



Date Issued: July 06, 2009
Subject : Resilient Flooring

Reference: Independent Living BC Non-Profit Housing Design
and Construction Standards, Revised October 2006
Provincial Homelessness Initiative Design Guidelines
& Construction Standards, October 2006

Page: 1 of 1

SUBJECT:

Revisions to BC Housing's Resilient Flooring standard as described in Section 5 Resilient Flooring, Section 09650. The same revisions apply to the Independent Living BC Non-Provincial Housing Design and Construction Standards, Revised October 2006, and the Provincial Homelessness Initiative Design Guidelines and Construction Standards, October 2006.

PURPOSE:

Provide easily maintained building products to reduce the need for extensive long-term maintenance as well as changing the base of wall detail to reduce the potential of a bedbug infestation from spreading to other units.

Revised the existing manufactured products listing which removed Inlaid Sheet Vinyl, included Heterogeneous Sheet Vinyl, and separated slip resistant flooring for bathrooms & commercial kitchens.

REFERENCE:

Independent Living BC Non-Profit Housing Design and Construction Standards (ILBC Standards), Revised October 2006:

- Section 5 Resilient Flooring, Section 09650

Provincial Homelessness Initiative Design Guidelines and Construction Standards, (PHI Standards), October 2006:

- Section 5 Resilient Flooring, Section 09650

DESCRIPTION:

ILBC Standard, Section 5 Resilient Flooring

Delete Section 5 Resilient Flooring, Section 09650, page 178-181 in its entirety and replace with: Resilient Flooring, Section 09650, 5 pages

PHI Standard, Section 5 Resilient Flooring

Delete Section 5 Resilient Flooring, Section 09650, page 151-155 in its entirety and replace with: Resilient Flooring, Section 09650, 5 pages

END

Technical Bulletin No 23-2009

**Resilient Flooring
Section 09650**

For

BC Housing Construction Projects

RESILIENT FLOORING

1.0 General

- Workmanship and materials must conform to the Specification Manual as published by the National Floor Covering Association, latest edition.
- Provide resilient flooring based on the following general areas:
 1. Tenant Suites
 - Bathrooms / Wheel in Shower – Slip resistant sheet vinyl for bathrooms with painted 102 mm (4”) wood base.
 - Dining – Heterogeneous sheet vinyl or homogeneous sheet vinyl with painted 102 mm (4”) wood base.
 - Kitchen - Heterogeneous sheet vinyl or Homogeneous sheet vinyl with painted 102 mm (4”) wood base.
 2. Tenant Common Areas
 - Amenity areas, Activity – Homogeneous sheet vinyl or linoleum sheet with painted 152 mm (6”) wood base.
 - Commercial Kitchen - Slip resistant sheet vinyl for commercial kitchen with integral cove base
 - Common Dining Area – Homogeneous sheet vinyl or linoleum sheet with painted 152 mm (6”) wood base.
 - Elevator Cab –Textured sheet rubber flooring.
 - Laundry – Homogeneous sheet vinyl flooring with integral cove base.
 3. Support Areas
 - Office Areas – Heterogeneous sheet vinyl, or homogeneous sheet vinyl with painted 152 mm (6”) wood base.
 - Utility/Service Areas - Homogeneous sheet vinyl or vinyl composite tile with painted 64mm (2½”) wood base.
- Provide a minimum of five percent of each type and colour of resilient floor covering supplied, for the Owner's maintenance requirements. Neatly package, mark and leave on site in a location as directed by the Consultant.
- Submit samples of all resilient flooring, accessories and seam layout to Consultant and Owner for review prior to installation.

2.0 Products

Exit Stairs – Concrete Construction

1. **Tread, Riser and Landing:** Concrete finish to be provided. See Section 03300 Basic Concrete Materials and Methods. Section 5 – Construction Standards, 03300 Basic Concrete Materials and Methods for detailed requirements.
2. **Tactile Warning Strip:** Tactile Warning Strip by Johnsonite, grooves in concrete surface or approved alternate; size, colour and location as per applicable building code.

Exit Stairs – Wood Framed Construction

1. **Tread, Riser and Landing:** Johnsonite raised profile rubber stair tread VIRH with 152mm (6”) base (riser) or Homogeneous sheet vinyl tread and riser with 2.0 mm (0.080”) thickness; Section 5 – Construction Standards, 09650 Resilient Flooring, 2.0 Products, Homogeneous Sheet Vinyl for detailed requirements.
2. **Nosing:** Johnsonite VIRH with appropriate profile, or approved alternate; highly contrasting colour to tread, riser and landing.
3. **Tactile Warning Strip:** Tactile Warning Strip by Johnsonite or approved alternate; same colour as nosing; size and location as per applicable building code.

Floor Underlayment

1. Will be required where plywood subfloor is provided. See Section 06100 Rough Carpentry.

Heterogeneous Sheet Vinyl

1. **Standard:** ASTM 1303-04a, Standard Specification for Sheet Vinyl Floor Covering with Backing, Type 1, Grade 1, Class B.
2. **Type:** Binder Content 90% minimum.
3. **Wear Layer Minimum Thickness:** 0.80 mm (0.032”)
4. **Overall Thickness:** 2.0 mm (0.080”) nominal.
5. **Seams:** All seams to be heat welded with matching welding rods.
6. **Acceptable product:** Acczent Wood by Johnsonite or approved alternate.

Homogeneous Sheet Vinyl

1. **Standard:** ASTM F1913-04a, Standard Specification for Sheet Vinyl Floor Covering without Backing.
2. **Type:** Binder Content 50% minimum.

3. **Wear Layer Minimum Thickness:** 2 mm (0.080")
4. **Overall Thickness:** 2 mm (0.080")
5. **Seams:** All seams to be heat welded with matching welding rods.
6. **Finish:** No wax, no polish for life of the product, while maintaining an even luster finish.
7. **Acceptable product:** Granit or Optima by Tarkett or approved alternate.

Linoleum Sheet Flooring

1. **Standard:** ASTM F2034-08 Standard Specification for Sheet Linoleum Floor Covering, Type 1
2. **Type:** Linoleum sheet with backing.
3. **Weight:** 3kg / 5.5 lbs
4. **Overall Thickness:** 2.5mm (0.100") overall (nominal)
5. **Acceptable product:** Marmoleum by Forbo, Harmonium XF by Johnsonite, Marmorette by Armstrong or approved equivalent.

Rubber Base

1. **Standard:** ASTM F1861-08a, Type TP, Group 1 (solid), Style B (Cove) Standard Specification for Resilient Wall Base.
2. **Height:** 152 mm (6"); **Thickness:** 3 mm (1/8") **Location:** Stair Riser.

Slip-Resistant Sheet Vinyl for Bathrooms

1. **Standard:** ASTM F 1303-04a, Standard Specification for Sheet Vinyl Floor Covering with Backing, Type 2, Grade 1, Class A or B backing.

or
Standard: ASTM F1913-04a, Standard Specification Sheet Vinyl Floor Covering without Backing.
2. Static coefficient of friction of .60 or greater for wet level surfaces, ASTM D 2047-04a.
3. **Overall Thickness:** 2.0 mm to 3.0 mm (0.080"-0.125")
4. **Seams:** All seams to be heat welded with matching welding rods.
5. **Acceptable products for bathing areas for barefoot:** products shall be appropriate for barefoot use: Marine 20 by Altro, Multisafe Granite or Safe-T by Tarkett, Safeguard Spa by Armstrong or approved alternate.
6. **Acceptable products for bathing areas for non-barefoot:** products shall be appropriate for non-barefoot use: Walkway 20 by Altro, Safe-T by Tarkett or approved alternate.

Slip-Resistant Sheet Vinyl for Commercial Kitchen

1. **Standard:** ASTM F 1303-04a, Standard Specification for Sheet Vinyl Floor Covering with Backing, Type 2, Grade 1, Class A backing.
2. Static coefficient of friction of .80 or greater for level surfaces
3. **Overall Thickness:** 2.0 mm to 3.0 mm (0.080"-0.125")
4. **Seams:** All seams to be heat welded with matching welding rods.
5. **Acceptable products:** Designer 25 by Altro or approved alternate.

Slip-Resistant Sheet Vinyl for Dry Ramps

1. **Standard:** ASTM F 1303-04a, Standard Specification for Sheet Vinyl Floor Covering with Backing, Type 2, Grade 1, Class A backing.
2. Static coefficient of friction of .60 or greater for level surfaces and .80 or greater for dry ramps, ASTM D 2047-04a.
3. **Overall Thickness:** 2.0 mm to 3.0 mm
4. **Seams:** All seams to be heat welded with matching welding rods.
5. **Acceptable products:** Safeguard by Armstrong, Designer 25 by Altro or approved alternate.

Vinyl Composition Tile Flooring

1. **Standard:** ASTM F1066-04a, Vinyl Composition Floor Tile, Composition 1 Without Asbestos, Class 2 Through Pattern Tile, Gauge 3 mm (1/8")
2. **Size:** 305 mm x 305 mm (12" x 12");

3.0 Execution

1. *Consultant shall ensure that specifications for environmental conditions, products, surface preparation, installation, and maintenance requirements are specified in the contract documents.*
2. The flooring installer shall be competent in the installation of the resilient flooring products specified for the project.
3. Prior to installation, the Contractor, flooring installer, flooring manufacturer's representative and Consultant shall meet on-site to establish procedures for inspections, approval of product samples, patterns, colours and accessories, procedures for acceptability of the substrate, environmental conditions, installation procedures, and protection of finished work.
4. Install flooring wall to wall before the installation of floor-set cabinets, casework, equipment, movable partitions, etc. Extend flooring into toe spaces, door recesses, closets and similar openings as shown on drawings.

5. Lay flooring to provide a minimum number of seams. Avoid seams in bathrooms. Seams in kitchens are permitted only under fridges, stoves, or in closets.
6. Floor drains in areas finished with sheet goods should be provided with a clamping system that will ensure positive water flow and a watertight flooring installation. Sheet vinyl required in these areas.
7. In wheelchair accessible prefabricated shower units, the joint between the edge of the shower and the resilient floor shall be sealed with caulking and the caulking protected by an 'F' transition strip, to ensure a watertight flooring installation. Exposed caulked joints are not acceptable. Contractor to prepare mock-up (*Consultant to provide detail*).

END OF SECTION

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**Resilient Flooring
Section 09650**

For

BC Housing Construction Projects

RESILIENT FLOORING

1.0 General

- Workmanship and materials must conform to the Specification Manual as published by the National Floor Covering Association, latest edition.
- Provide resilient flooring based on the following general areas:
 1. Tenant Suites
 - Bathrooms / Wheel in bathroom/shower - Slip resistant sheet vinyl for bathrooms with painted 102 mm (4") wood base.
 - Dining / Living Room / Bedroom – Homogeneous sheet vinyl with painted 102 mm (4") wood base.
 - Kitchen - Homogeneous sheet vinyl with painted 102 mm (4") wood base.
 2. Tenant Common Areas
 - Amenity areas, Activity & Lounge – Homogeneous sheet vinyl or linoleum sheet with painted 152 mm (6") wood base.
 - Commercial Kitchen – Slip resistant sheet vinyl for commercial kitchen with integral cove base.
 - Common Dining Area – Homogeneous sheet vinyl or linoleum sheet with painted 152 mm (6") wood base.
 - Elevator Cab –Textured sheet rubber flooring.
 - Laundry – Homogeneous sheet vinyl flooring with integral cove base.
 - Corridor – Homogeneous sheet vinyl or linoleum sheet with painted 152 mm (6") wood base.
 3. Support Areas
 - Office Areas – Heterogeneous sheet vinyl or homogeneous sheet vinyl with painted 152 mm (6") wood base.
 - Utility/Service Areas - Homogeneous sheet vinyl or vinyl composite tile with painted 64 mm (2½") wood base.
- Provide a minimum of five percent of each type and colour of resilient floor covering supplied, for the Owner's maintenance requirements. Neatly package, mark and leave on site in a location as directed by the Consultant.
- Submit samples of all resilient flooring, accessories and seam layout to Consultant and Owner for review prior to installation.

2.0 Products

Exit Stairs – Concrete Construction

1. **Tread, Riser and Landing:** Concrete finish to be provided. See Section 03300 Basic Concrete Materials and Methods. Section 5 – Construction Standards, 03300 Basic Concrete Materials and Methods for detailed requirements.
2. **Tactile Warning Strip:** Tactile Warning Strip by Johnsonite, grooves in concrete surface or approved alternate; size, colour and location as per applicable building code.

Exit Stairs – Wood Framed Construction

1. **Tread, Riser and Landing:** Johnsonite raised profile rubber stair tread VIRH with 152mm (6”) base (riser) or Homogeneous sheet vinyl tread and riser with 2.0 mm (0.080”) thickness; Section 5 – Construction Standards, 09650 Resilient Flooring, 2.0 Products, Homogeneous Sheet Vinyl for detailed requirements.
2. **Nosing:** Johnsonite VIRH with appropriate profile, or approved alternate; highly contrasting colour to tread, riser and landing.
3. **Tactile Warning Strip:** Tactile Warning Strip by Johnsonite or approved alternate; same colour as nosing; size and location as per applicable building code.

Floor Underlayment

1. Will be required where plywood subfloor is provided. See Section 06100 Rough Carpentry.

Heterogeneous Sheet Vinyl

1. **Standard:** ASTM 1303-04a, Standard Specification for Sheet Vinyl Floor Covering with Backing, Type 1, Grade 1, Class B.
2. **Type:** Binder Content 90% minimum.
3. **Wear Layer Minimum Thickness:** 0.80 mm (0.032”)
4. **Overall Thickness:** 2.0 mm (0.080”) nominal.
5. **Seams:** All seams to be heat welded with matching welding rods.
6. **Acceptable product:** Acczent Wood by Johnsonite or approved alternate.

Homogeneous Sheet Vinyl

1. **Standard:** ASTM F1913-04a, Standard Specification for Sheet Vinyl Floor Covering without Backing.
2. **Type:** Binder Content 50% minimum.

3. **Wear Layer Minimum Thickness:** 2 mm (0.080")
4. **Overall Thickness:** 2 mm (0.080")
5. **Seams:** All seams to be heat welded with matching welding rods.
6. **Finish:** No wax, no polish for life of the product, while maintaining an even luster finish.
7. **Acceptable product:** Granit or Optima by Tarkett, or approved alternate.

Linoleum Sheet Flooring

1. **Standard:** ASTM F2034-08 Standard Specification for Sheet Linoleum Floor Covering, Type 1
2. **Type:** Linoleum sheet with backing.
3. **Weight:** 3kg / 5.5 lbs
4. **Overall Thickness:** 2.5mm (0.100") overall (nominal)
5. **Acceptable product:** Marmoleum by Forbo, Harmonium XF by Johnsonite, Marmorette by Armstrong or approved equivalent.

Rubber Base

1. **Standard:** ASTM F1861-08a, Type TP, Group 1 (solid), Style B (Cove) Standard Specification for Resilient Wall Base.
2. **Height:** 152 mm (6"); **Thickness:** 3 mm (1/8") **Location:** Stair Riser.

Slip-Resistant Sheet Vinyl for Bathrooms

1. **Standard:** ASTM F 1303-04a, Standard Specification for Sheet Vinyl Floor Covering with Backing, Type 2, Grade 1, Class A or B backing.

or
Standard: ASTM F1913-04a, Standard Specification Sheet Vinyl Floor Covering without Backing.
2. Static coefficient of friction of .60 or greater for level surfaces and .80 or greater for dry ramps, ASTM D 2047-04a.
3. **Overall Thickness:** 2.0 mm to 3.0 mm (0.080"-0.125")
4. **Seams:** All seams to be heat welded with matching welding rods.
5. **Acceptable products for bathing areas for barefoot:** products shall be appropriate for barefoot use: Marine 20 by Altro, Multisafe Granite or Safe-T by Tarkett, Safeguard Spa by Armstrong or approved alternate.
6. **Acceptable products for bathing areas for non-barefoot:** products shall be appropriate for non-barefoot use: Walkway 20 by Altro, Safe-T by Tarkett or approved alternate.

Slip-Resistant Sheet Vinyl for Commercial Kitchen

1. **Standard:** ASTM F 1303-04a, Standard Specification for Sheet Vinyl Floor Covering with Backing, Type 2, Grade 1, Class A backing.
2. Static coefficient of friction of .60 or greater for level surfaces and .80 or greater for dry ramps, ASTM D 2047-04a.
3. **Overall Thickness:** 2.0 mm to 3.0 mm (0.080”-0.125”)
4. **Seams:** All seams to be heat welded with matching welding rods.
5. **Acceptable products:** Designer 25 by Altro or approved alternate.

Slip-Resistant Sheet Vinyl for Dry Ramps

1. **Standard:** ASTM F 1303-04a, Standard Specification for Sheet Vinyl Floor Covering with Backing, Type 2, Grade 1, Class A backing.
2. Static coefficient of friction of .60 or greater for level surfaces and .80 or greater for dry ramps, ASTM D 2047-04a.
3. **Overall Thickness:** 2.0 mm to 3.0 mm
4. **Seams:** All seams to be heat welded with matching welding rods.
5. **Acceptable products:** Safeguard by Armstrong, Designer 25 by Altro or approved alternate.

Vinyl Composition Tile Flooring

1. **Standard:** ASTM F1066-04a, “Vinyl Composition Floor Tile”, Composition 1 Without Asbestos, Class 2 Through Pattern Tile, Gauge 3 mm (1/8”)
2. **Size:** 305 mm x 305 mm (12” x 12”);

3.0 Execution

1. *Consultant shall ensure that specifications for environmental conditions, products, surface preparation, installation, and maintenance requirements are specified in the contract documents.*
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5. Lay flooring to provide a minimum number of seams. Avoid seams in bathrooms. Seams in kitchens are permitted only under fridges, stoves, or in closets.
6. Floor drains in areas finished with sheet goods should be provided with a clamping system that will ensure positive water flow and a watertight flooring installation. Sheet vinyl required in these areas.
7. In wheelchair accessible prefabricated shower units, the joint between the edge of the shower and the resilient floor shall be sealed with caulking and the caulking protected by an 'F' transition strip, to ensure a watertight flooring installation. Exposed caulked joints are not acceptable. Contractor to prepare mock-up (*Consultant to provide detail*).

END OF SECTION