

*2.4-2.1.2 Characteristics and Criteria for Selecting Materials and Products

A2.4-2.1.2 The effects of demolition and replacement and repair of materials and products used in residential health, care, and support facilities should be considered when selecting surface and furnishing materials and products for use in environments that are occupied 24 hours a day, seven days a week.

A2.4-2.1.2.1 Characteristics and criteria for selecting surface and furnishing materials and products

a. Residential health, care, and support facilities should incorporate architectural detail, surface, and furnishing materials and products that:

- Optimize sensory function in accordance with the vision and lighting guidelines established by ANSI/IES RP-28: *Recommended Practice for Lighting and the Visual Environment for Senior Living* and provide optimum light levels and glare-free finishes for the safety and vision comfort of residents and staff.
- Optimize acoustic comfort, acoustic privacy, and accurate oral communications; mitigate alarm fatigue, and consider residents' use of hearing aids.

b. The additional characteristics and criteria in this section should be used for designing architectural details and selecting and specifying products and materials for all residential health, care, and support facility design and construction projects. (The characteristics included in this text are supported by quantifiable industry test methods. See the Facility Guidelines Institute website at www.fgiguidelines.org/resources for more information.)

—*Durable*. Architectural detail, surface, and furnishing materials and products should be resistant to breakage, punctures/tears, stains, and damage and wear from abrasion as appropriate to the function of the material and product type being selected. See appendix section A2.2-2.5.1.3 (Reduced-impact materials) for additional information.

—*Resilient and impact-resistant*. Architectural detail, surface, and furnishing materials should remain intact, safe, and functional in heavy weight-bearing, high-traffic, and impact-susceptible areas. Materials and products selected should meet the following requirements:

- “Pounds per square inch” (PSI) weight tolerances for loads
- Tensile strength, flexibility, impact, and abrasion testing standards for the required use and application
- Surface bounces back from compressions caused by repeated use and does not shatter or fragment under abrasion or impact

—*Reduces user fatigue and musculoskeletal injury*. Architectural detail, surface, and furnishing materials should:

- Meet specific safety, assembly, and construction industry criteria for flexibility to address foot compression and heel strike absorption.

***2.4-2.1.2.1 General**. The effect of surface materials, colors, textures, and patterns on resident, staff, and

- Support foot comfort and reduce the fatigue and musculoskeletal injury effects of long-term continued use or bodily damage from impacts or falls.

—*Uses safe and compatible materials in assemblies, including substrate and surface finish materials*

- All assembled materials should meet the characteristics listed in Sections 2.4-2.2 (Architectural Details), 2.4-2.3 (Surfaces), and 2.4-2.4 (Furnishings).
- All seams and joints in assemblies should be joined to reduce wear and degradation and should be able to remain intact during the proposed service life of the assembly.
- Water-resistant materials, sealed-seam construction methods, and moisture-impervious surface selections should be used for assemblies where water or moisture is continuously present (e.g., clinical use work surfaces with inset or integral sinks, flooring, cove base assemblies, showers, other bathing areas) to reduce or eliminate the possibility of seepage in or under the assembly.

—*Safe and efficient for use in occupied residential settings over time*. Throughout their life cycle, architectural detail, surface, and furnishing materials and products should minimize and/or prevent the incidence and effects of noise, odors, gas, particulates, dust, and debris that reduce indoor air quality during product assembly, installation, and operations as well as maintenance, repair, or demolition in occupied residential health, care, and support facilities. See appendix section A2.2-2.4.1.1 (Emissions and VOCs) for additional information.

—*Appropriate for the emotional and cultural well-being of residents, staff, and visitors*. Design, layout, size, color, and pattern of architectural details, surfaces, and furnishings shall create resident environments that support the model of care and operations provided in the facility or setting. See Section 1.2-4.5.8 (Cultural Responsiveness) for additional information

- In any design project, the selection of a color palette should be based on many factors, including the building population, anticipated activities in the space, and lighting design strategy.
- Finishes and color palettes should respond to the geographic location of the residential health, care, and support facility, taking into account climate and light, regional responses to color, and the cultural characteristics of the community served.

—*Has acoustic properties that support resident safety and well-being*. Material and products selected should meet the noise reduction requirements for resident care areas in Section 2.5-8.3 (Design Criteria for Acoustic Finishes) and Section 2.5-8.6 (Design Guidelines for Speech Privacy) where applicable to the