

# WOOD FLOORING SPECIFICATIONS MANUAL

## AUXILLARY GYMNASIUM FLOORING CENTENNIAL HIGH SCHOOL

### PART 1 – GENERAL

#### 1.1 SUMMARY

##### A. Section Includes:

1. Sheet vapor retardant on substrate surface.
2. Plywood sheathing on cushion blocks.
3. Hardwood flooring.
4. MDF plywood panel flooring and AC plywood panel flooring.
5. Surface sanding, stain, sealer, finish coating and striping.
6. Vented base.
7. Installation of thresholds.

#### 1.2 REFERENCES

A. Comply with all References in effect, most active, or latest version as of the date of the Contract Documents.

B. American Society of Testing and Materials International (ASTM) ([www.astm.org](http://www.astm.org)):

1. D2394 - Standard Test Method for Simulated Service Testing of Wood and Wood-Base Finish Flooring.

2. D4258 – Standard Practice for Surface Cleaning Concrete for Coating.

3. F1869 – Standard Test Method for Measuring Moisture Vapor Rate of concrete Subfloor Using Anhydrous Calcium Chloride.

C. Forest Stewardship Council (FSC) ([www.fscus.org](http://www.fscus.org)): STD-40-004 - Chain of Custody Standard.

D. Maple Flooring Manufacturer's Association (MFMA) ([www.maplefloor.org](http://www.maplefloor.org)):

1. Grading Rules.

E. National Wood Flooring Association (NWFA) ([www.nwfa.org](http://www.nwfa.org)):

1. Grading Rules.

F. Resilient Floor Covering Institute (RFCI) ([www.rfci.com](http://www.rfci.com)):

1. FloorScore Certification Program.

G. American Lumber Standards Committee. (ALSC) ([www.alsc.org](http://www.alsc.org)).

H. American Plywood Association. (APA) ([www.apawood.org](http://www.apawood.org)).

I. National Forest Products Association. (NFPA) ([www.nfpa.org](http://www.nfpa.org)).

J. Western Wood Products Association. (WWPA) ([www.wwpa.org](http://www.wwpa.org)).

K. 2010 Americans with Disabilities Act. (ADAAG) ([www.ada.gov](http://www.ada.gov)).

L. 2015 International Building Code. (2015 IBC).

#### 1.3 SUBMITTALS

A. Submit product data.

B. Submit product data for resilient blocks, floor materials and floor coating.

C. Submit product stain, sealer, finish, and striping samples.

1. Submit multiple samples of stained and finished products for approval.
2. Submit multiple samples of custom color striping.
- D. Submit Manufacturer's Performance Testing: PUR. DIN 18032 part II, EN 14904.
- E. Submit Manufacturer's installation instructions.
- F. Shop drawings: Submit layout drawings of wood flooring with inlay work, and basketball and volleyball striping.
- G. Graphic: 1. No Graphics on these floors
- H. Maintenance Data: Upon completion of floor installation, send to owner and individuals in charge and responsible for the upkeep of the building a CARE CARD. This card spells out care and maintenance instructions including temperature and humidity ranges for areas where flooring is installed.

#### 1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with the following:
- B. Lumber Grading Agency: Certified by ALSC.
- C. Plywood Grading Agency: Certified by APA.
- D. Conform to MFMA - Recommendations for correct preparation, finishing and testing of concrete subfloor surfaces to receive wood flooring.
- E. Maintain one copy of each document on site.
- F. Qualifications
  1. Manufacturer: Member of MFMA, specializing in manufacturing the products specified in this Section with minimum three (3) years' experience.
  2. Installer: Company specializing in applying the work of this Section with minimum three (3) years' experience.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site.
- B. Deliver materials in time to permit moisture content to stabilize to ambient conditions.
- C. Store and protect products.

#### 1.6 PROJECT/SITE CONDITIONS

- A. Do not install wood flooring until wet construction work is completed.
- B. Do not install flooring until moisture content of concrete subfloor has stabilized at Manufacturer's requirements and ambient air at installation space is not less than 65 degrees F.
- C. Provide permanent heat, light, and ventilation prior to installation.
- D. Maintain minimum room temperature 65 degrees F for period of 2 days prior to delivery of materials during and after installation.

#### 1.7 SEQUENCING AND SCHEDULING – NOT USED.

#### 1.8 EXTENDED WARRANTY – NOT USED.

#### 1.9 MAINTENANCE – NOT USED.

### PART 2 – PRODUCTS

#### 2.1 MANUFACTURERS

A. Flooring:

1. Aacer Flooring. ([www.aacerflooring.com](http://www.aacerflooring.com)).  
Product: Aacer Flex EN-DIN.
2. Action Floor. ([www.actionfloors.com](http://www.actionfloors.com)).  
Product: Action Thrust I
3. Connor Sports. ([www.connorfloor.com](http://www.connorfloor.com)).  
Product: NeoShok Blue-60D Durometer.
4. Robbins Sports Surfaces. ([www.robbinsfloor.com](http://www.robbinsfloor.com)).  
Product: Bio Cushion Classic.
5. Substitutions upon approval by owner.

B. Floor Stain:

1. Bona. ([www.bona.com](http://www.bona.com)).  
Product: Bona DriFast Stain. (light and dark areas)
2. Substitutions upon approval by owner.

C. Floor Sealer:

1. Bona. ([www.bona.com](http://www.bona.com)).
2. Product: Bona SuperSport DTS. (light areas)
3. Product: Bona Sport Poly.
4. Substitutions upon approval by owner.

D. Floor Finish:

1. Bona Sport Poly. ([www.bona.com](http://www.bona.com)).
2. Hillyard Chemical Co. ([www.hillyard.com](http://www.hillyard.com)).
3. Substitutions upon approval by owner.

E. Floor Striping:

1. Colors: Custom as selected by Owner.
2. As indicated on drawings and products and applications as recommended by floor finish Manufacturer.
3. Substitutions upon approval by owner.

## 2.2 MATERIALS

Gymnasiums:

A. Flooring: Species and grade stamped on underside of each piece, conforming to the following:

1. Species: Northern Hard Maple (*Acer Saccharum*)
2. Grades: Second and better at main court within boundary lines. Third and better at all other areas.
3. Cut: Plain Sawn
4. Moisture Content: 8 percent maximum
5. Actual Thickness: 25/32 inch
6. Actual Width: 2-1/4 inches
7. Edge: Tongue and Groove
8. End: Tongue and Groove

9. Length: Random

B. Flooring specified is required: However, if material is no longer manufactured and distributed as specified, the replacement grade, or if it is not available the next (closest) upgrade shall be required, with written verification from flooring Manufacturer submitted with shop drawings. Flooring shall be “Smartwood Certified” in accordance with the rules of the Forest Stewardship Council.

C. Plywood Sheathing: Two layers of 4’ x 8’ x 15/32 inches CDX grade plywood.

D. Plywood Stop Blocks: 3-inch wide x length recommended by floor Manufacturer, CDX grade plywood attached to bottom layer of plywood sheathing.

1. Under stacked bleachers: Same thickness and spacing as cushion pads.

2. Under bleacher extension area: 1/2 inch thick, same spacing as cushion pads.

3. Install at edges of bottom layer of plywood sheathing in both stack and extension area.

E. Cushion pads, Sheet Vapor Retardant and Vented Perimeter Base accessories installed per Manufacturer’s system installation requirements.

2.3 MANUFACTURED UNITS – NOT USED.

2.4 EQUIPMENT – NOT USED.

2.5 COMPONENTS – NOT USED.

2.6 ACCESSORIES

A. Cushion Pads: Manufacturer’s standard, conical, compressible EPDM pads with full and immediate recovery. Various types as required for sports floors and theatrical stages as recommended by Mfr.

B. Sheet Vapor Retardant: Two layers 6 mil thick, polyethylene, with reinforced tape for lap joint sealing.

C. Nails: Type recommended by flooring Manufacturer. Hardened steel barbed type for use with a power driver.

D. Wall Base: Ventilating type, molded rubber, 4 by 3 inch, with adhesives and accessories, color as selected by Owner.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Verify that surfaces are ready to receive work.

B. Verify that recessed subfloor surface is smooth and flat to a tolerance of 1/8 inch per 10 feet maximum.

C. Verify that concrete substrate moisture content is per Manufacturer’s requirements.

D. Beginning of installation means installer accepts existing surfaces.

3.2 PREPARATION

A. Broom clean substrate.

3.3 INSTALLATION - FLOORING

A. Place vapor retardant, lap edges and ends 4 inches, tape all edges. Install second layer of vapor retardant, lap edge and ends 4 inches, tape seal.

B. Secure cushion blocks to underside of first layer of plywood at 12 inches O.C. and not more than 6 inches from edges.

C. Place plywood sleepers between cushions at all locations where bleacher rollers will be parked and rolling over hardwood floor.

D. Place second layer of plywood sheathing over the first layer. Lay diagonal to the first layer and nail at 12 inches O.C.

E. Lay flooring strips parallel to length of room areas with joints set flush and tight. Place second and better maple flooring at main court within boundary lines. Place third and better maple flooring at all other areas.

F. Nail flooring with power driver in accordance with Manufacturer's instructions.

G. Install base at floor perimeter to cover expansion space in accordance with Manufacturer's instructions. Miter inside and outside corners. Install vented base at gymnasium wood flooring locations.

H. Finishing

1. Sand hardwood flooring to smooth even finish with no evidence of sander marks. Take precautions to contain dust. Remove dust by vacuum.

2. Mask off adjacent surfaces.

3. Confirm floor design prior to finishing.

4. Apply stain in strict accordance to Manufacturer's instructions.

5. Apply one base coat and one finish coat, game lines, and then two finish coats in accordance with floor finish Manufacturer's instructions for hardwood flooring system.

6. Apply base coat. Allow to dry. Vacuum clean and wipe with damp cloth.

7. Apply second coat. Allow to dry. Abrade floors with Bona Diamond 180 grit discs. Vacuum clean and wipe with damp cloth.

8. Apply colored game lines to layout indicated on Drawings.

9. Abrade all paint with Bona Diamond 180 grit discs. Vacuum clean and wipe with damp cloth.

10. Apply two coats of finish.

11. Final thickness of finish is to be 5 mil. Contractor is to arrange and pay for an independent testing lab to verify finish in a minimum of three locations.

12. Provide and install ADA compliant thresholds at all public access doorways. These thresholds are to be similar to what is currently installed at the gymnasium entries on the first floor. Product must be submitted and approved by the Project Manager prior to installation.

13. Thresholds for the doorways to the exterior access in the North Gym and the Cheer Office in the South Gym must provide a tight seal to the door. These locations do not have to be ADA compliant. Product must be submitted and approved by the Project Manager prior to installation.

### 3.4 FIELD QUALITY CONTROL

A. Wood flooring to be installed straight (shall not vary more than 1/4 inch in 20 feet in any direction).

### 3.5 ADJUSTING – NOT USED

### 3.6 CLEANING – NOT USED

### 3.7 DEMONSTRATION – NOT USED

### 3.8 PROTECTION

- A. Protect finished floor from all traffic until substantially complete.