

Appendix 1: Building Design Guidelines (from VIHA 2012 Nanaimo RFP)

INTRODUCTION

1. Intent. The intent of the Request for Proposal is to provide a Facility for complex residential care which will operate 24 hours a day, 365 days per year, complete in every respect and ready to operate. This document identifies and describes important design elements. It is not intended to address every design element, and is intended to be flexible enough to allow for a variety of “best practice” building solutions that have a positive impact on service delivery and care outcomes.

2. Mandatory Code Requirements. The National Building Code, the BC Building Code and other legal or jurisdictional requirements take precedence and may supplant these Guideline requirements.

3. Service/Care Profile. Residents have complex care needs, which may include heavy physical care and/or complex health care (medical and/or behavioural), and they are not able to live outside a residential care setting within available home and community support services.

The complex care populations are anticipated to have some of the following characteristics:

- Clinically complex; often with multiple chronic conditions;
- Cognitively impaired and unable to direct their own care;
- The frail elderly (aged 80 to 100+ years); and/or
- Young adults with varying disabilities who will need to be located in age-appropriate environments, and who are unable to direct their own care.

Residents may have a combination of characteristics that could include the following:

- Difficulty in expressing needs or inability to express needs;
- Inability to adapt to visual or hearing losses;
- Requiring a varying amount of assistance with dressing, washing, grooming and bathing;
- Are depressed or agitated;
- Have impaired comprehension and a short retention span;
- Demonstrate varying degrees of difficulty in orientation to time, place and persons; and
- May have one or more severe behavioural problems which make the person unacceptable in the usual residential settings.

4. Program Objectives. Research indicates that placing elderly or disabled persons in an institution where they become passive recipients of care, often results in rapid mental and physical deterioration which may jeopardize quality and duration of life.

Environments that facilitate mobility and offer a variety of opportunities to engage in self-directed activities of daily living, as well as socializing and recreating, provide the necessary stimulation and pleasure that may slow, arrest, or even reverse deterioration. Built environments provide the flexibility to support the individual's remaining abilities, compensate for lost abilities, and optimize participation in daily life. Each Facility is considered a unique project with its own community and site. Careful attention to solar orientation, prevailing weather conditions, street access, desirable or undesirable views, topography, and other site conditions are essential for optimal quality of life and care outcomes.

5. Guiding Principles. Guiding principles have been established to assist in designing buildings that reduce resident isolation, helplessness, and boredom; and which support a philosophy wherein the physical environment facilitates optimal care and social outcomes.

The design of the Facility should incorporate as many of the following as possible:

- A homelike environment for residents; respecting that it will likely be the resident's home for the remainder of their lives;
- A resident "house" concept consisting of smaller groupings of resident rooms co-located with living, dining, and kitchen areas;
- A "neighbourhood" concept, which involves co-location of support services between or amongst houses;
- Encourage resident interaction and privacy by providing adequate space for larger social and leisure activities as well as quiet rooms and private spaces;
- Encourage autonomy and independence by incorporating design features that facilitate activities of daily living;
- Provide amenities for cooking meals using fresh ingredients on site;
- Facilitate accessibility in and around the building by designing meaningful destinations, short corridors, and safe indoor and outdoor space for healthy wandering and exploration;
- Enhance accessibility for residents, caregivers and visitors by providing clear spatial, organizational and "way-finding" cues. Wherever possible, corridors and outdoor space should allow the resident to wander in a loop;
- Preserve privacy, dignity, safety and security by understanding the relationship between private spaces for residents and common spaces;
- Provide adequate space for supplies and equipment to promote worker safety and ease of care delivery (e.g. ceiling lifts);
- Ensure adequate storage space is provided in all areas.
- Locate facilities in areas close to community services and transportation routes, and otherwise welcome/encourage integration with the outside community;
- Use energy efficient designs that respect the principles of sustainability, including harmonizing environmental, social and economic factors;
- Maximize the use of natural light in all living spaces and provide a variety of amenity and

- seating spaces that encourage normal activities of life;
- Build flexibility into resident groupings to accommodate need and changes in resident acuity.

Staffing Considerations. Designs must reflect the importance of staff safety and injury prevention. The staffing model envisioned for the Facility should be consistent with providing excellent care to residents by reducing unnecessary workload and optimizing staff resources. As such, the design will permit staff to gain efficiencies and reduce effort, enjoy the deployment of communications devices and the use of other aids. The Facility itself should be an integral aspect in meeting the care needs of all residents.

THE RESIDENTS' HOUSE/NEIGHBOURHOOD

6. The House Concept. The intent of the house concept is to create relatively autonomous living, dining (and possibly kitchen) spaces that function independently for groups of residents. These areas replicate the atmosphere of a large family home and also provide the opportunity to co-locate residents with similar care needs together to optimize care delivery.

In addition to reducing the institutional feel and appearance of a facility, the house concept also reduces resident confusion and anxiety that stems from noise and other stimuli resulting from congregating many people in one area. Ideally, houses should be designed for a maximum of 22-24 residents with a preference for smaller houses where quality, cost effective care can be delivered. Different populations, e.g. dementia, may benefit from smaller houses 18-20 residents.

7. The Neighbourhood Concept. A neighbourhood is formed when two or more houses are combined for staffing and spatial efficiencies to share functions such as activity areas, personal laundry, care stations, and clean and soiled utility rooms.

8. Resident Bedroom. Ideally, private rooms should be provided for each resident. A limited number of rooms should be double rooms that are able to accommodate couples. Single resident rooms should have an interior room dimension of at least 21 square meters (including the ensuite bathroom) and double resident rooms not less than 36 square meters (including the ensuite bathroom). The rooms must contain the following:

- An ensuite bathroom, which provides privacy for the resident when the door to the resident room is opened and is visible from the bed. The bathroom should be designed for disabled access including millwork, vanity for resident's toiletries and lockable supply cupboard for staff use. Rooms are to be equipped with accessible non-stall-type showers that are lip-free and have appropriate safety devices (grab bars, etc);
- Resident ceiling lifts are to be installed in all resident rooms with the ceiling tract to be

continuous from over the bed to over the toilet. There is a preference for ceiling lifts that can pick-up from any point in the room;

- Operable windows with the opening location and size to be safe for cognitively impaired residents and operable by physically frail residents, insect screens and privacy window coverings. Window sills should be low enough to permit a view of the outdoors, and downward, from a low bed or wheelchair position;
- Wheelchair accessible door widths:
- Multi-level lighting to permit residents with eyesight difficulties to read, staff to perform medical treatments, reduced level lighting for night monitoring and lighting in washroom areas for safety at night, e.g. night lights or motion-activated lights; and
- Visual and acoustic privacy for residents is important and shall be designed into all personal care spaces. There must be no direct view of the bed head, the resident's washroom or the bathing facilities from the corridor. It is important to be aware of the journey the resident will make for personal services (such as bathing or physiotherapy) and ensure private areas and public areas are discreetly separated.

9. Hallways. Memory boxes or areas for display that provide way finding and cueing for the resident;

10. Lounge Area. The lounge is the main activity space for social interaction, daytime activities and programs within the house. This space can be adjacent to the dining space to create one large open living/dining area or separated into a distinct room to provide "away space", which is quieter and offers more privacy for residents and their visitors. Provide a minimum of 1.5 square meters per resident per house.

11. Activity Rooms. The activity room or space can be fully or partially located within the house or its space allocation can be combined with other houses to create a larger space. Provide a minimum of 1.0 square meter per resident.

12. Dining. The dining space may be used as an activity or social space outside of mealtimes, but is not to function as the sole activity space for the house. The dining area should be located and designed to maximize the availability of natural light. Provide a minimum of 3.0 square meters per resident to include provision for residents in self propelled wheel chairs.

13. Serveries. Each neighbourhood should be provided with a servery to permit staff to serve food. Facilities for food storage, coffee and hot drinks, soups, toast, ice and cold water should be provided. These facilities must be separate from resident kitchens and designed to comply with all applicable health standards and regulations.

14. Resident Kitchens. A resident kitchen adjoining the dining area is preferred. The kitchen area permits residents, staff or families to prepare and serve special meals or snacks. Resident kitchens should include food storage, stove, hot drink preparation, microwaves, toasters and dish washing appliances that comply with all applicable health standards and regulations. Design in a way that minimizes risk to residents and staff (e.g. master switch to turn off all power to appliances).

15. Care Stations. Care stations should be provided for each neighbourhood (or house if neighbourhood design impedes the supervision of residents) with vision to corridors and dining/common areas. Where direct vision is not possible, CCTV should be provided to permit nursing staff to view all corridors and dining/common areas where residents can reasonably be expected to access. Nurse stations should contain the following as a minimum:

- Space for 4 to 6 nurses/care staff to prepare reports;
- Millwork for office type functions;
- Cabinets for storage of forms and other office supplies;
- Separate lockable room for medication carts including lockable cabinets, sink and counter unit; Computer workstations in a number suitable to the staffing model; and
- Access should be controlled while maintaining an appearance of openness.

16. Bathing Room. Each neighbourhood must include a bathing area with an assisted bathing tub, a private washroom and space to accommodate a stretcher shower. Design and finishing should reflect a “spa” environment. Particular care must be taken with lighting and HVAC. The bathing room should be equipped with a ceiling lift with at least 600 pounds of lifting capacity, to facilitate the transfer of residents. The suggested size for the bathing room is 15 square meters.

17. Outdoor Recreational Areas. Residents should have access to the outdoors from their neighbourhood. This may be in the form of a balcony of sufficient size to accommodate several residents at once. In addition, a ground level area should be provided which permits residents and their guests to have access to the natural environment. All outside areas must be secure. The design should provide audible privacy while maintaining visual contact with staff. The outdoor recreational area design must include adequate provision for the residents who have regular access.

18. Support Areas. Appropriate support areas must be included within each house, neighbourhood, or floor as appropriate and include:

- Storage rooms should be provided to store equipment and supplies. Provision should be made for storage of wheelchairs complete with outlets for charging these devices. Corridors are not to be used as storage space;
- Housekeeping rooms should include a sink for janitorial purposes and lockable cupboard (for toxic substances) and storage solutions; and

- Provide separate rooms for clean and soiled supplies.
 - Clean utility rooms should be provided with a sink and counter unit, storage to store bedding, linens and incontinence supplies.
 - Soiled utility rooms must be provided with a sink and a means for staff to rinse heavily soiled clothing and linen.

19. Food Preparation Kitchen. The Facility should be provided with a central facility to prepare resident food. Proponents should incorporate into their design sufficient area for a food preparation process. In addition, fixed equipment must be provided for frozen and cold storage and washing dishes, equipment and utensils.

20. Other Support Areas. Appropriate support areas that serve the entire care facility should be provided including:

- A multipurpose room;
- An activity room;
- A hairdressing salon;
- A gift/tuck shop;
- Appropriate space for support services staff including occupational and physical therapists and recreational therapists; and
- A Treatment room for the performance of dental, podiatry and medical procedures.

TECHNICAL REQUIREMENTS

21. Building Access. Design should permit easy access for Handi-Dart type buses and visitors with limited mobility. Provide for undercover drop off and wheelchair accessibility. Entry doors should be equipped with automatic door openers. Parking should be provided for staff and visitors to municipal requirements in a location convenient to the main entrance.

22. Exterior Lighting. Exterior lighting must permit staff to access parking spaces in safety after hours.

23. Nurse Call System. The nurse call system must be designed to permit staff to reduce unnecessary movement while allowing for quick response to residents' needs. It should include wireless communications, resident call, staff assist and emergency call capabilities.

24. Emergency Power. The Facility must be provided with emergency power to permit medical equipment and basic services to function, elevator operation to permit evacuation of residents and visitors, maintenance of emergency lighting systems to permit basic services to continue and emergency lighting for extended periods. Each resident room should be equipped with one electrical outlet tied into the emergency generator that allows for the operation of medical equipment during power outages.

25. Interior Finishes. Interior finishes should be designed with quality, durability, ease of maintenance and support infection control practices. Hospital quality sheet flooring products should be employed. Low friction carpeting is acceptable in areas other than bedrooms, bathrooms, dining rooms and storage rooms. Particular flooring systems have been proven to positively impact on resident fall outcomes. Designs should incorporate this element. Materials should be durable while ensuring the look and feel is warm and residential in nature. Corner protection and handrails must be provided in all high traffic areas.

26. Access Control. The building should be provided with an access control system. Control must be provided to prevent vulnerable residents from leaving the facility, but allow access by family and other visitors. All exterior doors are to be equipped with security devices to detect elopement and intruders. Methods of security shall be confirmed with the authority having jurisdiction.

27. Resident Room Lighting. Particular attention must be paid to resident room lighting design. In addition to ensuring the residents rooms are well lit with multilevel controls, lighting design must include provision to reduce glare, shadowing and bright spots. Lighting should be less clinical and more home like, while emphasising safety (e.g. night lights in washrooms).

28. Lighting in Corridors, Dining and Other Residents Areas. Lighting in corridors, dining and other resident areas should be designed to be less clinical and more home like while ensuring adequate light levels for aged residents. Lighting in the dining and recreational areas should be designed with multiple levels to permit higher light levels for crafts and other detail activities. Lighting in bathrooms should be equipped with motion-detection safety features.

29. Elevators. Elevators should be designed to permit residents to be moved while in bed.

30. Resident Telecommunication Requirements. Each resident's room should be provided with access to telephone, cable television and internet services.

31. Fire Alarm System. A two stage addressable fire alarm system with voice communications to direct staff and residents/visitors is required. The system must be designed for complex residential care facilities. If a paging system is required by the BC Fire Code or other applicable laws, it should be interfaced with the telephone system permitting either all building or neighbourhood paging. Otherwise, general paging will occur by cell phones and voice to voice nurse call systems.

32. HVAC Requirements. The HVAC should be designed with the following principles in mind:

- Residents rooms will be provided with individual heat controls, ideally designed with maximum patient comfort in mind, e.g. consider in floor slab heating;
- Ventilation in residents rooms should be a combination of natural and mechanical ventilation, including air supply and washroom exhaust;
- Residents rooms will not need to be provided with cooling except through the cooled air

transferred from corridors;

- Corridors and common areas will be provided with full mechanical ventilation including cooling
with sufficient capacity to provide resident rooms with cooled air;
- Staff offices and nurses stations will be provided with full mechanical ventilation including cooling;
- HVAC design will conform to current industry practice for complex residential care facilities
with particular attention to energy efficiency; and
- Direct digital controls will be incorporated where appropriate.