

**BID DOCUMENTS AND TECHNICAL SPECIFICATIONS**

***OSCAR FRAZIER PARK***  
***Playground Surface Improvements***

***IFB 2018 – 0061***

For



**Town of Bluffton**  
**Beaufort County, South Carolina**

**February 20, 2018**



## INVITATION FOR BID

### IFB 2018-61

### *OSCAR FRAZIER PARK PLAYGROUND SURFACE IMPROVEMENTS*

The Town of Bluffton is soliciting competitive sealed bids from experienced and qualified firms to provide new synthetic turf surface at Oscar Frazier Park playground, located at 7 Recreation Court, Bluffton, SC. The Town is requesting submission of sealed bids for the purchase and installation of synthetic turf surfacing, related safety padding, base material and edging.

The general scope of the improvements includes the following:

1. Removal and disposal of existing material to accommodate proposed sub-base.
2. Prepare, install and compact subgrade as per manufacturer recommendations and to ensure positive drainage.
3. Install edging per manufacturers recommendations.
4. Provide and install the required resilient pad layer corresponding to the various fall zones as required by the manufacturer specifications and national playground safety standards.
5. Protect existing playground equipment as required.
6. Provide and install approximately 6,500 sq. ft. of synthetic turf per attached specifications.
7. Cleanup and disposal.
8. Provide a minimum of a 5-year warranty of materials and labor.

The firm must be able to provide all of the required documents; meet the minimum qualifications; and provide proof of positive past performances to be considered a responsive and responsible bidder.

#### **Submittal of Sealed Bids:**

Sealed bids shall be received by or prior to:

**2:00 p.m. on Thursday, March 8, 2018**

The closing date and time shall be scrupulously observed. Packages containing submittals shall be presented as such that they may be easily identified. The outside of the package shall be identified as follows:

**IFB # 2018-61**  
**Oscar Frazier Park Playground Surface Improvements**  
**Attn: D. Coaxum**

Packages containing submittals and being delivered by postal, freight carrier, courier or in person shall be sent to:

**Town of Bluffton**  
**20 Bridge Street**  
**Bluffton, South Carolina 29910**

**Public Opening of Sealed Bids:**

Due to the renovation of Town Hall and the inability to provide proper accommodations for all participants and attendees of the public opening, the public opening will be held immediately following the deadline and at the address, on the date and time specified below:

**2:15 p.m. on Thursday, March 8, 2018**

**Rotary Community Center / Oscar Frazier Park**  
**11 Recreation Court**  
**Bluffton, South Carolina 29910**

No packages will be accepted at the Public Opening location. Packages must be submitted to the Town Hall location prior to the deadline to be considered. Packages mailed or hand delivered to the Rotary Community Center will be rejected.

The names of the firms submitting qualifications packages will be read aloud and recorded. No other information will be provided to the public until after a final contract has been awarded.

**Late Submittals:**

***Under no circumstances shall qualifications statements be delivered after the time specified; such submittals will be returned unopened to the submitting firm. The Town will not be responsible for late deliveries or delayed mail. It is the firm's sole responsibility to assure that his/her submittal is complete and delivered at the proper time and place prior to the deadline. Submittals which for any reason are not delivered will not be considered. Offers by facsimile, telegram or telephone are not acceptable.***

## **SOLICITATION TERMS and CONDITIONS**

At any time during the solicitation process, the Town of Bluffton reserves the right to refuse any and all sealed bids and to waive any technicalities and formalities. The Town may cancel this solicitation in part or in its entirety at any time during the solicitation process if it is in the Town's best interest to do so.

**Bidders Responsibility:**

While the Town has used considerable efforts to ensure an accurate representation of information in this IFB, each prospective Bidder is urged to conduct its own investigations into the material facts and the Town shall not be held liable or accountable for any error or omission in any part of this IFB.

Before submitting a bid, each Bidder shall make all investigations and examinations necessary to ascertain site conditions and requirements affecting the full performance of a contract and to verify any representations made

by the Town upon which the Bidder will rely. If the Bidder receives an award because of its submission, failure to have made such investigations and examinations will in no way relieve the Bidder from its obligations to comply in every detail with all provisions and requirements of the contract, nor will a plea of ignorance of such conditions and requirements be accepted as a basis for any claim by the Bidder for additional compensation or relief.

A Bidder, by submitting a bid represents that the Bidder has read and understands the Request for Bids requirements and its response is made in accordance therewith and that the Bidder is familiar with the local conditions under which the awarded Bidder must perform.

It is incumbent upon each prospective Bidder to carefully examine these requirements, terms, and conditions. Any inquiries, suggestions, or requests concerning interpretation, clarification or additional information shall be made in writing in accordance with procedures set forth herein. The Town will not be responsible for any oral representation given by any employee, representative or others. The issuance of a written addendum is the only official method by which interpretation, clarification or additional information can be given.

### **Questions and Inquiries:**

Questions and inquiries must be received seven (7) calendar days prior to the submittal due date. Replies considered necessary or critical to the solicitation will be issued through an addendum within the Bid Opportunities section of the Town's website at [www.townofbluffton.sc.gov](http://www.townofbluffton.sc.gov). It is the Bidder's responsibility to check the website periodically to determine if an addendum has been issued. Only questions answered by formal written addenda will be binding. Oral and other interpretations or clarifications will be without legal effect and may not be relied upon by potential firms in submitting their qualifications statement. Receipt of all addenda shall be acknowledged by the firm signing and enclosing said addendum acknowledgement with their bid.

Questions and inquiries regarding this solicitation shall be submitted to:

**Derrick Coaxum**  
**Town of Bluffton**  
**dcoaxum@townofbluffton.com**

### **Restricted Discussions:**

All prospective Bidders are hereby instructed not to contact any member of the Town of Bluffton Council, the Town Manager or Town of Bluffton staff members, other than the noted contact person OR the Town's Purchasing Administrator regarding this IFB or their response at any time during the IFB process. Any such contact shall be cause for rejection of your submittal

### **Opening of Bids:**

The receipt and opening of packages containing bids shall be public, at the address, on the date and time specified above. The closing date and time shall be scrupulously observed. All bid packages that have been timely accepted by the Town will be formally opened and accepted for consideration. The names of the firms submitting a bid package will be read aloud and recorded. No other information will be provided to the public until after a final contract has been awarded.

**Late Submittals:**

Under no circumstances shall bids be delivered after the time specified; such submittals will be returned unopened to the submitting firm. The Town will not be responsible for late deliveries or delayed mail. It is the firm's sole responsibility to assure that his/her bid is complete and delivered at the proper time and place of the said opening. Submittals which for any reason are not delivered will not be considered. Offers by facsimile, telegram or telephone are not acceptable.

**Acceptance / Rejection:**

The Town reserves the right to accept or reject any or all bids. The Town also reserves the right to waive any irregularities, informalities, or technicalities and may at its discretion, request a new solicitation.

Receipt of a bid does not indicate that the Town of Bluffton has pre-determined a company's qualifications to receive an award or contract. Such determination will be made after the opening and will be based on the Town's evaluation of the bids compared to the specific requirements and qualifications of a firm as contained and described in this document.

**Public Record:**

A bid is a public document under the South Carolina Freedom of Information Act (FOIA), except as to information that may be treated as confidential as an exception to disclosure under the FOIA. A firm that cannot agree to this standard should not submit a bid.

**Award:**

Award will be made to the lowest responsive and responsible Bidder. The Town reserves the right to consider criteria, such as, but not limited to, cost, past experience, ability, capability, reputation, and past performance. The Town may opt to establish alternate selection criteria to protect its best interest or meet performance or operational standards.

**Attachments:**

1. Bid Response Form;
2. Sample Contract;
3. Scope of Work; and
4. Technical Specifications

# **ATTACHMENT 1 – BID RESPONSE FORM**



**IFB 2018-61**  
***OSCAR FRAZIER PARK PLAYGROUND SURFACE IMPROVEMENTS***  
**BID FORM**

Cost	Schedule		
	Estimated Start	Estimated Completion	Total Number of Work Days
\$			

CONTRACTOR: \_\_\_\_\_

Owner/Manager: \_\_\_\_\_

Signature: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Business License #: \_\_\_\_\_

Date: \_\_\_\_\_

Contractor exceptions: \_\_\_\_\_

This bid is in effect for 90 days following bid opening.

## **ATTACHMENT 2 – SAMPLE CONTRACT**



**TOWN OF BLUFFTON AGREEMENT**  
**Contract Number 2018-61**

**COUNTY OF BEAUFORT**

**STATE OF SOUTH CAROLINA**

**THIS AGREEMENT** is made the \_\_\_\_ of \_\_\_\_\_, 2018 between <Contractor> (hereinafter called “Contractor”) and the Town of Bluffton (hereinafter called “Town”), a municipal corporation organized and existing under the laws of the State of South Carolina.

**WHEREAS**, the Town desires to install synthetic turf at the Oscar Frazier Park playground located at 7 Recreation Court, Bluffton, SC 29910; and

**WHEREAS**, the Town and Contractor desire to enter into an Agreement wherein the Contractor shall provide such services as set forth herein below:

**NOW, THEREFORE**, for and in consideration of the mutual promises, undertaking and covenants set forth herein, the receipt and sufficiency of which are acknowledged and affirmed by the Town and the Contractor, the parties hereto agree as follows:

1. **Services/Schedule:** The Contractor shall perform services per the attached scope of work in “Attachment 1”.
2. **Deliverables:** The deliverables resulting from execution of the above mentioned work shall be for all labor and materials needed to provide a complete and installed synthetic turf surface.
3. **Fees:** The total cost of these services shall be <Costs> per “Attachment 2”.
4. **Invoicing:** The Contractor shall send invoices to the Town of Bluffton, PO Box 386 Bluffton, SC 29910, Attn: Accounts Payable. The invoice should reference contract number 2018-61. Approved invoices shall be paid within 30 days upon receipt of invoice in the Finance Department.
5. **General Terms and Conditions:**
  - a. The Contractor shall be required to maintain the appropriate amounts and coverages of insurance for general liability, auto liability, and workers compensation as identified in “Attachment 1” for the entire length of the agreement. The contractor must provide the Town with a Certificate of Insurance for each that names the Town as an additional insured on their policy. The Contractor is required to immediately contact the Town should any change to these policies occur during the course of the performance of this contract. Failure to maintain these policies is grounds for termination.
  - b. Work will commence at NOTICE TO PROCEED and expire upon completion and acceptance of the project. All deliverables, whether goods, services, supplies, or other, shall become the property of the Town. Any deliverables that may be provided in hard copy and electronic form, such as drawings, plans, specifications, reports, or other, shall be provided in such formats and orientations as required by the Town.
  - c. Contractor shall be licensed to perform the work including, but not limited to, a current Town of Bluffton Business License and any required State of South Carolina license.
  - d. Contractor shall comply with the most current Federal and State of South Carolina Laws and Regulations, including but not limited to, Fair Labor Standards Act and Occupational Safety and Health Administration guidelines.
  - e. In the event the Contractor is required to hire Sub-Contractors, those Sub-Contractors must be appropriately licensed by the Town of Bluffton. The Contractor must provide the Town with a list of all Sub-Contractors and to immediately notify the Town of any changes. Use of non-licensed Sub-Contractors is grounds for termination.

- f. The Town Manager or his designee may terminate this contract in whole or in part at any time for the convenience of the Town. If the contract is terminated for the convenience of the Town, the Town will pay the Contractor for costs incurred to that date of termination.
- g. Should any part of this Agreement be rendered void, invalid or unenforceable by a court of law, such a determination shall not render void, invalid or unenforceable any other part of this Agreement.
- h. This Agreement has been made and entered into in the State of South Carolina, and the laws of South Carolina shall govern the validity and interpretation of this Agreement in the performance due hereunder.
- i. This Agreement may not be modified nor any additional work performed unless such modification or work is approved in writing and signed by both parties. The Contractor may not assign this contract without the prior written approval of the Town.
- j. The Contractor shall defend, indemnify, and hold harmless the Town, its officers, directors, agents, and employees from and against any and all actions, costs, claims, losses, expenses, and/or damages, including attorney's fees, whether incurred prior to the institution of litigation, during litigation, or an appeal arising out of or resulting from the conduct of any activity hereby authorized or the performance of any requirement imposed pursuant by this Agreement, however caused or occasioned, unless caused by the willful misconduct or gross negligence of the Town.
- k. In the event the Town has to proceed to litigation to protect or enforce its rights, the Town shall be entitled to recover its reasonable attorney fees and costs.
- l. Unless otherwise specified in this Agreement, Contractor shall provide a **five (5) year** warranty for the work performed hereunder, with said time to be measured from the date of final acceptance of the work by the Town.
- m. The parties hereto intend that no master/servant, employer/employee, or principal/agent relationship will be created by the Agreement. Nothing contained herein creates any relationship between the Town and Contractor other than that which is expressly stated herein. The Town is interested only in the results to be achieved under this Agreement. The conduct and control of the Contractor's agents and employees and methods utilized in fulfilling its obligations hereunder shall lay solely and exclusively with the Contractor. The Contractor's agents or employees shall not be considered employees of the Town for any purpose. No person employed by the Contractor shall have any benefits, status, or right of employment with the Town

**IN WITNESS WHEREOF**, the parties hereto affixed their signatures hereto the date first written hereinabove.

**<CONTRACTOR NAME>**

**TOWN OF BLUFFTON**

Date: \_\_\_\_\_

Date: \_\_\_\_\_

By: \_\_\_\_\_

By: \_\_\_\_\_

Print Name: \_\_\_\_\_

Print Name: \_\_\_\_\_

Position: \_\_\_\_\_

Position: \_\_\_\_\_

Witnesses: \_\_\_\_\_

Witnesses: \_\_\_\_\_

**Attachments:**

- 1. Exhibit A – Scope of Work
- 2. Exhibit B – Price Schedule (Bid Form)

# **ATTACHMENT 3 – SCOPE OF WORK**



**TOWN OF BLUFFTON**  
**SCOPE OF WORK – EXHIBIT “A”**  
**FOR**

**Oscar Frazier Park Playground Surface Improvements**

**I. GENERAL**

- A. The Contractor, if doing business under an assumed name, i.e. an individual, association, partnership, corporation, or otherwise, shall be registered with the State of South Carolina and hold a current and valid Town of Bluffton Business License.
- B. The Contractor shall assume full responsibility for damage to Town property caused by the Contractor's employees or equipment as determined by designated Town personnel.
- C. The Contractor shall be solely responsible for the safety of the Contractor's employees and others relative to the Contractor's work, work procedures, material, equipment, transportation and related activities and equipment.
- D. The Contractor shall obtain all permits required by the Town to perform the services of this Agreement.
- E. This is a non-exclusive agreement. The Town may now or hereafter enter into agreements with other Contractors for similar or like services.
- F. Services to be provided shall be performed by personnel directly employed by the Contractor. Under no conditions shall any work specified be subcontracted without the Town's prior approval. Pre-approved Sub-Contractor's shall be accompanied by and under the direct supervision of the Contractor at all times.
- G. All sub-Contractors must be pre-approved in writing by the Town. The Contractor shall provide the Town with three (3) references for each sub-Contractor for similar work done within the past three-(3) years. All sub-Contractors must have a Town Business Licenses, as well as proper insurance and licenses.
- H. The Contractor shall ensure that the required services specified in this contract, meet the quality standards outlined therein. All work performed under this contract shall be consistent with best industry practices, to assure adequate protection of Town assets and configurations.

- I. All work shall be performed according to best industry standards as adopted by the State of South Carolina and to the complete satisfaction of the Town.
- J. All work shall be scheduled at the convenience of the Town as not to interfere with Town's conduct of business.
- K. All work shall be done in a safe manner and comply with all governing regulations concerning safety. This shall include, but not limited to OSHA, MOSHA, etc. All work being performed for and/or on Town property shall fully conform to all local, state and federal safety regulations.

**II. SCOPE OF SERVICES**

- A. Removal and disposal of existing material to accommodate proposed sub-base.
- B. Prepare, install and compact subgrade as per manufacturer recommendations and to ensure positive drainage.
- C. Install edging per manufacturers recommendations.
- D. Provide and install the required resilient pad layer corresponding to the various fall zones as required by the manufacturer specifications and national playground safety standards.
- E. Protect existing playground equipment as required.
- F. Provide and install approximately 6,500 sq ft of synthetic turf per attached specifications.
- G. Cleanup and disposal.
- H. Warranty - The Contractor agrees that the goods or services furnished shall be covered by the most favorable commercial warranties the Contractor gives any customer for such goods or services and that the rights and remedies provided therein are in addition to and do not limit those available to the Owner by any other clause of this solicitation. At a minimum, all materials, equipment and labor shall be fully guaranteed by the Contractor against defects resulting from the use of inferior materials, equipment, or workmanship for five (5) years from the date of final acceptance of each project by the Town in writing. The Contractor warrants that, unless otherwise specified, all materials and equipment incorporated in the work under the contract shall be new, in first class condition, and in accordance with the contract documents. The Contractor further warrants that all workmanship shall be of the highest quality and in accordance with contract documents and shall be performed by persons qualified at their respective trades. Defects discovered during the warranty period shall be corrected by the Contractor to the Town's satisfaction, at no cost to the Town and shall be subject to the provisions of this clause to the same extent as materials initially delivered.

- I. Work Site Damages - Any damage to existing utilities, equipment or property resulting from the performance of this contract shall be repaired to the Town's satisfaction at the contractor's expense.
- J. Superintendence by Contractor - The contractor shall have a competent foreman or superintendent, satisfactory to the Owner, on the job site at all times during the progress of the work. Prior to work starting, the Contractor shall provide the Town's Project Manager with the supervisors contact information. The Supervisor shall be readily available to communicate with the Project Manager at any time during the project. The Contractor shall be responsible for all construction means, methods, techniques, sequences, and procedures, for coordinating all portions of the work under the contract except where otherwise specified in the contract documents, and for all safety and worker health programs and practices. The Contractor shall notify the Town, in writing, of any proposed change in superintendent including the reason therefore prior to making such change.
- K. Contractors Conduct - Employees of the Contractor must be able to work within a public setting without creating a disruption and conform to all policies, rules and regulations. Contractor shall require that their employees to be courteous at all times and not to use loud or profane language. Contractor shall require that its employees shall not trespass, loiter, cross property to adjoining premises, or tamper with property not covered by the contract.
- L. Damages - The Contractor shall be responsible for damage or injury to property during the prosecution of the Work resulting from any act, omission, neglect, or misconduct in the method of executing the Work or attributable to defective Work or materials. This responsibility shall not be released until final acceptance of the Project by the Town of Bluffton. When direct or indirect damage is done to property by or on account of any act, omission, neglect or misconduct in the method of executing the Work or in consequence of the non-execution thereof on the part of the Contractor, the Contractor shall restore such property to a condition similar or equal to that existing before such damage was done by repairing, rebuilding or restoring, as may be directed by the Town.
- M. Restoration - Proper notice shall be given to the Town of any expected inconvenience or hazardous condition. Road surfaces adjacent to the work site that have been soiled by the Contractor shall be cleaned of soil with mechanical brooms at the end of the project. All surplus materials shall be disposed of in a manner acceptable to the Town, and the construction area shall be left in a neat condition. No machinery or equipment shall be left or stored on the job site after the project is completed. If the Town determines that inadequate progress is being made with the restoration, he may shut down the Contractor's operation until the restoration is caught up with the work.
- N. Date of Commencement and Completion - The date of commencement for the project shall be established in a written Notice to Proceed issued by the Town. Work under the Contract shall be completed within the time frame established in the Notice to Proceed.
- O. Discrepancies - The Contractor shall immediately report to the Owner, in writing, any discrepancies found between the Contract Documents and site conditions or any

inconsistencies or ambiguities in the Contract Documents. The Town shall promptly correct such inconsistencies or ambiguities in writing. Work done by the Contractor after his discovery of such discrepancies, inconsistencies or ambiguities shall be done at the Contractor's risk.

### **III. INSURANCE**

The Contractor shall at all times maintain the following minimum amounts and coverages of insurance during the contract:

Workers Compensation – The Contractor shall agree to maintain Worker's Compensation Insurance & Employers Liability in accordance with the State of South Carolina Code.

Business Auto Policy – The Contractor shall agree to maintain Business Automobile Liability at a limit of liability not less than \$1,000,000 each occurrence for all owned, non-owned and hired automobiles.

Commercial General Liability – Commercial General Liability for public liability during the lifetime of a contract shall have minimum limits of \$1,000,000 per occurrence, \$2,000,000 aggregate for Personal Injury, Bodily Injury, and Property Damage Liability. Coverage shall not contain an exclusion or limitation endorsement for Contractual Liability or Cross Liability.

Additional Insured Requirements – Except as to Workers' Compensation and Employers' Liability, said Certificate(s) shall clearly state that coverage required by the contract has been endorsed to include the Town of Bluffton, a municipality of the State of South Carolina, its officers, agents and employees as Additional Insured with a CG 2026- Designated Person or Organization endorsement, or similar endorsement, to its' Professional Liability. The name for the Additional Insured endorsement issued by the insured shall read "Town of Bluffton", a municipality of the State of South Carolina, its officers, employees and agents along with the Contract and/or Bid number. The Certificate of Insurance shall unequivocally provide thirty (30) days written notice to the Town prior to any adverse changes, cancellation, or non-renewal of coverage thereunder. Said liability insurance must be acceptable by and approved by the Town as to form and types of coverage. All insurance policies shall be issued from a company or companies duly licensed by the State of South Carolina.

### **IV. INVOICING AND PAYMENT**

The Town does not prepay for materials, work or services provided. The Town shall make payment to the Contractor for all services provided by the Contractor pursuant to this Agreement. The Contractor shall submit a written invoice, with a copy to the Project Manager, for services rendered and the Town shall pay the approved invoiced fee within thirty (30) days after receipt of the approved invoice by the Town's Finance Department.

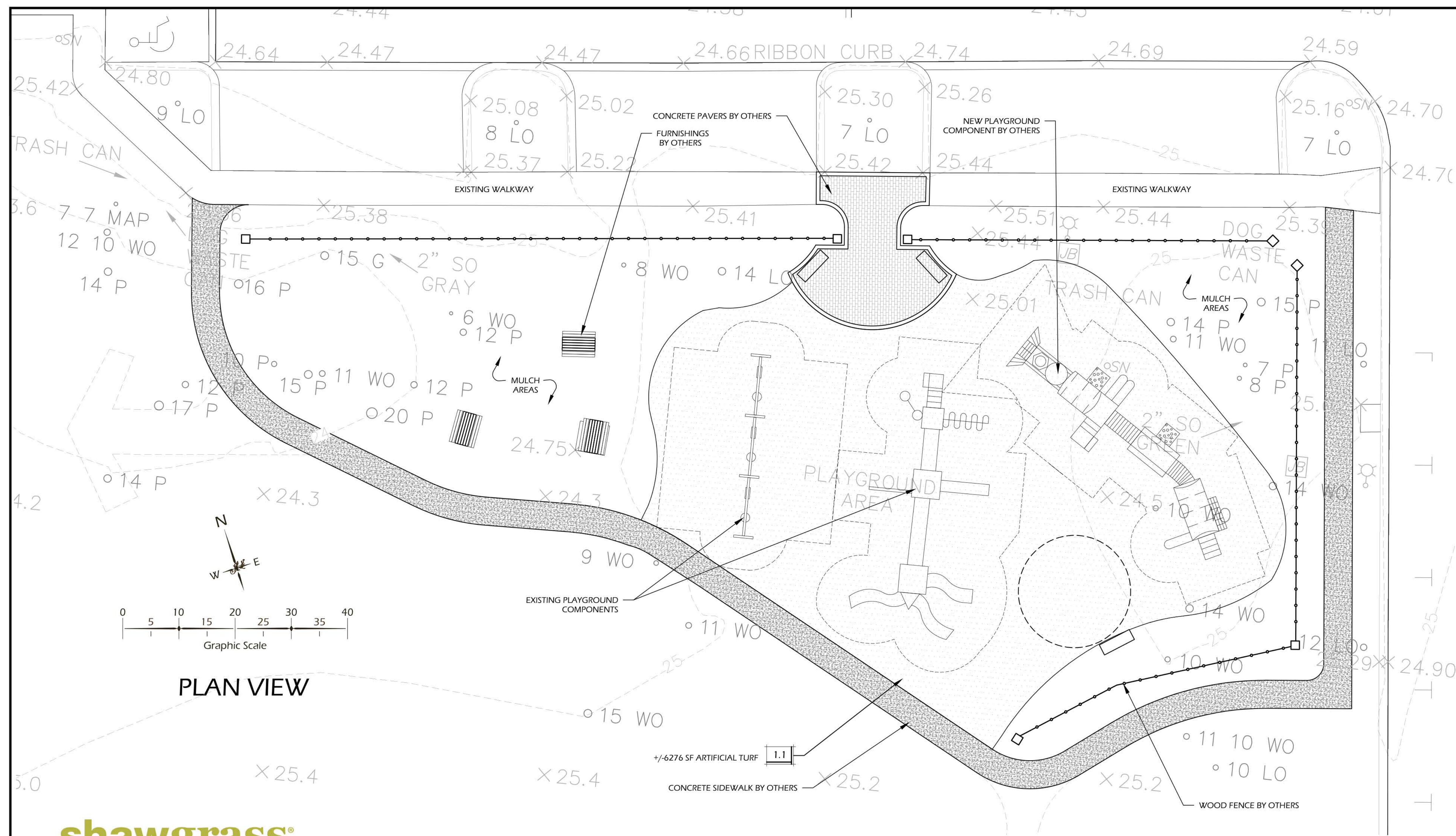
Paper Invoices shall be submitted to:      Town of Bluffton  
Attn: Accounts Payable Department

20 Bridge Street  
Bluffton, SC 29910

Electronic Invoices may be submitted to: [invoice@townofbluffton.com](mailto:invoice@townofbluffton.com)



**ATTACHMENT 4 – TECHNICAL  
SPECIFICATIONS**

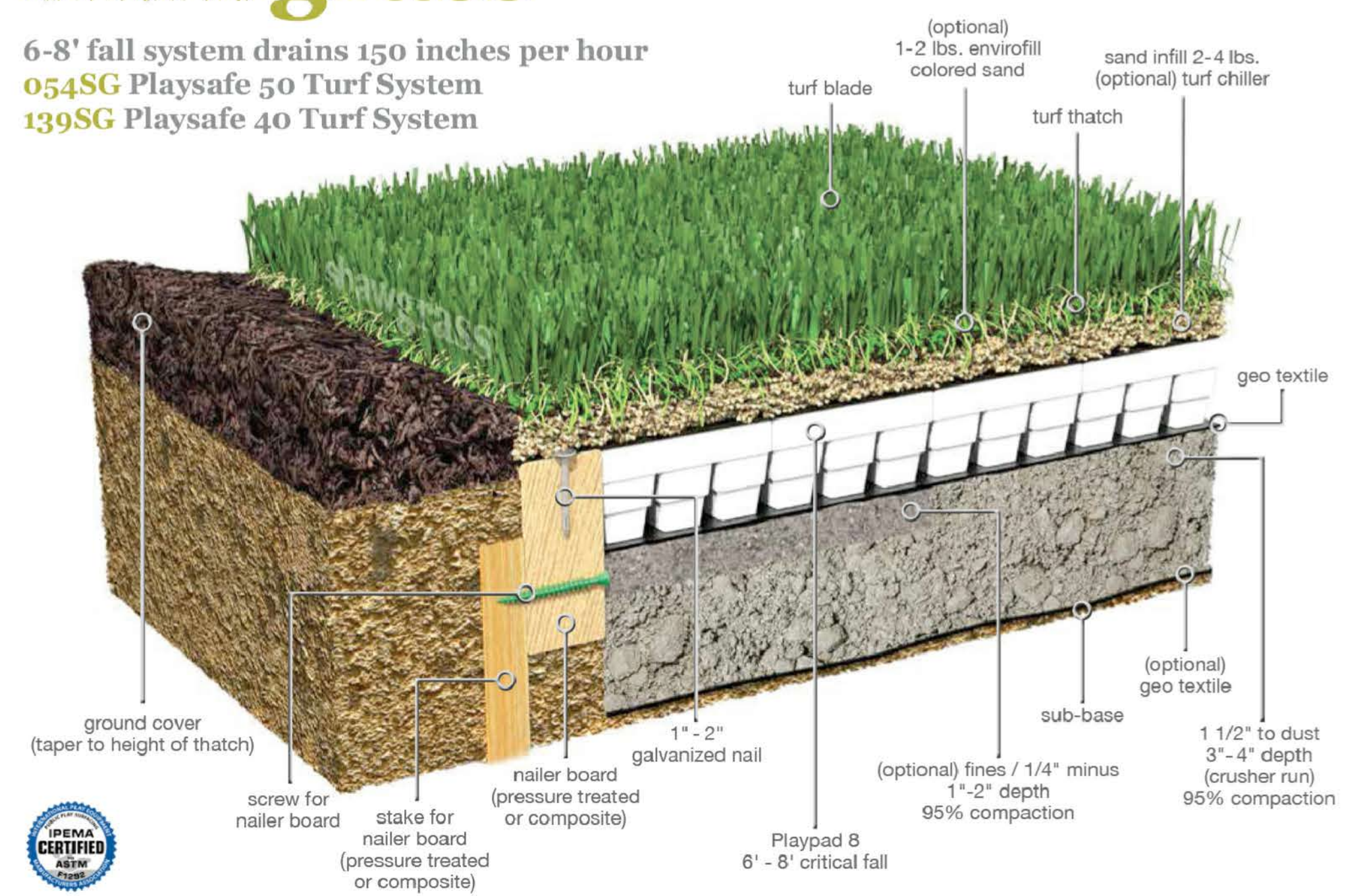


PLAN VIEW

RECREATION COURT

**shawgrass®**

6-8' fall system drains 150 inches per hour  
**054SG Playsafe 50 Turf System**  
**139SG Playsafe 40 Turf System**



© 2017 WJK LTD.  
 DESIGN CONCEPTS, DRAWING SHEETS, LOGOS, SPECIFICATIONS, DETAILS, WRITTEN MATERIAL SHALL NOT BE USED OR REPRODUCED IN WHOLE OR IN PART IN ANY FORM WITHOUT PRIOR WRITTEN CONSENT OF WJK LTD.  
 THIS SHEET TO SCALE AT: 24"x36"

SITE DEVELOPMENT PLANS  
 FOR  
**IMAGINATION TRAIN PLAYGROUND**  
 OSCAR FRAZIER PARK  
 BLUFFTON, SOUTH CAROLINA

DATE:	FEB 12, 2018
PROJECT NO.:	16108.01
DRAWN BY:	LW
CHECKED BY:	WM

**PRELIMINARY  
 SUBMITTAL PLAN,  
 NOT FOR  
 CONSTRUCTION**

REVISIONS:


DRAWING TITLE  
**KEY SHEET**

DRAWING NUMBER  
**L100**

## SECTION 02790 – ARTIFICIAL TURF

### PLAY SAFE 50 (GB043)

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## Part 1 – GENERAL

### 1.01 DESCRIPTION OF WORK

- A. The extent of artificial turf work is shown on the drawings.
- B. Artificial Turf work includes, but is not limited to, the following:
  - 1. A complete synthetic turf system, consisting of compacted crushed stone (road base) and nominal one and a half inch (1.5”) long polyethylene sports performance fiber with thatch, tufted into a single, dimensionally stable, three component primary backing with a secondary backing consisting of a minimum of 17 ounces of urethane per square yard.
  - 2. An up to 50 degree temperature reducing infill system (when used in accordance with manufacturers recommended guidelines), consisting of round silica sand coated with Hydro Chill by Shaw Industries.
  - 3. A closed cell foam underlayment pad, if required, that meets or exceeds the standard specification for impact attenuation of surfacing materials within the use zone of playground equipment (ASTM F 1292).
  - 4. Edge details
  - 5. Maintenance manual
  - 6. Written 10-year warranty for excess fading and UV degradation and a 5-year warranty for normal wear.
  - 7. Train field maintenance personnel in proper care maintenance procedures.
- C. Provide all materials, labor, equipment and services required to accomplish related work in accordance with the drawings and specifications.
- D. The turf shall be specifically designed, manufactured and installed for the intended use of heavy traffic, commercial playgrounds and/or adjacent general purpose play areas. If required, the system’s shock attenuation shall have a G-max value of less than 200 and a Head Injury Criteria (HIC) less than 1,000 (ASTM F 1292).
- E. The system shall be wheelchair accessible (ASTM 1951).

- F. Copies of independent laboratory test reports on system or components with sand and or rubber infill materials:
  - 1. ASTM F 1292 Head Impact
- G. Prior to Final Acceptance, the synthetic turf contractor shall submit to the owner three (3) copies of their maintenance manuals. These manuals will include all necessary instructions for the proper care and maintenance of the newly installed synthetic turf system.

## **1.02 SUBMITTALS**

### **Submit the following within 48 hours of bid opening:**

- A. Three (3) copies of most recent installation/reference list for all projects of similar scope to this project completed in the last three years.
- B. One (1) 12" x 12" sample of proposed synthetic turf carpet and one (1) 12" x 12" boxed samples including infill representative of the finished synthetic turf system. Also, submit three (3) copies of product data and testing documents demonstrating that proposed product meets or exceeds all specified requirements. One (1) 12" x 12" sample or shock/drain pad must also be submitted if applicable.

### **Submit the following prior to the ordering of materials:**

- A. The field builder/warrantor must exhibit evidence that the parent company exceeds \$4 billion in annual revenues, and that the operating division exceeds \$300 million in annual revenues and carries a minimum of \$500,000 in cash as warranty reserve and has a minimum of 50 independently owned franchises throughout the continental U.S and Canada from which warranty service and emergency repairs can be performed.
- B. Component certificates and samples: Provide seven (7) copies for each component from component manufacturer that will be used for this project. Each material certificate must be stamped and checked as approved by the synthetic turf contractor before submittal to the architect.
- C. Provide to the architect material samples of the following: One pint of sand infill, one pint of Hydro Chill sand infill, two 12" x 12" samples of synthetic turf and two 12" x 12" samples of foam pad (if applicable).
- D. Submit one (1) 12" x 12" sample of shock/drain pad (if applicable) with product data sheet.
- E. Submittals: Prior to ordering materials, the Contractor shall submit a sample warranty and any details of construction which deviate from the plans and specifications.
- F. Submit three (3) copies of the resume of proposed installation foreman. Installation crew must meet or exceed all requirements outlined in Section 104 E.

- G. Submit three (3) copies of manufacturers recommended maintenance equipment cut sheets.

### **1.03 JOB CONDITIONS**

- A. All job conditions in Section 02200 apply.

### **1.04 QUALITY ASSURANCE**

- A. Provide a qualified installation foreman to coordinate and review the component parts of the artificial turf system. Submit a resume of experience for approval prior to starting work.
- B. Warrantor must provide evidence of 50 independently owned franchises (support locations) throughout the continental U.S and Canada from which warranty service and emergency repairs can be performed.

- C. Sand Filled Artificial Turf

1. Factory-Trained technicians skilled in the installation of athletic-caliber infilled synthetic turf systems will undertake the placement of the turf. Special brushing equipment and techniques will be used in the installation.
2. The designated installation crew shall provide a list of installed projects consisting of a minimum of ten high quality commercial areas, similar in size to the current project over the past three years.
3. A letter from the turf manufacturer that the installation crew and foreman have been factory certified must be submitted prior to the start of the turf installation.
4. The Turf Contractor shall meet the following criteria: The turf contractor must provide competent workmen skilled in this type of artificial turf installation. The designated Supervisory personnel on the project must be certified, in writing by the turf manufacturer, as competent in the installation of this material, including cutting, gluing or sewing seams and proper installation of the infill and the temperature reducing infill agent (Hydro Chill). The manufacturer shall have a qualified job foreman on site to certify the installation and warranty compliance.

- D. WARRANTY

1. The contractor shall submit its Manufacturer's Warranty against excess fading and UV degradation for a minimum of ten (10) years.
2. The contractor shall submit an additional Manufacturer's Warranty, which warrants the usability and playability of the artificial turf system, for its intended use, for a minimum of five (5) years commencing with the date of Substantial Completion. This warranty coverage shall not be prorated nor place limits on the amount of the play area's usage. This warranty shall also require the addition of bevel edged, heavy duty, rubber wear mats (placed over the turf) under each swing and slide exit.

3. The turf contractor's warranty must have the following characteristics:
  - A. Provide a Ten (10) year warranty against excessive fading and UV degradation.
  - B. Provide full coverage for a minimum of five (5) years, covering normal wear, from the date of substantial completion.
  - C. Warrant materials and workmanship.
  - D. Repair or replace such portions of the installed materials that are no longer serviceable to maintain a serviceable play surface.
  - E. Be from a single source covering workmanship and all materials.
  - F. Assure the availability of exact or substantially the same replacement materials for the artificial turf system installed for the full warranty period.
  - G. Include general wear and damage caused by UV degradation. The warranty at a minimum shall specifically exclude vandalism and acts of God beyond the control of the manufacturer and installer.
  - H. Cover defects in the installation and workmanship. Assure the installation was done in accordance with both the manufacturer's recommendations and any written directives of the manufacturer's on-site representative.
  - I. Shall be limited to repair or replacement of the affected areas, (unless the play area fails to meet required G max and HIC ratings in which case proceed to 1.01, D) at the option of the manufacturer, and shall include all necessary materials, labor, transportation costs, etc., to complete said repairs.
- E. All components and their installation method shall be designed and manufactured for use on commercial playgrounds and play areas. The materials as hereinafter specified shall withstand full climatic exposure, be resistant to insect infestation, rot, fungus and mildew; it shall also withstand ultra-violet rays and extreme heat.
- F. The adhesive bonded or sewn seams of all system components shall provide a permanent, tight, secure, and trip hazard free playing surface.
- G. The installed artificial turf system's drainage capability shall allow water to flow through the turf, sand infill and pad at a rate of 16-20 inches per hour. Some water will "sheet drain" across the surface but the water that doesn't will pass through and travel horizontally across the crushed stone base. NOTE: If play area is to be bordered by a sidewalk, French drains shall be included in the perimeter areas, to enable water to pass under those sidewalks.

## Part 2 – PRODUCTS

### 2.01 SYNTHETIC GRASS SYSTEM

- A. Synthetic Grass:  
 Style: Play Safe 50 (or # GB043)  
 Description: Sports Performance Fibers  
 Fiber Type: 100% Polyethylene Slit Tape  
 Fiber Mass: 8000 denier  
 Lisport: Fiber must maintain 90% of its Fibril Width after 10,000 cycles on the Lisport Machine  
 Thatch: 6 ply TXT, 7300 denier  
 Tufted Pile Height: 1.5 inches  
 Color: Olive Green with Olive Green thatch  
 Tufting Gauge: ¼  
 Primary Backing: 7 oz/yd<sup>2</sup> (Stabilized dual layered woven polypropylene)  
 Secondary Backing: 17 oz/yd<sup>2</sup> (100% Urethane)  
 Tufted Face Weight: 50 oz/yd<sup>2</sup> (ASTM D 418)  
 Total Weight: 74 oz/yd<sup>2</sup> (ASTM D 418)  
 Finished Roll Width: 15 feet  
 Finished Roll Length: up to 100 feet (standard)  
 Permeability: 16-20 inches +/- per hour  
 Infill Composition: Hydro Chill silica sand, 3 lbs. per square foot (1/2" +/-).
- B. Sand Infill: The sand provided as a component of the infill shall be rounded silica sand so as to minimize abrasion to kids as well as synthetic grass fibers. It shall be engineered to provide the look, feel, footing, and shock absorption of a natural grass field in ideal conditions.
- C. Hydro Chill, a moisture activated, "infill technology" that can lower surface temperatures up to 40 degrees F during the hottest times of the year. Results vary from region to region and other factors. Hydro Chill coats the silica sand granules and cures to form a super absorbent polymer film that produces a "controlled release" throughout the day known as "evaporative cooling". As the turf surface gets heated by solar radiation, moisture stored in the Hydro Chill coated sand is slowly released into the atmosphere providing a substantially cooler playing surface for kids.
- D. **BASE BID:** Standard of Quality shall be Shaw/Southwest Greens, Play Safe 50 Synthetic Turf System as manufactured by Shaw/Southwest Greens or Architect approved equal. Contact Shaw/Southwest Greens at (404-432-6185).
1. Alternate: List alternates if any or delete.
  2. Alternate: List alternates if any or delete.

**Manufacturers for synthetic turf alternates shall meet or exceed the requirements listed in Part 2.01.**

## **2.02 PRE-MANUFACTURED SHOCK/DRAIN PAD**

- A. The pad shall be bacteria resistant, porous, Expanded Polypropylene in typical thickness of either ¾" (#SP220) or 2.0" (#PlayBase50) depending on critical fall height (ASTM F 1292). Material shall be delivered in panels with protective wrapping. Standard of quality shall be as manufactured by Brock International (303) 544-5800 or Architect accepted equal.

## 2.03 DRAINAGE BASE MATERIALS

- A. Excavating: Existing area shall be excavated to the depth established by the Architect and as shown on the excavation plan. The sub grade shall be shaped to achieve a minimum one (1) percent slope (drainage). The dirt sub grade shall also be compacted to a minimum of a 95% standard proctor density.
- B. Geotextile Filter Fabric: Geo Textile Fabric shall go over the compacted dirt sub base and under the crushed stone base.
  - 1. Non-woven polypropylene geo-textile fabric shall be chemically and biologically inert and shall be equivalent to the following or Architect accepted equal:
    - a. Mirafi 140M, Mirafi Inc., Pendagrass, GA (888) 795-0808.
- C. Stone Base Courses:
  - 1. Install 4" of aggregate. Contact local soil or civil engineers for detailed local aggregate specifications and performance expectations. Aggregate shall be state DOT road base or equivalent such as "crush and run". Aggregate shall consist of crushed rock composed of hard, fractured fragments free of clay coatings.
  - 2. Level subsurface aggregate to +/- 1/4" over 10' measured in any direction. The aggregate will likely have a size ranging from fines to 3/4". This product is difficult to get smooth enough for a proper surface installation due to the larger pieces contained in the mix. To ensure proper planarity, install 1/2" of 1/4" minus granite screenings or "chips and dust" or "m-10's" over the final compacted and leveled subsurface. This material is used to fill in the undulations in planarity of the compacted aggregate.
  - 3. Use a vibrating compactor to reach 95% standard proctor density. In most cases it will be impossible to obtain adequate compaction with vibrating compaction alone. Complete multiple passes in both directions. Install material in 2" layers assisting compaction by soaking aggregate with water. Once aggregate has been adequately compacted, a compaction test is recommended.
  - 4. Inspect final compacted aggregate base.
- D. Adhesive Bonded Seams:
  - 1. Adhesives for bonding tufted synthetic turf shall be one part moisture cured polyurethane obtained from a single manufacturer and be equivalent to Nordot 34-N2 or 34-G as manufactured by Synthetic Surfaces, Inc., Scotch Plains, NJ (908) 496-6000.
  - 2. Seaming Tape: Tape for securing seams in the tufted synthetic turf shall be high quality tape made with a minimum roll width of 12 inches.
- E. Sewn Seams: If seams are to be sewn, they must be sewn with high quality cord/thread as recommended by synthetic turf manufacturer.



## PART 3 – EXECUTION

### 3.01 SUBMITTALS

- A. Prior to ordering materials, submit a sample warranty, seam layout of play area, and all details of construction that deviate from the plans and specifications.

### 3.02 HORIZONTALLY DRAINING BASE

- A. The synthetic turf base contractor shall strictly adhere to the installation procedures outlined under this section. Any variance from these requirements must be accepted in writing, by the manufacturer's on-site representative, and submitted to the architect/owner, verifying that the changes do not in any way affect the warranty.
- B. Install geotextile over excavated and prepared sub grade in accordance with Turf Contractor's recommendations. Provide a 36" minimum overlap at all seams.
- C. Concrete Header Curb and Pressure Treated Wood Turf Nailer: The synthetic turf perimeter fastening structure shall be installed before the drainage aggregate.
  - 1. The 6" x 12" concrete header curb shall be installed in accordance with the Drawings and/or Shop Drawings and these Specifications. The foundation of the concrete header curb shall be a compacted road base aggregate.
  - 2. Install a pressure treated wood 2" x 4" nailer. Pressure treated wood nailer shall be set ½ inch below the top of the curb by means of Tapcon concrete screw approximately every twelve (12) inches. This shall be the responsibility of the synthetic turf base contractor. See synthetic turf edge attachment detail.
- D. Base Drainage Aggregate: The installation of the base drainage aggregate shall only begin after a minimum slope of 1% exists, the dirt sub base is compacted to 95%, the nailer board has been installed ½" below the top of the sidewalk, French drains exists around the edges (or lowest spot in the play area) to allow water, that does not sheet drain, to travel under the curb/sidewalks.
- E. Base Acceptance: The architect and/or Owner's Representative must jointly approve the base before shock pad or turf installation can begin.
- F. Pre-Manufactured Shock/Drain Pad (Optional):
  - 1. After the Base Aggregate has been approved and inspected, the Pre-Manufactured Shock/Drain Pad shall be installed. Only hand placed puzzle cut panels shall be allowed. Rolled shock pads shall not be allowed.
    - a. Puzzle cut panels must be placed by hand. No equipment shall be allowed on the stone base to minimize disturbance of the stone base during pad installation.

- b. All Operations shall work from behind the placed pad or from adjacent, pre-installed pad surface.
  - c. Care shall be taken as to not disturb the choker layer materials (“fines”) when butting the seams together.
  - d. Panels shall be placed in 15’ width intervals completely across the width of the playing surface and turf shall be rolled out upon the placed pad as to minimize exposure of pad to potential windy conditions. Pad shall not be left exposed over night without being secured by turf and/or sand bags.
  - e. Styrene-butadiene rubber (SBR) mixed with aromatic binder and troweled smooth is acceptable when filling in around playground posts, odd shaped edges and under extremely low decks. However, when applied in the fall zones, this material must also meet or exceed critical fall height requirements (ASTM F 1292). Required mix proportions by weight: 18% polyurethane, 82% rubber. Using screed sticks and gauge polls, install the buffing rubber materials to 1/4" higher than required thickness. Using pool trowels, pull the base material together using consistent pressure throughout. Repeat the process until all areas, including fall zones, comply with the provided architectural plans and specification requirements. Allow to cure for sufficient time (5 to 24 hours) so that indentations cannot be made. Installation contractor must verify that these new base pads have cured sufficiently before applying the synthetic turf.
- 2. The Pre-Manufactured Shock/Drain Pad shall not receive a final cut or edging detail until the material has relaxed/expanded in direct sunlight for a maximum of one (1) hour.
    - a. No open seams shall exceed 1/8” after final seam or end cutting is complete.
    - b. Padding material shall cover the entire surface of the exposed nailer board.
  - 3. The Pre-Manufactured Shock/Drain Pad shall be inspected by the Synthetic Turf Contractor after completion to insure the surface is completely smooth without bumps from stone particles or other material protruding from underneath.
    - a. Expansion bubbles and open seams shall be repaired prior to final inspection.
    - b. Repeat inspections shall be carried out prior to each roll of synthetic turf being installed.

#### G. Synthetic Turf and Infill Materials

- 1. After a final inspection of the Resilient Underpad by the Contractor and the Owner’s Representative, the synthetic turf installation shall begin. The first roll shall begin with the longest perpendicular cross-field distance. No head seams shall be permitted in the inbound playing surface.
- 2. The rolls of turf shall be rolled out a minimum of four (4 hours) prior to starting seaming procedures and allowed to relax/expand.

- a. All visible wrinkles shall be stretched out before seaming.
  - b. Seams shall be flat, tight and permanent with no separation or fraying.
  - c. Synthetic turf yarn fabric that is trapped or glued between seams shall be freed from the seams by hand or other approved method to an upright position prior to the commencement of brushing and top dressing procedures.
  - d. All Synthetic Turf seams shall be assembled as follows: the full width rolls shall be laid out across the play area. Utilizing standard state of the art adhering or sewing procedures, each roll shall be attached to the next.
  - e. The “grain” of each roll of turf shall always go in the same direction.
  - f. When all of the rolls of the play area have been installed, the edge areas shall be cut to shape and installed perpendicular to the center play area.
3. After all seaming is completed; the infill shall be spread evenly, using a drop spreader or top dresser.
    - a. Hydro Chill sand infill shall be applied in a uniform rate of multiple applications until the specified infill depth is achieved (3 lbs. per square foot at a minimum).
    - b. Infill material shall be brushed between infill applications with a motorized rotary broom and pull-type groomer brush simultaneously.
    - c. The Hydro Chill infilled sand may need to be sprayed with water the morning before a scheduled event in order to achieve optimal results during the hottest part of the day.

H. Synthetic Turf Perimeter Attachment:

1. After final trimming, the turf backing shall be screwed into the pressure treated wood nailer system as per the turf manufacturer’s recommendations.

### **3.03 AREA LAYOUT**

- A. Play area Layout shall be shown on the record drawings.

### **3.04 CLOSE OUT**

- A. The turf contractor must verify that a qualified representative has inspected the installation and that the finished play area surface conforms to the manufacturer’s requirements.
- B. The turf manufacturer shall provide a warranty to the owner that covers defects in materials and workmanship of the turf for a period of 10 years from the date of Substantial Completion as described in 1.04 F. Submit three (3) copies of the warranty.

- C. The turf contractor must submit three (3) copies of its maintenance manual to the owner.
- D. Synthetic turf contractor must train owner's designated field personnel how to properly use grooming equipment as well as make minor repairs.
- E. Extra Materials: Synthetic turf contractor must leave a partial pail of adhesive, 100 linear feet of seam tape, one bag of Hydro Chill sand (in weather proof bag) and one 5' x 5' piece of turf with owner before leaving job site. All salvageable pieces of turf used during the installation should be left with the owner or play equipment dealer as well.

### **3.05 CLEAN UP**

- A. The Turf Contractor shall provide the labor, supplies and equipment necessary for final cleaning of surfaces and installed items. The Owner is responsible for providing a dumpster for final jobsite cleanup.
- B. All usable remnants of new material shall be neatly rolled up and turned over to the Owner at a place and area designated by the Owner.
- C. During the Contract and at intervals as directed by the Architect and as synthetic turf installation is completed, clear the site of all extraneous materials, rubbish, or debris and leave the site in a clean, safe, well draining, neat condition.
- D. Surfaces, recesses, enclosures, etc., shall be cleaned as necessary to leave the work area in a clean, immaculate condition ready for immediate occupancy and use by the Owner.

### **3.06 HIC/G-MAX TESTING**

- A. Optional at substantial completion, the synthetic turf contractor can, if specified, hire an independent testing laboratory to perform a field G-max and HIC test (ASTM F 1292) to verify that the shock attenuation properties of the play area meet the requirements set forth in this specification. Submit three (3) copies of the HIC/G-max test to the owner.

# Play Safe 50

## Construction Specification & Warranty

### PART 1 – GENERAL

#### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specifications apply to this section.

#### 1.2 DESCRIPTION OF WORK

A. Provide all materials, labor, equipment and services required to accomplish related work in accordance with the drawings and specifications. The turf system shall be specifically designed, manufactured and installed for high use, public playgrounds. The turf system shall be IPEMA Certified and 100% wheelchair accessible (ASTM F 1951) in the field. The turf system shall drain up to 130 inches per hour (ASTM F 1551), excluding the crushed stone base. The system's shock attenuation shall have a G-max value of less than 200 and a Head Injury Criteria (HIC) less than 1,000 (ASTM F 1292). The turf system shall consist of, but not necessarily be limited to, the following:

1. Synthetic turf consisting of nominal one and a half inch (1.5") long polyethylene fibers with thatch that is tufted into a single, dimensionally stable, three component primary backing with a secondary backing consisting of a minimum of 17 ounces of urethane per square yard. Shaw Grass Play 50 with Ultraloc backing or equivalent.
  2. Closed cell foam underlayment pads that meet or exceed the standard specification for impact attenuation of surfacing materials within the use zone of playground equipment (ASTM F 1292). Either Brock PlayBase or Brock SSP20 or equivalent depending on various fall height requirements.
  3. Synthetic Turf Infill that is designed to cool the playing surface 30-50 degrees as well as prolong the life of the turf fibers shall be used. A combination of two (2) pounds of Turf Chiller (by Shawgrass) and one (1) pound of clean silica per square foot shall be mixed and installed via power broom in at the jobsite.
- B. Work included in this Section includes grading necessary to shape and drain the area and base preparation and installation of the synthetic turf in areas shown on Drawings.

### PART 2 - PRODUCTS

#### 2.1 SYNTHETIC TURF SAFETY SURFACE

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A. Aggregate Base – Crushed angular hard stone, ¾” minus compactible stone (not clean). (Refer to Section 3.2-B)

B. Synthetic Turf: A nominal 1.50 inch turf specifically designed for high use public park and public school playgrounds and play areas. Play Safe 50 by Shaw Grass, 185 South Industrial Blvd, Calhoun GA 30701: Phone (404) 432-6185, or Architect approved equal.

- a. Fiber Type: Shaw Polyethylene Slit Tape
- b. Fiber Mass: 8000 denier
- c. Thatch: 6 ply TXT, 7300 denier
- d. Tufted Pile Height: 1.50 inches
- e. Color: Olive with Olive thatch
- f. Tufting Gauge: ¼”
- g. Primary Backing: 7 oz/yd<sup>2</sup> (Stabilized dual layered woven polypropylene)
- h. Secondary Backing: 17 oz/yd<sup>2</sup> (100% Urethane)
- i. Tufted Face Weight: 50 oz/yd<sup>2</sup> (ASTM D 418).
- j. Total Product Weight: 74 oz/yd<sup>2</sup> (ASTM D 418)
- k. Finished Roll Width: 15 feet
- l. Finished Roll Length: Up to 100 feet (standard)
- m. Warranty: 5 year wear, 10-year fade

C. Pad Underlayment System: Bacteria resistant, porous, expanded polypropylene in various thicknesses depending on Critical Fall Height Requirements (ASTM F 1292). Foam pads engineered by Brock International (303) 544-5800 or Architect approved equal.

**Brock #SSP20 pad (for 2’-5’ falls-ASTM F 1292)**

- a. Expanded polypropylene
- b. 20mm thick (approximately ¾”)
- c. 15.90 square feet (net coverage per pad)
- d. 100% wheelchair accessible (ASTM F 1951)
- e. 100% recyclable
- f. Rainfall capacity: 730 inches per hour (ASTM F 1551)
- g. Life expectancy when used under synthetic turf: 16 years

**Brock # PlayBase (for 6’-8’ falls-ASTM F 1292)**

- a. Expanded polypropylene
- b. 2.0” thick with impact absorbing pistons and drainage channels
- c. 16.88 square feet (net coverage per pad)
- d. 100% wheelchair accessible (ASTM F 1951)
- e. 100% recyclable
- f. Rainfall capacity: 280 inches per hour (ASTM F 1551)
- g. Life expectancy when used under synthetic turf: 20 years

NOTE: All seams between pads must be taped before synthetic turf is added.

NOTE: A minimal 1 inch per 1 foot slope shall be installed as a smooth transition between fall zones requiring different sized pads. This can be accomplished by staggering the crushed stone base or by mixing and troweling SBR (rubber buffings)/aromatic binder.

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D. Synthetic Turf Infill: TurfChiller™ with Bac-Shield from Shaw Grass, 185 South Industrial Blvd., Calhoun, GA 30701. Phone (404) 432-6185 or Architect approved equal.

- a. Color: Light Brown/Buff
- b. Anti-Microbial
- c. Non-toxic
- d. Grain shape: Hardness: 6-8 Mohs
- e. Krumbein Roundness: 0.8
- f. Krumbein Sphericity: 0.8
- g. Specific Gravity: 2.65 lb per cf
- h. Bulk Density: 97.4 lb/ft<sup>3</sup>
- i. Mesh Size: 16/30
- j. Porosity: 10-15%
- k. Acid Solubility: < 2.0%
- l. Turbidity (FTU): <250
- m. Temperature Stability Fahrenheit: 1400
- n. Angle of Repose: +30 degrees
- o. Dust: Negligible

NOTE: Turf Chiller™ sand is designed to retain moisture from rainfall, dew or irrigation for days and cool the turf surface temperatures via “evaporative cooling” up to 50 degrees during the hottest times of the year compared to standard synthetic surfaces. Turf Chiller™ sand should be mixed with either Envirofill or clean silica sand at the jobsite as follows: Two (2) pounds of Turf Chiller™ with one (1) pound of Envirofill or clean silica sand per square foot. All sand should be installed using drop spreader and power broom. NOTE: Irrigation (sprinklers) can be set to water the synthetic turf surface once every 3.5 days during the hottest times of the year to achieve maximum results.

E. Splicing Material (seaming tape): Kingsport BV-Holland® 12” wide minimum, spun-bonded polyester or Architect approved equal.

F. Adhesive: Nordot 34G as manufactured by Synthetic Surfaces Inc., Scotch Plains, New Jersey (908-496-6000) or Architect approved equal.

G. Adhesive: Mapei PU2K, 2 part OD adhesive as manufactured by MAPEI Corporation, Deerfield Beach, FL. (800-992-6273) or Architect approved equal.

H. Molded rubber mats: For under all swings and slide exits. Green, 3’ x 3’ x 2”, Beveled edges, 67 lbs., flat back (for glue down). RB Rubber Products, 904 McMinnville, Oregon, 504-472-4691 or Architect approved equal.

## PART 3 - EXECUTION

### 3.1 GROUND PREPARATION

A. General: The ground area to receive synthetic turf safety surface is indicated on the Drawings.

B. Leveling and Site Preparation: All organic material and organic debris to be removed. Soil to be graded level and stabilized (compacted). Compaction shall be done with mechanical

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compactors, including vibratory compactors, and/or powered tampers, and rollers.

### 3.2 BASE AND SYNTHETIC TURF CONSTRUCTION

A. General: The area to be smooth and graded to allow proper drainage. Refer to grading plan. The overall grade of the playground is not to exceed 3%.

B. Compacted Aggregate Base: Place 4 inches of aggregate base as leveling layer compacted to 90% of max density per AASHTO T99. Compaction shall be done with mechanical compactors, including vibratory compactors, and/or powered tampers, and rollers. Aggregate size should be ¾" minus (compactable).

C. Synthetic Turf: Place turf and cut to fit configuration as shown on Drawings. Splice seams. All seams must be attached with splicing film/fabric and adhesive as approved by the manufacturer for this type of installation of their product.

D. Infill: Apply layers of synthetic turf infill evenly with a spreader and broom the turf fibers with stiff bristle broom to stand fibers up and allow infill to settle into the bottom. Broom in two (2) pounds of Turf Chiller and one (1) pound of clean silica per square foot.

E. Anchoring/Edging: Edges of turf will be secured to ground or concrete curb with mechanical fasteners, stakes or edging.

## PART 4 - WARRANTY

### 4.1 WARRANTY

A. Please refer to the updated Shawgrass warranty for details.

## Commercial Playground Limited Warranty for Playsafe 50 Turf

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The following is the Commercial Playground Limited Warranty issued by Shaw Industries, Inc. ("Shaw") for our Playsafe 50 Turf made with poly-ethylene sports performance fibers, and coated with a polyurethane unitary backing system.

This Commercial Playground warranty begins when the turf is purchased. **The turf must be installed in accordance with Shaw Industries installation guidelines and specifications.** The turf must be maintained in accordance with Shaw Industries maintenance (turf care) recommendations and such maintenance continues throughout the duration of the original installation.

This Warranty is further limited to the period of time the turf is owned and maintained by the original end-use purchaser. The basis of any warranty related claim is the original authorized Shaw dealer invoice. Damage resulting from the failure to follow these instructions will not be covered under this warranty.

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Installation guidelines and specifications along with turf care recommendations can be obtained from your dealer or from The Shaw Information Center at 1-800-441-7429.

### **Ten year limited warranty coverage:**

**Fiber – Fiber Degradation** - Shaw warrants that the **Playsafe 50 Turf**, when installed and maintained as recommended by Shaw Industries for proper outdoor use, will not display ultraviolet (UV) degradation, resulting in fiber deterioration or loss.

(Failure is defined as the loss of 25 % of the tufted products based on the original weight of the products at the time of manufacturing per test method ASTM D 5848).

Actual degradation will cause a deterioration of the yarn and loss of pile as a result. Failure does not include a decrease in pile height of the face yarn from the original pile height as a result of surface compression due to normal wear.

### **Five year limited warranty coverage:**

**Backing - Tuft Bind** - Shaw warrants that our **Playsafe 50 Turf**, when installed and maintained as recommended by Shaw Industries, under normal use, will meet industry standards for tuft bind.

**Backing - Integrity/Delamination** - Shaw warrants that our **Playsafe 50 Turf**, when installed and maintained as recommended by Shaw Industries, under normal use, will not delaminate from the face of the turf.

Note: The construction, fiber and backing system used in these products are designed and engineered for use when installed in playground and general play area applications.

### **What you should do if any of the above problems occur and you need**

**warranty service:** You (the original purchaser) should notify the authorized Shaw Dealer and/or your Shawgrass representative and submit in writing, the following:

- A valid proof of purchase in the form of a sales receipt or other documents which establish proof of purchase.
- A detailed description of the problem and/or a photograph/sample that clearly shows the warranty problem.

Shaw Industries will designate a representative to inspect the Turf and evaluate the warranty claim.

### **What Shaw Industries will do should you need warranty service:**

Should a defect covered under this warranty be found, the affected area will be repaired to conform to the warranty.

If repair is not commercially practical, Shaw may, at its sole option, replace the affected turf or refund the proportional purchase price for the affected area.

Shaw will pay the reasonable costs for freight and labor. Any costs incurred for the moving of equipment, furnishings, and the like, that were installed over the turf will be at the consumer's expense.

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## What conditions apply to Shaw Industries Commercial limited Warranty of Playsafe 50 Turf:

This commercial playground warranty specifically excludes:

- a) Turf not installed in accordance with Shaw installation guidelines.
- b) General soiling, discoloration and appearance change due to flattening of pile or pattern due to pile distortion.
- c) Staining or fading from exposure to substances or contaminants which degrade or destroy the face fiber or the color of the turf.
- d) Turf installed on stairs/landings or in areas subject to abnormal use.
- e) Turf exposed to abusive wear from abrasion or from pivot points when using inappropriate foot wears i.e. ski boots, metal cleats, hard plastic cleats, metal golf spikes, or sports equipment.
- f) Turf installed in inappropriate applications. i.e. under playground such as swings, slide landing areas or other high friction play equipment, unless rubber mats are placed over the Playsafe 50 Turf and under all swings, slide exits and around all “merry go round” type structures and other high friction play equipment.
- g) Turf installed where standing water, floods and/or flooding conditions exist.
- h) Turf installed on contact sports fields I.E. football, soccer, lacrosse, etc., unless these fields are designed for general purpose recreational play. Example: There is a big difference between a general recreation play area where elementary school kids play soccer during recess and a regulation soccer field that hosts high school, college and professional team competitions.
- i) Burns, cuts, accidents, vandalism, abuse, negligence or neglect.
- j) Improper design or failure of the base or sub-base of the landscape.
- k) Wear or abrasion caused by inadequate base or sub-base.
- l) Wear or movement of product due to lack of infill on infilled products.
- m) Use of improper infill products.
- n) Use of improper cleaning agents, pesticides, herbicides, or chemicals, and maintenance methods not recommended by Shaw.
- o) Failure to properly maintain, protect or repair the turf.
- p) Damage caused by reflection (melting) or other flammable materials.
- q) As with any manufactured flooring product, there can be occasional slight differences in color between “dye lots”. Shaw cannot be responsible for any color shading differences between different rolls of turf.

**Please note - The warranty is not transferable. It extends only to the original purchaser. Shaw does not grant to any person or entity the authority to create for it any obligation or liability in connection with this product.**

**Shaw shall not be liable to the consumer or any other person or entity for any incidental, special or consequential damages, arising out of breach of this limited warranty or any implied limited warranty (excluding merchantability).**

**All implied warranties, including an implied warranty of merchantability or fitness for a particular purpose, are hereby limited to the duration of this limited warranty. Some states do not allow the exclusion or limitation of implied warranties or the limitation of incidental or consequential**

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**damages, so the above limitations or exclusions may not apply to the purchaser. This warranty gives the purchaser specific legal rights, such rights may vary from State to State.1-24-2016 ga**

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**TÜV SÜD America Inc.**  
**Product Safety Services**  
 47523 Clipper Drive  
 Plymouth, MI 48170  
 Phone: 734.455.4841

**IPEMA Surfacing Material Report – ASTM F1292-13**

Participant:	<u>Shaw-Southwest Greens Internationa</u>	TUV Report No.:	<u>QI1404331-1</u>
Main Office Address:	<u>PO BOX DWR 2128</u>	Report Date:	<u>5/7/2014</u>
	<u>Dalton, GA 30722</u>	Test Date:	<u>5/6/14 &amp; 5/7/14</u>
Phone:	<u>877 260 7888</u>	Selection:	<input type="checkbox"/>
Manufacturing Location ID:	<u>Calhoun, GA</u>	Initial:	<input checked="" type="checkbox"/>
Commercial Name of product:	<u>Play Safe 50 Turf System 6-8 FT</u>	Follow up:	<input type="checkbox"/> Ref Job:
Date of Manufacture:	<u>Unknown</u>	Sample Receipt Date:	<u>4/29/2014</u>
No. of samples submitted:	<u>3: 18 x 18 Play 50 Turfs, 1 bag Hydro</u>	Ambient Air Temperature:	<u>23.3°C</u>
	<u>Chill Sand, 3: 18 x 18 x 2" Foam Pads</u>	Humidity:	<u>29.0%</u>

**Test Equipment:**

Triax System 1:	<input checked="" type="checkbox"/>	Environmental Chamber No.:	<u>PLYP00101</u>
Triax System 2:	<input type="checkbox"/>	Calibration Due Date:	<u>7/31/14</u>
Accelerometer ID:	<u>PLYP00089</u>	Environmental Chamber No.:	<u>PLYP00069</u>
Accelerometer Calibration Due Date:	<u>6/27/2014</u>	Calibration Due Date:	<u>7/31/14</u>

**Loose fill Material Sample Description:**

Engineered Wood Fiber:	<input type="checkbox"/>	Un-compacted Depth:	<u>4.5</u> Inches
Loose Fill Wood:	<input type="checkbox"/>		
Rubber:	<input type="checkbox"/>		
Sand:	<input type="checkbox"/>	Compacted Depth:	<u>4</u> Inches
Gravel:	<input checked="" type="checkbox"/>		
Other:	<input type="checkbox"/>		

**Unitary Sample Description:**

Tiles:	<input type="checkbox"/>	Total Thickness:	<u>3.25</u> Inches
Poured in Place:	<input type="checkbox"/>	Turf/Top Layer:	<u>1.25</u> Inches
Other:	<input checked="" type="checkbox"/>	Foam/Base Layer:	<u>2</u> Inches

**Comments:**

Total system depth = 7.25in.

**Determined maximum critical fall height was determined at : 8 Ft.**

The results reported herein reflect the performance of the above described samples at the time of testing and at the temperature(s) reported. The results are specific to the described samples. Samples of surfacing materials that do not closely match the described samples will perform differently. The following data sheet provides an accurate representation of the test results.

Sample in compliance with ASTM F1292-13 at the temperature and rating specified?      Yes            No     

Signature: 

Date: 5/9/2014

Reviewed by: 

Date: 5/14/2014

Client: Shaw-Southwest Greens International

TUV Report No.

QI1404331-1

Manufacturer: Shaw-Southwest Greens International

Test Date:

5/6/14 & 5/7/14

Drop	Determined Maximum Critical Fall Height (Ft.)	Reference Temperature -6°C, (21.2°F)				Reference Temperature 23°C, (73.4°F)				Reference Temperature 49°C, (120.2°F)			
		G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)
1	8	119	724	22.7	8.011	101	574	22.6	7.940	117	637	22.6	7.940
2	8	121	699	22.8	8.081	108	581	22.7	8.011	149	850	22.7	8.011
3	8	122	700	22.8	8.081	118	635	22.7	8.011	167	981	22.8	8.081
Average		121.5	699.5			113	608			158	915.5		
Measured Surface Temperature		-6°C	Max. Change from reference + 5°C, (5°F)			23°C	Max. Change from reference ± 3°C, (5°F)			49°C	Max. Change from reference -3°C, (-5°F)		
Sample Condition:		DRY				DRY				DRY			

Drop	One foot over (Ft.)	Reference Temperature -6°C, (21.2°F)				Reference Temperature 23°C, (73.4°F)				Reference Temperature 49°C, (120.2°F)			
		G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)
1	9	137	830	24.1	9.029	147	902	24.0	8.954	143	867	24.1	9.029
2	9	139	851	24.1	9.029	154	921	24.1	9.029	177	1119	24.2	9.104
3	9	135	797	24.1	9.029	164	981	24.1	9.029	192	1248	24.2	9.104
Average		137	824			159	951			184.5	1183.5		
Measured Surface Temperature		-6°C	Max. Change from reference + 5°C, (5°F)			23°C	Max. Change from reference ± 3°C, (5°F)			49°C	Max. Change from reference -3°C, (-5°F)		
Sample Condition:		DRY				DRY				DRY			

Drop	One foot under (Ft.)	Reference Temperature -6°C, (21.2°F)				Reference Temperature 23°C, (73.4°F)				Reference Temperature 49°C, (120.2°F)			
		G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)	G-Max	HIC	Velocity (ft/s)	Theoretical Drop Height (ft.)
1	7	107	556	21.2	6.987	99	494	21.3	7.053	132	630	21.2	6.987
2	7	109	562	21.2	6.987	98	473	21.3	7.053	148	749	21.2	6.987
3	7	111	563	21.3	7.053	104	506	21.3	7.053	147	765	21.2	6.987
Average		110	562.5			101	489.5			147.5	757		
Measured Surface Temperature		-6°C	Max. Change from reference + 5°C, (5°F)			23°C	Max. Change from reference ± 3°C, (5°F)			49°C	Max. Change from reference -3°C, (-5°F)		
Sample Condition:		DRY				DRY				DRY			



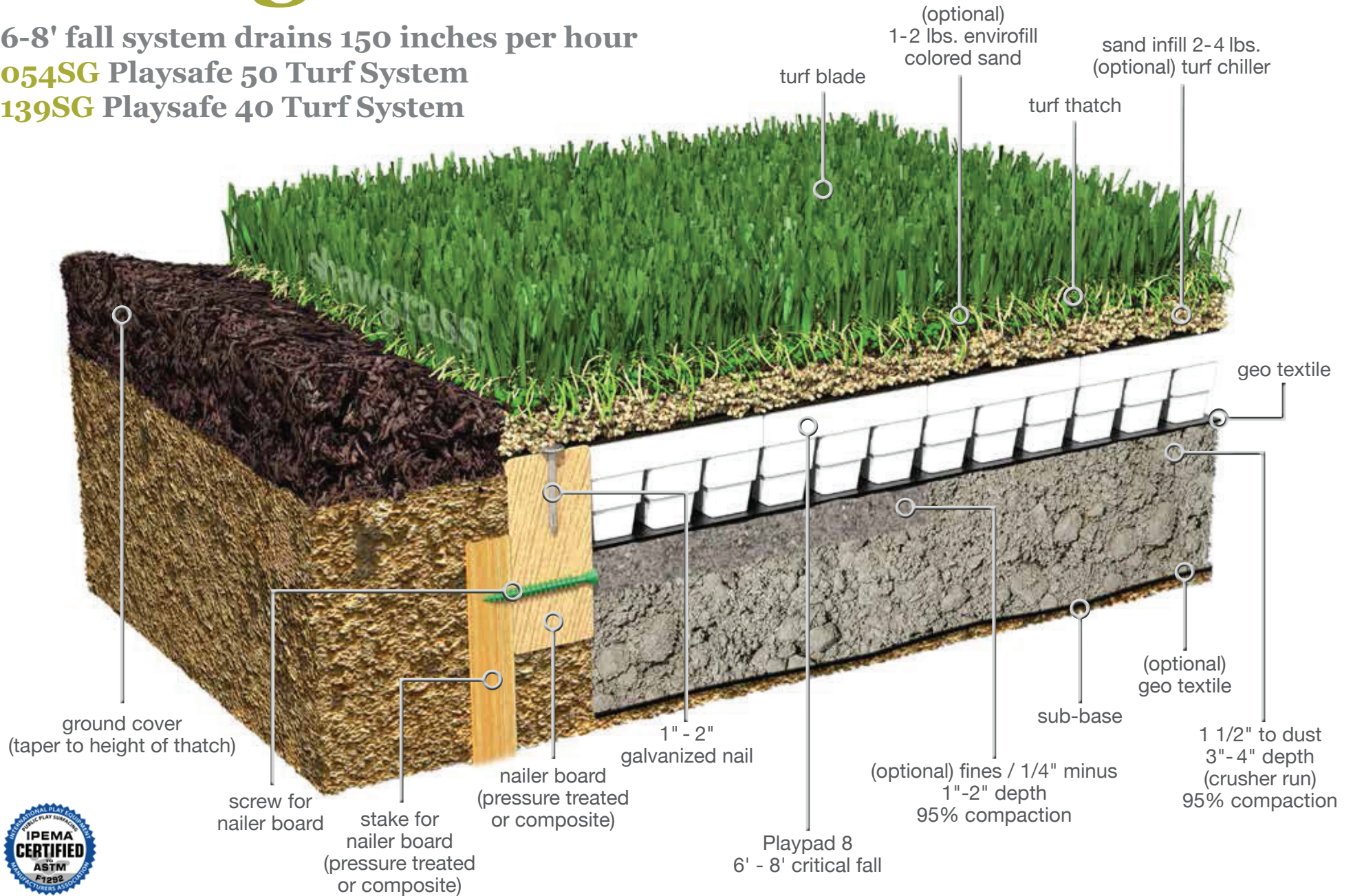
America

# shawgrass®

6-8' fall system drains 150 inches per hour

054SG Playsafe 50 Turf System

139SG Playsafe 40 Turf System



- For “high use” commercial playgrounds
- IPEMA Certified.
- Wheelchair accessible (ASTM F 1951).
- Water permeable: The turf, pad and sand infill drain at a rate of 150 inches per hour (ASTM F 1551).
- Turf system can be installed over concrete, asphalt, or crushed stone bases with positive drainage.
- During the spring, summer and fall seasons all synthetic surfaces can get hot. Shaw’s Turf Chiller™ sand infill, when hydrated by rain, dew or irrigation, can provide up to 50 degree lower surface temperatures that last for days compared to standard synthetic surfaces.
- Sand infill: We recommend a minimum of 3 pounds per square foot by combining two (2) pounds of Turf Chiller™ sand with one (1) pound of clean silica sand to lower costs. Turf Chiller™ offers antimicrobial protection to help prevent the growth of bacteria, mold/mildew and reduce odors.

# shawgrass®

**054SG Play Safe 50 Turf System**  
**139SG Play Safe 40 Turf System**  
**For 6’-8’ critical fall heights (ASTM F 1292)**

• **Additional ASTM testing available upon request:**

*Impact Attenuation (ASTM F 1292)*

*Wheelchair Accessibility (ASTM F 1951)*

*Rainfall Drainage Capacity (ASTM F 1551)*

*Grab Tear Strength (ASTM D 5034)*

*Pill Flammability (ASTM D 2859)*

*Static COF-James Machine (ASTM D 2047)*

