

**SECTION 32 18 23
ATHLETIC SURFACING**

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. The provisions of the general Conditions, Supplementary Conditions, and the Sections included under Division 1, General Requirements, are included as a part of this Section.

1.2 SUMMARY

- A. Provide labor, materials, services, and equipment necessary to furnish and install synthetic surfacing work as indicated and as specified herein, includes, but is not limited to:
 - 1. Surfacing of running track and field event areas
 - 2. Painting of lines and numerals
- B. Provide continuous and competent supervision of work included under this Section.
- C. Refer to Section Alternates that may affect the work of this Section.
- D. Related Work Specified Elsewhere
 - 1. Excavation, filling, grading, and compaction of sub-grade under running track and field event areas.
 - 2. Asphalt binder/leveler course and sub-base for running track and field event areas.
 - 3. Concrete base for field events and related concrete work.

1.3 SUBMITTALS

- A. Manufacturer Data: Submit copies of manufacturer's specifications and installation instructions for items required.
 - 1. Include data substantiating that materials comply with specified requirements.
 - 2. Indicate that installer has received copy of manufacturer's instructions.
- B. Documents in Regard to Warranty
 - 1. Provide letter from manufacturer of all materials attesting to the warranty length and limits signed by an officer of the organization.
 - 2. Provide letter of Warranty from the Installation Contractor for the time-period and conditions as noted under "Warranty."
 - 3. Submit these documents to the Architect or Owner prior to final payment.
- C. Provide documentation from track surface manufacturer of having been in business continuously for the last five-years under the same company name.
- D. Contractor is to provide certified statement in writing listing the overall quantity of rubber (total pounds of granules or strands) and tack coat/primer, and latex binder (total gallons) delivered to the job site and used in this track re-surfacing project.
 - 1. Copy of shipping invoices shall be included with this statement, and submitted to the Architect prior to final payment.
- E. Layouts for Running Track (Metric) and Field Events
 - 1. Submit drawings showing the tracks and field event layouts, including metric lane markings, passing zones, start and finish lines, and other markings in accordance with the National Federation of State High School Association's High School Track and Field Rules and Records.
 - a. The Architect shall review the plans prior to the Owner's review.
 - 2. The layout of the track and field events shall conform to the drawings.
 - a. Upon completion of striping and layout work, the Contractor shall submit to the Architect an "As Built Drawing" prepared by a licensed surveyor with his name,

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address, and license number, certifying that all points and layouts shown on the approved shop drawing are located where required.

- b. Contractor shall include cost in bid.
3. Submit color samples for line marking paint. Colors shall be red with white lines.
- F. Samples:
 1. Each bidder shall submit one sample, not less than 3" by 3" for each surface being bid.
 2. All samples shall represent the exact surface being bid.
- G. Provide owner with written instructions for track use and maintenance requirements in accordance with the warranty.

1.4 QUALITY ASSURANCE

- A. A Contractor who has a minimum of 5-years experience in the field, and can demonstrate successful completion of similar projects must perform installation of synthetic surfacing.
- B. A representative of the manufacturer of the synthetic material shall be at the job site during performance of the work to assist and advise the asphalt plant in establishing the proper mix and to assist and advise the Contractor on all phases of the synthetic surfacing installation.

1.5 TESTING

- A. The owner reserves the right to submit representative samples of the synthetic track surface to an independent testing lab at any time during the length of the warranty to determine the chemical composition and performance characteristics.
- B. Contractor shall submit tests for Owner's acceptance, confirming compliance with the project and manufacturer's specification of the track system.
- C. The Owner is responsible for paying for all initial testing of the synthetic surfacing.
 1. If the test confirms the surface acceptable, the owner pays the cost of replacing the core sample areas in the track surface.
 2. Contractor shall remove and replace any section of track not in compliance with the project or manufacturer's specifications at no additional expense to the owner.
 3. Further testing of the synthetic surfacing, that has been replaced, will be done by an independent testing lab at the direction of the owner and at the expense of the Contractor.
- D. Take a 6" x 6" sample every 1,000 sq yd, do not use samples to repair the track surface, follow manufacturer's specifications for replacing the surfacing within the core sample areas.

PART 2 PRODUCTS

2.1 MANUFACTURES

- A. Acceptable manufacturers, subject to compliance with requirements, provide products from:
 1. "Maxflex BL" as manufactured by Precision Sports Surfaces, Inc.
 2. "Reflex-1" as manufactured by Leslie Coatings, Inc., Indianapolis, Indiana; or Goddard Coatings Company, Auburn Hills, Michigan.
 3. "Top Trax Surfacing System" by All American Tracks Corporation, Amherst, Ohio
 4. "Omni-B" by Vibra-Whirl & Co., Panhandle, Texas
 5. "Seal Flex" as manufactured by Athletic Field Services, Genesee Depot, Wisconsin or by Current Surfaces, Hanover, Michigan
 6. "Resilo-Flex" by Site Technology, Inc., Stow, Ohio
 7. "Sportflex" by Mondo America Inc, Atlanta, Georgia
 8. Beynon Sports Surfaces, Inc Hunt Valley, Md
- B. Products of other manufacturers provided they are equal or exceed the material requirements and functional qualities of the specified product.

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1. The "Substitution Request Form" and complete technical data for evaluation must accompany requests for Architect's approval.
 2. Additional approved manufacturers are by Addendum.
 - C. Refer to Section, "Instruction to Bidders," for additional requirements.
- 2.2 MATERIALS
- A. The surfacing system shall be complete and consist of components, blended and mixed in the prescribed manner, placed and installed with the recommended equipment to provide the best-finished product available from the manufacturer, and conforming to current specification.
 - B. Description of System
 1. 3/8" thick minimum depth
 2. Color: Red
 3. Installation includes:
 - a. One tack coat of latex binder or asphalt emulsion
 - b. Minimum 4-layers of SBR rubber granules or stranded rubber bound with latex binder.
 - c. "Overspray" top layer of latex binder
 - C. Product Description
 1. Binder/primer
 - a. Asphalt Emulsion: Slow setting emulsified asphalt, complying with Specification M208-72 of the American Association of State Highway and Transportation officials test methods as prescribed in AASHTO T-59.
 - i) Use only on tack coat and bottom layer of rubber with 4-layer system.
 - ii) Do not mix asphalt emulsion with latex binder.
 - b. Latex binder: Provide type of latex binder as recommended by the manufacturer in the case that the manufacturer recommends a binder other than the #4125 and #4170.
 - c. System (rates given are minimum – follow manufacturer's recommendations if more binder is required).
 - i) Tack coat/primer is to be installed at a minimum rate of 0.05-gal/sq.yd.
 - a) Asphalt emulsion
 - b) #4125 SBR latex binder as manufactured by California Products.
 - ii) Over first layer of rubber, install one of the following at a rate .07 gal/lb of rubber in a sq. yd.
 - a) Asphalt emulsion
 - b) #4125 SBR latex binder
 - c) Acrylic latex binder
 - iii) Over remaining layers of rubber granules, install one of the following at a rate of .07 gal/lb of rubber in a sq. yd.
 - a) #4170 SBR latex binder with U.V. inhibitor in top layer
 - b) Acrylic latex binder
 - iv) "Overspray" layer is to be at a rate of 0.10-gal per sq. yd. Provide SBR Latex Binder with U.V. inhibitors or acrylic latex binder.
 - v) Overall, minimum quantity of binder is to be as follows: (.73 gal/sq yd).
 - d. Measurement and Payment: The overall quantities listed are for setting a minimum acceptable quantity for the Project and noted in the certification statement signed by the Contractor. The Contractor is responsible for estimating total quantities of

latex binder required for a complete installation and to provide total encapsulation of rubber particles providing a minimum 3/8" depth overall. If the rates exceed the minimum amount listed above, base the total quantity of materials on the manufacturer's recommended rates, for their synthetic surfacing system. The Contractor is responsible to field verify all quantities. The owner will not be responsible for additional expenses for provision of additional materials beyond the quantities listed above.

2. Rubber
 - a. Minimum pounds per sq. yd.: 8.25 pounds overall. Provide one of the following systems or combination of strand and granule to achieve overall minimum 3/8" depth and minimum 8.25 lb rubber/sq.yd.
 - b. Size of rubber:
 - i) Granules
 - a) 1-3 mm on bottom 3 layers
 - b) 0.5-1.5 mm on top layer
 - ii) Stranded rubber (strandulated) shall be properly ground and graded as follows:
 - a) Course (bottom layer): #98500 (58500) as manufactured by Spartan Enterprises
 - b) Medium (middle 2 layers) #98438 (58438) as manufactured by Spartan Enterprises
 - c) Fine: (top layer): #98722 (58722 or previously called #58137) as manufactured by Spartan Enterprises
 - c. Measurement and Payment: The overall quantities listed are for setting a minimum acceptable quantity for the Project and noted in the certification statement signed by the Contractor. The Contractor is responsible for estimating total quantities of rubber required for a complete installation and to provide total encapsulation of rubber particles providing a minimum 3/8" depth overall. If the rates exceed the minimum amount listed above, base the total quantity of materials on the manufacturer's recommended rates, for their synthetic surfacing system. The Contractor is responsible to field verify all quantities. The owner will not be responsible for additional expenses for provision of additional materials beyond the quantities listed above.
- D. Line Marking Paint: Use 100% acrylic latex type, unless surfacing manufacturer recommends a different type.
 1. Do not use traffic, oil, alkyd, or solvent-vehicle type paints.

PART 3 EXECUTION

3.1 INSTALLATION OF SYNTHETIC SURFACING

- A. Before applying the surfacing, properly clean the running track and field events surface of dirt and debris and preparing surface by applying primer.
- B. Strictly adhere to manufacturer's written instructions for mixing, transporting, spreading, and compacting resilient material.
- C. Utilize only installation equipment and procedures recommended by surfacing manufacturer.
- D. Do not begin track and field events work before completion of final grading and surfacing.
- E. Do not apply material during a rainfall or when rain is imminent.
 1. Both ambient and materials temperatures are to be at least 50°F (10°C) and rising.
- F. After a rainfall, allow sufficient time for the surface to dry before resuming work.

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1. Surface shall be dry, since surface moisture on hot days can turn to steam or vapor.
 2. Trapped moisture under an application of material usually causes blisters.
- 3.2 INSTALLATION OF SYNTHETIC SURFACING ON CONCRETE BASE
- A. Allow minimum cure time of 28 days prior to installation of primer and synthetic surfacing.
 - B. Power wash concrete surface and allow to dry completely prior to installation of primer.
 - C. Use #4125 SBR Latex Binder as primer, do not use asphalt emulsion as binder or primer over concrete base.
- 3.3 INSTALLATION OF SYNTHETIC SURFACING ON ASPHALT PAVEMENT
- A. Synthetic surface has to be able to drain; therefore, bituminous concrete base course has to be flushed with top of curb.
 - B. Allow minimum cure time of 14 days or longer as recommended by manufacturer prior to installation of primer and synthetic surface over new asphalt pavement.
- 3.4 LINE MARKING OF RUNNING TRACK AND FIELD EVENTS
- A. Carefully apply striping so lines are uniform, straight, and with even edges, color: white.
 - B. Lines and other markings shall receive 2-coats of paint, amount as recommended by the manufacturer.
 1. Use paints directly from original containers and absolutely no thinning is allowed.
- 3.5 MAINTENANCE AND RESURFACING
- A. Contractor shall inspect the track and notify owner of structural cracks or problems with drainage needing repair prior to the installation of the new synthetic surface.
 - B. Contractor will repair all defects in the synthetic surface caused by delamination, peeling, chalking, or raveling.
 - C. Contractor will restore high use areas of the track and field events that are showing wear to bring the surface up to the original 3/8" thickness.
- 3.6 FIELD QUALITY CONTROL
- A. Use the following to test the finished track surface for compliance with the above specifications:
 1. Contractor shall cut a 5" x 6" x 6" sample out of the finished track surface, in the presence of the owner.
 2. The Owner shall select the test locations, not less than 6" from the edge of the surface.
 3. An independent testing laboratory shall examine the test cuts for thickness and weight.
 - a. The finished weight of the systems shall be not less than 11.5 pounds per square yard of surface with a minimum thickness of 3/8".
 4. In the event that the above minimums are not achieved, the Contractor shall install additional materials until achieving the required minimum.
 5. The Contractor shall repair the test cut areas.

END OF SECTION