

# Background and Details

## Accessible Community Garden Guidelines 2011

Prepared by the Joint Subcommittee on Accessible Community Gardens  
City of Vancouver Persons with Disabilities Advisory Committee and Seniors Advisory Committee

**PLOTS:** At least 5% of plots should be accessible raised beds; 10-20% is ideal

### Reasons:

Approximately 12% of people have a disability. However, people with disabilities have a significantly greater need for community garden plots because they have the lowest incomes in Canada, have extremely low home ownership, and are unlikely to have their own gardening space.

Seniors constitute a significant part of the population and may have difficulty bending to use in-ground garden plots.

Many persons who do not consider themselves disabled have knee, back or hip injuries or chronic health conditions which limit their ability to bend or reach an in-ground plot.

### Dimensions of accessible raised bed plots

Width: 3-4' wide, if bed can be reached from both sides; 3½' wide is ideal  
1½-2' wide, if bed can only be reached from one side; 1¾' wide is ideal

### Reasons:

Most books recommend a maximum of 2' for one-sided-beds & 4' for two sided beds, but many people (especially women) have a shorter arm reach. To accommodate everyone, ideal width is 3½' for beds reachable on two sides and 1¾' for beds reachable on only one side.

Please note: If a person has to work in a raised bed from a wheelchair, the wheels of the chair reduce the maximum arm reach (the wheels are between the bed & the person.)

Height: 2 – 3' high

### Reasons:

Comfortable height of a person's arm varies significantly, so it may be wise to build some beds at different heights.

Some people may prefer to sit on or transfer to a stool when gardening. Bed height should be in the lower range to accommodate this option.

Some people may need to stand to garden, rather than sit. Bed height should be in the higher range to accommodate this option.

It is easier for a person to reach slightly down into a bed, than to reach up.

If a person is in a wheelchair, two factors affect arm height:

- height of the wheelchair from ground to seat (average: 19"; range: 12"-20")
- height of the person's body from seat to arm (average: 19";)

Recommendation: Build beds at different heights, between 2-3', to accommodate different needs.

## Dimensions of accessible raised bed plots, continued

Surface: Minimum 4' wide accessible surface surrounding accessible raised beds

- Surface around raised beds should be accessible (wheel-able), and not a hazard for persons with canes, walkers, limited mobility etc. Acceptable surfaces include compacted crushed granite fines, compacted crushed limestone, other compacted crushed materials, concrete, pavement, bricks, pavers etc.
- Accessible surface should be a least 4' around all sides of each bed; 5' is ideal. This enables a person using a wheelchair to manoeuvre and work from all sides of the accessible raised bed, and to turn

Corners: Brightly marked or painted so that people with low vision or blindness can find plots

Length: Length of raised bed does not affect accessibility, but longer beds are harder to build properly and maintain.

Shape: Any shape is accessible if the maximum width at any point is 4', and if indentations are at least 4' wide

- Any shape is accessible as long as the maximum reach across one side of the bed is no more than 2' (1½' is ideal), if indentations are at least 4' wide, and a 4-5' accessible surface surrounds every side
- Rectangular beds
  - simple to construct
  - less gardening space than E, S, T, U or W shaped beds.
  - Ideal dimensions for rectangular bed: 3½' wide; 10-12' long
- Beds shaped like a "E" "S" "T", "U", or "W"
  - more difficult to construct
  - provide more gardening space, more efficient use of space
  - An E or W-shaped bed has two indentations – if the indentations are at least 4' wide, the bed is accessible and an efficient use of space
  - An S-shaped bed, has the same gardening space as an E-shaped bed, and is interesting & attractive
  - U or horseshoe-shaped beds are accessible, attractive, and an efficient use of space
- Tabletop beds:
  - Tabletop beds are like a tabletop on a pedestal -- there's a shallow gardening bed on the top (6-10" deep), supported by a base that does not come out to the sides, & an accessible surface under the table
  - This design enables a person in a wheelchair to put their legs under the table, allowing the person to place their body closer to the edge of the gardening bed – this allows improved reach/agility
  - Tabletop beds are in use at Pearson Centre & Pandora Garden. Designs are on the City Farmer website.

**PATHS:** Accessible surface, at least one access path 5'+ wide or 4'+ wide with 5' turning circle; other paths 3' wide minimum

### Accessible Path Surfaces:

- Accessible path surfaces must be smooth, level, wheel-able, with tactile guide markers
- Concrete & asphalt: most ideal surfaces
  - Safe, easy to travel on for people who use wheelchairs; people who use walkers; people who use canes; people who have limited mobility; & for people who walk but have risks of falling
  - Expensive options
  - Many feel are unattractive in a garden
  - Tactile guide markers may be imbedded along the centre of paved paths for persons who are blind or with low vision.
- Compacted crushed granite fines, compacted crushed limestone or other compacted crushed materials
  - Less ideal to walk or wheel on than concrete
  - Less expensive and simpler to install than concrete; more natural appearance
  - Must be compacted to be accessible
  - Do not need guide markers as the surface is different from surrounding area
- Bricks, pavers etc
  - Attractive & accessible if maintained properly
  - Safety may become an issue if bricks are not maintained; uneven cracks can pose safety hazard
  - Do not need guide markers as the surface is different from surrounding area

## PATHS CONTINUED

### Non-Accessible Path Surfaces

- Bark mulch
  - ° Not an accessible surface. Persons using manual wheelchairs cannot travel on bark mulch; bark mulch is a falling/tripping hazard for seniors, people using canes, walkers etc.
- Grass
  - ° Not an accessible surface. Slippery and a hazard when wet. Bumpy & uneven if not closely mowed.
- Dirt
  - ° Not an accessible surface. Slippery and a hazard when wet.
- Gravel
  - ° Not an accessible surface. Uneven & unstable – not wheel-able; tripping hazard for ambulatory people.

### Path width

- At least one access path: 5'+ wide of 4'+ wide with 5' turning circle; 5'+ is ideal
- All other paths minimum 3' wide

### Reasons:

Five foot width is the minimum width for a person in a wheelchair to turn around (wheelchairs vary in width, but scooters and larger power chairs are wide and sometimes long). 3' width is the minimum width for a person in a wheelchair to pass.

### Tactile Guide Markers imbedded in solid concrete or asphalt paths

If path surface is solid concrete or asphalt, tactile guide marker may be imbedded along the centre of the path for persons who are blind or with low vision.

### Curbs

Optional: this helps ensure paths do not erode; important that curbs don't create a barrier.

## **WATER ACCESS:** Taps 2' high minimum; placed at or very near accessible raised beds; placed within 20' of each plot

- Water taps need to be high enough for a person in a wheelchair or a person who has trouble bending to reach. This means water taps must be at least 2' high, with a maximum height of 4'
- Many people with disabilities and seniors have difficulty carrying a hose and/or turning a tap. Many people who do not have a disability have difficulty carrying heavy or long hoses.
  - ° Taps should therefore be located frequently throughout the garden – one tap within 20' of each plot
    - This enables every gardener to carry only one 25' hose to water a plot
  - ° Taps should also be attached to, or very close to, raised beds
    - This enables seniors and people with disabilities who require an accessible raised bed to not carry a hose
  - ° Drip watering systems installed on accessible raised beds, with easy turn on/off switches, provide accessible water access for seniors or people with disabilities in an affordable manner
- Taps should be brightly coloured or painted to ensure persons with limited vision or blindness can find them

## **SEATING:** Appropriate seating should be provided in the garden for seniors and others who need to sit

# Accessibility for Everyone

The details mentioned above sometimes focus on people who are blind or who use wheelchairs, because specific technical accommodation is needed.

However, most of these accommodations also meet the needs of people with other disabilities and seniors.

A few examples:

- Surfaces that are bumpy and uneven are not accessible for people using wheelchairs, but they are also difficult and a safety and tripping hazard for people who use walkers or canes; seniors; people with visual impairments; people with balance or mobility impairments etc.
- Raised beds make gardening possible for people with back problems, for people who have problems bending, etc. Many seniors find in-ground gardening difficult/impossible; raised beds solve this problem.
- Water access: many seniors have difficulty bending to a low tap and/or carrying a hose; the recommended adaptations for people with wheelchairs also solve these problems for persons who are frail and/or seniors.

## Background and Underlying Problem

People with disabilities have a higher need for, and are uniquely dependent on, public garden space to grow their own food, and enjoy green space.

This is because many disabled people are poor and may have chronic health conditions, which make a fresh diet important. But fresh produce is often too expensive to afford, and home gardening isn't a viable option because homeownership is severely limited for people with disabilities (due to low income and limited accessible housing).

Unfortunately, most community gardens in Vancouver exclude seniors and people with disabilities simply because they are not properly designed and have barriers. Paths between plots are too narrow for wheelchairs to pass, garden plots are in the ground or too low for persons to reach, raised beds are too low or too wide to reach, water taps are too low, path surfaces are too bumpy or sloped, toolsheds cannot be entered etc. Seniors face similar issues bending to the ground, to taps, carrying heavy hoses, etc

## Solutions:

- **New community gardens must be accessible:**  
Establish a "building code" for community gardens that ensures that new community gardens are built in a way that is accessible for seniors and persons with disabilities
  - New gardens should submit accessible garden plans for approval before building the new garden (in the same way that a builder has to submit building plans which must meet safety and building code accessibility standards in order to be approved)
- Accessible pathways and accessible water systems/taps should be provided by the City as part of the infrastructure it provides to newly built community gardens

### Reasons

#### Accessible Pathways

- Accessible pathways are an integral and crucial part of accessibility in community gardens, and all other aspects of accessibility are nullified if the paths are not accessible
- Installing accessible pathways is beyond the technical capacity of community gardeners
- City staff have the relevant expertise to install accessible pathways properly
- Cost should be less than \$500 for each new community garden

#### Accessible Water service

- Accessible water service is an integral and crucial part of accessibility in community gardens
- The City already installs water service in new community gardens on City land
- The work and cost for the City to ensure that the water system is accessible at the outset is minimal
- The work to modify an existing water system to make it accessible later on is considerable

# References and Sources for these Guidelines

## References

- Adil, Janeen R: Accessible Gardening for People with Physical Disabilities: A Guide to Methods, Tools and Plants; Woodbine House, 1994.
- Please, Peter. Able to Garden: A Practical Guide for Disabled and Elderly Gardeners; Horticultural Therapy, 1990.
- Walden, Fred. A Garden for You: A Practical Guide to Tools, Equipment and Design for Older People And People with Disabilities: Disabled Living Foundation, 1997.
- Woy, Joann. Accessible Gardening: Tips & Techniques for Seniors & the Disabled: Stackpole Books, 1997.
- Yeomans, Kathleen. The Able Gardener: Overcoming Barriers of Age & Physical Limitations: Storey Communications, 1992.

## Consultations with:

- Bredner, Gerry: GB Bobcat, Contractor who built Terra Nova Community Garden
- Carter, Tom: Manager of Field Operations, UBC Farm
- Killo, Rick:, Park Board Operations Supervisor, Area North, Vancouver
- Pottinger, Guy: Manager of Maintenance, Stanley Park, Vancouver
- Simpson, Patrick: Universal Design Consultant; Executive Director, SAFER Homes Society
- Canadian Horticulture Therapy Association
- Community consultations with disability organizations including DIGA (Disabled Independent Gardeners Association), BC Coalition of Persons with Disabilities, BC Paraplegic Association, Pearson Hospital, GF Strong, etc; seniors organizations including COABC, Community Garden Network Project, 411 Seniors, etc; community groups including Village Vancouver, Friends of the UBC Farm, Strathcona Community Centre, Evergreen, etc; community gardens including Cottonwood Community Garden, Strathcona Community Garden, Pandora Community Garden, Farmers on 57<sup>th</sup>, etc.

*These guidelines have been prepared by the Joint Subcommittee on Accessible Community Gardens, City of Vancouver Persons with Disabilities Advisory Committee and Seniors Advisory Committee, 2009/2010*