

**ACCESSIBILITY ANALYSIS OF MODEL CODES**

**UNIFORM BUILDING CODE ANALYSIS**

**REPORT FOR PUBLIC COMMENT**

*Prepared By:*

Steven Winter Associates, Inc.  
50 Washington Street  
Norwalk, CT 06854  
203-857-0200

*Presented To:*

U.S. Department of Housing and Urban Development  
451 7<sup>th</sup> St. SW  
Washington, DC 20410

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## **I. PURPOSE**

The purpose of this report is to identify provisions of the 1997 edition of the Uniform Building Code (UBC), published by the International Conference of Building Officials (ICBO) that do not meet the requirements of the Fair Housing Act, the regulations implementing the 1988 Amendments to the Act, or the Fair Housing Accessibility Guidelines (the Guidelines). Where variances are identified, Steven Winter Associates, Inc. (SWA) recommends how they may be revised to meet the requirements of the Act, the regulations, or the Guidelines.

## **II. METHODOLOGY**

The analysis by SWA of the UBC, consisted of the following:

- A review of the language of the Act, 42 USC Section 3604 (f)(3)(C) (the Act), the regulations at 24 CFR 100.201 and 205 (the regulations), the Fair Housing Accessibility Guidelines, 56 Fed. Reg. at 9472-9515 (the Guidelines), and the June 28, 1994 Supplement to Notice of Fair Housing Accessibility Guidelines: Questions and Answers About the Guidelines,” 59 Fed. Reg. 12 at 33362-33368 (the Questions and Answers);
- A review of the December 15, 1997 copyrighted comparative matrix developed by the International Code Council (ICC), Buildings Officials & Code Administrators International (BOCA), International Conference of Building Officials (ICBO), Southern Building Code Congress International (SBCCI), and the Council of American Building Officials (CABO). The matrix, which was included with HUD’s Request for Quotations for this analysis, consists of a side-by-side comparison of the Guidelines with the corresponding accessibility provisions of the three model building codes and the UBC. SWA began its analysis of the UBC by reviewing the column of the matrix that includes the UBC’s accessibility requirements and comparing them with the column that includes the provisions of the Guidelines. The matrix review was conducted to identify apparent variances between the UBC’s accessibility requirements and those of the Act, regulations, and Guidelines.
- A review of the accessibility provisions of the UBC, 1997 edition, herein referred to as the UBC; and a review of applicable referenced codes and standards, including: American National Standards Institute (ANSI) A117.1 – 1986, which is referenced in the regulations, and CABO/ANSI A117.1 - 1992. Because the matrix did not include full text of the technical provisions, it was necessary to use these standards as companion documents in assessing the matrix, the Guidelines, and the UBC. They were reviewed to identify any variances from the Act, regulations, or Guidelines in the technical provisions required by each.

- Interviews with Paul Armstrong, ICBO Senior Staff Engineer, to gain insight into how the UBC responds to variances that SWA identified. SWA found it necessary to understand ICBO's interpretations of its own requirements that may not be apparent when reviewing code text.

The original analysis of the UBC was submitted to HUD on September 23, 1999. HUD formed a Model Code Working Group consisting of representatives from the Office of Fair Housing and Equal Opportunity, the Office of General Counsel, and the Office of Housing. A representative of the U.S. Department of Justice also participated on the Working Group. The Working Group met with SWA on September 29, 1999, asked questions and made comments and suggestions about the analysis. This analysis reflects the results of the Working Group comments. This analysis also has been revised and edited by HUD staff. The analysis described herein does, however, represent the findings and conclusions of SWA, the Department's contractor for this project.

### **III. THE UNIFORM BUILDING CODE**

The International Conference of Building Officials (ICBO) administers the UBC series of model regulatory construction codes.

Unlike the Fair Housing Act, the UBC is a model building code and not a law. It provides minimum standards for public safety, health and welfare as they are affected by building construction. Compliance with the UBC is not required unless adopted by reference by a jurisdiction's board, council, or other authoritative governing body. Jurisdictions may adopt a model building code in its entirety or with modifications; hence, the building codes are referred to as "model codes."

The 1997 UBC, published January 1, 1997, includes provisions for accessibility intended to reflect the intent of the Guidelines. Previous editions of the code include provisions for accessibility, but not as required by the Act. The 1997 UBC, Chapter 11, Accessibility, is the first attempt at codifying the accessibility provisions of the Act. Any jurisdiction that adopts the 1997 UBC code must follow these accessibility provisions.

In the past, some model building codes have required that a certain percentage or number of dwelling units in defined residential uses meet the standards for full accessibility as defined by ANSI A117.1. These dwelling units are referred to in the UBC in Section 1102 as "Type A" dwelling units. It is important to note, however, that CABO/ANSI A117.1-1992 does not contain scoping provisions, discussed below. The UBC includes scoping provisions for Type B dwelling units in Section 1106.

### **IV. SCOPING PROVISIONS**

Building codes have two major components that are relevant to this analysis. One component describes the technical standards that should be applied during the design and construction or alteration of a building or structure or elements within a structure. The other component is a description of the types of buildings or structures or elements within a structure to which the technical standards are applied. The provisions in this second component are referred to as “scoping” provisions. This section of the analysis sets forth areas where the scoping provisions of the UBC do not include all of the dwelling units, buildings, or uses that are covered by the Act, regulations, or the Guidelines. This analysis of the scoping provisions of the UBC included an examination of the following:

- UBC’s definition of dwelling unit, building, structure, and ground floor dwelling unit;
- UBC’s classification of residential buildings according to use and occupancy; and
- UBC’s scoping of dwelling units to which the accessibility provisions apply.

This analysis concludes that the UBC covers most of the same dwelling units, buildings and residential uses as the Act, regulations, and Guidelines. For example, SWA concluded that, in buildings with four or more dwelling units, apartments, custom-designed condominiums, multistory units with internal elevators, single story townhouses, and modular units are covered. Additions of four or more units to existing buildings are also included within the UBC’s scoping requirements for Type B dwelling units. However, SWA has concluded that the following provisions of the UBC do not or may not include “covered multifamily dwellings” as they are defined in the Act, regulations, or Guidelines.

#### UBC Classification of Residential Use Groups

The UBC Section 310.1 defines residential occupancies (Group R occupancies) as follows:

- Division 1: Hotels and apartment houses. Congregate residences (each accommodating more than 10 persons). Section 204, Chapter 2, defines congregate residences as follows: any building or portion thereof that contains facilities for living, sleeping and sanitation, as required by this code, and may include facilities for eating and cooking, for occupancy by other than a family. A congregate residence may be a shelter, convent, monastery, dormitory, fraternity or sorority house, but does not include jails, hospitals, nursing homes, hotels or lodging houses
- Division 2: Not used.
- Division 3: Dwellings and lodging houses. Congregate residences (each accommodating 10 persons or less). Includes detached one- and two-family dwellings.

The reference to “detached one-and two-family dwellings” under Division 3 refers to structures that are physically detached.

The UBC requires that in Group R, Division 1 occupancy apartments containing four or more dwelling units, and in Group R, Division 3 occupancies where there are four or more dwelling units in a single structure, all dwelling units shall be Type B dwelling units. Section 1103.1.9. Type B dwelling units are defined as units that are designed and constructed for accessibility in accordance with Section 1106. Section 1106 – Type B Dwelling Units, provides the design and construction requirements for Type B units.

### CONGREGATE RESIDENCES

The regulations define the term “dwelling unit” as:

a single unit of residence for a family of one or more persons. Examples of dwelling units include: a single family home; an apartment unit within an apartment building; and in other types of dwellings in which sleeping accommodations are provided but toileting or cooking facilities are shared by occupants of more than one room or portion of the dwelling, rooms in which people sleep. Examples of the latter include dormitory rooms and sleeping accommodations in shelters intended for occupancy as a residence for homeless persons. 24 CFR § 100.201.

It is clear from the discussion in the Preamble to the Regulations, found at 54 Fed. Reg. at 3244 (Jan. 23, 1989), that the Department intended that each sleeping room intended for occupancy by a separate household in a building with shared toileting or kitchen facilities would be considered a separate dwelling unit, and that buildings with four or more of these sleeping accommodations are “covered multifamily dwelling units” for purposes of the Act.

Of course, a detached building that has four or more sleeping rooms with shared toileting or kitchen facilities and that is intended for occupancy by one household is not considered to be a “covered multifamily dwelling” under the Act. For example, a detached single family house with four bedrooms occupied by four or more persons related by birth or marriage is not a covered multifamily dwelling. In addition, a single family house occupied by four or more unrelated persons that functions as one distinct household, such as what is commonly referred to as a “group home” would not be considered to be a “covered multifamily dwelling” for purposes of the application of the design and construction requirements of the Act. This latter example is consistent with case precedent and the position of this Department and the Department of Justice with respect to the application of zoning and land use restrictions to single family group homes .

The UBC defines the term “dwelling unit” in Section 205, Chapter 2, Definitions and Abbreviations, as follows:

Dwelling Unit is any building or portion thereof that contains living facilities, including provisions for sleeping, eating, cooking, and sanitation, as required by this code, for not more than one family, or a congregate residence for 10 or less persons.

### **Recommendation Number 1:**

**It is recommended that the UBC definition of “dwelling unit” be modified as follows:**

**Any building or portion thereof that contains living facilities, including provisions for sleeping, eating, cooking and sanitation, as required by this code, for not more than one family, or a congregate residence for 10 or less persons. For purposes of Chapter 11, sleeping accommodations intended for occupancy by separate households in structures in which the occupants of the sleeping accommodations share toileting or cooking facilities shall be considered to be separate dwelling units.**

According to Section 1103.1.9.3, Multi-unit dwellings, the UBC’s accessibility provisions apply to Group R, Division 1 and 3 occupancies. In order to determine whether or not dwelling units covered by the regulations are covered in the same way by the UBC, one must examine the UBC’s classification of each type of unit.

According to Section 310.1 of the UBC, Group R, Division 1 occupancies include hotels, apartment houses, including residential condominiums, and congregate residences accommodating more than 10 persons. Group R, Division 3 occupancies include dwellings, lodging houses (containing not more than five guest rooms where rent is paid in money, goods, labor, or otherwise), and congregate residences accommodating 10 persons or less.

The accessibility requirements for congregate residences are covered under UBC Section 1103.1.9.2, Hotels, lodging houses, and congregate residences as follows:

- In hotels, lodging houses and congregate residence occupancies containing six or more guest rooms, multibed rooms or spaces for more than six occupants, one for the first 30 guest rooms or spaces and one additional for each additional 100 guest rooms or space, or fraction thereof, shall be accessible. In hotels with more than 50 sleeping rooms or suites, roll-in-type showers shall be provided in one half, but not less than one, of the required accessible sleeping rooms or suites...

Congregate residences that accommodate less than six guest rooms for less than six occupants are required to provide accessibility according to 1103.1.9.3, Multi-unit dwellings. However, if a congregate residence accommodates between six and nine occupants, it can be covered by either Sections 1103.1.9.3, Multi-unit dwellings or

Section 1103.1.9.2, Hotels, lodging houses and congregate residences. According to ICBO staff interviews, in these cases the UBC requires that the stricter provision apply.

To the extent that the UBC does not require in congregate residences that all ground floor sleeping rooms occupied by a separate household in buildings without an elevator, or all sleeping rooms occupied by a separate household in elevator buildings, meet the requirements of a Type B dwelling unit, it does not meet the requirements of the regulations.

### **Recommendation Number 2:**

**It is recommended that the UBC modify Section 1103.1.9.2 as follows:**

- **In hotels, lodging houses and congregate residence occupancies containing six or more guest rooms, multibed rooms or spaces for more than six occupants, one for the first 30 guest rooms or spaces and one additional for each additional 100 guest rooms or space, or fraction thereof, shall be accessible. In hotels with more than 50 sleeping rooms or suites, roll-in-type showers shall be provided in one half, but not less than one, of the required accessible sleeping rooms or suites... All ground floor dwelling units in congregate residence occupancies of four or more dwelling units, and all dwelling units in congregate residence occupancies in structures of four or more dwelling units with elevators shall meet the requirements of a Type B dwelling unit.**

### CONTINUING CARE FACILITIES

Continuing care facilities are covered by the Act. 59 Fed. Reg. at 33364. The UBC Section 308.1 classifies these types of facilities as Group I, Division 1.1 and 2 occupancies. These occupancies are defined as follows:

- Group I, Division 1.1:  
Nurseries for the full-time care of children under the age of six (each accommodating more than five children). Hospitals, sanitariums, nursing homes with nonambulatory patients and similar buildings (each accommodating more than five patients.)
- Group I, Division 2:  
Nursing homes for ambulatory patients, homes for children six years of age or over (each accommodating more than five patients or children).

The UBC's accessibility provisions for Group R occupancies of four or more dwelling units do not apply to UBC's Group I occupancies. However, they are required to provide accessibility as follows:

- Section 1103.1.7 Group I Occupancies. Group I occupancies shall be accessible in public-use, common-use and employee-use areas, and shall have accessible patient rooms, cells, and treatment or examination rooms as follows:

In Group I, Division 1.1 and 2 nursing homes and long-term care facilities, at least one in every two patient rooms, or fraction thereof, including associated toilet rooms and bathing rooms.

Under the definition of “dwelling unit” contained in the regulations, a sleeping room in a nursing home or a home for juveniles occupied by an individual as a residence in a building with four or more such dwelling units would be covered under the accessibility requirements of the Act. To the extent therefore that sleeping rooms in Group I, Division 1.2 occupancies are not covered under the requirements for Type B dwelling units under the UBC, the UBC does not meet the requirements of the Act.

### **Recommendation Number 3:**

**It is recommended that the definition of dwelling unit contained in Recommendation Number 1 above be adopted and that Section 1103.1.7 be modified as follows:**

- **Section 1103.1.7 Group I Occupancies. Group I occupancies shall be accessible in public-use, common-use and employee-use areas, and shall have accessible patient rooms, cells, and treatment or examination rooms as follows:**

**In Group I, Division 1.1 and 2 nursing homes and long-term care facilities, at least one in every two patient rooms, or fraction thereof, including associated toilet rooms and bathing rooms. In addition, in Division 1.1 and 1.2 occupancies of four or more dwelling units, all ground floor dwelling units in structure of four or more dwelling units, and all dwelling units in structures with elevators of four or more dwelling units, shall meet the requirements for Type B dwelling units.**

### GROUND FLOOR DWELLING UNIT

The regulations define “ground floor” as a “floor of a building with a building entrance on an accessible route. A building may have one or more ground floors.” 24 CFR 100.202. The Guidelines further state: “Where the first floor containing dwelling units in a building is above grade, all units on that floor must be served by a building entrance on an accessible route. This floor will be considered to be a ground floor.” 56 Fed. Reg. at 9500.

If a building is built into a hill, for example, and the front and the back of the building have entrances to dwelling units at grade, but at different elevations, the ground floor dwelling units on both levels are covered under the Guidelines. 59 Fed. Reg. at 3364.

Since, according to the example above, both levels of the building have entrances to dwelling units at grade, the UBC requires accessibility to these units.

In Section 1102, the UBC defines Ground Floor Dwelling Unit as “a dwelling unit with a primary entrance and habitable space at grade.” However, it is unclear from the UBC’s definition of “ground floor dwelling unit” that there can be more than one ground floor, or ground floor units on different levels of a building. Exception 1, Section 1103.1.9.3, Multi-unit dwellings, states that where no elevator service is provided in a building, Type B dwelling units need not be provided on floors other than the ground floor.

#### **Recommendation Number 4:**

**As a result, it is recommended that the UBC amend its definition of “ground floor dwelling unit” in Section 1102 as follows:**

**Ground floor: A floor of a building with a building entrance on an accessible route. A building may have one or more ground floors. Where the first floor containing dwelling units in a building is above grade, all units on that floor must be served by a building entrance on an accessible route. This floor will be considered to be a ground floor.**

#### FIRST LEVEL OF LIVING

The Department considers the first level of dwelling units above retail, parking, commercial space, etc. in buildings without elevators as the ground floor and all units on that floor must be designed with an accessible entrance on an accessible route. 56 Fed. Reg. at 9500. The UBC intends on covering these same units by stating the following in Exception 2, Section 1103.1.9.3, Multi-unit dwellings:

- Where no elevator service is provided in a building and the ground floor does not contain dwelling units, only those dwelling units located on the first floor of either Group R, Division 1 apartment occupancies or Group R, Division 3 occupancies need comply with the requirements of this section.

The reference to “first floor” in Exception 2 above may be misleading because floor numbers can vary from one building to the next. For example, what is considered the first floor in one building may be considered the second floor in another. Although the UBC intends on covering the first level of living above retail, parking, commercial space, or private garages if the level at grade does not contain dwelling units, its intention can be made more clear.

#### **Recommendation Number 5:**

**It is recommended that the UBC modify Section 1103.1.9.3, Exception 2 as follows:**

- **Where no elevator service is provided in a structure and a floor at grade does not contain dwelling units, only those dwelling units located on the first floor containing dwelling units of either Group R, Division 1 apartment occupancies or Group R, Division 3 occupancies need comply with the requirements of this section.**

### MULTISTORY DWELLING UNITS

The regulations determined that a multistory dwelling unit that does not have an elevator internal to the unit that is located in a building that does not have an elevator is not a “covered multifamily dwelling” because the entire unit is not on the ground floor. 54 Fed. Reg. at 3244. The Guidelines define a “multistory dwelling unit” as a dwelling unit with finished living space located on one floor and the floor or floors immediately above or below it. 56 Fed. Reg. at 9500. A “single-story dwelling unit” is defined as a dwelling unit with all finished living space located on one floor. 56 Fed. Reg. at 9501.

The UBC includes the following definitions:

“Multistory dwelling unit” is a dwelling unit with habitable or bathroom space located on more than one story. (UBC Chapter 11, Section 1102) The UBC defines “habitable space” as a space in a structure for living, sleeping, eating or cooking. Bathrooms, toilet compartments, closets, halls, storage or utility space, and similar areas, are not considered habitable spaces. (UBC 209)

According to the UBC’s definition of “multistory dwelling unit”, a unit is considered multistory if one level contains living or “habitable” space and the floor next above or below contains only a bathroom. According to the definitions in the Guidelines, a two-level unit with only a bathroom, or only a bathroom and storage space on one level, is not a multistory dwelling unit because finished living space must be located on both floors. Bathroom space alone does not constitute living space, nor does bathroom and storage space.

Therefore, the UBC’s definition of “multistory dwelling unit” does not meet the Department’s interpretation of the Act, the regulations and the Guidelines of what constitutes a “multistory dwelling unit.”

#### **Recommendation Number 6:**

**It is recommended that the reference to “or bathroom space” in the UBC’s definition of “multistory dwelling unit” be deleted as follows:**

#### **Section 1102, Definitions:**

**Multistory dwelling unit: For application of the accessibility requirements, this term shall mean a dwelling unit with habitable space located on more than one story.**

#### DEFINITION OF BUILDING AND STRUCTURE

In the definition of “covered multifamily dwellings,” the Guidelines contain the statement that: “Dwelling units within a single structure separated by firewalls do not constitute separate buildings.” 56 Fed. Reg. at p. 9500. The Guidelines’ definition of “building” is a “structure, facility, or portion thereof that contains or serves one or more dwelling units.”

The UBC defines Building, and Structure as follows:

- **Building**  
Any structure used or intended for supporting or sheltering any use or occupancy.
- **Structure**  
That which is built or constructed, an edifice or building of any kind, or any piece of work artificially built up or composed of parts joined together in some definite manner.

The UBC does not include firewall criteria in its definition of “building” or “structure.” The UBC does not specify that buildings or structures separated by firewalls constitute separate buildings or structures. Interviews with Paul Armstrong confirm that structures separated by firewalls do not constitute separate structures. As a result, in terms of providing accessibility according to Chapter 11, Accessibility, structures separated by firewalls do not constitute separate structures. However, this may not be sufficiently clear in the code.

#### **Recommendation Number 7:**

**To ensure that firewall criteria are eliminated for the purpose of scoping the accessibility requirements for Type B dwelling units, it is recommended that the Exceptions in Section 1103.1.9.3 be modified by eliminating any reference to the term “building” and replacing it with the term “structure.”**

#### **V. SEVEN SPECIFIC DESIGN AND CONSTRUCTION REQUIREMENTS**

The Guidelines specify seven requirements relating to accessibility which reflect the language of the Act and the regulations. Compliance with the provisions of the Guidelines constitutes a safe harbor for compliance with the requirements of the Act. The Act itself references the ANSI A117.1 standard as a means for meeting the technical requirements of the Act. As discussed in the Department’s policy statement, at the time the Act was passed and the Guidelines were written, ANSI A117.1-1986 was in effect.

Since that time, there have been two additional editions of ANSI A117.1 published, the CABO/ANSI A117.1 in 1992 and the ICC/ANSI A117.1 in 1998.

The Department believes that compliance with either of these newer versions of the ANSI-A117.1 constitutes an additional safe harbor in terms of demonstrating compliance with the technical provisions of the Act's accessibility requirements. It is, of course, still necessary to refer to the Act and the regulations, or the Guidelines, for implementing the scoping requirements. The Department believes that Code officials may rely on the edition of ANSI A117.1 that has been adopted by the code organization or State or local jurisdiction, if it has been adopted without modifications and is uniformly enforced

The UBC utilizes the technical criteria contained in CABO/ANSI A 117.1 -1992. Therefore, SWA has determined that there is no variance between the requirements of the Act and the model code provision if the model code provision is based on CABO/ANSI A117.1-1992, even where those criteria differ from the ANSI A117.1-1986 criteria or the Guidelines.

#### **REQUIREMENT 1: ACCESSIBLE BUILDING ENTRANCE ON AN ACCESSIBLE ROUTE.**

The Guidelines set forth specifications to implement the requirements of 24 CFR 100.205(a) that all covered multifamily dwellings shall be designed and constructed to have at least one building entrance on an accessible route, unless it is impractical to do so because of terrain or unusual characteristics of the site. 56 Fed. Reg. at 9503.

Requirement 1 of the Guidelines includes specifications for providing an accessible entrance on an accessible route and explains that the requirements apply to a single building on a site and to multiple buildings on a site. In addition, Requirement 1 includes specifications for determining site impracticality based on terrain and unusual site characteristics. However, the Guidelines specify that covered multifamily dwellings with elevators shall be designed and constructed to provide at least one accessible entrance on an accessible route, regardless of terrain or unusual characteristics of the site.

In conducting this analysis, SWA and the Department noted that the UBC 1997 applies the site impracticality test to both Type A and Type B dwelling units. The inclusion of Type A units in the scoping of application of the site impracticality test may conflict with the requirements of Section 504 of the Rehabilitation Act of 1973 in multifamily residential projects receiving federal financial assistance, or with the requirements of the Americans with Disabilities Act of 1990, 42 U.S.C. § 12101 *et seq*; 29 U.S. C. § 794(a), in multifamily residential projects constructed by governmental entities.

The UBC's provisions are consistent with the Act, the regulations, and the Guidelines, except as follows:

#### **SITE IMPRACTICALITY DUE TO TERRAIN**

The Guidelines set forth two tests to assess site impracticality due to terrain-- the individual building test and the site analysis test. 56 Fed. Reg. at 9503.

**Individual Building Test** -- This test may be used for all sites, but must be used for sites with a single building having a common entrance for all units. 56 Fed. Reg. at 9503

**Site Analysis Test** --May be used for all sites, including those with multiple buildings and single buildings with multiple entrances serving individual dwelling units or clusters of dwelling units except sites with a single building having a common entrance for all units. This test has three steps. 56 Fed. Reg. at 9503-04

**Step A** requires the calculation of the percentage of total buildable area of the undisturbed site with a natural slope of less than 10%. A professional licensed engineer, landscape architect, architect or surveyor must certify the analysis of the slope. 56 Fed. Reg. at 9504.

**Step B** states that the percentage of ground floor units that must be made accessible should be equal to the total buildable area of the undisturbed site (not including floodplains, wetlands, or other restricted areas) that has an existing natural grade of less than 10% slope (previously determined in Step A) 56 Fed. Reg. at 9504.

**Step C** requires that in addition, **all** ground floor units in a building, or ground floor units served by a particular entrance, shall be made accessible if the entrance to the units is on an accessible route, defined as a walkway with a slope between the planned entrance and a pedestrian or vehicular arrival point that is no greater than 8.33%. In some cases, application of Step C will result in a greater number of accessible units being required. 56 Fed. Reg. at 9504.

For example, according to the Guidelines' site analysis test for determining impracticality due to terrain, if 60% of the total area of an undisturbed site has an existing natural grade of less than 10% slope, then 60% of the ground floor units are required to be served by an accessible entrance on an accessible route. If we construct two buildings not served by elevators on that site, each with 20 ground floor units for a total of 40 ground floor dwelling units on the entire site, then 24 ground floor dwelling units (60% of ground floor units) must have an accessible entrance on an accessible route. In addition, according to step C of the site analysis test, all ground floor units in the building, or ground floor units served by a particular entrance, shall be made accessible if the entrance to the units is on an accessible route.

#### Variance Related to Site Analysis Test

Section 1103.1.9.3, Exception 4, of the UBC provides that the number of Type B dwelling units in multiple non-elevator buildings on a single site is allowed to be reduced

to a percentage of the ground floor units which is equal to the percentage of the entire site having grades, prior to development, which are 10% or less; but in no case shall the number of Type B units be less than 20% of the ground floor dwelling units on the entire site.

This Exception corresponds to Steps A and B of the site analysis test, except that the Guidelines require the grades to be "less than 10%". 56 Fed. Reg. at 9504. In addition, the Exception fails to provide equivalent language to Step C -- i.e., it does not require that, in addition to the percentage of ground floor units required to be accessible, all ground floor units in buildings, or ground floor units served by a particular entrance, must be made accessible if the entrance to the units is on an accessible route. 56 Fed. Reg. at 9504. Therefore, the UBC does not meet this aspect of the Guidelines.

In addition, according to the Guidelines, regardless of site considerations, an accessible entrance served by an accessible route is practical whenever an elevator connects parking with a ground floor, in which case all ground floor units are covered, or whenever an elevated walk with a slope no greater than 10% is planned between an entrance and a pedestrian or vehicular arrival point. 56 Fed. Reg. at 9504. The UBC does not include any language that reflects these requirements. As a result, the UBC does not meet these provisions of the Guidelines.

#### **Recommendation Number 8:**

**In order to address these inconsistencies, we recommend the following additions to the UBC Section 1103.1.9.3, Exception 4:**

**The number of Type B dwelling units provided in multiple non-elevator buildings on a single site is allowed to be reduced to a percentage of the ground floor units which is equal to the percentage of the entire site having grades, prior to development, which are less than 10%. In addition to the percentage established, all ground floor units in a building, or ground floor units served by a particular entrance, shall be Type B if the entrance to the units is on an accessible route, defined as a walkway with a slope between the planned entrance and a pedestrian or vehicular arrival point that is no greater than 8.33%. In no case shall the number of Type B dwelling units be less than 20 percent of the ground floor dwelling units on the entire site. When a building is equipped with an elevator which provides access to the ground floor only, or when an elevated walkway is planned between a building entrance and a pedestrian or vehicular arrival point and the planned walkway has a slope no greater than 10%, all ground floor units shall comply with the requirements for Type B dwelling units. The walkway, in such cases shall be reduced to no greater than 8.33%.**

#### Variance Related to Buildings with Elevators

According to the Guidelines, buildings with elevators must provide an accessible entrance on an accessible route regardless of site impracticality. 56 Fed. Reg. at 9503.

The UBC, Exception 5, Section 1103.1.9.3, states in relevant part that:

The required number of Type A and Type B dwelling units shall not apply to a site where the lowest floor or the lowest structural building members is required to be at or above the base floor elevation resulting in....

**Recommendation Number 9:**

**It is recommended that Section 1103.1.9.3 Exception 5 be modified to exempt buildings with elevators from site impracticality as follows:**

**The required number of Type A and Type B dwelling units shall not apply to a site where the lowest floor or the lowest structural building members of non-elevator buildings is required to be at or above the base floor elevation resulting in....**

Variance Related to Sites with Unusual Characteristics

The criteria in the Guidelines for determining site impracticality for sites having unusual characteristics specifies that an accessible entrance on an accessible route is impractical when the unusual site characteristics result in a difference in finished grade elevation exceeding 30 inches AND 10 percent, measured between an entrance and all vehicular or pedestrian arrival points within 50 feet of the planned entrance, and if none, then between the closest vehicular or pedestrian arrival point. 56 Fed. Reg. at 9504.

The UBC does not reflect this requirement in Section 1103.1.9.3 Exception 5. The UBC's corresponding provision states that the accessibility requirements shall not apply to a site where the lowest floor or the lowest structural building members is required to be at or above the base flood elevation resulting in a difference in elevation between the minimum required floor elevation at the primary entrances and vehicular and pedestrian arrival points within 50 feet exceeding 30 inches, OR a slope exceeding 10 percent between the minimum required floor elevation at the primary entrances and vehicular and pedestrian arrival points within 50 feet. The Guidelines specify that the difference in finished grade elevation must be both 30 inches and 10 percent.

**Recommendation Number 10:**

**It is recommended that Section 1103.1.9.3, Exception 5, be modified as follows:**

**5.1 A difference in elevation between the minimum required floor elevation at the primary entrances and vehicular and pedestrian arrival points within 50 feet (15 240 mm) exceeding 30 inches (762 mm), AND**

## **REQUIREMENT 2: ACCESSIBLE AND USABLE PUBLIC AND COMMON USE AREAS.**

The Act and the regulations provide that covered multifamily dwellings with a building entrance on an accessible route be designed and constructed in a manner so that the public and common use areas are readily accessible to and usable by people with disabilities. 42 USC 3604 (f)(3)(C)(i); 24 CFR 100.205 (c )(1). The Guidelines' Requirement 2 cites the appropriate section of the ANSI A117.1 – 1986 Standard for the technical provisions for 15 accessible elements or spaces, and describes the application of the specifications including modifications to the referenced Standard. 56 Fed. Reg. at 9505. Following are the 15 basic elements or spaces for accessible and usable public and common use areas or facilities:

- Accessible routes
- Protruding objects
- Ground and floor surface treatments
- Parking and passenger loading zones
- Curb ramps
- Ramps
- Stairs
- Elevators
- Platform lifts
- Drinking fountains and water coolers
- Toilet rooms and bathing facilities
- Seating, tables, or work surfaces
- Places of assembly
- Common-use spaces and facilities
- Laundry rooms

56 Fed. Reg. at 9505. When a variance is identified in the UBC that does not meet the requirements of the Guidelines for each of the 15 elements or spaces above, it is noted below.

Preliminarily, it is noted that Section 1103.1.9.1. General, provides that rooms and spaces available to the general public and spaces available for the use of residents that serve Group R, Division 1 occupancy accessible dwelling units shall be accessible. This section does not require accessibility in rooms and spaces available to the general public in Group R, Division 3 occupancies which are covered by Section 1103.1.9.3, Multi-unit dwellings. This is not equivalent to the accessibility provisions of the Guidelines.

### **Recommendation Number 11:**

**It is recommended that the UBC modify Section 1103.1.9.1, General, by including Group R, Division 3 occupancies as follows:**

- **Section 1103.1.9.1, General:**
  - **Group R Occupancies shall be accessible as provided in this chapter. Rooms and spaces available to the general public and spaces available for the use of the residents that serve accessible dwelling units in Group R, Division 1 and Division 3 occupancies shall be accessible.**

### ACCESSIBLE ROUTE(S)

#### Vehicular Route

Requirement 1, paragraph (5) of the Guidelines states that if the slope of the finished grade between covered multifamily dwellings and a public or common use facility exceeds 8.33%, or where other physical barriers or legal restrictions, all of which are outside the control of the owner, prevent the installation of an accessible pedestrian route, an acceptable alternative is to provide access via a vehicular route, so long as necessary site provisions such as parking spaces and curb ramps are provided at the public or common use facility. 56 Fed. Reg. at 9504.

The UBC Section 1103.2.2 contains language which is comparable to the Guidelines with one exception. That section states:

For Group R, Division 1 apartment occupancies, when the slope of the finished grade between accessible buildings and facilities exceeds 1 unit vertical in 12 units horizontal (8.33% slope), or when physical barriers of the site prevent the installation of an accessible route, a vehicular route with parking at each accessible building or facility may be provided in place of the accessible route.

The UBC does not include language making it clear that accessible parking and curb ramps must be available at the accessible facility if access is provided by a vehicular route.

#### **Recommendation Number 12:**

**It is recommended that the UBC, Section 1103.2.2, Accessible route, be modified to include the following language:**

- **If the slope of the finished ground level between accessible facilities and buildings exceeds one unit vertical in 12 units horizontal, or where physical barriers prevent the installation of an accessible route, a vehicular route with accessible parking spaces and curb ramps at each public or common use facility or building is permitted in place of the accessible route.**

#### Headroom

The Guidelines refer to headroom requirements through their adoption of the ANSI A117.1-1986 section on Accessible routes and its subsection, 4.3.5. which references headroom requirements. 56 FR 9505. The UBC does not include headroom requirements in its technical provisions for accessible routes. However, it does include headroom requirements in the provisions for protruding objects.

**Recommendation Number 13:**

**It is recommended that the UBC include headroom requirements stipulated in ANSI A117.1 - 1986 Section 4.4.2, Headroom, in Section 1103.2.2, Accessible route as follows:**

- **Walks, halls, corridors, passageways, aisles, or other circulation spaces shall have 80 in. minimum clear headroom. If vertical clearance of an area adjoining an accessible route is reduced to less than 80 in. nominal dimension, a guardrail or other barrier having its leading edge at or below 27 in. above the finished floor shall be provided.**

PARKING AND PASSENGER LOADING ZONES

Division I of Appendix Chapter 11 includes the only provisions for accessible parking and passenger loading zones. These provisions do not apply if the appendix is not specifically adopted. Therefore, a jurisdiction that adopted the UBC 1997 without the Appendix would not meet the accessibility requirements of the Act, regulations and Guidelines.

**Recommendation Number 14:**

**It is recommended that Appendix Chapter 11 be automatically adopted by a jurisdiction that adopts UBC 1997.**

The Questions and Answers (Question and Answer 14c) state that at least 2% of parking garages where there are several individual parking garages grouped together either in a separate area of the building (such as at one end of the building, or in a detached building), for assignment or rental to residents, at least 2% of the garages must be at least 14'2" wide and have a vehicular door at least 10' wide. 59 Fed. Reg. at 33366.

The UBC does not provide minimum requirements for these garages, and therefore, does not meet this aspect of the provisions of the Guidelines.

In addition, the Questions and Answers provide that parking shall be provided that is on the same terms and with the full range of choices (e.g., surface parking or garage) that is provided for other residents. 59 Fed. Reg. at 33366.

The Guidelines provide that accessible parking on a route accessible to persons in wheelchairs be provided for at least 2% of the covered dwelling units, and that there be accessible visitor parking sufficient to provide access to grade level entrances of covered multifamily dwellings, and accessible parking at facilities. 56 Fed. Reg. at 9505.

The UBC does not include comparable language in Appendix Chapter 11 Site Accessibility, Section 1108, Parking Facilities, and therefore, this aspect of the UBC does not meet the provisions of the Guidelines. In addition, Appendix Chapter 11, Section 1108, Parking Facilities, the 3<sup>rd</sup> provision applies to Group R, Division 1 apartment buildings and not Group R, Division 3 occupancies which may be covered under the Act, the regulations, and the Guidelines. As a result, the UBC does not meet the requirements of the Guidelines.

#### **Recommendation Number 15:**

**In order to address the inconsistencies outlined above, it is recommended that the UBC add the following language to Section 1108:**

**At least 2% of parking garages provided for R-2 and R-3 occupancies required to have accessible dwelling units where there are several individual garages grouped together, either in a separate area of a building or in a detached building, for assignment or rental to residents, must be at least 14'2" wide and have a vehicular door at least 10' wide.**

**Where accessible parking spaces are provided, they shall be on the same terms and with the full range of choices (surface parking or garage) that are provided for other residents.**

**Accessible visitor parking sufficient to provide access to grade level entrances for Type A and Type B dwelling units and accessible parking at facilities serving accessible structures shall be provided.**

**and modify the 3<sup>rd</sup> provision under Section 1108 as follows:**

**3. For Group R, Division 1 and Group R, Division 3 occupancies containing accessible or adaptable dwelling units where parking is provided, 2 percent of the parking spaces shall be accessible...**

In addition, Section 1108.3, Signs, provides an exception which states that accessible parking space signs need not be provided in parking garages or parking facilities that have

five or less total parking space. This exception does not meet the requirements of the Guidelines which requires signage at all accessible parking space.

**Recommendation Number 16:**

**It is recommended that the UBC delete this exception. If this exception is deleted from the charging paragraph, then signs will be required at all accessible parking spaces.**

ELEVATORS

The Guidelines require that elevators on accessible routes be accessible according to the technical specifications of ANSI A117.1, Section 4.10, Elevators. 56 Fed. Reg. at 9505. Section 1105.3 of the UBC, Elevators and Stairway and Platform Lifts, states that elevators on an accessible route shall be accessible. It also states that elevators required to be accessible shall be designed and constructed to comply with CABO/ANSI A117.1 – 1992. The technical specifications for elevators required by both the Guidelines and the UBC are equivalent.

However, the UBC provides an exception to Section 1105.3 which states that private elevators serving only one dwelling unit need not be accessible. This does not meet the requirements of the Guidelines because elevators within multistory units must provide accessibility.

**Recommendation Number 17:**

**It is recommended that the exception under Section 1105.3 be deleted.**

The UBC provides an exception to Section 1104.1.3, Elevators, which states that elevators need not be provided to floors provided with a horizontal exit and located at or above the level of exit discharge in fully sprinklered buildings. This exception does not meet the requirements of the Guidelines that requires elevators, if provided to units other than the ground floor, provide access to all floors.

**Recommendation Number 18:**

**It is recommended that the exception under Section 1104.1.3 be deleted.**

LAUNDRY ROOMS

The Guidelines state that if provided in the facility or at the site, at least one of each type of appliance provided in each laundry area shall be accessible. UBC Section 1103.1.9.1, General, states that Group R Occupancies shall be accessible as provided in Chapter 11. Rooms and spaces available to the general public and spaces available for the use of residents that serve Group R, Division 1 Occupancy accessible dwelling units, which

includes laundry facilities, shall be accessible. The UBC does not include Group R, Division 3 occupancies in Section 1103.1.9.1 which does not meet the requirements of the Guidelines.

**Recommendation Number 19:**

**It is recommended that Section 1103.1.9.1 be modified to include Group R, Division 3 occupancies.**

**REQUIREMENT 3. USABLE DOORS**

The Act and regulations require that all doors designed to allow passage into and within a covered dwelling unit be sufficiently wide to allow passage by persons in wheelchairs. 42 U.S.C. Section 3604 (f)(3)(C)(ii); 24 C.F.R. 100.205(c)(2). The Guidelines set forth criteria to meet this requirement. The Guidelines also set forth additional guidance regarding doors that are a part of an accessible route in the public and common use areas of multifamily dwellings and to doors into and within individual dwelling units. 56 Fed. Reg. at 9506.

The Guidelines provide the following:

On accessible routes in public and common use areas, and for primary entry doors to covered units, doors that comply with ANSI A117.1 4.13 will meet the Act's requirements for usable doors; and

Within individual dwelling units, doors intended for user passage through the unit which have a clear opening of at least 32 inches nominal width when the door is open 90 degrees, measured between the face of the door and the stop, would meet the Act's requirement.

The Department has determined that the UBC meets the requirements of the Act, regulations, and the Guidelines for usable doors.

**REQUIREMENT 4: ACCESSIBLE ROUTE INTO AND THROUGH THE COVERED DWELLING UNIT.**

The Act and regulations require that all covered multifamily dwellings with a building entrance on an accessible route shall be designed and constructed in such a manner that all premises within covered multifamily dwelling units contain an accessible route into and through the covered dwelling unit. 42 U.S.C. § 3604 (f)(3)(C)(iii)(I); 24 C.F.R. § 100.205 (c)(3)(i). Requirement 4 of the Guidelines sets forth criteria to meet this requirement. 56 Fed. Reg. at 9509-10. The UBC meets the provisions of the Act, regulations, and Guidelines with respect to Requirement 4, except the following.

**MULSTORY UNITS SERVED BY ELEVATORS**

Among the criteria for Requirement 4 is the provision that in multistory dwelling units in buildings with elevators, the story of the unit that is served by the building elevator is the primary entry to the unit. 56 Fed. Reg. at 9507.

One of the UBC's exceptions to the requirement for Type B units provides, in Section 1103.1.9.3, as follows:

A multistory dwelling unit not provided with elevator service is not required to comply with requirements for Type B dwelling units. Where a multistory dwelling unit is provided with elevator service to only one floor, the floor provided with elevator service shall comply with the requirements for a Type B dwelling unit, and a toilet facility shall be provided on that floor.

The UBC does not mention in this exception that where a multistory dwelling unit is provided with elevator service, the story served by the elevator must be the primary entry to the unit. As a result, the UBC does not meet the requirements of the Guidelines in terms of the exceptions for multistory units in buildings served by elevators.

#### **Recommendation Number 20:**

**It is recommended that the UBC modify Section 1103.1.9.3, Exception 3 as follows:**

- **A multistory dwelling unit not provided with elevator service is not required to comply with requirements for Type B dwelling units. Where a multistory dwelling unit is provided with elevator service to only one floor, the floor provided with elevator service shall be the primary entry to the unit, shall comply with the requirements for a Type B dwelling unit, and a toilet facility shall be provided on that floor.**

#### **REQUIREMENT 5: LIGHT SWITCHES, ELECTRICAL OUTLETS, THERMOSTATS, AND OTHER ENVIRONMENTAL CONTROLS IN ACCESSIBLE LOCATIONS.**

The Act and regulations require that all covered multifamily dwellings with a building entrance on an accessible route shall be designed and constructed so that all premises within the covered units contain light switches, electrical outlets, thermostats, and other environmental controls in accessible locations. 42 U.S.C. § 3604 (f)(3)(C) (iii)(II); 24 CFR § 100.205. Requirement 5 of the Guidelines sets forth criteria to meet these requirements. The UBC meets the provisions of the Act, regulations, and Guidelines with respect to Requirement 5.

#### **REQUIREMENT 6: REINFORCED WALLS FOR GRAB BARS.**

Requirement 6 of the Guidelines sets forth technical specifications to meet the requirements of the Act at 42 U.S.C. § 3604 (f)(3)(C)(iii)(III) and the regulations at 24

C.F.R. § 100.205(c)(3)(iii), which specifies that all covered multifamily dwellings with a building entrance on an accessible route shall be designed and constructed so that all premises within the covered units contain reinforcements in bathroom walls to allow later installation of grab bars around toilet, tub, shower stall and shower seat, where such facilities are provided. 56 Fed. Reg. at 9509-10.

Although it is the intent of the UBC at Section 1106.6.3 to require grab bar reinforcement at fixtures located away from walls, sunken or raised tubs for example, one cannot make that clear determination.

**Recommendation Number 21:**

**It is recommended that the UBC modify Section 1106.6.3, Toilet and bathing fixtures by adding the following:**

**Where fixtures are located away from walls alternative reinforcement complying with CABO/ANSI A117.1 4.24.2.5 and 4.24.3 shall be provided for the mounting of grab bars.**

**REQUIREMENT 7: USABLE KITCHENS AND BATHROOMS.**

The Act and regulations provide that all covered multifamily dwellings with a building entrance on an accessible route shall be designed to have usable kitchens and bathrooms such that an individual in a wheelchair can maneuver about the space. 42 U.S.C. § 3604 (f)(3)(C)(iii)(IV); 24 CFR § 100.205. Requirement 7 of the Guidelines sets forth technical criteria to meet those requirements. 56 Fed. Reg. at 9511-15.

Usable Kitchens

The Guidelines address a parallel approach to kitchen sinks in Requirement 7 at 56 Fed. Reg. at 9511. The parallel approach to the sink is addressed in Figure 7(c). 56 Fed. Reg. at 9514. The ANSI A117.1 – 1986 standard requires, with respect to sinks and lavatories, a forward approach with clear floor space below, and illustrates the forward approach centered on the sink/lavatory. (ANSI A117.1 1986, Fig.32 on page 50) The Department's Guidelines allowed a departure from the ANSI standard. 56 Fed. Reg. at 9511-12. The Guidelines permit the clear floor space to be designed for a parallel position. While the Guidelines only show the clear floor space centered on the lavatory [Fig. 7 (c)], it is equally applicable to the sink.

UBC Section 1106.5.2, Clear floor space, requires that a 30-inch-by-48-inch minimum clear floor space be provided at the sink and at each appliance. Provision 1, under Section 1106.5.2, states that the clear floor space at the sink shall be positioned for a parallel approach which must extend 15 inches minimum from each side of the sink centerline. This does not meet the requirements of the Guidelines. The Guidelines require the centering of the parallel approach on the sink.

**Recommendation Number 22:**

**It is recommended that the UBC delete the 15-inch offset requirement and modify Provision 1, Section 1106.5.2, Clear floor space as follows:**

- 1. The clear floor space at the sink shall be positioned for a parallel approach. The clear floor space shall be centered on the sink.**

Usable Bathrooms

The Guidelines provide two options for designing accessible bathrooms. The first option requires a minimal level of accessibility. This option requires that walls be reinforced for grab bars and sufficient maneuvering space be provided within the bathroom for a person using a wheelchair or other mobility aid to enter, close the door, use the fixtures, reopen the doors and exit. 56 Fed. Reg. at 9511.

The second option for designing accessible bathrooms provides a greater level of accessibility than that provided by the first option. The second option requires that they have reinforced walls for grab bars, clear space at specific locations within the bathroom to permit use of the fixtures, and specific clearances for fixtures. 56 Fed. Reg. at 9511.

According to the Guidelines, for covered multistory dwellings in elevator buildings, only bathrooms on the accessible level are subject to the requirements. If a powder room is the only facility provided on the accessible level of a multistory dwelling unit, it must comply with the first or second option for designing accessible bathrooms and have reinforcement for grab bars.

As discussed in reference to kitchens above, the Guidelines require the centering of the parallel approach on the lavatory. 56 Fed. Reg. at 9512. The UBC requires an offset of 15 inches which does not meet the Guidelines' requirement.

**Recommendation Number 23:**

**It is recommended that the reference to 15 inches be deleted from Sections 1106.6.4.1.1, Lavatory, and Section 1106.6.4.2.1, Lavatory, and replaced with the following:**

- ...Clear floor space positioned for a parallel approach shall be centered on the lavatory.**