

SECTION 09650 - RESILIENT FLOORING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Owner furnished LVT flooring and adhesive for installation by Contractor.
 2. Contractor furnished resilient flooring accessories.
 3. Preparation of Contraction/Construction Joints under floor finishes.
 4. Contractor installation of resilient flooring and accessories.
 5. Floor Treatment: Application of finish to resilient floor tile.
- B. Related Requirements:
1. Section 01351 - Regulatory Compliance:
 - a. Removal and recycling of existing resilient flooring.
 - b. Removal and recycling are responsibility of General Contractor. References to Owner's Preferred Flooring Contractor are not applicable.
 - c. Disposal and removal of construction and universal waste.
 - d. Work practice control methods for airborne respirable dust.
 2. Section 02023 – Selective Site Demolition: Requirements for dust control during preparation of existing slabs to receive resilient flooring.
 3. Section 03314 - Cast-In-Place Concrete Slabs: Floor substrate surface.
 4. Section 09655 - Resilient Base and Accessories: Resilient wall base.
 5. Appendix A – Products and Work By Owner or Separate Contractor
 - a. General procedures related to Owner furnished products.
 - b. Manufacturers, suppliers, vendor contacts and product names and numbers related to Owner furnished products.

1.2 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. Publications are referenced within the text by these basic designations only.
- B. ASTM International (ASTM):
1. ASTM F 710 – Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.
 2. ASTM F 1869 – Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.
 3. ASTM F 2170 – Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using *in situ* Probes.
- C. Occupational Safety and Health Administration (OSHA):
1. OSHA 01926.1153 Respirable Crystalline Silica.

1.3 ENVIRONMENTAL REQUIREMENTS

- A. Minimize dust emissions and provide equipment that suppresses dust.

1.4 QUALITY ASSURANCE

- A. Resilient Flooring Installer Qualifications:
1. Resilient Flooring Installation Contractor shall have at least five years' experience in installation of resilient flooring similar to that required for this Project.
 2. Each installer shall be trained or certified by manufacturer of adhesive, if specified, for installation techniques required.

- B. Floor Treatment Applicator Qualifications:
 - 1. Company Requirements: Company specializing in performing work as specified herein with minimum 3 years documented experience.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Owner Furnished Product Delivery: Walmart will deliver products to jobsite for Contractor to receive on delivery date established by Walmart.
- B. Walmart Floor Finish Plan: Issued to Contractor by Walmart prior to possession date.
- C. Product Packaging: Resilient flooring and accessories will be packaged in manufacturer's standard cartons.
- D. Acceptance at Site:
 - 1. Verify quantity of products furnished with Bill of Material provided with Walmart furnished products.
 - 2. Check material for consistency of run item and shade numbers.
 - 3. Report discrepancies in product quantity delivered or damage to products delivered to Walmart Construction Manager within 24 hours.
 - 4. Upon notification by Contractor, Walmart will arrange for delivery of replacement products.
 - 5. Note description of product quantity discrepancies and/or product damage on Bill of Lading.
- E. Storage:
 - 1. Store materials in a secure area to prevent loss due to theft or damage.
 - 2. Store flooring on original pallets with no multiple stacking of pallets.
 - 3. Store resilient flooring and adhesives indoors and protect from excessive cold, heat, temperature fluctuations, humidity, and moisture penetration.
 - 4. Do not allow adhesive to freeze.
 - 5. Storage Conditions:
 - a. Store flooring materials in environment between 65 and 85 degrees for three days prior to installation to achieve temperature stability.
 - 1) Coordinate location of storage with Walmart Construction Manager.
 - b. Maintain adhesives at a minimum temperature of 65 degrees F for 48 hours prior to installation.
- F. Transport, handle, store, and protect products in compliance with the requirements of Section 01600 and manufacturer's recommendations.

1.6 PROJECT CONDITIONS

- A. Concrete Sub-Floor Evaluation:
 - 1. Owner's Floor Testing Consultant (FTC): Independent Floor Testing and Inspection, Inc. (IFTI). Contact: James Pouliot (800) 490-3657, walmart.usa.spec@floortest.com.
 - 2. Concrete slab moisture vapor emission, in-situ relative humidity and pH (alkalinity) testing have been conducted by FTC in accordance with ASTM F710, ASTM F 1869 and ASTM F2170.
 - 3. Moisture Test Report: FTC will prepare report to include the following:
 - a. Executive Summary.
 - b. Moisture and pH Test Report.
 - c. Test Site Floor Plan.
 - d. Test Results Mapping Diagram.
 - e. Risk Assessment and Repair Option Chart.
 - f. Test Site Photographs.
 - g. Repair Option Specification.
 - h. Product Data and Installation Instructions.
 - 4. Information furnished in FTC's Moisture Test Report shall not be used to modify requirements except as specifically required herein or unless otherwise specified or directed in writing by Walmart.
 - 5. FTC's Moisture Test Reports are available to Contractor within the GC Permit Information folder on Owner's document delivery website.

1.7 SCHEDULING

- A. Schedule resilient flooring installation to prevent damage to resilient flooring and to prevent movement of construction materials over area of resilient flooring.
- B. Work shall begin no earlier than 15 minutes before approved "start time" and shall finish within one hour after approved completion time. Approved time is determined by the Walmart Construction Manager.
- C. All work shall be done in association with approved interruption of the Store's normal operations.

PART 2 - PRODUCTS

2.1 OWNER FURNISHED PRODUCTS

- A. Walmart will furnish the following as specified in Appendix A (Section 09650) for installation by the Contractor:
 - 1. Resilient flooring.
 - 2. Adhesive.
 - 3. LVT-to-concrete transition strip with fasteners.
 - 4. Floor treatment materials.

2.2 CONTRACTOR FURNISHED ACCESSORIES

- A. Subfloor Filler (Cementitious Based Underlayment):
 - 1. Schonox SL, by HPS North America, Inc. (256) 246-0345.
- B. Contraction/Construction Joint Filler:
 - 1. Epolith P or G, two-part, 100% solids, flexible epoxy joint filler, by BASF Building Systems, (800) 433-9517
- C. Primers: Types as suitable for specific material and substrates encountered. Primer VOC shall be not greater than 50 g/L.

2.3 EQUIPMENT

- A. Contractor shall furnish all labor and equipment for installation of Walmart furnished Floor Treatment Materials. Use of Walmart owned equipment is not allowed.]
- B. Dust extraction system and pre-separator for cleaning slab after surface preparation.
 - 1. Heavy-duty industrial HEPA filtration vacuum system, suitable for extracting and containing large quantities of fine concrete dust (minimum 350CFM air flow) in conjunction with manufacturer recommended pre-separator.
 - 2. Provide one of the following:
 - a. 86D, by HTC (877) 482-8700 www.htc-america.com.
 - b. T8600, by Ermator LLC (855) 736-2869 www.ermatorusa.com.
 - c. Bull 1250, by SASE Company, Inc. (800) 522-2606 www.sasecompany.com.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine surfaces and adjacent areas where products will be installed and verify that surfaces conform to the following requirements for substrate conditions. Do not proceed until unsatisfactory conditions have been corrected.
 - 1. Verify concrete floors are free of excessive moisture, hydrostatic pressure, alkalinity, scale, and dusting.
 - 2. Verify concrete floors are plane to tolerances specified in Division 3 specifications.
 - 3. Verify concrete floors are free from oil, grease, dust, construction debris, loose or scaly paints or coatings, incompatible curing or sealing compounds, and other substances that may impair adhesion of adhesive and

finish materials.

4. Verify that storage conditions specified in Part 1 have been met.

B. On remodel installations evaluate existing materials for suitability as a substrate.

C. Beginning of installation indicates acceptance of substrate conditions.

3.2 PREPARATION – GENERAL

A. The Contractor must have the Final Floor Finish Plan and the schedule of moving the gondolas and verify with Walmart Construction Manager, Store Manager, and Store Planning Field Project Manager. Contact Store Manager 48 hours prior to any work affecting their area.

B. Cover and protect merchandise and racking to prevent damage or contamination of stored products. Provide dust drapes as required to protect merchandise from dust or debris.

C. Comply with the requirements of Section 02023.

D. Remove existing floor tiles as required. All demolished tile shall be disposed of or recycled as specified in Section 01351.

3.3 PREPARATION – CONCRETE SUBSTRATE

A. Unless otherwise specified herein, prepare substrate according to ASTM F 710.

B. Remove paint, oils, waxes, sealers and curing compounds not compatible with adhesive to be used. Do not use organic solvents or liquid adhesive removers.

C. Prepare concrete substrate according to flooring manufacturer's written recommendations and as outlined below to ensure adhesion of resilient products.

1. Remove ridges, bumps, protrusions, and other irregularities.

2. Where scraping, sanding, or grinding of concrete surface is required to remove existing oil, grease, coatings, or compounds, and where sanding or grinding of concrete surface is required to remove protrusions, use proper dust control tools and methods to maintain dust emissions below the permissible level.

3. Properly prepare expansion joints and fill contraction/construction joints with joint filler or subfloor filler specified in Part 2 of this section as required. Do not seal joints in areas to receive resilient flooring using polyurea or epoxy joint filler specified for concrete slabs in other Sections.

4. Fill cracks, holes, and depressions with cementitious based underlayment and finish smooth as necessary to achieve a level, flat, hard surface.

5. Prohibit traffic until filler is cured. Thereafter, unnecessary traffic in work areas shall be kept to a minimum.

6. Vacuum slab.

a. Use HEPA-rated filtration vacuum system during slab preparation.

3.4 PREINSTALLATION TESTING BY CONTRACTOR

A. Bond Test: Conduct bond test of specified floor covering and specified adhesive in accordance with manufacturer's published instructions.

3.5 INSTALLATION

A. Begin resilient flooring installation only when slab moisture and pH conditions are satisfactory for placement as determined from results of pre-installation testing.

B. Install resilient flooring in accordance with manufacturer's published instructions at locations indicated on Walmart Floor Finish Plan.

- C. Open number of floor material cartons to provide quantity required to cover each area; mix pieces within single shade lot to ensure shade variations do not occur within any one area. When working with more than one lot, plan lot placement and location to minimize possible shade differences.
- D. Apply adhesive in accordance with manufacturer's directions. Follow adhesives open time by spreading only enough adhesive to permit installation of floor materials before initial set. Do not spread adhesive for overnight dry.
- E. PVC/LVT Plank Flooring Installation:
 - 1. Install PVC/LVT flooring in accordance with manufacturer's published instructions. Lay flooring from side-to-side, not front-to-back, of store.
 - 2. Install PVC/LVT plank strips with random end-joint offset over entire area. Cut planks in random sizes for starter pieces and alternate the size of the starter piece to avoid a repeating joint pattern. The shortest starter piece shall be not less than 12" and the shortest end run piece shall be not less than 6".
 - 3. Overall PVC/LVT flooring layout shall produce a complete random appearance of joint spacing with end joints staggered a minimum of 6" apart.
 - 4. Install PVC/LVT border as shown on the drawings.
- F. Wipe down bleed through of adhesive, if specified, during installation.
- G. Rolling (Adhered Flooring): Set flooring into place, thoroughly cross roll with a 100-150 pound three-sectional roller before adhesive set time expires to attain full adhesion.
- H. Terminate flooring at centerline of door openings where adjacent floor finish is dissimilar. Where flooring continues through door opening, continue established pattern with no interruption.
- I. Install transition strips at unprotected or exposed edges where flooring terminates.
 - 1. Set metal transition strips butted to adjacent flooring. Anchor into concrete slab with specified fasteners. Drill concrete with Matched Tolerance Drill Bit for Dense Concrete by Hilti.
- J. Scribe flooring to walls, columns, cabinets, floor outlets, and other appurtenances to produce tight joints.
- K. Continue flooring under movable type partitions without interrupting floor pattern.

3.6 FIELD QUALITY CONTROL

- A. Inspect resilient flooring installation, pattern, layout, and attachment to substrate.
- B. Correct deficiencies in Work which inspection indicates are not in compliance with Contract Documents.

3.7 CLEANING

- A. Remove excess adhesive from floor, base, and wall surfaces without damage.
- B. Broom clean resilient flooring after application.
- C. Dispose of construction waste in accordance with the requirements of Section 01351.

3.8 FLOOR TREATMENT

- A. Provide floor treatment for new resilient flooring.
 - 1. Floor treatment for areas of PVC/LVT shown or noted on the drawings as existing to remain (ETR), including any piece-replaced PVC/LVT therein, shall be by others.
- B. Examine surfaces and adjacent areas where products will be applied and verify that surfaces conform to product manufacturer's requirements for substrate conditions. Do not proceed until satisfactory conditions have been corrected.

C. Cleaning and Finishing

1. Cleaning:

a. PVC/LVT: Dry mop with microfiber mop.

1) Ensure all adhesive residues are removed from tile prior to initial cleaning.

2. Finishing: Apply floor finish in accordance with manufacturer's instructions.

a. PVC/LVT Plank Flooring: Apply two light coats of floor finish to floor with a 24" rayon mop in direction of wood grain of plank. Do not burnish.

END OF SECTION