



Designing for Accessibility at LACCD

Accessibility standards and code requirements deal specifically with physical facilities, as do other codes related to fire safety, structural integrity, weather protection and the like. But unlike safety and quality construction requirements, accessibility codes relate to legislated civil rights of individuals with disabilities. A non-compliant physical condition related to access could lead to claims of employment, housing or other discrimination, as it directly affects the ability of a building owner to provide equal access to programs, services and activities in that facility.

While the process of documentation and DSA approval will inevitably focus on meeting the detailed requirements of the California Building Code (CBC), it is important to keep in mind those areas that may not fall into a specific CBC category, but are nevertheless important items related to potential disability civil rights. Consider the following:

1 Private Offices

When private offices are used by individual employees strictly for work, the features of those spaces are not regulated by access codes, and there is no need for accessible features. However, when such offices are used to meet students or other members of the public, they must be designed to accommodate visitors who may have a disability. This should include providing the required maneuvering clearances at doors, and appropriate FF&E layout, size and specifications. Additionally, Offices used by individuals with disability, must be designed to accommodate the specific needs of the individual, to that end all offices should be designed so that modifications could be easily made in the future, should there be a need to accommodate an employee with a disability. See the attached LACCD Elements of Accessible Design For Furniture, Fixtures, Equipment And Placement for additional information.

2 Emergency Call Stations / Phones

Public call stations, alarm buttons, etc. designed to contact the police or sheriff in case of emergency need to be accessible to all potential users. In addition to locating such devices on accessible route, and within accessible reach range, the system shall be designated with raised characters and Braille, and provide both audible and visual signals to indicate that assistance is on the way. Signs indicating the meaning of visual signals should be provided.

3. Touch Screen Technology

When touch screens are used, an alternate mode of operation and information retrieval that does not require user vision shall be provided. Where a product utilizes touchscreens or contact-sensitive controls a tactilely discernible input method shall be provided— at the same time, in the same location, and for the same type of independent operation as the touch screens. For example, newer ATMs and touch screen kiosks used for check-in at Amtrak stations are also equipped with Braille and headsets to assist passengers unable to use touch screens.

4. Storage Facilities

Where storage is provided, at least one of each type shall be accessible; on accessible route, and within reach range. Types of storage include, but are not limited to, closets, cabinets, shelves, clothes rods, hooks, and drawers. Where lockers are provided, at least 5 percent, but no fewer than one of each type, shall comply. Different types of lockers may include full-size and half-size lockers, as well as those

specifically designed for storage of certain specific types of items, for example, various sports equipment. Library book stacks available for public use shall be 54 inches maximum above the finish floor.

5. Teaching Stations, Lecterns and "Smart" Classrooms

Lecterns are work surfaces, and when provided for use by employees who require "reasonable accommodation", or by other than employees, for example students, at least 5% shall comply, and be on accessible route. Whether in moveable lecterns or built-in teaching stations, any technology provided must be accessible, not only in terms of physical location, but also in terms of the functions of that technology (controls, provisions for those with hearing or visual impairments, etc.). Accessible lecterns and teaching stations must be dispersed throughout the facility.

6. FF & E

Many access issues related to furniture, fixtures and equipment only manifest themselves after the project is complete and the users have occupied the space. Thoughtful design and coordination during the design process with architectural, electrical, mechanical/plumbing control locations, security device placement, and audio-visual requirements could help alleviate potential problems. Rows of bookshelves with minimum clearances between them do not necessarily account for books that are deeper than the shelves and will protrude into the clear aisle width. Classrooms filled with seating without the required aisle clearances will not be useful to those using mobility aid such as a wheelchair. Consider required clearances and accessible route to all amenities within spaces along with space usage issues when designing furniture and equipment layouts. Specify tables that provide knee and toe clearances required for access, allow for required floor clearances for doors, aisles, and accessible seating locations. Consider FF&E sizes and quantities for the rooms they are intended. Locate all wall mounted writing boards, tack boards, hooks, and other elements on accessible route. Do not block or overlap the required aisles and clearances. See the attached LACCD Elements of Accessible Design for Furniture, Fixtures, Equipment and Placement for additional information.

7. Construction Tolerance Errors

Experience shows that despite the best efforts of architects, engineers and contractors, elements that are designed to the maximum or minimum of a code-allowed range often become noncompliant conditions due to construction tolerance errors. In general, do not design to the extreme ends of these allowed ranges – see the attached DSA IR 11B-8, dated November 19, 2009. Also be aware of soil types, and FINISH dimensions and thickness of wall and floor materials. Pay particular attention to lavatory offsets, toilet/shower accessory mounting locations, shower clear widths, handrail extensions (full minimum extension must be horizontal), floors sloped to drain and walkway slopes. Construction tolerances must be built in to the design. Compact and prepare substrates under walkways prior to placement of pavement.

8. Employee and Staff Areas

All new construction and all enhancement projects for existing campus facilities are required to be designed and constructed such that all areas of the facility (unless exempted by the regulations) including all common use employee and staff areas are readily accessible to and usable by individuals with disabilities and in compliance with the regulations that provide the greatest degree of accessibility. In new construction, compliance in these areas may NOT be deferred under Reasonable Accommodations of ADA Title I, or California Government Code. Please see LACCD Memorandum, dated October 30, 2012, attached.

9. Applicable Regulations

Finally, all design and construction must conform to the latest version of the ADA Standards, and to the applicable version of the California Building Code. When both ADA and CBC have regulation regarding the same issue, the more stringent of the two must be followed. Additionally for alterations projects the requirements of Path Of Travel (POT) must be delineated on the drawings per DSA PR 15-01.

"Lessons Learned" Design and Specification Recommendations

Compliance with access requirements is often measured in fractions of inches; details that are well planned can prevent non-compliant issues from arising during construction. The following list contains recommendations that are a direct result of "lessons learned" in previous projects.

1. Recommended Note under Accessibility General Notes:
The plans and details for this project may show certain dimensions, slopes, etc. that EXCEED the minimum requirements as called out in these General Notes or as specified in CBC or ADA Standards. The project is to conform to the plans and details in order to create enhanced accessibility and to minimize construction tolerance errors.
2. The Path of Travel: (POT) for new projects must connect to the existing campus POT, and to planned future campus POT. Carefully coordinate the limit of construction with the surrounding existing and planned future campus site work, parking and POT. Include in construction documentation repairs to any surrounding POT conditions that are non-compliant or have been damaged by construction activities.
3. Per the General Conditions to the Contract, Design-Builders are required to maintain an accessible POT to all operational facilities in and around the construction site at all times; plan in the construction documents for this POT during construction. Designers on Design-Bid-Build contract should coordinate with College Project Team on construction phasing plans.
4. Campus Arrival Points:
 - a. Provide accessible drop off zones at ALL campus drop off areas; carefully coordinate civil and architectural design requirements and construction. In designing the accessible loading zone, avoid locating detectable warnings within the access aisle. In other words, don't simply stretch a CBC "parallel curb ramp" with the intent of using the bottom landing of the dropped sidewalk area as the access aisle unless you are locating the detectable warnings on the ramp themselves. Detectable warning surfaces are required to meet color requirements, aren't engineered to receive additional painting, and can present issues for the deployment of a vehicle lift.
 - b. Carefully consider drainage issues in loading zones. Both the vehicle pull-up space and the access aisle must be level to ¼" per foot and extending cross-gutters through loading zone should be avoided or carefully designed. Similarly, one needs to coordinate grading around curb ramps. While bottom landings of curb ramps are normally permitted to have slopes in the direction of travel up to 5% to accommodate a gutter, the accessible loading has more stringent paving requirements.
 - c. Vehicular overhang is prohibited in all areas where parking stalls are adjacent to a pedestrian walkway and designers need to incorporate wheel stops to limit overhang where stalls are adjacent to and facing an accessible path of travel. The distance from the front end of the parking space to the rear of the wheel stop (where tires' strike the wheel stop) should be 36". The designer also needs to avoid bumper overhang beyond the designated parking space and to avoid creating a safety hazard for pedestrians or obstruction of an access aisle.
5. Exterior Path of Travel:
 - a. Paths
 - i. Design maximum cross slopes along the Path of Travel, at Sidewalks, Parking Access Aisles and at Level Landings to 1.7%, which is more restrictive than the code requirement of 2% maximum. Sidewalk cross slope will be measured perpendicular at

four feet (4') intervals at outside edge to edge across the width of the sidewalk.

- ii. Design level paving at all pathway intersections and turns.
- iii. Flatness on regular sidewalks shall not exceed one-sixteenth inch (1/16") maximum.
NOTE: Flatness is strictly a specification issue; cross-slope is the relevant accessibility Issue
- iv. Where Path of Travel crosses a drainage gutter, the slopes in the direction of travel shall not exceed 5%.
- v. To the greatest extent possible, avoid pedestrian pathways being on or adjacent to vehicular traffic ways (auto or regular cart traffic). Where it isn't possible to provide separation by curb or other manner and detectable warnings are needed, consider providing pathways that are at least 7'-0" wide so that individuals using mobility aids to travel extended distances over detectable warnings.
- vi. Exterior POT may not be less than 48" wide, however nothing prevents paths to be designed and constructed wider. If wider paths are constructed, the entire constructed width must comply with cross slope and running slope requirements, or the compliant part of the path is clearly and permanently identifiable and discernable by design, and designation.

b. Detectable Warning Surfaces

- i. Provide Detectable warnings at all on-grade transitions between pedestrian and vehicular areas.
- ii. Coordinate detectable warning surface locations so that they aren't dependent upon parked cars to provide cane detection (i.e., not floating in the middle of a parking lot that one might miss)
- iii. Where new concrete is being provided, consider recessed type truncated dome mats, and avoid surface mounted systems which typically leave a raised edge.

c. Ramps

- i. Design the location of ramps to coincide as much as possible with stairs serving the same areas.
- ii. Design running slopes of ramps to a 1 to 14 (7.1%) ratio where feasible, which is more restrictive than the code maximum requirement of 1 to 12 (8.3% slope).

6. Interior Path of Travel:

- a. Design for at least 62" turning radius where 60" turning radius is required.
- b. Code for aisle width to facilitate travel for wheelchair users who are traveling in opposing directions requires 44" width up to 200 feet long maximum without 60" wide passing space; reduce maximum length to 100 feet.
- c. Note LESS THAN 4" for protruding objects along circulation paths, including fire extinguishers, AV equipment, underside of open stairways, fire risers in stair landings or hallways, hand dryers, shower rods mounted lower than 80", wall mounted telephones, wall mounted dispensers, etc.
 - i. Wall-mounted televisions (including flat screens) need careful attention to avoid protruding object conditions. Brackets themselves typically protrude at least 2" from the wall. Often locating the screen in an alcove or above casework is necessary.
 - ii. Transaction counters must not become protruding objects.

- d. Carefully consider required clear floor space at tactile signs (an 18" x 18" area CENTERED on the sign with no door opened 45 degrees swinging into the clear floor space). Positioning needs careful attention in alcoves where the sidewall is just 18" from the swing of the door - leaving no position tolerance – and when provided on the push side of doors which often have less than 18" clearance between the door and other elements such as walls, casework or FF&E placement.
7. Sanitary Facilities:
 - a. Limit design height of accessible counter tops, work surfaces, sinks and lavatories to 33" or 33-1/2" AFF, which is more restrictive than the code requirement of 34" maximum. Coordinate lavatory type (drop-in with an additional lip height v. self-rimming) with final maximum height requirement.
 - b. Use motion activated flush systems on toilets at all urinals that are not "waterless."
 - c. Insulate ALL pipes at accessible sinks and lavatories, including drainage, hot, cold and insta-hot lines.
 - d. Design with construction tolerances in mind for grab bar lengths, locations of accessible WCs. Rear grab bar needs to extend from centerline of WC 24" min. to clear side and 12" min. to wall side. Side grab bar is 42" long minimum and is mounted 12" max. from rear wall, with the front end 54" minimum from rear wall.
 - e. Use 36" wide shower stall seats when feasible (code does not specify minimum width) and maintain 1" to 1 1/2" mounting from the wall.
 8. Doors:
 - a. The use of power operated and automatic doors is encouraged. When designing for power operated doors, there must be a 30"x48" level clear floor space centered in front of the actuator device (i.e., vertical actuator bar) and the operating door must not swing into this clear floor area. Access Board recommends 72" maximum from power operated doors to access controls; reduce to 68" maximum and include opportunity for both side approach (convenience) and front approach (individuals with paraplegia using foot rest to signal door operation).
 - b. Compliant maneuvering clearances – Recommend dimensioning ALL door strike side clearances and clear depths. Don't rely on common details. See diagrams attached at the end of this document.
 - c. Maximum threshold height - 1/4" max. vertical transition plus another 1/4" allowed if beveled at 1:2 - including restroom marble thresholds. Detail all floor material transitions at thresholds.
 - d. The force required to activate all hardware including panic exit devices must not exceed 5 lbs. of force. Specify hardware that can operate within this limit.
 - e. All doors must be operable with maximum 5 lbs. of force. Each additional hardware component will add friction and weight, and will affect the force needed for operating the door. Carefully consider the number and type of components for each location and function, and avoid specifying unnecessary components.
 - f. Avoid specifying door assemblies with deep frame throats.
 9. Products and accessories should be reviewed on a case-by-case basis for accessibility regarding people with hand function impairments – the requirement that there be no "tight pinching, twisting or grasping" for typical operation. Regardless of the vendor's claim of compliance, look carefully at restroom hand dryers or various dispensers, vending machines, pencil sharpeners or other classroom accessories and the like.

10. Non-compliant conditions often occur at the intersection of engineering and architectural design and construction work. Coordinate carefully the following:
 - a. Exterior slab, drainage, door landing and threshold requirements at exterior doors.
 - b. Drain pipes and knee clearances at underside of lavatories.
 - c. Shower floor drains, sloped floors and required uniform 18" height to seat.
 - d. Grate openings and orientation.

Elements of Accessible Design For Furniture, Fixtures, Equipment and Placement

- ❖ **Furniture:** The California Building Code does not provide specific requirements as to how a building should be furnished. There are, however, several codes that cite specific requirements for maneuvering spaces, clearances around doors, and appropriate dimensions for permanent fixtures. By taking these requirements and *recommendations* into account, one can more easily make decisions when buying furniture, fixtures, and equipment that will enhance the accessibility of a given environment.
- ❖ **Placement** (For a graphical representation of the following requirements please refer to Diagrams at the end of this document)
 - **Aisles:** Unless otherwise required for egress width, aisles may have a minimum of 36" clear width if serving only one side and not less than 44" clear width continuously, when the aisle serves both sides. It is permissible to drop down to 32" for a point no longer than 24", with consecutive pinch points kept at least 48" apart. Dead end aisles shall not be greater than 20 feet long.
 - Frequently, there is a need for paths of travel to perform a U-turn. Where the distance from one aisle to the next is less than 48", the clear area in the turn must be 5'-0" when serving one or more 36" wide aisles, and 48" when both aisles are at least 42" wide. [see diagram at the end of this document, and CBC Fig. 11B-403.5.2]
 - **Clear Floor Space:** The clear floor space required for a single wheelchair occupant is 30" X 48" with no more than ¼" per foot slope in any direction. Clear floor space requirements apply to desks, lecterns or podiums, sinks, dispensers, vending machines, drinking fountains, transaction and service counters, workstations, or any situation where the user is stationary to use the furniture, fixture, or equipment. If the instructor's lectern (non-fixed equipment) is not accessible, it is recommended that a side table with required knee clearance be added adjacent to the lectern for accessibility compliance. *It is important, when placing furniture, fixtures, or equipment in outdoor locations, to remain mindful of the slope requirement. Installing equipment without providing a level area can present difficult or even dangerous conditions for people who use wheelchairs, as the wheelchair is prone to rolling away or tipping over.*
 - **Wheelchair turning space:** Wheelchair turning space may be achieved with either a 60" diameter clear floor space, or a t-shaped turn around area, where each side of the tee is 36" wide and the overall length is 60". (36"+24")

- **Door Clearances:** The purpose of door clearance requirements is often not understood, and tends to be overlooked or disregarded. The reason that nothing should be placed within certain proximities to doors is that individuals using mobility devices (such as a wheelchair) need clearance space to get through the door. One must be able to approach a door (sometimes at an angle), open it, maneuver around the door itself, and then pass through the doorway. Different types of door setups require different clearances. The required maneuvering clearances on both sides of the doors must be kept clear at all times. Do not specify FF&E in these areas.
- **Signage Clearances:** Most people who are visually impaired were not born blind but lose eyesight with age; standing closer and closer to a sign. This is why tactile signs are required to have an 18"x18" clear floor space centered upon them. FF&E layouts need coordinated with signage plans to avoid creating barriers to those who are visually impaired.

❖ **Fixtures:**

- **Fixed Seating:**
 - **Minimum Number:** Where fixed or built in seating, tables or counters are provided in accessible or common use areas, 5 percent, but never less than one, must be accessible as provided. An accessible route of travel shall lead to and through such fixed or built-in seating areas or tables. *This includes both indoor and outdoor furniture. (i.e. Outdoor tables w/built in seats, fixed furniture in a classroom, etc.)*
 - **Assembly Areas:** Wheelchair areas must be an integral part of any fixed seating plan and provide people with disabilities a choice of admission prices and lines of sight comparable to members of the public in general. Spaces designed for more than 300 spectators are required comply with requirements for vertical and horizontal dispersion of wheelchair seating positions. At least one compliant companion seat must be provided next to each wheelchair space, but up to three seats for companions in the same row, contiguous with the accessible seat is recommended. Some assembly spaces in the District are subject to unique requirements but typically the number of wheelchair spaces required for each type of seating area (*seating area that provides spectators with distinct services or amenities that generally are not available to other spectators*) is as follows:

NO. OF SEATS	MINIMUM NUMBER OF WHELCHAIR SPACES
4 to 25	1
26 to 50	2
51 to 150	4
151 to 300	5
301 to 500	6
501 to 5,000	6, plus 1 for each 100, or fraction thereof, beyond first 500
5,001 and over	46, plus 1 for each 200, or fraction thereof, beyond first 5,000

In addition to wheelchair seating positions and their accompanying companion seats positioned with shoulder alignment to the spectator in a wheelchair, there are a need for one percent of all seats to be semi-ambulant and five percent of aisle seats to be designated aisle seats. The semi-ambulant seats must have 24 inches of legroom in front of the seat. The designated aisle seats must be those seats which are closest to the accessible path, have folding or retractable armrests on the aisle side of the seat when other seats in the area have armrests. Designated aisle seats are to be identified by an ISA symbol.

- **Height of Work Surfaces:** To be considered accessible, the tops of tables and counters must be between 28-34 inches tall. When the intended use of a table or counter is for equipment, designers must consider the planned equipment so that the final assembly allows for adequate reach range operation to an element not higher than 48" AFF, when reach is unobstructed, or less if reaching over an element. See reach range diagrams attached for more information.
- **Knee Clearance:** Accessible knee clearance is defined as being a minimum of 27" high, 30" wide and 19" deep. Elements such as eye washes which are located in an alcove, require 36" of width when the alcove is deeper than 24"
- **Storage:** Where storage is provided, at least one of each type must be accessible. However, when lockers are provided, five percent of all lockers need to be accessible. For example, separate types of music instrument lockers may be provided for cellos, flutes and guitars; five percent of each type must be accessible. To be considered accessible, said facilities and hardware must be placed between 15" and 48". For hardware, touch latches and "U" shaped pulls are acceptable.
- **Sinks:** Lavatories, when located next to a wall, or other hard surface, must be mounted with the centerline a minimum of 18" to the wall, or adjacent hard surface. The lip or rim of the sink may be located no more than 34" above the finished floor. The sink must also extend a horizontal depth of at least 17". The 30" X 48" clear floor space may extend up to 19" under the sink, providing the following is met. The bottom of the apron or bottom edge of the lavatory must measure 29" reducing to 27" at a point 8" back from the front edge. Additionally, a 9" high toe clearance must be provided extending back toward wall to a distance no more than 6" from the back wall. Please see figure 11B-1D below for a graphic representation of these requirements.
- **Wall Mounted Fixtures:** Wall mounted fixtures with the bottom leading edge between 27"- 80" shall not extend from the wall more than 4". Wall mounted fixtures mounted above 80", below 27", or in between, but with cane detection; may extend any distance from the wall, as long as they do not reduce the required clearances at floor. *This section explains the requirements for "protruding objects." Adherence to these specifications will help keep paths of travel safe for people with visual impairments. Objects that protrude into a path of travel present a hazard to people with visual impairments unless they can be detected by the sweep of a cane.*

❖ Equipment

- **Reach Ranges:**
 - All operational controls shall fall between 15" and 48" above finish floor and not require reach over an element taller than 34".

- When an item/control is located over an obstruction (i.e. paper towels over a countertop, valve handles for operating laboratory equipment on countertops, etc.), the maximum height at which the item may be mounted decreases as the height and depth of the obstruction increases. When there is horizontal reach distance in excess of 10", the upper limit of this range is reduced to 46". When forward reach is between 20" and 25", the reach height is reduced to 44" AFF.
- **Operation:** Controls and operating mechanisms must be operable with one hand, and shall not require any tight grasping, pinching, or twisting of the wrist. Further, controls must be operable with no more than 5lbf. This requirement does not apply where special equipment dictates otherwise. *A good test is to see if operation is possible with a closed fist. If so, chances are the controls are accessible.*
- ❖ **Other Code Requirements You Might Not Know...**
 - **Laboratory Rooms:** Lab rooms shall have at least 5% of all workstations but not less than one workstation accessible to and usable by persons with disabilities. (11B-226.1)
 - **Teaching Facility Cubicles, Study Carrels, etc.:** Teaching facility cubicles, study carrels, etc. shall have 5% but always at least one cubicle or carrel in each use group (language, dental, audiovisual, typing, drafting, darkrooms, etc.) made accessible to and usable by persons with disabilities. (11B-226.1)
 - **Library General Use Areas:**
 - **General:** Library general use areas such as those housing card files, book stacks, periodicals, reading and study areas, reference areas, information desks, circulation counters, reserve areas, special facilities or collections, etc. shall be made accessible to persons with disabilities.
 - **Open Book Stacks:** Open book stacks (those available for customer use) shall be on an accessible route. and shall have main aisles of no less than 44" in clear width and side and end aisles no less than 36" clear width. Dead end aisles shall not be greater than 20 feet long.
 - **Height of Book Shelves and Magazine Racks:** Unless an attendant is available to assist persons with disabilities, all book shelving shall be located not more than 48" above the floor. Note that this is more stringent than the 54" height provided under CBC 11B-225.2.3.
 - **Card Catalogs and Similar Elements:** Minimum clear aisle space and maximum reach heights at card catalogs with all drawers within the accessible reach ranges described above.
 - **Reading and Study Areas:** At least 5% or a minimum of one of each element of fixed seating, tables, study carrels, computers or similar workstations must accessible. (11B-226.1)
 - **Check-out Areas:** At least one lane on each check out area shall be on an accessible route and shall have a portion of the counter which is at least 36" in length with a maximum of 34" above the finished floor with a 36" wide aisle on the customer side.
 - **Playgrounds and other Recreation Areas:**
 - **General:** The new 2010 ADA regulates many types of recreation areas as well as how exercise equipment is installed. The changes were adopted into the 2013 California Building Code and need reviewed whenever a project includes these sorts of uses.



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October 30, 2012

Attention: CPM Directors, Relocation Project Managers (RPM), and Design Professionals

Regarding: Los Angeles Community College District
Designing for Accessibility in Employee or Staff Areas

The purpose of this memorandum is to clarify the scope of physical accessibility required within employee or staff areas as regulated by the California Building Code and Federal ADA Regulations.

Accessibility is required at all common use employee and or staff areas where work is not to be performed exclusively by the employees and or staff.

Common use employee and staff areas include but are not limited to circulation paths, faculty only restrooms, faculty lounges and lockers, faculty only parking, etc.

Background

The Americans with Disabilities Act of 1990 (ADA) Title II regulations requires *"Each facility or part of a facility constructed or altered, on behalf of, or for the use of a public entity shall be designed and constructed in such manner that the facility or part of the facility is readily accessible to and usable by individuals with disabilities, if the construction was commenced after January 26, 1992"*.¹

Similarly, the purpose of the California Building Code (CBC) is *"to ensure that barrier-free design is incorporated in all buildings, facilities, site work and other improvements to which this code applies and in compliance with state law to ensure that these improvements are accessible to and usable by persons with disabilities."*² Further, *"to incorporate standards at least as restrictive as those required by the federal government for barrier-free design under (1) Title III (Public Accommodations and Commercial Facilities), Subpart D (New Construction and Alteration) and Appendix A (Americans with Disabilities Act Standards for Accessible Design) (see 28 C.F.R., Part 36), and (2) Title II (Public Entities), Section 35.151 (New Construction and Alterations) (see 28 C.F.R., Part 35) both from the Americans with Disabilities Act of 1990."*²



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The requirements, set forth by the ADA and CBC, apply to all areas of the facility unless clearly exempted by the regulations, or where scoping limits the number of elements required to be accessible. These requirements apply to both temporary and permanent facilities.

Common use circulation paths and common use spaces and elements within employee work areas are not exempt. The common use paths, spaces, and elements shall be designed and constructed in such manner that the facility is readily accessible to and usable by individuals with disabilities.

Spaces and elements within work areas, where work is to be performed exclusively by the employee or staff, are generally exempt from the requirement of ADA Title II, and the California Building Code, but shall be designed and constructed so that individuals with disabilities can approach, enter, and exit the area. These areas are covered under Title I of ADA, and California Government Code 12926 and 11135.

Title I of the ADA and California Government Code section 12926 require an employer to provide reasonable accommodation to qualified individuals with disabilities, employees or applicants for employment, unless to do so would cause undue hardship. Under these regulations, an employer is required to remove workplace barriers that keep individuals from performing jobs they could do with some form of accommodation. An accommodation is any change in the work environment or in the way things are customarily performed which enables an individual with a disability to enjoy equal employment opportunities.

Work place barriers may be physical obstacles (such as inaccessible facilities or equipment), or they may be procedural (such as rules concerning when and how work is performed). Reasonable accommodation removes workplace barriers for individuals with disabilities.

There are a number of possible reasonable accommodations that an employer may have to provide in connection with modifications to the work environment or adjustments in how and when work is performed. These modifications include, but not limited to, making existing facilities accessible, acquiring or modifying equipment, or job restructuring, etc.

Conclusion:

All new construction and all enhancement projects for existing campus facilities are required to be designed and constructed such that all areas of the facility (unless exempted by the regulations) including all common use employee and staff areas are readily accessible to and



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usable by individuals with disabilities and in compliance with the regulations that provide the greatest degree of accessibility.

Corrective work for employee and staff common areas in existing buildings may not be deferred under Reasonable Accommodations of ADA Title I and or California Government Code. However, corrective work for employee and staff exclusive work areas in existing buildings, not subject to any enhancement or alteration projects under the Bond Program, may be deferred and tracked on the ADA Transition Plan under Reasonable Accommodations provisions of the referenced regulations.

If you have any questions or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in blue ink, appearing to read "J. O' Reilly".

James O' Reilly
Executive Director, Facilities Planning & Development

cc: Vice Presidents of Administration
Thomas L. Hall, Director of Facilities Planning & Development
Todd Cozolino, Director Construction Services
Daynard Tullis, Director Design Services
Frank Alaniz, LACCD FP&D Deputy Director, Inspections

TLH:at

¹ [The Americans with Disabilities Act of 1990, 28 CFR 35.151 New construction and alterations.](#)

² [California Building Standards Commission, 2010 California Building Code, California Code of Regulations Title 24, Part 1, \(Sacramento: California Building Standards Commission, 2010\), Chapter 1.9.1.](#)

² [California Government Code 4454](#)

USE OF PREDETERMINED CONSTRUCTION TOLERANCE GUIDELINES FOR ACCESSIBILITY

IR 11B-8

References: 2007/2010 California Building Code, Section 1101B.5

Revised 01-01-11
Issued 11-19-09

Discipline: Access Compliance

This Interpretation of Regulations (IR) is intended for use by the Division of the State Architect (DSA) staff, and as a resource for design professionals, to promote more uniform statewide criteria for plan review and construction inspection of projects within the jurisdiction of DSA. This IR indicates an acceptable method for achieving compliance with applicable codes and regulations, although other methods proposed by design professionals may be considered by DSA.

This IR is reviewed on a regular basis and is subject to revision at any time. Please check the DSA web site for currently effective IRs. Only IRs listed in the document at <http://www.dgs.ca.gov/dsa/Resources/IRManual.aspx> at the time of plan submittal to DSA are considered applicable.

Purpose: This Interpretation of Regulation clarifies DSA's position regarding the use of construction tolerance guidelines related to accessibility provisions contained in the California Building Code.

Background: Often, the subject of construction tolerance arises with regard to provisions for accessibility as indicated in California Building Code Section 1101B.5. Requests have been received for DSA to predetermine guidelines for what is considered an acceptable construction tolerance for various architectural components.

1. LEGAL ISSUES: According to the California Attorney General's office, developing guidelines for construction tolerances *"...unnecessarily encourages contractors and others to deviate from the access regulations found in the California Building Code..."*¹

The California Attorney General's office also indicated *"we are concerned that local building officials and members of the general public, when they consult Construction Tolerance Guidelines,...may assume that they have been adopted by a state agency and therefore, have the force of state law, which they do not. Such reliance, in our view, may result in violations of the California Building Code and, possibly, litigation against local building officials and/or property owners."*¹

Separately, a United States District Court case discussed the term "conventional building industry tolerances" as follows:

*"What is an acceptable 'dimensional tolerance' obviously will vary, depending in part upon the purpose for the standard and the technological capacity to closely adhere to the target dimensions."*²

2. REGULATORY BUILT-IN TOLERANCES: California Building Code Section 1101B.5 indicates all dimensions are subject to conventional industry tolerances except where the requirement is stated as a range with specific minimum and maximum end points. Where a California Building Code requirement states a specified range, such as in Section 1133B.4.2.1 where handrails must be installed between 34 inches and 38 inches above the nosing, the regulation itself already provides an adequate tolerance and therefore no further tolerance outside of the range at either limit is permitted. In such cases, the technological capacity to achieve literal compliance with the dimensional requirements is quite easy to accomplish.

3. MINIMUMS, MAXIMUMS AND SPECIFYING AT THE LIMIT: Where an element is to be installed at the minimum or maximum permitted dimension, such as "48 inches maximum", it is not good practice to specify 48 inches, although it is allowed. Rather, it would be good practice to specify a dimension less than the required maximum (or more than the required minimum) by the amount of the *expected* field or manufacturing tolerance and not to state any tolerance in conjunction with the specified dimension.

In other words, dimensions noted in accessibility provisions as "maximum" or "minimum" should not be considered dimensions for design, because they represent the absolute limits of a requirement. To be sure that field tolerances result in usable construction, notes and dimensions in construction documents should identify and incorporate *expected* tolerances so that a required dimensional range is not exceeded by the addition of a finish material or a variation in construction practice, to the maximum extent feasible.

Specifying dimensions for design in the manner described above will better ensure that facilities and elements accomplish the level of accessibility intended by the requirements. It will also more often produce an end result of strict and literal compliance with the stated requirements and eliminate enforcement difficulties and issues that might otherwise arise.

On the other hand, by voluntarily choosing to specify the exact maximum limit or the exact minimum limit of a requirement for design, field construction based on such specification may unnecessarily fail to achieve the compliance that is required. In such cases the failure is not necessarily a consequence of field tolerance, but rather it is a result of the decision to design at the very edge of the prescribed limit.

4. ABSOLUTE DIMENSIONS: In the few cases where absolute dimensions are indicated, the application of construction tolerances is most likely to be influenced. In construction, the technological capacity to achieve an exact and precise placement of an architectural element in some cases can be quite difficult. In addition, the technological capacity to place one particular architectural element at a specific distance may not be the same for a different architectural element. For instance, consider the requirement that water closets (toilets) be an absolute 18" from the adjacent wall to the centerline. Variations in wall finish thicknesses or structural members could easily influence the final constructed condition, especially in concrete slab construction.

In such water closet installations, it would not be unusual to see minor ½" deviations (17½" to 18½") based on these field conditions. Therefore, it is reasonable to assume that at least some minor deviation from absolute dimensions could be expected for water closets.

In recent projects however, water closet centerline dimensions in newly constructed toilet rooms for adults measured as much as 21" and as little as 15" from the adjacent wall. In both cases the amount of variation equaled or even exceeded the entire thickness of the combined wall finishes. Under analysis, it was clear that the lack of care and coordination exercised in the planned placement of the wall, the rough plumbing, and the wall finish was the cause of the deviation, rather than any field condition or manufacturing variant.

While acceptance of a ½" water closet centerline variance may be allowed as a DSA jurisdictional building code approval, it should be noted that such acceptance may not necessarily have effect or provide immunity under a judicial review.

5. ESTABLISHING TOLERANCE GUIDELINES: In conclusion, establishing predetermined construction tolerances guidelines related to the requirements for accessibility contained in the California Building Code is inappropriate.

As previously stated, the California Attorney General's office has indicated that construction tolerance guidelines *"may wrongfully be viewed by some to have the effect of law"*¹ and *"unnecessarily encourages contractors and others to deviate from the access regulations contained in the California Building Code."*¹

The use of predetermined construction tolerance guidelines allows a blanket acceptance of departures from the building code requirements with no analysis as to the reason the use of a tolerance is either justified or warranted. As a result, the guidelines are then arbitrarily substituted for building code requirements, without taking into account the specific facts of each circumstance.

It is preferred that construction tolerance acceptance be on a case-by-case basis, with the degree of departure from the literal requirements coupled with the specific reason that the requirement was unable to be achieved as the basis to be utilized for analysis. Many times when questions arise regarding tolerances, it is often found after analysis that neither field conditions nor manufacturing variables contributed to the deviation, but rather there was simply a lack of proper planning or coordination. Inadequate planning and coordination are not justifications for the use of construction tolerances.



Endnotes

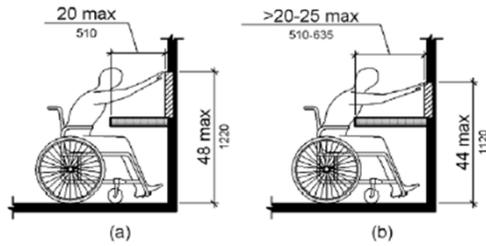
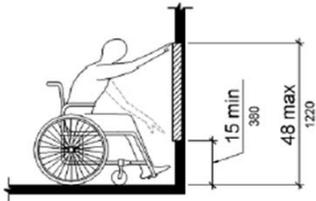
¹ Letter from the State of California Department of Justice to the Orange Empire Chapter of the International Conference of Building Officials dated August 22, 2002.

² Independent Living Resources v. Oregon Arena Corporation

ACCESSIBLE REACH RANGES

Forward Reach Ranges

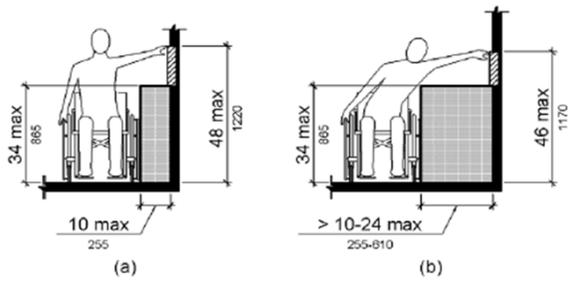
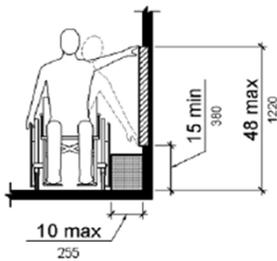
Unobstructed.



Over obstruction

Side Reach Ranges

Unobstructed.

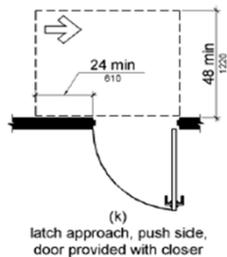
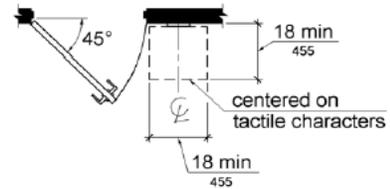
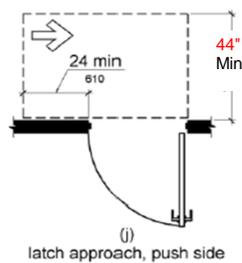
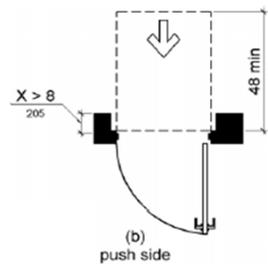
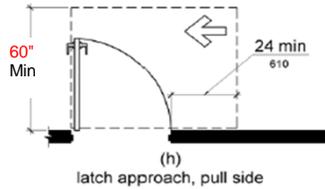
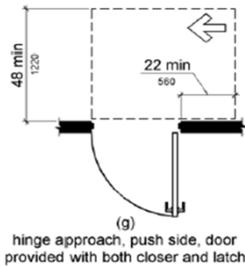
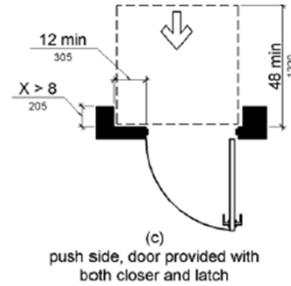
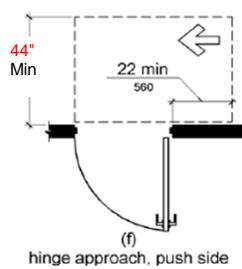
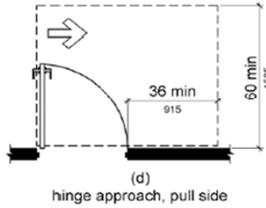
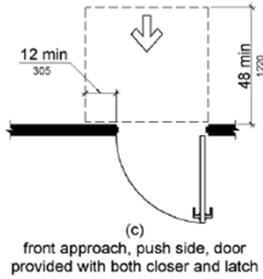
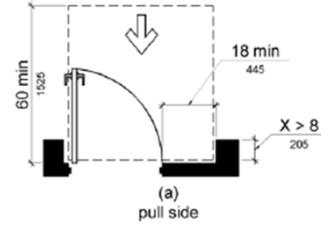
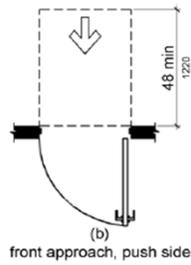
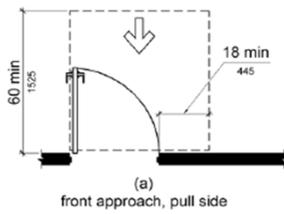


Over obstruction

DOORS

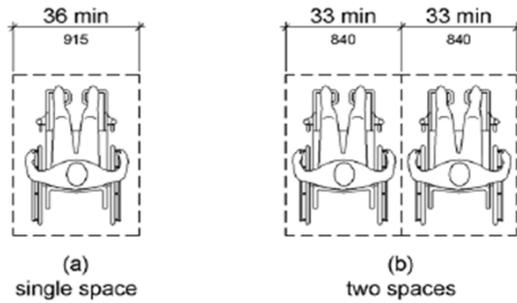
Required Clearances At Doors

Do not place objects in the required clear area

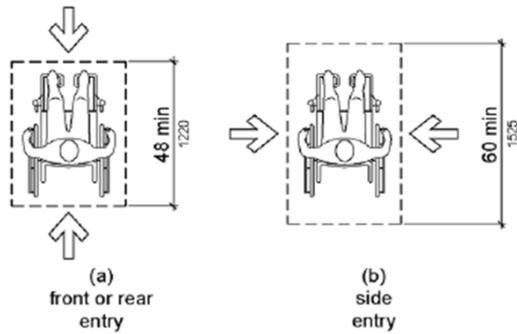


WHEELCHAIR SPACES

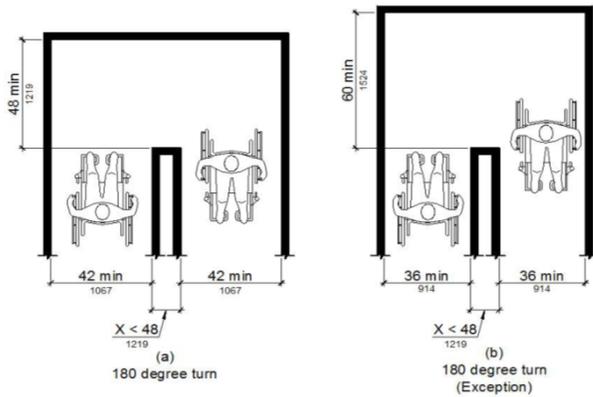
Wheel chair Spaces



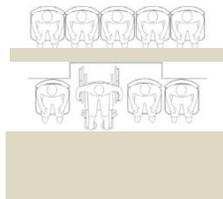
Width



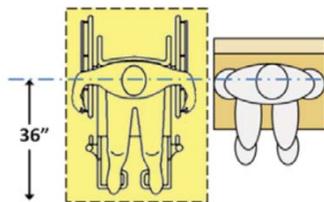
Length based on approach



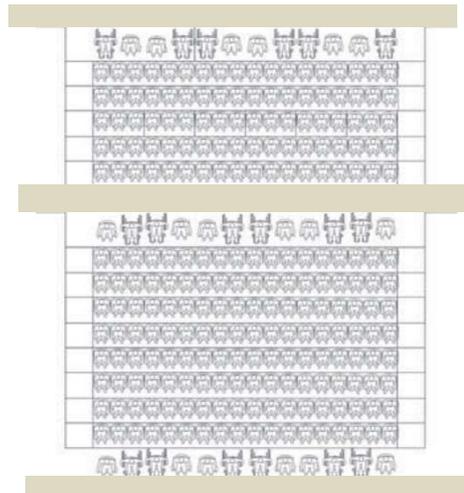
Space at turns



Wheelchair spaces shall not overlap circulation paths



Shoulder alignment



Accessible routes shall not overlap wheelchair spaces

BUILD LACCD issued by the ACCESS ANALYST TEAM

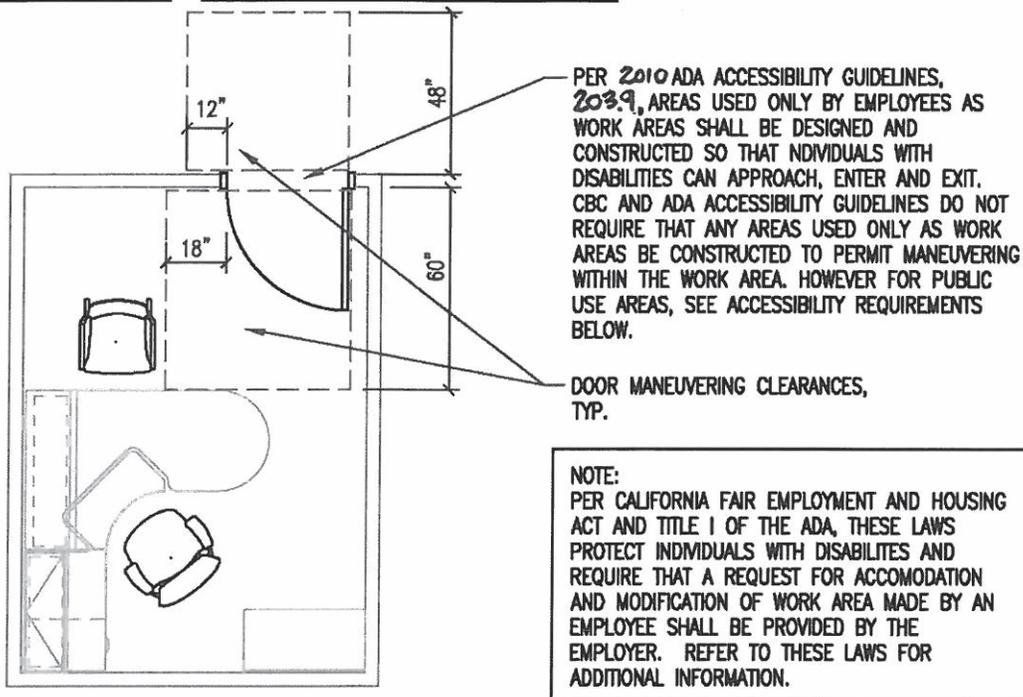


DIAGRAM D ACCESSIBLE DESIGN GUIDELINES FOR FURNITURE PLACEMENT AT TYPICAL PRIVATE OFFICE

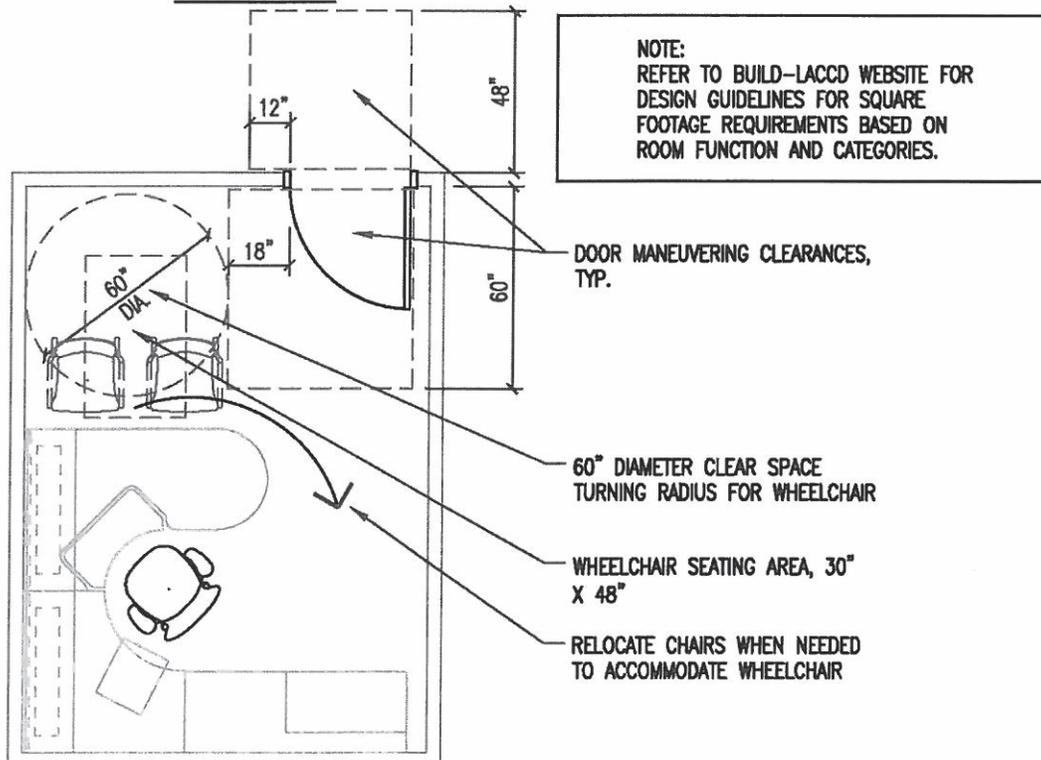


DIAGRAM E ACCESSIBLE DESIGN GUIDELINES FOR FURNITURE PLACEMENT AT TYPICAL COUNSELOR ROOM, MEETING ROOM, OR PUBLIC USE ROOM