


GOLD, SILVER and BRONZE UNIVERSAL DESIGN FEATURES IN HOUSES


The original Center's Gold, Silver and Bronze universal house feature list was created in 2001 to ease adoption for builders and developers by The Center for Universal Design. These characteristics are the elements, features, ideas or concepts that contribute to or can be components of a universal house. This list is intended as a guide and represents those features which would be most challenging to add to an existing home.

Some items on the list are finite recommendations, some are lists of options, and some are scope statements in regard to how many particular features must or should be included. The more universal features/elements that are included in a house, the higher the level that can be achieved, with GOLD the highest level. Gold and Silver levels are additive to the Bronze level: the Silver level has all the features of the Bronze level plus those listed under the Silver level. The Gold level has all the features of the Bronze and Silver levels plus those listed under the Gold level.

Remember, a key component of universal design is the market appeal of the home and the integration of universal features into the overall home scheme. Universal design becomes a virtually invisible element of a home when done well.

Bronze 
Entrance
Decks
Interior circulation
Bathroom
Kitchens
Garages and carport
Switches and Controls

Silver 
Entrance
Interior circulation
Bathroom
Kitchens
Garages and carport
Switches and Controls
Laundry
Storage
Home Automation
Light and color
Windows

Gold 
Entrance
Interior circulation
Bathroom
Kitchens
Garages and carport
Laundry
Storage
Hardware
Sliding doors
Windows

Bronze Level

Entrances

Stepless Entrances

- At least one stepless entrance is essential; if only one, not through a garage or from a patio or raised deck.
 - Level bridges to uphill point.
 - Drive and garage elevated to floor level, so vehicles do the climbing.

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- Earth berm and bridge and sloping walk details.
- Site grading and earth work (with foundation waterproofing) and sloping walks at 1 in 20 maximum slope.
- Avoid ramps. If ramps are used, integrate into the design.

Other Entrance Features

- One-half inch maximum rise at entrance thresholds.
- Space at entry doors should be a minimum 5' x 5' level clear space inside and outside of entry door for maneuvering while opening or closing door.
- Clear door opening width (34" minimum = 36" wide doors), for all entrance doorways.

Decks

- Build deck at same level as house floor.

Interior Circulation

- At least one bedroom and accessible bathroom should be located on an accessible ground floor entry level (same level as kitchen, living room, etc.).
- Clear door opening width (32" minimum, 34" - 36" wide doors), for all doorways.
- Clear floor space (18" minimum) beside door on pull side at latch jamb provides space to move out of the way of the door swing when pulling it open.
- Circulation route (42" minimum width) to provide maneuvering room in the hallways and archways.

Vertical Circulation

- Stair handrails placed on both sides of stairs

Bathrooms

At least one bathroom on the accessible level must have one of the following accessible bathing fixtures:

- Minimum 5' x 3' (4' preferred), deep curbless shower
- Adequate maneuvering space: 60" diameter turning space in the room and 30" x 48" clear floor spaces at each fixture. Spaces may overlap.

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- Clear space (3') in front and to one side of toilet allows for easy maneuvering to and around toilet.
- Toilet centered 18" from any side wall, cabinet or tub.
- Broad blocking in walls around toilet, tub, and shower allows for future placement and relocation of grab bars while assuring adequate load-bearing and eliminates the need to open up wall to add blocking later.

Fixture Controls

- Single-lever water controls at all plumbing fixtures and faucets.
- Mix valve with pressure balancing and hot water limiter prevents scalding people who cannot move out of the way if water temperature and/or pressure changes suddenly.

Kitchens

- Space between face of cabinets and cabinets and walls should be 48" minimum.
- Full-extension, pull-out drawers, shelves and racks in base cabinets for easy reach to all storage space.
- Adjustable height shelves in wall cabinets.
- Pantry storage with easy access pull-out and/or adjustable height shelves for easy reaching of otherwise hard-to-get items.
- Single-lever water controls at all plumbing fixtures and faucets.

Garages

- Power operated overhead doors.

Switches and Controls

- Light switches above floor, 36" - 44" maximum, and thermostats at 48" maximum height.
- Electrical outlets, 18" minimum height, allows easy reach from a sitting position as well as for those who have trouble bending over.
- Electrical panel with top no more than 54" above floor located with a minimum 30" x 48" clear floor space in front.

Silver Level



Stepless Entrances

- More than one stepless entrance is preferred.

Garages And Carports

- Sloping garage floor (with through-the-wall vents at bottom of slope to release fumes, if a garage) in lieu of stepped entrance with ramp from garage to house interior in attached garages.

Other Entrance Features

- Weather protection shelter while unlocking and opening doors, such as porches, stoop with roof, awnings, long roof overhangs, and/or carports.
- Use slatted decking for positive drainage (i.e., a wood trench drain).
- Light for operating at entry doors: focused light on lockset, general illumination for seeing visitors at night, and/or motion detector controls that turn on lights when someone approaches the door to eliminate the problem of dark approaches to home and adds a sense of security.

Interior Circulation

Vertical Circulation

If a two-story dwelling:

- at least one set of stacked closets, pantries, or storage spaces with knock-out floor for later use as an elevator shaft

Bathrooms

At least one bathroom on the accessible level must have one of the following accessible bathing fixtures:

- tub with integral seat, water proof floor, and a floor drain.

Additional features for all bathrooms

- Countertop lavatories preferred with bowl mounted as close to front edge as possible.
- Wall hung lavatories acceptable with appropriate pipe protection.

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- Pedestal lavatories are not acceptable.
- Long mirrors should be placed with bottom no more than 36" above finished floor and top at least 72" high. Full-length mirrors are good choices.
- Offset controls in tub/shower with adjacent clear floor space allows for easy access from outside the tub with no inconvenience when inside.
- Integral transfer seat in tub and in 3' x 3' shower stall allows people to sit in tub/shower without needing additional equipment.
- Grab bars, if installed, should not be stainless steel or chrome. Use colors to match decor.

Fixture Controls

- Hand-held shower heads in all tubs and showers, in addition to fixed heads, if provided. Single lever diverter valves if needed.
- Adjustable height, movable hand-held shower head or 60" flexible hose allows easy use by people of all heights.

Kitchens

- Contrasting color border treatment on countertops. Color or contrast difference allows easy recognition of the edges of counters and the different heights to prevent accidental spills.
- Stretches of continuous counter tops for easy sliding of heavy items, particularly between refrigerator, sink, and stove top, for easy one-level food flow.
- Front mounted controls on appliances to facilitate easy reach.
- Cook top with knee space below allows someone to use the appliance from a seated position. May be open knee space or achieved by means of removable base cabinets or fold-back or self-storing doors. Pipe protection panels must be provided to prevent contact with hot or abrasive surfaces.
- Cook top or range with staggered burners and front or side mounted controls to eliminate dangerous reaching over hot burners.
- Glare-free task lighting to illuminate work areas without too much reflectivity.
- Side-by-side refrigerator allows easy reach of otherwise hard-to-get items, particularly if pull-out shelving is provided.
or
- Use under counter or drawer type refrigerators and install them on raised platforms for optimum access to storage space of 18" - 48" above finished floor.

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Laundry Areas

- Front loading washers and dryers, with front controls, raised on platforms to reduce need to bend, stoop, or lean over.
- Clear space 36" wide across full width in front of washer and dryer and extending at least 18" beyond right and left sides. (Extended space can be part of knee space under counter tops, sink, etc.)

Storage

- 50% of storage to be no more than 54" high.
- Adjustable height closet rods and shelves allow for flexibility of storage options.

Garages And Carports

- Extra length and width inside for circulation around parked cars.
- No ramp in garages.
- Sloping garage floor (with through-the-wall vents at bottom of slope to release fumes) in lieu of stepped entrance with ramp from garage to house interior.

Home Automation

- Motion detector light switches in garages, utility spaces, entrances, and basements.
- Remote controls for selected lights.
- Remote controls for heating and cooling.
- Doorbell intercoms that connect to portable telephones.
- Audible and visual alarms for doorbell, baby monitor, smoke detectors, etc.

Light and Color

- Color contrast between floor surfaces and trim allows easy recognition of the junction of floor surfaces and walls. Avoid glossy surfaces.
- Color contrast difference between treads and risers on stairs.
- Ambient and focused lighting allows lots of light. Lighting that is thoughtful and variable, emphasizing lighting at stairs, entrances and task lighting
- Contrast between counter tops and front edges or cabinet faces.

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Switches and Controls

- Easy-touch rocker or hands free switches. (See Home Automation.)
- Additional electrical outlets at bed locations and desk for equipment, four-plex boxes each side for computer and electronic equipment as well as personal use equipment.

Windows

- Windows for viewing, 36" maximum sill height. Casements, awnings, hoppers, and jalousies are good choices but not essential.

Gold Level



Stepless Entrances

- Make all home entrances stepless.

Other Entrance Features

- View of callers for all people, including children and seated users through sidelights, wide angle viewers, TV monitors, windows in doors, and/or windows nearby.
- A place to put packages while opening doors: built-in shelf, bench or table with knee space below located on the outside next to the door.
- A way for visitors to communicate with residents, such as lighted doorbell at a reachable height, intercom with portable telephone link, and/or hardwired intercom.
- Address/house number should be large, high contrast, located in a prominent place, easy for friends and emergency personnel to locate.

Interior Circulation

- Turning space in all rooms (5' diameter).
- An open plan design, minimizing hallways and doorways and maximizing sight lines.
- Floor finishes that minimize glare, are slip resistant, and offer low resistance to walking or rolling.

Vertical Circulation

- All stairs to have appropriate width and space at the bottom for later installation of a platform lift, if needed.

UNIVERSAL DESIGN FEATURES IN HOUSES

Bathrooms

Bathrooms on the second floor should follow guidelines.

At least one bathroom must have one of the following accessible bathing fixtures:

- tub with integral seat, water proof floor, and a floor drain.
- Other bathrooms in the same house may have a tub with an integral seat or a 3' x 3' transfer shower with "L" shaped folding seat and 1/2" maximum lip (curb) in lieu of fixtures described above. When more than one bathroom has the same type of bathing fixture (a tub, shower, wet area shower), at least one shower should be arranged for left-hand use and one for right.
- Knee space under lavatory (29" high) allows someone to use lavatory from a seated position. May be open knee space or achieved by means of removable vanity or fold-back or self-storing doors. Pipe protection panels must be provided to prevent contact with hot or sharp surfaces.

Kitchens

- Clear knee space under sink (29" high minimum) allows someone to use the sink from a seated position. May be open knee space or achieved by means of removable base cabinets or fold-back, bi-fold (Door Ease), or self-storing doors. Pipe protection panels must be provided to prevent contact with hot or sharp surfaces.
- Adjustable height work surfaces (28" - 42"), electrically powered, continuously adjustable counter segments, some with cook tops and/or sinks and disposal units (e.g. Adjustable Systems, Inc.)
or
- Mechanically adjustable counter segments, some with sinks and disposal units, some with cook tops, adjustable in 2" increments (28" - 42") allows in-kitchen work for people of all heights, those with back trouble, people who are seated, and/or children.
- Built-in oven with knee space beside, set for one pull-out oven rack at the same height as adjacent counter top.
- Drop in range with knee space beside, top set at 34" above finished floor.
- Dishwasher raised on a platform or drawer unit, so top rack is level with adjacent counter top, puts bottom racks within easy reach requiring less bending.

Laundry Areas

- Laundry sink and counter top surface no more than 34" above finished floor with knee space below.

Storage

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- Motorized cabinets that raise and lower.
- Power operated clothing carousels.

Garages And Carports

- Door height and headroom clearances (8' minimum) for tall vehicles or provide alternative on site outdoor parking space.

Hardware

- Easy to use, requiring little or no strength and flexibility:

lever door handles
push plates
loop handle pulls on drawers and cabinet doors – no knobs
touch latches
magnetic latches in lieu of mechanical, keyless locks

Windows

- Crank operated windows.
- Power operators whenever possible.

Sliding Doors

- Exterior sliding doors: - drop frame and threshold into sub floor to reduce upstanding threshold track, or ramp the finished flooring to top of track on both sides.
- Interior pocket doors: When fully open door should extend 2" minimum outside door jamb and be equipped with open-loop handles for easy gripping..
- By- passing closet doors - each panel should create an opening at least 32" clear

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