SECTION 096229 - CORK FLOORING

Verify that Section titles referenced in this Section are correct for this Project's Specifications; Section titles may have changed.

1. GENERAL
	* + 1. SUMMARY
				1. Section Includes:

Cork floor tile.

Engineered cork floor tile.

Cork rubber floor tile.

Cork floating floor system.

* + - 1. SUBMITTALS
				1. Submittals for this section are subject to the re-evaluation fee identified in Article 4 of the General Conditions.
				2. Manufacturer’s installation instructions shall be provided along with product data.
				3. Submittals shall be provided in the order in which they are specified and tabbed (for combined submittals).
				4. Product Data: For each type of product.
				5. Sustainable Design Submittals:

Retain "Shop Drawings" paragraph below if required for complex patterns.

* + - * 1. Shop Drawings: For each type of cork flooring.

Include cork flooring layouts, edges, columns, doorways, enclosing partitions, built-in furniture, cabinets, and cutouts.

Show details of special patterns.

Retain "Samples" paragraph below for single-stage Samples, with a subordinate list if applicable. Retain "Samples for Initial Selection" and "Samples for Verification" paragraphs for two-stage Samples.

* + - * 1. Samples: Full-size units of each type, color, pattern, and finish of cork flooring required.
				2. Samples for Initial Selection: For each type of cork flooring indicated.
				3. Samples for Verification: Full-size units of each type, color, pattern, and finish of cork flooring required.
				4. Product Schedule: For cork flooring. Use same designations indicated on Drawings.
			1. CLOSEOUT SUBMITTALS
				1. Maintenance Data: For each type of cork flooring to include in maintenance manuals.
			2. MAINTENANCE MATERIAL SUBMITTALS
				1. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

Cork Flooring: Furnish one box for every 50 boxes or fraction thereof, of each type, color, pattern, and finish of cork flooring installed.

* + - 1. QUALITY ASSURANCE
				1. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.

Coordinate mockups in this Section with mockups specified in other Sections.

Size: Minimum 100 sq. ft. for each cork flooring type, color, pattern, and finish, [**in locations indicated**] [**in locations directed by Director’s Representative**].

Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Director’s Representative specifically approves such deviations in writing.

Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

* + - 1. DELIVERY, STORAGE, AND HANDLING
				1. Store cork flooring and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F or more than 90 deg F. Store cork flooring on flat surfaces.
			2. FIELD CONDITIONS

Ambient temperature range for installation varies among cork flooring manufacturers. Consult manufacturers for recommendations and revise first paragraph below to suit Project.

* + - * 1. Maintain ambient temperatures within range recommended by manufacturer, but not less than 65 deg F or more than 75 deg F where relative humidity is between 45 and 65 percent, in spaces to receive cork flooring during the following periods:

72 hours before installation.

During installation.

72 hours after installation.

* + - * 1. After installation and until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer, but not less than 65 deg F or more than 75 deg F.
				2. Close spaces to traffic during cork flooring installation.
				3. Close spaces to traffic for 72 hours after cork flooring installation.
				4. Install cork flooring after other finishing operations, including painting, have been completed.
1. PRODUCTS

Manufacturers and products listed in SpecAgent and Masterworks Paragraph Builder are neither recommended nor endorsed by the AIA or Deltek. Before inserting names, verify that manufacturers and products listed there comply with requirements retained or revised in descriptions and are both available and suitable for the intended applications.

* + - 1. PERFORMANCE REQUIREMENTS

Retain "Fire-Test-Response Characteristics" paragraph below if fire-test-response testing is required by authorities having jurisdiction. In most building codes, resilient flooring, including cork flooring, is exempt from fire-test-response requirements. See "Fire-Test-Response Characteristics" Article in the Evaluations for additional information.

* + - * 1. Fire-Test-Response Characteristics: For cork flooring, as determined by testing identical products according to ASTM E648 or NFPA 253 by a qualified testing agency.

Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm.

* + - 1. CORK FLOOR TILE <**Insert drawing designation**>

Copy this article and re-edit for each product.

Insert drawing designation. Use these designations on Drawings to identify each product.

* + - * 1. [Manufacturers:](http://www.specagent.com/Lookup?ulid=371) Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

[Globus Cork](http://www.specagent.com/Lookup?uid=123457061327).

[Jelinek Cork Group](http://www.specagent.com/Lookup?uid=123457061320).

[WE Cork Inc](http://www.specagent.com/Lookup?uid=123457061329).

Approved equivalent.

* + - * 1. Composition: 100 percent natural cork bark and recycled cork granules and set in a natural or synthetic, flexible resin matrix; homogeneous and uniform in composition throughout the tile thickness.

Physical characteristics of cork floor tile vary among cork flooring manufacturers. Consult manufacturers for recommendations and revise remaining paragraphs to suit Project. See "Product Characteristics" and "Cork Floor Tile" articles in the Evaluations for additional information.

* + - * 1. Nominal Density: 34 lb/cu. ft., minimum.
				2. Nominal Thickness: [**0.180 inch**] [**0.312 inch**].
				3. Nominal Size: 12 by 12 inches.

Retain "Color" paragraph below if color is not indicated in a separate schedule.

* + - * 1. Color: [**Light natural**] [**Medium natural**] [**Dark natural**] [**As indicated by manufacturer's designations**] [**Match Director’s Representative's sample**].
				2. Factory Finish: [**Sanded or unfinished**] [**Waxed**] [**Polyurethane**] [**Polyurethane containing UV inhibitors**] [**Acrylic**] [**As indicated by manufacturer's designations**] [**Match Director’s Representative's sample**].
			1. ENGINEERED CORK FLOOR TILE <**Insert drawing designation**>

Copy this article and re-edit for each product.

Insert drawing designation. Use these designations on Drawings to identify each product.

* + - * 1. [Manufacturers:](http://www.specagent.com/Lookup?ulid=372) Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

[Expanko, Inc](http://www.specagent.com/Lookup?uid=123457061334).

[Gerbert Limited](http://www.specagent.com/Lookup?uid=123457061337).

[Jelinek Cork Group](http://www.specagent.com/Lookup?uid=123457061338).

Approved equivalent.

* + - * 1. Composition: 100 percent natural cork bark and recycled cork granules with laminated, patterned cork veneers and set in a natural or synthetic, flexible resin matrix; homogeneous and uniform in composition throughout the tile thickness.

Physical characteristics of engineered cork floor tile vary among cork flooring manufacturers. Consult manufacturers for recommendations and revise remaining paragraphs to suit Project. See "Product Characteristics" and "Engineered Cork Floor Tile" articles in the Evaluations for additional information.

* + - * 1. Nominal Density: [**Manufacturer's standard**] [**30 lb/cu. ft., minimum**] [**34 lb/cu. ft., minimum**] [**37 lb/cu. ft., minimum**].
				2. Nominal Thickness: 0.312 inch.
				3. Nominal Size: [**12 by 12 inches**] [**12 by 24 inches**] [**24 by 24 inches**].

Retain "Color" and "Pattern" paragraphs below if color and pattern are not indicated in a separate schedule.

* + - * 1. Color: [**Light natural**] [**Medium natural**] [**Dark natural**] [**As indicated by manufacturer's designations**] [**Match Director’s Representative's sample**].
				2. Pattern: [**As indicated by manufacturer's designations**] [**Match Director’s Representative's sample**].
				3. Factory Finish: [**Sanded or unfinished**] [**Waxed**] [**Polyurethane**] [**Polyurethane containing UV inhibitors**] [**Acrylic**] [**As indicated by manufacturer's designations**] [**Match Director’s Representative's sample**].
			1. CORK RUBBER FLOOR TILE <**Insert drawing designation**>

Copy this article and re-edit for each product.

Insert drawing designation. Use these designations on Drawings to identify each product.

* + - * 1. [Products:](http://www.specagent.com/Lookup?ulid=373) Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to the following:

Capri Cork, LLC; Sequel.

[Expanko, Inc](http://www.specagent.com/Lookup?uid=123457061351).; XCR4 Cork Rubber Flooring.

[Zandur, Inc](http://www.specagent.com/Lookup?uid=123457068803).; Sustain.

Approved equivalent.

* + - * 1. Composition: Natural cork granules mixed with rubber granules combined with fade-resistant pigments; homogeneous and uniform in composition throughout the tile thickness. Minimum 60 percent recycled or renewable content.

Minimum Tensile Strength: 700 psi.

* + - * 1. Nominal Thickness: 0.098 inch minimum.
				2. Size: [**12 by 24 inches**] [**20 by 20 inches**] [**24 by 24 inches**] [**40 by 40 inches**].
				3. Texture: [**Smooth**] [**Lightly textured wear surface**].

Retain "Colors and Patterns" paragraph below if colors and patterns are not indicated in a separate schedule.

* + - * 1. Colors and Patterns: [**As indicated by manufacturer's designations**] [**Match Director’s Representative's samples**].
			1. CORK FLOATING FLOOR SYSTEM <**Insert drawing designation**>

Copy this article and re-edit for each product.

Insert drawing designation. Use these designations on Drawings to identify each product.

* + - * 1. [Products:](http://www.specagent.com/Lookup?ulid=374) Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to the following:

[Jelinek Cork Group](http://www.specagent.com/Lookup?uid=123457061349).

[Nova Distinctive Floors](http://www.specagent.com/Lookup?uid=123457061342).

[WE Cork Inc](http://www.specagent.com/Lookup?uid=123457061344).

Approved equivalent.

* + - * 1. Construction: Laminated planks made of two cork layers, top and bottom, that sandwich a medium-density fiberboard core.

Physical characteristics of cork floating floor planks vary among manufacturers. Consult manufacturers for recommendations and revise remaining paragraphs to suit Project. See "Product Characteristics" and "Cork Floating Floor System" articles in the Evaluations for additional information.

* + - * 1. Plank Thickness: 0.450-inch .
				2. Plank Size: Insert dimensions.
				3. Plank Edge: Manufacturer's standard interlock.

Retain "Color" and "Pattern" paragraphs below if color and pattern are not indicated in a separate schedule.

* + - * 1. Color: [**Light natural**] [**Medium natural**] [**Dark natural**] [**As indicated by manufacturer's designations**] [**Match Director’s Representative's sample**].
				2. Pattern: [**As indicated by manufacturer's designations**] [**Match Director’s Representative's sample**].
				3. Factory Finish: [**Sanded or unfinished**] [**Waxed**] [**Polyurethane**] [**Polyurethane containing UV inhibitors**] [**Acrylic**] [**As indicated by manufacturer's designations**] [**Match Director’s Representative's sample**].
			1. INSTALLATION MATERIALS
				1. Trowelable Leveling and Patching Compounds: Latex-modified, portland-cement-based or blended hydraulic-cement-based formulation provided or approved by cork flooring manufacturer for applications indicated.

Retain "Vapor Retarder" paragraph below for cork floating floor system.

* + - * 1. Vapor Retarder: ASTM D4397, polyethylene sheet not less than 8.0 mils thick.
				2. Adhesives: Water-resistant type recommended by flooring and adhesive manufacturers to suit cork flooring and substrate conditions indicated.

Insert underlayment material requirements if cork flooring is installed on wood substrates. Consult cork flooring manufacturers for additional information.

* + - 1. FIELD-APPLIED FINISHES

See "Product Characteristics" and "Finishes" articles in the Evaluations for discussion of cork flooring finishes.

Retain "Sealer" paragraph below for cork rubber tile and for sanded or unfinished cork flooring to receive field-applied sealer. Consider requiring sealer over cork flooring with factory-applied acrylic or polyurethane finish; consult manufacturers for recommendations.

* + - * 1. Sealer: Product as recommended by cork flooring manufacturer.

Retain "Paste Wax" paragraph below for sanded or unfinished cork flooring to receive field-applied paste wax finish and for cork flooring with factory-applied paste wax finish to receive additional field-applied paste wax coats.

* + - * 1. Paste Wax: Products as recommended by cork flooring manufacturer.

Retain "Finish Coatings" paragraph below for sanded or unfinished cork flooring to receive field-applied finish coatings. Insert requirements for colored stain if any. Consider requiring field-applied finish coatings applied over cork flooring with factory-applied acrylic or polyurethane finish; consult manufacturers for recommendations.

* + - * 1. Finish Coatings: Products containing UV inhibitors as recommended by cork flooring manufacturer.
1. EXECUTION
	* + 1. EXAMINATION

Coordinate requirements specified in other Sections for substrate construction and tolerances to ensure that they are appropriate for cork flooring.

* + - * 1. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of cork flooring.

* + - * 1. Proceed with installation only after unsatisfactory conditions have been corrected.
			1. PREPARATION

Extensive surface preparation is required over substrates from which existing flooring has been removed. Requirements vary among manufacturers. Insert requirements to suit Project.

* + - * 1. Prepare substrates according to cork flooring manufacturer's written instructions to ensure adhesion of cork flooring.

Retain "Concrete Substrates" paragraph below for tile products that will be adhered to concrete.

* + - * 1. Concrete Substrates: Prepare according to ASTM F710.

Verify that substrates are dry and free of curing compounds, sealers, and hardeners.

Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by cork flooring manufacturer. Do not use solvents.

Alkalinity and Adhesion Testing: Perform tests recommended by cork flooring manufacturer. Proceed with installation only after substrate alkalinity falls within range on pH scale recommended by manufacturer in writing, but not less than 5 or more than 10 pH.

Retain "Moisture Testing" subparagraph below; excessive moisture vapor can cause failure of resilient products adhered to concrete. ASTM F1869 (anhydrous calcium chloride test) and ASTM F2170 (relative humidity test) both recommend one test per 1000 sq. ft., but no fewer than three tests per test area.

Moisture Testing: Perform tests so that each test area does not exceed 1000 sq. ft., and perform no fewer than three tests in each installation area and with test areas evenly spaced in installation areas.

When tested according to ASTM F1869, a maximum moisture-emission level of 3 lb of water/1000 sq. ft. of slab area in a 24-hour period is generally accepted in resilient flooring industry.

Relative Humidity Test: Using in-situ probes, ASTM F2170. Proceed with installation only after substrates have a maximum 75 percent relative humidity level measurement.

Retain "Access Flooring Panels" paragraph below for cork flooring installed on access flooring.

* + - * 1. Access Flooring Panels: Remove protective film of oil or other coating using method recommended by access flooring manufacturer.
				2. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.
				3. Do not install cork flooring until materials are the same temperature as space where they are to be installed.

At least 72 hours in advance of installation, move cork flooring products and installation materials into spaces where they will be installed.

* + - * 1. Immediately before installation, sweep and vacuum clean substrates to be covered by cork flooring.

Insert additional preparation requirements if cork flooring is installed on wood substrates. Consult cork flooring manufacturers for recommendations.

* + - 1. FLOOR TILE INSTALLATION
				1. Comply with manufacturer's written instructions for installing cork flooring.

Retain first paragraph below for cork floor tile; generally, mixing tiles is unnecessary for engineered cork and cork rubber floor tile.

* + - * 1. Mix together floor tiles from each carton to ensure uniform distribution of shade.
				2. Discard broken, cracked, chipped, or deformed floor tiles.
				3. Lay out floor tiles from center marks established with principal walls, discounting minor offsets, so tiles at opposite edges of room are of equal width. Adjust as necessary to avoid using cut widths that equal less than one-half tile at perimeter.
				4. Lay floor tiles [**square with room axis**] [**at a 45-degree angle with room axis**] [**in ashlar or staggered joint pattern**] [**in pattern indicated**].

If built-in items are required to be set on top of floor tile, indicate on Drawings and revise first paragraph below.

* + - * 1. Scribe, cut, and fit floor tiles to butt neatly and tightly to vertical surfaces and permanent fixtures including built-in furniture, cabinets, pipes, outlets, and door frames.
				2. Extend floor tiles into toe spaces, door reveals, closets, and similar openings. Extend floor tiles to center of door openings.
				3. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on floor tiles as marked on substrates. Use chalk or other nonpermanent marking device.

Retain first paragraph below for floor tile installed on floor covers.

* + - * 1. Install floor tiles on covers for telephone and electrical ducts, building expansion-joint covers, and similar items in installation areas. Maintain overall continuity of appearance between pieces of tile installed on covers and adjoining tiles. Tightly adhere tile edges to substrates that abut covers and to cover perimeters.
				2. Adhere floor tiles to substrates using a full spread of adhesive applied to substrate to produce a completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.
			1. CORK FLOATING FLOOR SYSTEM INSTALLATION
				1. Comply with manufacturer's written instructions for installing cork floating floor system.
				2. Install continuous vapor retarder over substrate, taping side and end laps.
				3. Mix floor planks from several cartons to ensure uniform distribution of shade.
				4. Discard broken, cracked, chipped, or deformed floor planks.
				5. Do not attach floor planks to substrate.

Retain first paragraph below if plank edges are adhered.

* + - * 1. Tightly interlock and adhere plank edges with adhesive. Remove excess adhesive from top surface of planks.
				2. Lay floor planks in pattern indicated.
				3. Use spacers to keep floor planks from shifting as subsequent rows are added. Remove spacers after installing cork floating floor system.
				4. Maintain expansion space at walls and other obstructions and terminations of flooring of not less than 3/8 inch.
				5. Extend floor planks into toe spaces, door reveals, closets, and similar openings. Extend floor planks to center of door openings.
				6. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on floor planks as marked on substrates. Use chalk or other nonpermanent marking device.
			1. FIELD-APPLIED FINISHES
				1. Apply finishes according to cork flooring manufacturer's written instructions.

Retain "Cork Sealer" paragraph below for cork rubber tile and for sanded or unfinished cork flooring to receive field-applied sealer. Consider requiring sealer applied over cork flooring with factory-applied acrylic or polyurethane finish; consult manufacturers for recommendations.

* + - * 1. Cork Sealer: Apply [**one**] [**two**] coat(s).

Retain "Paste Wax" paragraph below for sanded or unfinished cork flooring to receive field-applied paste wax finish and for cork flooring with factory-applied paste wax finish to receive additional field-applied paste wax coats.

* + - * 1. Paste Wax: Apply [**one**] [**two**] [**three**] coat(s).

Retain "Finish Coatings" paragraph below for sanded or unfinished cork flooring to receive field-applied finish coatings. Insert requirements for colored stain if any. Consider requiring field-applied finish coatings applied over cork flooring with factory-applied acrylic or polyurethane finish; consult manufacturers for recommendations.

* + - * 1. Finish Coatings: Apply [**two**] [**three**] coat(s).
			1. CLEANING AND PROTECTION
				1. Comply with manufacturer's written instructions for cleaning and protecting cork flooring.
				2. Perform the following operations immediately after completing cork flooring installation:

Remove blemishes from surfaces.

Retain first subparagraph below for adhered floor tile.

Remove installation adhesive from surfaces.

Sweep and vacuum surfaces thoroughly.

Damp-mop surfaces to remove marks and soil.

* + - * 1. Protect cork flooring from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.
				2. Cover cork flooring until Substantial Completion.

END OF SECTION 096229