M E M O R A N D U M

To: Board of Selectmen, Town of Swampscott

From: *Athletic Field Study Committee*[1]
Christian J. Urbano, Chairman
Linso van der Burg, Secretary
Mounzer Aylouche
Scott Faulkner
Richard Feinberg
Josh Field
Doug Sutherland

Date: February 14, 2013

Re: Findings and Recommendations of the Athletic Field Study Committee

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Pursuant to the Scope of Responsibilities established by the Board of Selectmen for the Town of Swampscott, the following discussion sets forth the findings and recommendations of the Athletic Field Study Committee.

Executive Summary

As discussed below, the Athletic Field Study Committee (the "AFSC") has conducted a thorough study into the development of a long-term improvement plan for Blocksidge Field that best serves the needs of the residents and high school students of Swampscott for the present and the future, using privately raised funds in addition to public funds. Based upon the findings of this study, the AFSC recommends the following:[2]

- A ***three-phased approach*** should be taken to install a multi-use artificial turf athletic field complex located at Blocksidge Field, which should ultimately include the construction of permanent light towers and aluminum grandstands and a press box on the home field side, with mobile, aluminum seating on the visitors' side. A plan depicting each phase is attached to this memorandum collectively as Exhibit A.
    - Phase 1: install a multi-sport, artificial turf field, including the following:

[1] Selectman Glenn Kessler is the liaison between the Athletic Field Study Committee and the Board of Selectmen.

[2] **Unless otherwise noted, the project should be funded by town funds/bonding and, if successful, reimbursement through the award of a PARC Grant (defined below).**

- install good quality monofilament artificial turf as the field's surface;
- install good quality, non-toxic thermoplastic elastomers ("TPE") for the field's infill (too many health concerns surround styrene-butadiene-rubber (or "crumb rubber") and too many quality concerns surround organic infill alternatives) or other alternative infill products;
- line the field permanently and/or temporarily for football, soccer, lacrosse and field hockey with the "Big Blue" logo in each end zone;
- design and construct (a) lighting conduits and (b) concrete foundations for home side grandstands;
- demolish existing grandstands and temporarily replace grandstands with mobile, less expensive stands on the home side only (**funded by youth sports organizations and used until Phase 3 below**);
- replace the existing scoreboard and, if necessary, goal posts;
- install a security fence;
- install signage with health and safety guidelines regarding artificial turf, including information regarding how to recognize heat-related illnesses, the proper steps to moderate and treat such illnesses, appropriate hygiene such as hand washing after playing and practicing, and standard first aid for skin wounds to prevent infections; and
- install signage to indicate what activities are allowed or prohibited on the artificial turf field. These signs shall preclude items such as food, drinks (other than water), chairs, umbrellas, metal cleats or metal golf shoes, and athletic equipment and pets that could damage the turf, invalidate the manufacturer's warranty or shorten the life expectancy of the turf, infill or subbase.

- Phase 2: install light towers (**funded privately**);
- Phase 3: (a) install ADA compliant grandstands on home side of new Blocksidge Field, together with a press box; and (b) relocate mobile, temporary grandstands to visitors' side (**each funded privately**).

- Future Maintenance: enter into a yearly maintenance contract ($8,000 per year, per industry standards) with the artificial turf manufacturer/installer to upkeep the field and to ensure the warranties are not voided; account for replacement of certain quantity of infill every four years; account for minor repairs due to ordinary wear and tear and/or vandalism (via warranty or otherwise);

- Replacement Fund: establish a field replacement fund to defray the cost of replacing the artificial turf after each ten-year cycle, as follows:

    - Earmark $10.00 of each youth sport user fee towards a replacement fund (appx. $20,000 annually);

    - Obtain rental fees (appx. $15,000 annually);

    - Obtain funds from season ticket sales (appx. $20,000); and/or

    - Additional fundraisers.

The cost estimates for **Phase 1** of the foregoing recommendations are set forth in the table below.[3]

ITEM	QUANTITY	UNIT	UNIT COST	TOTAL
ATHLETIC FIELD CONSTRUCTION - Phase One				
GENERAL CONDITIONS				
Construction Bonds & Insurance	1	ls	$ 20,000.00	$ 20,000.00
Mobilization & De-mobilization	1	ls	$ 25,000.00	$ 25,000.00
Materials Testing & Lab Expenses	1	ls	$ 5,000.00	$ 5,000.00
Replace unsuitable materials (Allowance)	1	alw	$ 20,000.00	$ 20,000.00
Silt Fence & Erosion Control	1	alw	$ 5,000.00	$ 5,000.00
Subtotal				**$ 75,000.00**
DEMOLITION				
Misc site demolition and removal of select materials (old grandstands)	1	ls	$ 65,000.00	$ 65,000.00
Strip and Stockpile Existing Topsoil (assume 6") for removal by owner	2,000	cy	$ 2.50	$ 5,000.00
Ordinary Borrow to lift existing site elevation by approx 12"	3,500	cy	$ 18.00	$ 63,000.00
Subtotal				**$ 133,000.00**
ARTIFICIAL TURF FIELD				

[3] Estimates of probable construction costs provided by Huntress Associates, Inc. The AFSC expressly thanks Chris Huntress for numerous hours of assistance free of charge.

ITEM	QUANTITY	UNIT	UNIT COST	TOTAL
Athletic Field Gravel Subbase & Drainage	96,724	sf	$ 3.50	$ 338,534.00
Artificial Turf - Monofilament Infill System	96,724	sf	$ 4.25	$ 411,077.00
Artificial Turf - Alternative Infill System (TPE or alternative infill)	1	allow	$ 50,000.00	$ 50,000.00
Field Drainage to outfall	1	ls	$ 50,000.00	$ 50,000.00
Football Goal posts & pads	2	ls	$ 7,500.00	$ 15,000.00
Subtotal				**$ 864,611.00**
GRANDSTAND FOUNDATION				
Aggregate Base for new Grandstands (assume 8")	325	ton	$ 30.00	$ 9,750.00
Concrete pad for Bleachers (assume 6")	150	cy	$ 125.00	$ 18,750.00
Subtotal				**$ 28,500.00**
SITE IMPROVEMENTS				
Asphalt Walkways	20,000	sf	$ 5.00	$ 100,000.00
Flagpole, installed	1	ea	$ 5,000.00	$ 5,000.00
Scoreboard & Delay of Game Timers	1	allow	$ 30,000.00	$ 30,000.00
6' Chain Link Fence (Fusion Bond, Black)	600	lf	$ 54.00	$ 32,400.00
Loam and seed all disturbed areas w/ 6" topsoil and hydroseed	60,000	sf	$ 1.00	$ 60,000.00
Subtotal				**$ 227,400.00**
Subtotal				$ 1,328,511.00
6% Design & Engineering Fees				$ 79,711.00
10% Construction Contingency				$ 132,851.00
TOTAL				**$ 1,541,073.00**

Based upon the cost estimates outlined above, the cost for Phase 1 is $1,541,073. The AFSC recommends that town funds/bonding be utilized to pay for Phase 1. If the Board of Selectmen empowers the AFSC to market these recommendations to the Town of Swampscott and its Town Meeting members via a warrant article, the AFSC will make every effort to reduce the cost to the town. It should be emphasized, however, that none of the following cost reduction measures is in either the AFSC's or town's control.

The AFSC recommends that the town apply for a PARC Grant (as defined below). In fiscal year 2013, those awarded a PARC Grant received up to $400,000 in reimbursements for projects such as the one proposed here. Although the agency that awards PARC Grants has indicated that the award amounts will be reduced in fiscal year 2014 in order to provide additional municipalities with PARC Grants, the AFSC strongly encourages the town to apply.

Phase 2, which would include the cost of installation of light towers, is estimated at approximately $330,000. This phase would be funded exclusively by private donations and construction started after Phase 1 has been completed, or during Phase 1 if the funds are available.

Phase 3, which would include the cost of installation of ADA compliant grandstands and a press box on the home side of Blocksidge Field, is estimated at approximately $300,000. This phase would be funded exclusively by private donations and construction started after Phase 1 and Phase 2 have been completed, or during Phase 1 or Phase 2 if the funds are available.

Background

Since 2005, private groups and the town have considered proposals to overhaul Blocksidge Field and/or Phillips Park. In 2005, an all-inclusive master plan was created to completely renovate Phillips Park. The cost of the master plan was estimated at $5.5 million. This master plan was too expensive for the town and the proponents of the plan have not pursued it further.

In May 2012, the "All for One Field Committee," a private group of Swampscott residents, made an unsuccessful attempt to obtain approval of a $2.6 million[4] project to install, among other things, new grandstands, lights, and a multi-sport artificial turf field at Blocksidge Field (the "May 2012 Proposal"). The May 2012 Proposal sought $1,850,000 from the town, an amount that the Finance Committee reported could be financed without a tax increase to town residents. The Board of Selectmen, Finance Committee, and School Committee each supported the proposal at Town Meeting. The May 2012 Proposal included a promise to obtain $750,000 in private donations by December 2012. It did not, however, seek contributions from youth sports programs or a construction reimbursement grant from the Commonwealth through the Parkland Acquisitions and Renovations for Communities (PARC) Grant Program (the "PARC Grant").[5]

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[4] The All for One Field Committee proposed that $750,000 of the cost of the May 2012 Proposal would come from "private, local funding." The All for One Field Committee, Letter to Town Meeting Members, p.1 (May 3, 2012).

[5] The All for One Field Committee did research private grants, and determined, as did the AFSC, that private grants are almost exclusively provided to low income communities with a significant percentage of low income and/or minority residents in urban locations. The PARC Grant is often, but not exclusively, awarded to similarly situated towns and cities in Massachusetts.

Although the All for One Field Committee increased the private donation portion to $850,000, a supermajority vote was not reached and the warrant article failed to pass. The AFSC believes the article failed to pass for three primary reasons: (a) the cost was too high in relation to other capital improvement projects deemed to be of higher priority; (b) the real and perceived health risks associated with crumb rubber infill; and (c) the lack of information regarding the proposal or lack of time provided Town Meeting members to digest the information and make an informed decision. The AFSC believes that its recommendations address these concerns and, if supported by the Board of Selectmen, should be approved by Town Meeting in May 2013.

The AFSC and Its Scope of Responsibilities

In July 2012, the Board of Selectmen established the AFSC. In August 2012, the Board of Selectmen appointed its members, and on August 16, 2012, the AFSC conducted its first meeting. Pursuant to the Scope of Responsibilities, attached to this Memorandum as Exhibit B, the purpose of the AFSC is –

> [t]o develop a long-term improvement plan for the Town of Swampscott athletic field, commonly known as the football field, located adjacent to Humphrey Street that best serves the needs of the residents of the Town of Swampscott as well as the needs of the Swampscott High School students for the present and the future, using privately raised funds in addition to public funds.[6]

The scope of this project is set forth as follows:

> The scope of this project will address the immediate and future needs for practice and playing space within the field's area or at an alternative location, including a synthetic surface required for such. Planning for the replacement of the stands, inclusion of field lights and the construction of a concession stand will be considered but may be included in later project phases.[7]

Among the goals set forth in the Scope of Responsibilities are the following:

1. Examine existing and additional options to replace the current 'football field' with a synthetic surface.
2. Examine existing and additional options to repair or replace existing stands on site.
3. Include recommendations that result in facility improvement for all sports that primarily utilize the field area: football, field hockey, lacrosse, soccer, etc.

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6 Scope of Responsibilities, p.1.

7 Id.

4. Investigate sources of funding, including grants and private donations, to fund any recommendations of the Committee.[8]

The AFSC has met eleven (11) times since August 2012. During this time, the AFSC has conducted a thorough investigation into each of the goals set forth above. Committee members have interviewed turf and infill vendors, natural grass installers, listened to presentations by Selectmen, engineers, contractors, and artificial turf sales representatives. Committee members have also conducted internet research and telephone interviews, visited other towns' athletic fields, spoken to other town administrators concerning their artificial turf fields, reviewed product materials, met with grandstand vendors, and performed extensive research into various types of infill to be used in an artificial turf field system.[9] The AFSC has also drafted six (6) status reports for the Board of Selectmen. The AFSC conducted an informal public survey on Thanksgiving Day during the Swampscott/Marblehead football game. A copy of the results of the survey is attached to this memorandum as Exhibit C. Based upon the foregoing investigations, the AFSC finds and recommends the following:

AFSC Findings and Recommendations

A. The AFSC Recommends Replacing the Natural Grass Football Field at Blocksidge Field with a Multi-Sport, Artificial Turf Field in Phase 1.

The AFSC has conducted a thorough study of artificial turf fields and their components. Synthetic turf is commonly referred to as an infill-type system in which rubber granules (or an equivalent infill) are added to a flexible synthetic grass carpet to hold and stand the synthetic blades in place and provide a cushioned playing surface. Sand may also be mixed with the infill. The synthetic grass and infill are underlain with a crushed stone base and drainage pipes to facilitate rapid draining of the playing surface. Several manufacturers provide this type of system for use on athletic fields.[10] Long gone are the days of "Astro-turf": short pile nylon fibers containing unacceptable levels of lead on top of a concrete surface. Today's artificial grass is made primarily of polyethylene that contains no lead. The Synthetic Turf Council has stated that there are over 9,000 third-generation artificial turf fields in the United States today.

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8 Id.

9 Some of the parties mentioned include, Bill Lorenz of Carpell Sports Surfaces Corp. (turf installer), Chris Huntress of Huntress Associates, Inc. (field complex engineer and architect), Barry Greenfield, Selectman, the Swampscott Board of Health, Terra XPS (infill), Synthetic Turf Council, Melissa Cryan of Parkland Acquisitions and Renovations for Communities (PARC) Grant Program, John Taylor of National Recreation Systems, Inc. (grandstand replacement or retrofit), CushionFall (infill), GeoTurf (organic infill), Charles Osborne, Jr. of Osborne Organics, LLC (natural grass installer and Chairman of Marblehead Recreation Commission), NFL Grassroots Field Grant Program, Northeast Turf, Endicott College (artificial turf generally), Boston College (infill issues), numerous state, local and federal studies, numerous university and private corporate studies (synthetic turf system safety); and various memoranda from cities and towns in Massachusetts and other states (costs and funding of maintenance and installation, user health and safety).

10 Artificial turf systems may also include an irrigation system to keep surface temperatures down during summer months.

1. Thermoplastic Elastomer ("TPE") Infill or Other Alternative Products Should Be Used As Safer Alternatives to Styrene-Butadiene Rubber ("SBR" or "Crumb Rubber").

Public debate continues over potential environmental and health risks associated with the use of synthetic turf, and particularly, crumb rubber. Crumb rubber is made from recycled tires, which contains various chemicals that are considered volatile organic compounds ("VOCs") or semi-volatile organic compounds ("SVOCs"), including poly aromatic hydrocarbons ("PAHs"). Certain of these VOCs and SVOCs are known to cause cancer if exposed to unsafe levels over sufficient periods of time. While the town has not conducted an independent analysis of synthetic turf systems, nationally and internationally a large body of research has been commissioned by government health agencies, universities, independent laboratories, and health and environmental organizations.

The governmental and private studies respecting crumb rubber or synthetic grass have concluded that (a) there are no public health concerns regarding the potential inhalation of VOCs, SVOCs or particulates in the breathing zone or by inadvertent ingestion; (b) artificial turf harbors fewer bacteria (*e.g.*, antibiotic resistant Staphylococci) than natural turf; (c) the rate of skin abrasions per 1,000 player hours is two- to three-fold higher on artificial turf relative to natural turf; (d) more concussions occur on natural grass; (e) use of black crumb rubber infill may increase surface temperatures to degrees exceeding 150º F on hot summer days; (e) rotational resistance injuries occur at no greater frequency or intensity than on *quality* natural grass fields (Blocksidge Field cannot be considered a quality natural grass field); and (f) after a year of leach testing, no lead, selenium, or cadmium was found, and only trace amounts of zinc – well below water quality standards – was found.[11]

Two members of the AFSC, together with Selectman liaison Glenn Kessler, met with the Swampscott Board of Health at their November 13, 2012 meeting to discuss the potential health risks associated with artificial turf fields. The principal concern of the Board of Health was the use of crumb rubber infill and its adverse affects on the environment or human health. The Board of Health adamantly opposed the All for One Field Committee's proposed use of crumb

[11] See, e.g., Human Health Risk Assessment of Artificial Turf Fields Based upon Results from Five Fields in Connecticut (CT Dept. of Pub. Health, July 28, 2010); Health Issues with Artificial Turf Fields, (CA Dept. of Resources, Recycling and Recovery, Oct. 2010); see also Letter from Mass. Dept. of Public Health to Needham Board of Health (April 29, 2008) (recognizing that comprehensive study in California concluded that "exposure opportunities to [crumb rubber] materials would not be expected to result in health effects" but offered TPE as a safe alternative). It is worth noting that a study by Environmental and Human Health, Inc., conducted for the Connecticut Agricultural Experiment Station, concluded that crumb rubber releases chemical compounds into the air and ground water and thus constituted a chemical exposure for human beings and the environment. See Alderman, Nancy Artificial Turf: Exposures to Ground-Up Rubber Tires: Athletic Fields, Playgrounds, Gardening Mulch (Environmental & Human Health, Inc. 2007). Contrary to that study, however, the Connecticut Department of Public Health subsequently issued a fact sheet in 2007 about synthetic turf and concluded, "Based upon current evidence, a public health risk appears *unlikely*. However, there is still uncertainty and additional investigation is warranted." Connecticut Department of Public Health, Fact Sheet, October 2007, Artificial Turf Fields: Health Questions, http://www.tahd.org/pdf/artificial%20Turf.pdf. Based on conflicting reports and studies, the AFSC recommends avoiding crumb rubber infill and recommends TPE or other alternative infill.

rubber for an artificial turf field at the May 2012 Town Meeting and indicated that nothing had changed its position since then. The AFSC members directed the Board of Health's attention to the numerous federal, state and local agencies' and university studies that have each determined that there is no apparent public health concern other than increased temperatures and frequency of skin abrasions. Nonetheless, the Board of Health claimed that it could point to other health studies to the contrary. The Board of Health directed the AFSC members to organic infill made by Geoturf, but research into organic infill such as coconut husk and cork blends revealed that these products' quality was questionable. Video evidence found online shows organic infill destroyed by heavy rains, turning certain organic infill into clumpy mush so deteriorated that it cannot be restored. Moreover, industry representatives indicate that organic infill, while biodegradable, is prone to mold. Accordingly, the AFSC does *not* recommend the use of organic infill at this time.

The AFSC believes that the Board of Health's position on crumb rubber is shared with a sufficiently large number of Town Meeting members, and Swampscott residents generally, that proposing crumb rubber infill will jeopardize approval of any artificial turf field, regardless of cost. Accordingly, the AFSC does *not* recommend using crumb rubber for the artificial turf field.[12]

The AFSC's research has found that TPE infill is a safer alternative to crumb rubber infill and its quality exceeds that of organic infill. Because TPE is manufactured specifically from virgin plastics, it does not contain any of the VOCs or SVOCs found in crumb rubber infill.[13] TPE infill is non-toxic, heavy metal free, available in a variety of colors that resist fading and keep surface temperatures 30% cooler than black crumb rubber. TPE is also long lasting and is 100% recyclable and reusable as infill when the field is replaced. TPE infill, when utilizing virgin-based resins, will offer consistent performance and *g*-max[14] ratings over a wide temperature range. However, TPE costs substantially more than crumb rubber infill because it is manufactured from virgin materials.

Further research on alternative infill products should be performed during the engineering stage of Phase 1, as there are a number of alternatives, including without limitation, encapsulated crumb rubber, which has come to our attention but have not had the time to investigate fully. Therefore, the AFSC recommends the use of TPE or alternative infill products for the field.

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[12] The elevated temperatures on the surface of a synthetic turf field using black crumb rubber on hot summer days is another sound reason to use a crumb rubber alternative.

[13] There are no known studies indicating that TPE is a risk to the environment or to human health.

[14] *G*-max is a safety rating system that takes *g*-max measurements for body parts rebounding off the turf. This measurement costs approximately $1,000 per year and is required by all insurance companies. Adjustments must be made to ensure a *g*-max measurement is maintained within a range determined by the manufacturers and the insurers (and to ensure the warranty is not voided).

2. Synthetic Turf Should Be Used Instead of Natural Grass.

a. *Advantages and Disadvantages of Synthetic Turf.*

Synthetic turf has a number of advantages over natural turf. Synthetic turf -

- Provides a more consistent, resilient and level playing surface;
- Does not require irrigation, thus saving potable water;
- Does not require the application of fertilizers, pesticides or herbicides, thus reducing operating costs and exposure to non-organic compounds;
- Does not require weekly or bi-weekly mowing and edging, thus reducing emissions due to the use of gasoline powered maintenance equipment and reducing operating costs;
- Provides year-round use with no down time due to turf renovations (assuming no snow or ice buildup);
- Can support heavier use, allowing for additional programming of field use; and
- Provides an attractive, well-manicured appearance.

The disadvantages to using synthetic turf may include:

- Higher initial installation cost;
- Increased cost of repairs relating to vandalism or misuse compared to similar repairs made to natural turf (depending on the manufacturer, costs include travel and accommodations for the manufacturer's representatives to make the repairs, as the repairs done by a local contractor may void the turf system's warranty);
- Increased need for passive security measures and oversight to mitigate improper uses, such as food products, punctures or burns to the synthetic grass, which may reduce manufacturer's warranty or shorten the life span of the product;
- High replacement cost at the end of the synthetic turf's life expectancy for which funding will need to be identified (see below for discussion of replacement fund);
- Heat build-up on the playing surface can become a health and performance issue for users if black crumb rubber is used as the infill; and
- Cost and method of recycling or disposing of synthetic turf at the end of its lifecycle is not fully known, although estimates have ranged from $35,000 to

$100,000 depending on the type of turf and infill.

b. *The Increasing Overuse of Swampscott's Athletic Fields Demands Installation of an Artificial Turf Field*.

The AFSC considered the use of natural grass at Blocksidge Field. Committee members interviewed natural grass installers and compared the use of natural grass with artificial turf through online research.[15] In the recent past, Swampscott has received generous anonymous donations of sod for the center portion of Blocksidge Field. Despite at least two donations of sod and good-faith attempts by the Department of Public Works ("DPW") to maintain the field, the sod has been destroyed and the field is in awful condition.[16]

The AFSC has learned from Gino A. Cresta, Jr., Director of DPW, Jon Flanagan, Athletic Director for Swampscott High School, and Danielle Strauss, Director of the Recreation Department, that all of the athletic fields in Swampscott are subject to extreme overuse due to the ever-increasing number of youth athletes that need them. From youth sports like football, lacrosse and soccer, to high school sports like football, lacrosse, soccer and field hockey, all of the athletic fields in the town have been unable to rest. Moreover, Mr. Flanagan has informed the AFSC that an increasing number of injuries to our high school athletes occurs each year due to poor field conditions.

The AFSC also learned from Charles Osborne, Jr., of Osborne Organics, LLC, a natural grass athletic field installer and Chairman of the Recreation Commission in Marblehead, Massachusetts, that natural grass athletic fields must have time to rest. He indicated that games played on natural grass during the wet spring season can ruin the crown of the grass (the portion of grass that creates growth), which will stall growth for not less than 30 days. Continuous overuse of natural grass fields will leave bare patches that need rest and reseeding in order to grow. Furthermore, after heavy rains, the natural grass fields take much longer to drain than an artificial turf field constructed with a drainage system. Once the summer months begin, hot temperatures also cause a natural halt to growth. By the time fall sports begin, the lack of rest, lack of growth, and inability to keep up with maintenance of the fields causes the decrepit conditions currently seen at Blocksidge Field and elsewhere in town. Only a "red light" plan that is adhered to strictly and consistently will protect a natural grass field that is wet from spring rains. Unfortunately, the town does not have a sufficient number of natural grass playing surfaces to give an at-risk field the rest it needs.

These conditions are not improving, and with the ever increasing population of youth sports in Swampscott, it is unlikely that the town will be able to keep up with the maintenance

[15] See, e.g., Memorandum: Guidelines on the Use of Synthetic Turf within the City Park System (Park and Recreation Board, City of San Diego May 10, 2011); Interview with Charles Osborne, Jr., Osborne Organics, LLC.

[16] High school referees have commented that Blocksidge Field is one of the worst fields in Essex County, both for football and for lacrosse. One referee even threatened to cancel a game due to its poor condition. (Conversation with a Swampscott high school sports coach in May 2012.)

required to have suitable natural grass fields without giving these fields a chance to rest.[17] This problem is not limited to Blocksidge Field. Danielle Strauss has informed the AFSC that Upper Jackson and the Charlotte Road section of Phillips Park have been officially closed for the spring.[18] Upper Jackson field was overused to such a degree that it must be taken offline in its entirety and the attempt to re-seed Charlotte Road was unsuccessful.[19]

The AFSC has also learned that the cost to maintain natural grass under normal conditions at Blocksidge Field is approximately $15,000 per year, as opposed to $8,000 per year to maintain a (larger) multi-sport artificial turf field pursuant to a manufacturer's maintenance plan.[20] Natural grass fields require weekly mowing and sweeping, fertilization three times per year, aeration three times per year, biannual renovation, routine irrigation inspections, and watering. In contrast, a synthetic turf field needs only 20% of the water a natural grass field requires (for cooling purposes on extremely hot days), periodic sweeping, and occasional infill replacement (roughly once every four years) or minor stitching repairs. Long term maintenance costs for synthetic turf fields can be approximately 60% less than natural grass.

In a conversation with Mr. Osborne of Osborne Organics, it was learned that to completely re-sod Blocksidge Field, including stripping the existing soil, laser grading the field, replacing it with engineered soil and establishing a root system, the initial cost would be approximately $115,000.[21] Every two years, the field should be completely re-sodded, which costs approximately $85,000. An artificial turf field usually must be replaced after ten years at a cost of approximately $500,000, exclusive of disposal cost or savings for re-use of a portion of the infill. The cost to re-sod Blocksidge Field over ten years is approximately $455,000. Accordingly, the replacement costs are similar, and the maintenance costs are 60% less for a synthetic turf field. The initial installation of the artificial turf field, however, is obviously substantially more.

Notwithstanding the foregoing, Swampscott's fields can no longer survive the amount of use required for all of its sports. A quality artificial turf field will provide the much-needed rest that all of the athletic fields in Swampscott require. The AFSC is convinced that an artificial turf

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[17] There are well over 1,400 youth sports participants using the town's athletic fields, not including youth or high school baseball or softball.

[18] This is the case notwithstanding that the production company for "Grown Ups 2" completely renovated the football practice field, together with new and repaired drainage, at the rear of Phillips Park.

[19] When just one athletic field in Swampscott is closed for rest, it creates a ripple effect. For example, Sunday A.M. Softball, an organization that has purchased permits to play softball at Phillips Park every year from April to October since the 1950s, has been told it cannot play until mid-June so youth lacrosse can use the outfield between the softball fields on Sunday mornings.

[20] Gino A. Cresta, Jr., Director of DPW, and Charles Osborne, Jr. of Osborne Organics, LLC separately indicated that the cost to maintain the natural grass at Blocksidge Field under normal conditions is approximately $15,000 per year. Numerous artificial turf companies, and confirmed by Mr. Osborne, have indicated that it is standard in the industry to charge $8,000 per year for an artificial turf maintenance plan.

[21] Mr. Osborne did not prepare an official quote. The information was provided in a brief conversation based on his limited knowledge of Blocksidge Field and his experience in the industry. The AFSC thanks Mr. Osborne for volunteering this information.

field is no longer a "want;" it is most certainly a *need* for the town. Accordingly, the AFSC strongly recommends the installation of a multi-sport artificial turf field.

c. *Monofilament Synthetic Fibers Should Be Used for the Artificial Turf Surface.*

Not all synthetic grass is created equal. According to Bill Lorenz of Carpell Sports Surfaces Corp. ("Carpell") (among others), most smart purchasers of artificial turf fields order an oval, C6 grade resin, monofilament artificial grass (C4 being too loose, C8 being too stiff). Chris Huntress of Huntress Associates, Inc. agreed that monofilament fibers are preferred, and should have a density of 42-45 ounces. As stated previously, older nylon versions are not recommended due to their lead content. Furthermore, tape form (slit-film) synthetic fibers fray more easily than monofilament fibers and are therefore not recommended. The AFSC recommends the use of monofilament artificial grass with these specifications.

3. Blocksidge Field Is the Best Location for a Multi-Sport, Artificial Turf Field.

Consistent with the scope section of the Scope of Responsibilities, the AFSC considered various locations to construct a multi-sport, artificial turf field. Due to the size and location of Phillips Park, the Blocksidge Field location appears to be ideal. Nonetheless, alternatives were considered and presented by members of the AFSC and Selectman Barry Greenfield. The primary alternate location considered was Upper Jackson field.

Measurements were taken that demonstrate that an MIAA regulation-size soccer field could be placed inside the existing track at Upper Jackson. As a result, a multi-sport field accommodating football, lacrosse, soccer and field hockey could fit inside the track. Other considerations, however, made this location less desirable than Blocksidge Field, including, but not limited to, the following:

- Removal of ledge (solid rock/stone) underneath the surface of Upper Jackson could substantially increase construction costs;
- The lack of space to construct grandstands;
- The lack of space to store sports and field equipment;
- The lack of a field house for football and other sports athletes to change or rest;
- The lack of parking for football games;
- The inability to play ECYSA U12 or MBYL U11 games at Upper Jackson simultaneously because the required 70 yard width to do so does not exist within the parameters of the track, thereby adversely affecting no less than 16 youth soccer and lacrosse teams;

- The likelihood that residents abutting Upper Jackson would protest any future lights;

- Javelins used at a track and field meet could puncture the field and void the warranty;

- Lacrosse cannot practice on the field during track and field meets or practices due to the potential injury from stray lacrosse balls;

- The Thanksgiving Day survey found that 82% of residents polled would like a multi-sport artificial turf field to be located at Blocksidge Field;

- Many town residents have voiced their wish to make Blocksidge Field a gathering place for the town's children and families, and their belief that a renovated sports complex at this location would advance that goal.

The AFSC considered limiting a new multi-sport artificial turf field at Upper Jackson to lacrosse, soccer and field hockey games and practice, and football practice only, while allowing Blocksidge Field to remain natural grass and used exclusively for football games. The AFSC ultimately voted against this approach for many of the reasons listed above. Accordingly, the AFSC recommends that a multi-sport, artificial turf field complex be constructed at Blocksidge Field.

4. <u>The Artificial Turf Field Should Be Lined with Permanent and/or Temporary Lines to Accommodate Football, Soccer, Lacrosse and Field Hockey.</u>

The AFSC recommends that the artificial turf field be lined permanently and/or temporarily for football, soccer, lacrosse, and field hockey. Too many lines permanently placed on the field would cause unnecessary confusion. Since the cost to place temporary lines down for a specific sport is negligible, this issue can be discussed during the design period of Phase 1 and decided at a later date.

B. The AFSC Recommends That the Bleachers on Both Sides of Blocksidge Field Be Removed in Phase 1 and Only the Home Side Grandstands Be Replaced in Phase 3, with Mobile Bleachers Moved to the Visitor Side.

The AFSC reviewed the propriety of keeping the existing grandstands on one or more of the sides of Blocksidge Field. The AFSC weighed numerous factors, including (a) tradition and sentiment that there should be stands on both sides of the field; (b) the cost to restore, retrofit, or remove and replace each side's grandstands; and (c) size of the space involved vis-à-vis the installation of an MIAA regulation-size soccer field as part of a multi-sport artificial turf field. The AFSC learned from DPW and other engineers that the visitor side grandstands have failed inspection numerous times, and have often been ordered shut down for repairs. Although repairs have been made on each occasion to allow the visitor stands to pass inspection, it may be time to remove this costly structure for good.

With respect to the home side grandstands, conflicting opinions exist. DPW believes that the structural integrity of the steel framing is sound, while private engineers have disagreed. The AFSC learned from Chris Huntress of Huntress Associates, Inc. that there are numerous types of grandstands at numerous price points. Members of the AFSC also met with John Taylor, a local representative of National Recreation Systems, Inc. ("NRS"), a company that specializes in installing and retrofitting grandstands, including numerous grandstands for Massachusetts municipalities and school districts. Mr. Taylor stated definitively that it is next to impossible to retrofit the home side grandstands. He noted that regardless of the soundness of the steel supports, the old structural design is such that, after preparing a proper retrofit, the cost would equal or exceed the cost to completely replace them with new, ADA compliant aluminum stands and a press box. Accordingly, the AFSC recommends that the grandstands be demolished and replaced.

The AFSC further recommends that the grandstands be addressed in two phases of construction at Blocksidge Field. The AFSC believes that a new, multi-sport artificial turf field should have quality grandstands as part of its complex. To keep the cost down, however, the grandstands should only be replaced on the home side of the field. Accordingly, as part of Phase 1, which includes the installation of the artificial turf field, both the visitors and home side grandstands should be demolished and removed. Next, a gravel base and concrete foundation should be poured for future grandstands on the home side only. The town should seek private donations from the youth sports organizations in Swampscott to contribute to the purchase of mobile, temporary stands for the home side only. Installing the gravel and concrete foundation in Phase 1 will ensure a future place to erect home side grandstands when the private funds are available to do so. As part of Phase 3, new, elevated ADA compliant grandstands and a press box should be erected on the home side only, and the mobile, temporary stands should be moved to the visitors' side.

C. The AFSC Recommends That Lighting Conduit and Foundations Be Included in Phase 1 and Four Light Towers Be Erected in Phase 2.

The AFSC recommends that four light towers with sufficient lighting for night games be erected at the field. In order to do this, the AFSC believes that the lighting conduit and the foundations for the light towers should be installed as part of Phase 1 of the project. This advanced planning will ensure an easier and less expensive installation of the light towers themselves when the private funds are available.

Lights are recommended as Phase 2 of the project, rather than Phase 3, because of the deteriorated condition and rest needed of our existing natural grass athletic fields. Lights will allow practices to go on at night, giving additional rest to the natural grass fields like Upper Jackson that have been used for practices at night with temporary, portable construction lights.

D. The AFSC Recommends that the Town of Swampscott Use Town Funds/Bonding to Pay for Phase 1 and that Private Funds Be Raised for Phase 2 and 3 of the Project.

The AFSC is keenly aware of the various capital improvement projects that are important to the town. From the outset, the AFSC has struggled with the desire to place a top quality sports complex at Blocksidge Field and the practical and economic realities of the town's capital budget. The AFSC is also cognizant of the water and sewer problems in Swampscott and the exorbitant expense it may take to rectify those problems. Furthermore, the AFSC understands that the town may be advised by the ongoing feasibility study to shutter Hadley Elementary School and to erect a new single elementary school building for the town's elementary school children at an expense exceeding five times that of a multi-sport, artificial turf field complex.

With this in mind, the AFSC has worked diligently to try to find a quality and cost-effective solution to our aging and overused athletic fields. The AFSC determined that an urgent *need* exists to install an artificial turf field at Blocksidge Field. The AFSC found that the minimum cost to install a quality artificial turf field, together with infill that is safe for the environment and users, is $1.2 million. This amount, however, does not account for other necessary aesthetics, such as a walkway around the field, grooming and landscaping costs after construction is complete, a security fence, and a scoreboard and new goalposts and pads. Accordingly, the total cost of Phase 1, as set forth in the Executive Summary, is estimated to be $1,541,073. Nonetheless, the AFSC recommends that the Board of Selectmen and, ultimately, Town Meeting, approve the borrowing of $1,541,073 as a cap, with the opportunity to be reduced in the following manner.[22] It should be emphasized, however, that none of the following cost reduction measures is in either the AFSC's or town's control.

1. The Award of a PARC Grant May Further Reduce the Cost of Phase 1.

The Commonwealth, through the Parkland Acquisitions and Renovations for Communities (PARC) Grant Program, provides an opportunity for Swampscott to receive a significant reimbursement of the cost of the project. For fiscal year 2013, recipients of a PARC Grant could receive up to a $400,000 reimbursement of funds expended by the municipality on a qualified renovation project. According to Melissa Cryan at the Executive Office of Energy and Environmental Affairs (the "EEA"), the state agency that offers the PARC Grant, the FY14 amount will be somewhat reduced so that more municipalities can be awarded grants.[23]

The recommended project qualifies for a PARC Grant because it will have over 100 parking spots and is on the MBTA bus line with a stop within ½ mile of Blocksidge Field.

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[22] Selectman Barry Greenfield recently informed the AFSC of a lease to purchase option that might be available to the town. In summary, the lease to purchase option is provided by a company that provides leases with a term of seven years and 2.92% interest rate. The AFSC finance subcommittee has met with Tom Younger, the Town Administrator, to discuss this option, but no recommendation can be made at this time.

[23] The maximum award amount will not be known until March 2013. Twenty-five (25) cities and towns in Massachusetts will receive PARC Grants in FY13. Among those awarded PARC Grants this year are Boston, Brookline, Chelsea, Leominster, Lynn, Marblehead, Marlborough, Millbury, Salem, Somerville, Waltham and Worcester. Many of these towns received the maximum $400,000 grant.

Swampscott cannot, however, submit a PARC Grant application unless and until its Open Space and Recreation Plan ("OSRP") has been updated and submitted for approval by the EEA.[24] S. Peter Kane, Town Planner, indicated in September 2012 the current Open Space and Recreation Committee should have an OSRP ready for Board of Selectmen review by June 2013. Last year's deadline to submit a PARC Grant application was mid-July 2012. It is assumed the deadline will be similar. In addition, Ms. Cryan has stated that the Town Meeting vote to approve the project can occur at any time – it does not have to be timed to the OSRP or PARC Grant application. Ms. Cryan must review and approve the proposed warrant article language before Town Meeting votes on it.

Based on the foregoing, the AFSC recommends that the town prepare a PARC Grant application and submit it simultaneously with the OSRP prior to the mid-July 2013 deadline. Since the project's total cost to the town will be $1.541 million, a potential reimbursement of $350,000 if the PARC Grant is awarded would reduce the actual cost to the town to $1.191 million.

2. Competitive Bidding Could Further Reduce the Cost of Phase 1.

The AFSC recommends that the town seek corporate donations and competitive bids from local firms for Phase 1. The AFSC is confident that certain vendors and contractors in the construction industry will be willing to provide the town with competitive bids. The AFSC believes that corporations would be interested in advertising, naming rights or other recognition at Blocksidge Field, and therefore the town should explore such opportunities.

3. Installation of Four Light Towers Should Be Funded by Private Donations in Phase 2.

Phase 2, which would include the cost of installation of four light towers, is estimated at approximately $330,000. In an effort to keep the cost of this project down, this phase would be funded exclusively by private donations and construction started after Phase 1 has been completed, or during Phase 1 if the private funds are available.

4. Installation of Home Side Grandstands Should Be Funded by Private Donations in Phase 3.

Phase 3, which would include the cost of installation of ADA compliant grandstands and a press box on the home side of Blocksidge Field, is estimated at approximately $300,000. Again, in an effort to keep the cost of this project down, this phase would be funded exclusively by private donations and construction started after Phase 1 and Phase 2 have been completed, or during Phase 1 or Phase 2 if the private funds are available.

[24] Swampscott's OSRP was last updated and approved in 1983. An OSRP expires every five years.

5. The Town Should Enter into a Maintenance Agreement with the Manufacturer and Create a Replacement Fund to Defray the Cost of Replacement Turf.

Once an artificial turf field is installed, the town would obtain a warranty that would include both the installer and the manufacturer's materials and workmanship. The installer would come out to do repairs via a maintenance program. The installer/repair personnel should be certified by the manufacturer so no warranty issues arise. Some manufacturers' warranties are voided if proper and routine maintenance is not performed on the field. The maintenance agreement provides for the proper care and maintenance of the field. These agreements have a yearly cost of approximately $8,000.

A replacement fund should be established to defray the cost of replacing the turf as well. Most artificial turf fields come with an 8 year warranty, and have a lifecycle of ten years. The cost to replace a new field after 10 years is approximately $500,000 (the cost to re-sod a similar sized field with natural grass is approximately $455,000) in today's dollars. The replacement fund should be funded by (a) earmarking $10.00 of each youth sport user fee (appx. $20,000 annually); (b) obtaining rental fees (appx. $15,000 annually); (c) obtaining funds from season ticket sales (appx. $20,000); and/or (d) additional fundraisers.

Conclusion

The AFSC believes it has performed its due diligence for the Board of Selectmen and the Town of Swampscott. The AFSC respectfully submits that it has performed the tasks required of the Scope of Responsibilities and that its study is complete. The members of the AFSC, however, are ready and willing to perform appropriate public dissemination of information to Town Meeting members and all of Swampscott's residents, and to propose the project to Town Meeting if an article requesting funding for the project is placed on the warrant.

Dated: February 14, 2013

Respectfully submitted,

THE ATHLETIC FIELD
STUDY COMMITTEE,

By its Chairman,

/s/ Christian J. Urbano
Christian J. Urbano, Chairman
Athletic Field Study Committee