
To: Housing Committee

From: Jade Hume, Division Manager, Capital Maintenance and Development,
Metro Vancouver Housing

Date: March 12, 2024 Meeting Date: April 5, 2024

Subject: **Metro Vancouver Housing Unit and Common Area Renovation Standards –
Accessibility Update**

RECOMMENDATION

That the Housing Committee receive for information the report dated March 12, 2024, titled “Metro Vancouver Housing Unit and Common Area Renovation Standards – Accessibility Update”.

EXECUTIVE SUMMARY

Metro Vancouver Housing’s *Unit Renovation Standards* were created in 2018, to provide consistency and standardization of materials, installation quality, and frequency of renovations across the portfolio. In 2023, MVH updated the standards to include greater direction and detail to enhance accessibility and adaptability in existing buildings. To ensure the *Unit and Common Area Renovation Standards* reflect the latest best practices and opportunities to enhance accessibility and adaptability of existing units and common areas, MVH has aligned with leading industry guidelines and standards. In addition, MVH commissioned Sentis Research to conduct a survey with current residents to better understand which accessibility improvements would best support existing and future tenant households. This update to the *Unit and Common Area Renovation Standards*, includes:

- Consideration of barrier-free elements;
- Lighting and operational controls visible to people with visual impairments, and located at a height easily reachable by someone in a wheelchair;
- Hardware and appliances that can be operated without the requirement of precise motor control of hands and fingers;
- Slip-resistant finish, tactile warnings, colour contrasting edge protection, and continuously graspable handrails that can be added to common area staircases;
- Ensuring level thresholds to doorways are easy to step or wheel over;
- Adding electric door openers and/or ramps to common area main entry doors of apartment buildings;
- Elevator modernization (buttons, lighting, audible announcements); and,
- Other case-by-case improvements to meet individual tenant needs.

As a part of implementing the most recent update, MVH will undertake training with operational staff and housing technicians to review additions to the standards, and help identify ongoing opportunities to continue enhancing accessibility in existing housing.

PURPOSE

To inform the Housing Committee about the update to Metro Vancouver Housing's *Unit and Common Area Renovation Standards* to improve accessibility and adaptability of existing housing.

BACKGROUND

The *Metro Vancouver Housing 10-Year Plan* sets a target to achieve at least 20% of the organization's housing portfolio as adaptable or fully accessible over time (increasing from the current 6%). The Plan also highlights the need to enhance accessibility within MVH's existing housing stock by regularly reviewing and updating interior building standards, and to incorporate adaptable, barrier-free elements wherever possible, to support easier transition to accessible units. This report outlines changes to the *Unit and Common Area Renovation Standards* (Attachment 1) to improve accessibility and adaptability.

METRO VANCOUVER HOUSING UNIT AND COMMON AREA RENOVATION STANDARDS

In 2018, MVH developed *Unit Renovation Standards* to provide consistency and standardization of materials, installation quality, and frequency of renovations across the portfolio. Prior to the *Unit Renovation Standards* there were significant differences in approach for undertaking renovations across different areas of MVH's housing portfolio. A core task group of staff and consultants was formed to develop standards and key criteria for product review and evaluation including:

- durability;
- maintainability, including complexity of repairs, accessibility of parts, frequency of scheduled maintenance to maximize longevity, ease of maintenance access, and ease of cleaning;
- supply, including consistent availability, ability to meet volume demands, and lead time;
- Life Cycle Costing and Comparisons, including disposal costs, installation costs, costs and frequency of scheduled and anticipated maintenance, and replacement frequency; and
- sustainability, including energy usage, locally sourced and resourced where possible, recyclable content, and recycling programs where available.

In 2023, MVH began to update the standards to include greater direction and detail to enhance accessibility and adaptability in existing buildings. In addition, the document was renamed to *Unit and Common Area Renovation Standards*, which better describes the scope of the guidelines, as they include interior common areas, hallways, stairwells, parkades, elevators, and laundry rooms.

Planned unit renovations and renewals are guided through MVH's Asset Management system with additional renewals completed at the time of unit turnover as required.

ENHANCING ACCESSIBILITY

MVH is committed to providing housing that is inclusive for all residents. During building renewal projects and unit turnovers, MVH has an opportunity to incorporate updates to enhance accessibility in existing housing. In order to gain a better understanding of what meaningful improvements can be made during building renewals and unit turnovers, MVH commissioned Sentis Research to conduct a survey with current residents to better understand which accessibility improvements tenants would identify as being the most helpful for their household (Attachment 2).

A total of 669 MVH tenants participated in the survey in November/December 2023 (624 online, 39 on paper, and 6 over the phone).

From a list of 17 accessibility improvements that MVH could make to its existing buildings, tenants identified five as being the most helpful for their households:

- Grab bars in showers / bathtubs (71%);
- Glow-in-the-dark light switches (69%);
- Level doorway thresholds (67%);
- One hand / closed fist operable cabinets (65%);
- Grab bars in toilet areas (61%).

Two of the five involve adding grab bars in the bathroom, something that seniors (i.e., tenants 65 and older) were especially interested in. Leveling out doorway thresholds is an upgrade which households that included someone with a physical disability and/or uses a mobility aid deemed as particularly helpful. Cabinets/doors/windows that can be operated with one hand and glow-in-the-dark light switches were considered most helpful by households that have dependents.

Accessibility Considerations

By enhancing the accessibility and adaptability of affordable housing, MVH can better support people with disabilities and provide age-friendly housing where seniors can age in place and live independently for longer (which is shown to improve overall health and well-being).

Accessibility considerations are contextual and related to multiple visible and invisible barriers. While there is no universally adopted definition, it is important to recognize the spectrum of common types and causes of disability, which have been considered as part of this update:

- | | |
|------------------------------------|---|
| • Blindness/Low Vision | • Attention-Deficit/Hyperactivity Disorders |
| • Deaf/Hard-of-Hearing | • Neurological Disabilities |
| • Physical Disabilities | • Psychiatric Disabilities |
| • Speech and Language Disabilities | • Medical Disabilities |
| • Brain Injuries | • Elderly |
| • Learning Disabilities | |

Accessibility in MVH's Housing Portfolio

For new development, MVH designs buildings with a high degree of accessibility, applying universal design principles to all units and common areas, providing wheelchair accessible units, and creating age-friendly housing that can be easily adapted to meet people's needs as they change over time.

However, it is important to note that there are certain limitations for upgrades that can be made to existing properties, and buildings across MVH's portfolio vary in terms of how accessible they are. For example, it may not be possible in older buildings to provide wider doorways or hallways to better accommodate people in wheelchairs or mobility scooters. There are however, many changes that can be made to enhance accessibility in existing buildings. To increase accessibility in MVH's existing housing portfolio, the *Unit and Common Area Renovation Standards* have been updated

with more guidance on accessibility and adaptability improvements focused on unit interiors and interior common areas.

Updating Metro Vancouver Housing's Unit and Common Area Renovation Standards

To ensure the *Unit and Common Area Renovation Standards* reflect the latest industry best practices and opportunities to enhance accessibility and adaptability of existing units and common areas, MVH has examined the following guidelines, standards, and best practice resources:

- Accessible Design for the Built Environment (B651-18 National Standard of Canada), CSA Group and Standards Council of Canada, 2018;
- BC Housing Design Guidelines and Construction Standards 2019;
- Building Accessibility Handbook 2020: Illustrated Commentary on Accessibility Requirements British Columbia Building Code 2018, BC Office of Housing and Construction Standards;
- Universal Design: A guide for designers, builders and developers of multi-unit residential buildings, Canada Mortgage and Housing Corporation, 2023;
- Rick Hansen Foundation; and
- The Universal Design Network of Canada.

This process also involved a detailed review and consideration of MVH's accessibility considerations for new development (driven by various funder requirements and the latest municipal and provincial standards), to assess best practices and cost-effective and impactful solutions that could be achieved in existing buildings.

In addition to enhancing accessibility and livability for its tenants, updating existing buildings will support MVH to:

- meet specific accessibility requirements of funding programs (such as CMHC housing renewal and repair funding); and
- be proactive to prepare for new/future accessibility legislation in BC.

Accessibility has been added as a key criterion for product evaluation and embedded as a core consideration throughout the standards, and have been highlighted in yellow for the Housing Committee's information (Attachment 1). Accessibility considerations for older buildings include, but are not limited to:

- ensuring lighting and operational controls (e.g., light switches, elevator controls, thermostats, intercom systems) are located at a height easily reachable by someone in a wheelchair;
- using door hardware (such as door handles, cabinet pulls, latches, and locks) that can be operated without the requirement of precise motor control of hands and fingers;
- contrasting colour on door frames and handles to allow them to be easily seen;
- adding slip-resistant finish, tactile warnings, and colour contrasting edge protection to common area staircases;
- upgrading common area staircase handrails to be continuous;
- wherever possible, ensuring level thresholds to doorways that are easy to step or wheel over;

- adding electric door openers at common area main entry doors of apartment buildings;
- ramps to common area main entry doors of apartment buildings;
- elimination of common area barriers where possible;
- blocking provided behind tiles in bath/shower locations to allow for easy installation of hand rails;
- kitchen and bathroom faucets shall be operable with one hand, without tight grasping or pinching and with force not exceeding 5 lbs (see BCBC 3.8.3.8);
- common area laundry machines: 1 washing machine and 1 dryer per apartment building where feasible should be front loading on pedestals with controls and operating mechanisms at accessible height. Where possible a clear floor area of at least 750 mm x 1200 mm (2'-6" x 4'-0") in front of each appliance and laundry sink. Where possible a single bowl stainless steel laundry sink and a table or countertop for sorting or folding installed at accessible height and shall be designed with an open knee space clearance; and
- elevator modernization (e.g. buttons, lighting, audible announcements).

Renovations/upgrades of accessibility elements are completed at different times, dependent on many factors. Some upgrades are “triggered” when other work is being done (e.g. Blocking at bath/shower locations are completed when new tiles are being installed in the bath/shower locations), others are completed as part of a unit renovation or common area hallway upgrade, triggered by the asset management program. MVH also works with tenants and community organizations to provide customized alterations to units and common areas to meet tenant’s specific accessibility needs on a case-by-case basis.

NEXT STEPS

As a part of implementing the updated *Unit and Common Area Renovation Standards*, MVH will undertake training with operational staff and housing technicians to review changes to standards, and help identify opportunities to continue enhancing accessibility. MVH will continue to review and update its standards on a regular basis, reflecting changes to industry standards, requirements, and best practices.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

Staff update the *Unit and Common Area Renovation Standards* as part of their regular duties, therefore, there are no financial implications to this report. \$25,950 was included as part of the Board approved 2023 communications budget for Metro Vancouver Housing for the tenant accessibility survey conducted by Sentis Research.

Unit renovations and building upgrades fall with MVH’s capital and operating maintenance budgets. Additional upgrades for accessibility, where feasible, can often be completed along with other upgrades, or involve the selection of different materials, therefore, cost implications are generally not significantly higher than standard updates.

CONCLUSION

This report highlights how the *Unit and Common Area Renovation Standards* for Metro Vancouver Housing have been updated to enhance accessibility and adaptability in existing housing sites. MVH staff considered National and Provincial handbooks and guidelines, as well as feedback collected through a survey of current MVH residents to review and update the existing standards based on industry best practices and tenant feedback.

ATTACHMENTS

1. Metro Vancouver Housing Unit and Common Area Renovation Standards, March 10, 2024
2. Metro Vancouver Housing Accessibility Needs Survey Final Report, February 22, 2024

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Unit and Common Area Renovation Standards

Metro Vancouver Housing

March 10, 2024



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Introduction

PURPOSE

To provide technical specifications that will govern the replacement of interior finishes when renovating housing units and common areas. The *MVH Unit and Common Area Renovation Standards* are a living document that is continuously improved and updated to reflect emerging industry codes and standards and best practices.

BACKGROUND

Primary Drivers

The primary drivers for the development of the Unit and Common Area Renovation Standards include:

- Standardization and consistency throughout the housing portfolio
- Optimization of material, labour, environmental, and cost efficiencies
- Ease of installation, procurement, and repairs
- Selection of products for optimal durability, maintenance, and sustainability
- Increasing accessibility and adaptability of exiting buildings and units.

DEVELOPMENT AND METHODOLOGY

2018 – Initial Version

A core task group was formed to develop the standards. The group consisted of managers, field repair staff, and technical professionals. Industry experts such as contractors, consultants, and product representatives were consulted throughout the process.

The purpose of the task group was:

- To ensure that the current products being used and the site/unit specifics were being considered
- To utilize subject matter expertise
- To review existing, explore new, conduct thorough research of, and compare products
- To identify external funding opportunities
- To develop technical performance specifications for building component replacement

2024 – Addition of Accessibility and Adaptability

In order to achieve and maximize success of increasing accessibility and adaptability of exiting buildings and units, the *Unit and Common Area Renovation Standards* have been updated to explicitly describe the intent and provide specifications.

Use of well known and well used reference documents and websites in the industry are used to ensure accessibility and adaptability modifications meet the needs of the community and code requirements.

Reference Documents and Websites:

- Accessible Design for the Built Environment (B651-18 National Standard of Canada), CSA Group and Standards Council of Canada, 2018;
- BC Housing Design Guidelines and Construction Standards 2019;
- Building Accessibility Handbook 2020: Illustrated Commentary on Accessibility Requirements British Columbia Building Code 2018, BC Office of Housing and Construction Standards;
- Universal Design: A guide for designers, builders and developers of multi-unit residential buildings, Canada Mortgage and Housing Corporation, 2023;
- Rick Hansen Foundation; and
- The Universal Design Network of Canada;

Minor Capital Components

The following table references the minor capital components and their corresponding technical section as it relates to MasterFormat per the Canadian Specifications Institute.

Minor Capital Item	MasterFormat Technical Section
Bath/Shower Surround	09 30 00 – Ceramic Tile
Flooring (Hard Surface)	09 65 00 – Resilient Flooring
Flooring (Carpet)	09 68 00 – Carpet
Painting	09 91 00 – Painting
Appliances	11 30 00 – Equipment
Cabinets and Countertops (Kitchen and Bathroom)	12 32 00 – Manufactured Casework
Sinks, Tub, Faucets, Toilet, Hot water tank	22 00 00 – Plumbing
Electrical Items (Lighting, Plugs, Baseboard Heaters, etc.)	26 00 00 – Electrical

KEY CRITERIA

The key characteristics for each of the products and designs are reviewed and evaluated with the following criteria:

- Durability
- Maintainability
 - Complexity of repairs
 - Accessibility of parts
 - Frequency of scheduled maintenance to maximize longevity
 - Ease of maintenance access
 - Ease of cleaning
- Accessibility and Adaptability
 - Improve ease of access
 - Improve ability to adapt units to specific tenant needs
 - Aging in place
 - Design Principals of Universal Design (UD)
 - Equitable Use
 - Flexibility in Use
 - Simple and Intuitive Use
 - Perceptible
 - Tolerance for Error
 - Low Physical Effort
 - Size and Space for Approach and Use
- Supply
 - Consistent availability
 - Ability to meet volume demands
 - Lead time
- Life Cycle Costing and Comparisons
 - Disposal costs
 - Installation costs
 - Costs and frequency of scheduled and anticipated maintenance
 - Replacement frequency
- Sustainability
 - Energy usage
 - Locally sourced and resourced where possible
 - Recyclable content
 - Recycling programs where available

Unit and Common Area Renovation Standards

Unit and Common Area Renovation Standards will provide:

- Consistency in MVH's diverse portfolio
- Durable products that will stand-up well in a rental environment
- Enhanced accessibility and adaptability of existing housing stock to support people with disabilities and seniors to age in place
- Improved quality and appearance of the unit and common area interiors across the portfolio
- Clear direction to staff with respect to product selection and planned renewal cycle
- Economic and productivity benefits due to tendered SOA contracts with clear standards
- Environmentally-conscious property maintenance practices
- Ease of in-house maintenance with respect to repairs and cleaning on unit turnovers
- Guidance to successfully deliver on the 10-Year Plan

The renovation standards are presented as a performance specification in technical sections as they relate to MasterFormat per the Canadian Specifications Institute.

Planned renewals will be driven through the Asset Management Plan. Additionally, renewals will be completed at unit turnovers as required.

The *Unit and Common Area Renovation Standards* will be used to govern replacement of minor capital components when updating and renovating units and common areas.

Accessibility and Adaptability

The *Metro Vancouver Housing 10-Year Plan* set a target to achieve at least 20% of the organization's housing portfolio as adaptable or fully accessible over time. Metro Vancouver Housing's (MVH's) portfolio of existing housing varies in terms of how accessible buildings are, depending on the target population as well as building codes and regulations at the time of construction. MVH's *Unit Renovation Standards* were created in 2018, to provide consistency and standardization of materials, installation quality, and frequency of renovations across the portfolio. In 2024, MVH's *Unit and Common Area Renovation Standards* were updated to enhance accessibility in existing housing sites.

In existing housing, there are limitations to the accessibility upgrades that can be made. For example, it may not be possible in older buildings to widen doorways or hallways to better accommodate people in wheelchairs or mobility scooters. Despite these limitations, there are still many changes that can be relatively easily implemented to enhance accessibility in existing buildings, that have been reflected in the *Unit and Common Area Renovation Standards*.

Accessibility Considerations

Accessibility considerations are contextual and related to multiple visible and invisible barriers. While there is no universally adopted definition, it is important to recognize the spectrum of common types and causes of disability, that have been considered as part of these standards:

- | | |
|------------------------------------|---|
| • Blindness/Low Vision | • Attention-Deficit/Hyperactivity Disorders |
| • Deaf/Hard-of-Hearing | • Neurological Disabilities |
| • Physical Disabilities | • Psychiatric Disabilities |
| • Speech and Language Disabilities | • Medical Disabilities |
| • Brain Injuries | • Elderly |
| • Learning Disabilities | |

Accessibility has been enhanced as a key criterion for product evaluation and further embedded as a core consideration throughout these standards. Key examples of accessibility considerations for older buildings include, but are not limited to:

- Consideration of barrier-free elements wherever possible;
- Lighting and operational controls that are visible to people with visual impairments, and located at a height easily reachable by someone in a wheelchair;
- Hardware and appliances that can be operated without the requirement of precise motor control of hands and fingers;
- Slip-resistant finish, tactile warnings, colour contrasting edge protection, and continuously graspable handrails that can be added to common area staircases;
- Ensuring level thresholds to doorways that are easy to step or wheel over wherever possible;
- Adding electric door openers and/or ramps to common area main entry doors of apartment buildings;
- Elevator modernization (buttons, lighting, audible announcements, etc.); and,
- Other case-by-case improvements to meet individual tenant needs.

Renovations/upgrades of accessibility elements are completed at various times, dependent on many factors. Some upgrades are initiated when other work is being done (e.g. blocking at bath/shower locations are completed when new tiles are being installed in the bath/shower locations), others are completed as part of a unit renovation or common area hallway upgrade, guided by the asset management program. MVH also works with tenants and community organizations to provide customized alterations to units and common areas to meet tenant's specific accessibility needs on a case-by-case basis.

Metro Vancouver Housing

RENOVATION CONSTRUCTION STANDARDS

09 30 00 Ceramic Tile

PART 1 – GENERAL

- .1 Furnish labour, materials, and equipment for the complete supply and installation of all ceramic wall and floor tile.
- .2 Use locally available materials with recycled content if possible.
- .3 Stone, ceramic, powder-coated metals, plated or anodized metal, glass, concrete, clay brick, and unfinished or untreated solid wood flooring must not include integral organic-based surface coatings, binders, or sealants.
- .4 Paints, coatings, adhesives, and sealants must not contain methylene chloride and perchloroethylene. Paints and coatings must meet Canadian Volatile Organic Compound (VOC) Concentration Limits for Architectural Coatings Regulations (SOR/2009-264). Adhesives and sealants must meet SCAQMD Rule 1168, effective July 1, 2005.
- .5 All tile work in accordance with recommendations as set out in the latest edition of the Tile Specification Guide 09300 Tile Installation Manual as prepared by the Terrazzo, Tile, and Marble Association of Canada (TTMAC) and to ANSI 108.1 & 108.5
- .6 Accessibility: Blocking shall be provided in existing wall framing for bath/shower locations to provide backing for installation of grab bars in accordance with the MVH "Bathtub Grab Bar Backing Detail" drawing/specification (2023-06-19).
- .7 Warranty
 - .1 Labour: One (1) Year
 - .2 Material: Per the manufacturer's specifications.

PART 2 – PRODUCTS

- .1 All products must be submitted to MVH for review and written approval prior to installation.
- .2 Materials
 - .1 Backer Board: Minimum 13 mm, coated glass mat gypsum baker board (ASTM C1178) according to TTMAC requirements.
 - .2 Waterproof Membrane: Provide liquid applied or troweled membrane.
 - .1 The Plumbing Officials Association of BC (POABC) allows above, below or on grade installations. Liquid and troweled membrane applications must meet ANSI 118.10 for waterproofing and confirm manufacturer's instructions and TTMAC requirements.
 - .3 Cement: Type 10 Portland Cement conforming to CAN/CSA-A3000, A5 colour grey.
 - .4 Sand: Conforming to ASTM C144 passing 16 mesh.
 - .5 Water: Fresh, clean, potable, free from deleterious matter, acids, or alkalis.
 - .6 Latex Additive: Enriched latex emulsion additive conforming to ANSI A118.4 for use in thin set mortar.
 - .7 Reinforcing Mesh: All flooring incorporating a mortar bed and waterproof membrane.
 - .8 Reinforcing mesh, as per TTMAC detail 309F, to be 51 mm x 51 mm (2" x 2") 16 gauge galvanized welded wire mesh.
 - .9 Wall Tile Edge Trim: Extruded aluminum trim for use at exposed washroom wall tile edges.
 - .10 Floor Tile Edge/Transition Trim: Extruded aluminum trim at all exposed floor tile edges.
- .3 Tile

- .1 Conform to CAN/CGSB-75.1 — M complete with cushioned and bull nosed edges and necessary shapes as required. Provide floor tile with matching coved base and internal and external corners.
 - .2 All ceramic used at floor areas to meet dynamic co-efficient of friction of 0.42 in accordance with ANSI A137.1 standard.
 - .3 Provide appropriate tile type, finish, and moisture rating per TTMAC.
- .4 **Mixes**
- .1 Thin Set Mortar: Requirement must meet ANSI 118.4 and ANSI 118.11 which can be single component (polymer modified) or two components (liquid latex modified).
 - .2 Mortar Bed: A mixture of 1 part Portland cement, 4 parts sand and latex additive where required by TTMAC detail. Premixed mortar may be used per manufacturer's instructions and may need to adjust water volume depending on moisture content of sand.
 - .3 Polymer Modified Grout: Requirement must meet ANSI 118.7
- .5 **Product Locations**
- .1 Standard units: Bathtub, shower surrounds, and, in some circumstances, kitchen backsplashes (confirm with MVH).
 - .2 Accessible units: Bathroom floors and walls (including shower).

PART 3 – EXECUTION

- .1 **Thin Set Method**
- .1 Shower Walls: TTMAC detail 305W A & B; allow for a levelling coat to plumb water resistant backing board, concrete block, and surfaces to receive tile; tape joints of backer board with fiberglass mesh set into acrylic modified motor bed. Apply mortar per manufacturer's specifications.
 - .2 Floor Areas & Base: Dry areas; TTMAC detail 311F - A; use thin set mortar bed on concrete floor surfaces; all tile to be fully back buttered with latex modified mortar for a full mortar bed without hollows or non-bonded ceramic tile areas. Level tile joints for even surface. Provide divider strips and edge trim at termination of tile floor to other surface. Divider strips and edge trim to have top width of 3 mm (1/8").
- .2 **Mortar Bed (Shower floor areas)**
- .1 Install ceramic tile according to the TTMAC details similar to 309F using a cleavage membrane/reinforced mortar bed and bond coat.
 - .2 Provide mortar bed over cleavage membrane and install galvanized reinforcing mesh. Set mortar bed thickness as required so that floor finish elevation to top of ceramic tile will match adjacent finish floor elevations.
 - .3 Install the ceramic tile to mortar bed using an acrylic modified bond coat.
 - .4 In shower areas, install waterproof membrane below tile mortar bed in accordance with manufacturer's directions and slope to drain as indicated. Install floor tile in accordance with TTMAC Detail No. 319SR - A & B using reinforced mortar bed and bond coat.

END OF SECTION

95 65 00 Resilient Flooring

PART 1 – GENERAL

- .1 Workmanship and materials must conform to the Specification Manual as published by the National Floor Covering Association (NFCA), Canadian General Standards Board (CGSB), and the BC Floor Covering Association (BCFCA), latest edition.
- .2 MVH reserves the right to have independent third party inspection services for quality assurance at several stages while executing floor installation. The Contractor shall provide access and information regarding the work, the material, and the staff if/when requested by MVH and/or the independent third party inspection service.
- .3 Warranty
 - .1 Labour: One (1) Year
 - .2 Material: Per the manufacturer's specifications.

PART 2 – PRODUCTS

- .1 Selected products must be submitted to MVH for review and written approval prior to installation.
- .2 All products shall conform to the following specification requirements:
 - .1 Luxury Vinyl Plank Flooring (LVP) – unit interiors.
 - .1 4-sided micro beveled edges
 - .2 Ceramic bead, UV-cured finish
 - .3 Low-lustre/matte finish appearance
 - .4 Minimum wear-thickness of 12mils
 - .5 Overall minimum 2mm thick
 - .6 Minimum width of 6" with mixed lengths
 - .7 Meets or exceeds Class 3, Type A or B ASTM F-1700
 - .8 Meets or exceeds ASTM F2199-09, ASTM E648, ASTM E84, ASTM C1028-07, ASTM F970-07(R2011), and ASTM D3389-05
 - .9 Must be FloorScore certified
 - .10 Phthalates-free
 - .11 Approved for use over all radiant heated subfloors
 - .12 Full glue-down system
 - .2 LVP Underlay
 - .1 CRI Green Label Plus certified
 - .2 Thickness – minimum of 1.8mm
 - .3 Density and compression – minimum of 25/lb3 ASTM D 1055-97 (22H, 70C) – 16%
 - .4 Must be 100% virgin latex rubber
 - .5 Must be 100% post-consumer recyclable
 - .6 Acoustical properties
 - .1 Must meet STC 63 dB
 - .2 Must meet IIC 73 dB
 - .3 Must meet LEED IEQp3
 - .4 Must meet LEED EQ4.3
 - .1 Smoke density ASTM A662 – less than 89 max
 - .2 Flammability test ASTM D 2859(DOC FF 1-70)
 - .3 Thermal resistance (R value) 0.205
 - .4 Must have anti-microbial protection

- .3 Transition strips
 - .1 FloorScore certified and meets CA 01350
 - .2 TVOC ≤ 100µg/m³
 - .3 Phthalate free, except for recycled materials

.3 Product Locations

- .1 Tenant Suites
 - .1 Tenant Suite/Rooms Above Other Tenant Suites/Rooms
 - .1 Dining Room, Living Room, Kitchen, Bedrooms, Bathrooms, Utility/Storage Rooms - All areas except stairs
 - .1 Glue down sound control underlayment.
 - .2 Glue down Luxury Vinyl Plank (LVP) flooring.
 - .3 Painted 3.5" wood base.
 - .2 Tenant Suite/Rooms Above NO Other Tenant Suites/Rooms
 - .1 Dining Room, Living Room, Kitchen, Bedrooms, Bathrooms, Utility/Storage Rooms - All areas except stairs.
 - .2 Glue down Luxury Vinyl Plank (LVP) flooring.
 - .3 Painted 3.5" wood base.

.2 Accessible Suites/Locations

- 1. Each accessible suite will be reviewed by the MVH Housing Technician and unit specific specifications will be provided on a case by case basis.
- .3 Interior Common Areas
 - .1 Common Area Hallways
 - .1 Glue down sound control underlayment.
 - .2 Glue down Luxury Vinyl Plank (LVP) flooring.
 - .3 102mm (4") rubber cove base.

PART 3 – EXECUTION

- .1 The Contractor shall install the product(s) per the manufacturer's specifications, including but not limited to:
 - .1 Environmental conditions
 - .2 Surface preparation
 - .3 Materials including adhesives and other accessories
 - .4 Installation
- .2 Contractor must vacuum the existing flooring before removal and vacuum the subfloor prior to installing the new flooring.
- .3 Subfloor cracks, holes and flooring irregularities must be adequately repaired to ensure a smooth, finished appearance and to prevent accelerated wear and telegraphing.
- .4 Contractor shall, where possible install flooring prior to the installation of cabinets, casework, equipment, movable partitions, etc. Extend flooring into spaces, door recesses, closets and similar openings.
- .5 Install all material and accessories such that it will not pose a hazard to persons with mobility aids.
- .6 Where applicable, floor drains should be provided with a clamping system that will ensure positive water flow and watertight flooring installation.
- .7 In wheelchair accessible prefabricated shower units, the joint between the edge of the shower and the resilient floor shall be sealed with silicone caulking and the caulking shall be protected by a transition strip, to ensure a watertight flooring installation. Exposed caulking joints are not acceptable. Contractor to prepare a mock-up to be reviewed by MVH Housing Technician.
- .8 Protect all installed flooring from damage by protective coverings and remove the coverings at final cleaning.

MVH Renovation Construction Standards

Division 9

09 68 00 - Carpet

09 68 00 Carpet

PART 1 – GENERAL

1. Workmanship and materials must conform to the Specification Standards Manual as published by the National Floor Covering Association, latest edition, Canadian General Standards Board (CGSB), and the BC Floor Covering Association (BCFA).
2. All carpet must be installed in accordance with the CRI (Carpet and Rug Institute) Carpet Installation Standard (2011)
3. MVH reserves the right to have independent third party inspection services for quality assurance at several stages while executing floor installation. The Contractor shall provide access and information regarding the work, the material, and the staff if/when requested by MVH and/or the independent third party inspection service.
4. Warranty
 - .1 Labour: One (1) Year
 - .2 Material: Per the manufacturer's specifications

PART 2 – PRODUCTS

- .1 Selected products must be submitted to MVH for review and written approval prior to installation.
- .2 **Product Locations**
 - .1 General Locations (For Project Locations – see Materials and Locations Checklist)
 - .1 Tenant Suites
 - .1 Stairs only.
 - .1 Carpet Pad.
 - .2 Carpet (Stretch-In).
 - .2 Interior Common Areas
 - .1 Common Area Stairwells
 - .1 Glue down carpet tile.
 - .2 102mm (4") rubber cove base.
 - .3 Accessibility: Tactile Walking Surface Indicators
 - a. See BCBC 3.8.2.10 (3)
 - b. See BCBC 3.8.3.9 (3)
 - .4 Accessibility: Stair Nosings
 - a. See BCBC 3.4.6.8 (8)
 - b. See BCBC 3.8.3.9 (3 a and e)
 - .5 Accessibility: Continuously Graspable Handrails
 - a. See BCBC 3.4.6.5 (9)

PART 3 – EXECUTION

- .1 The Contractor shall install the product(s) per the manufacturer's specifications, including but not limited to:
 - .1 Environmental conditions
 - .2 Surface preparation
 - .3 Materials including adhesives and other accessories
 - .4 Installation

- .2 Install all material and accessories such that it will not pose a hazard to persons with mobility aids.
- .3 Contractor must vacuum the existing flooring before removal and vacuum the subfloor prior to installing the new flooring.
- .4 Subfloor cracks, holes and flooring irregularities must be adequately repaired to ensure a smooth, finished appearance and to prevent accelerated wear.
- .5 Install edge strips at all intersections of carpeting with finish floors of other materials. Edge strips shall provide a smooth transition to avoid tripping hazard. Round metal edges should be avoided.
- .6 Protect all installed flooring from damage by protective coverings and remove coverings at final cleaning.
- .7 Vacuum and/or clean the carpet just prior to Substantial Performance to the satisfaction of the Consultant and/or MVH.

END OF SECTION

09 91 00 Painting

PART 1 – GENERAL

- .1 Materials, conditions, surface preparation of substrates, workmanship, quality control, protection, and clean-up shall conform to requirements of the latest edition of Master Painters Institute Architectural Painting Specification Manual as issued by the local MPI Accredited Quality Assurance Association having jurisdiction (hereafter referred to as MPI).
- .2 Provide labor, materials, tools and other equipment, services, and supervision required to complete all interior painting and decorating work.
- .3 All materials and paints shall be lead and mercury free. Use only materials that meet the VOC limits outlined by the State of Californian South Coast Air Quality Management District's Rule 1113 – Architectural Coatings.
- .4 Where indoor air quality is an issue use only MPI listed materials having a minimum E2/E3 rating based on VOC (EPA Method 24) content levels.
- .5 Use materials that are sourced locally and have high recycled content where possible.
- .6 Quality Assurance
 - .1 The Paint Contractor shall have a minimum of five (5) years proven satisfactory experience and shall show proof before commencement of work that they will maintain a qualified crew of painters throughout the duration of the work.
 - .2 Only qualified journeypersons who have a Tradesman Qualification Certification of Proficiency shall be engaged in painting and decorating work. Apprentices may be employed provided they work under the direct supervision of a qualified journeyperson in accordance with trade regulations.
 - .3 All paint manufacturers and products used shall be as listed under the Approved Product List section of the MPI Painting Manual.
 - .4 Painting and decorating work may be inspected by a third party inspection agency (Consultant) at MVH's sole discretion. The painting contractor shall coordinate with the Consultant as necessary.
- .7 Regulatory Requirements: Conform to work place safety regulations and requirement of those authorities having jurisdiction for storage, mixing, application and disposal of all paint and related hazardous materials.
- .8 Submittals/Mock-Up
 - .1 At project completion provide an itemized list complete with manufacturer, paint type and colour-coding for all colours used for Owner's later use in maintenance.
 - .2 When requested by the Consultant or MVH, prepare and paint a designated surface, area, room, or item (in each colour scheme), with specified paint or coating showing selected colours, gloss/sheen, textures, and workmanship to MPI Painting Specification Manual standards for review and approval. When approved, surface, area, room, and/or items shall become acceptable standard of finish quality and workmanship for similar on-site work.
- .9 Product Delivery, Storage, and Handling: Deliver and store all painting materials in sealed, original labeled containers bearing manufacturer's name, brand name, type of paint or coating and colour designation, standard compliance, materials content as well as mixing and/or reducing and application requirements in strict accordance with manufacturer and MPI requirements.

.10 Environmental, Waste Management, and Disposal Requirements

- .1 Perform no painting or decorating work when the ambient air and substrate temperatures, relative humidity, dew point, and substrate moisture content is below or above requirements for both interior and exterior work.
- .2 Apply paint only to dry, clean, properly cured, and adequately prepared surfaces in areas where dust is no longer generated by construction activities such that airborne particles will not affect the quality of finished surfaces.
- .3 Ensure adequate continuous ventilation and sufficient heating and lighting is in place.
- .4 Paint, stain and wood preservative finishes and related materials (thinners, solvents, caulking, empty paint cans, cleaning rags, etc.) shall be regarded as hazardous products. Recycle and dispose of same subject to regulations of applicable authorities having jurisdiction.
- .5 To reduce the amount of contaminants entering waterways, sanitary/storm drain systems or into the ground, retain cleaning water and filter out and properly dispose of sediments.

.11 Warranty

- .1 Labour: One (1) Year
- .2 Material: Per the manufacturer's specifications.

PART 2 – PRODUCTS

- .1 Selected products must be submitted to MVH for review and written approval prior to installation.
- .2 Materials
 - .1 All materials (primers, paints, coatings, varnishes, stains, lacquers, fillers, thinners, solvents, etc.) shall be in accordance with the MPI Painting Specification Manual Approved Product Listing (APL).
 - .2 Other materials such as linseed oil, shellac etc. shall be the highest quality product of an MPI listed manufacturer and shall be compatible with paint materials being used as required.
- .3 Finish, Colour, Gloss/Sheen
 - .1 Unless otherwise noted, all painting or staining work shall be in accordance with MPI Premium Grade finish requirements.
 - .2 Colours shall be as selected by MVH from a manufacturer's full range of colours.

PART 3 – EXECUTION

- .1 The condition and preparation requirements for all surfaces and mixing and tinting shall be in accordance with MPI Painting Manual requirements.
- .2 Do not paint unless substrates are acceptable and/or until all environmental conditions (heating, ventilation, lighting and completion of other sub trade work) are acceptable for applications of products.
- .3 Painting coats specified are intended to cover surfaces satisfactorily when applied at proper consistency and in accordance with manufacturer's recommendations.
- .4 Interior Finish/Coating Systems
 - .1 Gypsum Wallboard
 - .1 Walls and Ceilings (Kitchen, Bathroom, Common Area Laundry): MPI System INT 9.2B – High Performance Architectural Latex, GL5 Semi-Gloss
 - .2 Walls (Bedroom, Living Room, Hallways, etc.): MPI System INT 9.2B – High Performance Architectural Latex, GL3 Eggshell
 - .3 Ceilings (Bedroom, Living Room, Hallways, etc.): MPI System INT 9.2B – High Performance Architectural Latex, GL1 Flat
 - .2 Wood: MPI System INT 6.3A – High Performance Architectural Latex, GL5 Semi-Gloss
- .5 Common Area Hallways
 - .1 Accessibility: Hallway walls and either unit door trims, or unit doors are to be painted in contrasting colours.

END OF SECTION

11 30 00 Equipment

PART 1 – GENERAL

- .1 Coordinate size, location and services to appliances with kitchen cabinet manufacturer and confirm opening sizes and clearances prior to ordering equipment. Refer to CSA B651-04 for accessible units. When necessary, coordinate work with mechanical and electrical for location and installation of water supplies, drains, vents, and power supplies.
- .2 All appliances to be readily available from well-established manufacturers and CSA-approved and ENERGY STAR® rated (where applicable).
- .3 In order to meet applicable energy incentive and rebate programs, the Contractor may be required to submit appliance invoices to BC Housing, complete with manufacturer and model numbers, unit price, and quantity.
- .4 Warranty
 - .1 Labour: One (1) Year
 - .2 Material: Per the manufacturer's specifications.

PART 2 – PRODUCTS

- .1 Selected products must be submitted to MVH for review and written approval prior to installation.
- .2 Standard Units
 - .1 Refrigerator
 - .1 CSA approved
 - .2 Slide out wire shelves
 - .3 Recessed/integrated door
 - .4 Reversible swing door
 - .5 No water/ice dispenser
 - .6 LED lights
 - .7 Energy Star qualified
 - .8 Top-mount freezer unit
 - .9 Vegetable crispers
 - .10 Accessibility:
 - .1 Freezer floor not higher than 43"
 - .2 Controls between 400-1200 mm
 - .3 Self defrost
 - .4 Door operable with one hand in fist position
 - .2 Electric range
 - .1 CSA approved
 - .2 Free standing
 - .3 4 surface elements: 6" and 8" in diameter
 - .4 Removable drip pans
 - .5 Broiler
 - .6 Timer
 - .7 Surface element/signal light
 - .8 Oven light
 - .9 Oven racks x2
 - .10 Auto shut-off (oven)

- .11 Storage drawer
- .12 Accessibility: Self cleaning feature

- .3 Range hood
 - .1 CSA approved
 - .2 Minimum airflow: 2 speed, 180CFM
 - .3 Max sones: 7.5
 - .4 Ducting: 3 ¼"x10" rectangular, 7" round
 - .5 Removable filter (charcoal)
 - .6 LED light

.3 Accessible Units

- .1 Refrigerator
 - .1 CSA approved
 - .2 ADA compliance
 - .3 Slide out wire shelves
 - .4 Recessed/integrated door
 - .5 Reversible swing door
 - .6 No water/ice dispenser
 - .7 LED lights
 - .8 Energy Star qualified
 - .9 Freezer floor not higher than 43"
 - .10 Controls between 400-1200 mm
 - .11 Self defrost
 - .12 Door operable with one hand in fist position
 - .13 Vegetable crispers
- .2 Electric range
 - .1 CSA approved
 - .2 ADA compliance (or control panel on front)
 - .3 Free standing
 - .4 4 surface elements: 6" and 8" in diameter
 - .5 Removable drip pans
 - .6 Broiler
 - .7 Timer
 - .8 Surface element/signal light
 - .9 Oven light
 - .10 Oven racks x2
 - .11 Auto shut-off (oven)
 - .12 Storage drawer
 - .13 Self cleaning feature
- .3 Cook top
 - .1 CSA approved
 - .2 ADA compliance
 - .3 Surface element/signal light
 - .4 Removable drip pans
 - .5 Timer
 - .6 Easy access to controls
 - .7 Surface elements: 6" and 8" diameter
- .4 Range hood
 - .1 CSA approved
 - .2 Minimum airflow: 2 speed, 180CFM
 - .3 Max sones: 7.5
 - .4 Ducting: 3 ¼"x10" rectangular, 7" round
 - .5 Removable filter (charcoal)
 - .6 LED light
 - .7 Provide remote switch at countertop for fan and light
 - .1 Coordinate with electrical
 - .2 Obtain CSA approval if required

- .5 Wall oven
 - .1 CSA approved
 - .2 ADA compliance, side opening oven door
 - .3 Broil
 - .4 Timer
 - .5 Oven light
 - .6 Oven racks x2

PART 3 – EXECUTION

- .1 Built-in appliances: Securely anchor to supporting cabinetry or countertops with concealed fasteners. Verify that all clearances are adequate for proper functioning and rough openings are completely covered or fully used.
- .2 Freestanding appliances: Place in designed locations and verify that all clearances are adequate to properly operate the appliance. Refer to CSA B651 for accessible units.
- .3 Set equipment in place, level and makes necessary adjustments. Connect appropriate utilities, water, drains, venting, gas and electrical.
- .4 Clean equipment, ready for use and test for proper operation immediately prior to Substantial Completion of the Work.

END OF SECTION

12 32 00 Manufactured Wood Casework

PART 1 – GENERAL

- .1 Submit shop drawings of kitchen cabinets and bathroom vanities to the Consultant and MVH for review prior to fabrication. Shop drawings must show construction details of all architectural woodwork, general arrangements, locations of all service outlets, typical and special installation conditions, the material being supplied and all connections, attachments, anchorage and location of exposed fastenings, as applicable.
- .2 Confirm all dimensions at site prior to fabrication.
- .3 Shop drawings must be coordinated with final selection of ranges, dishwashers, refrigerators, and other appliances.
- .4 Where possible, wood products are recommended to be certified according to the Forest Stewardship Council (FSC). Alternately, an audited certification system such as CSA CAN/CSA Z809-08, Sustainable Forestry Initiative (SFI), or Program for Endorsement of Forest Certification Systems (PEFC). Where possible use local wood products.
- .5 Composite Wood to comply with California Air Resources Board (CARB) ultra-low-emitting formaldehyde (ULEF) resins or no added formaldehyde resins. Composite wood cannot exceed 0.05 ppm of formaldehyde as tested under EN-717-1:2004, ISO 16000-3:2010, ISO 16000-6: 2011, ISO 16000-9:2006, ISO 16000-11:2006 or CEN/TS 16516: 2013.
- .6 Cabinet material must be high density particle board, sustainable design particleboard (SDP) M3 grade, wheat board or low VOC plywood, finished on interior with melamine, zero formaldehyde construction that meets the ANSI A208.1
- .7 All materials workmanship and equipment shall conform to the architectural woodwork specifications as set forth in the Quality Standards for the Architectural Woodwork Manufacturers Association of Canada (AWMAC), latest edition for millwork in public areas and AWMAC, Canadian Kitchen Cabinet Association (CKCA), or CAN 3-A278M for residential kitchen cabinets and bathroom vanities.
- .8 Paints, coatings, adhesives and sealants must not contain methylene chloride and perchloroethylene. Paints and coatings must meet Canadian Volatile Organic Compound (VOC) Concentration Limits for Architectural Coatings Regulations (SOR/2009-264). Adhesives and sealants must meet SCAQMD Rule 1168, effective July 1, 2005.
- .9 Warranty
 - .1 Labour: One (1) Year.
 - .2 Material: Per the manufacturer's specifications.
 - .3 Provide a five (5) year warranty against delamination of finishes.
 - .4 Provide a two (2) year warranty on hardware.

PART 2 – PRODUCTS

- .1 Selected products must be submitted to MVH for review and written approval prior to installation.
- .2 Base Support of Lower Cabinet
 - .1 Base support shall be constructed from 3/4" thick plywood.
 - .2 Shims shall be composite or hardwood.
- .3 Cabinet Box Fabrication (Upper and Lower)
 - .1 All melamine faced fibreboard shall have a minimum density of 45 pounds per cubic foot and be white in colour.
 - .2 Cabinet boxes shall be of flush overlay construction ("Inset" style boxes are not approved).
 - .3 Top shelf, bottom shelf, and side of cabinet boxes shall be minimum 5/8" thick melamine faced fibreboard screwed or dowelled together.
 - .4 Show Panels shall be minimum 5/8" thick with finish to match the doors.
 - .5 Shelving shall be adjustable and minimum 5/8" thick melamine faced fibreboard.
 - .6 Cabinet backing shall be minimum 1/4" thick hardboard with finish matching the box.
 - .7 Cabinet nailing strips shall be minimum 5/8" thick low VOC plywood located at the top and bottom back of cabinet, installed behind the 1/4" thick hardboard backing.
 - .8 Front edges of gables and shelves must be 2.0 mm impact resistant PVC edge banded. Bottom of gables beside toilets to be finished with melamine so that all exposed wood is covered and colour matched.
 - .9 All exposed edges shall be edge-banded.
 - .10 Base kicks to match cabinet. Toe space at all base cabinets shall be 6" deep by 8" high for accessible suites and for all other units 3" deep by 4" high.
 - .11 Cabinets must be assembled with dowels and bolts.
- .4 Cabinet Dimensions (Upper and Lower)
 - .1 Kitchen: Upper Cabinets shall be 12" deep, typically 24" tall above countertops, but ranges from 18" to 31" inches in height.
 - .2 Kitchen: Lower Cabinets shall be 24" deep with a finished height of approximately 36".
 - .3 Vanity: Lower Cabinets shall be 21" deep with a finished height of approximately 36". No upper cabinets in bathrooms.
- .5 Drawers
 - .1 Drawer boxes shall be constructed with 1/2" prefinished birch plywood with a 3/8" thick prefinished birch plywood bottom dadoed 1/4" into sides and bottom, finished with low VOC clear sealer.
 - .2 One drawer must have a minimum depth of 7".
 - .3 Any exposed screw heads are to be covered with fast caps.
- .6 Cabinet Doors and Drawer Fronts
 - .1 Cabinet doors and drawer fronts shall be high pressure laminate surface on high density particleboard, low VOC plywood, or SDP with 90 degree, full wrap edging and 2.0mm PVC edge banding.
 - .2 All doors shall be 3/4" thick MDF with concealed European style hinges with 110 degree range.
 - .3 Samples of door and drawer front designs shall be provided to MVH Housing Technician for approval.

.7 Countertops

- .1 Plastic Laminate: American National Standards Institute/National Electrical Manufacturer's Association (ANSI/NEMA), LD 3-2005, "High Pressure Decorative Laminate", Type HGS, 1 mm (0.040") thick, Matte finish.
- .2 Counter tops must be one-piece factory "postformed" type with bullnosed edges and 4-1/8" high backsplash and sidesplash, composed of high pressure laminate bonded to a SDP M3 grade particleboard core, zero formaldehyde construction that meets the ANSI A208.1
- .3 Laminated surface is to be continuous. Where "layup" seam (sidesplash) is required, locate in dry locations only.
- .4 Countertops shall be 5/8" thick with a minimum density of 60lbs per cub foot.
- .5 Square bullnose finish is to be built up to a minimum 3/4" thick and 1 1/4" high.
- .6 Unless specified, kitchen tops are to be 25-1/2" deep, and vanity are to be 22-1/2" deep.

.8 Hardware

- .1 Pulls
 - .1 Pulls shall have a satin nickel finish.
 - .2 No pulls on inactive doors or drawers.
 - .3 Accessibility: Graspable "D" type pulls on drawers and cupboards.
- .2 Hinges
 - .1 "European style pocket hinges" with 110 degree range.
 - .2 Six-way adjustable hinges.
 - .3 Completely concealed.
 - .4 For high use application, use a 3rd hinge.
- .3 Drawer Slides
 - .1 100lb Load Rated Ball Bearing Slide or MVH approved equal.
 - .2 Drawer slides shall be epoxy coated, full extension, with ball bearings, on tandem runners with safety stops to prevent tipping.
 - .3 Minimum 40 kg (88lb) capacity.
 - .4 Slides may be side or under mounted and must have a release for drawer disconnect.
- .4 Corner cabinets shall have adjustable shelving. Lazy Susans are not permitted.
- .5 Door Bumpers: Provide plastic door bumpers on doors and drawers, for sound absorption.
- .6 Screw Caps: Provide colour coordinated screw caps over screw heads exposed to view.

PART 3 – EXECUTION

- .1 The base support of the lower cabinet shall be installed level and attached to floor using 3" screws, shimmed as necessary.
- .2 Cabinets Installation (Upper and Lower)
 - .1 Lower cabinets shall be installed to cabinet base support using 1 1/4" screws.
 - .2 Upper and lower cabinets are to be installed level and plumb.
 - .3 Cabinet boxes shall be attached to wall studs with a minimum of four (4) – 3" screws per box.
 - .4 All electrical plugs, drainage, piping, etc. shall be left uncovered and protected in the installation process. Existing plumbing connections shall remain accesible.
- .3 Cabinet Doors and Drawer Fronts
 - .1 Fix drawer front to drawer body with mechanical fastenings.

.4 Countertop Installation

- .1 Countertops shall be secured to lower cabinets with 1 ½" screws.
- .2 Countertop joints shall be sealed to prevent water ingress.
- .3 Countertop connection to wall (at top of back splash) shall be neatly caulked with clear silicone.
- .4 Provide cut-outs in tops for all sinks and plumbing fixtures per templates supplied by MVH Housing Technician at the time of installation. Seal all edges with coloured sealer in accordance with Architectural Woodwork Standards (AWS). Supply and installation of new sinks and fixtures will be by others.

End of Section

22 00 00 Plumbing

PART 1 – GENERAL

- .1 All plumbing systems shall be designed to comply with the requirements of the BC Plumbing Code and Local Authority Having Jurisdiction.
- .2 Comply with ASHRAE 90.1-2010 and National Energy Code for Buildings (NECB) 2011.
- .3 Quality Assurance: All equipment shall be installed by qualified contractors licensed and regularly engaged in the installation of plumbing systems.
- .4 Low water consumption plumbing fixtures shall be used (e.g. water closets, sink and lavatory faucets, and shower heads).
- .5 Water supply piping in outside walls is not permitted. Route piping in a furred-out chase completely outside of the exterior wall. Do not embed piping in the wall insulation.
- .6 Avoid drainage piping in outside walls. If unavoidable, ensure that the exterior wall insulation is between the pipe and the exterior wall, that the pipe is not embedded in the insulation and that the R value of the insulation complies with the required value for the assembly. Use EPS or polyisocyanurate insulation if the pipe must be installed in an exterior wall stud space.
- .7 Provide frost free hose bibs complete with automatic draining vacuum breakers/backflow preventer. Locate hose bibs to avoid conflict between hose and sidewalks.
- .8 Domestic Hot Water Systems
 - .1 Hot water temperature must not exceed 49°C (120°F) at points of use by tenants. Hot water storage shall not be below 60°C (140°F) to control the propagation of Legionella bacteria.
 - .2 Provide hot water distribution to common kitchen areas and for janitor sinks at 60°C (140°F).
 - .3 Where low temperature pre-heating storage tanks are utilized, provide means of automatically re-heating water to 60°C (140°F) for a period of 1 hour every 24 hours for sanitation purposes.
 - .4 All new showers shall be provided with thermostatic mixing valves. All residential bathroom and kitchen faucets shall be provided with temperature limit stops. The shower valves and faucets shall be set to maximum hot water temperature of 49°C (120°F).
 - .5 Thermostatic mixing valves for residential faucets should be considered in lieu of temperature limit stops for applications where increased level of anti-scalding protection is required, such as group homes or care facilities. A central whole-building thermostatic mixing valve and central tampered hot water distribution should be considered for buildings with special need tenants where regular monitoring of domestic hot water temperature is required.
- .9 Drainage Systems
 - .1 Provide floor drains with trap primer in common laundry.
 - .2 Floor drains for:
 - .1 Sheet vinyl flooring shall be dura-coated cast iron body with bottom outlet, combination invertible membrane clamp and adjustable collar with polished nickel bronze strainer and complete with trap primer connection.

- .2 Ceramic tile floor shall be dura-coated cast iron body with bottom outlet, combination invertible membrane clamp and adjustable collar with "Type Y" polished nickel bronze square strainer with stainless steel screws and complete with trap primer connection.
- .3 Provide a membrane under any ceramic tiled shower areas and clamp the membrane into the membrane clamp of the floor drain. The membrane shall be in accordance with the BC Building Code.
- .4 Utilize cast iron DWV piping for all vertical drainage risers, horizontal drainage over areas with noise sensitivity (especially bedroom and sleeping areas) and for all drainage in parkade areas. Non-metallic DWV can be considered in less noise sensitive areas. Waste stacks and rain water leaders (RWL's) must not touch the structure and should be resiliently supported at floor penetrations on neoprene pad isolators sized for a minimum of 3mm of static deflection.
- .10 All piping shall be installed so that it will in no way be strained or distorted by thermal expansion. Anchors and expansion loops shall be provided where necessary to protect equipment / piping and regulate expansion.
- .11 Warranty
 - .1 Labour: One (1) Year.
 - .2 Material: Per the manufacturer's specifications.

PART 2 – PRODUCTS

- .1 Selected products must be submitted to MVH for review and written approval prior to installation.
- .2 Potable Water Piping
 - .1 Comply with all applicable regulations and code requirements.
 - .2 Thermal expansion and supports shall be as per the pipework manufacturer's requirements.
 - .3 Provide pressure-reducing valves and controls if required to ensure that approved pressures and temperature are not exceeded.
- .3 Fixtures
 - .1 Accessibility: All faucets shall meet the BCBC 3.8.3.8. Controls shall be operable with one hand, without tight grasping or pinching and with force not exceeding 5 lbs.
 - .2 Provide aerated low flow fixtures for the bathroom: 2 LPM/0.5 GPM faucet and 5.7 LPM/1.5 GPM showerhead. Fixtures shall display CSA approval.
 - .3 Plumbing fittings shall be to CAN/CSA B125, Plumbing Fittings.
 - .4 Plumbing fixtures shall be to CAN/CSA B45, 'General Requirements for Plumbing Fixtures.'
 - .5 Vitreous china plumbing fixtures shall be to CAN/CSA B45.1, 'Ceramic Plumbing Fixtures.'
 - .6 Enameled cast iron plumbing fixtures shall be to CAN/CSA B45.2, 'Enameled Cast Iron Plumbing Fixtures.'
 - .7 Porcelain enameled steel plumbing fixtures shall be to CAN/CSA B45.3, 'Porcelain Enameled Steel Plumbing Fixtures.'
 - .8 Stainless steel plumbing fixtures shall be to CAN/CSA B45.4, 'Stainless Steel Plumbing Fixtures.'
 - .9 Plastic plumbing fixtures shall be to CAN/CSA B45.5, 'Plastic Plumbing Fixtures.'
 - .10 Cartridge shall be brass with ceramic disc.
- .4 Toilets
 - .1 Accessibility: ADA compliance, flush lever shall be operable with one hand.
 - .2 Low Flush Water Closets: Vitreous China, free-standing elongated rim, wash-down bowl, china bolt caps, single flush 4.8 LPF (1.3 GPF), min. 54mm (2-1/8") fully glazed trapway, and complying with the latest edition Maximum Performance (MaP) testing rated at 1000 grams of waste per flush.
 - .3 Water closets shall be closed front with cover seat that shall be rugged, high impacted solid plastic that is highly stain and chemical resistant with stainless steel hardware package and factory-installed top hinge.
 - .4 Water closets shall be supplied with chrome-plated supply line, escutcheon plate and ball-valve type fixture stop.

.5 Bathroom Sinks

- .1 Sinks shall be vitreous china self-rimming lavatory basin with rear overflow.
- .2 Sinks shall be supplied with chrome single lever washerless faucet with ceramic disc cartridge and temperature limit stops set not to exceed 49°C (120°F) hot water temperature. For project where increased level of anti-scalding protection is required, consider utilizing thermostatic mixing valves.
- .3 Low-flow faucet aerators must be provided for bathroom sinks and any faucet used primarily for hand washing, limiting water flow to 2 LPM (0.5 GPM) or less.
- .4 Faucets
 - .1 Accessibility: Shall be operable with one hand, without tight grasping or pinching and with force not exceeding 5 lbs (see BCBC 3.8.3.8)

.6 Kitchen Sinks

- .1 Sinks shall be grade 18-8 stainless steel, single bowl counter-mounted sink complete with back ledge, self-rimming, sound deadening, mounting kit, strainer, and 89mm (3-1/2") crumb cup.
- .2 Faucets
 - .1 Accessibility: Shall be operable with one hand, without tight grasping or pinching and with force not exceeding 5 lbs (see BCBC 3.8.3.8).
 - .2 Faucets shall be deck-mounted, solid cast brass lead-free body complete with washerless, ceramic drip-free disc valve cartridge, 240mm (9-1/2") long cast swing spout with vandal-resistant, 5.7 LPM (1.5 GPM) flow pressure compensating aerator outlet, removable brass escutcheon plate, single control metal lever handle, flexible copper supplies.
 - .3 Where a faucet is installed on an island type counter, the faucet is to have a maximum swing of 180 degrees.
- .3 Provide temperature limit stops set not to exceed 49°C (120°F) hot water temperature. For project where increased level of anti-scalding protection is required, consider utilizing thermostatic mixing valves.
- .4 Sink Dimensions
 - .1 Standard applications: 521mm x 508mm x 178mm (20-1/2" x 20" x 7") deep complete with mirror finished rim, satin finished bowl, and 38 mm (1-1/2") tailpiece.
 - .2 Wheelchair accessible applications: 522mm x 511mm x 127mm (20-9/16" x 20-1/8" x 5") deep, satin finished rim and bowl, and with rear corner 38 mm (1-1/2") tailpiece for drain, (drain) located in left hand back corner. Provide insulating covering that is sanitary, vandal-resistant, flexible, seamless, and anti-microbial, to exposed piping (to protect against heat/contusions).

.7 Bathtubs

- .1 Bathtubs must be non-slip, stain resistant, porcelain enameled steel with plug and chain drain, sound deadening, overflow, over-rim spout, and cast brass trap. Fiberglass bathtubs are not acceptable. Provide tub spout with diverter and single lever, non-scalding. Thermostatic mixing valve with integral stops set not to exceed 49°C (120°F) hot water temperature.

.8 Common area laundry machines

- .1 Accessibility: 1 washing machine and 1 dryer per apartment building where feasible should be front loading on pedestals with controls and operating mechanisms at accessible height. Where possible a clear floor area of at least 750 mm x 1200 mm (2'-6" x 4'-0") in front of each appliance and laundry sink. Where possible a single bowl stainless steel laundry sink and a table or countertop for sorting or folding installed at accessible height and shall be designed with an open knee space clearance.

PART 3 – EXECUTION

- .1 Damaged or repaired materials will not be accepted.
- .2 Penetrations through exterior walls must be sealed to the water barrier of the wall assembly using self-adhesive bituminous membrane. The method of sealing penetrations must be acceptable to MVH Housing Technician.
- .3 Caulk plumbing fixtures where fixture contacts wall, floor, or vanity. Confirm with MVH Housing Technician for acceptable products.
- .4 Piping
 - .1 Installation shall comply with the manufacturer's specifications and be carried out by a trained installer, certified by the manufacturer.
 - .2 Insulate all domestic hot and recirculation piping as required ASHRAE 90.1 – 2010 and NECB 2011.
 - .3 Provide supports for pipes. Maintain required grading by adjustment; allow for expansion and contraction, and produce a neat appearance. Design supports to suit loading and services. Prevent undue stress to structural members. Supports must secure pipe and prevent vibration.
 - .4 For all copper horizontal piping, use wrought clevis hangers 25mm (1") larger than pipe diameter suitable for vertical adjustment, isolated from pipe with plastic tape.
 - .5 Provide access panels to concealed valves and clean-outs. ULC rating required in rated assemblies.
 - .6 Install escutcheon plates at piping penetrating wall and at exterior hose bibs.
 - .7 Provide a metal access panel for all hose bibs with concealed isolating valves.
 - .8 Drain connection for a toilet shall be minimum 100mm (4") diameter.
- .5 Seismic Restraint
 - .1 Seismic restraint must be provided for all mechanical equipment and accessories, including attachment to structural members where required by code.
 - .2 Letter of Assurance from Seismic Engineer on commencement of design and completion of field review must be provided where required.
- .6 Acoustical Considerations
 - .1 Consultant to review acoustic requirements and incorporate or revise the following standards to achieve required STC ratings:
 - .1 Plumbing (including RWLs) shall be installed without direct contact to drywall or studs.
 - .2 Oversize sleeves through structure. Use firestopping and smoke seal in accordance with applicable Codes.
 - .3 Support plumbing at floor level only.

END OF SECTION

26 00 00 Electrical

PART 1 – GENERAL

1. Comply with all applicable standards, codes and requirements of the Local Authority Having Jurisdiction (AHJ). It is the Contractors responsibility to determine applicable codes, standards and requirements of the AHJ and to obtain and coordinate any required permits and inspections.
2. All material and/or equipment installed must be “Approved”, as and bear evidence of approval as defined in Canadian Electrical Code adopted for use in BC by Technical Safety BC. All material and parts shall be readily available locally.
3. All products must be submitted to MVH for review and written approval prior to installation.
4. Contractor shall review the Electrical drawings (as applicable) in coordination with all other drawings and specifications provided for the project. Verify the existing site and electrical systems and report any discrepancies to the MVH Housing Technician. It is the responsibility of the Contractor prior to submitting a bid to field measure exacting raceway routes.
5. If core drilling of existing structure (floors and slabs) is required, contractor shall provide for x-ray or feroscan to ensure no damage is done to existing structure and infrastructure (rebar, conduits, cables etc.). Before core drilling obtain permission from structural engineer and coordinate schedule with MVH.
6. Penetrations through any assemblies (interior, exterior, fire rated separation, smoke control separations, air control and others) shall be conducted in such a manner that integrity of assemblies is maintained and must be preapproved in writing by an MVH Housing Technician prior to work being conducted as well as meet all applicable codes and standards.
7. Provide a copy of the final electrical inspection certificate to the Electrical Engineer or Owner upon project completion before requesting a final review.
8. Contractor is to confirm sizes and location of existing electric baseboard heaters, including controls, and report any changes in the installation of new baseboard heaters to MVH Housing Technician prior to proceeding with the Work.
9. Warranty
 1. Labour: 1 (One) Year.
 2. Material: Per manufacturer’s specifications.

PART 2 – PRODUCTS

1. Selected products must be submitted to MVH for review and written approval prior to installation.
2. Branch Circuit Panelboards
 1. Panels must be provided with main disconnecting means (main breaker) and must incorporate a means to lock out range branch circuit.
 2. All two and three pole breakers must have common trip type with single handle.
 3. A minimum of 20% spare capacity must be provided for all common area panelboards.
 4. Locate in accessible location.
 5. Arrange circuiting to balance loads for all phases.
 6. All panelboards shall be equipped with panelboard directories clearly identifying all circuits.

3. Wiring Methods
 1. Must follow all applicable codes, standards, and good practice.
4. Wiring Devices
 1. Outlet boxes must be sized to suit the number of conductors. Boxes in concrete must be PVC. Plates must be “nylon” either white or as approved by Electrical Consultant and/or MVH.
 2. All Receptacles shall be tamper-resistant type.
 3. Receptacles, telecommunications and television outlets on common or party walls shall be installed such that the continuity of the fire separation is maintained. All communication outlets must be provided with back boxes.
 4. Provide GFCI electrical outlet at each bathroom vanity and on kitchen countertop in all suites.
 5. Accessible units — Provide convenient kitchen outlets, light, fan and range hood controls at locations accessible from work or seated positions. Refer to CSA B651.
5. Lighting
 1. Adequate illumination must be provided in all areas to levels as recommended by IESNA. Lighting power densities must conform to the requirements of current editions of ASHRAE 90.1, NRCC 54435 “National Energy Code of Canada for Buildings” and other applicable Federal, Provincial & Municipal regulations.
 2. Provide lighting control zones in accordance with current BCBC, current edition of ASHRAE 90.1 requirements for perimeter and non-perimeter spaces.
 3. Only LED type light sources shall be used for all areas. In some circumstances and depending on the feasibility, including financial constraints, other light sources may be considered. Consult with the MVH Housing Technician representatives before final selection of lighting specification.
 4. Lighting specification must include consideration for standardization of lamps, ballasts and other luminaire components to reduce maintenance requirements, standardize components, and ease maintenance programs. Lamp types shall be minimized for maintenance ease.
 5. When lighting is provided in crawl spaces and accessible attic spaces, they must be illuminated utilizing luminaires with mechanical protection of lamps. Lighting design must incorporate means to adequately locate and service equipment, ducting, etc.
 6. All luminaires shall be selected to minimize glare.
 7. Light fixtures in bedrooms and suite corridors must contain two or more lamps.
 8. Lighting products are to be readily available from well-established manufacturer’s and Energy Star labeled (refer to NRCAN), and/or listed in the BC Hydro e-catalogue.

PART 3 – EXECUTION

1. Execute all work in a professional manner, to present a neat mechanical appearance, coordinate and arrange equipment in proper relation with other apparatus, ducts, pipes, etc. and with building consultants, contractors and subcontractors for consistency and completeness. No consideration will be given for extra cost due to lack of coordination between trades.
2. If core drilling of existing structure (floors and slabs) is required, contractor shall provide for x-ray or feroscan to ensure no damage is done to existing structure and infrastructure (rebar, conduits, cables, etc.). Before core drilling, obtain permission from structural engineer and coordinate schedule with MVH.
3. Where accepted, ENT conduit runs shall be installed neatly parallel or at right angles to building lines, must be supported using appropriate methods (tie wire is not appropriate), must be oversized and at no time shall conduit less than ¾” be used.
4. All conduits must be installed concealed in walls, ceiling space or partitions, except where permission is specifically obtained for running on the surface. Where exposed conduits must be installed, they are to be painted to match surroundings.
5. Air leakage between units shall be minimized by using sealant or foam. Electrical receptacles may be treated using air tight drywall type gasket boxes prior to the installation of drywall.
6. Large electrical penetrations (greater than 50 mm diameter) are most effectively treated by boxing out the penetration within the stud cavity, filling with foam, then installing neoprene gaskets around the

perimeter of the box. This is used when a double plate party wall provides the sounds and fire separation and is requires by Code.

7. Accessibility: Ensure lighting and operational controls (e.g., light switches, elevator controls, thermostats, intercom systems) are located at a height easily reachable by someone in a wheelchair.
8. All equipment must remain clean during construction and be thoroughly cleaned to “as new” condition prior to Substantial Performance.

END OF SECTION

Reference Documents

Documents Reviewed / Referenced	Date/ Version of Document (YYYY-MM-DD)	Link to Document
BC Housing Design Guidelines and Construction Standards	2018-03	
BC Housing Design Guidelines and Construction Standards	2019-05	BC Housing Design Guidelines and Construction Standards
Building Accessibility Handbook 2020 (BCBC)	2020	2020_building_accessibility_handbook.pdf (gov.bc.ca)
Rick Hansen Foundation (Website)	2024-03	Homepage Rick Hansen Foundation
The Universal Design Network of Canada (Website)	2024-03	Home - Universal Design Network of Canada
Universal Design – Multi-Unit Residential Buildings (CMHC)	2023-02	Universal Design: A guide for designers, builders and developers of multi-unit residential buildings (cmhc-schl.gc.ca)
Accessible Design for the Built Environment (B651-18 National Standard of Canada)		

Document Revision History

Rev. No.	Description of Change	Created/ Revised By	Date Created/ Revised (YYYY-MM-DD)	Approved By	Date Approved (YYYY-MM-DD)	Signature
1	Initial Version	Jade Hume	2018-08-22	Ravi Chhina	2018-08-22	
2	a) Renamed document to include Common Areas b) Added Document Revision History section c) Addition of Accessibility and Adaptability intent and specifications throughout the document. d) Changed all instances of MVHC to MVH e) Added Reference Documents section f) Renamed “Construction Documents” Section to include “MVH Renovation” and removed “Section 4” g) Added Accessibility and Adaptability Section	Jade Hume	2024-03-10			



Metro Vancouver Housing Housing Accessibility Needs Survey

FINAL REPORT

February 22, 2024



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BACKGROUND & OBJECTIVES

Metro Vancouver Housing (MVH) is one of the largest non-profit housing providers in the region, providing over 3,400 rental homes across 49 sites, serving close to 10,000 residents. MVH provides homes primarily to families, seniors and people with disabilities who have low to moderate incomes.

MVH is committed to providing housing that is inclusive for all residents. During building renewal projects and unit turnovers, the organization has the opportunity to incorporate updates to enhance accessibility in its existing housing.

As such, MVH wants to identify, and to the best of its ability, mitigate or remove accessibility barriers for its residents. Additionally, having a better understanding of what improvements can be made during MVH building renewals and unit turnovers can inform the organization's Unit Renovation Standards.

To meet the aforementioned objectives, MVH commissioned Sentis Research to conduct a survey with its current residents.

A total of 669 MVH tenants participated in the survey (624 online, 39 on paper and 6 over the phone).

- Tenants were provided with three options to complete the survey: online, over the phone, or on paper.
- Tenants were notified of the survey in several ways:
 - MVH mailed a notification letter to tenants via Canada Post. The letter included a link & QR code to the online survey, Sentis' toll-free phone number for those who wanted to do the survey by telephone and MVH contact information to request a paper copy of the survey. (Paper surveys were included in the mailings to tenants of Cedarwood Place, Inlet Centre [both seniors' properties] and Kelly Court [a property with all fully accessible units]).
 - Those with an email on file were also sent an email invitation from MVH, which included a link to the online survey.
 - Posters with all relevant information (as per the mailed letter) were placed in key common areas at all MVH housing sites. (An informal discussion of the survey, in terms of the importance of participating and how to participate, also took place at a holiday event at Cedarwood Place.)
- The survey was open for participation from November 21st to December 11th, 2023.
- To ensure the survey results were an accurate representation of all MVH tenants, mathematical weighting was applied by household composition and region.
- Survey results are subject to margins of error. The margins of error at the 95% level of confidence for the total sample size of 669 is $\pm 4\%$.

Note: The regions in this report are defined as follows: North East: Burnaby, Coquitlam, Maple Ridge, Port Coquitlam and Port Moody; North West: North Vancouver City and Vancouver; South East: New Westminister and Surrey, South West: Delta and Richmond.

The abbreviation HH used in this report refers to Households.

The background of the right side of the page is a dark blue architectural drawing. It features various lines, dimensions (e.g., 2560, 2810, 1250, 250, 1185, 2500, 3175, 3100, 830, 40, 1030, 1480, 380, 150, 1010), and circled numbers (2, 5, 6, 3).

METHODOLOGY



HIGHLIGHTS

What You Need To Know

HIGHLIGHTS

Most Helpful Accessibility Improvements

From a list of 17 accessibility improvements that MVH could make to its existing buildings, tenants identify five as being the most helpful for their households. Two of the five involve adding grab bars in the bathroom, something that seniors (i.e., tenants 65 and older) are especially interested in.

Leveling out doorway thresholds is an upgrade which households that include someone with a physical disability and/or uses a mobility aid deem as particularly helpful. Cabinets/doors/windows that can be operated with one hand and glow-in-the-dark light switches also both make the top five and are considered most helpful by households that have dependents.



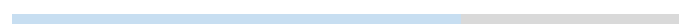
71% Grab Bars in Showers / Bathtubs



69% Glow-in-the-Dark Light Switches



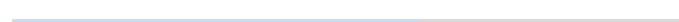
67% Level Doorway Thresholds



65% One Hand / Closed Fist Operatable Cabinets, etc.



61% Grab Bars in Toilet Areas

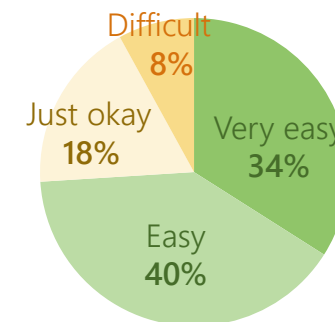


Moving to More Accessible Units

Tenants express mixed feelings about possibly moving to another unit within MVH that has more accessibility features – 41% say they would be likely to consider it, 30% would not consider it and 29% are not sure or say they might consider it.

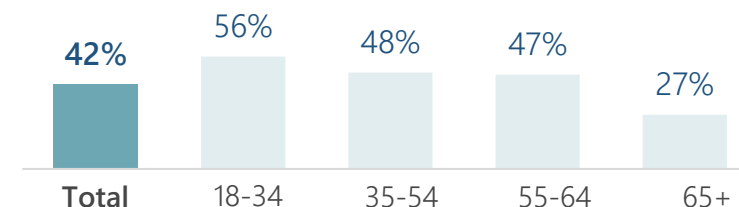
On one hand, this mix of opinions makes sense since most tenants (74%) say they currently have no difficulty getting around and carrying out their day-to-day activities in their current unit and building complex. However, even among the 26% who say getting around is just okay or difficult, their feelings about moving units are also mixed.

Accessibility Rating of Current MVH Housing
(getting around & carrying out day-to-day activities)



What seems to be playing into this is age, with older tenants (65 and older), despite being more likely to have some difficulty getting around or navigating their building, being the most adverse to moving and seemingly wanting to age in place.

Would Consider Moving to a Unit with More Accessibility Features by Tenant Age



HIGHLIGHTS

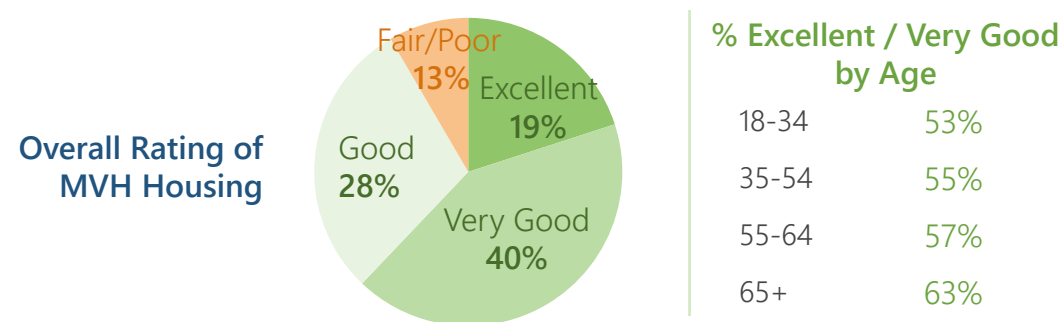
When told about MVH's fully accessible units, not only have most tenants never heard of them (only 36% had), but future interest is even more mixed than to the general idea of moving to a unit with more accessibility features. Consideration of MVH's fully accessible units does increase as the time when tenants would move is expanded (e.g., in 1 to 3 years, in 4 to 9 years, or in 10 or more years). However, even as far out as 10 or more years only 31% of tenants say they would be likely to consider moving to a fully accessible unit. Further, the only notable difference by age is that tenants 55 to 64 are the most likely to say they would consider moving to one of these units in 10 or more years (39% versus broadly 30% of all other age groups).

Understanding MVH Tenants Profiles & the Survey Results

It's easy to assume that seniors (tenants ages 65 and older) would be the most interested in accessibility upgrades or moving to a unit with more accessibility features. Seniors are the most likely to report having a person with a physical disability of some kind in the household (47% vs 29% overall) and to report that someone in their household uses a mobility aid (33% vs 19% overall, most commonly a cane or a walker). Finally, they are also the most likely to say that getting around their unit and the building complex is not easy (31% vs 26% overall).

However, despite their physical challenges, seniors don't express more interest than younger tenants in most of the various accessibility improvements presented in the survey, with the exception of grab bars in the bathrooms for showers/bathtubs and toilet areas, which they widely deem as helpful.

Another side note about seniors is that, again, despite their physical challenges, they are in many ways one of the most positive tenant groups. They are the most apt to give MVH top marks for the housing provided to them and the least likely to have complaints about their housing or the MVH organization/staff.



What could be partly responsible for their positivity is that the majority of seniors do not have any dependents in their household. That is, they only have to worry about themselves (or possibly a partner), while many younger tenants, especially those in the 35 to 54 age bracket, have dependents. Further, singles with dependents are the most likely to have someone in their household with a mental disability or who is neurodivergent. Meanwhile, seniors are the least apt to report that someone in their household has one of these conditions.

So, while age does play a role, it is not the only factor involved when it comes to which accessibility improvements are considered to be the most helpful; instead, it is a combination of several factors: age, if there are any household members with disabilities, what those disabilities are, whether they use a mobility aid, if there are dependents in the household, and to a certain degree, household composition.



SUMMARY OF FINDINGS

Metro Vancouver Housing

- Overall & Accessibility Ratings



Overall Rating of MVH Housing

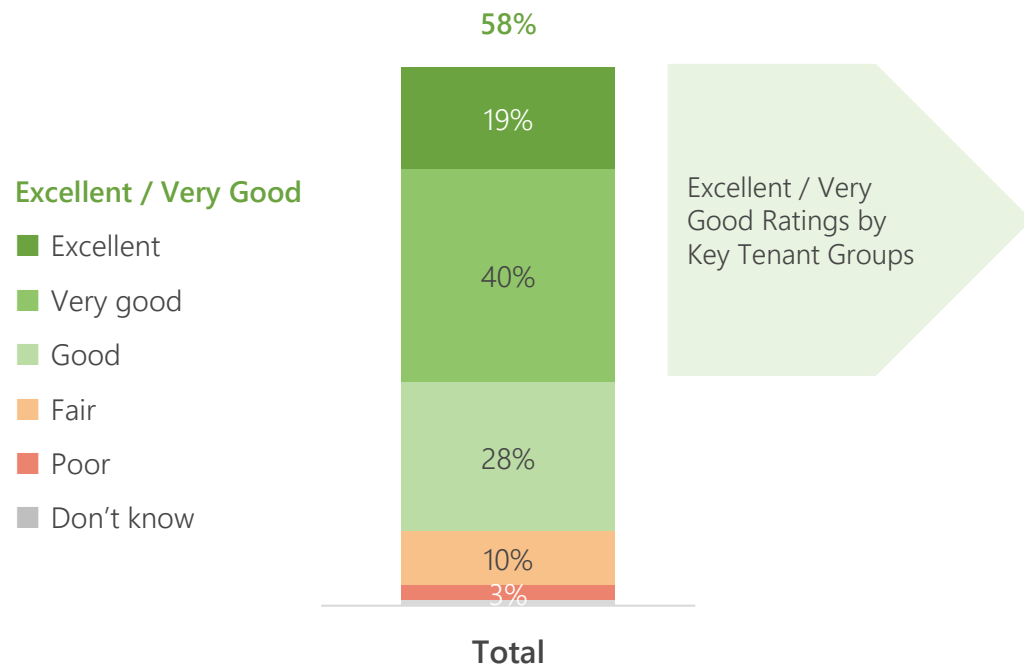
MVH tenants are generally happy with the housing provided to them.

Almost 60% of tenants give top marks to their housing (i.e., they rate it as excellent or very good) and another 28% rate it as good.

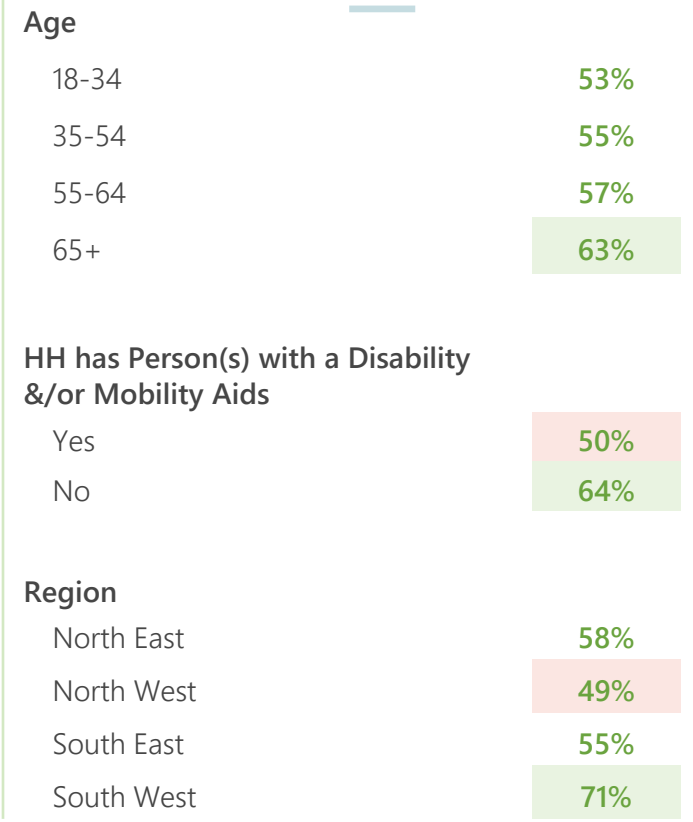
Older tenants (65+) and households where no one has a disability or uses a mobility aid tend to give the most positive ratings of their housing.

Regionally, it is tenants in the South West who are the happiest with their housing.

Overall Rating of MVH Housing



Excellent / Very Good Ratings by Key Tenant Groups



■ Relatively higher than others ■ Relatively lower than others

Unprompted Reasons for MVH Overall Housing Ratings

Housing being clean and well maintained and responding to problems or maintenance requests quickly are why tenants are highly satisfied with the housing MVH provides. Being affordable, well managed and conveniently located are also reasons tenants rate their housing positively. For the 28% of tenants who rate their housing as 'good' (rather than as very good or excellent), while they also say the rent is fair and affordable, their top comment is that the housing needs updating, some maintenance and/or cleaning.

While few tenants (only 13%) rate their housing as fair or poor, the primary reason is because they feel it needs updating, more maintenance and/or cleaning. Tenants in the North West and South East who rate their housing as fair or poor are particularly likely to say it needs updating, maintenance and/or cleaning.

What Makes Metro Vancouver Housing Excellent / Very Good	
Base: Those ranking MVH as 'excellent' or 'very good'	366
It's clean / well maintained	28%
Problems / maintenance requests are responded to quickly	19%
It's affordable / the rent is fair	15%
Good building management	15%
It's in a convenient location / like where it is located	15%
I like my unit (it's large / new / well laid out)	12%
It's good / great / no complaints	10%
It's safe / I feel safe here	10%
Staff are friendly / helpful / like the staff	8%
I like my neighbours	6%
It's quiet / in a quiet area	6%
It needs updating / maintenance / cleaning	6%

What Makes Metro Vancouver Housing Good	
Base: Those ranking MVH as 'good'	179
It needs updating / maintenance / cleaning	27%
It's affordable / the rent is fair	20%
It's clean / well maintained	12%
Problems / maintenance requests are not responded to quickly	11%
It's in a convenient location / like where it is located	9%
Problems / maintenance requests are responded to quickly	9%
Issues with neighbours / other tenants	7%
I like my unit (it's large / new / well laid out)	6%
It's good / great / no complaints	6%
Issues with heating / insulation / warmth	6%
We've had issues with pests	5%

What Makes Metro Vancouver Housing Fair / Poor	
Base: Those ranking MVH as 'fair' or 'poor'	84
It needs updating / maintenance / cleaning	49%
Problems / maintenance requests are not responded to quickly	20%
We've had issues with pests	12%
Issues with heating / insulation / warmth	10%
Units / buildings need more accessibility features	8%
Need more / better amenities and services	7%
It's affordable / the rent is fair	6%
It's expensive	6%
Staff are rude / not helpful	6%
Good building management	5%
Issues with neighbours / other tenants	5%

Accessibility of Current MVH Housing (Unit & Housing Complex)

Most MVH tenants (74%) say it is easy or very easy for them to get around and carry out daily activities in their unit and at the housing complex.

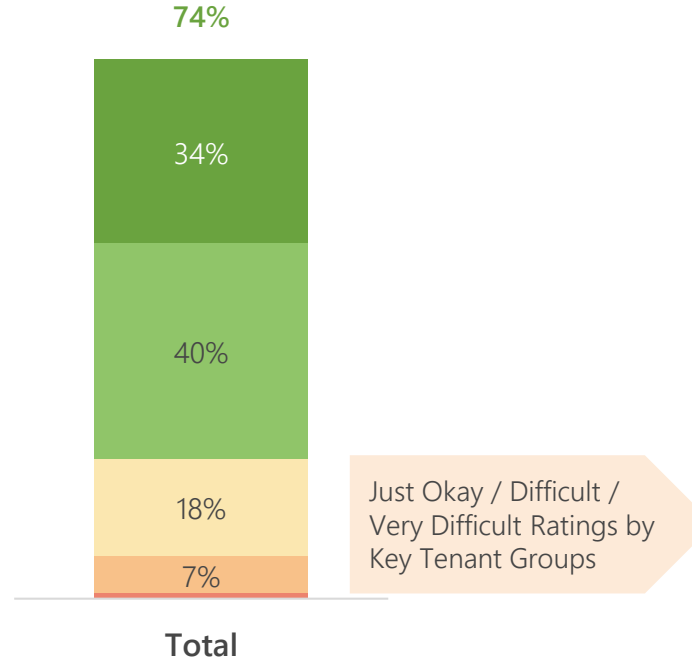
Ease of getting around (or accessibility) is highly tied to age - younger tenants find it easier than older tenants.

If the household has anyone with a disability and/or who uses a mobility aid they find it more challenging to get around and carry out activities, especially if a mobility aid is being used.

Very Easy /Easy

- Very easy
- Easy
- Just okay
- Difficult
- Very difficult
- Don't know

Accessibility Rating of Current MVH Housing



Just Okay/ Difficult/ Very Difficult Ratings by Key Tenant Groups

Age

18-34	18%
35-54	24%
55-64	25%
65+	31%

HH has Person(s) with a Disability

Yes	37%
No	16%

HH has Person(s) Using Mobility Aids

Yes	46%
No	19%

■ Relatively higher than others ■ Relatively lower than others

Unprompted Suggestions to Improve Ease of Getting Around

For tenants who rate the accessibility of their unit or housing complex as 'just okay', 'difficult', or 'very difficult', there are two key improvements that they feel would make it easier for them to get around – remote entry on doors because they tend to be too heavy and fewer stairs (or whatever can be done to eliminate using stairs, so elevators, ramps, etc.). While heavy doors is primarily mentioned by those in apartments, having too many stairs is a larger issue for those in townhouses (however, apartment dwellers also mention it). Secondary suggestions to improve accessibility include repairing sidewalks and outside grounds, more convenient parking, better lighting, and offering more ground floor units.

Among Those Rating Accessibility as Just Okay

Base: Those rating accessibility as 'just okay'	104
Doors are heavy / there should be remote / fob entry	17%
We have too many stairs / I have difficulty with stairs	17%
Sidewalks repaired / outside grounds in better condition	13%
More parking / more convenient parking	11%
Improved lighting	10%
More / improved railings and hand rails	9%
An elevator / a working elevator	8%
In-suite laundry facilities	7%
More / easier to access and use bathrooms	7%
Ramps / more ramps	6%
Improved access to basement / parking garage / common areas	5%
Better sidewalk and parking snow removal / cleaning / salting	5%
Wider stairs / less steep stairs	4%
Better maintenance / condition of units and buildings (general)	4%
Wider doorways	4%

Among Those Rating Accessibility as Difficult / Very Difficult

Base: Those ranking accessibility as 'difficult' or 'very difficult'	43
We have too many stairs / I have difficulty with stairs	21%
Doors are heavy / there should be remote / fob entry	20%
More wheelchair accessible / friendly	15%
Having a ground floor unit / single floor unit	10%
An elevator / a working elevator	9%
More / easier to access and use bathrooms	8%
Less carpeting / more laminate and hardwood flooring	8%
More parking / more convenient parking	6%
Better maintenance / condition of units and buildings (general)	5%
Improved lighting	4%

Overall Rating of MVH Housing by Current Accessibility

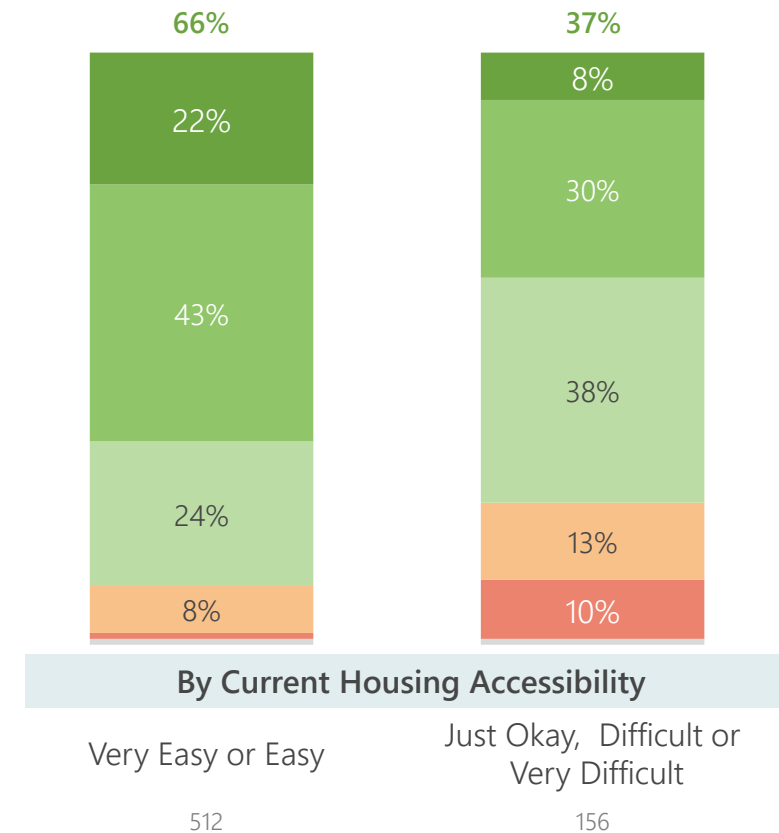
Tenants who feel it's easy or very easy to get around their unit and housing complex are happier with their housing overall than those who face some level of accessibility challenges. **While this in itself is not surprising, the difference in overall satisfaction with housing provided by MVH is very large between the two groups.**

Two-thirds of tenants who find their unit and housing complex to be accessible (i.e., they say it is easy or very easy to get around) give top marks to their housing overall. Meanwhile, among those who face accessibility challenges only 37% give it top marks.

Excellent / Very Good

- Excellent
- Very good
- Good
- Fair
- Poor
- Don't know

Overall Rating of MVH Housing





SUMMARY OF FINDINGS

Accessibility Improvements & Upgrades

Unprompted Suggestions to Improve Accessibility

When asked what tenants would like to see to offered by MVH to improve accessibility, no one suggestion dominates.

Topping the list is automatic or keyless doors (15% mentioning), followed by more bathrooms or more bathrooms on the main floor (12%).

Repairing and maintaining outside sidewalks and pathways is the top suggestion among those in households where at least one person uses a mobility aid (15%), but overall, is mentioned by only 10%.

Accessibility Improvements Tenants Would Like to See Offered	
Base: among those leaving a suggestion (64%)	306
Automatic / keyless doors	15%
More bathrooms / bathroom on main floor	12%
Repair / clean / maintain outside sidewalks and pathways	10%
Laundry facilities in-suite	7%
More / improved elevators	7%
More ramps	7%
Less stairs / ground floor unit	7%
More / better parking	7%
Better wheelchair / general accessibility	7%
More hand rails / grab bars in the bathroom	6%
Better lighting	6%
Wider doorways / rooms / hallways	6%
Make garbage / recycling facilities more accessible	5%
More hand rails / grab bars (general)	5%

“

"If someone experiences a physical handicap, they would be challenged to get out of the building in an emergency. The only ramp access is the front door and if the elevator is inaccessible, they have no other way out. Would also suggest fob system and electric doors for ease, convenience and safety."

“

"There needs to be automatic doors. We have a number of people in our building who are not able bodied, and getting in and out of the building, through the hall doors, and to the laundry room, can be very challenging for them."

“

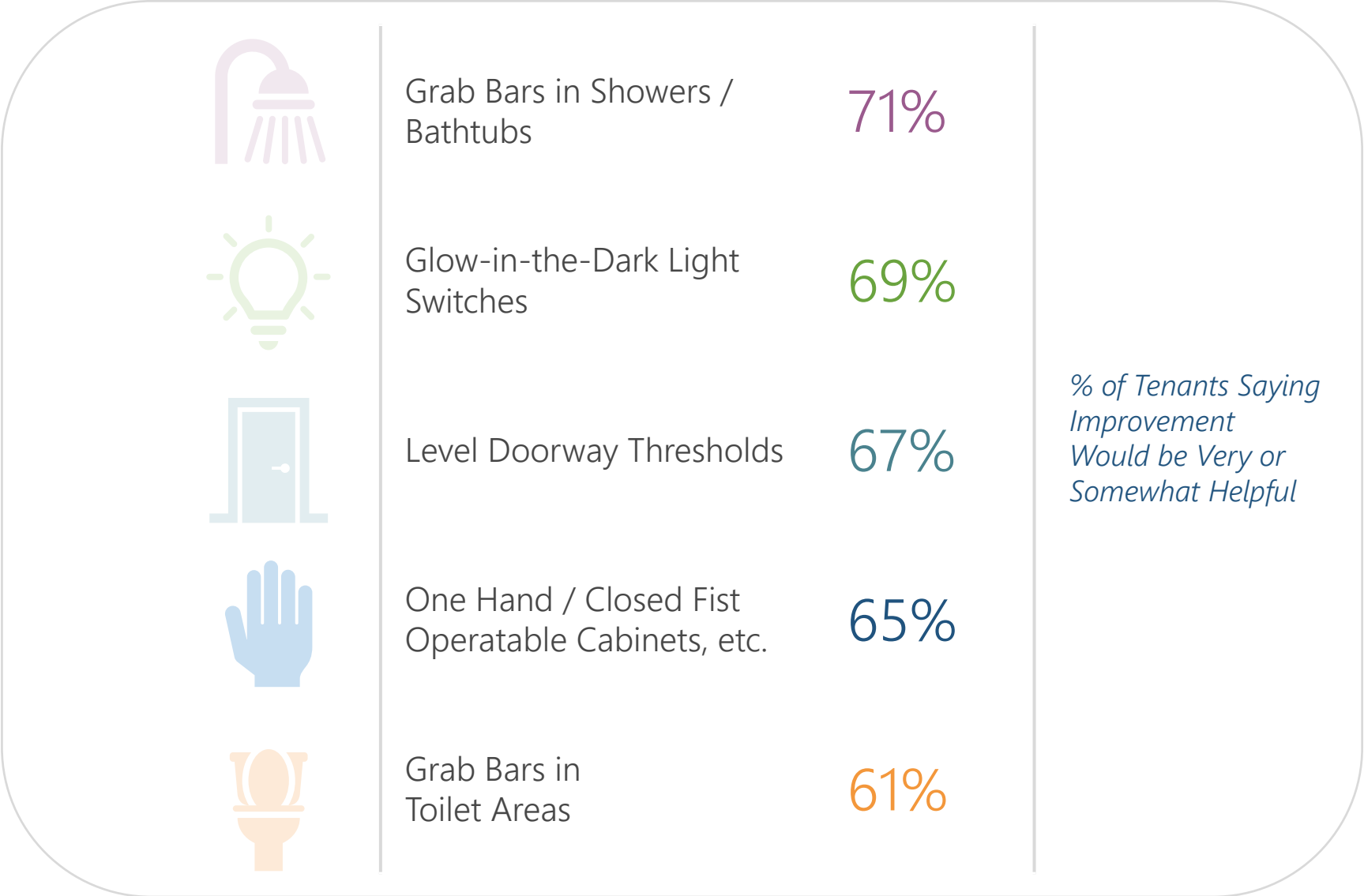
"Mostly better underground parking access or above ground parking options. In suite laundry would also be very helpful. On high pain days it's a lot to carry laundry in and out such a distance."

Top Accessibility Improvements Tenants Say Would Be Most Helpful

(From a list of 17 Options)

From a list of 17 accessibility options that MVH could make to its existing buildings, five stand out as they are the ones that tenants say would be the most helpful to their household.

Two of the top five involve upgrading bathrooms (i.e., putting in grab bars) and another two (i.e., level doorway thresholds and one hand or closed fist operatable cabinets, doors etc.) fall under physical or mobility aids.

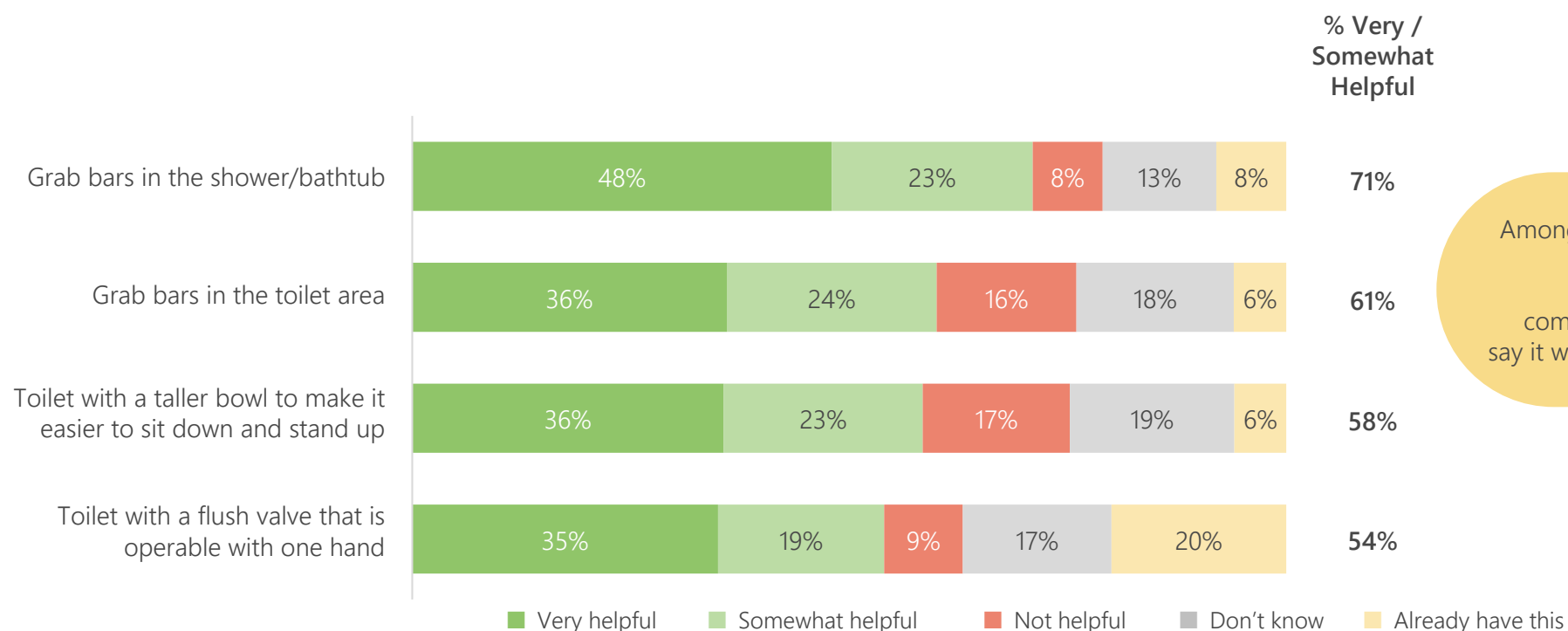


Helpfulness of Washroom-Specific Accessibility Improvements

Along with the majority of tenants feeling that grab bars in the shower/bathtub and the toilet area are at least somewhat helpful to their households, another six-in-ten also feel toilets with a taller bowl would be helpful. Toilets with flush valves that can be operated with one hand are considered helpful by 54% of tenants; however, 20% say this improvement was already in their unit when they moved in.

Across all possible washroom-specific improvements, no more than 17% of tenants say any of these upgrades would not be helpful. More often, tenants are saying they are not sure if the upgrade would help their household.

Seniors (those 65 and older) consider grab bars in showers, bathtubs and in toilet areas improvements to be particularly helpful for their households but are less interested in or less sure about toilets with a taller bowl and toilets with a flush valve that can be operated with one hand.



Helpfulness of Washroom-Specific Accessibility Improvements

(By whether anyone in the HH uses a mobility aid or has a physical disability)



The washroom-specific accessibility features that are especially appreciated in households where at least one person is reliant on a mobility aid are grab bars in the toilet area and having toilet flush valve that is operable with one hand.

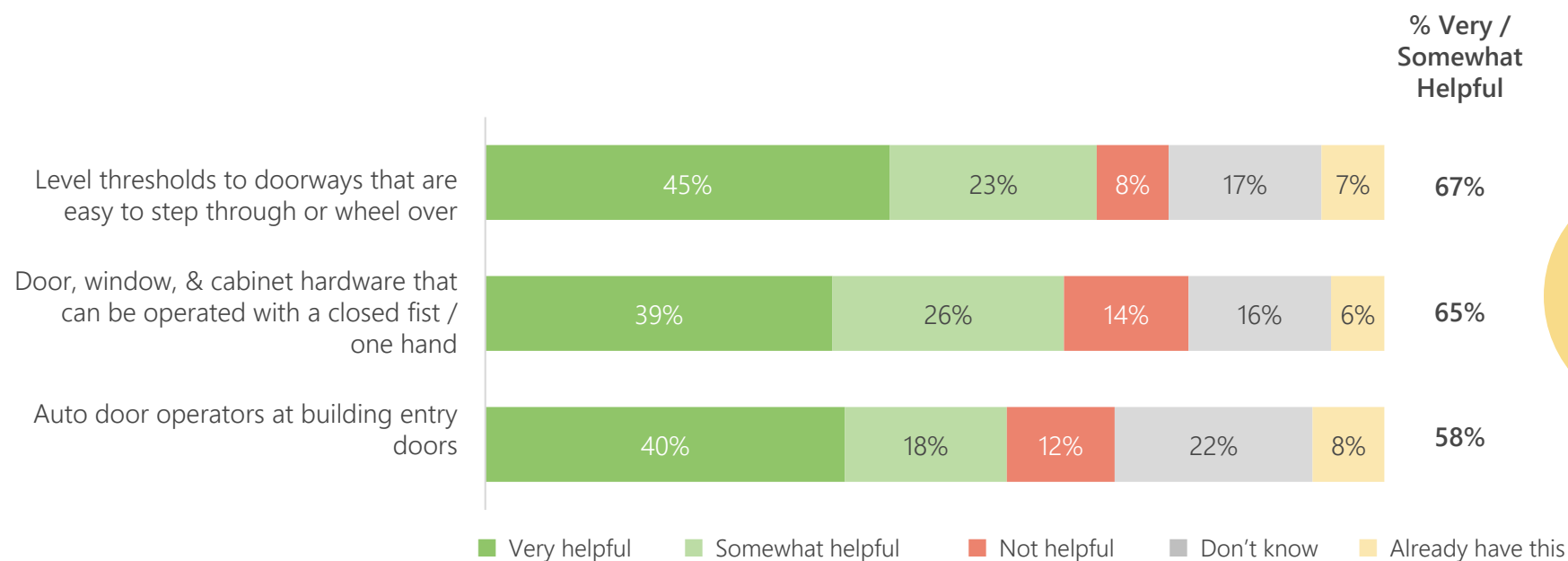
Grab bars in the shower/bathtub area are considered helpful by 71% of households overall. However, households with persons using mobility aids or with physical disabilities are more likely to consider them 'very' rather than 'somewhat' helpful.

Washroom-Specific Improvements	% Rating as Very / Somewhat Helpful		
	Mobility Aids Used in HH		Person(s) with a Physical Disability in HH
	Yes	No	
Base	108	512	171
Grab bars in the shower / bathtub	67%	71%	71%
Grab bars in the toilet area	66%	58%	64%
Toilet with a taller bowl to make it easier to sit down and stand up	64%	56%	61%
Toilet with a flush valve that is operable with one hand	58%	54%	50%

■ Relatively higher than others

Helpfulness of Physical / Mobility Accessibility Improvements

Two-thirds of MVH tenants say that having level threshold doorways and doors/windows/cabinet hardware that can be operated with a closed fist or one hand would be helpful to their household. Slightly fewer feel the same about automatic doors at building entries. Again, about one-in-five tenants are unsure if these types of upgrades would be helpful to their households.



Among tenants saying they already have the **physical / mobility** improvement in their unit / complex, most (93%-97%) say it was there when they moved in

Helpfulness of Physical / Mobility Accessibility Improvements

(By whether anyone in the HH uses a mobility aid or has a physical disability)



Level doorway thresholds and automatic door operators at building entries are considered relatively more helpful by households where someone has a disability and/or uses a mobility aid and by those who feel that getting around their unit and building complex is at best, just okay.

Further, the latter group (i.e., those who have challenges getting around) is especially likely to feel that all three accessibility improvements would be a helpful upgrade for their household.

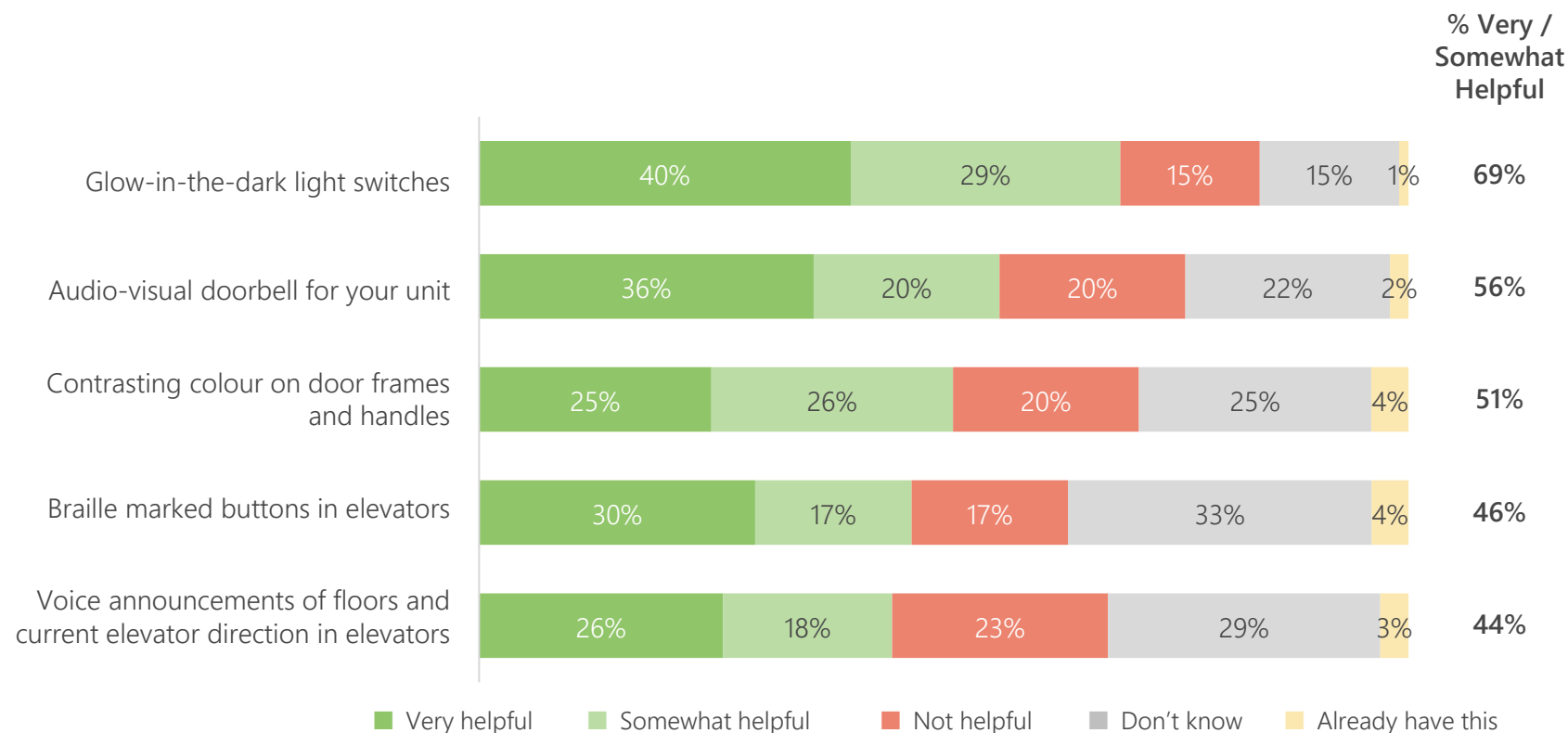
Physical / Mobility Improvements	% Rating as Very / Somewhat Helpful			
	HH has Person(s) with a Disability &/or Mobility Aids		Ease of Getting Around Unit & Complex	
	Yes	No	Very Easy / Easy	Just Okay / Difficult / Very Difficult
Base	270	399	512	156
Level thresholds to doorways that are easy to step through or wheel over	72%	64%	63%	80%
Door, window, & cabinet hardware that can be operated with a closed fist / one hand	67%	64%	62%	73%
Auto door operators at building entry doors	61%	57%	55%	68%

■ Relatively higher than others

Helpfulness of Sensory Accessibility Improvements

Of the five sensory accessibility improvements presented to tenants, glow-in-the-dark light switches are considered the most helpful. For the remaining four possible upgrades, at best, just over half of tenants think they would be helpful to their household (56% saying that about audio-visual doorbells for their unit), while as few as 44% think they would help their household (referring to voice announcements of floors and current elevator direction in elevators).

For the latter four possible upgrades, a considerable proportion of tenants (22% to 33%) are not sure how they could benefit their household indicating that more detailed information might be needed.



Among tenants saying they already have the **sensory** improvement in their unit / complex, most or all say it was there when they moved in

Helpfulness of Sensory Accessibility Improvements

(By whether anyone in the HH uses a mobility aid or has any disability)

Generally, there are few differences in the perceived helpfulness of sensory accessibility improvements between household types.

That is, households where at least one person has a disability and/or uses mobility aids are no more likely to consider sensory upgrades helpful to them than households where no one has a disability and/or uses a mobility aid.

In fact, the latter group (i.e., households where no one has disability or uses a mobility aid) express more interest than their counterparts in glow-in-the dark light switches and audio-visual doorbells.

Sensory Improvements	% Rating as Very / Somewhat Helpful	
	HH has Person(s) with a Disability &/or Mobility Aids	
	Yes	No
Base	270	399
Glow-in-the-dark light switches	66%	71%
Audio-visual doorbell for your unit	54%	57%
Contrasting colour on door frames and handles	50%	51%
Braille marked buttons in elevators	45%	47%
Voice announcements of floors and current elevator direction in elevators	45%	44%

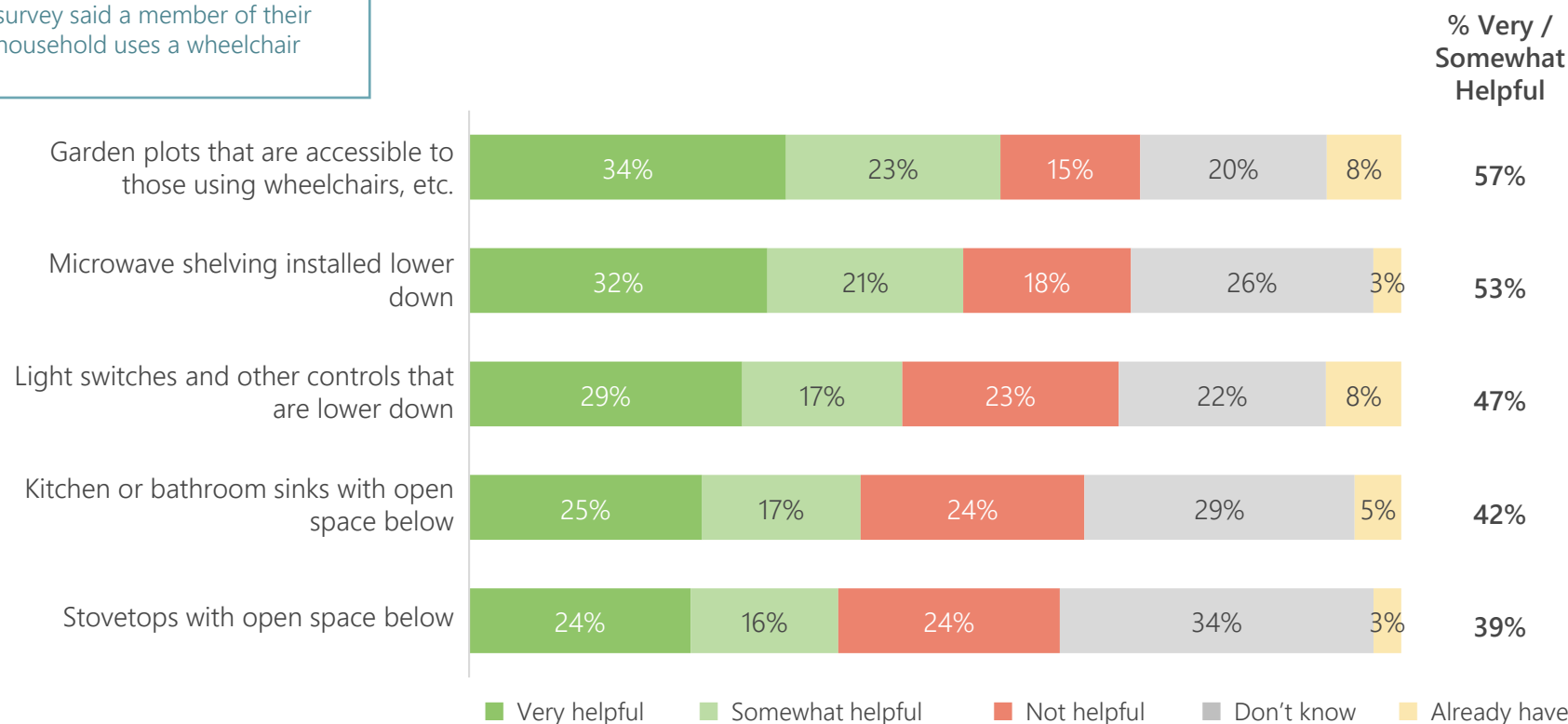
■ Relatively higher than others

Helpfulness of Wheelchair-Specific Accessibility Improvements

The five wheelchair-specific accessibility improvements that MVH could install in existing buildings are considered by tenants to be moderately helpful. Garden plots that are wheelchair accessible are thought to be the most helpful (57% think so) while stovetops with open space below for a wheelchair are considered the least helpful (39%). For all five improvements, just as many tenants, if not more, are unsure if the upgrade would be helpful rather than saying it wouldn't be, which may indicate that more specifics about these types of upgrades and their benefits is needed.



3% of tenants responding to the survey said a member of their household uses a wheelchair



Among tenants saying they already have the **wheelchair-specific** improvement in their unit / complex, most or all (90%-100%) say it was there when they moved in

Helpfulness of Wheelchair-Specific Accessibility Improvements

(By whether any in the HH uses a mobility aid)

Households that include at least one person who uses a mobility aid generally feel many of the wheelchair-specific accessibility improvements would be more helpful compared to households without those reliant on such aids. However, the perceived helpfulness of these upgrades is not highly different between these two groups.

Further, light switches/controls placed lower down are considered equally helpful by both tenant groups.

Wheelchair-Specific Improvements	% Rating as Very / Somewhat Helpful	
	Mobility Aids Used in HH	
	Yes	No
Base	108	512
Garden plots that are accessible to those using wheelchairs, etc.	59%	56%
Microwave shelving installed lower down	58%	52%
Light switches and other controls that are lower down	47%	46%
Kitchen or bathroom sinks with open space below	48%	41%
Stovetops with open space below	46%	37%

 Relatively higher than others

Additional Accessibility Improvement Comments

The complete listing of comments provided by tenants can be found in the Appendix of this report.

“

*"1. Door knob gripper or lever handle to easily open doors without having to grip or twist the knob.
2. Install a motion detection light along the dark pathway. It would be beneficial during winter time.
3. If possible, fire alarms be installed closer to or near the kitchen."*

“

"Recently you have installed new floor and new kitchen cupboards/countertop, appliances plus shelving. Very pleased with these new changes. I find though that bi-fold closet doors are annoying and would rather just leave them off and install curtains on a track system."

“

"Sound dampening. There are many disabilities, some include focus and sensitivity issues, sound is incredibly important. We have five senses, our housing providers can't do much to alter smells, we can control lights, texture is provided, but sound; we tenants need help with this."

“

"Replace carpet/rubber tread stair treads as they are not properly installed and are a tripping hazard. New railings in the stairways to replace the metal ones that have sharp corners that have cut my hands and clothing on multiple occasions."

“

"As my vision becomes worse, I feel it would be helpful to have a light switch for the main open area right outside the bedroom door instead of having to navigate in the dark across a room. In the kitchen, lower cupboards everywhere. I have to ask my daughter to help me get anything above the low shelf."

“

"Broken cement sidewalks and in yards aren't safe and smooth cement would be beneficial."

“

"Even though I don't personally need some of these accessibility improvements, I may have visitors or relatives that do. They cannot visit without them so I'd like to advocate for adopting a universal design in all MVHC buildings."

“

"Better lighting around entrances / balconies and outside. Better elevator emergency system. Ambulance cannot use our elevator, stretcher and sit up chair don't fit inside."

“

"Have more units that are wheelchair accessible available so we can help our aging parents as well. I have requested for my dad but nothing was available. It is very hard and we are still waiting."

“

"Bathroom sink with one lever for people with arthritis or physical disability."

Requests For Unit Accessibility Upgrades

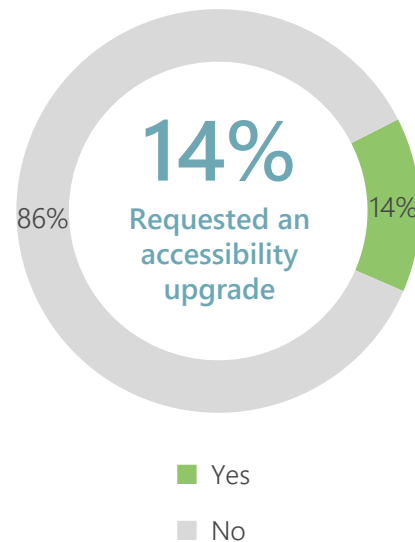
Fourteen percent of MVH tenants report ever requesting accessibility upgrades for their units.

However, households where someone uses a mobility aid and households where someone has a physical disability are more likely to have done so (36% and 28%, respectively).

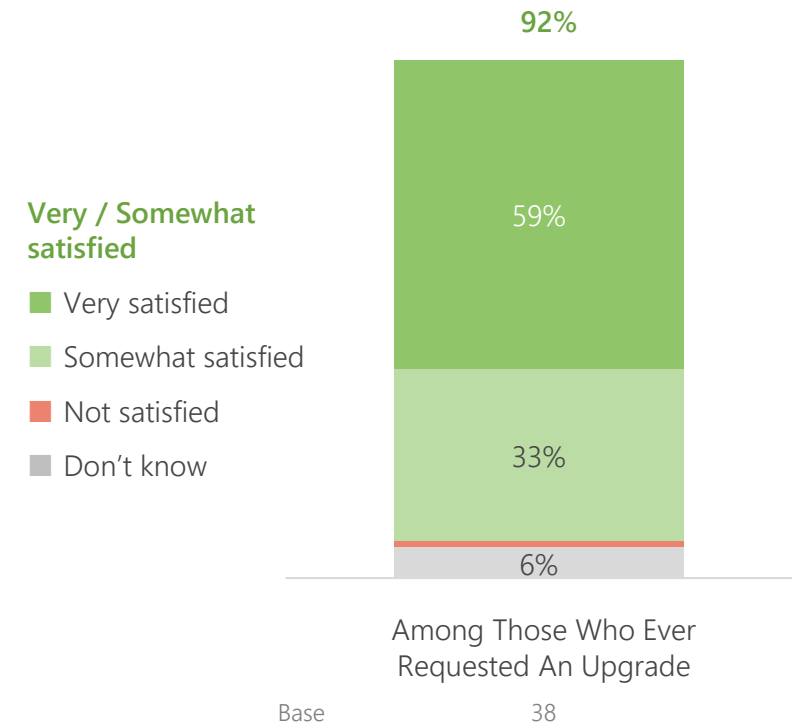
Among the group of tenants who say getting around their unit or outside the complex is just okay for them or difficult, only 17% have ever requested an upgrade.

For those that have made the request for an accessibility upgrade, almost all say they are satisfied with it.

Ever Requested an Accessibility Upgrade for Unit



Satisfaction with Accessibility Upgrade





SUMMARY OF FINDINGS

Future Moving Considerations

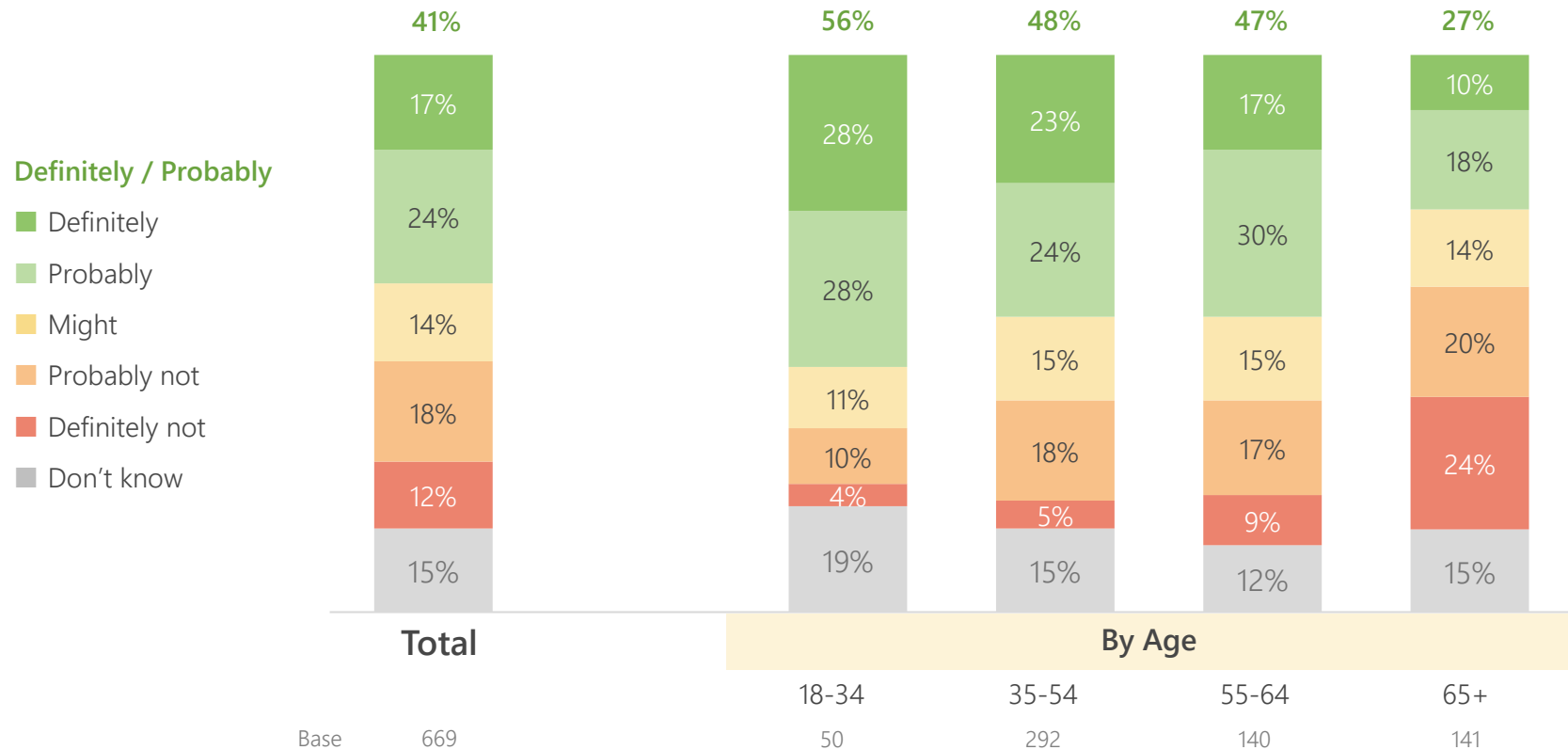
Likelihood of Moving if Accessibility Needs Not Being Met

Less than half of tenants (41%) say they would consider moving to another housing unit with more accessibility features if their accessibility needs were not being met in their current unit.

By age, more than half of younger tenants (ages 18-34) would consider moving to a more accessible unit that would better suit their accessibility needs (56% definitely or probably would).

By contrast, seniors (65+) are least apt to consider moving to more accessible housing unit even if their accessibility needs were not being met in their current home (only 27% say they definitely or probably would move). Further, one-quarter of seniors say they definitely would not consider moving to a more accessible unit.

Would Tenants Consider Moving to Another Housing Unit with More Accessibility Features?



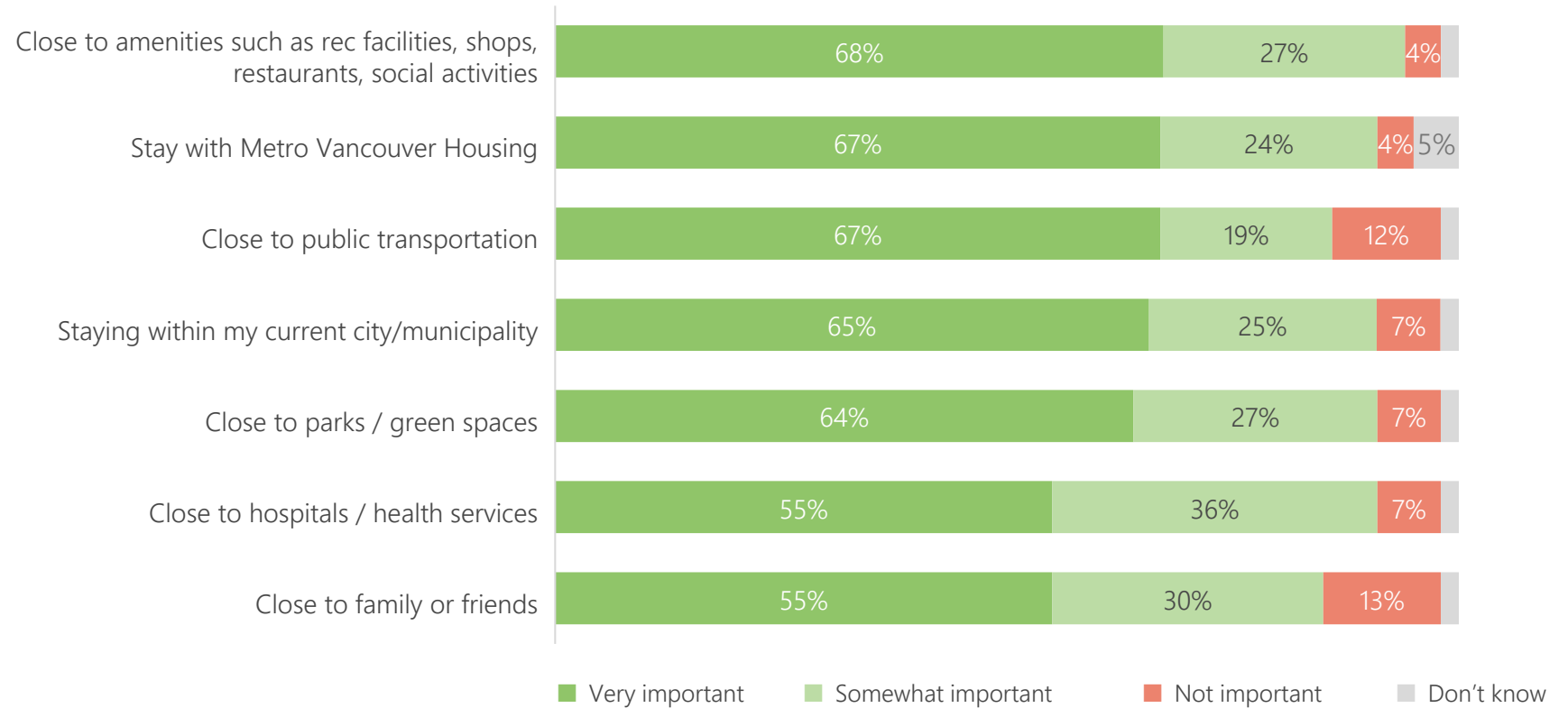
Importance of Factors When Deciding to Possibly Move (i.e., Move to another unit or another complex)

Tenants were presented with a list of 7 factors, and asked to rate how important each one is when deciding to possibly move to another housing unit or complex.

The most important factors for tenants when deciding whether to move is staying close to amenities and staying with MVH.

What is of relatively less importance to tenants is staying close to family and friends and to hospitals and health services (although the latter is important to seniors and those with disabilities and/or using mobility aids).

See the following slide for details on which tenant groups place the greatest importance on each factor.



Who Places the Most Importance on Factors that Impact Deciding to Possibly Move

The importance of each factor when deciding to move to another housing unit or complex varies by tenant group.

The table to the right shows which tenant groups place the highest importance on each factor.

	% Rating as Very Important	
	Total	Tenants Who Place the Most Importance on this Factor
Close to amenities such as rec facilities, shops, restaurants, social activities	68%	76% Tenancy = 3-5 years 73% Live in an apartment 73% HH inc. those with a disability/mobility issue 72% South East tenants 72% Middle-aged tenants (35-54)
Close to public transportation	67%	78% North West tenants 75% Tenancy <5 years
Stay with Metro Vancouver Housing	67%	77% South East tenants 73% Single, with dependents 71% Older tenants (65+) 70% Tenancy = < 10 years 70% HH inc. those with a disability/mobility issue
Staying within my current city / municipality	65%	73% HH inc. those with a neurodiversity condition 73% North West tenants
Close to parks / green spaces	64%	78% HH inc. those with a neurodiversity condition 77% Tenancy = 3-5 years 69% Middle-aged tenants (35-54)
Close to hospitals / health services	55%	65% HH inc. those with a disability/mobility issue 65% Older tenants (65+)
Close to family or friends	55%	64% Single, without dependents 63% HH inc. those with a physical disability 63% South West tenants

MVH Fully Accessible Housing Units | Awareness & Consideration

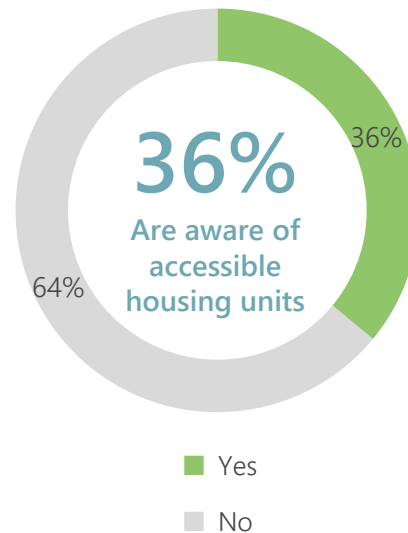
Over one-third of tenants (36%) are aware of MVH's fully accessible housing units.

Tenants who are the most likely to report being aware of these units include:

- Those who previously requested an accessibility upgrade (50%)
- Younger tenants (48%)
- Households where someone uses a mobility aid (44%)
- Tenants in the North West (44%)
- Newer tenants (been there 5 years or less) (43%).

When asked if they would consider moving to a fully accessible unit in the future, the predicted likelihood that tenants would move increases with time. That is, twice as many tenants predict they would be likely to move in 10 or more years compared to the next 1 to 3 years. That said, even at 10 or more years, only 31% feel they would be likely to consider it.

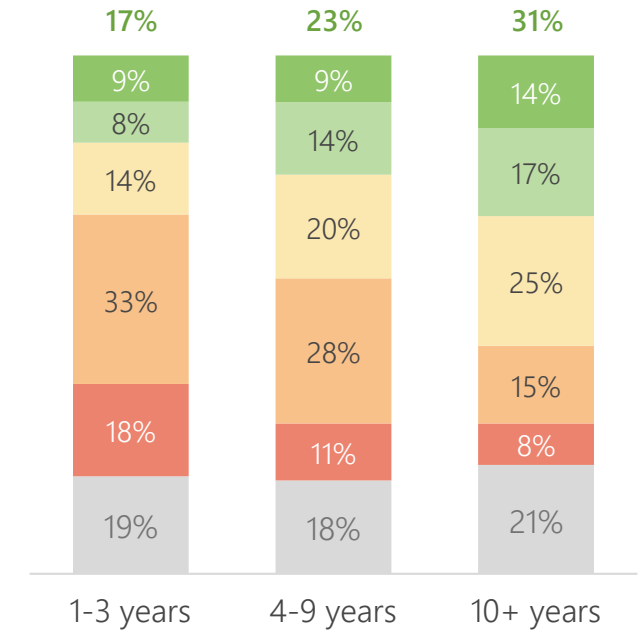
Awareness of Metro Vancouver Housing's Fully Accessible Units



Likelihood of Considering a Move to an Accessible Housing Unit in the next...

Definitely / Probably

- Definitely
- Probably
- Might
- Probably not
- Definitely not
- Don't know





APPENDIX

Profiles




TENANT PROFILES | Demographics



	Region				
	Total	North East	North West	South East	South West
Base	669	210	150	141	167
Age					
18-24	1%	1%	1%	0%	<1%
25-34	6%	9%	6%	4%	4%
35-44	16%	16%	21%	13%	14%
45-54	17%	17%	17%	18%	18%
55-64	22%	22%	21%	28%	16%
65-74	20%	16%	19%	18%	32%
75 or older	8%	9%	4%	8%	11%
Prefer not to say	10%	10%	10%	12%	5%
Gender					
Female	56%	61%	48%	55%	57%
Male	29%	26%	34%	30%	29%
Gender non-conforming	<1%	0%	<1%	1%	1%
Two-spirit	<1%	0%	0%	<1%	1%
Non-binary	0%	0%	0%	0%	0%
Other	2%	3%	2%	2%	0%
Prefer not to say	12%	11%	16%	11%	12%



HOUSEHOLD PROFILES | Disabilities & Mobility Aids

		Region				
		Total	North East	North West	South East	South West
Base		669	210	150	141	167
Household Composition						
	Single with no dependents	16%	17%	16%	11%	18%
	Couple with no dependents	22%	18%	26%	23%	22%
	Single with dependents	14%	16%	12%	15%	11%
	Couple with dependents	26%	26%	26%	26%	26%
	Other	4%	2%	1%	9%	3%
	Prefer not to say	19%	20%	18%	16%	20%
Has a Disability in Household						
	Physical Disability	29%	36%	26%	25%	27%
	Mental Disability	12%	13%	11%	17%	7%
	Neurodiversity Condition	7%	9%	8%	8%	2%
	Other	1%	1%	<1%	<1%	<1%
	None of the above	48%	41%	47%	50%	54%
	Prefer not to say	15%	11%	19%	15%	15%
Mobility Aids Used in Household						
	Wheelchair	3%	1%	8%	1%	3%
	Walker	8%	9%	9%	6%	10%
	Motorized scooter	2%	2%	2%	4%	2%
	A cane	12%	16%	13%	9%	9%
	Other	1%	1%	2%	1%	2%
	None of the above	73%	71%	67%	78%	77%
Prefer not to say		8%	8%	8%	10%	7%

D5. Which of the following best describes the current composition of your household?

D8. Do you or does anyone in your household live with any of the following? Please select all that apply

D9. And do you or does anyone in your household use any of the following inside your home? Please select all that apply

HOUSEHOLD PROFILES | Disabilities



Physical Disability	Region				
	Total	North East	North West	South East	South West
Base: among those with a physical disability in the household	171	65	33	34	39
Pain related disabilities	61%	66%	51%	76%	49%
Mobility issues	55%	52%	65%	50%	54%
Flexibility issues	38%	39%	16%	54%	45%
Hearing impairments	23%	17%	16%	28%	32%
Dexterity / fine motor skills challenges	21%	19%	25%	25%	15%
Visual impairments	11%	8%	11%	20%	7%
Respiratory issues (unaided)	6%	5%	14%	0%	4%
Arthritis / Osteoarthritis (unaided)	5%	5%	8%	3%	2%
Other	8%	8%	10%	2%	10%



Mental Disability / Neurodiversity Condition	Region				
	Total	North East	North West	South East	South West
Base: among those with a mental disability or neurodiversity condition in the household	123	48	29*	31	15*
Learning disabilities	29%	32%	21%	39%	17%
ADHD (unaided)	28%	33%	27%	34%	4%
Autism (unaided)	21%	24%	31%	19%	0%
Memory conditions	21%	9%	28%	25%	26%
Anxiety (unaided)	18%	21%	21%	10%	25%
Depression (unaided)	13%	26%	7%	8%	4%
Development conditions	10%	10%	7%	14%	5%
Bipolar disorder (unaided)	9%	14%	3%	12%	0%
PTSD (unaided)	7%	10%	3%	10%	0%
Other	11%	8%	12%	9%	18%
Prefer not to say	3%	2%	4%	0%	8%

HOUSEHOLD PROFILES | Geography & Building Type

	Region				
	Total	North East	North West	South East	South West
Base	669	210	150	141	167

Regional Areas and Municipalities

North East

Burnaby	4%	15%	0%	0%	0%
Coquitlam	11%	40%	0%	0%	0%
Maple Ridge	1%	5%	0%	0%	0%
Port Coquitlam	5%	17%	0%	0%	0%
Port Moody	6%	22%	0%	0%	0%

North West

North Vancouver City	5%	0%	21%	0%	0%
Vancouver	20%	0%	79%	0%	0%

South East

New Westminister	7%	0%	0%	30%	0%
Surrey	17%	0%	0%	70%	0%

South West

Delta	4%	0%	0%	0%	17%
Richmond	19%	0%	0%	0%	83%
Prefer not to say	0%	0%	0%	0%	0%

	Region				
	Total	North East	North West	South East	South West
Base	669	210	150	141	167

Building Type

Apartment	52%	60%	55%	45%	47%
1-bedroom apartment	18%	24%	18%	5%	25%
2-bedroom apartment	28%	29%	29%	34%	18%
3-bedroom apartment	7%	7%	9%	7%	4%
Townhouse	43%	38%	36%	50%	50%
2-bedroom townhouse	18%	16%	20%	18%	21%
3-bedroom townhouse	24%	20%	16%	32%	29%
4-bedroom townhouse	1%	2%	0%	1%	0%
Studio	1%	0%	3%	0%	0%
Prefer not to say	4%	2%	6%	5%	3%

Years lived at Housing Unit

Less than two years	12%	14%	16%	5%	13%
3-5 years	17%	20%	20%	15%	16%
6-10 years	27%	30%	17%	37%	22%
11+ years	32%	28%	33%	33%	37%
Prefer not to say	11%	7%	14%	11%	13%





APPENDIX

Additional Accessibility Improvement Comments (Question 4r)

Q4r. Is there anything else you would like to share about accessibility improvements?
<ul style="list-style-type: none"> - An easy Egress or more for exiting the unit for an emergency. - easier emergency radio communication for seniors inside the units - sound alarm for a direction to the exit during an emergency situation for visually impaired.
Install threshold ramp on each door entrance <ul style="list-style-type: none"> - Install an entrance door whose width is wider than 32" - Install grab rails on bathroom - On flooring, install a carpeted floor on bedrooms for comfort but non-slip floor surface in all other areas - It is a must to put 2 bathrooms per unit
{ADDRESS REMOVED} I would just like to say that the complex where I am does not have elevators and I do not understand some of the questions.
1. Door knob gripper or lever handle to easily open doors without having to grip or twist the knob. 2. Install a motion detection light along the dark pathway. It would be beneficial during winter time. 3. If possible, fire alarms be installed closer to or near the kitchen.
A bigger kitchen, small window in the kitchen and in the bathroom too. Lower noise of bathroom's aspirator.
A lot does not apply to {BUILDING NAME REMOVED} as most units are two story townhouses
A lot of the suggestions are for physical accommodation which is great and necessary. Not sure what could be done to help those with less visible disabilities. Ex: sensory issues for an autistic person could be simply fixing the loud doors in the parking area.
a lot of these don't apply to my household but i'm sure they will be beneficial to many
A lot of these wouldn't help in a two level townhouse
A toilet and sink on my first level would be helpful.
Access to the site is also helpful and access from garage. If someone in a wheel chair had to park in the underground of our site they would have to leave through garage door and go all around site to access from {STREET NAME REMOVED}.
Accessible parking garage doors and access points.
Add more questions driven towards children improvements.
Air conditioning in summer
All doors need to be easy to enter with wheelchairs and walkers
All of these suggestions would definitely make life better for anyone in a wheel chair or with other disabilities.
Although renovations can be costly it's got to be cheaper than forcing people out of their communities and into long term care. Also is it possible to get solar panels please?
answered don't know for many since these are not limitations we have at the moment and don't require support for
Any questions I replied don't know is because it doesn't apply to me.
As I live in one of your townhouses there is NOTHING Wheelchair accessible in my unit
As my vision become worse I feel it would be helpful to have a lightswitch for the main open area right outside the bedroom door instead of having to navigate in the dark across a room. In the kitchen, lower cupboards everywhere. I have to ask my daughter to help me get anything above the low shelf.
At least a half bath on the main floor. My uncle is in a wheelchair as has never been able to come visit or stay here when he needed care because he could not get to the bathroom if he needed it. My bathroom is on the top floor.

Balcony doors that could be left locked from the inside but a bit open for fresh air. Always afraid of raccoons getting in...
Bathroom sink with one lever for people with arthritis or physical disability
Bathtub installed with a shower screen Kitchen sink installed with detachable, moveable tap
Better accessibility to garbage and recycling bins for this in chairs or height restricted
Better constructed pathways for wheelchair users from cul de sac to building entrances
Better lighting around entrances/ balconies and outside. Better elevator emergency system. Ambulance cannot use out elevator, stretcher and sit up chair dont fit inside.
Better wheel chair access in front of building. A no parking for people with disability's.
Bigger bathtub
bigger room for scooters
Broken cement sidewalks and in yards aren't safe and smooth cement would be beneficial
Built with wider doorways in units for easy wheelchair access.
Can build more bedrooms houses
Carry out these improvements soon and efficiently where needed, and when requested.
cement slabs from patio to sidewalk, clear leaves on sidewalk, remove snow and add salt between cars
currently I have no disability so I do not need any of these items
Definitely grab bars for tubs as tubs low. Would have come in super handy when in a MVA and could not balance on one foot. Thought these were mandatory for seniors.
Disability parking
DISHWASHER in units /townhouses PLEASE
door frames should be wider, larger print/colour contrast on stove, auto lock/unlock on door keypad
Door handles
Door handles that are round are difficult to operate with full hands.
Door phone intercome to be in working condition
Easier access bathtub. Is it possible to have tub converted to shower or create a low barrier access?
Even though I don't personally need some of these accessibility improvements, I may have visitors or relatives that do. They cannot visit without them so I'd like to advocate for adopting a universal design in all MVHC buildings.
Everything is fine and I appreciate the efforts of Metro Vancouver management for all the buildings
Extra space to park wheelchair and walkers instead of in the hallway
Floor tiles that are not too slippery
Fob access for doors instead of keys
Fob entry for automatic doors
Fobs for garage opener would be very helpful
For safety, grab bars for the bathtub are needed in case of accidentally slipped while showering in the bathtub.
Fortunately, I don't have a disability, neither does anyone in our household but I can see the above could be helpful to those who do.
Front door weatherstripping falls apart too easily. I requested a replacement a while back no reply so far

Garage area. Large bins, heavy lids. Elderly, wheelchair bound and kids taking out the garbage are unable to lift the lid due to the height of the bin.
Garbage room/bins more accessible to everyone
Get rid of carpets
Get rid of the carpets
Grab bar by the toilet
Hard surface flooring, not carpets.
Hard to say - as of right now do not see need for modifications. But as we age yes will need items identified
Have accessibility to every door in the apartment
Have more units for wheelchair accessible available so we can help our aging parents as well. I have requested for my dad but nothing was available. It is very hard and we are still waiting.
I answered this survey considering how helpful these changes would be to a person who requires accessibility measures and how equipped my unit isn't for these needs.
I also have a family member with a disability. I needed a fence door for the safety of this family member, but I was told it couldn't be installed due to the presence of stairs. It would be helpful if fences could have doors for accessibility in case of individuals with disabilities.
I don't have issues with accessibility but I imagine all would be beneficial for all that do.
I don't need accessibility improvements but some elderly may.
I don't require anything regarding accessibility because my disability is mental health.
I don't need accessible equipment in our unit, but for accessible units these all should be mandatory
I have a ground floor unit that is very accessible. I did have my barbecue and propane tank stolen though.
I have care aides twice a day that need access to the building. I don't use my washroom. Care aides help with bathing and I use a diaper
I have mold in ceiling
I have staircase
I have used "don't know" to indicate not applicable to my situation {BUILDING NAME REMOVED} is not an accessible space, and I think would be difficult to alter to become one sure to the amount of steps
I love all these ideas. For the ideas related to inside the units itself, it may be ideal to reserve these specifically for disability units. If all units had these specialties, the building will look like it's a care home and not a multi housing building that is supposed to include families.
I need you change my carpet
I think any improvement made to accessible units would be beneficial to those who require to make life easier. I don't have a need for these enhancements myself. But I love the thought into these.
I think pretty much everything is covered
I want to Downeaster. it is very hard to carry shopping up stary
I wish a second toilet in my townhouse
I would like MV take away the storage room door. That door is in the way when we enter in the apt. It would make that room more accessible and useful.
I would prefer to stay where I am and get accessibility upgrades as required but not sure if Metro can provide that in a reasonable time.
If the for 3 or 4 bed we have 2 bathrooms is very helpful too
If we had an elevator that had a fold down place to rest a laundry basket, or groceries that would be helpful.

In case of fire we can't use Elevator and we live in the 15th floor we are wondering what would happen in case of emergency
In my building the lower light switches seem unnecessary because a person in a wheelchair would not be able to access most areas with all the steps and no elevators
In my opinion, it is very difficult for people in wheelchairs to use garbage
In our building because we are sharing with house pice needs to be replaced and have a more relatable one
Inbuilt laundry
Install hand bar in the bathtub, update the faucet.
Install modern buzzer
It's all been said and I hope it all happens.
It's all good. Metro Vancouver is always making improvements for residents
Just that I find the doors to the units very heavy and are not able to stay open when hands are full
Just wanted to mention that some of these ideas would not apply to our complex ie. No elevator here. Cannot speak to accessibility ideas that I am not familiar with.
Key fob access to doors instead of keys
Keyless unit entry
Kitchen
Locks on windows for children
Mainly the doors to outside
Maintain cleaned the back of the parking spaces as a tenant responsibility
make emergency exit that lead to outdoor stairs safer for use in winter
Make sure power doors always work.
More lighting around outdoor common areas and automated door to common laundry room and better lit stairways
More electrical outlets that work properly
More laundry machines
More parking area, playing area, downstairs washroom.
Most of these are not applicable to my family and living situation. So I answered don't know for these. I know at our complex our garden plot and play area is not disabled-friendly.
Most of these things are not in our current building however I can see how useful they would be.
My husband is unable to use a washroom, care aides come to help him with his bathroom needs
N/A
Need one and a half washroom
needs to have more parking accessibility
New technology intercom
No
No
No
No
No

No
No
No lip bathtubs or shower
No stairs by my outside door
No! Not at this time
No, because everything is great
No, just answered based on my situation
no,you have pretty much covered everything I could think of.
Non slip should be properly installed/maintained on stairs to prevent injury.
None of these apply to units
Nope
Not at this time
Not for now
Not helpful responses should be not applicable to me but would be if health warranted or likely more relevant to apartment housing
Nothing comes to mind but there is a lot of important pest issues at hand
Nothing comes to mind for now. Thank you much!
Now of above questions are not applicable with my physical condition. But they are all sounded excellent for seniors and people with disabilities .
Our building provides that for every tenant, if they use wheelchair is taken care of.
Outside access from the 2nd floor has a very high step. As you cover, level thresholds would be beneficial
Parking for disabled is unavailable and the marked stalls have cars without disability signs . I have mine and the {NAME REMOVED} answer had my car towed, because I was in visitors parking too long. I feel targeted by this a person, because many other cars are not towed and have been parked longer than allotted
Please take care of the people in need of these improvements - that will make their life much easier. Thank you.
Prickly overgrown weeds and plants by the fence in the east side (by the creek) that were ignored and scraped passersby on the face and arms.
Ramps as wheelchair or moving furniture in addition to stairs access
Reassessing safety and security Parking lines clearly marked Access to salt the green safety bins in our complex are not in use
Recently you have installed new floor and new kitchen cupboards/counter top, appliances plus shelving. Very pleased with these new changes. I find though that bi-fold closet door are annoying and rather just leave them off and install curtains on a track system.
Replace carpet/rubber tread stair treads as they are not properly installed and are a tripping hazard. New railings in the stairways to replace the metal ones that have sharp corners that have cut my hands and clothing on multiple occasions.
Replace very old kitchen cabinets
Replacing door knob with real handle would be great. Installing electronic padlock would also be a plus
Room Windows in my unit is a problem
Security camera

security, and camera each complex
Outside
Should be half bathroom in all homes of complex
Should. Have had and answer the said not needed in my unit. I used dont know for that. I live in a 2 level townhouse. I already installed my own ring cam. We could use peep holes on doors. Not too high so kids can see thru.
Shower heads that can be hand held that are not at the expense of the tenant.
Side walk for wheelchair
Smart thermostat. Thermostat adjustment is difficult for a person with mobility issues. If they can use a connected app through their smartphone they can adjust the temperature from wherever they are. Better insulated windows so that frequent thermostat adjustment is less neccessary.
Snow removal...health challenged tenants cannot shovel snow
Some areas have more stairs coming down a building and have to go around the building to access your suit because that is the only flat surface.
Something to help with units with stairs
Sound dampening. There are many disabilities, some include focus and sensitivity issues, sound is incredibly important, we have five senses, our housing providers can't do much to alter smells, we can control lights, texture is provided, but sound; we tenants need help with this.
Stair master for the future, not needed now
Take out bath tub and just have shower for wheelchair access
Thank you so much for everything God bless you all
The amount of stairs to climb in town home units
The blinds should be replaced its very old
The current layout of townhouse units do not provide adequate storage space to allow wheelchair counter access as these are main storage areas for units.
The items that I marked as 'not helpful' don't really apply to me, When I moved in, I was given permission to install shower grab bars at my own expense. This was somewhat costly, but have proven to be extremely helpful getting in & out of the tub safely.
The limbs on very large tree behind {ADDRESS REMOVED} need to be chopped off at roof level. This tree literally wreaks havoc, destroys everything in its path from April to Dec every year. Tenants have no motivation to do anything to keep their yards nice or even create any kind of garden or enjoyable space
The shelves and bathtub are not helpful and are not suitable for people with special needs. Thank you
The storage outside need to cover all the way down to avoid rodents to come inside
The toilet is too small
The units need to have a bigger balcony and a hot tub with more height, for someone like me who has arthritis and needs to be covered under hot water in the bathtub, and also more kitchen cabinets, it's not enough here at the moment..!
These accessibility improvements do not apply to me however communication is key. If we could get the phones working again, that would be great
This is helpful if the person is tall but not everyone is tall.
Those all sound like wonderful additions to an apartment
Tight spaces are a problem for many different types of disability.
To open kitchen up. Remove wall. Have more access

Toilet seats with support handles
Two doors to get in from underground is hard if ur carry groceries...we think one door would be better..also for strollers difficult..
Under kitchen cabinetry lighting (daylight (white) not soft yellow lights). Kitchen cabinetry doors with rounded beveled edges. No bathtub. No bathtubs. Maybe no bathtub.
Update carpet and kitchens
Ventilation in the hallways, in summer it's too hot in winter, it's freezing.
Video doorbell with intercom to answer / know who is there without standing up and check the door.
Visitor parking handicap spot
Walk in tubs would be nice
washers and dryers in the units
Washrooms upstairs and downstairs
We have 3 bedroom and there's 4 of us, would be nice to have one more washroom at the basement, I will so appreciate it, thank you
We need new windows to keep all people of all abilities warm in {BUILDING NAME REMOVED}
Well most of these suggestions of course are helpful. How could they not be.
Wider door ways.
Wider doorways.
Wider parking lots for handicapped people
Yes thats all thanks. I love to live here. Thank you
Yes there is a lot of unused space because cupboard are very high. So something more practical for a wheelchair user would be better.



APPENDIX

Invitations and Questionnaire

Metro Vancouver Housing Would Like to Hear From You!

Metro Vancouver Housing is inviting all tenants to participate in a **short survey** on how we could make housing units easier for people of all abilities to live in. **We want to hear from all tenants on this topic.**

To complete the survey, type <https://sentis.ca/mvh> into your Internet browser or scan the QR code using your smartphone's camera. [See below for options to complete the survey over the telephone or on paper.](#)



Complete the survey for a chance to win 1 of 12 Save-On-Foods gift cards (\$1,500 in gift cards to be awarded!)

- The online survey can be completed on laptop, computer, tablet, or smartphone.
- **Want to participate by telephone or need survey or technical support?** Contact Sentis at 1-855-958-3985 or at mvh@sentis.ca
- **Want to verify the survey or do the survey on paper?** Contact Metro Vancouver Housing at 604-432-6300 or at Housing.Inquiries@metrovanancouver.org
- Participation is voluntary and anonymous. Metro Vancouver Housing has partnered with Sentis, an independent research company, to conduct this survey.

Metro Vancouver Housing Would Like to Hear From You

Dear Tenant,

Metro Vancouver Housing is inviting all tenants to participate in a short survey on how we could make housing units easier for people of all abilities to live in. Your feedback will help determine which upgrades or changes are needed most.

It's important that we hear from a variety of tenants on this topic – those who currently have specific accessibility needs and those who may not have those needs now, but who might in the future.

Participation in this survey is voluntary and anonymous. The survey is easy to answer and will only take about 8 to 10 minutes. You can complete the survey on your computer, laptop, tablet or smart phone. If you would like to complete the survey over the phone or on paper, there are options for that as well (details below). **The survey deadline is Monday, December 11, 2023.**

For completing the survey, you will be entered into **a prize draw for a chance to win one of 13 Save-On-Foods gift cards:**

- 1 – grand prize of a \$400 gift card
- 2 – \$200 gift cards
- 4 – \$100 gift cards
- 6 – \$50 gift cards

Metro Vancouver Housing has partnered with Sentis, an independent research company, to conduct this survey. All survey responses are confidential and anonymous.

To complete the survey, scan the QR code below using your phone's camera or type <https://sentis.ca/mvh> into your browser.



If you would like to complete this survey over the telephone with an interviewer, or for help with the survey or technical support, contact Sentis at 1-855-958-3985 or at mvh@sentis.ca.

If you would like to verify this survey or prefer to complete this survey on paper, contact Metro Vancouver Housing at 604-432-6300 or at Housing.Inquiries@metrovanancouver.org

Thank you for participating.

Metro Vancouver Housing

From: [MVH EMAIL ADDRESS]

Subject: Metro Vancouver Housing Would Like To Hear From You!

metrovancouver | HOUSING

Metro Vancouver Housing is inviting all tenants to participate in a short survey on how we could make housing units easier for people of all abilities to live in. Your feedback will help determine which upgrades or changes are needed most. **We also mailed all tenants a letter about this survey, so if you have already done the survey – thank you! If you haven't completed it yet, we want to hear from you!**

It's important that we hear from a variety of tenants on this topic – those who currently have specific accessibility needs and those who may not have those needs now, but who might in the future.

Participation in this survey is voluntary and anonymous. The survey is easy to answer and will only take about 8 to 10 minutes. You can complete the survey on your computer, laptop, tablet or smart phone. If you would like to complete the survey over the phone or on paper, there are options for that as well (details below). **The survey deadline is Monday, December 11, 2023.**

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Metro Vancouver Housing has partnered with Sentis, an independent research company, to conduct this survey. All survey responses are confidential and anonymous.

[Start Survey](#)

If you would like to complete this survey over the telephone with an interviewer, or for help with the survey or technical support, contact Sentis at 1-855-958-3985 or at mvh@sentis.ca.

If you would like to verify this survey or prefer to complete this survey on paper, contact Metro Vancouver Housing at 604-432-6300 or at Housing.Inquiries@metrovancouver.org

Thank you for participating.

Metro Vancouver Housing

Having trouble? Copy and paste the link below into your web browser: <https://sentis.ca/mvh>. You can also email us at: mvh@sentis.ca

[Contest Rules](#)
[Privacy Policy](#)
[Survey Opt-out](#)



Metrotower III, 4515 Central Blvd 10th Floor, Burnaby, BC V5H 0C6

Landing Page

metrovancover | HOUSING

Welcome to the Housing Accessibility Survey!

Your feedback will help Metro Vancouver Housing identify the accessibility improvements that are most needed by tenants. We are interested to learn about changes we could make to Metro Vancouver Housing units to make them easier for people of all abilities to live in.

It's important we hear from a variety of tenants on this topic – those who currently have specific accessibility needs and those who may not have those needs now, but might in the future.

As a token of appreciation, tenants participating the survey will be entered into a prize draw for a chance to win one of the following prizes:

- 1 - \$400 Save-On-Foods gift card
- 2 - \$200 Save-On-Foods gift cards
- 4 - \$100 Save-On-Foods gift cards
- 6 - \$50 Save-On-Foods gift cards

[Start Survey](#)

The survey takes about 8 to 10 minutes to complete and all your responses will be confidential. **The survey closes on December 11, 2023.**

If you would prefer to complete this survey over the telephone with an interviewer, or for help with the survey or technical support, you can call Sentis toll free at 1-855-958-3985 or email mvh@sentis.ca

If you would like to verify this survey or if you would prefer to complete this survey on paper, you can contact Metro Vancouver Housing at 604-432-6300 or Housing.Inquiries@metrovancover.org.

[Privacy Policy](#) [Contest Rules](#)



D1. To begin, in which municipality do you live?

1. Burnaby
2. Coquitlam
3. Delta
4. Maple Ridge
5. New Westminster
6. North Vancouver City
7. Port Coquitlam
8. Port Moody
9. Richmond
10. Surrey
11. Vancouver
99. Prefer not to say

SHOW THE LIST IN D2 THAT CORRESPONDS WITH THE MUNICIPALITY IN D1. IF D1=99 (PREFER NOT TO SAY) DO NOT ASK D2. INCLUDE A '99. PREFER NOT TO SAY' CODE AT THE END OF EACH MUNICIPALITY'S HOUSING SITE LIST

D2. And in which Metro Vancouver housing site do you reside?

IF D1= BURNABY (D1=1)

1. Greystone Village
2. Ran Beamish Place

IF D1= COQUITLAM (D1=2)

3. Chateau de Ville
4. Le Chateau Place
5. Malaspina Village
6. Ozada Village
7. Park Court

IF D1= DELTA (D1=3)

8. Evergreen Downs
9. Lynden Court

IF D1=MAPLE RIDGE (D1=4) AUTOMATICALLY ASSIGN HOUSING SITE AS CODE 10. FRASERWOOD

IF D1=NEW WESTMINSTER (D1=5)

11. Crown Manor
12. London Square
13. McBride Place

IF D1=NORTH VANCOUVER CITY (D1=6)

14. Manor House
15. Pinewood Place
16. St. Andrews Place
17. Walnut Gardens

IF D1=PORT COQUITLAM (D1=7) AUTOMATICALLY ASSIGN HOUSING SITE AS CODE 18. MERIDIAN VILLAGE

IF D1=PORT MOODY (D1=8)

- 19. Inlet Centre
- 20. Moray Place

IF D1=RICHMOND (D1=9)

- 21. Adelaide Court
- 22. Alderwood Place
- 23. Cedarwood Place
- 24. Knightsbridge I & II
- 25. Maple Vine Court
- 26. Maplewood
- 27. Minato West
- 28. Moffatt Park
- 29. Odlinwood

IF D1=SURREY (D1=10)

- 30. Epsom Downs
- 31. Guildford Glen
- 32. Kingston Gardens
- 33. Somerset Gardens
- 34. Sutton Place

IF D1=VANCOUVER (D1=11)

- 35. Ashdown Gardens
- 36. Claude Douglas Place
- 37. Earle Adams Village
- 38. Euclid Square
- 39. Grandview Gardens
- 40. Habitat Villa
- 41. Heather Place
- 42. Hemlock Court
- 43. Hugh Bird Residence
- 44. Kelly Court
- 45. Regal Place Hotel
- 46. Semlin Terrace
- 47. Strathearn Court
- 48. Tivoli Gardens

S1. And do you have responsibility for paying the rent (either full or joint responsibility)?

- 1. Yes
- 2. No **THANK & TERMINATE**

IF S1= NO (CODE 2) TERMINATE AND SHOW THIS MESSAGE: Thank-you for your interest in this survey; however, we need to speak with residents who live in Metro Vancouver Housing who have at least some responsibility for paying the rent.

Q1a Overall, how would you rate the housing provided to you by Metro Vancouver?

- 5. Excellent
- 4. Very good
- 3. Good
- 2. Fair
- 1. Poor
- 98. Don't know

ASK Q1B ONLY IF Q1A≠98 (DON'T KNOW)

Q1b Why do you rate it as [INSERT RESPONSE FROM Q1A]? SEMI-MANDATORY OPEN-END

MAX 300 CHARACTERS

Throughout this survey, we refer to 'accessible housing' or 'accessibility'. By this we refer to the way in which housing is designed, constructed or modified (such as through repair/ renovation/ renewal), to enable independent living for persons with diverse abilities.

Q2a. Thinking about your current housing, including your unit and the housing complex, how easy or difficult is it for you to get around and carry out daily activities?

- 5 Very easy
- 4 Easy
- 3 Just okay
- 2 Difficult
- 1 Very difficult
- 98 Don't know

ASK Q2B ONLY IF Q2A=JUST OKAY, DIFFICULT OR VERY DIFFICULT (CODES 3, 2,OR 1)

Q2b What would make it easier for you to get around and carry out your daily activities? SEMI-MANDATORY OPEN-END

MAX 300 CHARACTERS

Q3. What accessibility improvements, upgrades, or changes for housing units and complexes, if any, would you like to see offered by Metro Vancouver Housing? SEMI-MANDATORY OPEN-END

MAX 300 CHARACTERS

99. Nothing/Nothing comes to mind

Q4. Here is a list of accessibility improvements. How helpful would each one be for your household?

If you already have the improvement in your unit or housing, you can indicate that instead.

RANDOMIZE. BUILDABLE GRID

Rows:

- a Light switches and other controls that are lower down, so they are easily reachable by someone in a wheelchair
- b Glow-in-the-dark light switches
- c Door, window, and cabinet hardware (such as handles, pulls, latches and locks) that can be operated with a closed fist and/or one hand
- d Contrasting colour on door frames and handles so they are easier to see
- e Microwave shelving installed lower down so it is easily reachable by someone in a wheelchair
- f Grab bars in the shower/bathtub
- g Grab bars in the toilet area
- h Level thresholds to doorways that are easy to step through or wheel over
- i Braille marked buttons in elevators for the vision-impaired
- j Voice announcements of floors and current elevator direction (going up / going down) in elevators
- k Garden plots that are accessible to those using wheelchairs, walkers, scooters
- l Stovetops with open space below for wheelchair access
- m Kitchen or bathroom sinks with open space below to allow for wheelchair access
- n Auto door operators at building entry doors
- o Audio-visual doorbell for your unit (doorbell that flashes a light as well as makes a noise)
- p Toilet with a taller bowl to make it easier to sit down and stand up from the seat
- q Toilet with a flush valve that is operable with one hand

Columns:

- 3. Very helpful
- 2. Somewhat helpful
- 1. Not helpful
- 98. Don't know
- 99. Already have this

Q4r. Is there anything else you would like to share about accessibility improvements? **SEMI-MANDATORY OPEN-END**

MAX 300 CHARACTERS

99. Nothing/Nothing comes to mind **CHECKBOX**

Q5 Have you ever requested any accessibility upgrades for your unit?

- 1. Yes
- 2. No

ONLY ASK Q6 & Q7 IF Q5=1 (YES) AND AT LEAST 1 ITEM IN Q4A-Q = 99 (I ALREADY HAVE THIS IMPROVEMENT)

Q6a-q. For each of the improvements or upgrades you indicated earlier that were already in your unit or housing complex, was it there when you moved in or was it an improvement you requested?

RANDOMIZE. BUILDABLE GRID

Rows:

THE ROWS SHOWN IN Q6 WILL ONLY BE ITEMS RATED AS 99 IN Q4A-(I ALREADY HAVE THIS IMPROVEMENT)

Columns:

- 1. It was already there when I moved in
- 2. I requested this improvement/upgrade
- 98. Can't recall

Q7. And generally how satisfied are you with that / those improvement(s) / upgrade(s)?

- 3 Very satisfied
- 2 Somewhat satisfied
- 1 Not satisfied
- 98 Don't know

Q8. If your accessibility needs were not being met in your current unit, would you consider moving to another housing unit with more accessibility features to meet your needs?

- 5. Definitely
- 4 Probably
- 3 Might be
- 2. Probably not
- 1 Definitely not
- 98 Don't know

Q9. How important are each of the following factors to you when deciding to possibly move to another housing unit or complex? **RANDOMIZE. BUILDABLE GRID**

Rows:

- a. Staying within my current city/municipality
- b. Being close to family or friends
- c. Being close to hospitals and other health services
- d. Being close to amenities such as recreational facilities, shops and restaurants, social activities
- e. Being close to public transportation
- f. Being close to parks and green spaces
- g. Stay with Metro Vancouver Housing

Columns:

- 3 Very important
- 2 Somewhat important
- 1 Not important
- 98 Don't know

Q10a. Metro Vancouver Housing currently has fully accessible units.

These units typically include roll-in showers with grab bars, increased space around cabinetry and in bathrooms to accommodate wheelchair turn-around space, wider doorways, and lowered switches. Some units include strobe lights for the fire alarm system in addition to the standard audible bell.

Before this survey, were you aware of Metro Vancouver's fully accessible housing units?

1. Yes
2. No

Q10b. How likely would you be to consider moving into one of Metro Vancouver's fully accessible housing units...?

DO NOT RANDOMIZE. BUILDABLE GRID

Rows:

- a. In the next 1 to 3 years?
- b. In the next 4 to 9 years?
- c. In about 10 years or longer?

Columns:

- 5 Definitely
- 4 Probably
- 3 Might be
- 2 Probably not
- 1 Definitely not
- 98 Don't know

Wrap Up

The following questions will be used to group your survey responses with other tenants like yourself. Your individual survey responses will be kept confidential and will not be shared with Metro Vancouver Housing.

Just a few questions about where you live.

D3. Is your home a...

1. 1-bedroom apartment
2. 2-bedroom apartment
3. 2-bedroom townhouse
4. 3-bedroom apartment
5. 3-bedroom townhouse
6. 4-bedroom townhouse
7. Studio
99. Prefer not to say

D4. For how long have you lived in this home? *Your best estimate is fine. Please enter a number value.*

_____ years

0. For less than one year
99. Prefer not to say

And finally, just a few questions about you.

D5. Which of the following best describes the current composition of your household?

1. Single with no dependents
2. Couple with no dependents
3. Single with dependents
4. Couple with dependents
96. Other (specify)
99. Prefer not to say

D6. Which age range do you fall into?

1. 18-24
2. 25-34
3. 35-44
4. 45-54
5. 55-64
6. 65-74
7. 75 or older
99. Prefer not to say

D7. How do you identify?

1. Gender non-conforming
2. Man
3. Non-binary
4. Two-spirit
5. Woman
96. I identify as: _____
99. Prefer not to say

D8. Do you or does anyone in your household live with any of the following? *Please select all that apply*

1. A physical disability **IF SELECTED SHOW DROP DOWN:** Q8b *Please select all that apply*
 1. Pain related disabilities
 2. Flexibility issues
 3. Mobility issues
 4. Visual impairments
 5. Hearing impairments
 6. Dexterity / fine motor skills challenges
 96. Other physical disabilities (specify)
2. A mental disability **IF SELECTED SHOW DROP DOWN:** Q8c *Please select all that apply*
 1. Learning disabilities
 2. Memory conditions
 3. Development conditions
 96. Other mental disabilities (specify)
3. Neurodiversity conditions (specify) **SPECIFY TEXT BOX:** d8d.
96. Other (specify)
98. None of the above
99. Prefer not to say

D9. And do you or does anyone in your household use any of the following inside your home? *Please select all that apply*

1. Wheelchair
2. Walker
3. Motorized scooter
4. A cane
96. Other (specify): _____
98. None of the above / Not applicable
99. Prefer not to say

D10. And finally, would you like to be entered into the prize draw for a chance to win one of 13 Save-On-Foods gift cards?

1. Yes **IF YES IN Q10, ASK D10B**

D10b. Please provide your name and a phone number or an email we can reach you at if you are one of our prize winners. *Please be assured this information will only be used for the prize draw and will not be linked to your survey responses.*

Name: _____

Phone number or email: _____

2. No, thanks

Those are all our questions. Please click submit to complete your survey.

SUBMIT PAGE:

Thank you!

If you would like to request an accessibility improvement to your unit, please reach out to Metro Vancouver Housing at 604-432-6300 or email Housing.Inquiries@metrovancover.org

Your survey has been submitted.