



SAFE™ LAMINATED SLEEPER SUBFLOOR SYSTEM

The Horner SAFE™ Laminated Sleeper Subfloor Systems are an upgraded version of the SAFE™ Sleeper System. The laminated (plywood) sleepers are more flexible and yield a higher Impact Force Reduction Factor than the standard sleeper with the same pads. The SAFE™ Sleepers are available in two varieties. In addition to the standard regular sleeper a laminated version is also available. The choice of sleeper and pad properties gives you the opportunity to fine tune and customize a sports floor.

PART 1-GENERAL

1.1 DESCRIPTION

- A. This document specifies a wood strip gymnasium floor system consisting, in general, of wood sub-flooring, maple flooring, vapor retarder, sanding, sealers, finishes, gamelines and wall base.
- B. The general 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 GENERAL CONTRACTOR.
 1. Concrete slab depression to use with 3/4" (19mm) SAFE™ pads shall be:
 - a. 2 7/8" (73mm) for 25/32" (20mm) thick flooring.
 - b. 3 1/8" (79mm) for 33/32" (26mm) thick flooring.
 2. Concrete slab depression to use with 7/16" (11mm) SAFE™ shall be:
 - c. 2 5/8" (67mm) for 25/32" (20mm) thick flooring.
 - d. 2 7/8" (73mm) for 33/32" (26mm) thick flooring.
 3. Concrete subfloors shall have an adequate vapor retarder beneath and at the perimeter of the slab.

Option: The Horner Accredited Installation Company shall provide all tools and services to install a complete wood floor system from the concrete's surface polyethylene vapor retarder, when required, upward through the sanding and finishing, plus the installation of perimeter moldings.

1.2 QUALITY ASSURANCE

- A. Supplier Qualifications
 1. Supplier of wood flooring shall be Horner Flooring Company.
- B. Installer Qualifications
 1. Flooring contractor shall be a firm experienced in maple flooring systems.
Option: 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.
- C. Flooring shall be stored on the premises a minimum of seven (7) days before installation commences, or as required for acclimation. Final determination as to acclimation will be made by the flooring contractor.
- D. All flooring bundles should be broken and loosely piled to acclimate the flooring to moisture conditions in the building.

1.3 WORKING CONDITIONS

- A. The floor system shall not be delivered or installed until all masonry, plastering, tile work and all overhead mechanical trades are completed and building is enclosed and weathertight.
- B. Permanent heat, light and ventilation shall be installed and operating during and after installation, maintaining a temperature range of 55°F (13°C) to 75°F (24°C) and a relative humidity range of 35% to 50%.

1.4 WARRANTY

- A. Horner Flooring Company hereby warrants the SAFE™ LAMINATED SLEEPER SUBFLOOR SYSTEM flooring materials to be free from manufacturing defects for a period of one year from the date of substantial completion.

PART 2-PRODUCTS

2.1 MATERIALS

- A. Flooring shall be Horner Maple, 25/32" (20mm) or 33/32" (26mm) thick x 1 1/2" (38mm) or 2 1/4" (57mm) wide, First, Second and Better, Third and Better or Third Grade, 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. SAFE™ Laminated Sleepers shall be 7/8" x 4" x 8' (22mm x 102mm x 244cm) SPF plywood sleepers padded with 7/16" (11mm) or 3/4" (19mm) SAFE™ Pads.
OPTION: Rawl type restraint. Horner sleepers shall be prenotched to accept R-I retainers, or predrilled to accept R-II retaining pins if so specified.
- D. Subfloor shall be 15/32" (12mm) rated sheathing, exposure 1, plywood or 7/16" (11mm) OSB.
- E. Flooring fasteners shall be 1 3/4" (45mm) barbed cleat or 15 gauge (2mm) coated staples.
OPTION: If Horner Long Life™ is specified, use 2" (51mm) 15 gauge (1.8mm) staples only.
- F. Wall Base shall be 3" x 4" (76mm x 102mm) Vent Cove heavy duty molded, vented vinyl base with premolded outside corners as supplied by Horner Flooring Company. Specify color: black or brown.
- G. Finish material shall be as specified by architect selected from the latest listing provided by the MFMA and shall be applied according to manufacturer's instructions.

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 work required to put the concrete slab in an acceptable condition shall be the responsibility of the general contractor.

3.2 INSTALLATION

- A. Cover concrete with 6 mil polyethylene, sealing and lapping joints a minimum of 4" (102mm).
- B. Subfloor:
 - 1. Install Horner sleepers along short dimension of room (at right angles to the main playing court), butting ends with a 1/4" (6mm) space and staggering joints. Provide 2" (51mm) expansion voids at the perimeter and at all vertical obstructions. Sleepers shall be spaced 12" (305mm) o.c. Attach plywood or OSB to the sleepers using 1 1/4" (32mm) cleated nails with 1/4" (6mm) spacing between adjoining sheets.
OPTION: Rawl type restraint. Install R-I restraints over prenotched sleepers or install R-II pins into predrilled sleepers if so specified.
- C. Install finish flooring parallel with main playing court by power nailing or stapling approximately 12" (305mm) o.c.
 - 1. Space joints between flooring strips to allow for intermediate expansion, as designated by the installer and in accordance with humidity conditions in the region.
 - 2. Provide 2" (51mm) expansion voids at the perimeter and at all vertical obstructions.

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 or vacuum.
- C. Refer to MFMA sanding and finishing guide for procedures.

3.4 FINISHING

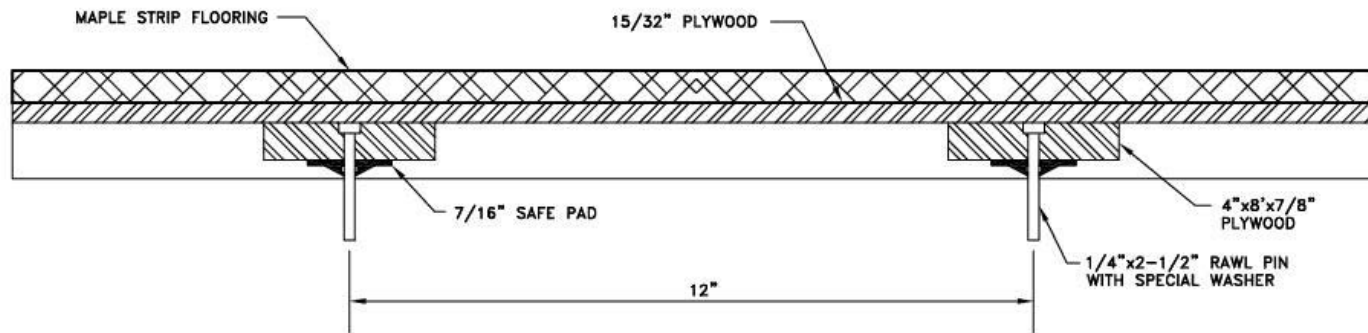
- A. Inspect entire area of floor to insure that surface is acceptable for finishing, completely free from sanding dust and perfectly clean.
- B. Apply seal and finish per manufacturer's instructions.
 - 1. Apply two (2) coats of seal and two (2) coats of finish.
- C. Buff and clean floor between each coat.
- D. Paint game lines as shown on drawings, between seal and first coat of finish.
- 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 of the Horner or MFMA Care Card are followed.



SAFE™ LAMINATED SLEEPER SUBFLOOR

Flooring	Slab Depression	
	25/32" (20mm)	33/32" (26mm)
7/16" Pad (11mm)	2 5/8" (67mm)	2 7/8" (73mm)
3/4" Pad (19mm)	2 7/8" (73mm)	3 1/8" (79mm)

HORNER FLOORING COMPANY
 DOLLAR BAY, MICHIGAN
 AUGUST 23, 2006

