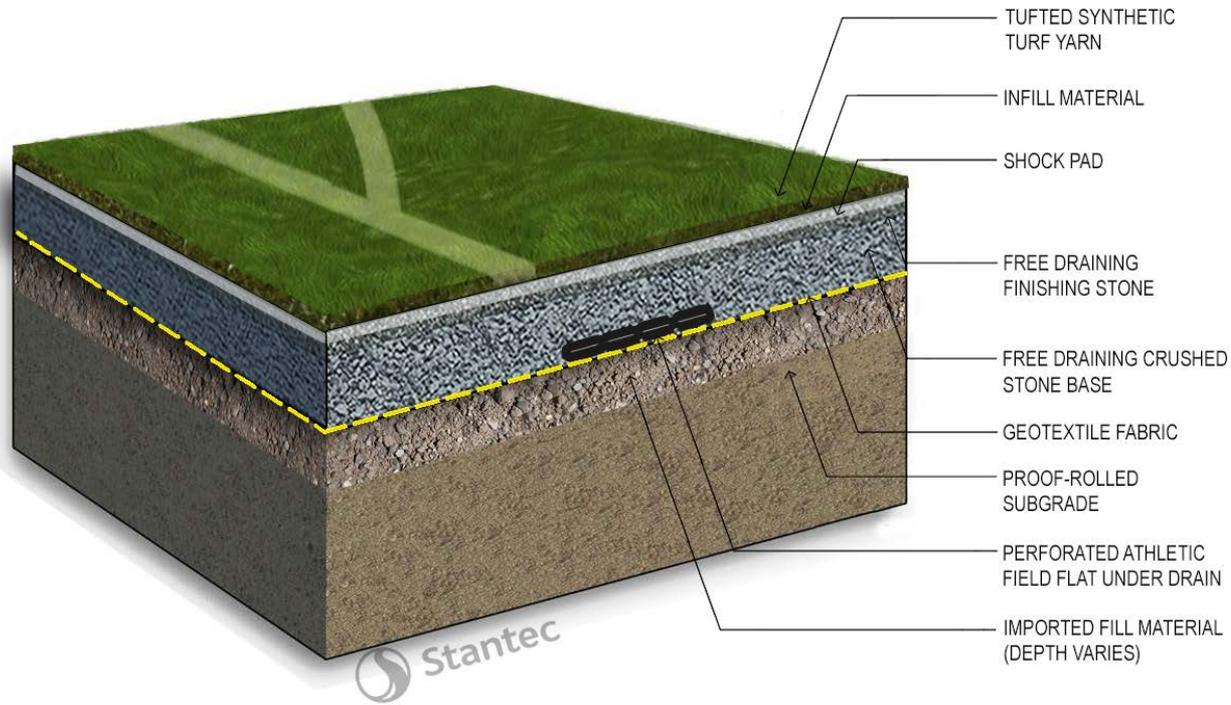
Shock Pad System vs. Non Padded Systems



Turf Base Profile – Conventional System



Turf Base Profile – Flat Drain System



Synthetic Turf System Components

Fiber – Traditional Slit Film



Fiber – Monofilament



Fiber – Parallel Slit Film



Fiber – Dual (Slit Film and Monofilament)



Components

Turf Fiber

Primary Backing

Secondary Backing

Synthetic Turf System Components



Components

Infill

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Synthetic Turf System Components

Infill – Recycled / SBR



Infill – Natural



Infill – Sand(s)



Infill – TPE



Components

Infill

Synthetic Turf Infill

	Recycled Rubber	TPE	Sand	Natural
MAINTENANCE	▪ LOW	▪ LOW	▪ LOW	▪ HIGH
COST	▪ \$65K - \$80K	▪ \$310K - \$320K	▪ \$195K - \$220K	▪ \$150 - \$210K
LIFE CYCLE	▪ 10 – 20+ YRS	▪ 20+ YRS	▪ 20+ YRS	▪ 8-10 YRS
ENVIRONMENTAL (PERCEIVED)	▪ MED	▪ LOW	▪ N.A.	▪ LOW

Synthetic Turf System Components

Pad – Panel/Roll



Pad – E-Layer



Components

Shock Pad



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Athletic Systems / Surfacing

» ADVANTAGES AND DISADVANTAGES

Natural Grass Systems

Synthetic Turf Systems

PROS....

- SURFACE TEMPERATURE
- MAINTAIN NATURAL SURFACE
- INITIAL COST (NATIVE)

- DURABILITY/HOURS OF USE
- COST PER HOUR OF USE
- WEATHER RESISTANCE
- LESS MAINTENANCE/ NO FERTILIZER/ NO WATER

CONS....

- MAINTENANCE/FERTILIZER/ WATER/\$/\$\$\$
- DURABILITY/HOURS OF USE
- WEATHER/FIELD CLOSURES

- INITIAL COST
- SURFACE TEMPERATURE

Native Soil Natural Grass \$

Athletic Systems / Surfacing

» HOURS OF USE

In order to maintain a high quality surface, natural systems are limited in the plan they can withstand and weather only impacts these limitations

- NATIVE SOIL NATURAL GRASS 10-15 HOURS
- SAND BASED NATURAL GRASS 15-20 HOURS
- SYNTHETIC TURF SYSTEMS 50+ (AND MINIMAL CANCELATIONS ETC.)

More available hours translates to more children and adults in the community have the chance to be active!

- CURRENT NURSERY FIELD PROGRAM 44.5 HOURS SPRING & 36.5 HOURS IN FALL

Cost Analysis

CAPITAL COSTS - FIELD FOOTPRINT ONLY

» AMENDED TOP SOIL FIELD

- » Remove and amend topsoil
- » Fill and Grade subgrade
- » Perimeter drainage
- » Spread and laser grade amended soil
- » Seed or sod, grow-in time

\$550K - \$700K

» SYNTHETIC TURF FIELD

- » Remove and dispose topsoil
- » Fill and Grade subgrade
- » Drainage layer and perimeter drainage
- » Finishing stone and laser grade
- » Turf system installation (shock pad, carpet, sand and rubber infill)

\$1.2M - \$1.5M

Cost Analysis

CAPITAL COSTS - TOTAL PROJECT

» AMENDED TOP SOIL FIELD

- » Natural Grass Field
- » Retaining wall - \$75K +/-
- » Chain Link Fence and Netting - \$180K +/-
- » Fill Material - \$250K +/-
- » Score Board - \$30K +/-
- » 100 Seat Portable Bleachers - 12K +/-
- » Goals and Benches - \$24K +/-
- » Soft Costs - \$110K - \$150K +/-
- » Contingencies

\$1.3M - \$1.6M

» SYNTHETIC TURF FIELD

- » Synthetic Turf System
- » Retaining wall - \$75K +/-
- » Chain Link Fence and Netting - \$180K +/-
- » Fill Material - \$200K +/-
- » Score Board - \$30K +/-
- » 100 Seat Portable Bleachers - 12K +/-
- » Goals and Benches - \$24K +/-
- » Soft Costs - \$150K - \$180K +/-
- » Contingencies

\$1.8M - \$2.2M

Cost Analysis

TYPICAL ANNUAL MAINTENANCE

- » AMENDED TOP SOIL FIELD +/- \$30,000
Mowing, fertilizer, water, over seeding, aeration,
herbicide & pesticides

- » SYNTHETIC TURF FIELD +/- \$14,000
Grooming, sweeping, inspecting/adding infill, addressing goal
areas, water (if needed for natural infill) etc.

*These include labor costs

Cost Analysis

FIELD LIFE CYCLE COSTS 20 YEARS	TOTAL	PER HOUR OF USE
» AMENDED TOP SOIL FIELD (Program as recommended, 600 hours/year)	\$1.3 M	\$109
» SYNTHETIC TURF FIELD (Program Up to 2000 hours)	\$2.4 M	\$60

* Depends of typical Town usage

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Natural vs Synthetic

Factor	Natural Grass Systems	Synthetic Turf Systems
SURFACE TEMPERATURE	<ul style="list-style-type: none"> ▪ 80° 	<ul style="list-style-type: none"> ▪ 130°+ (with SBR & Sand)
HOURS OF USE/WEEK	<ul style="list-style-type: none"> ▪ 10-15 	<ul style="list-style-type: none"> ▪ 50+
MAINTENANCE (\$)	<ul style="list-style-type: none"> ▪ +/- \$30K 	<ul style="list-style-type: none"> ▪ +/- \$14K
INITIAL COST	<ul style="list-style-type: none"> ▪ \$550K - \$700K 	<ul style="list-style-type: none"> ▪ \$1.2M - \$1.5M
ENVIRONMENTAL	<ul style="list-style-type: none"> ▪ FERTILIZERS, PESTICIDES 	<ul style="list-style-type: none"> ▪ RUNOFF
SAFETY	<ul style="list-style-type: none"> ▪ VARIES, RUTS, COMPACTION 	<ul style="list-style-type: none"> ▪ MORE CONSISTENT SHOCK ATTENUATION
CLOSURES	<ul style="list-style-type: none"> ▪ FREQUENT AFTER STORMS 	<ul style="list-style-type: none"> ▪ NEVER



Questions

Thank you for your time