

# Applying Universal Design Principles TO MULTI-UNIT DEVELOPMENTS

The more the physical design of homes and housing units makes aging in place easy and affordable, the greater will be their attraction and potential resale value. Many of the features described in this section can be incorporated inexpensively into new housing. However, these features provide increased stability in neighbourhoods and result in a more efficient use of infrastructure and resources.

Traditionally, universal design or barrier-free design was considered a specialized concern for a minority of housing providers. As a result, an increasing number of buildings—as well as cities and neighbourhoods—now are in need of expensive modifications or additions to make them accessible to people with disabilities or to those who want to remain in their homes and communities as they age.

Applying universal design at the unit scale will ensure that buildings or products can be used by all people to the greatest extent possible, without the need for later adaptations. When the principles are applied effectively, an accessible unit does not look different from a standard unit, making it attractive and marketable to people who do not need or want features that emphasize differing levels of ability.

## SITE AND BUILDING ENTRIES

Older people may experience difficulties in locating the entry to a building and finding their way inside a larger building. Therefore, in multi-unit developments, there is a strong need for clarity in layout, signage and entries. Entryways should also be clear of tripping hazards such as steps or bevelled thresholds. Protective canopies over entries are also desirable, as are vestibules that act as air locks in hot or cold weather. Buildings with multiple units should be convenient for vehicular pick-up and drop-off.



## OUTDOOR SPACE

### Parking

Larger projects should be designed to provide for ease of circulation, minimal confusion, good lighting and clearly marked drop-off points. All parking areas should provide adequate, accessible spaces convenient to the building entry and spaces close to the residential units in multiple-unit schemes, rather than in one large lot. Parking areas should be designed to ensure that there are no concealment opportunities for intruders, and consideration should also be given to providing for charging and storage of electric mobility scooters.

### Walkways

When designing walkways with older adults in mind, it is important to consider non-slip surfaces, sufficient width for wheelchairs (and for wheelchairs to pass each other) and good lighting. Varied surface textures can also offer users cues about their location. Frequent seating areas and a variety of stimuli along the way will encourage residents to use the walkways. The design should also take into consideration micro-climate issues such as snowdrifts, wind, sun and shade.

### Quick checklist for gardens

- Raised beds to allow older adults to garden
- Sheltered spaces for sitting
- Paths wide enough to accommodate wheelchairs
- Plantings that attract birds and butterflies
- Enclosures for safety
- Scented plants for enjoyment by those with restricted vision

## Gardens

Researchers are becoming increasingly aware of the important psychological and therapeutic effects of human contact with nature (for example, research has demonstrated that patients with views of nature have shorter recovery times from surgery<sup>1</sup>).

The importance of good landscape design therefore cannot be overstressed. Landscape architecture plays an important role in creating “outdoor rooms” and fostering residents’ relationships with nature and the surrounding neighbourhood. Yet it is frequently the first casualty of cost-cutting exercises, even though it can yield the most cost-effective design rewards.

In any development, views of gardens or pleasant landscapes from inside are important. For larger developments, attention to outdoor spaces can ensure that residents have places for healthy exercise, quiet contemplation or social interaction. Flowers and other plants can trigger memories, attract birds and butterflies, and provide hours of occupation for many residents. Water features can provide endless delight. They may also be connected to rainwater catchment systems.

Enclosed courtyards and gardens provide quiet and secure outdoor spaces in retirement and long-term care homes. Safe wandering gardens have been developed for those suffering from dementia, with different plants and other features providing visual and aromatic cues. For those who wish to garden for themselves, raised planting beds provide access for people in wheelchairs or those who have difficulty kneeling. In larger projects, green roof gardens can greatly increase the provision and enjoyment of outdoor spaces.

## SEMI-PUBLIC INDOOR SPACE

### Lobby

The main lobby in a multi-unit development can be a welcome high-activity community space—an area where residents can encounter each other and observe the comings and goings as in old-fashioned porches. However, a secondary entry may be desirable for residents who do not wish to be observed at all times. Alcoves or small sitting areas near the entry can provide discreet overlooks outside the main circulation. In assisted living accommodations, it is desirable to place a desk for a concierge, receptionist or greeter in the main lobby, but clear signage is still essential.

### Corridors

Corridors can be much more than simply areas of access and circulation. They may be places to meet people, or to display personal items and art work. Some European examples of corridors are glazed and well lit, and mimic lively interior streets. By varying colour, texture and lighting, corridors can avoid repetitious, disorienting layouts. Alcoves with seating provide rest places and encourage spontaneous conversations. Windows are desirable wherever possible, as views to the outside help orientation, but glare from glazing at the end of corridors should be minimized. It is also advisable to include handrails on both sides, and an institutional look can be avoided by integrating the handrail with wainscoting (see figure 4).

<sup>1</sup> Ulrich, Roger S. (2002). Conference paper: “Plants for People,” International Exhibition Floriade.

### Quick checklist for semi-public indoor space

- Automatic door openers
- Door and corridor widths to accommodate mobility devices
- Straight-run stairways with easy-to-grasp rails on both sides
- No interior doorsills to impede wheelchairs or walkers
- Non-slip flooring
- Clear signage
- Non-glare general lighting
- Seating in corridors and other public areas
- Materials chosen to mute excessive noise
- Views from windows toward green space

## Stairs

Stairs can be potential hazard areas for the visually impaired and those with difficulty walking. Making flights of stairs as short and straight as possible will help to lessen the hazard. Handrails should be provided on both sides and should be easy to grip. In addition, providing seats at the base, the landing and the top of stairs can offer helpful rest points and possible places for socialization in an assisted living environment. Using contrasting colours for risers and treads can also be helpful.<sup>2</sup>

## Dining Area

Typically the most heavily used space in an assisted living facility, the dining area is an important space for residents. Dining is often the most pleasant activity of the day for those in assisted living accommodations, and it is therefore vital that the ambience of this room be welcoming. This can be accomplished by using carpets and soft furnishings to improve acoustics for hearing-impaired residents, by using good lighting and by locating the room so that it has a view onto a garden.

**Figure 4:** Corridor Handrail



The distance from each resident's room to the dining area should be minimized. If the dining space is a single, multi-purpose room, adequate storage should be provided for tables and chairs. Space requirements can vary, but it is important to make adequate allowance for wheelchairs, walkers and other aids. While two- and four-person table arrangements are effective, some European assisted living projects offer family-style dining areas accommodating six to eight residents only.<sup>3</sup>

## Lounges

The lounge can be a focal point for informal activities and social encounters. Activities can range from parties and entertainment to watching television, playing card games and chatting, so a flexible furniture arrangement is important. Alcoves and corners can serve as more intimate areas within a larger space. The creation of additional smaller lounges may also be desirable, where possible. A television is best included where it can be in its own space with sound isolation.

<sup>2</sup> For more information on stair safety, see Canada Mortgage and Housing Corporation, *Preventing Falls on Stairs*. Retrieved from <http://www.cmhc-schl.gc.ca/odpub/pdf/63637.pdf?fr=1441901329905>

<sup>3</sup> Regnier, Victor (2002). *Design for Assisted Living*. Wiley, John and Sons.

## Communal Washrooms

In convenient locations for the lobby, dining room, lounge and activity areas, accessibility to washrooms is of utmost importance. Non-slip floors as well as mirrors and sinks at heights appropriate for wheelchairs are necessary. There should also be ample space to manoeuvre.<sup>4</sup>

## Recreational and Lifestyle Amenities

Today's homes for older adults typically offer a vast array of recreational programs for their residents. These may include fine arts, crafts, music, performance, workshops, games, exercise, swimming, sports, cooking and gardening. Spaces in which these activities occur may be multi-purpose rooms, sunrooms, chapels, libraries and athletic centres. For more information on these types of amenities, see *Housing for Older Canadians - Volume 5: Services and Amenities*.

<sup>4</sup> For more ideas and tips on accessible bathroom design, see Canada Mortgage and Housing Corporation. Accessible Housing by Design—Bathrooms. Retrieved from <http://www.cmhc-schl.gc.ca/odpub/pdf/65686.pdf?fr=1446744984667>

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