Update on Leo Santaballa Field Initiative

Presented by

Lacrosse and Field Hockey

Agenda

- Introductions / Background on GFLA
- Review of Objectives / Past Activities
- Discussion of Field Construction
- Alternative Solutions and Recommendation
- Storm Water / Field Drainage Analysis
- Concluding Remarks
- Appendix – background material incorporated into presentation by reference

Introductions / Background on GFLA

Introductions

- Great Falls Lacrosse
  - Glenn Tofil, Commissioner
  - Lars Okeson, Treasurer
  - Greg Beckwith, Board Member
  - Peyton Cross, Board Member

- Fairfax County Board of Supervisors Facilities Management Department
  - Mike Lambert, Property Manager for Facilities Management Department

- Fairfax County Park Authority
  - Dave Bowden, Director, Planning and Development Division
  - Deb Garris, Manager Synthetic Turf Program

- Burgess & Niple
  - Dennis Thomas P.E., Principal

Background on GFLA

- Volunteer run 501 (c) (3) founded in 1996
- 600 boys and girls in our 2011 Spring Lacrosse programs
- 120 girls in our 2011 Fall Field Hockey programs
- 300 boys and girls in our Fall Lacrosse programs
- There are over 400 Great Falls families currently associated with our program – 800 families have participated in our programs dating back to 2008
- We offer an opportunity for players of all experience and skill levels to enjoy lacrosse and field hockey – ages 4 to 17
- We are a community based program with virtually all of our lacrosse and field hockey players residing within the Langley High School pyramid

Review of Objectives / Past Activities

Project Purpose / Overview

- Great Falls Lacrosse set out to sponsor the installation of an attractive, high quality, all weather year-round playing surface at Leo Santaballa
- Multi-purpose facility that could be viewed as a community asset – accessible to other Great Falls community athletic groups outside of our lacrosse and field hockey programs
- To make it a true community asset, we need avoid use restrictions placed on natural grass fields
- GFLA Board pledged to investigate and be responsive to neighborhood and community groups concerns, particularly related to storm water management and in-fill alternatives

Review of Past Activities

- Discussions with Great Falls community through GFCA first started in October 2010
- GFLA participated in subsequent meetings in 2010 with members of the community and the GFCA to listen to and explore ways to address community concerns with the project
- During the first half of 2011, GFLA invested a significant amount of time, in conjunction with the Fairfax County Park Authority investigating alternatives to traditional fields which use “crumb rubber” (from recycled tires) as its in-fill
- This effort involved extensive conversations with vendors, field developers/users and others both nationally and internationally
- We also retained Burgess & Niple to investigate the feasibility of engineering the field to reverse the current flow of water off of the northern end of the field and into the existing storm water management structure in front of the Great Falls Library
- We recently met with residents of the Innsbruck neighborhood to brief them on the project

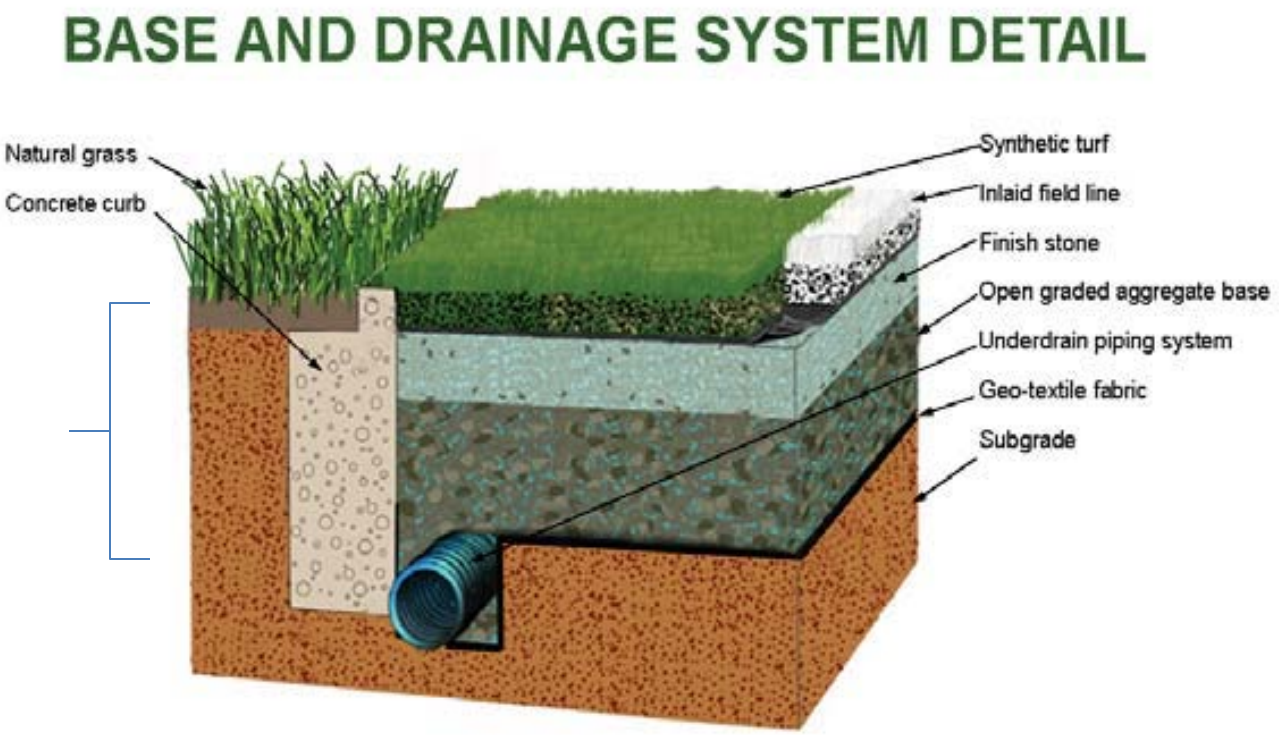
Parameters of Our Search

- Study and evaluate alternative in-fills which minimize the environmental footprint of the project given the fact that most residents surrounding the field are on well water
- Identify a solution that possessed strong performance characteristics – heat, GMAX, durability, etc.
- Work with a proven technology and supplier
- Find a solution that did not substantially increase the cost of the project
- Acquire the appropriate product warranties

Discussion of Field Construction

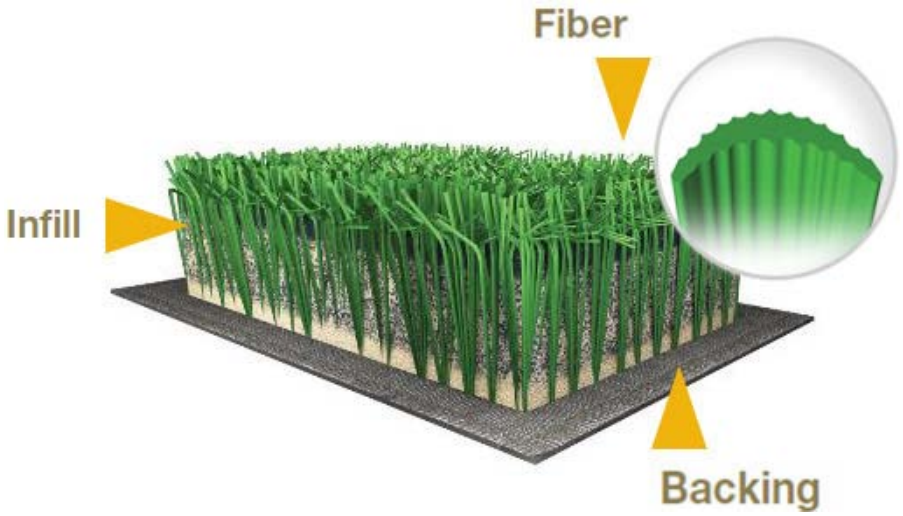
Cross Section of Design

Subsurface construction, excluding piping system is 8” deep



Fiber and In-Fill Construction

- In-fill includes a mixture of synthetic rubber (TPE in this case and silica sand)
- In the case of the field technology being proposed the mix is 50% sand and 50% synthetic rubber TPE
- Total in-fill material used – approximately 720,000 pounds (360 tons)
- 14 passes of silica sand and TPE mixture used to create infill



Field Construction

PROCESS

1. Groundbreaking to officially kick-off project

2. Stripping vegetation and topsoil from existing rectangular field.

3. Installation of underdrain piping system and geo-textile fabric.

4. Placement of open graded aggregate base stone.

5. Synthetic turf installation. Turf is seamed and sewn.

6. Field lines installed. Infill system consisting of cryogenic rubber and coated sand spread and groomed.

Recyclable Material

- FutrFill (recommended in-fill) certified 100% recyclable
- FieldTurf is 100% recyclable -- first company in the industry to remove entire systems and recycle them

Alternative Solutions and Recommendation

Preliminary Findings

- After significant investigation our recommendations focused on the following:

In-fill product consisting of cork and coconut husk and sold as a system (in-fill and carpet) by Limonta Spa. Limonta supplies both the carpet and in-fill. (Limonta also offers a TPE similar to FutrFill.)

In-fill product derived from a synthetic rubber (virgin styrene-based copolymer) material that phthalate, BPA, and vinyl free. Mixed with sand as part of the installation. Can be used with FieldTurf or AstroTurf.

Our Initial Recommendation

- On June 15, 2011, we informed the GFCA that our evaluation had been centered around Limonta and its GeoTurf in-fill solution as well as the FutrFill product

- Despite what we considered to be superior long term performance characteristics of the FutrFill and concerns about potential contract arrangements with the Limonta, we informed the GFCA that the GLFA board had recommended the use of the GeoTurf product to the Park Authority given the significant cost differential

- Since that time, we have received a revised proposal from FieldTurf and FutrFill which would allow us to move forward with this alternative from a budgetary standpoint

Lab Analysis

- Below are the results of Synthetic Precipitation Leaching Procedure (SPLP) testing (material is bathed in mixture of water and a 60/40 weight percent mixture of sulfuric and nitric acids until the pH is 4.20 + 0.05 – simulates rain water East of the Mississippi) for: 1) the FutrFill product (original formulation from Italian supplier (“IT”); 2) FutrFill manufactured by Felix Technologies (“NA”)); 3) sand used in in-fill; and 4) FieldTurf’s Duraspine fiber.

- Also included for comparison are typical background levels of heavy metals found in the soils of Eastern Virginia and SPLP test performed on the Infill Pro Geo product.

PERFORMANCE INFILL	Typical (*)	Duraspine (Fiber) (**)	Sand Infill (**)	Futrfill (***) NA	Futrfill (***) IT	Infill Pro Geo (**)
MEASUREMENT	Background	mg/L	mg/L	mg/L	mg/L	PPM
MEASUREMENT TYPE	Levels (PPM)	SPLP	SPLP	SPLP	SPLP	SPLP
TYPE		N/A	Used with TPE	TPE	TPE	Organic
Arsenic	3.0 to 12 .0	<0.01	<0.01	<0.10	0.010	0.025
Barium	n/a	<0.01	<0.01	<0.50	0.368	0.461
Cadmium	0.1 to 1.0	<0.01	<0.01	<0.025	0.005	0.013
Chromium	n/a	<0.01	<0.01	0.051	0.010	0.050
Copper	1.0 to 50.0	n/a	n/a	<0.125	0.025	0.63
Lead	10.0 to 70.0	<0.01	<0.01	<0.10	0.010	0.100
Mercury	n/a	n/a	n/a	<0.002	0.0020	0.0020
Selenium	0.1 to 3.9	<0.01	<0.01	<0.10	0.010	0.025
Silver	n/a	<0.01	<0.01	<.050	0.010	0.025
Zinc	9.0 to 125.0	0.09	0.03	<0.30	0.077	0.287

**** Information provided by A & L Eastern Laboratories, Inc. (Richmond, VA)***

*****Analysis performed by Analytical Industrial Research Laboratories Inc***

****** Analysis performed by Paradigm Environmental Services, Inc.***

Note: mg/L is equivalent to Parts Per Million (PPM)

Additional Information on FutrFill

- Non-toxic material similar to composition of resins used in consumer products such as bike handlebar grips, handles for hand tools, rubber portion of toothbrushes, etc.
- **Trace** amounts of heavy metals from SPLP test (detectable at well less than one PPM and none greater than **5 Parts Per 10 Million**) attributable to use of calcium carbonate (mined mineral) used as a filler
- Meets European RoHS (Restriction on Hazardous Substances) and REACH (**R**egistration, **E**valuation, **A**uthorisation and Restriction of **Ch**emical substances) requirements
- Excellent performance statistics (GMAX, durability, etc.)
- Can be manufactured in green or beige, thus reducing heat retention significantly
- Greater specific gravity than water – no floatation in heavy rain
- 100% recyclable

Additional Information on FutrFill

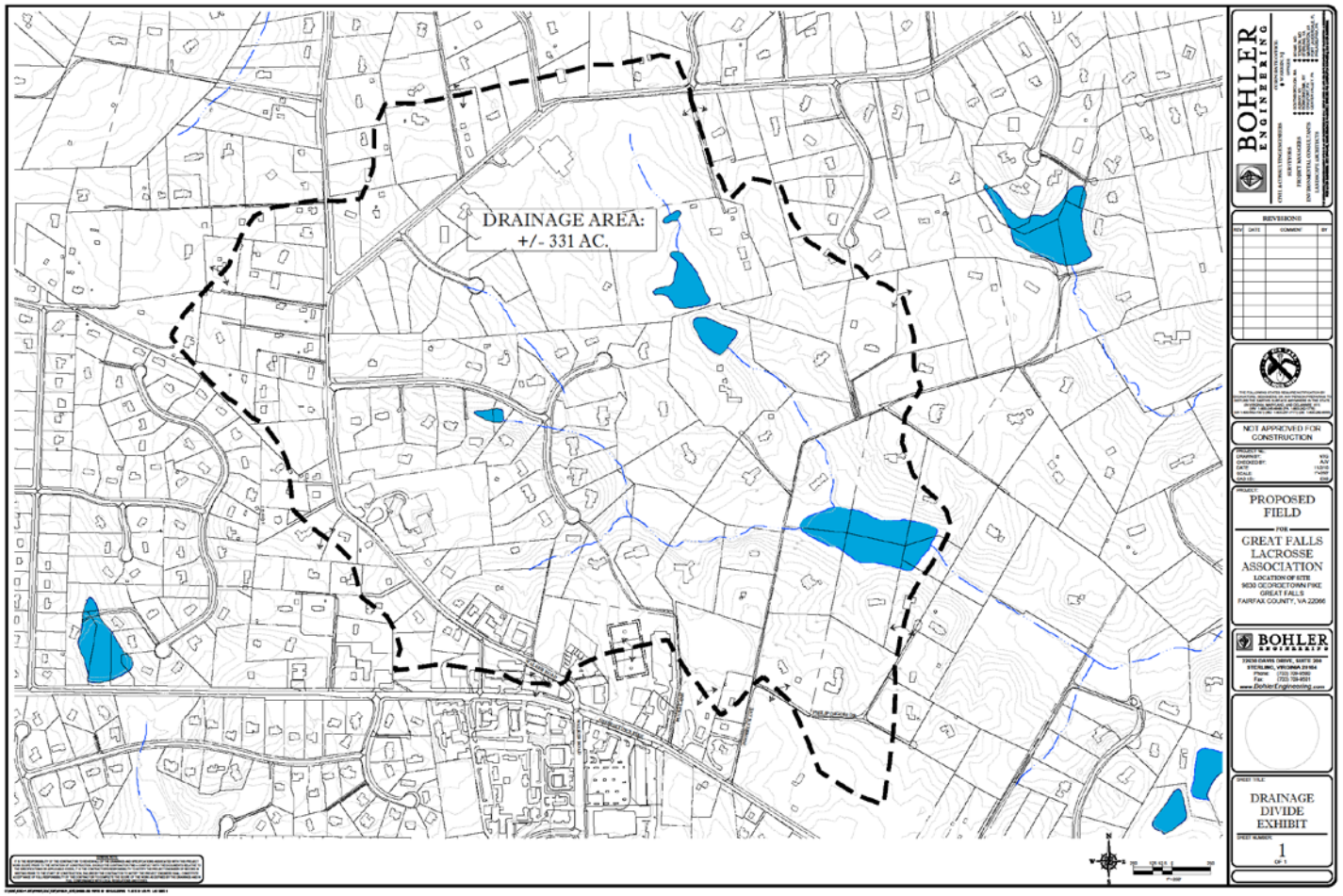
- Supplied by Target Technologies (Burnaby, BC) -- www.ttiionline.com
- Composition and shape developed by TDL Plastics (Corpus Christi, TX) -- www.tdlplastics.com
- Compounded by Felix Compounds (Saint-Hubert, QC) -- www.felixcompounds.com
- After exhaustive research and work with Target and TDL -- The New York City Public School Board has standardized on FutrFill product
- FutrFill-based field in Richmond Hill, ON recently received FIFA “2 Star” rating

Our Current Recommendation

- We currently believe that the Futrfill/FieldTurf alternative represents a solution that meets all environmental concerns expressed by individuals in the community
- We also endorse a re-grading of the field during construction to re-route storm water run off from the field entirely into the storm water management retention pound in front of the library – discussion to follow
- We are very confident in the product and the vendor as there is a significant track record with Fairfax County and elsewhere
- There would be a solid contracting mechanism in place with FieldTurf standing completely behind the performance of the field (installation and product performance)
- This is a large investment and we want to make sure we have a vendor and product that can stand up to (and behind) representations and warranties

Storm Water / Field Drainage Analysis

Drainage Divide – Lake Marmota



Additional Note on Storm Water Management

- To further address water quality concerns of residents living at the northern end of the field, GFLA engaged Burgess & Niple to look at alternative options for field drainage and storm water management

- Following a study of the proposed field design, location and existing storm water management infrastructure, Burgess & Niple concluded that the field could be constructed in such a way as to divert all run off from the field into the existing storm water management “pond” adjacent to Georgetown Pike (in front of the library)

- Given the design of the field and drainage infrastructure, Burgess & Niple has stated that the peak rate of runoff from the synthetic turf field will be less than the existing grass field and should not impact plans for environmental improvements to the area surrounding the storm water management pond

- A copy of the Burgess & Niple analysis is available for review

Concluding Remarks

Concluding Remarks

- The GFLA has invested a significant amount of time and resource in addressing the concerns of the Great Falls community
- We do not believe a natural grass surface meets our requirements in terms of our primary season (early Spring), desire to allow community access to the field and use during the Fall and Winter seasons
- Fairfax County considers the design of this field to be a Best Management Practice from a storm water management perspective
- We believe the FutrFill / FieldTurf field represents an outstanding solution for our organization and the community
- We are committed to working with the community to make sure remaining storm water management concerns are addressed during the design phase of this project

Appendix

Included by reference are the following:

- Product data on FutrFill in-fill including testing data, Material Safety Data Sheets, other items
- Product data on DuraSpine fiber and sand in-fill including testing data, Material Safety Data Sheets, other items
- Summary of Storm Water Management study performed by Burgess & Niple

These items will be provided to the GFCA (along with this presentation) and uploaded onto the GFLA website.