

**ADAAG/ABAAG 2004 PUBLISHED;  
TECHNICAL DISCUSSION OF CHANGES**

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## **BACKGROUND**

The revision to ADAAG published on July 23, 2004 and hereinafter called ADAAG/ABAAG consolidates the requirements under ADA and those under the ABA. Historically, certain buildings leased or owned by the Federal Government or built with Federal funds were required to comply with ABA. Design guidelines for ABA compliance were issued by the Department of Defense, the General Services Administration, the Department of Housing and Urban Development, and the US Postal Service. In 1982 the Access Board issued a consolidated guideline for ABA known as Uniform Federal Accessibility Guidelines (UFAS), which was referenced by the individual agencies in their "rules." UFAS is also referenced as the guideline by applicable agencies for compliance with the Rehabilitation Act of 1973. Multi-family housing is covered by yet another statute, the Fair Housing Act.

ADA was passed in 1990 to require accessibility of buildings NOT covered under any of those statutes. Under ADA, local governmental entities were given a choice of complying with UFAS or ADAAG. Although the various agencies noted above are still legally responsible for issuing guidelines, they have now created a single guideline for compliance with both ADA and ABA. It is presumed that other agencies will also adopt this guideline, at least with appropriate modifications to the specific requirements of the applicable statute. In sum, with the adoption of this document by all those US governmental entities that now enforce UFAS, that document will disappear and almost all Federal accessibility rules will employ ADAAG/ABAAG. (I'd never say "all" regarding anything in this maze!)

The proposed revision was also undertaken with the goals of:

- Improving the format and usability of ADAAG;
- Reconciling differences between ADAAG and national consensus guidelines, including model building codes and industry guidelines;
- Updating ADAAG to reflect technological developments and to continue to meet the needs of persons with disabilities; and
- Coordinating these and future ADAAG revisions with national guidelines and model building codes; among other things, ADAAG has been reorganized to follow the

same organization and section numbering guideline as ANSI A117.1 to the same extent possible.

The revisions were principally developed by an Advisory Committee, which worked over a two-year period. The Board, however, as the ultimate issuing authority, made all final decisions and indeed declined to adopt Advisory Committee recommendations in a number of cases.

One big improvement in ADAAG/ABAAG is that there are “advisory” boxes sprinkled throughout the guidelines. These clarify issues and often reflect commonly asked questions regarding ADAAG. In some cases, the advisories present “shoulds” (best practices guidelines), but not “musts” (requirements.) It is certainly beneficial to have that information right there in the guidelines rather than forcing those trying to apply it to refer to other documents that may not be well known. For example, the “Supplementary Information” originally published with ADAAG in the Federal Register explained why comments on earlier drafts were or were not adopted and was very helpful in resolving questions of intent and interpretation. Example: we once encountered a local building official who decided that all accessible parking spaces are passenger-loading zones and must have the required 114” (9’6”) vertical clearance. The Supplementary Instructions discussion of why the van accessible clearance was set at 8’2” and passenger loading zones at 9’6” helped us prove that the Access Board did not consider all accessible parking stalls as accessible loading zones. There is a similar “Preamble” available on the Access Board website for ADAAG/ABAAG, but it is considerably less detailed and shorter. Another document, which assisted in clarifying gray areas, was Bulletin # 6, Parking; much of that language now appears in ADAAG/ABAAG as “Advisory.” Incidentally, the Parking Bulletin is still posted on the Access Board website and is valuable in designing under the current version of ADAAG.

NOTE 1: you should make every effort to do the “shoulds” but the Board recognizes that sometimes those items will be impracticable or conflict with other requirements.

NOTE 2: ADA and in turn the Department of Justice Rules published in 1991 had somewhat different requirements regarding modifications to areas where the public may go to receive goods and services in existing buildings owned by governmental entities (Title II) as compared to those applicable to buildings owned by private entities (Title III). We shall refer only to the requirements of private entities if we discuss any related issues regarding existing buildings. Whether or not buildings designed to meet ADAAG now have to be modified to meet ADAAG/ABAAG is not yet known; the Department of Justice will address it in their final rules when published. See the separate paper on the DOJ notice of rulemaking. My interpretation of the DOJ notice regarding its rulemaking is that they are seriously considering requiring upgrades. (101.2) On the other hand, ABA F203.2 specifically states that such modifications are not required of those required to meet ABA, but the latter does not apply to many local government buildings. Both ADA and ABA do require that modifications to existing buildings be made on a case-by-case basis to meet the needs of **employees** with disabilities under the specific requirements related to employment.

NOTE 3: Because of different language in the Fair Housing Act and the rules issued by HUD, residential dwelling units are given exceptions to a number of requirements. Those are not discussed herein, except for the parking requirements.

### Scoping for ADA and ABA

Because the ADA and ABA laws have slightly different language, there are two “scoping” documents (what or how many elements have to be accessible), one for each statute. Therefore there are two sets of Chapters 1 and 2; the ADA sections are 100 and 200 series numbers while the ABA sections have the same numbers but the prefix “F” (for federal??). Significant differences between the two are summarized as:

- ADA provides that “demonstrating equivalent facilitation” can be employed to justify alternative designs and technologies provided they result in “substantially equivalent or greater accessibility and usability.” The Department of Justice and the Access Board do not have any process for certifying that an alternative design provides equivalent certification, although the Department of Transportation will do so for transit facilities. ABA provides that the associated agency (for example, the Department of Defense) is authorized to modify or waive an accessibility guideline on a case-by-case basis; therefore while there is a formal procedure for Federal agencies to request a waiver or modification under ABA, there is none for local governments and private entities to do so under ADA. (103 and F103)
- Both the ADA and ABA require that new construction fully comply with ADAAG/ABAAG. (201 and F201) Both require that **alterations and additions** to existing buildings must comply to the maximum extent feasible (202 and F202). There are, however, differing scoping requirements for additions and alterations for each. Both require that alterations to areas containing primary function of a building trigger a need to improve the path of travel to the area altered as well as the restrooms, drinking fountains and telephones serving the altered area, “unless such alterations are disproportionate to the overall alterations in terms of scope and cost” as determined by the issuing agency. The DOJ has established a limit of 20% of the cost of the alterations and the DOT uses similar criteria for public transportation facilities under ADA (Advisory 202.4); however, the other agencies have no specific guideline. ABA does not have such a limit, and also requires that new leases on space in existing buildings require that the space and joint use areas serving the space comply with ADAAG/ABAAG with some limitations (F202.6). In other words if an existing building cannot be brought into compliance with ADAAG/ABAAG, a Federal agency covered by ABA won’t be able to lease it.
- Employee work areas are treated differently under ADA than ABA. ABA apparently requires all areas to be fully accessible; ADA provides an exception from full accessibility requirements for employee-only work areas. Full accessibility means that the turning radii for wheelchair movements are met within the space, and all operable controls are within reach ranges. ADA requires that common areas (such as public reception spaces, conference rooms, break rooms and restrooms) be fully accessible but individual employee work areas must only be accessible “to and through the door.” Individual employee work areas do not need to be constructed to permit maneuvering within the work area or equipped to be accessible. (203.9)

The main concern at this stage is that it would be very easy for someone to pick up the document, not understand the difference between ADA and ABA, and read the wrong scoping section, which is particularly a concern with alterations and additions.

The following sections cover other requirements applicable for both. Because virtually all of the subsequent comments are on sections that are identical for ABA or ADA, we have not included the “F” prefixed numbers.

### Chapter 1/F1:

- **SIGNIFICANT CHANGE:** Clarified that all dimensions not stated as “maximum” or “minimum” are “absolute”, but all dimensions, including absolute dimensions, are “subject to conventional industry tolerances” except where a range is provided since the specified range already provides adequate tolerances. (104.1) Initially this was felt to benefit our industry, because theoretically a designer can design to the dimensions of ADAAG/ABAAG without fear of violating it due to construction tolerances. However, Advisory 104.1.1 opens the possibility whereby designers could be held responsible for not considering standard construction tolerances in design. For example, it is often very difficult for us to keep slopes of parking areas to the 1:50 (2%) maximum slope in any direction required by ADAAG for accessible parking spaces and access aisles, while dealing with drainage, camber of prestressed elements, etc. If we have to allow for construction tolerances, the drainage design will be further complicated. The Advisory states that “it would be good practice to specify a dimension less than the required maximum by the amount of expected field...tolerance.” Thus designers “should” design such areas to 1:48 (note the change in the maximum slope) LESS typical construction tolerances. This also affects handrail heights and numerous other design features where well-intentioned designers and contractors have run into problems during construction. **I strongly recommend that designers (including those who do not normally deal with accessibility such as structural engineers) review the discussion of construction and manufacturing tolerances in Advisory 104.1.1.**
- **SIGNIFICANT CHANGE:** Clarified that when the required **size or dimension** of an element involves percentages or ratios, rounding down for values less than one half is permitted. (104.2) However, one must always **round up** to the next whole number when calculating **ratios or percentages in determining the required number of accessible elements**. Therefore, a parking facility with 810 spaces will have to have  $810 \times .02 = 16.2$  spaces = 17 spaces (104.2).
- Adopted the term “operable parts” and dropped “controls and operating mechanisms.” Dropped the term “area of refuge,” although it’s referred to under “accessible means of egress.” (106) Dropped the definition of accessible route and allows the scoping and technical requirements for accessible routes to define what it is (106.5). The current ADAAG definition for accessible route (ADAAG 3.4) includes “crosswalks at a vehicular way” but not a vehicular way itself. ADAAG/ABAAG clearly allows vehicular ways to be part of accessible routes. Vehicular ways do include drive aisles in parking facilities.
- In all locations where the term parking lot was used in ADAAG, the term parking facility is employed in ADAAG/ADAAG. The NPA/PCC asked for this back in 1991 during the comment period for the original ADAAG...they finally did it!
- Structural impracticability for new construction has removed. The Board and Advisory Committee both feel that good design can overcome almost any terrain

and/or environmental issues (ADAAG 4.1.1 (5) (a). Technical infeasibility for alterations, however, remains.

### Chapter 2/F2:

- All areas of newly constructed buildings, and all altered portions of existing buildings and facilities must fully comply. (201.1)
- They dropped any distinction in requirements between exterior facilities and buildings. (ADAAG 4.1.2) In the Supplementary Information for ADAAG in 1991, they stated that open parking structures, as exterior facilities, are not subject to such requirements for buildings as areas of rescue assistance. (We suspect they thought an open parking structure is a roof level one open to the sky, not the definition employed in building codes.) As this was a general statement, some construed that open parking structures didn't have to comply with any of the guidelines for "buildings", e.g. elevators, stairs, handrails, ramps, etc. Other discussion in that document however made it clear that parking structures are buildings and to our knowledge, an interpretation that open parking structures are exterior facilities rather than a building was not accepted in any enforcement action. This change in ADAAG/ABAAG then resolves that potential conflict in a final way.
- More importantly, Advisory 201.1 removes any argument over whether or not all areas of a building must be made accessible if the specific elements that are required to be accessible are grouped in one area. The example given is that while not all patient care rooms in a hospital need to be made fully accessible, all common use and public use spaces must be accessible. In parking facilities, this means that elevators serving all floors are still required (I won't go into the specific language and exceptions here) even when all of the accessible parking spaces are provided on the grade level. The latter is one of the most frequent questions of interpretation that I receive, because it wasn't absolutely clear in the guidelines before (even though it was clear in such documents as the Supplementary Instructions). See further discussion of circulation paths and accessible routes in Chapter 3.
- Dropped the provision currently in ADAAG, which requires an entire space be made accessible when alterations of single elements considered together amount to an alteration of a room or space. The advisory committee considered the requirement to be vague and difficult to enforce. An extreme example is how much renovation to stair/elevator tower/lobbies triggers the need to take out existing stairs and put them back at the right tread/riser ratios. The central requirement remains: what you take out must be put back "accessible" to the "maximum extent feasible" AND the path of travel to primary function areas must be made accessible to the "maximum extent feasible." As previously noted, the improvements to the path of travel are limited to 20% of the cost of alterations to the areas or elements, at least under the DOJ rules for enforcement of ADA.
- Advisory 202.3 clarifies and confirms a principle discussed in some advisory material by the Board staff that where accessibility improvements are constrained or limited in one way, other requirements shall still be accomplished. The classic parking example is that while it may not be possible to meet the 8'2" clearance for van spaces in facilities **built before 1992**, van spaces must still be added, striped and signed during alterations (as well as in readily achievable improvements to existing facilities not undergoing alteration.) Many vans used by those requiring van spaces can traverse a parking facility with 7'0" clearance.

- A new exception for Single Occupant Structures (203.6) and a clarification of and Advisory for requirements for Employee Work Areas (203.9) has been added that clarifies requirements for accessibility of cashier booths. Although many in our industry have ignored if not argued with this interpretation, the Supplementary Information to ADAAG in 91 stated that ALL cashier booths in parking facilities are “employee work areas” and thus must meet the requirements for accessibility to and through the door. A new exception to the requirements for employee work areas applies if the work area is less than 300 sq ft (yes, cashier booths are smaller) AND raised more than 7” above the adjacent floor because that is essential to its purpose (cashier booths are **not required** to be 7” or more above the floor to properly function.) To be accessible to and through the door, a door must be provided on the end of the booth with a curb ramp, or the booth must be modified and/or lowered so that it’s floor is at the same elevation as the drive lane. (Full accessibility within the booths is not required.) Paragraph 203.6 clearly only exempts single occupant structures from the “to and through the door” requirement if they are ONLY accessed by tunnels or overhead bridges. **Therefore, unless you are building a tunnel between them, ALL cashier booths should be accessible to and through the door. Period. End of argument.**
- Conversely, the ADAAG Appendix recommendation that 5% of similar workstations, with a minimum of 1, (e.g., 1 cashier booth for every 20) be fully accessible has been dropped and replaced with Advisory 203.9 which recommends (but does not require) that employee work areas be designed to be fully accessible where possible (and thus all cashier booths is implied.) If you do not have any fully accessible booths, you cannot refuse to give a disabled person a cashier position. If an employee needs it, you would have to remove the booth and replace it with a compliant one, which can be extremely difficult in constrained spaces. However, there is a low risk that every employee working on a single shift would require a fully accessible booth. If an owner is willing to accept the risk that booths would have to be replaced if employees need them, I continue to recommend that 5% with a minimum of at least one booth in every parking facility be designed to be fully accessible. But all booths still have to be accessible to and through the door!
- Clarified that operable controls on accessible routes, in accessible spaces and serving accessible elements must be accessible (205.1). For example, the light controls in the cashier booth that is fully accessible must meet the requirements for reach ranges but those in booths not intended to be fully accessible would not need to be so located. New exceptions are provided in 205.1 that are helpful; specifically, HVAC diffusers do not have to be accessible. Where parking access and revenue control equipment generally serves both accessible and non-accessible parking spaces, the operating controls must be accessible. Thus, devices that do not serve accessible spaces, for example both single and multispace parking meters serving non-accessible spaces, would not have to be accessible. There are separate requirements for “ATM’s and fare machines;” see below.
- Accessible route requirements have been substantially clarified and modified in section 206.
  - In 206.2.1, at least one accessible route must be provided within the site from “site arrival points” to the accessible entrances of the buildings and facilities “served.” This paragraph clearly includes accessible parking spaces and accessible passenger loading zones as “site arrival” points and apparently acknowledges that they can be either on-site or off-site (such as on-street

- parking.) An exception in this paragraph is that an accessible route is not required if the only connection from the site arrival point is a vehicular way not designed for pedestrian use. That would seem to be intended for sites that really don't need pedestrian paths all the way to the nearest public street, bus stop or accessible parking spaces. For example, the Getty Museum in Los Angeles is located on top of a mountain and people do not walk from the nearest public street, which in itself is miles from anywhere that pedestrians might originate. Many airports are isolated from other uses and not designed for pedestrians to walk to the terminal from off-airport properties. Likewise, if pedestrians are not expected to walk from remote parking lots to the terminal, then an accessible route from accessible parking in the remote lot would not be required (although the bus service to the terminal would have to be accessible if accessible spaces are provided in the lot.)
- Advisory 206.2.1 requires that if there are multiple site arrival points such as bus stops, each must have an accessible route to an accessible entrance. It goes on to say, "In addition, the accessible routes must serve all of the accessible entrances on the site." This is very broad and we were concerned that it might require an accessible route from every accessible entrance to every site arrival point. However, there is also language requiring accessible routes through buildings from all accessible elements to all accessible entrances and 206.2.2 further shows no intent to connect all site arrival points to all accessible entrances on a site. I have communicated with Marsha Mazz, at the Access Board, who indicated that directly connecting every accessible entrance to every site arrival point, is not intended.
  - A second Advisory to 206.2.1 reinforces that vehicular ways may be part of accessible routes, and then says that if vehicular ways are intended to be used by pedestrians, "such as within a shopping center parking lots", the exception to the need to have an accessible route from the site arrival point to the accessible entrance does not apply. Clearly this is limited to required accessible routes from site arrival points across parking lots, and not everywhere within parking lots in general.
  - Per 206.2.2, an accessible route must be provided within sites, connecting essentially all accessible elements, unless the only connection between the elements is a vehicular way not designed for pedestrians. For example, if there are two buildings on a site and you provide a pedestrian path between the two buildings then you have to have an accessible route between them. But if there is only a roadway not designed for pedestrian use between the two buildings, (for example between two terminals at an airport), an accessible route between the buildings is not required.
  - Multi-story buildings must have an accessible route **connecting** all floors, including mezzanines. (206.2.3) This provision replaces the requirement for elevators under ADAAG, but in most cases, an elevator will be employed to meet the requirement (Stairs and escalators can not be part of accessible routes.) The same exceptions as ADAAG had for elevators have been modified to apply to the accessible route requirement. A privately owned building with only two floors does not have to have an accessible route such as an elevator, UNLESS it is a shopping center, a transportation terminal, an airport terminal, or houses medical offices. There are new clarifications dealing with mezzanines and other excepted building types, but they are not applicable to parking structures. This provision applies whether or not there are accessible parking spaces on the floor served.

Thus, **all** publicly owned parking structures that are owned by state universities or local governments and **all** other parking structures with three or more floors must have accessible routes connecting **all** floors. Note that this is simply not an accessible route to each floor, but specifically one **connecting** the floors. Thus a publicly-owned parking structure set into a hill with two “flat floors” connected directly to public streets may still have to have an elevator if there is not an accessible route connecting the two floors. This change from elevators being required to accessible routes being required is somewhat more flexible, but not really a significant change since an accessible route between floors could replace the elevator required under ADAAG. What has been strengthened is that the routes have to be reasonably equivalent to those used by the general public as discussed later in this section.

- Advisory 206.2.3 states that even where the accessible route between floors is not required, i.e., in two-story parking structures owned by private entities, all other provisions in the guidelines still apply. (Putting all the accessible parking spaces at grade level doesn’t get you out of all of the other requirements, either.)
- Under 206.2.4, “Spaces and Elements”, an accessible route must connect accessible entrances to the building or facility to spaces and elements within the building or facility required to be accessible, which are otherwise connected by circulation paths. There are a number of specific exceptions, none of which are applicable to parking facilities. In other words, if there isn’t a circulation path from one entrance to a particular accessible element, there doesn’t have to be an accessible route, but if there is a path between them, then an accessible route has to be provided. This paragraph also does not require accessible routes between every accessible space or element, just one accessible route from an accessible entrance.
- In sum, per 206.2.2, accessible parking spaces and accessible passenger loading zones if required must be connected to accessible entries, per 206.2.3 floors must be connected, and per 206.2.4 the circulation paths between accessible entrances to required accessible spaces and elements in buildings and facilities must be accessible.
- Required accessible routes must coincide with or be in the same general area as the common use circulation paths. Where the general route for others is interior, then the accessible route must be interior. (206.3) The Advisory to 206.3 says: “The accessible route must be in the same area as the general circulation path. This means that circulation paths, such as vehicular ways designed for pedestrian traffic, walks and unpaved paths that are designed to be routinely used by pedestrians must be accessible or have an accessible route nearby. Additionally, accessible vertical interior circulation must be in the same area as stairs and escalators, not isolated in the back of the facility.” Specific examples are that an elevator cannot be a significant distance from the stairs or escalators provided for everyday use. The accessible parking spaces also cannot be put near a back or service entrance if everyone else enters through the front door. This also affects the issue of the accessible route between floors in a two level parking structure set into a hillside. If an accessible route is required (i.e., the garage is owned by a governmental entity), and others can go from floor to floor using stairs that are inside the structure, then the disabled cannot be forced to use a public sidewalk outside the building to go from floor to floor, even if the sidewalk meets the requirements for an accessible route. Another example: a parking structure is

- designed to have pedestrian connections to the shopping center on every floor. If pedestrians can return to the structure after shopping on a different floor and then go to the correct floor on a stair, the disabled can't be forced to go back a considerable distance to the elevator in the shopping center to get to the correct floor. An elevator would have to be provided in a location reasonably near the stairs. All those examples are of situations where the "common" circulation path connects elements that are required to be accessible and have accessible routes between them. The language of the advisory COULD be interpreted as more general, requiring that circulation paths that are routinely used by pedestrians must be accessible, period. It is our belief, however, that the advisory only applies to required accessible routes, not all circulation paths on a site or within a facility; if the latter was intended it would have been stated clearly in 206.3, which it is not.
- There are substantial changes to the requirements for entrances. Among other things, the number of entrances that must be accessible has been increased from 50% to 60% (206.4.1); conversely, the old ADAAG also required that 50% of code-required exits be designed as accessible entrances, but the new one drops that requirement. The latter was a significant concern where exits were not intended to be used for regular pedestrian use, and in particular where they are secured to prevent non-emergency use. ADAAG/ABAAG is a significant improvement in this respect. If all pedestrians use only one entry to the garage, then only that entrance needs to be accessible.
  - Significant Change: **Every "direct" connection** between parking structures and building entrances, i.e., ALL pedestrian paths at grade as well as all bridges, shall be accessible. (206.4.2) In the Preamble discussing the changes to these requirements it is noted that connections between parking **structures** and buildings were deemed more important by the Board than other types of pedestrian access to buildings.
  - All technical criteria for accessible means of egress, including areas of refuge, have been removed. Instead, the International Building Code (IBC) is directly referenced for scoping and technical requirements (207). Therefore, even if you are designing under another code, the IBC requirements for accessible means of egress must be followed to meet ADA (once ADAAG/ABAAG is enforced.)
  - Section 208 Parking Spaces: The exception that did not require accessible parking spaces in valet parking facilities has been removed, while exceptions not requiring accessible spaces for parking spaces exclusively reserved for buses, trucks, delivery vehicles, law enforcement vehicles and vehicle impound lots have been added. (208.1)
  - The basic table for required accessible parking spaces has not changed. (208.2)
  - There is further strengthening and clarification of the guideline relating to the calculation of required number of spaces where multiple facilities serve a destination. Although various publications such as Bulletin Number 6 confirmed this interpretation, ADAAG/ABBAG is absolutely clear: the required number of spaces must be determined for each and every parking facility, not for the parking supply in aggregate. (Advisory 208.2)
  - Important language has been added clarifying that the increased requirements for accessible spaces at "outpatient" (10%) and "rehabilitation" (20%) facilities only apply to visitor and patient parking. The definition of outpatient has been clarified to be facilities at hospitals for treatments not requiring overnight stay and not doctors' offices, independent clinics, etc. not located in a hospital. (208.2.1 and 208.2.2) This was expected because it was included in Bulletin #6.

- Added requirements for number and location of accessible parking spaces at residential units (208.2.3); they may be summarized as: where at least 1 space is provided per unit, one accessible space per **required** accessible dwelling unit minimum; if more than 1 space per unit for residents, two percent but not less than one of the additional spaces shall be accessible; if additional spaces are provided for guest parking, that parking shall comply with the guideline table. Where accessible spaces are specifically located at or assigned to specific dwelling units, they do not have to be signed or dispersed; however, where they are not assigned, the accessible spaces shall be dispersed. (ADAAG originally did not have any requirements for residential buildings because ADA did not cover housing.) The trick of this one is the required number of accessible residential units varies according to which Federal law applies to the residential units.
- **IMPORTANT CHANGE:** The number of accessible van spaces has been increased to 1 in 6 accessible spaces (from 1 in 8 in ADAAG.) (208.2.4) This is a change from the draft guideline published several years ago and was not anticipated. The Preamble indicates this was a compromise because a fair number of commenters on the draft wanted all accessible spaces to be van accessible.
- The location criteria have not been substantially reworded, although they are relocated/reorganized. (208.3) Accessible spaces still must be located on the “shortest accessible route” to an accessible entrance to the building served; if the parking facility serves destinations on other sites, the spaces shall be located on the shortest route to the accessible entrances to the parking facility. Where there is more than one accessible entrance, the parking spaces shall be dispersed to those accessible entrances. Van parking spaces may still be concentrated on one level of a parking structure, even though every **direct** pedestrian connection to the building served must now be accessible.
- Once the required number of spaces has been determined, they may be relocated to a different location if equivalent or greater accessibility. Further such relocation must consider “distance from an accessible entrance, parking fee and user convenience.” (208.3.1 Exception 2) ADAAG currently doesn’t have the clarifying words “user,” and some interpreted it that cost of construction or operation was adequate justification for moving the spaces to a different location. However the intention, according to the Supplementary Information issued in 1991, has always been that disabled parking can’t be relocated from a parking facility with a lower parking fee to one with a higher rate, unless the user is charged the lower rate at the new facility. A further new advisory notes that “user convenience” shall consider weather, security, lighting and “comparative maintenance” of the alternative parking sites.
- Changed and clarified the requirements for accessible passenger loading zones. One accessible loading zone will be required for every 100 ft of passenger loading zone (209.2.1). It appears that this will significantly increase the number of accessible passenger loading zones at airport arrival and departure curbs. It is less clear how it may impact strip shopping centers, where fire lanes also provide for nearly continuous passenger loading zones; one can argue that they are intended solely as fire lanes not as passenger loading zones.
- An accessible passenger-loading zone is required at valet and mechanical-access parking facilities, even though neither is exempted from having accessible parking spaces. (209.4 and 209.5)
- Because ADAAG/ABAAG consolidates transportation accessibility with building accessibility guidelines, a new requirement that **ALL** bus loading zones must be

accessible and requirements thereof have been added. An associated advisory notes that this applies not only to publicly operated transit, but loading spaces for charter buses, taxis and limousines, and hotel shuttles. By extension it probably also applies to off-airport parking shuttles.

- SIGNIFICANT CHANGE: 216.1 states that the only signs in parking facilities which must meet accessibility requirements are those which identify accessible parking spaces and those which identify means of egress. The requirements for signs at means of egress are substantially expanded and clarified, but they are tied to the doors at exits and areas of refuge. Thus they may not apply to open exit stairs in open parking structures since there are no doors and no areas of refuge required under IBC.
- They did not clearly address whether or not a sign is required at every accessible stall, or whether a group of stalls can be signed with a lesser but effective number. It is presumed from the actual language (which lacks a word such as “each” or “every”) in the guideline that the latter is okay: “parking spaces... shall be identified by signs...”
- 216.5 Accessible parking spaces that are reserved for specific residential units need not be signed as accessible. Accessible spaces are required but need not be signed in parking lots with four or less spaces. (Note, an exception that van accessible spaces do not have to be designated as “van” accessible in the draft was dropped from the final rule.)
- Section 220 has significant changes for “Automatic Teller Machines and Fare Machines.” The definitive language is “ATMs and self-service fare vending, collection or adjustment machines.” The Preamble notes that the Board asked in the draft process if the requirements for ATM’s and fare machines should be extended to cover “interactive transaction machines (ITM’s), point of sale machines, and information kiosks” and that after review of comments the Board decided NOT to extend the requirements to the latter. On October 28, 2004 I received a clarification from Marsha Mazz of the Access Board that the extensive requirements in section 707 regarding ATMs and Fare Machines **do not** apply to pay on foot machines, nor to single space meters, multi-space meters and pay and display machines. “...parking fee collection devices are not ATM's or fare machines addressed by the revised ADA and ABA Accessibility Guidelines Section 707. These are point of sale machines or ITM's. In either case, Section 707 does not address these machines. Where machines are provided for customer use, the enforceable DOJ standards require that they be on accessible routes and comply with the provisions pertaining to controls and operating mechanisms. See the ADA Standards at 4.1.3(1) and (13). The ADA Standards do not address machines that are provided for drive-up use. The revised ADA and ABA Accessibility Guidelines do not change this existing Standard. See Section 205.”
- Section 227 for sales and service counters clearly does apply to central cashiers in pay on foot design.

### Chapter 3: Building Blocks

In most cases, no substantive changes have been made EXCEPT the maximum height for side reaches has been reduced from 54” to 48”.

### Chapter 4: Accessible Routes

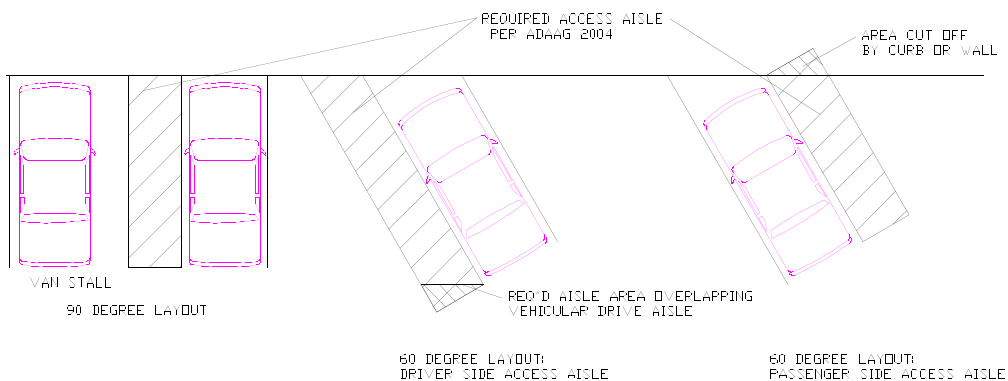
There have been changes in design requirements for curb ramps that will affect site design. They are not presented herein. However, see the discussion of detectable warnings at the end of Chapter 5.

#### Chapter 5: General Site and Building Elements

- 502 Clarification has been added about how to measure parking stall widths, apparently recognizing the occasional disputes we've had regarding width of paint stripes. Width measurements shall be from centerline of markings. Clearly, with "double line stripes" the width is measured to the center of the double lines. An exception further is that when the marking is NOT between another parking space or access aisle, measurements **can** consider the full width of the line defining the stall as part of the stall. I can't help but wonder what dispute about striping layout triggered this language!
- Size of regular accessible spaces is not fundamentally changed; they shall be 8' wide per section 502.2 plus a 5' access aisle per 502.3. Note that the Board now specifically calls these stalls accessible car spaces.
- SIGNIFICANT: Van spaces required to be accessible shall be 11' wide (502.2) with a 5' access aisle (502.3.1). The old standard of 8' plus 8' is still permitted (502.2 Exception), partially so that all existing stalls designed under ADAAG and/or designs meeting state requirements for 8'+8' remain compliant. However the board now clearly prefers the 11' plus 5' standard, because, as stated in the preamble, this tends to discourage the yahoos of the world who park on the 8' access aisle. It also allows disabled drivers who van use the stall to park farther to the passenger side, allowing them room to get in and out of the vehicle. Note that van spaces are not reserved for vans, they are simply designed to be usable by persons who drive vans modified with side lifts.
- They dropped the exception allowing Universal Parking Design (ADAAG 4.1.2. (5)(b) Exception) because the dimensions of universal stalls are the same as those now required as the base design. However, the old ADAAG required that if Universal Parking Design is employed, all stalls had to be 11'+5' with 8'2" clearance, i.e., all accessible stalls are van accessible. Therefore Universal Design was rarely employed except where mandated locally. Although technically a violation, we'd recommend that all designers begin to use the 11' plus 5' standard for van accessible stalls immediately unless the particular state or local government does not accept that layout.
- SIGNIFICANT: They clarified that "access aisles must adjoin an accessible route" and "two parking spaces shall be permitted to share a common access aisle" (502.3). An advisory goes on to say:
  - "Accessible routes must connect parking spaces to accessible entrances."
  - "In parking facilities where the accessible route must cross vehicular traffic lanes, marked crossings enhance pedestrian safety particularly for people using wheelchairs and other mobility aids." This is a "should" not a "must" but marked crossings **should** be used in most cases.
  - "Where possible, it is preferable that the accessible route not pass behind parked vehicles." This is also a should, not a must. However, it means that every effort should be made to avoid making persons using disabled spaces pass behind parked vehicles. The onus will be on designers to prove that it was not possible to do it.

- Under 502.3.2, access aisles shall extend the full length of the stalls they serve. This is intended to prevent the rather common design of putting a curb ramp in the access aisle at the face of the curb and extending it into the area where folks will be getting out of cars or vans. However it also means that placing the base of the curb ramp at the face of curb designed for overhang is not technically permitted. This primarily affects parking lot design, and effectively mandates that the sidewalk serving as the accessible route either be kept the parking stall elevation for the length of the connections to access aisles, or that it slope down to that elevation in the running direction and back up to the curb height at each access aisle. Just do it.
- It is unclear how the requirement for full length access aisles should be applied to angled parking stalls; in 99% of cases, technically, the access aisle cannot be provided full width, at least not perpendicular to the stall, for its full length. On the passenger side, the front end of the access aisle is cut off by the acute angle with the curb, wall or other parking guide; on the driver side, an angled corner at the back end overlaps the vehicular drive aisle; overlap of the access aisle with a vehicular drive is specifically prohibited (502.3.4) Pulling the stall away from the wall or drive aisle enough for a truly rectangular access aisle is impracticable in parking structures, and difficult in most other circumstances. However, that same paragraph mandates that the access aisle be placed on the passenger side if a van stall is angled, so obviously they don't intend to prohibit having angled stalls be accessible. Ms Mazz of the Access Board confirms that there is a technical violation of ADAAG 2004-502.3.2 with angled parking stalls as seen in Figure 1; however she indicated that the Board did not intend to prohibit angled parking. We are currently working with Ms Mazz to develop details and language for a clarification that would allow the triangular areas shown in Figure 1 to be "excepted" from the full length/width requirement. Hopefully it would be issued before ADAAG/ABAAG is enforced by DOJ.

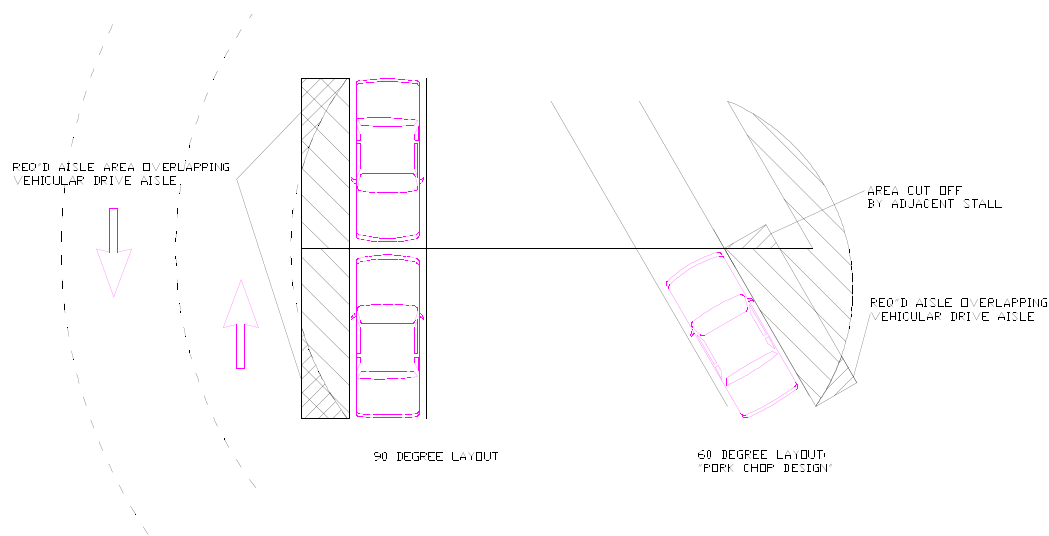
Figure 1: Difficulties with providing "full length" access aisles at angled stalls



- Under 502.3.3, access aisles must be marked to discourage parking in them. The advisory states that a specific marking layout and color is not mandated, but they note that marking the access aisle is particularly important with van accessible stalls. This is not really a change from the Board's intent under ADAAG, but they are now absolutely clear: 11' wide car stalls and 16' wide van stalls do not meet ADAAG/ABAAG!
- Under 502.3.4, access aisles must not overlap vehicular ways. Because the full width of access aisle must extend the full length of the stall, care must be taken to provide a full access aisle when the stall is located at a turning bay between parking modules.

See Figure 2' both of these designs are NOT acceptable! Board staff are particularly irritated by “pork chop” access aisles.

Figure 2: Non-compliant access aisles



- This paragraph goes on to say, “access aisles shall be permitted to be placed on either side of the parking space except for angled van spaces which shall have access aisles located on the passenger side of the parking spaces” (502.3.4). Therefore, car stalls can share access aisles in angled parking situations, but van stalls cannot. It also noted that it is many drivers find it more difficult to back into 90 degree parking stalls. If a van stall is to share the access aisle with a car stall, “consider” locating the van stall so that the access aisle is on the passenger side. “Consider” is the weakest of the terms they could use. This means that you can still design two 90-degree van stalls to share an access aisle but if you don’t need both to be van accessible, you should sign the one with the access aisle on the passenger side as the van stall.
- The requirements of 502.4 assuring that the access aisle is at the same elevation as the parking stall (i.e., not at curb height) is the same as the original ADAAG, but the maximum slope of both the accessible space and the access aisle in any direction has been changed from 1:50 to 1:48. The Board notes in an Advisory that this maximum “is adequate for drainage” and repeats the statement that built-up curbs cannot be placed in access aisles.
- The vertical clearance required for van stalls, their access aisles and the vehicular route thereto is not changed. An interesting advisory is that signs noting this clearance are “a useful customer service.”
- The draft ADAAG/ABAAG dropped the requirement for van accessible spaces to be specially identified; however it is restored in the final rule. Signs at each accessible space are required by Chapter 2, as previously discussed, and according to 502.6, the signs must have the international symbol of accessibility. Van spaces shall have the additional designation “van accessible.” An advisory notes that van spaces are not intended to be reserved solely for vans, as previously noted.
- A new and valuable clarification is that the “performance requirement” that the signs be visible when vehicles are parked in the stall has been dropped. In its place, ADAAG/ABAAG now requires the bottom of the sign be 60 inches above finished

floor. That means that where the stalls are against the outside parapet walls of open parking structures, they are going to be visible from the outside. (502.6)

- 502.7 requires that parked vehicles not reduce the available width of accessible routes. The Board kept its advisory that “wheelstops are an effective way” to achieve this, despite our comment that wheel stops are a trip hazard and should be avoided in parking facilities. We recommend reinforcing the signpost to prevent intrusion into an accessible route along the front of the stall, rather than using a wheel stop.

**COMMENTARY:** In sum, there is not a limit on distances, number of spaces passed, passing only disabled spaces, etc. either in the requirements for accessible routes (206) or the requirements for location of accessible spaces (208.) In fact, the new proposed guideline reverses direction; it drops the definition of accessible route, which only included crosswalks at vehicular ways, and added language clearly allowing a vehicular way, including drive aisles in parking lots, to be part of an accessible route. However, designers “should” do everything possible to avoid having the accessible route to/from accessible parking spaces pass behind parked cars.

- **SIGNIFICANT CHANGE:** The access aisle for passenger loading zones must be at the same elevation as the vehicle stopping space, that is, it can’t be on top of an adjacent curb. This effectively requires a 5 ft wide **reduction** in the sidewalk width at accessible loading spaces, which is extremely significant to the design of passenger loading zones (503).
- Added technical specifications for detectable warnings (705) but it is only required at transit boarding platforms.

**COMMENTARY:** ADAAG required that detectable warnings be placed on all curb ramps, everywhere, as well as at hazardous vehicular areas and at edges of reflecting pools. This requirement was suspended in 1994 due to concerns about the specifications, maintenance, usefulness, and safety. On July 26, 2001, the board decided not to extend the suspension, in anticipation of the new ADAAG/ABAAG, which does not require detectable warnings at those locations. However due to the delay in enforcing the new ADAAG/ABAAG document, detectable warnings are **TECHNICALLY** currently required at all curb ramps, at hazardous vehicular areas and at edges of reflecting pools. Some jurisdictions recognize the fact that the Board has decided not to require them on sites, but other jurisdictions are enforcing the requirement. It is not known if the DOJ is currently enforcing it or not. If you do need to do detectable warnings under the old ADAAG, however, the Board has issued an advisory recommending that you use the new design in ADAAG/ABAAG even though it is not yet enforceable. Also please note that the Board has indicated that it probably will require detectable warnings on curb ramps in the public right of way, if/when it issues its final guideline in that area. Neither ADAAG nor ADAAG/ABAAG as currently published applies to public rights-of-way; a proposed rule for this area has been through several rounds of proposed rulemaking but is not yet finalized. We understand however that it should be completed and published as a final rule in the near future.

As previously noted this discussion is limited to elements that specifically affect parking functional design and does not address changes in general architectural design required by the new standard.