PRE-INSTALLATION INSTRUCTIONS FOR WOOD FLOORING

INSTALLATION BULLETIN

The installation of wood floors is an endeavor, which requires more preparation, and craftsmanship than any other type of flooring an installer may work with. Building construction and climate are extremely important factors to be considered before, during and after a wood floor installation. Wood, being a product of nature, has characteristics unlike other common types of flooring and must be understood to be worked with successfully. When glue down installation is necessary for solid wood flooring specific pre-installation instructions must be followed for a successful installation. Thin-gauged solid wood is extremely sensitive to adverse job site conditions.

BUILDING CONSTRUCTION

Building moisture due to construction faults or environmental moisture (in excess) is a major concern with wood flooring. The National Oak Flooring Manufacturers Association suggests checking for the following conditions:

Outside the Home

- Eave overhang and gutters. Are they moving water away from the foundation?
- Does natural slope move rainwater away from foundation, crawl space, basement, or concrete slab? Are there any raised flower beds, swimming pools or ponds that could introduce moisture?

Inside the Home

- Is there a sense of damp, moist or stagnant air when entering the home? Are heating and air conditioning systems operational? Are all major appliances properly vented to release warm, moist air? Are outside doors adjoining patio properly caulked and weatherproofed?
- Is there any leaking or condensation coming from plumbing in the area where the floor is to be installed?
- Does the slab contain a 6-mil poly moisture barrier or equal, or is the soil within the crawl space properly covered with 6-mil polyfilm moisture barrier? Is concrete slab moisture level suitable for installation?

TEMPERATURE AND HUMIDITY

Follow wood floor manufacturers instructions for installation of their products. Temperature and humidity of the installation site should be consistently maintained at 60-70º F and 40-50% RH for at least 4-5 days prior to installation The adhesive should also be temperature acclimated in the installation site for at least 48 hours prior to usage. Wood flooring products should be delivered, broken out of their packaging, and stored in the installation site during the same length of time to allow the flooring to acclimate to the site conditions.

Installation should not proceed if the temperature in the installation site is below 60 F. The temperature and humidity levels must be properly controlled before, during, and after the installation. All windows and doors must be in place and the HVAC (air conditioning and heating) system must be working to control the environment during and after the installation.

SUITABLE SUBFLOORS

Approved subfloors are on or above grade concrete, APA trademarked plywood underlayment, Association grade particleboard, underlayment grade OSB, fully adhered non-cushioned vinyl tile and sheet, and terrazzo. NOTE: Some wood flooring is not recommended below grade. Do not use Taylor adhesives over substrates not approved by the wood flooring manufacturer.

Concrete slabs containing antifreeze chemicals, and mixtures or curing compounds that are hydroscopic are not acceptable. Concrete that has been sealed is not acceptable and must be removed.

Loose laid and perimeter bond sheet goods, and rubber floor tiles are not acceptable subfloors.

Radiant Heated Substrates

Follow wood flooring manufacturers recommendation for each specific wood flooring product. Taylor Meta-Tec adhesives can be used with wood flooring approved for radiant heated substrates when the surface temperature does not exceed 85 F. It is recommended the heat be turned off 24 hours prior to, during, and 24 hours after installation. When the radiant heat must be left on to maintain an acceptable surface temperature the working time of the adhesive may be reduced. Therefore, during the installation, occasionally lift a newly installed plank to ensure 100% transfer of adhesive to wood flooring (see label for proper instructions).

SUBFLOOR CONDITION

In order to ensure the successful installation of the wood floor, certain minimal subfloor conditions must be met. It is the sole responsibility of the installer to ensure that the subfloor conditions are acceptable. Prior to beginning the installation, the subfloor must be structurally sound, fully adhered, level, clean, dry and alkali free.

Structurally Sound: The subfloor must be fastened securely and supported to resist squeaking and flexing.

Fully Adhered: Vinyl flooring must be 100% securely bonded. Wood subfloors must be completely and securely nailed down.

Level: The subfloor must be smooth, flat, and level to 3/16" in a 10' radius. High spots must be ground level. All low spots must be filled with a polymer modified cementitious patching compound, which must be allowed to fully cure prior to floor installation. Do not use gypsum based floor patches, which are not structurally sound enough and may break apart during normal floor movement.

Clean: The subfloor must be free of dirt, dust, wax, grease, oil, paint, old adhesive, or any substance that may interfere with adhesion. Finish should be removed from existing hard surface flooring to ensure good mechanical bonding. Existing floor coverings should be surface treated to remove any maintenance finishes. Removal of existing sheet flooring must be done according to RFCI guidelines (see asbestos removal).

Dry: All subfloors must be tested for moisture content and migration. The moisture content of concrete must be measured with an impedance type moisture encounter meter specifically designed for concrete moisture measurements. Readings should not exceed 4%. Note that this will measure only the moisture present in the slab at the particular time of measurement. Of equal or greater concern is the amount of moisture vapor migrating or passing through the slab to the surface. The calcium chloride test is the only quantitative test available at this time and must be performed to determine the extent of moisture passing through the slab. The emission of moisture through the slab must not exceed 3 pounds/1000 square feet/24 hours. Calcium chloride test kits are available at most flooring distributors.

Condensation tests may be performed by taping 18"x18" polyethylene sheets in several locations on the concrete slab. Heat lamps are then placed close enough to warm these areas and allowed to remain in place for 48 hours. Moisture on the plastic sheets or darkening of the concrete surface under the sheets is an indication of high moisture in the concrete. Phenolphthalein tests may also be performed by using a 3% phenolphthalein solution in water free alcohol. Drill dime-sized holes, ¼" deep, in various areas of the concrete slab, particularly around the walls. Then apply two drops of the solution into each of the drilled holes. If there is no color change in the solution, then there is not enough moisture to affect the installation. If the solution turns pink or dark red within five minutes, further testing must be done with a moisture encounter meter or calcium chloride test kit.

Test all wood subfloors and wood floor products with an impedance type moisture meter specifically designed for wood moisture measurements. The moisture content of the subfloor should be within 4 percentage points of the moisture content of the wood floor product (typically less than 13%). The product should be acclimated on the jobsite until this range is reached.

Alkali Free: Excess alkalinity can contribute to adhesive failure. Alkali can be visible as a white powder on the surface of the concrete. However, it is the excess salt contained within the concrete that can cause adhesive failure over time. This problem is magnified if moisture is present and passing through the concrete, as this condition will deposit the excess salt on the concrete surface. A simple pH test will determine the presence of alkali on a slab surface. Apply a few drops of distilled water to a small thoroughly clean and scraped concrete surface area and apply a strip of pH paper to the wetted area. The paper will change color within 5 minutes. Compare the color change to the chart standard supplied with the paper to indicate the pH of degree of alkalinity. A pH range from 5 to 10 is acceptable. Corrective measures must be taken with any concrete slab that measures a pH reading above10. Follow the wood floor product manufacturers instructions for correcting these concrete slabs.

INSTALLATION TIPS

Use the correct trowel. A sufficient amount of adhesive must be applied so that wood makes and maintains overall contact with adhesive and does not bridge over low spots leaving hollow sounds after cure.

Allow open time for adhesive to begin flashing. All manufacturers require this in various degrees.

Side nail and weight where necessary. There are many times that a few planks will have a natural bowing, or subfloors are slightly uneven, or there are sprig nails on concrete. Weighting (overnight if necessary) will help keep wood floor bedded in the adhesive.

Allow for expansion. Follow wood floor manufacturers specifications for perimeter spacing.

References: Anderson, Bruce, North American/Mannington, Hartco