CYPRESS PLAYGROUND & ATHLETIC FIELD SCOPING SESSIONS

SCHOOL COMMITTEE UPDATE

December 7, 2017

Stantec

AGENDA

Introduction

Character of the Park

Park Program Elements

Concept Plan Review

Athletic Systems/Surfacing

Cost Analysis

Character of the Park

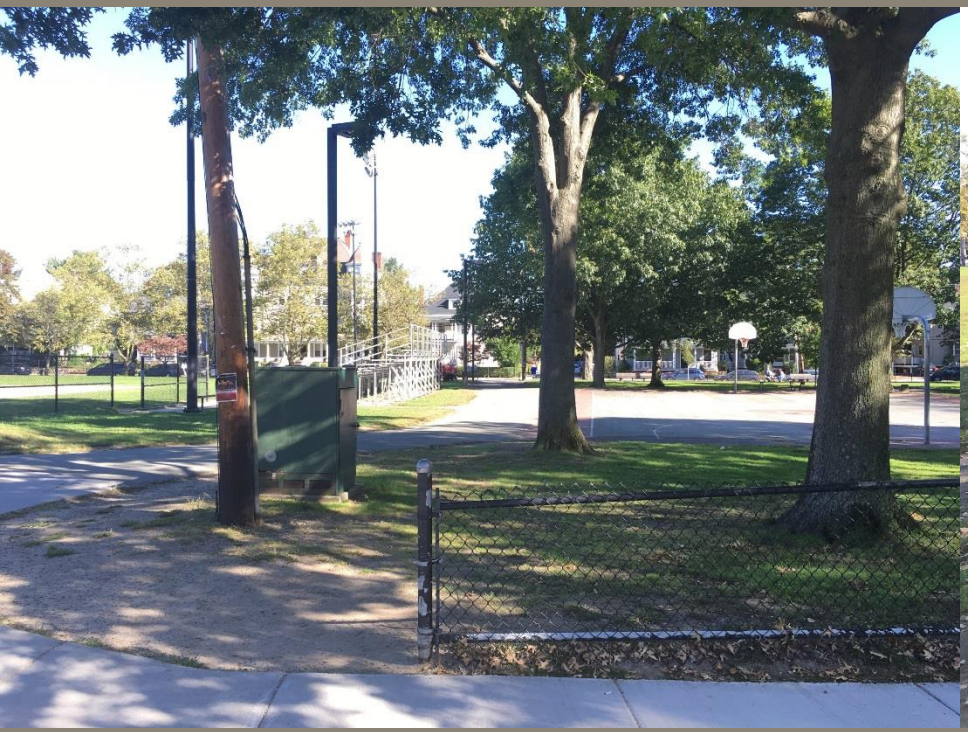
» CYPRESS PLAYGROUND AND ATHLETIC FIELD

Existing Conditions Plan

Character of the Park

CYPRESS PLAYGROUND AND ATHLETIC FIELD

- MATURE TREES AND SHADY EDGES



Character of the Park

CYPRESS PLAYGROUND AND ATHLETIC FIELD

- HIGH SCHOOL AND THE PARK – GATHER, PICNIC AND PLAY

Character of the Park

» CYPRESS PLAYGROUND AND ATHLETIC FIELD STUDY

- OPEN GREEN SPACE AND SPORT FIELDS

Park Program Elements

- PLAYGROUND and WATER PLAY

Park Program Elements

» PICNIC / SEATING / GATHERING / SPECTATOR SEATING

Park Program Elements

» BIKE RACKS / TRASH & RECYCLING / WATER FOUNTAIN

Park Program Elements

- BASKETBALL COURT

Park Program Elements

- LIGHTING – PEDESTRIAN, BASKETBALL & ATHLETIC FIELD

Park Program Elements

» FENCING and KEY CIRCULATION & ACCESSIBLITY

Park Program Elements

» KEY CIRCULATION & ACCESSIBLITY

Park Program Elements

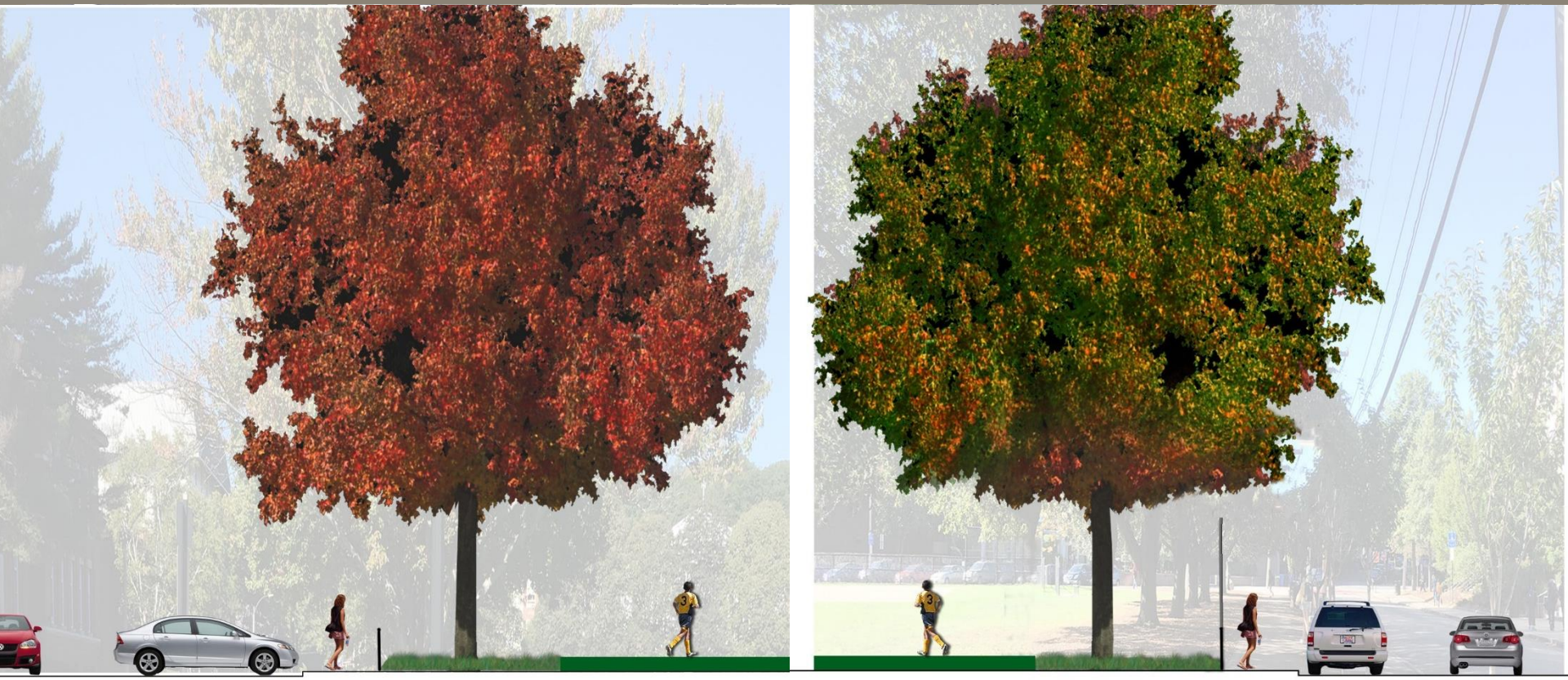
» SPORT PROGRAM: SOCCER, LAX, SOFTBALL & FIELD HOCKEY

Site Plan

Revised Concept Plan

» CYPRESS PLAYGROUND AND ATHLETIC FIELD

- MAINTAIN THE CHARACTER/REVISED CONCEPT
- Providing a seamless transition



Athletic Systems/Surfacing

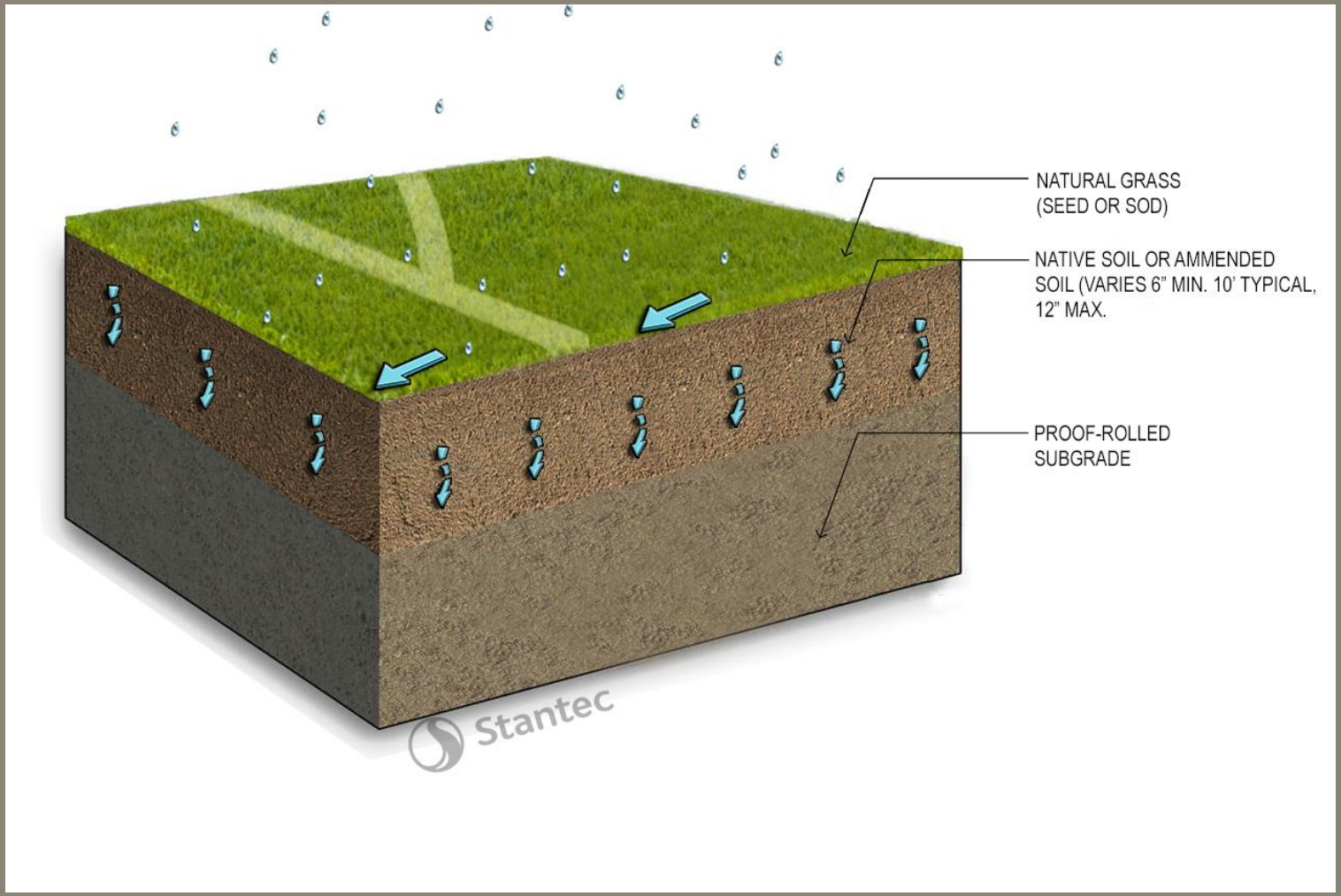
- EXISTING NATURAL GRASS; NATIVE TOPSOIL, AMENDED IN-PLACE OVER TIME

Athletic Systems/Surfacing

- OPTIONS; NATURAL GRASS: NATIVE SOIL, AMENDED SOILS; AND SYNTHETIC TURF

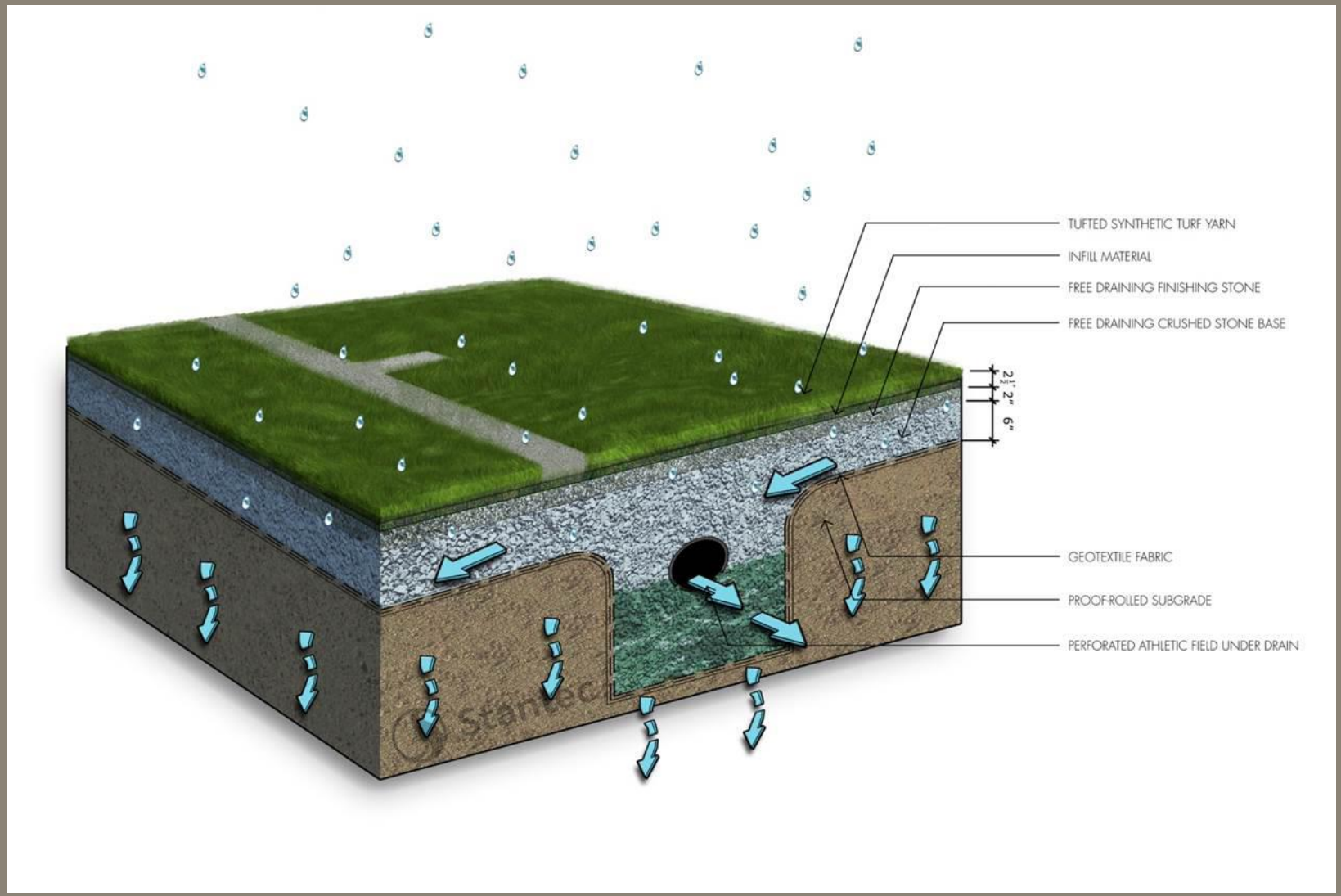
Athletic Systems/Surfacing

- NATURAL GRASS: NATIVE SOIL OR AMENDED SOILS FIELD SYSTEM



Athletic Systems/Surfacing

» SYNTHETIC TURF FIELD SYSTEM



Athletic Systems/Surfacing

» ADVANTAGES AND DISADVANAGES

	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 ▪ MAINTENANCE/FERTILIZER/ WATER/$
CONS….	▪ MAINTENANCE/FERTILIZER/ WATER/$$ ▪ DURABILITY/HOURS OF USE ▪ WEATHER/FIELD CLOSURES	▪ INITIAL COST $$ ▪ SURFACE TEMPERATURE

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

- SYNTHETIC TURF SYSTEMS 50+

MORE AVAILABLE HOURS TRANSLATES TO MORE CHILDREN AND ADULTS IN OUR COMMUNITY HAVE THE CHANCE TO BE ACTIVE!

Athletic Systems/Surfacing

- Turf System Components

Fiber - Dual Fiber System

Fiber – Parallel Slit Film

Fiber – Monofilament - Shape

Infill

Organic - Coconut

Organic – Walnut

Plant Based TPE

Infill – Sand(s)

Athletic Systems/Surfacing

- SURFACE TEMPERTURE

NATURAL GRASS SYSTEMS	JUST BELOW THE AMBIENT TEMP
SYNTHETIC TURF (EXISTING TOWN FIELDS)	35 TO 55 DEGREES HOTTER
NEW SYNTHETIC TURF SYSTEMS – HEAT REFLECTING FIBER	15D COOLER THAN THE CURRENT SYSTEMS
WITH AN ORGANIC INFILL	AN ADDITIONAL 15D COOLER

Human & Environmental Impact

» SURFACE TEMPERTURE

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SYNTHETIC TURF (EXISTING TOWN FIELDS)	35 TO 55 DEGREES HOTTER
NEW SYNTHETIC TURF SYSTEMS – HEAT REFLECTING FIBER	15D COOLER THAN THE CURRENT SYSTEMS
WITH AN ORGANIC INFILL	AN ADDITIONAL 15D COOLER
	IRRIGATION SYSTEM PROVIDED FOR ADDITIONAL COOLING

Human & Environmental Impact

- GMAX AND FIELD SAFETY

The higher the g-max value, the poorer the shock-attenuation performance of the surface. Measuring impact-attenuation is a fundamental tool of athletic field safety testing. It is also useful in assessing the playability of a field (scale 0-200).

NATURAL GRASS – WELL MAINTAINED	85-95 GS
NEW SYNTHETIC TURF SYSTEMS – WITH SAFETY PAD	75-95 Gs
NATURAL GRASS – WITHOUT GRASS COVER	95 – 150+ Gs, depending on root mass, moisture content, soil compaction, etc.

Human & Environmental Impact

- TURF FIBERS AND ORGANIC INFILL

TURF FIBERS AND INFILL - pass EN-71-3: Safety requirements for toys, (-3) migration of certain elements.

UV STABILIZERS AND HEAT REDUCTION - state-of-the-art hindered amine light stabilizers (HALS). The producers of HALS masterbatches also produce masterbatch materials for food packaging, so most of the HALS have gone through the stringent FDA approval process for food contact.

No Lead or metals are used as stabilizes.

Human & Environmental Impact

- HERBICIDES, FUNGICIDES & PESTICIDES

Are typically used to maintain a high quality grass surface. With the adjacent school use these products are not allowed to be used making it difficult to maintain a quality surface.

- FERTILIZERS

EPA's clean water act goal is to reduce phosphorus discharges to the lower Charles by 54 percent to restore the river to a healthy state.

Cost Analysis

CAPITAL COSTS

Include design, engineering and permitting, full construction for the park renovation, contingency's and escalation.

Cost Analysis

CAPITAL COSTS	TOTAL	FIELD
» AMENDED TOP SOIL FIELD	$4.3 M	$0.50 M
» SYNTHETIC TURF FIELD	$5.80 M	$1.5 M

Cost Analysis

TYPICAL ANNUAL MAINTENANCE

- AMENDED TOP SOIL FIELD

  Mowing, fertilizer, water, over seeding, aeration, herbicide & pesticides

- SYNTHETIC TURF FIELD

  Grooming, sweeping, inspecting/adding infill, addressing goal areas, water etc.

Questions, Ideas, Suggestions?