

# BSS-300 Synthetic Track Surfacing System

## System Specifications

### PART 1 - GENERAL

#### 1.1 Scope

The synthetic surfacing contractor shall furnish all labor, materials, equipment, supervision and services necessary for the proper completion of all Synthetic Track Surfacing and related work indicated on the drawings and specified herein.

The synthetic surfacing contractor shall refer to the drawings for the required locations of synthetic track surfacing to be installed. All quantities and dimensions shall be field verified by the synthetic surfacing contractor.

#### 1.2 Specific Scope Of Work

A. Install an IAAF approved impermeable polyurethane synthetic track system consisting of SBR Rubber and a single-component polyurethane base and a poured-in-place, two-component U.V. stabilized elastomeric polyurethane wearing layer with an embedded textured finish.

B. Layout and paint all track lines and event markings as required and specified by current IAAF, NCAA and NFHS rules.

#### 1.3 Coordination

The synthetic surfacing contractor shall coordinate the work specified with an authorized and appointed representative of the owner so as to perform the work during a period and in a manner acceptable to the owner.

### PART 2 - CODES AND STANDARDS

#### 2.1 Applicable Publications

Codes and standards follow the current guidelines set forth by the International Amateur Athletic Federation (IAAF) and the National Collegiate Athletic Association (NCAA), along with current material testing guidelines as published by the American Society of Testing and Materials (ASTM).

#### 2.2 Performance Standards

The new synthetic track surfacing system shall exhibit the following minimum performance standards as required by IAAF.

- A. Thickness 12mm, Minimum 10mm
- B. Force Reduction 35 to 50%
- C. Modified Vertical Deformation 0.6 to 1.8mm
- D. Friction 47 TRRL Skid Resistance
- E. Tensile Strength 0.SMPa
- F. Elongation at Break a 40%

### PART 3 - QUALITY ASSURANCE

#### 3.1 Contractor Qualifications

- A. The synthetic surfacing contractor must have a minimum of seven years experience in the installation of poured-in-place, two-component elastomeric polyurethane synthetic track surfacing.
- B. The synthetic surfacing contractor must have installed a minimum of six outdoor track facilities in the last two years using the exact Synthetic Track Surfacing System as specified herein with the firm bidding the project.
- C. The polyurethane manufacturer must have a minimum of 10 years of experience with compound two-part polyurethane for athletic surfaces.
- D. The supervisor for the installation must have installed a minimum of 20 two-component polyurethane tracks in the last 3 years.
- E. The synthetic surfacing contractor shall be a builder member of the American Sports Builders Association.
- F. The Synthetic surfacing contractor shall employ a certified track builder to oversee this project.

#### 3.2 Submittals

The following submittals must be received with bid submittal

- A. Standard printed specifications of the synthetic track surfacing system to be installed on this project.
- B. An affidavit attesting that the synthetic track surfacing material to be installed meets the requirements defined by the manufacturers currently published specifications and any modifications outlined in those technical specifications.
- C. A synthetic track surfacing system sample, 6" x 6" in size, of the same synthetic surfacing system to be installed on this project.
- D. An installation list of outdoor track facilities installed in the last two years using the exact synthetic track surfacing system specified herein,

E. Test results from an approved IAAF Testing Laboratory confirming compliance to the performance of athletic tracks test according to the IAAF.

### PART 4 - MATERIALS

#### 4.1 Elastomeric Polyurethane

Two-component U.V. stabilized elastomeric polyurethane compounded from polyol and isocyanate components, based on one hundred percent Methylene Diphenyl Isocyanate (MDI). No Toluene Diisocyanate Isocyanate (TDI) will be allowed.

The elastomeric polyurethane shall be red in color.

#### 4.2 EPDM Granulate

The EPDM granulates shall be 1 to 3mm in size and peroxide cured.

The EPDM granulates and the U.V. stabilized elastomeric polyurethane shall be color matched.

#### 4.3 Rubber Granulate of the Base Course

Styrene Butadiene Rubber (SBR) processed ground to a graded sized of 1 to 3mm.

A maximum of 80%, by weight of the paved-in-place base layer, of SBR will be allowed.

#### 4.4 Single Component Polyurethane Binder

A minimum of 20%, by weight of the paved-in-place base layer.

#### 4.5 Seal Coat

The granular SBR and binder layer shall be sealed with a thixotropic two-component polyurethane.

#### 4.6 Line Marking Paint

Single-component, moisture cured, aliphatic polyurethane paint

### PART 5 - INSTALLATION

#### 5.1 Subbase

The Synthetic Track Surfacing System shall be laid on an approved subbase. The general contractor shall provide compaction test results of 95% or greater for the installed subbase and asphalt surface.

For NCAA and IAAF certification the following criteria must be followed. The track surface, i.e. asphalt substrate, shall have a maximum lateral slope outside to inside of 1.0% and a maximum slope of 0.1 % in the running direction. The finished asphalt shall not vary under a 10' straight edge more than 1/8".

It shall be the responsibility of the asphalt-paving contractor to flood the surface immediately after the asphalt is capable of handling traffic, but within 24 hours. If, after 20 minutes of drying time, there are birdbaths evident, it shall be the responsibility of the architect, in conjunction with the surfacing contractor to determine the method of correction. No cold tar patching, skin patching or sand mix patching will be acceptable.

Any oil spills (hydraulic, diesel, motor oil, etc.) must be completely removed, either by chipping out or removing and replacing with new, keyed in asphalt. The minimum depth of any asphalt replacement shall be one inch. The curing time for the asphalt base is 28 days. It shall be the responsibility of the surfacing contractor to determine if the asphalt substrate has cured sufficiently prior to the application of polyurethane surfacing system.

It shall be the responsibility of the general contractor to determine if the asphalt substrate meets all design specifications, i.e. cross slopes, planarity and specific project criteria. After all the above conditions are met, the synthetic surfacing contractor must, in writing, accept the planarity of the asphalt receiving base, before work can commence.

#### 5.2 Thickness

The thickness of the Synthetic Track Surfacing System shall be 13 mm.

#### 5.3 Equipment

The Synthetic Track Surfacing System components shall be processed and installed by specially designed machinery and equipment. A mechanically operated paver with variable regulated speed and thermostatically controlled screed shall be used in the installation of the base mat. The wearing course shall be installed using automatic electronic portioning, which provides continuous mixing and feeding for an accurate, quality controlled installation.

#### 5.4 Installation A. Base

##### Course

The SBR granules and polyurethane shall be mixed together on site to regulate the ration/quantity of SBR, not to exceed 80% in the base mat portion of the system. The single component polyurethane binder shall be mixed with the SBR rubber so that a minimum of 20%, by weight, exists in the final mixture. This mixture is then mechanically installed using the paver.

##### B. Seal Coat

The granular layer shall be sealed with a thickened two-component polyurethane, squeegee applied to ensure a non-permeable base layer.

##### C. Wearing Course

The 1 to 3mm EPDM granules shall be integrated into poured-in-place U.V. stabilized elastomeric polyurethane to achieve the full depth of the 5mm wearing course. The resilient embedded textured finish shall be a dense matrix of exposed EPDM granules. The homogeneous wearing course shall be applied in situ with the base course.

#### 5.5 Site Conditions

A. Installation shall not take place if adjacent or concurrent construction generates excessive dust, abrasives or any other by-product that, in the opinion of the installer, would be harmful to the track material, until completion of such works.

B. If, in the opinion of the installer of the synthetic material, the weather and/or climatic conditions are detrimental to the proper installation of the surfacing materials, work shall be delayed until conditions are acceptable. Preferred installation temperature is fifty degrees Fahrenheit and rising. Installation shall be executed only in dry conditions.

### PART 6 - LINE STRIPING AND EVENT

#### 6.1 Layout

Line striping and event markings shall be laid out in accordance with current IAAF, NCAA and NFHS rules.

#### 6.2 Certification

Upon completion of the installation, the owner shall be supplied with all necessary computations and drawings as well as a letter of certification attesting to the accuracy of the markings.

### PART 7 - GUARANTEE

Synthetic track surfacing system shall be fully guaranteed against faulty workmanship and material failure for a period of five (5) years from the date of acceptance.

Synthetic surfacing material found to be defective as a result of faulty workmanship and/or material failure shall be replaced or repaired at no charge, upon written notification within the guarantee period.



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