

CITY OF BURNABY

COMMUNITY ISSUES AND SOCIAL PLANNING COMMITTEE

HIS WORSHIP, THE MAYOR
AND COUNCILLORS:

Re: Adaptable Housing

RECOMMENDATION:

1. THAT the draft design guidelines for adaptable housing presented in Appendix 1 be distributed for comment, as outlined in Section 4.0 of this report.

R E P O R T

The Community Issues and Social Planning Committee at its meeting held on 1993 January 27, received and adopted the attached staff report outlining draft design guidelines for adaptable housing.

The Committee therefore submits the report outlining the draft design guidelines to Council for review and comments.

Respectfully submitted,

Councillor E. Nikolai
Chair

Councillor D. Evans
Member

Councillor C. Redman
Member

Councillor J. Young
Member

: - COPY - CITY MANAGER
- DIRECTOR PLANNING & BUILDING
- CHIEF BUILDING INSPECTOR

TO: COMMUNITY ISSUES & SOCIAL PLANNING COMMITTEE 1993 JANUARY 14

FROM: ACTING DIRECTOR PLANNING & BUILDING OUR FILE: 17.908.1

SUBJECT: ADAPTABLE HOUSING

PURPOSE: To present draft design guidelines for adaptable housing.

RECOMMENDATION:

1. THAT the draft design guidelines for adaptable housing presented in Appendix 1 be distributed for comment, as outlined in Section 4.0 of this report.

R E P O R T

1.0 INTRODUCTION

At its regular meeting of 1989 July 24, Council adopted a policy to encourage the voluntary provision of adaptable housing units in multiple family development in Burnaby's town centres.

In 1990 October, Council received a further report that outlined staff efforts to promote the provision of adaptable units, and advised that barrier-free design standards for residential units were being developed by the Canadian Standards Association.

In working to promote the provision of adaptable housing units in Burnaby, staff identified a need for design guidelines to assist developers to incorporate adaptable features in residential developments.

This report presents draft design guidelines for adaptable housing. The report proposes that the design guidelines be distributed for review and comment to groups representing developers, architects, builders and persons with disabilities.

2.0 ADAPTABLE HOUSING

Adaptable housing units are not specifically intended for occupants with physical disabilities; however, the units are designed in such a way that they can be modified easily and relatively cheaply if the occupants' abilities decline or they are later occupied by a person with disabilities.

2.1 Features of Adaptable Housing

Adaptable housing is wheelchair accessible, and has both fixed and adjustable features that allow fixtures to be added, adjusted or removed as necessary to accommodate the needs of persons whether or not they are disabled.

Adaptable housing looks similar to other units, but is able to accommodate tenants who acquire a permanent or temporary disability, older people who want to continue living in their homes, and disabled persons who wish to live independently or with a non-disabled spouse or attendant.

The fixed accessible features make each adaptable unit usable by disabled people without undertaking structural changes such as building ramps, moving walls, or widening doors. Some of the main fixed accessible features of an adaptable dwelling are:

- site planning that minimizes grade changes
- wide doors
- no steps at entrances
- low mounted switches and controls
- levers and other easy to use handles
- most rooms along an accessible route
- clear floor space in entrance area, bathroom, bedrooms and kitchen for turning wheelchair
- accessible route to and throughout all spaces in the building including parking, lobby, laundry room, decks, and common areas

The following adjustable features allow an adaptable housing unit to be easily modified to meet the needs of both disabled and non-disabled occupants. The three principal adjustable features of adaptable housing are:

- removable base cabinets installed in knee spaces under kitchen and bathroom sinks
- segments of counters that can be adjusted from a standard height to a lower height
- reinforced wall areas so grab bars can be attached at the bathtub, shower, and toilet areas as needed

These fixed and adjustable features of adaptable housing eliminate the special or different appearance associated with dedicated wheelchair units, and make the unit equally marketable to people who do not require features that are intended for people with disabilities.

2.2 Need for Adaptable Housing

Two trends are contributing to increasing demand for affordable and accessible housing for persons with disabilities. These are the aging of the population and de-institutionalization. The prevalence of disabilities increases with age. This is combined with a trend for seniors to remain in an independent environment as long as possible (versus institutional care). With de-institutionalization and an emphasis on the integration of persons with disabilities into the "mainstream" community, an increasing number of these persons will seek appropriate accommodation within the community.

By incorporating adaptable features, adaptable housing enables people who suddenly or gradually become disabled, to remain in their homes. Adaptable units also expand options for the integration of persons with disabilities into the community by providing a variety of housing types at different locations in the City.

The provision of adaptable units will help meet Burnaby's existing and future needs for housing that is suitable for persons with disabilities.

3.0 DRAFT DESIGN GUIDELINES

Through a review of material on adaptable housing developed locally and in other areas, staff have developed the draft design guidelines for adaptable units presented in Appendix 1 attached. Appendix 2 attached lists the reference material used to compile the draft guidelines.

The draft guidelines reflect the basic principles of adaptable housing, and current standards for accessibility contained in the B.C. Building Code and other reference materials on barrier-free design. The draft guidelines set a minimum standard for the following items:

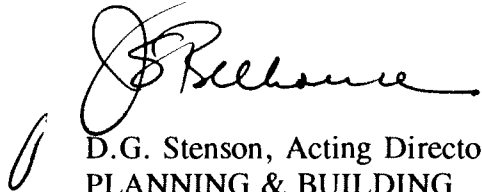
- . Paths of Travel
- . Doors
- . Manoeuvring Space At Doors
- . Corridor Widths
- . Floor Surfaces
- . Controls and Outlets
- . Alarms
- . Windows
- . Kitchens
- . Bathrooms
- . Bedrooms
- . Base Cabinets (Kitchen and Bathrooms)
- . Clothes Storage
- . Laundry Facilities
- . Living Areas
- . Multiple Level Units
- . Outdoor Living Areas
- . Notice of Adaptable Features

4.0 PROCESS FOR REVIEW AND COMMENT ON GUIDELINES

In order to assess the effectiveness of the draft guidelines to assist with the development of adaptable housing, it is proposed that this report and guidelines be distributed to groups representing builders, developers, architects and persons with disabilities for review and comment. A proposed distribution list is presented in Appendix 3 attached.

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These groups would be asked to review the guidelines, and provide specific comments to staff. Once the comments have been compiled, staff would prepare a further report for the Committee and Council reporting on the comments received, and presenting a final version of the guidelines for endorsement. The guidelines are intended to be used to further assist developers in voluntarily providing adaptable housing units in Burnaby. It is anticipated the staff will be able to further refine the guidelines over a period of time. Once an effective set of guidelines has been developed staff will present recommendations on whether to make the provision of adaptable units mandatory or to continue the present voluntary policy.


D.G. Stenson, Acting Director
PLANNING & BUILDING

LP/db
Attachments (3)

cc: Chief Building Inspector

APPENDIX 1

GUIDELINES FOR ADAPTABLE HOUSING

A. Paths of Travel

1. Walks to at least one main entrance shall:
 - (a) be provided by means of a continuous plane not interrupted by steps or abrupt changes in level;
 - (b) have a permanent, firm and slip-resistant surface such as asphalt, concrete pavers, well-compacted crushed stone, or lumber with the planks across the direction of travel.
 - (c) have an uninterrupted width of not less than 920 mm (3'), and a gradient not steeper than 1 in 20.
 - (d) be designed as a ramp where the gradient of the walk is more than 1 in 20.

B. Doors

1. All doors shall have a clear width when open of not less than 815 mm (2'8").
2. Thresholds shall not be more than 13 mm (1/2") high.
3. Operating devices such as handles, pulls, latches, and locks shall be:
 - (a) operable by one hand;
 - (b) not require fine finger control, tight grasping, pinching, or twisting of the wrist to operate; and
 - (c) be mounted between 400 and 1200 mm (1'4" - 4') from the floor.
 - (d) Where door viewers are provided, one shall be located at a height between 1100 and 1200 mm (3'8" - 4') from the floor and the other shall be located at the normal height for a standing adult.

C. Manoeuvring Space At Doors

1. When the door swing is towards the manoeuvring space, the space shall be not less than 1500 mm (5') long by a width equal to the door assembly width plus not less than 300 mm (12") clear space beside the latching jamb of the door.
2. When the door swing is away from the manoeuvring space, the space shall be not less than 1,220 mm long by a width equal to the door assembly width plus not less than 300 mm clear space beside the latching jamb of the door.

D. Corridor Widths

1. Corridors shall be at least 920 mm (3') wide for all interior routes.

E. Floor Surfaces

1. Shall be firm and slip-resistant such as tiles, carpet or pvc with non slip granules.
2. Shall have no abrupt changes in level.
3. Where carpets or carpet tiles are used,:
 - (a) be securely fixed;
 - (b) have a firm cushion, pad or backing;
 - (c) have a pile texture with a maximum pad and pile height of 13 mm (1/2"); and
 - (d) have the exposed edges of the carpet firmly fastened to the floor surface.

F. Controls and Outlets

- 1) Light switches, circuit breakers, locks, and intercom buttons shall be located at a height between 455 and 1200 mm (1'6"- 4') from the floor.
- 2) Electrical receptacles outlets shall be located between 455 mm and 550 mm (1'6"- 1'9") above the floor.
- 3) Thermostats shall be located no higher than 1500mm (5') above the floor.
- 4) The operable part of controls, such as thermostats, electrical switches, circuit breakers, locks and intercom buttons, microphones, and electrical and communication wall outlets shall be
 - (a) located adjacent to a clear floor space that has a width of 750 mm (2'6");
 - (b) operable with one hand; and
 - (c) of a type that does not require tight grasping, pinching, or twisting of the wrist.
- 5) At least one switched electrical outlet shall be provided in the master bedroom and living room.

G. Alarms

1. An electrical receptacle shall be provided above the main entrance to allow for the connection of a personal visual or auditory signal.

H. Windows

1. Opening and locking mechanisms shall be:
 - (a) located adjacent to a clear floor space that has a width of 750 mm (2'6");
 - (b) operable with one hand; and
 - (c) of a type that does not require tight grasping, pinching, or twisting of the wrist.

I. Kitchens

1. The minimum clearance between counters and all opposing base cabinets, countertops, appliances, or walls in kitchens shall be 1500 mm (5').
2. A clear floor space at least 750 X 1200 mm (2'6" x 4') shall be provided for side approach at all appliances in the kitchen, including the range or cooktop, oven, refrigerator/freezer, dishwasher, and trash compactor.

J. Bathrooms

1. Bathrooms shall have a space at least 1500 X 1500 mm (5' x 5') for access to the toilet and the fixture itself and this access space may overlap access space for other fixtures;
2. The distance between the centre line of the toilet fixture and the adjacent wall shall be between 460 and 480 mm (1'6"- 1'7"); and
3. Behind the toilet, shower, and bathtub walls, structural support shall be provided to allow the installation of grab bars.

K. Bedrooms

1. At least one bedroom shall provide sufficient space for a turning area of not less than 1500 mm (5') diameter on one side of a bed.

L. Base Cabinets (Kitchen and Bathrooms)

1. The base cabinets under the kitchen and bathroom sinks shall be removable.
2. At least one section of the kitchen counter shall have a work surface that:
 - (a) is at least 750 mm wide X 600 mm (30" x 24") deep;
 - (b) is adjustable in height from 710 mm to 860 mm (2'4" - 2'10"); and
 - (c) has a clear floor space of at least 750 mm wide X 1200 mm (2'6" x 4') deep, which may extend 480 mm (1'7") underneath the work surface.

M. Clothes Storage

1. Where provided, one hall closet and one bedroom closet shall have:
 - (a) a clothes hanger rod capable of being lowered to a height of 1200 mm (4');
 - (b) at least three shelves between 400 and 1200 mm (1'4"- 4') from the floor;
 - (c) a clear floor space at least 750 mm X 1200 mm (3' x 4') in front of the storage area; and
 - (d) a clear opening of not less than 900 mm (3').

N. Laundry Facilities

1. A clear floor space at least 750 X 1200 mm (2'6" x 4') shall be provided in front of clothes washing and drying equipment.

O. Living Areas

1. Complete living facilities, kitchen, bathroom, and bedroom, shall be provided on one level to avoid the need for lifts or elevators.

P. Multiple Level Units

1. Where living areas are provided on two or more levels, closets or foyer space 915 mm wide by 1200 mm (3' x 4') long, shall be positioned one above the other on each level to provide space to accommodate the future installation of an residential elevator or lift.

Q. Outdoor Living Areas

1. Outdoor living areas such as patios, balconies or decks shall be
 - (a) at least 1500 X 1500 mm (5' x 5');
 - (b) adjacent to an accessible route; and

R. Notice of Adaptable Features

1. A permanent information sheet on the location and type of adaptable features included in the unit shall be posted on, beside or inside the electrical panel.

*Note: Imperial measurements are provided for convenience purposes only and are approximately equal to the metric measurement.

APPENDIX 2

REFERENCE MATERIAL ON ADAPTABLE HOUSING

Barrier Free Design Centre. "Adaptable Housing Guidelines". Toronto, Ontario.

B.C. Coalition of the Disabled. "Building Checklist: Access for Persons with Disabilities". Vancouver, B.C.

Building Standards Branch, Ministry of Municipal Affairs Recreation & Housing. "British Columbia Building Code 1992". Victoria, B.C., 1992.

Canada Mortgage and Housing Corporation. "Housing Choices for Canadians with Disabilities". Canada, 1992.

Canadian Standards Association. "Barrier-Free Design, National Standard of Canada, CND/CSA-B651-M90". Toronto, Canada, 1990.

City of Calgary, Disabled Access Review Committee. "Disabled Access Design Guidelines". Calgary, Alberta, 1988.

City of Vancouver. Accessible Design Guidelines. Vancouver. B.C., 1990.

Ministry of Municipal Affairs. "The Section 3.7 Handbook: Building Requirements for Persons with Disabilities Including Illustrations and Commentary. Victoria, B.C., 1984.

U.S. Department of Housing and Urban Development, Office of Policy Development and Research. "Adaptable Housing: Marketable Accessible Housing for Everyone". Washington, D.C., 1987.

APPENDIX 3

DISTRIBUTION LIST FOR DRAFT ADAPTABLE HOUSING GUIDELINES

Architects and Development Groups

Adolph Ingre
Consulting Engineer
9th Floor - 525 Seymour Street
Vancouver, B.C. V6B 3J3

Affordable Housing Advisory Association
211-800 McBride Blvd.
New Westminster, B.C. V3L 2B8

Architectural Institute of B.C.
970 Richards Street
Vancouver, B.C.

Aragon Development
370-601 West Hastings
Vancouver, B.C. V6B 5A6

Bosa Group of Companies
201-3701 Hastings Street
Burnaby, B.C.

Boffo Bros. Construction Ltd.
201-4695 East Hastings Street
Burnaby, B.C. V5C 2K6

Canadian Home Builders Association of B.C.
3700 Willington Avenue
Burnaby, B.C.

Columbia Housing Advisory Association
202 - 2250 Commercial Drive
Vancouver, B.C. V5N 5P9

Corner Stone Architects
408-611 Alexander Street
Vancouver, B.C. V6A 1E1

Cressey Development Corporation
8th Floor - 1177 West Hastings Street
Vancouver, B.C. V6E 2K3

James Cheng Architects Inc
75 West Broadway
Vancouver, B.C.

Dowling Knapp Architects Inc
556-409 Granville Street
Vancouver, B.C. V6C 1T2

Gomberoff - Policzer Architects
Suite 101 - 1012 Balfour Avenue
Vancouver, B.C. V6H 1X1

Hamilton Doyle Architects
Gerald Hamilton, Architect
200-1450 Creekside Drive
Vancouver, B.C. V6J 5B3

Charlotte Murray
The Iredale Partnership
1151 West 8th Avenue
Vancouver, B.C. V6H 1C5

Howard|Yano Architects
Mike Hill, Architect
301-761 Cardero Street
Vancouver, B.C. V6G 2G3

Inner City Housing Society
1646 West 7th Avenue
Vancouver, B.C.
V6J 1S5

International Land Corporation Ltd.
2225 Folkestone Way
West Vancouver, B.C. V7S 2Y6

Ken Anderson, Manager
Lucas Anderson Construction Co. Ltd.
203-1405 Hunten Street
North Vancouver, B.C. V7J 1H3

Lad Investments Ltd.
300-353 West 7th Avenue
Vancouver, B.C. V5Y 1M2

Laing Property Corporation
Alec D. Caruth, Vice President, Projects
560 Grandville Square
200 Grandville Street
Vancouver, B.C. V6C 1S4

Loeppky Consulting Ltd.
Denis J. Loeppky
Housing Consultant
Unit 14, 1835 - 56th Street
Sundial Square Mall
Tsawwassen, B.C. V4L 2B4

Lutz Associates
101-605 Clyde Avenue
West Vancouver, B.C. V7T 1C9

MacLean Management Ltd.
2nd Floor, 136 West 3rd Street
North Vancouver, B.C. V7M 1E8

Maureen Enser
Executive Director
Urban Development Institute
3rd Floor, 717 West Pender Street
Vancouver, B.C. V6C 1G9

Michael Lee Architects
200-2165 West 10th Avenue
Vancouver, B.C. V6K 2H7

Musson, Cattell, Mackey Partnership
Architects, Designers and Planners
1825-Two Bentall Centre
Vancouver, B.C. V7X 1M9

Neale, Staniszki, Doll Architects
604-134 Abbott Street
Vancouver, B.C. V6B 2K4

Pat Simpson
Holly Glen Holdings
11502 Burnette Street
Maple Ridge, B.C.

Pennyfarthing Development Corp
1450 Creekside
Vancouver, B.C.

Polygan Development
1800 Spyglass Place
Vancouver, B.C. V52 4K8

Roger Romses Architects Inc
403-515 West 10th Avenue
Vancouver, B.C. V5Z 4A8

Sorn Rasmussen Architects Inc.
450-375 Water Street
Vancouver, B.C. V6B 5C6

Taina Group Construction
1820 Burrard Street
Vancouver, B.C. V6J 3H1

Terra Housing consultants
501-1587 West 8th Avenue
Vancouver, B.C. V6J 1T5

Toby Russel Buckwill & partners
1650 Alberni Street
Vancouver, B.C. V6G 1B1

United Properties
201-1195 West Broadway
Vancouver, B.C. V6H 3X5

Viam Holdings Ltd.
1551 Columbia Street
North Vancouver, B.C.

Les Hetherington
American Standard
170 - 6450 Roberts Street
Burnaby, B.C. V5G 4E1

G.P. Lockhart, P.Eng.
Building Owners and
Managers Association
218 - 744 West Hastings Street
Vancouver, B.C. V6C 1A5

H. Vesely, P.Eng.
Electric Power Equipment Ltd.
1285 Homer Street
Vancouver, B.C. V6B 2Z2

Frank Jonasen
Universal Design Unlimited
9156 - 212 Street
Langley, B.C.
V1M 2B7

Disabled Persons Groups

Advocacy Access
#211 - 456 West Broadway
Vancouver, B.C. V5Y 1R3

Burnaby Association for the Mentally Handicapped
2702 Norland Avenue
Burnaby, B.C. V5B 3A6

B.C. Coalition of People with Disabilities
204 - 456 West Broadway
Vancouver, B.C. V5Y 1R3

B.C. Rehabilitation Society
4255 Laurel Street
Vancouver, B.C. V5Z 2G9

Doug Mowatt
B.C. Paraplegic Association
780 S.W. Marine Drive
Vancouver, B.C. V6P 5Y7

Jane Cowie
Canadian National Institute for the Blind
350 East 36th Avenue
Vancouver, B.C. V5W 1C6

International Society of the Handicapped
116 - 1985 Wallace Street
Vancouver, B.C. V5V 1X8

Emerald Bartlett
Kinsmen Rehabilitation Foundation
2256 West 12th Avenue
Vancouver, B.C. V6J 1K1

Multiple Sclerosis Society of Canada
205- - 6125 Sussex Avenue
Burnaby, B.C. V5H 4G1

Premier's Advisory Council for Persons with Disabilities
Suite 520, East Tower
City Square
555 West 12th Avenue
Vancouver, B.C. V5Z 3X7

SPARC of B.C.
106A - 2182 West 12th Avenue
Vancouver, B.C. V6K 2N4

Vancouver Resource Society of the Physically Disabled
4678 Main Street
Vancouver, B.C. V5V 3R7

Doug Clifton
Western Institute for the Deaf and Hard of Hearing
2125 West 7th Avenue
Vancouver, B.C. V6K 1X9

Western Society for Senior Citizen's Services
301 Columbia Street
New Westminster, B.C. V3L 1A7

Burnaby Access Advisory Committee
c/o Planning Department
4949 Canada Way
Burnaby, B.C. V5G 1M2

E.J. Desjardins
G. Strong Rehabilitation Centre
4255 Laurel
Burnaby, B.C. V5Z 2G9

Tom Parker
Canadian Paraplegic Association
780 SW. Marine Drive
Vancouver, B.C. V6P 5Y7

Walt Schmid
Social Planning and
Research Council of B.C.
106 - 2182 West 12th
Vancouver, B.C. V6K 2N4

Paul Thiele, B.A., M.A.
Charles Crane Memorial Library
University of British Columbia
Vancouver, B.C.

Government Services

Jack Robertson, Director
Building Standards Branch
Ministry of Municipal Affairs
Parliament Buildings
Victoria, B.C. V8V 1X4

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453 West 12th
Vancouver, B.C.
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Don Henning
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600 - 1166 Alberni
Vancouver, B.C.
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400 - 890 West Pender Street
Vancouver, B.C.
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