

# Home Modifications through Universal Design: A Resource Guide



The City of Irvine is proud to present this Resource Guide for residents interested in making Universal Design modifications to their homes.

This Resource Guide was created to:

- **provide a brief overview of Universal Design** and its benefits,
- **offer some suggested residential modifications** using Universal Design features,
- **act as a guide to related resource materials and organizations**, and
- **explain the steps needed when going beyond ‘do-it-yourself’ projects** in The City of Irvine.

In addition to changes you can make in your home, The City of Irvine is committed to providing an accessible and inclusive community. The City offers a wide range of services for persons of all ages and abilities and maintains accessible facilities, programs and events.

# Introduction

## All people have varying abilities.

Throughout our lives, many of us may encounter temporary or permanent changes in our ability to conduct the tasks necessary for daily living.

**Therefore daily tasks become limited by barriers.**

**Universal Design is about barrier-free living.** Some barriers may exist when:

- moving between rooms in a house,
- turning the faucet on to a desired temperature,
- getting in and out of the shower, or
- visiting a friend's home.

**You can limit the impact of barriers by implementing the features of Universal Design.** This means that your home can be more responsive to the reality of varying abilities inherent to life.

**Some suggested Universal Design features are listed in this Resource Guide,** although there are many more options available when making changes to your home. **Each image has corresponding notes of the illustrated Universal Design features.**

**Universal Design features can:**

- **increase accessibility**, or the ability to access regular activities in your home;
- **enhance visitability**, or the ability for friends to visit your home;
- **promote more independent lifestyles**, for your self, family and guests;
- **'universally' support people's** diverse needs and abilities;
- **provide greater safety** in your home; and
- **encourage "Aging in Place."**

**The benefits of home modifications can serve immediate and future needs.**

**Modifications of Universal Design can be accomplished easily and with limited resources; they can be done at once or phased over time.**



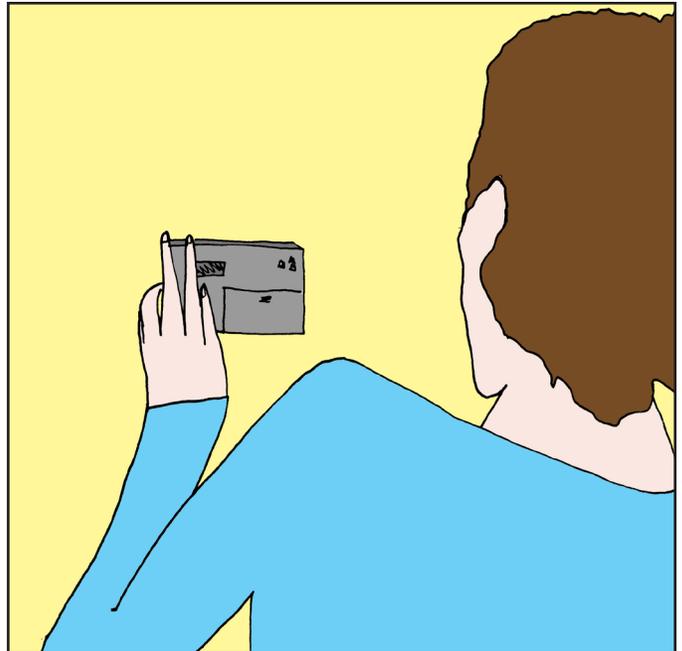
# Universal Design Features

Of the numerous Universal Design features, the following are some suggested alterations that can make your home safer and easier to use:

- **Change door handles to levers** (rather than knobs) which can be operated with a forearm, wrist or elbow.
- **Install a secondary 'peep hole' in the front door** from 42"-48" from the floor to support their use for people of all heights.
- **Move outlets and jacks up**, to 18-24" from the floor to be reached more easily.
- **Lower light switches and temperature controls**, to 42"-48" from the floor, for ease of use and better legibility for those of varying heights.
- **Change flooring** to wood, vinyl, non-slip ceramic tile, or high-density and low-pile carpeting.
- **Change cabinet hardware** to 'U' shaped pulls for easier grasping.



• **Lever type door handle**



• **Temperature controls placed at 48" height from floor**

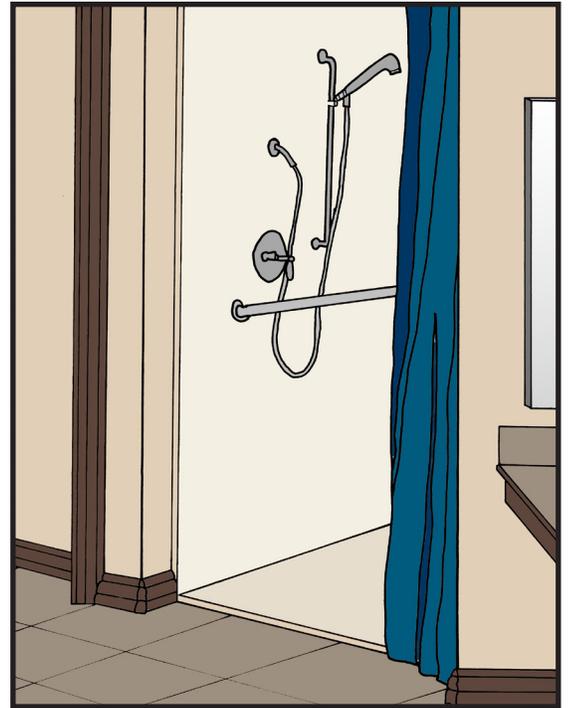
# Kitchens and Bathrooms

For kitchens and bathrooms:

- **Change shower heads and spigots** from a 'fixed' type to one that has a hand-held mechanism.
- **Replace faucets** with a single-control, lever type device for easy operation and temperature selection.
- **Add insulation** to exposed hot water lines beneath sinks to prevent accidental scalding.
- **Install properly placed and supported grab bars**, contrasting in color to the wall for better visibility, in toilet and shower/bathtub areas.
- **Increase the toilet seat height** by changing the toilet, toilet seat or adding an insert where the base meets the floor.
- **Create areas of countertop at differing heights with leg space underneath** for users in seated positions.



- **Single-control lever type shower handle hardware**



- **Low threshold transition into shower stall**
- **Adjustable height shower head with hand-held mechanism**
- **Grab bar properly installed**
- **Open area under countertop**



- **'U'-shaped cabinet hardware**
- **Lowered countertop workspace**
- **Open area under countertop**

# Appliances

When selecting or installing appliances, consider the following:

- **Front loading** washers and dryers are more convenient for people of all heights, while
- Some **control buttons** are easy to read and audibly ‘click’ into the desired settings, making use easier for people with diminishing hearing ability.
- Select **side-hinged** ovens and microwaves; install a pull-out shelf directly below, or next to the appliance to help when removing hot food.
- For people of different heights select **side-by-side** refrigerators which have good access to shelves and
- Install appliances at **comfortable heights** for the user.



- Open area under sink
- ‘U’-shaped cabinet hardware
- Side-hinged appliances
- Front-loading washer/dryer on lifts
- Level non-slip ceramic tile floor



- Placement of electrical outlets and light switches
- Side-hinged door on microwave
- ‘U’-shaped cabinet hardware



- Side-hinged door on microwave
- Pull-out shelf
- ‘U’-shaped cabinet hardware
- High-contrast appliance buttons

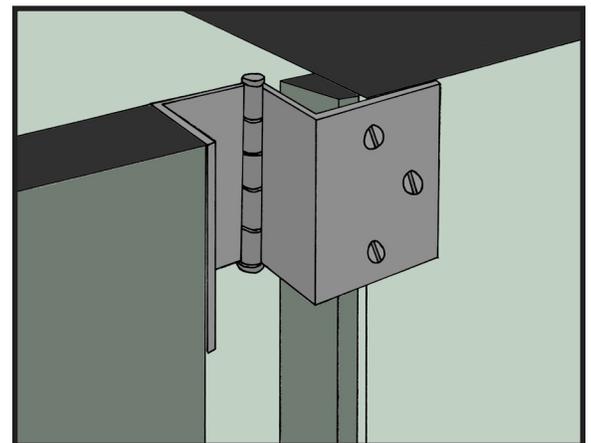
# Doorways

## Doorway Improvements:

- **Maximize doorway widths** (32" minimum; 36" preferred) by either:
  - Replacing **door** hinges with the 'swing-clear' type,
  - Replacing the door with a pocket door, or
  - Replacing the door with a sliding door on externally wall-mounted glides.
- **Lower threshold transitions** to  $\frac{1}{4}$ "- $\frac{1}{2}$ " or add angled wedges to ease movement between rooms.



- Sliding pocket door
- Wood/laminate flooring
- Level doorway threshold
- 'U'-shaped cabinet hardware
- Placement of electrical outlets and light switches



- 'Swing clear' type hinge can increase doorway clearance

# Multi-Story Residences

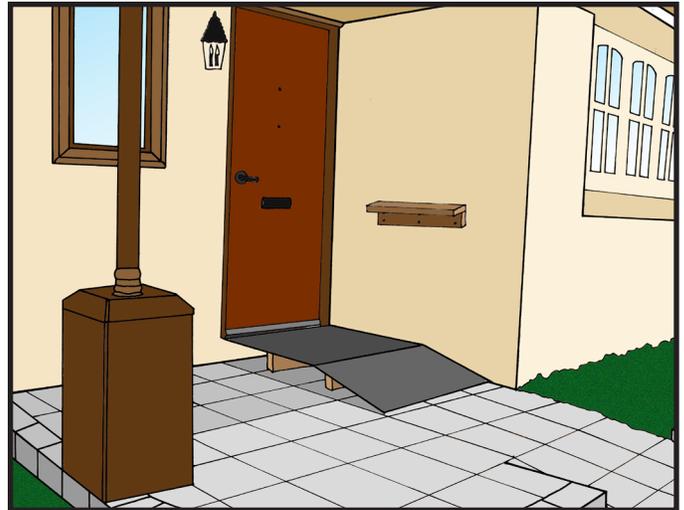
In cases of multi-story residences or homes with grade/elevation changes such as 'sunken' living rooms or stepped entryways, the barriers may be reduced in severity, in the following ways:

## Interior

- Install a **residential lift or elevator**,
- **Chair-lift** to transcend a stairway
- Permanent or portable **ramps or wedges**, for uneven living spaces.

## Exterior

- **Add a ramp** next to, or over stairs.
- Create an entirely **new entry point** through adding a ramp.



- **Exterior ramp** added to front entry
- **Dual-height peep holes** in front door
- **Package shelf** near door
- **Lever type door handle**
- **Effective lighting**
- **Level tile pavers** to front entry



- **Residential lift** next to stairs at front entry
- **Dual-height peep holes** in front door

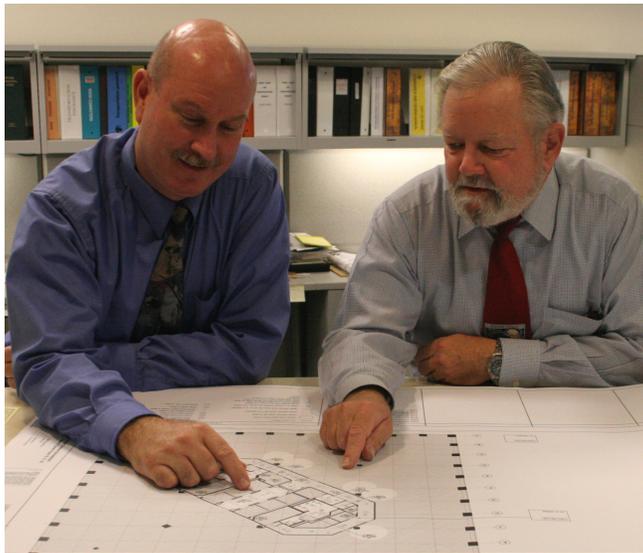


- **Create a concrete ramp** next to existing stairs

# Do-It-Yourself

## Going beyond 'do-it-yourself'...

- **A licensed contractor is required for any construction work valued at \$500.00 or more.** Contractors are listed in the phone book or on the internet. When selecting a contractor, make sure to verify the license through the California State Contractors Board (*see resources listed on page 8 of this guidebook*) and **ask for all references.**
- **A permit is required for all electrical, mechanical, plumbing, and structural modifications to your home.** Permits are not required for interior painting, wallpaper, flooring, or same-size window replacement.
- **Building plans/blueprints are required in order to receive a permit.**



# Permits

Issuance of a City building permit does not relieve you of the legal requirement to obtain approval of the proposed modifications from your **Community or Homeowner Association (HOA)**, which may require separate review. Therefore, **please read the following notes for your particular residential characteristics:**

Attached Homes	Detached Homes	Rental Units
<ul style="list-style-type: none"> <li>• Select a contractor specific to the desired modifications. Verify the contractor’s license with the State. Check all references.</li> <li>• Visit your HOA to receive an Approval Letter.</li> <li>• Visit the Community Development counter at City Hall with building plans and HOA Approval Letter to obtain a City building permit.</li> <li>• Commence work after receiving a City building permit.</li> </ul>	<ul style="list-style-type: none"> <li>• Select a contractor specific to the desired modifications. Verify the contractor’s license with the State. Check all references.</li> <li>• Visit your HOA to obtain HOA permission for proposed work.</li> <li>• Visit the Community Development counter at City Hall with building plans to obtain a City building permit.</li> <li>• Commence work after receiving a City building permit and HOA approval.</li> </ul>	<ul style="list-style-type: none"> <li>• Discuss modification needs with your Site Manager prior to making any changes.</li> <li>• If reasonable accommodations are not possible, then contact either:               <ul style="list-style-type: none"> <li>a. The renter dispute hotline service for Irvine Apartment Communities, or</li> <li>b. The Fair Housing Council of Orange County (FHCOC) provides Irvine residents with education and mediation services regarding fair housing enforcement.</li> </ul> </li> </ul>

# Resources

## Local & State Resources

### **City of Irvine, Community Services**

[www.ci.irvine.ca.us/depts/cs/default.asp](http://www.ci.irvine.ca.us/depts/cs/default.asp)

- Disability Services (949) 724-6732
- Senior Resource Center (949) 724-6926

### **City of Irvine, Community Development, Building & Safety**

[www.ci.irvine.ca.us/depts/cd/buildingsafety/default.asp](http://www.ci.irvine.ca.us/depts/cd/buildingsafety/default.asp)

- Universal Design Information (949) 724-7290
- Permit Processing Center & Information Line (949) 724-6313

### **Dayle McIntosh Center: Disability Resources and Advocacy**

[www.daylemc.org](http://www.daylemc.org)

(714) 621-3300; TDD (714) 663-2087

- Housing Services (714) 620-8321

### **Braille Institute**

[www.brailleinstitute.org/Centers/OrangeCounty.htm](http://www.brailleinstitute.org/Centers/OrangeCounty.htm)

(800) 272-4553

### **Rebuilding Together, Orange County**

(714) 667-8174

[www.rebuildingtogether.org/main-pages.php?page\\_id=main/home\\_mods/home\\_mods.php](http://www.rebuildingtogether.org/main-pages.php?page_id=main/home_mods/home_mods.php)

### **Irvine Apartment Community, Renter Dispute Hotline Service**

(800) 422-5162

### **Fair Housing Council of Orange County (FHCOOC)**

(800) 698-FAIR, [info@fairhousing.org](mailto:info@fairhousing.org)

### **State of California, The Division of the State Architect (DSA), Los Angeles Basin Regional Office**

[www.dsa.dgs.ca.gov/UniversalDesign/default.htm](http://www.dsa.dgs.ca.gov/UniversalDesign/default.htm)

(213) 897-3995

### **Contractors State License Board**

[www.cslb.ca.gov/contractorEd/FreeInfoPostcard.asp](http://www.cslb.ca.gov/contractorEd/FreeInfoPostcard.asp)

(800) 321-CSLB (2752)

# Resources

## Other Resources

**AARP (American Association of Retired Professionals)**  
[www.aarp.org/families/home\\_design/](http://www.aarp.org/families/home_design/)

**National Resource Center on Supportive Housing and Home Modification (NRCSHHM)**  
For information on aging in place  
[www.usc.edu/dept/gero/nrcshhm/directory/](http://www.usc.edu/dept/gero/nrcshhm/directory/); (213) 740-1364

**Paralyzed Veterans of America (PVA) Architecture**  
[www.pva.org/livingsci/architecture/archindex.htm](http://www.pva.org/livingsci/architecture/archindex.htm); (800) 424-8200  
TTY (800) 795-HEAR (4327)

**Center for Universal Design, North Carolina State University**  
[www.design.ncsu.edu:8120/cud/](http://www.design.ncsu.edu:8120/cud/)  
Info Line: (800) 647-6777  
Tel/TTY (919) 515-3082

**Kansas State University**  
[www.k-state.edu/humec/atid/UDF/related\\_resources.htm](http://www.k-state.edu/humec/atid/UDF/related_resources.htm); (785) 532-1325

**Transgenerational Design**  
[www.transgenerational.org/resources/books.htm](http://www.transgenerational.org/resources/books.htm); (505) 323.4041

**Independent Living Institute (Sweden)**  
[www.independentliving.org/links/links-accessibility-and-universal-design.html](http://www.independentliving.org/links/links-accessibility-and-universal-design.html)

**Wheelchair Net**  
[www.wheelchairnet.org/WCN\\_ProdServ/Products/access.html](http://www.wheelchairnet.org/WCN_ProdServ/Products/access.html); (412) 586-6908  
TDD (412) 383-6598

**Accessible Living**  
[www.adaptenv.org/index.php?option=Resource&articleid=405&topicid=28](http://www.adaptenv.org/index.php?option=Resource&articleid=405&topicid=28)  
v/tty(617) 695-1225

**Aging Beautifully**  
[www.agingbeautifully.org/abstracts.html](http://www.agingbeautifully.org/abstracts.html)  
(970) 219-0212

**The IDEA Center at University of Buffalo**  
[www.ap.buffalo.edu/idea/Home/index.asp](http://www.ap.buffalo.edu/idea/Home/index.asp)  
(716) 829-3485

**Concrete Change**  
[www.concretechange.org](http://www.concretechange.org)

**Iowa Program for Assistive Technology (IPAT), Center for Disabilities and Development**  
[www.uiowa.edu/infotech/universalhomedesign.pdf](http://www.uiowa.edu/infotech/universalhomedesign.pdf)  
(800) 779-2001

**Community and Home Injury Prevention Project for Seniors (CHIPPS) – San Francisco Department of Public Health**  
[www.dph.sf.ca.us/php/chipps.htm](http://www.dph.sf.ca.us/php/chipps.htm)  
(415) 581-2415

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## Other Resources

*(continued)*

**California Department of  
Rehabilitation, Fountain Valley**  
[www.rehab.cahwnet.gov/default.htm](http://www.rehab.cahwnet.gov/default.htm)  
(714) 593-5678

**Easter Seals, Santa Ana**  
(714) 834-1111  
[www.southernca.easterseals.com/  
site/PageServer?pagename=CALA\\_  
ResidentialServices](http://www.southernca.easterseals.com/site/PageServer?pagename=CALA_ResidentialServices)

**U.S. Department of Housing and  
Urban Development (HUD), Housing,  
Counseling & Referral Line**  
(800) 569-4287  
[www.hud.gov/local/index.cfm?state=ca](http://www.hud.gov/local/index.cfm?state=ca)

**California Department of Aging**  
(800) 510-2020  
[http://www.aging.state.ca.us/html/  
programs/services\\_menu.html](http://www.aging.state.ca.us/html/programs/services_menu.html)

**ABILITY Awareness**  
[www.abilityawareness.org](http://www.abilityawareness.org)  
(949) 854-8700

