SECTION 09 65 66 – resilient athletic flooring

1. General
   1. summary
      1. The Work of this Section includes furnishing materials and installation of resilient athletic flooring including, but not limited to, subfloor preparation, flooring system installation, floor socket installation and application of game lines.
   2. REFERENCE Standards
      1. American Society for Testing of Materials (ASTM)
         1. ASTM F1869, Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.
   3. SUBMITTALS
      1. Provide required information in accordance with Section 01 33 00 – Submittal Procedures.
      2. Submit representative samples pieces for selection of colours.
      3. Submit product data sheets for flooring, adhesives, subfloor filler, levelling compound, wall base, game line paint and floor sockets.
      4. Submit athletic flooring manufacturer's written installation instructions.
   4. Project Closeout Submissions
      1. Provide operations and maintenance information in accordance with Section 01 78 00 – Project Closeout: Operations and Maintenance Data.
      2. Submit completed athletic flooring manufacturer's warranty.
      3. Provide written declaration that site conditions meet the requirements of the athletic flooring manufacturer prior to commencement of Work.
   5. CLOSEOUT PROCEDURES
      1. Train the Owner's maintenance staff on the proper care and maintenance of the finished flooring.
   6. QUALITY ASSURANCE
      1. Use only experienced resilient athletic flooring systems installer approved by athletic flooring manufacturer, having experience with projects of similar scope and complexity and a minimum of five (5) years proven experience; provide a list of last three (3) projects of similar magnitude and complexity when requested by Consultant.
   7. Testing and Inspections
      1. Test moisture emission rate of concrete subfloor prior to installing flooring, using the calcium chloride test method in accordance with ASTM F1869.
      2. Provide 72 hours notice to the Consultant of commencement of the Work.
      3. Include cost of testing as a part of the price for work of this section.
      4. Do not install flooring over concrete slabs until slabs have cured and are sufficiently dry to bond with adhesive, as determined by flooring manufacturer's recommended bond and moisture test, and as follows:
         1. Resilient flooring manufacturers generally set the maximum safe moisture emission level of concrete slabs at 0.170 μg/s.m2; confirm manufacturer’s recommended emission rate before starting testing.
         2. Moisture tests must be conducted on all concrete slabs and is especially critical where low VOC or water-based adhesives are specified.
         3. Carefully monitor test conditions to ensure that tampering or disturbance of the test packs does not affect the results.
         4. Maintain a minimum temperature of 13°C for substrates during testing operations.
   8. PRE‑Construction Meeting
      1. Arrange a pre‑construction meeting in accordance with Section 01 31 19 – Project Meetings attended by Consultant, Contractor, flooring installer’s project manager or foreman and athletic flooring manufacturer's representative.
      2. Schedule the conference after completion of subfloor preparation and testing, and prior to installation of the athletic flooring system to discuss coordination issues and floor preparation requirements.
   9. Delivery, STORAGE AND HANDLINg
      1. Provide and maintain dry, off‑ground weatherproof storage.
      2. Store rolls in upright position.
      3. Place runways over work to enable movement of material and other traffic.
   10. ENVIRONMENTAL REQUIREMENTS
       1. Maintain air temperature and structural base temperature at flooring installation area above 18 deg C for one week prior to, during installation and for 72 hours after completion of work.
       2. Area where materials are to be stored should be maintained at 15 deg C and under 50% relative humidity.
       3. Maintain continuous ventilation during installation of flooring. Existing ventilation may be used if capable of providing adequate air changes. Provide additional ventilation when directed by Consultant.
   11. SCHEDULING
       1. Flooring installation not to begin until subcontract work that could cause damage, dirt, dust, or interruption of normal installation pace is completed. The installation area to be closed to traffic and activity for a period set by flooring contractor.
       2. Material not to be delivered or installed until masonry, painting, plastering, tile work, marble and terrazzo work are completed, and overhead mechanical work, lighting, backstops, scoreboards are installed.
       3. After flooring is installed and game lines are painted, area to be kept secured to allow curing time for the paint and finish system. No other trades allowed on floor until flooring is accepted by Consultant.
   12. WARRANTY
       1. Provide athletic flooring manufacturer's standard warranty.
2. Products
   1. Manufacturers
      1. Basis‑of‑Design products are named in this Section; additional manufacturers offering similar setting systems may be incorporated into the work provided they meet the performance requirements established by the named products.
      2. Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
         1. Connor Sports Flooring System.
         2. Mondo America Inc.
         3. Robbins Sports Surfaces.
         4. Taraflex Sports Flooring.
   2. RESILIENT ATHLETIC FLOORING
      1. Colour selection to be based on one field colour and two accent colours as selected by Consultant from manufacturer's full colour range.
      2. Where applicable, select sheet length to minimize seams.
      3. Basis-of-Design Materials:
         1. Connor Sports Flooring System ElastiPlus 2002, 11 mm.
         2. Mondo America Inc. Advance Double Layer, 10 mm.
         3. Robbins Sports Surfaces Pulastic 2000MP, 11 mm.
         4. Taraflex Sports Flooring Sport M Plus 7 mm.
   3. ACCESSORIES
      1. Adhesives: as approved for use by the athletic flooring manufacturer to suit the subfloor conditions.
      2. Subfloor filler and leveller: as approved for use by the athletic flooring manufacturer to suit the subfloor conditions.
      3. Grout: to CSA A179, Table 3.
      4. Game line paint: Polyurethane line paint approved for use by the athletic flooring manufacturer. Colours as selected by Consultant.
      5. Floor sockets: Fixed type, bronze exposed components and covers. Provide steel socket for installation in concrete slab, diameter to suit existing equipment standards. Refer to drawings for quantities and installation locations.
      6. Resilient wall base: thermoplastic rubber, 150 mm (6”) high exposure, coved‑toe. Provide pre-moulded external corners. Wrap internal corners. Colour selected by Consultant from manufacturer's entire solid colour range.
      7. Moulded Thresholds: Rubber, tapered shape, size to bridge difference in elevation at the intersection of athletic flooring and adjacent flooring. Colour as selected by Consultant.
3. Execution
   1. CONCRETE SUBFLOOr
      1. Do not install flooring until concrete subfloor has been cured sixty (60) days.
      2. Verify that no curing compounds and/or sealers have been applied to the concrete subfloor.
      3. Grout fill abandoned socket locations flush to existing subfloor.
      4. Telegraphing of imperfections to the new flooring will not be accepted.
   2. TESTING
      1. Flooring contractor to pay for and perform tests for moisture, alkalinity, and adhesion prior to application of athletic flooring and report adverse conditions to the Consultant in writing.
         1. Moisture vapour emission rate not to exceed 3 lb/24hr/ft2 using the calcium chloride test as per ASTM F1869.
         2. PH level to be in the range of 7 to 8.5.
      2. Flooring installation will not begin until subfloor conditions and test results have been reviewed and accepted by the athletic flooring manufacturer's representative.
   3. INSTALLATION SHEET FLOORING
      1. Installation to be done in accordance with athletic flooring manufacturer's printed installation instructions. In the case of conflict between the manufacturer's installation instructions and these documents, the manufacturer's instructions shall rule.
      2. Layout sheets and allow to relax, leaving a small gap between each sheet.
      3. Lay out sheets according to manufacturer's installation instructions and to minimize seams.
      4. As installation progresses, and after installation, roll flooring with roller to ensure full adhesion.
      5. Rubber flooring: Butt seams of rubber sheet flooring in accordance with manufacturer's printed instructions. Hold all seams in place with suitable weights for a minimum of 12 hours.
      6. Vinyl flooring: Mechanically rout and heat weld seams in accordance with manufacturer's printed instructions.
   4. INSTALLATION ACCESSORIES
      1. Install floor sockets flush with finished floor, to locations shown on drawings. Secure new sockets in concrete subfloor by grouting.
      2. Install wall base in accordance with manufacturer's recommendations.
      3. Install thresholds where indicated on drawings.
   5. GAME LINE PAINTING
      1. Layout out game lines and mask on both sides with masking tape. Clean surfaces to be painted with an acetone dampened cloth.
      2. Apply paint in accordance with manufacturer's instructions.
      3. Provide painted school logo at centre court. Coordinate school logo template for size, location, and lettering font with Consultant.
   6. FINISHING
      1. Remove excess adhesive from floor, base, and wall surfaces without damage.
      2. Clean and dry floor surface to athletic flooring manufacturer's printed instructions.
      3. Provide initial waxing to rubber sheet flooring in accordance with manufacturer's supplemental instructions.
   7. PROTECTION
      1. Do not install equipment or allow foot traffic on the floor for a minimum of 72 hours following the installation to allow the adhesive and game line paint to set and dry.
      2. Surface to be protected before, during and after installation until acceptance by the Consultant.

END OF SECTION