canopy

Install Instruction

Flex

INTRODUCTION

Canopy Flex is a new generation of high-performance, self-adhering flooring product. Requiring no adhesives, **Canopy Flex** flooring is easy to install and has no unpleasant odors. **Canopy Flex** installs like traditional loose lay / glue-down LVT over a smooth and non-porous surface. This makes **Canopy Flex** ideal for installing over existing non-porous, fully bonded, and intact resilient flooring like sheet vinyl, VCT, LVT, or rubber flooring.

The information in this document provides general guidelines and industry-accepted best practices to ensure successful installation. Make sure to review the current **Canopy Flex** Installation Instructions, which are available at www.canopyfloors.com, before installing **Canopy Flex** flooring products. It is vital to avoid problems from the outset. If you need clarification on any information provided in this document or are having a problem with your installation, immediately stop and contact International Flooring Co. Customer Service for additional guidance. Customer Service can be reached at **info@canopyfloors.com** or (855) 432-2353, Monday through Friday, 8:00 a.m. to 5:00 p.m. EST.

There are **three key points** to help achieve a successful and trouble-free **Canopy Flex** installation.

1. PRIMER / SEALER—To make porous surfaces non-porous, Use the Wakol PU-280 Polyurethane Primer & Moisture Barrier. PU-280 is available through the Wakol Distribution network.

CAUTION: Most Primer / Sealer products on the market for traditional adhesives do not provide a non-porous surface and will not provide a suitable bonding surface. Only use Primer / Sealer products that function as a moisture barrier. Before selecting an alternate surface Primer / Sealer, consult with your IFC Sales Representative or contact Customer Service at **info@canopyfloors.com** or (855) 432-2353, Monday through Friday, 8:00 a.m. to 5:00 p.m. EST.

2. PROPERLY APPLY THE PRIMER / SEALER – Shake the container of Wakol PU-280 for 1 minute or longer, then allow the container to sit for 2-3 minutes to let air bubbles release from the product. Pour the PU-280 into a paint tray. To properly apply the Wakol PU-280, use a Microfiber Roller Cover with ¼ Inch Nap with a roller frame on a pole. Use a foam paintbrush to apply the PU-280 to cut in along edges, corners, and recesses. It is crucial to apply the PU- 280 to the edge where the flooring will be installed. Load the roller cover and aggressively roll the PU-280 to apply a thin, even coat. If you see bumps on the surface, the coating is thicker than necessary and takes longer to dry. When you have bumps in the coating, allow 2-3 hours of dry time, then remove any bumps with a putty knife, the flat edge of a trowel, or sanding with an 80 to 120 grit screen or sandpaper.

CAUTION: Using the wrong roller cover contributes to bumps or an unsmooth surface on the cured coating. Typical paint roller covers, even with an ¼ inch nap, trap air in the coating and leave a heavier coating thickness than needed. If you do not have an option but to use the incorrect roller cover, allow for 2-3 hours of dry time and scrape or sand the surface with an 80 to 120 grit screen or sandpaper to remove bumps before installation.

3. BEGIN WITH 2 OR 3 ROWS ALONG THE STARTING LINE—Align two rows of tiles or three rows of planks along the starting line. Ensure the flooring pieces are laid straight without gaps or misalignment and not bent into position. Only use the starting line as a reference and lay the starting tiles or planks straight and aligned to each other.

GENERAL INFORMATION

The key to a successful and trouble-free installation is preparation. Do not install **Canopy Flex** flooring without first performing an on-site evaluation (including job site testing), ensuring that subfloor preparations are finished and that the work of all other trades has been completed. Site conditions must comply with the information provided within this document, the ASTM F710, "How to Prepare Concrete Substrates to Receive Resilient Flooring," ASTM F1482 "Standard Practice for Installation and Preparation of Panel Type Underlayments to Receive Resilient Flooring," as well as from subfloor preparation material manufacturers technical documents and applicable building codes.

- **Canopy Flex** Luxury Vinyl Tile and Plank products come in 5.0mm gauge for residential & commercial applications.
- **Canopy Flex** can be installed transition-free with products of the same thickness.
- The **Canopy Flex** backing system provides a cushioned foam layer and self-adhering backing technology to bond to any smooth, non-porous surface. The **Canopy Flex** technology provides a secure, repositionable bond ideal for fast turnaround renovations. The removable nature of **Canopy Flex** allows for quick and easy repairs.
- **Canopy Flex** is only intended for climate-controlled interior use environments and is suitable for above, on, and below-grade applications. **Canopy Flex** is not suitable for exterior installations or use in non-climate- controlled areas.
- **Canopy Flex** is recommended for use over suitable existing floors, properly prepared concrete, suspended wood, metal, and other fully bonded, smooth, and non-porous substrates.
- Acclimation: **Canopy Flex** shall be installed in climate-controlled structures maintained at a consistent temperature between 65°-85°F (18°-29°C) and 35%- 65% RH with a slab surface of at least 65°F (18°C). Acclimation is achieved when the flooring and subfloor are at a consistent and stable temperature within 3°- 5°F (1°- 2°C) of each other.
- **Canopy Flex** can be used immediately after installation. Unlike traditional adhesive installations, there is no need to restrict use and wait for the adhesive to cure.
- Provide good overhead lighting for proper subfloor preparation and installation. Ambient lighting during installation should equal the anticipated lighting level during occupancy. Poor lighting is no excuse for improper workmanship or installation of visible defects.
- Floor Flatness: The surface shall be flat to 3/16 inch in 10 feet (4.8 mm in 3 m) or 1/8 inch in 6 feet (3.2 mm in 1.8 m) and 1/32 inch in 12 inches (0.8 mm in 305 mm).
- Level high spots by sanding, grinding, and filling low spots. Smooth the surface using an appropriate patch or self-leveling underlayment to prevent any irregularities or roughness from telegraphing through the new flooring. After patching, sand the surface to remove all ridges. Rework remaining low spots or surface defects to achieve a smooth, flat surface. Vacuum the entire surface, paying close attention to the perimeter to remove all dust and debris. Prime / Seal the prepared surface with Wakol PU-280.
- Porous or dusty structurally sound substrates shall be Primed / Sealed by applying one or two coats of Wakol PU-280 with an ¼ inch (6 mm) short nap paint roller and allowed to dry before proceeding. The Wakol PU- 280 generally dries to touch and can proceed within 45-60 minutes at the specified temperature and humidity range.
- Allow other trades, especially the overhead and wall trades, to complete their work before beginning the floor installation. Cover the substrate during spackling, painting, or pipe cutting to prevent surface contamination. Spackling, permanent marker, paint, paint thinner, machine oil, and other construction trade items that contaminate the substrate can cause bond failure or product discoloration.
- Close working spaces to non-essential traffic until the installation is completed. After installation, the Flooring Contractor, General Contractor, or property owner shall protect the installed flooring from construction damage from other trades until the space is turned over.

All warranties and guarantees pertaining to the suitability and performance of any preparation or ancillary product rest with that material manufacturer and/or the Flooring Contractor and NOT with International Flooring Co.. The condition of the subfloor, any issues resulting from improper subfloor preparation, and the use of incorrect or incorrectly prepared surface preparation products are the responsibility of the Flooring Contractor, General Contractor, and/or the product manufacturer.

WARNING: ASBESTOS & SILICA – Various Federal, State, and Local government agencies have regulations governing the removal of in-place asbestos-containing material. If you contemplate the removal of a resilient floor covering structure that contains (or is presumed to contain) asbestos, you must review and comply with all applicable regulations. Do not sand, dry sweep, dry scrape, drill, saw, bead blast, or mechanically chip or pulverize existing resilient flooring, backing, lining felt, asphalt "cut-back" adhesive, or other adhesive. These products may contain asbestos fibers or crystalline silica. Avoid creating dust. Inhalation of such dust is a cancer and respiratory tract hazard. Smoking by individuals exposed to asbestos fibers significantly increases the risk of bodily harm. Unless certain that the product is a non-asbestos-containing material, you must presume it contains asbestos. Regulations may require that the material be tested to determine asbestos content. RFCI's Recommended Work Practices for Removal of Resilient Floor Covering is a defined set of instructions addressing the removal of resilient floor covering structures. For further information, visit the Resilient Floor Covering Institute website at www.rfci.com.

Chemical Abatement: International Flooring Co. does not recommend using solvent adhesive removers (inorganic or bio-based) or chemically abating an existing floor covering or adhesive. Adhesive removers can remain in the slab, under walls, and within cracks and cause the new floor covering to fail after installation. To remove all flooring and adhesives, follow the resilient flooring removal procedure detailed in the RFCI's Recommended Workplace Practices for Removal of Resilient Floor Coverings.

MATERIAL RECEIVING, STORAGE AND ACCLIMATION

Immediately remove shrink-wrap and other protective coverings and check the material for damage. Verify that the material is the correct color and quantity ordered for each Pattern and Run number(s). Photograph any concerns at the time of delivery and note all discrepancies on the Bill of Lading with the truck driver. Immediately report discrepancies to International Flooring Co. Customer Service at **info@canopyfloors.com** or (855) 432-2353, Monday through Friday, 8:00 a.m. to 5:00 p.m. EST.

General Storage: Store all materials flat on a smooth and fully supported base off the floor in a weather-tight space maintained between 55°-85°F (13°-29° C). Using outside temporary storage and other uncontrolled storage locations may result in unintended installation issues, including bond failure, edge lifting, gapping, or buckling, and is not covered under the product warranty. **DO NOT DOUBLE-STACK PALLETS.**

Acclimation: Canopy Flex shall be installed in climate-controlled structures maintained at a consistent temperature between 65°-85°F (18°-29°C) and 35%-65% RH with a slab surface of at least 65°F (18°C). Acclimation is achieved when the flooring, installation accessories, and subfloor in the installation area are at a consistent and stable temperature that is within 3°-5°F (1°-2°C) of each other. If permanent HVAC is not operational, use temporary HVAC and data loggers to confirm temperature and RH compliance. Stack unopened cartons no more than five (5) high and spaced 4-6 inches apart to acclimate more quickly. Keep materials away from heating and cooling ducts/sources and direct sunlight during acclimation and installation.

JOBSITE INSPECTION AND TESTING

Before installation, plan and attend an on-site construction meeting with the General Contractor, Architect, and Property Owner to review all requirements. Inspect site conditions as outlined in this document, as well as those outlined in ASTM F710 and ASTM F1482, and from substrate preparation material manufacturers and relevant building codes. Flooring installation shall only begin once all site conditions have been assessed, testing has been completed, the subfloor has been prepared, and all conditions are in compliance. Installation of material constitutes acceptance of all job site conditions. Document and save your job site testing and evaluation results.

- Before job site testing can begin, the building must be enclosed (ASTM F710). Windows, doors, roofing, walls, etc., must be installed and HVAC operational.

- Maintain interior environmental conditions at a consistent temperature between 65°-85°F (18°-29°C) and 35%- 65% RH for a minimum of 48 hours before and continuously during testing (ASTM F710).
- To achieve valid results, the substrate moisture test sites must be planned, placed, and protected for the duration of the testing.
- Confirm that the subfloor flatness for all substrates does not exceed 3/16 inch in 10 feet (4.8 mm in 3 m), 1/8 inch in 6 feet (3.2 mm in 1.8 m), and 1/32 inch in 12 inches (0.8 mm in 305 mm).
- For concrete slabs on or below grade, request documentation from the General Contractor or owner that specifies and confirms there is a properly installed and intact vapor retarder that complies with ASTM E1745.
- Moisture Testing: Perform one or more of the listed moisture evaluation methods to determine the moisture levels of the subfloor and whether moisture remediation is required.

CONCRETE SUBFLOORS

- Electronic Moisture Meter: Use a Tramex Concrete Moisture Encounter Meter to check the moisture level of the concrete slab's surface. The moisture limit is 4.0% on the Concrete Moisture scale.
- Mat Test (ASTM D4263): Duct tape two-foot-x-two-foot pieces of plastic sheet to the surface of the concrete, ensuring the edges are secure. After 24 hours, peel back the plastic. The limit is darkness, but no dampness or water drops. Any condensation or moisture on the slab or the plastic is not acceptable.
- Calcium Chloride Test (ASTM F1869): Place the calcium chloride tests as specified in the current ASTM F1869. The maximum limit is 8.0 lbs. MVER.
- In-Situ Relative Humidity (RH) Test (ASTM F2170): Place the RH probes as specified in the current ASTM F2170. The maximum limit is 90.0% RH.
- Alkalinity testing is not required.

WOOD SUBFLOORS

- Wood Moisture Meter: Check wood substrates with a calibrated pin moisture meter. Readings between the subfloor/structural wood and underlayment panels must be within 3.0% and be less than 14.0% moisture content.

WARNING: Mold and mildew grow in the presence of moisture. Job site mold and moisture issues must be addressed and corrected before installation. Please visit www.epa.gov/mold for information about safely preventing and removing mold, mildew, and other biological pollutants.

ACCLIMATION

- Acclimate the **Canopy Flex** flooring, job site, and subfloor in the area to be installed to a stable and consistent temperature between 65°-85°F (18°-29°C) with ambient relative humidity between 35%- 65% RH. The key is to condition the flooring materials and job site environment to match the facility's operational environmental conditions. Achieve and maintain a stable and consistent temperature for at least 24 hours before, during, and continuously after installation. Check the subfloor surface and flooring materials and confirm all are at the same temperature within 3°-5°F (1°-2°C) before and during the installation. If permanent HVAC is not operational, use temporary HVAC and data loggers to confirm temperature and RH compliance.
- Stack flooring cartons flat no more than five (5) high. Space flooring 4-6 inches apart and keep materials away from heating or cooling ducts/sources and direct sunlight.

- Radiant-heated subfloors must be run for at least two (2) weeks and turned off two (2) days before installation. Maintain temperature with temporary HVAC using data loggers to confirm temperature and RH compliance. After two days, gradually raise the temperature by 2°F (1°C) per day to reach normal operating temperature.
- Radiant-heated subfloors shall not exceed 85°F (29°C) under any mode of operation.
- After installation, maintain conditions between 65°-85°F (18°-29°C) and 35%- 65% RH for optimal flooring performance. The minimum floor surface temperature should not go below 60°F (16°C).

SUITABLE SUBFLOORS

Canopy Flex flooring products may be installed over existing fully bonded, smooth, and intact resilient flooring (non-porous surface) and properly prepared concrete, suspended wood, and metal subfloors.

All substrates must be properly prepared, meeting the requirements listed in this **Canopy Flex** Installation Instructions, ASTM F710, ASTM F1482, and the ACI 302.1 and ACI 302.2, and have a smooth and non-porous surface. Consult a substrate preparation material supplier for appropriate selections, application requirements, and warranty information. The Flooring Contractor, materials supplier, and manufacturer are responsible for assessing the suitability, specifying the substrate preparation material, and providing their product warranty.

Suitable substrates include:

1. Existing Floors
   A. Sheet Vinyl/LVT/VCT and Ceramic Tile
   B. Polymeric Poured Floors and Terrazzo Floors
2. Metal Substrates
3. Thick Pour Gypsum Underlayments
4. Radiant Heated Subfloors
5. Concrete Slabs and Underlayments
6. Wood Subfloors and Underlayments

EXISTING FLOORS

- Existing flooring must be fully bonded and have all loose or damaged areas removed. Floor finish or polish should be cleaned and remain in place. Once the damaged areas are removed and the surface is thoroughly clean, prepare the surface by leveling and smoothing with an appropriate patching compound, then prime all patched surfaces with Wakol PU-280.
- Existing glazed, polished, highly power-trowelled smooth, dense surfaces should be checked for surface bonding characteristics. This surface type may be non-porous and smooth and not need to be primed. Bond testing should be performed in multiple locations to determine if the surface is non-porous. Prime all patched or porous areas with Wakol PU-280.

SHEET VINYL/LVT/VCT AND CERAMIC TILE

Existing fully bonded, non-cushioned, single-layer resilient flooring or ceramic tile may be installed over, on suspended, or on-grade installations **(not below grade)**. Repair all loose and damaged areas, clean the surface **(do not strip or abrade the finish), and** smooth the surface or grout joints using an embossing leveler or appropriate floor patching and smoothing product. Prime / Seal patched areas with Wakol PU-280.

POLYMERIC POURED FLOORS AND TERRAZZO FLOORS

Polymeric, resinous, terrazzo, and terrazzo tile or seamless poured flooring may be installed over, on suspended, or on-grade installations **(not below grade)**. These products may be porous and create bonding concerns in the long term. Perform bond testing over these substrates in areas with a textured surface, voids, or slight openings. Long- term bonding concerns may result if these conditions have areas of porosity. If there is any doubt regarding surface porosity, prime the surface with Wakol PU-280. It can be difficult to confirm if existing polymeric and terrazzo floors are well bonded to the substrate or have moisture-related issues.

METAL SUBSTRATES

Metal substrates must be completely clean, dry, and free of rust, dirt, wax, marker, paint, grease, or other harmful contaminants that may act as bond breakers or staining agents. Degrease the surface using an appropriate heavy-duty degreasing cleaner. Mineral Spirits may be necessary to remove grease and or oil contaminants. Always perform a bond test before installation. Metal substrates are generally smooth and non- porous and should provide a good bonding surface. Lead is very soft and will easily dent and deform. Lead and other soft metal substrates should be covered with a 1/8 inch or thicker layer of self-leveling underlayment to stabilize and smooth the surface. Follow patch manufacturers' recommendations for proper application. Prime/Seal all patched or porous areas with Wakol PU-280.

THICK POUR GYPSUM UNDERLAYMENTS

Thick-pour gypsum-based Underlayments must be manufactured and installed in compliance with ASTM F2419, "Standard Practice for Installation of Thick-Pourned Gypsum Concrete Underlayments and Preparation of the Surface to Receive Resilient Flooring." Test and evaluate thick-pour underlayment moisture following the underlayment manufacturer's recommendations. Use the Wakol PU-280 to prime gypsum underlayments.

RADIANT HEATED SUBFLOORS

Radiant-heated subfloors shall be prepared following the guidance for that surface type. The radiant heat system must be run for at least two weeks and turned off at least two (2) days before starting the installation. Use temporary HVAC with data loggers to maintain temperature and RH compliance. Radiant-heated subfloors shall not exceed 85°F (29°C) under any mode of operation.

CAUTION: International Flooring Co. does not recommend using solvent adhesive removers (inorganic or bio-based) or chemically abating an existing floor covering or adhesive. Adhesive removers can remain in the slab, under walls, and within cracks and cause the new floor covering to fail after installation. Follow the procedure detailed in the RFCI's Recommended Workplace Practices for Removal of Resilient Floor Coverings.

CONCRETE SLABS AND UNDERLAYMENTS

New and existing concrete slabs shall comply with current requirements from the following documents:

1. ASTM International
   A. ASTM F 710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring
2. American Concrete Institute (ACI)
   A. ACI 302.1 Guide to Concrete Floor and Slab Construction
   B. ACI 302.2 Guide for Concrete Slabs to Receive Moisture Sensitive Flooring Materials

3. Local and National building codes

Concrete surfaces to receive resilient flooring shall be suitable for intended use and shall be permanently dry, clean, smooth, and structurally sound. They shall be free of dust, solvent, paint, wax, oil, grease, residual adhesive, adhesive removers, curing, sealing, hardening, or parting compounds, alkaline salts, excessive carbonation or patience, mold, mildew, and other foreign or deleterious contaminants that may act as a bond breaker or staining agent (ASTM F 710).

Concrete slabs shall have a minimum 3,500 psi cured compressive strength and be designed and placed with a water-cement ratio of 0.45 to 0.5, as the concrete construction industry recommends and appropriate for slabs to receive moisture-sensitive finishes. Higher water-cement ratios lead to longer dry times and issues associated with elevated moisture conditions that cause floor failures (ACI 302.1 & ACI 302.2).

Coal fly ash is recycled content that replaces Portland cement in concrete slabs. It is becoming more prevalent with the popularity of sustainable LEED construction practices. Fly ash contains silicon dioxide and calcium oxide. Silicon dioxide is a spherical particle with an extremely smooth surface. Calcium oxide is a caustic, highly alkaline component that is a bond breaker for traditional adhesives. These components provide a dense, smooth, and non-porous surface that may work well with **Canopy Flex** flooring. Always perform a bond test before installation. Apply Wakol PU-280 when there is poor bond performance.

On-grade or below-grade slabs require a properly installed and intact vapor retarder that complies with ASTM E1745, "Standard Specification for Water Vapor Retarders Used in Contact with Soil or Granular Fill Under Concrete Slabs." In addition, on-grade or below-grade concrete slabs shall be free from hydrostatic pressure, excessive moisture, or other harmful conditions.

CAUTION: The flooring contractor is not responsible for determining whether an intact and properly installed vapor retarder exists. However, the flooring contractor is responsible for ensuring that the General Contractor has determined whether a vapor retarder is installed in compliance with ASTM E1745.

Concrete slabs should be wet-cured using plastic sheeting or another suitable moisture-retaining cover. Avoid curing compounds, as they may prevent moisture dissipation and slow the slab drying rate, resulting in elevated moisture. In addition, curing compounds can act as a bond breaker if not removed. The entire slab surface should be sanded or mechanically abraded after 30 days to ensure 100% removal of the curing compound.

Perform moisture testing as outlined in Jobsite Inspection and Testing on Pages 5 and 6.

Power-trowed concrete surfaces can be smooth and non-absorbent. These surface conditions may provide a good bonding surface for **Canopy Flex** but may adversely affect the bond of floor preparation materials. If a highly power-trowed surface requires smoothing or patching, the surface should be mechanically prepared by sanding, grinding, or shot blasting to improve the bond of the preparation materials.

Use high-quality Portland cement, calcium aluminate, or synthetic gypsum-based patching and leveling compounds recommended by their manufacturer for the specified conditions. The underlayment shall be mold, mildew, alkali-resistant, non-shrinking, and moisture-resistant with a minimum of 3,500 psi cured compressive strength.

MOISTURE MITIGATION SYSTEM

When a moisture mitigation system is necessary to resolve elevated moisture conditions, International Flooring Co. recommends applying two (2) coats of Wakol PU-280 onto a porous slab or onto patching or self-leveling materials that are rated and specified to be moisture-resistant with the current moisture conditions. If the specified preparation materials are not moisture-tolerant, apply the moisture mitigation system first.

If an alternate moisture mitigation system is desired, use a product that complies with ASTM F 3010 “Standard Practice for Two-Component Resin Based Membrane Forming Moisture Mitigation Systems for Use Beneath Resilient Floor Coverings." Alternate moisture mitigation systems should provide product and adhesive bond warranty coverage. Several companies offer compliant mitigation systems that also provide expertise to deal with moisture issues:

MANUFACTURER	WEB ADDRESS	PHONE NUMBER
Aquafin	www.aquafin.net	866.278.2346
Ardex	www.ardexamericas.com	888.512.7339
Koster	www.kosterusa.com	757.425.1206
Mapei	www.mapei.com	800.992.62.73
Schonox	www.schonox.us	855.391.2649
Ufloor Systems	www.uzin.us	720.374.4810

SURFACE IRREGULARITIES

Cracks, grooves, depressions, control joints, or other non-moving joints, and other surface irregularities shall be filled or smoothed with high-quality portland-cement, calcium-aluminate or synthetic-gypsum based patching, or self-leveling underlayment materials. Some surface cracks may need to be chased and filled. Patching or self-leveling underlayment materials shall be moisture, mildew, and alkali resistant. They shall provide a minimum of 3,500 psi compressive strength after 28 days when tested following Test Method ASTM C109 or ASTM Test Method C472, whichever is appropriate. Refer to and follow the manufacturer's instructions for surface preparation.

PATCHING AND SELF-LEVELING

For concrete subfloors, use only high-quality Portland cement, calcium aluminate, or synthetic gypsum-based materials (minimum 3,500 psi compressive strength per ASTM C109). Self-leveling compounds may have very high moisture content, thus requiring longer curing times. Follow the manufacturer's instructions, and do not over-water patching and leveling compounds. The contractor is responsible for managing cure times, water patch mix ratio, bonding ability, and the structural integrity of any leveling or patch compound they apply.

Warning: Do not lightly skim-coat highly polished, slick, power-troweled concrete surfaces. A thin film skim coat of floor patch will not bond sufficiently to a slick subfloor and may delaminate, causing tiles to release at the interface of the subfloor and patching material. Most highly polished or slick, power-troweled concrete surfaces are smooth and non-porous, and **Canopy Flex** may bond well to that surface.

EXPANSION JOINTS/ISOLATION JOINTS

Moving joints are incorporated into concrete floor slabs to permit movement without causing random cracks. These joints must be honored and not filled with patching products or other materials, and floor coverings must not be laid over them. The architect or engineer should detail expansion joint covering systems based on intended usage and aesthetic considerations.

This table lists several manufacturers of expansion joint covering systems that can be used with **Canopy Flex** flooring.

MANUFACTURER	WEB ADDRESS	PHONE NUMBER
Balco USA	www.balcousa.com	800.767.0082
C-S Group	www.c-sgroup.com	800.233.8493
EM Seal Joint Systems	www.emseal.com	800.526.8365
Inpro Corp	www.inprocorp.com	800.222.5556
MM Systems	www.mmsystemscorp.com	800.241.3460
Nystrom	www.nystrom.com	800.547.2635
Watson Bowman Acme	www.watsonbowmanacme.com	800.677.4922

WOOD SUBFLOORS & UNDERLAYMENTS

All suspended wood subfloors shall have standard, double-layer construction with a minimum total thickness of at least 1 inch (25mm). As a finish layer, use a minimum 1/4 inch (6mm) thick, APA-rated "underlayment grade" plywood with a fully sanded face or other underlayment panel that is appropriate and warranted for the intended use by the panel manufacturer. Follow the manufacturer's instructions for acclimation, installation, and surface preparation. All wood substrates must be Primed / Sealed using Wakol PU-280 primer before installation. All substrates must meet relevant building code requirements.

Do not install onto wood floors in direct contact with the earth, on concrete slabs, or over a sleeper floor assembly.

The double-layer wood subfloor shall incorporate an APA Underlayment Grade top layer such as Accuply or Multi-Ply® designed for the intended use and meets the following requirements:

1. The underlayment panel has a minimum 1/4-inch (6 mm) thickness.
2. Have a sanded face free of knots or roughness to prevent surface telegraphing.
3. Have a solid core free of voids to resist indentations and punctures from concentrated loads.
4. Specified for resilient flooring use and free of any substance that may stain vinyl.
5. Moisture content is less than 14.0%, and panel layers are within 3.0% of each other.
6. Confirm panel moisture level by checking several areas using a calibrated pin moisture meter.
7. Compliant with APA or manufacturer recommended as “Underlayment Grade” for resilient flooring.

Do not directly install over Lauan, pine, other soft woods, particle board, OSB (Oriented Strand Board), hardboard, hardwood flooring, floating floors, treated lumber, or underlayment panels with core voids or face knots. Do not install directly over a rough surface or any underlayment not recommended by its manufacturer for the intended use or use beneath resilient flooring. Cover these and other unacceptable soft wood surfaces that do not have a smooth surface with a 1/4 inch or thicker APA-rated or similar underlayment grade panel in compliance with all underlayment requirements listed in this guide.

Do not install underlayment panels with coated fasteners.

Underlayment panels shall be stored, acclimated, prepared, and installed following the manufacturer's current published instructions and current APA Underlayment Installation Guidelines and current ASTM F1482 "Standard Practice for Installation and Preparation of Panel Type Underlayments to Receive Resilient Flooring.”

Follow panel installation instructions, which include proper acclimation, subfloor flatness, panel spacing, nailing or staple schedule, and seam treatment.
After the underlayment panel installation, sand uneven edges and areas where a patch was used to provide a smooth, level surface.

Prime all porous wood surfaces using a thin, single coat of the Wakol PU-280 primer.

Just before installation, thoroughly vacuum the surface, paying close attention to the perimeter and under drywall to remove all dust and debris.

Once the underlayment is installed correctly, dry, smooth, flat, clean, primed with Wakol PU-280, and in compliance with all specifications, proceed with the installation.

PRE INSTALLATION

BOND TESTING

The prepared surface must be checked for proper bonding before the installation begins. Take a piece of **Canopy Flex** flooring and remove the release liner 6-8 inches from one end. Place the exposed **Canopy Flex** backing against the prepared surface and step on or firmly press down on the exposed end of the flooring to bond. After 10 minutes or longer, take the opposite end of the flooring and move it laterally several inches across the floor surface. If the flooring buckles and the bonded area remains secure to the subfloor, the surface is non-porous and ready to install. After sliding the uninstalled end laterally 4-6 inches across the floor surface, if the bonded end releases, the surface must be primed with Wakol PU-280. When a non-porous subfloor surface is not primed, check multiple locations throughout the job site to confirm a consistent good bond. Also, frequently check the surface bond during installation.

INSTALLATION TOOLS

Ensure you have all necessary tools and equipment needed, including:

1. Carpenter Square or Speed Square
2. Hand Roller
3. 75 to 100-pound 3-section roller (Not shown)
4. Undercut Saw
5. Chalk Line
6. Putty Knife
7. Utility Knife
8. Extra Blades (Not shown)
9. Pencil
10. Tape Measure
11. Straight Edge
12. Razor Scraper and Spare blades (Not shown)

Bring sufficient spare blades and other consumable supplies to complete the project.

Confirm that all sundry items and floor covering materials are on-site and that the flooring materials are the correct color, style, and quantity for each dye lot.

Substrate Priming Tools

1. Microfiber Roller Cover with ¼ Inch Nap
2. Roller Cover Frame
3. Threaded Pole
4. Foam brush or chip brush – for cutting (Not shown)

INSTALLATION

GENERAL INFORMATION

Confirm that all pre-installation requirements are satisfactorily completed. Verify that the **Canopy Flex** flooring materials are the correct color and quantity ordered for each Pattern and Run number(s). Immediately report any discrepancies. Check materials during installation for any damage and set aside any damaged pieces to make cuts.

FINAL CHECKS

- Ensure that the flooring and job site ambient temperatures, including slab temperatures, are acclimated to a steady temperature between 65°-85°F (18°-29°C) and 35%-65% RH.
- Confirm that the quantity of flooring is sufficient for the installation. Check the materials for visual defects before installation. Flooring installation implies acceptance of materials and job site conditions.
- Perform the final acceptance inspection of the substrate, making sure all surfaces to be covered are completely clean, dry, and smooth and that all necessary subfloor preparation has been properly completed and documented.
- Protect adjacent work areas and finished surfaces from damage that could occur during product installation.
- **Canopy Flex** should be the last material installed to prevent other trades from disrupting the installation and to prevent damage to the new floor.

Canopy Flex comes in plank, rectangular, and square tile formats. Install tiles running in the same direction (block or staggered), quarter-turned, or as specified by the architect or owner. **Install Canopy Flex** plank flooring with the end joints offset by at least 6 inches and staggered to create a random appearance that avoids alignment of end joints (H pattern). **Canopy Flex** can be installed to run either parallel or diagonal to the room or primary wall.

LAYOUT

The layout should be specified by the architect, designer, or end-user (refer to architectural drawings).

- Establish center lines and determine the starting point to balance the installation by having equal tile widths on opposite sides of the room. This can be determined by measuring or dry-laying tiles and marking reference lines to install from.
- When all preparatory work is satisfactorily completed, proceed with the installation. Inspect tiles for visual defects before installing.

CANOPY FLEX RESILIENT TILE INSTALLATION

Tiles installed in the same direction provide a more consistent shade, color, and gloss appearance. Tiles installed alternating (quarter-turned) give a more varied shade, color, and gloss appearance. **Canopy Flex** rectangle tiles are usually installed in a running bond fashion with the end joints offset by ½ for each row of tiles. The rectangular tiles may be installed like square tiles with the end joints aligned. Square tiles are usually installed in the stacked bond fashion with the end joints aligned but can be quarter-turned or installed in different patterns to add variation.

SQUARE THE LAYOUT

Square the layout of the room. Measure and mark the center point along each wall. Connect the center points from opposite walls to place the center lines in the room. Snap a chalk line between the center points on opposite walls to mark the center line on the floor. Make a mark measuring 4 feet vertically and 3 feet horizontally from the center point. The measurement between these marks should be exactly 5 feet. If the measurement is not exactly 5 feet, the center lines are not perpendicular at a right angle. (Figure 1)

TIP: Use multiples of the 3-4-5 (6-8-10, 9-12-15, etc.) triangle method for greater accuracy in larger spaces.

BALANCE FLOORING TO THE ROOM

Either measure or dry lay a ROW of tiles from the center lines to the side and end walls to determine the width of the last row of tiles in each direction (Figure 2). Measure the distance (in inches) from the center line to the opposite wall and divide by the width of the tile (in inches). If the remainder or resulting border is less than half the width of the tile (0.5), move the start row over by half the tile width. To move, snap a new start line aligned one-half tile width from the original center line to provide a larger width at the wall (Figure 3). Do the same sequence in the length direction and adjust the starting reference line the same way as appropriate. For 12"x24" tiles, it is customary to lay the tiles in a broken bond fashion, with each row offset by ½ of the tile length. In this instance, adjust the starting line by ¼ of the plank length when the last tile measures ¼ or less of the tile length to provide a larger tile length at the wall. Where the new reference lines intersect is the starting point. (Figure 3)

INSTALL THE FLOORING

After determining the layout and snapping reference lines, install the initial tiles along the starting line from the starting point. Use the stair step method for square tiles; for rectangular tiles, use two (2) rows along the starting line to begin the installation (Figure 4). With the first tile aligned to the starting reference lines, push down to secure it in place. Position the second tile aligned to the edge of the first tile without any gap or force. Secure the tiles by removing the release liner and pressing down on the tile after it is properly aligned. Install additional tiles, ensuring each tile is aligned with the tiles next to it. (Figures 5 & 6) Once all full tiles are installed, cut perimeter tiles net or slightly gapped to the wall, ensuring the wall base or other trim will cover any gaps. DO NOT FORCE-FIT OR COMPRESSION-FIT TILES TO THE WALL OR VERTICAL SURFACES. There are two (2) easy ways to trim the last pieces along the wall:

1. Place a full tile (Blue) on top of the last complete row in the position it will be installed (Figure 7). Take another full tile (Gray) and place it against the wall on top of the tile to be trimmed (Figure 8). Use the edge of the tile on top (Gray) to mark and cut the uninstalled full tile (Blue Tile). Take the cut piece and place it in position along the wall. (Figure 9)

2. Cut the last row of tiles by measuring the distance from the edge of the last full tile to the wall. Mark the exact distance on each side of the tile to be cut. Use a utility knife, straightedge, or carpenter square to trim the excess edge. For walls with an uneven edge, it may be necessary to take multiple measurements and transcribe them to the tile to be trimmed to provide a good fit. Install the last rows by placing the factory edge to the factory edge

and the cut edge towards the wall.

3. Roll the installed flooring with a minimum 75-pound 3-section roller. Use a hand roller in areas that cannot be reached with a 75-pound roller. **Protect installed floors** from damage by other trades until the final inspection is completed and turned over to the owner.

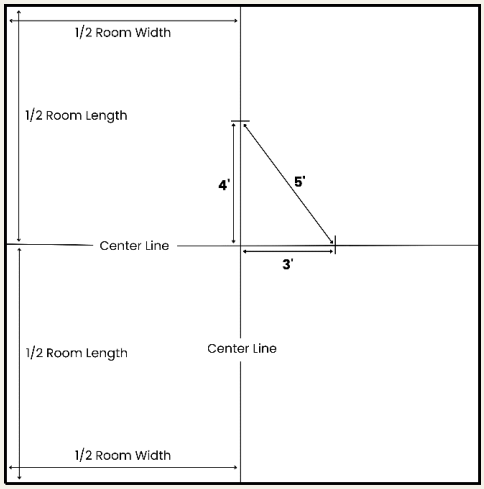


Figure 1

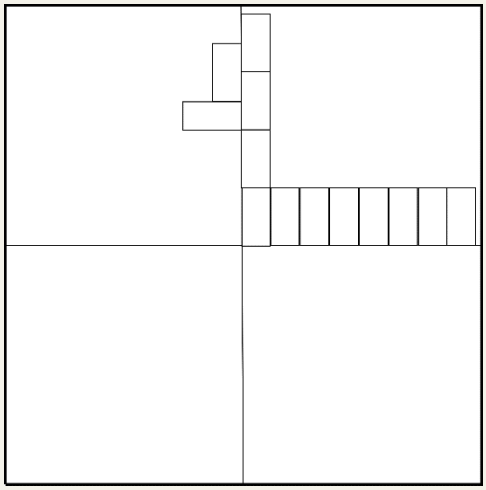


Figure 2

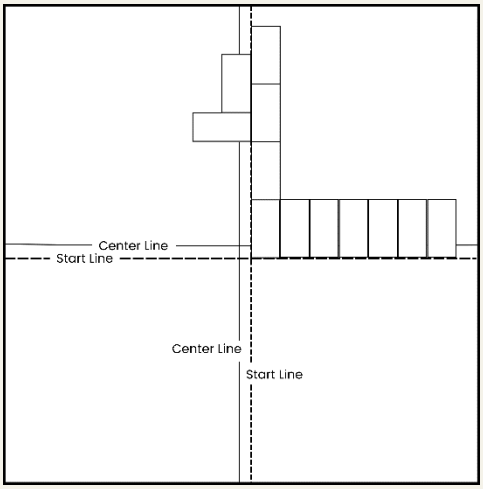
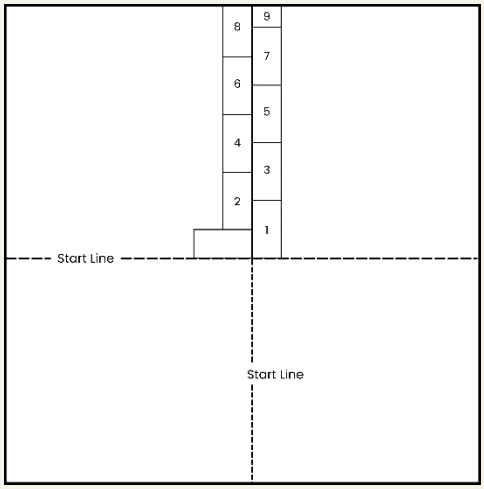


Figure 3



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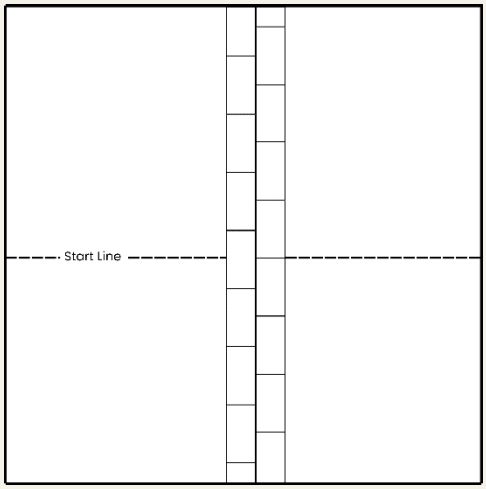

Figure 5

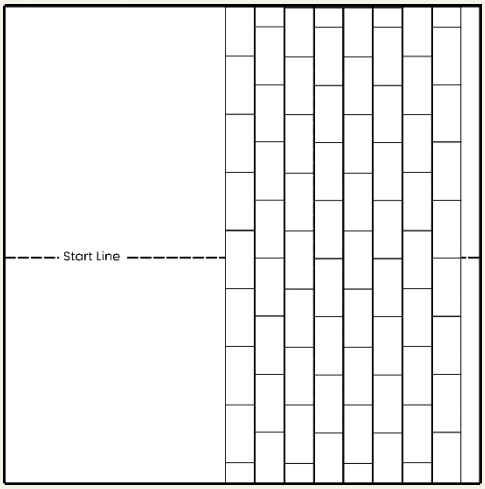

Figure 6

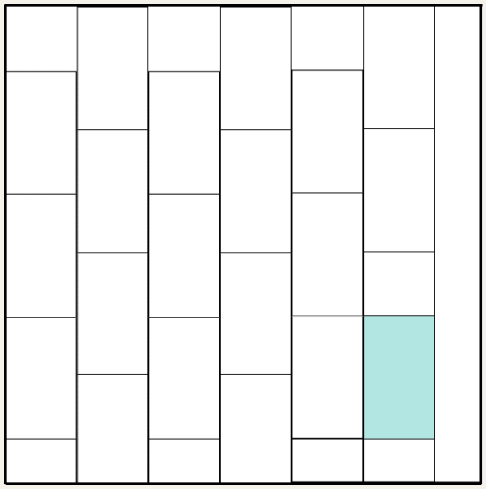
Figure 7

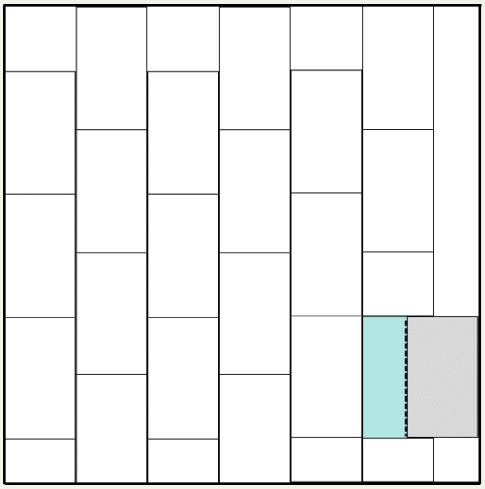
Figure 8

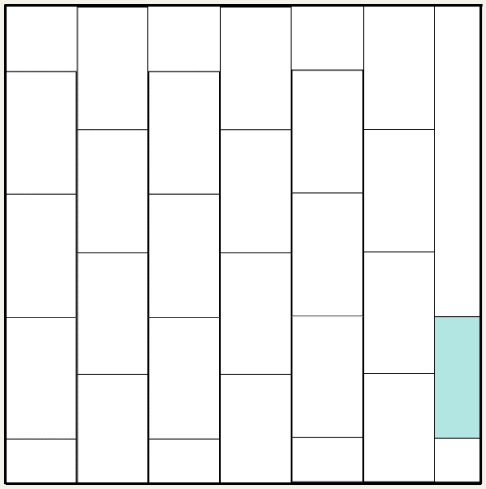
Figure 9

CANOPY FLEX RESILIENT PLANK INSTALLATION

Plank flooring is usually installed running in the same direction, with random staggering of the end joints at least 6 inches apart and avoiding end joint alignment (H pattern). This provides an authentic wood floor appearance when installed. Planks can also be installed in a pattern specified by the architect or end user.

ESTABLISH CENTER LINE

Establish the center line of the room. Measure and mark the center point on the end walls in the direction you want to run the flooring. Snap a chalk line between these points to mark the center line on the floor. (Figure A)

BALANCE FLOORING TO THE ROOM

Either measure or dry-lay a ROW of planks from the center line to the side walls to determine the width of the last row (Figure B). Measure the distance from the center line to the opposite wall and divide that measurement by the width of the plank. If the remainder or resulting border is less than half the width of the plank (0.5), move the start row over by ½ (one-half) the plank width. To move the start line, snap a new reference line aligned with the center line moved over by ½ the plank width (Figure C). This is now the starting line to begin the installation.

INSTALL THE FLOORING

After snapping the starting line, lay three rows of planks aligned with the reference line. Position the first plank (full size) aligned with the reference line. You can begin with a full plank butted to the wall (Figure D) or start with a full plank aligned to the reference line away from the end wall. After the first plank is in position, use the chalk line as a guide, but don't force or bend the planks to precisely follow the line if it runs off. The alignment between the first full plank and the second, third, and subsequent planks is more important to keep straight without bending or forcing the planks to align. If starting against a wall, the second plank should be cut to 2/3 to ¾ length. Use the cut-off piece to start the third row on the opposite side of the first plank. Ensure each plank is aligned with the adjoining planks without gaps and without forcing or bending the plank into position. Position the 4th plank above the third plank aligned to the first plank. Continue installing the three rows to the wall. (See Figure B)

Continue the installation to the opposite wall. Use cut pieces to begin the next row. Trim the cut pieces as needed to maintain a 6-inch or longer end joint offset and ensure end cuts will be at least 6 inches long. Always put cut edges to the wall. Once all full-width planks are installed, cut perimeter planks to fit net or slightly gapped (no more than 1/8 inch) to the wall, ensuring the wall base or other trim will cover any gaps. DO NOT FORCE-FIT OR COMPRESSION- FIT PLANKS TO THE WALL OR VERTICAL SURFACES. There are two (2) easy ways to trim the last pieces along the wall:

1. Place a full plank (Blue) on top of the last row in the position it will be installed (Figure G). Take another full plank (Gray) and place it against the wall on top of the (blue) plank to be trimmed (Figure H). Use the edge of the tile on top (Gray) to mark and cut (or use a straight edge to cut) on the uninstalled full plank (Blue). Take the cut piece and place it in position along the wall. (Figure 9)

2. Cut the last row of tiles by measuring the distance from the edge of the last full tile to the wall. Mark the exact distance on each side of the tile to be cut. Use a utility knife, straightedge, or carpenter square to trim the excess edge. For walls with an uneven edge, it may be necessary to take multiple measurements and transcribe them to the tile to be trimmed to provide a good fit. Install the last rows by placing the factory edge to the factory edge and the cut edge towards the wall.

As an alternate for small rooms, dry lay (keep the release liner on) two rows of planks along the longest straight wall. If the wall is straight and provides a good fit when planks are aligned against it, you can install the planks starting from that wall. If the wall is not straight, start the installation from the center line.

4. Roll the installed flooring with a minimum 75-pound 3-section roller. Use a hand roller in areas that cannot be reached with a 75-pound roller. **Protect installed floors** from damage by other trades until the final inspection is completed and turned over to the owner.

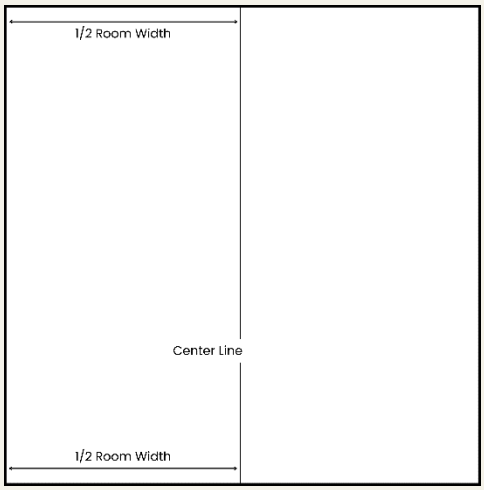

Figure A

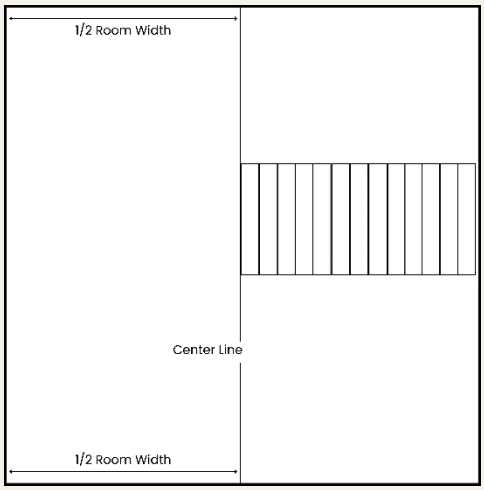

Figure B

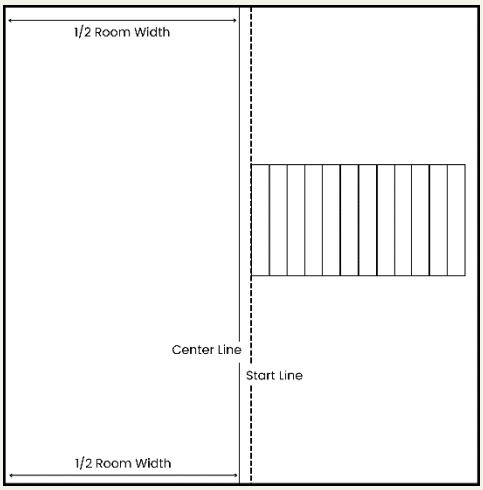

Figure C

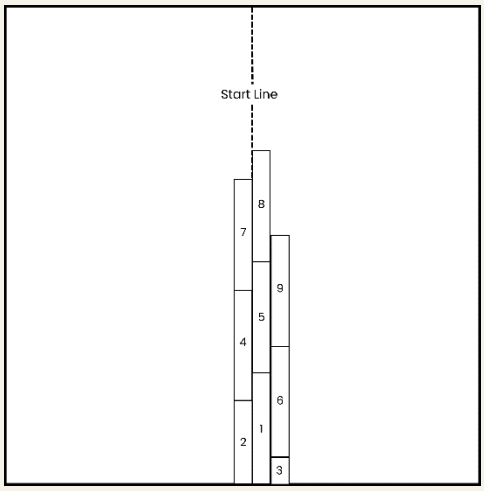

Figure D

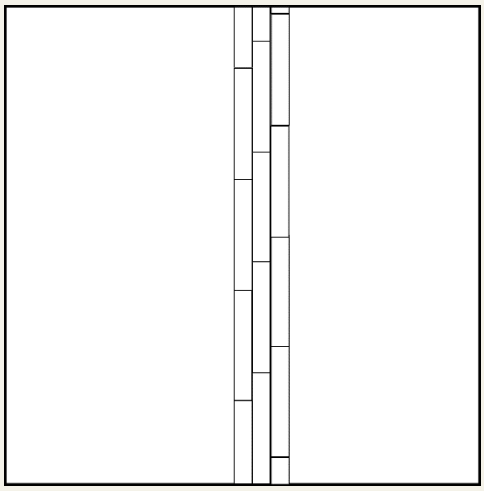

Figure E

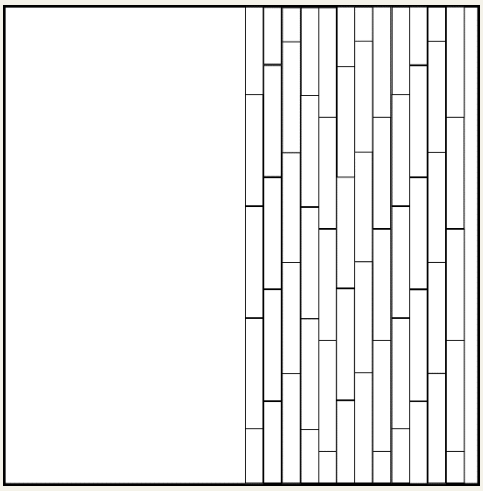

Figure F

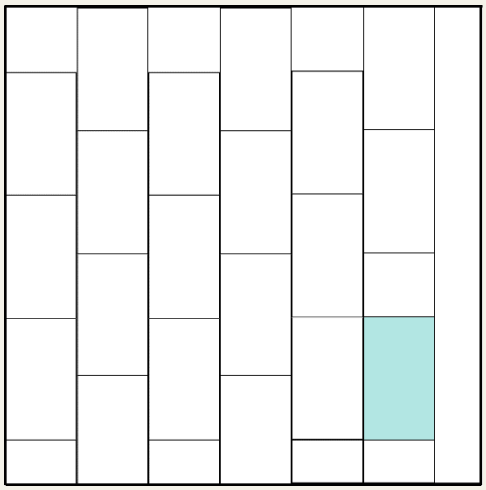

Figure G

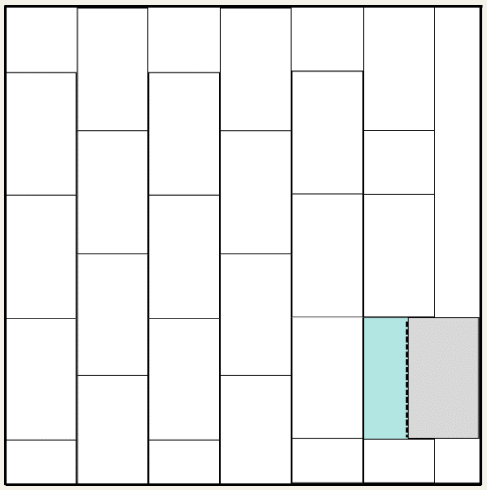

Figure H

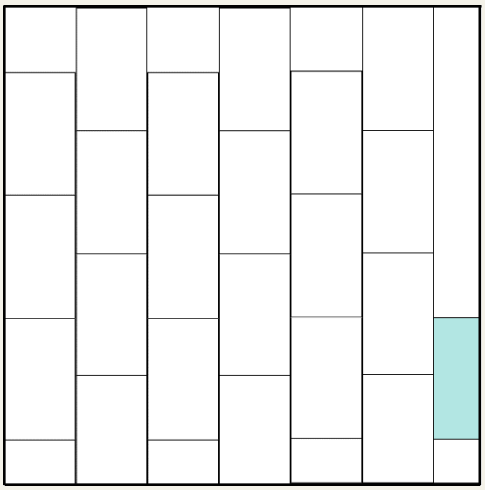

Figure I