



Designed for possibilities.
Made for people.



Floor and wall solutions for senior living

Creating a safe, warm and comfortable environment for seniors with Altro

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Altro is your foundation for safer senior living

Flooring and walls play a key role in creating attractive, welcoming environments. But, in a senior living facility, flooring and walling must be more than pleasant to look at. They must provide a safe, stable, and durable foundation that can handle the health needs of aging and disabled residents.

Whether the facility is independent living, assisted living, skilled nursing or a CCRC, the choice of flooring and walling is critical because you need to minimize the risks to the health and safety of your residents and staff. Facilities that care for seniors and have residents with physical disabilities have even more reason to pay special attention to the properties of the material installed.

From resident showers to neighborhood common areas, Altro can help keep vulnerable people safe. Designed for senior living functionality, Altro flooring and wall cladding combines safety and durability with warm colors and tones that enhance the residents' living environment.

Trends in senior living

- Providing unique amenities
- Overcoming the misconceptions of senior housing
- Enabling seniors to age in place
- Providing memory care services
- Integrating seniors into the larger community
- Creating home-like settings
- Introducing hospitality design concepts
- Optimizing resident privacy and dignity
- Expanding individual choice
- Using technology to enhance senior living
- Seeking more sustainable environments

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In addition to sources already cited in this booklet, the following sources were also used:

www.asid.org, www.environmentsforaging.com, Healthcare Facilities Management Magazine, American Academy of Healthcare Interior Designers, "Bracing for falls of an aging nation" by Kate Hafner, NY Times



Designing for an aging population

North America's rapidly growing senior population has drastically impacted senior living and the processes behind the design and architecture of its communities.

In order to design effectively for our senior population, it's vital to understand the many ways that aging is likely to affect residents and their perceived physical environment. The physiological changes associated with growing old alter how we perceive the environment around us and are often accompanied by declines in our sense of sight, hearing, touch, smell and taste. When these senses are dulled, the environment is more difficult to understand and navigate, making normal daily tasks stressful and frustrating.

As people age, they can lose their peripheral vision, undergo color and night vision changes, or can experience problems with glare and blurred vision. In addition, the aging eye lens changes, making all colors appear more yellow and about 20% less saturated.

Walls and floors with similar colors can make it difficult for seniors to differentiate the beginnings and ends of each surface. Contrasting colors between all surfaces, especially with steps and landings, can reduce accidental trips and falls. In bathrooms, for example, contrasting colors between the floor and the toilet can help residents navigate safely and help reduce the risk of a fall.

A person's ability to move is impacted by the aging process, which can result in unsteadiness while walking, difficulty getting in and out of a chair, or even a dangerous fall. Any muscle weakness or joint problems can also contribute to mobility issues. To decrease falls, the proper flooring and lighting, with handles and other safety measures, must be included.

Architects and designers will be increasingly called upon to design supportive, livable, helpful, and safe senior living accommodations to remove stress and confusion from an aging person's everyday life.





Challenges faced while designing for senior living

- Changes to hearing and balance
- Changes to pattern of foot fall
- Increased use of walking aids
- Loss of peripheral vision
- Color vision changes
- Changes to night vision
- Problems with glare
- Disorientation and memory loss



Color and pattern

In creating functional spaces for aging residents, designers need to understand vision changes. Although this adds complexity to color and pattern selection, certain overriding principles still remain:

- Brighter colors may be used to emphasize more important areas of a room, supported by color contrast and additional light.
- Color can encourage or discourage movement into certain areas.
- Color may be incorporated into wayfinding and orientation.
- Color can be used on the walls in stairwells, corridors, and bathrooms to contrast with handrails and help with navigation.
- Use as matte of a surface as possible. Facility Guidelines Institute (FGI) Guidelines state: “Use of non-glare finished floors should be considered to avoid compromising vision and potentially disrupting balance of residents.”
- Avoid sparkles or speckling, as these can cause distraction or look like something to pick up, which could result in a fall.
- FGI Guidelines state: “To prevent falls, flooring should have no pattern or a small pattern less than 1” wide or a large pattern wider than 6”. Flooring should have low-contrast patterns.”

Evidence-based design

In healthcare, evidence-based design is a field of study that deals with how the environment can influence a person's well-being. It is believed that this kind of design can make a real difference for people as they age, removing some of the stress, frustration and confusion from everyday living.

Designers are taking the results of these studies and applying them into their designs in order to achieve similar outcomes. Design choices, such as flooring color or location of a sink, can lead to achieving a measurable goal of reducing disorientation, loss of balance and the risk of falling.



Colors and what they mean

Color can also play a role in the well-being of a resident; it has an effect on the nervous system that can alter psychology and physiology. Different effects can be accomplished with color, and each color expresses its own unique qualities.

	Neutrals – Clean, pure, restful, and noninvasive.
	Earth tones (gray, brown, beige) – Stability, approachable, warm, and soothing.
	Red – Bold, releases adrenaline, elevates blood pressure and heart rate.
	Pink – Soothing, affectionate, happiness, and energy. Can reduce erratic behavior.
	Orange – Energy, warmth, and joy.
	Yellow – Alertness and optimism. It can also cause eye fatigue.
	Green – Balance, restful, healing, and nature.
	Turquoise – Refreshing, relaxing, and invigorating.
	Blue – Calming, lowers blood pressure and heart rate.
	Purple – Promotes creativity, spirituality, and perception.



Backsplash

Provides high contrast visibility and protects drywall from water

Contrast and light reflectance values

It's not enough to consider color alone when differentiating between areas. When the difference between floors, walls, steps and doorways is too subtle, it can cause enough uncertainty to result in a fall.

Contrasting colors, however, create visual changes that help differentiate space. It is actually the amount of light reflected from surfaces that is the main factor in determining a person's ability to identify different surfaces.

Contrasting stair nosing combined with quality safety flooring reduces the risk of slips and trips on stairs. Use contrasting colors or a stripe at the top and bottom of stairways to indicate the final step.

LRVs (Light Reflectance Values)

Light Reflectance Values (LRVs) are the best way to measure contrast. Every material has an LRV marked on a scale of 1-100 — 1 being dark (absorbing light), and 100 being light (reflecting light).

To meet requirements set by the FGI Guidelines, there should be at least a 30 point variance in LRVs between adjacent surfaces such as floors and walls.

Conversely, where different types of flooring are used alongside each other and there is no step between them, it's equally important to ensure that the LRVs of the materials are as similar as possible to avoid creating the illusion of a step where there is none.



Walls

Altro Whiterock 32

LRV 70

Focus point

Darker color creates a focal point and gives high contrast to fixtures

Encourage movement

Use bright colors to encourage movement toward the color

Door wainscoting and corner protection

Altro Whiterock protects doors and corners from bumps and dings

Chairs

Chair color contrasts from the wall and floor color

Darker areas

Can discourage foot traffic around a particular area or create a visual pathway.

Hand rails

Hand rails contrast from the wall.

Flooring

Altro Wood Farmhouse Oak

LRV 38

Coordinate

Use a coordinating, non-wood visual, with a similar LRV, rather than coving a wood-look flooring up the wall.

Performance

Key performance benefits for designers and end users to consider

Durability

Altro flooring is extremely durable. Its indentation resistance and surface abrasion results enable the flooring to resist scuffing and other damage caused by wheelchairs, heavy equipment, walking sticks, or other walking aids.

Altro Whiterock wall cladding is highly impact resistant and known to withstand damage normally caused by wheelchairs and equipment being moved within a home.

Commercial warranties of up to 20 years attest to the durability of Altro flooring and walling.



Cleanability

Residents of senior living facilities are already at a higher risk than the rest of the population of contracting an infection due to age and increased vulnerability to illness. Therefore, it is necessary to maintain a clean and healthy indoor environment to ensure a high quality of life for residents and peace of mind for their loved ones. To meet requirements set by the FGI Guidelines, surfaces need to be water-resistant and easily cleanable.

- Altro manufactures floors and walls designed to meet not only the requirements set by the FGI Guidelines but also the rigorous demands of senior living facilities.
- Altro products are 100% adhered to substrates and have water-tight seams and terminations – water cannot get under flooring or behind the wall panels.
- Altro floors and walls can be power-washed.
- Water-tight and impermeable surfaces keep spills and soil on the surface.
- Our proprietary cleaning technology, Altro Easyclean, is great for overall stain resistance and cleanability. It outperforms other leading commercial flooring in side-by-side tests. It also offers a lasting, attractive appearance and savings over floors not treated with Altro Easyclean.

Safety

As mentioned in some of the earlier sections, the FGI Guidelines for Residential Health, Care, and Support Facilities go into considerable detail on requirements to prevent falls:

- To prevent falls flooring should have no pattern or a small pattern less than 1” wide or a large pattern wider than 6.” Flooring should have low-contrast patterns.
- Use of flooring material that is flexible and “gives” should be reviewed to reduce injury to residents who fall.
- Use of non-glare finished floors should be considered to avoid compromising vision and potentially disrupting balance of residents.
- Flooring surfaces shall provide smooth transitions between different flooring materials.
- Slip resistant flooring required in bathing areas, ramps, and entries.
- Slip resistant flooring required in kitchens with all joints sealed.

Our safety and slip resistant flooring ranges exceed international safety and hygiene standards and offer sustained slip resistance for the life of the product.



Safety, slip-resistant or smooth?

Risk of slips	Altro R12 (Altro Stronghold 30)	Altro R11 (Altro Aquarius + Altro Classic 25)	Altro R10 (Slip resistant floorings)
Water	1 in a million	1 in a million	1 in a million
Vegetable oil	1 in a million	1 in 100,000	1 in 20
Greasy water	1 in a million	1 in 100,000	1 in 20
Talcum powder	1 in a million	1 in a million	1 in 20
Shower gel	1 in a million	1 in a million	1 in 20
Plastic wrapping	1 in a million	1 in a million	1 in a million

How slip resistance is measured

As the inventor of safety flooring, we take slip resistance seriously. All of our ranges are rigorously tested using multiple techniques that comply to global standards.



Ramp Test (DIN 51130)

This standard uses test subjects who walk on an angled ramp in a controlled manner over a flooring sample contaminated with water, oil, or other liquids. Results are achieved when the test subject loses balance and falls and are classified on a numbered scale.



TRRL Pendulum Test (BS7976)

The pendulum test is the only test standard that is portable, allowing for on-site tests. The test incorporates a rubber shoe heel which sweeps over a set of flooring in a controlled manner and produces a pendulum value measuring the potential to slip.



Static Coefficient of Friction (ASTM D2047)

This test measures the friction created when a small weighted sled is pulled over the flooring.

Altro flooring is suitable for many commercial areas, but how do you know which floorings are best?

It is designers, specifiers and end-users' responsibility to ensure flooring is fit for purpose and it's part of our role at Altro to help make this process easy. Our flooring is separated into three categories: safety, slip-resistant and smooth. These categories have been created to help assist you in specifying the floor that is right for the application type and any contaminants that may be present on a regular basis.

Are contaminants present?

Areas that commonly see many contaminants such as oils, body fats, soap scum, soaps, grease, or constant spillages of water require extra care when selecting flooring. We recommend Altro safety flooring that meets R12 or R11 levels of slip resistance for these areas. General use areas that are not riddled with contaminants will be secure with our slip resistant or smooth offerings.

Typical areas with contaminants

Commercial kitchens, dish washing area, food + beverage service, showers, locker rooms, pool + spa surrounds, lavatories.

Altro has carefully recommended flooring options that offer the right amount of slip resistance for specific areas in senior living facilities.

Slips and falls

Slips and falls are a serious issue for both care givers and residents in a senior living community:

- Falls account for 25% of all injuries among seniors 65 years and over...in some regions, as high as 50%.
- One third of community-dwelling seniors experience one fall each year and half of those will fall more than once.
- Among seniors, 20% of deaths related to injury can be traced back to a fall.
- One in every three serious bone injuries in seniors results in death within one year of the incident.

Slip resistance

Falls occur when body movement shifts the body off the center of balance.

- Slips: too little friction between footwear and walking surface.
- Safety + slip resistant flooring, from Altro, delivers slip resistance values well above ADA and OSHA standards. Unlike other safety floors, our slip resistant aggregate is found throughout the thickness of the floor, ensuring slip resistance for the life of the product.
- Trips: foot collides with an object. Any unevenness greater than an eighth of an inch is a tripping hazard to a shuffling resident.

Our flooring has varying degrees of slip resistance to ensure that safety flooring installed allows for this shuffling movement while still allowing for increased traction or grip between the foot (shoe sole or barefoot), cane, crutch, walker or wheelchair and the floor surface.

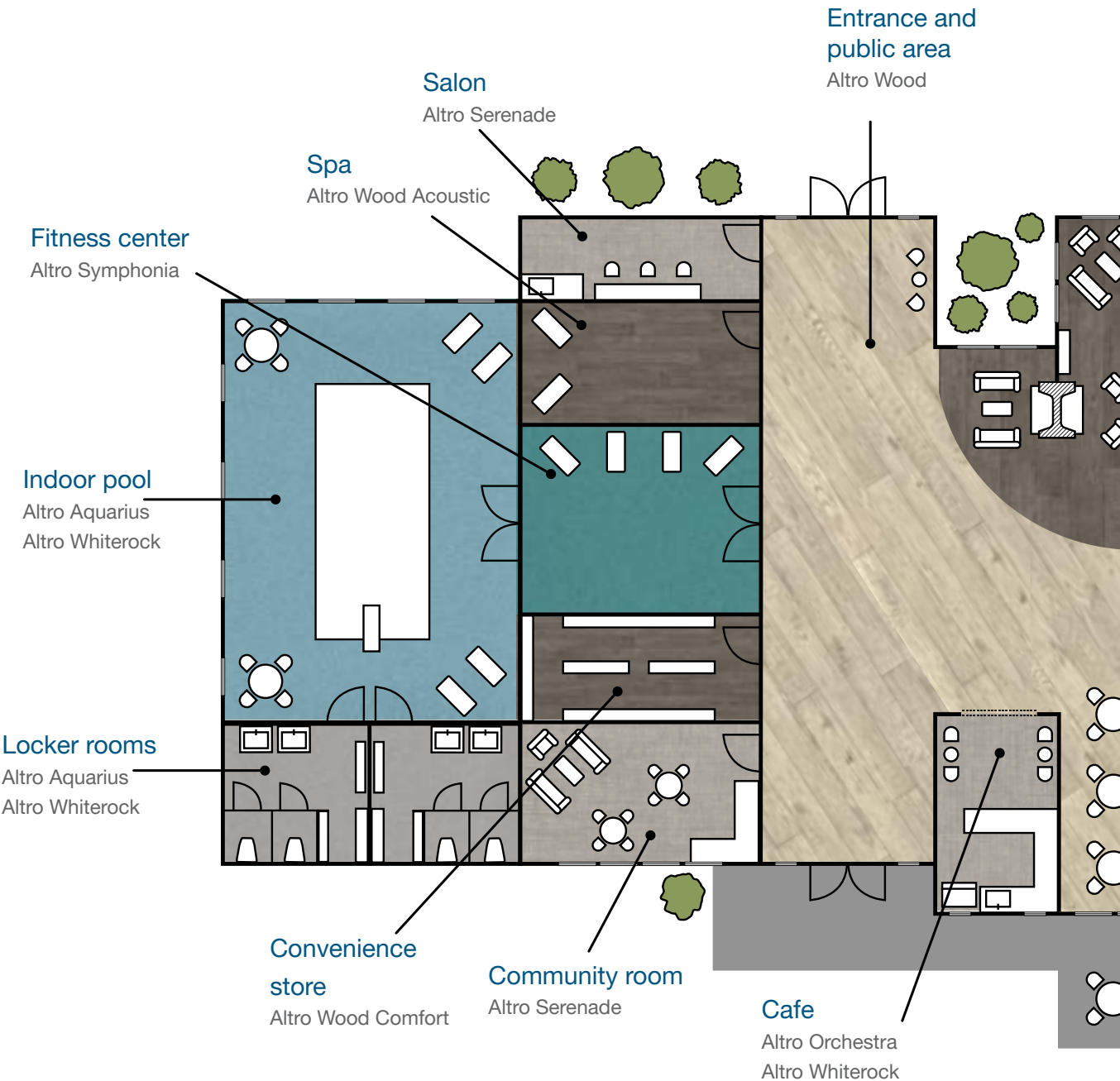
Selecting the right degree of slip resistance

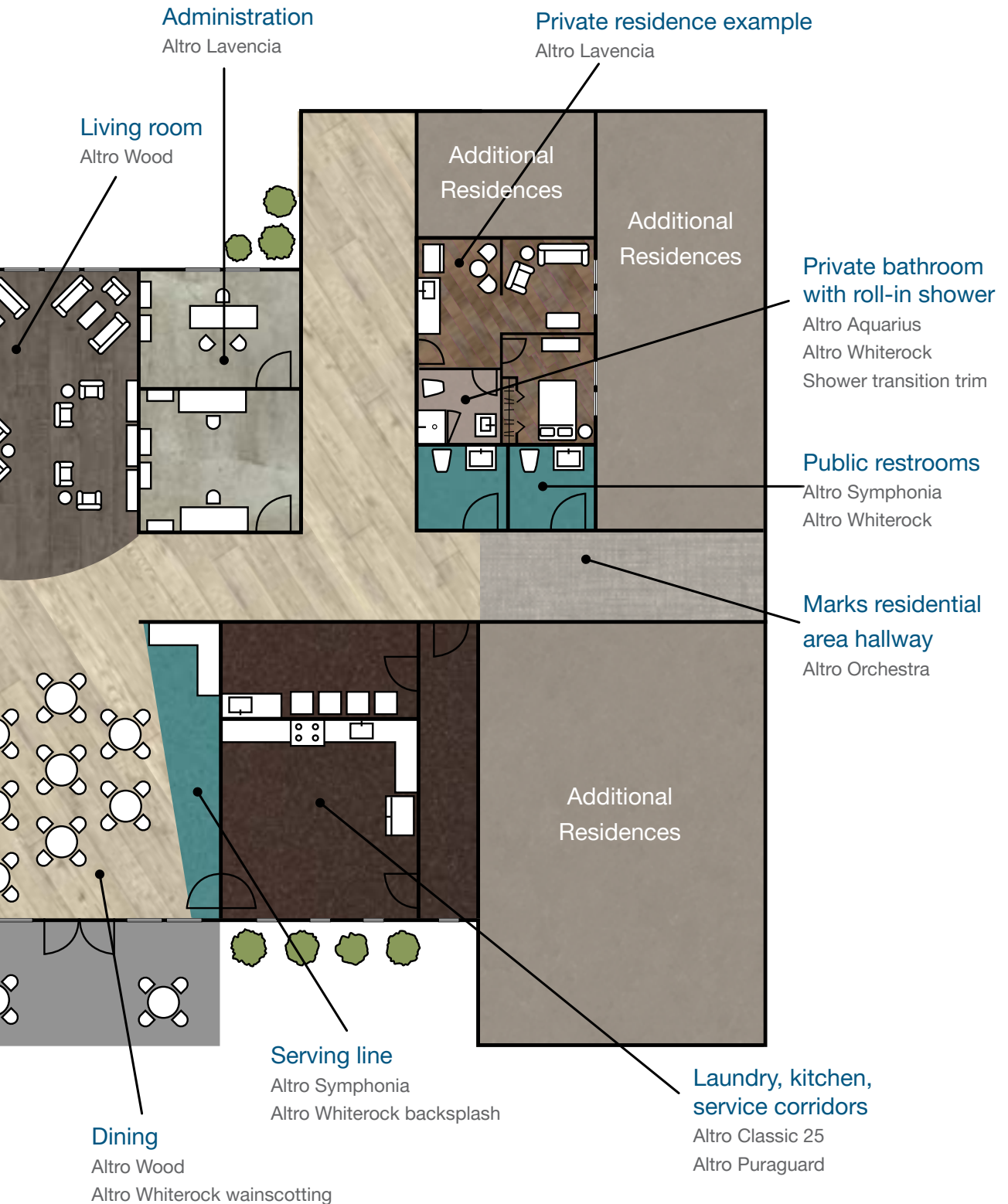
It is important that the right amount of slip resistance be selected. Too little can result in slips and falls but too much slip resistance can be harmful and may impede movement, especially to those with reduced ambulatory ability.



Fit for purpose

In communities that need to be concerned with the well-being and safety of both the residents and care givers alike, a diverse selection of flooring and wall protection is necessary. Altro has a full spectrum of safety flooring, slip resistant flooring, smooth flooring and hygienic wall systems to suit the needs of each area of your facility.





Entrances and reception areas



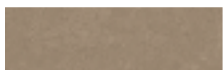
First impressions count – as well as welcoming the guests, these high traffic areas take abuse from everything from walking aids to rolling carts. As the main entrance to the facility, floors in this area must be able to cope with high amounts traffic as well as dirt and moisture being tracked in from the street.

An effective dirt barrier, such as a large entry mat, should be considered in the specification stage which will greatly reduce dirt trafficked into the area. Test your mat in an inconspicuous area before using.

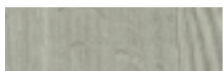
Suggested flooring



Altro Symphonia
41 colors



Altro Orchestra or Altro Operetta
40 colors 25 colors



Altro Wood
21 colors



Altro Lavencia
60 colors

Suggested walling



Altro Whiterock
20 colors

Considerations

- High traffic durability
- Water and snow brought in from shoes
- Colors to help hide dirt
- Home-like environment

FGI Guidelines

- Flooring surfaces shall allow for ease of ambulation and self-propulsion.
- Flooring surfaces shall allow easy movement of all wheeled equipment used in the facility.
- Flooring surfaces shall be stable, firm and slip resistant.

Dining rooms



The atmosphere of a senior living community is often created in the common areas where residents gather and interact. Because the meal time experience can be one of the most exciting parts of a day for a resident, dining areas are a key part of the senior living community and can be attractive for potential clients.

Materials that are beautiful, durable and easy to maintain are paramount in creating a warm, welcoming gathering space.

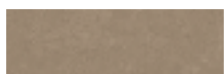
Suggested flooring



Altro Wood 21 colors or Altro Wood Comfort 12 colors



Altro Symphonia 41 colors



Altro Orchestra 40 colors or Altro Operetta 25 colors



Altro Lavencia 60 colors

Suggested walling



Altro Whiterock 20 colors

Considerations

- High traffic durability
- Rolling carts and wheelchairs
- Scratch resistance

FGI Guidelines

- Flooring surfaces shall allow for ease of ambulation and self-propulsion.
- Flooring surfaces shall allow easy movement of all wheeled equipment used in the facility.
- Flooring surfaces shall be stable, firm and slip resistant.

Hallways and corridors



From assistants to guests and even residents with canes and wheelchairs, senior living hallways and corridors need flooring that will endure constant foot traffic. However, it's not just durability – the right flooring is critical for visual impact and way-finding.

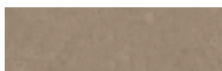
Suggested flooring



Altro Symphonia
41 colors



Altro Wood
21 colors



Altro Orchestra or Altro Operetta
40 colors or 25 colors



Altro Lavencia
60 colors



Altro Walkway 20
44 colors

Suggested walling



Altro Whiterock
20 colors

Considerations

- High traffic durability
- Rolling carts and wheelchairs

FGI Guidelines

- Flooring surfaces shall allow for ease of ambulation and self-propulsion.
- Flooring surfaces shall allow easy movement of all wheeled equipment used in the facility.
- Flooring surfaces shall be stable, firm and slip resistant.



To keep people safe without compromising the look and feel of their home environment, our products are available in a wide range of colors and designs, so there's something to suit practically every taste and décor. Our products help create a soothing home-like environment while at the same time are easily cleaned, are highly durable and provide safety under foot (to help prevent slip and fall incidents).

Suggested flooring



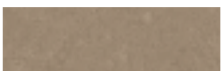
Altro Wood Comfort
12 colors



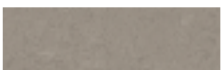
Altro Wood Acoustic
6 colors



Altro Wood
21 colors



Altro Orchestra or Altro Operetta
40 colors or 25 colors



Altro Serenade
15 colors



Altro Lavencia
60 colors

Considerations

- Shuffling feet
- Comfort
- Home-like environment
- Cleanability

FGI Guidelines

- Flooring surfaces shall allow for ease of ambulation and self-propulsion.
- Flooring surfaces shall allow easy movement of all wheeled equipment used in the facility.
- Flooring surfaces shall be stable, firm and slip resistant.

Suggested walling



Altro Whiterock
20 colors

Showers, tubrooms and wet areas



FGI Guidelines state that the slip resistance ratings of flooring surfaces shall be appropriate for the areas of use, especially important for wet environments. It also states that slip resistant flooring products shall be used for surfaces in bathing areas and wet areas.

What's more, you must consider the types of foot traffic in these areas. In modern senior living facilities, both barefoot and sole shod traffic is to be expected; therefore the flooring specified should work well for both.

Altro Aquarius, an award winning safety flooring innovation, is great for areas that receive both barefoot and shoe traffic. Its unique texture affords slip resistant SCoF ratings of .88 Dry and 1.03 Wet, allowing for maximum traction regardless of the type of traffic.

Suggested flooring



Altro Aquarius
39 colors

Suggested walling



Altro Whiterock
20 colors

Considerations

- Accommodate barefeet and shoe traffic
- Contaminants like water, soap and conditioners are always present - slip resistant is important
- Cleanability and hygiene

FGI Guidelines

- Slip resistant flooring must be used in bathing areas.
- Floor and wall bases shall be constructed of materials that are not affected by germicidal cleaning solutions.
- Floor and wall bases must have sealed joints.
- Coved flooring must be continuous and sealed to the wall without voids.
- Flush transition between bathroom floor and shower.
- Floor must slope toward drain.


Resident bathrooms



These areas also need to be easy to clean and durable enough to handle the facility’s recommended cleaning regime. FGI Guidelines require that floors and wall bases of any wet areas shall be constructed of materials that are not physically affected by germicidal or other types of cleaning solutions. They must also have sealed joints and if coved they should be continuous and sealed to the wall without voids.

Suggested flooring

 Altro Walkway 20
44 colors

 Altro Symphonia
41 colors

 Altro Wood
21 colors

Suggested walling

 Altro Whiterock
20 colors

Considerations

- Contaminants may be present
- Cleanability and hygiene

FGI Guidelines

- Floor and wall bases shall be constructed of materials that are not affected by germicidal cleaning solutions.
- Floor and wall bases must have sealed joints.
- Coved flooring must be continuous and sealed to the wall without voids.
- Flush transition between bathroom floor and shower.
- Floor must slope toward drain.

Heavy-duty commercial kitchens



In environments where wet and greasy are typical floor conditions, slip and fall accidents can be both common and costly. It is the owner's responsibility to ensure the safety of all those sharing the space.

A safe kitchen begins with the floor. Installing safety flooring can make slip and fall accidents one of the kitchen's least concerns. Altro Stronghold 30 is built for busy, industrial kitchens, and reduces the risk of a slip and fall to one in a million.

While a chipped or damaged wall may not look concerning, bacteria can harbor in its cracks. Durable, non-absorbent and easy-to-clean walls are necessary to protect against mold and germs.

Suggested flooring



Altro Stronghold 30
7 colors



Altro Classic 25
8 colors



Altro Atlas 40
4 colors

Suggested walling



Altro Puraguard
3 colors

Considerations

- Foot traffic
- Slip and fall accidents
- Carts and other rolling loads
- Comfort underfoot

FGI Guidelines

- Floors in areas used for food preparation and assembly shall be water-resistant.
- Floor surfaces, including tile joints, shall be resistant to food acids.
- Floor construction in dietary and food preparation areas shall be free of spaces that can harbor pests. All joints shall be sealed.
- Slip-resistant flooring products shall be used throughout kitchens, including wet areas.
- Walls shall be non-absorbent, smooth, easily cleaned, and light in color.
- Walls adjacent to cooking equipment shall have sealed surfaces that are cleanable and made of non-combustible materials.

Medium and light-duty commercial kitchens

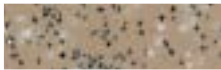


Not all kitchens are created equal, and not every space requires the most slip-resistant flooring. However, a degree of slip resistance is required, even in these less-busy environments, to ensure safe working conditions.

Other Altro flooring, such as our Altro Walkway 20 and Altro Reliance 25, are better suited for lower-trafficked kitchens that experience only water or dry contamination.

Durable and easy-to-clean walls are still necessary, though, to prevent moisture and bacteria buildup.

Suggested flooring



Altro Reliance 25
26 colors



Altro Walkway 20
44 colors

Suggested walling



Altro Puraguard
3 colors

Considerations

- Foot traffic
- Slip and fall accidents
- Carts and other rolling loads
- Comfort underfoot

FGI Guidelines

- Floors in areas used for food preparation and assembly shall be water-resistant.
- Floor surfaces, including tile joints, shall be resistant to food acids.
- Floor construction in dietary and food preparation areas shall be free of spaces that can harbor pests. All joints shall be sealed.
- Slip-resistant flooring products shall be used throughout kitchens, including wet areas.
- Walls shall be non-absorbent, smooth, easily cleaned, and light in color.
- Walls adjacent to cooking equipment shall have sealed surfaces that are cleanable and made of non-combustible materials.

Residential kitchens and kitchenettes



In spaces where the kitchen and dining area share the same room, or if residents have a lounge area with sinks and appliances, less industrial-looking, but still slip-resistant flooring is necessary.

Our Altro Wood provides quality slip resistance to protect from accidental slips resulting from spilled water, can provide comfort underfoot and resembles real wood, giving a homey, domestic feel to any dining area.

If wood is not the desired look, we have many shades, from bright to neutral, to match the space's vision.

Suggested flooring



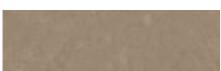
Altro Wood
21 colors



Altro Walkway 20
44 colors



Altro Symphonia
41 colors



Altro Operetta
25 colors

Suggested walling



Altro Whiterock
20 colors

Considerations

- Cleanability and hygiene
- Contaminants may be present

FGI Guidelines

- Floors in areas used for food preparation and assembly shall be water-resistant
- Floor surfaces, including tile joints, shall be resistant to food acids
- Floor construction in dietary and food preparation areas shall be free of spaces that can harbor pests. All joints shall be sealed
- Slip-resistant flooring products shall be used throughout kitchens, including wet areas

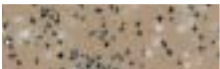
Back of house, laundry and service corridors



When it comes to areas that need rugged, hardwearing flooring and wall protection, Altro safety flooring and Altro Whiterock are the perfect choice. Altro traditional safety flooring is engineered with quartz, silicon carbide and aluminum trioxide for long-term durability and slip resistance. Designed for low maintenance, it incorporates Altro Easyclean™ for a lasting attractive appearance and savings in time and cleaning costs.

Altro Whiterock is highly impact resistant and known to withstand damage normally caused by laundry carts, food wagons and maintenance equipment.

Suggested flooring



Altro Reliance 25
26 colors



Altro Walkway 20
44 colors

Suggested walling



Altro Whiterock
20 colors



Altro Puraguard
3 colors

Considerations

- Heavy rolling loads
- Impact resistant walls
- Heavy equipment present
- Durability
- Water and moisture present

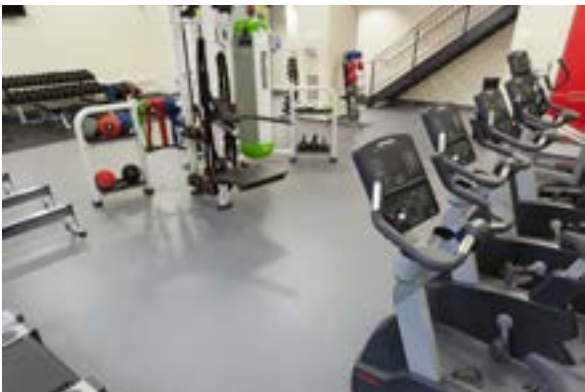
FGI Guidelines

- Floor construction in dietary and food preparation areas shall be free of spaces that can harbor pests. All joints shall be sealed
- Slip-resistant flooring products shall be used throughout kitchens, including wet areas

Additional locations to consider Altro products



Indoor pool



Fitness center



Salon



Cafe



Community space



Convenience store



Custodial closet




Living room



Spa



Administration

 For more information on each product please visit altro.com

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