

**SECTION 096466 --- WOOD GYMNASIUM FLOORING****PART 1-GENERAL****1.1 DESCRIPTION**

- A. This document specifies a wood strip athletic floor system consisting, in general, of wood subflooring, maple flooring, vapor retarder, vertical restraints (system specific), sanding, sealers, finishes, game lines, and wall base.
- B. The concrete contractor shall provide a concrete slab, smooth troweled and level to a tolerance of 1/8" (3mm) in a 10'0" (3m) radius, subject to the approval of the wood flooring contractor. LABOR AND MATERIALS NECESSARY TO PUT THE CONCRETE SLAB IN ACCEPTABLE CONDITION (HIGH AREAS GROUND DOWN AND LOW AREAS FILLED WITH APPROVED LEVELING COMPOUNDS) SHALL BE THE RESPONSIBILITY OF THE CONCRETE CONTRACTOR.
  - 1. Concrete slab depression shall be:
    - a. 2 1/2" (64mm) for 25/32" (20mm) thick flooring.
    - b. 2 3/4" (70mm) for 33/32" (26mm) thick flooring.
  - 2. With a plywood subfloor, the slab depression shall be:
    - a. 2" (51mm) for 25/32" (20mm) thick flooring.
    - b. 2 1/4" (57mm) for 33/32" (26mm) thick flooring.
  - 3. With an OSB subfloor, the slab depression shall be:
    - a. 1 7/8" (48mm) for 25/32" (20mm) thick flooring.
    - b. 2 1/8" (54mm) for 33/3" (26mm) thick flooring.
  - 2. Concrete subfloors shall have an adequate vapor retarder beneath and at the perimeter of the slab.
  - 3. No pea gravel, river gravel or slag aggregate shall be allowed in the concrete. The concrete strength range at the time of wood flooring installation shall be between 3,000 PSI and 3,500 PSI.

**1.2 QUALITY ASSURANCE**

- A. Supplier Qualifications
  - 1. Supplier of wood flooring shall be Horner Flooring Company.
  - 2. Basis of design shall be "All-Wood" sports floor system as provided by Horner Flooring, [www.hornerflooring.com](http://www.hornerflooring.com). (800-380-0119).
  - 3. Materials other than those listed must be approved 10 days prior to bid date by written addendum. Materials from non-approved manufacturers will not be accepted.
- B. Installer Qualifications
  - 1. The flooring contractor shall be a Horner Accredited Installation Company with MFMA Accredited Installer(s) on-site for the duration of the wood floor installation; or, a contractor approved by Horner Flooring.
- C. Flooring shall be stored on the premises before installation commences as required for acclimation. Final determination as to acclimation will be made by the flooring contractor.
- D. System shall meet necessary DIN/EN requirements.

**1.3 WORKING CONDITIONS**

- A. The floor system shall not be delivered or installed until the concrete slab is properly cured and all masonry, plastering, tile work and overhead mechanical trades are completed and building is permanently enclosed and weathertight.
- B. Permanent heat, light and ventilation shall be installed and operative during and after installation, maintaining a temperature range of 55° F (13° C) to 75° F (24° C) and a relative humidity range that changes no more than 15% from low to high humidity levels.
- C. HVAC System shall be operating in balance at levels and conditions consistent with those during permanent occupancy.

**1.4 WARRANTY**

- A. Horner Flooring Company hereby warrants the flooring materials to be free from manufacturing defects for a period of one year from the date of substantial completion. This warranty is expressly limited to the flooring materials supplied by Horner. This warranty is in lieu of all other warranties, expressed or implied including but not limited to any warranty of merchantability or fitness for a particular purpose, and of any other obligations on the part of Horner. This warranty does not cover floor damage caused by conditions beyond our control, such as fire, wind, floor surface chemical action, faulty maintenance,

improper ventilation, faulty construction of building, Act of God, ordinary wear and tear, excess moisture and excess dryness, separation of concrete slab, settlement of walls, failure of floor if not installed properly, when installed over poured urethane if poured urethane returns to its liquid state, if poured urethane releases from concrete slab or failure of floor if installed over polyvinyl chloride synthetic flooring. In the event of breach of any warranty, the liability of Horner shall be limited to repairing or replacing material and system components supplied by Horner and proven to be defective in manufacture, and shall not include any other damages, either direct or consequential.

- B. Extended warranties are based on maintenance and yearly/annual cleaning and recoating agreements with certified contractors.

## PART 2-PRODUCTS

### 2.1 MATERIAL

- A. Flooring shall be Horner 25/32" (20mm) or 33/32" (26mm) thick x 2 ¼" (57mm) or 1 ½" (38mm) wide First, Second and Better, Third and Better or Third Grade, random length continuous tongue and groove and end-matched MFMA Northern Hard Maple, grade marked and stamped as manufactured by Horner Flooring Company.  
OPTION: Horner Long Life™ flooring if so specified.
- B. Vapor retarder shall be 6 mil polyethylene.
- C. Subfloor shall be Horner 1" x 6" (25mm x 152mm) (nominal) Second and Better Gym Grade Hemlock, No. 2 Spruce, Fir, or Pine S2S to ¾" x 6" (19mm x 152mm) x RL (2 layers of 15/32" (12mm). Rated sheathing, exposure 1, plywood, or 7/16" (11mm) OSB may be used in place of 1" x 6" (25mm x 152mm)).
- D. Horner Foam: ¼" (6mm) multi cellular, closed cell plastic foam. Density: 2.0 PCF.
- E. Underlayment tape shall be 2" (51mm) duct tape.
- F. Fasteners
1. Subfloor fasteners shall be 1¼" (32mm) nails or staples (1" (25mm) with plywood or OSB).
  2. Flooring fasteners shall be 2" (51mm) barbed cleats or 15 gauge (1.8mm) coated staples.  
OPTION: If Horner Long Life™ is specified, use 1 1/2" (51mm) 15 gauge (1.8mm) staples only.
- G. Wall base shall be 3" x 4" (76mm x 102mm) Vent Cove heavy duty molded, vented base with premolded outside corners as supplied by Horner Flooring Company. Specify color: black or brown.
- H. Finish material shall be specified from the latest listing provided by the MFMA, and shall be applied according to manufacturer's instructions. Minimum of 2 seal coats and 2 finish coats.
- I. Gameline paint shall be compatible with finish.
- J. Stop blocking, where heavy loads are anticipated, stop blocking shall be installed between pad locations.

## PART 3-EXECUTION

### 3.1 INSPECTION

- A. Inspect concrete slab for proper tolerance and dryness and report any discrepancies to the general contractor for correction.
- B. The concrete slab shall be cleaned of all debris so flooring contractor will have adequate access to work surface.
- C. All overhead work and wet trades shall be complete in floor work area.

### 3.2 INSTALLATION

- A. Cover concrete with 6 mil polyethylene, sealing, and lapping joints a minimum of 4" (102mm).
- B. With 1" x 6" (25mm x 152mm) (nominal) subfloor:
1. Install first layer of 1" x 6" (25mm x 152mm) subfloor across the long dimension of the room at a 45° angle. The ends of the 1" x 6" (25mm x 152mm) shall be butted, leaving a ¼" (6mm) space and the sides spaced 2" (51mm) between adjoining 1" x 6" (25mm x 152mm). Provide 2" (51mm) expansion voids at perimeter and all vertical obstructions.
  2. The second layer of 1" x 6" (25mm x 152mm) subfloor shall be laid out 90° to the bottom layer, such that no end joints shall fall over any end joints of the first layer. The ends of the second layer 1" x 6" (25mm x 152mm) shall also be butted, leaving a ¼" (6mm) space, and the sides spaced 2"

- (25mm) between adjoining 1" x 6" (25mm x 152mm). This layer shall be secured to the first layer with nails or staples at each intersection.
3. A single 1" x 6" (25mm x 152mm) border strip shall be installed as part of the second subfloor layer, at right angles to the finish flooring at floor perimeter.
- C. With All-Wood System II option:
1. Install subfloor as above, but with lower 1" x 6" (25mm x 152mm) (nominal) layer spaced 12" (305mm) o.c., and upper layer spaced 8" (203mm) o.c.
- D. With 15/32" (12mm) sheathing plywood or 7/16" (11mm) OSB option:
1. Install two layers of either 15/32" (12mm) sheathing plywood or 7/16" (11mm) OSB so that each layer is 45 degree to the long dimension of the floor and 90 degree to the other layer, leaving a ¼" (6mm) space between adjoining sheets and a 2" (51mm) perimeter expansion void.
- E. Install finish flooring parallel with main playing court by power nailing or stapling approximately 12" (305mm) o.c.  
Provide 1<sup>1/2"</sup> (51mm) expansion voids at the perimeter and at all vertical obstructions.
- F. Stop blocking 4"x4" minimum shall be attached to underside of 1<sup>st</sup> layer of subfloor allowing a maximum of ¼" less than pad thickness where heavy loads are anticipated.
- G. Solid blocking shall be attached to areas under bleachers in the closed position. Solid blocking shall match the thickness of system pad. Solid blocking shall be a minimum of 4" wide and 12" O.C.
- H. Expansion Provisions-Size joints between maple flooring strips to allow for intermediate expansion in accordance with expected humidity changes and conditions in the space.

### 3.3 FLOOR SANDING

- A. Machine sand with coarse, medium and fine paper to a smooth, even and uniform surface.
- B. Remove sanding dust from entire surface by tack of vacuum.
- C. Refer to MFMA sanding and finishing guide for procedures.

### 3.4 FINISHING

- A. Inspect entire area of floor to insure that surface is acceptable for finishing, completely free from sanding dust and perfectly clean.
- B. Apply seal and finish per finish manufacturer's instructions.
- C. Buff and clean floor between each coat or as necessary.
- D. Paint game lines as shown on drawings, between seal coats.
- E. Game line paint shall be compatible with finish.

### 3.5 BASE INSTALLATION

- A. Install Vent Cove base, mitering inside corners and anchoring to walls with base cement or screws and anchors.

### 3.6 MAINTENANCE

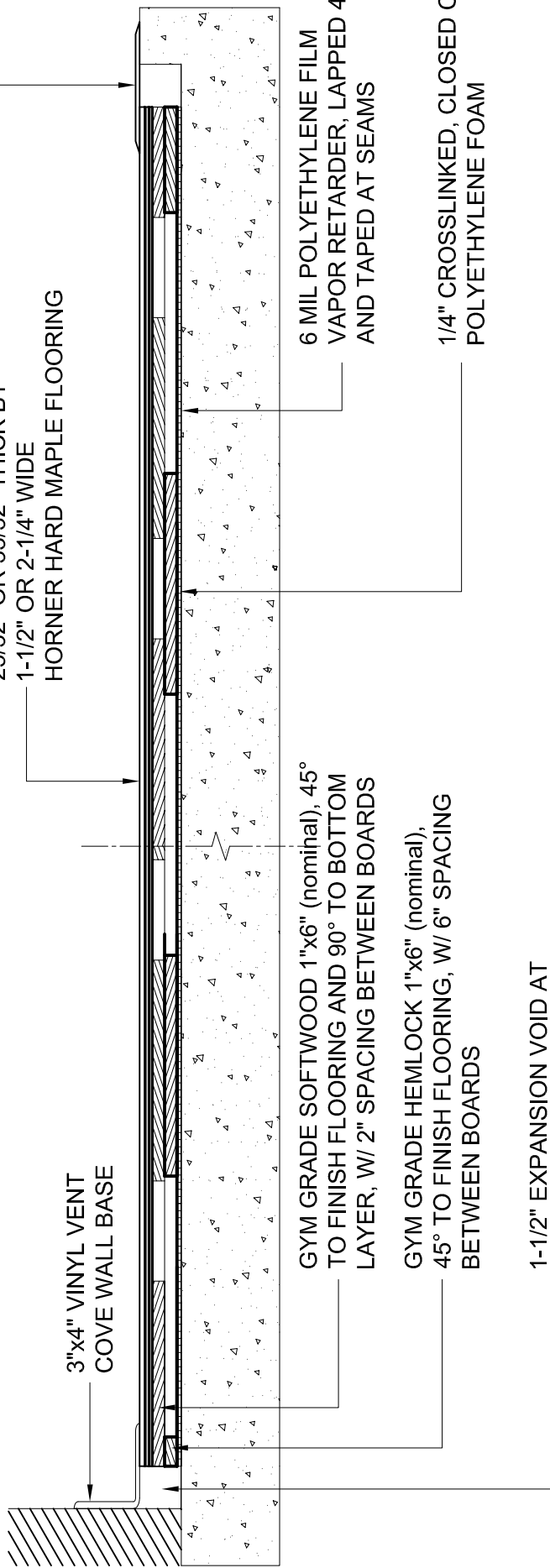
- A. Upon completion of floor installation, the owner, attendants or individuals in charge and responsible for the upkeep of the building are to see that the care and maintenance instructions outlined within the provided Horner Care and Maintenance Manual are followed. Horner flooring and certified dealers may offer extended warranty and maintenance agreements. It is recommended that any extended agreements include maintenance and recoats by the original installing contractor or related/recommended parties. (See maintenance/cleaning and recoating information on Horner Flooring website).

### END OF SECTION

ALUMINUM THRESHOLD

25/32" OR 33/32" THICK BY  
1-1/2" OR 2-1/4" WIDE  
HORNER HARD MAPLE FLOORING

3"x4" VINYL VENT  
COVE WALL BASE



GYM GRADE SOFTWOOD 1"x6" (nominal), 45°  
TO FINISH FLOORING AND 90° TO BOTTOM  
LAYER, W/ 2" SPACING BETWEEN BOARDS

GYM GRADE HEMLOCK 1"x6" (nominal),  
45° TO FINISH FLOORING, W/ 6" SPACING  
BETWEEN BOARDS

1-1/2" EXPANSION VOID AT  
PERIMETER OF FLOOR

6 MIL POLYETHYLENE FILM  
VAPOR RETARDER, LAPPED 4"  
AND TAPED AT SEAMS

1/4" CROSSLINKED, CLOSED CELL  
POLYETHYLENE FOAM

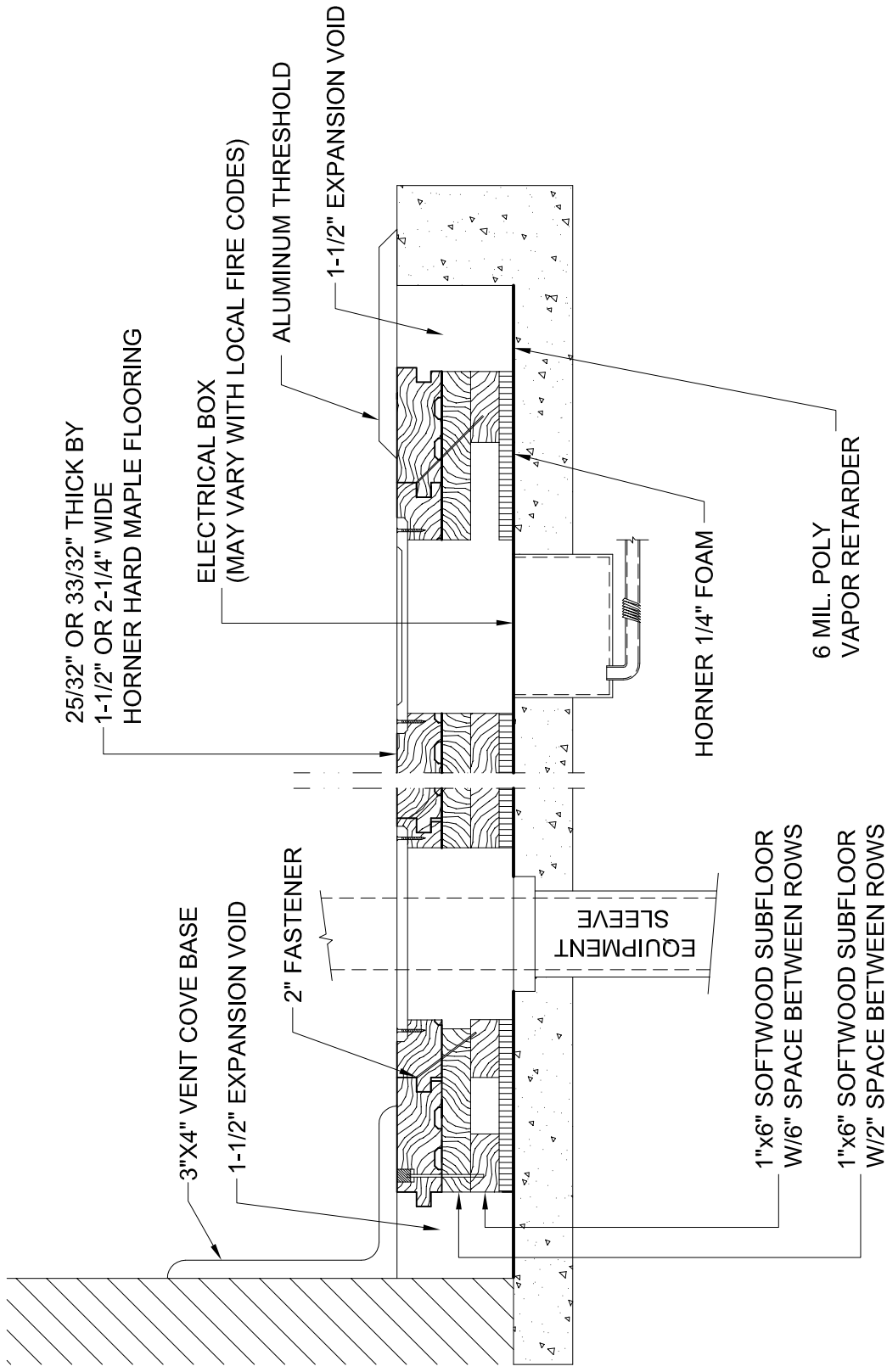
\*SUBFLOOR LAYERS ARE NAILED TOGETHER AT  
INTERSECTIONS W/ 1-1/4" STAPLES, AND ARE  
SPACED 1/4" AT BUTTED ENDS

**SLAB DEPRESSION**

FLOORING	25/32" (20mm)	33/32" (26mm)
1"x6" SUB	2-1/2" (64mm)	2-3/4" (70mm)
PLYWOOD SUB	2" (51mm)	2-1/4" (57mm)
OSB SUB	1-7/8" (48mm)	2-1/8" (54mm)

**ALL-WOOD SYSTEM -  
SIDE VIEW**

HORNER FLOORING COMPANY  
DOLLAR BAY, MI  
11-01-09



**ALL-WOOD SYSTEM**

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