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January 17, 2022

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**Senior Housing / Mixed-Use Development
136-140 Croton Ave., Ossining, NY
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Applicable Code:

2020 Building Code of New York State, which has adopted the following:

- 2018 International Building Code
- 2018 International Plumbing Code
- 2018 International Mechanical Code
- 2018 International Fire Code
- 2018 International Energy Conservation Code

2020 National Electric Code (NFPA 70)

2017 ICC/ANSI A117.1 Accessible and Usable Buildings & Facilities, which has adopted the following:

- 2010 Americans with Disabilities Act (ADA) Standards for Accessible Design
- Fair Housing Act Design Manual
- Universal Design Guidelines

New York State Design Guidelines for Multifamily Development

Westchester County Senior Housing Floating Zone

Village of Ossining Building Code

Village of Ossining Zoning Code

Village of Ossining Form-Based Zoning Code Overlay

Village of Ossining Architectural Design Guidelines



FAIR HOUSING ACT DESIGN MANUAL

**A MANUAL TO ASSIST
DESIGNERS AND BUILDERS
IN MEETING THE
ACCESSIBILITY REQUIREMENTS
OF THE FAIR HOUSING ACT**



**U. S. Department
of Housing and Urban Development
Office of Fair Housing and Equal Opportunity
Office of Housing**

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Preface

The Department is pleased to present the Fair Housing Act Design Manual. The manual was first published in August, 1996, and was updated in 1998. This republication of the 1998 manual is intended to provide clear and helpful guidance about ways to design and construct housing that complies with the Fair Housing Act.

The manual provides comprehensive information about accessibility requirements which must be incorporated into the design and construction of multifamily housing covered by the Act. It carries out two statutory responsibilities:

- first, it provides a clear statement of HUD's interpretation of the accessibility requirements of the Act, so that readers may know what actions on their part will provide them with a "safe harbor," and
- second, it provides guidance in the form of recommendations which meet the Department's obligation to provide technical assistance on alternative accessibility approaches.

Readers following the revised manual can rely on it. They will be in compliance with the Act's accessibility provisions if they carry them out. However, it should be noted that when the manual uses the terms: recommended, preferred, should, could, or uses italics or text labeled as "recommended," the material involved is provided as a suggestion for accessibility and not a requirement under the Act. In addition, HUD currently recognizes six other safe harbors for compliance with the Fair Housing Act's design and construction requirements. The other safe harbors are:

1. HUD's March 6, 1991 Fair Housing Accessibility Guidelines (the Guidelines), and the June 28, 1994 Supplemental Notice to Fair Housing Accessibility Guidelines: Questions and Answers about the Guidelines;
2. ANSI A117.1-1986, used in conjunction with the Act and HUD's regulations, and the Guidelines;
3. CABO/ANSI A117.1-1992, used in conjunction with the Act, HUD's regulations, and the Guidelines;
4. ICC/ANSI A117.1-1998, used in conjunction with the Act, HUD's regulations, and the Guidelines;
5. *Code Requirements for Housing Accessibility 2000* (CRHA), approved and published by the International Code Council (ICC), October 2000;
6. *International Building Code 2000* (IBC) as amended by the *IBC 2001 Supplement to the International Codes*.

It is important to note that the ANSI A117.1 standard contains only technical criteria, whereas the Fair Housing Act, the regulations and the Guidelines contain both scoping and technical criteria. Therefore, in using any of the ANSI standards it is necessary to also consult the Act, HUD's regulations, and the Guidelines for the scoping requirements.

Providing an environment where persons with disabilities can have the same access to, and ability to use, housing that persons without disabilities enjoy is both a worthwhile goal and the law. The Department is committed to helping those who develop housing to meet the requirements of the law, so that we can reach the goal of providing meaningful access for people with disabilities.

FAIR HOUSING ACT DESIGN MANUAL

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**A MANUAL TO ASSIST
DESIGNERS AND BUILDERS
IN MEETING THE
ACCESSIBILITY REQUIREMENTS
OF THE FAIR HOUSING ACT**

designed and developed by
Barrier Free Environments, Inc.
Raleigh, North Carolina

for
**The U.S. Department of Housing
and Urban Development
Office of Fair Housing and Equal Opportunity
and the Office of Housing
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**August 1996
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CREDITS

Project Director **Ronald L. Mace, FAIA**

Project Manager **Leslie C. Young**

Technical Assistance **Cheryl Kent, FHEO, HUD**

Authorship **Leslie C. Young**
Ronald L. Mace
Geoff Sifrin

Architectural Design
and Conceptual Illustration **Ronald L. Mace**
Leslie C. Young
Rex J. Pace
Geoff Sifrin

Graphic Design **Christopher A. B. McLachlan**

Illustration **Rex J. Pace**
Mark Pace

Photography **Kelly Houk**
Leslie C. Young

Acknowledgements Creation of this design manual involved the close cooperation of many people. Among them are the reviewers and technical staff at the Department of Housing and Urban Development, including Cheryl Kent, Judy Keeler, Merle Morrow, Alan Rothman, Nelson Carbonell, and Gail Williamson.

Special appreciation to the Barrier Free Environments, Inc. staff who contributed to this publication, including Leslie Young, Rex Pace, and Ron Mace. Special thanks also to Geoff Sifrin in South Africa and Lucy Harber.

Every attempt was made with this project to provide a concise and easy-to-follow guide on the construction requirements of the Fair Housing Act. Our hope is that the construction and disability communities to whom this manual is directed will be able to use and benefit from our efforts.

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Part One



INTRODUCTION

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INTRODUCTION

THE FAIR HOUSING ACT

Title VIII of the Civil Rights Act of 1968, commonly known as the Fair Housing Act, prohibits discrimination in the sale, rental, and financing of dwellings based on race, color, religion, sex, and national origin. In 1988, Congress passed the Fair Housing Amendments Act. The Amendments expand coverage of Title VIII to prohibit discriminatory housing practices based on disability¹ and familial status. Now it is unlawful to deny the rental or sale of a dwelling unit to a person because that person has a disability.

As a protected class, people with disabilities are unique in at least one respect because they are the only minority that can be discriminated against solely by the design of the built environment. The Fair Housing Act remedies that in part by establishing design and construction requirements for multifamily housing built for first occupancy after March 13, 1991. The law provides that a failure to design and construct certain multifamily dwellings to include certain features of accessible design will be regarded as unlawful discrimination.

The design and construction requirements of the Fair Housing Act apply to all new multifamily housing consisting of four or more dwelling units. Such buildings must meet specific design requirements so public and common use spaces and facilities are accessible to people with disabilities. In addition, the interior of dwelling units

covered by the Fair Housing Act must be designed so they too meet certain accessibility requirements.

The Fair Housing Act is intended to place “**modest**” accessibility requirements on covered multifamily dwellings These **modest** requirements will be incorporated into the design of new buildings, resulting in features which do not look unusual and will not add significant additional costs” (House Report 711² at 25 and 18). Fair Housing units are not fully accessible, nor are they purported to be; however, new multifamily housing built to comply with the Guidelines will be a dramatic improvement over units built in the past.

The Fair Housing Act gives people with disabilities greater freedom to choose where they will live and greater freedom to visit friends and relatives. But the Fair Housing Act has other broad implications. It proactively addresses the needs of an evolving population, looking ahead at future needs. With the aging of the population and the increase in incidence of disability that accompanies aging, significant numbers of people will be able to remain in and safely use their dwellings longer. For example, housing designed in accordance with the Fair Housing Act will have accessible entrances, wider doors, and provisions to allow for easy installation of grab bars around toilets and bathtubs, i.e., features that make housing safer and more responsive to all users.

¹The Fair Housing Act statute uses the term “handicap”; however, this manual uses the terms “disability” or “persons with disabilities” to the greatest extent possible to be consistent with current preferred terminology as reflected in the Americans with Disabilities Act of 1990.

²House Report No. 711, 100th Congress, 2nd Session

THE ROLE OF HUD

The U.S. Department of Housing and Urban Development (HUD) is the Federal agency responsible for enforcement of compliance with the Fair Housing Act. On January 23, 1989, HUD published its final rule implementing the Fair Housing Act. In the preamble to this rule, HUD indicated that it would provide further guidance on meeting the new construction requirements of the Act by developing accessibility guidelines. The preamble stated that until these guidelines are published, designers and builders may be guided by the requirements of the ANSI A117.1-1986 *American National Standard for Buildings and Facilities – Providing Accessibility and Usability for Physically Handicapped People*. More information on the ANSI standard appears on page 13.

The final Fair Housing Accessibility Guidelines (the Guidelines) were published on March 6, 1991 (56 Federal Register 9472-9515, 24 CFR³ Chapter I, Subchapter A, Appendix II and III). The Guidelines provide technical guidance on designing dwelling units as required by the Fair Housing Act. The Guidelines are not mandatory, but are intended to provide a safe harbor for compliance with the accessibility requirements of the Fair Housing Act. The Guidelines are included in this manual as Appendix B.

The Guidelines published on March 6, 1991, remain unchanged. However, on June 28, 1994, HUD published a supplemental notice to the Guidelines, “Supplement to Notice of Fair Housing Accessibility Guidelines: Questions and Answers About the Guidelines.” This supplemental notice reproduces questions that have been most frequently asked by members of the public, and

HUD’s answers to those questions. The Supplement also is included in this manual as Appendix C.

Under the Fair Housing Act, HUD is not required to review builders’ plans or issue a certification of compliance with the Fair Housing Act. HUD prepared the Guidelines and will answer technical questions. HUD also provides this publication as additional guidance.

The burden of compliance rests with the person or persons who design and construct covered multifamily dwellings. HUD or an individual who thinks he or she may have been discriminated against may file a complaint against the building owner, the architect, the contractor, and any other persons involved in the design and construction of the building. See page 22 for additional information on enforcement.

THE PURPOSE OF THE MANUAL

This design manual has been produced by HUD to assist designers, builders, and developers in understanding and conforming with the design requirements of the Fair Housing Act. It contains explanations and uses detailed illustrations to explain the application of the Guidelines to all aspects of multifamily housing projects.

The manual consists of three parts:

Part One: THE INTRODUCTION contains an overview of the Fair Housing Act, outlines other national laws and standards that regulate accessible design, presents the types of buildings/dwellings that are covered by the Fair Housing Act, and gives a brief discussion of the different types of disabilities.

³CFR = Code of Federal Regulations

Part Two: The Design Requirements of the Guidelines is a detailed, illustrated explanation of the seven requirements of the Fair Housing Accessibility Guidelines.

Part Three: The Appendix contains additional information that may be useful to anyone needing to be familiar with the design requirements of the Fair Housing Act. Included are a list of product resources, a list of selected references, a reprint of the Guidelines, and a reprint of the Supplemental Notice to the Guidelines.

LAWS AND CODES THAT MANDATE ACCESSIBILITY

Over the past two and a half decades, several statutes have been enacted at various levels of government that ensure nondiscrimination against people with disabilities, both in the design of the built environment and in the manner that programs are conducted. Even though this manual addresses the application of the Fair Housing Act and the Guidelines, certain dwellings, as well as certain public and common use areas, may be covered by several of the laws listed below. A brief synopsis of the landmark legislation follows to show where the Fair Housing Act fits into the overall history of accessibility legislation.

THE ARCHITECTURAL BARRIERS ACT (1968)

This Act stipulates that all buildings, other than privately owned residential facilities, constructed by

or on behalf of, or leased by the United States, or buildings financed in whole or in part by the United States must be physically accessible for people with disabilities. The Uniform Federal Accessibility Standards (UFAS) is the applicable standard.

SECTION 504 OF THE REHABILITATION ACT (1973)

Under Section 504 of the Rehabilitation Act of 1973 as amended, no otherwise qualified individual with a disability may be discriminated against in any program or activity receiving federal financial assistance. The purpose of Section 504 is to eliminate discriminatory behavior toward people with disabilities and to provide physical accessibility, thus ensuring that people with disabilities will have the same opportunities in federally funded programs as do people without disabilities.

Program accessibility may be achieved by modifying an existing facility, or by moving the program to an accessible location, or by making other accommodations, including construction of new buildings. HUD's final regulation for Section 504 may be found at 24 CFR Part 8. Generally, the UFAS is the design standard for providing physical accessibility, although other standards which provide equivalent or greater accessibility may be used.

THE FAIR HOUSING ACT OF 1968, AS AMENDED

The Fair Housing Act provides equal opportunities for people in the housing market regardless of disability, race, color, sex, religion, familial status or national origin, regardless of whether the housing is

publicly funded or not. This includes the sale, rental, and financing of housing, as well as the physical design of newly constructed multifamily housing. The Fair Housing Act is discussed in more detail in the next section, “General Provisions of the Fair Housing Act.”

THE AMERICANS WITH DISABILITIES ACT (1990)

The Americans with Disabilities Act (ADA) is a broad civil rights law guaranteeing equal opportunity for individuals with disabilities in employment, public accommodations, transportation, state and local government services, and telecommunications. Title III of the Act covers all private establishments and facilities considered “public accommodations,” such as restaurants, hotels, retail establishments, doctors’ offices, and theaters. People with disabilities must have equal opportunity in these establishments, both in terms of physical access and in the enjoyment of services. Title II of the ADA applies to all programs, services, and activities provided or made available by public entities. With respect to housing, this includes, for example, public housing and housing provided for state colleges and universities.

Under Title I of the ADA, employers may not discriminate in hiring or firing, and must provide reasonable accommodations to persons with disabilities, such as providing special equipment or training and arranging modified work schedules. A discussion of the relationship between the ADA and the Fair Housing Act appears on page 2 of the “Supplement to Notice of Fair Housing Accessibility Guidelines: Questions and Answers About the Guidelines” at Appendix C.

STATE AND LOCAL CODES

All states and many cities and counties have developed their own building codes for accessibility, usually based in whole or in part on the specifications contained in the major national standards such as ANSI and UFAS. Many states also have nondiscrimination and fair housing laws similar to the Fair Housing Act and the Americans with Disabilities Act.

When local codes differ from the national standard, either in scope or technical specification, the general rule is that the more stringent requirement should be followed. Many states also have provisions that a certain percentage (often 5%) of new multifamily housing must meet more stringent physical accessibility requirements than required under the Fair Housing Act. In such cases, both the state’s mandated percentage of accessible units must be provided and all dwellings covered by the Fair Housing Act must meet the Guidelines.

GENERAL PROVISIONS OF THE FAIR HOUSING ACT

The 1988 amendments to the Fair Housing Act extend to persons with disabilities and to families with children the same kinds of nondiscrimination protections afforded to persons based on race, color, religion, sex, and national origin. Thus, the Fair Housing Act protects persons with disabilities from discrimination in any activities relating to the sale or rental of dwellings, in the provision of services or facilities in connection with such dwellings, and in the availability of residential real estate related transactions.

The Fair Housing Act covers most types of housing. In some circumstances it exempts owner-occupied buildings with no more than four units, single-family housing sold or rented without the use of a broker, and housing operated by organizations and private clubs that limit occupancy to members.

The design and construction requirements of the Fair Housing Act and the Guidelines apply only to new construction of housing built for first occupancy after March 13, 1991. Those requirements are the focus of this manual; however, a brief discussion follows on the effect of the Fair Housing Act on policies and procedures in both new and existing multifamily housing developments.

The broad objective of the Fair Housing Act is to prohibit discrimination in housing because of a person's race, color, national origin, religion, sex, familial status, or disability. To ensure that persons with disabilities will have full use and enjoyment of their dwellings, the Fair Housing Act also includes two important provisions: one, a provision making it unlawful to refuse to make **reasonable accommodations** in rules, policies, practices, and services when necessary to allow the resident with a disability equal opportunity to use the property and its amenities; and two, a provision making it unlawful to refuse to permit residents with disabilities to make **reasonable modifications** to either their dwelling unit or to the public and common use areas, at the residents' cost.

REASONABLE ACCOMMODATIONS

Under the Fair Housing Act, it is unlawful for any person to refuse to make reasonable accommodations in rules, policies, practices, or services when

such accommodations may be necessary to afford a person with a disability equal opportunity to use and enjoy the dwelling. For example, in buildings with a "no pets" rule, that rule must be waived for a person with a visual impairment who uses a service dog, or for other persons who use service animals. In buildings that provide parking spaces for residents on a "first come, first served" basis, reserved parking spaces must be provided if requested by a resident with a disability who may need them. Sales material for apartments may need to be provided in a format so an individual with a visual disability may access the information.

REASONABLE MODIFICATIONS

When a resident wishes to modify a dwelling unit under the reasonable modification provisions of the Fair Housing Act, the resident may do so. The landlord/manager may require that the modification be completed in a professional manner under the applicable building codes, and may also require that the resident agree to restore the interior of the dwelling to the condition that existed before the modification, reasonable wear and tear excepted.

Landlords may not require that modifications be restored that would be unreasonable, i.e., modifications that in no way affect the next resident's "enjoyment of the premises." For example, in existing construction, a resident needs grab bars and pays to have the original wall reinforced with blocking between studs so grab bars can be securely mounted. It would be reasonable to require that the resident remove the grab bars at the end of the tenancy; however, it would be unreasonable to require that the blocking be removed since the reinforced wall would not

interfere with the next resident's use and enjoyment of the dwelling unit and may be needed by some future resident.

However, if a resident who uses a wheelchair were to remove a kitchen base cabinet and mount a lowered countertop to a height suitable for his or her use, the landlord may condition permission on the resident agreeing to restore the cabinet to its original condition when the resident vacates the unit. On the other hand, if a resident who uses a wheelchair finds that the bathroom door in the dwelling unit is too narrow to allow his or her wheelchair to pass, the landlord must give permission for the door to be widened, at the resident's expense. The landlord may not require that the doorway be narrowed at the end of the resident's tenancy because the wider doorway will not interfere with the next resident's use of the dwelling.

Residents also may make modifications to the public and common use spaces. For example, in an existing development it would be considered reasonable for a resident who uses a wheelchair to have a ramp built to gain access to an on-site laundry facility. Modifications of this type are not required to be returned to their original condition. If a resident cannot afford such a modification, the resident may ask a friend to do his or her laundry in the laundry room, and the landlord must waive any rule that prohibits nonresidents from gaining access to the laundry room.

Regarding the cost of special modifications in new construction, builders or landlords are responsible only for meeting the design requirements specified by the Fair Housing Act. If a particular resident intends to buy a unit and needs additional modifications to meet the needs of his or her disability, then the resident may ask for such

modification and the builder may not refuse.

However, the resident is responsible for any extra cost that the modifications might create over and above what the original design would have cost.

THE SCOPE OF THE DESIGN AND CONSTRUCTION REQUIREMENTS OF THE FAIR HOUSING ACT

The accessibility requirements of the Fair Housing Act are intended to provide usable housing for persons with disabilities without necessarily being significantly different from conventional housing. The Fair Housing Act specifies certain features of accessible design and certain features of adaptable design. These basic design features are essential for equal access and to avoid future de facto exclusion of persons with disabilities, as well as being easy to incorporate into housing design and construction. These design features assist not only persons with disabilities but also other persons to use and enjoy all aspects of a residential development.⁴

ADAPTABLE DWELLING UNITS

Covered dwelling units that meet the design requirements of the Guidelines are sometimes referred to as “adaptable dwelling units” or units that meet “certain features of accessible design.” The Guidelines incorporate accessibility features that are both accessible and adaptable. Accessible elements and spaces are those whose design allows them to be used by the greatest number of users without being modified. For example, the requirement within the covered dwelling unit for “usable” doors, with a nominal clear opening of 32 inches, ensures that dwelling unit doors are not too narrow or impassable for any resident.

Adaptable/adjustable elements and spaces are those with a design which allows them to be adapted or adjusted to accommodate the needs of

different people. The Fair Housing Act incorporates the adaptable/adjustable concept in bathroom walls by requiring that they contain reinforced areas to allow for later installation of grab bars without the need for major structural work on the walls.

DWELLINGS COVERED BY THE DESIGN REQUIREMENTS

The design requirements apply to buildings built for first occupancy after March 13, 1991, which fall under the definition of “covered multifamily dwellings.” See page 12 for a discussion of “first occupancy.” Covered multifamily dwellings are:

1. all dwelling units in buildings containing four or more dwelling units if such buildings have one or more elevators, and
2. all ground floor dwelling units in other buildings containing four or more units.

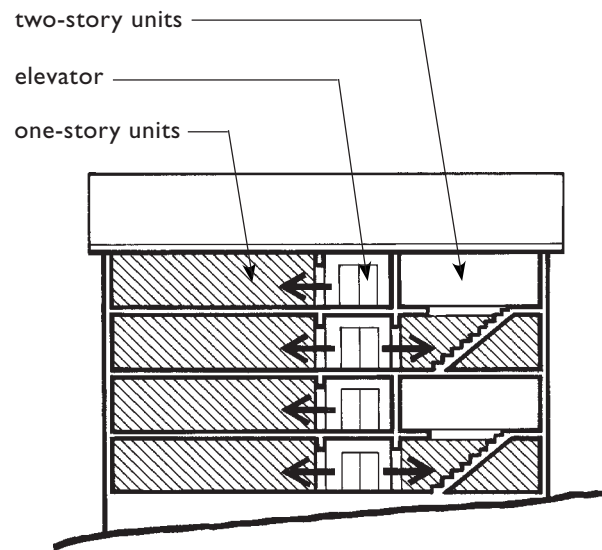
To be a covered unit, all of the finished living space must be on the same floor, that is, be a single-story unit, such as single-story townhouses, villas, or patio apartments. Even though raised and sunken areas are permissible in covered dwelling units, there are limitations to their use and they are discussed in Chapter Four: “Accessible Route Into and Through the Covered Unit.” Multistory dwelling units are not covered by the Guidelines except when they are located in buildings which have one or more elevators, in which case, the primary entry level is covered.

⁴House Report No. 711, 100th Congress, 2nd Session

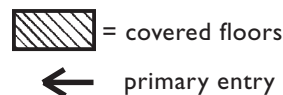
Dwelling Units in Buildings with Elevator(s)

As is evident from the preceding discussion, the Fair Housing Act's definition of "covered multifamily dwellings" distinguishes between buildings with elevators and buildings without elevators. Thus, if a building has one or more elevators, all of the dwelling units in the building are covered.

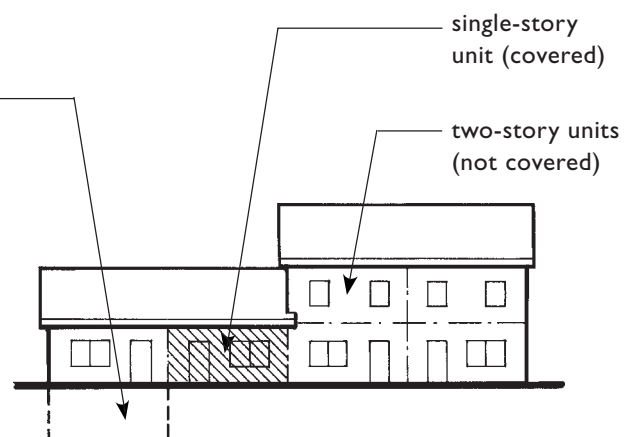
There is one exception to this requirement, and that is when an elevator is provided only as a means of creating an accessible route to dwelling units on a ground floor. In that case, the elevator is not required to serve dwelling units on floors which are not ground floors, and the building is not considered to be a "building with one or more elevators" that would require all of the dwelling units to meet the requirements of the Guidelines. This concept is discussed more fully in Chapter 1: "Accessible Building Entrance on an Accessible Route," starting on page 1.21.



**Buildings with Elevator(s):
All Single-Story Units and the Primary Entry
Level of Multistory Units Are Covered**



finished basement
with living space
makes this a two-
story dwelling unit,
thus, it is not covered



**Ground Floor Units in Buildings of 4
or More Units Are Covered**



Ground Floor Dwelling Units

The **ground floor** is defined as a floor of a building with a building entrance on an accessible route. The ground floor may or may not be at grade.

The definition of **ground floor** further provides that 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.

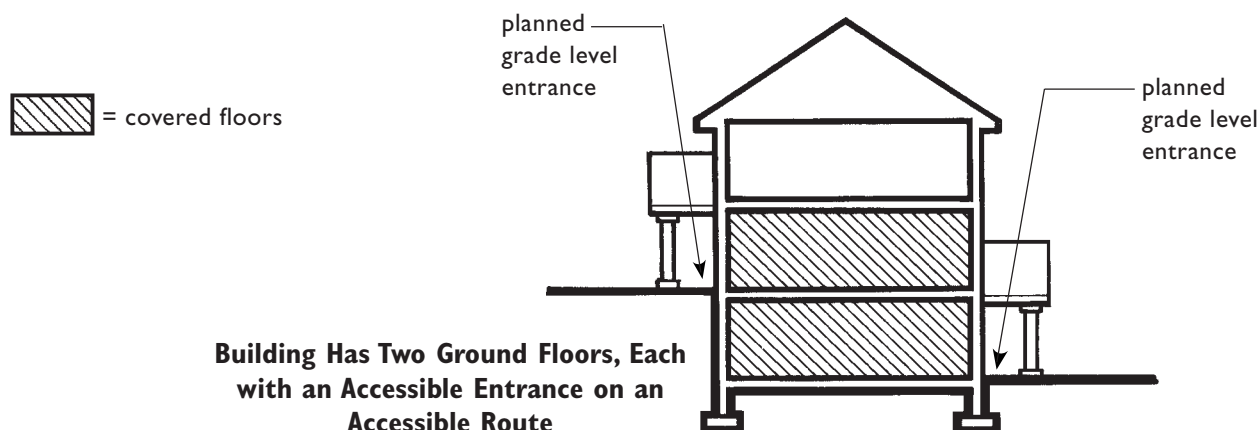
If more than one story can be designed to have an accessible entrance on an accessible route, then each story becomes a ground floor and all units on those stories are covered. However, the Fair Housing Act and the Guidelines do not require that there be more than one ground floor. See Chapter 1: “Accessible Building Entrance on an Accessible Route” for more detailed discussion of covered ground floors.

an accessible route via a ramp or elevator must be provided to the first floor of dwelling units

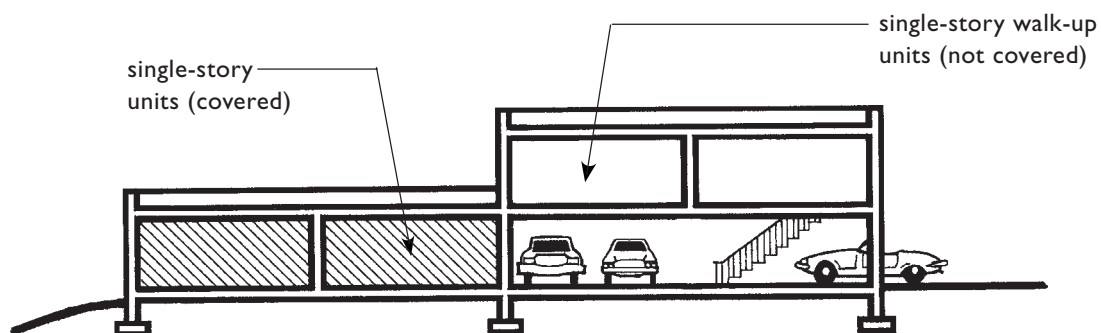
placing shops or garages under multi-family housing is a design choice and is not dictated by extremes of terrain



Covered Dwelling Units Over Shops and Garages



Building Has Two Ground Floors, Each with an Accessible Entrance on an Accessible Route



Dwelling Units on the Ground Floor Are Covered (the Guidelines Do Not Require that There Be a Second Ground Floor)

EXAMPLES OF COVERED MULTIFAMILY DWELLINGS

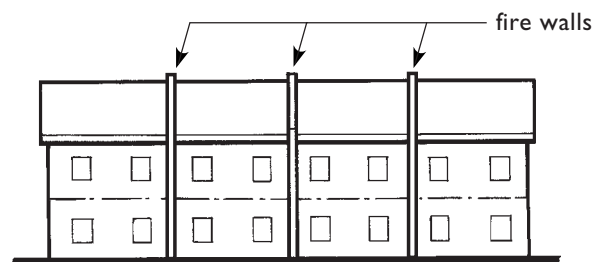
The Fair Housing Act does not distinguish between different forms of ownership when determining whether a unit or building is covered. Condominiums are covered by the Fair Housing Act even if they are pre-sold as a shell and the interior is designed and constructed by the buyer. All covered units must comply with the design and construction requirements of the Guidelines. Single-story townhouses are covered, as are other types of housing including vacation timeshare units, college dormitories, apartment housing in private universities, and sleeping accommodations intended for occupancy as a residence in a shelter.

Continuing care facilities or retirement communities are covered even when they include health care, provided the facility includes at least one building with four or more dwelling units. Whether a facility is considered a “dwelling” depends on whether the facility is to be used as a residence for more than a brief period of time. The operation of each continuing care facility must be examined on a case-by-case basis to determine whether it contains covered multifamily dwellings.

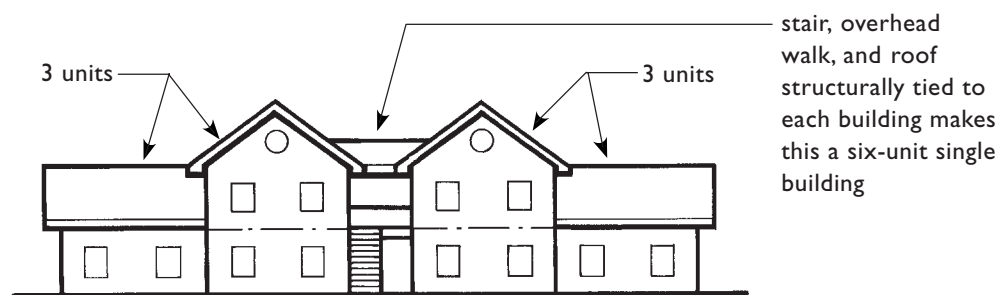
Buildings Separated by Firewalls or Covered Walkways

Dwellings built within a single structure but separated by a firewall are treated under the Fair Housing Act as a single building. For example, a structure containing two units on each side of a firewall would not be regarded as four two-unit buildings (and thus not covered by the Guidelines) but as a single eight-unit building.

In other situations where the dwelling units are connected, such as by stairs or a walkway that is structurally tied to the main body of the building, for purposes of the Guidelines, they are considered a single building and ground floor units in such buildings without elevators are covered.



**Building with Firewalls
Is Treated as a Single Building**



**For Purposes of the Guidelines, Two Structurally Joined Buildings
Are Treated as a Single Building**

Building Conversions

If a building was used previously for a nonresidential purpose, such as a warehouse, office building, or school, and is being converted to multifamily housing, the conversion is not covered. The Fair Housing Act only applies to covered buildings for first occupancy after March 13, 1991. The regulations define “first occupancy” as “a building that has never before been used for any purpose.” See page 12 for additional discussion of “first occupancy.”

New Construction Behind Old Facade

In cases where the facade of a building is preserved, but the interior of the building, including all structural portions of floors and ceilings is removed, and a new building is constructed behind the old facade, the building is considered a new building for the purposes of the Fair Housing Act. Thus, it is covered and must comply with the Guidelines.

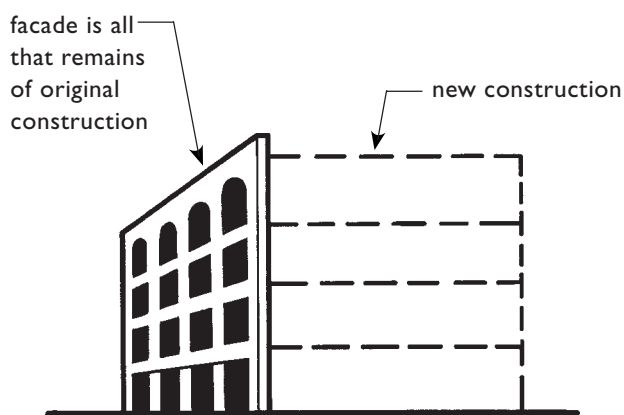
Additions to Existing Buildings

When an addition is built as an extension to an existing building, the addition of four or more units is regarded as a new building and must meet the design requirements of the Guidelines.

If any new public and common use spaces are added, they are required to be accessible. If, for example, an apartment wing is added to an existing hotel, the apartments are covered by the Fair Housing Act.

Housing for Older Persons Is Covered

Housing built specifically for older persons is exempt from complying with the Fair Housing Act’s prohibition against discrimination based on familial status (see 24 CFR 100.303 and 100.304). However, such housing is still subject to the Fair Housing Act’s other requirements, including the design requirements for accessibility.



**New Construction Behind
Old Facade Is Covered**

FIRST OCCUPANCY AFTER MARCH 13, 1991

The Fair Housing Act does not require any renovations to existing buildings. Its design requirements apply to new construction only – to covered multifamily dwellings that are built for first occupancy after March 13, 1991. First occupancy is defined as “a building that has never before been used for any purpose.” See also “Definitions Used in the Guidelines,” page 16.

A building is not subject to the design requirements of the Fair Housing Act if:

1. it was occupied on or before March 13, 1991,
– or –
2. the last building permit or renewal thereof was issued by a state, county, or local government on or before June 15, 1990.

For a building to be considered occupied, the following criteria must be met:

1. a certificate of occupancy must have been issued,
– and –
2. at least one dwelling unit actually must be occupied.
 - a. For a building containing **rental units**, this means that a resident has signed a lease and taken possession of a unit. The resident must have the legal right to occupy the premises, but need not have physically moved in yet.
 - b. For a building containing **for-sale units**, this means that a new owner has completed settlement and taken possession of a unit. The new owner must have the legal right to occupy the premises, but need not have physically moved in yet.

A certificate of occupancy, or the fact that units are being offered for sale but not yet sold, would not be an acceptable means of establishing occupancy. For a project consisting of several buildings which are constructed in phases spanning the March 13, 1991 date, first occupancy will be determined on a building-by-building basis.

THE ANSI STANDARD, THE FAIR HOUSING ACT, AND THE GUIDELINES

The Fair Housing Act requires certain features of accessible design for covered multifamily dwellings built for first occupancy after March 13, 1991. The Act and HUD's implementing regulations, as well as the final Fair Housing Accessibility Guidelines (the Guidelines) reference the 1986 ANSI A117.1 *American National Standard for Buildings and Facilities – Providing Accessibility and Usability for Physically Handicapped People* as an acceptable standard to meet when designing accessible elements, spaces, and features outside covered dwelling units.

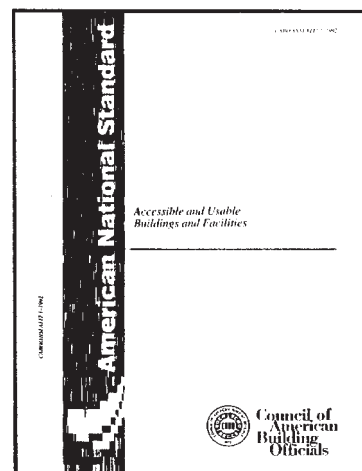
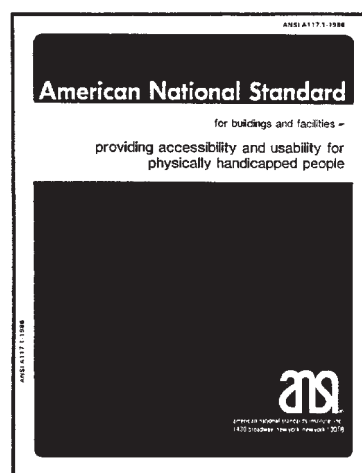
The level of accessibility required by the Fair Housing Act is relatively high on the site and in common use areas where compliance with much of the ANSI Standard is required. Accessibility is less stringent within the dwelling units where only specific features outlined in the Guidelines are required. In some instances, the specification is a modification of the related ANSI section, and in other instances the Guidelines substitute specifications.

The Guidelines state in the “Purpose” Section that the Guidelines are to provide technical guidance on designing dwelling units that are in compliance with the Fair Housing Act, and are not mandatory. Rather, the Guidelines provide a safe harbor for compliance with the accessibility requirements of the Act.

The “Purpose” Section also states, “Builders and developers may choose to depart from these Guidelines and seek alternate ways to demonstrate that they have met the requirements of the Fair Housing Act.” However, it is recommended that,

if a designer or builder chooses to follow an accessibility standard other than the 1986 ANSI A117.1 Standard, or a more recent version of the ANSI A117.1, such as the 1992 CABO/ANSI, that care be taken to ensure the standard used is at least equivalent to or stricter than the 1986 ANSI A117.1 Standard.

Note: Whenever this Manual states the ANSI Standard or the ANSI A117.1 Standard “must be followed,” it means the 1986 ANSI A117.1 Standard or an equivalent or stricter standard.



THE GUIDELINES

The design requirements of the Guidelines to which new buildings and dwelling units must comply are presented in abridged form below. Dwelling units are not subject to these requirements only in the rare instance where there are extremes of terrain or unusual characteristics of the site. Such instances are discussed in detail in Chapter One: “Accessible Building Entrance on an Accessible Route.”

REQUIREMENT 1

Accessible Building Entrance on an Accessible Route: Covered multifamily dwellings must 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. For all such dwellings with a building entrance on an accessible route the following six requirements apply.

REQUIREMENT 2

Accessible and Usable Public and Common Use Areas: Public and common use areas must be readily accessible to and usable by people with disabilities. See Chapter Two.

REQUIREMENT 3

Usable Doors: All doors designed to allow passage into and within all premises must be sufficiently wide to allow passage by persons in wheelchairs. See Chapter Three.

REQUIREMENT 4

Accessible Route Into and Through the Covered Dwelling Unit: There must be an accessible route into and through the dwelling units, providing access for people with disabilities throughout the unit. See Chapter Four.

REQUIREMENT 5

Light Switches, Electrical Outlets, Thermostats and Other Environmental Controls in Accessible Locations: All premises within the dwelling units must contain light switches, electrical outlets, thermostats and other environmental controls in accessible locations. See Chapter Five.

REQUIREMENT 6

Reinforced Walls for Grab Bars: All premises within dwelling units must 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. See Chapter Six.

REQUIREMENT 7

Usable Kitchens and Bathrooms: Dwelling units must contain usable kitchens and bathrooms such that an individual who uses a wheelchair can maneuver about the space. See Chapter Seven.

DEFINITIONS USED IN THE GUIDELINES

This is the complete list of definitions used in the Guidelines, excluding a definition for “handicap” and “controlled substance.” See Appendix B of this manual for a reprint of the Guidelines, which contains the complete list. Two additional definitions, taken from the regulations and a Guideline Requirement, are provided below. They are so noted with the definition.

Accessible

when used with respect to the public and common use areas of a building containing covered multifamily dwelling units, means that the public or common use areas of the building can be approached, entered, and used by individuals with physical disabilities. The phrase “readily accessible to and usable by” is synonymous with accessible. A public or common use area that complies with the appropriate requirements of ANSI A117.1-1986, a comparable standard, or these Guidelines is “accessible” within the meaning of this paragraph.

Accessible route

means a continuous and unobstructed path connecting accessible elements and spaces in a building or within a site that can be negotiated by a person with a severe disability using a wheelchair, and that is also safe for and usable by people with other disabilities. Interior accessible routes may include corridors, floors, ramps, elevators, and lifts. Exterior accessible routes may include parking access aisles, curb ramps, walks, ramps, and lifts. A route that complies with the appropriate requirements of ANSI A117.1-1986, a comparable standard, or

Requirement 1 of these Guidelines is an “accessible route.” In the circumstances described in Requirements 1 and 2, “accessible route” may include access via a vehicular route.

Adaptable dwelling units

when used with respect to covered multifamily dwellings, means dwelling units that include the features of adaptable design specified in 24 CFR 100.205(c) (2)-(3).

ANSI A117.1 - 1986

means the 1986 edition of the American National Standard for buildings and facilities providing accessibility and usability for physically disabled people.

Assistive device

means an aid, tool, or instrument used by a person with disabilities to assist in activities of daily living. Examples of assistive devices include tongs, knob-turners, and oven-rack pusher/pullers.

Bathroom

means a bathroom which includes a water closet (toilet), lavatory (sink), and bathtub or shower. It does not include single-fixture facilities or those with only a water closet and lavatory. It does include a compartmented bathroom. A compartmented bathroom is one in which the fixtures are distributed among interconnected rooms. A compartmented bathroom is considered a single unit and is subject to the Act’s requirements for bathrooms.

Building

means a structure, facility, or portion thereof that contains or serves one or more dwelling units.

Building entrance on an accessible route

means an accessible entrance to a building that is connected by an accessible route to public transportation stops, to parking or passenger loading zones, or to public streets or sidewalks, if available. A building entrance that complies with ANSI A117.1 -1986 (see Requirement 1 of these Guidelines) or a comparable standard complies with the requirements of this paragraph.

Clear

means unobstructed.

Common use areas

means rooms, spaces, or elements inside or outside of a building that are made available for the use of residents of a building or the guests thereof. These areas include hallways, lounges, lobbies, laundry rooms, refuse rooms, mail rooms, recreational areas, and passageways among and between buildings. See Requirement 2 of these Guidelines.

Covered multifamily dwellings

or covered multifamily dwellings subject to the Fair Housing Amendments means buildings consisting of four or more dwelling units if such buildings have one or more elevators, and ground floor dwelling units in other buildings consisting of four or more dwelling units. Dwelling units within a single structure separated by firewalls do not constitute separate buildings.

Dwelling unit

means a single unit of residence for a household of one or more persons. Examples of dwelling units covered by these Guidelines include: condominiums, an apartment unit within an apartment building, and 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. Examples of the latter include dormitory rooms and sleeping accommodations in shelters intended for occupancy as a residence for homeless persons.

Entrance

means any exterior access point to a building or portion of a building used by residents for the purpose of entering. For purposes of these Guidelines, an “entrance” does not include a door to a loading dock or a door used primarily as a service entrance, even if nondisabled residents occasionally use that door to enter.

Finished grade

means the ground surface of the site after all construction, levelling, grading, and development has been completed.

First occupancy

means a building that has never before been used for any purpose. (Definition found in regulations at 24 CFR 100.201)

Ground Floor

means 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 is above grade, all units on that floor must be served by a building entrance on an accessible route. This floor will be considered a ground floor.

Loft

means an intermediate level between the floor and ceiling of any story, located within a room or rooms of a dwelling.

Multistory dwelling unit

means a dwelling unit with finished living space located on one floor and the floor or floors immediately above or below it.

Powder room

A room containing a toilet and a sink. (Definition found in Requirement 6 of the Guidelines.)

Public use areas

means interior or exterior rooms or spaces of a building that are made available to the general public. Public use may be provided at a building that is privately or publicly owned.

Single-story dwelling unit

means a dwelling unit with all finished living space located on one floor.

Site

means a parcel of land bounded by a property line or a designated portion of a public right of way.

Slope

means the relative steepness of the land between two points and is calculated as follows: The distance and elevation between the two points (e.g., an entrance and a passenger loading zone) are determined from a topographical map. The difference in elevation is divided by the distance and that fraction is multiplied by 100 to obtain a percentage slope figure. For example, if a principal entrance is ten feet from a passenger loading zone, and the principal entrance is raised one foot higher than the passenger loading zone, then the slope is $1/10 \times 100 = 10\%$.

Story

means that portion of a dwelling unit between the upper surface of any floor and the upper surface of the floor next above, or the roof of the unit. Within the context of dwelling units, the terms “story” and “floor” are synonymous.

Undisturbed site

means the site before any construction, levelling, grading, or development associated with the current project.

Vehicular or pedestrian arrival points

means public or resident parking areas, public transportation stops, passenger loading zones, and public streets or sidewalks.

Vehicular route

means a route intended for vehicular traffic, such as a street, driveway, or parking lot.

DISABILITY TYPES AND IMPLICATIONS FOR DESIGN

TYPES OF DISABILITIES

Most people will, at some time during their life, have a disability, either temporary or permanent, which limits their ability to move around in and use the built environment. In fact, more than one in five Americans aged 15 and over have some type of disability; problems with walking and lifting are the most common. Not until fairly recently have the needs of people with disabilities been given adequate attention. The passage of the Fair Housing Act is another step in the process to create a built environment where people with disabilities can move freely in society as do persons who have no disability.

According to the “Statistical Report: the Status of People with Disabilities,” compiled by the President’s Committee on Employment of People with Disabilities, published in 1994⁵ :

- 48.9 million Americans are persons with disabilities;
- 32 million Americans are age 65 or over;
- 3.3 million Americans are 85 and older, and this number is projected to grow by 100%, to over 6 million by 2010;
- 70% of all Americans will, at some time in their lives, have a temporary or permanent disability that makes stair climbing impossible;
- 8,000 people survive traumatic spinal cord injuries each year, returning to homes that are inaccessible;
- 17 million Americans have serious hearing disabilities;
- 8.1 million Americans have vision disabilities;
- 27 million Americans have heart disease and reduced or limited mobility.

There are hundreds of different disabilities and they manifest themselves in varying degrees. One person may have multiple disabilities while another may have a disability whose symptoms fluctuate. Most standards and design criteria are based on the needs of people defined by one of the following four general categories:

I. MOBILITY DISABILITIES

This category includes people who use wheelchairs and those who use other mobility aids.

Wheelchair Users

People with severe mobility disabilities use either a power-driven or manually operated wheelchair or, the more recent development, the three-wheeled cart or scooter to maneuver through the environment. People who use wheelchairs have some of the most obvious access problems. They include maneuvering through narrow spaces, going up or down steep paths, moving over rough or uneven surfaces, making use of toilet and bathing facilities, reaching and seeing items placed at conventional heights, and negotiating steps or changes in level at the entrance to a dwelling unit.

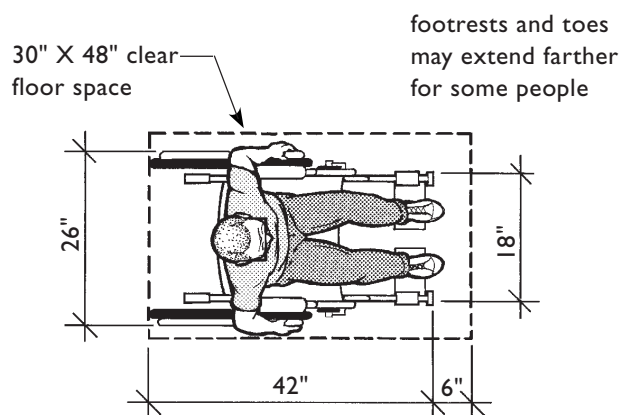
The design and construction requirements of the Fair Housing Act and the Guidelines focus primarily on the spatial needs of people who use wheelchairs because those needs are met more easily in the initial construction phase of a building project. This section provides basic information on the spatial requirements for an average seated adult

⁵Based on the census report *Americans With Disabilities* 1991/1992, published January 1994

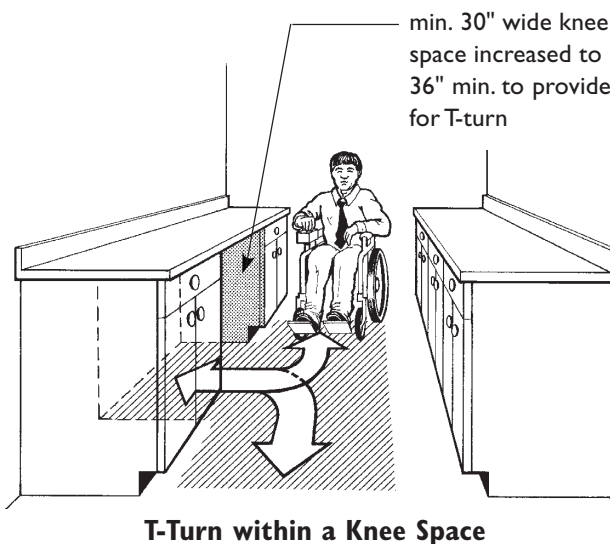
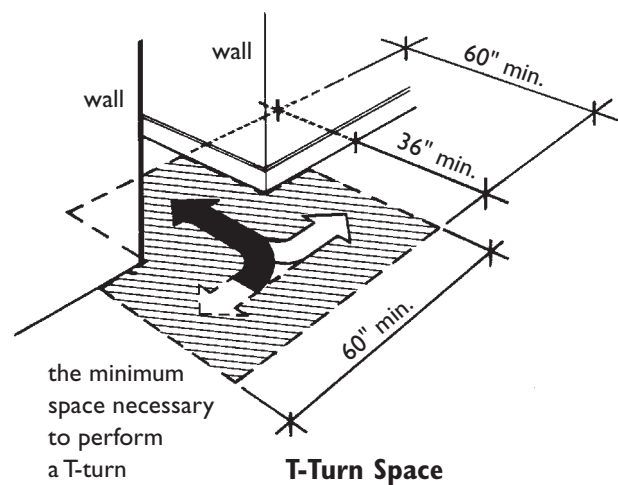
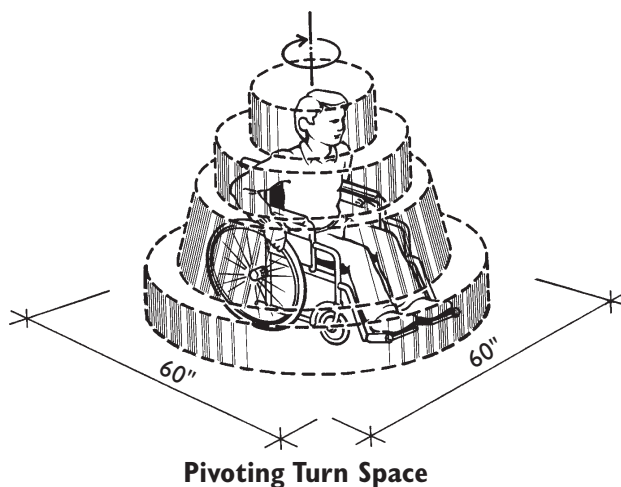
in a stationary position and the space necessary to execute the two most common turns typically described in accessibility standards. The specifications given here are based on the A117.1 - 1986 ANSI Standard (see ANSI 4.2, 4.3, and 4.4).

Clear Floor Space: The minimum clear floor space required to accommodate a single, stationary wheelchair is 30 inches by 48 inches. For an approach to an object, counter, or control, depending upon the object, the user may position his or her chair either parallel or perpendicular to the object. These two types of approaches are discussed in more detail in Chapters Five and Seven.

Turning Spaces: The space required for a person using a wheelchair to make a 180-degree turn is a circle with a diameter of 60 inches. Alternatively, a person can make a T-shaped turn, similar to a three-point turn in a car, at the intersection of a hall or in a room where some of the space necessary to perform the turn may be under a desk, table, or countertop.

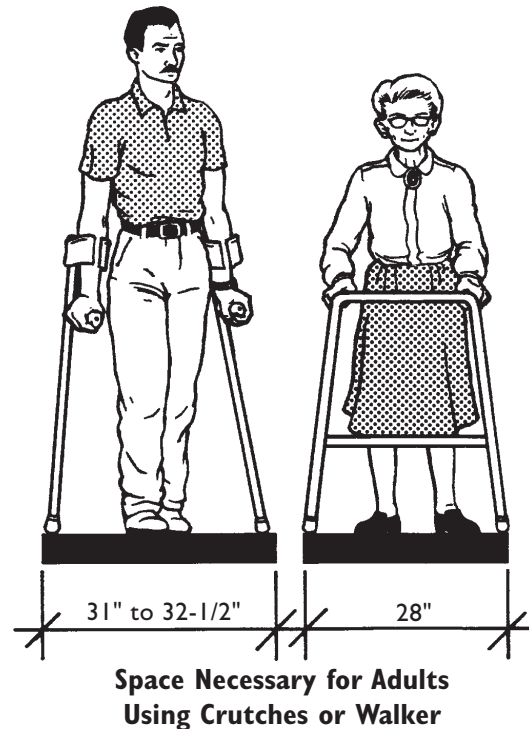


Space Allowances and Approximate Dimensions of Adult-Sized Wheelchairs



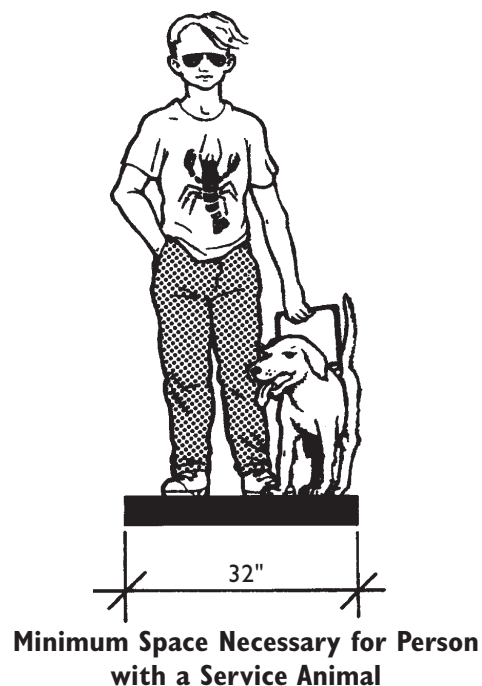
Ambulatory Mobility Disabilities

This category includes people who walk with difficulty or who have a disability which affects gait. It also includes persons who do not have full use of arms or hands, or who lack coordination. Persons who use crutches, canes, walkers, braces, artificial limbs, or orthopedic shoes are included in this category. Activities that may be difficult for people with mobility disabilities include walking, climbing steps or slopes, standing for extended periods of time, reaching, and fine finger manipulation.



2. VISUAL DISABILITIES

This category includes people with partial vision or total vision loss. Some people with a vision disability can distinguish light and dark, sharply contrasting colors, or large print, but cannot read small print, negotiate dimly lit spaces, or tolerate high glare. Many people who are blind depend upon their sense of touch and hearing to perceive their environment and communicate with others. Many use a cane or have a service animal to facilitate moving about.



3. HEARING DISABILITIES

People with partial hearing often use a combination of speech reading and hearing aids which amplify the available sounds. Echo, reverberation, and extraneous background noise can distort hearing aid transmission. People who are deaf and who rely on lip reading for information must be able to see clearly the face of the individual who is speaking. Those who use sign language to communicate also may be adversely affected by poor lighting. People who are hard of hearing or deaf may have difficulty understanding oral communication and receiving notification by equipment that is exclusively auditory such as telephones, fire alarms, public address systems, etc.

4. COGNITIVE DISABILITIES AND OTHER HIDDEN CONDITIONS

People with cognitive and learning disabilities may have difficulty using facilities, particularly where the signage system is unclear or complicated. In addition to people with permanent disabilities, there are others who may have a temporary condition which affects their usual abilities. Broken bones, illness, trauma, or surgery – all may affect a person's use of the built environment for a short time. Frequently, people have diseases of the heart or lungs, neurological diseases with resulting lack of coordination, arthritis, or rheumatism that may reduce physical stamina or cause pain. Reduction in overall ability is also experienced by many people as they age. People of extreme size or weight often need special accommodation as well.

ENFORCEMENT

Under the Fair Housing Act, discrimination includes a failure to design and construct covered multifamily dwellings in a manner which includes the specific features of accessible design delineated in the Act. Thus, responsibility for complying with the law rests with any and all persons involved in the design and construction of covered multifamily dwellings. This means, for example, that if a complaint is filed, the complaint could be filed against all persons involved in the design and construction of the building, including architects, builders, building contractors, the owner, etc.

HUD has the responsibility for enforcement of the Fair Housing Act. The Fair Housing Act provides that an aggrieved person may, not later than one year after an alleged discriminatory housing practice has occurred or terminated, file a complaint with the Secretary of HUD. The Secretary, on the Secretary's own initiative, also may file such a complaint. With respect to the design and construction requirements, complaints could be filed at any time that the building continues to be in noncompliance, because the discriminatory housing practice – failure to design and construct the building in compliance – does not terminate.

Following the filing of the complaint, an investigation is conducted and completed within 100 days, unless impracticable to do so. During the period beginning with the filing of the complaint and ending with the filing of a charge or a dismissal by the Secretary, HUD will engage in conciliation.

If a charge of discrimination is issued after an investigation, an aggrieved person or a respondent may elect, in lieu of an administrative proceeding with HUD, to have the complaint decided

in a civil action. An aggrieved person may bring a civil action in state or federal district court within two years after occurrence or termination of an alleged discriminatory housing practice.

If an administrative law judge finds that a respondent has engaged in or is about to engage in a discriminatory housing practice, the administrative law judge will order appropriate relief. Such relief may include actual and compensatory damages, injunctive or other equitable relief, attorney's fees and costs, and may also include civil penalties ranging from \$10,000 for the first offense to \$50,000 for repeated offenses. In addition, in the case of buildings which have been completed, structural changes could be ordered, and an escrow fund might be required to finance future changes.

With respect to the design and construction requirements, HUD may encourage, but cannot require, states and units of local government to include in their existing procedures for the review and approval of newly constructed covered multifamily dwellings, determinations as to whether the design and construction of such dwellings are consistent with the requirements of the Fair Housing Act, HUD's implementing regulations, and the Fair Housing Accessibility Guidelines.

HUD provides technical assistance to states and units of local government and other interested persons, in order to implement the design and construction requirements of the Fair Housing Act. Architects, designers and builders may contact HUD with questions, either by telephone or by letter. However, HUD is not required to, nor does the agency have a procedure

for, review and approval of building plans to determine if they are in compliance. Technical assistance provided by HUD serves only as general interpretation of law and regulations and is not binding on the agency with respect to a specific case.

Some states have incorporated the requirements of the Fair Housing Act into their state laws. How this is done may differ from state to state. Some states, for example, have included the design and construction requirements as a part of the state law and simply incorporated HUD's Fair Housing Accessibility Guidelines by reference. Other states have drafted their own language to implement the design and construction requirements of the Fair Housing Act into the state building code. States which have incorporated the requirements of the Fair Housing Act into their state laws enforce those laws independently of the federal government. However, it should be noted that it is the state law that is being enforced. Such enforcement will not preclude any individual from exercising his or her right to file a complaint with HUD under the Fair Housing Act, or from filing a private lawsuit; nor does it preclude HUD from conducting a Secretary-initiated complaint.

The Fair Housing Act does not invalidate or limit any law of a state or local government that requires dwellings to be designed and constructed in a manner that affords persons with disabilities greater accessibility than the requirements of the Fair Housing Act. Likewise, the Fair Housing Act does not invalidate or replace other federal laws which require greater accessibility in certain housing, such as Section 504 of the Rehabilitation Act of 1973 or the Architectural Barriers Act of 1968.

The following is a list of HUD enforcement offices. Architects, builders and other users of this manual are encouraged to contact these and other HUD Fair Housing field offices for technical assistance as needed.

New England

U.S. Department of Housing
and Urban Development
Thomas P. O'Neill, Jr. Federal Building
10 Causeway Street, Room 308
Boston, Massachusetts 02222-1092
(617) 994-8300

**Connecticut, Maine, Massachusetts,
New Hampshire, Rhode Island, Vermont**

New York/New Jersey

U.S. Department of Housing
and Urban Development
26 Federal Plaza
New York, New York 10278-0068
(212) 264-1290

New Jersey, New York

Mid-Atlantic

U.S. Department of Housing
and Urban Development
The Wanamaker Building
100 Penn Square East
Philadelphia, Pennsylvania 19106-3392
(215) 656-0647

**Delaware, District of Columbia, Maryland,
Pennsylvania, Virginia, West Virginia**

Southeast/Caribbean

U.S. Department of Housing
and Urban Development

Five Points Plaza

40 Marietta Street

Atlanta, Georgia 30303-3388

(404) 331-5140

**Alabama, Florida, Georgia, Kentucky,
Mississippi, North Carolina, South Carolina,
Tennessee, Puerto Rico, Virgin Islands**

Midwest

U.S. Department of Housing
and Urban Development

77 West Jackson Boulevard

Chicago, Illinois 60604-3507

(312) 353-7776

**Illinois, Indiana, Minnesota, Michigan,
Ohio, Wisconsin**

Southwest

U.S. Department of Housing
and Urban Development

801 North Cherry Street

Fort Worth, Texas 76113-2905

(817) 978-5900

**Arkansas, Louisiana, New Mexico,
Oklahoma, Texas**

Great Plains

U.S. Department of Housing
and Urban Development

Gateway Tower II, 400 State Avenue

Kansas City, Kansas 66101-2406

(913) 551-6958

Iowa, Kansas, Missouri, Nebraska

Rocky Mountain

U.S. Department of Housing
and Urban Development

First Interstate Tower North

633 17th Street

Denver, Colorado 80202-2349

(303) 672-5434

**Colorado, Montana, North Dakota, South
Dakota, Utah, Wyoming**

Pacific/Hawaii

U.S. Department of Housing
and Urban Development

Phillip Burton Federal Building

450 Golden Gate Avenue

P.O. Box 36003

San Francisco, California 94102-3448

(415) 436-6569

**Arizona, California, Hawaii, Nevada, Guam,
American Samoa**

Northwest/Alaska

U.S. Department of Housing
and Urban Development

Federal Office Building

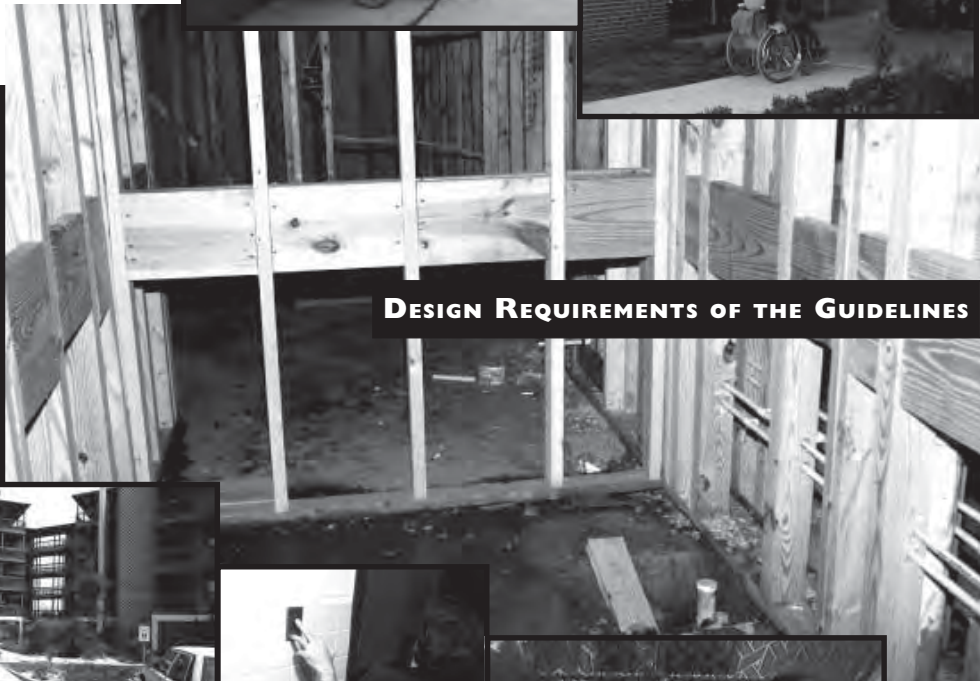
909 First Avenue, Suite 200

Seattle, Washington 98104-1000

(206) 220-5170

Alaska, Idaho, Oregon, Washington

Part Two



Chapter One:

REQUIREMENT I

Accessible Building Entrance on an Accessible Route



...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.

Fair Housing Act Regulations, 24 CFR 100.205

Definitions from the Guidelines

Accessible route. A continuous unobstructed path connecting accessible elements and spaces in a building or within a site that can be negotiated by a person with a severe disability using a wheelchair, and that is also safe for and usable by people with other disabilities. Interior accessible routes may include corridors, floors, ramps, elevators and lifts. Exterior accessible routes may include parking access aisles, curb ramps, walks, ramps, and lifts. A route that complies with the appropriate requirements of ANSI A117.1 – 1986, a comparable standard, or Section 5, Requirement 1 of these guidelines is an “accessible route.” In the circumstances described in Section, 5, Requirements 1 and 2, “accessible route” may include access via a vehicular route.

Building. A structure, facility or portion thereof that contains or serves one or more dwelling units.

Building entrance on an accessible route. An accessible entrance to a building that is connected by an accessible route to public transportation stops, to parking or passenger loading zones, or to public streets or sidewalks, if available. A building entrance that complies with ANSI A117.1 – 1986 or a comparable standard complies with the requirements of this paragraph.

Entrance. Any exterior access point to a building or portion of a building used by residents for the purpose of entering. For purposes of these guidelines, an “entrance” does not include a door to a loading dock

or a door used primarily as a service entrance, even if nonhandicapped residents occasionally use that door to enter.

Finished grade. The ground surface of the site after all construction, levelling, grading, and development has been completed.

Site. A parcel of land bounded by a property line or a designated portion of a public right of way.

Slope. The relative steepness of the land between two points and calculated as follows: The distance and elevation between the two points (e.g., an entrance and a passenger loading zone) are determined from a topographical map. The difference in elevation is divided by the distance and that fraction is multiplied by 100 to obtain a percentage slope figure. For example, if a principal entrance is ten feet from a passenger zone, and the principal entrance is raised one foot higher than the passenger loading zone, then the slope is $1/10 \times 100 = 10\%$.

Undisturbed site. The site before any construction, levelling, grading, or development associated with the current project.

Vehicular or pedestrian arrival points. Public or resident parking areas, public transportation stops, passenger loading zones, and public streets or sidewalks.

Vehicular route. A route intended for vehicular traffic, such as a street, driveway, or parking lot.

INTRODUCTION

The Fair Housing Accessibility Guidelines (the Guidelines) define covered multifamily dwellings as

1. those buildings consisting of four or more units if such buildings have one or more elevators and
2. ground floor units in other buildings having four or more units.

The Guidelines do not specify the total number of entrances a building must have nor where they must be positioned. However, the Guidelines do stipulate that each covered building on a site must have at least one accessible entrance on an accessible route. It is expected that most sites can and should be made accessible, i.e., an accessible route can be provided to entrances of covered dwellings; therefore, it is also expected that covered dwelling units will be provided on all building sites, including those where steep slopes, rock outcroppings, marshy areas, and similar conditions exist.

The requirements of the Fair Housing Act are outlined in the Act itself and in the implementing regulations issued by the U.S. Department of Housing and Urban Development (HUD). Section 100.205 (a) of these regulations states: “Covered multifamily dwellings for first occupancy after March 13, 1991, 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 the terrain or unusual characteristics of the site.”

Requirement 1 of the Guidelines presents guidance on designing an accessible building entrance on an accessible route. Requirement 1 also provides tests to assist a developer of buildings that do not have one or more elevators to determine when an accessible entrance is impractical because

of extreme terrain or unusual characteristics of the site. See impracticality tests pages 1.40 through 1.55. Units where entrances are impractical do not have to meet the other design requirements; the tests, therefore, can alter the number of units on a site that must comply.

The language of the Fair Housing Act itself does not provide an exception for site impracticality; however, as HUD notes in the preamble to its regulations, “the legislative history makes it clear that Congress was ‘sensitive to the possibility that certain natural terrain may pose unique building problems.’”⁶ In applying the site impracticality tests, architects and builders should keep in mind that in enforcement proceedings under the Fair Housing Act, it is the person(s) who designed and constructed the building(s) who has the burden of establishing that site impracticality existed.

Accessible routes and accessible entrances may occur in the course of any design project. They also may not occur and be expensive to include later if a careful approach to site design is not conducted. Deliberate manipulation of the grade to avoid the requirements of the Fair Housing Act is regarded as a discriminatory housing practice and must be avoided. This chapter offers methods and strategies to assist designers and builders to more efficiently provide accessible entrances and routes for all sites.

⁶House Report No. 100-711, page 27

EARLY PLANNING FOR ACCESSIBLE ROUTES AT ENTRANCES

The language of the Fair Housing Act requires covered multifamily dwellings to be **designed** and constructed in a manner that incorporates certain features of accessible and adaptable design. The Act specifically includes the design process, thereby recognizing that changes will need to be made in the way buildings are designed in order to assure accessibility.

Planning for accessibility should be an integral part of the design process in multifamily housing developments. This is particularly crucial in the early stages of planning when major decisions are being made about the overall design of the site. The location and orientation of buildings, parking areas, loading zones, and other elements have a major impact on the ease with which accessibility can be achieved in a finished development. This is especially important on sloping sites where careful initial planning can eliminate the need for major earthwork and the construction of elaborate ramps, bridges, lifts, or elevators to provide accessibility.

Attempts should be made to set the entrance floor levels of buildings at or close to ground levels to eliminate or minimize changes in level that may require steps or ramps. Often this may be accomplished by making use of fill dirt which has been excavated from other parts of the building site to alter the ground levels at appropriate places.

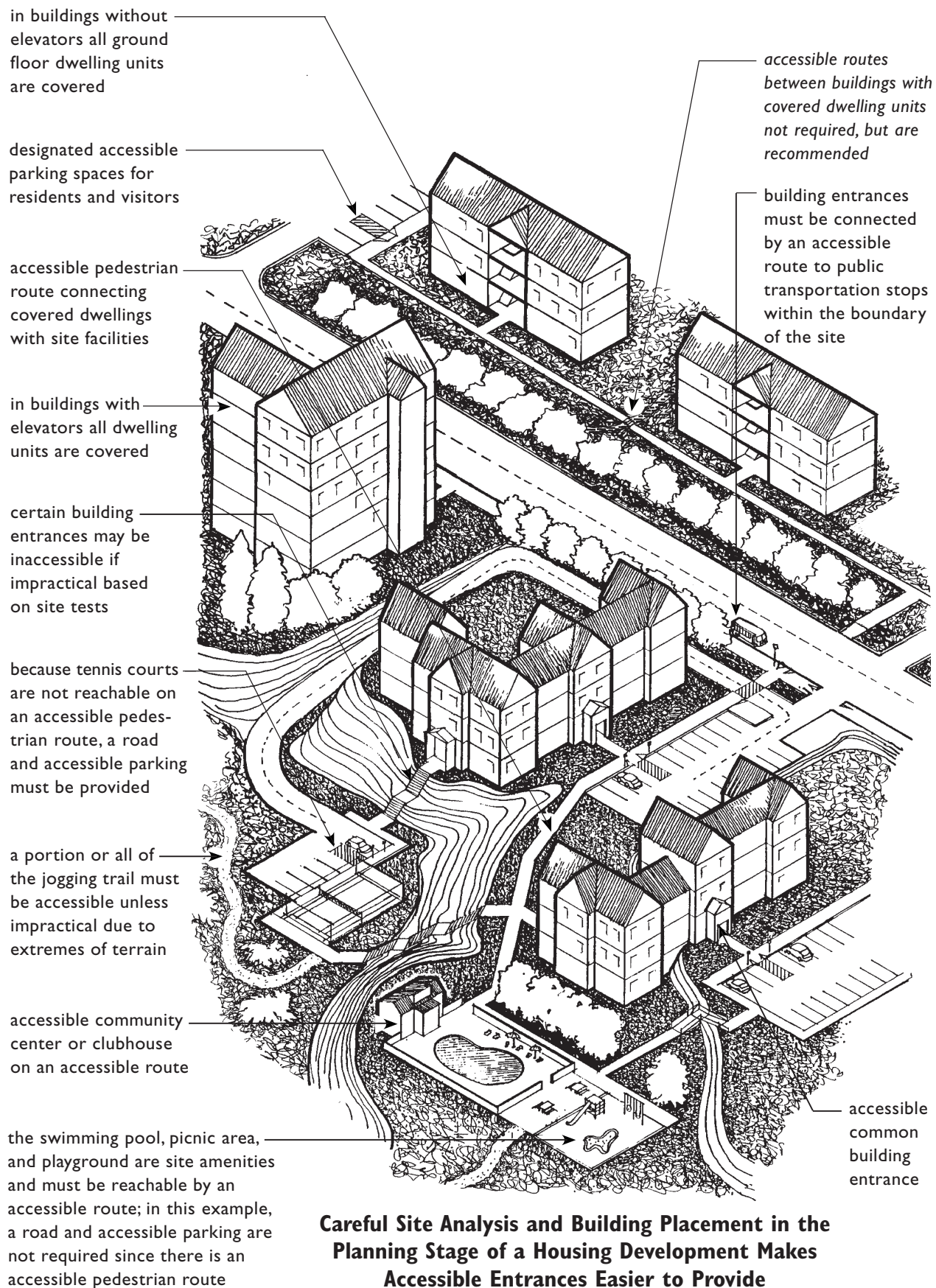
Since people generally arrive at buildings by a private car, bus, or taxi, the location of vehicle arrival points is critical. Passenger drop-off points and parking areas for people with disabilities

should be located close to building entrances and at levels which do not necessitate climbing steep slopes to reach the entrance floor level.

The path of travel to and placement of site amenities, such as outside mailboxes, refuse disposal areas, swimming pools, clubhouses, and sports facilities should be given careful consideration early in the planning process. The intent of the Fair Housing Act is that people with disabilities be able to reach and use such amenities.

In this manual, the ANSI Standard A117.1 - 1986 is referenced as the accessibility standard for compliance in much of public and common use space of multifamily housing developments. The Guidelines themselves cite the ANSI A117.1 - 1986 Standard (*the American National Standard for Buildings and Facilities – Providing Accessibility and Usability for Physically Handicapped People*).

Although referenced, the ANSI specifications are not mandated. Any ANSI citation in this manual refers to the 1986 ANSI A117.1 Standard and should be understood to mean that compliance with ANSI or any other similar accessibility standard that is equal to or more stringent than the ANSI A117.1 (1986) Standard would fulfill the requirements of the accessibility provisions of the Fair Housing Act.



WHAT IS AN ACCESSIBLE ROUTE ?

An accessible route is a continuous, unobstructed path through sites and buildings that connects all accessible features, elements, and spaces. It is the critical element that allows the successful use of any site or building by a person with a disability. Such a route is safe for someone using a wheelchair or scooter and also is usable by others.

Accessible routes on a site may include parking spaces, parking access aisles, curb ramps, walks, ramps, and lifts. Accessible routes within buildings may include corridors, doorways, floors, ramps, elevators, and lifts. Specifications for accessible routes are found in ANSI 4.3. Certain elements of accessible routes which must be given careful attention are:

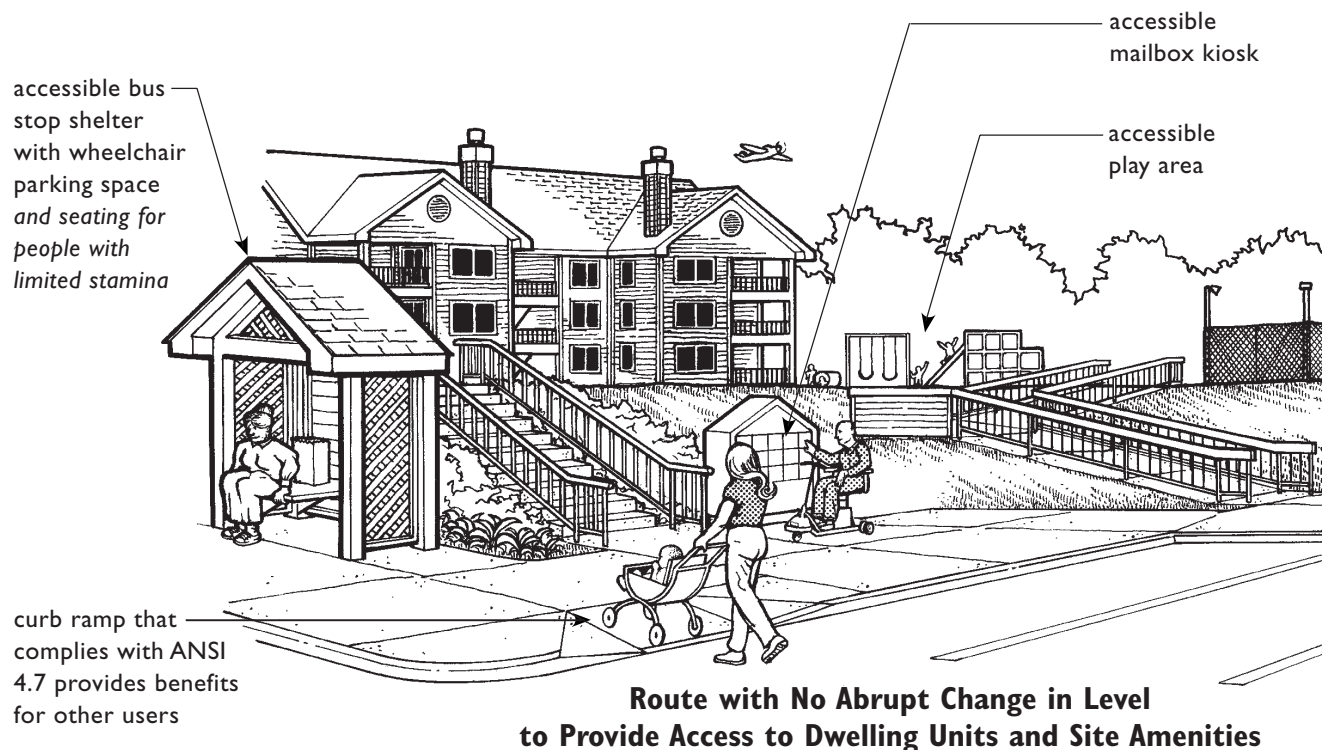
- width of route
- slope of route
- ground and floor surfaces
- cross slope
- headroom
- curb ramps
- protruding objects
- lift/elevator design

These elements are discussed in detail in Part Two, Chapter 2.

Stairs and Accessible Routes

Stairs are not an acceptable component of an accessible route because they prevent use by people using wheelchairs and others who cannot climb steps. ANSI specifications for accessible stairs (4.9) make stairs safer and more usable by mobility impaired people who can climb stairs.

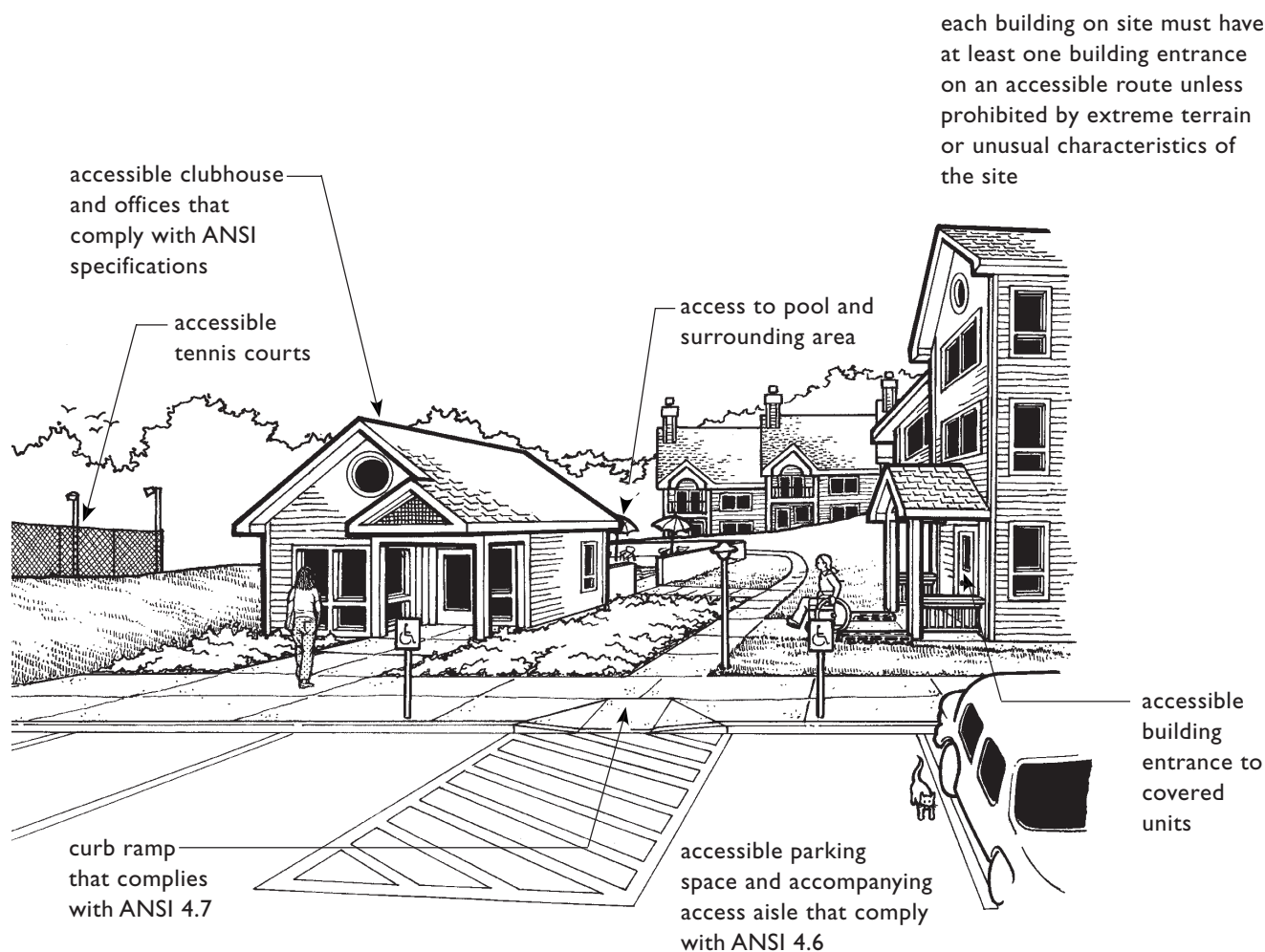
accessible routes must connect covered dwelling units with accessible site facilities (and at least one of each type of recreational facility when more than one of each is provided at any location)



When stairs are installed along routes that are required to be accessible, there must be an alternative way to get between levels. If the alternative way is an elevator or lift, the stairs do not need to comply with ANSI 4.9. If the alternative way is a ramp, the stairs must comply with ANSI 4.9. When an accessible route consists of both a ramp and stairs, it is best if they are located in close proximity so people who can use only one of the two (such as the ramp), need not travel an unreasonable additional distance.

Walks on Accessible Routes

Walks that are part of accessible routes become ramps when their slope exceeds 5% (1 in 20). Handrails are not required on walks with slopes between 0% and 5%, but they are required on those steeper than 5% and up to 8.33% (1 in 12). Slopes steeper than 8.33% are not usable by most people with disabilities and cannot be considered part of an accessible route. Handrail requirements for walks differ, depending upon which buildings the walks connect. This is addressed in the following sections.



WHERE ARE ACCESSIBLE ROUTES REQUIRED ON SITES?

Accessible Route from Site Arrival Points to Accessible Building Entrances

The Guidelines require that an accessible route be provided from public transportation stops, accessible parking spaces, accessible passenger loading zones, and public streets or sidewalks to accessible building entrances unless it is impractical to do so as determined by application of the site tests specified in Requirement 1 (site impracticality due to terrain or unusual site characteristics, see page 1.38). Because these walkways are required to be accessible, handrails, as per ANSI, must be provided when the slope of the walk is between 5% (1 in 20) and 8.33% (1 in 12).

Accessible Routes and Walks Between Accessible Buildings and Site Facilities

The Guidelines require accessible routes to connect buildings containing covered dwelling units (those with one or more elevators and ground floors of other buildings, except two-story townhouses) and accessible facilities, elements, and spaces on the same site. The Guidelines do not require accessible routes, walks, or paths between buildings containing only covered dwelling units unless the route is also part of a required accessible route. For example, if a building also contains a facility such as a laundry that is shared by two buildings, then an accessible route must be provided between the two buildings.

If no portion of the finished grade of a route between two buildings that contain only dwelling units exceeds 8.33% (1 in 12), it is

recommended that the route be made accessible. Such voluntary accessible walks must meet the same specifications as an accessible route except that handrails, commonly required on accessible routes when their slope exceeds 5% (1 in 20), are not required.

Accessible Site Facilities on Accessible Routes

The Guidelines require accessible and usable public and common use areas. All facilities, elements, and spaces that are part of public and common use areas must meet ANSI 4.1 through 4.30 and must be on an accessible route from covered dwelling units. Such facilities might include outside mailboxes, site furnishings, outside storage areas, refuse disposal areas, playing fields, amphitheaters, picnic sites, swimming pools and sun decks, tennis courts, clubhouses, playgrounds, gazebos, parking areas, sidewalks, and all or part of nature trails and jogging paths.

Where multiple recreational facilities of the same type are provided at the same location on the site (e.g., tennis courts), not all but a “sufficient” number of the facilities must be accessible to ensure an equitable opportunity for use by people with disabilities. Whenever only one of a type of recreational facility is provided at a particular location on the site, it must be accessible and connected by an accessible route to the covered dwelling units. (See Chapter 2: “Accessible Public and Common Use Spaces.”)

Use of Vehicles for Access to Site Facilities

When the finished grade exceeds 1 in 12 or other physical barriers (natural or man made) or legal restrictions, all of which are outside the control of the owner, prevent the installation of an accessible pedestrian route between covered dwellings and some public or common use site facilities; the Guidelines allow for automobiles to be used for access if certain conditions are met. When such a vehicular route is used as an alternative method to achieve accessibility:

1. the required parking at covered dwelling units must be provided, and
2. an appropriate number of additional accessible parking spaces on an accessible route must be

provided at each facility that is otherwise unreachable by means of an accessible pedestrian route. For a complete discussion of parking requirements, see Chapter 2: “Accessible and Usable Public and Common Use Areas.”

Careful planning and strategic location of accessible parking spaces and curb ramps around dwelling units and amenities will help give continuity between vehicular and pedestrian accessible routes. Accessible parking spaces and curb ramps are recommended at all on-site amenities to give residents choices in how to reach them, even those served by accessible pedestrian routes. This is especially important where accessible routes are very long and where parts or all of the route have maximum allowable slopes of 1 in 12 (1:12), which are difficult or impossible for many people to use.



**In Some Circumstances,
Site Access by Vehicle May Be Acceptable**

ACCESSIBLE ENTRANCES

All buildings containing covered dwelling units and separate buildings containing public and common use spaces, such as clubhouses, must have at least one accessible building entrance on an accessible route, unless it is impractical to do so as determined by applying the site impracticality tests provided in the Guidelines; see pages 1.38 through 1.58. Entrances into individual dwellings on an interior accessible route are referred to in the Guidelines as “entries.” These entries and the entries to dwelling units having separate exterior ground floor entrances will be discussed in Chapter 3: “Usable Doors.” The Guidelines establish three requirements for an accessible building entrance.

Accessible Building Entrance on an Accessible Route

The building entrance must be connected by an accessible route to public transportation stops, to accessible parking and passenger loading zones, and to public streets or sidewalks.

Primary Use

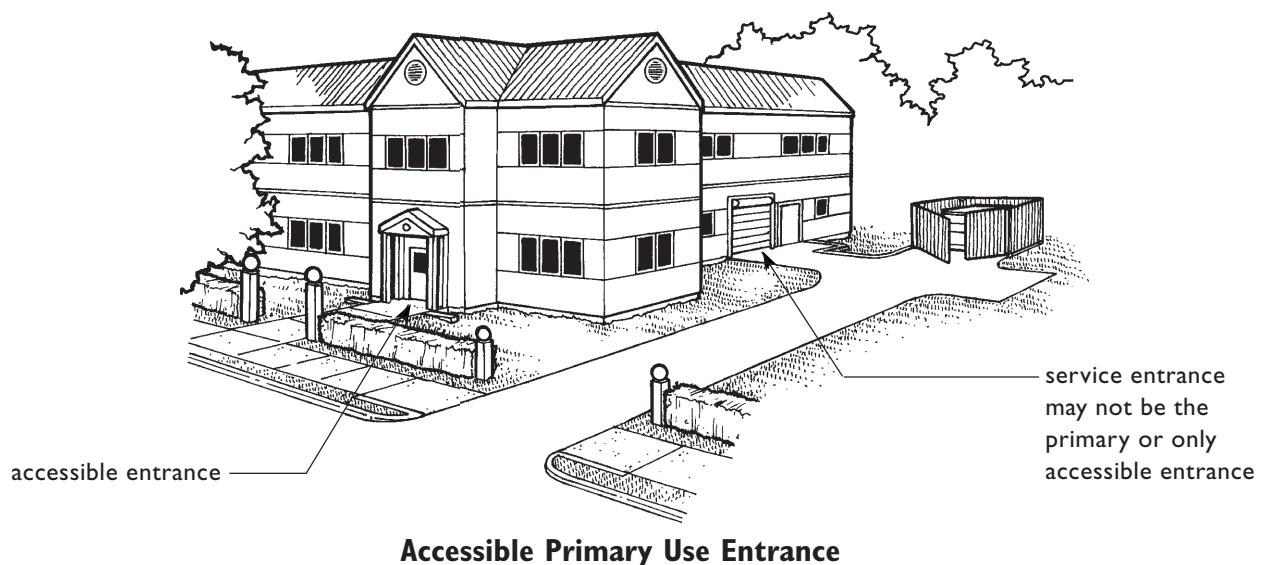
The accessible (common use) entrance must be one which is typically used by residents and/or guests for the purpose of entering the building. Service doors or loading docks cannot serve as the only accessible entrance to buildings, even if residents occasionally use such a door for entering the building.

Building Entrance Design Features

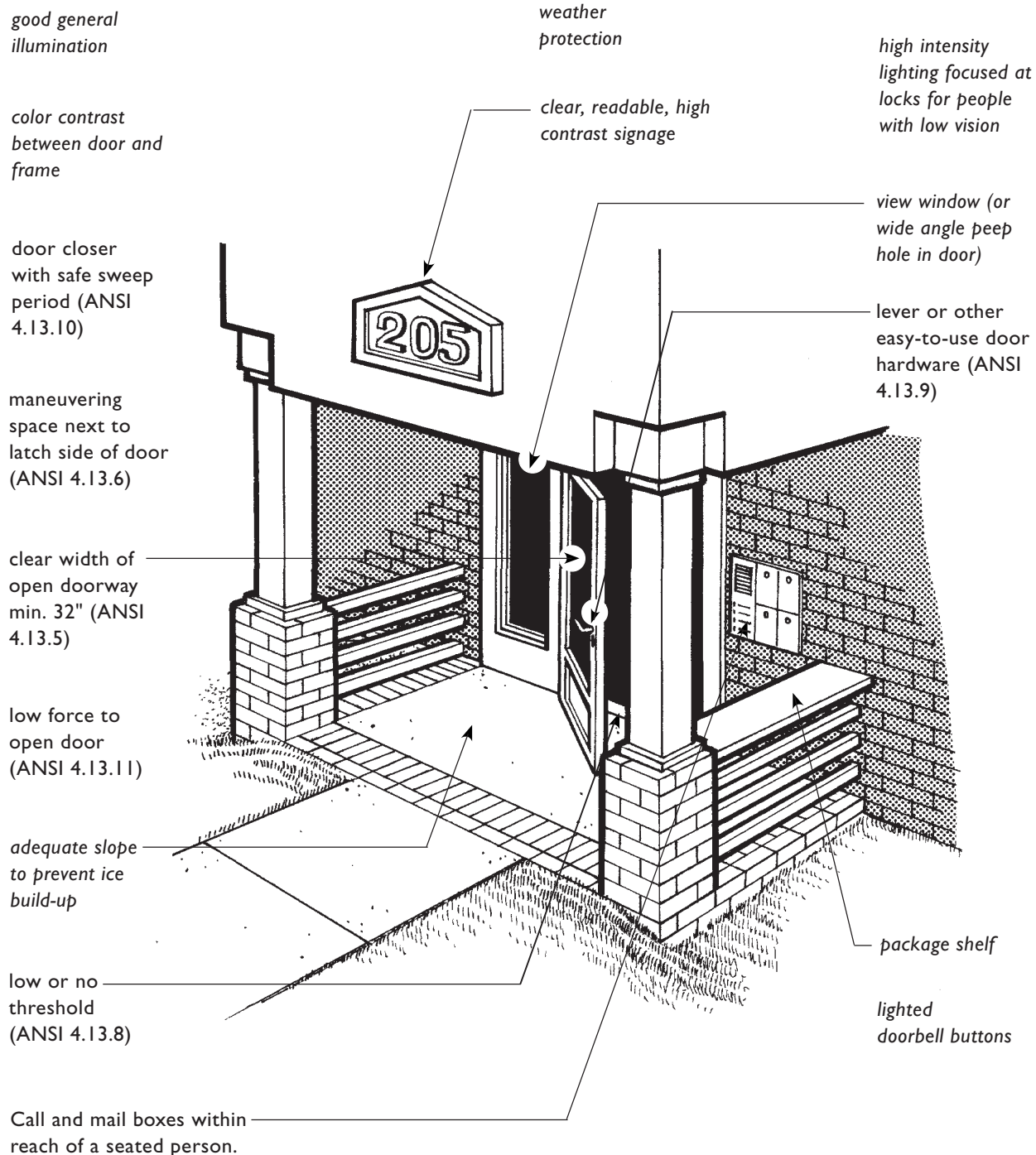
The entrance door itself must be usable by people with disabilities. Detailed specifications to achieve this are given in ANSI 4.13. Accessible building entrances are considered public and common use spaces and, unlike unit entrances, must meet the ANSI requirements on both sides of the door; see the next page.

Main factors which must be addressed are:

- minimum clear width of open doorway 32 inches,
- low or no threshold,
- clear maneuvering space inside and outside the door,
- force needed to open the door,
- accessible door hardware, and
- safe door closing speed.



Accessible Primary Use Entrance



Call boxes should be equipped with both visual and audible signals so as to be usable by both hearing and non-hearing people.

Design of Accessible Building Entrances

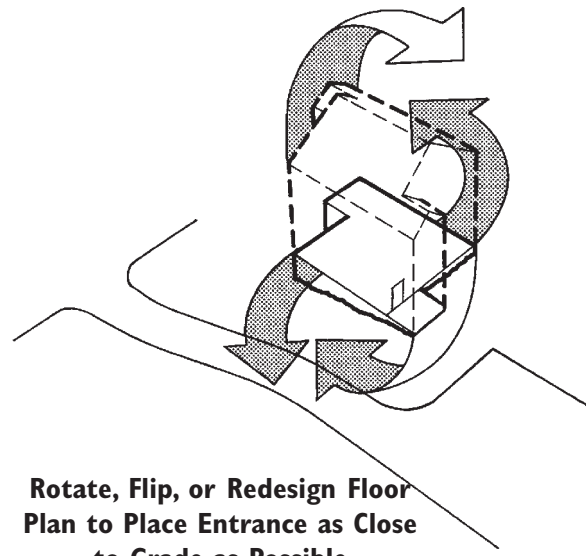
Notes in italic type are recommendations only and are not required by ANSI or the Guidelines. All recommended features are helpful to people with and without disabilities.

SITE PLANNING FOR ACCESSIBLE ENTRANCES ON ACCESSIBLE ROUTES

The ease of establishing an accessible route at building entrances can be radically affected by the type of construction used and the placement and positioning of the building on the site. These factors should be considered along with others essential to successful early planning and design of a housing complex.

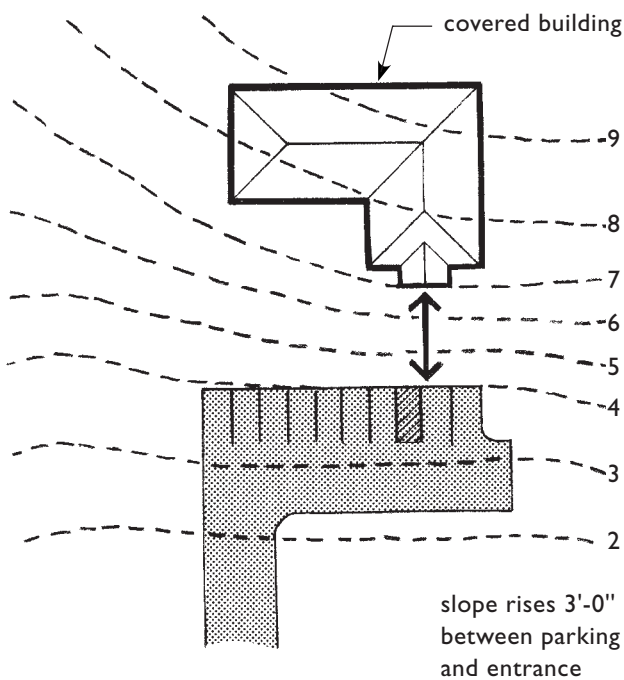
Careful Building Placement

Regardless of the type of construction, the way in which a building is located on a site will affect accessibility at entrances. If entrances exist at locations where the floor level is close to the ground, accessibility will be easier and less expensive to provide. Sometimes plans can be rotated or flipped to bring entrances closer to grade. Entrances and

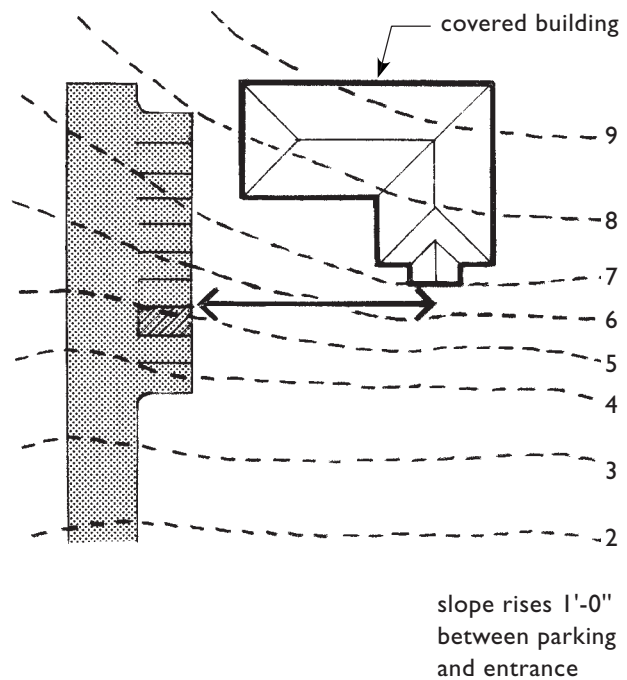


**Rotate, Flip, or Redesign Floor
Plan to Place Entrance as Close
to Grade as Possible**

parking often can be relocated to maximize use of existing grades. In some cases, the best solution is to redesign the proposed floor plan to place entrances at or as near grade as possible.



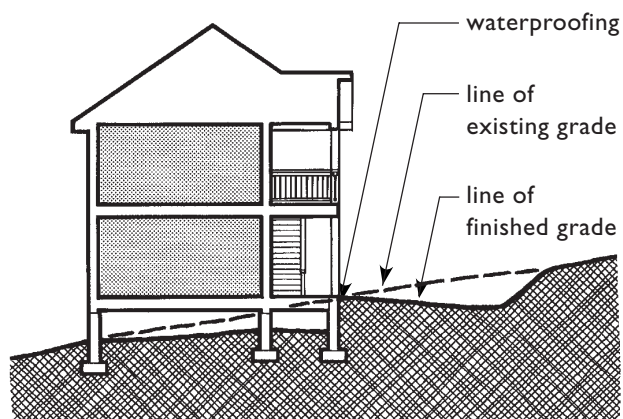
**Current Position of Parking Lot Makes Accessible
Route Difficult or Impossible to Provide**



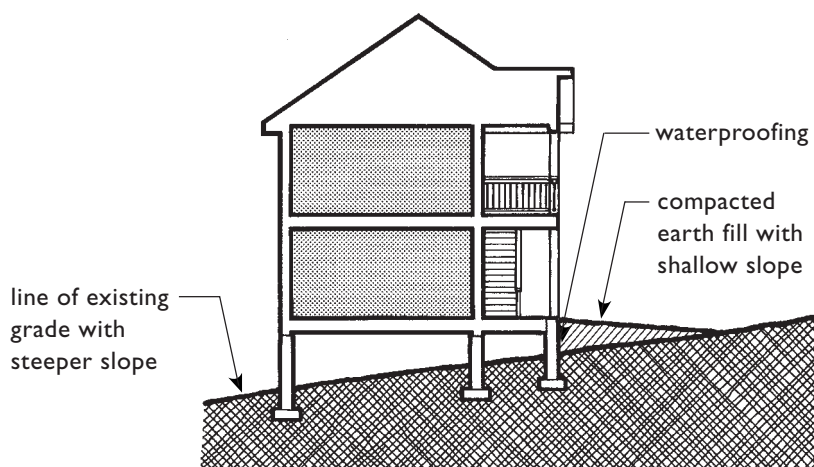
**Reorientation of Parking Area to
Achieve Accessible Route**

Earthwork and Site Grading

It is often possible to create accessible routes to entrances by means of earthwork and the grading of sites. On sloping sites, fill can be added or the land can be cut and graded to place the building entrance at ground level.



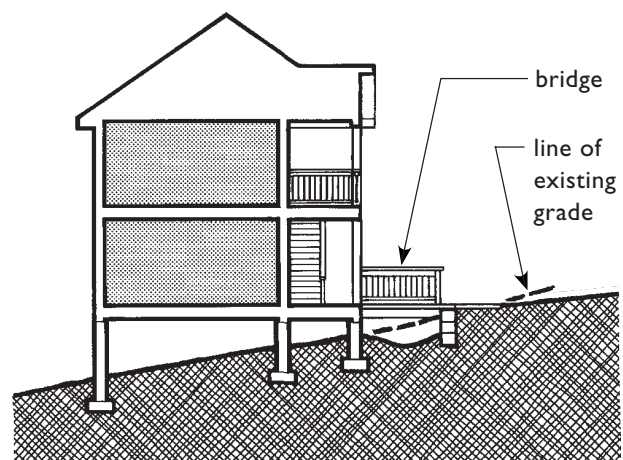
Earth Cut Site Grading



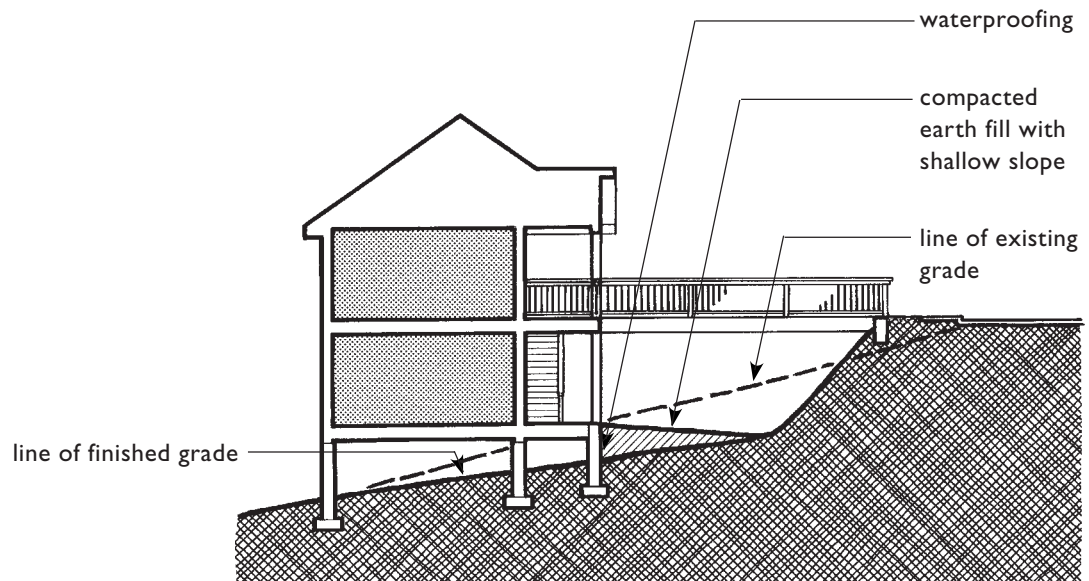
Earth Fill at Entrance

Bridges and Elevated Walks

Bridges or elevated walkways may be a good solution to providing an accessible route to an entrance on a sloping site, particularly where the building is approached from an uphill location. Combinations of techniques can be used on some sites to provide accessible entrances on more than one level. Bridges usually can be made level and thus easy and safe for everyone.



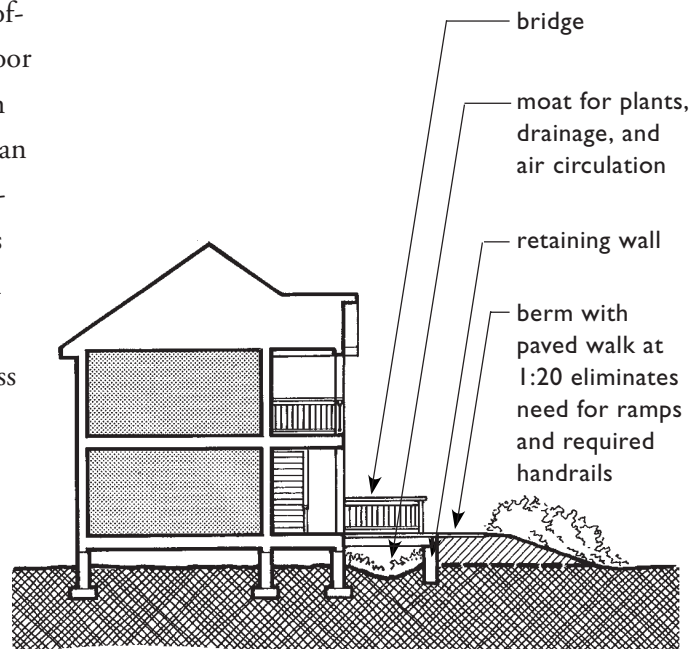
**Bridges to Uphill Locations
on Sloping Sites**



**Combination Earth Cut and
Accessible Bridge/Walk to Entrances**

Earth Berms and Bridges

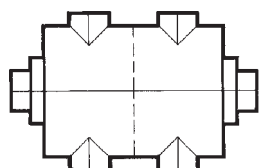
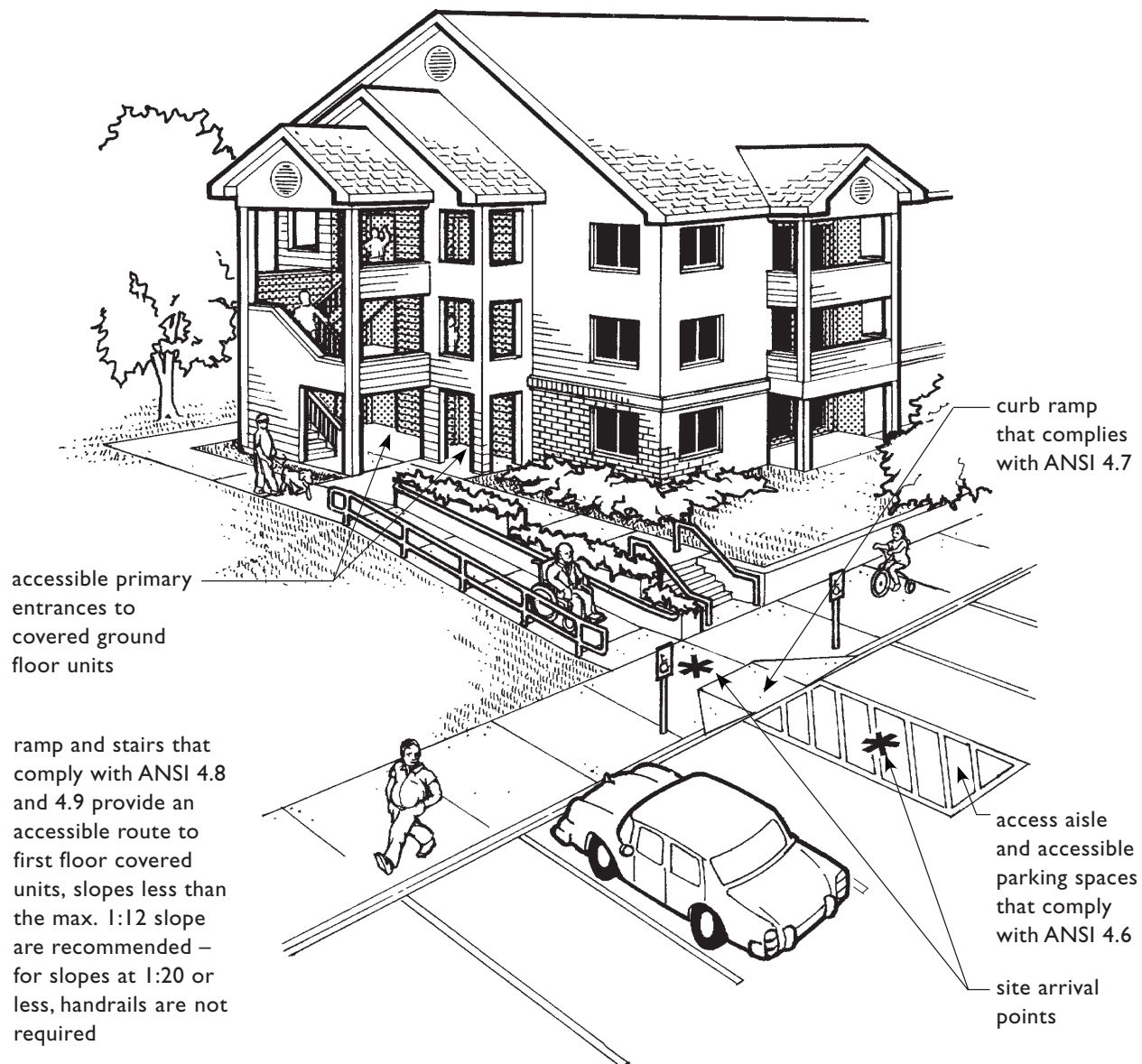
On flat or irregular sites an accessible route to an above grade entrance might be created by providing a low retaining wall, an earth berm, and a bridge. There are several advantages to this method. The retaining wall is held several feet away from the foundation forming a moat that allows drainage and ventilation to occur at the foundation and eliminates the need for additional waterproofing. The bridge from the retaining wall to the floor of the building can be level. The sloping walk on the berm, if kept flush with the earth and less than 1:20 slope, will not require handrails, thus eliminating the awkward sloping appearance of access ramps and their handrails. Plants on and around the berm and in the moat create an attractive landscaped garden entrance rather than an “access ramp.”



Earth Berm and Bridge

In this site configuration a ramp provides the accessible route from several possible site arrival points to the building entrance. Often a ramp can be combined with stairs and a planter to create attractive entrances that serve the needs of a wide range of people.

ground floor units are covered in this building without elevator(s)

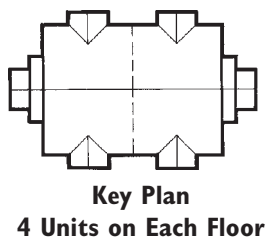
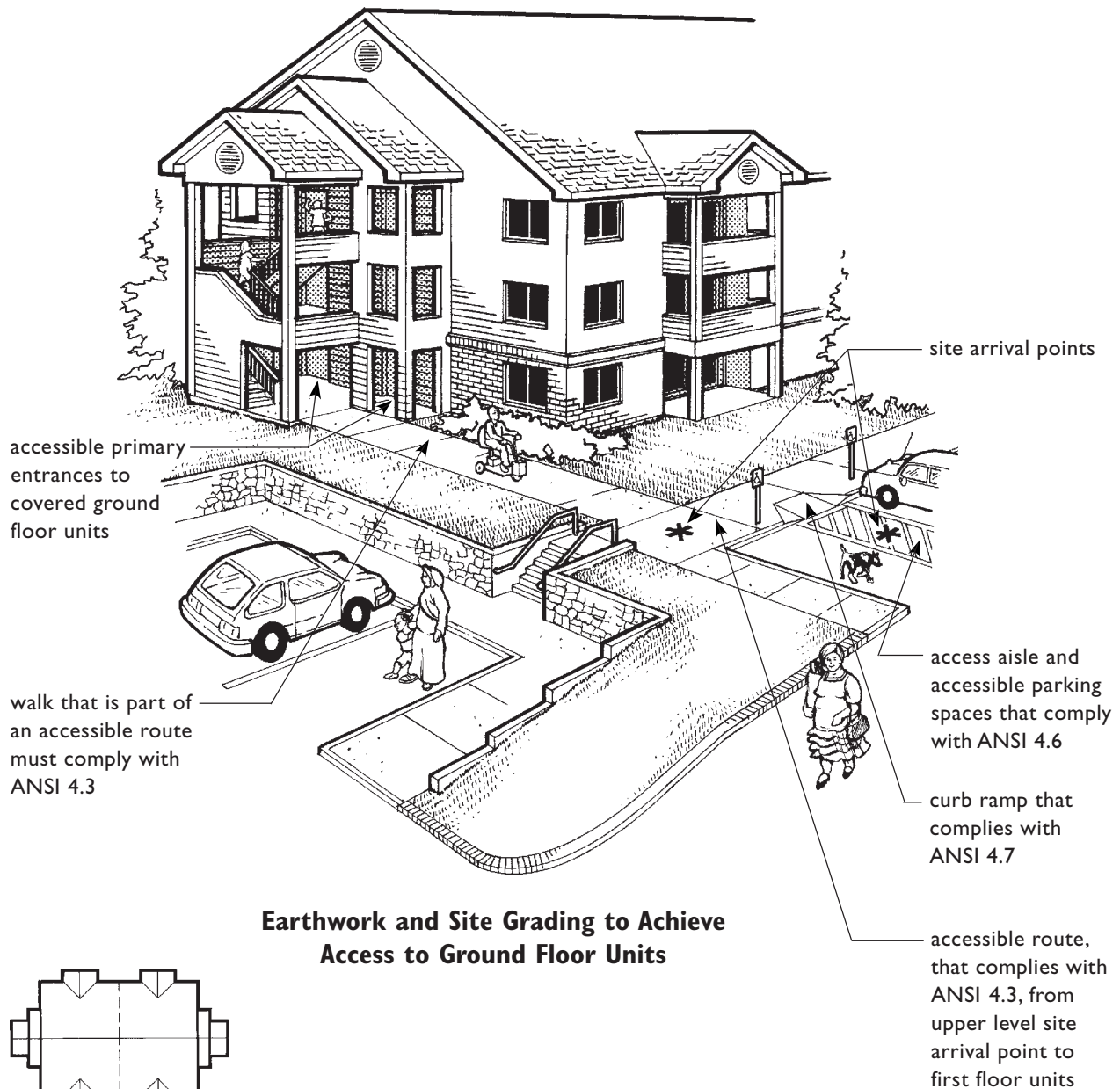


Key Plan
4 Units on Each Floor

**Site Grading
with Combined Ramp and Stairs
to Create Access to First Floor Units**

In this site configuration the parking for the building is divided between two levels, with the accessible parking provided on the upper level. This solution creates the possibility of an accessible route, with little or no slope, to the building entrance and may reduce the required amount of earthwork necessary for a larger parking lot on the upper level that would serve the entire building.

buildings without one or more elevators, only ground floor units are covered



In this site configuration a combination of level walkway and bridge is used to create an accessible route to the units on the second floor. On such sloping sites, bridges can provide convenient, safer, and direct access to the upper level.

Access by level bridge and walk provides an accessible route from site arrival points to entrance of two covered units on the second floor level on this side of the building.

stairs down to two lower level units and up to two top floor units

Accessible route from lower level site arrival point to the accessible ground floor entrances to two covered units on the lower level ground floor at the far end of the building.

this walk is part of an accessible route and must comply with ANSI 4.3

If the resulting design plan was such that the two units on the lower ground floor at the near end of the building were on an accessible route, those units would also be covered.

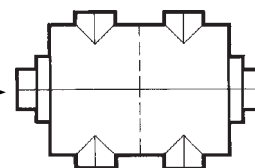
curb ramp that complies with ANSI 4.7

upper level site arrival point

access aisle and accessible parking that comply with ANSI 4.6

Bridge to Achieve Access to Second Floor Units

this building has four dwelling units on each floor with separate unit entrances and stairs at each end

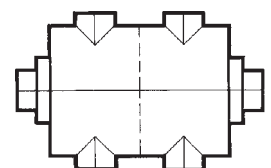
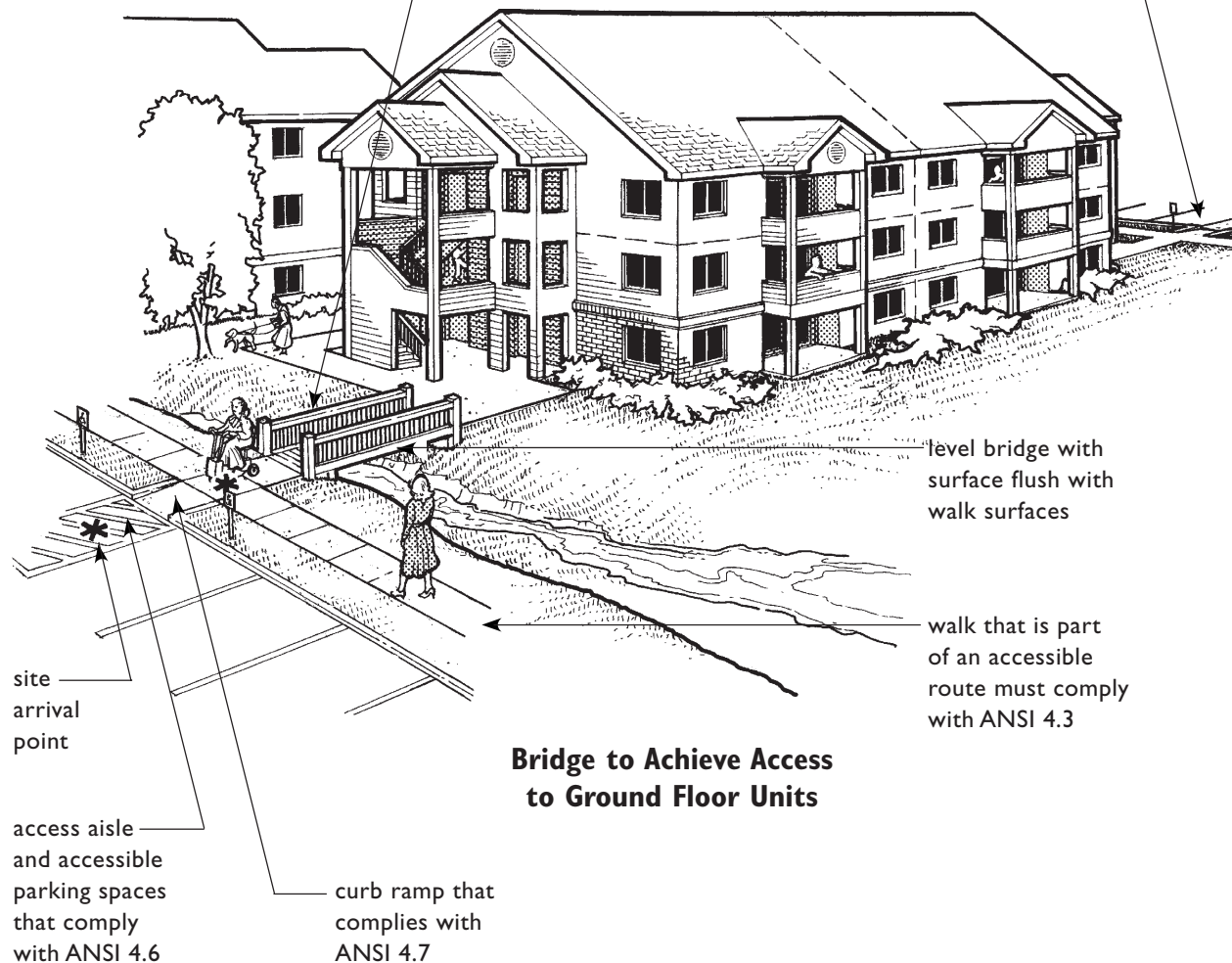


Key Plan
4 Units on Each Floor

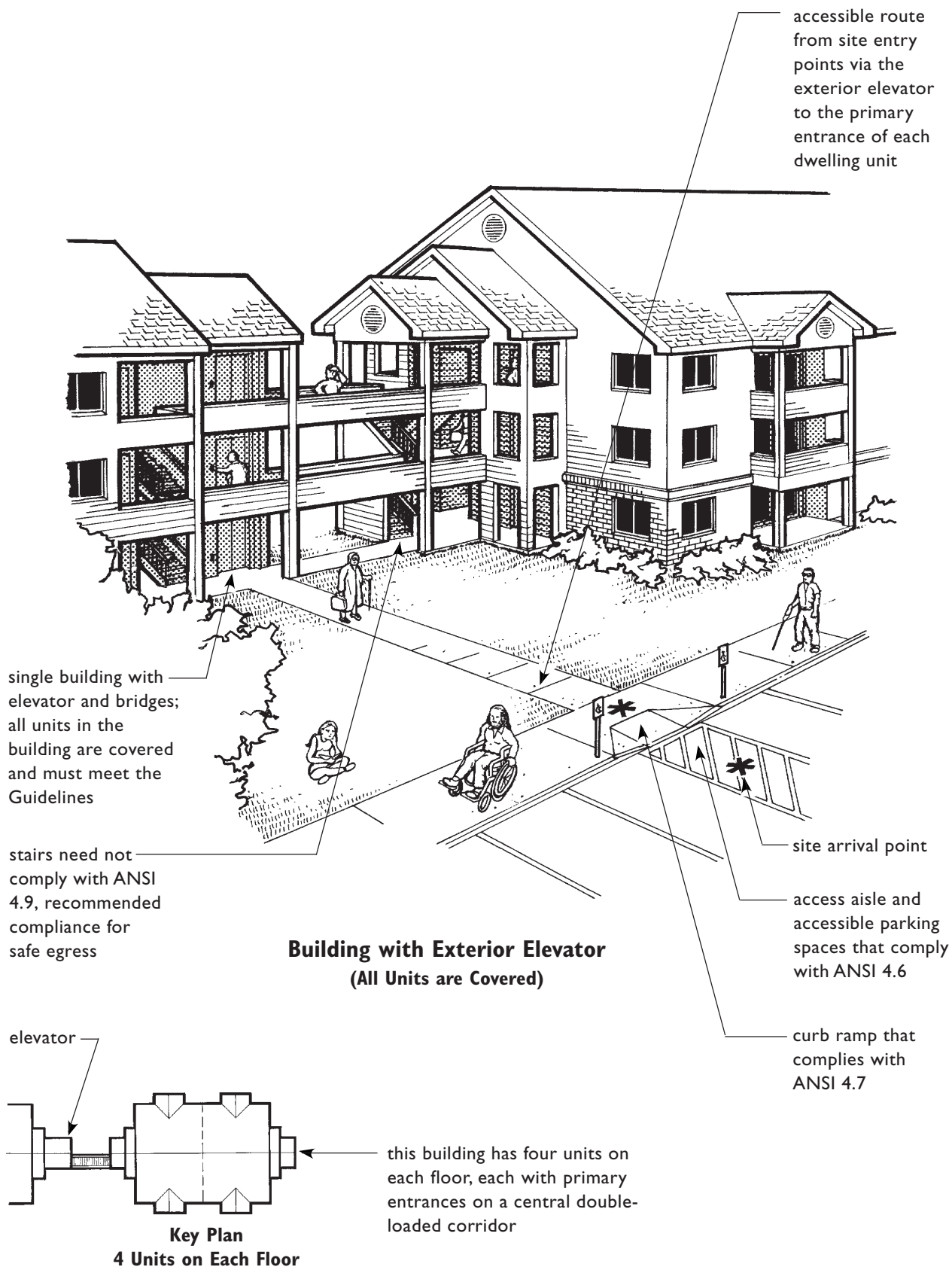
In this site configuration an ordinary site feature, a bridge over a stream, has been integrated with a level walkway to create an accessible route to the ground floor units of the building.

access by level bridge and walk provide an accessible route from site arrival points to primary entrances to two ground floor covered units at the near end of the building

accessible route from site arrival point to accessible primary entrances to two ground floor units at the far end of the building



Key Plan
4 Units on Each Floor



COVERED DWELLING UNITS AND THEIR ACCESSIBLE ENTRANCES

In buildings containing multiple dwelling units, common use exterior entrances and individual exterior entrances to ground floor units are required by the Guidelines to be accessible, unless it is impractical to do so as determined by one of the site impracticality tests discussed in the next section on pages 1.38 through 1.58.

It is expected that all multifamily buildings will have covered dwelling units. However, the configuration of the building; the location of the entrances; the determination of which is the ground floor(s) (there can be more than one); the placement, origin, and destination (range) of elevators; and site impracticality will affect which units in multifamily buildings are covered and where or how accessible entrances are provided. This section of the manual discusses coverage and accessible exterior entrances in

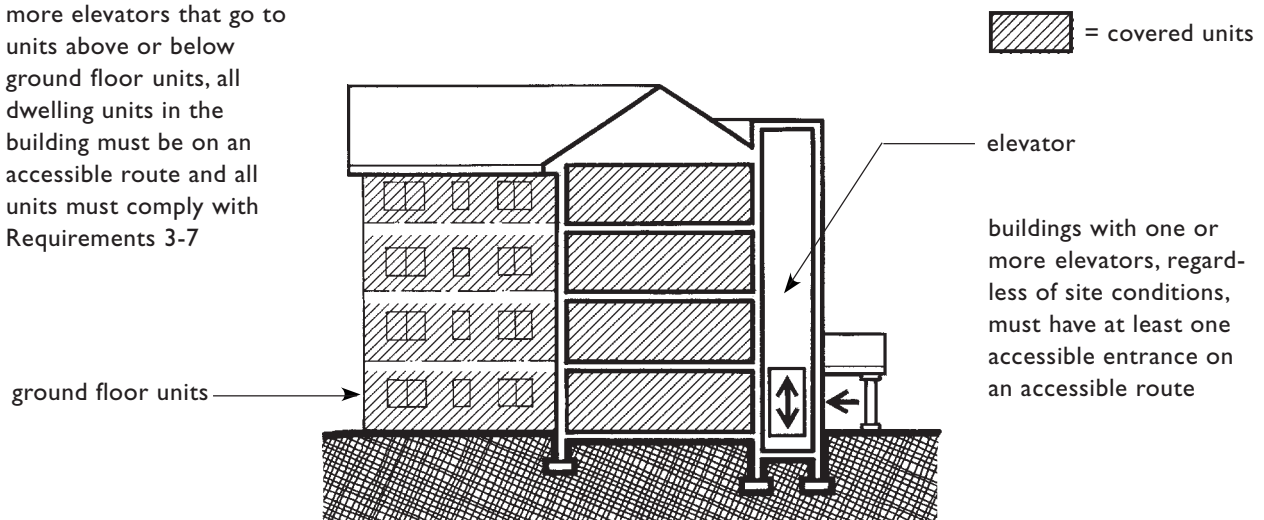
1. buildings having one or more elevators,

2. buildings with separate ground floor entrances to dwelling units, and
3. buildings with common entrances.

Entrances to covered dwelling units from interior halls, corridors, or accessible common use spaces are discussed in Chapter 3: “Usable Doors.”

Based on the legislative history of the Fair Housing Act, it is expected that **only** extreme conditions of a site may make it impractical to provide an accessible route to entrances of some covered dwelling units. The Guidelines allow, in some instances, the number of covered units to be reduced where such impracticality can be demonstrated. Requirement 1 of the Guidelines includes two site impracticality tests that can be used to determine if an accessible route at a required entrance is impractical due to extreme terrain or site conditions. The tests are referenced in this section and their applications are described in detail on pages 1.38 to 1.58 of this chapter.

in a building with one or more elevators that go to units above or below ground floor units, all dwelling units in the building must be on an accessible route and all units must comply with Requirements 3-7



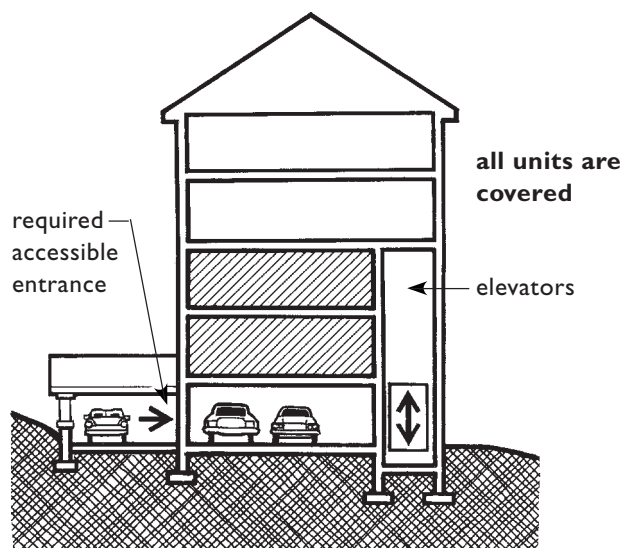
**In Buildings with One or More Elevators:
(Elevator Buildings) All Units are Covered**

BUILDINGS WITH ELEVATORS

All dwelling units are covered in buildings having one or more elevators and one or more common entrances. The Guidelines require that such buildings with elevators (elevator buildings) have at least one accessible entrance on an accessible route, regardless of the terrain or unusual characteristics of the site. In other words, site impracticality as defined in the tests discussed on pages 1.38 through 1.58 is not allowed for “buildings having one or more elevators.”

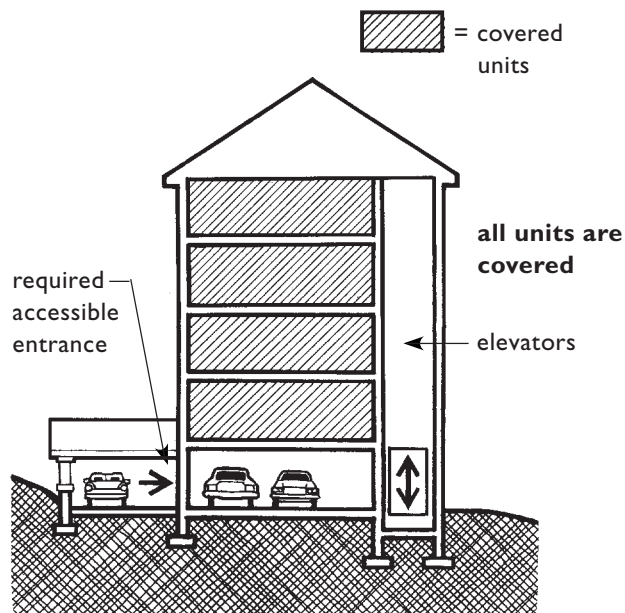
The rationale for disallowing site impracticality for such buildings includes the assumption that a building having elevators is a mid- to high-rise building and that all floors are accessible via the elevators. In addition, it is expected that the site work performed when building such elevator buildings generally results in a finished grade that would make an accessible route into and through the building practical. For a building to meet the Fair Housing Act definition of a “building having one or more elevators” (elevator building), it must have at least one elevator that travels from an entrance level to a floor containing dwelling units that is above or below a “ground floor.” If such an elevator is planned, it must go to all floors that contain dwelling units. Thus, it is not acceptable to provide elevator service to some floors or units and not others.

In the building shown in the upper right column on this page, the elevator only goes to the first and second floors containing dwelling units. This is unacceptable because the elevator is going to a floor other than a ground floor (floor two), therefore, floors three and four also must have access via the elevator.



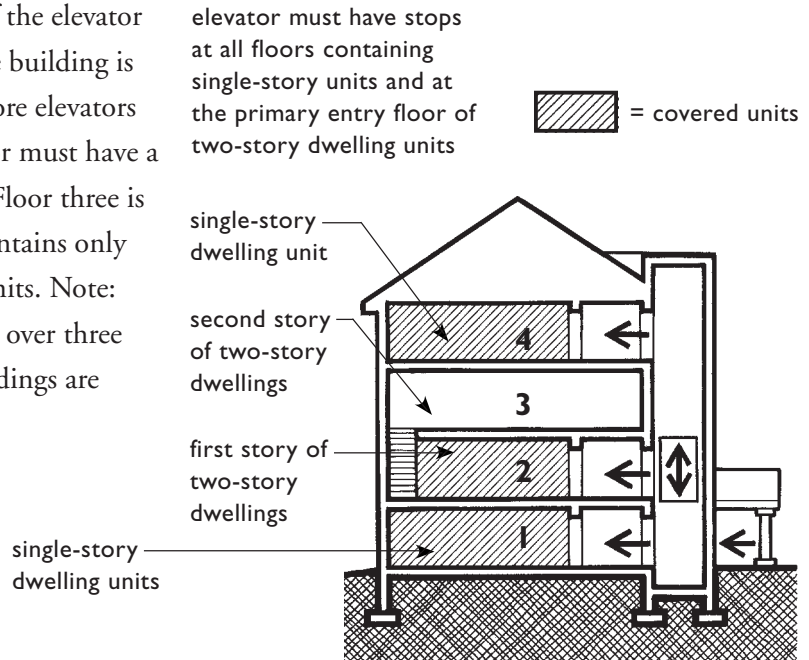
✗ Termination of Elevator as Shown in this Building is NOT Acceptable

when an elevator provides access to dwelling units other than dwelling units on a ground floor, it becomes a “building with one or more elevators” and the elevator must go to all floors and all dwelling units are covered



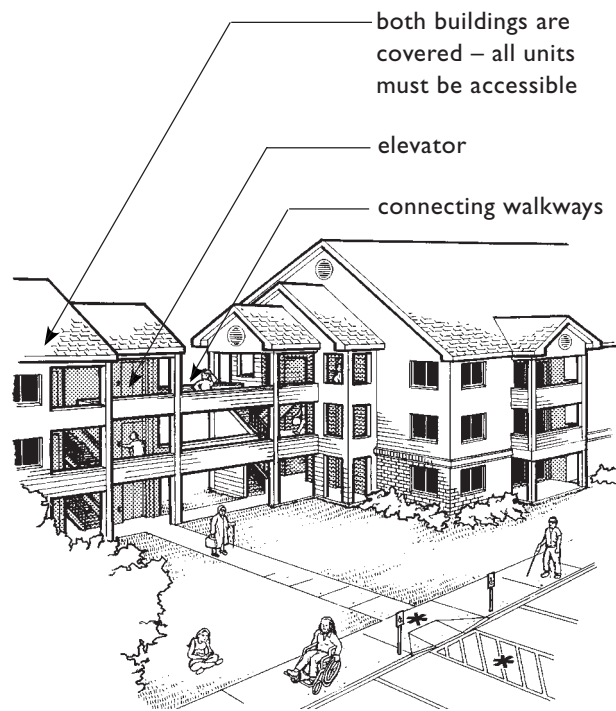
Elevators Must Provide Access to All Dwelling Units in Elevator Buildings

In the example to the right, if the elevator stops at floors other than just one, the building is classified as a building with one or more elevators (an elevator building), and the elevator must have a stop at the second and fourth floors. Floor three is not required to have a stop since it contains only second floors of two-story dwelling units. Note: most building codes require buildings over three stories to have elevators. All such buildings are covered by the Guidelines.



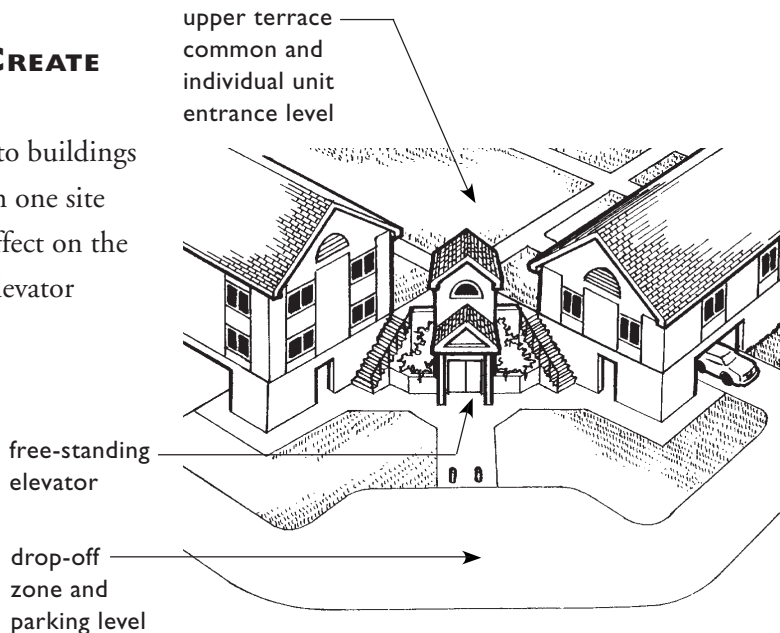
Elevators Must Provide Access to Primary Entry Floors of Two-Story Dwellings in Elevator Buildings

If an elevator in or at one building is connected to other buildings via overhead walks or bridges, the connectors must be accessible and all the connected buildings are covered.



FREE-STANDING ELEVATORS FOR SITE ACCESS DO NOT CREATE ELEVATOR BUILDINGS

Free-standing elevators not connected to buildings serve as part of an accessible route from one site level to another and do not have any effect on the building's status as an elevator or nonelevator building.



**Free-Standing Elevators for Site Access
Do Not Create Elevator Buildings**

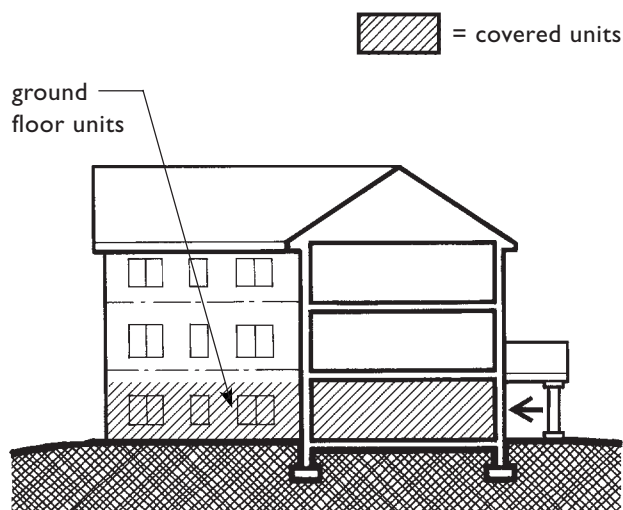
BUILDINGS NOT HAVING ELEVATORS

In buildings not having elevators, only ground floor dwelling units are covered and each dwelling unit must be on an accessible route and meet Requirements 3-7.

Buildings not having elevators must have at least one accessible entrance on an accessible route, unless prohibited by extreme terrain or unusual site characteristics. See site impracticality section, page 1.38. Note, in buildings either with or without elevators, more than one accessible entrance may be required when:

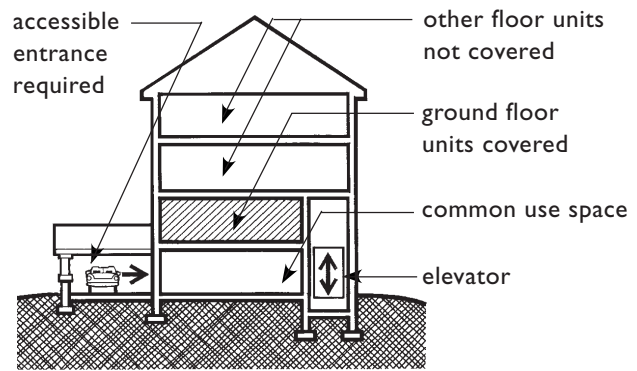
1. there is more than one ground floor,
2. there is a split-level ground floor, or
3. units are clustered on the ground floor and each cluster has a separate entrance.

These situations are covered on the next several pages.



**In Buildings Not Having Elevators
(Nonelevator Buildings)
Only Ground Floor Units Are Covered**

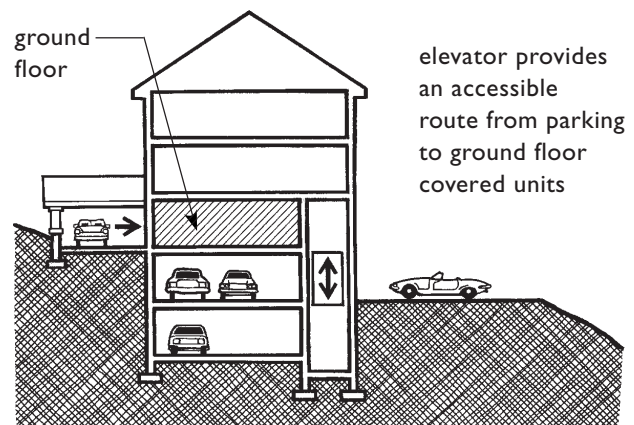
In some circumstances the “ground floor” units that are covered may not actually be at grade level. For example, when common use spaces such as parking, meeting rooms, shops, etc. occupy the floor at grade, the first floor containing dwelling units above or below that level will be the designated “ground floor” for purposes of the Guidelines. All dwelling units on such levels must meet Requirements 3-7 and be on an accessible route.



Elevator to First Floor of Dwelling Units Above Grade or Entrance Level Does Not Make a Building with One or More Elevators (a Covered Elevator Building)

It is important to note that some buildings may contain an elevator and not be considered a “building having one or more elevators” for purposes of the Guidelines. For example, when an elevator travels from a garage or other entry level not containing dwelling units only to a “ground floor” containing dwelling units, these “ground floor” units are covered; however, the building is not a “building having one or more elevators” (elevator building) and the elevator is not required to travel to all floors.

If a building elevator is provided only as a means of creating an accessible route from parking to dwelling units on a ground floor, the building is not considered an elevator building. In this case, the dwelling units on the “ground floor,” plus one of each type of public and common use area, must comply with the Guidelines.



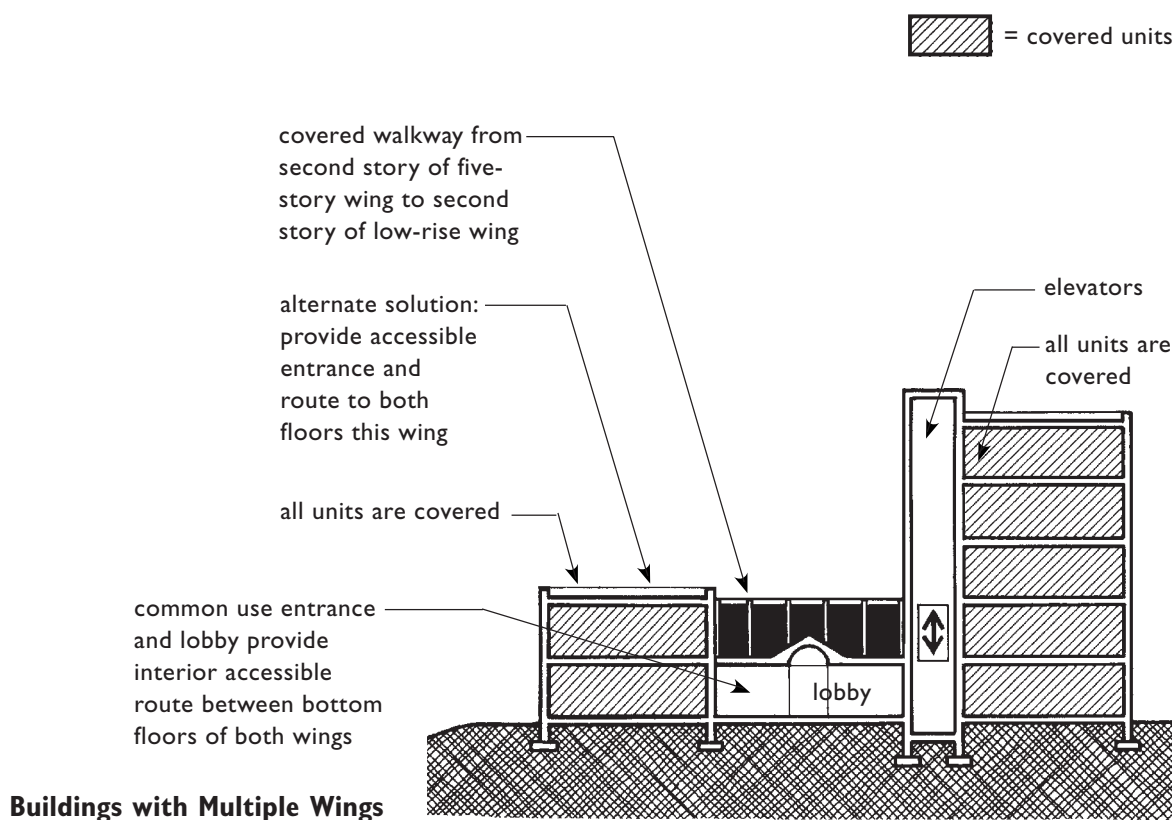
Elevators for Access to Ground Floor Units Do Not Make an Elevator Building

BUILDINGS HAVING CONNECTED ELEVATOR AND NON-ELEVATOR WINGS

Buildings having multiple wings of different configurations may have to provide more than one entrance and possibly more than one elevator. If any wing has an elevator, all of the units in the building are covered and must be on an accessible route.

In the example below, a single building has two wings, one of which has an elevator. A lobby or similar public and common use space connects the wings and serves both wings. All the units in the building are covered, therefore, the building either must have an additional elevator serving the two-story wing, or an alternative means of access to the

dwelling units on the second floor of the two-story wing. In addition, since the two wings share the common use entrance, lobby, and related amenities, such as mailboxes, reception desk, etc., there must be an interior accessible route between the lobby and the two-story wing. In this example, an accessible route has been created from the second floor of the five-story wing to the second floor of the two-story wing by means of a covered walkway, thereby providing the necessary access.



BUILDINGS WITH SEPARATE EXTERIOR UNIT ENTRANCES

BUILDINGS WITH SEPARATE EXTERIOR GROUND FLOOR UNIT ENTRANCES

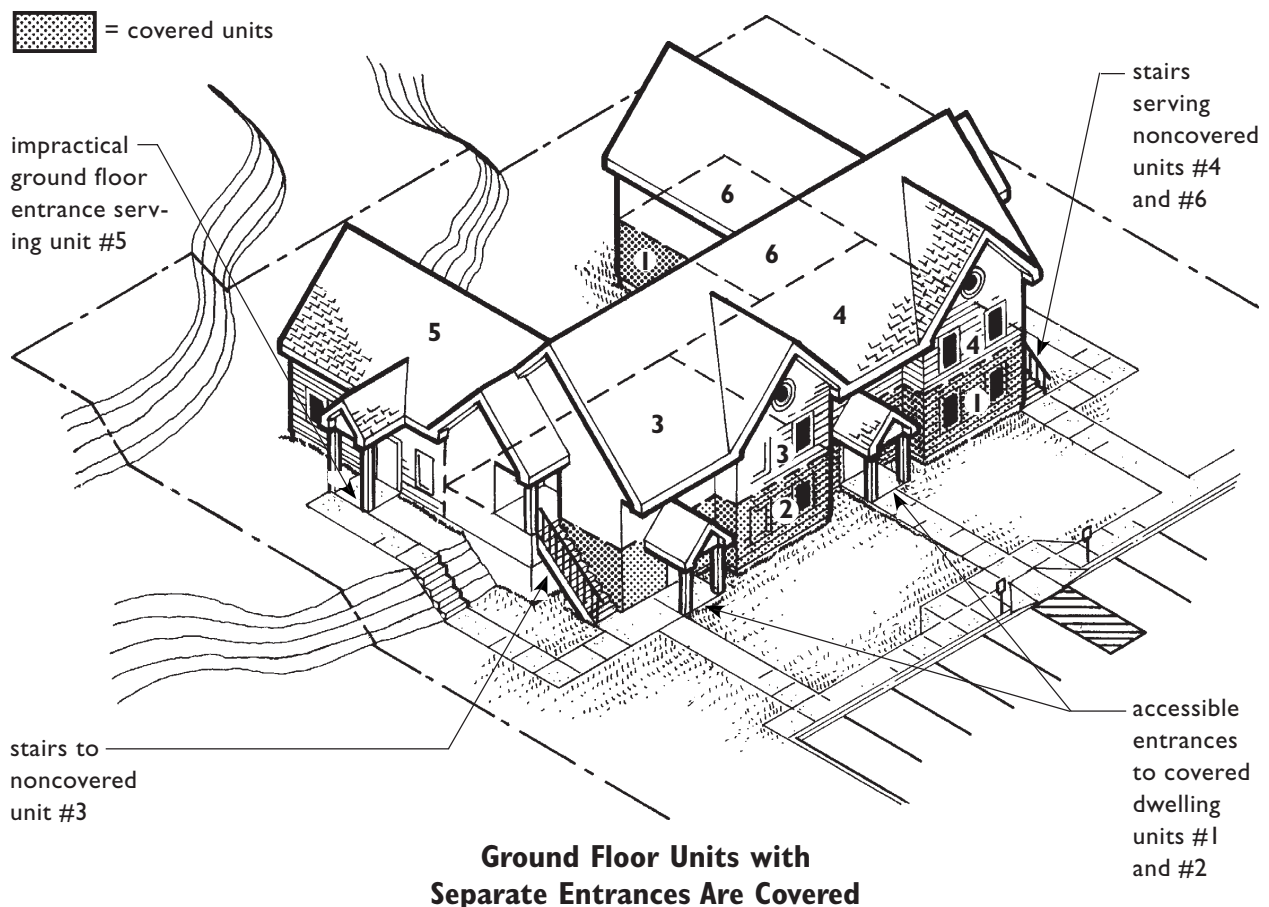
Where a building has ground floor units, each with its own exterior entrance, the Guidelines provide that each of these ground-floor units shall:

1. have an accessible entrance,
2. be on an accessible route, and
3. meet all other design requirements of the Guidelines.

The only exception applies to ground floor units where terrain or unusual characteristics of the site make an accessible entrance on an accessible route impractical.

The example below is a single non-elevator building on a site and has multiple entrances.

Regardless of which site impracticality test is used, a minimum of 20% of the ground floor units must be accessible, and possibly more, based on the results of the test. The individual building test was used, and resulted in site impracticality at Unit #5. The site was not impractical for Units #1 and #2, and therefore, those units must be made accessible. Two out of three units = 66%, so the minimum of 20% has been satisfied, and no additional ground floor units must be made accessible. See site impracticality on page 1.38.

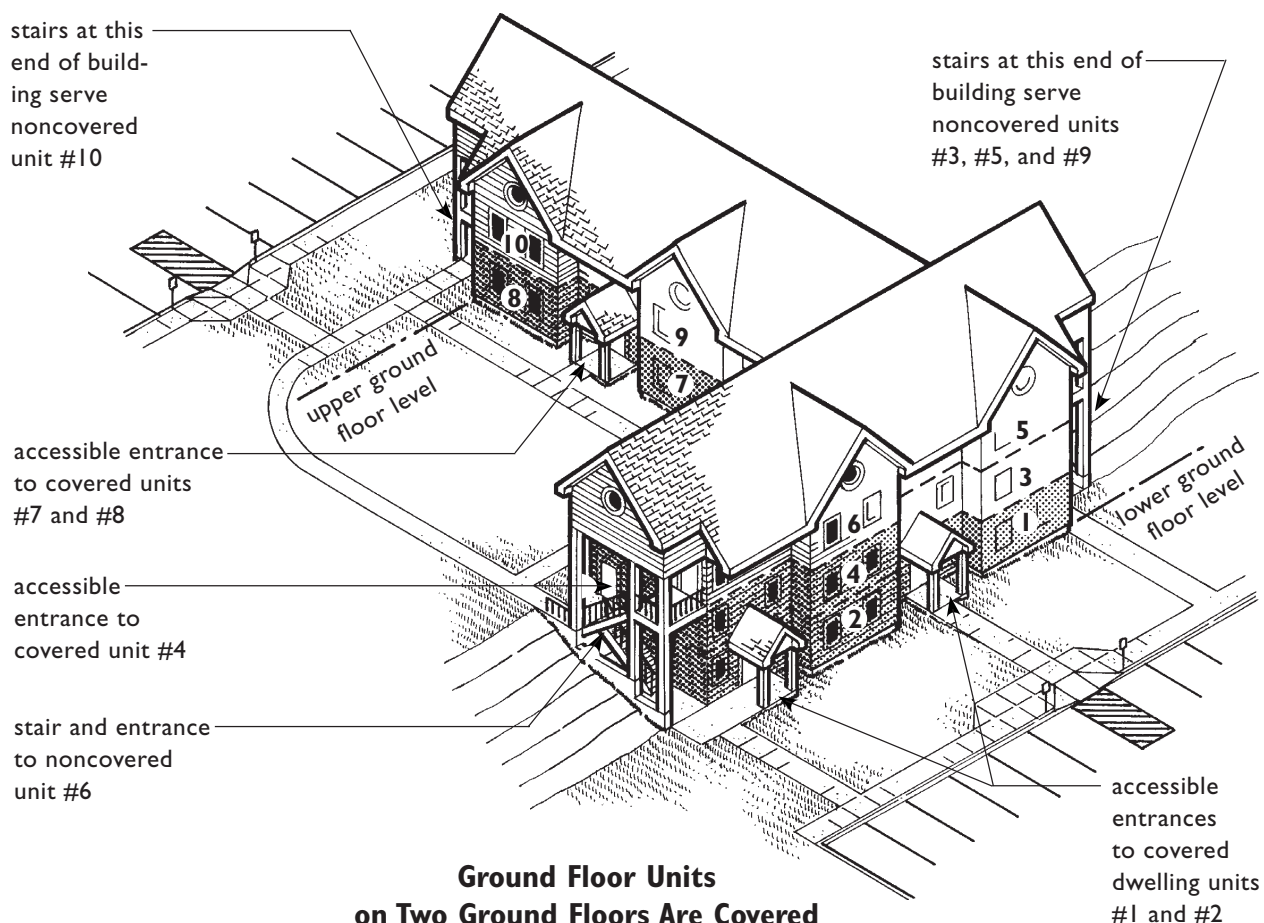


BUILDINGS WITH SEPARATE GROUND FLOOR UNIT ENTRANCES ON TWO OR MORE GROUND FLOORS

Where a building has ground floor units with their own individual entrances on two or more ground floors, the Guidelines provide that each of these entrances shall be an accessible entrance on an accessible route. The only exception to this applies to ground floor units where terrain or unusual characteristics of the site make an accessible entrance impractical, see site impracticality tests, page 1.38.

 = covered units

Since entrances were planned on both ground floors and all ground floor units are covered, each must have an accessible entrance on an accessible route and meet the other design requirements of the Guidelines.

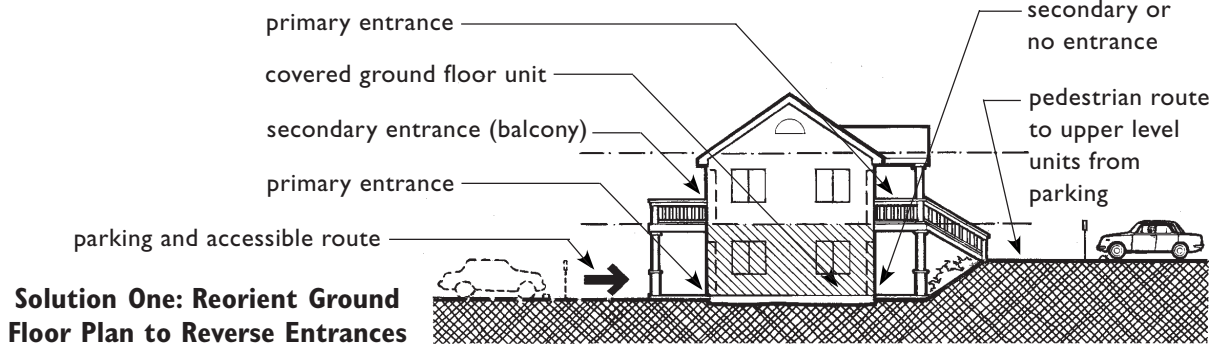
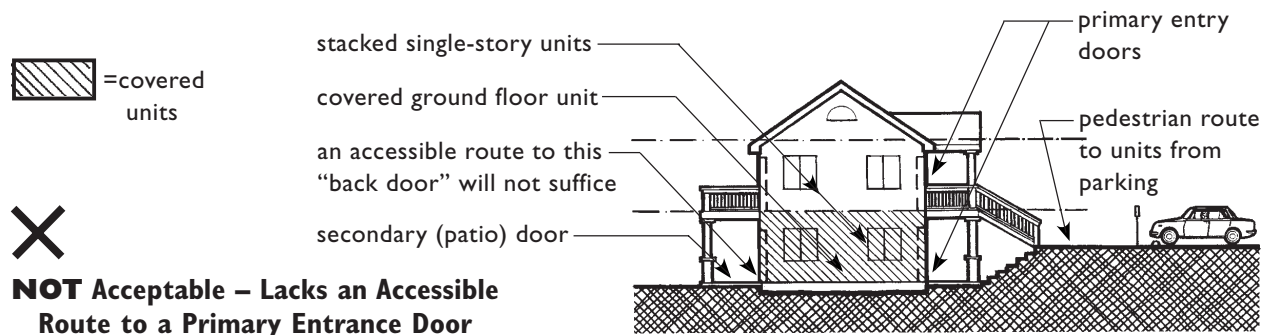


BUILDINGS WITH SEPARATE UNIT ENTRANCES HAVING SPLIT-LEVEL APPROACHES

Apartments with split-level approaches to their entrances typically cannot provide an accessible route from parking or other pedestrian arrival points to either lower or upper level primary entrances. Redesign is necessary to ensure an accessible building entrance on an accessible route to ground floor units. Note, however, that simply

adding an accessible route to the secondary, rear entry is not acceptable as that results in “back door” access. See the first illustration and Solution One.

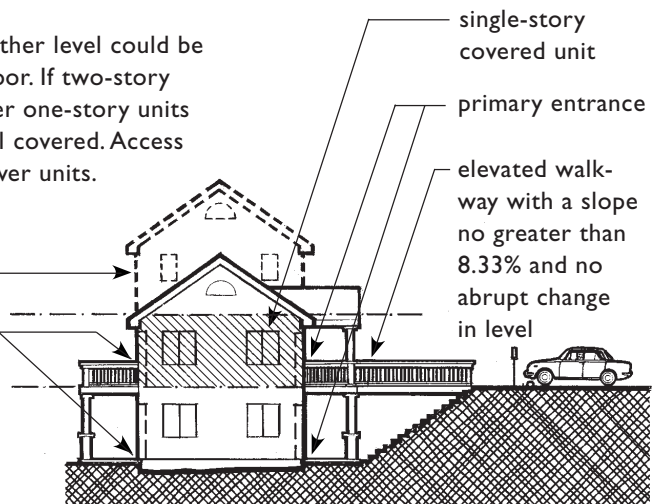
In Solution Two, regrading and the addition of a bridge provides access to the upper level, making that level the ground floor. Because no primary entrance was planned at the rear of the lower level units, and since there is no requirement to have more than one ground floor, an accessible route is not required to those units.



Solution Two is for a building having single-story units on each floor. Note, however, that if multistory units are stacked over the single-story units, then the building is still covered, and access to the single-story units would be required, as shown in Solution One.

If the units are one story, either level could be designated as the ground floor. If two-story townhouses are stacked over one-story units on grade, the building is still covered. Access must be provided to the lower units.

two-story townhouse
secondary entrances

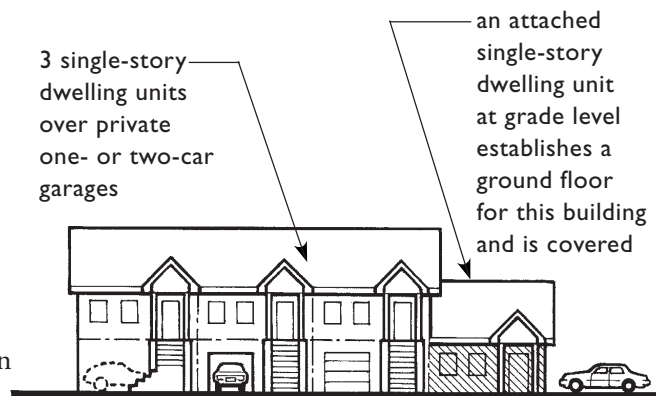


BUILDINGS WITH SEPARATE GROUND FLOOR UNIT ENTRANCES OVER PRIVATE GARAGES (CARRIAGE UNITS)


Carriage House Units

Carriage houses in which the garage footprint is used as the footprint for the remaining floor or floors of the units are not required to meet the design and construction requirements. (See December 16, 1991 memorandum from Frank Keating at back of Appendix C.)

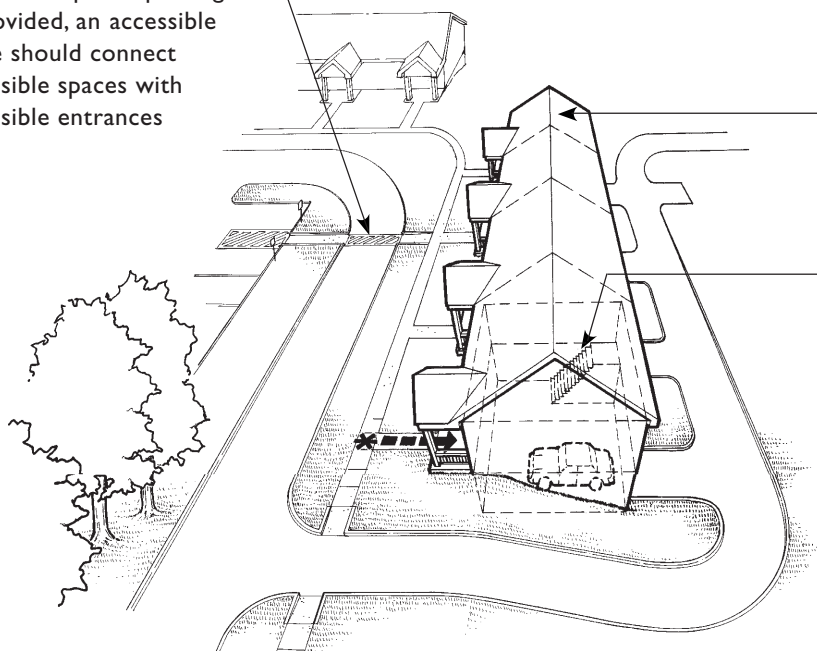
If buildings containing carriage units have one or more units at grade level with an entrance on an accessible route, the grade level unit establishes a ground floor for the building and is covered. There is no requirement for there to be more than one ground floor nor for other units in the building on the second or elevated floor to be accessible.



Carriage Units in Buildings Having One or More Grade Level Units Are Not Covered

covered units = 

if visitor or public parking is provided, an accessible route should connect accessible spaces with accessible entrances



Carriage Units Having an Accessible Route to an Entry Are Covered

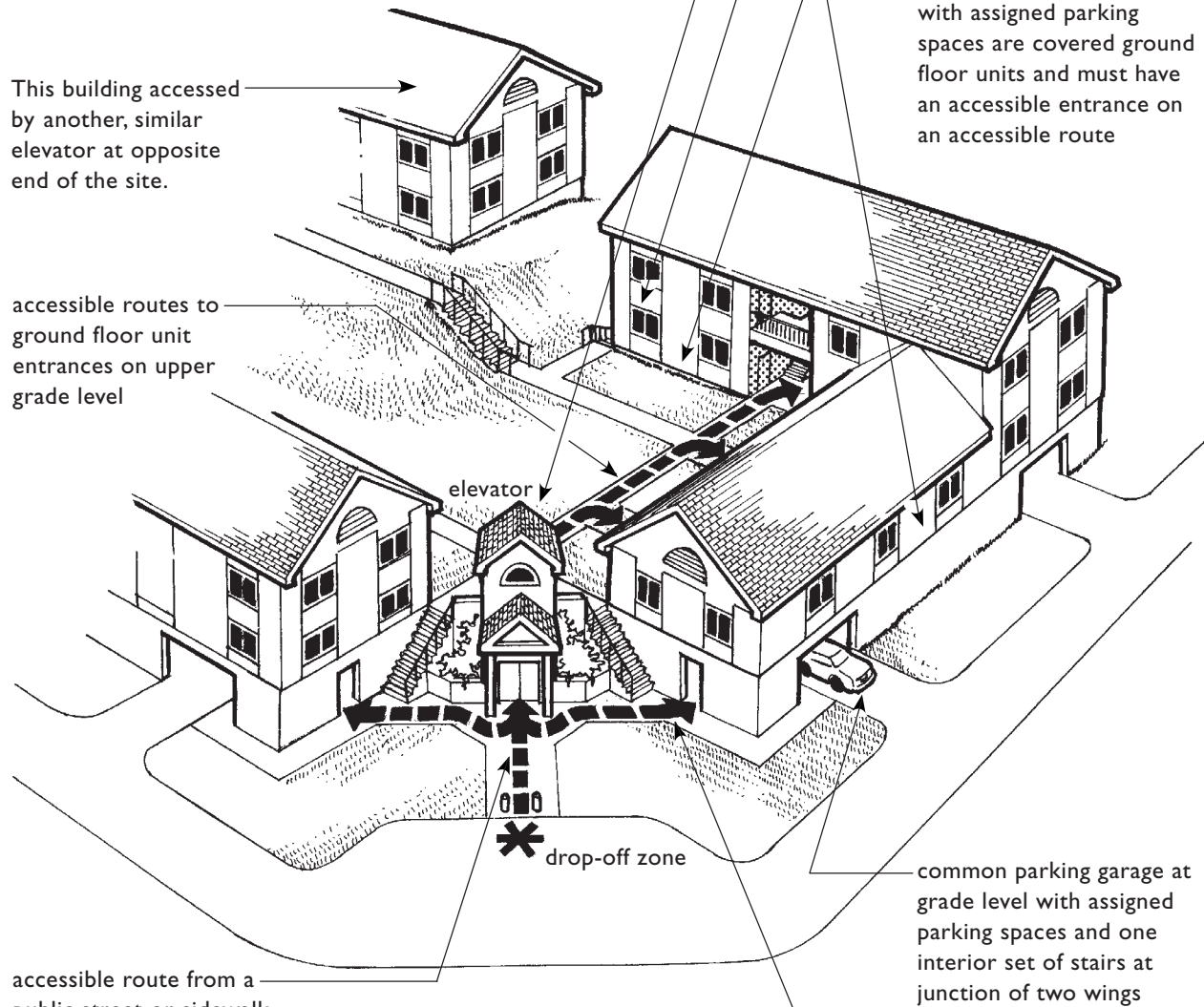
This elevator serves several buildings on the site. Although this configuration meets the requirements of the Guidelines, it subjects people with disabilities to using a more circuitous route from the dwelling unit entrances to parking and exposes them in an unequal way to inclement weather conditions.

This building accessed by another, similar elevator at opposite end of the site.

accessible routes to ground floor unit entrances on upper grade level

single-story walk-up units on second floor above common garage space are not covered

single-story dwelling units over a common garage with assigned parking spaces are covered ground floor units and must have an accessible entrance on an accessible route



**Single-Story Ground Floor Dwelling
Units with Separate Entrances
Over Common Use Parking Garages**

accessible route from a public street or sidewalk or other pedestrian arrival point to accessible entrances to covered units

elevator to create an accessible route from parking to ground floor does not make these elevator buildings

common parking garage at grade level with assigned parking spaces and one interior set of stairs at junction of two wings

accessible route from parking to accessible common or individual ground level entrances to covered units

BUILDINGS WITH COMMON ENTRANCES

Buildings with Ground Floors

Over Shops or Garages

Where the first floor containing dwelling units in a building is above grade, all units on that floor are covered and must be served by a building entrance on an accessible route. This floor will be considered a ground floor, thus making dwelling units over retail stores, garages, or other common use spaces covered units.

an accessible route to dwelling unit entrances must be provided

grade level is used entirely for parking, shops, or other common use spaces

third floor single-story units are not covered

covered single-story units

ground floor for purposes of the Guidelines

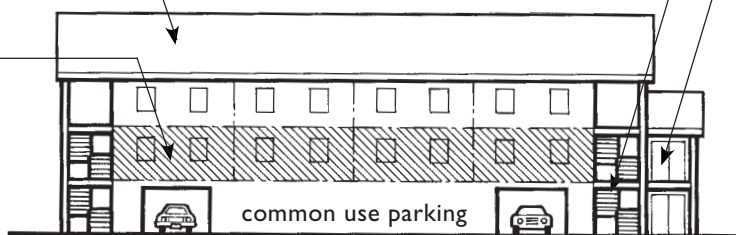


three-story building of single-story dwelling units on a double-loaded open-air corridor

single-story units above common use parking at grade level are covered

elevator, ramp, lift, elevated walkway, or bridge is required to provide accessible route to covered units

elevator stairs



Note: if the elevator is also taken to the next level, the building becomes a building with one or more elevators and all floors and units must comply.

Walk-Up Dwelling Units Over Garages, Shops, and Other Public or Common Use Spaces Are Covered

If one or more single-story dwelling units with an accessible entrance on an accessible route are located at grade level in buildings otherwise having public or common use parking or shops at grade level, a new grade level ground floor is established and only the grade level units are covered.

shops or common use parking

covered single-story unit



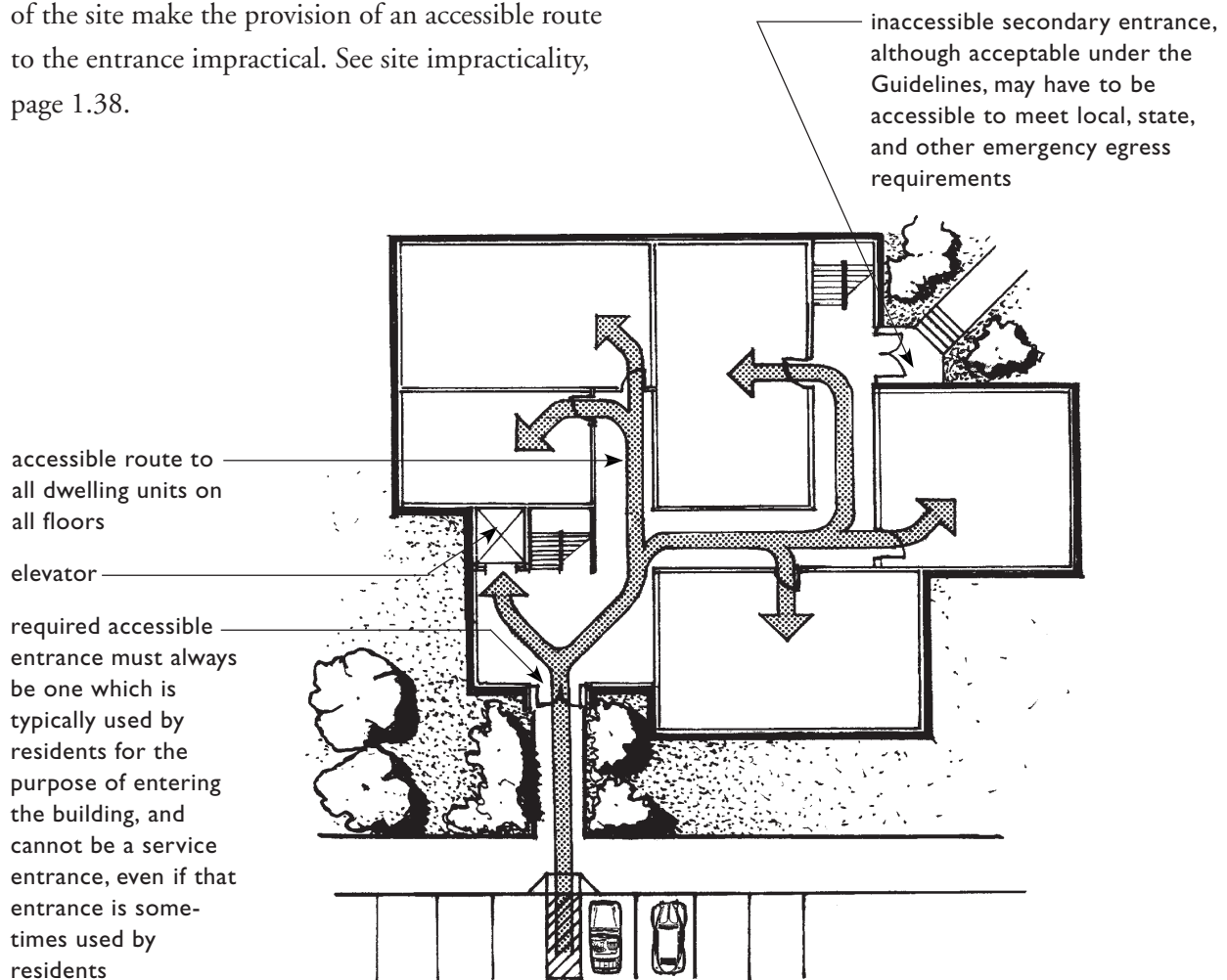
One or More Grade Level Accessible Units Establishes a Ground Floor and Eliminates Need for Accessible Routes to Units Over Garages or Shops

 = covered units

BUILDINGS WITH ONE OR MORE COMMON ENTRANCES

When a building has one or more common entrances, the Guidelines provide that at least one of these entrances shall be accessible and shall be on an accessible route to **all** dwelling units in buildings with one or more elevators, and to all ground floor units in nonelevator buildings. Examples of how this applies to specific buildings and sites follow. The only situation where an accessible entrance is not required is when there is a single building with a single entrance on a site with no elevator, and the terrain or unusual characteristics of the site make the provision of an accessible route to the entrance impractical. See site impracticality, page 1.38.

This is a single building on a site. It has two common entrances and an elevator serving multiple floors. Because it is a building with one or more elevators (an elevator building), all units in the building are covered, and at least one common entrance must be accessible and on an accessible route from a public street or sidewalk or other pedestrian arrival point, regardless of the terrain or unusual characteristics of the site; site impracticality tests do not apply for elevator buildings.



Buildings with Common Entrances

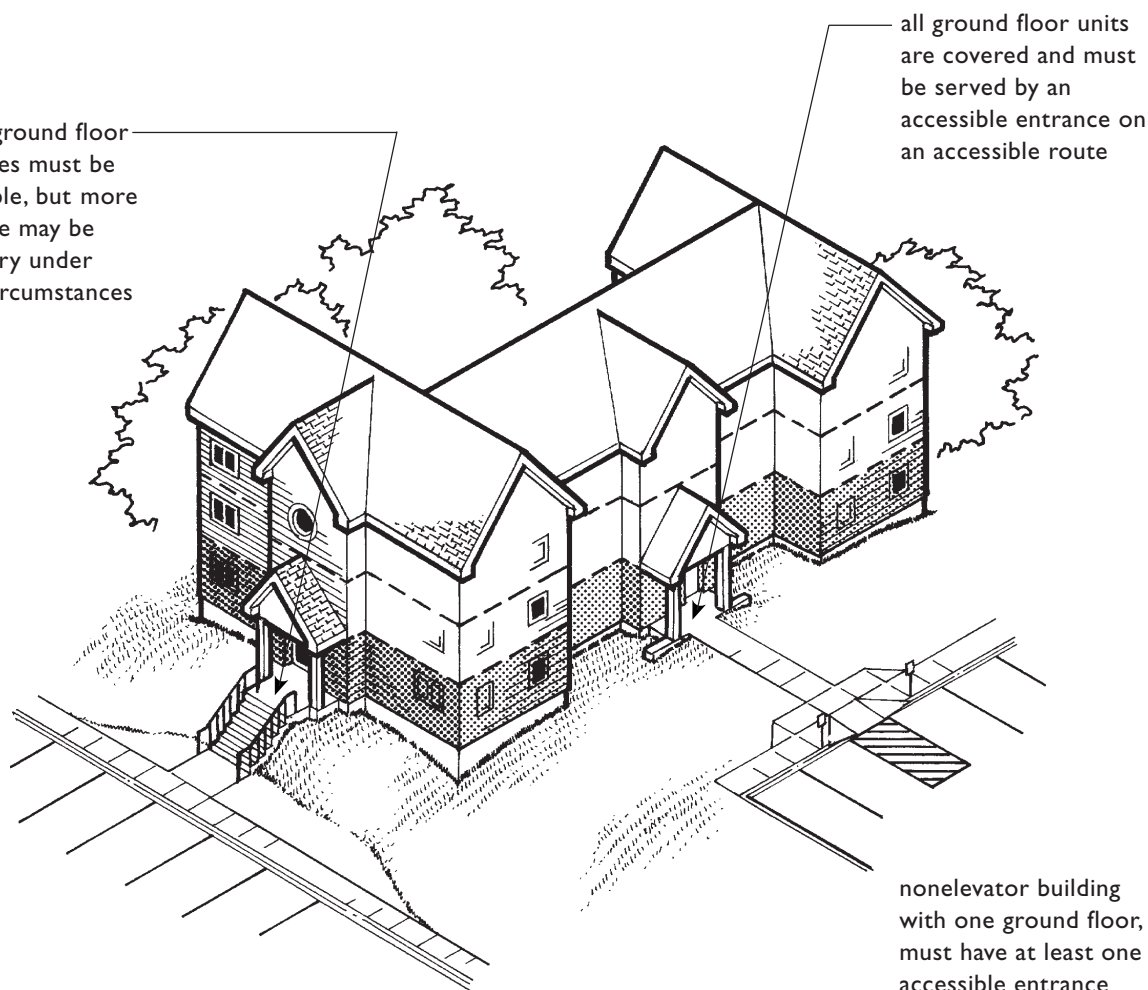
BUILDINGS WITH COMMON ENTRANCES AND A SINGLE GROUND FLOOR

When a building has a single ground floor and more than one common entrance, at least one entrance must be accessible. This accessible entrance should be the primary entrance and must provide an interior accessible route to all ground floor units in the building. If an interior accessible route does not connect the primary entrance to all ground floor units, additional entrances on accessible routes are necessary to reach the additional ground floor units.

 = covered units

not all ground floor entrances must be accessible, but more than one may be necessary under some circumstances

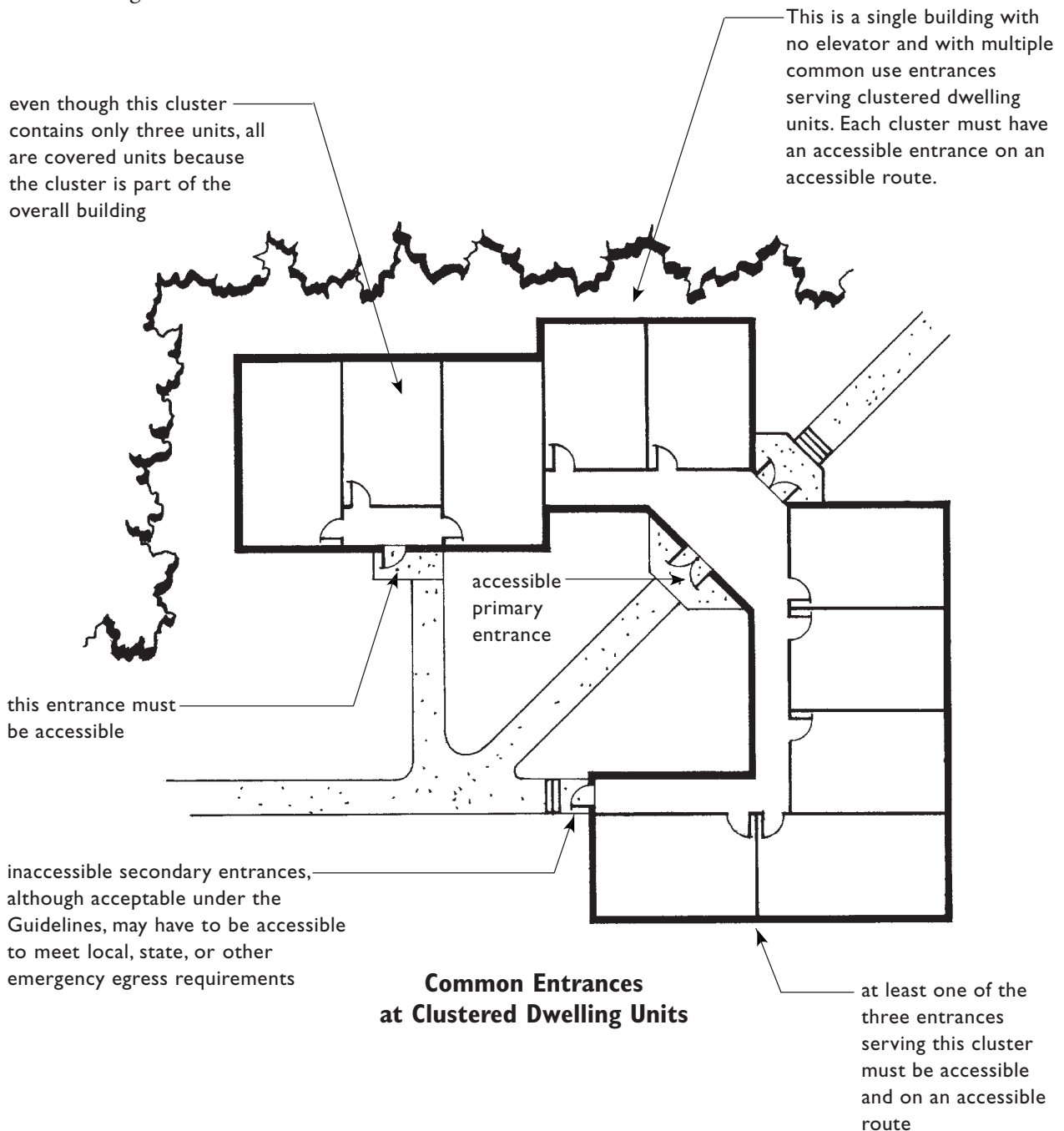
all ground floor units are covered and must be served by an accessible entrance on an accessible route



Common Entrances in Buildings with a Single Ground Floor

BUILDINGS WITH COMMON ENTRANCES AND CLUSTERED DWELLING UNITS

Where dwelling units are clustered in a building, each cluster which has its own entrance or entrances shall have at least one accessible entrance providing access to all ground floor units in the cluster.



BUILDINGS WITH SPLIT-LEVEL GROUND FLOORS

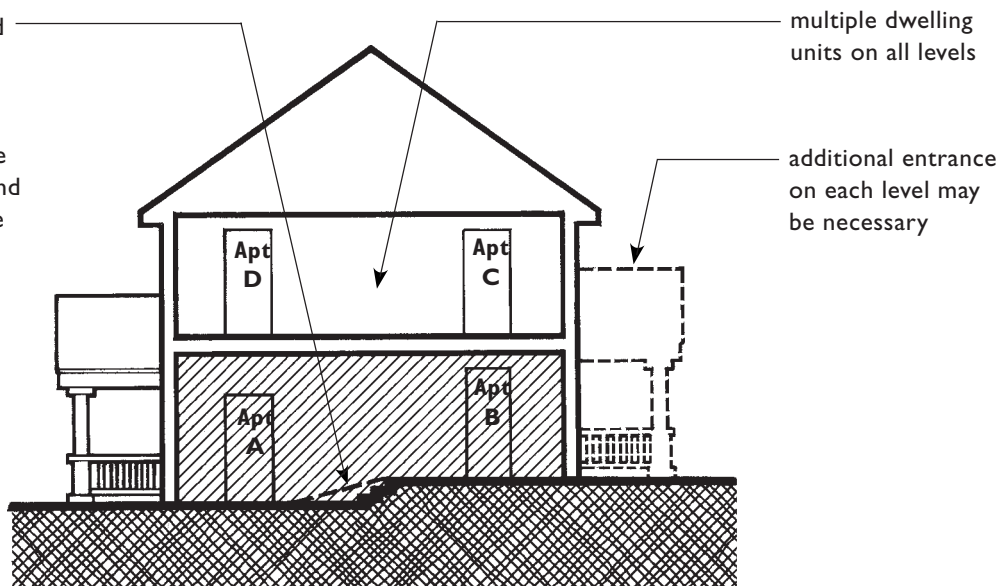
Split-level floors of less than a full story in height are not separate floor levels and are considered to be one ground floor. Covered ground floor units on each level must have entry doors on an accessible route connecting to at least one accessible common use building entrance and at least one of each type of common use facility or feature, such as mail rooms, laundries, vending areas, etc. Since steps and stairs cannot be part of an accessible route, changes in level on covered floors must be accomplished by means of ramps, lifts, or elevators.

If an accessible route, in lieu of or in addition to steps or stairs, is provided between levels, the route must not be remote, hidden,

circuitous, or require people with disabilities to travel excessively long distances to arrive at the same point as others. Finally, the accessible route between levels must be readily available to all residents and visitors and not be locked or require keys, attendants, or special services or permits for use.

If an accessible route is not provided between covered floor levels, each level must have its own accessible common use entrance on an accessible route; any common use facilities or features provided on one level must also be available on an accessible route on each other level.

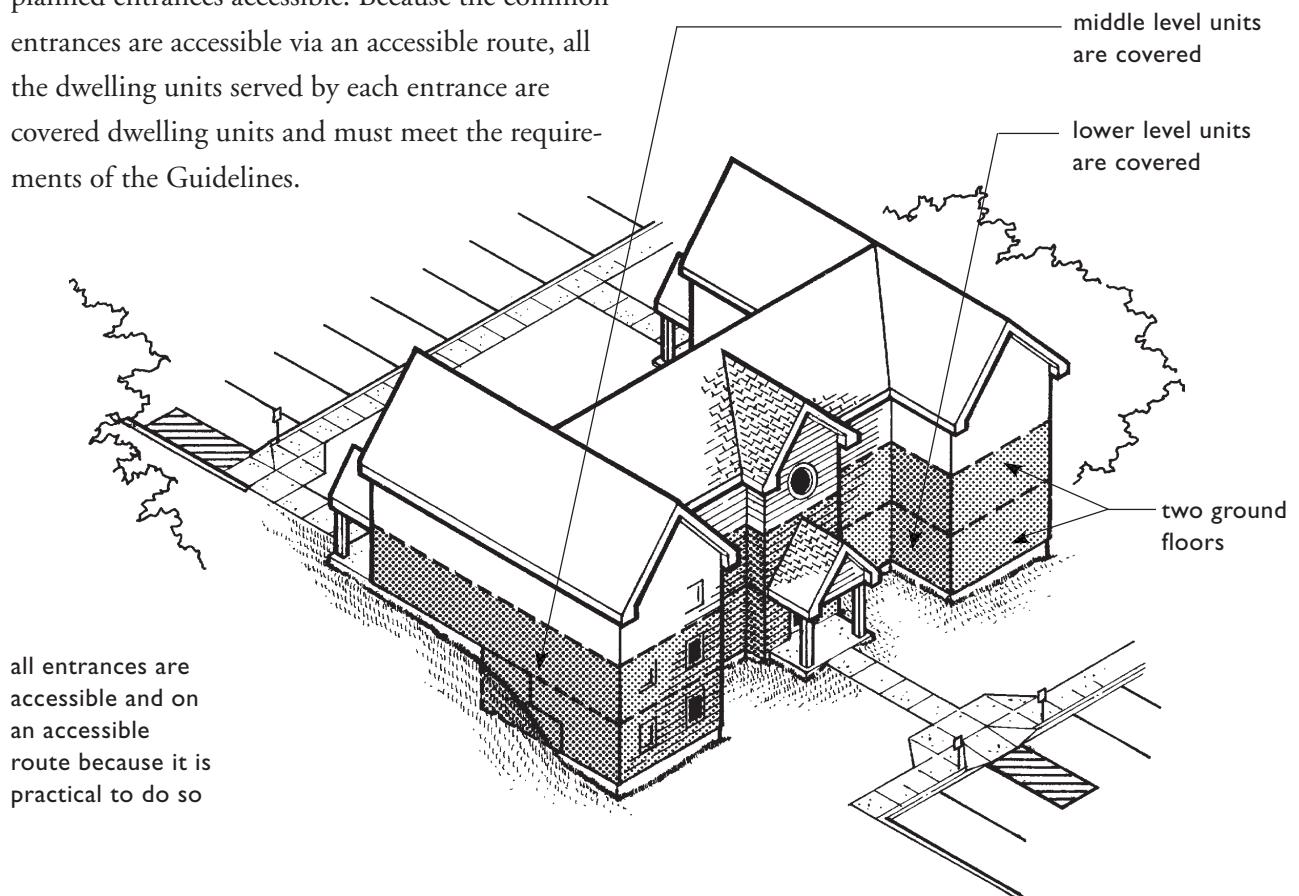
steps must be replaced
or accompanied by an
accessible route
– OR –
additional common use
accessible entrances and
other facilities must be
provided on each level



**Split-Level Ground Floor Regarded
as Single Ground Floor**

BUILDINGS WITH COMMON ENTRANCES AND MORE THAN ONE GROUND FLOOR

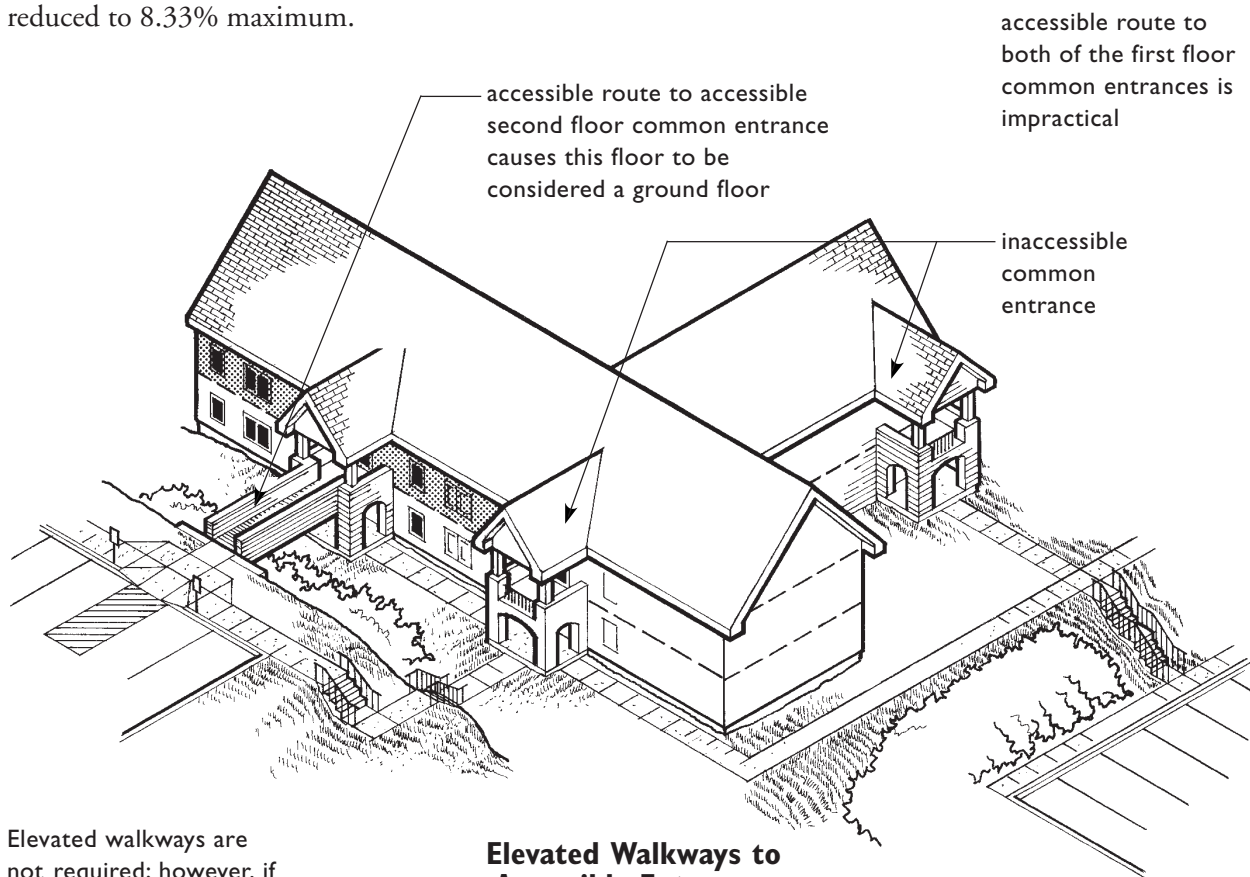
In building designs that are planned to have more than one ground floor, an entrance on each ground floor is required to be accessible unless site conditions make it impractical to provide an accessible route to each entrance. See page 1.38 for site impracticality. In this illustrated example, the planned location of parking and sidewalks (that would serve as the pedestrian and vehicular arrival points) is close to the planned entrances, with only minor changes in level between the arrival points and the floor level of the building at the planned entrances, therefore, it is practical to make the planned entrances accessible. Because the common entrances are accessible via an accessible route, all the dwelling units served by each entrance are covered dwelling units and must meet the requirements of the Guidelines.



**Common Entrances at Buildings
with More Than One Ground Floor**

BUILDING FLOORS HAVING COMMON ENTRANCES SERVED BY ELEVATED WALKWAYS

When a developer plans an elevated walkway from a pedestrian or vehicular arrival point to the building entrance and the walkway has a slope of 10% or less, that floor shall be considered a ground floor. The dwelling units on that floor are covered and the site is not considered impractical. Since the walkway meets the 10% slope criterion, it is practical to provide an accessible route to the entrance, and the slope of the walkway must be reduced to 8.33% maximum.



Elevated walkways are not required; however, if one is planned and its slope is no greater than 10%, then the slope must be reduced to 8.33% maximum and the dwelling units on that floor shall be accessible.

Elevated Walkways to Accessible Entrances

SITE IMPRACTICALITY

INTRODUCTION

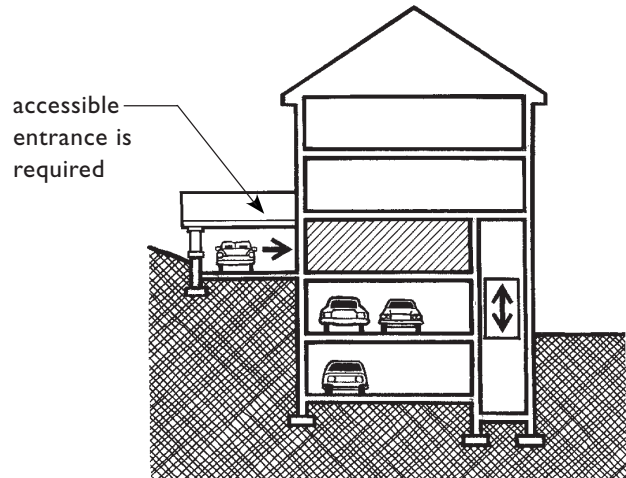
HUD's regulations implementing the Fair Housing Act state:

Covered multifamily dwellings for first occupancy after March 13, 1991 shall be designed and constructed to have at least one building entrance on an accessible route unless it is impractical to do because of the terrain or unusual characteristics of the site. [24 CFR 100.205(a)].

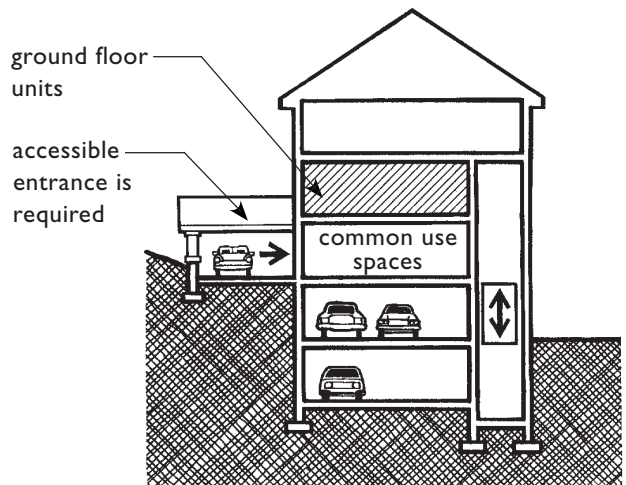
The Fair Housing Act itself does not contain an impracticality exception; however, the preamble to HUD's regulations explains as follows: "Congress did not intend to impose an absolute standard that all covered multifamily dwelling units be made accessible without regard to the impracticality of doing so. Even though the statute itself does not contain an impracticality standard the legislative history makes it clear that Congress 'was sensitive to the possibility that certain natural terrain may pose unique building problems'." Thus, the regulations and the Guidelines recognize that certain site conditions may make it impractical to make all ground floor units accessible in buildings that do not have an elevator due to the difficulty of providing an accessible route to the building entrance or to individual dwelling unit entrances. The Guidelines provide tests for determining site impracticality, which are discussed beginning on page 1.40.

Elevators from garages or grade levels to ground floors need not serve other floors and only the ground floor dwelling units must meet the design requirements of the Guidelines.

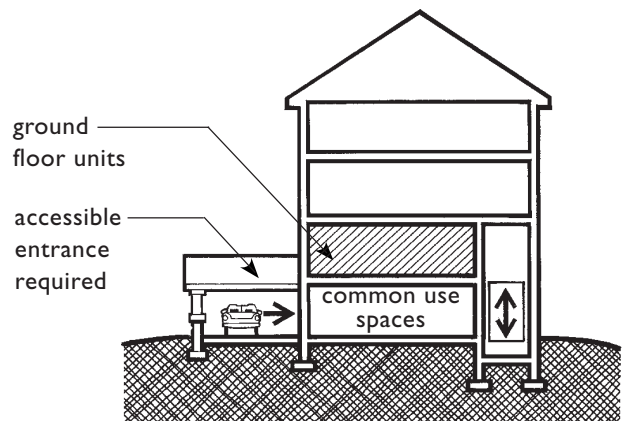
Buildings With Elevators, Including Those Having Elevators Only for Access to Covered Ground Floor Units, Cannot Claim Site Impracticality



Elevator From Garage to Covered Ground Floor Units

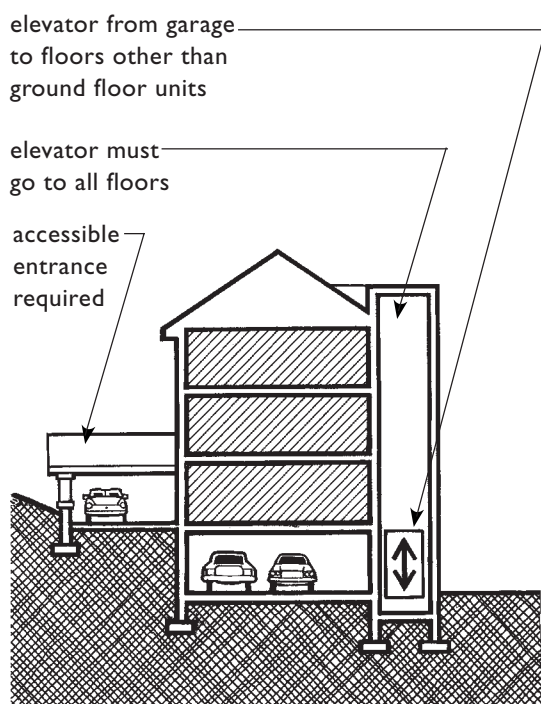


Elevator From Garage Levels to Ground Floor Units Above Common Use Grade Level Floor

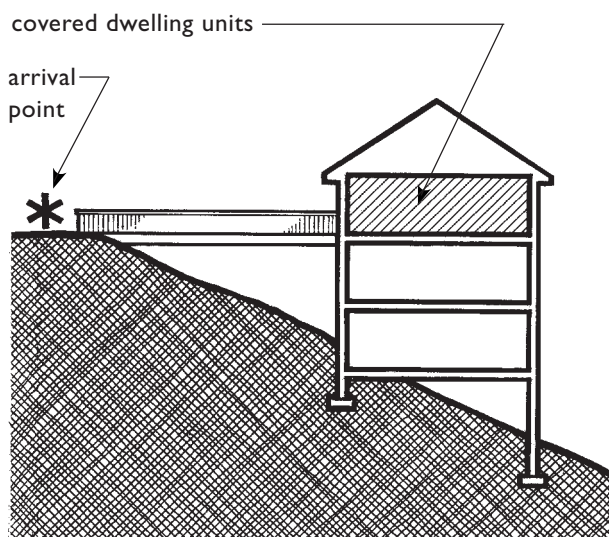


Elevator From Grade Level Common Use Spaces to Covered Ground Floor Units Above

If an elevator provides access to any floors other than a ground floor, then it must go to all floors in the building and all units in the building must meet the design requirements of the Guidelines.



Buildings with One or More Elevators Cannot Claim Site Impracticability



Buildings Served by a Planned Elevated Walkway Cannot Claim Site Impracticability

BUILDING TYPES WHERE SITE IMPRACTICALITY IS NOT ALLOWED

The Guidelines address the regulatory provision for site impracticability discussed above in Requirement 1, Accessible Building Entrance on an Accessible Route. The Guidelines **do not allow site impracticability for certain buildings**. These buildings are:

1. Buildings with one or more elevators – These buildings are covered and must have at least one entrance on an accessible route regardless of terrain or other characteristics of the site.
2. Buildings where an elevator is provided solely as a means of access to units on a ground floor – These buildings are covered and all ground floor units must be accessible. However, this type of building is not treated as an elevator building where all of the units in the building are covered. For a full explanation of buildings with elevators, see pages 1.20 through 1.25.
3. Buildings that have an elevated walkway – Site impracticability is not allowed for buildings where an elevated walkway is planned between a building entrance and a vehicular or pedestrian arrival point and the planned walkway has a slope no greater than 10%. The 10% criterion only determines whether making the entrance is practical. Once this criterion is met, the slope would have to be reduced to a maximum of 8.33 %.

These building types for which site impracticability is not permitted are illustrated on this page and 1.38.

Site impracticability is not allowed where the entrance to the building is provided by an elevated walkway between the building entrance and an arrival point with a planned slope no greater than 10%. By meeting the 10% slope criterion, it is considered practical to provide an accessible route, and the slope must be reduced to 8.33% maximum.

SITE IMPRACTICALITY TESTS FOR SITES WITH DIFFICULT TERRAIN

The Guidelines provide **two tests to determine site impracticality** based upon difficult terrain conditions, the **Individual Building Test** and the **Site Analysis Test**.

Since buildings with one or more elevators and those served by a planned elevated walkway cannot claim site impracticality, the site impracticality tests apply only to other types of buildings on sites having extreme terrain or unusual characteristics. The tests will help determine the actual number of units that must meet the Guidelines on such sites.

The tests differ and their application will be affected by the number of buildings on the site, the number of planned entrances, the slope of the land, and the distance between key points on the planned site. Unusual site characteristics, including such conditions as federally designated flood plains or coastal high hazard areas where it is required to raise the floor level of buildings above a base flood elevation, also have an impact on the number of covered dwelling units. Each of the tests follow the Guidelines and conclude with a minimum required number of accessible units.

The **Individual Building Test** accepts as inaccessible, because of site impracticality due to terrain, all ground floor units in which the elevation difference between the undisturbed site grade and the proposed finished site grade from arrival points and the planned building entrance is over 10% when measured in a straight line. If either the undisturbed slope or the proposed finished slope, measured in a straight line, is 10% or less, then site impracticality due to terrain does not exist and the

developer must provide an accessible route to the particular entrance being measured.

The **Site Analysis Test** measures the total buildable area of undisturbed or natural grade having an existing slope before grading less than 10% (**Step A**). The area of less than 10% slope is expressed as a percentage of the total site area less any restricted use areas such as wetlands or flood plains. The percentage establishes the minimum percentage of ground floor units to be made accessible (**Step B**) subject to the additional requirement of **Step C**. **Step C** requires that, in addition to the percentage established in **Step B**, 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%.

Which Tests Apply to Which Sites

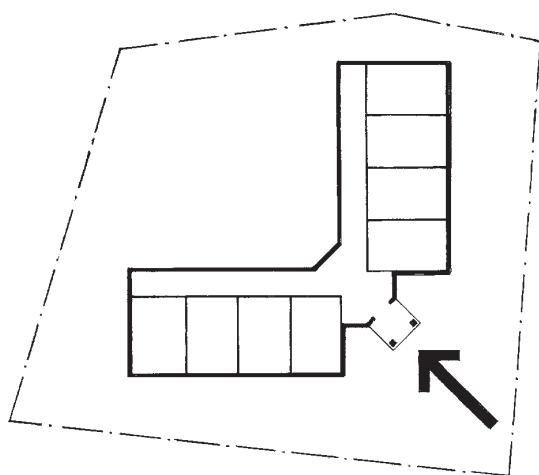
The tests relate to different buildings and site conditions. It is important to remember before discussing the test applications that they are not applicable to buildings having one or more elevators (elevator buildings) because they already are covered and all units in them must meet the requirements of the Guidelines, and they must have at least one entrance on an accessible route regardless of terrain or other characteristics of the site. None of the buildings described in the following explanation of test applications are elevator buildings; nor are they served by an elevated walkway between a building entrance and an arrival point.

Sites Where Only the Individual Building Test May be Used

For sites with difficult terrain which have a single building with only one common entrance on the site, the individual building test **must** be used. If the results of this test determine that it is impractical to make that entrance accessible, then the building is not required to be accessible and none of the ground floor units are covered. This is the only circumstance under which an entire site may not be covered.

Sites Where Either Test May be Used

Either test may be used for building sites having multiple buildings or a single building with more than one common entrance. When the Individual Building Test is applied to such sites it must be calculated for each building and each building entrance separately.



Single Building on a Site with One Common Entrance

Example of Potentially Impractical Site Based on Terrain and Application of Individual Building Test

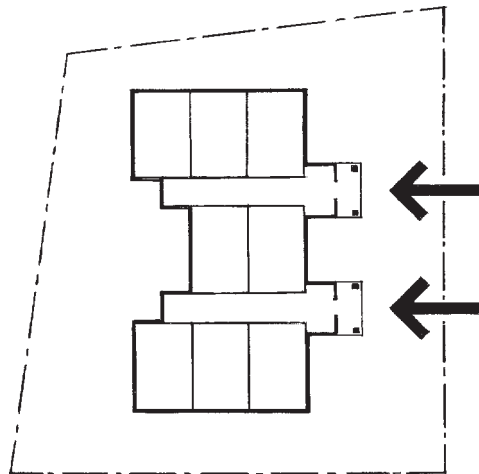
The 20% Rule

For those sites where **either** the Individual Building Test or the Site Analysis Test may be used, the Guidelines set a **minimum** percentage of ground floor units, which serves as a starting point even before the tests are applied. This minimum is 20%. Thus, for those sites where either test may be used, there never will be a situation where less than 20% of the units are required to comply with the Guidelines; in most cases the tests will result in a much larger percentage of units required to be accessible. Keep in mind that this 20% minimum cannot be used as a maximum. The results of the test, depending on which test is used, will determine the maximum number of units required to be accessible.

Note: The following examples apply only to buildings that do not have one or more elevators (elevator buildings). Buildings having one or more elevators must be accessible regardless of site conditions.

- one building
- 4 or more units
- 1 entrance
- **must** use the Individual Building Test

A site with a single building with one common entrance may not be required to be accessible if the site is impractical and application of the Individual Building Test determines impracticality at this entrance.

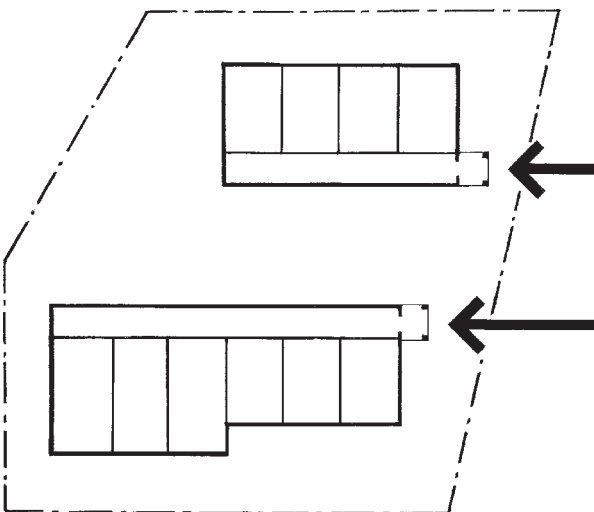


Single Building with Multiple Entrances on a Site

Note: The following examples apply only to buildings that do not have one or more elevators (elevator buildings). Buildings having one or more elevators must be accessible regardless of site conditions.

- single building on a site
- 4 or more units
- 2 or more entrances
- **may** use either the Individual Building Test or the Site Analysis Test

A minimum 20% of ground floor units must comply with the requirements of the Guidelines, plus an additional number determined by application of one of the tests. In addition, if any entrance is made accessible to meet either the 20% minimum or the percentage resulting from the test: **all units served by that entrance must comply.**



Multiple Buildings on a Site

- multiple buildings on a site
- 4 or more units in each building
- 1 or more entrances
- **may** use either the Individual Building Test or the Site Analysis Test

A minimum 20% of ground floor units must comply with the requirements of the Guidelines, plus an additional number determined by application of one of the tests. In addition, if any entrance is made accessible to meet either the 20% minimum or the percentage resulting from the test: **all units served by that entrance must comply.**

Examples of Potentially Impractical Sites Based on Terrain and Application of Site Impracticality Tests

INDIVIDUAL BUILDING TEST

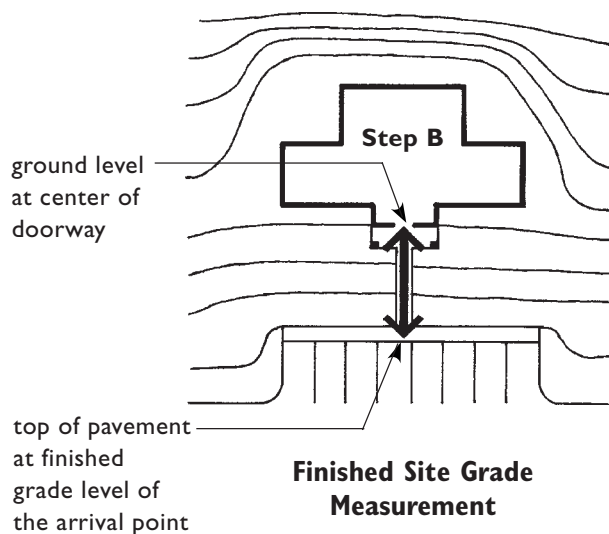
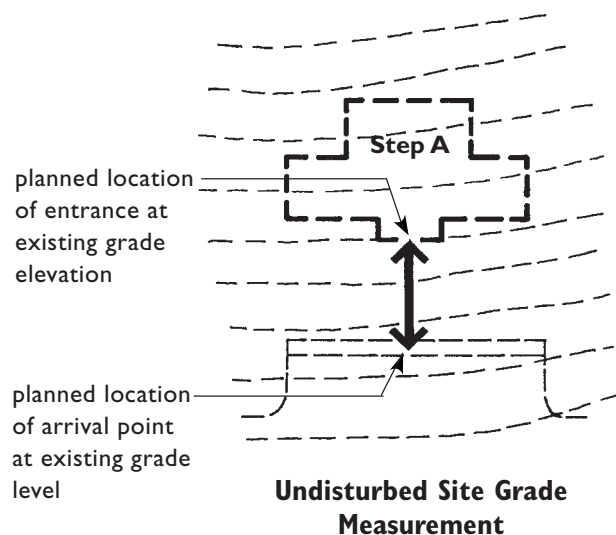
The Individual Building Test **must** be used to analyze a site with a single building with one common entrance and also may be used for all other sites. The Individual Building Test, unlike the Site Analysis Test, does not have to be certified by a professional licensed engineer, landscape architect, or surveyor; but it should be calculated on a topographic map with two-foot (or less) contour intervals.

For it to be considered impractical to provide an accessible route to any building or individual dwelling unit entrance, the slope between the pedestrian arrival points and the planned

entrances must meet both of the following two conditions (quoted directly from the Guidelines):

STEP A. the slopes of the undisturbed site measured between the planned entrance and all vehicular or pedestrian arrival points within 50 feet of the planned entrance exceed 10%; and

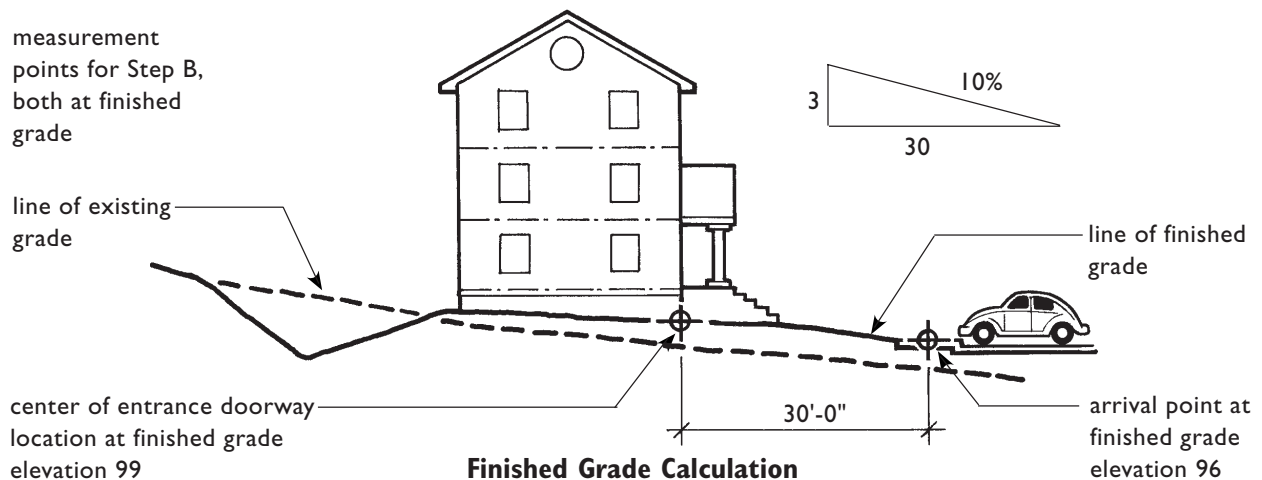
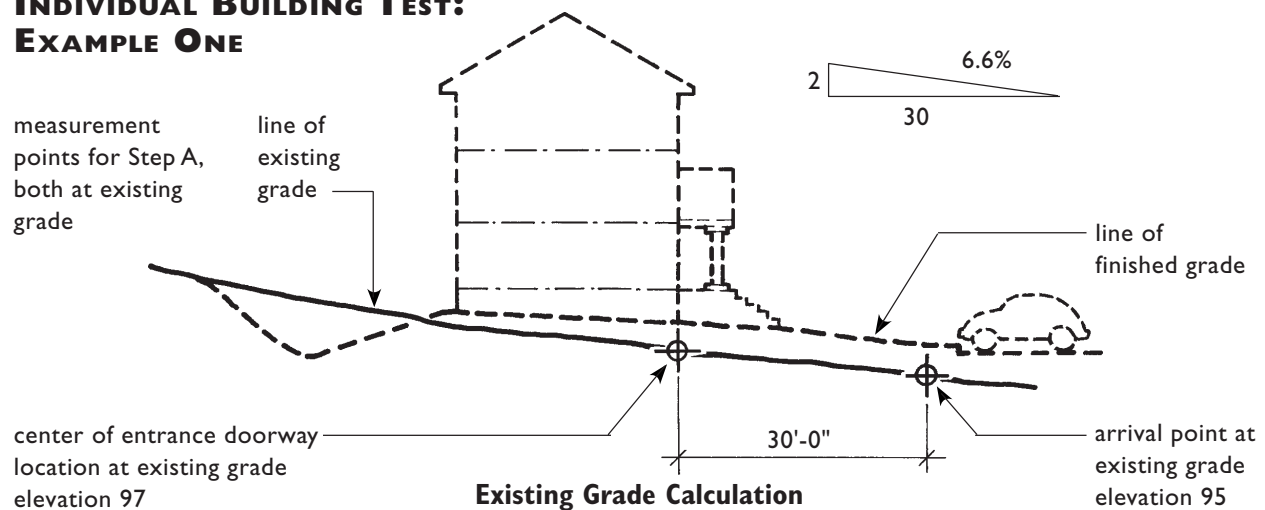
STEP B. the slopes of the planned finish grade measured between the entrance and all vehicular or pedestrian arrival points within 50 feet of the planned entrance also exceed 10%.



If the slope of both the undisturbed site and the planned finished grade between the building entrance and pedestrian arrival points does not exceed the 10% slope criterion, then it is considered practical to provide an accessible route with a maximum slope of 8.33% to the building or dwelling unit entrance. The entrance, thus, must be accessible and the unit(s), plus the public and

common use spaces in the building served by the entrance, must comply with the design requirements of the Guidelines. The 10% slope criterion determines whether it is practical to provide an accessible route from a pedestrian arrival point to the building or dwelling unit entrance. It is not meant to imply that 10% is the acceptable slope for an accessible route.

INDIVIDUAL BUILDING TEST: EXAMPLE ONE

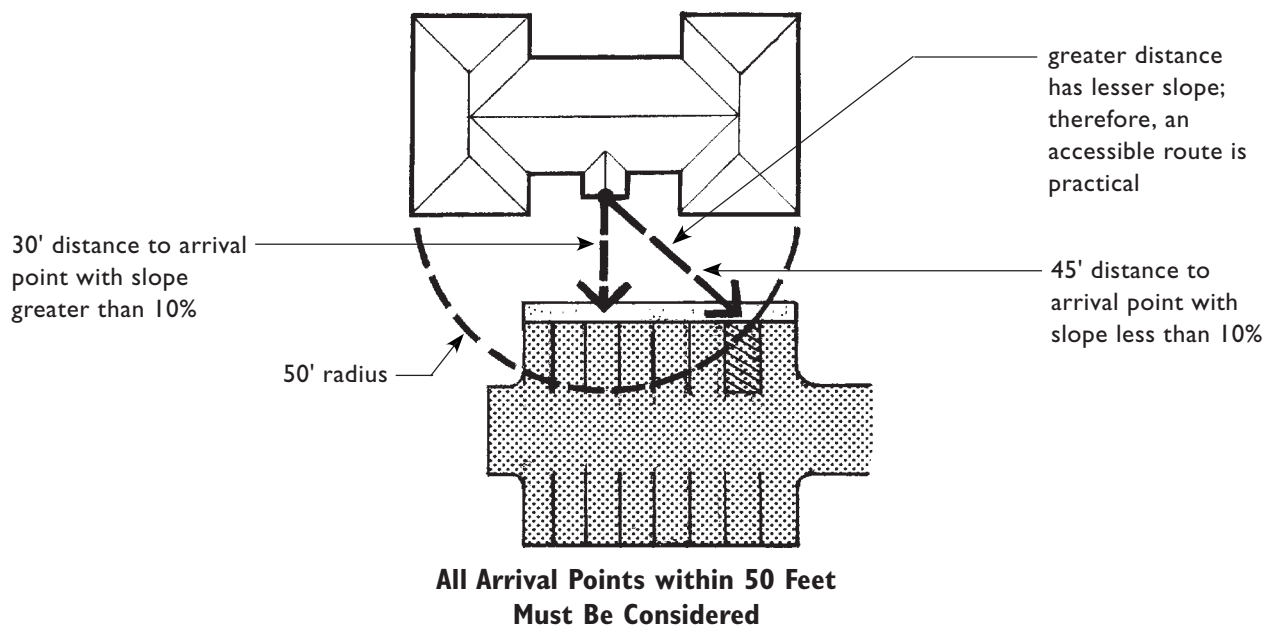


Individual Building Test: Example One

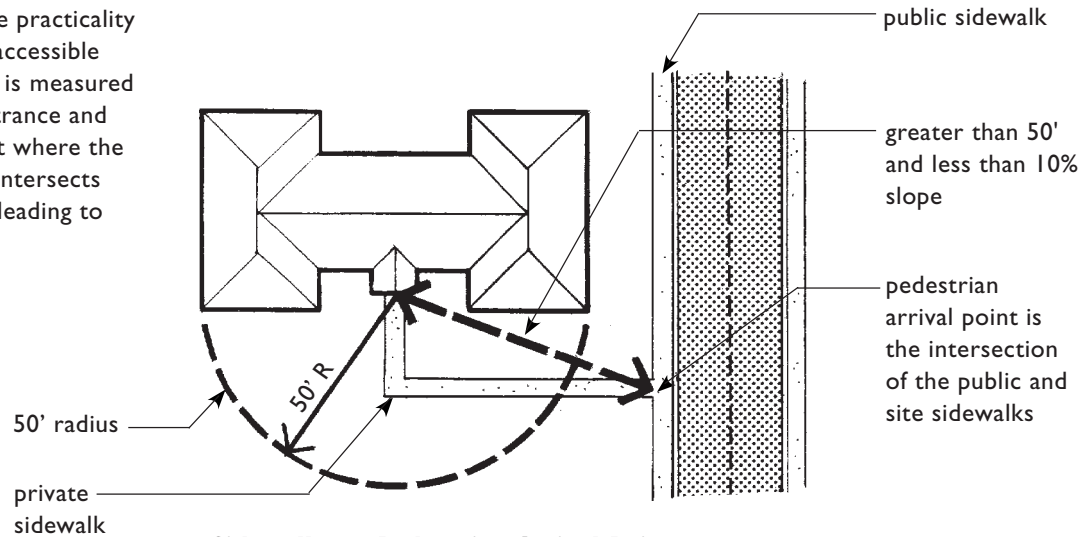
both calculations do not exceed 10%; therefore, the developer must provide an accessible route to the entrance and all units on the ground floor served by the entrance are covered

Vehicular or pedestrian arrival points include public or resident parking areas, public transportation stops, passenger loading zones, and public streets or sidewalks. In applying the test, all arrival points within the radius of 50 feet must be reviewed and not just a direct line to the closest arrival point. As shown in the diagram below, a 30-foot line to the closest arrival point has a slope of more than 10%, while a 45-foot line to a farther point has a slope of less than 10%. An accessible building entrance on an accessible route is, therefore, practical and the entrance must be accessible.

If there are no vehicular or pedestrian arrival points within 50 feet, the slope must be calculated to the closest arrival point beyond 50 feet. For sidewalks, the closest point to the planned entrance is taken at the point where a public sidewalk entering the site intersects with a sidewalk leading to the entrance.



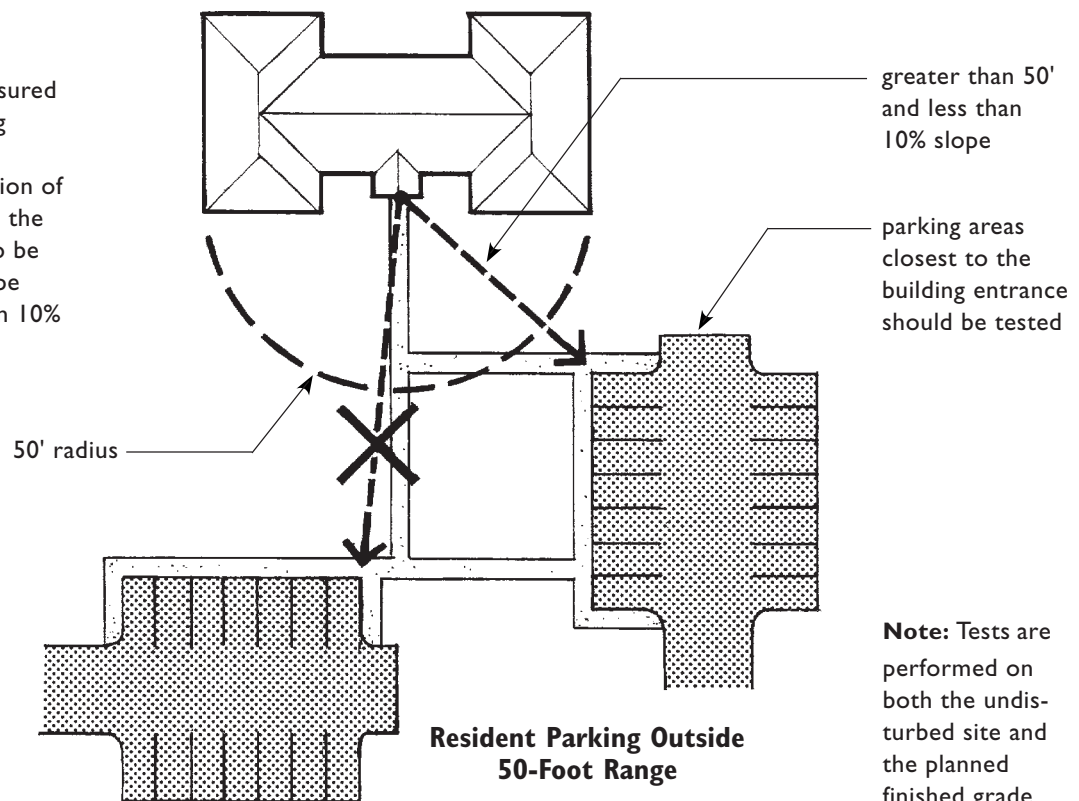
to determine the practicality of providing an accessible route, the slope is measured between the entrance and the closest point where the public sidewalk intersects with a sidewalk leading to the entrance



Sidewalks as Pedestrian Arrival Points
(Closest Arrival Point Is Outside 50-Foot Range)

In the case of resident parking areas, the closest point to the planned entrance will be measured from the entry point to the parking areas that are located closest to the planned entrance.

the slope is measured from the building entrance to the closest intersection of the sidewalk and the parking area – to be practical the slope must be less than 10%



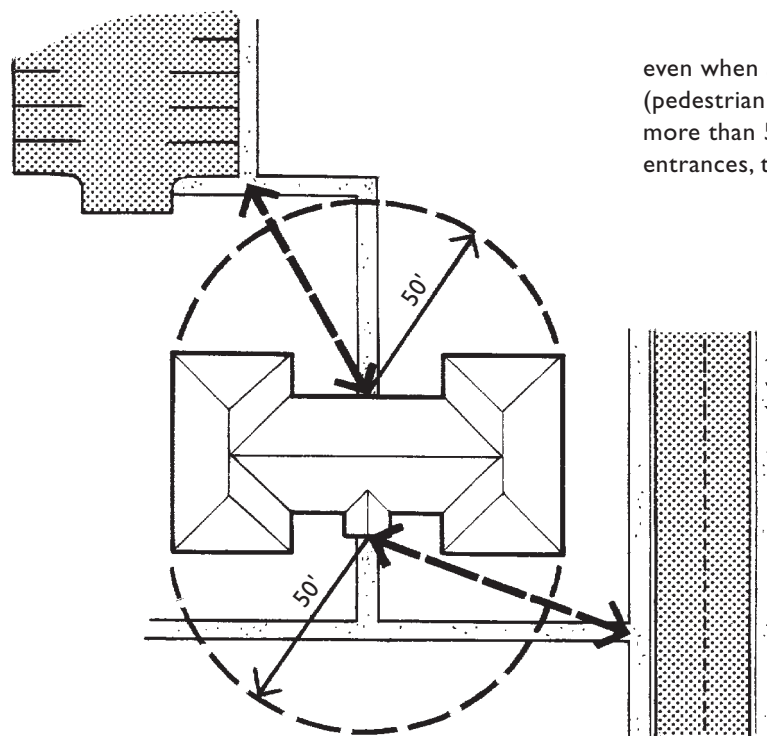
In some buildings the Individual Building Test may need to be applied to each entrance. The following pages contain illustrations explaining the application of this test at different site conditions.

INDIVIDUAL BUILDING TEST:

EXAMPLE TWO

For buildings having **more than one planned common entrance** on a ground floor, the Individual Building Test must be conducted for each

entrance. Even if both entrances prove to be impractical, 20% of the ground floor units still must meet the requirements of the Guidelines; and the developer must change the entrance in whatever way necessary to provide an accessible route to these units. Once the accessible route and entrance is provided, all ground floor units served by the accessible entrance must comply. However, only one entrance is required to be accessible and on an accessible route.



**Individual Building Test:
Example Two**
**Buildings with More than One Planned Common
Entrance on a Ground Floor**

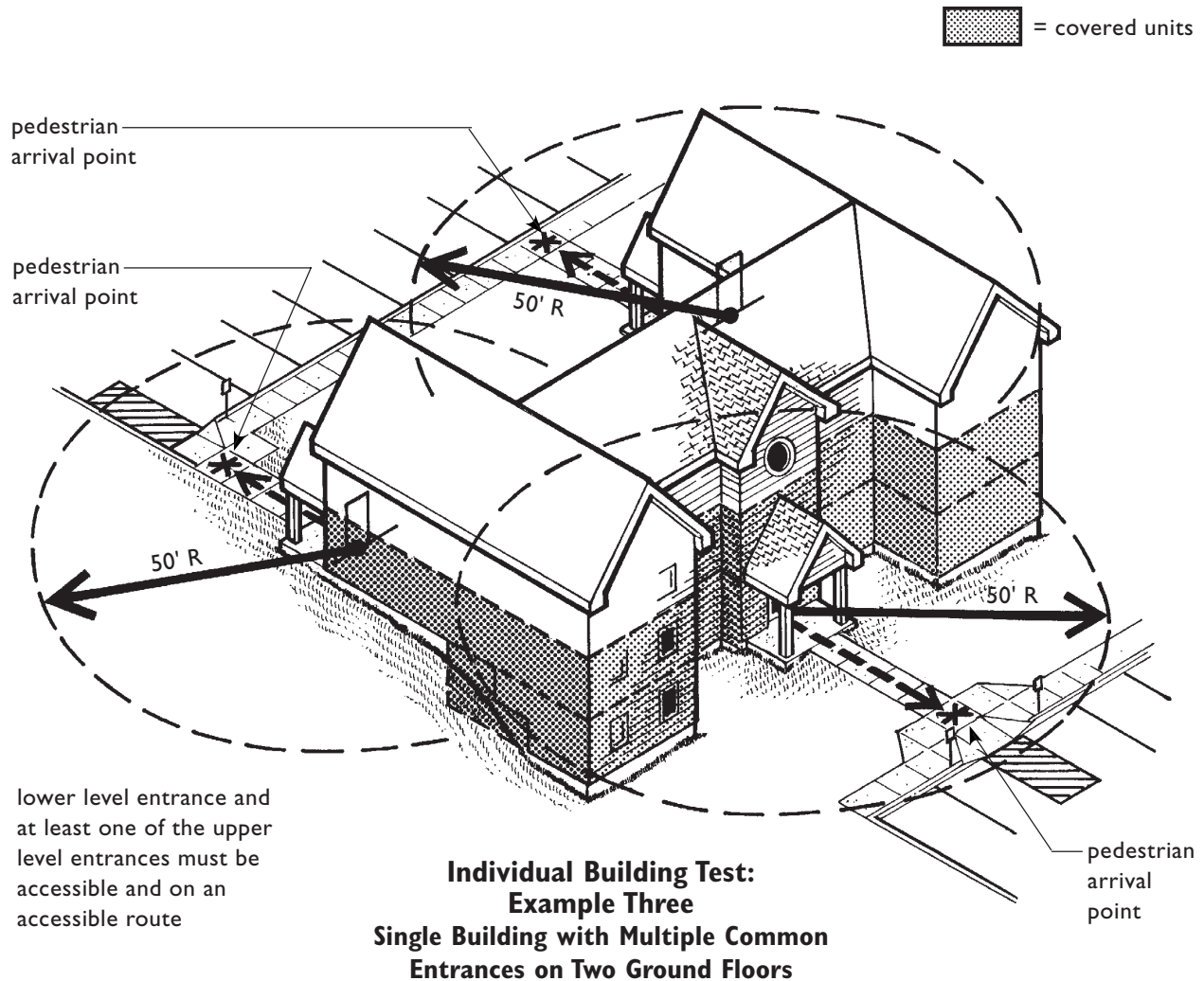
INDIVIDUAL BUILDING TEST:

EXAMPLE THREE

For buildings having **more than one planned common entrance on more than one ground floor** the Individual Building Test is applied to each entrance.

The site arrival points within 50 feet of each entrance for both the existing and finished grade do not exceed 10%; therefore, all entrances

are practical. Since all entrances are practical, units on both floors are covered and must comply with the requirements of the Guidelines. The entrance on the lower floor level and at least one of the entrances on the upper floor level must be on an accessible route unless the two entrances on the upper level serve different sets of clustered units, in which case both upper level entrances must be on an accessible route.



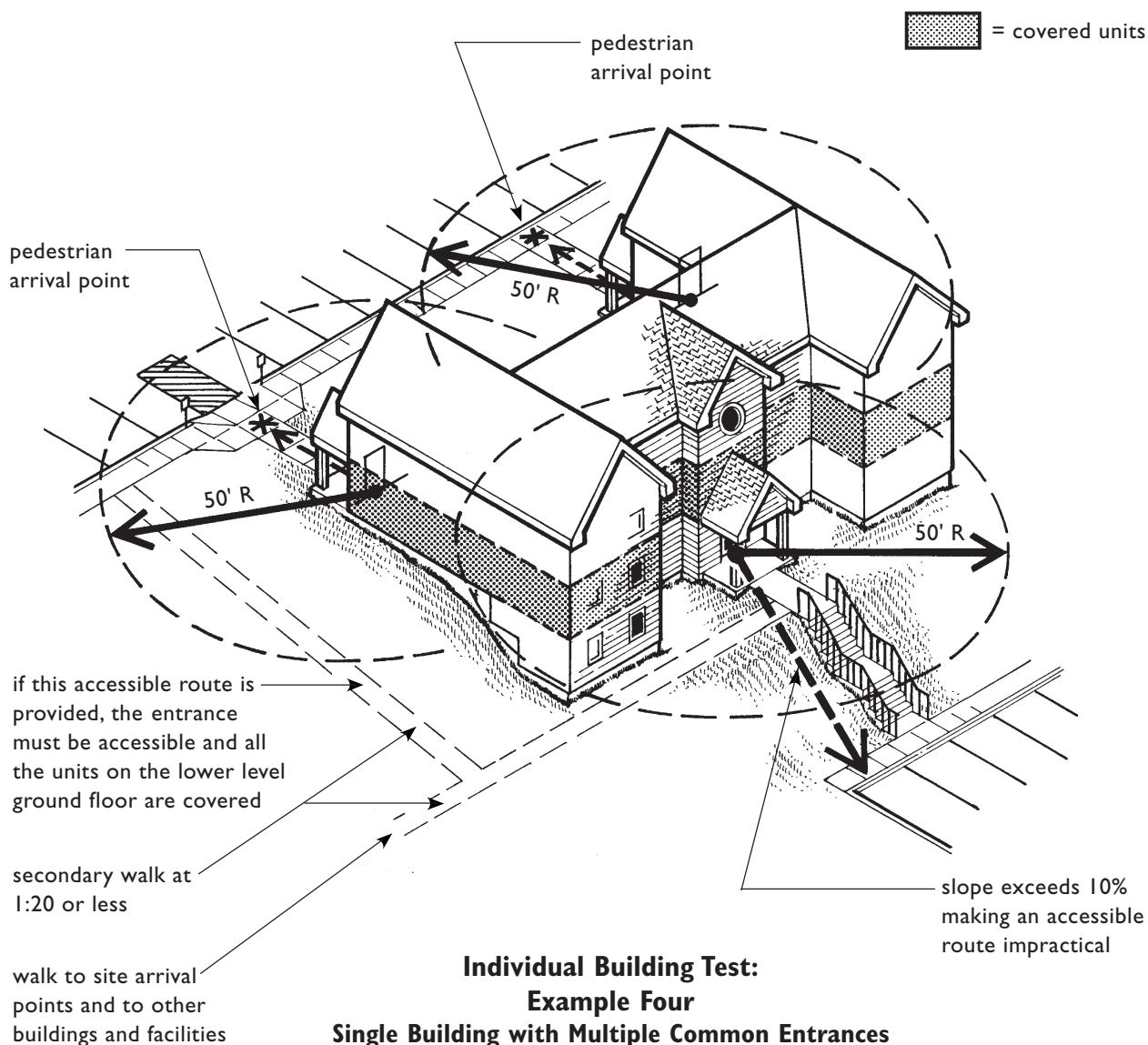
INDIVIDUAL BUILDING TEST:

EXAMPLE FOUR

There is a site arrival point within 50 feet of each planned entrance. The slopes from the existing and finished grade for the two upper level entrances do not exceed 10%, but the slopes for the lower level entrance do.

It is impractical to provide an accessible route from parking to the entrance on the lower ground floor. However, a secondary and

nonrequired walk system is planned (dotted lines). It would connect the lower level entrance to the upper level arrival points and to other on-site buildings, amenities, and arrival points. The walk would not exceed a 1:20 slope and would therefore be an accessible route. If the walk is installed, the lower level entrance would be on an accessible route and the units on the lower level floor also would be covered.



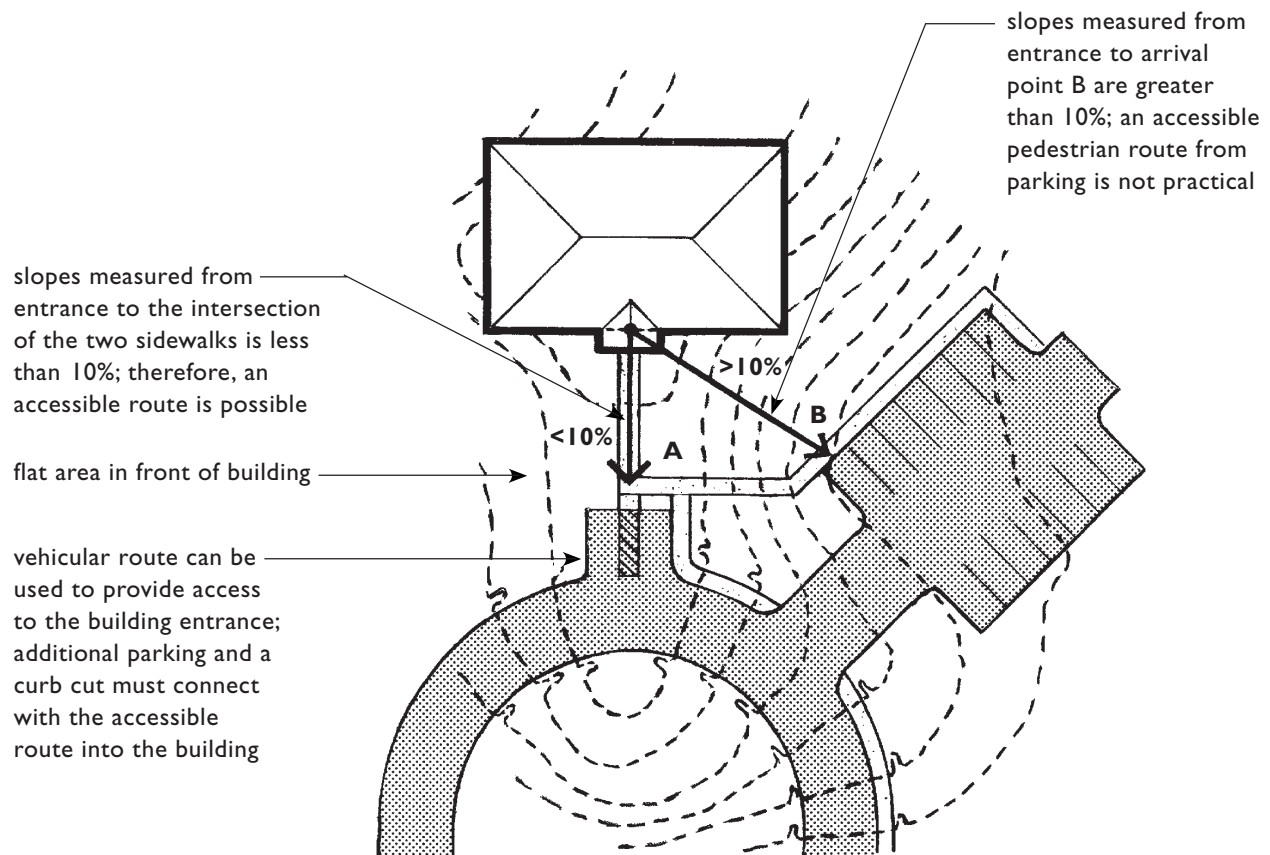
**Individual Building Test:
Example Four
Single Building with Multiple Common Entrances
Lower Ground Floor Units May Be Covered**

**INDIVIDUAL BUILDING TEST:
EXAMPLE FIVE
VEHICULAR ROUTE PROVIDES ACCESS
TO BUILDING ENTRANCES**

There is a single nonelevator building on a site having one common entrance, so the Individual Building Test is used to evaluate the practicality of providing an accessible route from the arrival points to the planned entrance. The closest arrival point is the sidewalk beside the driveway that curves up a slope to a flat area in front of the entrance (point A). The slopes from the entrance to arrival point A are less than 10%, but no parking is provided. The slopes between the entrance and all

other vehicular and pedestrian arrival (point B) are greater than 10%, making it impractical to provide an accessible pedestrian route from the parking lot to the building entrance.

This is still a covered building since an accessible route is possible from the entrance to the sidewalk in front of the building. Because it is impractical to install an accessible pedestrian route from the parking area, an acceptable alternative is to provide access via a vehicular route. However, necessary site provisions, such as parking spaces and curb ramps, must be provided on an accessible route to 2% of the covered dwelling units.



**Individual Building Test:
Example Five
Vehicular Route May Be Used to Provide Access to
Buildings Containing Dwelling Units**

SITE ANALYSIS TEST

This test may be used to analyze the site for a multifamily housing development containing multiple buildings without elevators, or a single nonelevator building with multiple entrances. The methodology for this test is significantly different from the Individual Building Test. It requires an analysis of the site to determine the number of required units which must be on an accessible route and which must meet the design requirements of the Guidelines. After this calculation is completed, the site is laid out and the minimum number of covered units must be provided. A third step which analyzes the placement of required units, accessible routes, and accessible entrances is then performed. This step is used to identify any additional units that can and therefore must be made to comply. Where the site contains multiple buildings, all the covered units should not be clustered in one building, but, as much as the site allows, should be dispersed throughout all the buildings. To perform the Site Analysis Test the following steps must be taken:

STEP A

Calculate the percentage of total buildable area of the undisturbed site with a natural grade less than 10% slope.

1. Obtain a Survey Map: Obtain a topographic survey map of the undisturbed site with 2-foot contour intervals. The map must show precise boundaries of the site as well as areas where building is not allowed, such as floodplains, wetlands, setbacks, easements, or other restricted use areas.

2. Measure the Total Buildable Area: Measure the total area on which building is allowed, i.e., the area of the lot or site where a building can be located in compliance with applicable codes and zoning regulations. The “Total Buildable Area” is the total area of the site minus any restricted use areas.

3. Complete a Slope Analysis: Do a slope analysis of the total buildable area and mark on the topographic survey all those areas which have a slope of 10% or less. Calculate the combined area of site with slopes less than 10%. The slope determination shall be made between each successive 2-foot contour interval. **The accuracy of the slope analysis must be certified by a professional licensed engineer, architect, landscape architect, or surveyor.**

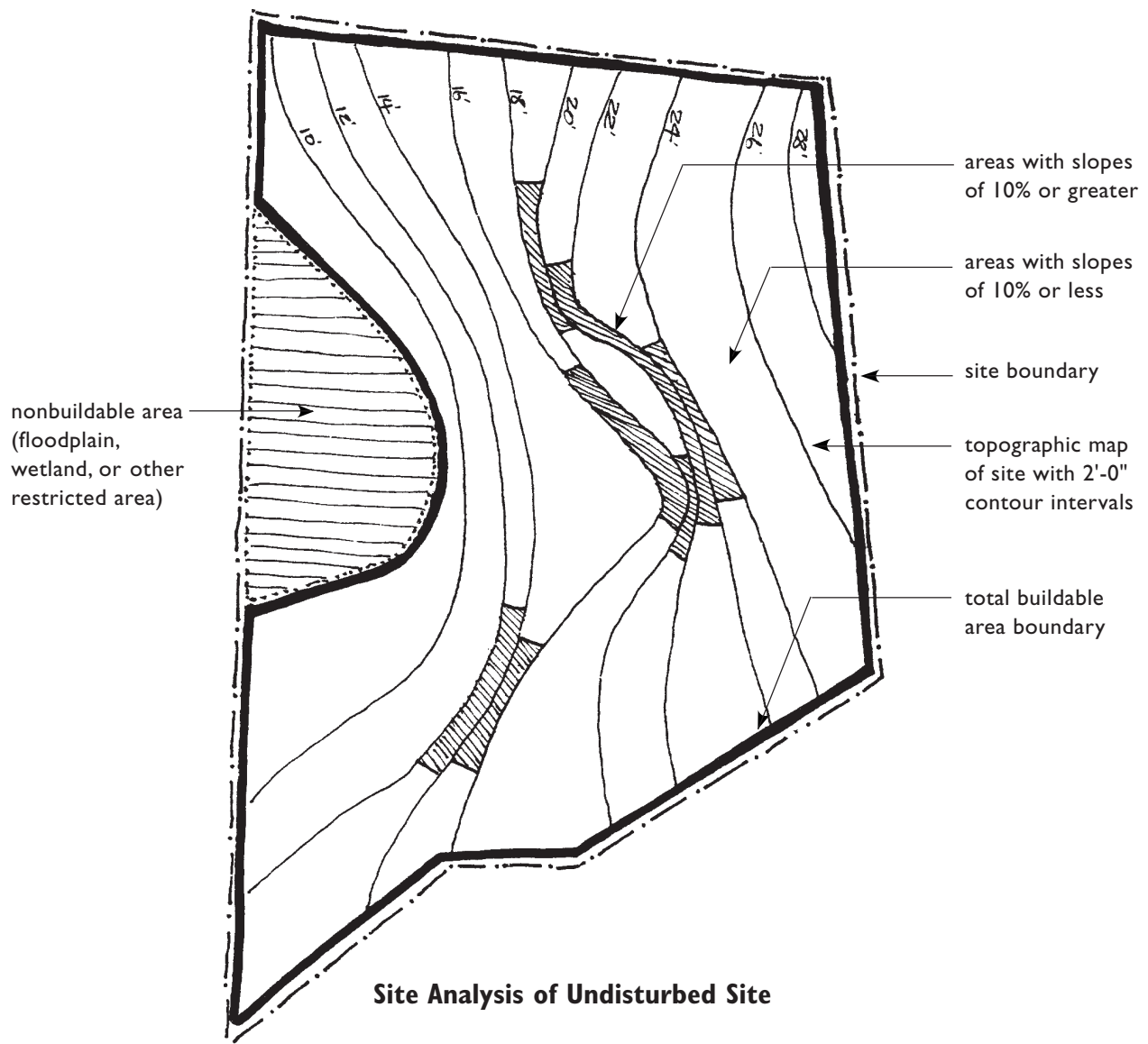
STEP B

Calculate percentage of accessible units.

Calculate the percentage of total buildable area of the undisturbed site with a natural grade less than 10%. This percentage is the minimum percentage of ground floor units which must be made accessible. See sample site on page 1.52.

For example, if the total buildable area is 125,000 square feet and the area with slopes of less than 10% is 100,000 square feet, then the minimum percentage of units to be accessible is 80%.

$$\frac{\text{Area with slope } < 10\%}{\text{Total buildable area}} = \frac{100,000}{125,000} = 80\%$$



STEP C

Additional Covered Units

In addition to the number of units required by the preceding analysis, **all ground floor units** must meet the design requirements of the Guidelines if they are served by a planned building entrance which is on an accessible route, i.e., on a walkway having a slope no greater than 8.33% between the planned entrance and a vehicular or pedestrian arrival point. This requires the builder/developer to

review the site plan a second time to determine if additional accessible routes and/or entrances have been created that will increase the number of covered accessible units. Whenever accessible routes or entrances have been created to provide access to the minimum required number of units, any additional units that may be served by those entrances also must meet the requirements of the Guidelines.

APPLYING THE SITE ANALYSIS TEST

Calculating the Required Number of Covered Units

There are three nonelevator buildings on a site. Two have 16 units, 4 on the lowest ground floor level and 6 on each of the other floors. The third building has 12 units, 6 on each floor. Performing **Step A** of the site analysis test reveals that 75% of the buildable area has a slope of less than 10%. Therefore, 75% of the total number of ground floor units must meet the requirements of the Guidelines and be on an accessible route.

Buildings One and Two have two ground floors, while Building Three has only one ground floor. The total number of ground floor units for the development is 26. Seventy-five percent of $26 = 20$ (19.5 rounded up) ground floor units that are covered (**Step B**). The covered units should be dispersed on the site among the three buildings.

To provide the required number of units the developer/builder chooses to place the covered units on the only ground floor in Building Three and on the upper ground floor of Buildings One and Two, where accessible entrances on accessible routes can be provided most easily. The number of units on these floors totals 18, which is 2 units **less** than the 20 that are needed to meet **Steps A and B**.

To meet the requirement for 20 accessible units, the developer/builder has the option of providing the 2 additional units on the second ground floor of either Building One or Two. In this example, the builder places the additional 2 required units on the lower ground floor of Building One, and provides the required accessibility by regrading and adding a ramp to the lower level entrance. Additionally, under **Step C**, since the

lower level entrance is now on an accessible route, all the units on that floor become covered units and the entire ground floor must comply. As a result, the total number of covered units is 22.

Positioning Covered Units on a Building Site

It is permissible under the Site Analysis Test to select in which buildings and on which floors covered units will be placed; however, in a multiple building development, all the covered units should not be located in a single building. Covered units should be dispersed between buildings and, if possible, among all the ground floors. However, if the required number of covered units is less than the total number of units on a floor, all the units on that floor become covered units because the required units are served by an accessible route and entrance.

Step A

Topographic analysis:

Area < 10% slope = 75%

Ground floor units to comply = 75%

Step B

Total Ground Floor Units = 26

$\times 75\%$

Covered Units = $\frac{20}{20}$

Step C

After distribution of required units, total count of 20 covered ground floor units is raised to 22.

Two more units are added to lower ground floor of Building #1 and an accessible route is provided to meet the required 20. Two remaining units on that floor become covered units because all ground floor units served by an accessible route are covered units.

Building #3

- 1 ground floor
- 6 ground floor units
- all 6 ground floor units covered

Building #2

- 2 ground floors
- 10 ground floor units
- 6 ground floor units covered

Building #1

- 2 ground floors
- 10 ground floor units
- all 10 ground floor units covered

additional
required covered
units provided
on lower ground
floor

6 units

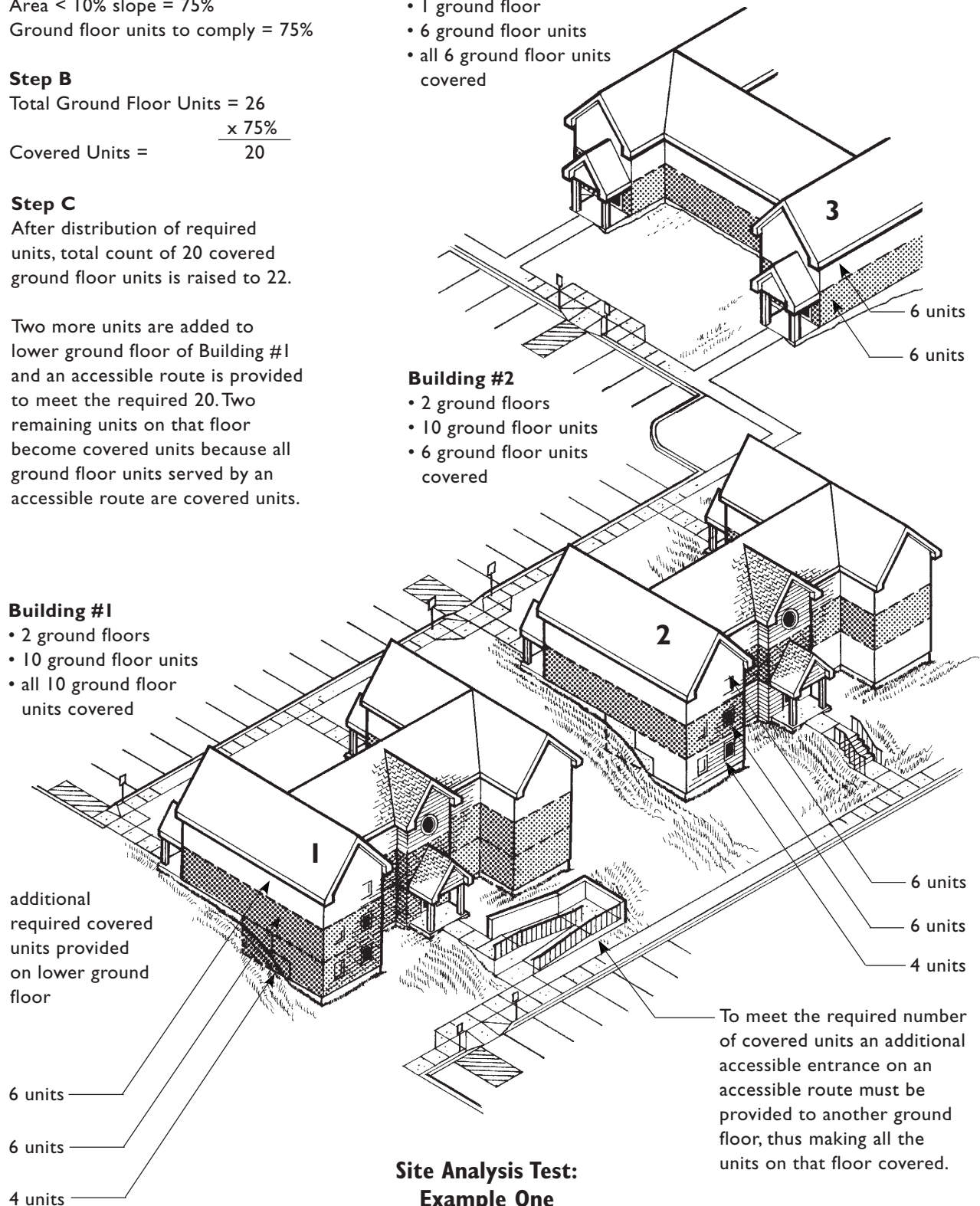
6 units

4 units

Site Analysis Test:

Example One

The Number of Covered Units

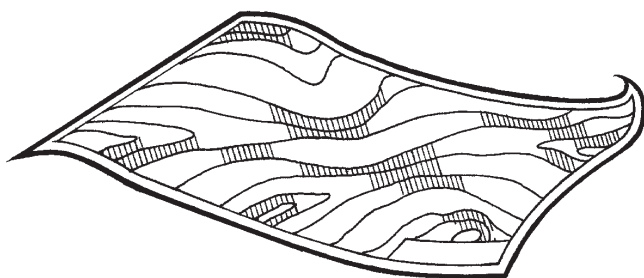


ACCESSIBLE ROUTES MAY DICTATE ADDITIONAL COVERED UNITS

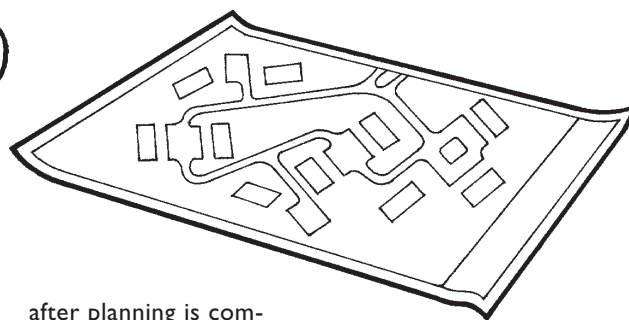
If the Site Analysis Test indicates a particular percentage of required covered units and the project has a larger number, all of which are on accessible routes, the larger number are covered and must meet the design requirements of the Guidelines.

Ten three-story nonelevator buildings are planned for a site, each having eight ground floor units for a total of 80 units. **Steps A and B** of the site analysis test show 60% (or 48) of the ground

floor units must comply. During planning the developer places these 48 required units in six of the ten buildings, selecting the six buildings where providing accessibility is easily achieved. However, after the site planning is completed, application of **Step C** shows that all ten buildings have entrances on an accessible route, i.e., a walkway with a slope between the planned building entrances and a pedestrian or vehicular arrival point that is no greater than 8.33%. Therefore, all ground floor units in each building (or 80 units) must meet the Guidelines.



Steps A and B of the site analysis reveals 60% of ground floor units are covered



after planning is completed **Step C** of the test requires all buildings to have entrances on an accessible route; therefore, 100% of ground floor units are covered

Site Analysis Test: Example Two Additional Covered Units

SITES WITH UNUSUAL CHARACTERISTICS

Certain sites are subject to laws or codes which specify that the lowest floor of a building or the lowest structural member of the lowest floor must be raised to a specified level. Examples of such sites are those located in a federally designated flood-plain or coastal high-hazard area, where buildings must be raised to a level at or above the base flood elevation.

When these circumstances result in **Step One**, a difference in grade elevation exceeding 30 inches

– and –

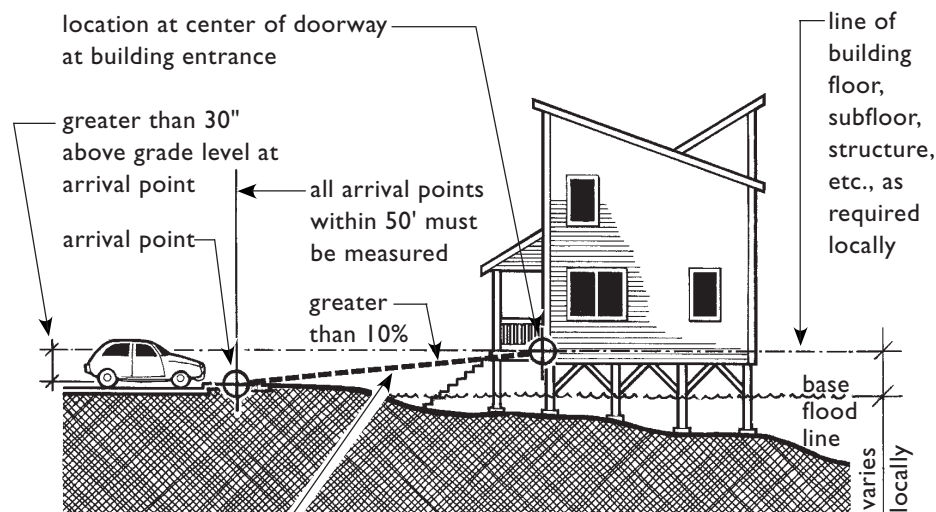
Step Two, a slope exceeding 10% between a building entrance and all vehicular and pedestrian arrival points within 50 feet of the entrance (or to the closest one if none are within 50 feet), then an accessible route to that building entrance is considered impractical. Therefore, the building would not be subject to the accessibility requirements of the Fair Housing Act.

The heavy dotted line between the door threshold and the arrival point in the following illustrations is a measuring and slope determination line only. It is not intended to represent the surface of a ramp or walk. The slope and the length of this line simply will determine whether or not the building entrance is required to be on an accessible route. Once that determination is made, the developer/builder can design any system of ramps, walks, lifts, or other method of providing the necessary access.

The entrances shown in these examples may be either a common or an individual dwelling unit entrance. If the measuring and slope determination line shown has a vertical elevation change less than 30 inches and the slope is less than 10%, the entrance and the route to it must be accessible (meet the Guidelines) as well as the dwelling units on that ground floor.

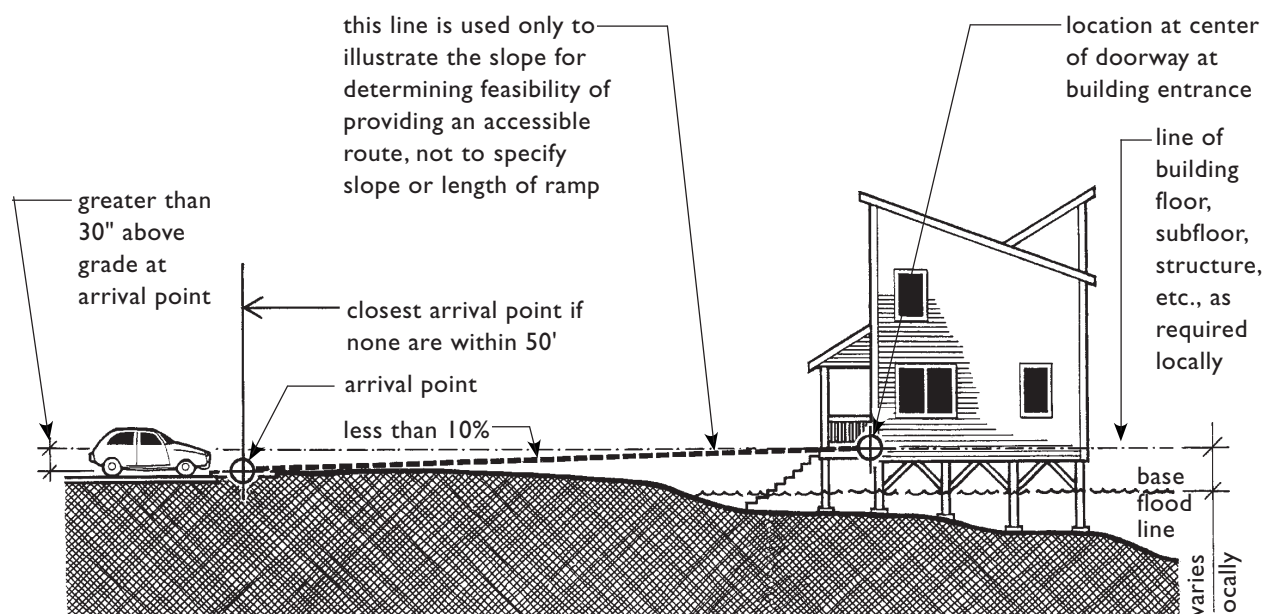
Tree-save ordinances do not constitute an unusual site characteristic that necessarily would exempt a site from complying with the requirements of the Act. However, the Guidelines would not require that a site be graded in violation of a tree-save ordinance. If, however, access is required based on the final site plan, then installation of a ramp for access, rather than grading, could be necessary in some cases so as not to disturb the trees.

Line of building floor, subfloor, underside of lowest structural member, or other measuring point required by local code authority is more than 30" above grade level at the arrival point. In addition, the slope of the measuring line between the entrance and the arrival point is greater than 10%; therefore, the building is not covered.

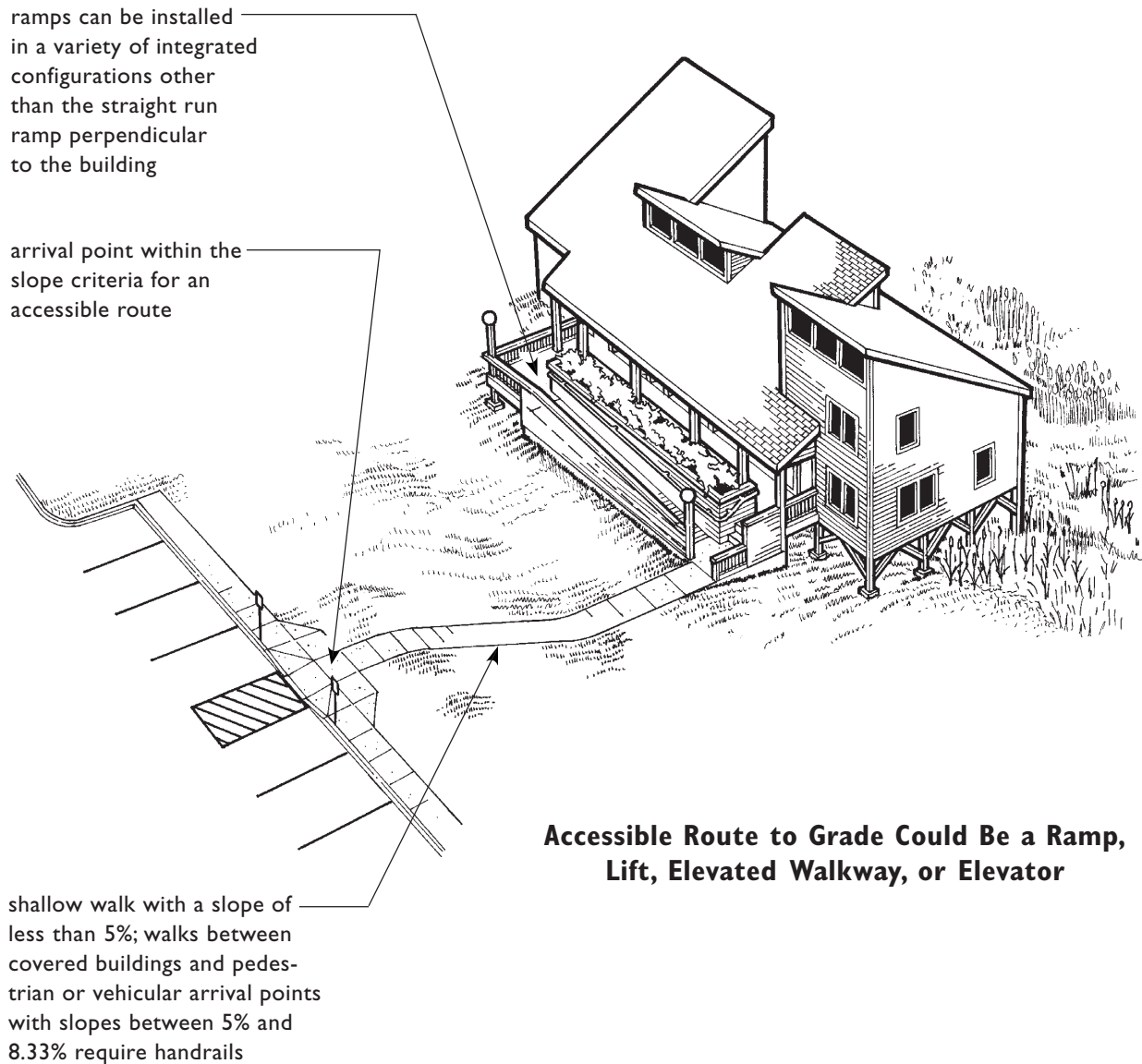


this line is used only to illustrate the slope measurement for determining feasibility of providing an accessible route, not to specify slope or length of ramp

Building Meets Both Criteria for Exemption



Building Must Comply With Requirements of the Guidelines



Chapter Two:

REQUIREMENT 2

Accessible and Usable Public
and Common Use Areas

2



...covered multifamily dwellings with a building entrance on an accessible route shall be designed in such a manner that the public and common use areas are readily accessible to and usable by handicapped persons.

Fair Housing Act Regulations, 24 CFR 100.205

Definitions from the Guidelines

Accessible. When used with respect to the public and common use areas of a building containing covered multifamily dwellings, means that the public or common use areas of the building can be approached, entered, and used by individuals with physical handicaps. The phrase “readily accessible to and usable by” is synonymous with accessible. A public or common use area that complies with the appropriate requirements of ANSI A117.1 – 1986, a comparable standard or these guidelines is “accessible” within the meaning of this paragraph.

Common Use Areas. Rooms, spaces, or elements inside or outside of a building that are made available for the use of residents of a building or the guests thereof. These areas include hallways, lounges, lobbies, laundry rooms, refuse rooms, mail rooms, recreational areas, and passageways among and between buildings.

Public Use Areas. Interior or exterior rooms or spaces of a building that are made available to the general public. Public use may be provided at a building that is privately or publicly owned.

INTRODUCTION

The Fair Housing Accessibility Guidelines (the Guidelines) require public and common use areas and facilities in covered multifamily housing developments to be accessible to people with disabilities so they may benefit from and enjoy the amenities present in the housing development in which they live. Public and common use areas that must be accessible include, but are not limited to, such spaces and elements as selected on-site walks, parking, corridors, lobbies, drinking fountains and water coolers, swimming pool decks or aprons, playgrounds, rental offices, mailbox areas, trash rooms/refuse disposal areas, lounges, clubhouses, tennis courts, health spas, game rooms, toilet rooms and bathing facilities, laundries, community rooms, and portions of common use tenant storage.

The Guidelines require an accessible route (see page 2.15) to public and common use spaces, but not all features or elements within that space may be required to be accessible. The scoping

provisions, or “where,” “when,” and “how many” elements and spaces must be accessible, will be addressed throughout this chapter. For example, where multiple recreational facilities are provided, the Guidelines do not require that each amenity be accessible, but rather that “sufficient numbers” be accessible to provide equitable use by people with disabilities.

In general, however, if each building on a site has its own trash room, lounge area, laundry room, game room, etc., then each of these in each building must be on an accessible route and comply with the applicable portions of an appropriate accessibility standard since they serve different buildings. For an overview of the scoping requirements refer to the illustrations on pages 2.8 through 2.11 and to the chart, taken from the Guidelines, entitled “Basic Components for Accessible and Usable Public and Common Use Areas or Facilities,” reprinted on the next page.



BASIC COMPONENTS FOR ACCESSIBLE AND USABLE PUBLIC AND COMMON USE AREAS OR FACILITIES

Accessible element or space	ANSI A117.1 section	Application
1 Accessible routes)	4.3	Within the boundary of the site. (a) From public transportation stops, accessible parking spaces, accessible passenger loading zones, and public streets or sidewalks to accessible building entrances (subject to site considerations described in section 5) (b) Connecting accessible buildings, facilities, elements and spaces that are on the same site. On-grade walks or paths between separate buildings with covered multifamily dwellings, while not required, should be accessible unless the slope of finish grade exceeds 8.33% at any point along the route. Handrails are not required on these accessible walks. (c) Connecting accessible building or facility entrances with accessible spaces and elements within the building or facility, including adaptable dwelling units. (d) Where site or legal constraints prevent a route accessible to wheelchair users between covered multifamily dwellings and public or common-use facilities elsewhere on the site, an acceptable alternative is the provision of access via a vehicular route so long as there is accessible parking on an accessible route to at least 2% of covered dwelling units, and necessary site provisions such as parking and curb cuts are available at the public or common use facility.
2 Protruding objects	4.4	Accessible routes or maneuvering space including, but not limited to halls, corridors, passageways, or aisles.
3 Ground and floor surface treatments	4.5	Accessible routes, rooms, and spaces, including floors, walks, ramps, stairs, and curb ramps.
4 Parking and passenger-loading zones	4.6	If provided at the site, designated accessible parking at the dwelling unit on request of residents with handicaps, on the same terms and with the full range of choices (e.g., surface parking or garage) that are provided for other residents of the project, with accessible parking on a route accessible to wheelchairs for at least 2% of the covered dwelling units, accessible visitor parking sufficient to provide access to grade-level entrances of covered multifamily dwellings, and accessible parking at facilities (e.g., swimming pools) that serve accessible buildings.
5 Curb ramps	4.7	Accessible routes crossing curbs.
6 Ramps	4.8	Accessible routes with slopes greater than 1:20.
7 Stairs	4.9	Stairs on accessible routes connecting levels not connected by an elevator.
8 Elevator	4.10	If provided.
9 Platform lift	4.11	May be used in lieu of an elevator or ramp under certain conditions.
10 Drinking fountains and water coolers	4.15	Fifty percent of fountains and coolers on each floor, or at least one, if provided in the facility or at the site.
11 Toilet rooms and bathing facilities .. (including water closets, toilet rooms and stalls, urinals, lavatories and mirrors, bathtubs, shower stalls, and sinks.)	4.22	Where provided in public-use and common-use facilities, at least one of each fixture provided per room.
12 Seating, tables, or work surfaces	4.30	If provided in accessible spaces, at least one of each type provided.
13 Places of assembly	4.31	If provided in the facility or at the site.
14 Common-use spaces and facilities .. (including swimming pools, playgrounds, entrances, rental offices, lobbies, elevators, mailbox areas, lounges, halls and corridors, and the like.)	4.1 through 4.30	If provided in the facility or at the site: (a) Where multiple recreational facilities (e.g., tennis courts) are provided sufficient accessible facilities of each type to assure equitable opportunity for use by persons with handicaps. (b) Where practical, access to all or a portion of nature trails and jogging paths.
15 Laundry rooms	4.32.6	If provided in the facility or at the site, at least one of each type of appliance provided in each laundry area, except that laundry rooms serving covered multifamily dwellings would not be required to have front-loading washers in order to meet the requirements of § 100.205(c)(1). (Where front loading washers are not provided, management will be expected to provide assistive devices on request if necessary to permit a resident to use a top loading washer.)

Reprint of "Basic Components" chart from the Guidelines. The application column gives guidance on scoping: how many of what kind located where.

SCOPE OF ANSI AND THE ADA IN PUBLIC AND COMMON USE SPACES

APPLICATION OF ANSI A117.1 - 1986

The Fair Housing Act references the ANSI A117.1 Standard (*American National Standard for Buildings and Facilities: Providing Accessibility and Usability for Physically Handicapped People*) as an acceptable means of complying with the design requirements of the Act. However, the Act does not exclusively require following ANSI A117.1. The Fair Housing Act regulations of the U.S. Department of Housing and Urban Development (HUD) adopt the ANSI Standard, but specify the 1986 version of the ANSI A117.1 Standard. Likewise, the Guidelines reference specific portions of the 1986 ANSI A117.1 Standard.

The Guidelines are to provide technical guidance and are not mandatory. They provide a safe harbor for compliance with the accessibility requirements of the Act.

The “Purpose” section in the Guidelines states that “Builders and developers may choose to depart from these guidelines and seek alternate ways to demonstrate that they have met the requirements of the Fair Housing Act.” If an accessibility standard other than the ANSI A117.1 Standard is followed, care must be taken to ensure the standard used is at least equivalent to or stricter than the 1986 ANSI A117.1 Standard. See also the ANSI Standard discussion in the Introduction on page 13.

The Guidelines, in some instances, modify the ANSI specifications and, in other instances, substitute specifications. The illustrations in this chapter provide an overview of many of the key requirements for public and common use areas.

When designing these areas it is essential to refer to the 1986 ANSI A117.1 Standard specifications 4.1 through 4.31, as appropriate (or an equivalent or stricter standard), for detailed dimensional design specifications for each required accessible element or space.

Note: When this Manual states the ANSI Standard or the ANSI A117.1 Standard “must be followed” it means the 1986 ANSI A117.1 Standard or an equivalent or stricter standard.

ANSI Technical Specifications for Accessible Elements and Spaces

- 4.1 Basic Components
- 4.2 Space Allowances and Reach Ranges
- 4.3 Accessible Route
- 4.4 Protruding Objects
- 4.5 Ground and Floor Surfaces
- 4.6 Parking Spaces and Passenger Loading Zones
- 4.7 Curb Ramps
- 4.8 Ramps
- 4.9 Stairs
- 4.10 Elevators
- 4.11 Platform Lifts
- 4.12 Windows
- 4.13 Doors
- 4.14 Entrances
- 4.15 Drinking Fountains and Water Coolers
- 4.16 Water Closets
- 4.17 Toilet Stalls
- 4.18 Urinals
- 4.19 Lavatories, Sinks, and Mirrors
- 4.20 Bathtubs
- 4.21 Shower Stalls
- 4.22 Toilet Rooms, Bathrooms, Bathing Facilities,
and Shower Rooms
- 4.23 Storage
- 4.24 Grab Bars, and Tub and Shower Seats
- 4.25 Controls and Operating Mechanisms
- 4.26 Alarms
- 4.27 Detectable Warnings
- 4.28 Signage
- 4.29 Telephones
- 4.30 Seating, Tables, and Work Surfaces
- 4.31 Auditorium and Assembly Areas

PUBLIC AND COMMON USE AREAS NOT COVERED BY THE GUIDELINES

Where a newly constructed development consists entirely of buildings of four or more **multistory dwelling units without elevators** (e.g., two-story townhouses), the development is not required to comply with the Fair Housing Act or the Guidelines. Since there are no covered multifamily dwellings on the site, no public and common use areas anywhere on the site are required to be accessible. Note, however, that the Americans with Disabilities Act (ADA) of 1990 may apply. See the discussion of the ADA in the next column.

However, in housing developments of two- or three-story walk-up buildings where the ground floor dwelling units are single-story, all the ground floor units are covered (unless site impracticality can be claimed, see Chapter 1: “Accessible Building Entrance on an Accessible Route”) and must be on an accessible route with accessible entrances. Since an accessible route does not go to the upper floors, then the stairs up to those dwelling units, and the halls, corridors, and entry doors on the upper floors are not covered by the requirements of the Guidelines.

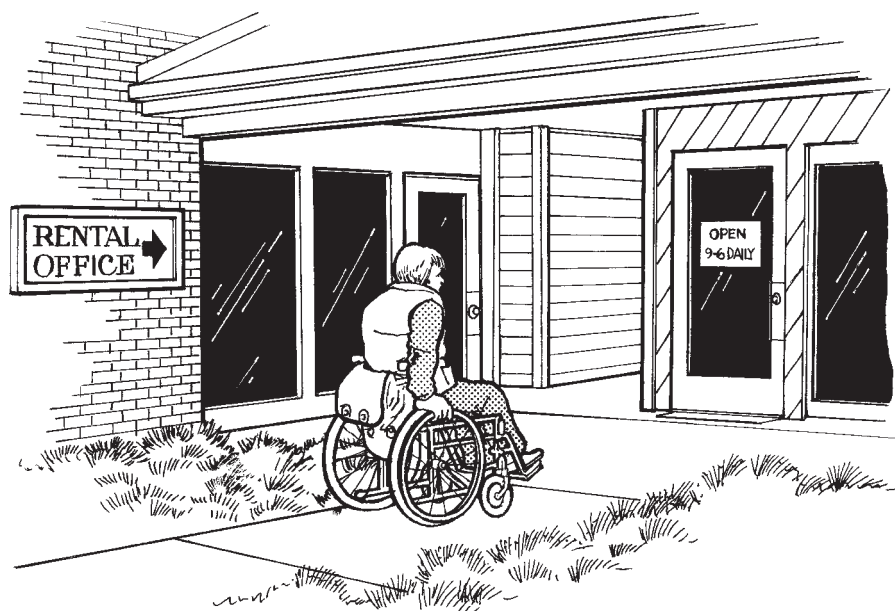
Of course, public and common use facilities must be accessible and cannot be located on upper floors of buildings which do not have an elevator(s), unless similar facilities also are located on the ground floor. For example, it would not be acceptable to have a common use trash room on the second floor of a building and not have one on the ground floor of the same building.

IMPACT OF THE AMERICANS WITH DISABILITIES ACT (ADA) ON PUBLIC AND COMMON USE SPACES

The dwelling units of private multifamily housing developments generally are not required to meet the accessibility provisions of the Americans with Disabilities Act Accessibility Guidelines (ADAAG). However, some public and common use spaces such as rental offices and sales offices are considered “public accommodations” under Title III of the ADA because, by their nature, they are open to people other than residents and their guests. They, therefore, must comply with the ADA requirements in addition to all applicable requirements of the Fair Housing Act.

Other buildings and amenities in a housing development, such as laundry buildings and recreational facilities (clubhouses, swimming pools, spas, game rooms, and exercise rooms), will be covered by the ADA **only** if they are available for use by people other than residents and their guests. If such facilities are made available to the public only periodically, such as for a festival or seasonal event, they must comply with the ADA during the event.

Fortunately the ANSI and the ADAAG have similar technical specifications for most features. However, there are some differences in scope and technical requirements. For example, the ADAAG requires designated parking spaces for vans. For more discussion of this, see page 2.20 “Access Aisles.” Since this document presents the ANSI specifications cited in the Fair Housing Act, the reader is advised to consult ADAAG only when public and common use facilities are to be available to the general public.



MULTIPLE RECREATIONAL FACILITIES

Where multiple recreational facilities of the same type are provided at the same location on the site (e.g., tennis courts), not all but a “sufficient” number of the facilities must be accessible to ensure an equitable opportunity for use by people with disabilities. It is recommended that all recreational facilities be accessible when the site is relatively flat and this can be easily achieved. Whenever only one of a type of recreational facility is provided at a particular location on the site, it must be accessible and connected by an accessible route to the covered dwelling units. In instances where each building or cluster of buildings is served by its own recreational facility e.g., a swimming pool, then the facility must be on an accessible route from the covered dwelling units.

In the case of recreational facilities, special equipment and features are not required by the Guidelines. For example, play areas for children and swimming pool aprons must be accessible and

meet ANSI specifications for all commonly constructed elements, but special mechanical pool lifts or wheelchair accessible play equipment are not required. The Guidelines do not require an accessible route (ramp or lift) down into the water at pools.

Public and Common Use Space Covered by the ADA

Places of public accommodation subject to the requirements of Title III of the ADA include:

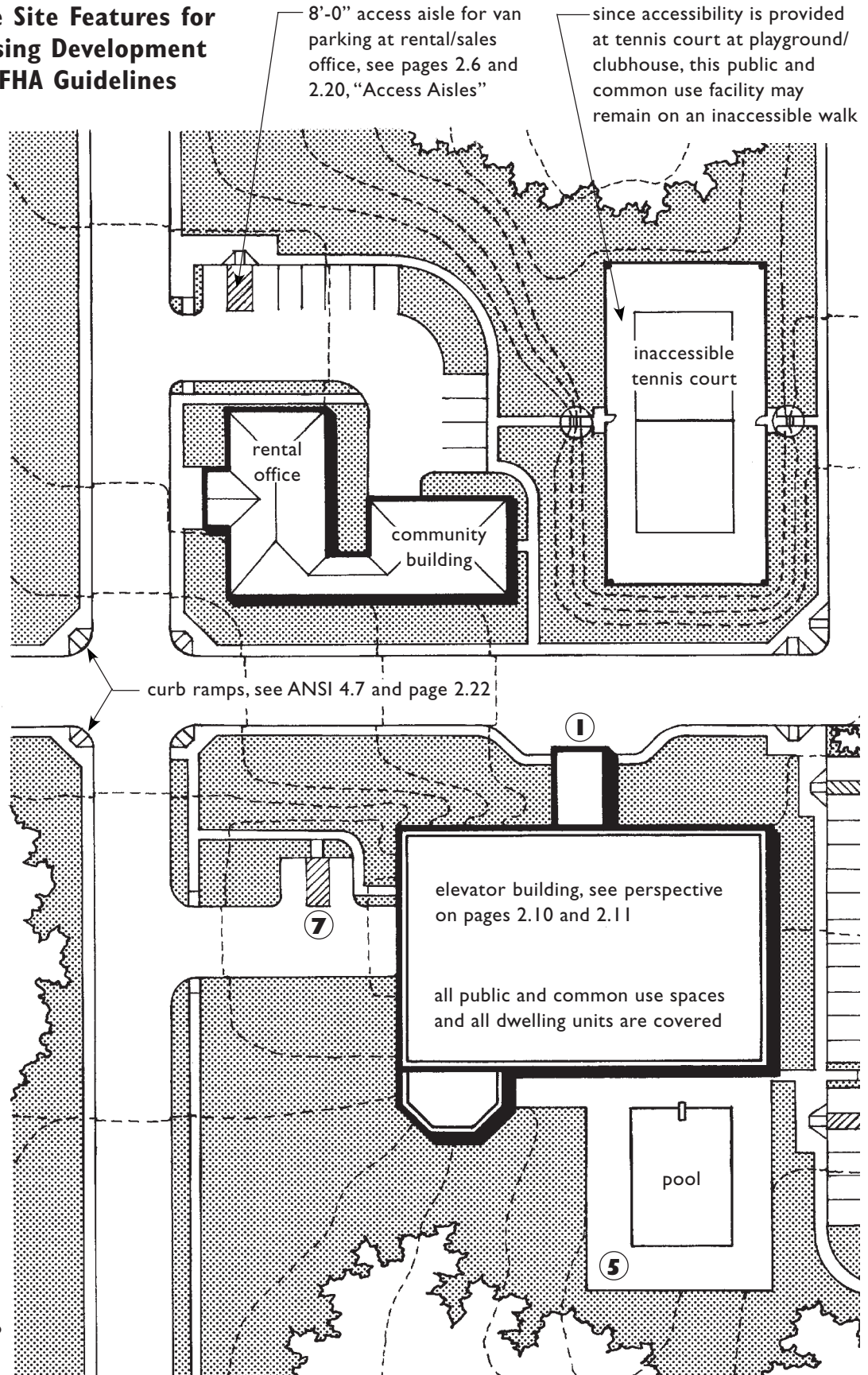
1. places of lodging, 2. establishments serving food or drink,
3. places of exhibition or entertainment, 4. places of public gathering,
5. sales or rental establishments, 6. service establishments, 7. stations used for specified public transportation, 8. places of public display or collection, 9. places of recreation,
10. places of education, 11. social service center establishments, and 12. places of exercise or recreation.

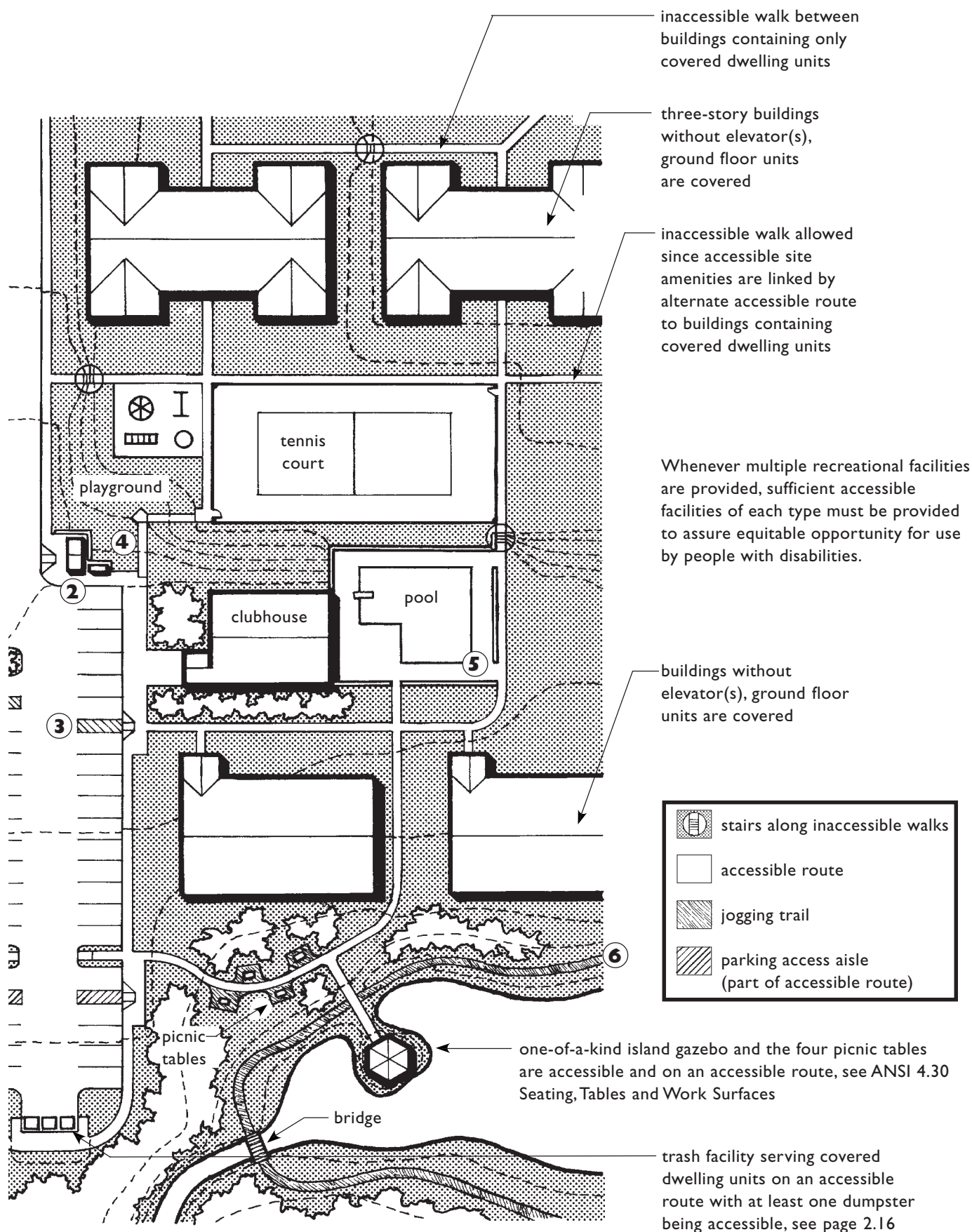
28 CFR Part 36, Section 36.104.

Definitions

Example: Accessible Site Features for a Multifamily Housing Development Covered by the FHA Guidelines

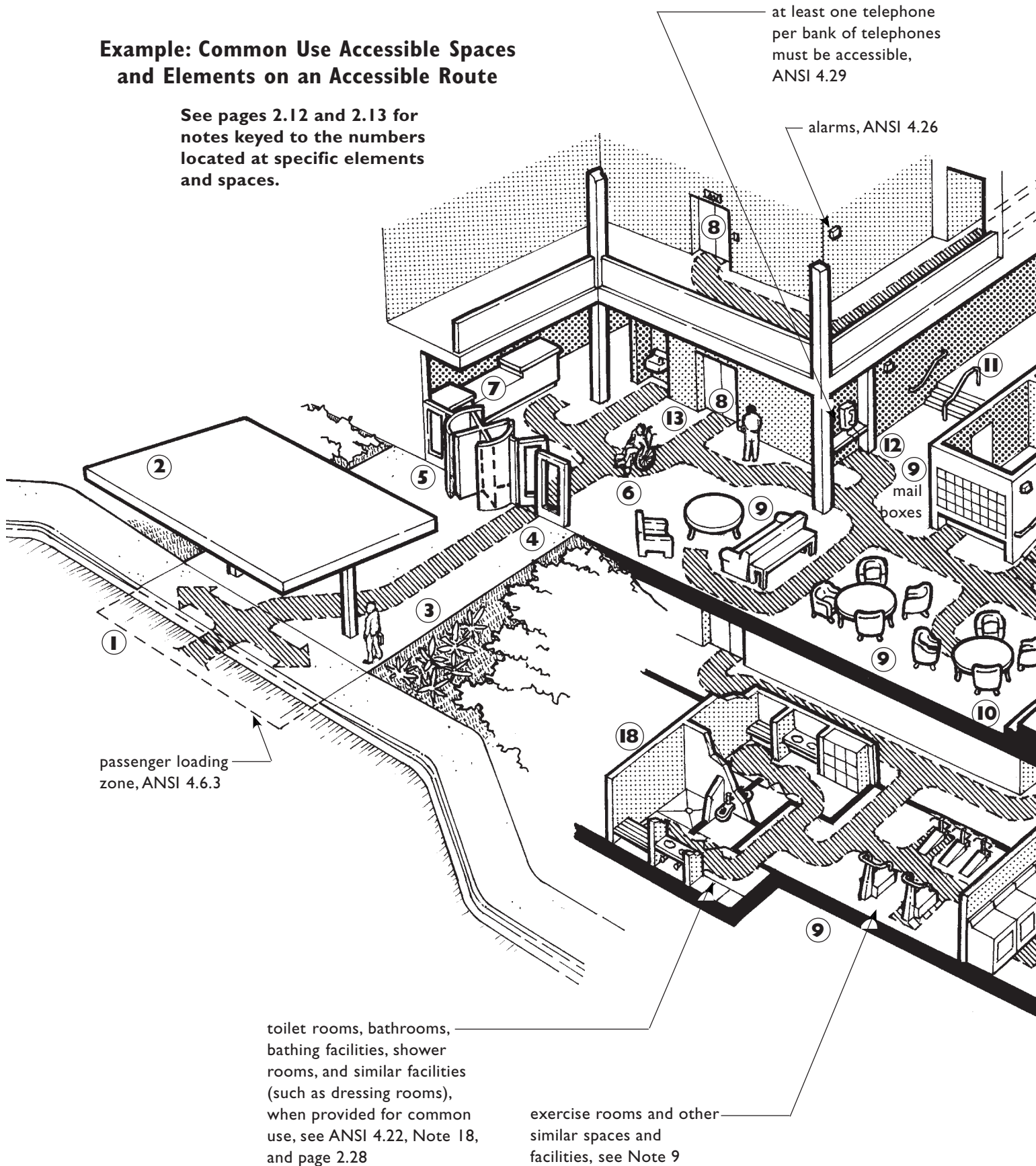
- ① accessible passenger loading zone, see ANSI 4.6
- ② accessible bus shelter (pedestrian arrival point) on an accessible route, see drawing on page 1.6
- ③ accessible resident and visitor parking, see page 2.23
- ④ ramp from upper level of site with tennis court to lower level with clubhouse is part of a required accessible route and must meet ANSI 4.8 Ramps
- ⑤ both pools must be on an accessible route that continues around the apron (access into water not required) since they serve separate buildings containing covered dwelling units
- ⑥ all or a portion of jogging trails must be accessible where practical; this trail is accessible from this point to bridge (smooth, level, paved surface with no abrupt change in level); beyond bridge, trail is inaccessible
- ⑦ van accessible space, see page 2.13, note 16

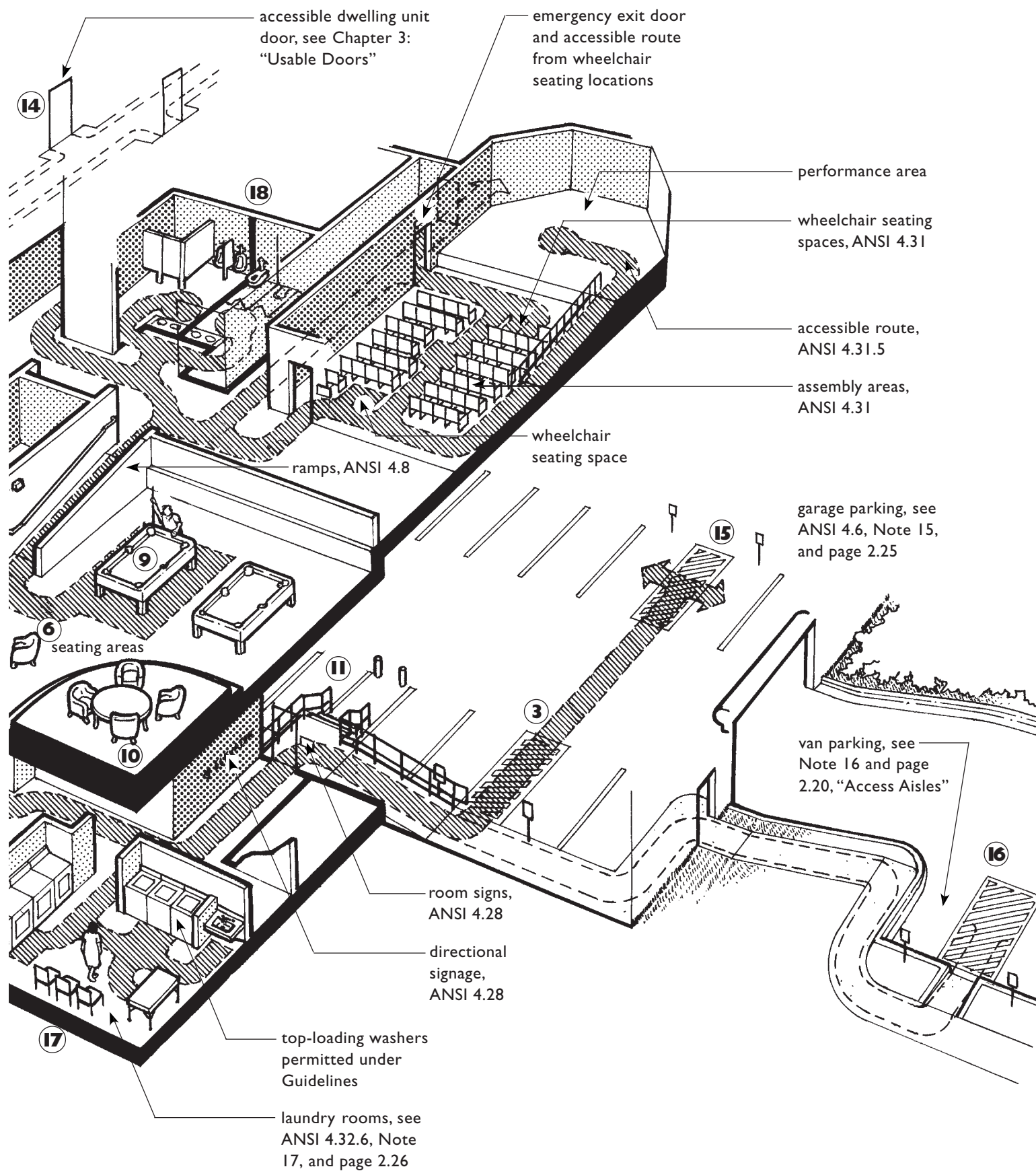




Example: Common Use Accessible Spaces and Elements on an Accessible Route

See pages 2.12 and 2.13 for notes keyed to the numbers located at specific elements and spaces.





The following numbered notes are keyed to the perspective “Example: Common Use Accessible Spaces and Elements on an Accessible Route” appearing on pages 2.10 and 2.11. Each note contains selected technical design references and explanations based on the FHA Guidelines and the ANSI A117.1 - 1986.

1

Passenger Loading Zones. Passenger loading zones must have a large clear pedestrian access aisle connected by an accessible route to accessible building entrances. They also must have sufficient headroom to clear buses or vans with high roofs. See ANSI 4.6 and Notes 2 and 3 below.

2

Overhanging Objects. Roofs, tree limbs, or other elements that overhang passenger loading zones must be kept high enough to clear buses or vans with high roofs. See ANSI 4.6.

3

Accessible Route. Accessible routes must connect accessible transportation stops, parking spaces, passenger loading zones, and public streets and sidewalks within the boundaries of the site to accessible entrances. See ANSI 4.3, Note 6, and page 2.15.

4

Accessible Entrance. Doors along accessible routes must meet ANSI 4.13. See also Chapter 1: “Accessible Building Entrance on an Accessible Route.”

5

Revolving Doors. Revolving doors generally cannot meet the requirements of ANSI 4.13, and, therefore, cannot be the only means of passage at an accessible entrance or on an accessible route.

6

Accessible Route. An accessible route must connect accessible building or facility entrances with accessible spaces and elements within the building or facility, including adaptable (or covered) dwelling units. See also ANSI 4.3, Note 3, and page 2.15.

7

Reception Desk. Accessible reception desks are not specifically described in ANSI. This common use facility must be accessible to people with disabilities and should comply with the applicable specifications of ANSI 4.1 - 4.31. See also Note 9.

8

Elevators. All elevators, if provided, must comply with ANSI 4.10.

9

Multiple Elements, Features, or Spaces.

Whenever one of a type of element, feature, or space is provided for public or common use of residents, it must be on an accessible route and meet the applicable specifications of ANSI. Whenever multiple features or facilities are provided, sufficient accessible features of each type must be provided to assure equitable opportunity for use by people with disabilities.

When ANSI does not contain specifications for the specific facility or feature in question, then related human factors and performance specifications must be used to achieve accessibility. Such specifications include, but are not limited to, 4.2 Space Allowances and Reach Ranges, 4.3 Accessible Route, 4.4 Protruding Objects, 4.5 Ground and Floor Surfaces, and 4.25 Controls and Operating Mechanisms.

10

Raised or Sunken Floor Areas. Small raised or sunken floor areas within a single space or room not connected by an accessible route may be allowed, provided that any facilities or elements on the raised or lowered area also are provided on the main or accessible floor area in the same room or space. In many building codes raised areas, such as mezzanines, are limited to a maximum of 33-1/3 percent of the floor area of the space in which they are located. This seems to be a reasonable limiting percentage for a cumulative total of the entire inaccessible raised and lowered floor areas. The majority of all facilities or elements must be on the accessible floor area and be served by an accessible route. The raised or sunken area must not prevent an accessible route from serving other accessible areas, facilities, or elements; it must not require people with disabilities to take a circuitous route or travel an inordinate additional distance to reach the accessible space.

11

Stairs Along Accessible Routes. A properly designed ramp is considered to be an acceptable part of an accessible route. However, since some users are safer on stairs than on ramps, it is best if stairs are provided in combination with ramps. This is especially true when they are located along an accessible route connecting levels not connected by an elevator. Such stairs are required to meet the ANSI requirements since they will be used by people with particular disabilities for whom steps are easier to traverse than ramps. See page 2.17 for further discussion of stairs along accessible routes.

12

Protruding Objects. The corridor space is an accessible route and like all accessible routes and maneuvering areas, it must be free of hazardous protruding objects that project from walls and posts and are dangerous to someone who is inobservant or a person with a visual impairment. See ANSI 4.4 Protruding Objects and page 2.18.

13

Drinking Fountains and Water Coolers. Where drinking fountains or water coolers are provided, 50 percent on each floor, or at least one, must be on an accessible route and comply with ANSI 4.15.

14

Doors to Covered Units. Doors to adaptable (or covered) dwelling units must meet ANSI 4.13 on the exterior or public and common use side, but need only meet Guidelines Requirement Three: Usable Doors on the inside. See Chapter 3: “Usable Doors.”

15

Parking. Where parking is provided on a multifamily building site, accessible parking spaces on an accessible route are required for residents and visitors. To comply with the Guidelines, such spaces must meet the ANSI 4.6 specifications for parking. The accessible parking that serves a particular building should be located on the shortest possible accessible circulation route to an accessible entrance of the building.

16

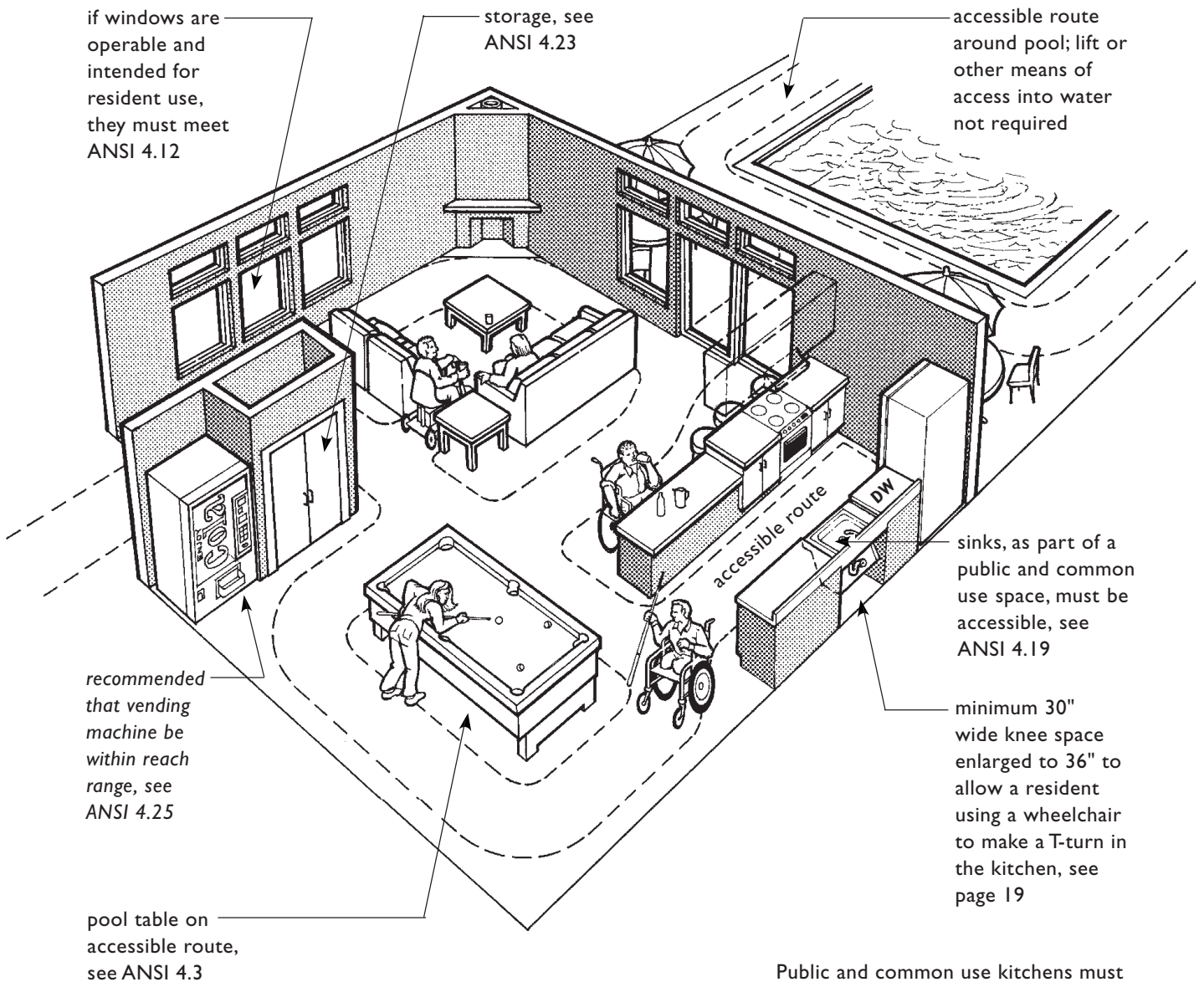
Van Parking. The Guidelines do not require special van parking, but they do require headroom over passenger loading zones for vans. ANSI accessible parking spaces, when located in parking garages, may or may not have sufficient headroom to accommodate vans. Also, the 60-inch access aisle specified in ANSI is not wide enough for vans with side-mounted lifts. For these reasons, it is recommended, where accessible parking is located in garages not having headroom equal to that required by ANSI at loading zones, additional supplemental designated van parking spaces be placed outdoors and furnished with an 8-foot (96 inches) wide access aisle and an accessible route to the garage or other entrances of the building.

17

Laundry Rooms. Where laundry rooms are provided for common use of residents, at least one of each type of appliance provided in each laundry area must be accessible, see ANSI 4.32.6. Note, however, front-loading machines are not required. The accessible route into the room must adjoin a clear floor space to permit a person using a wheelchair to make a parallel or forward approach (see page 5.5) to at least one of each type of appliance, i.e., washing machines, dryers, and soap dispensers. If related features are provided in laundry rooms, such as wash sinks, tables, and storage, at least one of each type must be accessible and comply with applicable ANSI specifications. See page 2.26.

18

Toilet Rooms, Bathrooms, Bathing Facilities, and Shower Rooms. Where toilet rooms and bathing facilities are provided for public use or common use of residents, at least one fixture of each type provided must be accessible per room. See page 2.28 and ANSI 4.22. If related features are provided, such as lockers, at least one of each type must be accessible and comply with applicable ANSI specifications including 4.2 Space Allowances and Reach Ranges, 4.25 Controls and Operating Mechanisms, and 4.23 Storage.



Accessible Elements and Features of a Public and Common Use Clubhouse

Public and common use kitchens must be usable and at least meet the requirements in the Guidelines for kitchens. If preferred, the requirements for kitchens in ANSI 4.32 could be followed.

Notes in italic type are recommendations only and are not required by ANSI or the Guidelines. All recommended features are helpful to people with and without disabilities.

SELECTED TOPICS ON ACCESSIBLE PUBLIC AND COMMON USE SPACES AND FACILITIES

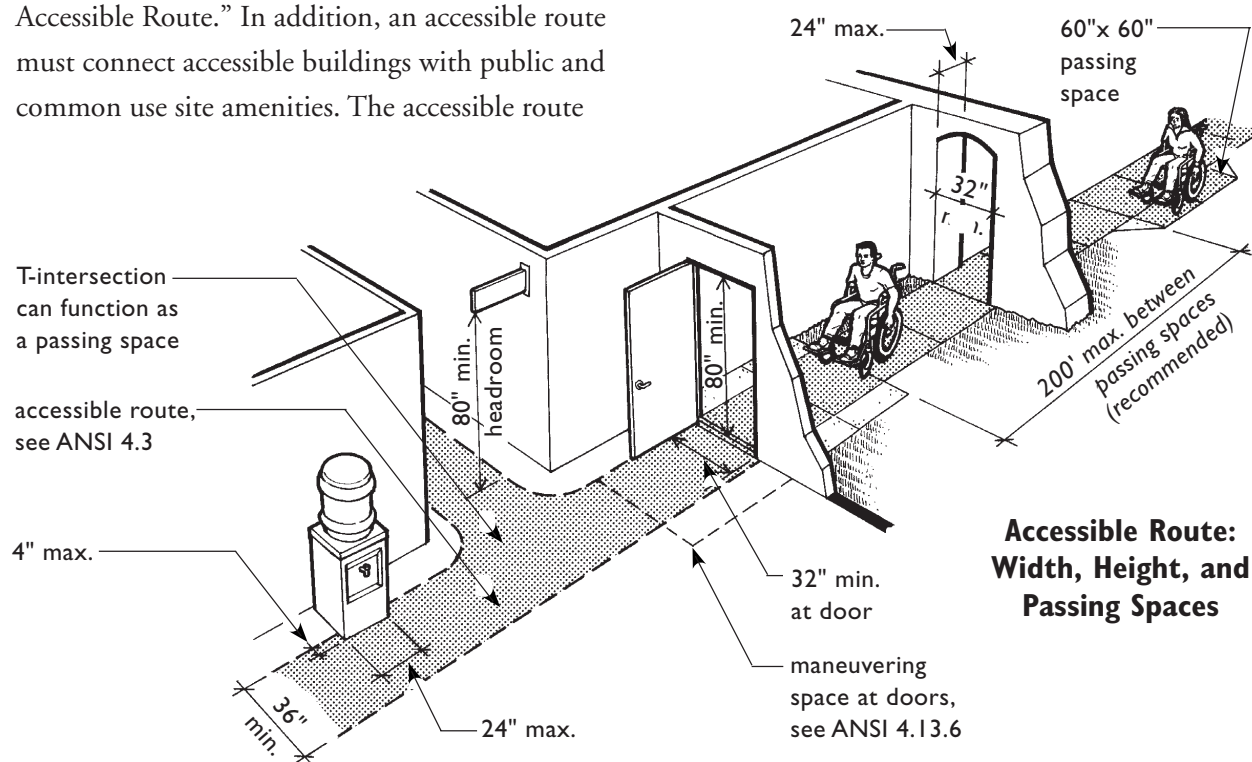
The following is additional explanatory text and illustrations describing selected topics related to accessible public and common use spaces and facilities covered by the Guidelines.

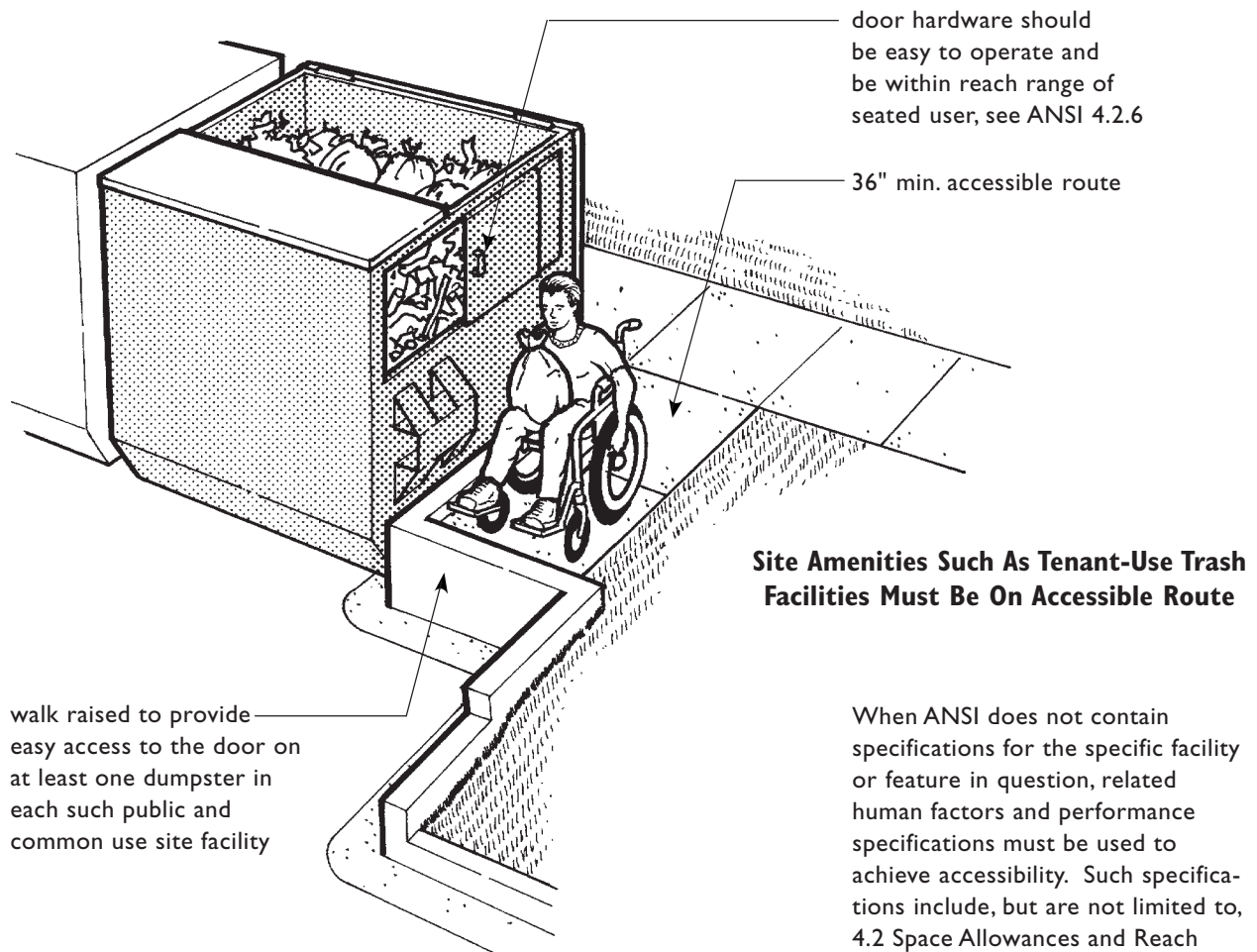
ACCESSIBLE ROUTE

An accessible route is a path that is at least 36 inches wide, smooth, as level as possible, and without hazards or obstructions. Within the boundary of the site, an accessible walk or route on a site must connect public transportation stops, accessible parking spaces, accessible passenger loading zones, and public streets and sidewalks to accessible building entrances. Such accessible walks and routes are subject to site constraints discussed in Chapter 1: “Accessible Building Entrance on an Accessible Route.” In addition, an accessible route must connect accessible buildings with public and common use site amenities. The accessible route

links all accessible elements and features on a site and within a building, making it possible for people with a wide range of disabilities to maneuver safely and use a facility successfully.

Exterior accessible routes include but are not limited to parking access aisles, passenger loading zones, curb ramps, crosswalks at vehicular ways, walks, ramps, and lifts. See Chapter 1: “Accessible Building Entrance on an Accessible Route” for additional discussion of accessible routes on sites. As the accessible route continues into a building, it may include corridors, doorways, floors, ramps, elevators, lifts, and clear floor space at fixtures. Accessible routes also may include sky walks, tunnels, garages, and parts of many public and common use spaces. ANSI 4.3 contains complete technical specifications for accessible routes, including width, headroom, surface texture, slope, changes in level, doors, and egress in emergencies.





WALKS EXEMPT FROM ACCESSIBLE ROUTE REQUIREMENTS

On-grade walks between separate buildings containing only covered dwelling units are not required to be accessible. However, if the grade of walks between buildings containing only dwelling units does not exceed 8.33%, it is recommended that these walks meet the requirement for accessible routes and not be interrupted by steps. If these walks are made accessible, handrails will not be required on any part of the walk where the slope is between 5% and 8.33%.

It is important to note, however, that if walks between buildings containing only covered dwelling units are also part of a required accessible route—for example, if the walk serves as the route to a common use facility located nearby—then the route would be required to be accessible. (See page 1.8, “Accessible Routes and Walks Between Accessible Buildings and Site Facilities.”)

STAIRS AND ACCESSIBLE ROUTES

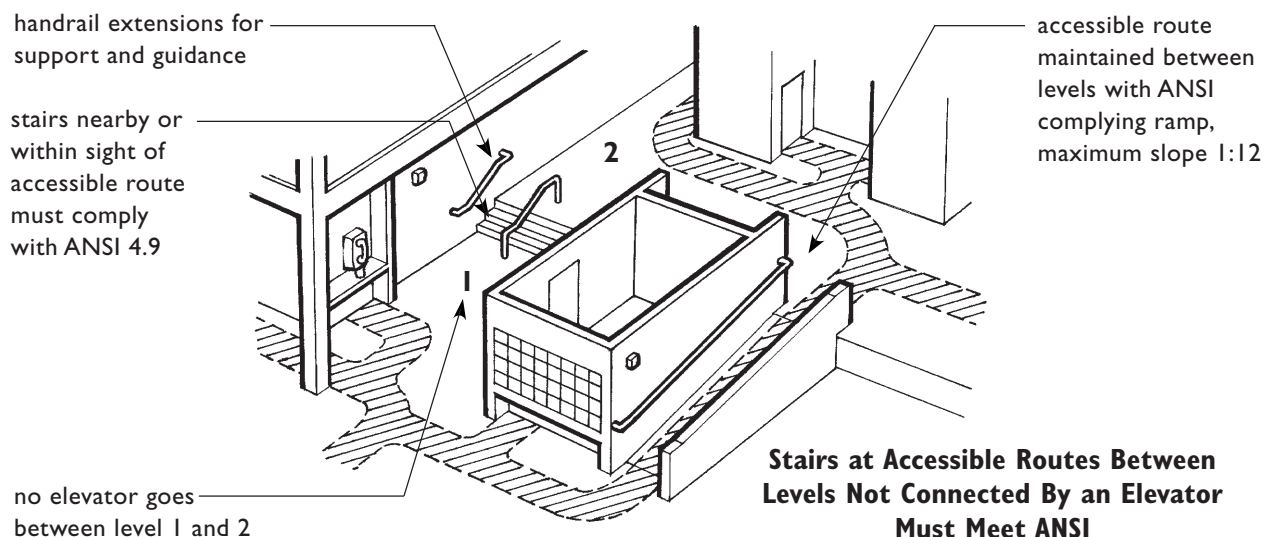
By definition and ANSI 4.3.8 Changes in Level, a stair can never be part of an accessible route, i.e., a stair can never interrupt or be part of the path of an accessible route. Elevators, ramps, and mechanical lifts, however, can be part of an accessible route. In view of the fact that some users have difficulty walking on ramps and are safer using appropriately designed stairs, it is always best that stairs be placed adjacent to or nearby ramps that are used to provide an accessible route between levels not served by elevators.

The ANSI and the Guidelines “Application” charts both state “stairs on accessible routes connecting levels not connected by an elevator” must comply with ANSI 4.9 Stairs. However, the preamble to the Guidelines states “stairs are subject to the ANSI Standard only when they are located **along** an accessible route not served by an elevator.” Therefore, “along” and “on” are interpreted to have the same meaning, especially given the definition of an accessible route that states a stair cannot be part of an accessible route. Thus, “along” and “on” are intended to mean either “adjacent to” or “nearby.”

Nearby in this case means within the same area or within sight of the accessible route or at an unseen location indicated by directional signage. See the example in the illustration below.

In buildings that do not have elevator(s), the Guidelines do not require stairs serving floors above or below the ground floor to meet the ANSI standard. It should be noted, however, that any applicable state or local law or code that sets a stricter standard, may require the stairs to be accessible.

For example, if the local building code has adopted the 1986 ANSI A117.1 Standard, then ANSI 4.9.1 would be applicable. ANSI 4.9.1 states, “Stairs that are required as a means of egress and stairs between floor levels not connected by an elevator shall comply with 4.9.” Because most stairs in nonelevator buildings are provided either to connect floors not connected by an elevator or are stairs required as a means of egress, this would mean that virtually all stairs, including monumental or decorative stairs, would have to comply. Therefore, it is important to check state or local laws for their applicability to stairs.



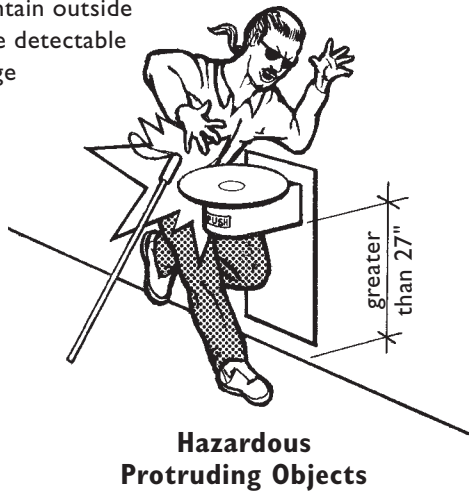
PROTRUDING OBJECTS

Many people with visual impairments use a long cane for guidance. The cane is used to follow a “shoreline” such as the edge of a sidewalk or a curb or, indoors, the baseboard of a wall. The cane, when swept ahead of the user, also detects obstacles in the path. Objects which protrude from walls or hang from overhead are not detectable and are, therefore, hazardous because a person with a visual disability can not avoid running into them.

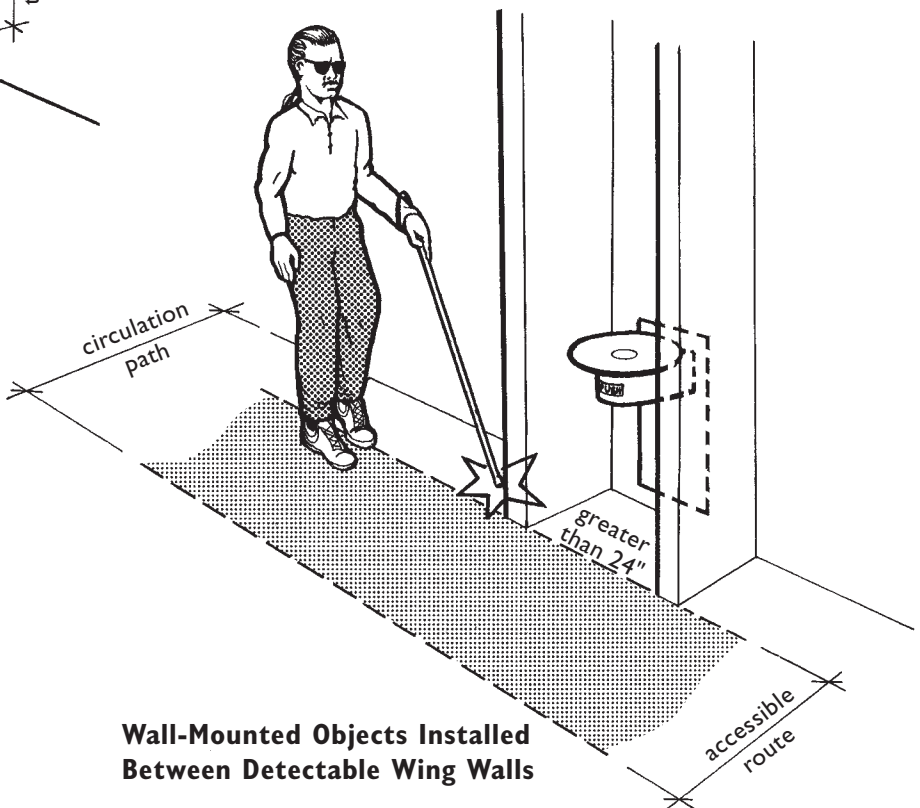
Detectable items are obstacles that can be maneuvered around.

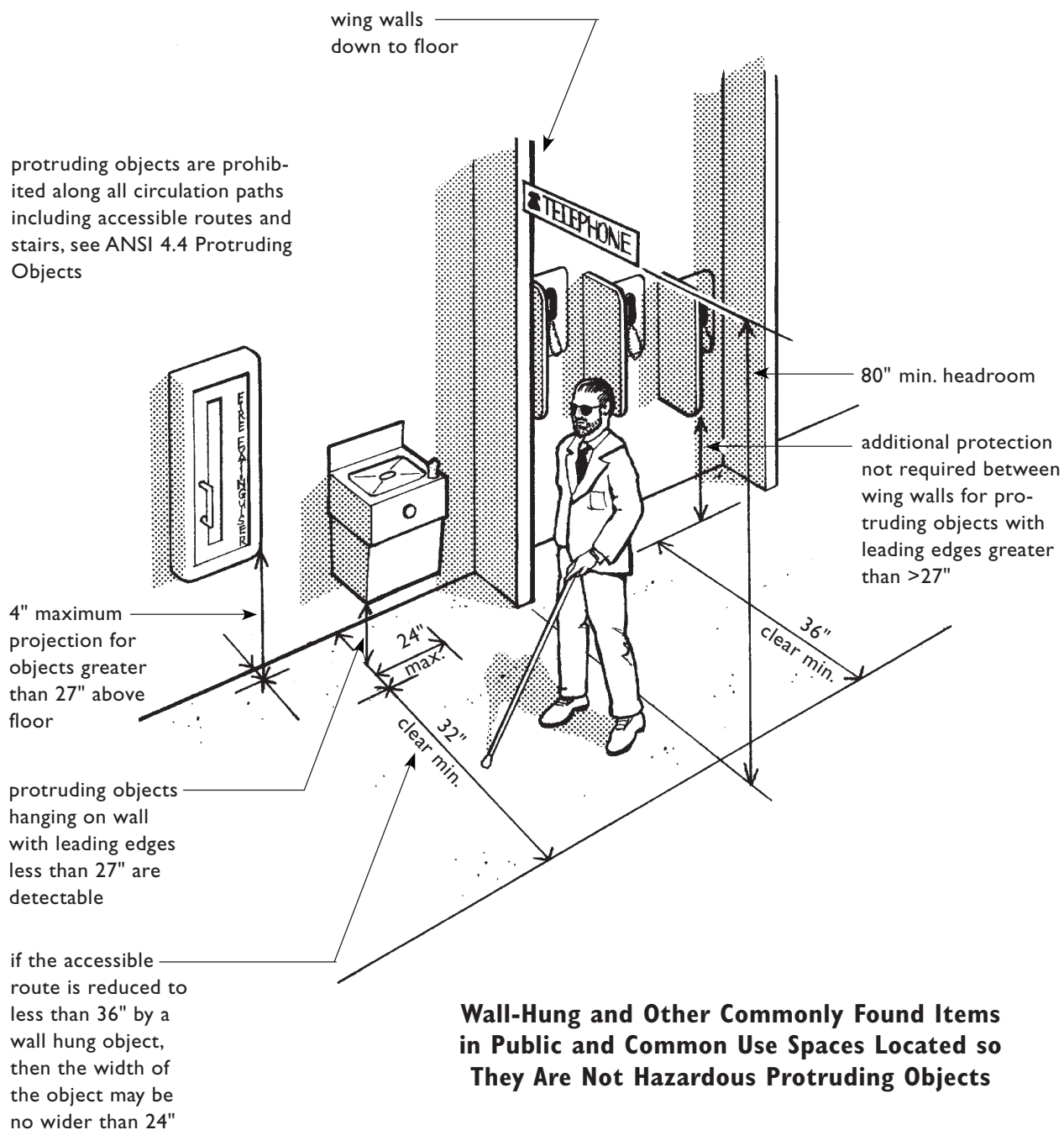
There must always be a 36-inch wide accessible route around any obstacle. Large wall-mounted items such as fire extinguishers and telephone enclosures must be recessed, set in alcoves, or designed so they have structures extending close to the floor, no higher than 27 inches, and within the long cane detectable area.

bottom edge of
fountain outside
cane detectable
range



wing walls or other
detectable warning
barrier must not
reduce accessible
route



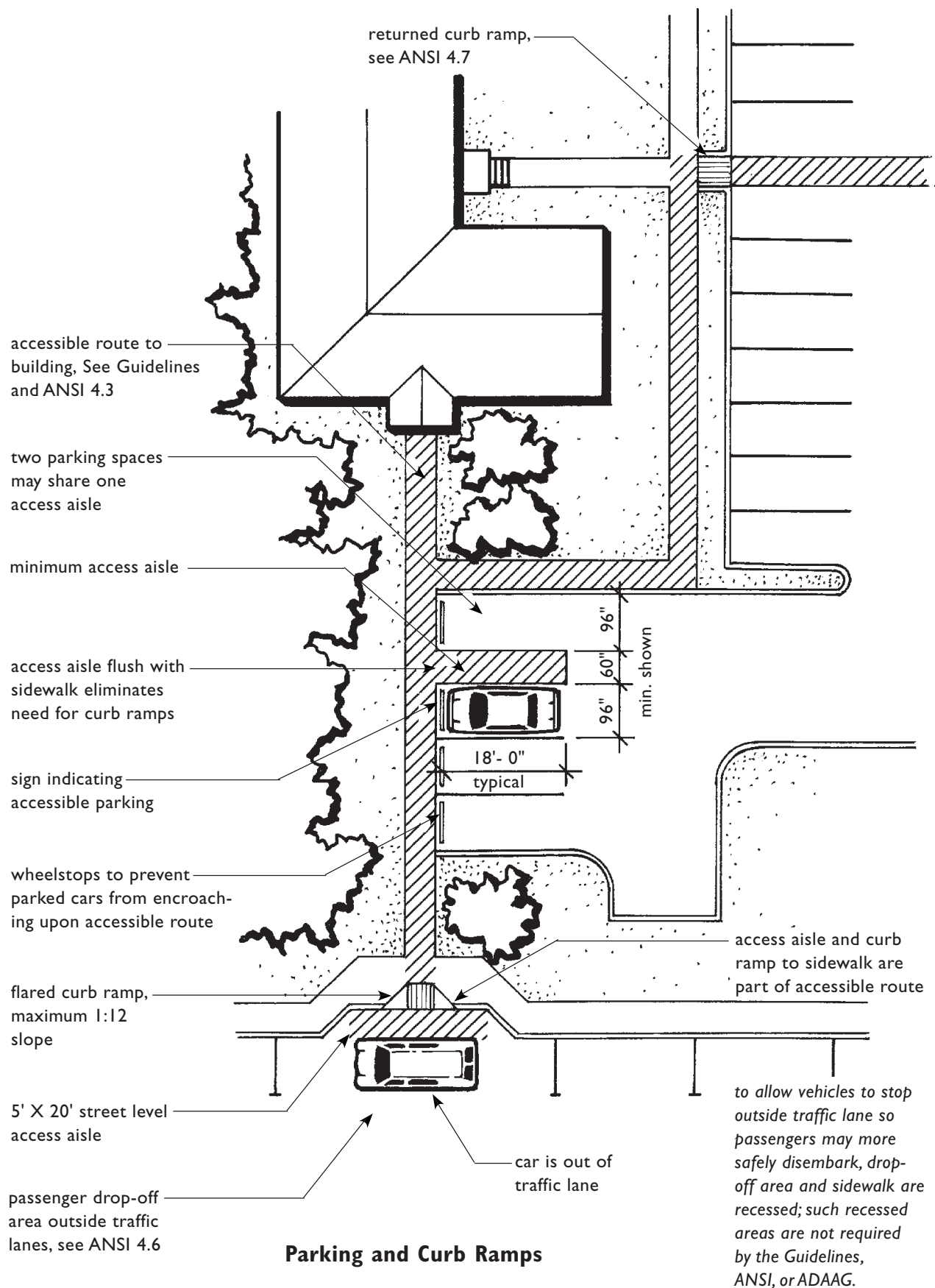


ACCESSIBLE PARKING ON AN ACCESSIBLE ROUTE

When parking is provided on a residential site, accessible parking spaces on an accessible route must be provided for residents and visitors. Accessible parking spaces must meet the requirements for parking in ANSI 4.6 and be located on the shortest possible accessible circulation route to an accessible entrance, subject to site considerations in Chapter 1.

Access Aisles. Parking spaces must be wide enough to allow people using wheelchairs or mobility aids to move between cars and to enter cars or vans. Accessible parking spaces must be at least 96 inches wide and have an adjacent access aisle that is 60 inches wide. This 60-inch access aisle is regarded as a minimum, and although it is adequate for people using wheelchairs who can transfer into and out of cars, it is too narrow for safe and comfortable use for people who drive vans. The Guidelines do not require nor specify the size of van-accessible access aisles. The only nationally accepted design standard that contains such a specification is the Americans with Disabilities Act Accessibility Guidelines (ADAAG), which specify that a van parking access aisle must be at least 96 inches wide and is required at sales and rental offices. See page 2.6.

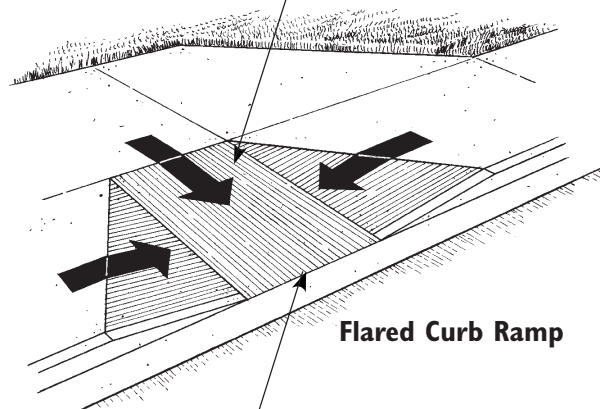
Curb Ramps. Curb ramps are transitions between roads, parking areas, access aisles, and sidewalks that allow a pedestrian route to remain accessible to people who use wheelchairs and other mobility aids, see ANSI 4.7. Curb ramps are a necessity for people with mobility impairments but are a hazard to people who are blind who use the curb as a “cue” to know when they are entering the street. The ANSI Standard requires a texture on curb ramp surfaces to make them detectable. These textures often do not provide enough of a cue and a person with a visual impairment may inadvertently enter the street. Locating curb ramps out of the usual line of pedestrian flow and “shorelines” (edge between sidewalk and grass or other cane detectable surface) is one solution to this problem. See drawing at the bottom of page 2.22.



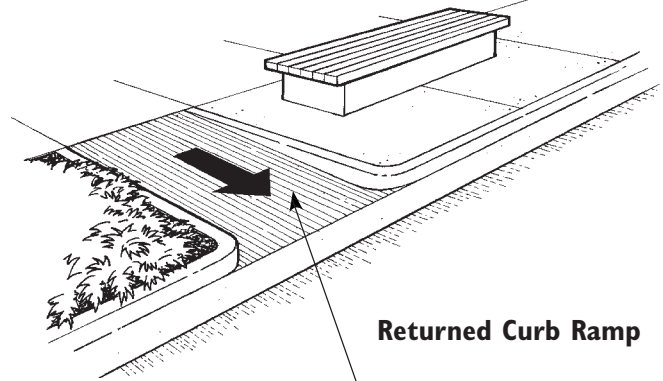
required textures
on curb ramps,
see ANSI 4.7.7

flared curb ramp
allows people to
walk safely across it

returned curb ramp
needs protection so
people will not trip on it



Flared Curb Ramp



Returned Curb Ramp

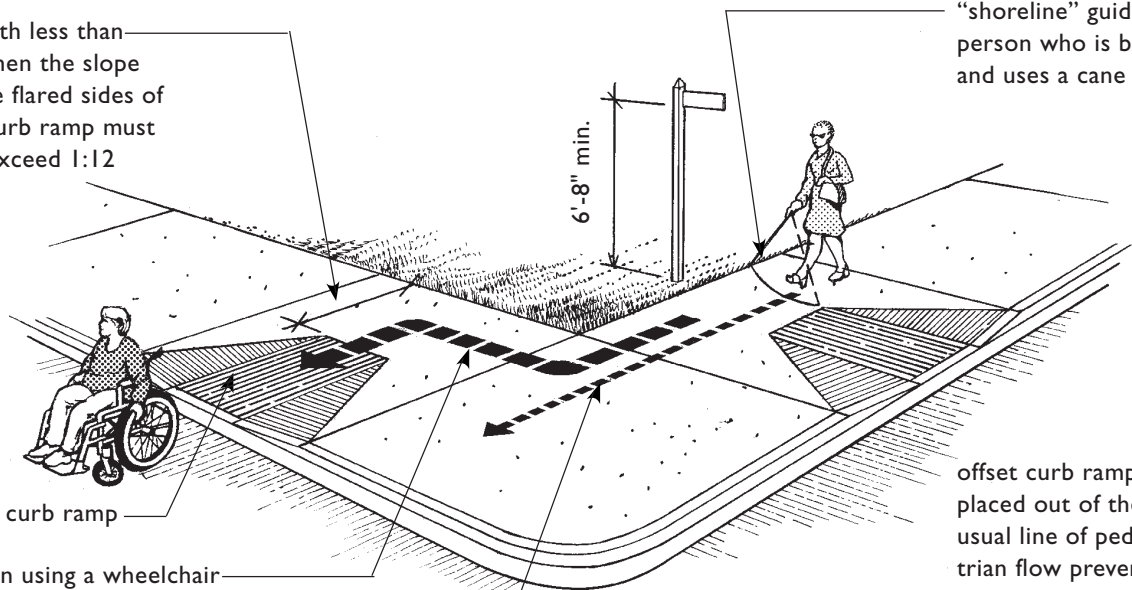
smooth transition
with no lip or
drop-off here

The "flared curb" ramp
is safest and allows people
to enter the ramp directly
or from a side angle. This
design is best used where
pedestrians are likely to
walk across the ramp.

The "returned curb" ramp
has the curb "turned back"
the full depth of the ramp.
This design can be a tripping
hazard to pedestrians and
should be used only where
adjacent plant beds or other
features will prevent ap-
proach from the sides.

required textures
on curb ramps,
see ANSI 4.7.7

if width less than
48" then the slope
of the flared sides of
the curb ramp must
not exceed 1:12



Offset Curb Ramps

flared curb ramp

person using a wheelchair
must take short detour

path of a person with
visual disability to the curb

"shoreline" guides
person who is blind
and uses a cane

offset curb ramp
placed out of the
usual line of pedes-
trian flow prevents
person with visual
disability from walking
out into road before
realizing it

Types of Curb Ramps

RESIDENT ACCESSIBLE PARKING

Minimum Number. The Guidelines provide that a minimum of two percent of the parking spaces serving covered dwelling units be made accessible and be located on an accessible route. For example, if 100 units are covered, then a minimum of two accessible spaces is required.

$$100 \times 2\% = 2$$

If the development provides different types of parking, such as surface parking, garage, or covered spaces, at least one of each must be made accessible. Since many people with disabilities require more time to get in and out of vehicles, covered parking is especially important; therefore, where covered parking is provided, such covered parking must include at least one, and preferably more than one, accessible parking space. Accessible covered surface parking may be substituted for garage parking if the latter is not accessible. While the total number of spaces required to be accessible is only two percent, at least one space for each type of parking must be made accessible even if this number exceeds two percent.

Many state or local codes may require a greater percentage of accessible parking spaces for both residents and visitors. Builders/developers must follow the local or state code whenever it is stricter. Note also that accessible spaces benefit a wide range of users, residents and visitors with disabilities, residents carrying packages, families with strollers, movers, and delivery personnel.

Requested Parking Spaces. If buyers or renters request an accessible space at the time of first sale or rental, it may be necessary to provide additional

accessible parking spaces if the two percent are already reserved. These must be offered on the same terms and with the full range of choices offered other residents, i.e., surface, garage, or covered parking. If the spaces that make up the two percent count are not being used by residents with disabilities, such space(s) may be moved to a resident requested location near a building or unit entrance. These new parking spaces must be on an accessible route including curb ramps.

Number of Accessible Parking Spaces

For Residents

- 2% of parking spaces serving covered dwelling units
- minimum of one at each site amenity

For Visitors, When Visitor Parking Is Provided

- a sufficient number of spaces to provide access to grade level entrances of covered multifamily dwellings
- minimum of one at sales/rental office

PARKING AT PUBLIC AND COMMON USE FACILITIES

If parking spaces are available at a facility, such as a swimming pool, then at least one accessible parking space must be provided and be on an accessible route. A specific number or percentage of spaces is not defined in the Guidelines; however, to provide equitable use of facilities by people with disabilities, parking should be provided in accordance with the local code, or, at a minimum, at least one accessible parking space must be provided at each facility serving buildings containing covered dwelling units.

The Guidelines allow a vehicular route as an alternative to an accessible pedestrian route between dwellings and accessible public or common use site amenities when the site conditions are deemed extreme or where other physical barriers or legal restrictions prevent the installation of an accessible pedestrian route. See page 1.9 for additional discussion of “Use of Vehicles for Access to Site Amenities.” When use of a vehicle is the only means for a person with a mobility disability to reach a facility, it is recommended that more than one accessible parking space on an accessible route to the facility be provided. Since there is no accessible pedestrian route, it is important to provide ample parking at such public and common use facilities that may be accessed only via a vehicular route. If a person who uses a wheelchair must drive to a site facility, he or she should not be further inconvenienced and frustrated by finding the only accessible space already occupied.

VISITOR ACCESSIBLE PARKING

If visitor parking is provided, accessible parking spaces for visitors also must be provided. The Guidelines do not specify a number or percentage of accessible visitor spaces, but provide that such parking must be “sufficient” to provide access to grade level entrances of covered multifamily dwellings. To allow people with disabilities to visit and have access to such entrances on an equitable basis, it is recommended that accessible visitor spaces be dispersed throughout the site, and that several spaces be provided at a building with large numbers of dwelling units.

IMPRACTICAL SITES

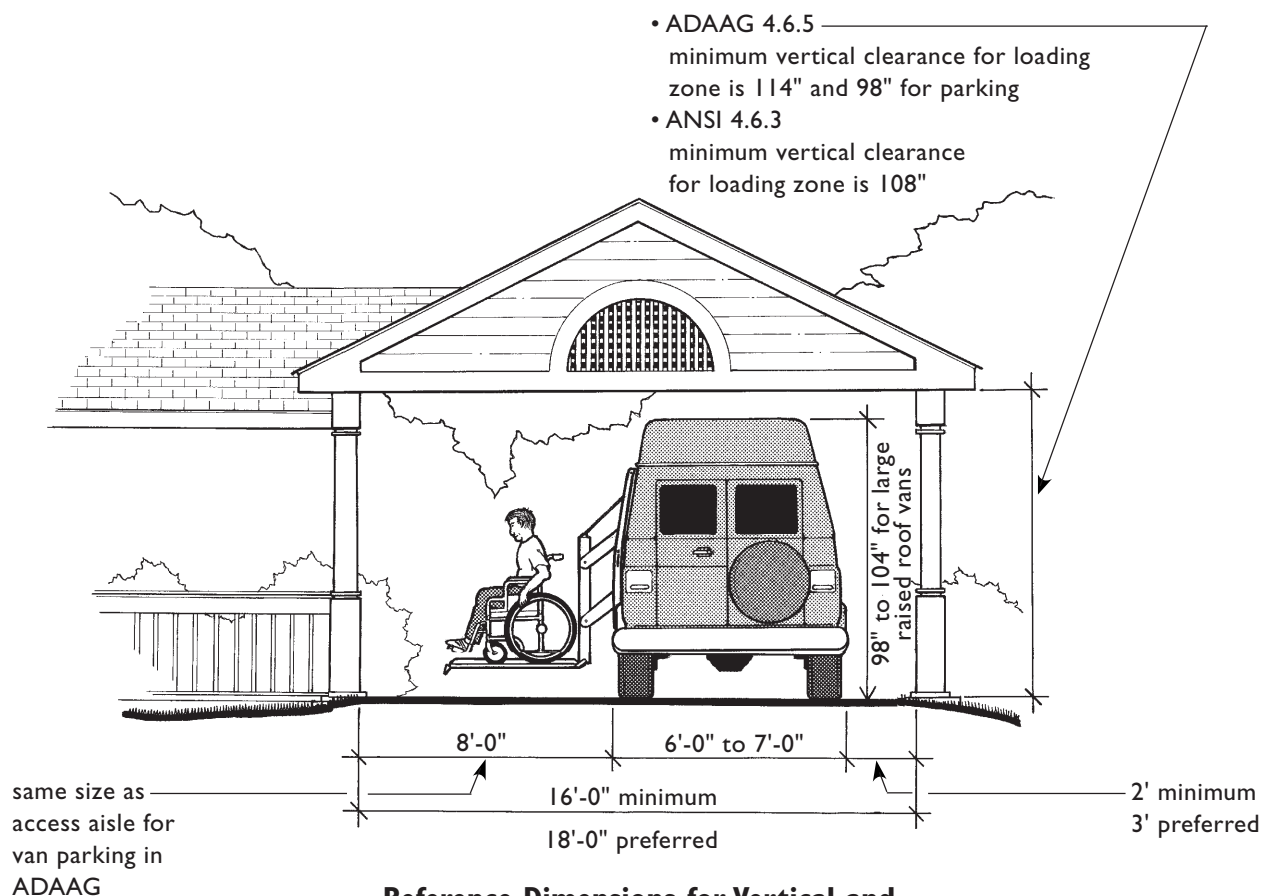
Where site conditions make it impractical to provide an accessible route from the designated general parking area to a building containing covered dwelling units, accessible parking spaces at a minimum of two percent of the covered dwelling units must be provided on an accessible route to the entrance. It is strongly recommended that every effort be made to provide this parking from an adjacent location. If visitor parking is provided, there also must be accessible parking spaces on an accessible route for use by visitors. See Chapter 1: “Accessible Building Entrance on an Accessible Route,” and the illustration on page 1.50 of that chapter.

CLEARANCES FOR COVERED PARKING

If a project provides detached parking garages for assignment or rental to its tenants, it is considered public and common use parking. In the "Supplemental Questions and Answers," item 14 (see Appendix), it is suggested that at least two percent of the garages should be at least 14'-2" wide and the passage door for the vehicle should be at least 10'-0" wide. The width of such garages would be adequate for cars, but to provide sufficient space for a van, it is recommended that the width be increased to between 16 and 18 feet. The door width of the garage could remain the same.

Neither the Guidelines nor ANSI give specifications for vertical clearance in parking

garages or at other sheltered parking to accommodate vans. However, ANSI does give specifications for vertical clearance of 108 inches at accessible passenger loading zones. The ADAAG specifies 98 inches of vertical clearance for van parking and 114 inches of vertical clearance at accessible passenger loading zones. The dimensions shown below are a compilation of available figures from commonly accepted accessibility standards that may be used to assist the building industry when planning to provide covered van parking. Such parking is not required by the Guidelines nor ANSI.



Reference Dimensions for Vertical and Horizontal Clearances for Raised Roof Van with Lift Extended

LAUNDRY ROOMS

Where common use laundry rooms are provided, at least one of each type of appliance provided in each laundry area must be accessible and be on an accessible route, see ANSI 4.32.6. Such appliances include washing machines, dryers, soap dispensers, and any related features such as wash sinks, tables, and storage areas.

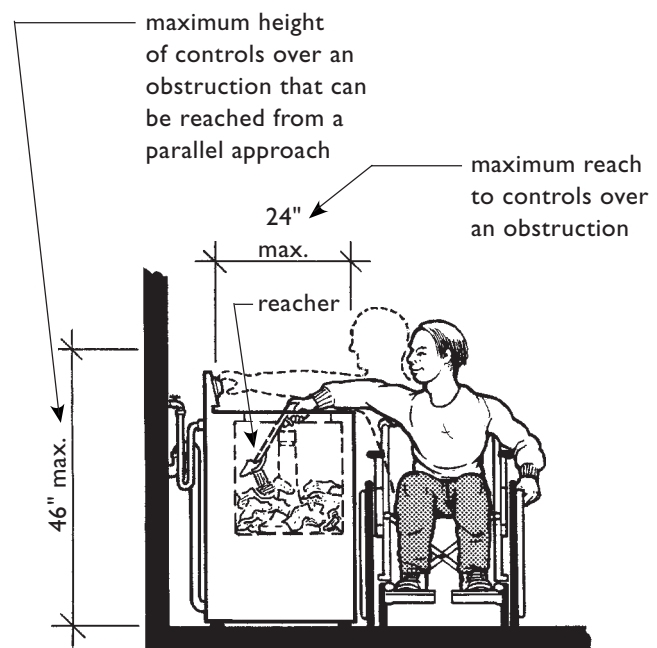
Where there are laundry rooms that serve each floor of an elevator building, each laundry room must be accessible. Likewise, where there is one laundry room on a ground floor in each building, each must be accessible. In the rare situation where there is a laundry room on the ground floor of a building and another located in the basement, it is acceptable to have only the ground floor laundry room accessible.

Front-loading washing machines are not required in common use laundry rooms if management, upon request, provides assistive devices (reachers) to enable a resident to use a top-loading washer. However, for people who use wheelchairs, front-loading washers generally are easier to reach into than top-loading machines.

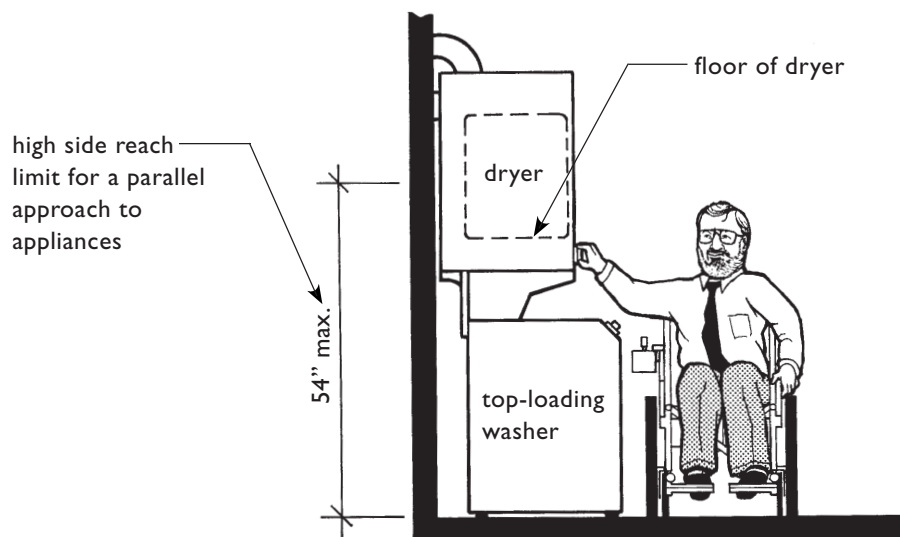
Top-loading machines with rear-mounted controls should not be installed on elevated pads that place the top of the cabinet and the controls beyond the reach range of a seated user. Dryers with either side-hinged or bottom-hinged doors may be installed in public and common use laundry rooms. Dryers with side-hinged doors usually are easier to reach into than those with bottom-hinged doors which, when open, obstruct floor space in front of the dryer.

The washer and dryer must have controls (including coin slots) within the reach range of a seated user. Since the Guidelines permit the installation of stacked washers and dryers, this same requirement for controls applies to at least one of these stacked units. Controls should be operable with one hand and not require tight grasping, pinching, or twisting of the wrist. If they can be operated with a closed fist they would work well for most users. See ANSI 4.25 Controls and Operating Mechanisms.

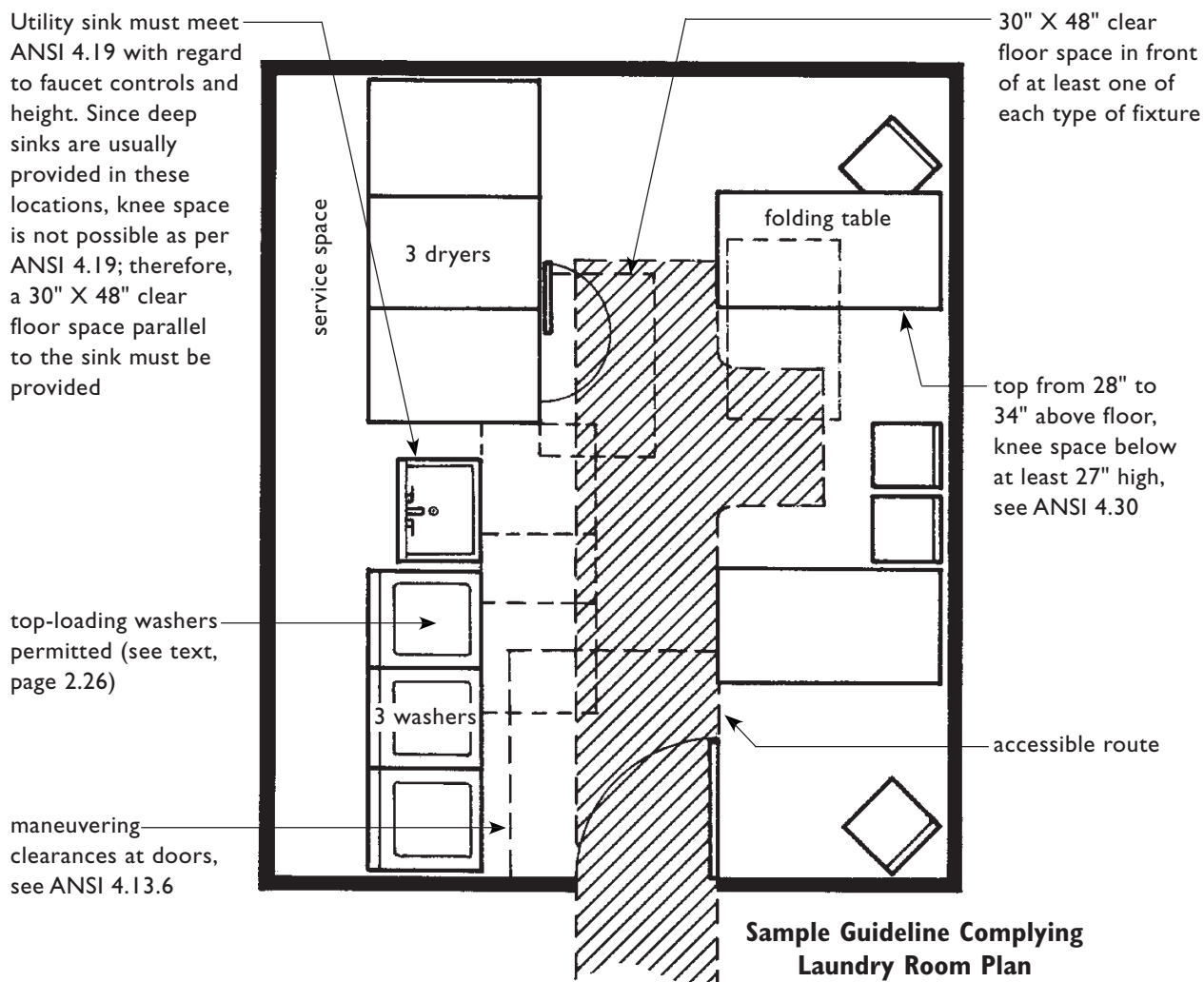
It is possible that management will be requested to provide, in addition to the grabbers, a knob turner that would allow someone with limited grasp to operate washer/dryer controls more easily. See Product Resource List in Appendix A, under “Assistive Devices” for manufacturers that carry knob turners in addition to reachers/grabbers.



Use of Top-Loading Machine Made Possible With Assistance of a Mechanical Reacher



Stacked Washer/Dryer Unit with Dryer and All Controls Within Reach Range of Seated User



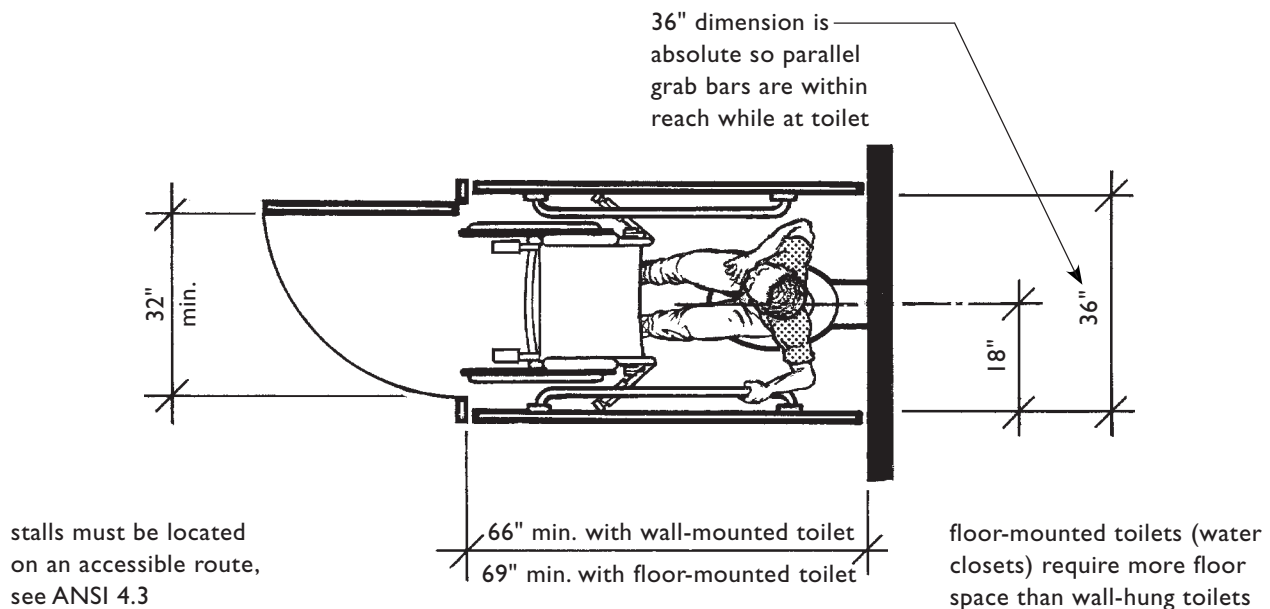
TOILET ROOMS, BATHROOMS, BATHING FACILITIES, AND SHOWER ROOMS

The Guidelines require that all toilet rooms and bathing facilities in all public and common use facilities must be on an accessible route and at least one of each fixture type in each room or space must be accessible. The ANSI Standard addresses the types of fixtures and their mounting heights, the types of controls, and the amount of clear floor space required at accessible fixtures. These specifications, combined with clearances for doors and turning spaces for wheelchairs, determine the minimum toilet room requirements. See ANSI 4.22 Toilet Rooms, Bathrooms, Bathing Facilities, and Shower Rooms.

Toilet and bathing facilities that are required to be accessible include shower/dressing rooms located on the site for use of residents and their guests in addition to such spaces as common use public toilet rooms. Although neither the Guidelines nor the ANSI contain specifications for

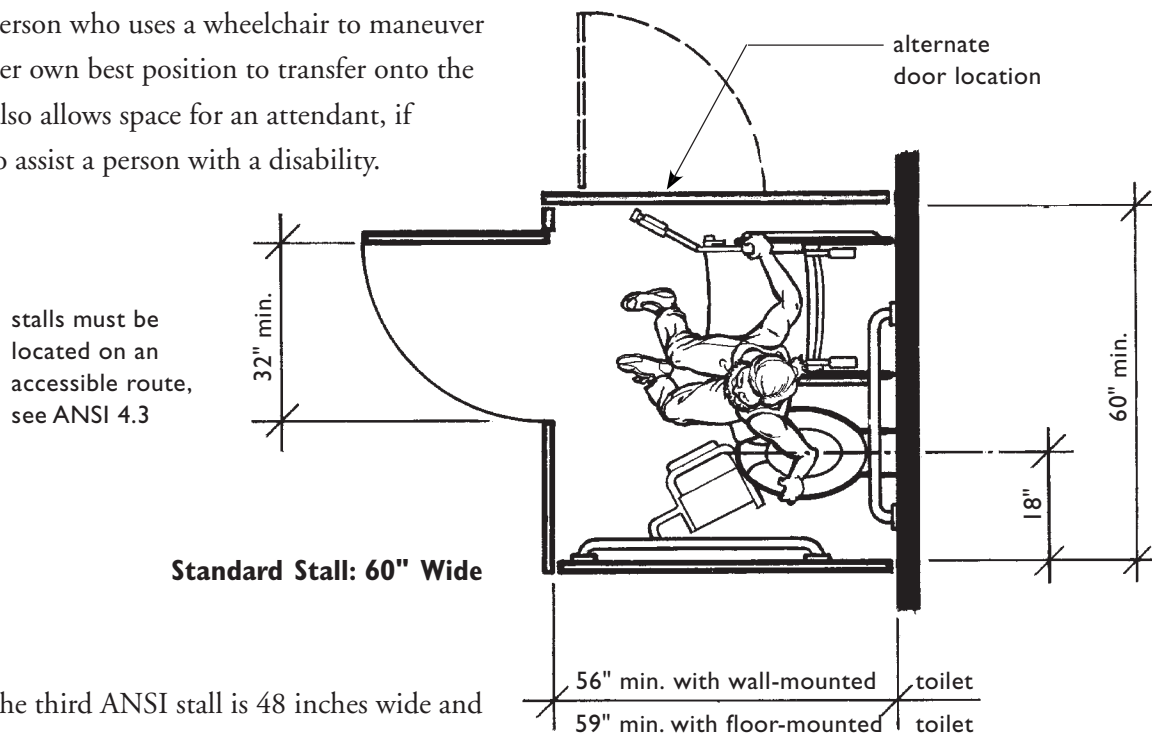
shower/dressing rooms, such as those which may serve a swimming pool, the applicable sections of ANSI for similar components apply in these spaces and must be provided.

Three Types of Toilet Stalls. The ANSI Standard allows considerable flexibility in the size and layout of toilet rooms. There are three types of accessible toilet stalls for use by people with different disabilities. The narrow stall is 36 inches wide and varies in length, depending on whether it has a floor-mounted or wall-hung toilet fixture. This stall was originally intended for people who walk with difficulty, many of whom use crutches and braces and who need grab bars to steady themselves when sitting down and standing up. Such people generally have good upper body strength, a characteristic not always true of people who use wheelchairs. This 36-inch wide stall, although space efficient, does not work well for many people who use wheelchairs.

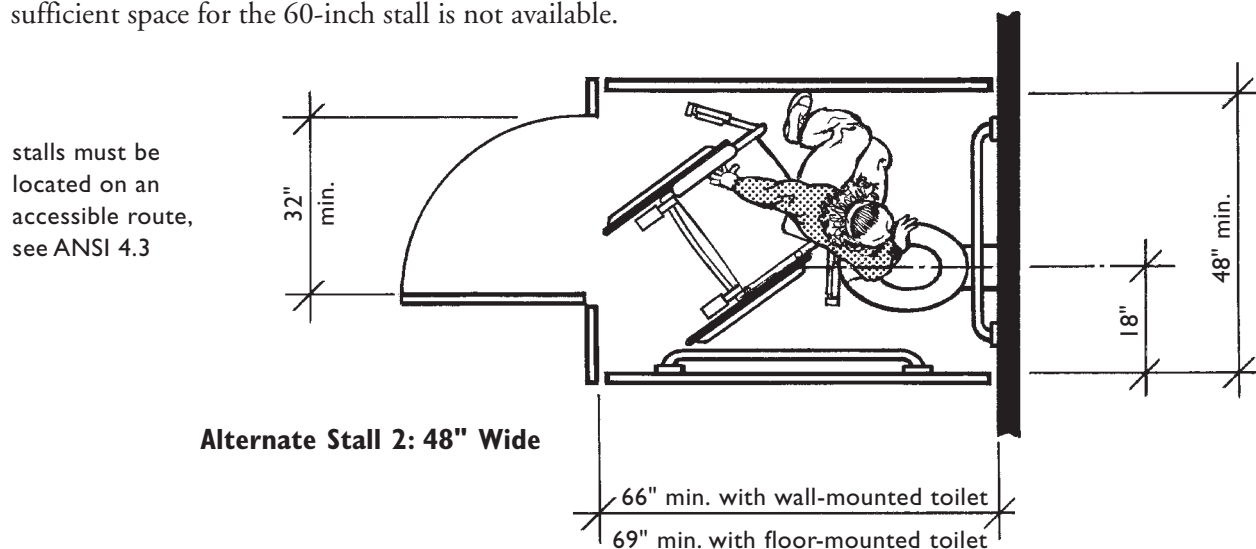


Alternate Stall I: 36" Wide

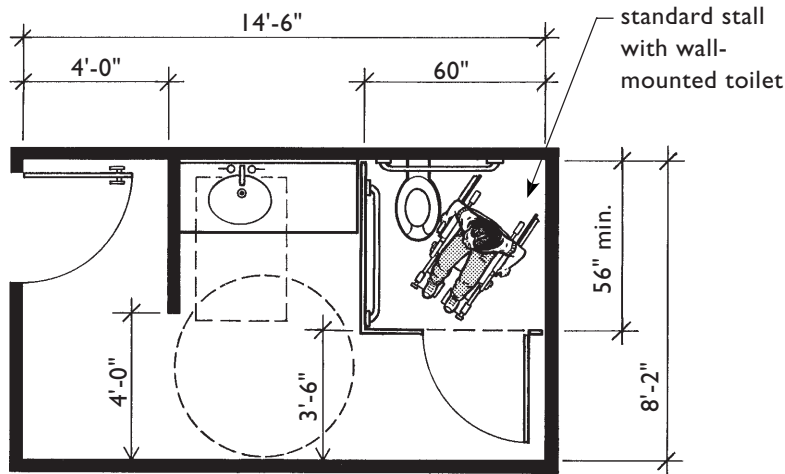
The 60-inch wide stall is a significant improvement over the narrow one because it accommodates most users. The extra floor space allows a person who uses a wheelchair to maneuver into his/her own best position to transfer onto the toilet. It also allows space for an attendant, if needed, to assist a person with a disability.



The third ANSI stall is 48 inches wide and is a compromise between the first two. This stall offers slightly more flexibility in the manner it is used by people with disabilities than the 36-inch wide stall. Since it cannot be used the same way as either of the others, it is limited in its usefulness. Often it is designed into renovation projects where sufficient space for the 60-inch stall is not available.

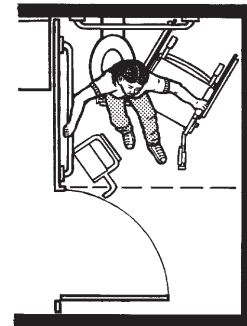


Sample plans of toilet rooms and shower/dressing rooms are presented to offer examples of how fixtures and elements can be combined into modest efficient spaces that comply with the ANSI.

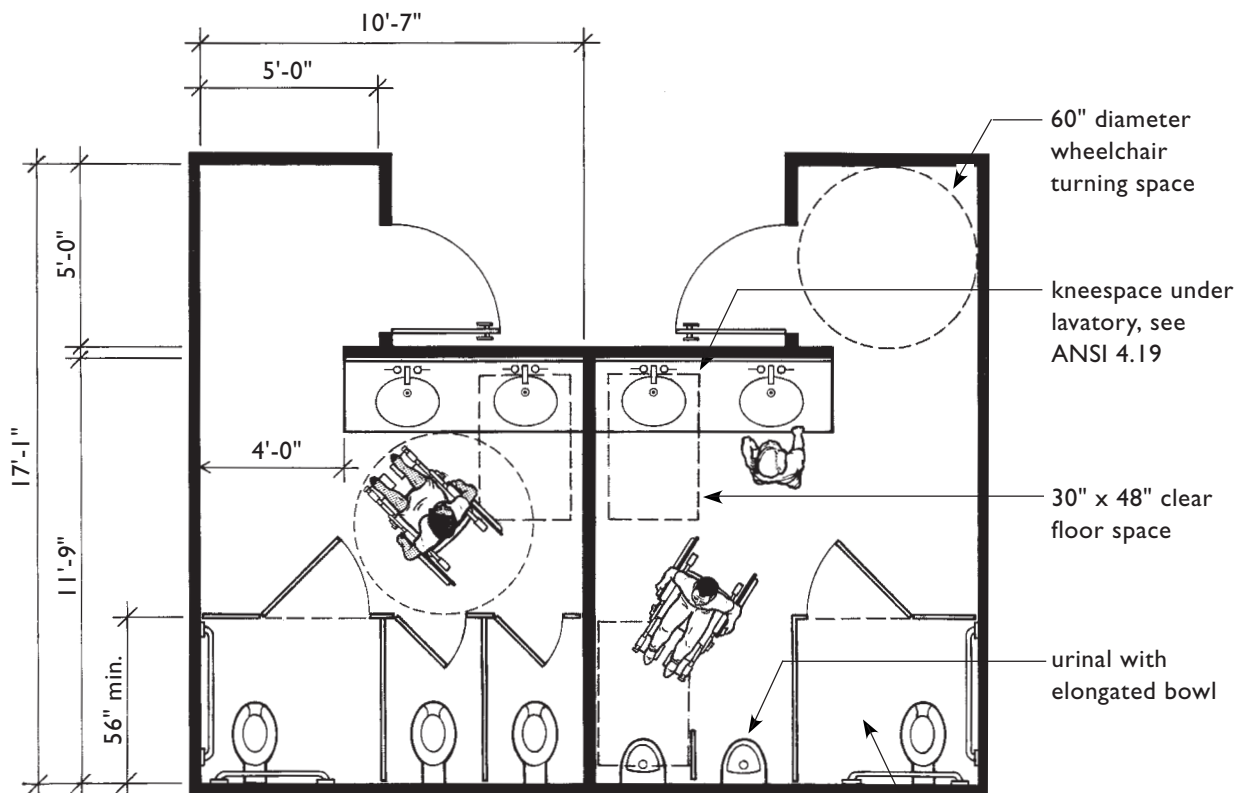


Small Toilet Room with Single Standard Stall
Scale 3/16"=1'-0"

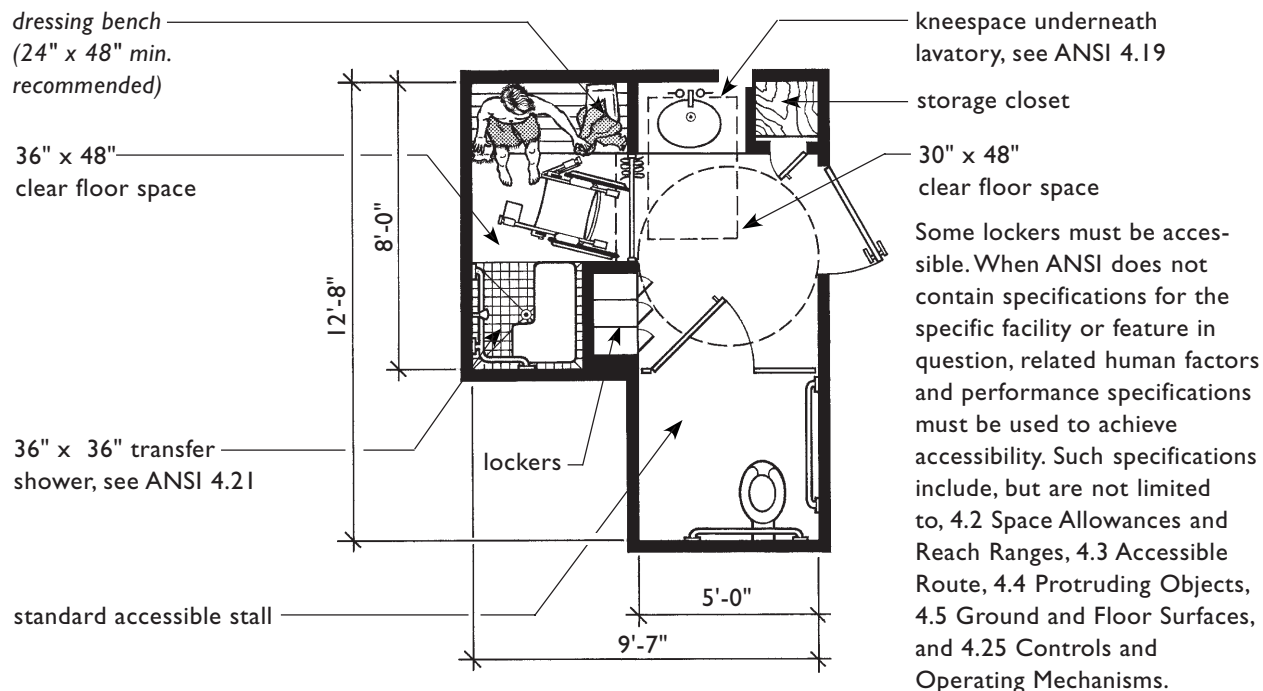
By repositioning the partition layout, additional space can be added to the toilet compartment to provide more maneuvering space without adding additional square footage to the room.



Standard Alcove or "End of Row" Stall
Scale 3/16"=1'-0"

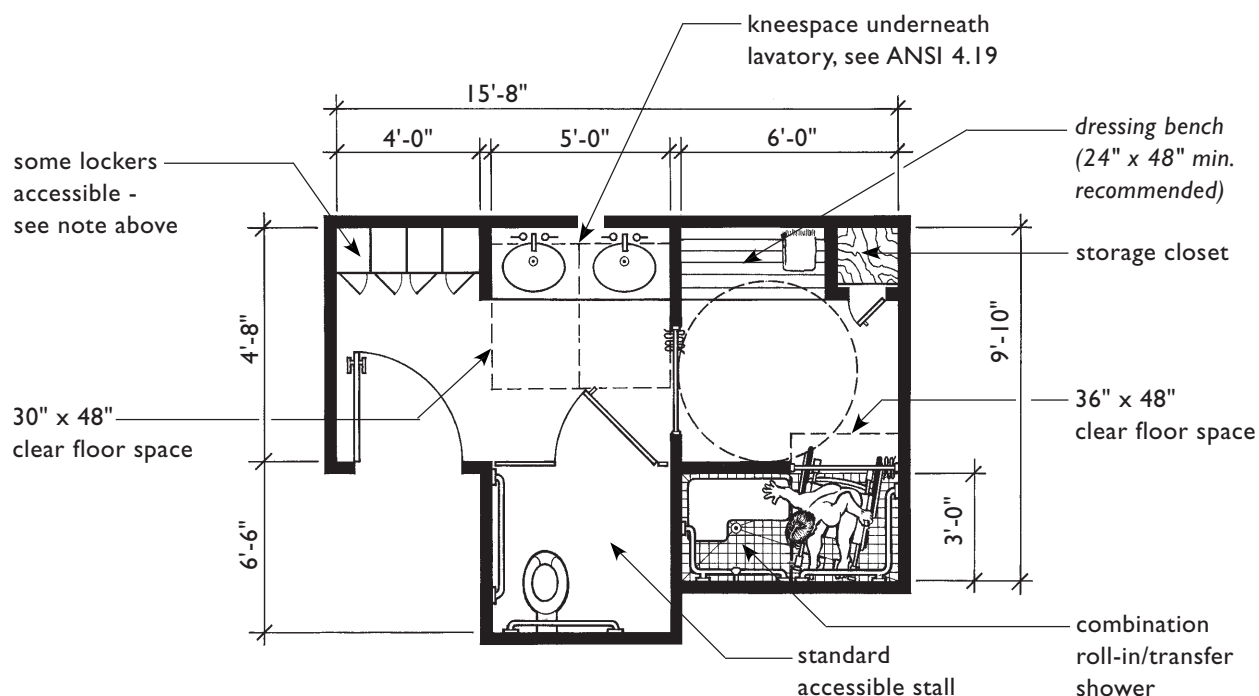


Larger Public and Common Use Toilet Room
Scale 3/16"=1'-0"



**Small Toilet/Dressing Room
with 36-Inch x 36-Inch Transfer Shower**

Scale 3/16"=1'-0"



**Small Toilet/Dressing Room
with Combination Roll-in/Transfer Shower**

Scale 3/16"=1'-0"

Chapter Three:

REQUIREMENT 3

Usable Doors

3

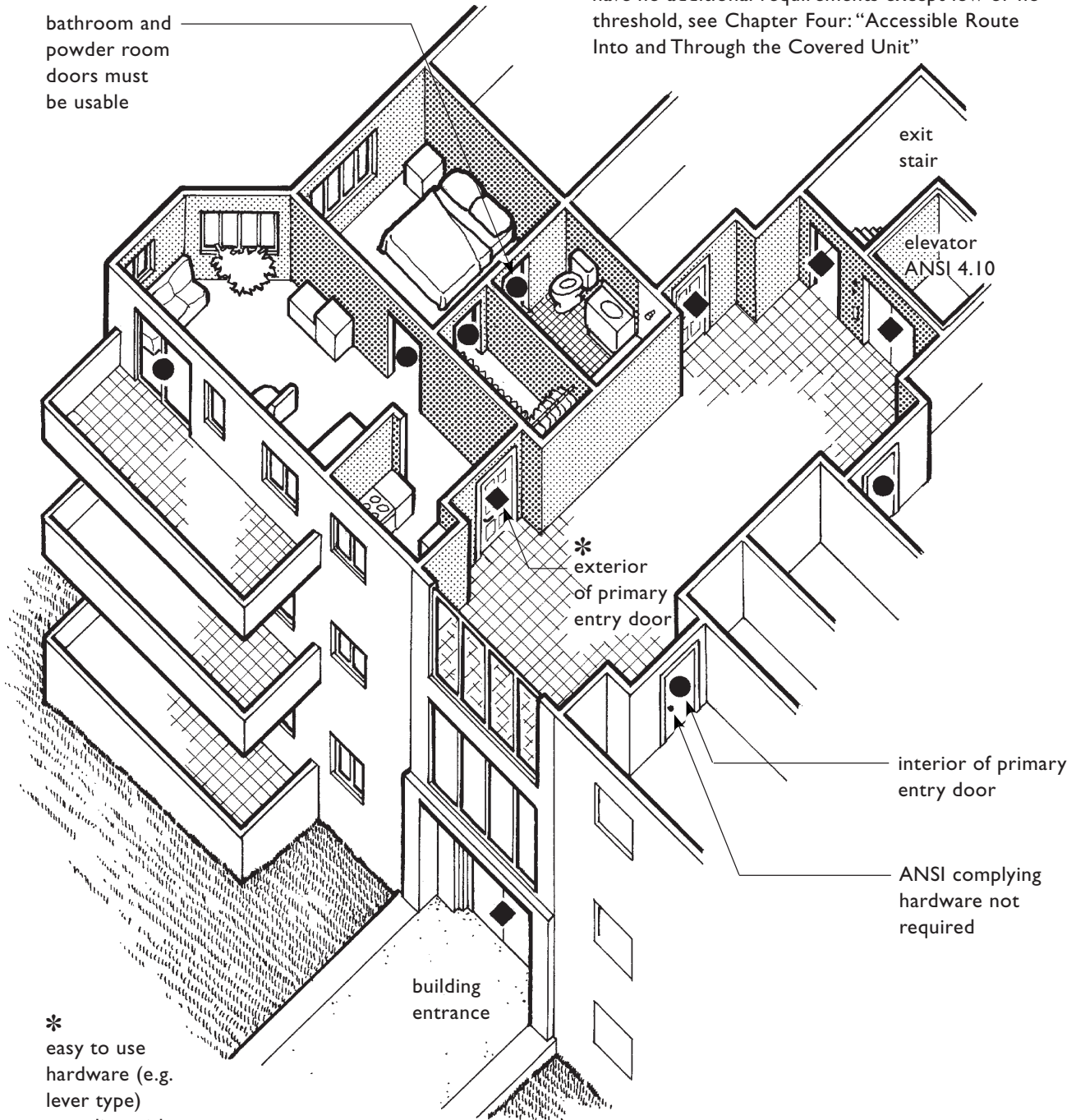


...covered multifamily dwellings with a building entrance on an accessible route shall be designed in such a manner that all the doors designed to allow passage into and within all premises are sufficiently wide to allow passage by handicapped persons in wheelchairs.

Fair Housing Act Regulations, 24 CFR 100.205

- ◆ **accessible doors** (in public and common use spaces and on public side of dwelling unit entry door)
 - must provide 32" minimum clear width
 - must meet ANSI 4.13 Doors

- **usable doors** (within interior of dwelling unit)
 - must provide 32" nominal clear width (see page 3.5)
 - have no additional requirements except low or no threshold, see Chapter Four: "Accessible Route Into and Through the Covered Unit"



*
easy to use
hardware (e.g.
lever type)
complies with
ANSI 4.13.9

**Accessible and Usable Doors
in Buildings Containing Covered Dwelling Units**

INTRODUCTION

The regulations for the Fair Housing Act state that **all** doors “designed to allow passage into and within all premises are sufficiently wide to allow passage by...persons in wheelchairs.” The Fair Housing Act Guidelines (the Guidelines) apply the requirements to doors that are part of an accessible route in public and common use areas of multi-family housing developments, as well as doors into and within covered dwelling units.

The Fair Housing Act and the Guidelines cover all doors designed to allow passage into and within all premises. However, doors in public and common use areas and primary entry doors of covered dwelling units must meet more stringent requirements for accessibility than doors that are located inside each dwelling unit. Therefore, to clarify this difference, this chapter refers to doors in public and common use areas and primary entry doors of covered dwelling units as **accessible doors**. Doors which are interior to the dwelling unit and which are subject to less stringent requirements for accessibility are referred to as **usable doors**.

Accessible doors must meet the ANSI 4.13 requirements for clear width, maneuvering clearances, thresholds, hardware, and opening force. Accessible doors are:

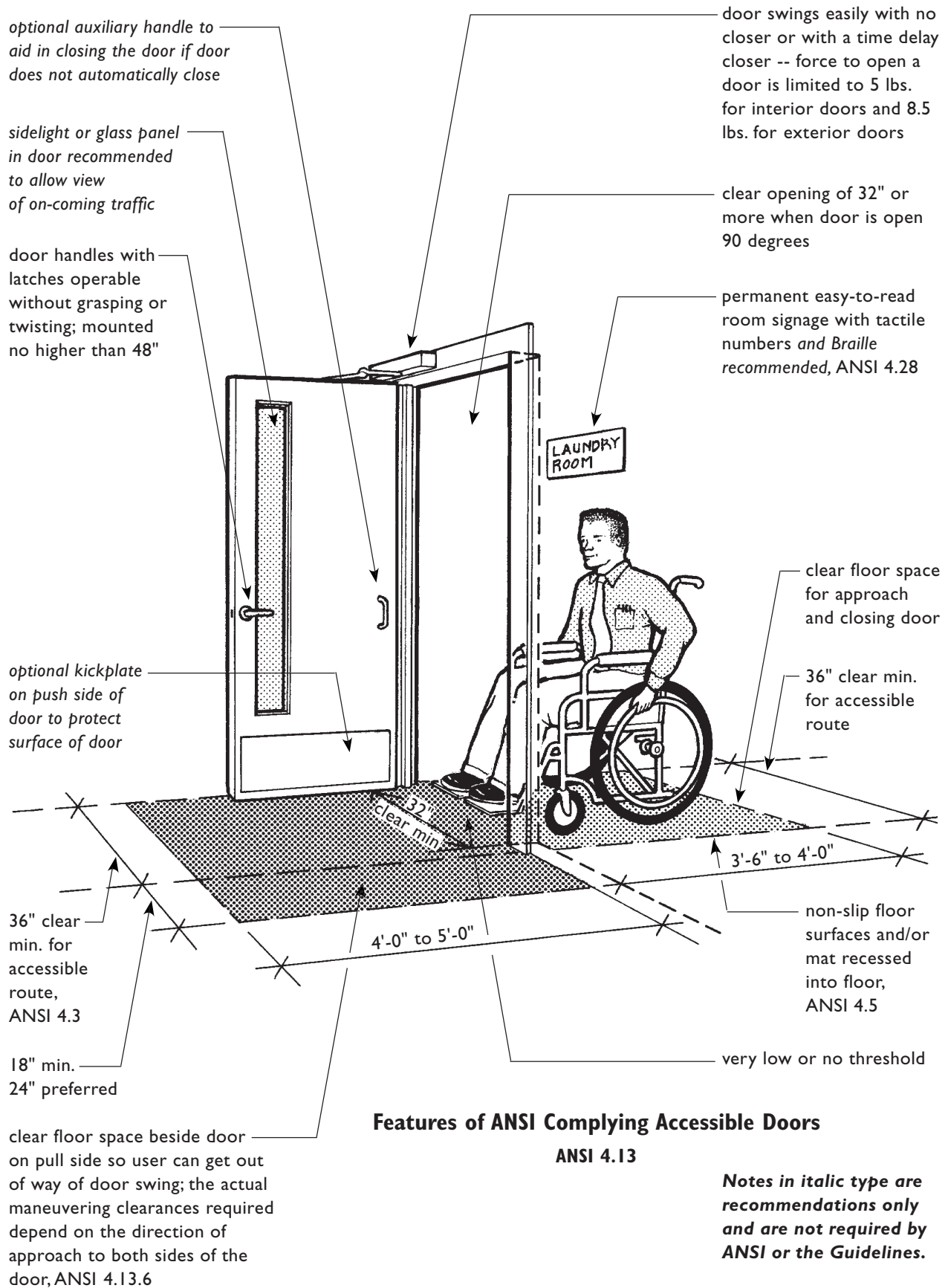
1. Doors that are part of an accessible route in public and common use spaces. They include, but are not limited to, doors residents use to enter buildings and doors into and within clubhouses, public restrooms, laundry rooms, and rental offices.
2. Primary entry doors to covered dwelling units – exterior side only. Entry doors may open from a

corridor or lobby or can be private individual entry doors accessed directly from the outside.

Usable doors are doors within the dwelling unit intended for user passage and must be usable in terms of clear opening width. Doors within the unit are not required to meet the ANSI 4.13 Doors requirements for maneuvering clearances, hardware, and opening force; but because an accessible route must be provided within the unit, thresholds must be low or nonexistent, see Chapter Four: “Accessible Route Into and Through the Covered Dwelling Unit.”

Usable doors include all secondary exterior doors at dwelling units that open onto private decks, balconies, and patios. Usable doors also include all passage doors within the covered dwelling unit, such as doors between rooms, doors into walk-in closets, and doors into utility/storage rooms or rooms that contain washers and dryers. Not covered are doors to small closets such as linen closets which typically have shelves within easy reach. Also not covered are access doors to small mechanical closets dedicated specifically to furnaces or hot water heaters.

In addition, the Guidelines also require that usable doors be provided to areas of the dwelling that may not be accessible at the completion of construction, such as an unfinished basement or a garage attached to a single-story dwelling unit (in the latter case, another door is used for the accessible entrance). Usable doors at these locations will allow people with mobility impairments to modify their unit later to provide accessibility to these areas, such as installing a ramp from the dwelling unit into the garage. Usable doors also are important for people with walkers or crutches so they may have improved access to such areas.



DOORWAY WIDTH AND DEPTH

DOORWAY CLEAR OPENING

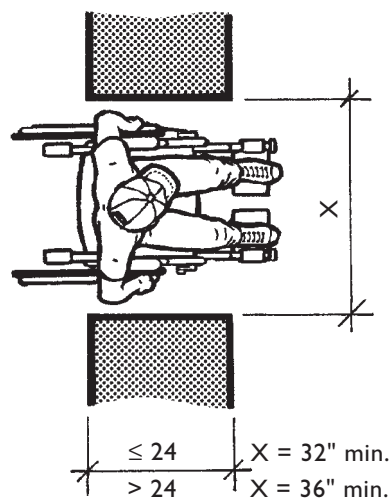
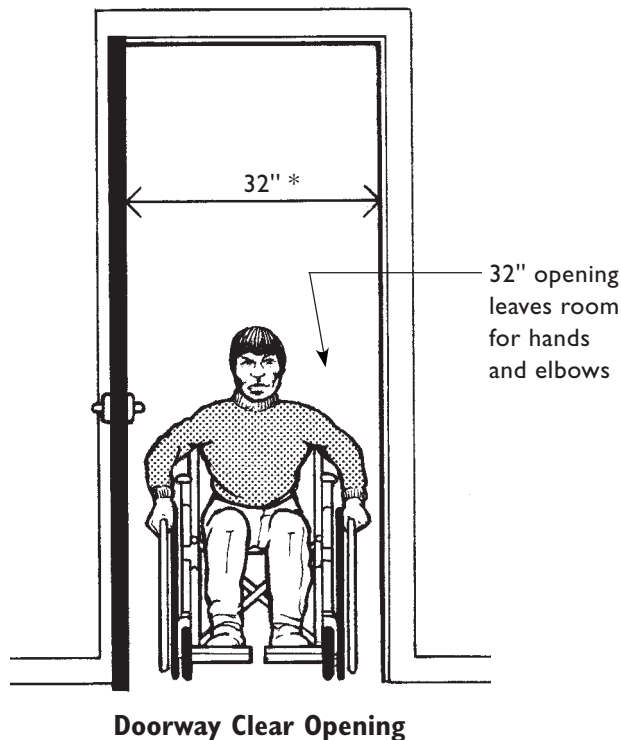
The commonly used hinged, folding, or sliding doors installed in the standard manner provide a passage width that is reduced by both the door standing in the doorway and door stops, if present. Thus, the available passage width is less than the size of the door.

Accessible doors in public and common use spaces and primary entry doors of dwelling units must provide a clear opening of **32 inches minimum**. This means the clear opening must not be less than 32 inches, but it may be more. The Guidelines allow **usable doors** (secondary exterior doors and doors that allow passage within the dwelling unit) to be a **nominal 32 inches** clear width. Usable doors are intended to provide 32 inches of clear width. But because of normal installation practices, adjacent conditions, variation in products such as hinges, and thicknesses of available materials, the doorway may vary from the 32-inch clear width by a nominal or small amount. Tolerances of 1/4 inch to 3/8 inch are considered an acceptable range for usable doors. This tolerance does not apply to accessible doors.

DOORWAY DEPTH

In both public and common use spaces and within dwelling units, the wall thickness of all cased openings must be no greater than 24 inches if the width of the doorway or passage is the minimum 32 inches. Doorways with a depth greater than 24 inches must be widened to provide the 36-inch minimum clear width for an accessible route.

- * 32" clear minimum for accessible doors
- 32" nominal clear width for usable doors



Doorway Depth

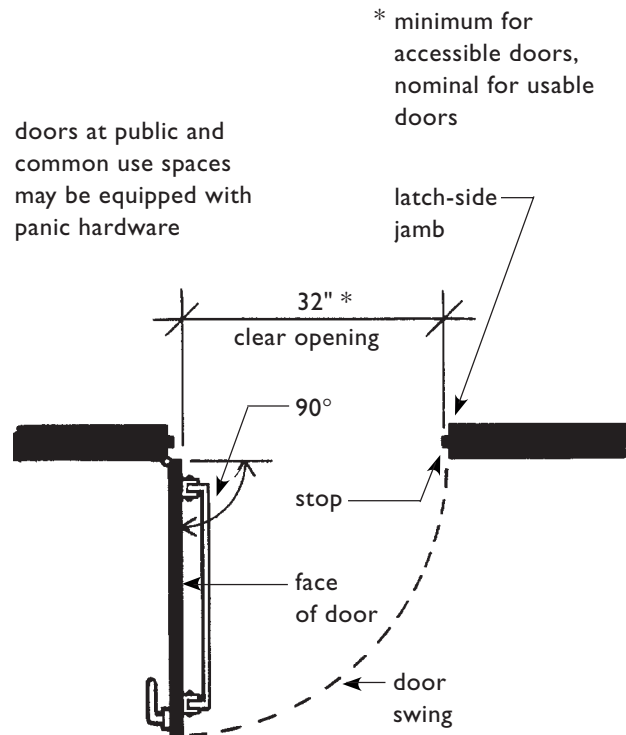
TYPES OF DOORS

HINGED DOORS, SINGLE-LEAF

At hinged doors the 32-inch opening is measured from the stop on the latch side jamb to the face of the door when standing in a 90-degree open position. Because the door, when open, remains in the doorway, the size of door used for the main entry door must be wide enough so that when open 90 degrees, it provides 32 inches minimum clear width. Main entry doors to dwelling units may be thicker than doors used within the unit, often making it necessary to install a door wider than 34 inches at the main entry. (In addition, most building codes require a 36-inch door at the main entry.) Within the dwelling unit, a 34-inch wide door, hung in the standard manner, is considered a usable door because it provides an “acceptable” nominal 32-inch clear opening of at least 31-5/8 inches clear.

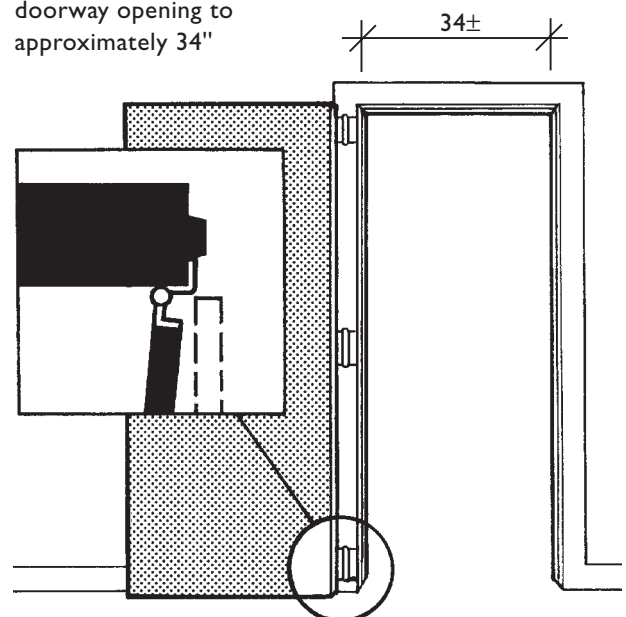
Accessible hinged doors in public and common use spaces may be equipped with push bar or panic type hardware even though the bar may protrude into the 32-inch clear width. The hardware should be mounted high enough (approximately 36 inches minimum above the floor) to allow sufficient room for people pushing themselves in manual wheelchairs to get through the doorway without catching their arms, shoulders, or clothing on the panic hardware. In no case may the bar extend more than 4 inches from the door because it then becomes a hazardous protruding object, see ANSI 4.4 Protruding Objects.

In the interior of dwelling units it is possible for residents or landlords to adapt the nominal 32-inch clear opening to create a wider and more usable doorway by installing offset or swing-clear hinges, by removing the lower portion



Measuring Clear Width at Hinged Doors

installation of swing-clear hinges is a modification that increases a 32\" doorway opening to approximately 34\"



Use of Swing-Clear Hinges

of the door stop, or by doing both. With standard hinges, a door, when open, remains in the door opening; swing-clear hinges allow a door to swing completely out of the doorway and increase the clear opening of the doorway. See Product Resource List, Appendix A, for manufacturers of swing-clear hinges. Builders are cautioned that they may not install a 32-inch wide door (which effectively yields a 30 to 30-1/2 inch opening) and expect residents to make modifications later to bring the door up to the 32-inch nominal width required at the time of initial construction.

HINGED DOORS, DOUBLE-LEAF

Two narrow, double-leaf doors (two hinged doors) mounted in a single frame may be slightly more difficult to open and close than a single door. Double-leaf doors can be a useful choice where space for the door swing is limited and where doors are likely to stand open. If narrow double-leaf doors are used, the nominal 32-inch clear opening must be maintained between door faces when in a 90-degree open position. Where larger double-leaf doors are installed, and if only one leaf is active, that leaf must be usable, i.e., provide the nominal 32-inch clear opening.

POCKET, SLIDING, AND FOLDING DOORS

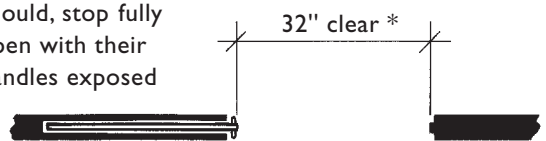
Pocket, sliding (e.g., automatic sliding doors at a main entrance), and folding doors may be installed in public and common use areas and at those times must meet the technical requirements of ANSI 4.13 Doors. The following discussion will focus on this category of doors when installed within dwelling units.

Unlike hinged doors, pocket, sliding, and folding doors, encroach little or not at all upon

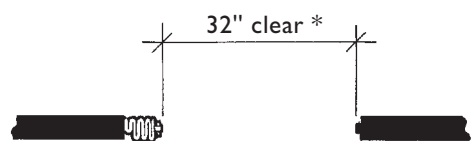
clear floor space and may, therefore, be an advantage when planning small rooms. This category of doors has additional features pertaining to the amount of space the door occupies within the doorway and the type of hardware installed. Hardware on interior dwelling unit doors is not covered by the Guidelines; however, recommendations are made to increase ease of use of the hardware, and thus the door.

accessible sliding doors must, and usable sliding doors should, stop fully open with their handles exposed

*minimum for accessible doors, nominal for usable doors

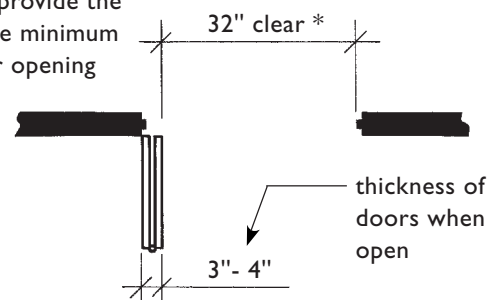


Clear Width at Sliding/Pocket Door



Clear Width at Accordion-Fold Door

a 3'-0" door is the narrowest bi-fold door that can be installed and still provide the accessible minimum 32" clear opening

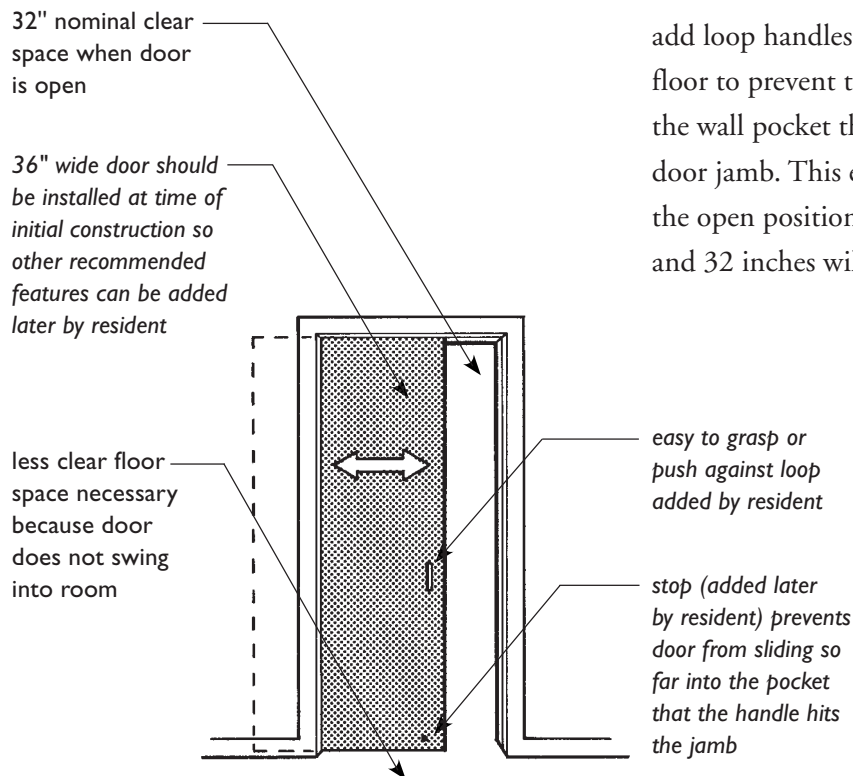


Clear Width at Bi-Fold Door

Pocket Doors. The traditional handle and latch installed in pocket doors are difficult for many people to operate because the hardware is recessed into the face of the door so the door can slide completely into the wall pocket. If carefully monitored, it may be possible to install a 32-inch wide pocket door that yields a nominal 32-inch clear opening; however, without modifying the door hardware, the door is still difficult to open and close.

Lacking complete control of variables such as the specific manufacturer's design of the door track assembly, the builder's installation method, the decision to install door stops (which vary in thickness), and other field conditions, it is recommended that pocket doors wider than 32 inches be installed. If a 36-inch wide door is installed, residents may make the following simple modifications later so the door is easier to operate: add loop handles on the door and a stop at the floor to prevent the door from sliding so far into the wall pocket that the handle is tight against the door jamb. This ensures that when the door is in the open position the handle will remain exposed and 32 inches will remain clear for passage.

Notes in italic type are recommendations only and are not required by ANSI or the Guidelines.

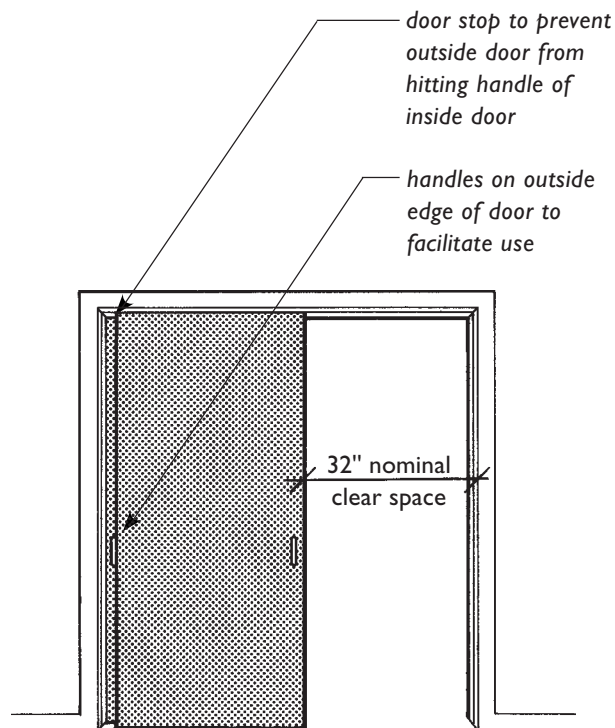


Usable Sliding/Pocket Door

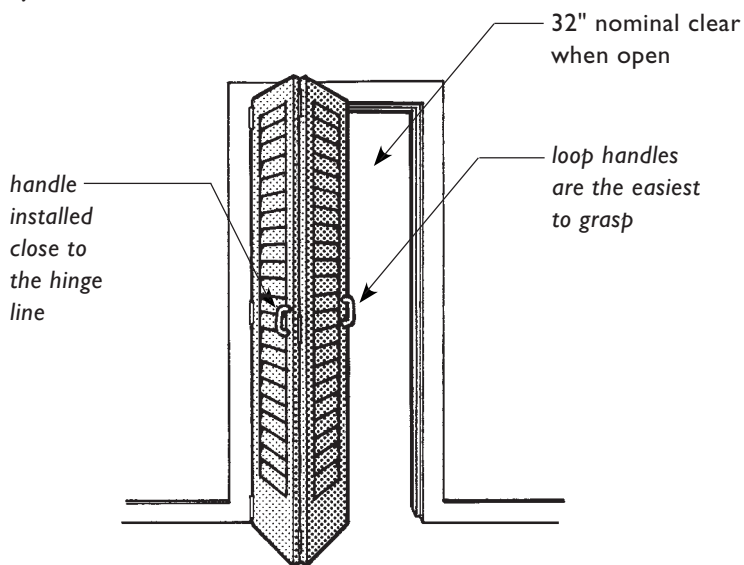
Sliding Doors. Interior sliding doors are generally used as closet doors since they avoid problems caused by door swings. If installed, each panel or door must provide a nominal clear opening of at least 32 inches. It is recommended that loop handles be installed rather than the more common recessed finger cups. Exterior sliding doors are discussed on page 3.10.

Folding Doors. Folding doors typically found in dwelling units are either accordion or bi-fold. They are made up of two or more attached or hinged panels that fold together when opened. When either type of door is in the open position, the clear opening is reduced by the thickness of the folded door. Considering this, the smallest doorway in which either a bi-fold assembly or accordion type door assembly can be installed is 36 inches.

To improve the ease of use of bi-folding doors, loop handles can be installed in the recommended locations as shown in the adjacent drawing. Magnet catches and latches on accordion-folding doors often are difficult to line up with the receiving end of the catch for people with any hand or grasp limitation.



Usable Sliding Door



Usable Folding Door

Notes in italic type are recommendations only and are not required by ANSI or the Guidelines.

DWELLING UNIT DOORS

PRIMARY ENTRY DOOR

The exterior of the primary entry door of covered dwelling units is part of public and common use spaces, therefore, it must be on an accessible route and be accessible, i.e., meet the ANSI requirements of 4.13 Doors. This is true both of entry doors opening off interior corridors internal to a building containing multiple dwelling units, and of separate exterior ground floor dwelling unit entrances.

Because primary entry doors to covered units must be on an accessible route, thresholds at these doors must be no higher than 3/4 inch and must be beveled with a slope no greater than 1:2. See additional discussion of thresholds and accessible route at dwelling units on page 4.12.

SECONDARY EXTERIOR DOORS

All secondary exterior doors from the same or different rooms that provide passage onto exterior decks, patios, or balconies must be usable. For example, if a deck is served by French doors or other double-leaf doors, and if only one leaf is active, that leaf must be usable, i.e., provide a nominal 32-inch clear opening. If both leaves are active, one leaf would not have to provide a nominal 32-inch clear opening as long as both leaves, when open, do provide the nominal 32-inch clear opening.

Since an accessible route must be provided throughout the unit, thresholds at secondary exterior doors also are limited to a maximum height of 3/4 inch. However, secondary doors that exit onto exterior decks, patios, or balcony surfaces are allowed to have a 4-inch maximum step (or more if required by local building code) to prevent

water infiltration at door sills only if the exterior surface is constructed of an impervious material such as concrete, brick, or flagstone. If the exterior surface is a pervious material such as a wood deck that will drain adequately, the decking must be maintained to within 1/2 inch of the interior floor level. See Chapter Four: “Accessible Route Into and Through the Covered Dwelling Unit.”

Sliding glass doors are often installed as secondary exterior doors. The Guidelines state that “the nominal 32-inch clear opening provided by a standard 6-foot sliding patio door assembly is acceptable.” Unfortunately, many of the standard 6-foot sliding glass door assemblies yield only a 28-1/2-inch maximum clear opening in the full open position. Note: 28-1/2 inches is not an acceptable 32-inch nominal dimension. Builders and product specifiers must carefully select door assemblies that yield the 32-inch nominal clear opening (a clear opening from 31-5/8 to 32 inches or more). Some economy suppliers have 6-foot sliding glass doors that will meet the required width. Other assemblies on the market larger than 6 feet also provide the required width. See Product Resource List, Appendix A.

good general illumination

color contrast between door and frame

door closer with safe sweep period, ANSI 4.13.10

low force to open door, ANSI 4.13.11

clear width of open doorway min. 32", ANSI 4.13.5

clear, readable, high contrast signage

lever or other easy to use door hardware, ANSI 4.13.9

low or no threshold, see Chapter 4

maneuvering space on exterior side of door next to latch varies depending upon direction of approach to door, ANSI 4.13.6

outside landing 0" to 1/2" below interior floor level depending upon construction of porch or landing surface, see Chapter 4

adequate slope to prevent ice build-up

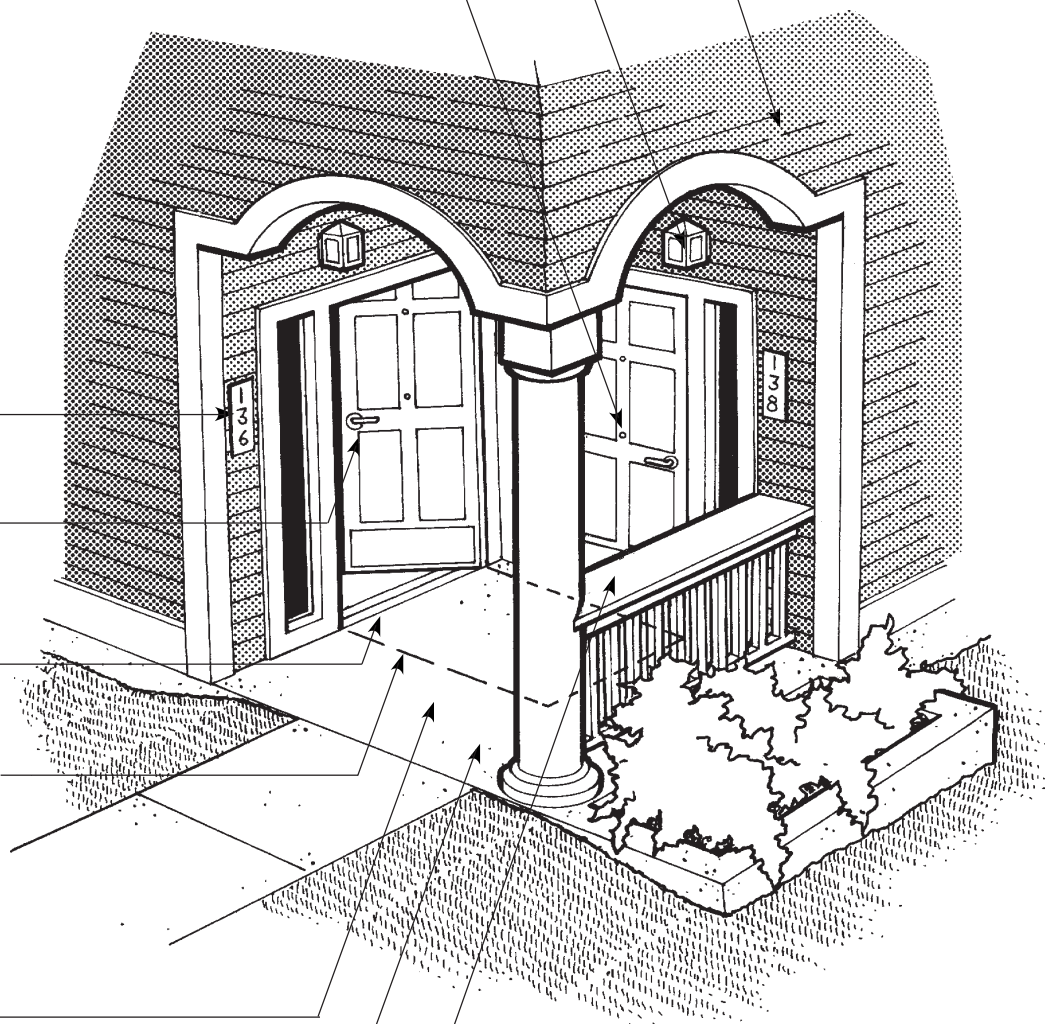
package shelf

high intensity lighting focused at locks for people with low vision

view window (or wide angle peep hole)

lighted doorbell buttons

weather protection

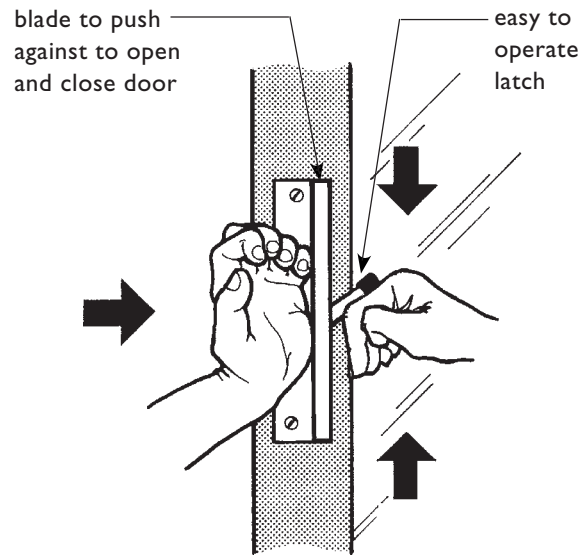


**Accessible Primary Entry Door
at Covered Dwelling Unit**
See ANSI 4.13 Doors

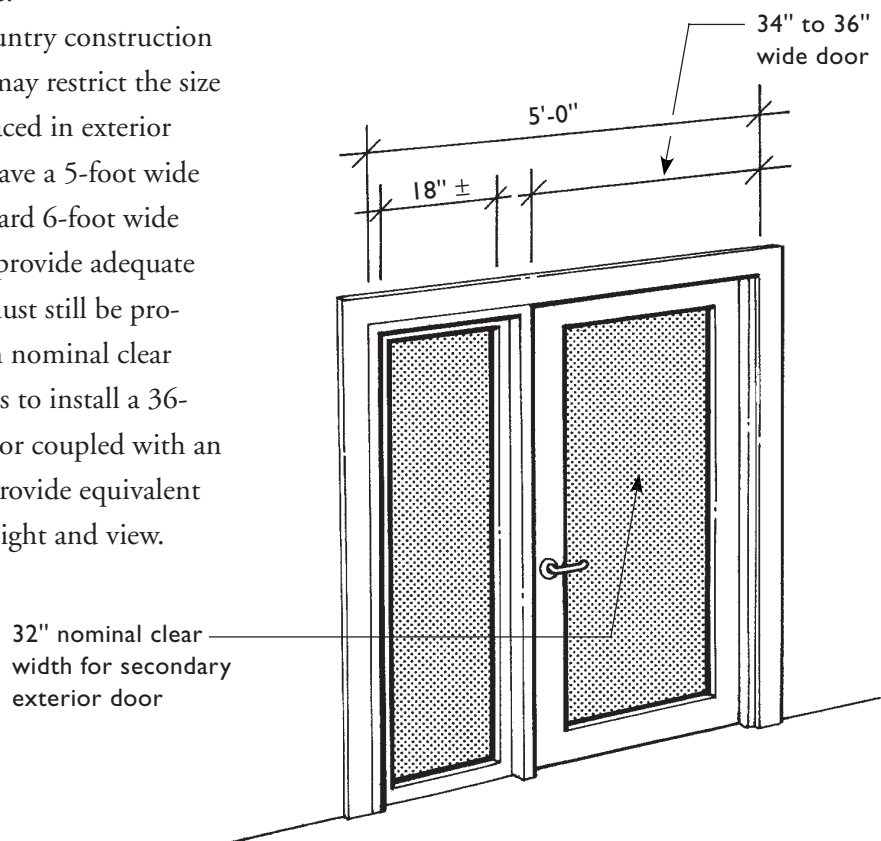
Notes in italic type are recommendations only and are not required by ANSI or the Guidelines. All recommended features are helpful to people with and without disabilities.

Where sliding glass doors are used, it also may be necessary to modify the threshold either by sinking the frame into the floor, or by adding a beveled edge. See Chapter Four: “Accessible Route into and Through the Covered Unit” for additional discussion of thresholds along accessible routes. Locks and latches on sliding glass doors are often difficult to operate for someone with any hand limitation. Although not required by the Guidelines, but because sliding glass door hardware is more difficult to modify at a later time if needed than hardware on hinged doors, it is recommended that locks be installed that can be raised and lowered with a closed fist or that require no finger manipulation. When sliding glass doors are being selected, doors with loop handles or large blades to push or pull against are the easiest to use.

In some parts of the country construction or building code requirements may restrict the size of window or door openings placed in exterior walls. Where it is necessary to have a 5-foot wide maximum opening or if a standard 6-foot wide sliding door assembly does not provide adequate passage width, a passage door must still be provided that will yield the 32-inch nominal clear width. One suggested solution is to install a 36-inch wide full glass swinging door coupled with an appropriate width sidelight to provide equivalent or similar glass area for natural light and view.

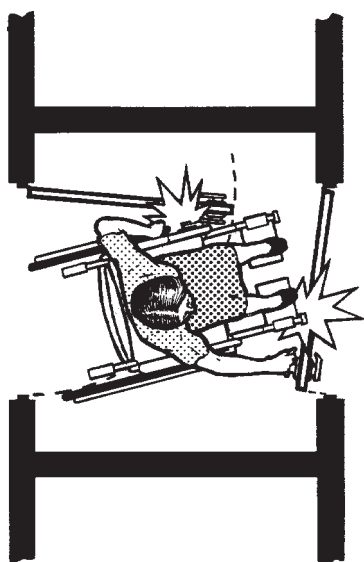


Sliding Glass Door Hardware that Requires No Twisting, Turning, or Fine Finger Manipulation to Operate Recommended



Substitution of a 36\" Hinged Door Plus Sidelight When a 5' or 6' Sliding Door Assembly Cannot Provide a 32\" Door Opening

after maneuvering to get around the first door, the user cannot open the second door and is trapped



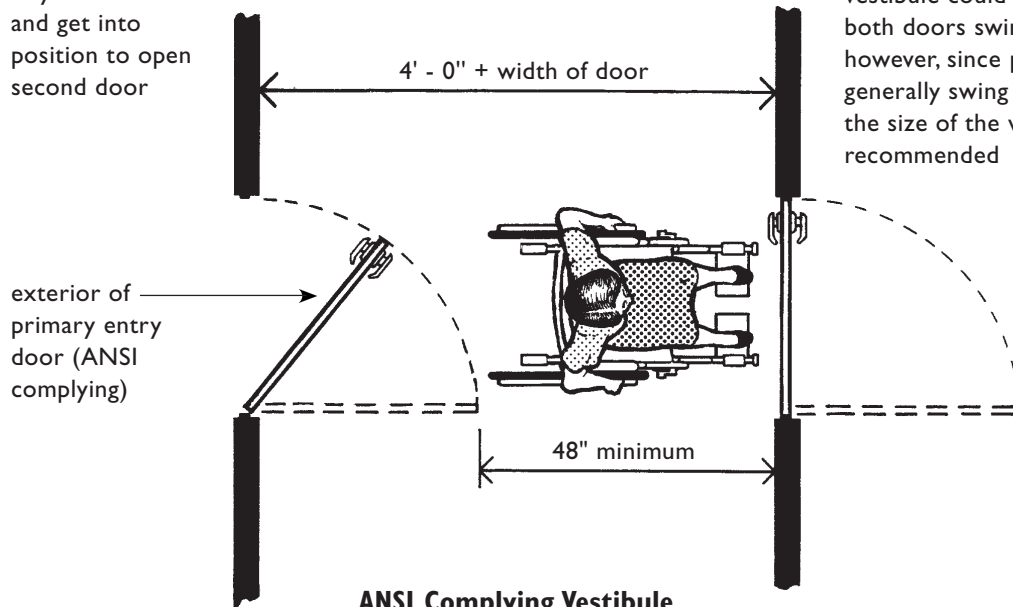
Inadequate Space in Vestibule

DOORS IN SERIES OR DOUBLE DOOR VESTIBULE

Doors in a series are not typically part of an individual dwelling unit but are used at entrances to buildings. As such they are part of public and common use spaces and subject to the design specifications found in ANSI 4.13 Doors. However, where doors in a series are provided as part of a dwelling unit (to form an air lock when extremes of climate exist or to create a privacy vestibule), the requirements of an accessible route into and through the dwelling unit would apply.

If a vestibule is too small, people using mobility aids may get trapped and not be able to open the second door and exit the vestibule. For this reason, even though doors on the interior of the unit only must be usable (or have a 32-inch nominal clear width) the distance between the doors must be sufficient to allow users to maneuver to get the second door open and pass through. This is especially critical for safe egress in emergency situations. Guidance can be found at ANSI 4.13.7.

user is able to maneuver out of way of first door and get into position to open second door



ANSI Complying Vestibule

vestibule could be smaller provided both doors swing out of the vestibule; however, since primary entry doors generally swing into the dwelling unit, the size of the vestibule as shown is recommended

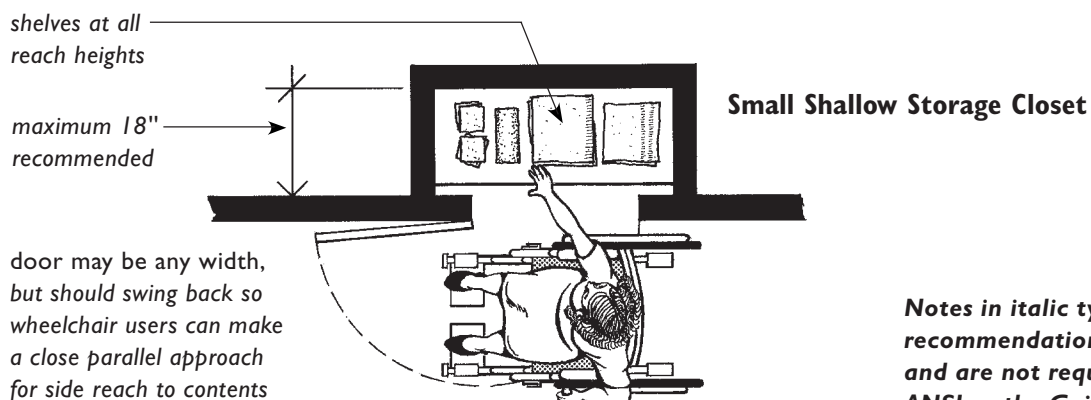
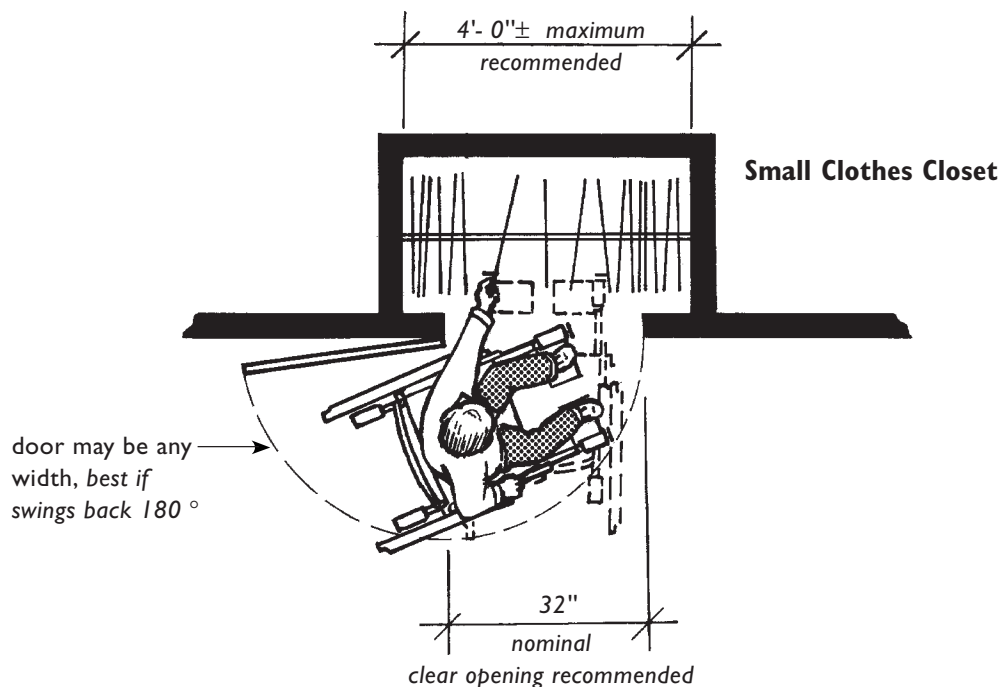
CLOSET DOORS

Closets that require users to pass through the doorway to reach the contents must have doors that provide at least 32 inches nominal clear opening. Closets that permit the user to access the contents from outside the closet have no door width specifications whatsoever.

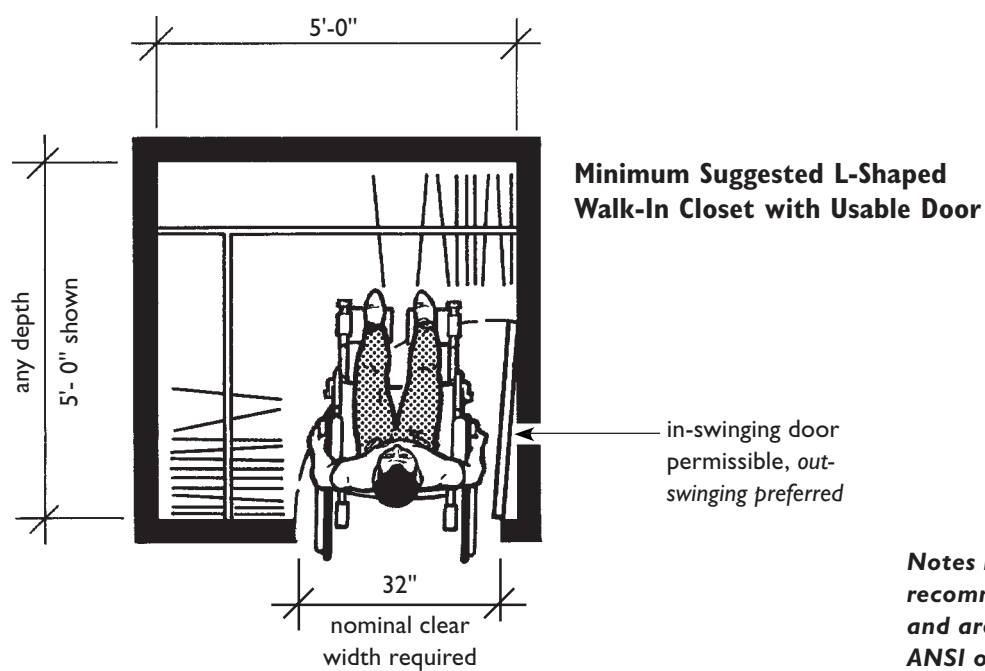
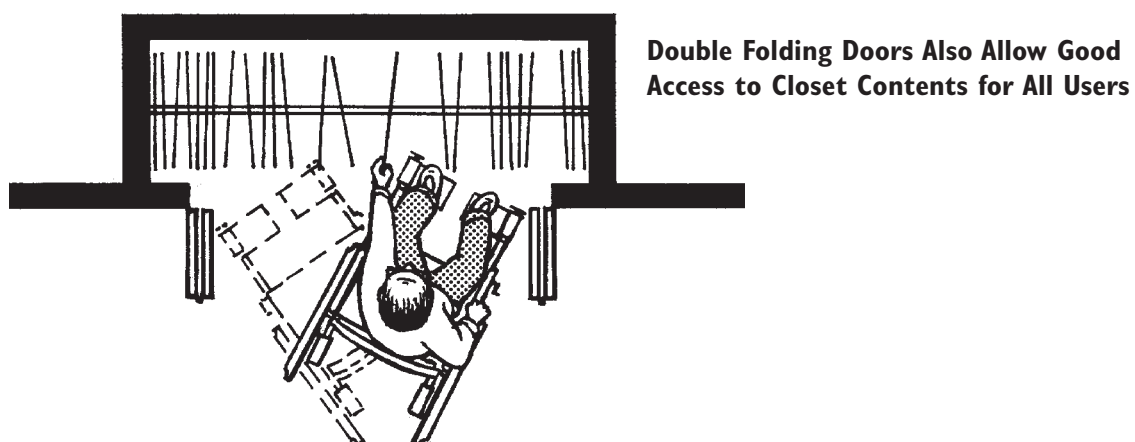
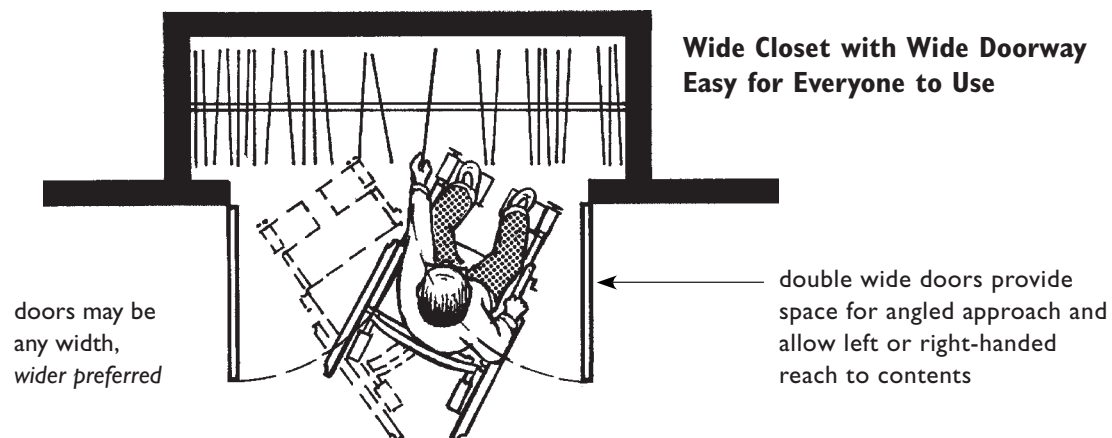
Closets for hanging clothes are usually 24 inches deep and of variable width. Small clothes and linen closets should be no more than 48 inches

long to avoid dead space at the ends that is difficult or impossible for most users to reach, seated or standing, even if a 34-inch door is installed.

If wider closets are provided it is best that doors be double (hinged or bi-folding preferred) to provide maneuvering space and clear view of contents. If “walk-in” closets are planned, they must have usable doors to provide adequate space for passage of a person using a wheelchair.



Notes in italic type are recommendations only and are not required by ANSI or the Guidelines.



*Notes in italic type are
recommendations only
and are not required by
ANSI or the Guidelines.*

Chapter Four:

REQUIREMENT 4

Accessible Route into
and Through the Covered Unit

4



...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.

Fair Housing Act Regulations, 24 CFR 100.205

Definitions from the Guidelines

Loft. An intermediate level between the floor and ceiling of any story, located within a room or rooms of a dwelling.

Multistory dwelling unit. A dwelling unit with finished living space located on one floor and the floor or floors immediately above or below it.

Single-story dwelling unit. A dwelling unit with all finished living space located on one floor.

Story. That portion of a dwelling unit between the upper surface of any floor and the upper surface of the floor next above, or the roof of the unit. Within the context of dwelling units, the terms “story” and “floor” are synonymous.

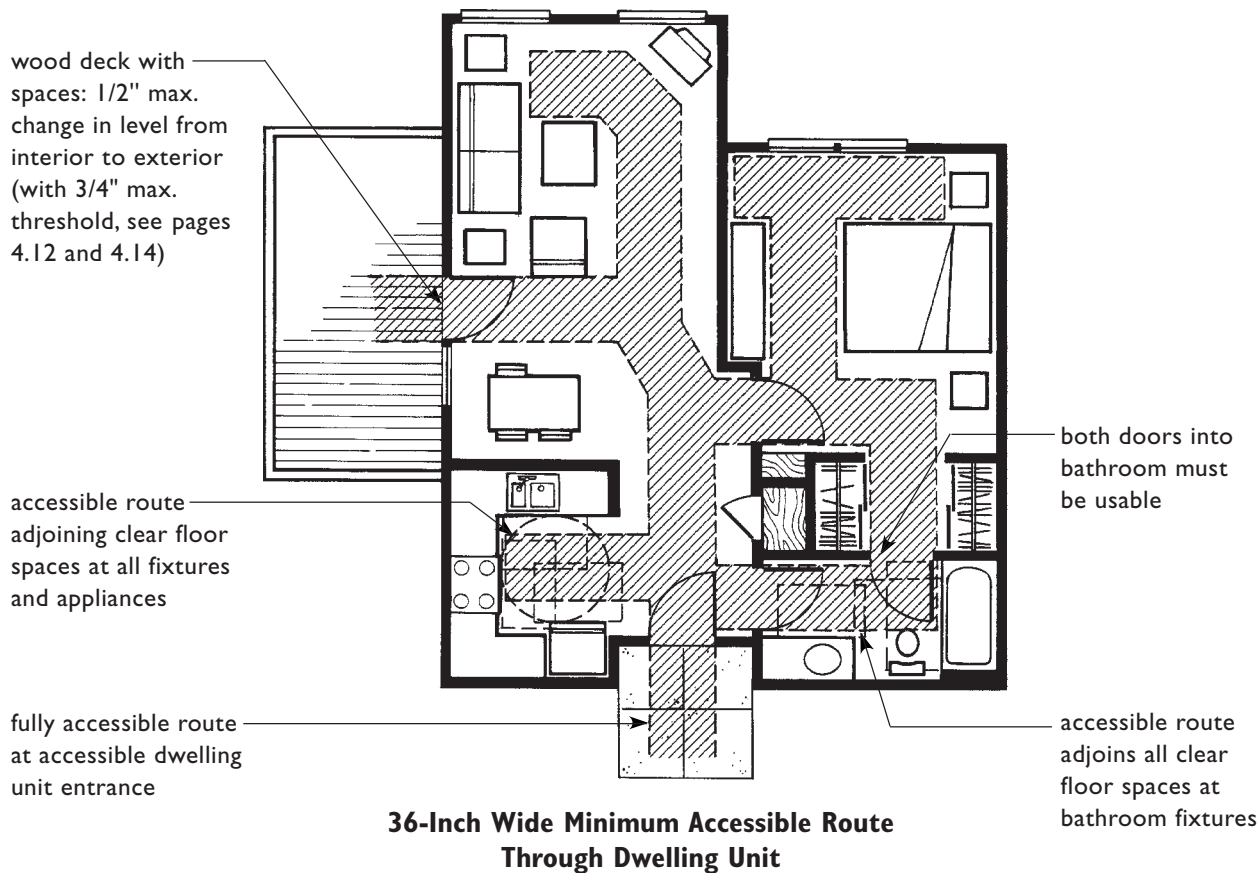
INTRODUCTION

The Fair Housing Accessibility Guidelines (the Guidelines) specify that an accessible route be provided into and throughout the entire covered dwelling unit. The accessible route must pass through the main entry door, continue through all rooms in the unit, adjoin required clear floor spaces at all kitchen appliances and all bathroom fixtures, and connect with all secondary exterior doors.

Unlike public and common use areas, where a fully accessible route that complies with ANSI A117.1 - 1986, or an equal or more strict accessibility standard is required, the Guidelines designate specific elements of an accessible route that must be provided. The accessible route must be **1.** sufficiently wide and **2.** lacking in abrupt changes in level so residents with disabilities (and/

or their guests with disabilities) can safely use all rooms and spaces, including storage areas and, under most circumstances, exterior balconies and patios that may be part of their dwelling unit. See page 4.11 for exception at balconies and patios constructed of impervious materials.

An accessible route is not required into a basement or garage. However, doors from the interior of the dwelling unit to an unfinished basement or a garage attached to a single-story dwelling unit must be “usable”; see Chapter 3: “Usable Doors.” Providing an accessible route and a usable door in these circumstances will allow a resident to make later modifications, such as installing a ramp from the dwelling unit into the garage, thereby increasing usability of the unit.



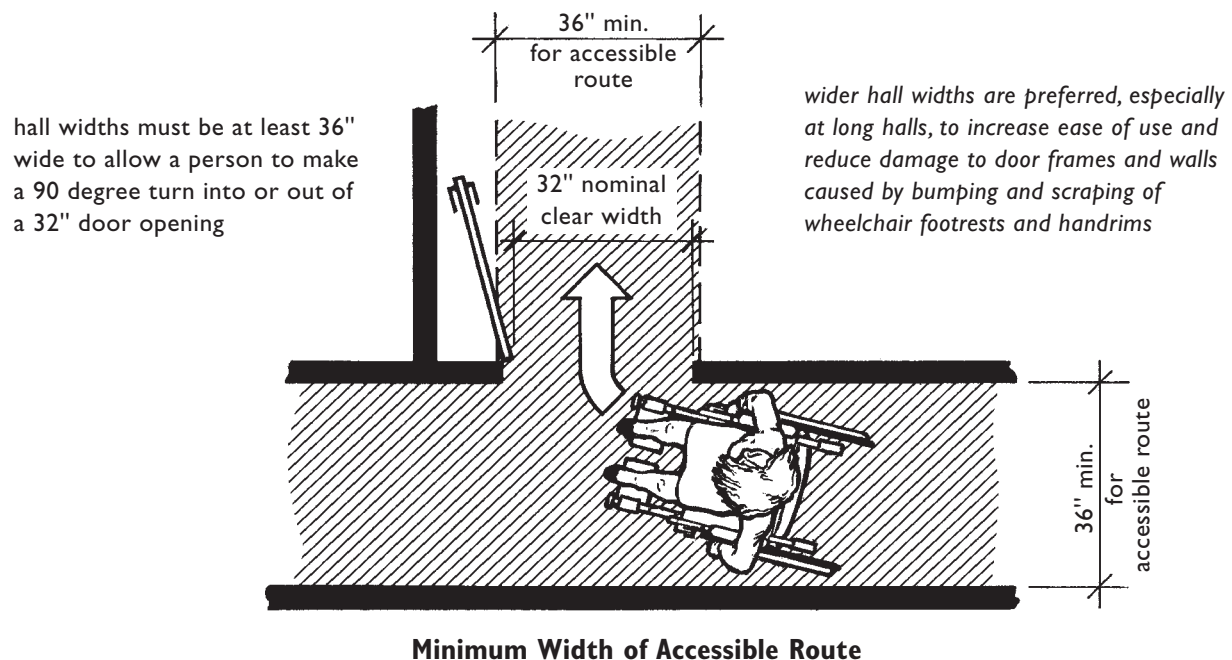
ACCESSIBLE ROUTE

WIDTH

The 36-inch wide fully accessible route as described in Chapters 1 and 2 must connect with the clear floor space outside the primary entry door of each covered dwelling unit. As the accessible route passes into the unit it may be reduced to 32 inches minimum clear width at the door. Throughout the unit the accessible route must be 36 inches wide or wider, except as it passes through passage doors,

where it may be reduced to 32 inches nominal clear width. See Chapter 3: "Usable Doors."

When specifications for accessible routes are presented in most accessibility standards they contain provisions for minimum height or headroom. The Guidelines, with respect to the interiors of dwelling units, do not include a specification for headroom. Protruding objects also are not addressed within the interior of the dwelling unit, but they should be avoided in all cases.

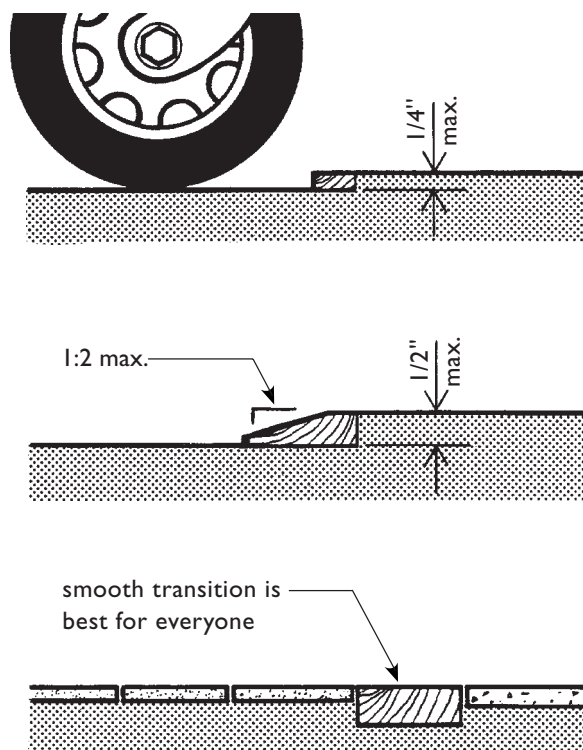


CHANGES IN LEVEL

Within single-story dwelling units (and on the primary entry level of multistory dwelling units in buildings with elevators) the maximum vertical floor level change is 1/4 inch, except when a tapered threshold is used, the maximum height is 1/2 inch. Even small abrupt changes of level in the

surface of an accessible route pose a tripping hazard for many people and can be a significant obstacle for people using wheelchairs. People who walk wearing braces and/or who have difficulty maintaining balance are particularly susceptible to catching their toes on small changes in level.

Small abrupt changes in level occur most frequently at floor material changes and at door thresholds. Within the interior of the dwelling unit, thresholds should not be used or they should be thin and installed flush with the flooring surface. If a threshold must be used, it must not have a level change more than 1/4 inch without being beveled or tapered. When a tapered threshold is used, the level change may be a maximum of 1/2 inch. If an interior door threshold represents a change in level greater than 1/2 inch, it must be ramped and must slope at 1 inch in 12 inches maximum (1:12). Thresholds at exterior doors are addressed on page 4.12.



Small Changes in Level Along Accessible Routes

SPECIAL DESIGN FEATURES

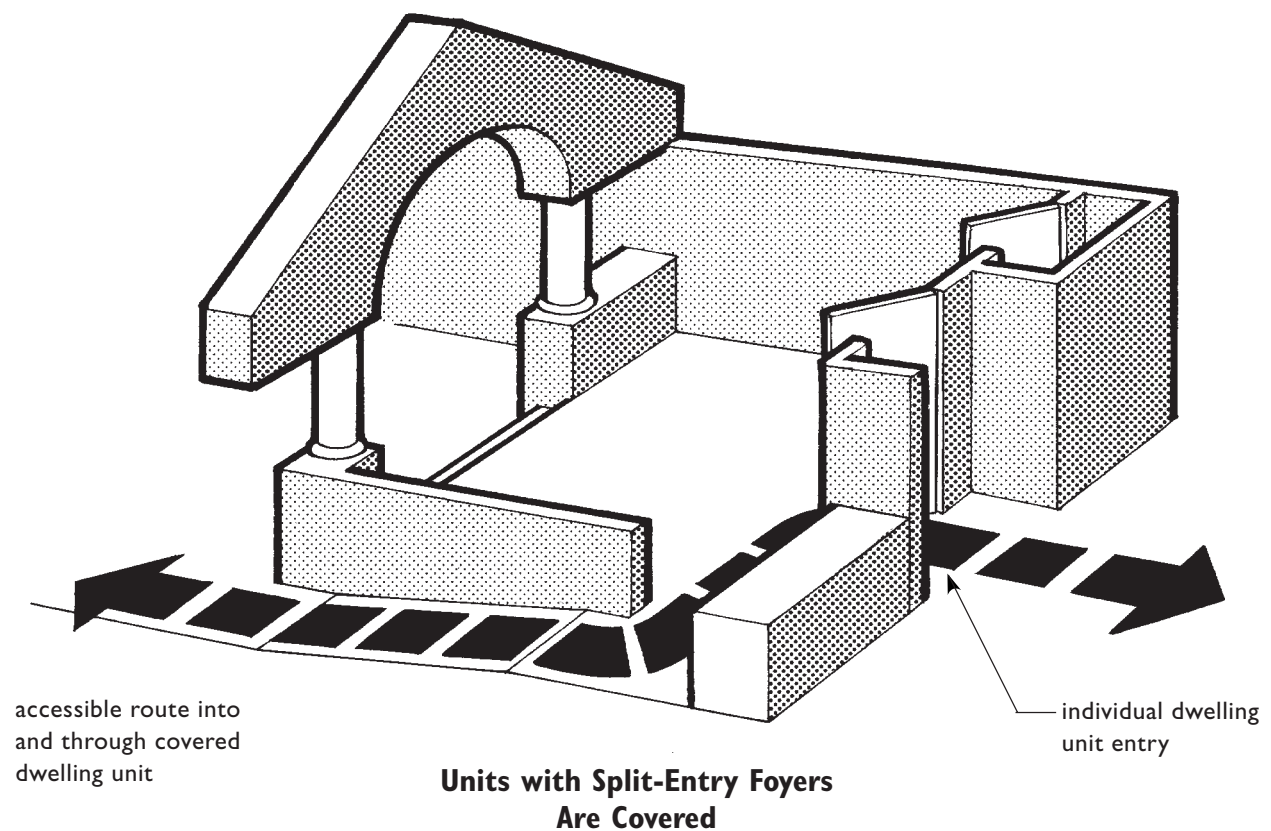
Single-story dwelling units are not prohibited from having specific design features, such as a split-level entry, a sunken living room, or a loft area; but the Guidelines do contain restrictions for each of these. Where a single-story dwelling unit has such a design feature, all portions of the unit, except the loft or the sunken or raised area, must be on an accessible route, i.e., the accessible route must be continuous throughout the dwelling unit and not be interrupted by the design feature.

The Guidelines specify that kitchens and all bathrooms, including powder rooms, must be

on an accessible route; therefore, no part of kitchens or bathrooms may be located in a raised or sunken area unless an accessible route can be provided to that area. However, a wet bar on a loft or in a sunken area that is not equipped with an accessible route is permissible since the wet bar is not a part of a kitchen. The combination of both a loft and a sunken area within the same dwelling unit prohibits residents with mobility impairments from using a significant percentage of their units and is thus not permitted under the Guidelines.

SPLIT-LEVEL ENTRIES

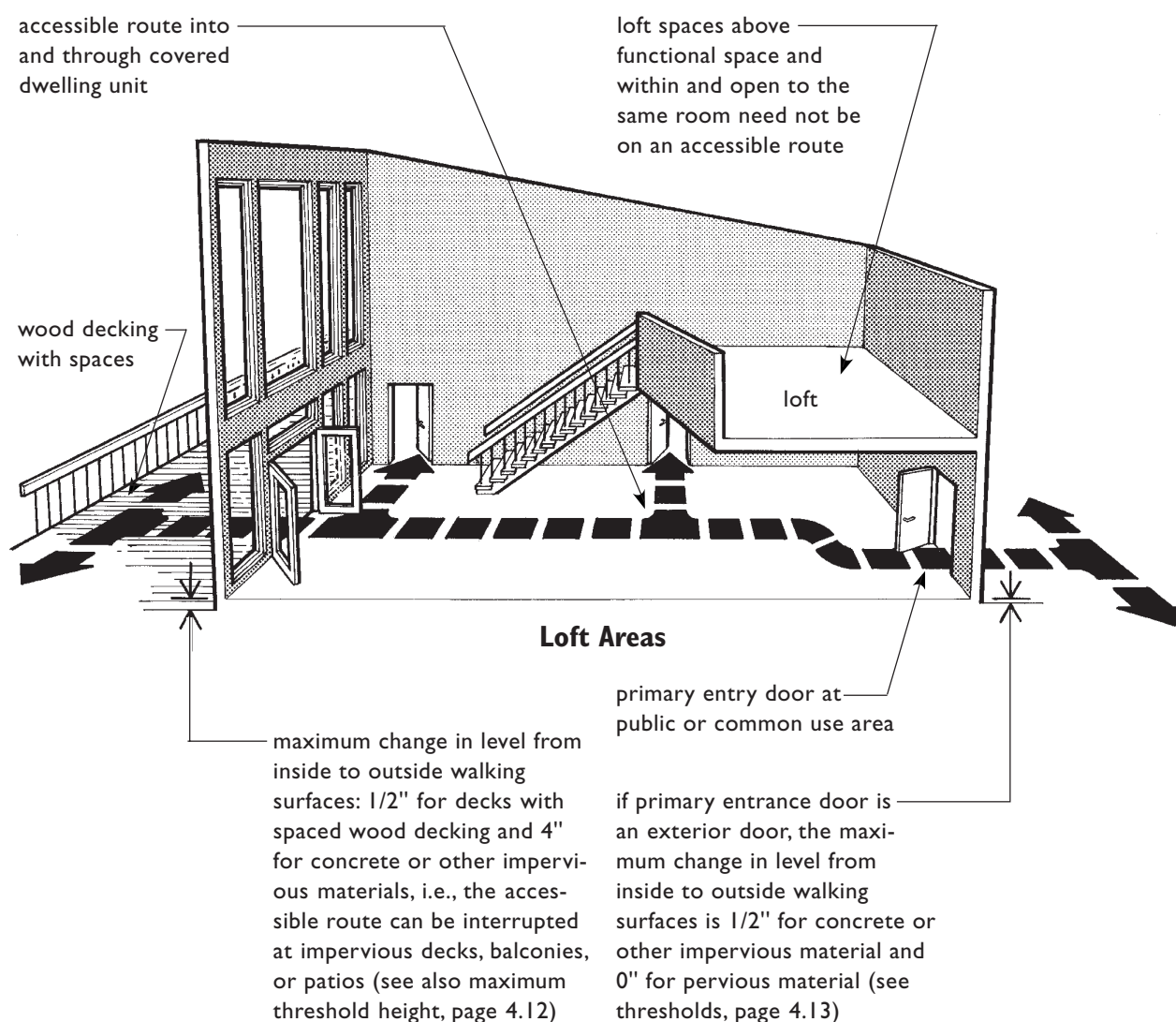
A split-level entry foyer, where the foyer is on one level and the remainder of the unit is down a few steps, does not exempt the unit from coverage by the Fair Housing Act. The entry is critical to providing an accessible route into and through the dwelling unit; therefore, an accessible route to the lower area must be provided by a ramp with a maximum slope of 1:12 or other means of access. It is recommended that the ramp comply with the other ramp requirements of ANSI A117.1 - 1986 or an equal or more strict accessibility standard. See ANSI 4.8.



LOFTS

Dwelling units containing a loft are distinguished from multistory units in that a loft is open to the surrounding space and does not exceed 33-1/3 percent of the floor area of the room in which it is located. Each story (or floor) in a multistory unit is enclosed and contains finished living space with its own ceiling and floor. See "Accessible Routes in Multistory Dwelling Units" on page 4.9.

Because a loft is an intermediate level between the floor and ceiling of the unit, it is not considered a second story. Therefore, a dwelling unit with a loft is a single-story unit covered by the Guidelines. Since all primary or functional living spaces must be on an accessible route, secondary living spaces, such as a den, play area, or an additional bedroom are the only spaces that can be on a loft unless an accessible route can be taken to the loft.



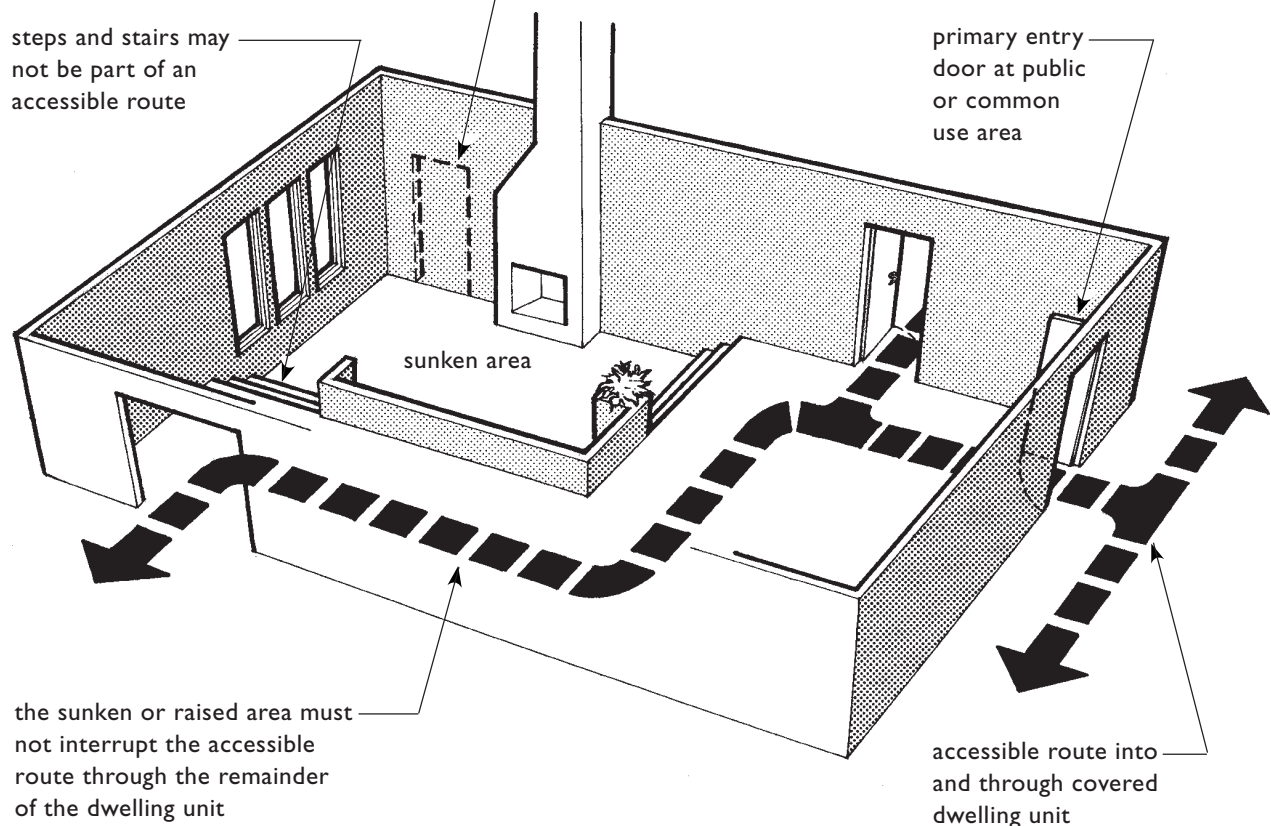
RAISED OR SUNKEN AREAS

A raised or sunken area is usually limited to a few steps maximum and has less of a change in level than a loft. These “special design features” may not contain a functional space in its entirety. For example, the entire living room must not be sunken; however, an auxiliary feature such as a second sitting area could have several steps down to that level that is not served by an accessible route.

If there were a door located here leading to any interior or exterior room or space that could not otherwise be reached by the accessible route, then the sunken/raised area would have to be eliminated or made accessible.

steps and stairs may not be part of an accessible route

primary entry door at public or common use area



Living/Dining Room with Sunken Area

ACCESSIBLE ROUTES IN MULTISTORY DWELLING UNITS

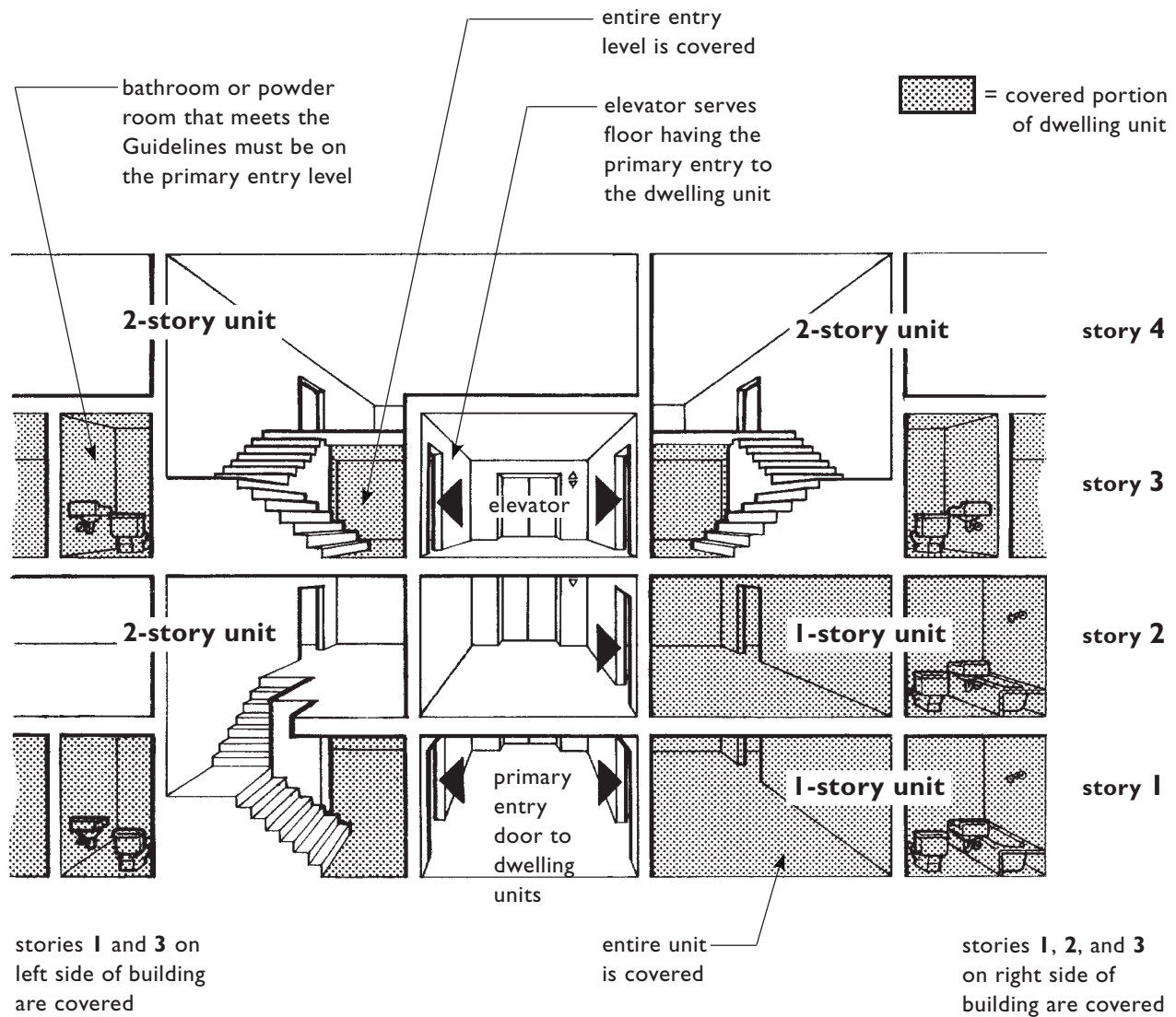
“Multistory dwelling unit” is defined in the Guidelines as a unit “with finished living space located on one floor and the floor or floors immediately above or below it.” Multistory dwelling units in buildings without one or more elevators are not covered by the Fair Housing Act; however, when multistory dwelling units are in buildings with elevators, the dwelling unit is covered and the story that is served by the building elevator must be the primary entry to the unit and must meet the requirements of the Guidelines. Where the primary entry level of a covered multistory dwelling unit contains either a raised or sunken area, that floor level is subject to the same requirements as discussed at “Lofts” and “Raised and Sunken Areas.”

Even though many people with significant mobility impairments may choose not to live in such a unit, multistory units, where the primary entry level meets the Guidelines, allow people with disabilities to visit with friends and relatives who may choose to live in a unit with more than one floor. A resident with a disability may choose to live in such a unit and add a lift at his or her own expense.

In multistory units the story that is served by the elevator must:

- 1.** be the primary entry to the unit,
- 2.** comply with Requirements 3 through 7 of the Guidelines for all rooms located on the entry floor level, and
- 3.** contain a usable bathroom or powder room.

If there is both a bathroom and a powder room on the entry level of a multistory unit, then the bathroom must meet Requirement 7 of the Guidelines and the powder room needs to meet only Requirements 3, 4, and 5 of the Guidelines. In cases where only a powder room is provided on the entry level, it is treated as a bathroom and must: **1.** be on the accessible route, **2.** have a door with a 32-inch nominal clear width, **3.** meet the maneuvering and clear floor space requirements at toilets and lavatories, **4.** allow the user to enter the room, close the door, use the facilities, and reopen the door to exit, **5.** have reinforcing around the toilet for future installation of grab bars, and **6.** have switches, outlets, and controls in accessible locations. See page 7.38 and powder room plans starting on page 7.81.



**Single-Story Units and the Primary Entry Level
of Multistory Units in Buildings
with One or More Elevators Are Covered**

**THRESHOLDS AND ACCESSIBLE
ROUTES AT EXTERIOR DOORS**

The Guidelines allow the change in level between the interior floor level of the dwelling unit and an outside surface or platform to vary somewhat, depending upon **1.** whether the door is a primary or secondary door and **2.** the construction material of the outside landing surface. If the primary entry door to a dwelling unit has direct exterior access, the landing surface outside the door, as part of the accessible route, must be level with the interior floor, unless the landing is constructed of an impervious material, such as concrete; in which case, the landing may be up to 1/2 inch (but no more than 1/2 inch) below the interior floor of the dwelling unit. However, to prevent water damage, the finished surface outside the primary entry door may be sloped at a maximum of 1/8 inch for every 12 inches.

When a secondary exterior door exits onto decks, patios, or balcony surfaces constructed of impervious materials, the accessible route may be interrupted. In this case, the outside landing surface may be dropped a maximum of 4 inches below the floor level of the interior of the dwelling unit (or lower if required by local building code) to prevent water infiltration at door sills. If the exterior surface is constructed of pervious material, such as a wood deck that will drain adequately, that surface must be maintained to within 1/2 inch of the interior floor level. Note: When measuring the distance between the floor inside and the outside surface, the interior floor level must be calculated from the finished floor and not from the subfloor. If carpet is to be installed, the measurement should be calculated with a fully compressed carpet and, if present, the pad. In addition to the above changes in floor level, the Guidelines specify the maximum height for the door threshold, which is discussed on page 4.12.

**Maximum Allowable Height Difference
Between Interior Floor Level and Exterior Floor Level**

level difference		at primary entry door
0"		pervious construction (e.g., wood decking with spaces)
1/2"		impervious construction (e.g., concrete, brick, or flagstone)
level difference		at secondary door
1/2"		pervious construction
4"		impervious construction

THRESHOLDS AT EXTERIOR DOORS

The concept of an accessible route is intended to ensure the maintenance of a continuous path of travel with no abrupt changes in level so people with disabilities who use wheelchairs or scooters and those who walk are not impeded. However, changes in level are inevitable at exterior doors because thresholds and changes in level are needed to control and/or prevent water infiltration.

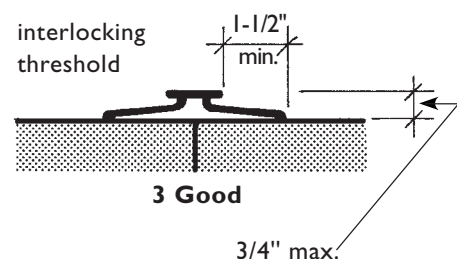
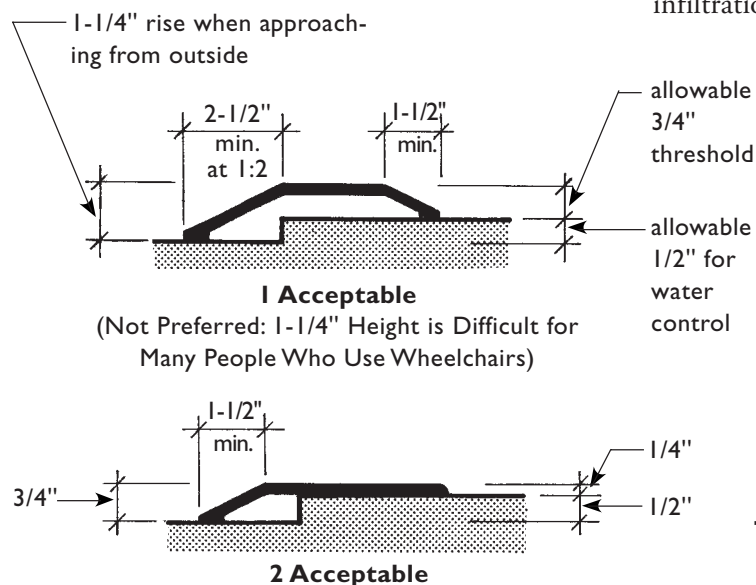
The Guidelines allow limited changes in levels at exterior doors along accessible routes. In addition to the change in floor level between the interior floor and exterior landing discussed on page 4.11, the Guidelines specify that thresholds at these exterior doors, including sliding door tracks, shall be no higher than 3/4 inch. The Guidelines further state that changes in level at these locations must be beveled with a slope no greater than 1:2.

In the case of primary entry doors where the exterior landing surface is impervious, the exterior landing surface is permitted to be below the finish floor level by 1/2 inch. Therefore, the Guidelines allow an overall change in level of 1-1/4 inch on the exterior side of the primary entry door.

Note, however, as already stated, these changes in level must be beveled with a slope no greater than 1:2. See the first illustration below.

Exterior door thresholds of 3/4 inch, even when beveled, can be extremely difficult to navigate for some persons who use wheelchairs, and the additional change in level when outside landing surfaces are impervious adds to this difficulty. Because of this, it is recommended that other solutions be considered which both provide for less of a change in level at the door threshold and also are designed to prevent water infiltration. One such solution is to use a threshold that rises a maximum of 1/4 inch on the inside and drops 3/4 inch at a slope of 1:2 at the exterior. See illustration two below. An even better solution is to bring the exterior surface up to the same level as the interior floor using an interlocking threshold. See illustration 3.

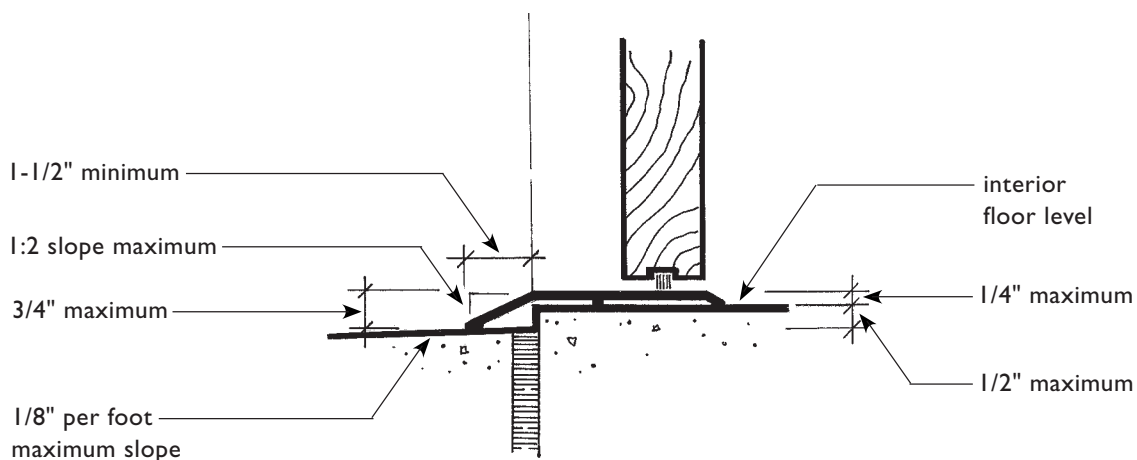
The illustrations on pages 4.13 through 4.14 offer design details of door thresholds that meet the requirements of the Guidelines as well as recommended door thresholds that provide for lesser changes in level while still preventing water infiltration to the dwelling unit.



Threshold Details at Primary Entry with Impervious Landing Surface

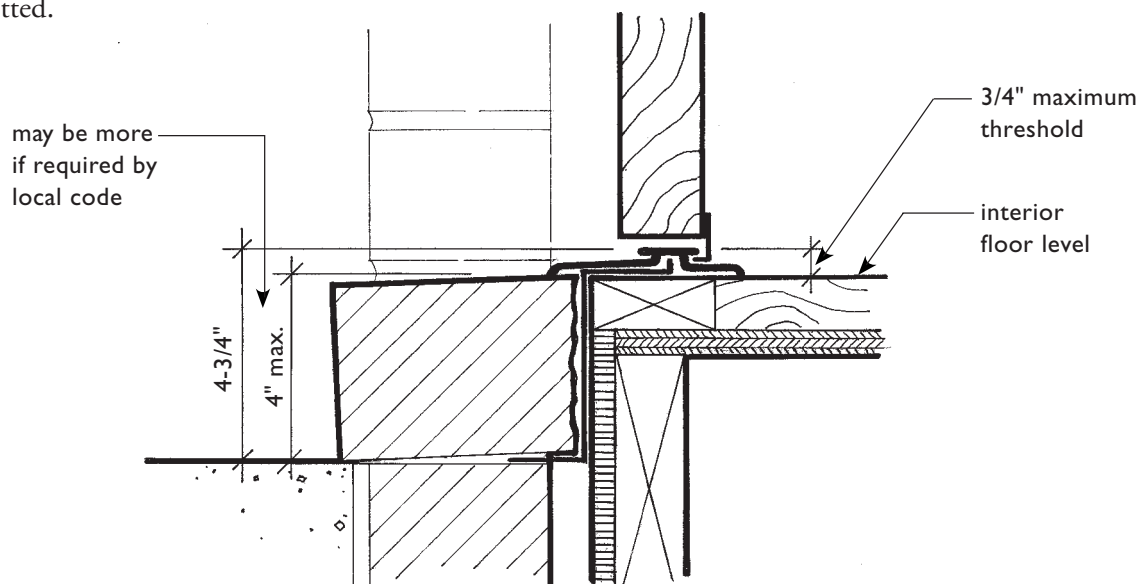
Swinging Primary Entry Door at Concrete Landing

showing allowable changes in level at primary entry doors with direct exterior access onto concrete or other impervious landing surface where 1/2-inch maximum changes in level are permitted.



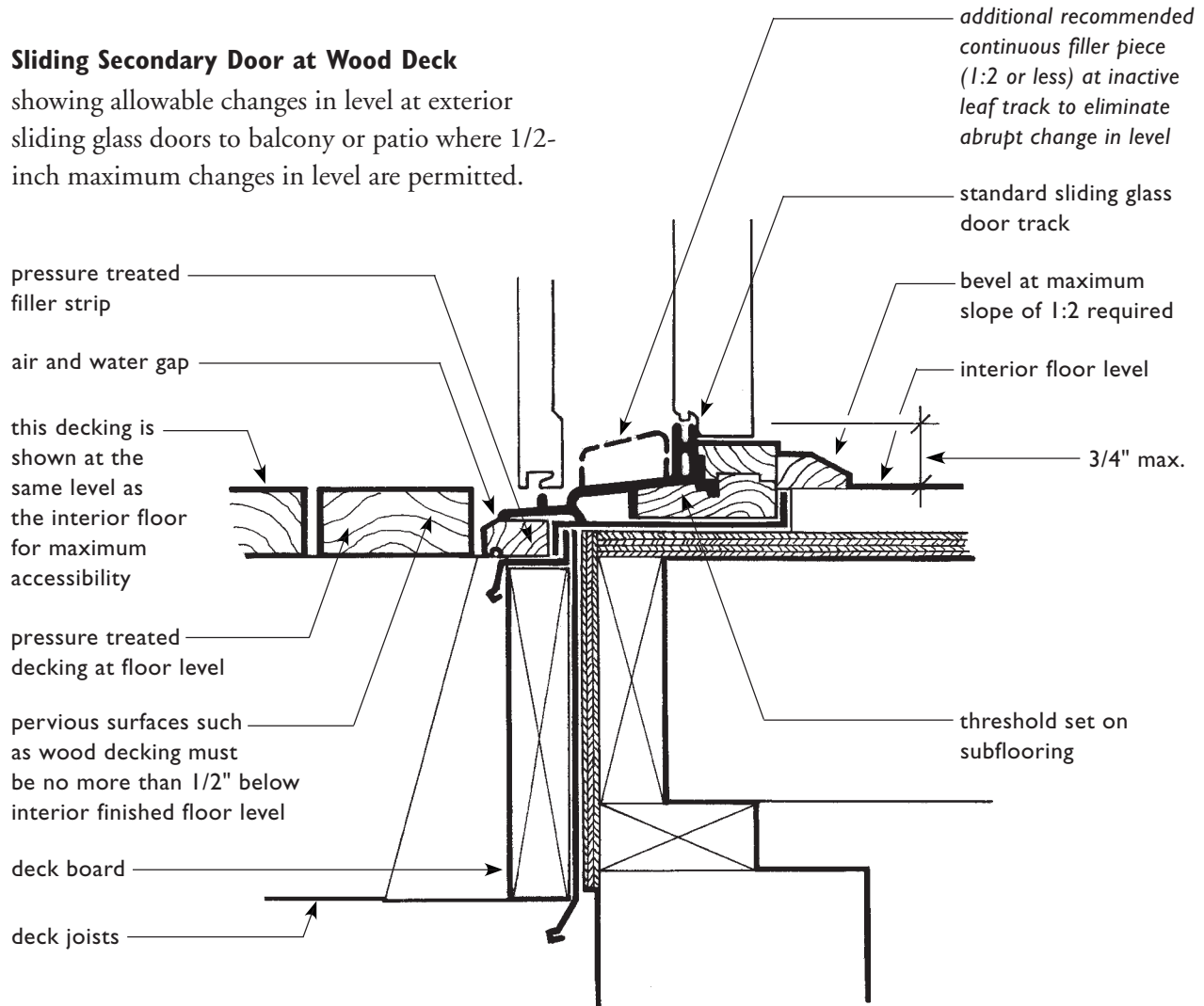
Swinging Secondary Door at Concrete Landing

showing allowable changes in level at exterior swinging doors onto concrete or other impervious landing surface where 4-inch changes in level are permitted.



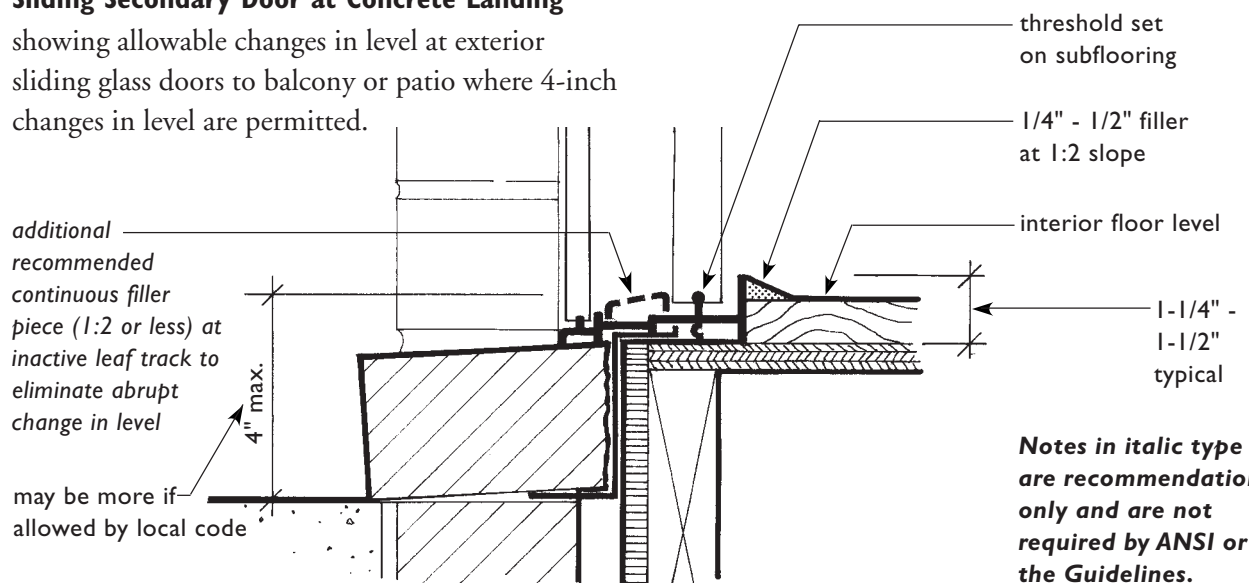
Sliding Secondary Door at Wood Deck

showing allowable changes in level at exterior sliding glass doors to balcony or patio where 1/2-inch maximum changes in level are permitted.



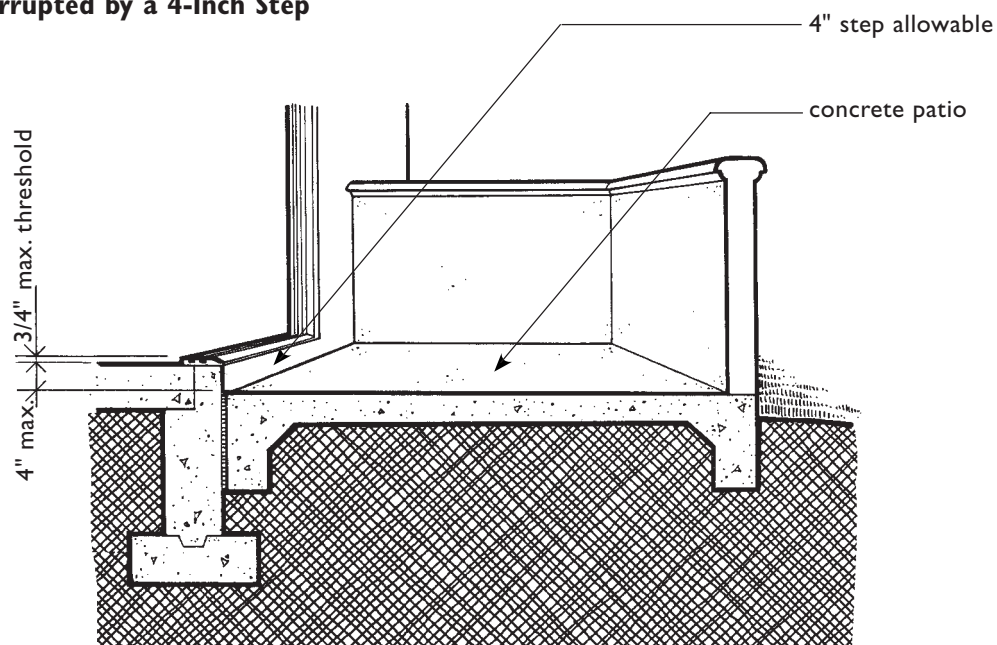
Sliding Secondary Door at Concrete Landing

showing allowable changes in level at exterior sliding glass doors to balcony or patio where 4-inch changes in level are permitted.



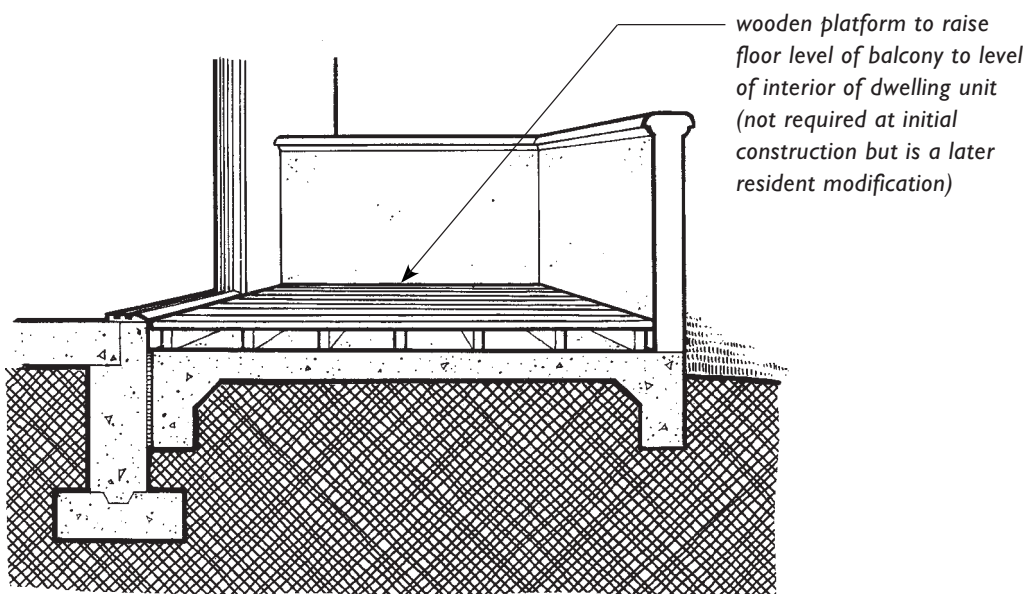
Notes in italic type are recommendations only and are not required by ANSI or the Guidelines.

**Accessible Route onto Balcony
Constructed of Concrete, Brick, or Flagstone
May Be Interrupted by a 4-Inch Step**



Notes in italic type are recommendations only and are not required by ANSI or the Guidelines.

Accessible Route onto Balcony Created with the Addition of a Raised Platform (Added by the Resident)



Chapter Five:

REQUIREMENT 5

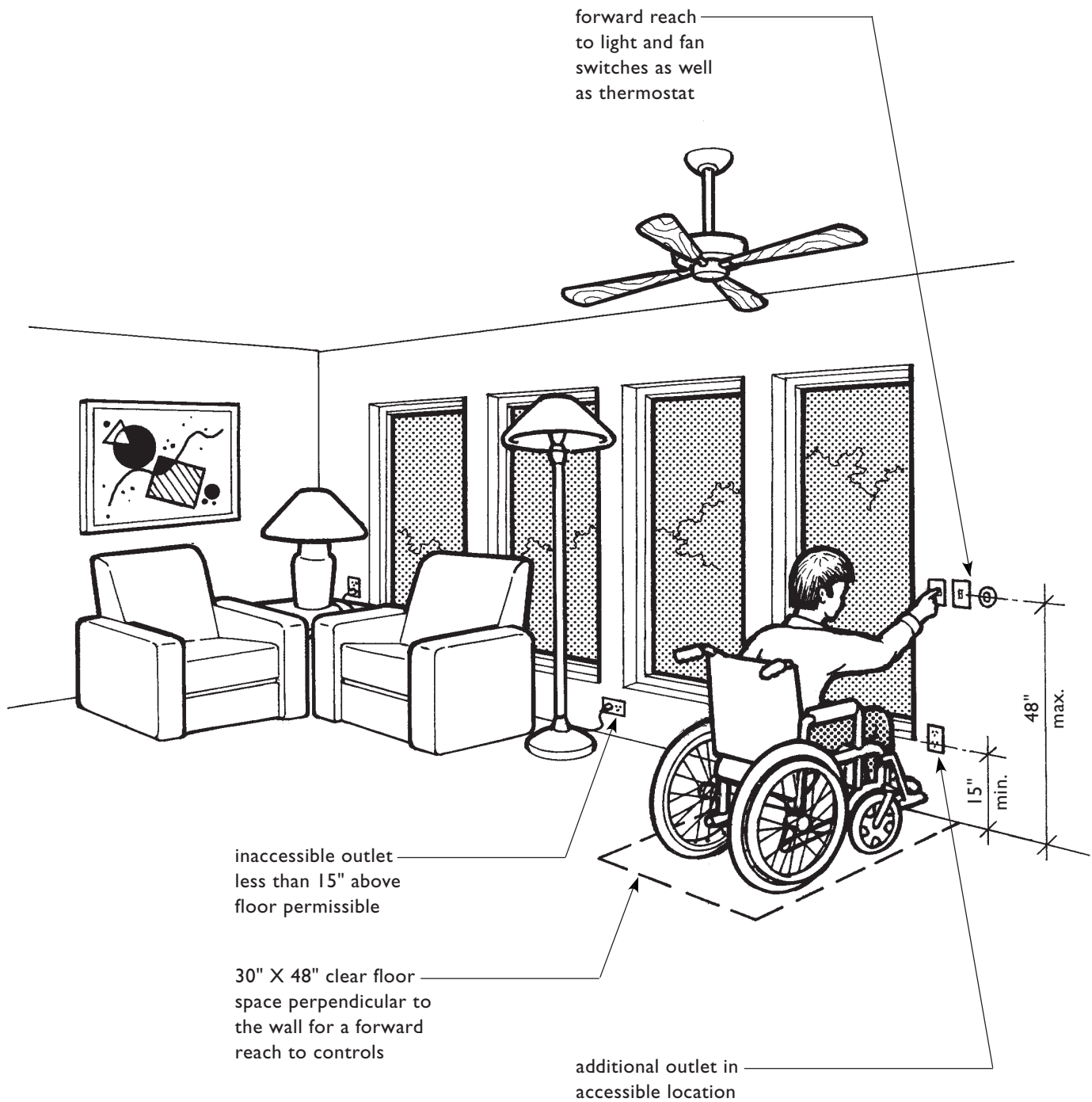
Light Switches, Electrical Outlets,
Thermostats, and Other Environmental
Controls in Accessible Locations

5



...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 light switches, electrical outlets, thermostats and other environmental controls in accessible locations.

Fair Housing Act Regulations, 24 CFR 100.205



**All Covered Switches, Outlets, and Controls
Operated on a Frequent Basis Must be in Accessible Locations**

INTRODUCTION

The ANSI specifications for accessible controls and operating mechanisms require a clear floor space to allow an approach by a person using a wheelchair, specify the height of the operable portion of the control, and require little or no force be exerted to operate the control. The Fair Housing Accessibility Guidelines (the Guidelines) do not require controls to be fully accessible but specify that light switches, electrical outlets, thermostats and other environmental controls, which are operated on a regular or frequent basis in the daily use of a dwelling unit, be in accessible locations.

The Guidelines' specifications for accessible locations, based on the ANSI (A117.1 - 1986) Standard, address where to position controls and outlets to be within the reach range of a seated user. Force and type of motion required to operate controls are not covered by the Guidelines.

CONTROLS AND OUTLETS SUBJECT TO THE REQUIREMENTS OF THE GUIDELINES

Environmental controls such as thermostats and other heating, air-conditioning, and ventilation mechanisms including ceiling fans and electrically operated skylights must be positioned in accessible locations, as must **light switches** and **electrical outlets** for each room. All these covered controls and outlets must be in accessible locations, with a few exceptions.

The Guidelines allow, for example, controls or outlets that do not satisfy the requirements, if comparable controls or outlets in accessible locations are provided within the same area. Comparable controls or outlets are those that perform the same function. For example, floor outlets (which are inaccessible) or outlets mounted in the corner of kitchen counters are permitted under the Guidelines, provided other outlets are available to serve the same space or area.

Controls and outlets not covered by the Guidelines include circuit breakers or electrical outlets dedicated to individual appliances such as refrigerators, built-in microwave ovens, washing machines, and dryers because neither circuit breakers nor these outlets are accessed frequently by residents. Appliance controls are not required to be in accessible locations because the Fair Housing Act is not intended to regulate the design of appliances.

Thus, when appliance controls are built into or are located on the appliance itself, they are not considered to be covered controls. Range or washing machine controls need not be within the reach range of seated users, although certainly it is preferred that such controls be within reach. Range

hood fan and light controls, when mounted on the hood, are part of an appliance and are, therefore, not covered. However, if the range hood fan and light are wired to a separate switch on a wall or any location other than on the hood, range, or cooktop, then the control must be in an accessible location.

Garbage disposals do not fall under any of the categories of covered controls. The operating switch for a garbage disposal is not mounted on the appliance itself but is wired to another location. Although not a covered control, since garbage disposals are used frequently and since it is relatively simple to place operating switches for

garbage disposals in accessible locations, it is recommended that it be done.

Emergency interrupt switches to mechanical systems such as furnaces or hot water heaters also are not covered by the Guidelines. However, it is recommended that such switches be in locations that can be reached from a seated position. Even when the mechanical system is located behind a narrow door in a small closet dedicated specifically to that purpose, it is recommended that the interrupt switch be positioned so it can be reached from outside the closet by a person using a wheelchair.

SWITCHES, OUTLETS, AND CONTROLS COVERED BY THE GUIDELINES

Covered

- light switches for controlling all room lights
- electrical outlets
- environmental controls
 - thermostats and controls for other heating, air-conditioning, and ventilation systems

Not Covered

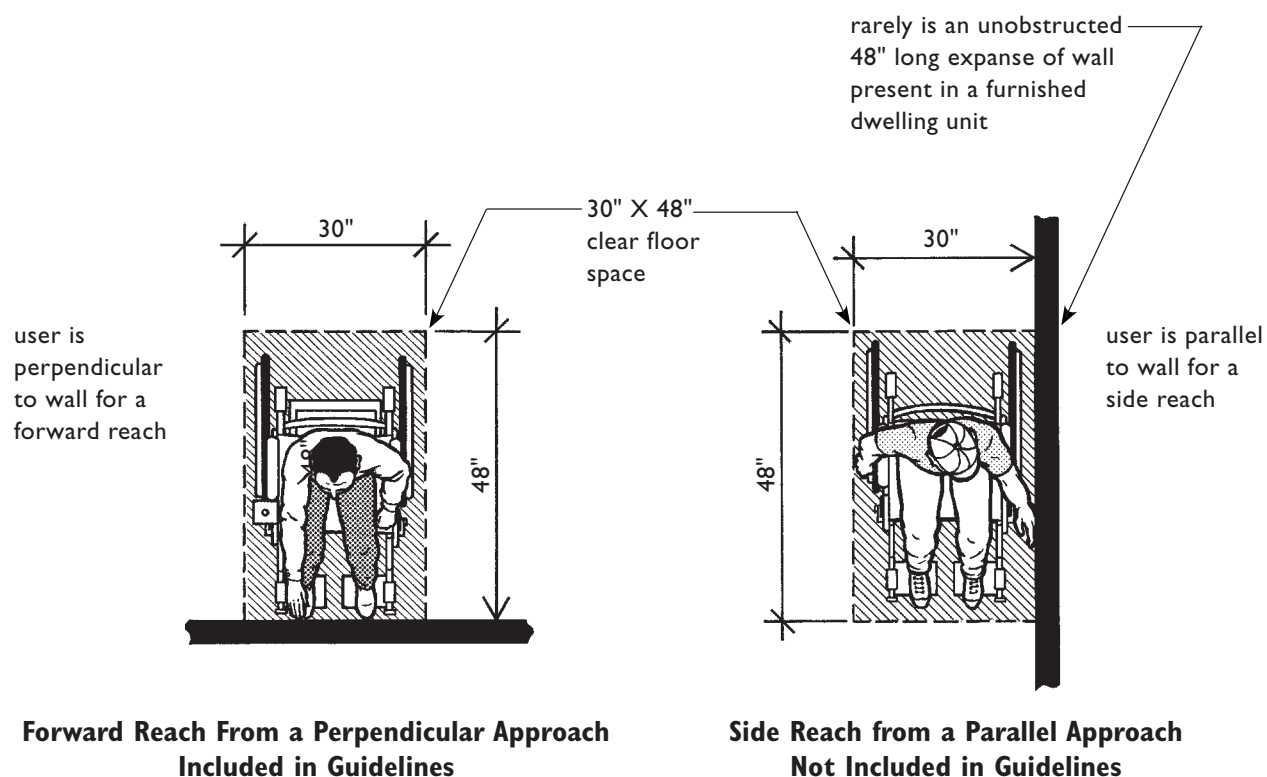
- circuit breakers
- appliance controls
- outlets dedicated for specific appliances

ACCESSIBLE LOCATIONS

The Guidelines contain height specifications for wall-mounted controls and outlets based upon the reach ranges of seated people given in the ANSI Standard. Typically ANSI and other accessibility standards present reach ranges for both forward and side reaches: **1.** where the user must reach over an obstruction, and **2.** where the user's approach is not restricted by an obstruction. One of these positions, a side reach from a parallel position without an obstruction, requires a 48-inch long clear floor space parallel and close to the wall so a user can get close enough to reach controls and

switches. Once a dwelling unit is furnished, sufficient room to execute such a parallel approach usually is not available; thus this specification was omitted from the Guidelines.

To accommodate all users in situations where there may or may not be a built-in counter, base cabinet, or other obstruction to interfere with reach, the Guidelines include specific requirements for mounting controls and switches so a person using a wheelchair can execute: **1.** a forward reach with no obstruction, **2.** a forward reach over an obstruction, and **3.** a side reach over an obstruction.

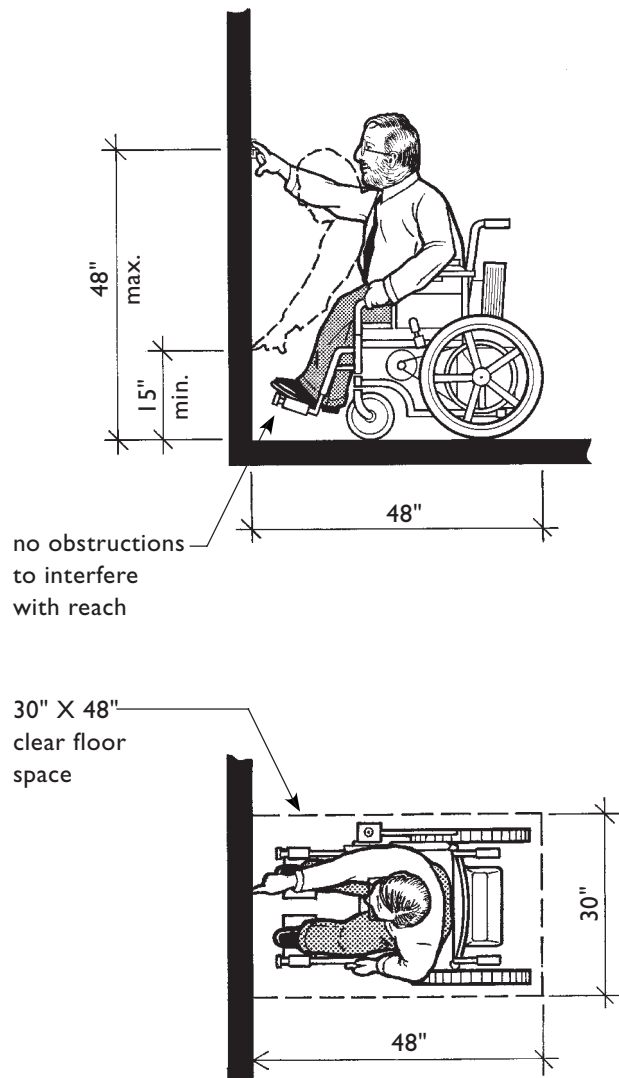


FORWARD REACH WITH NO OBSTRUCTION

Where there are no obstructions to interfere with the reach of a person using a wheelchair, controls and outlets may be mounted in a range from 15 to 48 inches above the floor. There must be a clear floor space of 30 inches x 48 inches perpendicular to the wall, adjoining a 36-inch wide accessible route, to allow a person using a wheelchair to approach and get into position to execute a forward reach to the control or outlet. See Chapter 4: “Accessible Route into and Through the Covered Dwelling Unit.”

Thermostats and other controls that must be read pose additional considerations. Even though people using wheelchairs may be able to execute a forward reach of 48 inches at a clear wall, they may have difficulty seeing the small numerals and indicators generally found on thermostats. A person using a wheelchair, when positioned perpendicular to a wall, must lean forward over his or her feet and knees making it difficult to get close enough to read small type. Therefore, it is critical that thermostats and similar controls that must be read are mounted at or lower than 48 inches above the floor.

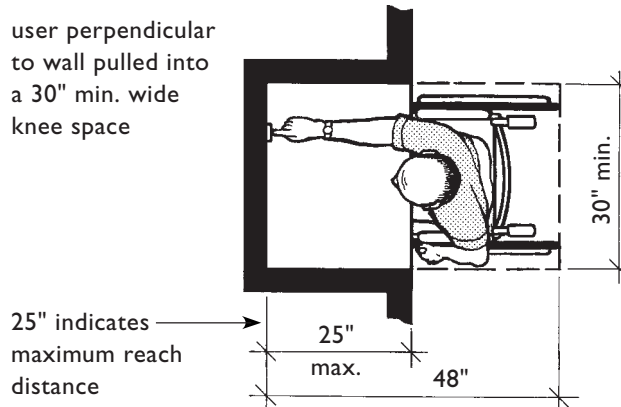
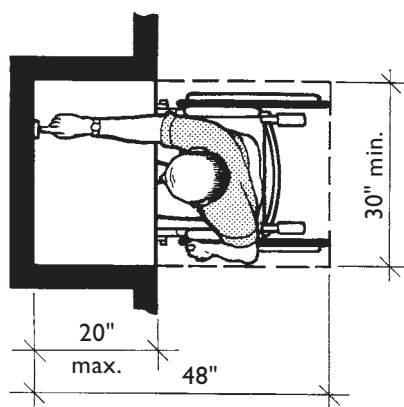
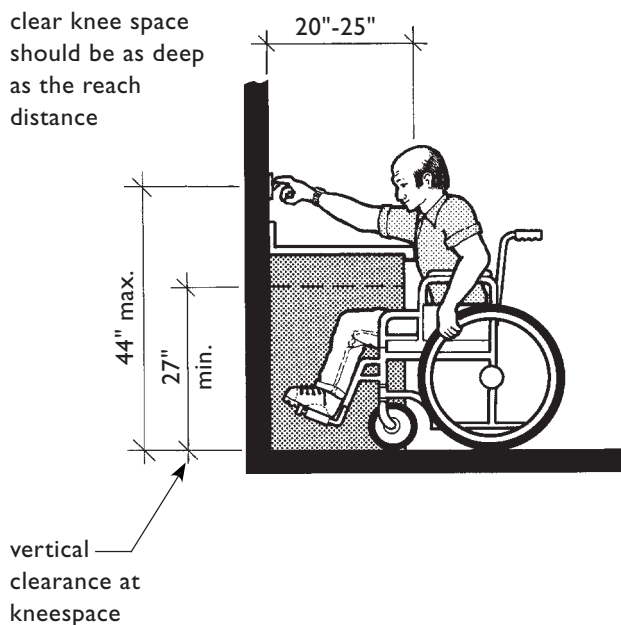
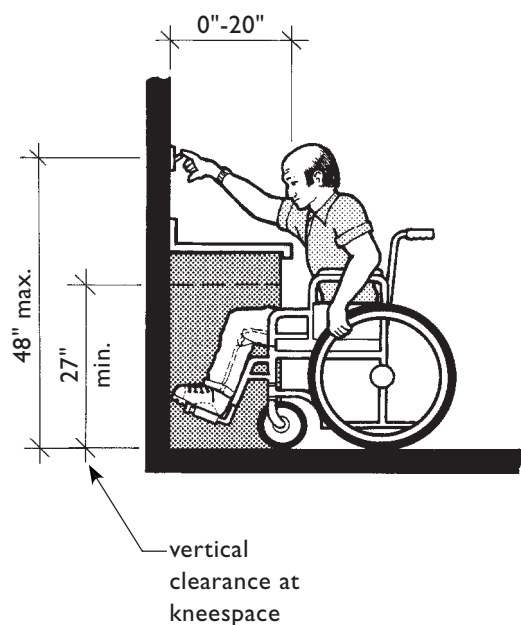
the counter/obstruction to allow a person using a wheelchair to pull up and execute a forward reach over the obstruction.



**High and Low Forward Reach Limits
From a Perpendicular Approach**

For obstructions extending from 0 to 20 inches from the wall the maximum height for a control or outlet over the obstruction is 48 inches above the floor. Deeper shelves, extending 20 to 25 inches from the wall, reduce the maximum mounting height of controls and outlets to 44 inches. Controls and outlets mounted over obstructions

extending further than 25 inches are outside the reach range of people using wheelchairs and are not considered to be in accessible locations. However, HUD allows an industry tolerance of 1/2 inch to permit the installation of standard countertops that may project from the back wall for a maximum dimension of 25-1/2 inches.

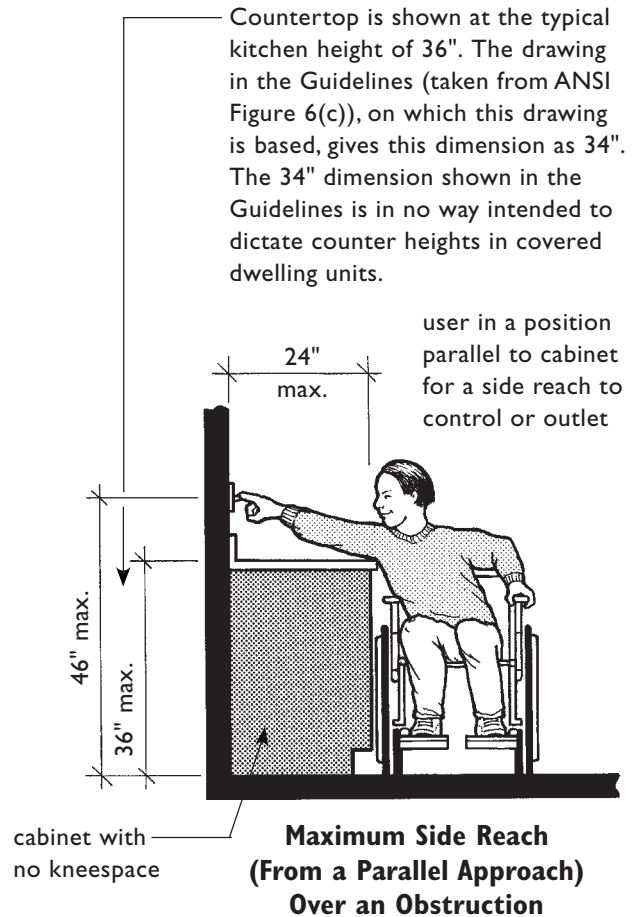


**Maximum Forward Reach
(From a Perpendicular Approach) over an Obstruction**

SIDE REACH OVER AN OBSTRUCTION

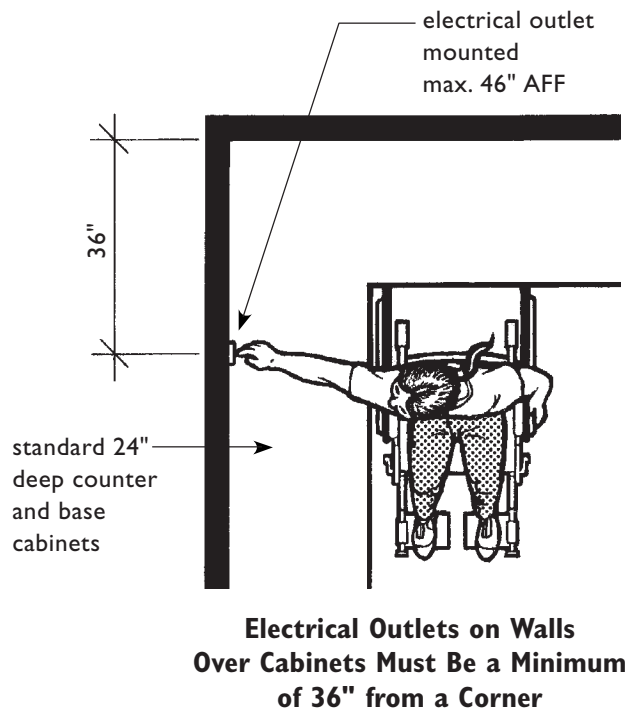
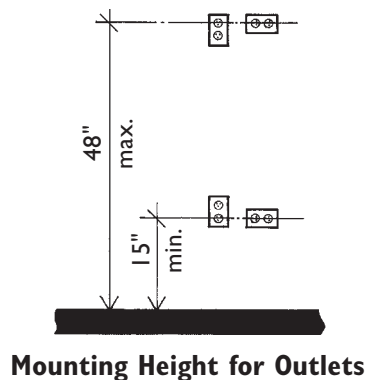
To reach controls and outlets mounted over base cabinets which lack knee space, a person using a wheelchair must be able to approach the cabinet from a position parallel to the cabinet and execute a side reach. This parallel position is made up of a 30-inch x 48-inch clear floor space adjoining a 36-inch wide minimum accessible route. When executing a side reach over a cabinet, the upper limit of the range is reduced to 46 inches.

Cabinet depth is limited to 24 inches. HUD permits use of a standard 24-inch deep cabinet with an additional extension of 1 to 1-1/2 inches for countertops for a maximum depth of 25-1/2 inches. If a built-in shelf, cabinet, or other obstruction must be deeper than 25-1/2 inches, then any switches, outlets, and controls that must be in accessible locations are not permitted to be installed over such deep surfaces.



MOUNTING LOCATIONS FOR OUTLETS

For accessible controls and outlets, all operable parts must be within the ranges specified above. When electrical outlets are installed horizontally or vertically, duplex outlets must have both receptacles within the reach range. Measurements are made as illustrated below.

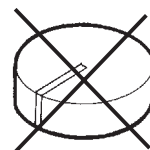


RECOMMENDATIONS FOR INCREASED ACCESSIBILITY

The Guidelines do not specify that controls and switches installed in dwelling units be accessible in terms of ease of operation, but that they be in accessible locations. For anyone specifying building products and appliances and wishing to enhance the accessibility of dwelling units, the following is a brief discussion of the types of switches and controls that increase usability for people with disabilities, as well as other persons who may experience hand limitations.

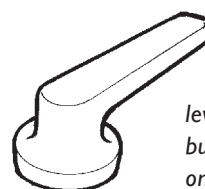
The most universally usable switches are rocker switches, toggle switches, and touch type electronic switches because they can be operated by a single touch, require little force, and do not require gripping, twisting, or fine finger dexterity.

Lever controls are generally usable by people with disabilities because they do not require grasping or significant force, and in some instances, their shape may double as an integral pointer to indicate the control's position. For people with limited strength or hand dexterity, smooth round knobs are especially difficult, as are controls that must be pushed down and turned at the same time.



smooth round knobs are difficult for people with hand limitations as well as for people with visual impairments

Poor Choice



levers are ideal but rarely found on appliances

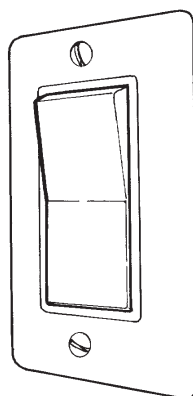


blades help indicate position and make turning somewhat easier

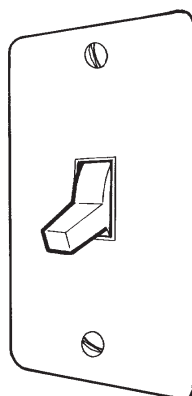


small lever or extended blade provides position pointer and leverage for easy turning without gripping

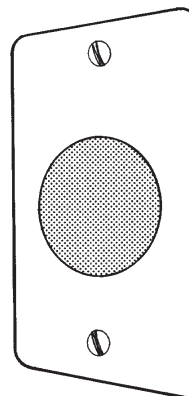
Better Control Choices



rocker



toggle



touch
sensitive

Switches Most People Can Operate

Chapter Six:

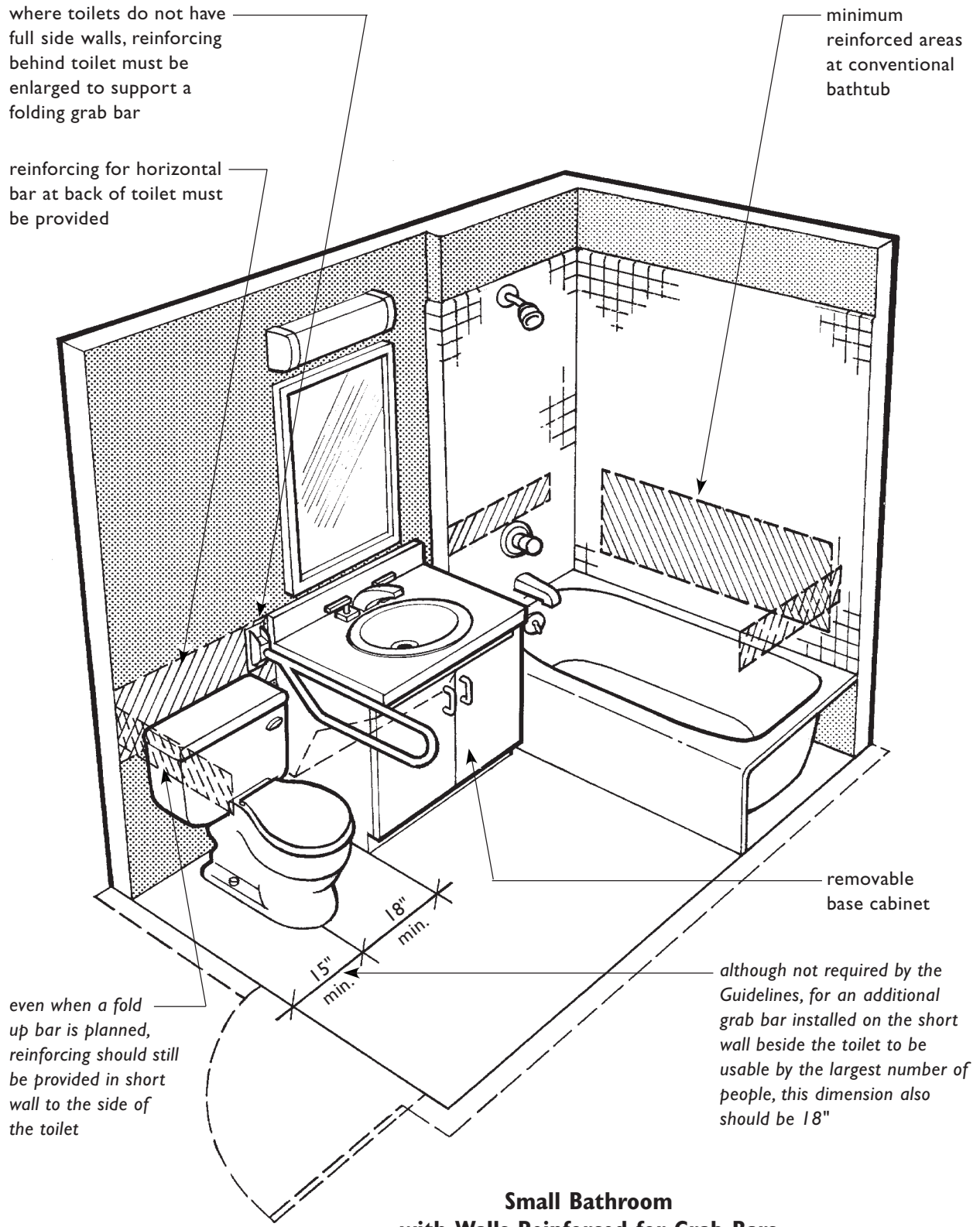
REQUIREMENT 6

Reinforced Walls for Grab Bars



...covered multifamily dwellings with a building entrance on an accessible route shall be designed and constructed in such manner that all premises within covered multifamily dwelling 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.

Fair Housing Act Regulations, 24 CFR 100.205



INTRODUCTION

The Fair Housing Accessibility Guidelines (the Guidelines) do not require that grab bars be installed in bathrooms. However, the Guidelines do require that bathroom walls be sufficiently strong to allow for later installation of grab bars for resident use. This requirement applies to all bathrooms, and also to powder rooms when the powder room is the only toilet facility on the entry level of a multistory dwelling unit in an elevator building (see page 4.9). Reinforcing methods are discussed later in this chapter.

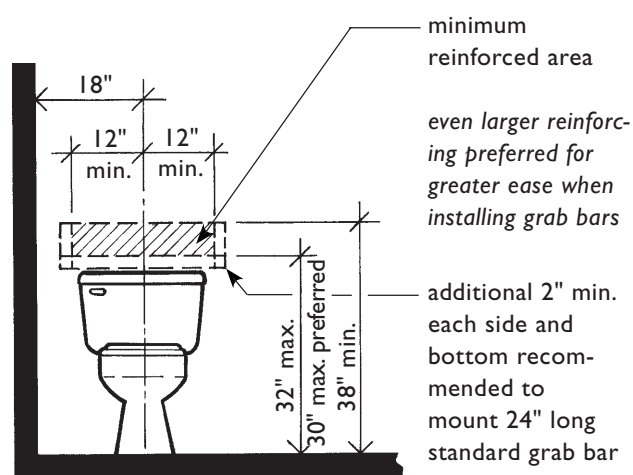
Grab bars are critical for many people with mobility impairments to be able to safely transfer on and off the toilet. Safety for everyone is greatly increased by the addition of grab bars at bathtubs and showers. The Guidelines do not prescribe the type or size of grab bars, nor the structural strength they must exhibit. The Guidelines state only that the necessary reinforcement must be placed “to permit the later installation of appropriate grab bars.” HUD encourages builders to look at the 1986 ANSI A117.1 Standard, or an equivalent or stricter standard, or their state or local building code in planning for or selecting appropriate grab bars.

It is recommended that building owners and managers permanently mount directions for installation of grab bars in every dwelling unit where applicable. The type of construction should be described, where reinforcing is located, and suggestions made for the most effective method for installing grab bars. These notices could be laminated to the inside of a linen closet door or to the inside of a utility or water heater/furnace door.

REINFORCING FOR GRAB BARS AT TOILETS

The Guidelines specify that reinforcing at least 6 inches wide by 24 inches long, capable of supporting grab bars, be provided behind and beside toilets. These minimal areas to be reinforced are adapted from the 1986 ANSI A117.1 Standard. However, the reinforcing should be both longer and wider so sufficient solid material is available to mount grab bars of differing lengths, mounting configurations, and designs. In fact, the Guidelines encourage longer reinforcing, as shown in the Guidelines Figure 3, “Water Closets in Adaptable Bathrooms,” where the preferred length of 42 inches for side wall reinforcing is given.

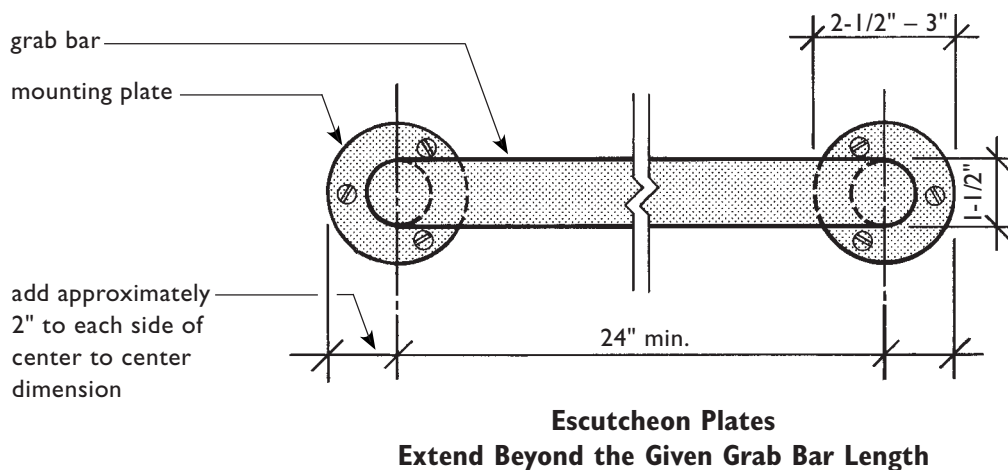
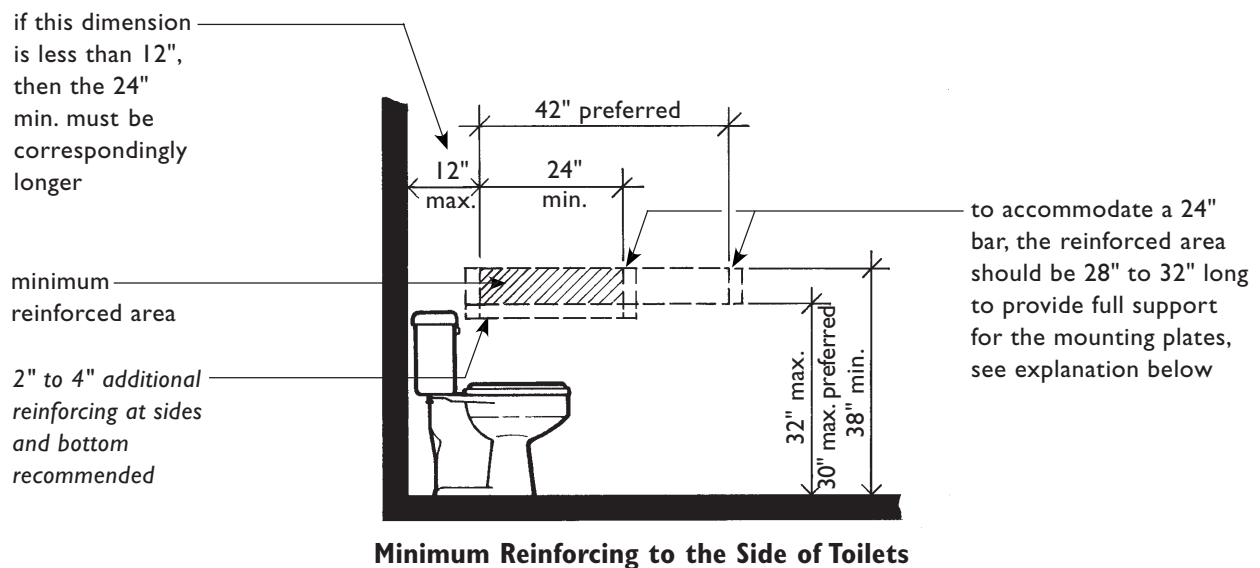
Grab bars, to be within the ranges presented in most accessibility standards, are mounted so their centerline is 33 inches to 36 inches above the floor. If the bottom of the reinforced area is at 32 inches, and a resident chooses to mount a bar at 33 inches, the mounting plates will extend below the reinforced area by 1/2 inch or more. To avoid a weak and unsafe connection, it is critical that reinforcing be enlarged.



**Minimum Reinforcing Behind Toilets
Located Beside a Wall**

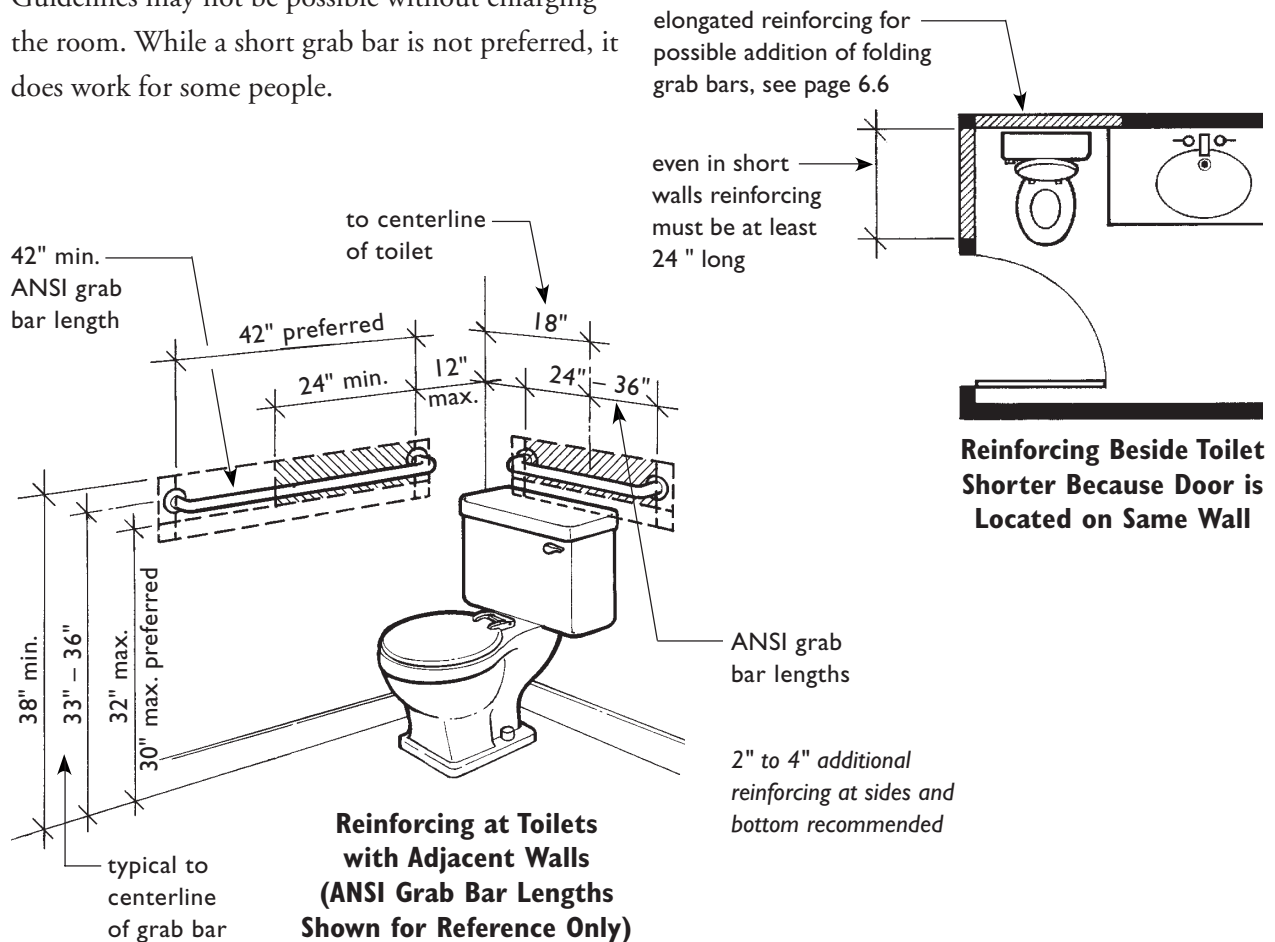
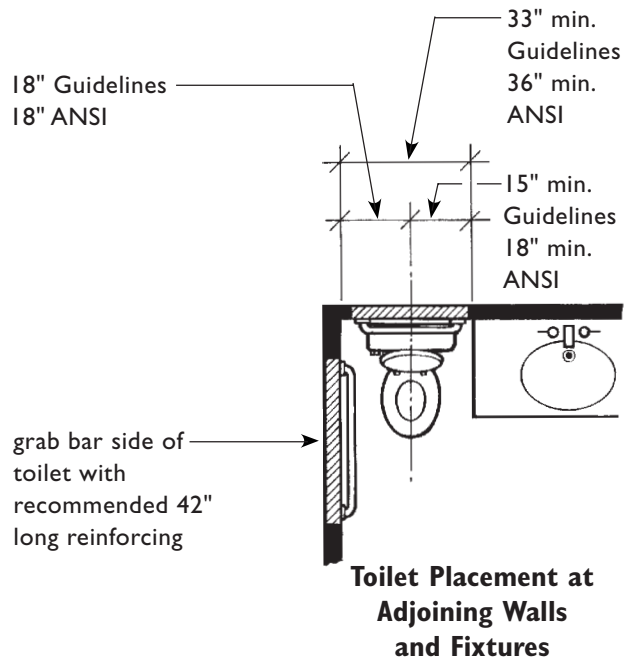
The leading edge of the reinforcing beside the toilet should be positioned at least 36 inches from the back wall to accommodate a bar that is a minimum of 24 inches long. If the reinforcing starts 6 inches from the back wall then the 24

inches of reinforcing should be increased to 30 inches minimum. Whenever a toilet is next to a wall that allows for a longer area of reinforcing (42" is preferred), the longer area should be reinforced.



Toilets positioned beside a wall offer the highest degree of safe use since a grab bar can be mounted to the side of the toilet. The dimensions describing the distance from the center of the toilet to a side wall and to the nearest fixture or obstruction on the opposite side have been adapted from the ANSI Standard. The 18 inches from the centerline of the toilet to the wall is an absolute measurement and will accommodate a grab bar and the shoulders of a person seated on the toilet. The Guidelines provide for a 15-inch minimum dimension on the nongrab bar side, which is more lenient than ANSI (which requires 18 inches minimum).

In small bathrooms where the door is located in the side wall immediately adjacent to the toilet, full length reinforcing as specified in the Guidelines may not be possible without enlarging the room. While a short grab bar is not preferred, it does work for some people.



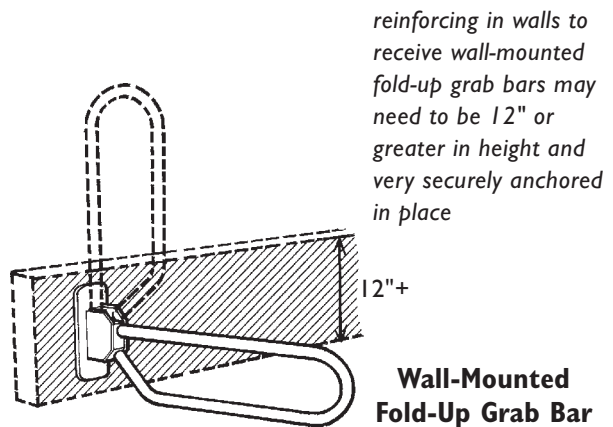
FOLDING AND FLOOR-MOUNTED GRAB BARS AT TOILETS

The Guidelines permit the installation of folding wall-mounted, floor-mounted or wall and floor-mounted grab bars where it is not possible to install “appropriate” wall-mounted ANSI, or similar, complying grab bars. This is particularly relevant when there is no wall or a very short wall adjacent to the toilet.

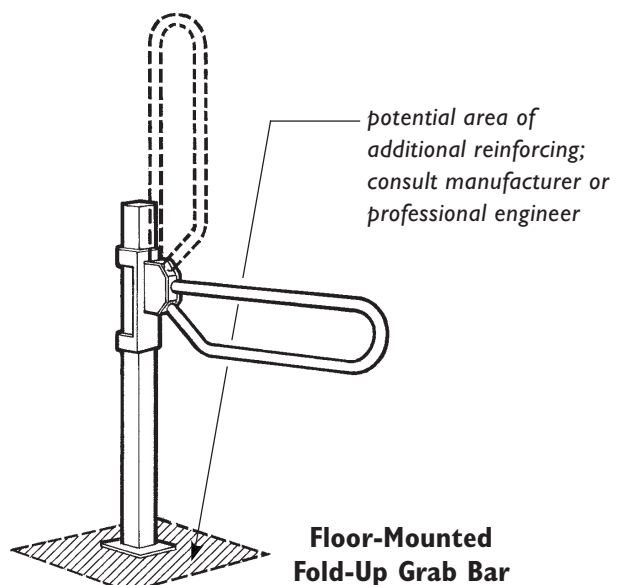
A wide variety of alternative folding grab bars are available. One of the most versatile is the bar that may be pulled down for support and folded out of the way when not needed. Although not quite as stable as the bar that is securely mounted to a wall at both ends, it provides reasonable support for some people.

Reinforcing for such folding grab bars must be substantial because of their cantilevered design. See the top illustration in the right column. For a grab bar to be floor-mounted or be hinged and mounted on the wall behind the toilet, larger areas of reinforcing in walls will be necessary and care must be taken to provide for the types of bars that will not encroach upon the necessary clear floor space at fixtures.

It is recommended that reinforcing for all types of folding grab bars be done strictly as recommended by manufacturers. Information about the exact size and location of reinforcement, and the type and size of bars the reinforcement is engineered to accommodate, should be included in the residents’ information suggested on page 6.3. See Product Resource List in Appendix A for sources of fold-up grab bars.

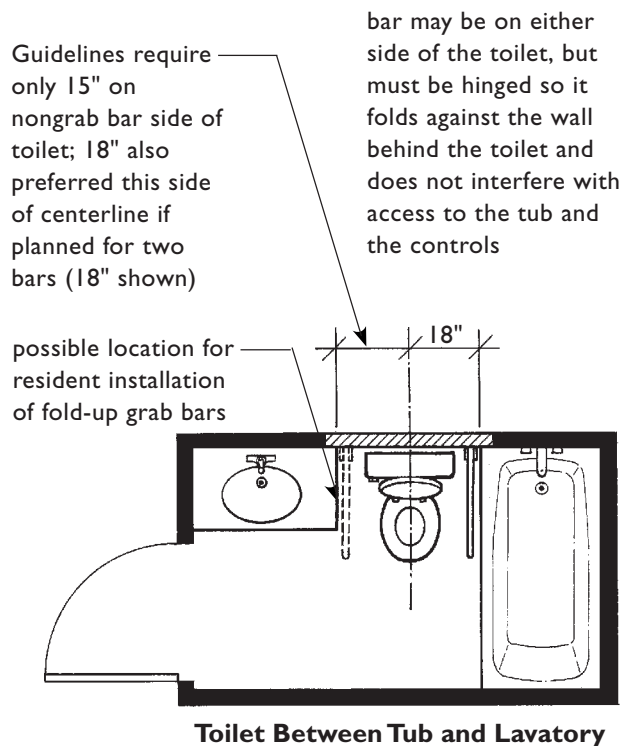
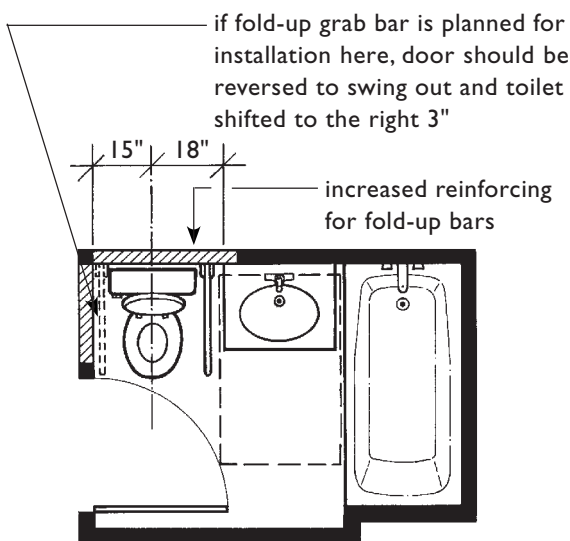
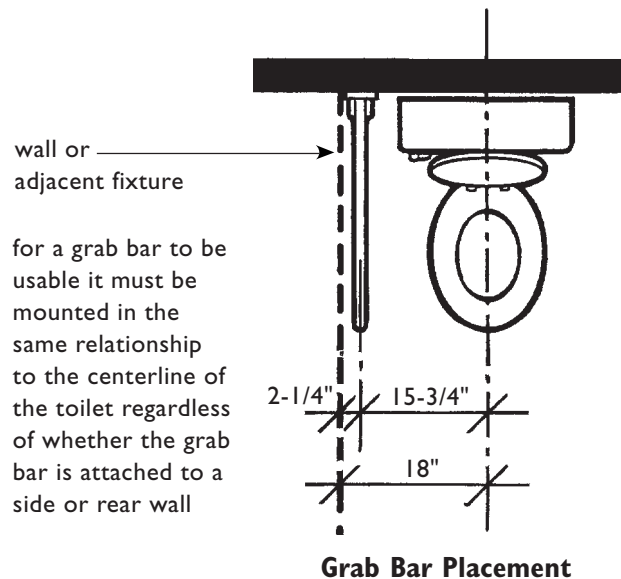


Floor-mounted fold-up grab bars, because of the stresses exerted upon them, will require an extremely secure floor connection. In frame construction, if access to the underside of the floor is available (i.e., from a crawl space or basement), necessary blocking or other reinforcing might be installed at the time the bar is installed. On concrete floor systems additional reinforcing may or may not be necessary. In either case the advice of the manufacturer and/or a professional structural engineer should be followed.



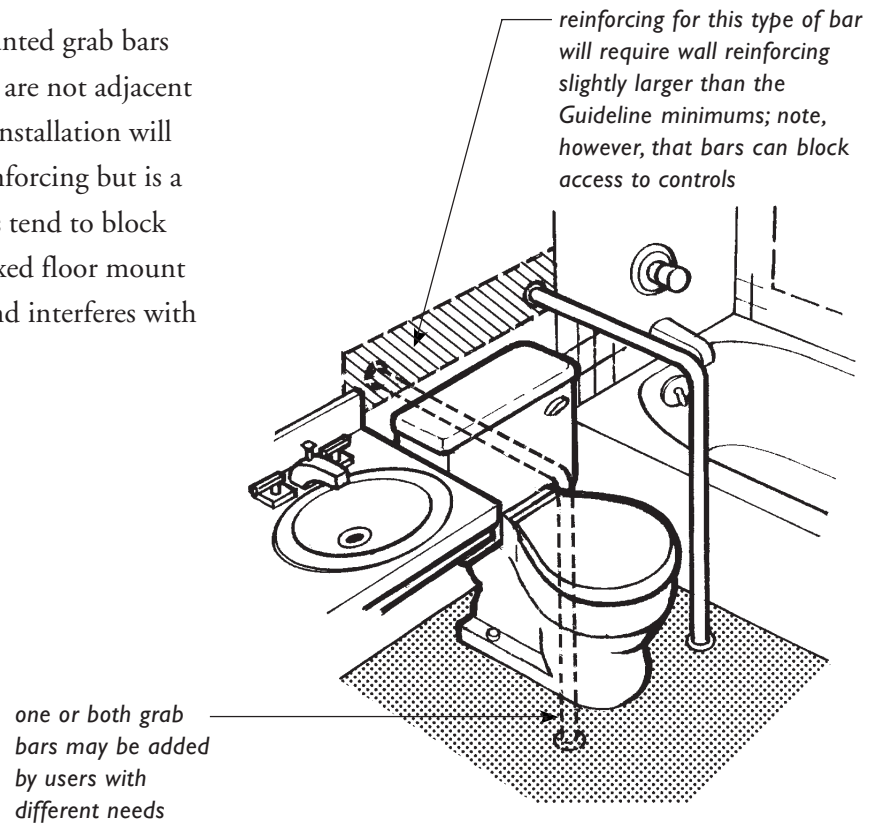
When a toilet is positioned in the room away from a side wall, grab bars must be mounted on the wall behind the toilet or be floor mounted. Reinforcing should be long and wide enough so a folding bar can be installed and, when lowered into position for use, its centerline is 15-3/4 inches from the centerline of the toilet. This dimension is consistent with the requirement that 18 inches be provided from the centerline of the toilet to the wall when that wall is to be equipped with a grab bar.

Advance planning will be necessary to determine on which side of the toilet a folding grab bar will be placed so the necessary 18 inches of space and additional reinforcing can be shifted to the grab bar side of the toilet. Although not required, it is recommended that the toilet be centered in a 36-inch space rather than the 33-inch space specified for usable bathrooms in the Guidelines. Adequate reinforcing could then run the full length behind the toilet to allow fold-up bars to be installed on either side, depending upon the needs and desires of the resident.



Recommended Locations for Fold-Up Grab Bars

Fixed floor and wall-mounted grab bars also can be installed where toilets are not adjacent to full length walls. This type of installation will require little if any additional reinforcing but is a poor choice because the grab bars tend to block access to adjacent fixtures. The fixed floor mount encroaches on clear floor space and interferes with wheelchair maneuvering.

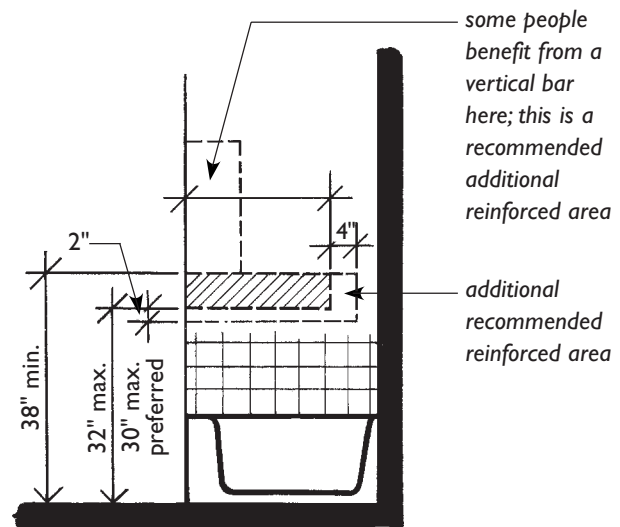


**Fixed Floor and Wall-Mounted Bars
Not a Good Choice for Many People**

REINFORCING FOR GRAB BARS AT CONVENTIONAL BATHTUBS

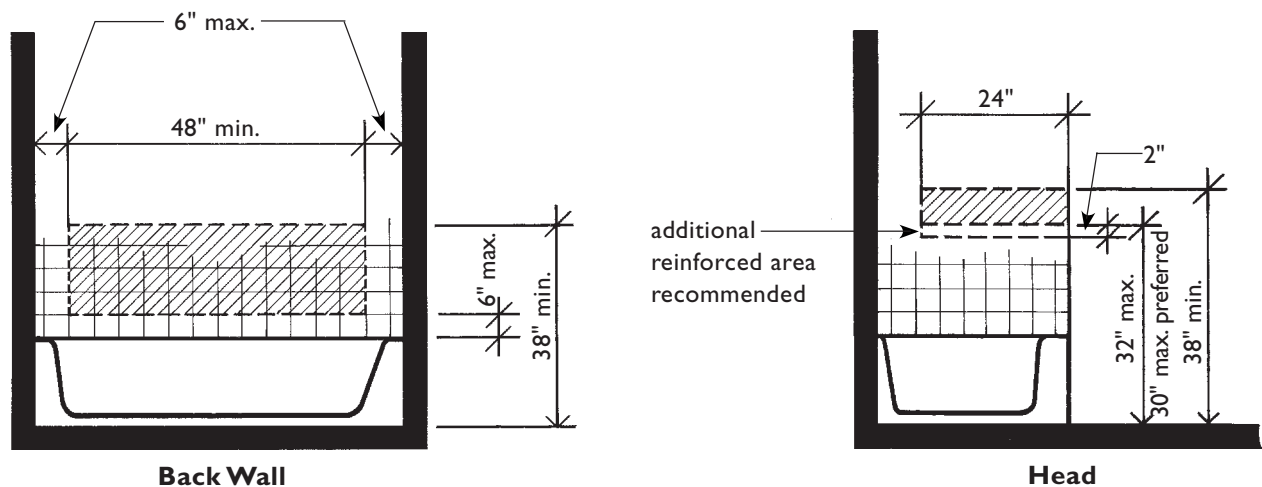
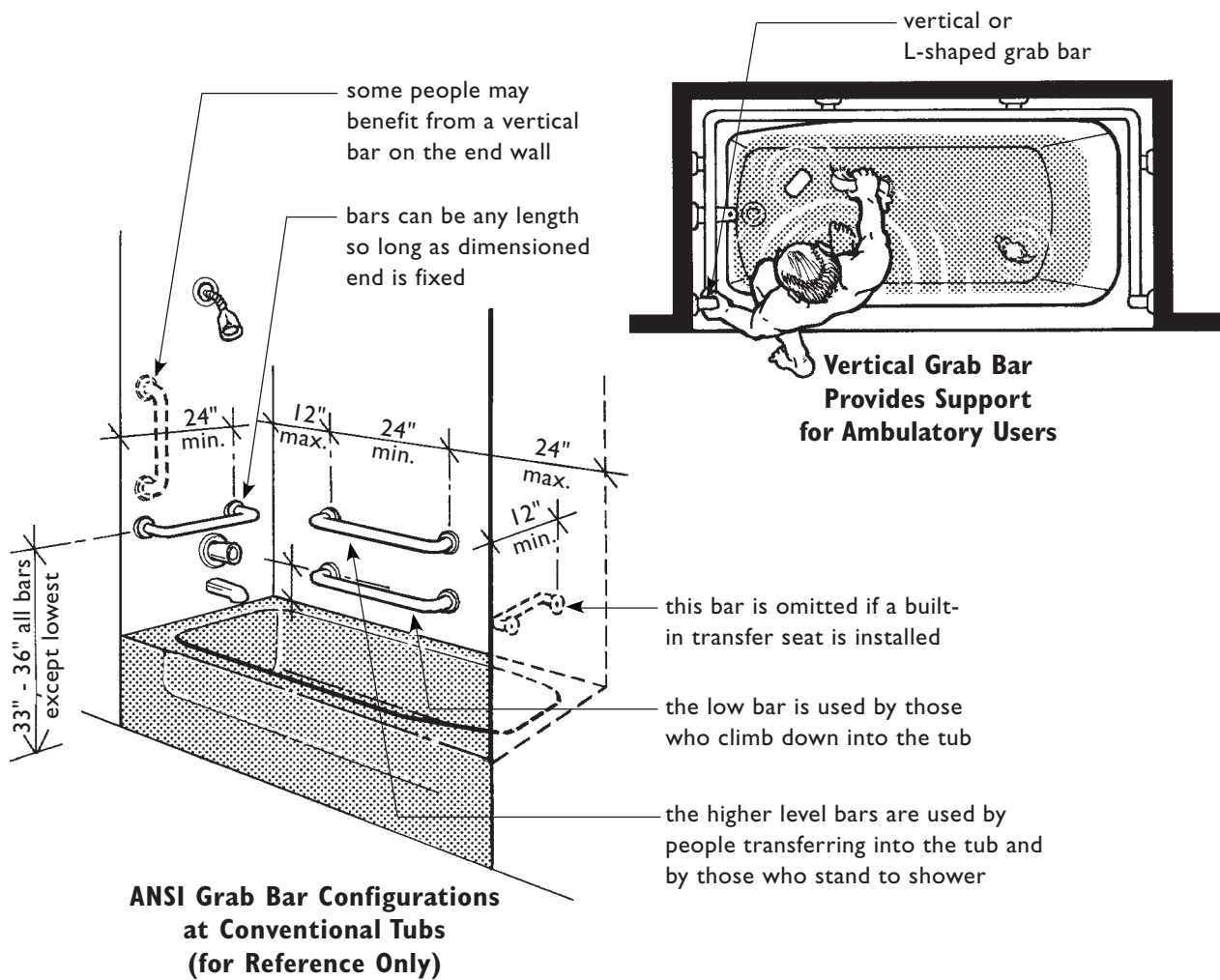
At conventional bathtubs the Guidelines specify wall reinforcing for grab bars as shown in the accompanying illustrations. The intent is to make it easy for a resident to install grab bars similar to those specified in ANSI A117.1 or other equal accessibility standard or code.

For the same reasons as discussed at toilets, the reinforced areas specified at the head and foot of tubs should be enlarged to provide full support for mounting plates and horizontal bars at the lowest position of 33" above the room floor. The enlarged reinforced areas are shown here as recommended additional reinforcing.



Foot (Control Wall)

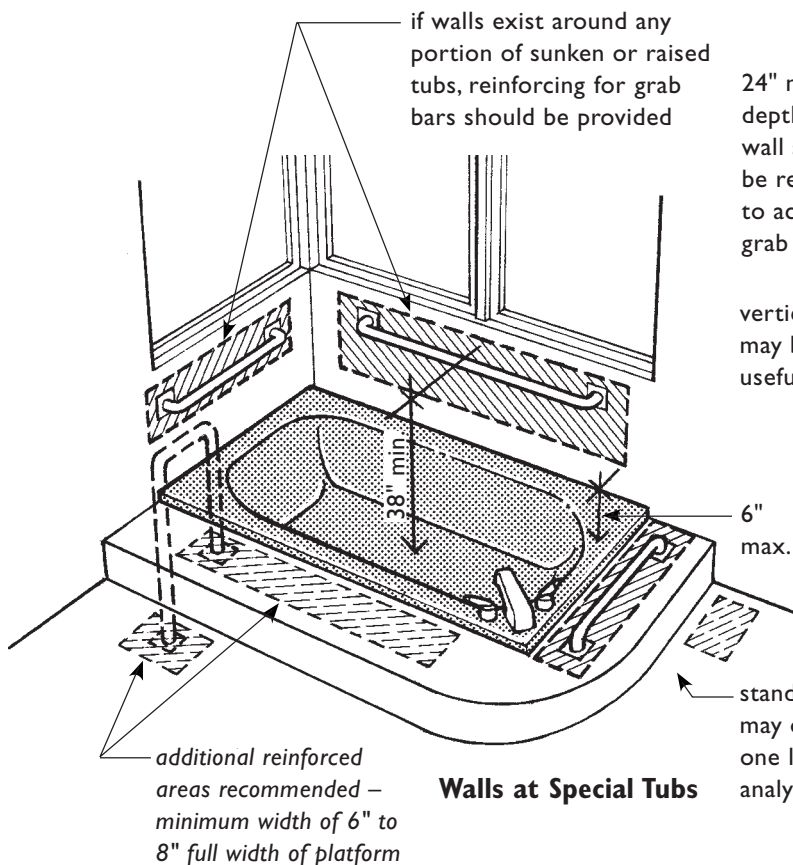
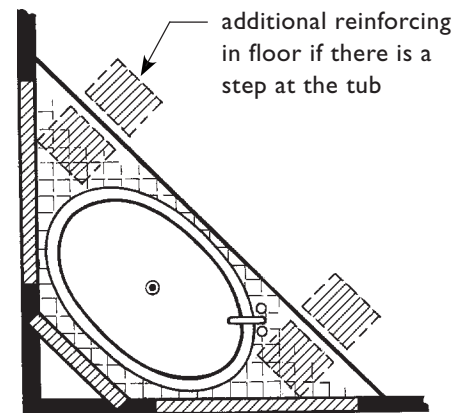
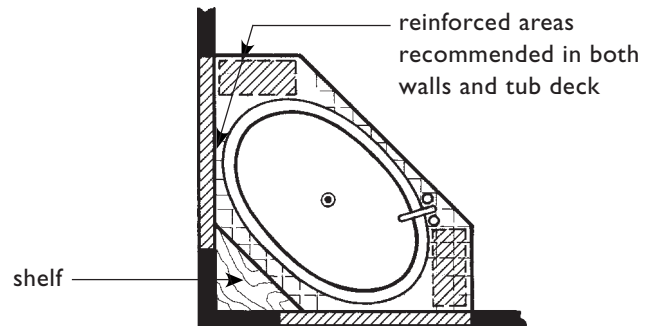
**Reinforced Areas Required by the Guidelines
at Conventional Bathtubs**



Reinforced Areas Required by the Guidelines at Conventional Bathtubs

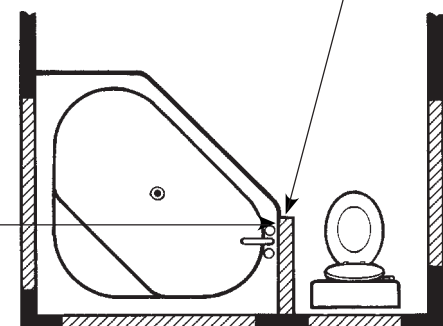
REINFORCING FOR GRAB BARS AT Non-CONVENTIONAL BATHTUBS

The Guidelines do not limit the size or proportion of bathtubs or showers to the configurations shown. Bathtubs may have shelves or benches at either end, or may be installed without surrounding walls, provided alternative methods for mounting grab bars are made. For example, a sunken bathtub placed away from walls could have reinforced areas in the floor for installation of floor-mounted grab bars. Whenever walls are adjacent to raised or sunken tubs, reinforcing should be provided that closely matches the sizes given at conventional bathtubs.



24" max. depth wing wall should be reinforced to accept grab bars

vertical bar may be useful here



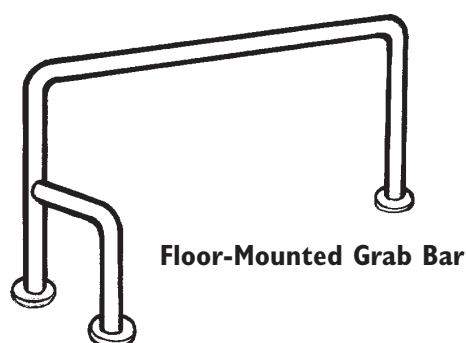
Recommended Reinforcing for Grab Bars at Raised or Sunken Tubs

standard nonreinforced floor may or may not be able to support one leg of a handrail; engineering analysis recommended

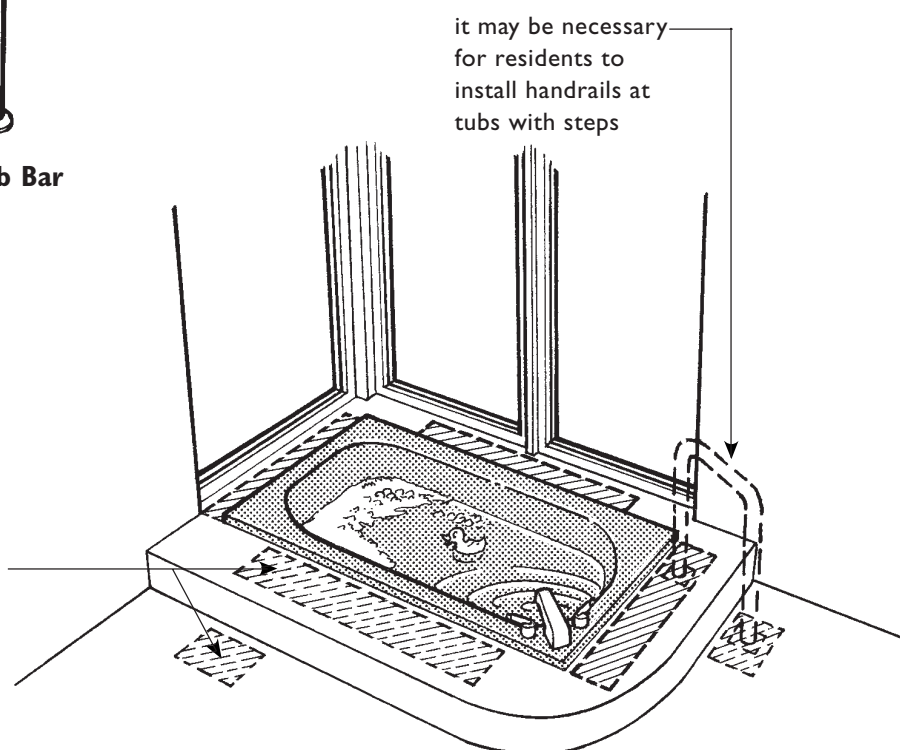
FLOOR-MOUNTED GRAB BARS AT SPECIAL BATHTUBS

On open sides of raised tubs having decks at tub rim level and at floors surrounding sunken tubs, the deck and other designated floor areas should be reinforced so they are structurally capable of receiving floor-mounted grab bars. The floor or deck must provide secure anchorage and such bars should withstand a 250 pound load applied in any direction and at any point. Although not required, any grab bar installation should be able to meet or exceed ANSI 4.24 Grab Bars.

Floor-mounted bars in these installations may be from 18 inches to 36 inches above the tub rim. Some have a braced double-footed mount as shown here.



additional reinforced areas recommended – minimum width of 6" to 8" full width of platform



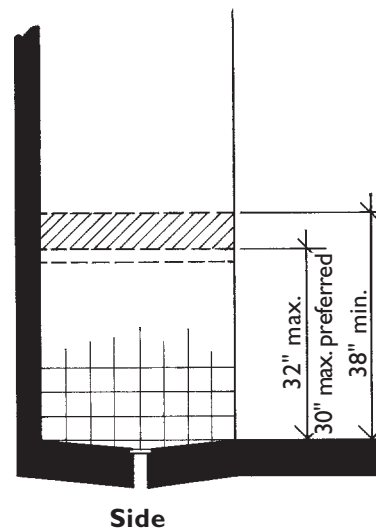
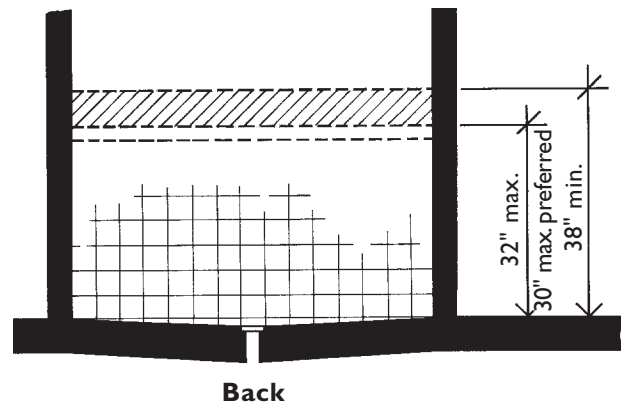
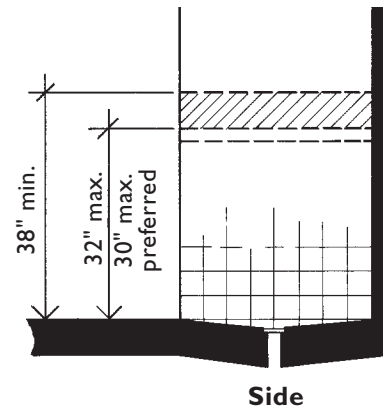
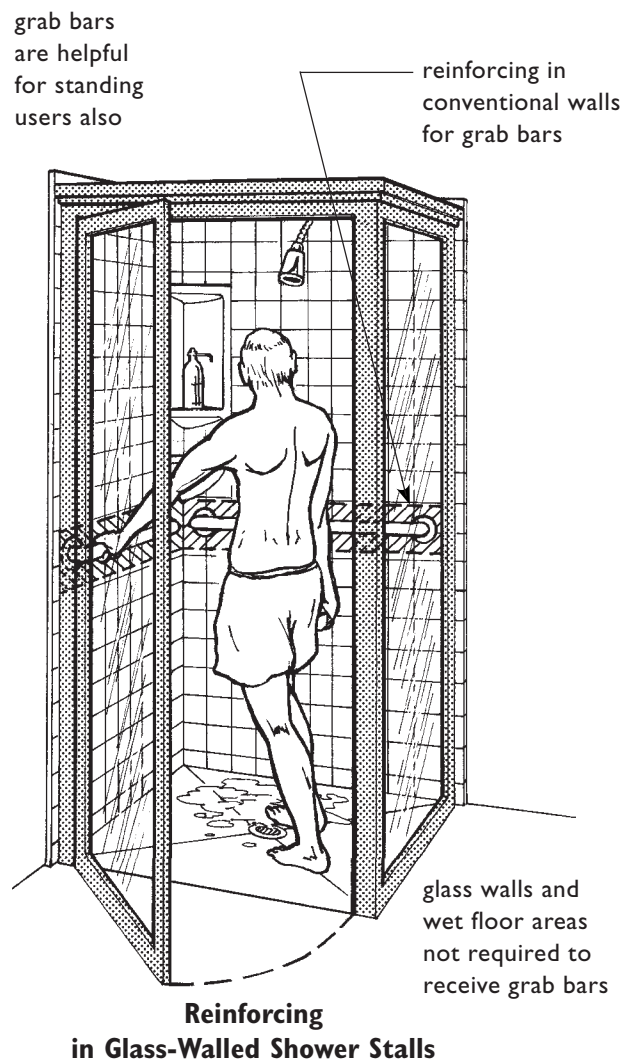
No Structural Walls at Special Tubs

If designated reinforced floor areas are to be provided, their size should be comparable in length to those required for conventional bathtubs, or proportionally longer if the bathtub is larger than a conventional bathtub. The width of the reinforcing may well need to be wider than other reinforced areas for sufficient strength and space to accept the braced double-footed mounts described above.

The size and exact location of designated reinforced floor areas should be included in the permanent affixed tenant information for installing grab bars recommended at the beginning of this chapter. The builder/owner/manager also may want to include in that information the height, type of fasteners, type of bar and mount, or even the model number and manufacturer of the bars upon which the adequacy of the structure was engineered.

REINFORCING FOR GRAB BARS AND SEATS AT SHOWERS

In glass shower stalls, only those walls that are solid construction, i.e., wood or metal studs with gypsum wallboard and/or tile or solid masonry, must have reinforced areas. Glass walls are not required to be reinforced, nor are shower stalls required to have the waterproof pan or floor seal pierced to receive screws/bolts for floor-mounted grab bars.



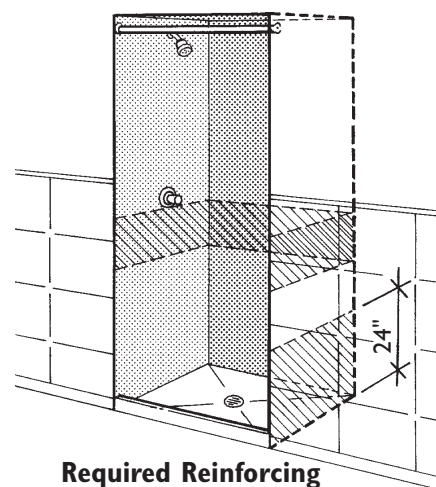
Minimum Reinforcing for Grab Bars in Showers

Shower stalls in covered dwellings may be any size or configuration unless they are the only bathing fixture provided in the dwelling unit or on the entry level of a multistory dwelling in a building with one or more elevators. (See clear floor space at shower stalls in Chapter 7, Part B: “Usable Bathrooms.”) Reinforcing for grab bars must be at the height shown in the illustrations on the preceding page and extend the full width of both side walls and the back wall. If shower walls curve, reinforcing must still be provided.

Because of the commonly accepted need to install horizontal grab bars between 33 and 36 inches above the floor, it is recommended that this reinforcing be enlarged so the bottom edge is 30 inches above the floor as explained previously at toilets and tubs.

There are certain situations where the shower stall is required to have reinforcing for later installation of a wall-hung bench seat. When this is required is addressed in Part B of Chapter 7, “Usable Bathrooms.” Reinforcing is required in a shower stall that measures a nominal 36 inches x 36 inches. The reinforcing is located on the wall opposite the controls and must run the full width of the stall, starting at the floor, to a minimum height of 24 inches.

HUD encourages builders to refer to the ANSI Standard or local codes for specifications on grab bars and wall-hung shower benches. The ANSI specified shower seat is an excellent design for safe use by people with disabilities. The builder should attempt to locate several manufacturers and size the reinforced area for the seat to accommodate more than one model. See Product Resource List in Appendix A. Information detailing reinforced areas and location, as well as product choices, should be included in the permanently affixed resident information recommended at the beginning of this chapter.

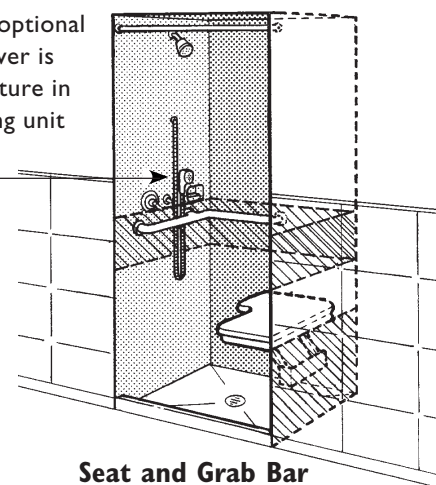


**Required Reinforcing
When Shower is Only
Bathing Fixture**

reinforcing for optional
seat when shower is
only bathing fixture in
covered dwelling unit

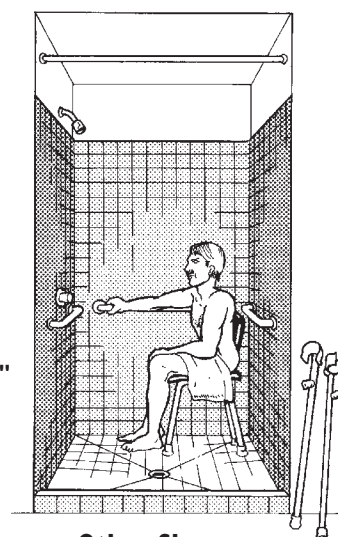
optional
hand-held
shower

17"-19", typical
seat height as
specified in
ANSI



**Seat and Grab Bar
in 36" X 36" Shower**

32" X 48"
shower



**Other Shower
Configurations Permitted**

RECOMMENDED REINFORCING METHODS

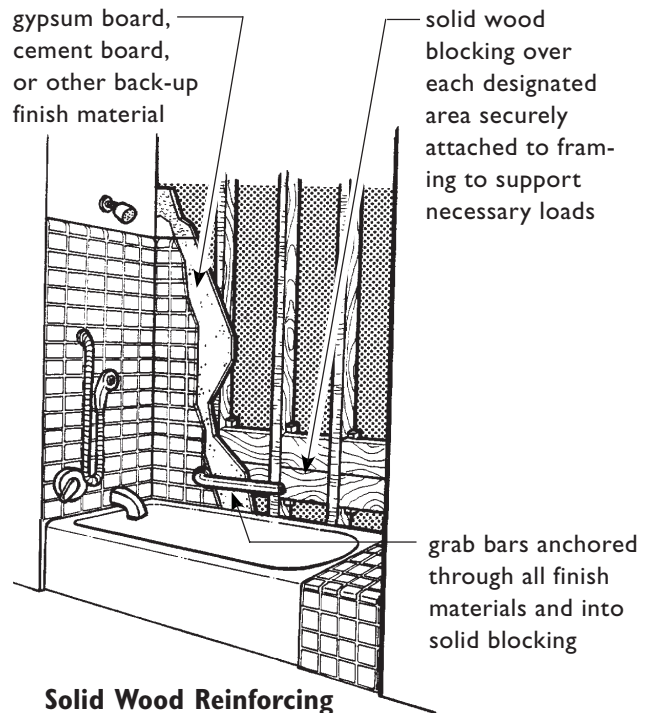
The Guidelines do not prescribe the type of material to use or methods for providing reinforcement at bathroom walls. Grab bar reinforcing may be accomplished in a variety of ways, some of which are suggested below.

LIMITED AREA REINFORCING WITH SOLID WOOD BLOCKING

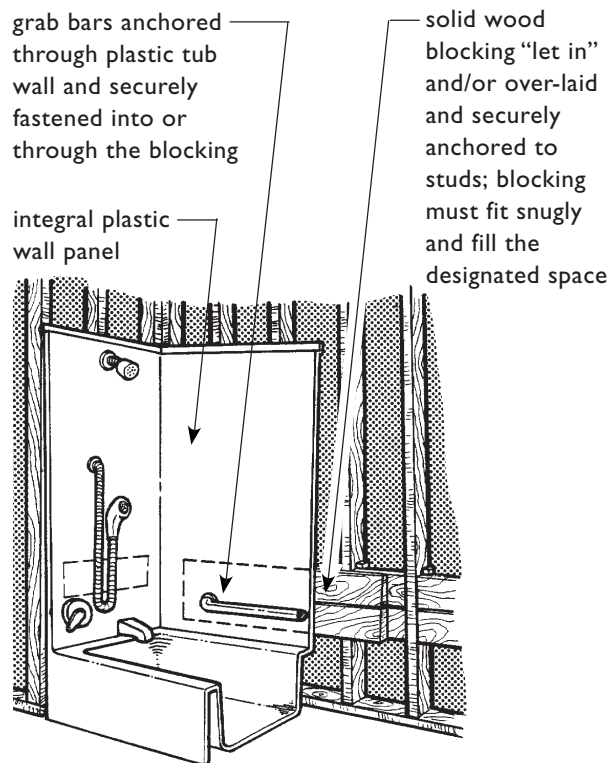
Stud Wall. In wood frame construction, the mounting area for grab bars can be reinforced by installing solid wood blocking either between or “let into” the studs and fastening the blocking securely to the studs. In either way, the solid wood reinforcing is installed flush with the face of the stud so finish materials can be applied to the studs and blocking in the normal manner.

Molded Fixtures. Fiberglass and acrylic bathtubs and showers with integral wall panels are common in both new construction and remodeling. The panels alone are too thin to support grab bars, and because they do not touch the stud wall except at the top, there is a space between the panel and the stud wall. To attach grab bars to these surfaces, an area of solid wood blocking or other solid substance must be installed in the cavity between the fiberglass or acrylic wall and the wall.

Since the space between the panels and the stud wall gets narrower as it approaches the top of the panels where they are fastened to the studs, this blocking must be cut to fit snugly in the space between the studs and the panel. The blocking must contact the plastic panel over the entire reinforced area.



**Solid Wood Reinforcing
on Wood Stud Walls**



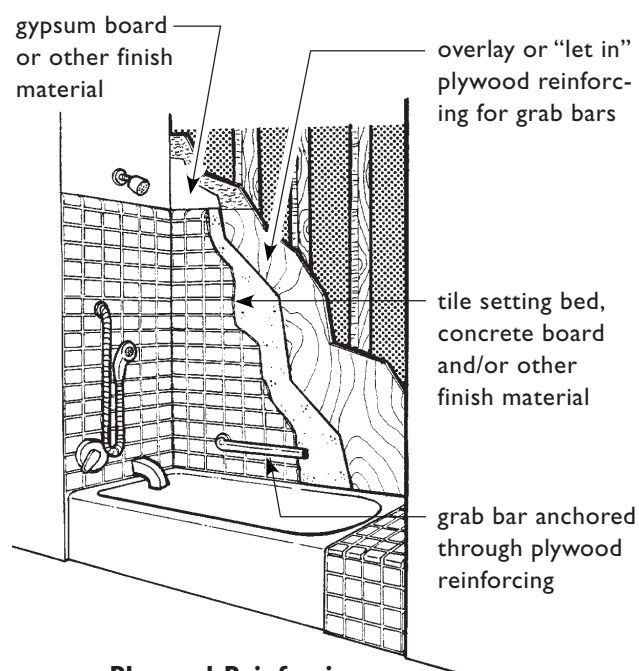
**Reinforcing for Grab Bars
Behind Fiberglass or Acrylic Tub
and Shower Surrounds**

Some fiberglass and acrylic tubs, showers, and wall sections are now made with reinforcing already in the walls to stiffen the fixture. If the reinforced fiberglass or acrylic wall is not specifically labeled as built for grab bars and meeting the ANSI load requirements, then additional reinforcing may need to be installed.

WHOLE WALL OR LARGE AREA REINFORCING WITH PLYWOOD

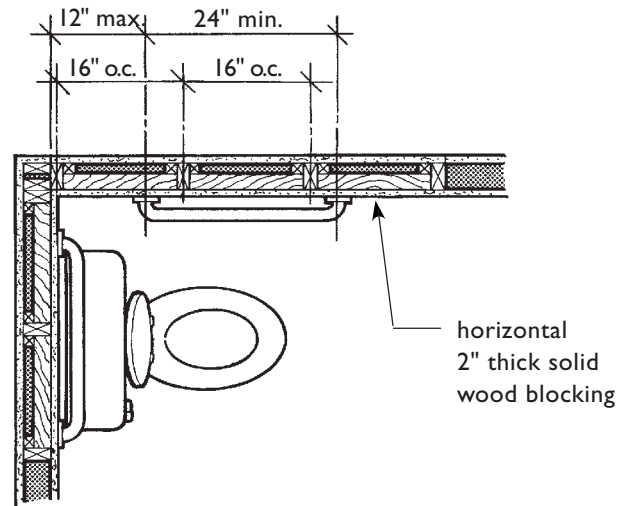
Although the location and the limited size of the wall areas that must be reinforced are specified by the Guidelines, it may be necessary or desirable to extend the reinforcing over a larger area or throughout the entire wall. Some people may want to locate grab bars in areas other than those specified in the Guidelines and other accessibility standards. Other people may have difficulty finding the minimum reinforced wall areas concealed inside a finished wall and install the grab bars in an unreinforced area. A larger reinforced area provides greater flexibility in placement and easier installation of grab bars.

Heavy plywood applied to the studs over a larger area can support grab bars and provide a base for the installation of finish materials such as ceramic tile or plastic wall panels. Plywood can be applied to the face of studs or “let in.” In either case the plywood must be of sufficient thickness and should be securely attached to withstand the forces specified in ANSI 4.24, or an equivalent or stricter standard. Anchors for securing the grab bars to the reinforced walls should be through-the-wall type or another type capable of meeting the ANSI force requirements.



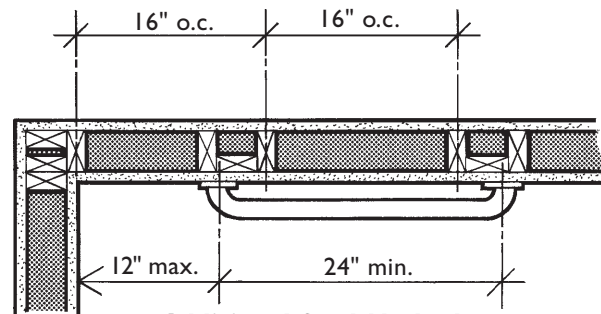
**Plywood Reinforcing
on a Wood or Metal Stud Wall**

Because of standard stud spacing, reinforced areas often will have to be longer than specified to support necessary blocking.



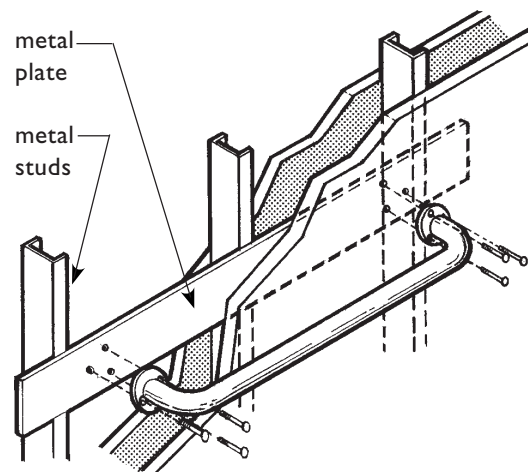
Plan View of Extended Horizontal Blocking Between Conventional Wood Studs

Additional vertical studs can be placed at ends of each specified reinforced area. This method is more expensive, difficult to install accurately, and more difficult to find after construction. It provides less flexibility in bar placement and is more likely to result in a weak connection.



Additional Stud Method of Reinforcing for Grab Bars

A manufactured, formed metal reinforcing plate can be spot welded or screwed to studs.



Reinforcing at Metal Studs

Chapter Seven:

REQUIREMENT 7

Usable Kitchens and Bathrooms

- **PART A:** Usable Kitchens
- **PART B:** Usable Bathrooms

7



■ **PART A: Usable Kitchens**

7a



...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 usable kitchens...such that an individual in a wheelchair can maneuver about the space.

Fair Housing Act Regulations, 24 CFR 100.205

counters may be at the standard height of 36" (counter height of 34" as shown in Fig. 2(c) of the Guidelines does not apply)

lever hardware, although preferred and more usable by everyone, is not required

kitchens in covered units must be on an accessible route and have door openings at least 32" clear to allow passage; see Chapter 4 "Usable Doors" and Chapter 5 "Accessible Route"

outlet located beyond reach of seated person permitted if other outlets in accessible locations are provided, see Chapter 6 "Switches, Outlets, and Controls"

ranges and cooktops may have front-, rear-, or side-mounted controls; *for safety reasons and ease of use, front- or side-mounted controls are preferred*

adequate space within the kitchen to provide 30" X 48" clear floor space at each fixture and appliance

Notes in italic type are recommendations only and are not required by ANSI or Guidelines.

in U-shaped kitchens, if less than 60" between the two legs of the U, then sink base must be removable, see page 7.12

Guideline Specifications for Kitchens

INTRODUCTION

Kitchens that comply with the Fair Housing Accessibility Guidelines (the Guidelines) can be designed to look and function like conventional kitchens typically found in multifamily housing. The Guidelines specify that three specific requirements must be provided to allow people who rely on mobility aids to “use” the kitchen. “Usable” kitchens, as specified in the Guidelines, are not necessarily “accessible” kitchens, but they do provide maneuvering space for a person who uses a wheelchair, scooter, or walker to approach and operate most appliances and fixtures.

The Guidelines 1) specify minimum clear floor spaces at fixtures and appliances, 2) define minimum clearance between counters, and 3) provide additional specifications when a U-shaped kitchen is planned. Wheelchair turning spaces, described in accessibility standards, are not required in kitchens that meet the Guidelines, except in some U-shaped kitchens, see page 7.9.

Additional supplemental design information, presented in *italic type*, is offered for designers/builders who may wish to increase the accessibility of dwelling units. This supplemental information is not required by HUD, the Fair Housing Act, or the Guidelines.

CLEAR FLOOR SPACE AT FIXTURES AND APPLIANCES

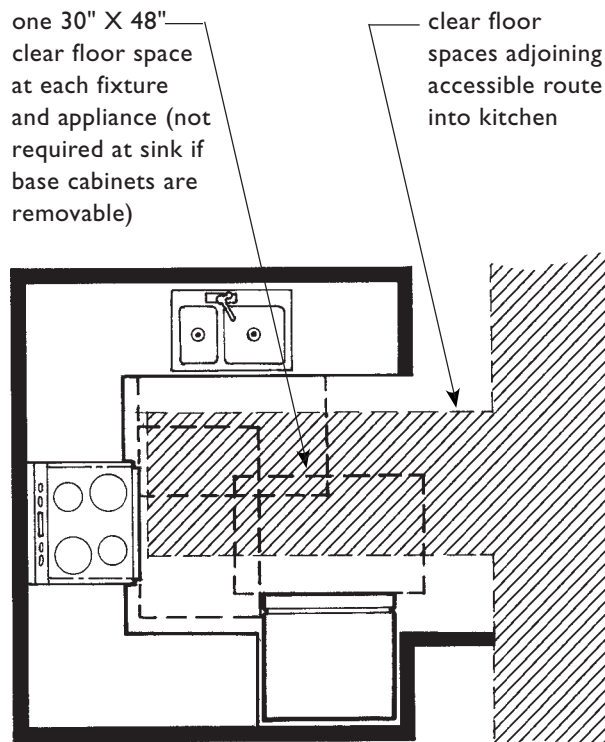
The Guidelines specify that a 30-inch x 48-inch clear floor space be provided at each kitchen appliance or fixture, and that each of these clear floor spaces adjoin the accessible route that must pass into and through the kitchen. It is anticipated that in any conventional kitchen plan, the overlapping of the minimum 36-inch wide accessible route with the clear floor spaces at all fixtures and appliances provides the necessary maneuvering space to make it possible for a person using a mobility aid to approach, and then position himself or herself close enough to use the fixture safely.

The clear floor space must be positioned either parallel or perpendicular to and centered on the appliance or fixture, i.e., the clear floor space must have its centerline aligned with the centerline of the fixture or appliance. This centered position is most critical at corners where an appliance may have to be pulled away from the corner to allow a full centered approach. The two types of approaches and where they are necessary are described on the following pages.



30" X 48"
clear floor space

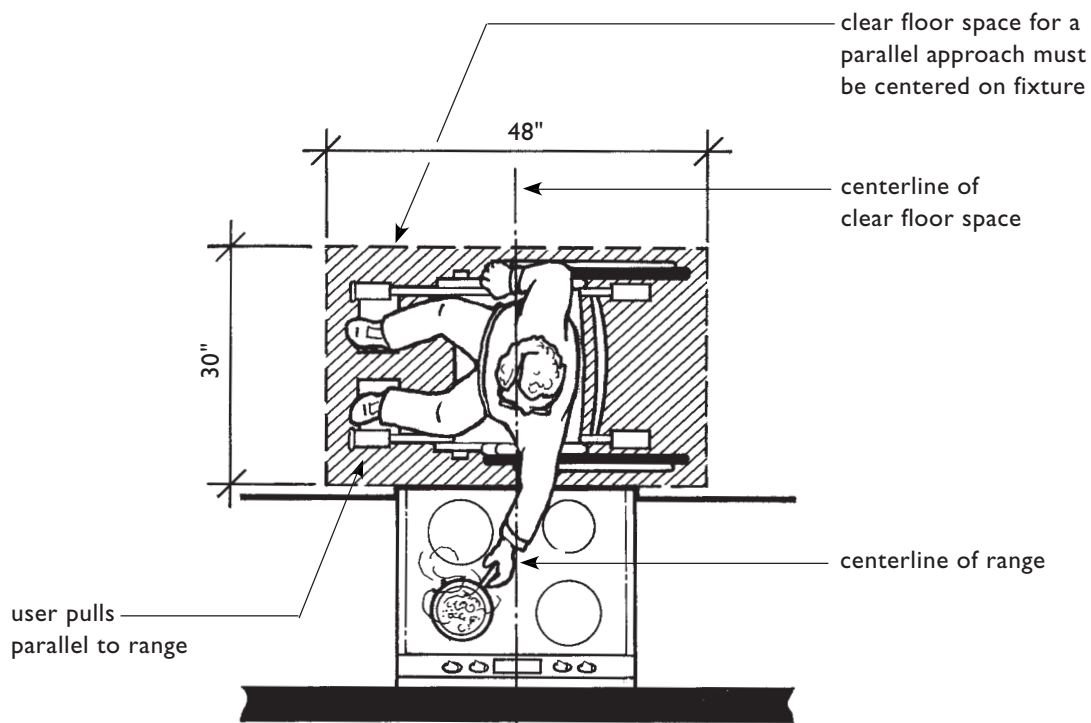
**Clear Floor Space for Wheelchair
Parking at Appliances and Fixtures**



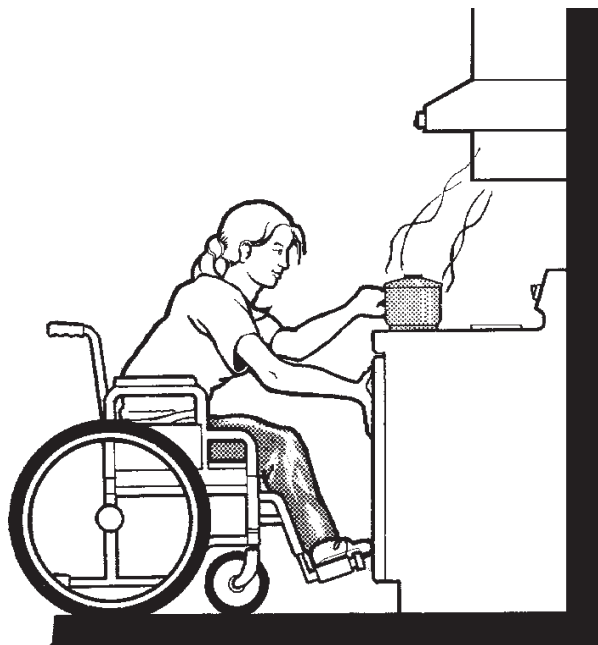
Overlapping Clear Floor Spaces and Accessible Route Provide Maneuvering Space

CLEAR FLOOR SPACE AT RANGES, COOKTOPS, AND SINKS

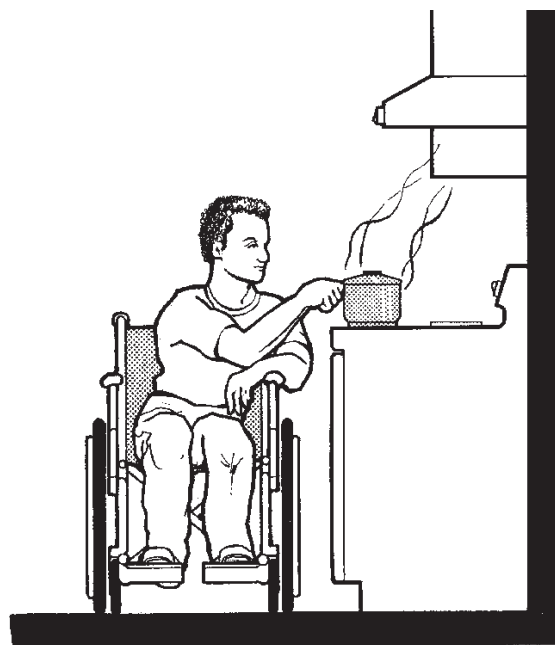
Unless knee space is provided, space to execute a parallel approach must be provided at ranges, cooktops, and sinks. The clear floor space in this parallel orientation allows the wheelchair user to make a close side approach permitting safer and easier reach to controls and cooking surfaces. A forward approach, on the other hand, is difficult and unsafe, especially when controls are located at the back, because it requires seated users to lean forward over their feet and knees to reach not only hot pots and pans but the controls as well. See pages 7.11 through 7.16 for required clear floor space at cooktop or sink when knee space is provided.



Space for Parallel Approach Required at Range and Cooktop



**Forward Approach at Range
is Difficult and Unsafe**

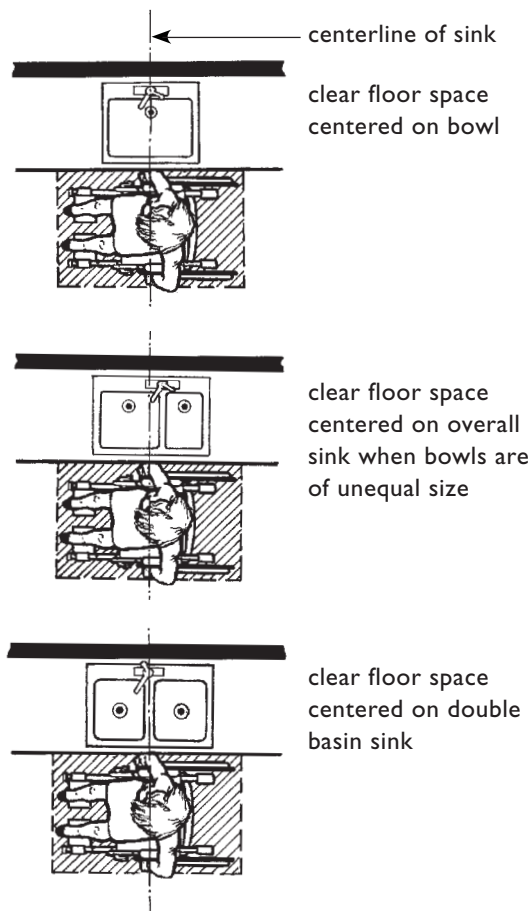


**Parallel Approach to Range
Specified in Guidelines**

A **parallel** approach also must be provided at sinks so a seated user can reach down into the bowl. A forward approach with kneespace below the sink may be required in some very small U-shaped kitchens. See page 7.11.

The parallel clear floor space at sinks, as at ranges and cooktops, must be centered on the bowl or appliance. At single bowl sinks the centerline of the clear floor space must align with the centerline of that bowl. Where there are multiple bowl sinks the clear floor space must be centered on the overall sink itself.

Faucets usually are placed at the center of or within six inches of the center of the sink, regardless of the number of basins. Since the clear floor space is centered on the sink, users are still afforded access to faucet controls.



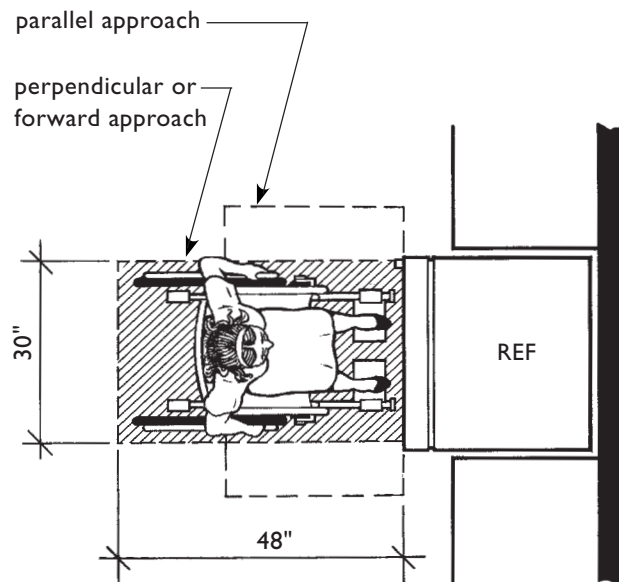
Space for Parallel Approach Required at Sinks

CLEAR FLOOR SPACE AT OVENS, DISHWASHERS, REFRIGERATORS, FREEZERS, AND TRASH COMPACTORS

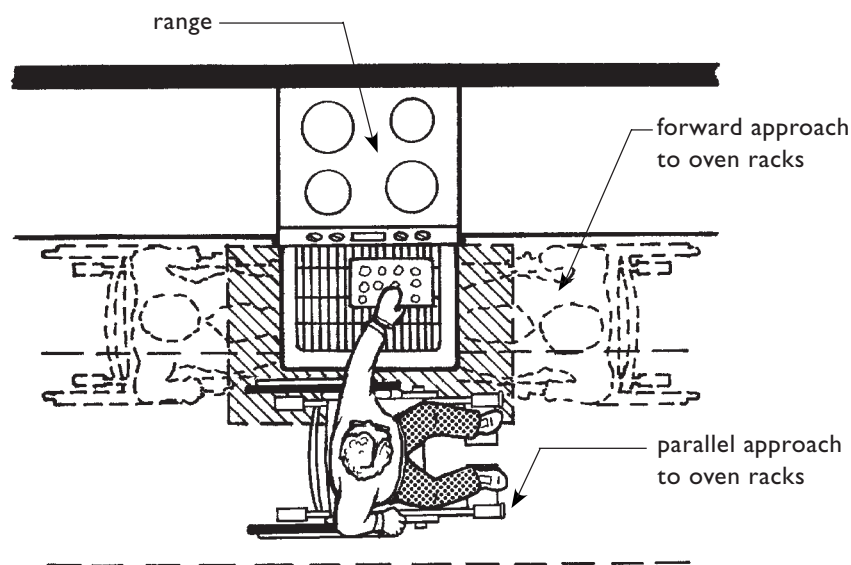
The 30-inch x 48-inch clear floor space oriented in either one of two positions—parallel or perpendicular—is required at the oven, dishwasher, refrigerator, freezer, and trash compactor. Wall-mounted and microwave ovens, like ovens in ranges, also must have either a parallel or perpendicular clear floor space adjacent to the appliance.

Even though this group of appliances has operable doors that require the user to be able to get out of the way of the door swing, for purposes of design and room layout the clear floor space must be centered on the appliance itself. However, the clear floor space for the specific appliance and the clear floor space for adjacent appliances and fixtures, combined with the 36-inch wide accessible route into the room, provide the functional space necessary to open a door and maneuver close to the appliance to be able to reach into it.

clear floor space for at least one type of approach (forward or parallel) must be centered on the refrigerator; this applies to side-by-side as well as over/under models



Space for Either a Forward or Parallel Approach Must be Provided

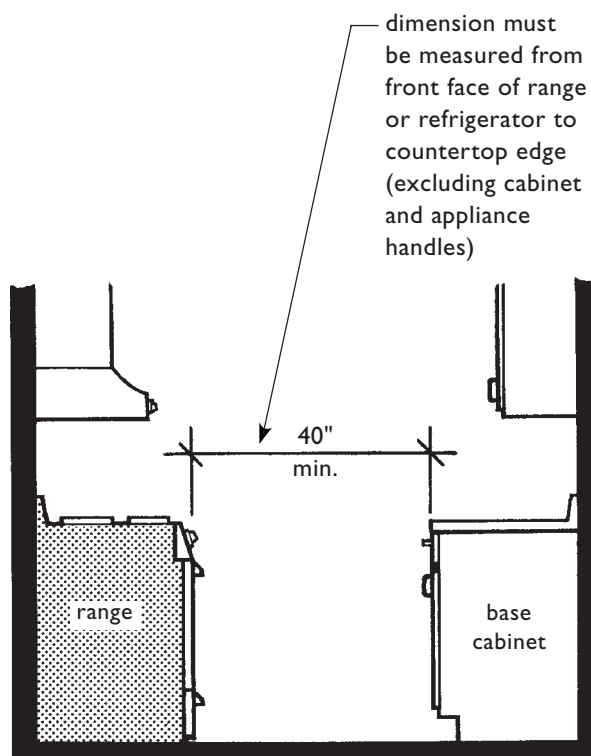


**Functional Use of Oven
Could Be From Any One of These Positions**

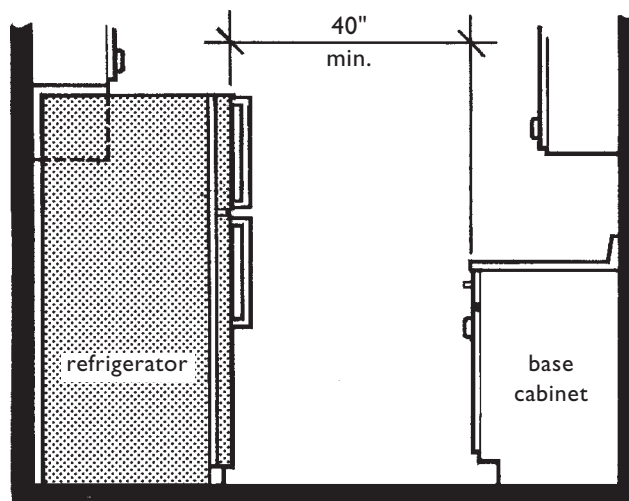
CLEARANCE BETWEEN COUNTERS AND ALL OPPOSING ELEMENTS

The Guidelines require a clearance of at least 40 inches between all opposing base cabinets, countertops, appliances, and walls. The 40-inch clearance is measured from any countertop or the face of any appliance (excluding handles and controls) that projects into the kitchen to the opposing cabinet, countertop, appliance, or wall.

Refrigerators vary greatly in depth and may extend up to eight inches beyond cabinet faces. Standard free-standing and drop-in ranges may project up to three inches. Appliance depths (excluding door handles) must be included when calculating the 40-inch clearances.

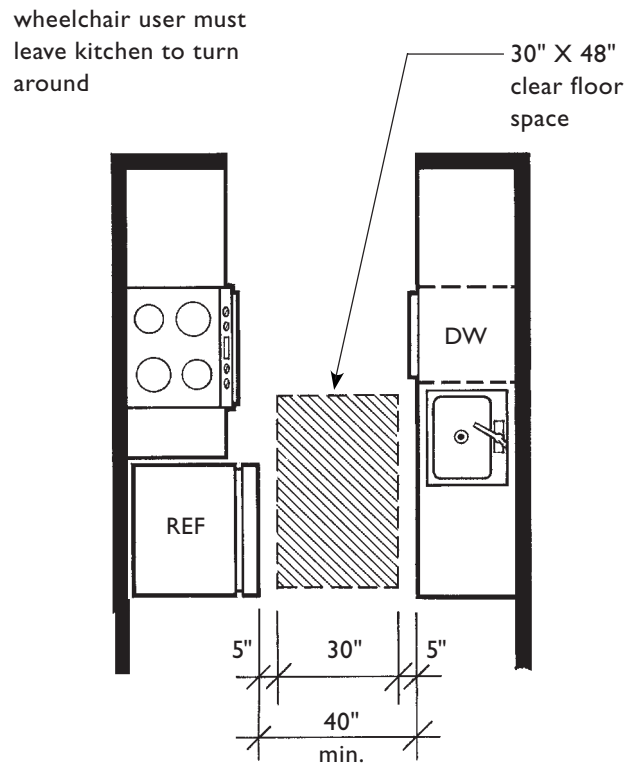


**Minimum Clearance between Range
and Opposing Base Cabinet**



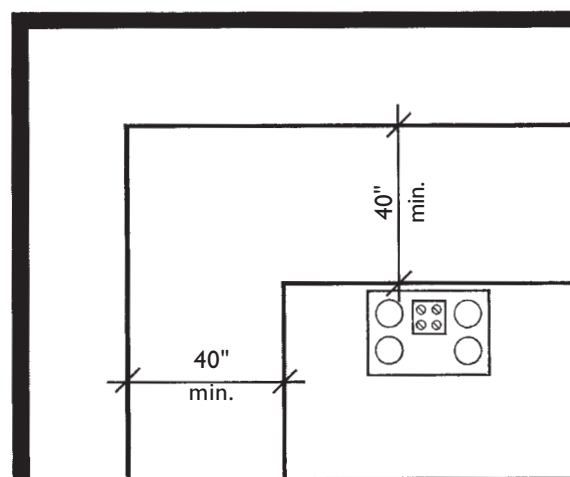
**Minimum Clearance between Refrigerator
and Opposing Base Cabinet**

In a narrow kitchen the 40-inch minimum clearance provides an additional five inches on either side of the required clear floor space of 30 inches x 48 inches at each fixture or appliance, so a user in a wheelchair can maneuver as close as possible to appliances or fixtures. A narrow kitchen such as the one shown to the right meets the Guidelines and is usable, but may be difficult for many people using wheelchairs. Its narrow corridor design requires a user in a wheelchair to exit the kitchen to turn around.



40" Minimum Clearance Between all Counters, Base Cabinets, Appliances, and Walls

In more elaborate kitchens where an island is planned, the 40-inch clearance must be maintained between the face of the island and all opposing features. Even though an accessible route for a 90-degree turn around an obstruction is 36 inches, to ensure sufficient space for maneuvering within the kitchen, the Guidelines require that the minimum clearance of 40 inches be maintained.



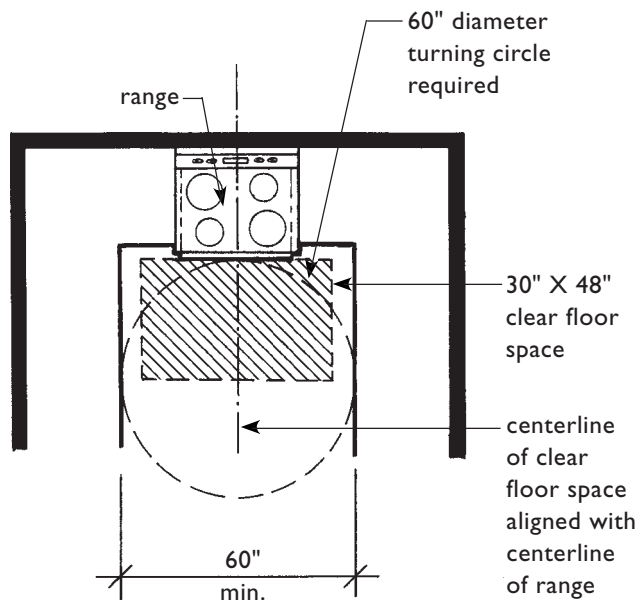
40" Must Be Maintained Between Island and all Opposing Features

U-SHAPED KITCHENS

A 60-inch diameter turning circle is required in a U-shaped kitchen that has a sink, range, or cooktop at its base. This turning diameter is necessary to provide adequate maneuvering space for a person using a wheelchair to approach and position themselves parallel to the appliance or fixture at the base of the U. Any appliances, such as refrigerators and ranges (excluding door handles), that project beyond countertops and cabinets must not encroach upon this 60-inch diameter turning space.

In addition to the turning space, the kitchen must be arranged so there is a 30-inch x 48-inch clear floor space for a parallel approach centered on the sink, range, or cooktop. The centerline of the fixture or appliance must be aligned with the centerline of the clear floor space.

When a sink, even a standard single basin sink, is at the bottom of the U and a dishwashing machine is planned to be included adjacent to the sink, the distance between the legs of the U must be greater than 60 inches to allow for a full centered approach at the sink. See the lower plan in the right column.

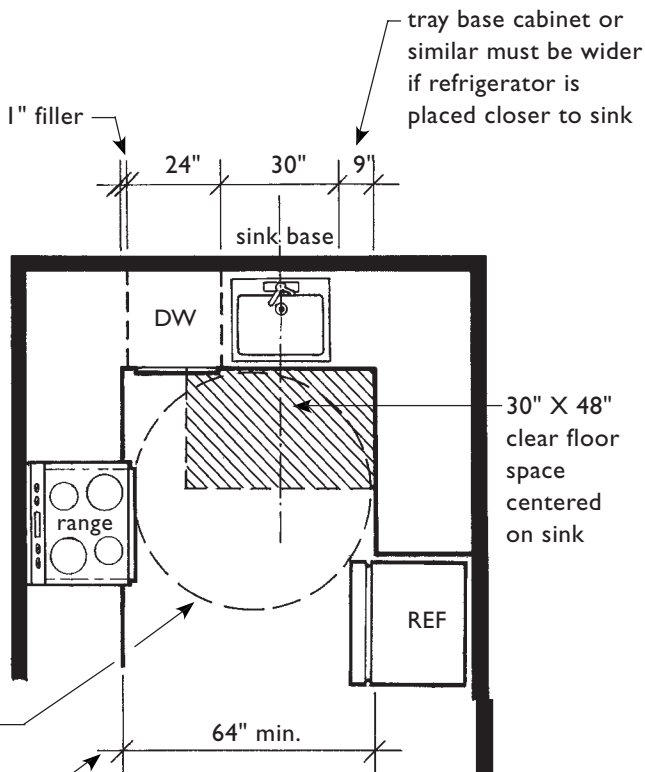


60" Diameter Turning Circle when Sink (Only), Cooktop, or Range is at Bottom of U-Shaped Kitchen

refrigerator must be selected and positioned so it does not encroach upon the 60" diameter turning circle or the clear floor space at the sink

60" diameter turning circle

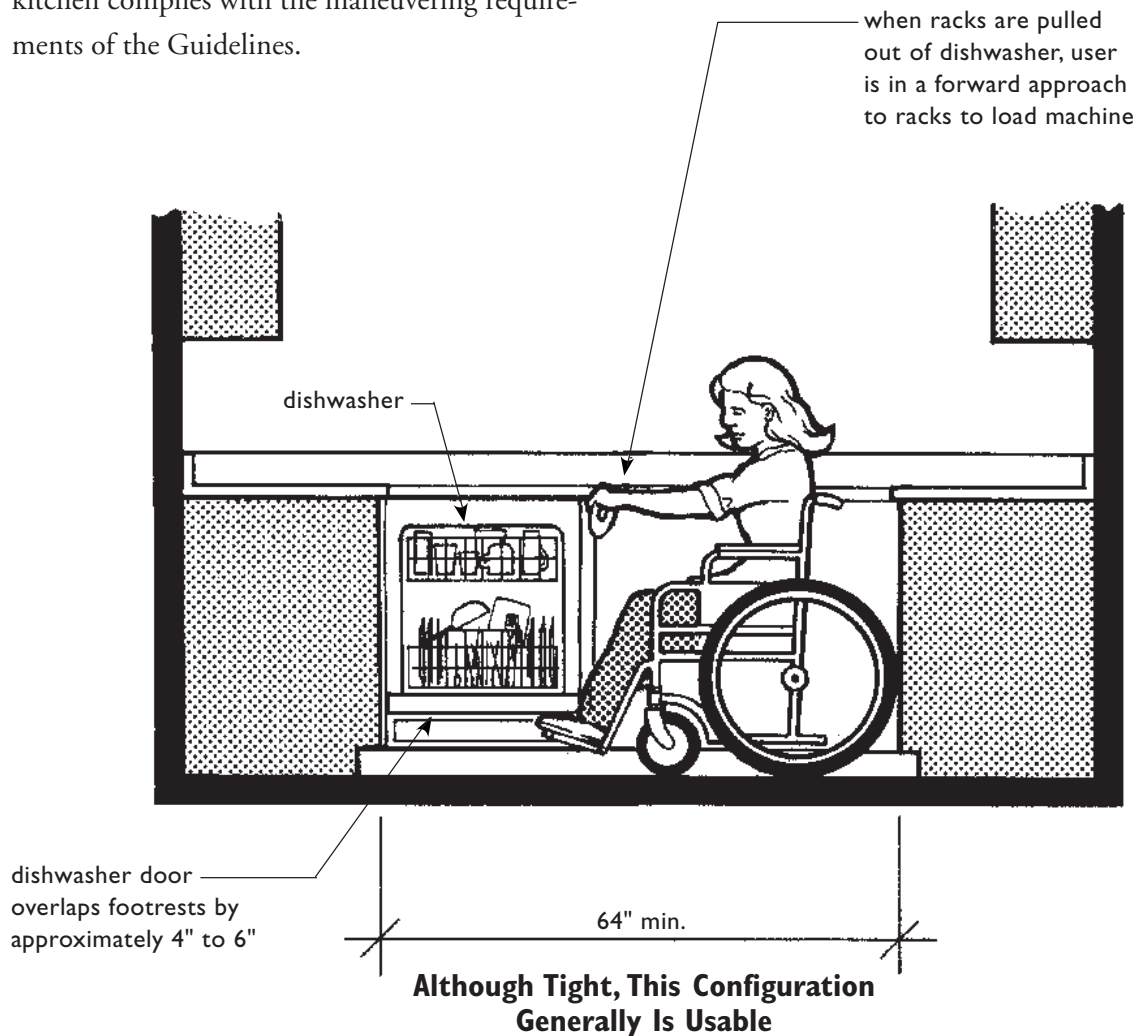
this dimension may need to be increased slightly for a double basin sink if wider than 30"



Sink and Dishwasher at Bottom of U-Shaped Kitchen Increases Room Width

In the lower plan on page 7.9, the refrigerator is pulled away from the sink and beyond the turning circle. Since a refrigerator may not overlap the five-foot turning space, if the refrigerator must be located closer to the sink, the distance between the legs of the U must be increased.

To reduce the need for additional floor space, and because clear floor space at appliances and fixtures may overlap, the clear floor space at the sink can serve as the clear floor space for a forward approach to dishwasher racks when they are pulled out of the dishwasher. Even though the dishwasher door would rest on the feet of the user, the required clear floor spaces are provided and the kitchen complies with the maneuvering requirements of the Guidelines.

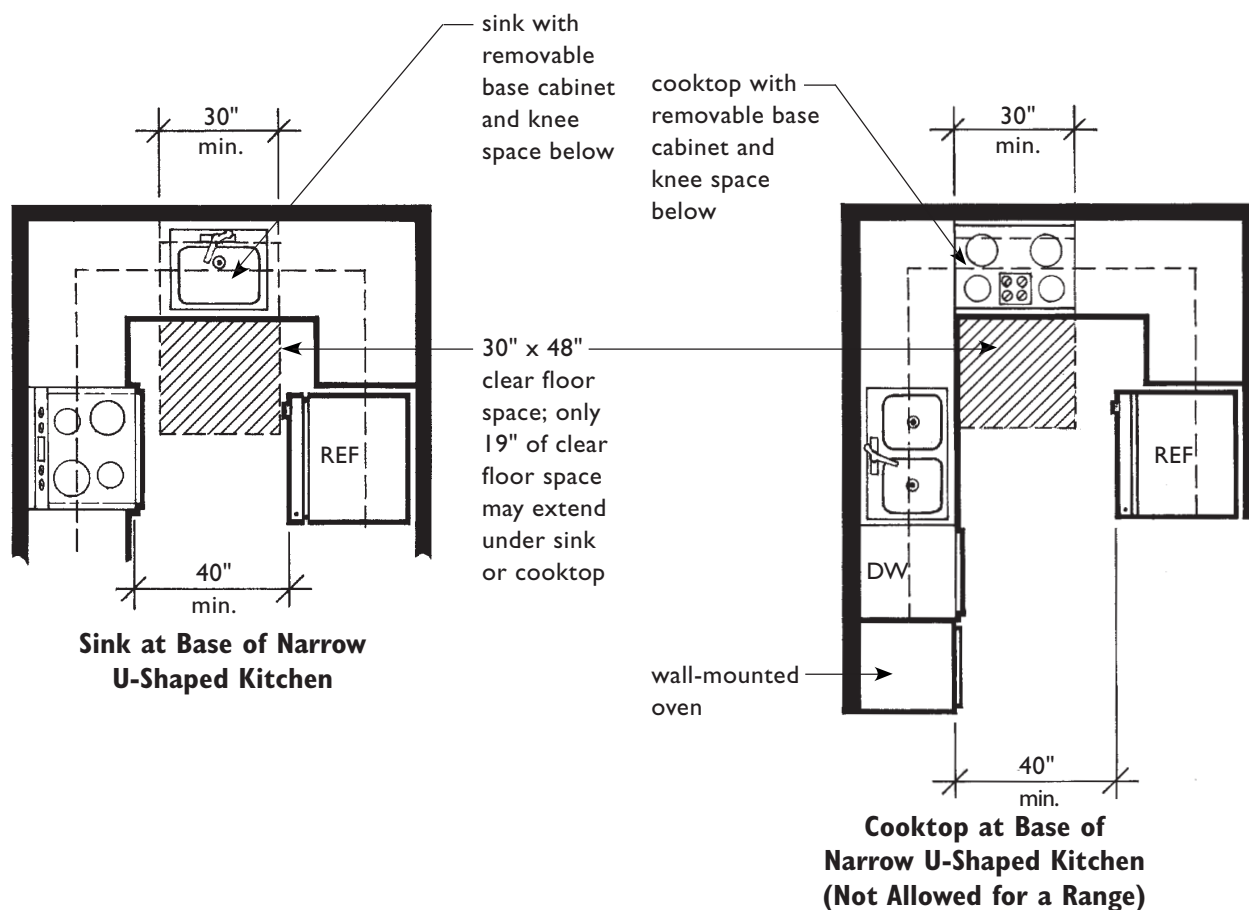


AN EXCEPTION

The Guidelines permit U-shaped kitchens with a sink or cooktop at the base of the U to have less than 60 inches between the legs of the U only when removable base cabinets are provided under the cooktop or sink. A clearance of at least 40 inches is required. Since knee space cannot be provided below a range, kitchens with a range at the base of the U must have the 60-inch minimum turning diameter.

Once the base cabinet is removed, the resulting knee space allows a person using a wheel-

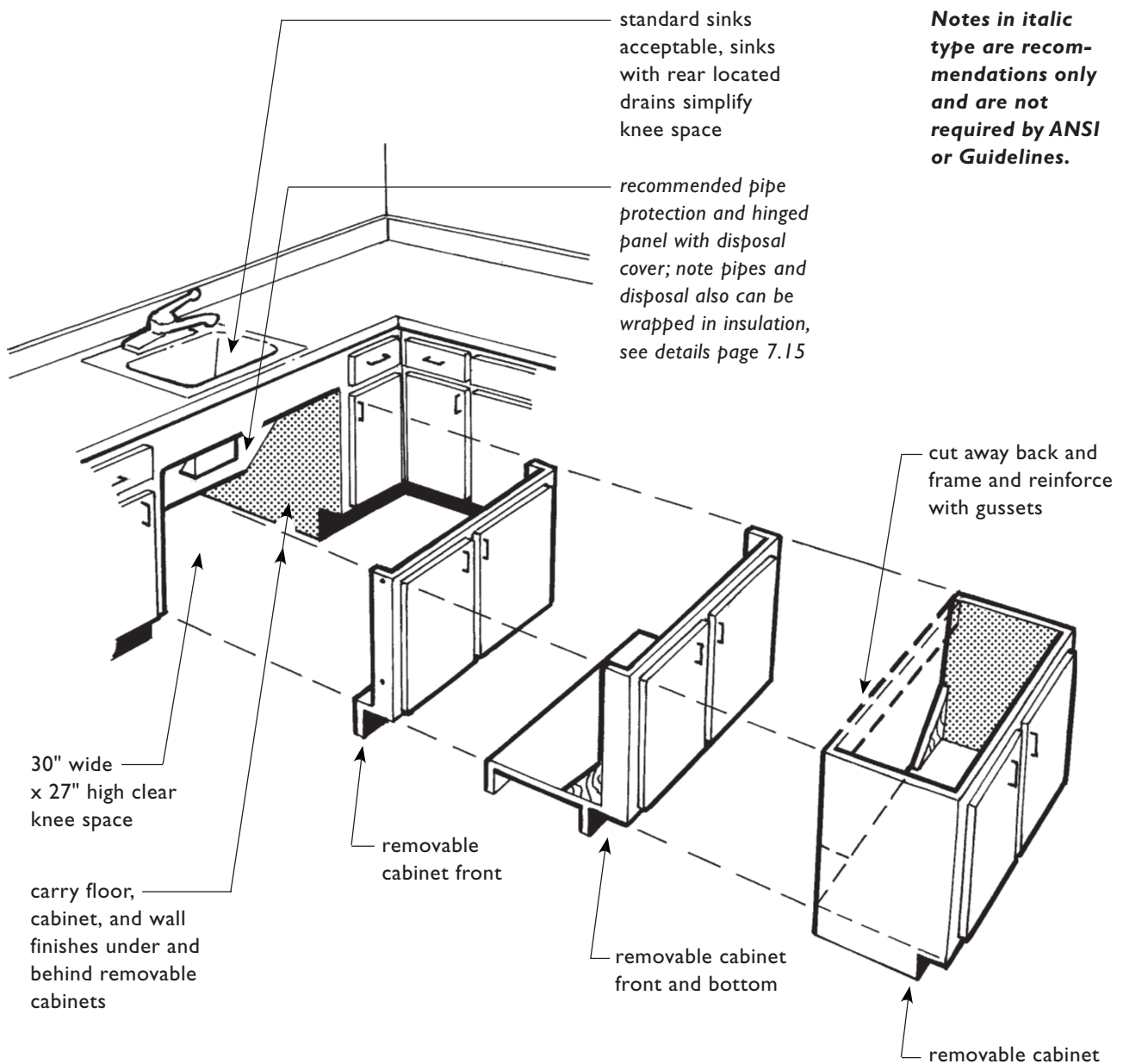
chair to pull up under the feature to reach controls and perform cooking/cleaning functions. A note of caution: knee space beneath cooktops provides essential maneuvering space for seated people, but it also creates a greater risk from hot food spilled in the lap. If cooktops are to be provided with knee space below, although not required, it is suggested that they be placed in lowered or adjustable height counter segments so they can be used more easily and safely by people using wheelchairs. Knee space configurations are shown on pages 7.14 and 7.15.



REMOVABLE BASE CABINETS

Narrow U-shaped kitchens, where knee space must be provided below sinks or cooktops, can appear identical to those kitchens which lack this additional feature since knee space can be concealed by a removable base cabinet. When a potential resi-

dent or owner needs the knee space it can be provided quickly and easily. Specifications for knee space are based on the Guidelines' requirements for bathrooms and ANSI 4.19 and 4.32. See also pages 7.14 - 7.15 and 7.52.

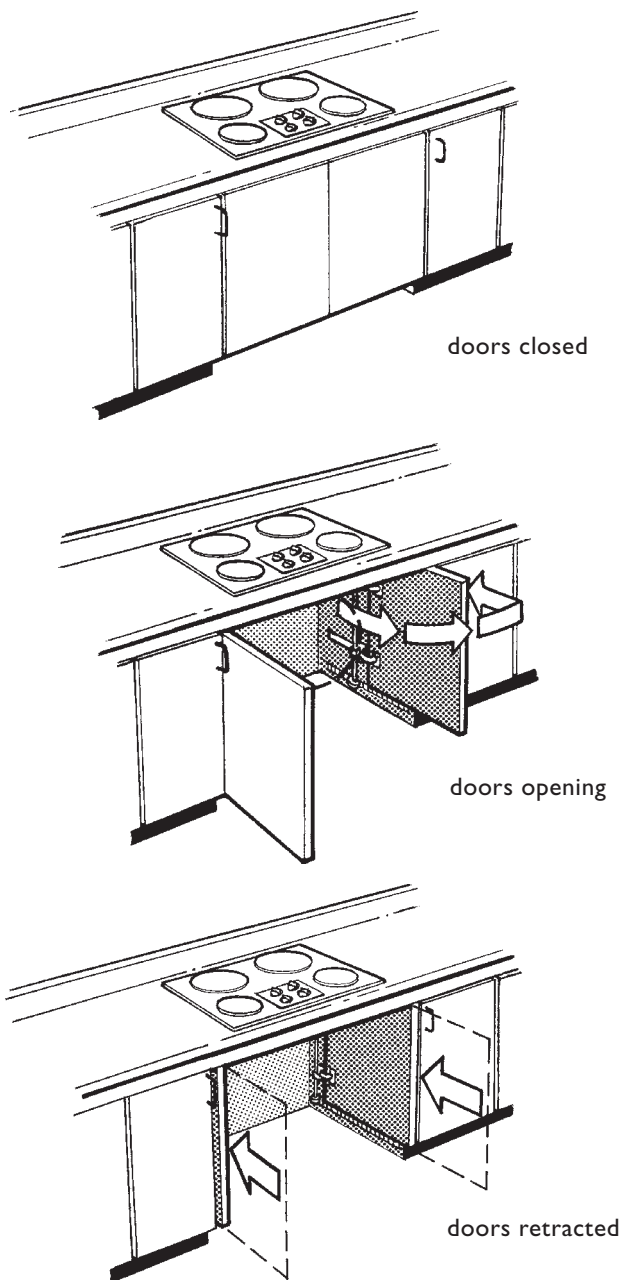


**Possible Removable Cabinet Options for Required Knee Spaces
at Sinks or Cooktops in Narrow (Less Than 60" Wide) U-Shaped Kitchens**

The Guidelines require that the floor, walls, and cabinet faces of knee space be finished during initial construction so no other work is necessary when the base cabinet is removed. When sinks or cooktops are installed at the bottom of a narrow U-shaped kitchen, regardless of whether the knee space is exposed or concealed by a removable cabinet, hot pipes or exposed sharp edges should be insulated or enclosed at the time of initial construction. Protection methods are addressed on page 7.14 “Knee Space and Pipe Protection.”

There are no kitchen cabinet manufacturers that currently offer “removable base cabinets” in their standard lines. The methods for providing removable cabinets presented here are some of the possible solutions. Of those shown, the removable cabinet front is likely to be the easiest to accomplish based upon current manufacturing processes. However, the resident may need to reinstall the cabinet at a later date, therefore, storage needs to be considered. It is recommended that instructions regarding proper storage be taped to the inside of the cabinet, as well as reinstallation instructions, if applicable. Other similar design options include removable cabinet floor and bottom, or, with some modification of rear supports, removal of the entire cabinet. This last option requires the counter to be installed independent of the base cabinet, with storage of the removable portion of the cabinet again a consideration.

Use of swinging retractable cabinet door hardware provides another excellent method to conceal knee space because the doors are self-storing and no part of the cabinet has to be removed or stored at another location. A special combination hinge allows the doors to swing open in a traditional manner and, when desired, allows the doors to be pushed back into the cabinet.



Use of Self-Storing Door Hardware to Expose Knee Space

KNEE SPACE AND PIPE PROTECTION

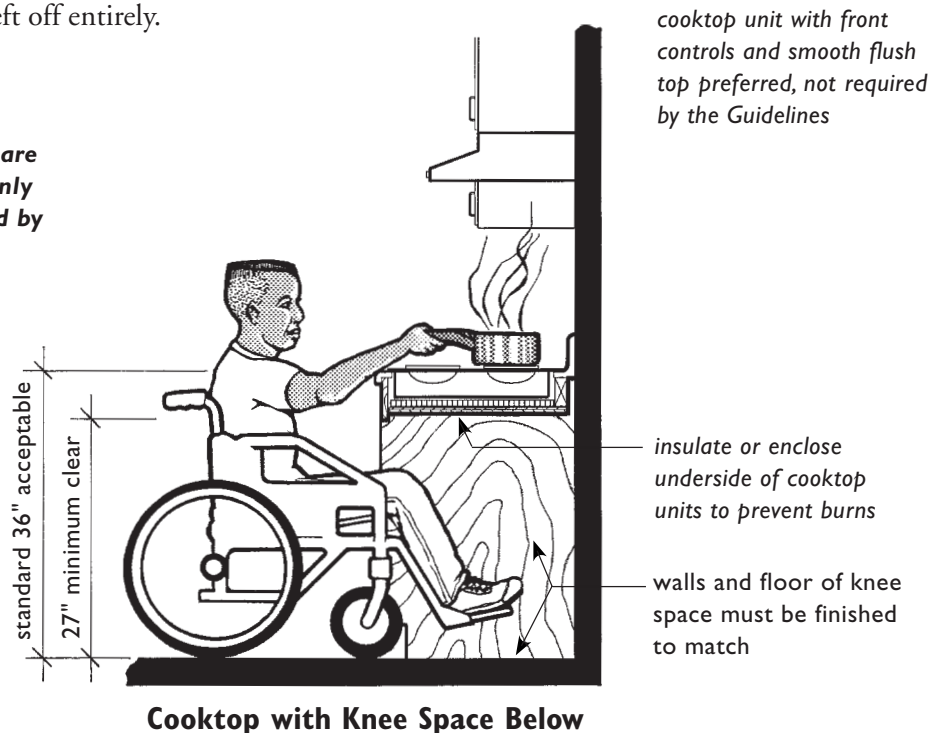
Where knee spaces are provided below sinks and cooktops, protecting seated users from burns and abrasions is strongly recommended. While the Guidelines do not specify such protection, the two most common design standards on accessibility (ANSI A117.1, 1986 and UFAS) require that the bottom of cooktops and sink supply lines and drain pipes be insulated or enclosed. Many people who use wheelchairs or scooters have limited sensation in their legs and cannot feel that they are touching a hot pipe or sharp edge and may be unaware that a serious injury has occurred. In addition, the need for protection from burns is an important safety consideration for all persons.

Pipes at sinks may be wrapped with insulation, but each time the plumbing is serviced the insulation must be removed and reinstalled. If the pipes are rewrapped using the original insulation (which may have lost much of its adhesion) the resulting application often is ineffective or the insulation may be left off entirely.

A more aesthetic and practical method for pipe protection is the installation of a removable panel over the plumbing. This panel shields the seated user and hides the plumbing from view. If such a panel is installed it should not inhibit access by encroaching upon the knee space. The panel should be hinged or otherwise removable so the pipes can be serviced easily.

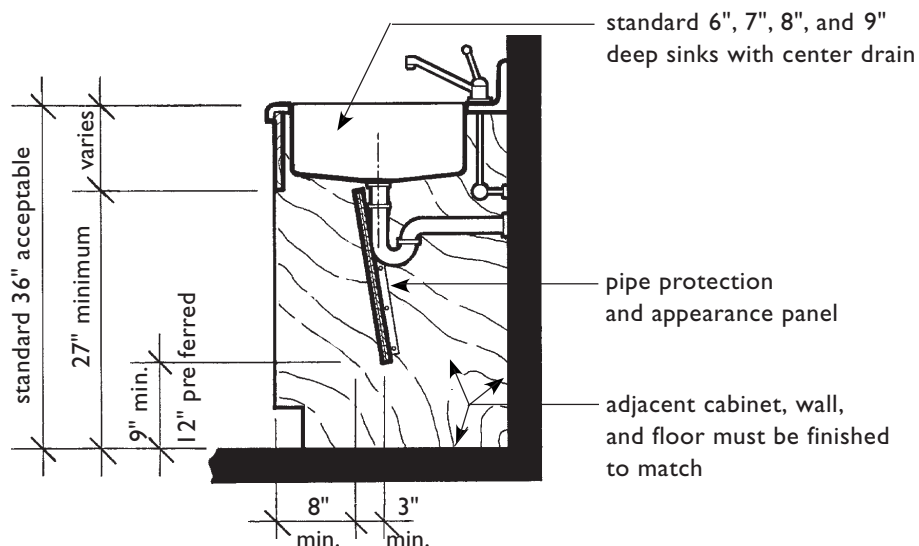
The dimensions for the knee space itself must be 30 inches wide (minimum) and should be 27 inches high (minimum). Since there is no specific ANSI figure delineating the requirements for knee space clearance beneath sinks or cooktops in dwelling units, the accompanying illustrations may be used as guidance when providing knee space beneath removable base cabinets. The pipe protection panel is patterned after the ANSI Figure 31 for Lavatory Clearances. See also ANSI 4.32.5.5 Sinks and 4.32.5.6 Ranges and Cooktops.

Notes in italic type are recommendations only and are not required by ANSI or Guidelines.

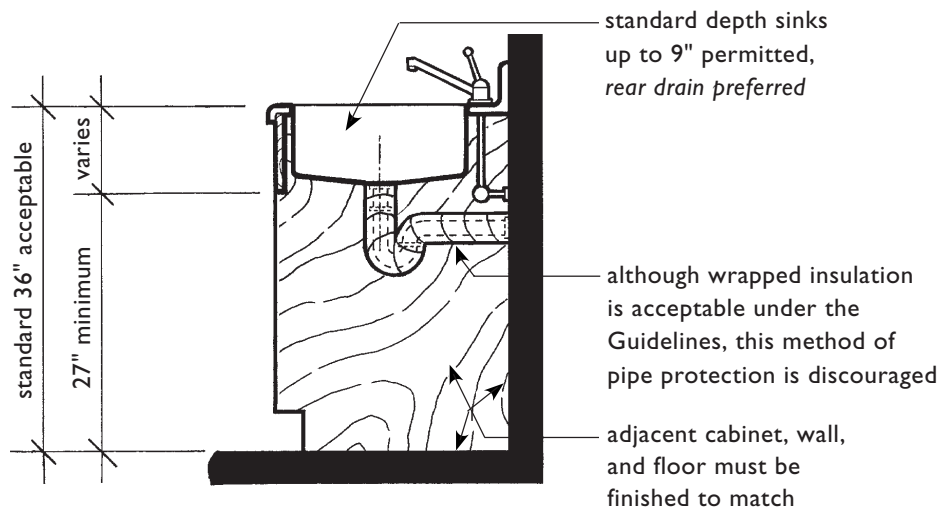


Knee Space at Sink with Pipe Protection Panel

sinks with rear located drain are not required but are a significant advantage when creating usable knee space



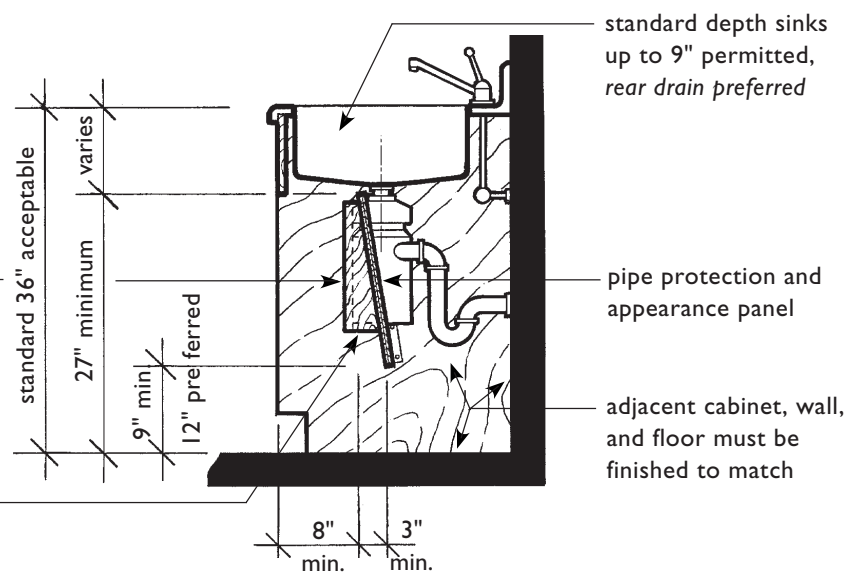
Knee Space at Sink with Wrapped Pipes



Knee Space at Sink with Garbage Disposal and Pipe Protection Panel

disposal cover
12" wide ±

open bottom for
ventilation and access
to reset buttons



shallow basin sink and rear drain, although not required by the Guidelines, greatly improve access by wheelchair user

lever hardware, although preferred, is not required

knee spaces must have walls and floor surfaces finished

plumbing and other elements should be covered by a removable pipe protection and appearance panel, or be wrapped with padded insulating material, see details page 7.15

knee space 30" wide is required and 27" high is recommended under sinks or cooktops located at bottom of U-shaped kitchens when the U is less than 60" wide

30" X 48" min. clear floor space; must not extend more than 19" into knee space

30" min.

40" min.
face to face
of appliances
and cabinets

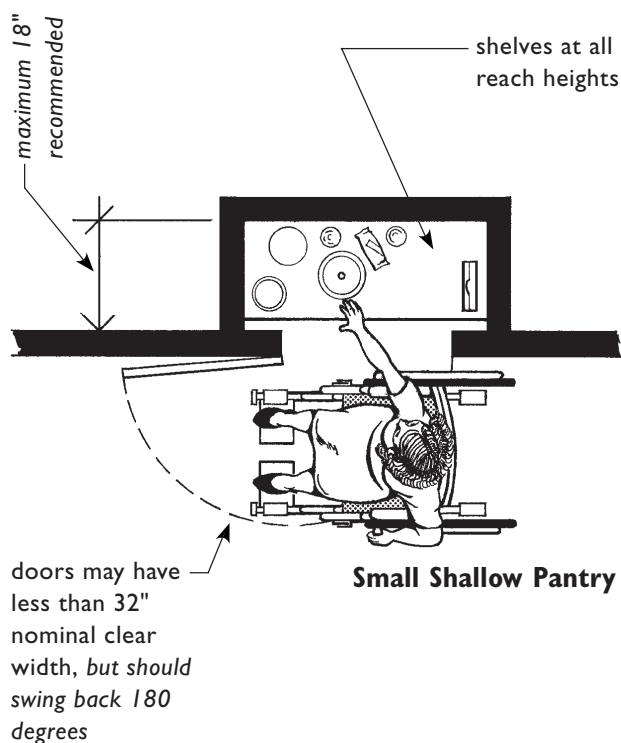
Notes in italic type are recommendations only and are not required by ANSI or Guidelines.

Knee Space at Narrow U-Shaped Kitchens

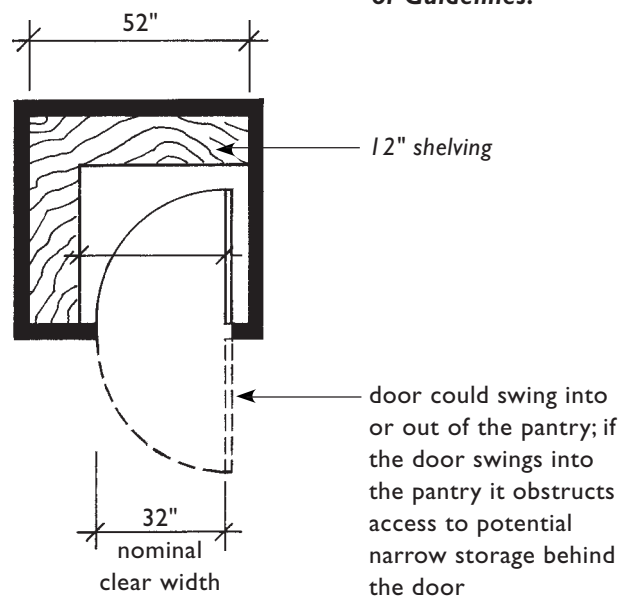
PANTRIES

Shallow storage closets, such as pantries, may have doors that do not provide a 32-inch clear width since they do not require the user to pass through the door to reach the contents. However, at walk-in pantries that must be entered to reach the stored items, the doorway must provide a 32-inch nominal clear opening. Shelving is not addressed by the Guidelines; however, it is recommended that it be provided at a variety of levels.

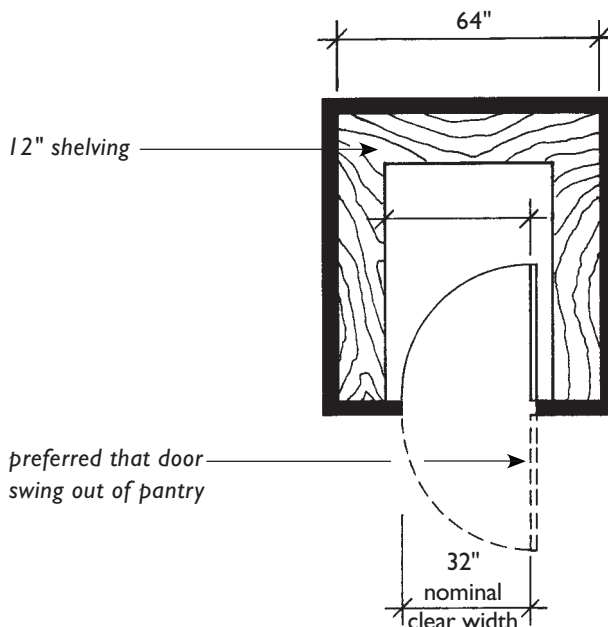
In the small walk-in pantry (below left), if wheelchair users enter the pantry facing the contents, they must back out of the space. In the larger walk-in pantry (below right), if the first shelf is placed at two feet above the floor, a wheelchair user could turn around in the pantry and exit facing out.



Notes in italic type are recommendations only and are not required by ANSI or Guidelines.



Small Walk-In Pantry



Larger Walk-In Pantry

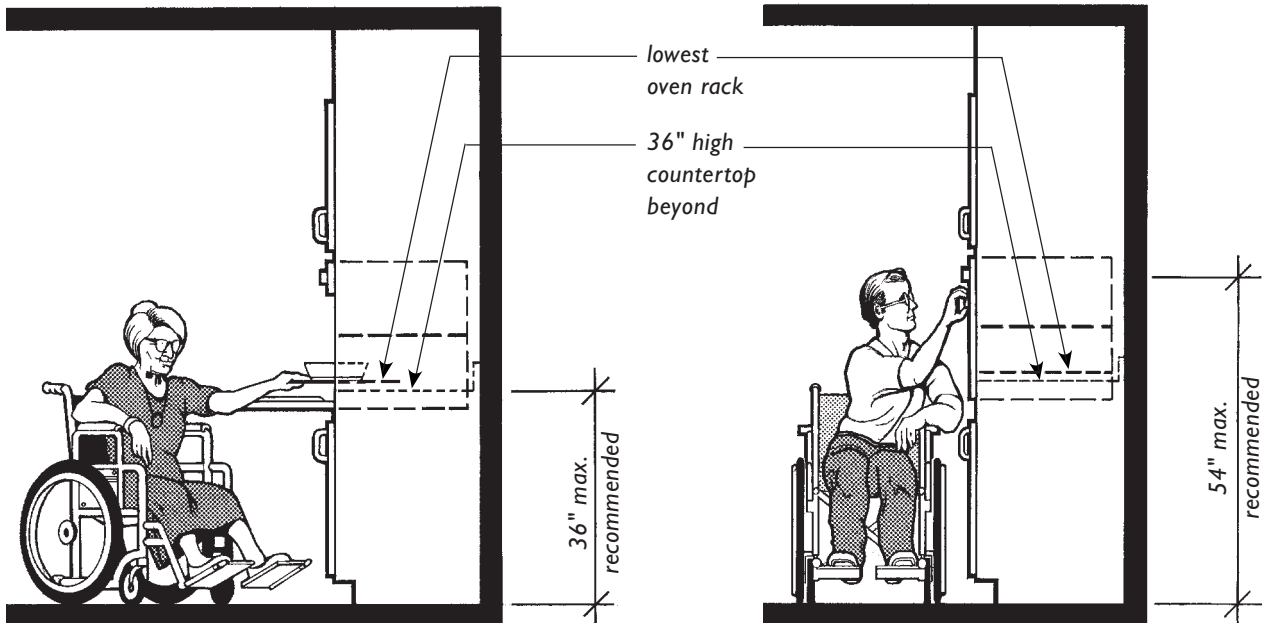
RECOMMENDATIONS FOR INCREASED ACCESSIBILITY

AT WALL OVENS

Wall-mounted ovens, like ovens in ranges, must have either a parallel or forward clear floor space adjacent to the appliance. When a single wall-mounted oven is installed, it is recommended that the bottom of the oven be mounted at or near counter height so a seated user could reach over a potentially hot door and, at a minimum, pull out the bottom oven rack. Controls also should be within the reach of a seated user.

If double ovens are installed, a wheelchair user must be able to execute a parallel or a forward approach at the appliance. At least one oven interior and its controls, even though appliance controls are not covered by the Guidelines, should be within the reach range of a seated person. See page 5.5 for reach ranges.

bottom of oven should
be positioned so lowest
oven rack is at or near
countertop height



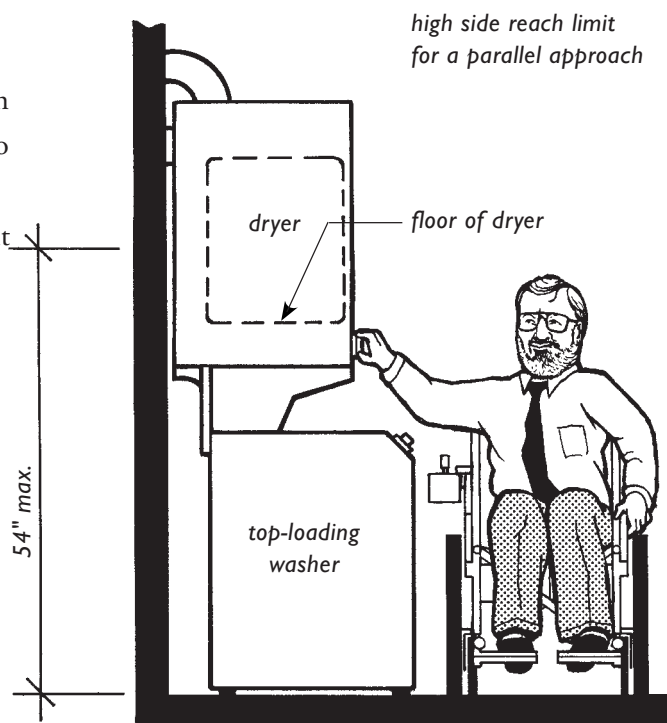
**36 Inches to Bottom
of Single Wall-Mounted Oven**

**54 Inches Recommended Reach to
Controls at Single Wall-Mounted Oven**

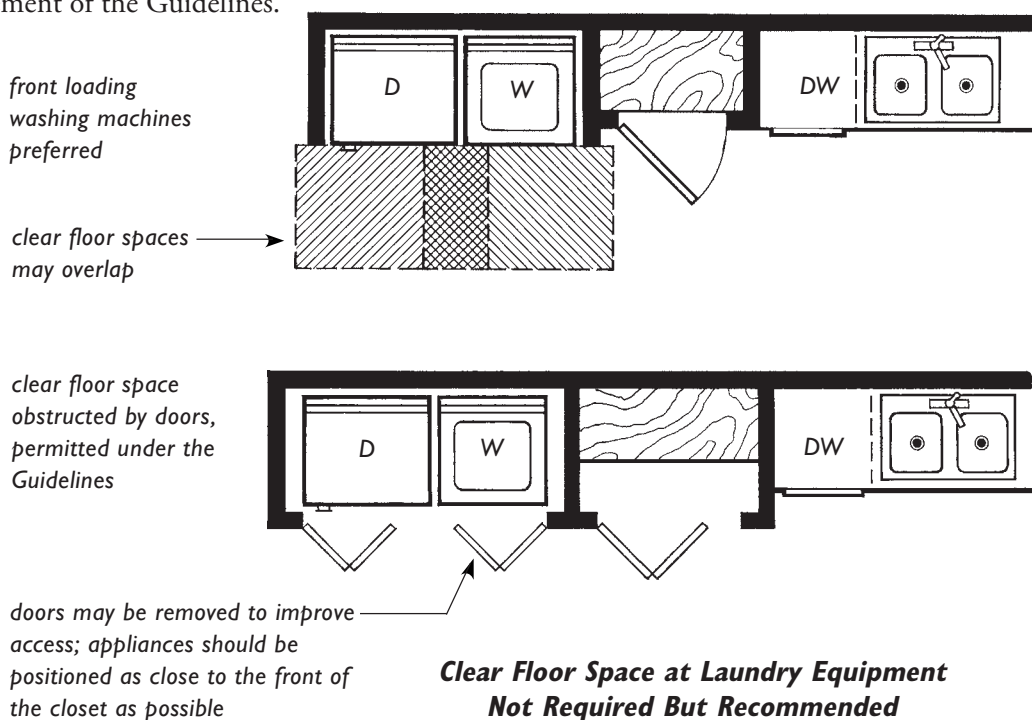
At Laundry Equipment

The Guidelines do not require washers and dryers in individual dwelling units to be accessible, which also means that they are not required to have 30-inch x 48-inch parallel clear floor spaces positioned in front of them. *However, when located in the kitchen along a row containing other appliances, it is recommended that space be provided for a parallel approach to each machine. The Guidelines permit the installation of stacked washers and dryers. It is recommended that the controls be within the reach of seated users; see the illustration in the upper right column.*

If the washer and dryer are located behind doors or are in a separate utility room, clear floor spaces in front of the machines are not required. However, if the door to the utility room is intended for user passage, the door must provide a 32-inch nominal clear opening. When laundry equipment is located in a common use area, it must conform to the requirements for accessible public and common use facilities, see page 2.26. Note: Non-italic type indicates a requirement of the Guidelines.



Stacked Washer/Dryer Unit with Dryer and All Controls Within Reach Range of Seated User

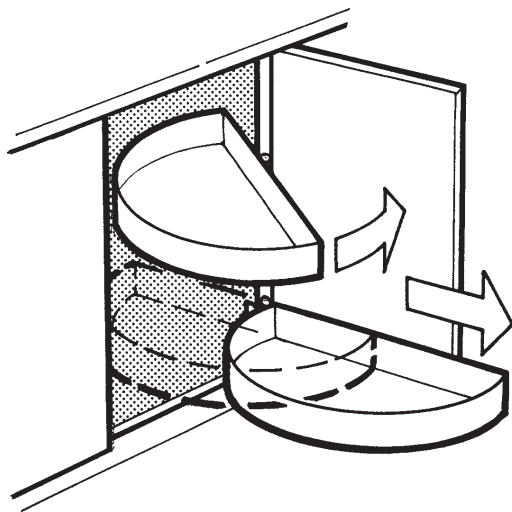


AT OTHER APPLIANCES AND FIXTURES

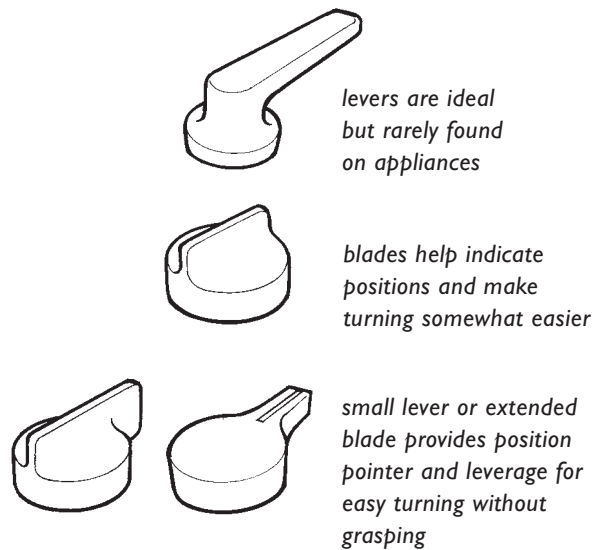
While not required by the Guidelines, careful consideration should be given to the selection of other appliances and fixtures installed in kitchens so potential residents who may currently, or in the future, have a physical limitation may more completely use and enjoy their dwelling.

A partial list of additional considerations for kitchens:

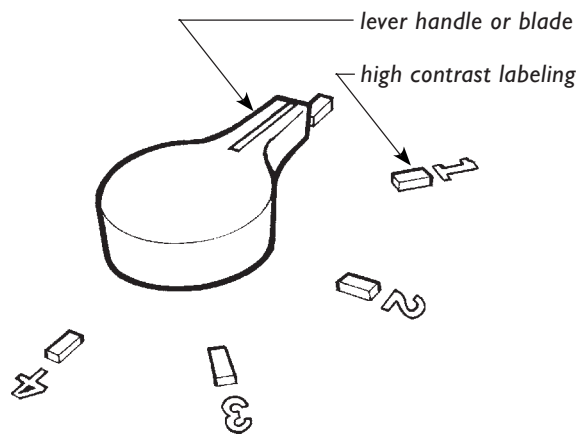
- ranges and cooktops with controls that are front- or side-mounted and have click stops to indicate heat settings,
- vent hoods with controls mounted at or near countertop level,
- shallow sink basins with rear-mounted drains when removable base cabinets are provided,
- lever or blade type handle faucets and controls,
- revolving/extending semicircular shelves for corner base cabinet storage.



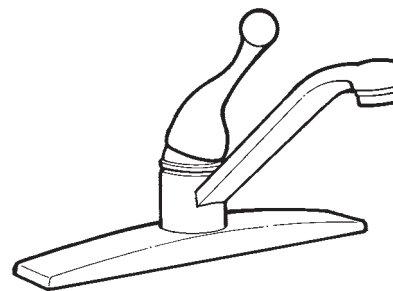
**Revolving/Extending Shelves
at Corner Base Cabinets Are an Advantage
for All Users**



Preferred Control Choices



Ideal Control Knob



**Lever Handles on Faucets Are Easy
for Most People to Operate**

**EXAMPLES OF KITCHEN
FLOOR PLANS THAT COMPLY
WITH THE GUIDELINES**

The plans presented on the following pages are examples of “usable” kitchens that comply with the Fair Housing Accessibility Guidelines (the Guidelines). They range from very small to larger, more elaborate kitchens but are only a small sampling of the layouts possible. The plans are neither required nor even suggested as ideal examples. They are included to illustrate typical applications or interpretations of specific requirements of the Guidelines under various circumstances.

The plans may be used as resource material and planning guides when developing new multi-family housing designs. Conventional industry standard fixture and appliance sizes have been used consistently when developing these plans. It is important to allow sufficient space for any fixtures that may be larger than those shown here. Although

designers should rely upon the dimensions indicated and not scale off the drawings, all plans in this section are reproduced at 1/4 inch scale.

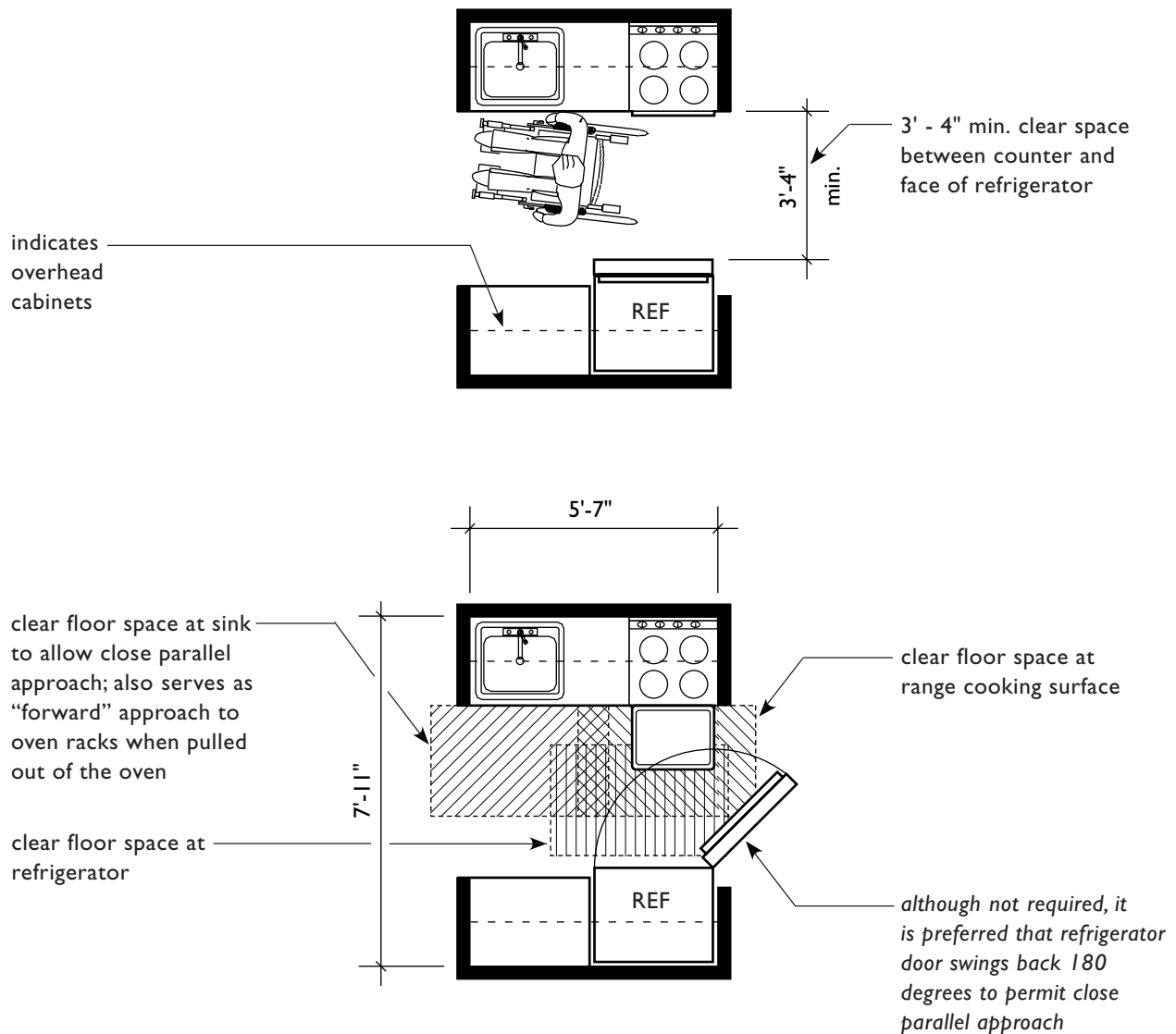
The plans are presented in pairs, with the first plan showing fixture and appliance placement and key dimensions, such as aisle widths, that are required by the Guidelines. The second plan gives the overall room dimensions which are offered for comparison purposes only and are not required by the Guidelines. The second plan also shows clear floor spaces adjoining individual appliances and fixtures and describes their use, and, to give the reader the “real” space that appliances occupy, appliance doors are shown in their open position.

Text and notes presented in *italic* type are comments or recommendations and are not required by the Guidelines.

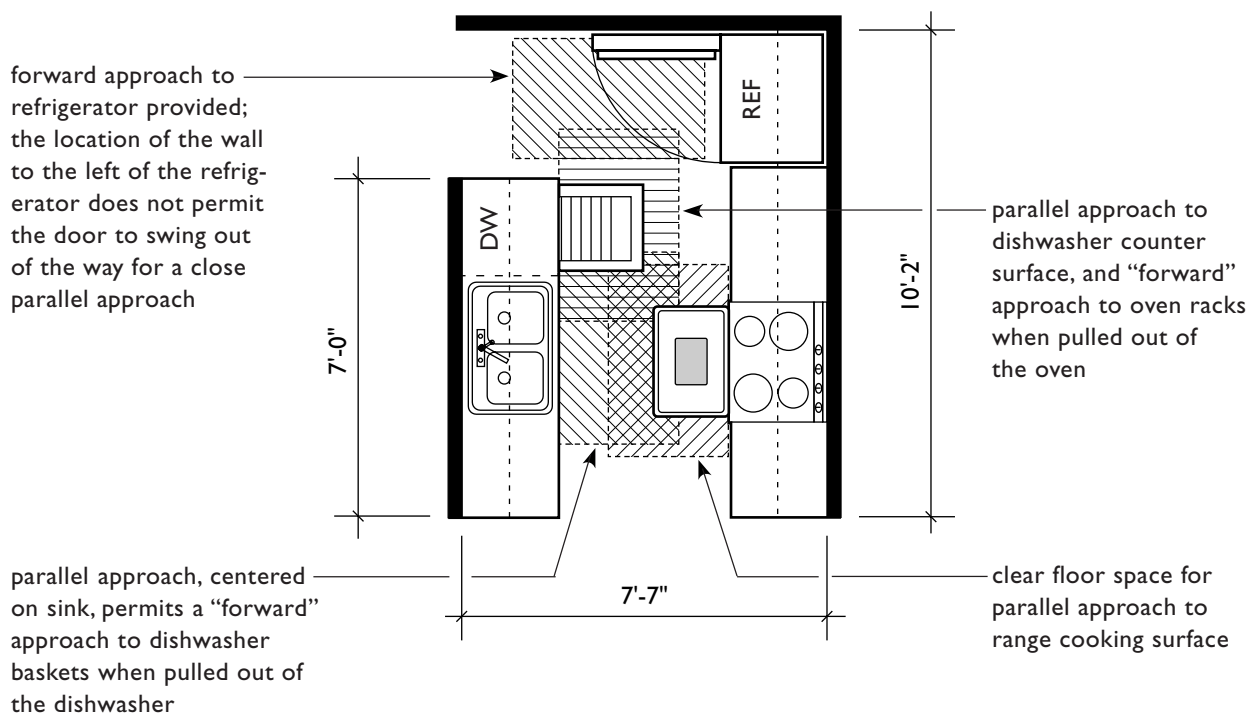
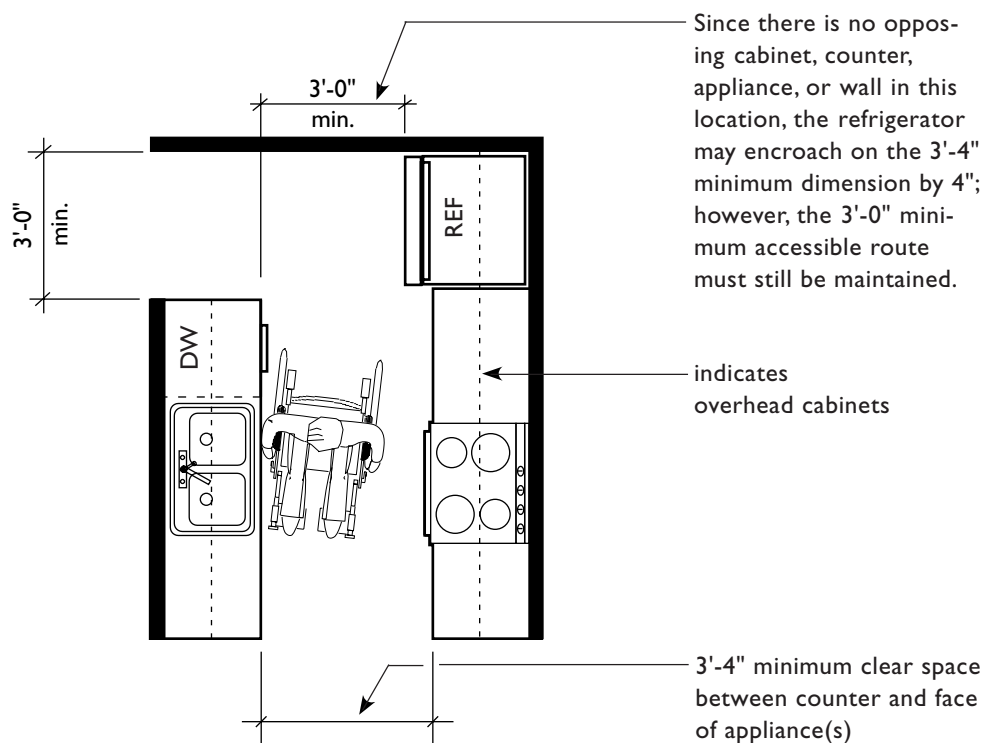
Very Small Parallel Wall Kitchen (Without Dishwasher)

In this kitchen design, walls may not continue across either open end because they would obstruct clear floor spaces required at each appliance.

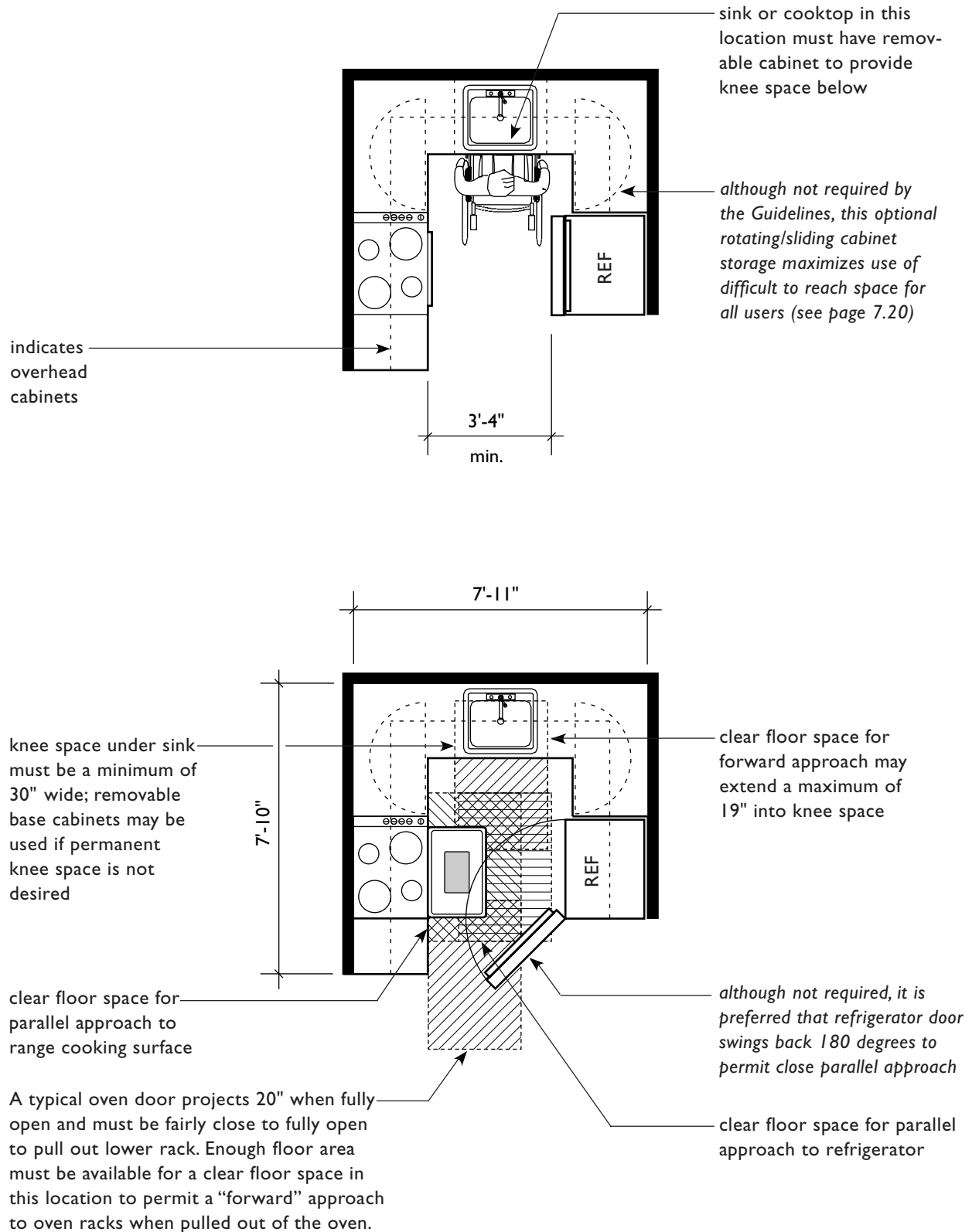
Although discouraged because maneuvering space would be severely restricted, the sink end could be closed if a removable cabinet that conceals a minimum 30-inch wide knee space is provided under the sink; 36-inch wide knee space is preferred.



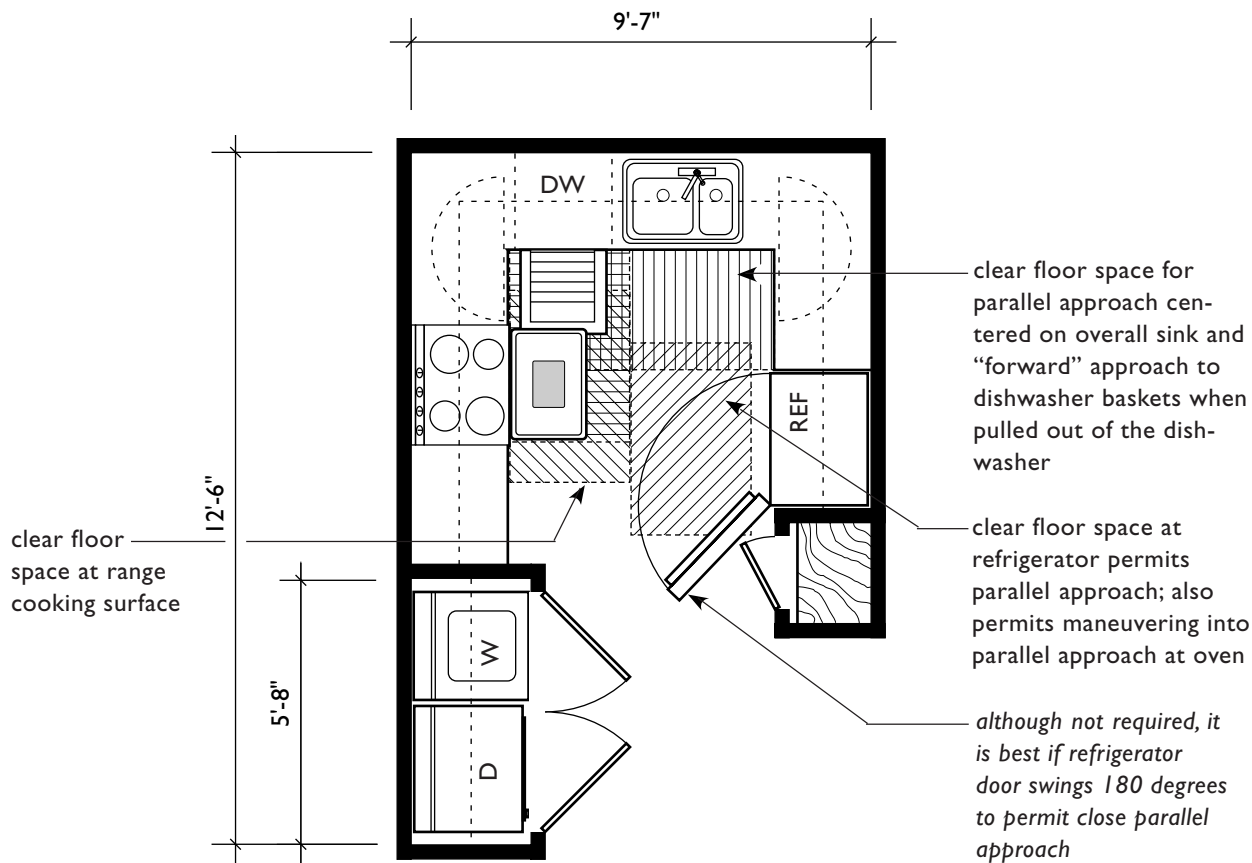
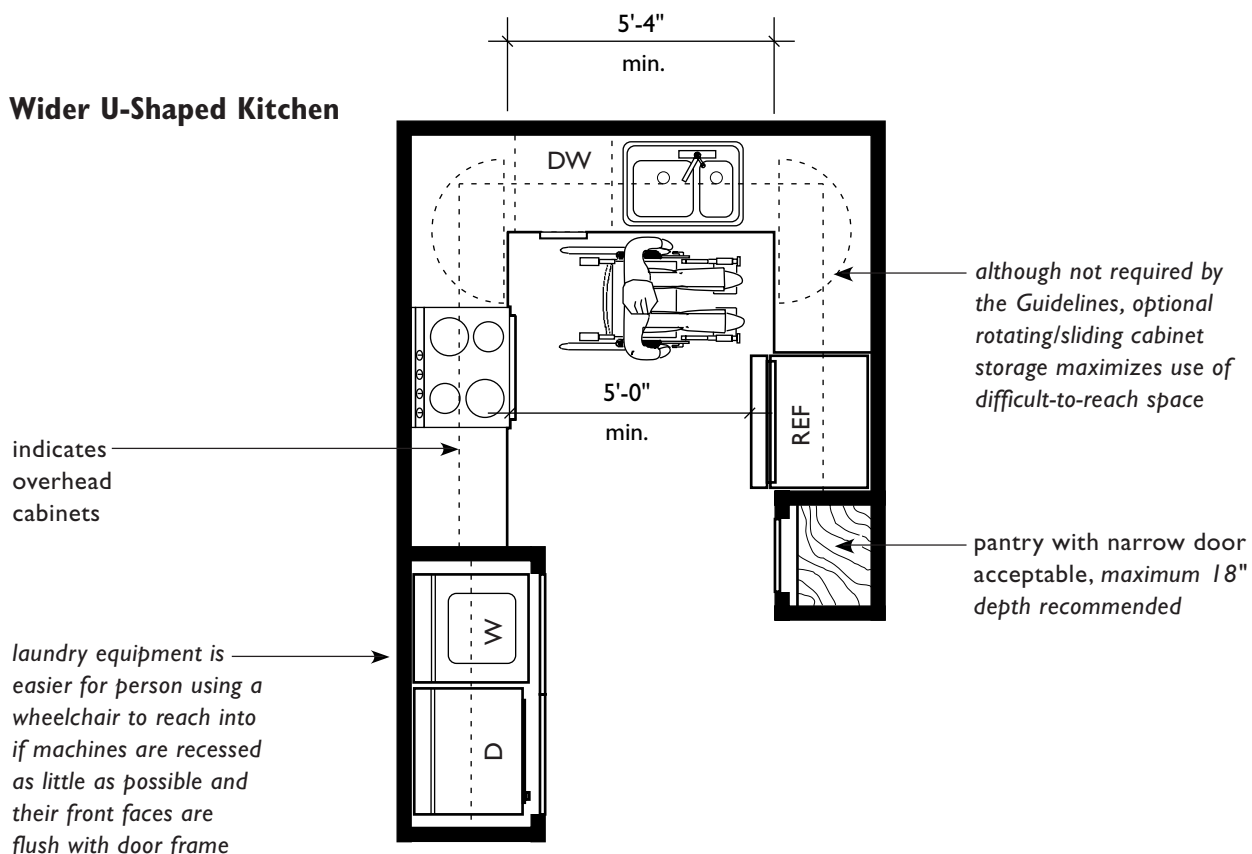
Parallel Wall Kitchen



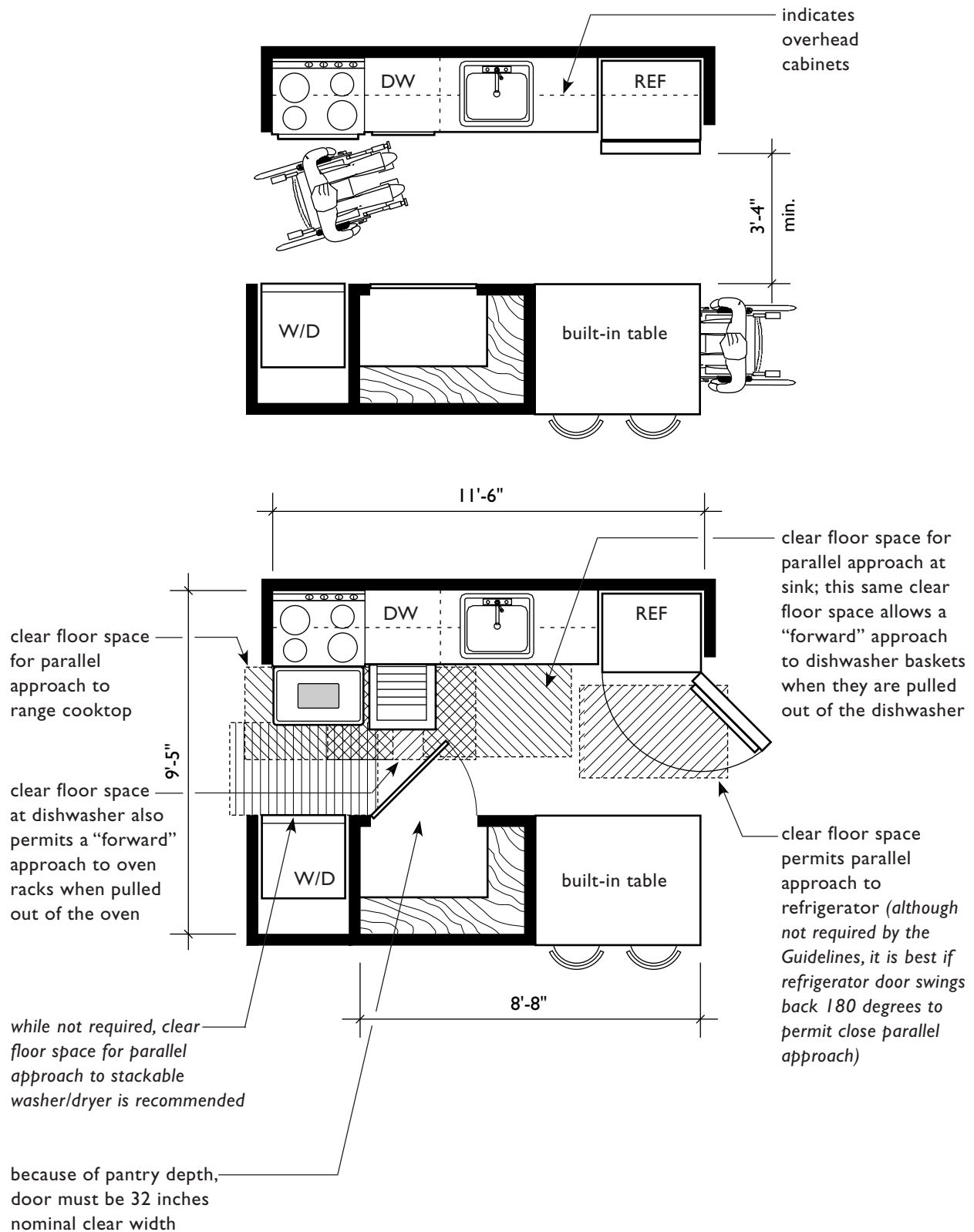
Narrow U-Shaped Kitchen (Without Dishwasher)



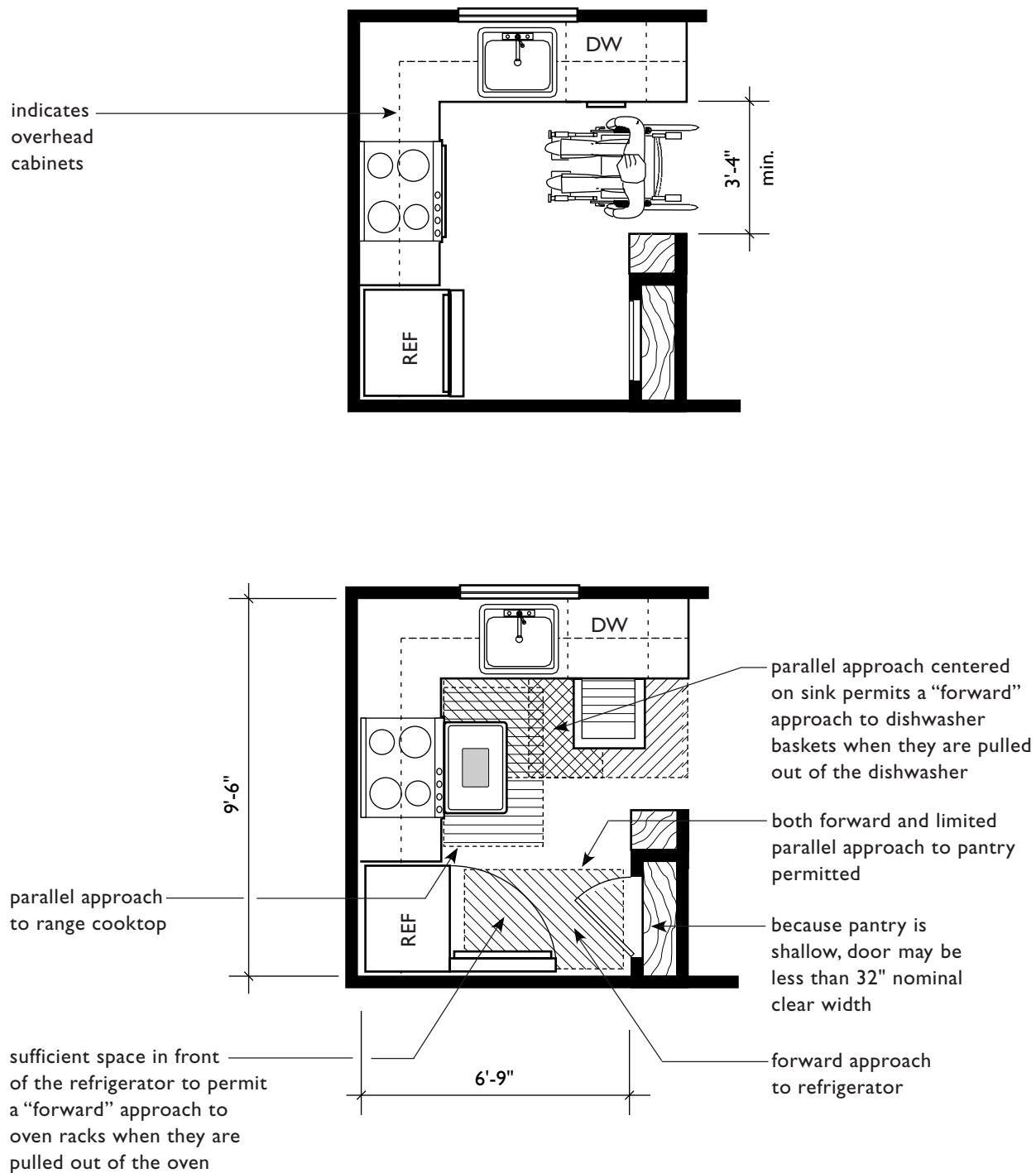
Wider U-Shaped Kitchen



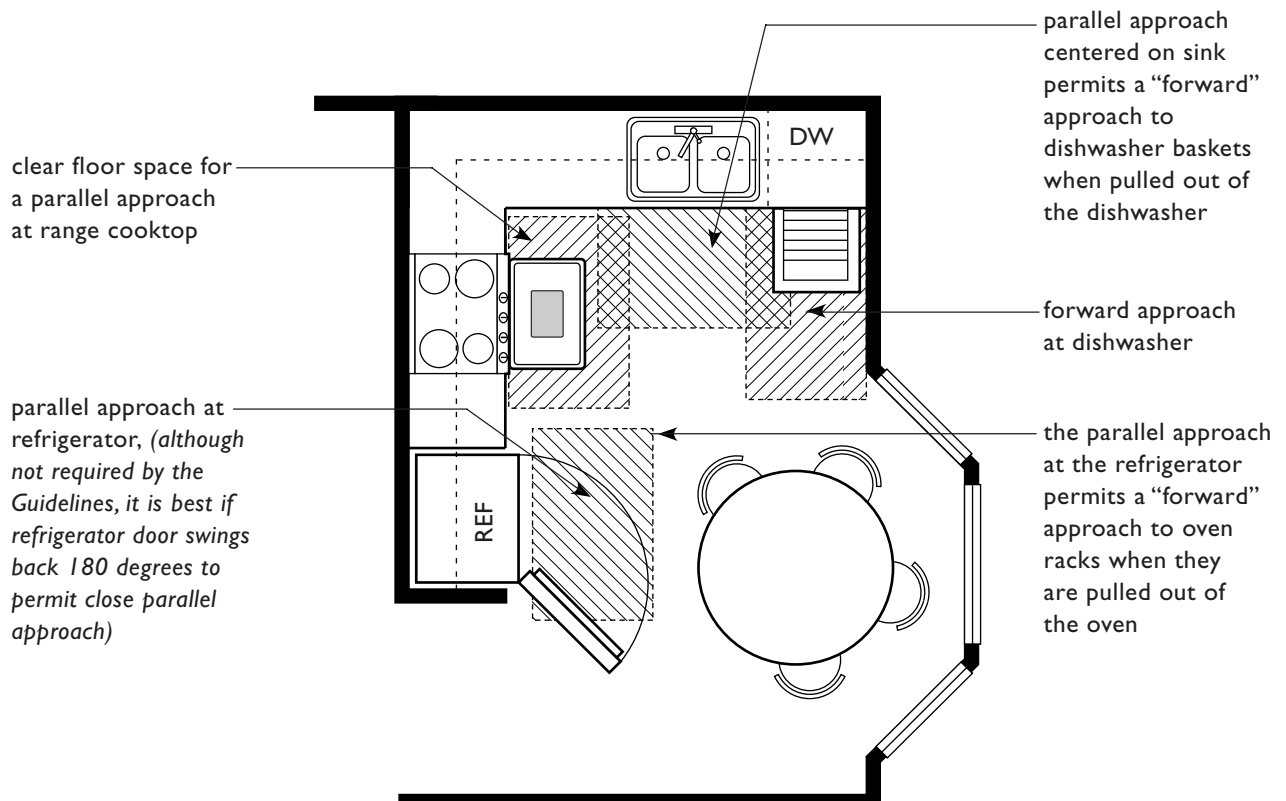
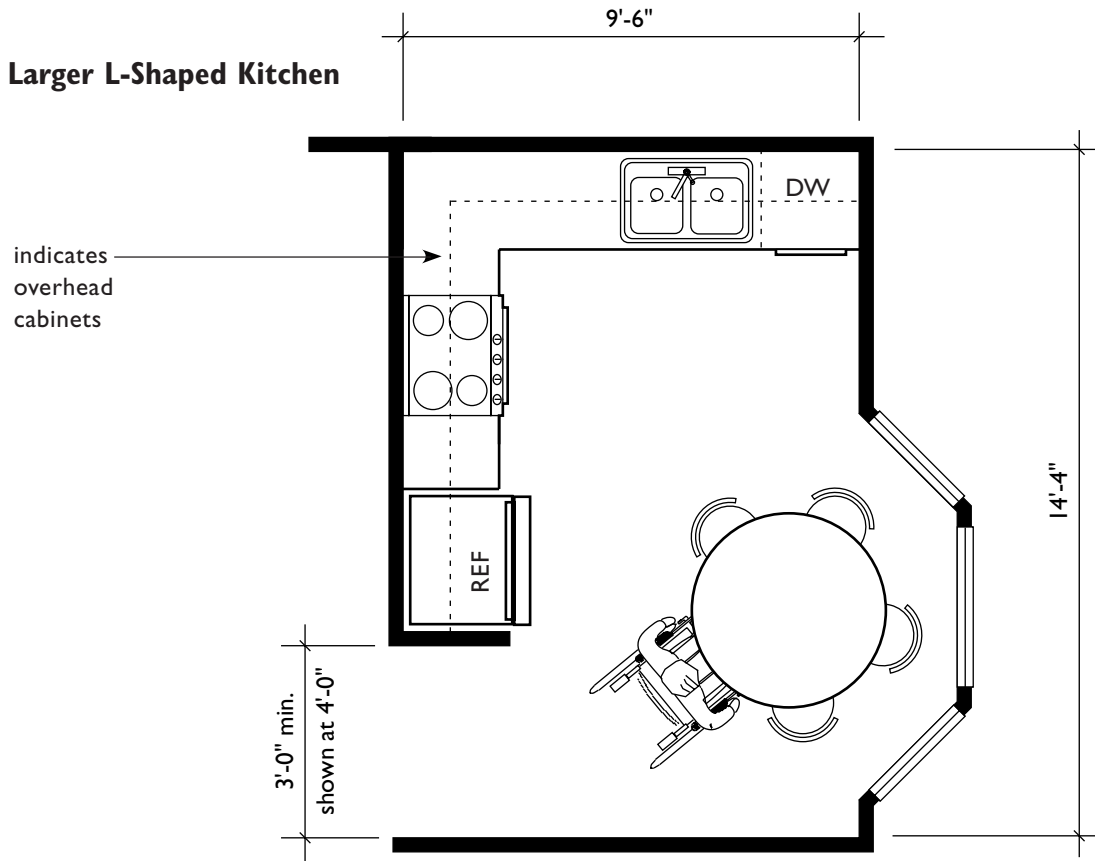
Parallel Wall Kitchen



Small L-Shaped Kitchen



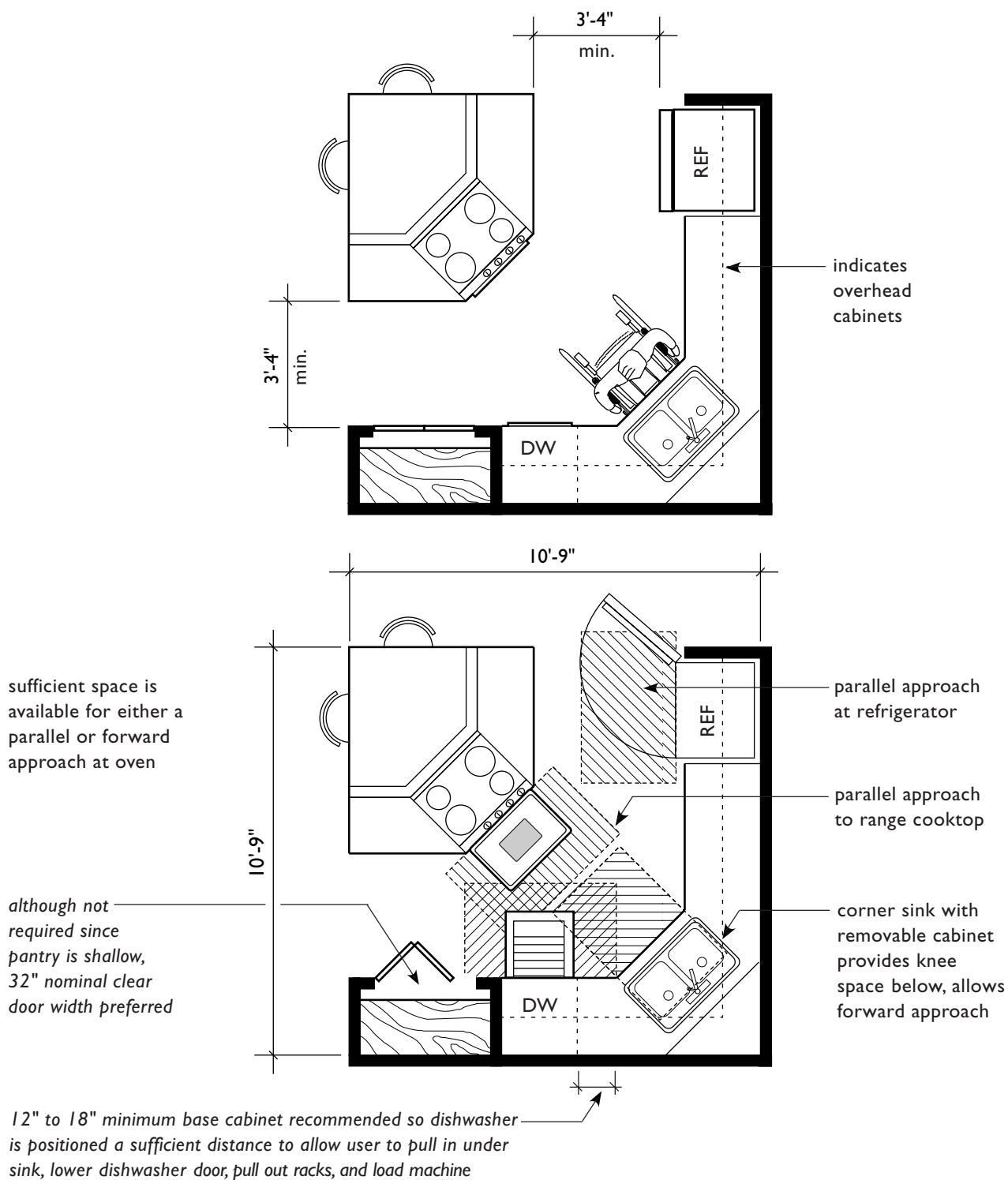
Larger L-Shaped Kitchen



Broken U-Shaped Kitchen

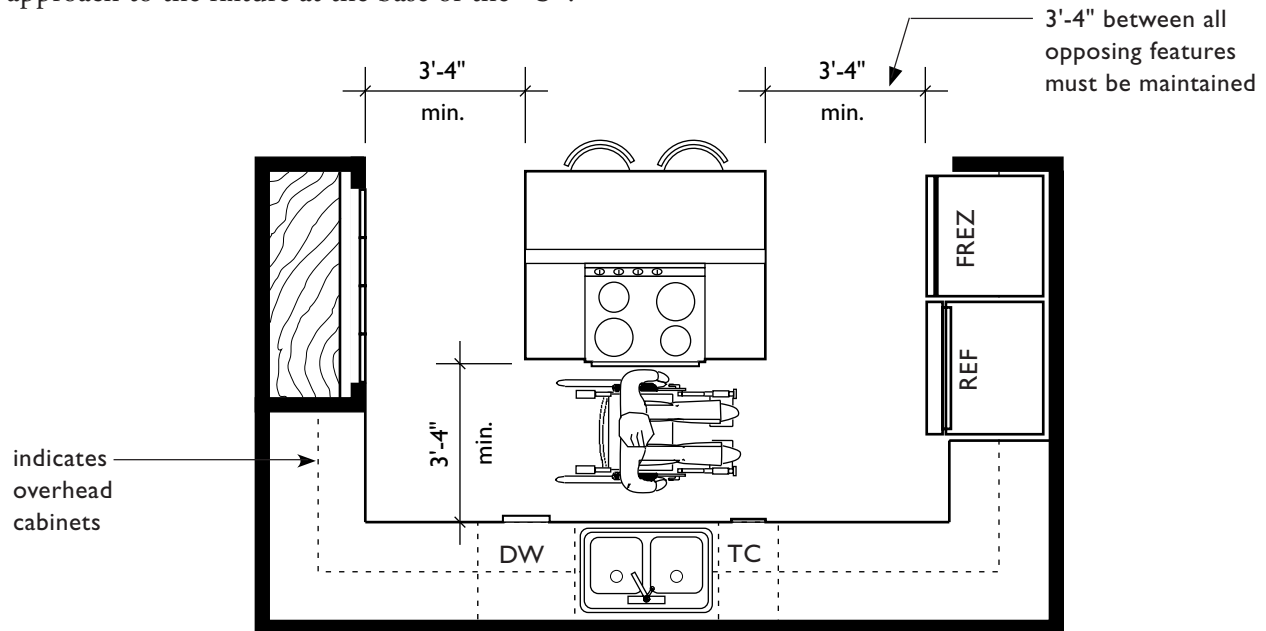
If a corner position with knee space below is being considered for either the sink or cooktop, it is preferred that the sink be located in the corner, as

opposed to the cooktop. This is because a cooktop with knee space below at the standard 36-inch height of a kitchen countertop is dangerous for seated users.



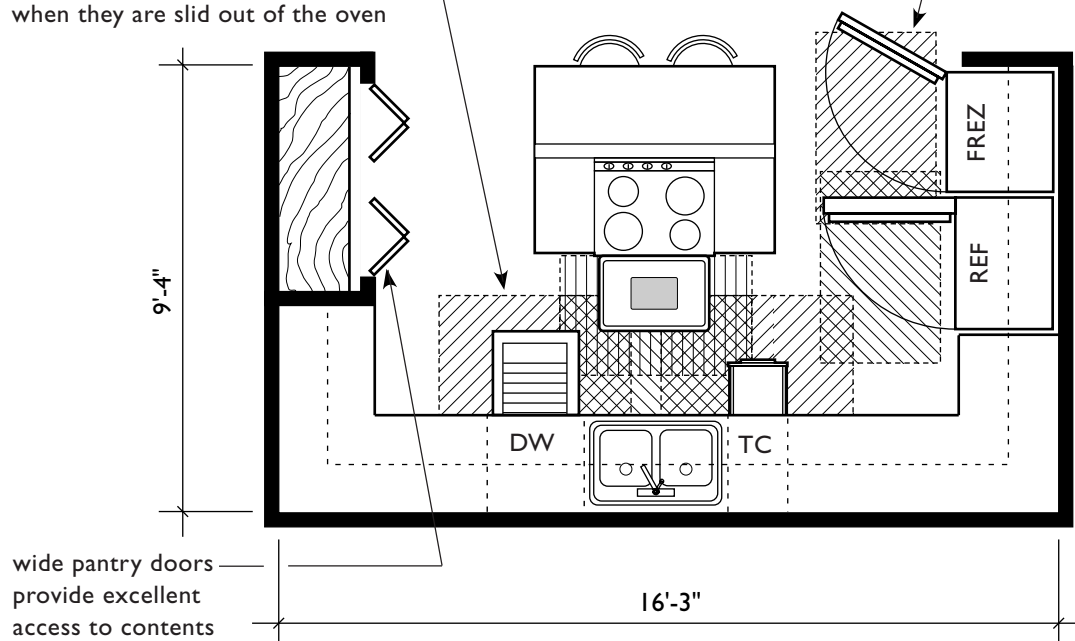
Spacious U-Shaped Kitchen

While this kitchen has an overall “U” shape, it functions like a parallel wall kitchen with two points of entry and exit and allows close parallel approach to the fixture at the base of the “U”.



parallel clear floor spaces at the dishwasher and trash compactor permit either a left- or right-handed “forward” approach to oven racks when they are slid out of the oven

parallel clear floor spaces at both refrigerator and freezer



■ **PART B:** Usable Bathrooms

7b



...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 usable ...bathrooms such that an individual in a wheelchair can maneuver about the space.

Fair Housing Act Regulations, 24 CFR 100.205

Definitions from the Guidelines

Bathroom. A bathroom which includes a water closet (toilet), lavatory (sink), and bathtub or shower. It does not include single-fixture facilities or those with only a water closet and lavatory. It does include a compartmented bathroom. A compartmented bathroom is one in which the fixtures are distributed among interconnected rooms. A compartmented bathroom is considered a single unit and is subject to the Act's requirements for bathrooms.

Powder Room. A room with only a water closet (toilet) and lavatory (sink). (Definition found in Requirement 6.)

INTRODUCTION

The Fair Housing Accessibility Guidelines (the Guidelines) provide specifications for bathroom design that make it possible for people who use mobility aids, and who, heretofore, could not even get into conventional bathrooms in multifamily housing, to now use such facilities. Though not fully accessible, when designed to comply with the Guidelines, these “usable” bathrooms provide a person who uses a wheelchair or scooter or who may use a walker or other mobility aid with a bathroom that has enough maneuvering space to allow the person to enter, close the door, use the fixtures, and exit. In some cases, a resident with a disability will find it necessary to make additional modifications to meet his or her specific needs.

In covered multifamily housing, bathrooms that meet the definition in the Guidelines for a bathroom must then meet the specifications outlined in the Guidelines for usable bathrooms. The Guidelines distinguish between bathrooms and powder rooms and provide different specifications (see definitions on facing page).

Usable bathroom specifications include:

1. an accessible route to and into the bathroom with a nominal 32-inch clear door opening (Requirements 3 and 4),
2. switches, outlets, and controls in accessible locations (Requirement 5),
3. reinforced walls to allow for the later installation of grab bars around the toilet, tub, and shower stall; under certain conditions provisions for reinforcing must be made in shower stalls to permit the installation of a wall-hung bench seat (Requirement 6),
4. maneuvering space within the bathroom to

permit a person using a mobility aid to enter the room, close and reopen the door, and exit (Requirement 7), and

5. maneuvering and clear floor space within the bathroom to permit a person using a mobility aid to approach and use fixtures; fixture dimensions and placement are specified only under certain conditions (Requirement 7).

Powder rooms, except as noted below, are only subject to the following specifications:

1. they must be on an accessible route with a nominal 32-inch clear door opening (Requirements 3 and 4) and
2. they must have switches, outlets, and controls in accessible locations (Requirement 5).

There is an **exception**, however, with respect to multistory dwelling units in buildings with one or more elevators. The level served by the building elevator must be the primary entry level for the dwelling unit and there must be either a usable bathroom or a usable **powder room** on the entry level. If there is both a bathroom and a powder room, then the bathroom would be required to be usable and meet Requirements 3 through 7 of the Guidelines. In cases where only a powder room is provided, then it must meet, in addition to Requirements 3, 4, and 5, the applicable provisions of Requirements 6 (Reinforced Walls) and 7 (Maneuvering and Clear Floor Spaces) of the Guidelines. The chart on page 7.35 summarizes the requirements for usable bathrooms and usable powder rooms.

Accessible route, usable doors, controls in accessible locations, and reinforced walls for later installation of grab bars are covered in other chapters of this manual. Maneuvering and clear

floor space requirements are explained in the first part of this chapter, followed by a presentation of a variety of bathroom floor plans that comply with the requirements of the Guidelines.

TWO BATHROOM SPECIFICATIONS

To satisfy the maneuvering and clear floor space requirements for usable bathrooms, Requirement 7 of the Guidelines gives two sets of specifications to design bathrooms, referred to in this manual as Specification A and Specification B. Although not the only difference between the two specifications, a bathroom designed to meet Specification B has greater access to the bathtub than a bathroom designed to meet Specification A. The two specifications and their differences will be described in the following discussions of maneuvering and clear floor space requirements.

HOW MANY BATHROOMS AND FIXTURES MUST COMPLY WITH THE GUIDELINES?

In dwelling units containing more than one bathroom, if Specification A is selected as the basis for designing a bathroom, all bathrooms in the dwelling unit also must comply with the A Specifications. If Specification B is selected, only one bathroom in the dwelling unit must meet those requirements; all other bathrooms in the dwelling unit must be on an accessible route (Requirement 4), have doors with a nominal 32-inch clear opening (Requirement 3), have switches, outlets, and controls in accessible locations (Requirement 5), and have reinforced walls around toilets, tubs, and shower stalls (Requirement 6). However, maneuvering space as specified in the Guidelines' Requirement 7 is not required in other bathrooms

within the dwelling unit when one bathroom is designed to meet the B Specifications.

However, any powder room provided in a dwelling unit, regardless of which set of specifications the bathroom(s) meets, is still subject to Requirements 3 (Usable Doors), 4 (Accessible Route), and 5 (Controls in Accessible Locations). The exception that requires certain powder rooms also to meet Requirements 6 (Reinforcing) and 7 (Maneuvering and Clear Floor Space) is discussed on page 7.33.

In bathrooms where several of each type of fixture are provided, e.g., a separate shower and tub or two lavatories, **all fixtures** must be usable in Specification A bathrooms while only **one** of each type of fixture must be usable by a person with a disability in a Specification B bathroom.

WHICH BATHROOM SHOULD MEET THE REQUIREMENTS OF THE GUIDELINES?

When a builder or developer is deciding whether to use the A or B Specifications when designing bathrooms, it is important to consider the number of bathrooms in the dwelling unit. If there is only one bathroom, the builder may follow the Specifications for either A or B. However, while not required by the Guidelines, it is recommended that Specification B, which provides the higher level of accessibility, be used.

In multiple bathroom dwelling units the issue is somewhat more complex. If the B Specification is selected for use in a two-bathroom dwelling, which bathroom should comply? The master or the hall bathroom? If the hall bathroom is selected to be the usable bathroom and the family member who has a disability would normally occupy the master bedroom, then he or she would have to go down the hall to that bathroom. If, on the other hand, the master bath is

the usable bathroom and the family member with a disability is one of the children, then it will be necessary for the child to continually enter the master bedroom suite.

Where there are two or more bathrooms, the ideal situation would be to have at least one bathroom

meet Specification B, and the other bathrooms meet Specification A. However, it is acceptable under the Guidelines to have only one bathroom meet Specification B, and the other bathrooms meet Requirements 3, 4, 5, and 6 of the Guidelines, but not Requirement 7. This discussion is advisory only.

Bathroom Requirements for Covered Dwelling Units

All bathrooms as defined in the Guidelines must:

1. be on an accessible route (Requirement 4),
2. have 32-inch nominal clear width doorways (Requirement 3),
3. have switches, outlets, and controls in accessible locations (Requirement 5),
4. have reinforcing around toilets, tubs, and showers (Requirement 6), and
5. meet Requirement 7, Specification A or B:

Specification A

If Specification A is used it applies to all bathrooms, and all fixtures in those bathrooms must be usable.

Specification B

If Specification B is used, it applies to one bathroom, and only one of each type of fixture must be usable; additional bathrooms in the unit are exempt **only** from maneuvering and clear floor space requirements at fixtures.

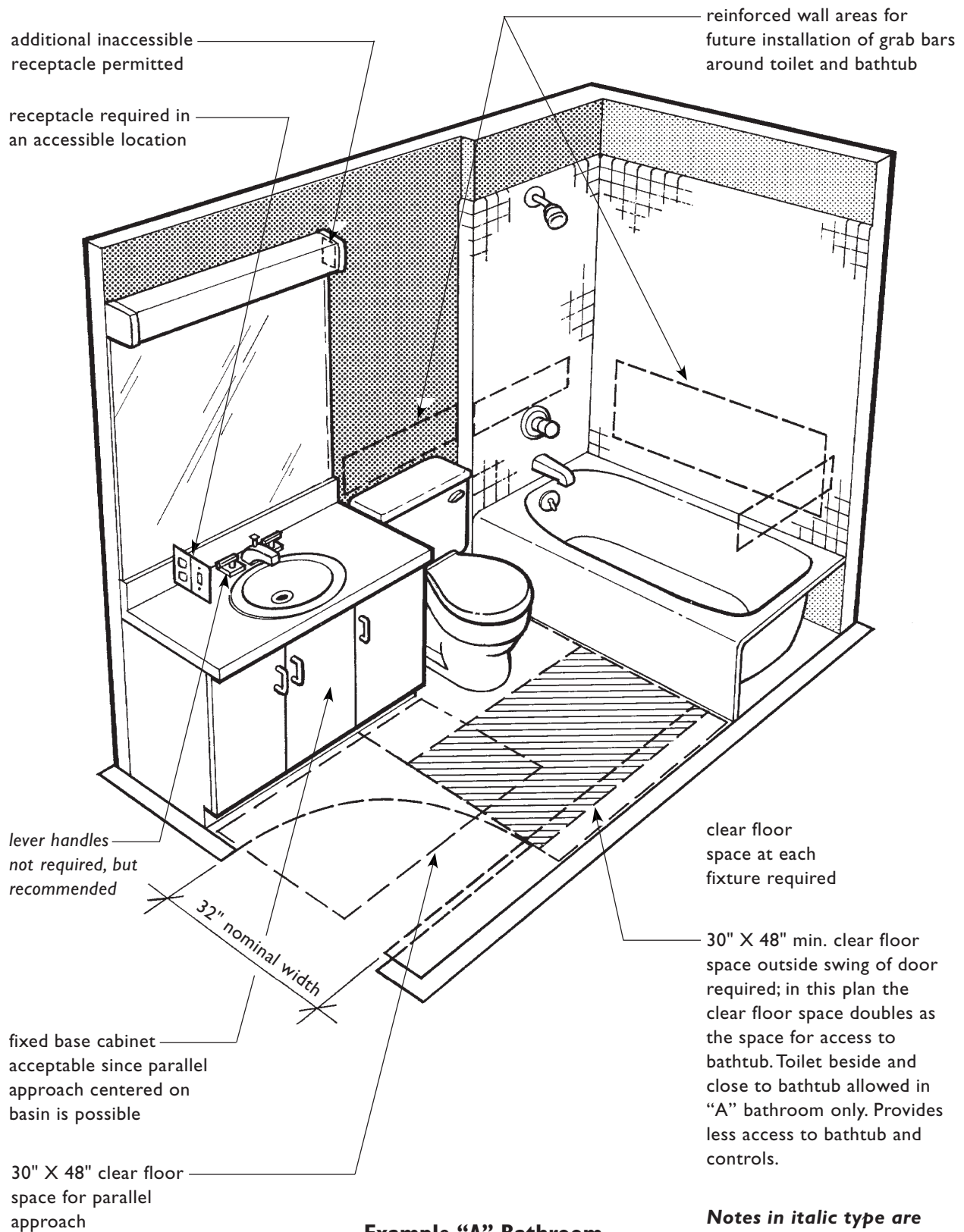
Powder Room Requirements for Covered Dwelling Units

Powder rooms must:

1. be on an accessible route (Requirement 4),
2. have 32-inch nominal clear width doorways (Requirement 3), and
3. have switches, outlets, and controls in accessible locations (Requirement 5).

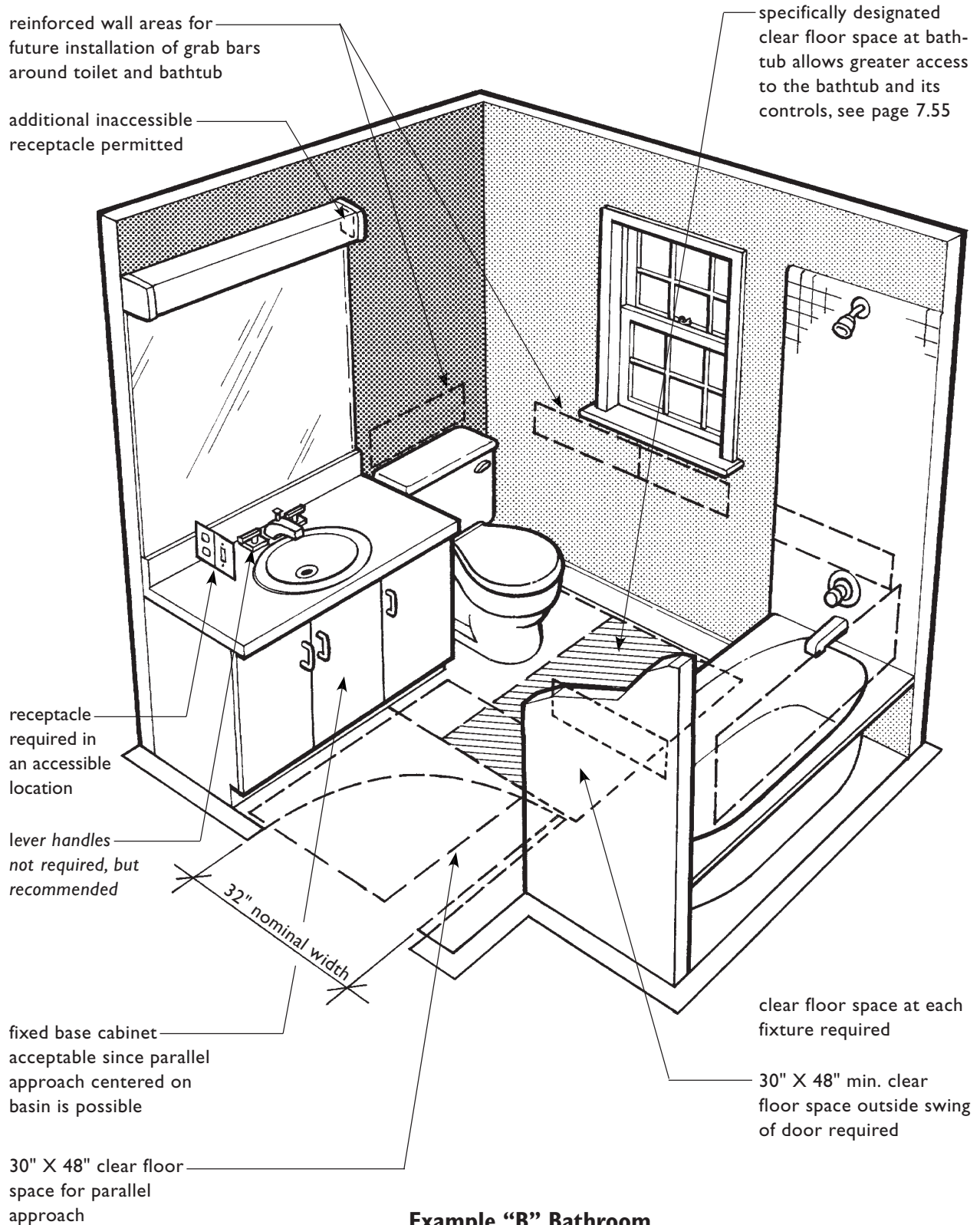
Exception

When the powder room is the only toilet facility on the entry level of a multi-story unit in a building with one or more elevators, it must, in addition to Requirements 3, 4, and 5, **meet the reinforcing specifications of Requirement 6 and the maneuvering and clear floor specifications of Requirement 7.**



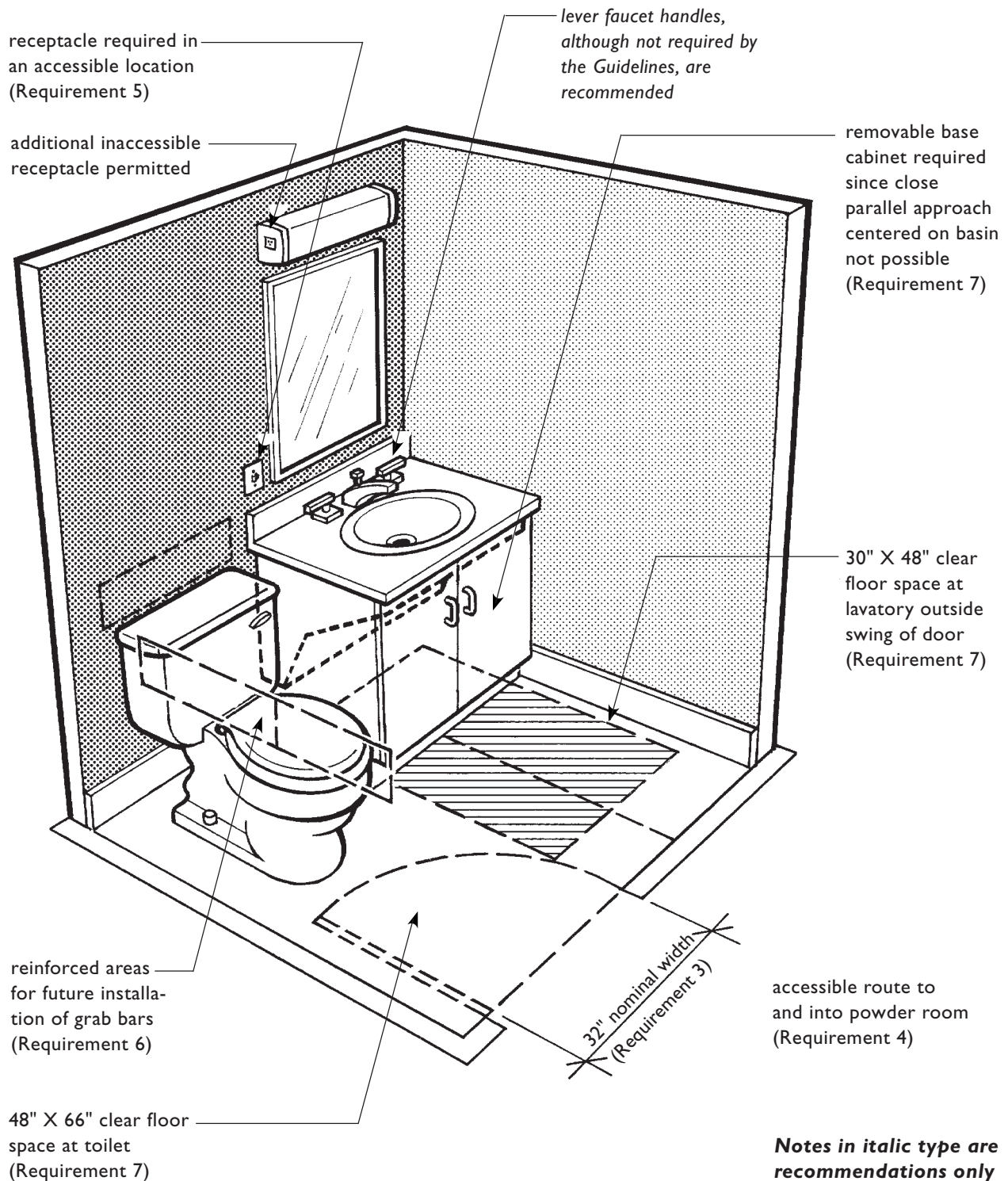
Example "A" Bathroom
9'-4" X 5'-2"
(See plan page 7.66)

Notes in italic type are recommendations only and are not required by the Guidelines.



**Example "B" Bathroom
Greater Access to Bathtub
6'-10" X 7'-9"**
(Similar to Plan on Page 7.67)

Notes in italic type are recommendations only and are not required by the Guidelines.



Usable Powder Room
5'-6" X 5'-8"
(See Plan Page 7.81)

Notes in italic type are recommendations only and are not required by the Guidelines.

Powder Room in Single-Story Dwelling Unit Must Meet Only Requirements 3, 4, and 5

Powder Room Must Meet Requirements 3, 4, 5, 6, and 7 When It Is the Only Toilet Facility on the Entry Level of a Multistory Unit in a Building with One or More Elevators

MANEUVERING SPACE IN BATHROOMS

The Guidelines offer two different wordings for the maneuvering space requirements for bathrooms complying with Specification A and Specification B. When applied, the requirements yield almost identical results. Neither Specification requires that the space for a five-foot circular turn or a T-turn (see page 19) be available so a user in a wheelchair would have the space necessary to turn around in the bathroom. However, there are very specific clear floor space requirements that have been adapted from the ANSI A117.1 - 1986 Standard to make it possible for many people with mobility disabilities to be able to use bathrooms designed to meet the requirements of the Guidelines.

When the maneuvering space requirements of both Specification A and B are analyzed carefully, the primary difference is that a clear floor space must be provided adjacent to the foot of the tub in Specification B bathrooms to increase access to the bathtub and the bathtub controls. To assist the reader in understanding the other differences in the two specifications, this manual will describe in detail bathroom elements and features as required by the Guidelines.

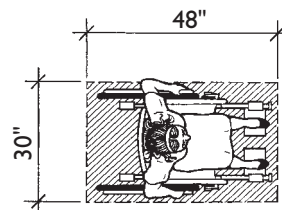
BOTH SPECIFICATION A AND SPECIFICATION B BATHROOMS REQUIRE THE FOLLOWING:

1. A 30-inch x 48-inch clear floor space outside the swing of the door as it is closed. In bathrooms where the door swings out of the room all the clear floor spaces at fixtures still must be provided. In addition, the user must be able to reopen the door to exit.

2. Usable bathroom fixtures. Making bathroom fixtures usable in both Specification A and B

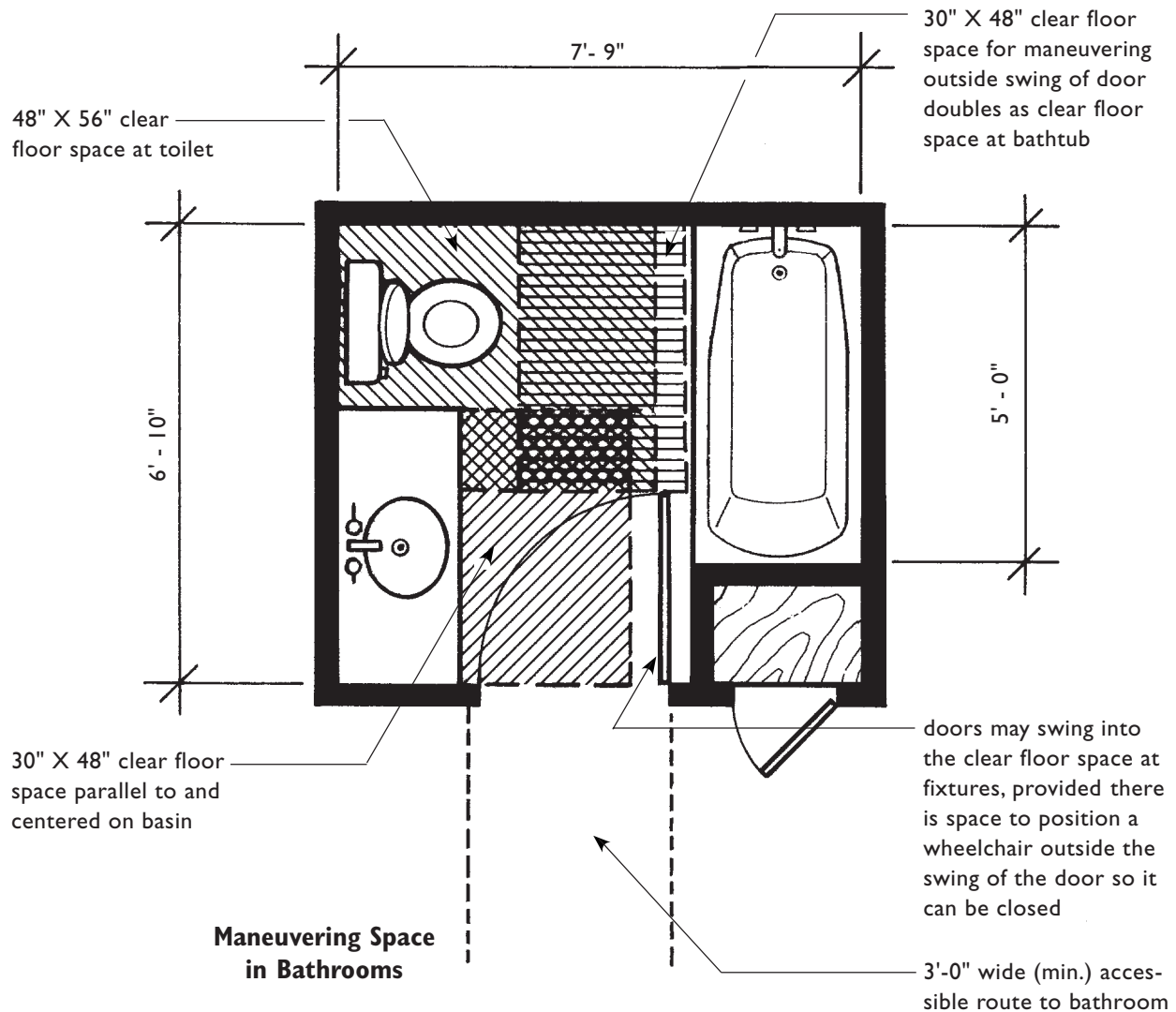
bathrooms involves providing certain clear floor space dimensions at each fixture and meeting certain requirements for the shower if the shower is the only bathing facility in the covered dwelling unit. In addition, Specification B sets additional requirements for bathroom fixtures such as providing clear floor space at the bathtub in a manner that allows greater access to the bathtub and meeting certain specifications on the installation of vanities and lavatories.

The maneuvering space necessary for usable bathrooms is thus made up of the combination of the designated clear floor spaces at fixtures and the presence of clear floor space outside the swing of the door. Clear floor spaces may overlap each other and the maneuvering space also may include knee or toe space under lavatories or toilet bowls. See the illustration at the top of page 7.40.



**Minimum Clear Floor Space
for Person Using a Wheelchair**

The Guidelines contain no requirements for location or type of controls except in Specification B bathrooms, the controls must be located at the foot of the tub. There generally are no fixture specifications, except size of showers when they are the only bathing fixture in the unit and when knee space must be provided under lavatories. If the bathroom has sufficient space to allow a parallel approach centered on the lavatory, then standard base cabinets may be used below a lavatory. If not, a removable vanity cabinet is required so necessary knee space for a forward approach is available at the lavatory.



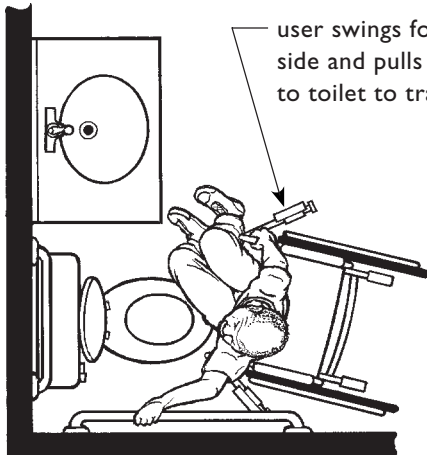
CLEAR FLOOR SPACE AT TOILET FIXTURES

The clear floor space at toilets varies in size and is larger than the clear floor space for wheelchairs shown at other fixtures. Different amounts of clear floor space must be maintained around a toilet fixture depending upon the direction of approach, either front or side, to allow ease of use by persons using wheelchairs.

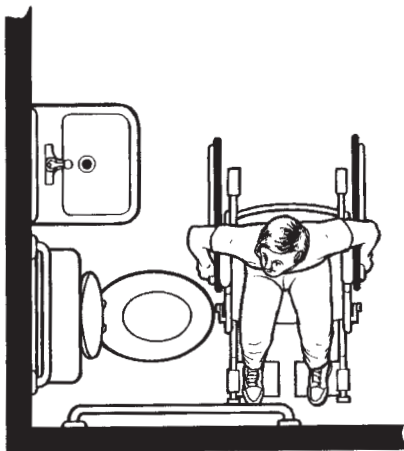
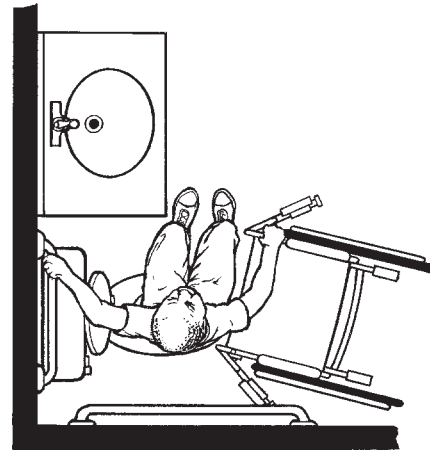
Many people who use wheelchairs are unable to stand while transferring from a wheelchair to the toilet. Some people can transfer to and from the toilet from only one side. Others can

complete right, left, or front transfers. The technique used depends on which approach is most familiar, easiest, and safest to complete.

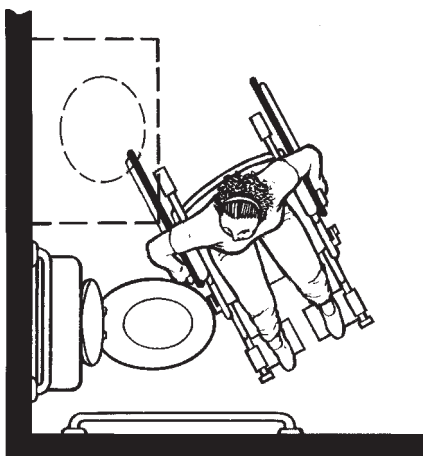
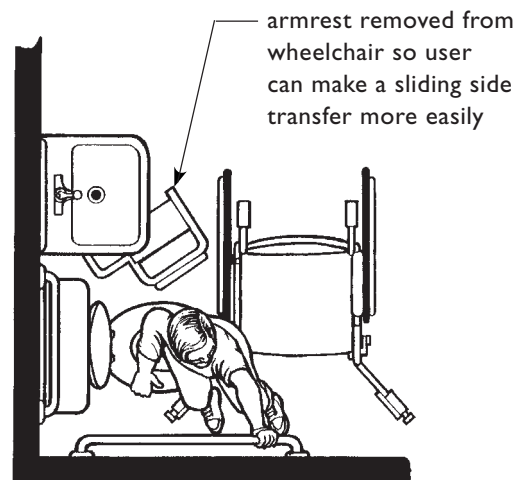
The unobstructed clear floor space required by the Guidelines allows a wheelchair user to approach the toilet and transfer onto the fixture using a variety of independent and assisted transfer techniques. The transfer techniques most commonly used are the forward, perpendicular, diagonal, reverse diagonal, and parallel. Whenever possible, it is best to position the toilet to allow forward, perpendicular, and diagonal approaches.



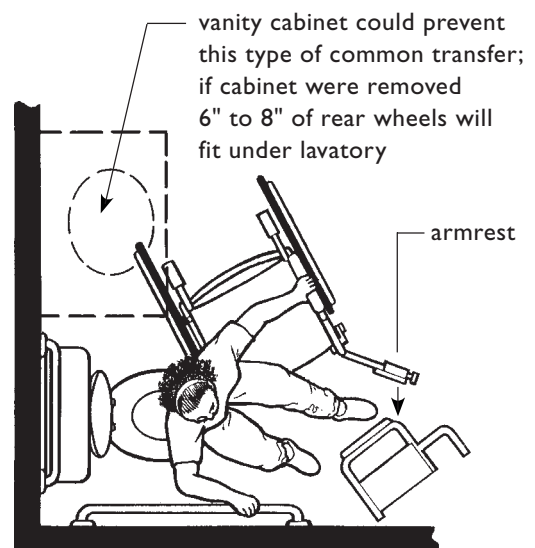
Forward Approach
(Front Transfer)

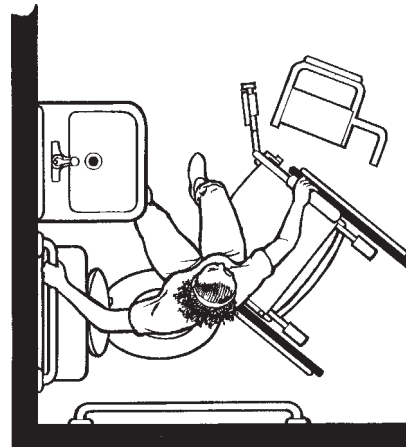
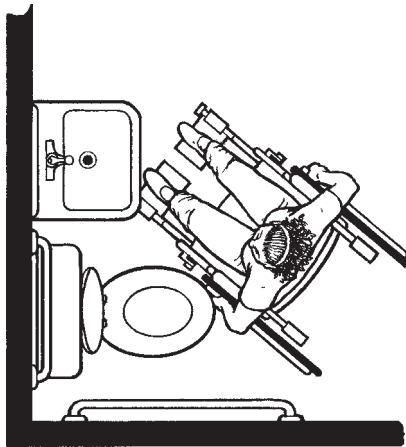


Perpendicular Approach
(Side Transfer)

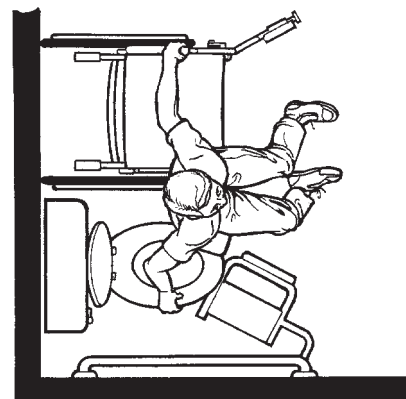
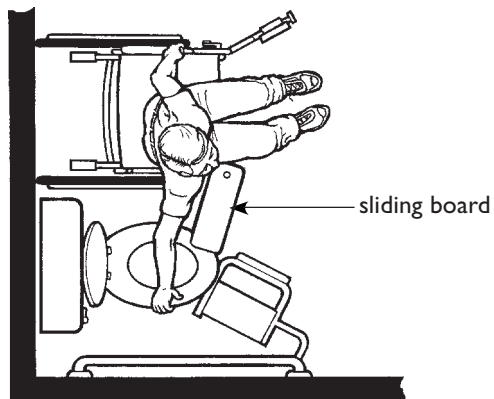


Diagonal Approach
(Probably Most Frequently Used Unassisted Transfer Technique)

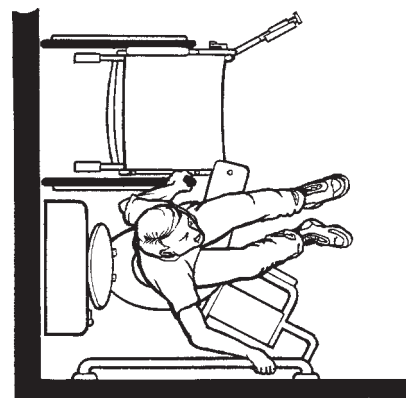




**Reverse Diagonal Approach
(Diagonal Transfer)**



**Parallel Approach
(Side Transfer Using Sliding Board)**



ONE OF THREE CLEAR FLOOR SPACES REQUIRED IN BOTH A AND B BATHROOMS

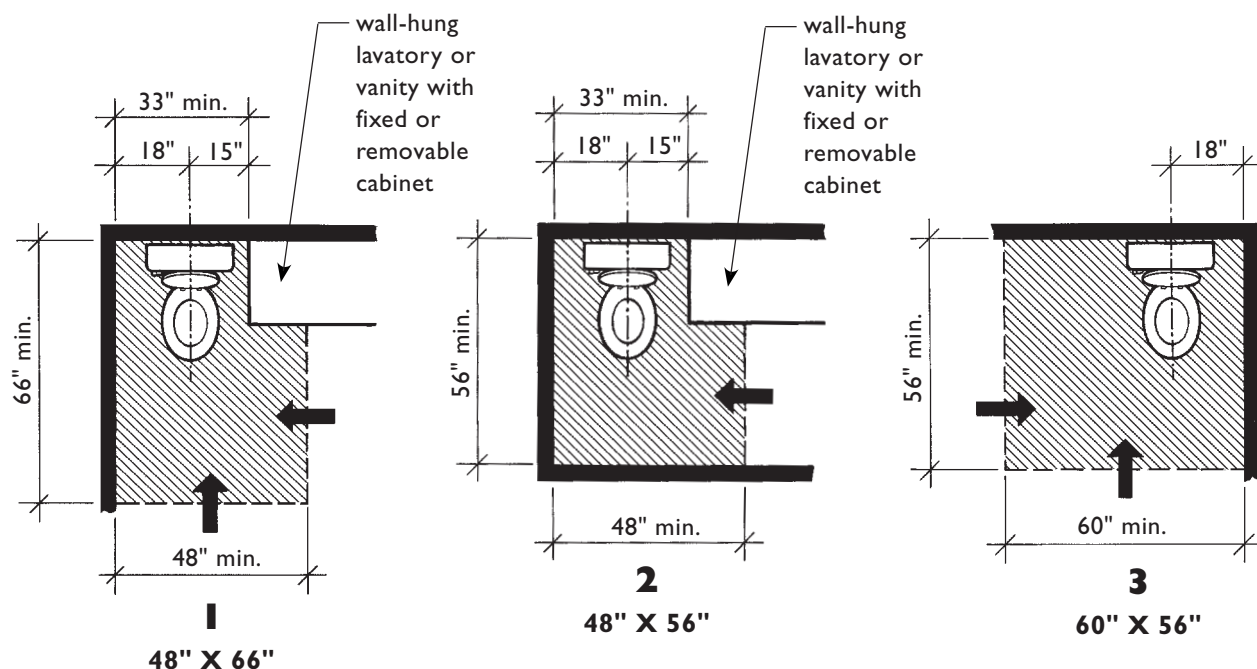
When planning both Specification A and B bathrooms, one of the following three clear floor spaces must be provided at toilets to allow people using wheelchairs and walkers to maneuver, approach the seat, and make a safe transfer onto the toilet. The clear floor space dimensions are to be applied or superimposed over a plan during the design process to determine if space requirements at toilets are being met.

In the plans shown below to illustrate the clear floor space options at toilets, the arrows pointing in toward the clear floor space are indicating the direction of approach to the toilet by a person using a wheelchair. In plans one and two, the incomplete box at the right of the toilet may be

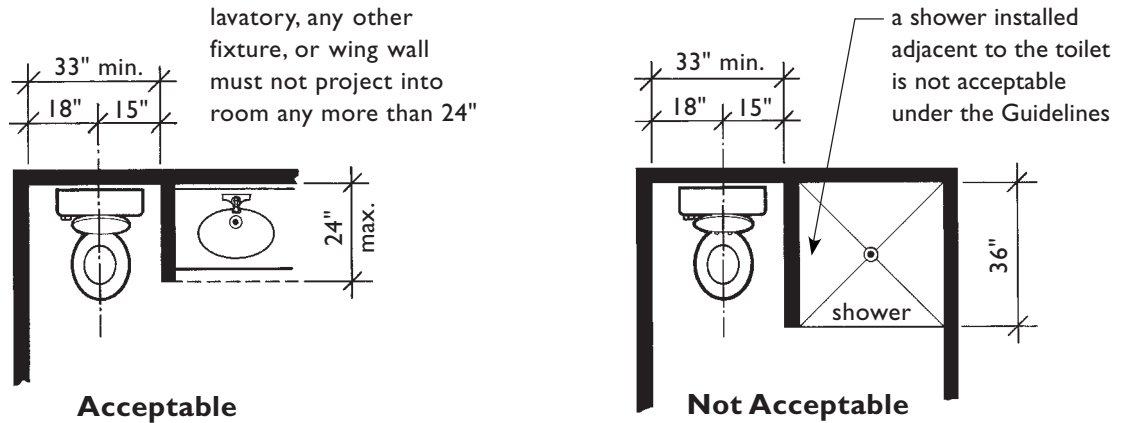
either a wall-hung lavatory or a countertop lavatory. Depending upon the placement of the other bathroom fixtures and the clearances in that room, any vanity cabinet may be fixed or may be required to be removable.

The Guidelines allow a countertop lavatory, with either a removable or fixed base cabinet, to be a maximum depth of 24 inches. A wing or privacy wall also may overlap the clear floor space; however, it, too, is restricted to a length of 24 inches and must be at least 33 inches from the opposite wall. In a compartmented bathroom, the 33-inch dimension would have to be increased. See the example on page 7.71.

In terms of accessibility or usability of the toilet, from left to right, diagram number one offers a middle level of usability, number two offers the lowest level, and number three, the highest.



Clear Floor Space at Toilets
(One of the Three Must be Provided in "A" and "B" Bathrooms)



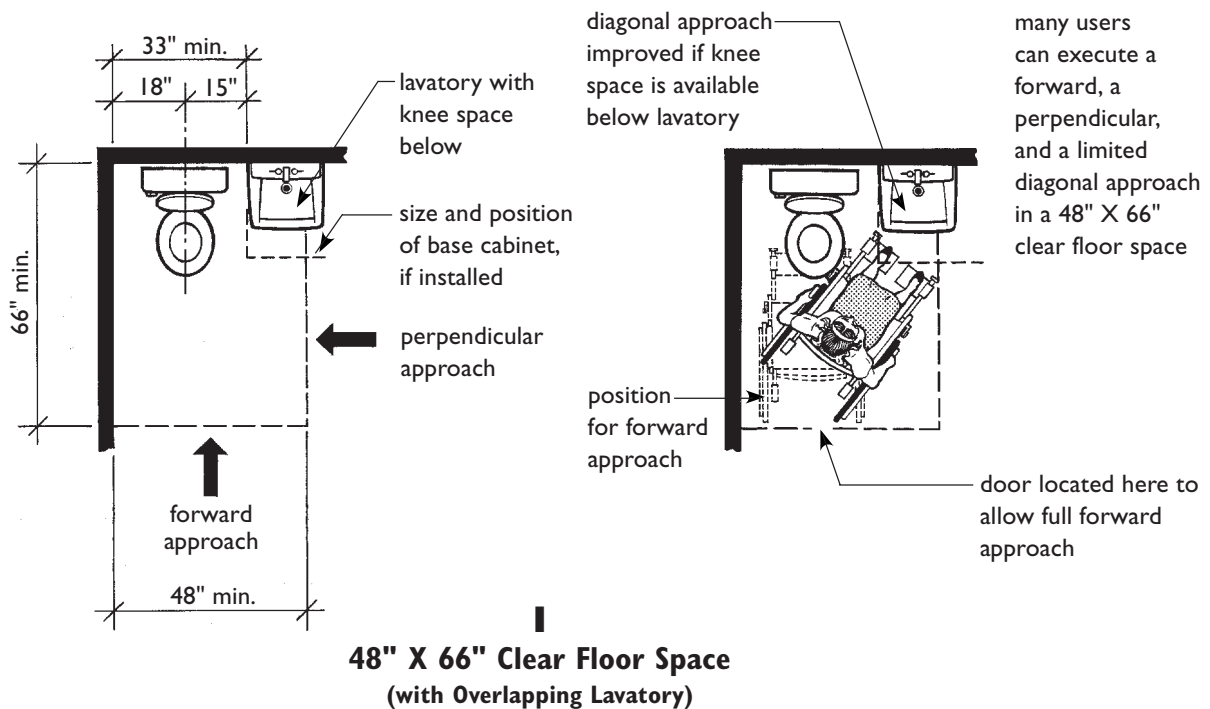
Some Features May Overlap Clear Floor Space at Toilet

48-INCH X 66-INCH CLEAR FLOOR SPACE

To provide space for a forward approach when a lavatory is adjacent to the toilet, the clear floor space must be a minimum of 66 inches long. The door is located opposite the toilet to provide the maneuvering space necessary to execute a forward approach to the toilet (see bottom right illustration).

The user may slide the wheelchair footrests under the toilet bowl or will swing them to either

side of the toilet to pull in closer to the bowl to execute a front transfer. The space for a perpendicular approach is actually wider than in clear floor space number two. An added benefit of the 48-inch x 66-inch clear floor space is that a limited version of the commonly used diagonal approach to the toilet also is possible.

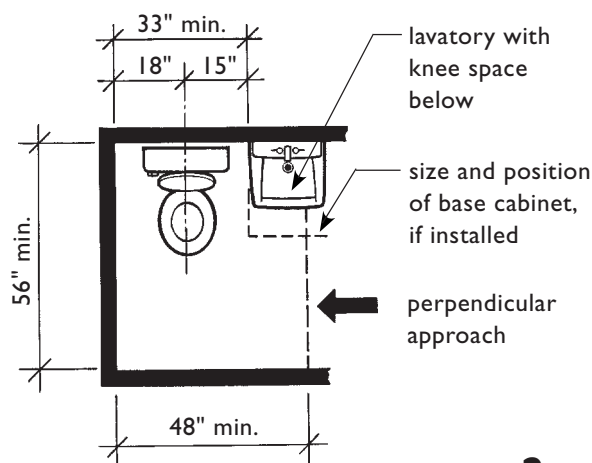


48-INCH X 56-INCH CLEAR FLOOR SPACE

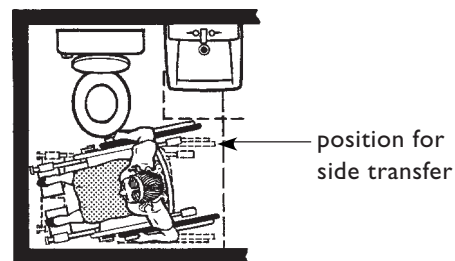
The 48-inch x 56-inch clear floor space enclosed on three sides is the minimum space in which a person using a wheelchair will be able to get close enough to make a side or perpendicular approach to the toilet. The 48-inch dimension is consistent with the length of the minimum clear floor space for wheelchairs. A person wishing to make a right transfer will approach the toilet head on as shown in the lower right illustration, or depending upon preference, the user may wish to back into the clear floor space to execute a left transfer.

The 56-inch dimension may allow some users to angle their wheelchair slightly to execute a

safer transfer onto the toilet. This angled position is improved if the lavatory is open below. The Guidelines do not require that this additional maneuvering space be provided for access to toilets, but it can be accomplished with the installation of a lavatory with a removable base cabinet. As much as six to nine inches of the large wheels on a manual wheelchair (somewhat less for power wheelchairs) can be positioned under the lavatory. Removable base cabinets are required in other situations and will be discussed in the next section on "Clear Floor Space at Lavatories." See page 7.47.



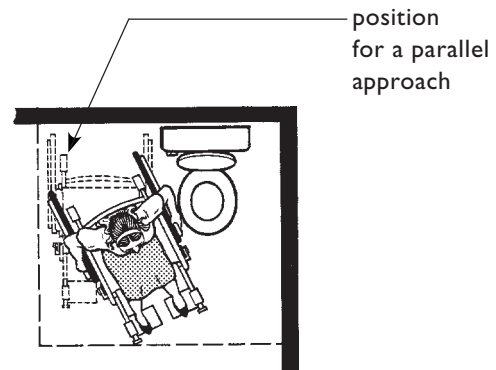
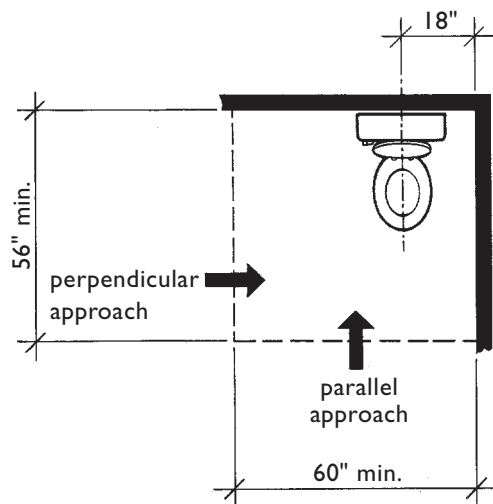
the primary approach that can be executed in a 48" X 56" clear floor space is perpendicular



2
48" X 56" Clear Floor Space
(with Overlapping Lavatory)

60-INCH X 56-INCH CLEAR FLOOR SPACE

This clear floor space, minus the lavatory, is the same length as at toilet clear floor space number two, but its width is increased by 12 inches. Its shape and size permit a large variety of transfer positions to be assumed by someone using a wheelchair or scooter, including parallel, perpendicular, and diagonal approaches. However, a forward approach as shown at clear floor space number one is not possible unless the depth of this space is increased to 66 inches. The 60-inch x 56-inch clear floor space has added value in that it has sufficient space so someone could assist a person using a wheelchair in making a transfer.



many users can execute a parallel, a perpendicular, and a diagonal approach in a 60" X 56" clear floor space

3
60" X 56" Clear Floor Space
(with No Overlapping Elements)

CLEAR FLOOR SPACE AT LAVATORIES

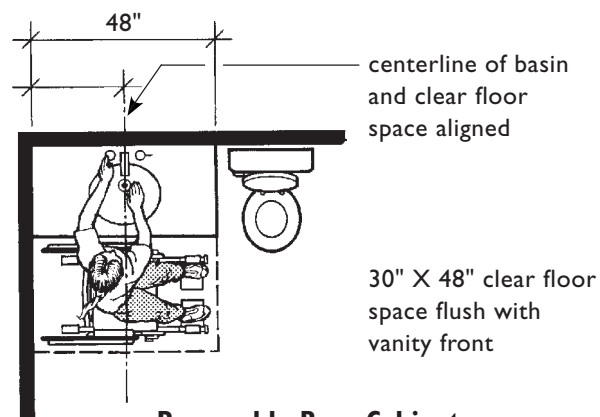
A 30-inch x 48-inch clear floor space is required at the lavatory so a person who uses a wheelchair or scooter can get close enough to the basin and controls to use the fixture. When knee space is not provided for a forward approach, this 30-inch x 48-inch clear floor space must be parallel to the cabinet or counter front and centered on the basin.

Either a countertop lavatory with a vanity cabinet or a wall-hung lavatory may be installed in Specification A and B bathrooms. There are no specifications for control location or type nor for drain location. The lavatory type and width, plus the available maneuvering space in the room, determines whether or not a vanity cabinet must be removable.

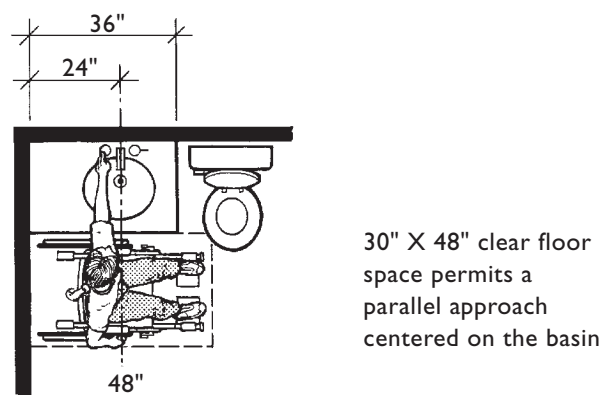
To economize on floor space the basin may be offset so the length of the countertop may be less than 48 inches. In 36-inch wide countertops, the basin may be offset provided it remains centered on the required 48-inch long clear floor space.

If a lavatory must be installed where space does not permit a close parallel approach with the 30-inch x 48-inch clear floor space centered on the basin, the centerline of the basin must be at least 15 inches from an adjoining wall or fixture. It must have knee space at least 30 inches wide to allow a user to execute a forward approach into clear floor space beneath the fixture.

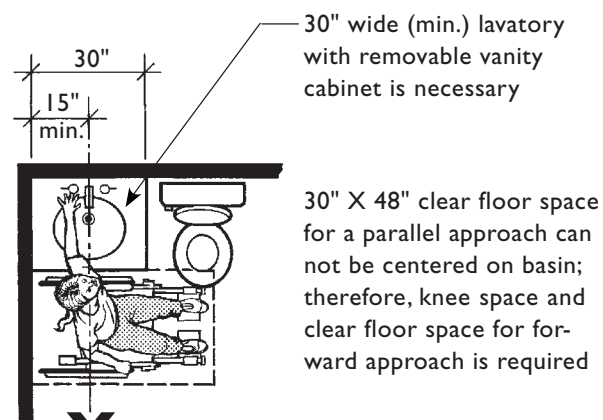
Knee space must be provided below narrow lavatories lacking this parallel and centered approach, because, if not, the user must make an awkward and often impossible, painful twisting motion over the side of the wheelchair to reach the faucet handle that is positioned somewhat behind one shoulder. In addition, it is difficult from this position to wash both hands, lean over the basin to clean teeth, etc. Information on removable base cabinets and knee space is given on page 7.49.



**Removable Base Cabinet
Not Required Because Clear Floor Space
Centered on Basin
(Applicable in A and B Bathrooms)**



**Use of Offset Basin
to Reduce Lavatory Length
(Applicable in A and B Bathrooms)**



**X Not Acceptable for Parallel Approach
Removable Base Cabinet Must Be Provided
Because Clear Floor Space Can Not Be Centered
(Required in A and B Bathrooms)**

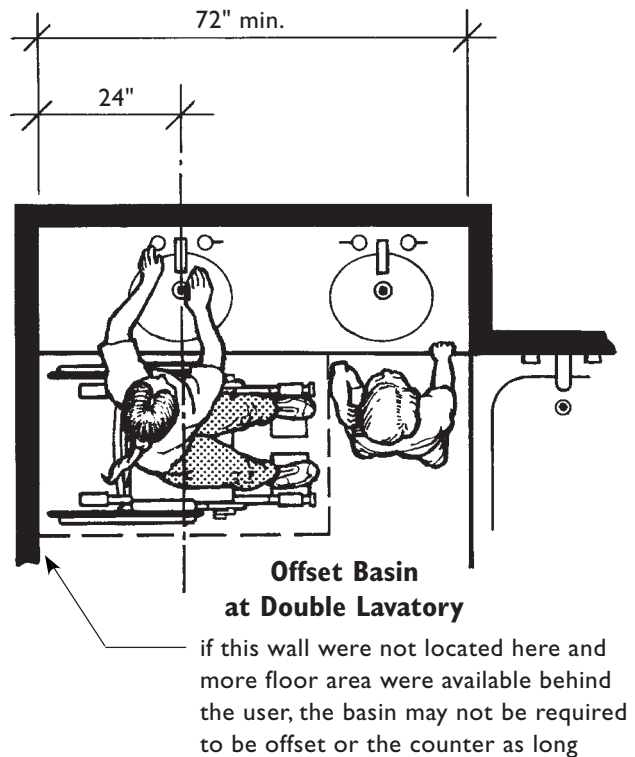
Double Basin and Pedestal Lavatories

It is also possible to install double basin lavatories and pedestal lavatories so they meet the requirements of the Guidelines. Countertops for double basin lavatories vary in length and may be as short as 60 inches.

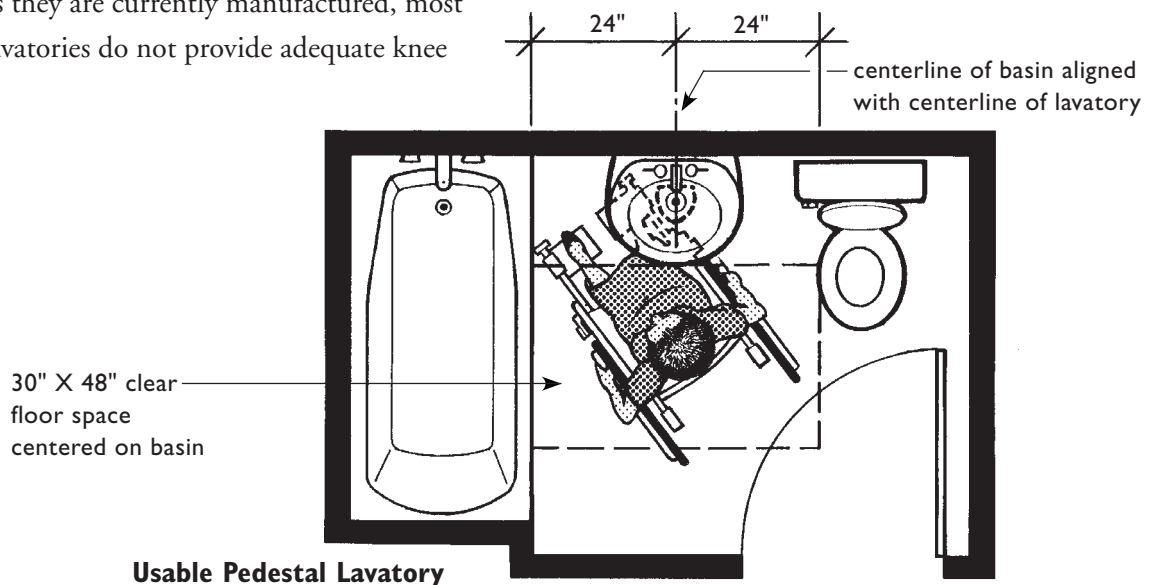
Where two basins are planned for installation in a 60-inch long countertop, and especially where obstructions such as a wall and bathtub (as shown in the illustration at right) enclose the available maneuvering space, a forward approach with a removable vanity cabinet should be used. However, in this illustration the countertop is 72 inches long and the person using a wheelchair can be parallel and centered on the basin.

Pedestal lavatories are manufactured with a variety of pedestal widths and depths. They can be installed in bathrooms covered by the Guidelines, provided a parallel approach centered on the basin can be made. Giving the appearance of having knee space, unlike a removable base cabinet where the knee space can be constructed to specific design parameters, pedestal lavatories have no removable element.

As they are currently manufactured, most pedestal lavatories do not provide adequate knee



space to allow a user to make a head-on or forward approach. If pedestal lavatories are installed with the 30-inch x 48-inch clear floor space centered on the basin, a user may execute a variety of approaches. Angled approaches are possible provided adjacent fixtures do not interfere.



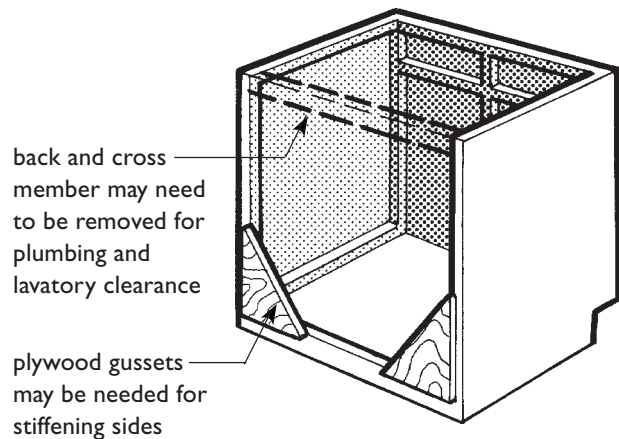
Removable Vanity Cabinets

Knee spaces are particularly important in bathrooms that are small and have limited maneuvering space. It is especially critical where a close parallel and centered approach cannot be provided at the lavatory basin. When knee space is necessary for a bathroom to be usable, that space must be provided at the time of initial construction. However, it may be concealed by a vanity cabinet that, when removed, will expose knee space. When the cabinet is in place a more common appearance is maintained and storage is provided. As in kitchens, finishes on the floor and walls in the knee space must be installed during initial construction so no additional finish work is required when the vanity cabinet is removed.

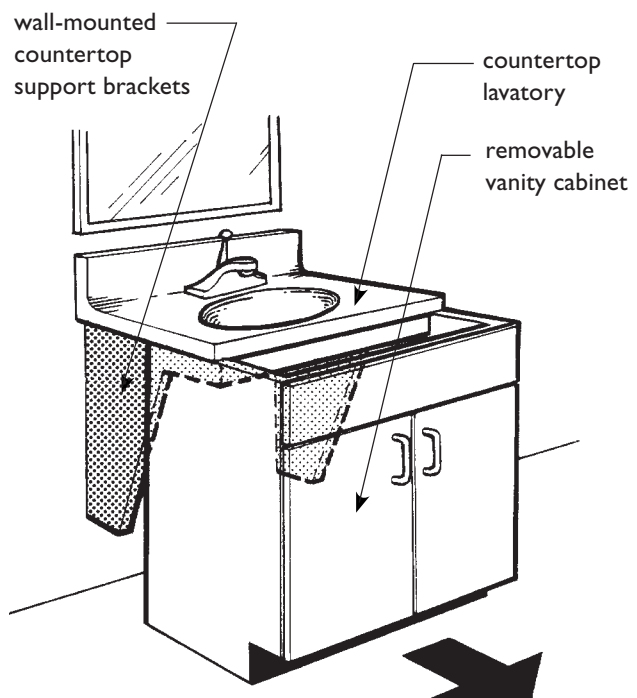
When a removable vanity cabinet is installed, the countertop and lavatory can be supported by wall-mounted brackets that fit inside the cabinet. These brackets are hidden when the base cabinet is in place; once the cabinet is removed, the brackets are exposed.

Unfortunately, removable vanity cabinets are not yet part of manufacturers off-the-shelf product lines. With growing demand, some of the commercial manufacturers are beginning to produce prototypes that should result, in the near future, in mass marketed lavatories with removable base cabinets.

Standard vanity cabinets may be modified and used as removable cabinets. The cabinet back or back supports may need to be cut down to clear the support system and to provide clearance for water lines, valves, and drain pipes. If the back of the cabinet is removed or significantly modified, the sides may have to be reinforced.



**Standard Base Cabinet
Modified to Be Removable**



**Removing Vanity Cabinet
to Expose Knee Space**

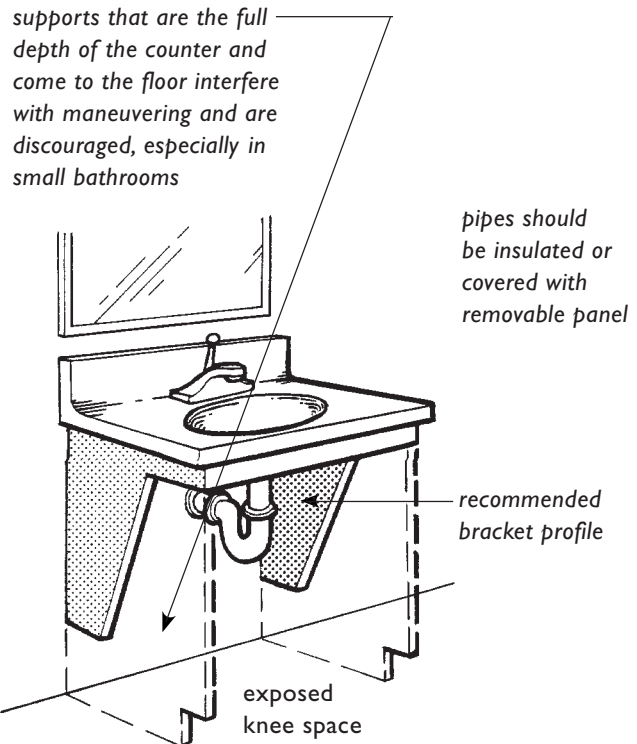
Any brackets used to support countertop lavatories should not interfere with maneuvering space within the bathroom; this is especially critical in small bathrooms where maneuvering space is at a minimum. The angled bracket shown in this series of illustrations is held away from the floor and is based on the ANSI knee space requirements. Use of a similarly designed bracket is strongly recommended.

Supports that are the full depth of the counter that go to the floor are discouraged at narrow lavatories but are acceptable for wider lavatories where it is assumed that more floor area will be available for maneuvering. Where supports extend to the floor, at least 30 inches must be provided between them to allow maneuvering space for a forward approach to the lavatory. This may require that some vanity cabinets be wider than 30 inches, so when the cabinet is removed and the concealed supports are exposed, 30 inches is provided between them.

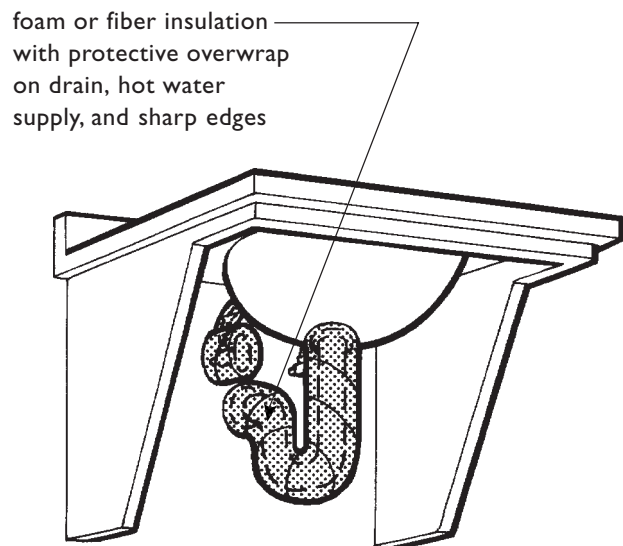
Pipe Protection at Knee Space

Plumbing below the lavatory should be covered to prevent burns and abrasions. This can be done by using removable insulation to cover the hot water pipe and the drain, or by adding a fixed, one-piece cover.

The most economical method of providing protection from hot pipes and sharp surfaces is to wrap them with insulation. Although this solution is effective, it is often difficult to maintain the insulation; it may be removed when repairs are made and either is difficult to rewrap due to loss of adhesion or is not replaced at all.



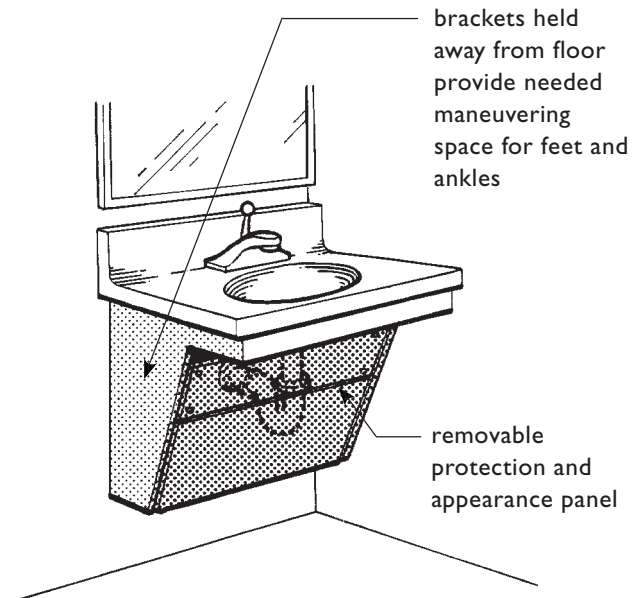
**Exposed Knee Space Under
Bracket-Supported Countertop Lavatory**



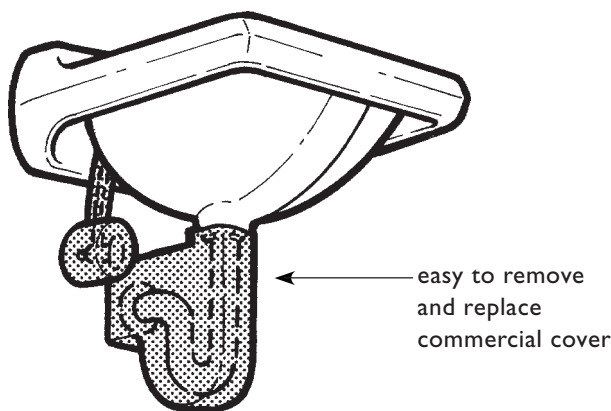
**Lavatory with Removable
Insulation Pipe Protection**

A reasonably priced aesthetic and functional improvement is possible with the installation of a commercially available or custom-made pipe cover. These pipe covers should be designed and installed so they are easy to remove and replace when the drain trap or valves need repair.

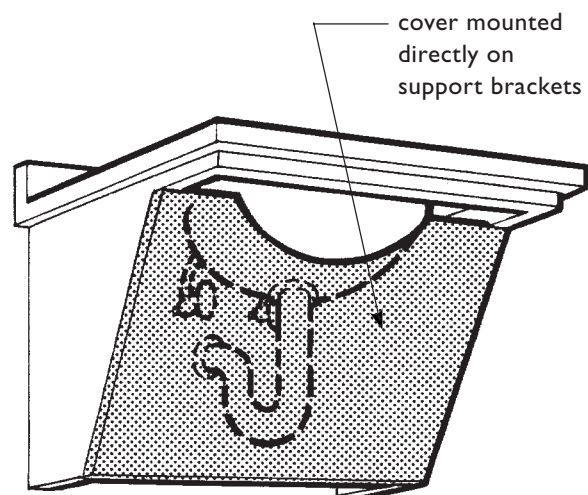
For countertop lavatories, an appearance and protection panel that covers the water pipes and drain can be mounted directly to the support brackets. Such a panel can be removed easily to service pipes, and unlike wrapped insulation, retains a more aesthetically pleasing appearance. It is recommended that the insulation or protection be installed at the time of construction. The shape of the knee space influences the design of any pipe protection method and is considered in the next section.



Countertop Lavatory with Wall Brackets and Appearance and Protection Panel



Lavatory with Removable Cover for Pipe Protection

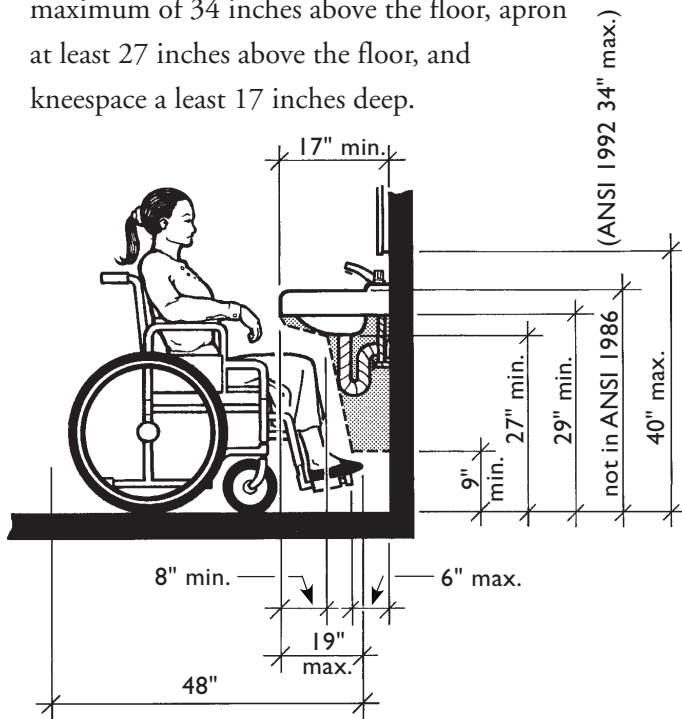


Preferred Appearance and Protection Panel

Knee Space Design

Knee space dimensions are specifically delineated in the Guidelines for lavatories in Specification B bathrooms. However, in Specification A bathrooms, “if parallel approach is not possible within the space, any cabinets provided would have to be removable to afford the necessary knee clearance for forward approach.” [Guidelines Requirement 7 (2) (a) Note]

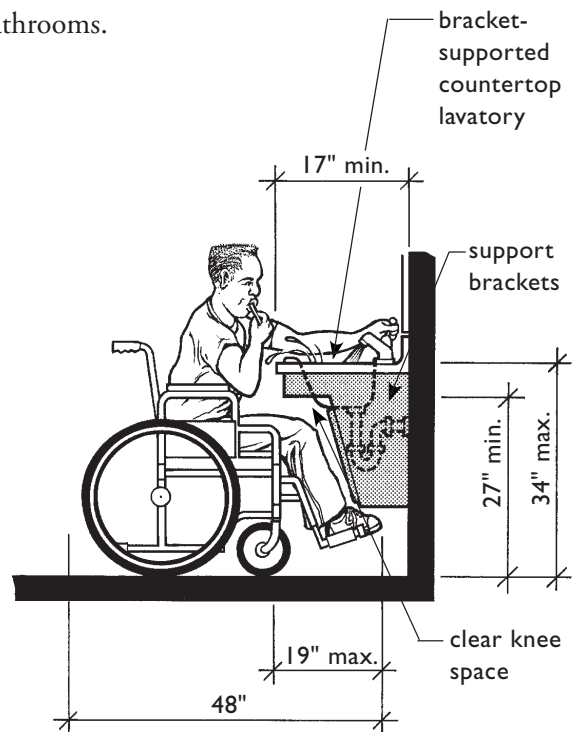
In Specification A bathrooms, knee space must be at least 17 inches deep, but only 19 of the 48 inches of clear floor space required for the perpendicular approach may extend under the lavatory. While the Guidelines do not provide further specifications for knee space, it is recommended that ANSI A117.1 be followed. The specific requirements given in the Guidelines for knee space in Specification B Bathrooms include: centerline of the fixture at least 15 inches from an adjoining wall or fixture, top of fixture rim a maximum of 34 inches above the floor, apron at least 27 inches above the floor, and kneespace a least 17 inches deep.



**ANSI 1986 Requirements at Knee Space
(Guidance for Knee Space in A Bathrooms)**

In both ANSI and the Specification B bathroom requirements, only 19 inches of the 30-inch x 48-inch clear floor space may extend under a lavatory. Seventeen inches is the minimum depth allowed for either a wall-hung or a countertop lavatory. This ensures that the basin extends sufficiently so a wheelchair user’s feet do not strike the wall on which the fixture is mounted before his or her torso is close enough to the front of the lavatory to be able to reach the controls and use the basin.

The dimensions given in the Guidelines for Specification B bathrooms are consistent with those found in the ANSI Standard. They do not completely define the shape of the knee space, and it is recommended that builders/developers follow the ANSI Standard when knee space must be provided in either Specification A or Specification B bathrooms.



**Knee Space at Lavatories that Meets the
Requirements for B Bathrooms**

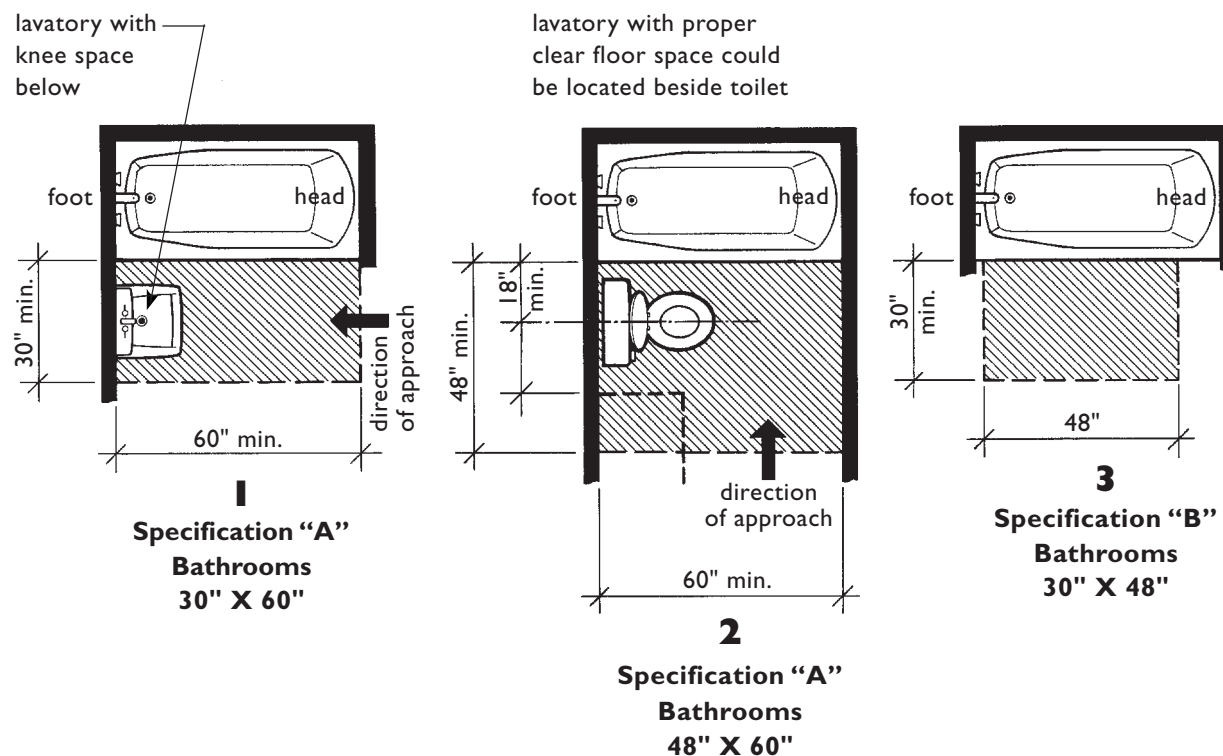
CLEAR FLOOR SPACE AT BATHTUBS/SHOWERS

The following discussion of bathtubs focuses on bathing fixtures that are a combination of bathtub and shower. It does not cover showers that are separate bathing fixtures; these will be addressed starting on page 7.56.

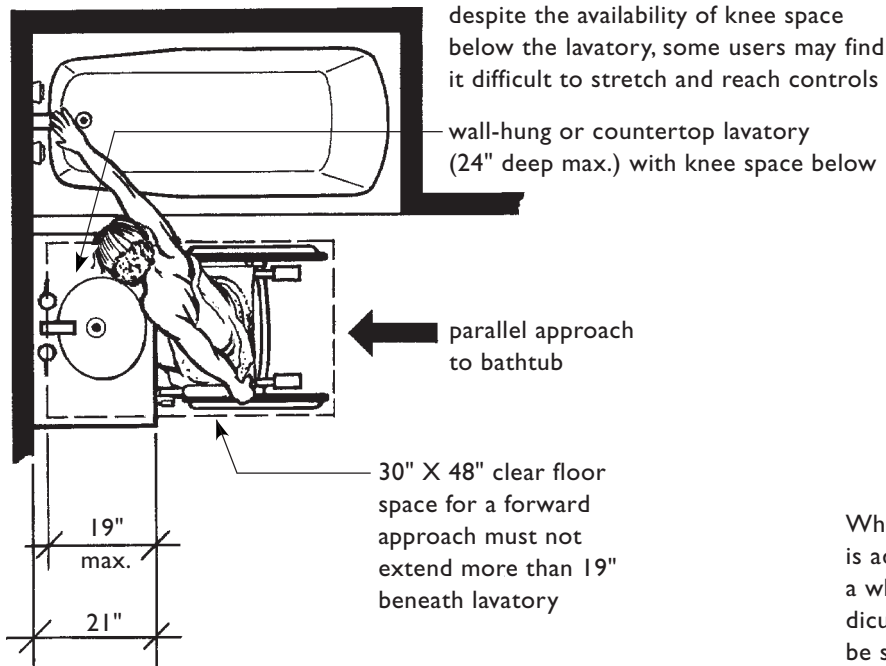
The Guidelines require that one of three different clear floor spaces be provided at bathtubs so people who use wheelchairs or scooters can get close enough to execute transfers into and out of bathtubs. The diagrams below, taken from the Guidelines, show the clear floor space requirements for bathtubs; numbers one and two apply to Specification A bathrooms and number three to Specification B bathrooms.

In all three clear floor spaces, the shaded areas must remain clear, except that in clear floor space diagram number 2, a lavatory that meets all applicable clear floor space requirements for lavatories may be located next to the toilet. In Specification A bathrooms, either a lavatory or a toilet may encroach upon the clear floor space next to the bathtub.

In clear floor space diagram number one, the arrow indicating direction of approach is relevant only if the lavatory is wall-hung and has knee space below. The user pulls forward into the knee space to transfer and/or operate controls, see illustration on the top of the next page.



Clear Floor Space at Bathtubs/Showers
Shaded Areas Must Remain Unobstructed
 (Taken from Guideline Figures 7(b) and 8)

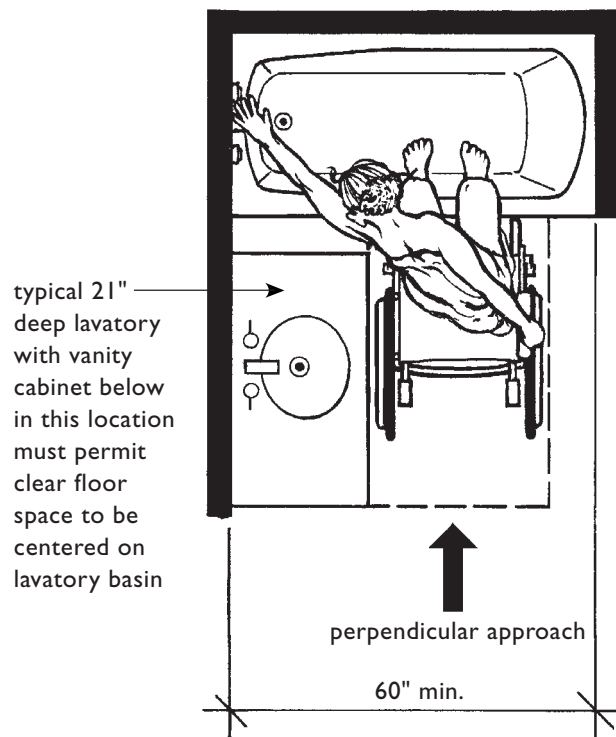


Parallel Approach to Bathtub at Lavatory with Knee Space Permitted in Specification A Bathrooms

If a countertop lavatory with a vanity cabinet is located adjacent to the bathtub, a person using a wheelchair must be able to execute a close parallel approach centered on the basin. If the lavatory does not afford a full parallel approach to the basin, knee space and clear floor space for a forward approach are required, and any cabinets would have to be removable.

When the lavatory with vanity is adjacent to a bathtub, reach to the controls is possible only from a perpendicular approach which may be difficult for some wheelchair users. To improve access to controls, a resident who uses a wheelchair could have a new vanity with knee space installed or have controls repositioned closer to the tub rim.

When a lavatory with vanity cabinet is adjacent to tub, a person using in a wheelchair must make a perpendicular approach to the tub rim to be sufficiently close to operate the controls. The user will have to remove footrests, place feet in tub, and execute a stretch which may be difficult for some people.



Perpendicular Approach to Bathtub at Vanity Cabinet Permitted in Specification A Bathrooms Only

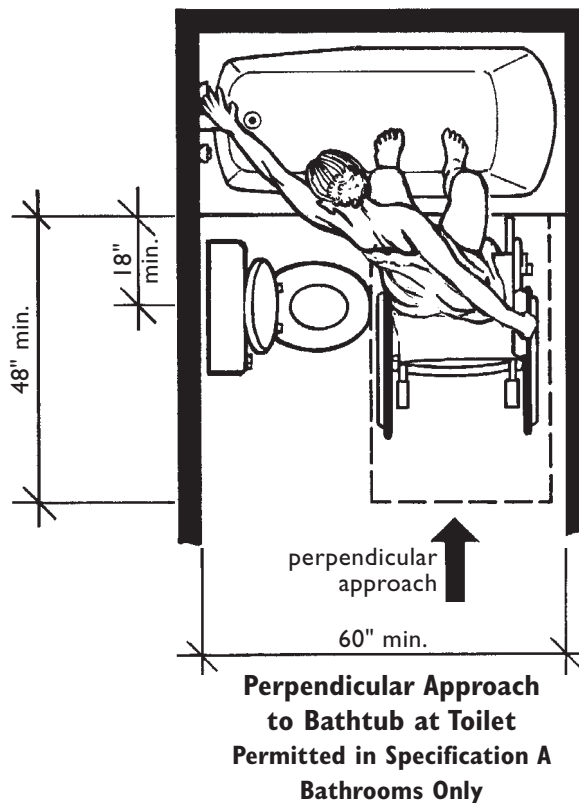
In **Specification A bathrooms**, the Guidelines also allow a toilet to occupy the space next to the bathtub. The approach by a person using a wheelchair is perpendicular to the bathtub. This arrangement of fixtures also makes it difficult to reach the controls, but reach can be improved if users can remove their footrests and position their feet in the tub to get closer to the tub rim.

A second option for some users is to transfer onto the toilet to reach the controls. The user then must transfer back into his or her wheelchair and maneuver to get sufficiently close to the bathtub rim to make a transfer down into the bathtub. Other users may add a bathtub seat that allows them to remain at the height of the tub rim while bathing. Transfers back into a wheelchair may be easier from a tub seat rather than from the floor of the bathtub, but this option does not allow the user to be immersed in water for a soaking bath.

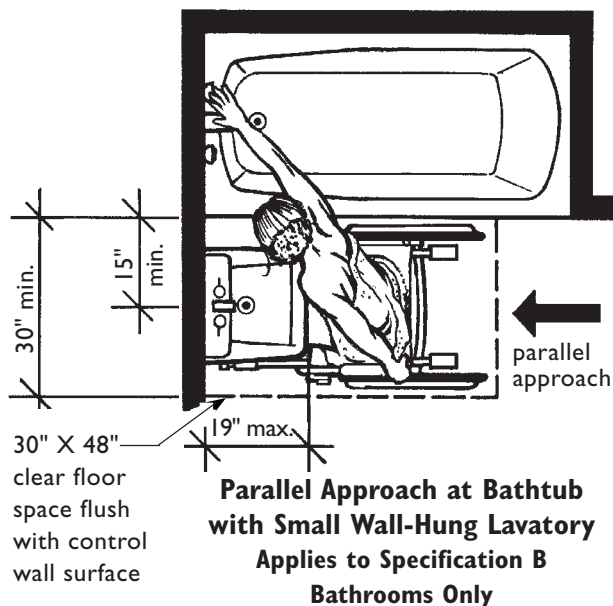
In **Specification B bathrooms**, a 30-inch x 48-inch clear floor space is required adjacent to the bathtub to provide greater access for transferring into and out of the bathtub. The controls must be on the wall at the foot of the bathtub, as shown in the Guidelines' Requirement 7, Figure 8. The edge of the clear floor space should be flush with the control wall surface.

Neither a vanity cabinet nor a toilet may encroach on this clear floor space. However, a wall-hung lavatory with a depth of 17 to 19 inches and with knee space below is the only fixture that may overlap the clear floor space at bathtubs in Specification B bathrooms. A lavatory that is deeper than 19 inches only may be installed if it is recessed into the wall to allow the edge of the 30-inch x 48-inch clear floor space to begin flush with the control wall surface at the foot of the bathtub.

Toilets typically protrude into the room farther than vanity cabinets, making it necessary for a person using a wheelchair to perform, what may be for some people, a difficult stretch to operate tub controls.



The only permissible overlapping element is a 17" to 19" wall-hung lavatory with knee space below.

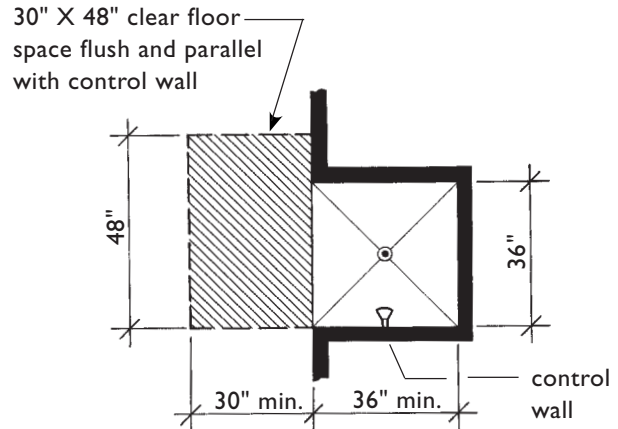


CLEAR FLOOR SPACE AT SHOWERS

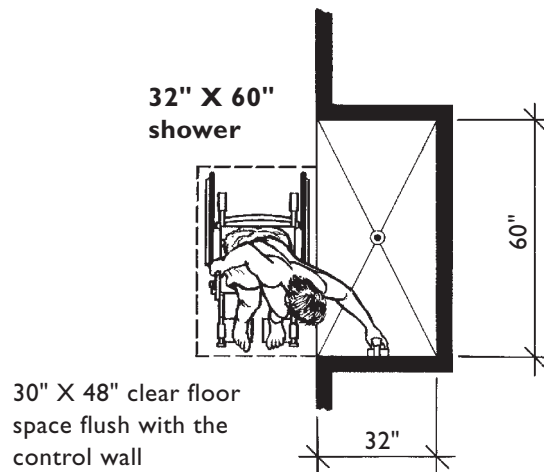
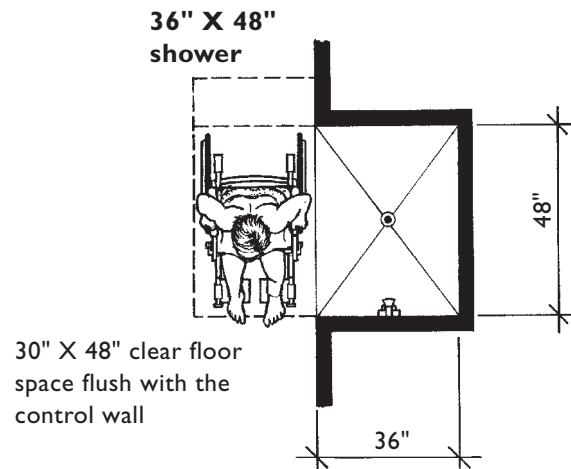
Shower stalls in covered dwelling units may be of any size or configuration and are not limited to the 36-inch x 36-inch stall shown in the diagram on the right, taken from the Guidelines, that illustrates clear floor space requirements for showers. An exception regarding minimum stall size is made when a shower stall is the only bathing fixture in the covered dwelling unit; this is discussed on page 7.58.

A 30-inch x 48-inch clear floor space must be provided at shower stalls, parallel to the fixture and flush with the control wall. In 36-inch x 36-inch showers, the clear floor space must be positioned exactly as shown in the upper right diagram, with 12 inches offset behind the wall opposite the control wall. The Guidelines require this clear floor space beside the shower fixture primarily to ensure that adequate maneuvering space is available outside the stall for a person using a mobility aid to get sufficiently close to enter and exit the stall safely. The 36-inch x 48-inch shower in the center is generally not intended for use with a wall hung bench seat because a user seated on the bench could not reach the controls. However, because some users may elect to add their own seat, an additional 12 inches of clear floor space is, as well as reinforcing for such a seat, recommended (see page 6.13).

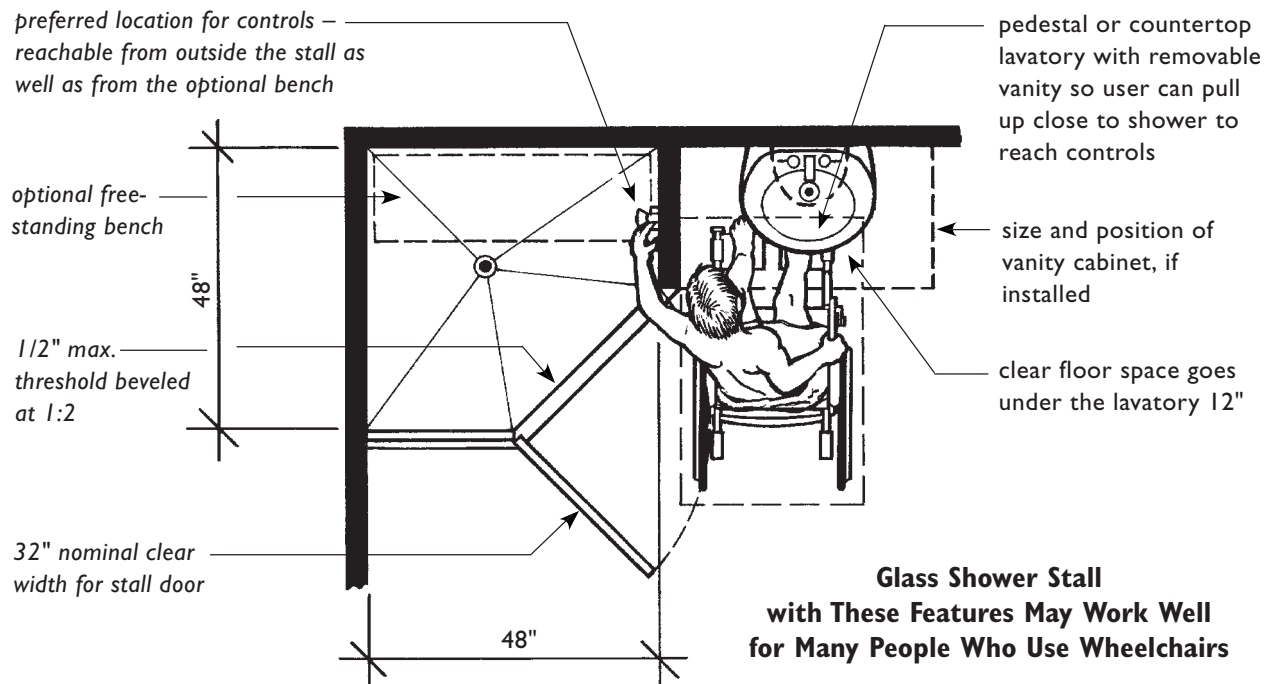
In Specification A bathrooms, where all fixtures must meet the Guidelines, if the room is equipped with both a bathtub and a separate shower, both fixtures must be provided with the required clear floor space. In Specification B bathrooms, only one bathing fixture must be provided with the required clear floor space. All shower stalls must have reinforced walls for later installation of grab bars (see Chapter 6). The Guidelines contain no specifications that limit the curb height, nor do they address control type or location.



Guideline Requirements for Clear Floor Space at Showers



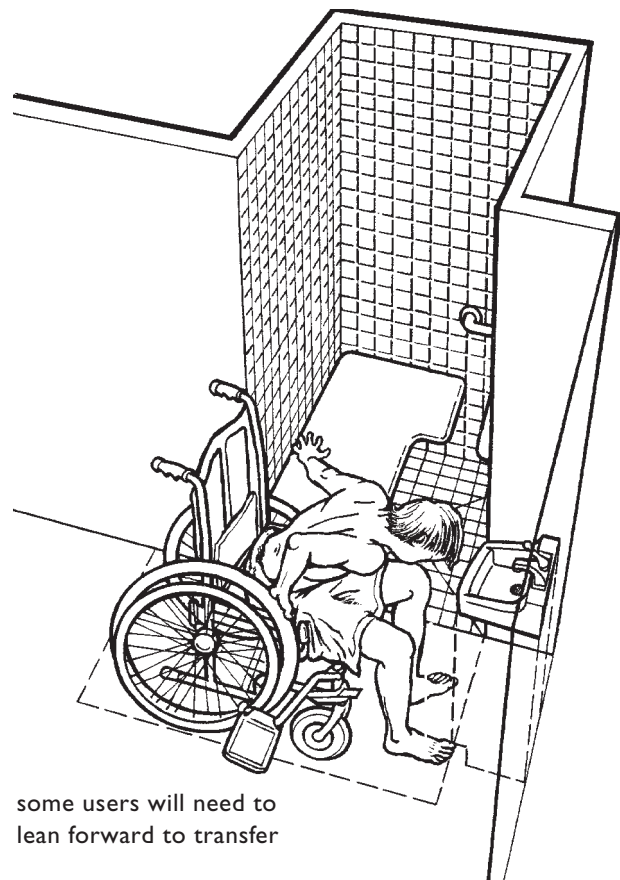
Other Shower Sizes Meet the Requirements of the Guidelines



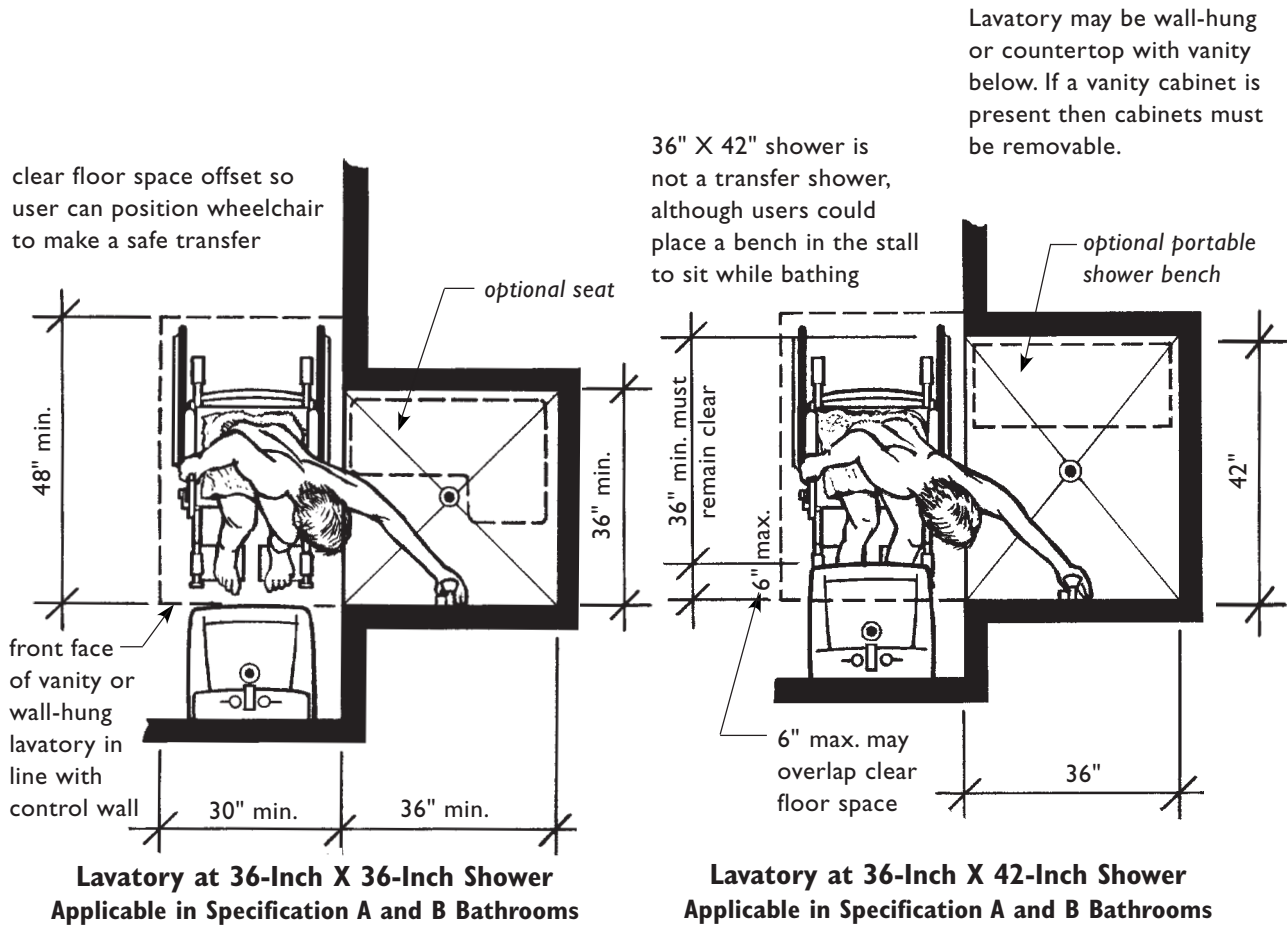
Fixtures that May Overlap

Clear Floor Space at Showers

In both Specification A and B bathrooms, **no other fixture may overlap the clear floor space at showers** when the shower is only 36 inches long. However, if the shower is 42 inches long and a lavatory is mounted on the control wall beside the shower, it may overlap the clear floor space by six inches. The portion of the lavatory that overlaps the clear floor space must have knee space below or a removable vanity cabinet. Thirty-six inches of the stall entrance must always remain clear for maneuvering and transfers. These limitations ensure that if a wall-mounted transfer seat or a free-standing shower bench or stool is placed in the shower, sufficient space to make a transfer is available.



Lavatory Must Not Encroach on Clear Floor Space at 36-Inch X 36-Inch Shower



Shower as Only Bathing Fixture

In both Specification A and B bathrooms, when a stall shower is the only bathing fixture in the covered dwelling unit it must be at least 36 inches x 36 inches in size. This also applies to any planned bathrooms on the primary entry level of covered multistory dwelling units in buildings with one or more elevators. Shower stalls of larger sizes and configurations are permitted, even when the shower stall is the only bathing fixture in the covered unit.

While reinforced walls for later installation of grab bars are required in all bathrooms, Specification A bathrooms do not require reinforcing to

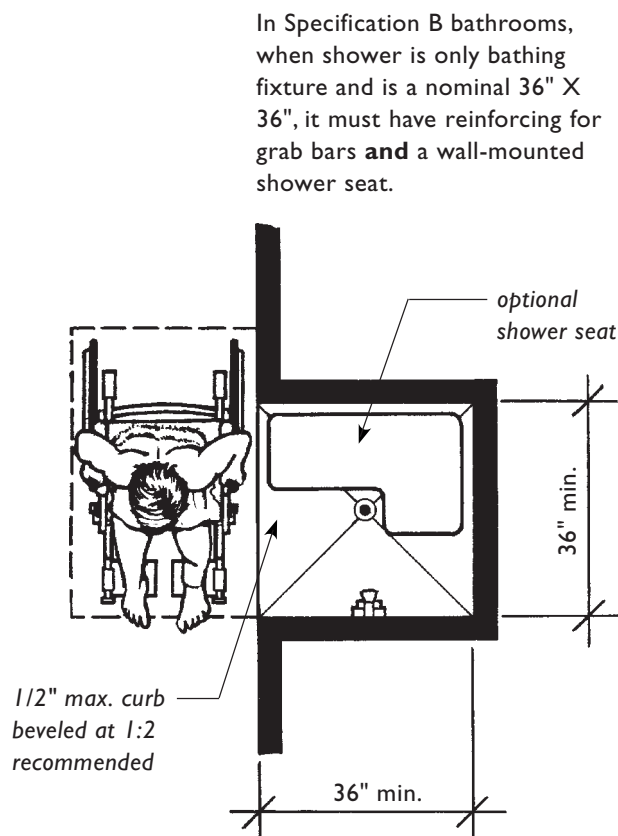
support a wall-mounted shower seat in the shower stall. However, it is strongly recommended that appropriate reinforcing for shower seats be installed in Specification A bathrooms. See Chapter 6: "Reinforced Walls for Grab Bars."

In Specification B bathrooms, however, in addition to the reinforcing required for grab bars, the shower stall must have reinforcing to allow for later installation of an optional wall-mounted seat in a shower stall measuring a nominal 36 inches square. By adding this requirement the Guidelines are setting the framework for a shower that could evolve into the ANSI accessible 36-inch x 36-inch transfer shower.

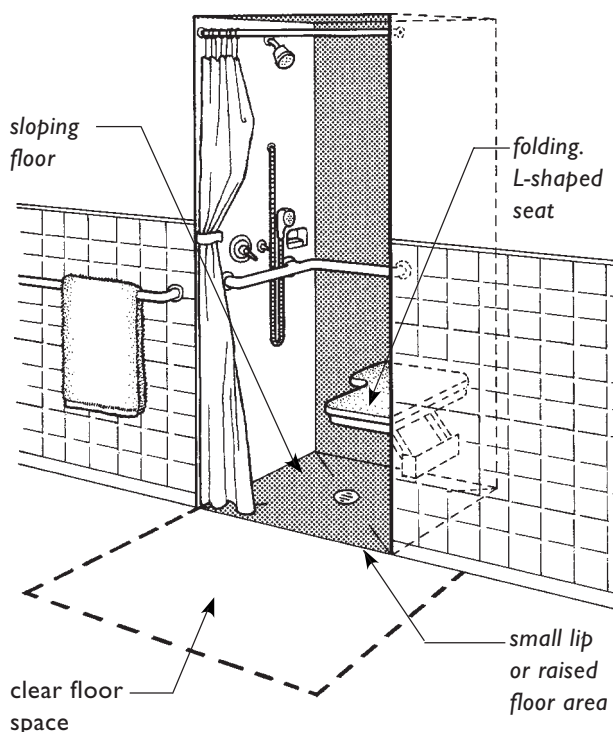
The 36-inch x 36-inch transfer shower with a low curb and L-shaped seat is a versatile and successful bathing fixture for people who use wheelchairs or have difficulty walking. If a seat is installed that can be folded up against the wall, an ambulatory user also can stand in the shower. The illustration below on the right shows the primary features found in a transfer shower. The 30-inch x 48-inch clear floor space beside the shower provides access to the control wall, and because it extends beyond the back of the stall, it allows a person using a wheel-

chair to position his or her chair in line with the wall-hung seat to make a safe sliding transfer.

Reinforcing for a shower seat is not required in stalls of larger sizes, e.g., 30 inches x 60 inches because the stall is so long that the user is not able to reach the controls from a seat at the opposite end of the stall. However, it is recommended that reinforcing be installed in stalls of different configurations and that thought be given to placing controls within reach of this potential seat as well as from outside the stall.



**When Shower Stall
Is the Only Bathing Fixture It Must Be
at Least 36 Inches X 36 Inches**



**36-Inch X 36-Inch Shower
with Folding Seat**

RECOMMENDATIONS FOR INCREASED ACCESSIBILITY

While the builder or developer of multifamily housing is not required to address all the design concerns faced by people with disabilities who may live in a development, there are certain aspects of bathroom design which should be considered when selecting fixtures.

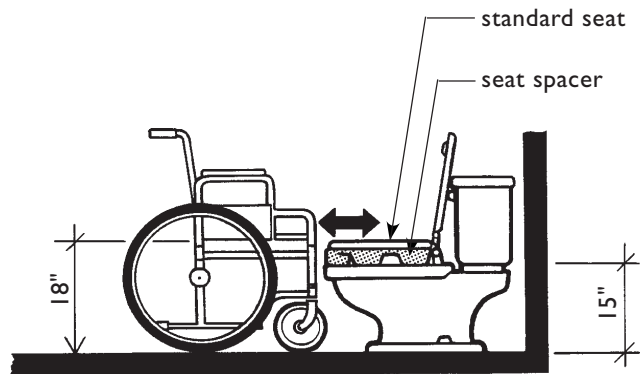
Toilet Seat Height

There is no single seat height which would suit all users. Low toilet seats are difficult for people who have trouble getting up on their feet and for people who use wheelchairs who may be able to transfer onto the seat but not get back into their chairs without assistance. High seats may be difficult for some wheelchair users to get onto and for shorter people because their feet do not touch the floor, making it difficult to maintain balance.

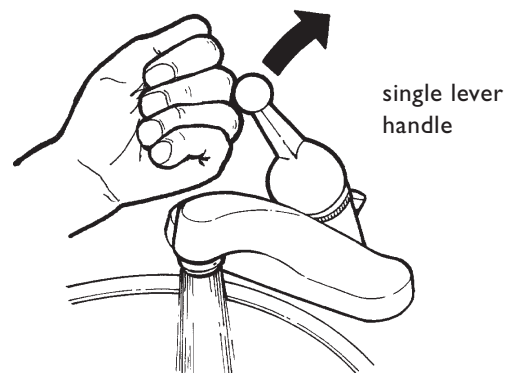
ANSI 4.32.4.2 specifies that toilet seats in dwelling units “shall be at least 15 inches and no more than 19 inches measured to the top of the toilet seat.” Standard toilets with 15-inch high seats are widely available in the marketplace and offer the best flexibility for adaptation for a wider range of people. For a user who may require that the seat be higher, it is relatively simple to install a seat spacer or thick seat. By contrast, to lower a toilet usually requires replacing the entire toilet fixture. It is recommended that standard low 15-inch toilets be installed in all dwelling units covered by the Guidelines.

Handles, Faucets, and Controls

Many people have difficulty using faucets and controls that require grasping and twisting of symmetrical shapes such as round, cylindrical, or square handles. It is preferable to install lever or blade handles which



Elevated Seats at Conventional Toilets



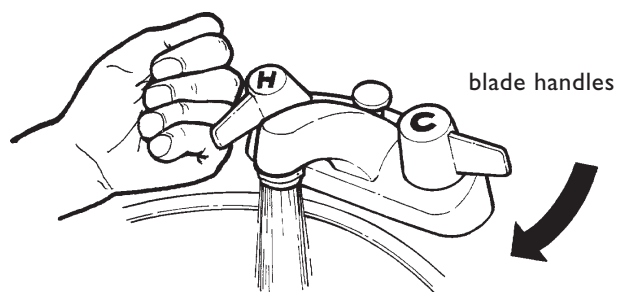
Ideal Faucet Control

can be used without gripping or twisting. If a faucet can be operated with a closed fist and requires less than five pounds of force to operate, then it is a usable control for most people with disabilities.

Control location also can greatly improve ease and safe use of the fixture. When bathtub controls are offset toward the outside of the bathing fixture, the need to bend and stretch to reach the controls from outside the fixture is greatly reduced - a help for any user with limited flexibility.

Auxiliary Handles at Doors

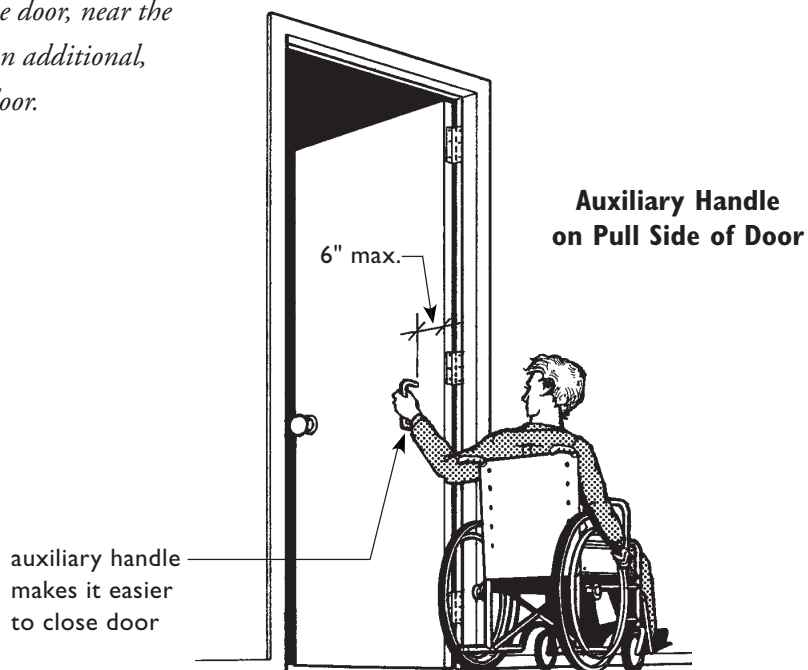
Suggestions to increase the accessibility and usability of bathrooms are made in the following section, "Example Bathroom Floor Plans that Comply with the Guidelines." One enhancement frequently highlighted is the installation of auxiliary handles on bathroom doors. Not required by the Guidelines, this additional hardware works well for many people with mobility impairments who have difficulty closing doors. With the installation of a second handle (such as a 4-inch loop handle similar to those used on drawers and kitchen cabinets) on the pull side of the door, near the hinge edge, the user is provided with an additional, and often easier, method of closing a door.



Another Usable Faucet Control



Preferred Offset Control Location



EXAMPLES OF BATHROOM FLOOR PLANS THAT COMPLY WITH THE GUIDELINES

The plans presented on the following pages are examples of “usable” bathrooms and powder rooms that comply with either Specification A or Specification B or both. These plans are only a sampling of possible layouts that would conform to the specifications and are not intended to limit designers’ options; certainly other layouts are feasible. The plans are neither required nor even suggested as ideal examples. They are included to illustrate typical applications or interpretations of specific requirements of the Guidelines under various circumstances.

The plans may be used as resource material and planning guides when developing new multi-family housing designs. Conventional industry standard fixture sizes have been used consistently when developing these plans.

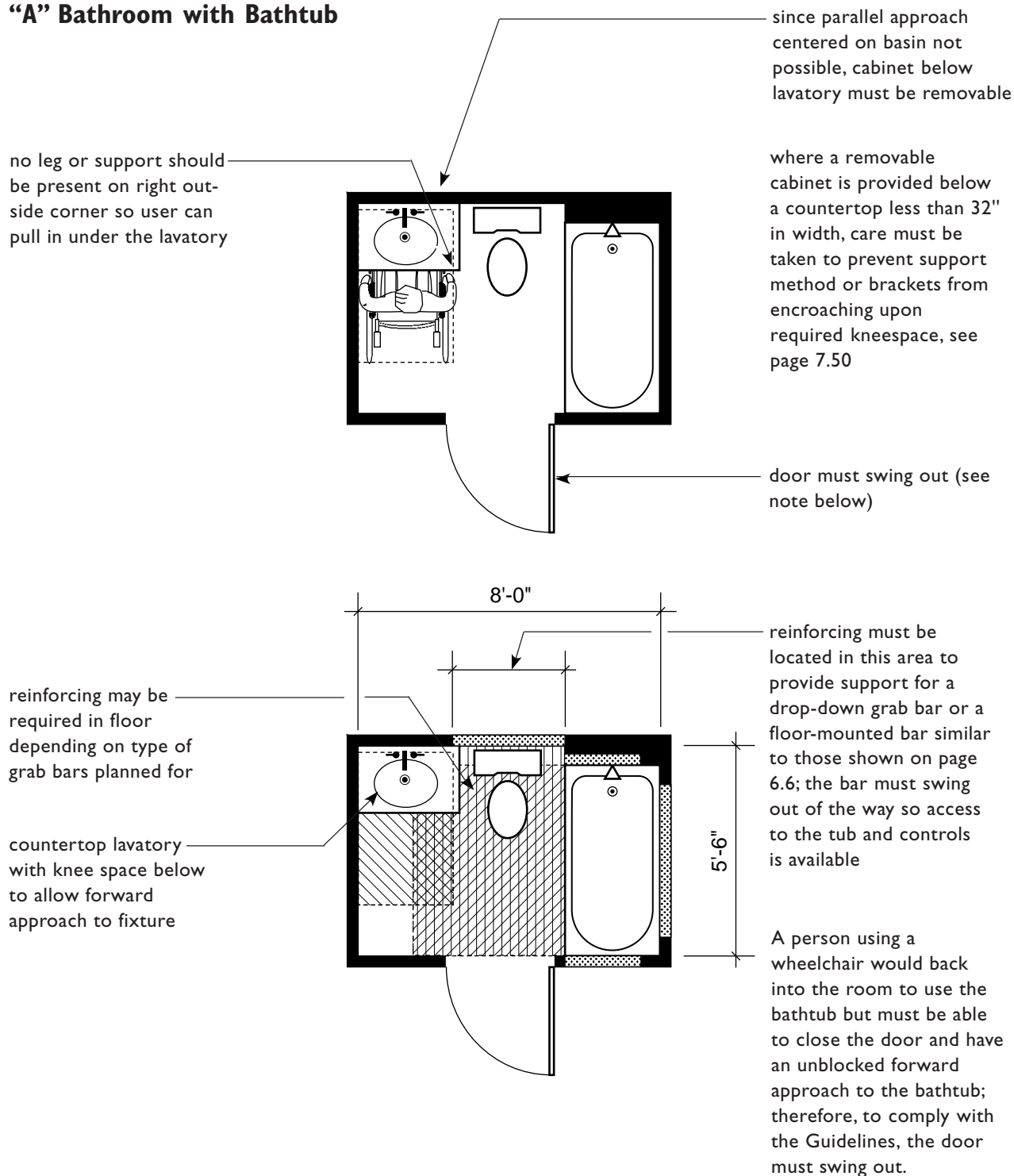
The toilets used measure 29 inches from the back wall to the front edge of the bowl. As toilets vary in size, with some being as long as 30 inches, it is important to allow sufficient space for doors to clear the toilet bowl. Wall-hung lavatories are 19 inches deep and countertop lavatories with base cabinets below are 21 inches deep unless noted otherwise on the plans. Doors

are 34 inches wide to provide the required nominal 32-inch clear opening. Rooms may need to be enlarged if a 36-inch door is installed. Bathtubs in the small bathrooms are 60 inches long and, along with showers, vary as the rooms become less conventional.




It is important to allow sufficient space for any fixtures that may be larger than those shown here. Although designers should rely upon the dimensions indicated and not scale off the drawings, all plans in this section are reproduced at 1/4-inch scale.

Some of the plans are more usable than others by people with disabilities and comments are included to describe where improvements could be made. The plans are divided according to bathing fixture type: bathtub/showers, showers, and multiple bathing fixtures. The plans are presented in pairs, with the first showing the overall room shape while the dimensioned plan describes the clear floor spaces at fixtures and indicates minimum wall and/or floor areas to be reinforced.

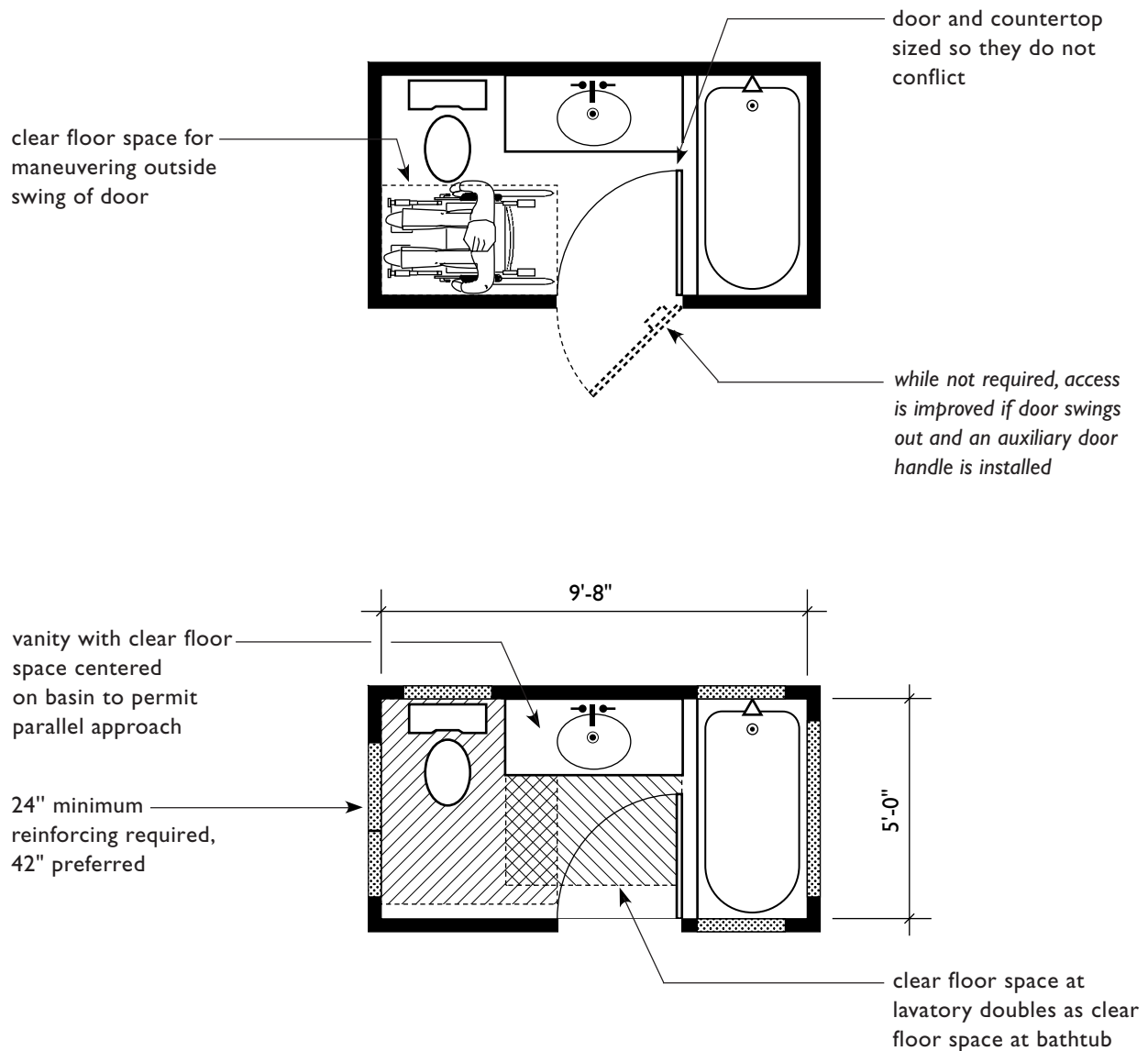
Text and notes presented in *italic* type are comments or recommendations and are not required by the Guidelines.




BATHROOMS WITH BATHTUB BATHING FIXTURE**“A” Bathroom with Bathtub**

Legend:

	reinforcing in walls or floors for grab bars		min. clear floor space at each fixture		min. clear floor space outside swing of door
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“A” Bathroom with Bathtub

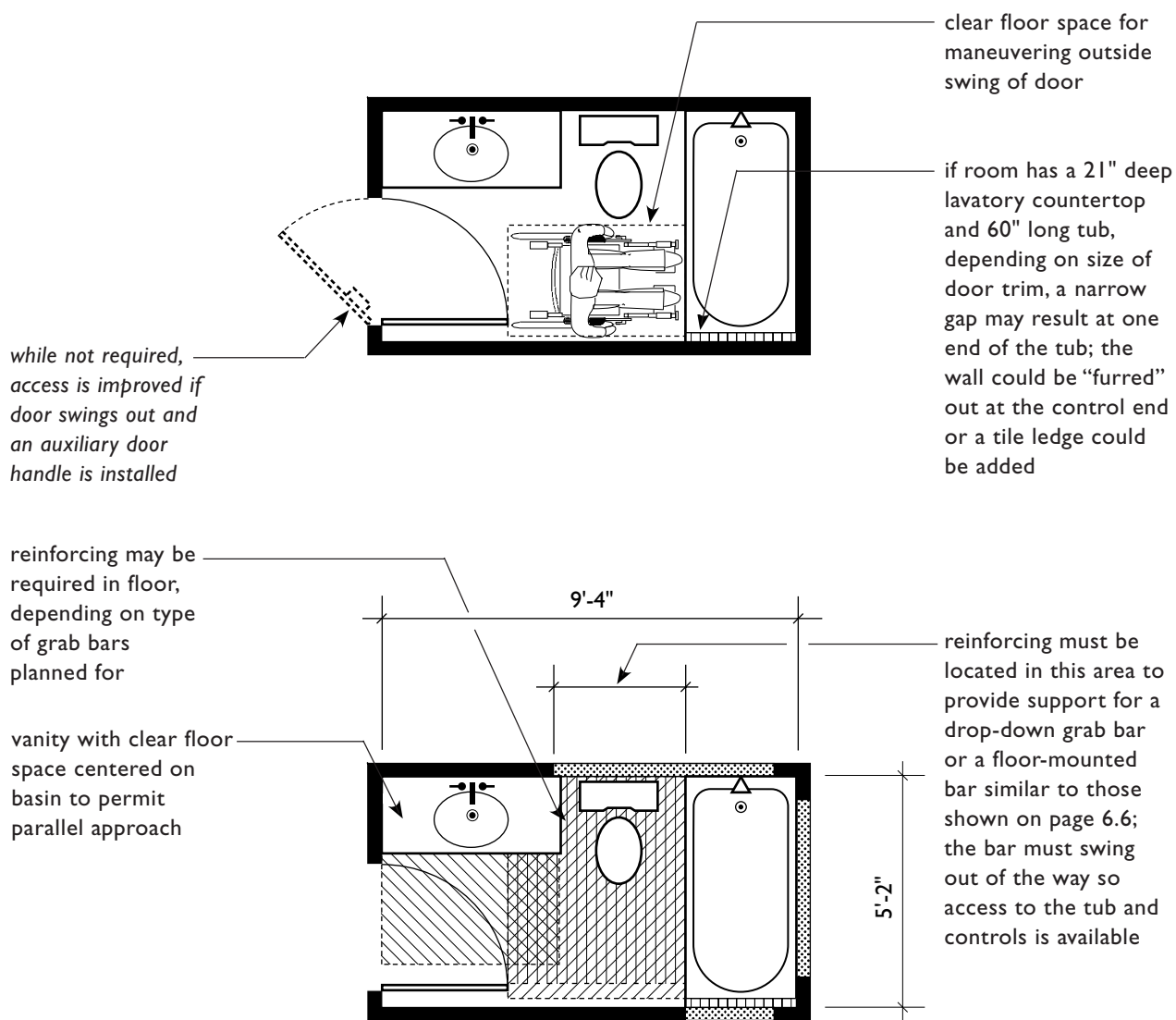


Legend:	 reinforcing in walls or floors for grab bars	 min. clear floor space at each fixture	 min. clear floor space outside swing of door
----------------	--	--	--

“A” Bathroom with Bathtub

The Guidelines do not require space for a five-foot turn or a T-turn in bathrooms; see page 7.39. In this bathroom, most persons using a wheelchair will not be able to turn around and may have to back into or out of the room. This, combined with

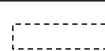
the lack of space to the latch side of the door, makes this room difficult to use by many people. Therefore, it is recommended that the 5'-2" dimension be increased and/or that knee space be provided under the lavatory.


Legend:


reinforcing in walls or floors for grab bars

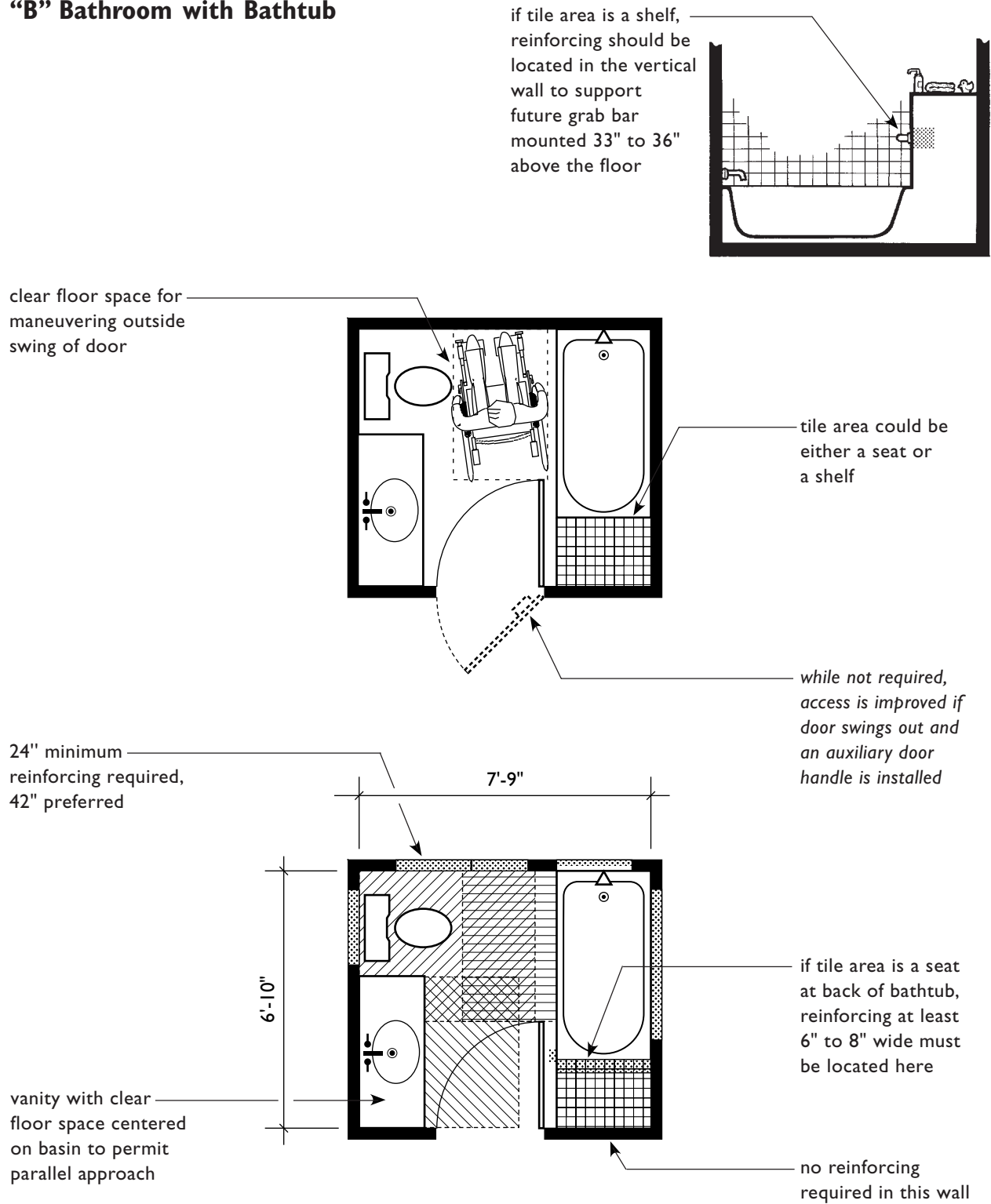


min. clear floor space at each fixture



min. clear floor space outside swing of door

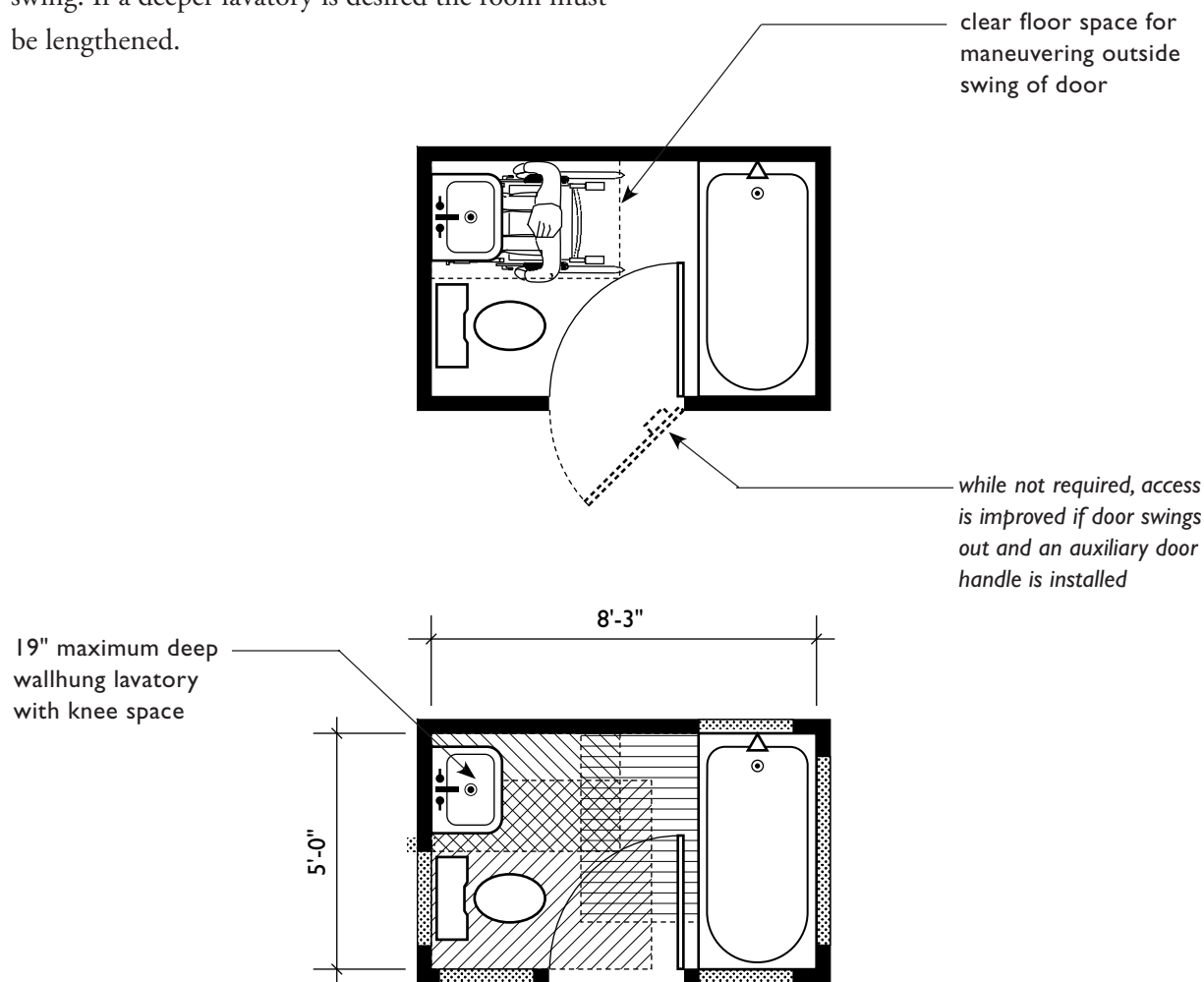
"B" Bathroom with Bathtub



Legend:	reinforcing in walls or floors for grab bars	min. clear floor space at each fixture	min. clear floor space outside swing of door
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“B” Bathroom with Bathtub

Only 19 inches of the required 30-inch x 48-inch clear floor space can go under a lavatory. A deeper lavatory would require that the clear floor space be positioned away from the plumbing wall and closer to the tub, causing it to overlap with the door swing. If a deeper lavatory is desired the room must be lengthened.


Legend:


reinforcing in walls or floors for grab bars



min. clear floor space at each fixture



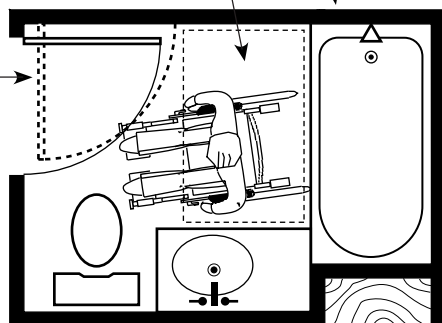
min. clear floor space outside swing of door

“B” Bathroom with Bathtub

because lavatory has
no knee space below,
to meet the Guidelines
bathtub controls must
be located on this wall

clear floor space
for maneuvering
outside swing
of door

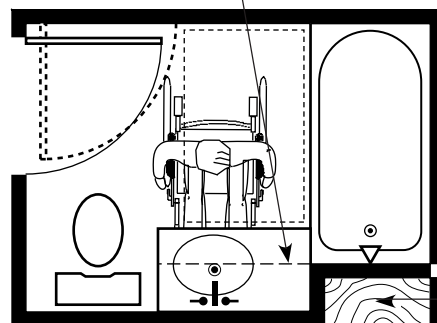
alternate
door
location



Option 1:
Plumbing on Opposite Walls
Lavatory With Base Cabinet Below
(No Knee Space)

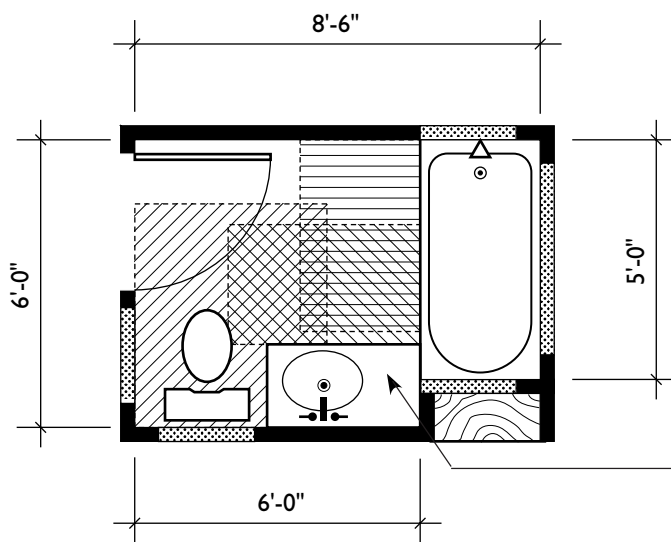
end of knee space
flush with bathtub
control wall permits
access to controls;
because knee space
is not the full depth,
user must still be able
to execute a parallel
approach to lavatory

if lavatory has
knee space below,
bathtub controls
can be located
on a common
plumbing wall



Option 2:
Plumbing on Common Wall
Lavatory With Shallow Knee Space

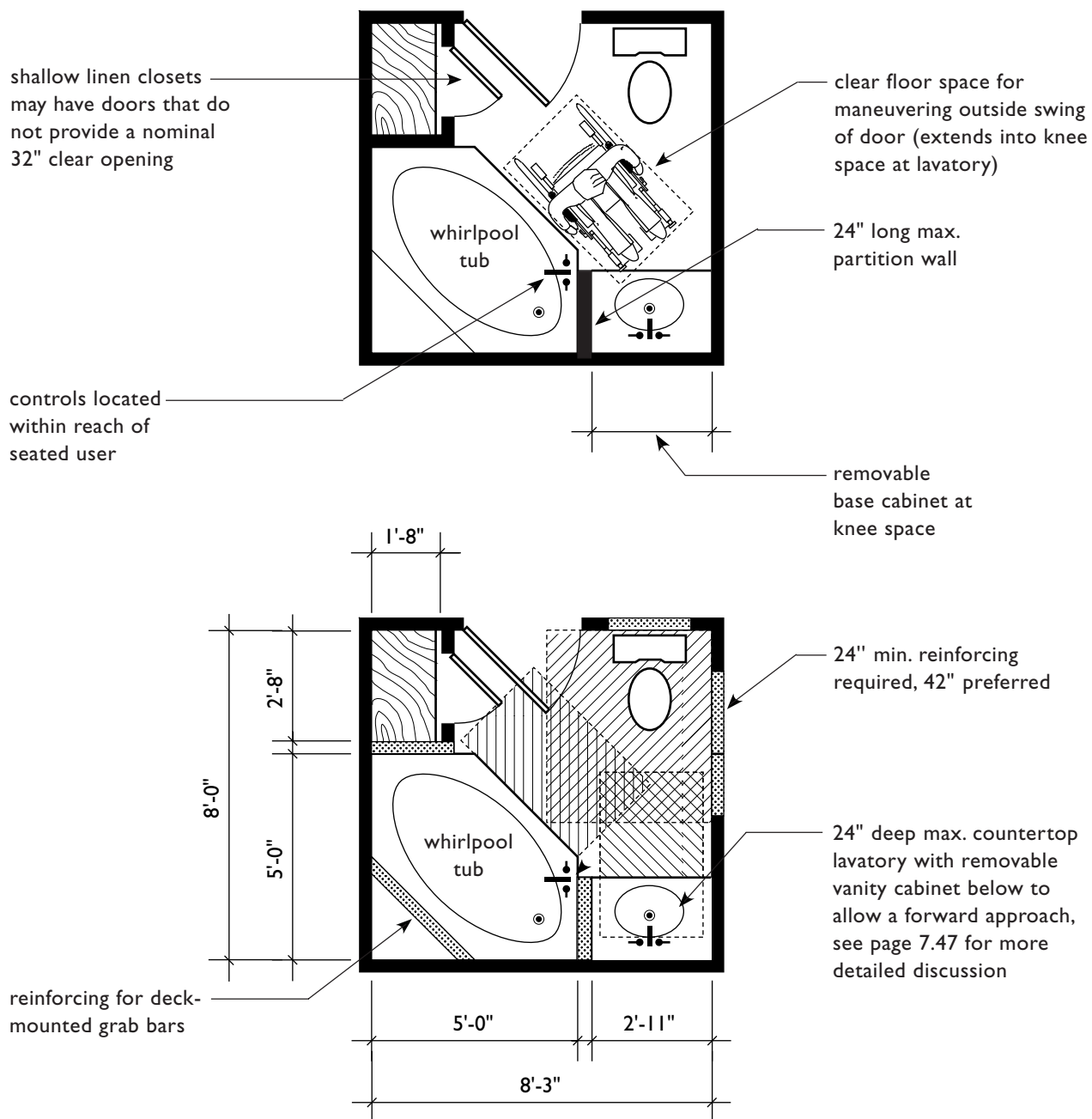
storage
shelves



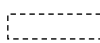


36" wide vanity
with offset basin
to permit parallel
approach centered
on basin

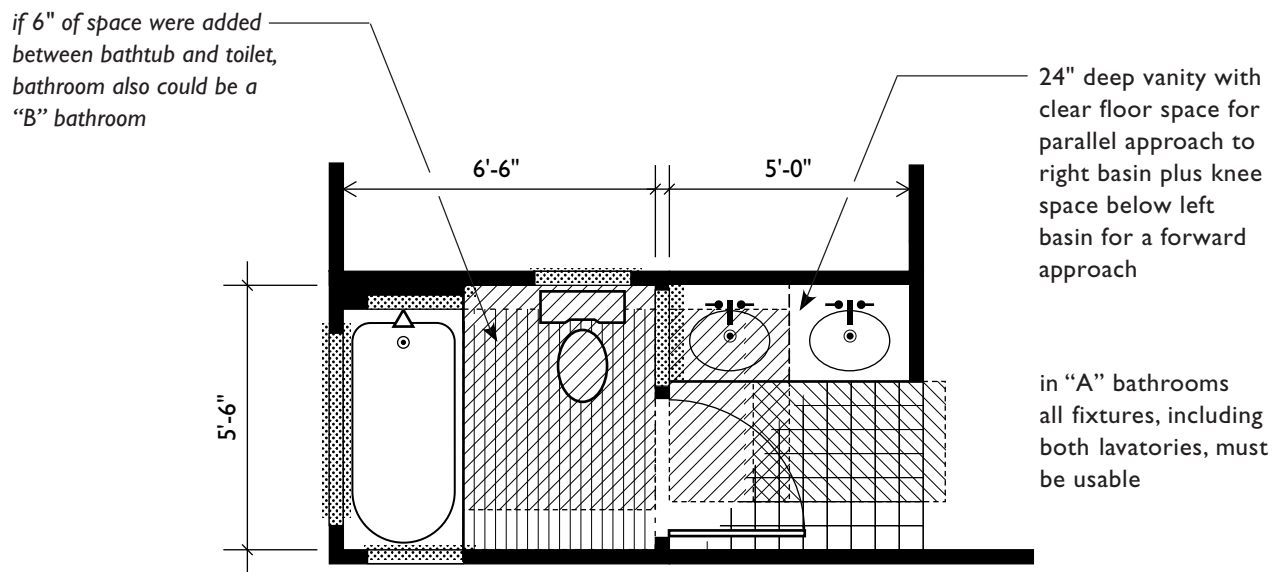
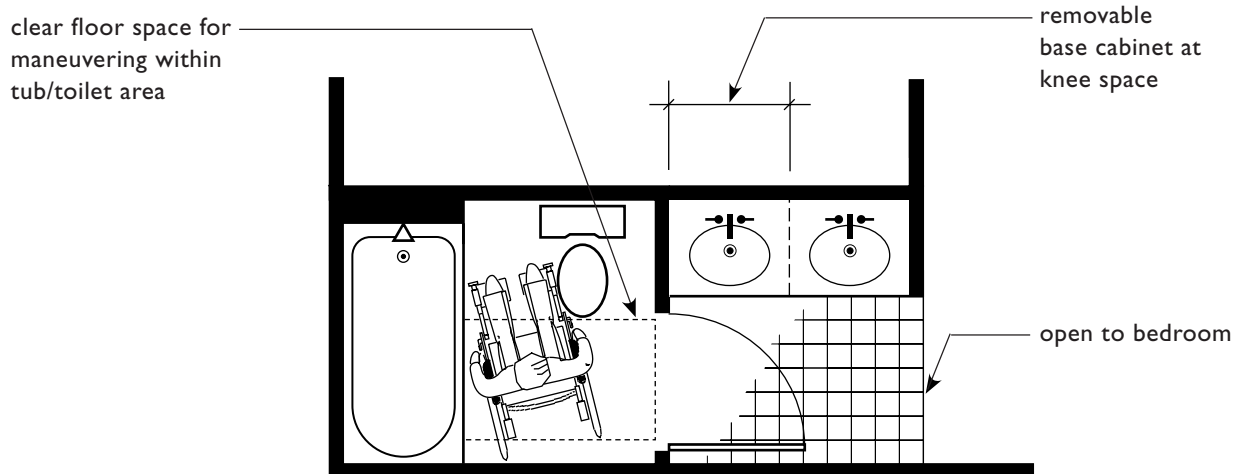
Legend: reinforcing in walls or floors for grab bars min. clear floor space at each fixture min. clear floor space outside swing of door



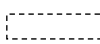
“B” Bathroom with Bathtub



Legend:	 reinforcing in walls or floors for grab bars	 min. clear floor space at each fixture	 min. clear floor space outside swing of door
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Compartmentalized “A” Bathroom with Bathtub



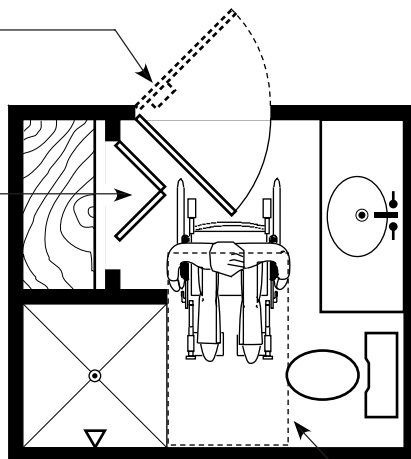
Legend:	 reinforcing in walls or floors for grab bars	 min. clear floor space at each fixture	 min. clear floor space outside swing of door
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BATHROOMS WITH SHOWER BATHING FIXTURE

“A” and “B” Bathroom with Shower

while not required, access is improved if door swings out and an auxiliary door handle is installed

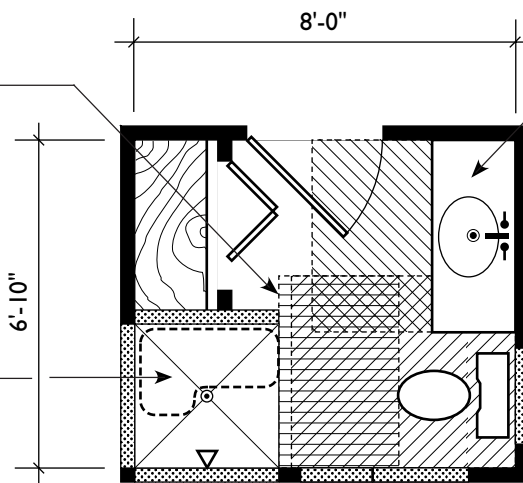
linen closets may have doors that do not provide a nominal 32" clear width if they do not require the user to pass through the door to reach the contents



clear floor space for maneuvering outside swing of door

36" x 36" min. shower with clear floor space offset to provide access to optional seat

optional shower seat



vanity with clear floor space centered on basin to permit parallel approach

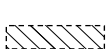
24" min. reinforcing required, 42" preferred

transferring onto toilet may be difficult for some people, recommend increasing this dimension 6"

Legend:



reinforcing in walls or floors for grab bars



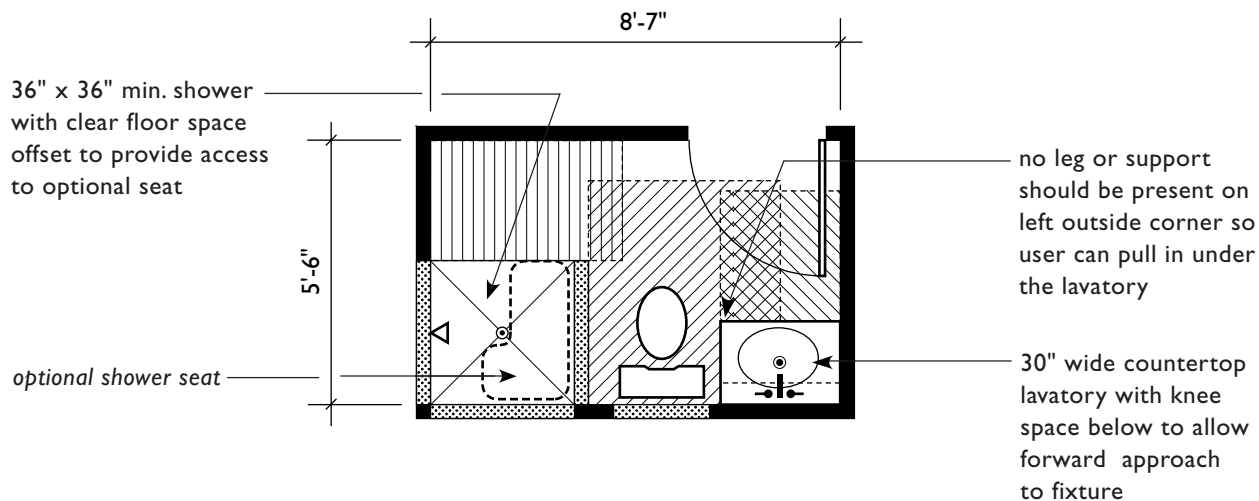
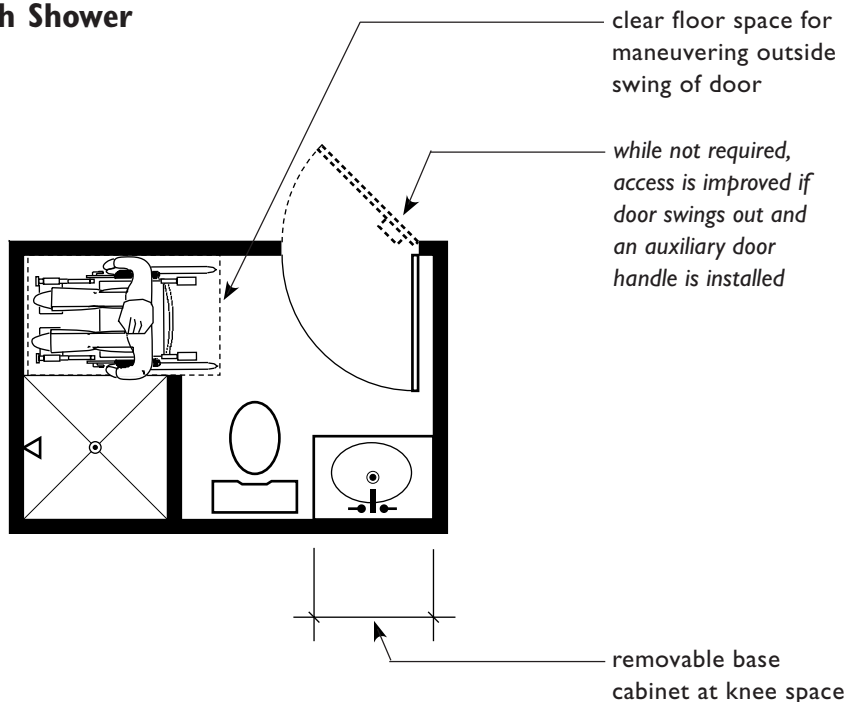
min. clear floor space at each fixture



min. clear floor space outside swing of door

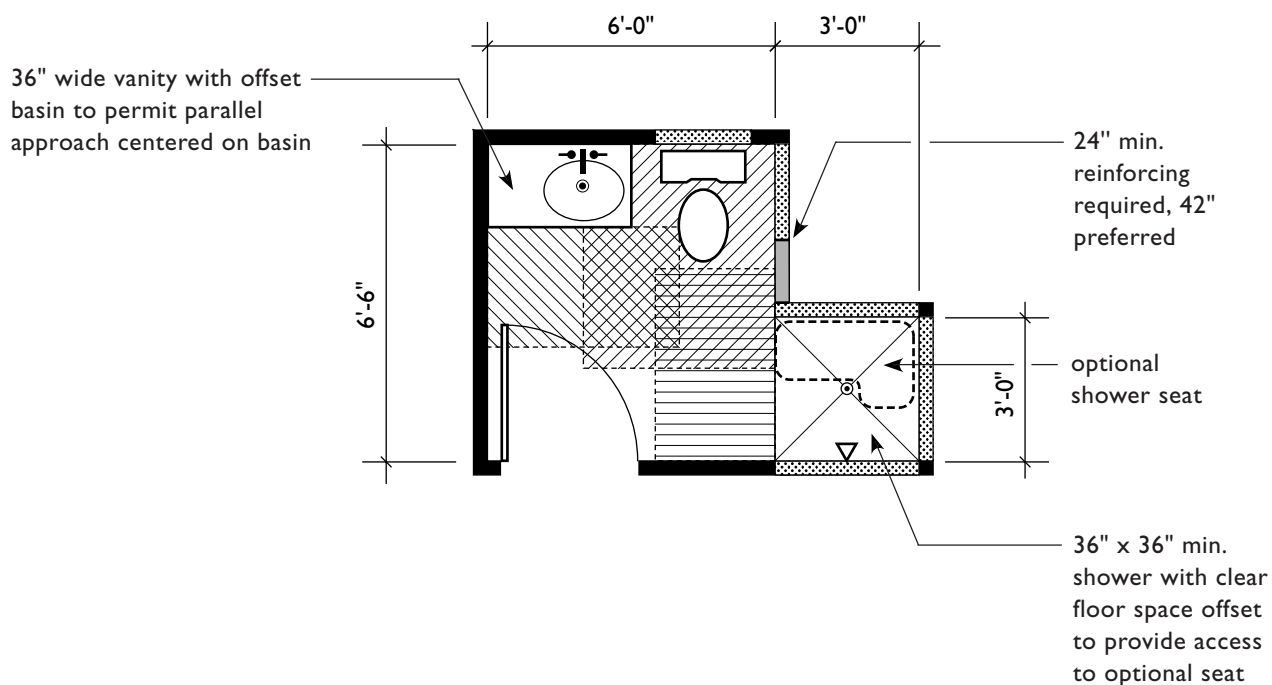
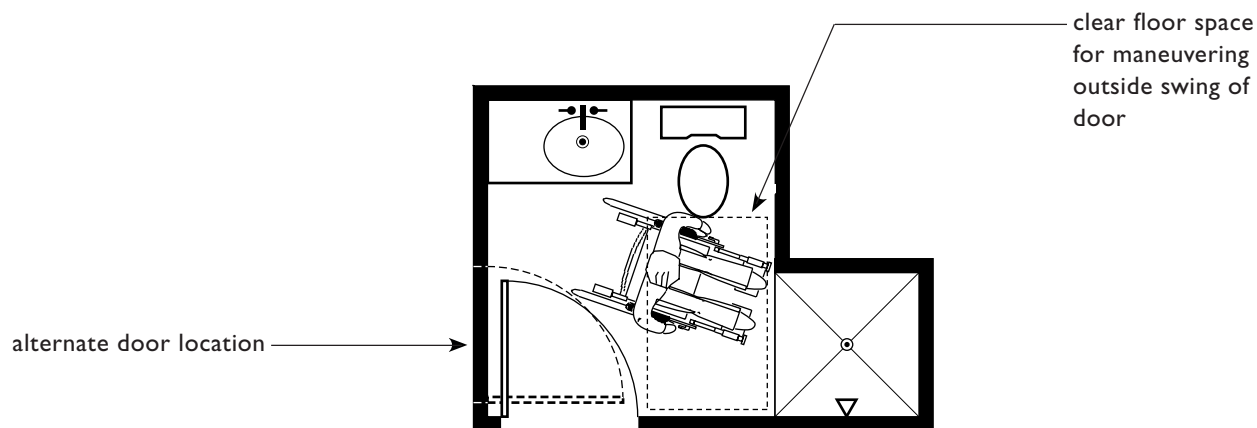
“A” and “B” Bathroom with Shower




where a removable cabinet is provided below a countertop less than 32" in width, care must be taken to prevent support method or brackets from encroaching upon required knee space, see page 7.50



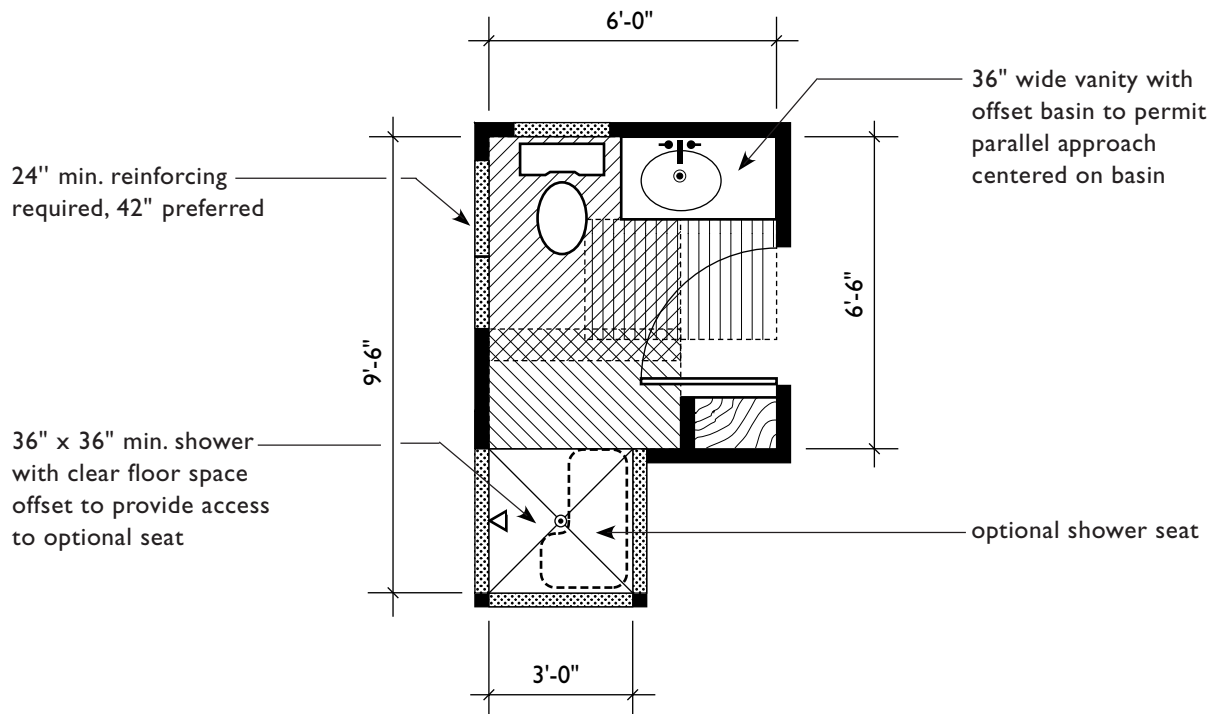
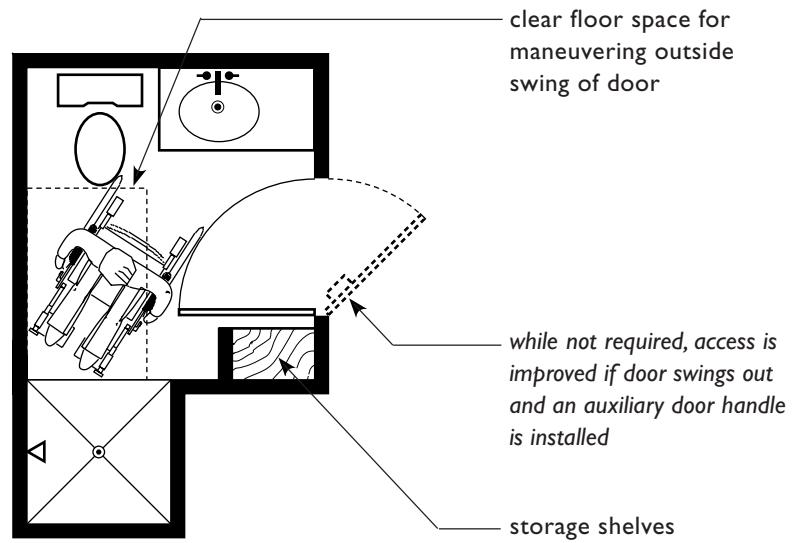
Legend:	reinforcing in walls or floors for grab bars	min. clear floor space at each fixture	min. clear floor space outside swing of door
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“A” and “B” Bathroom with Shower



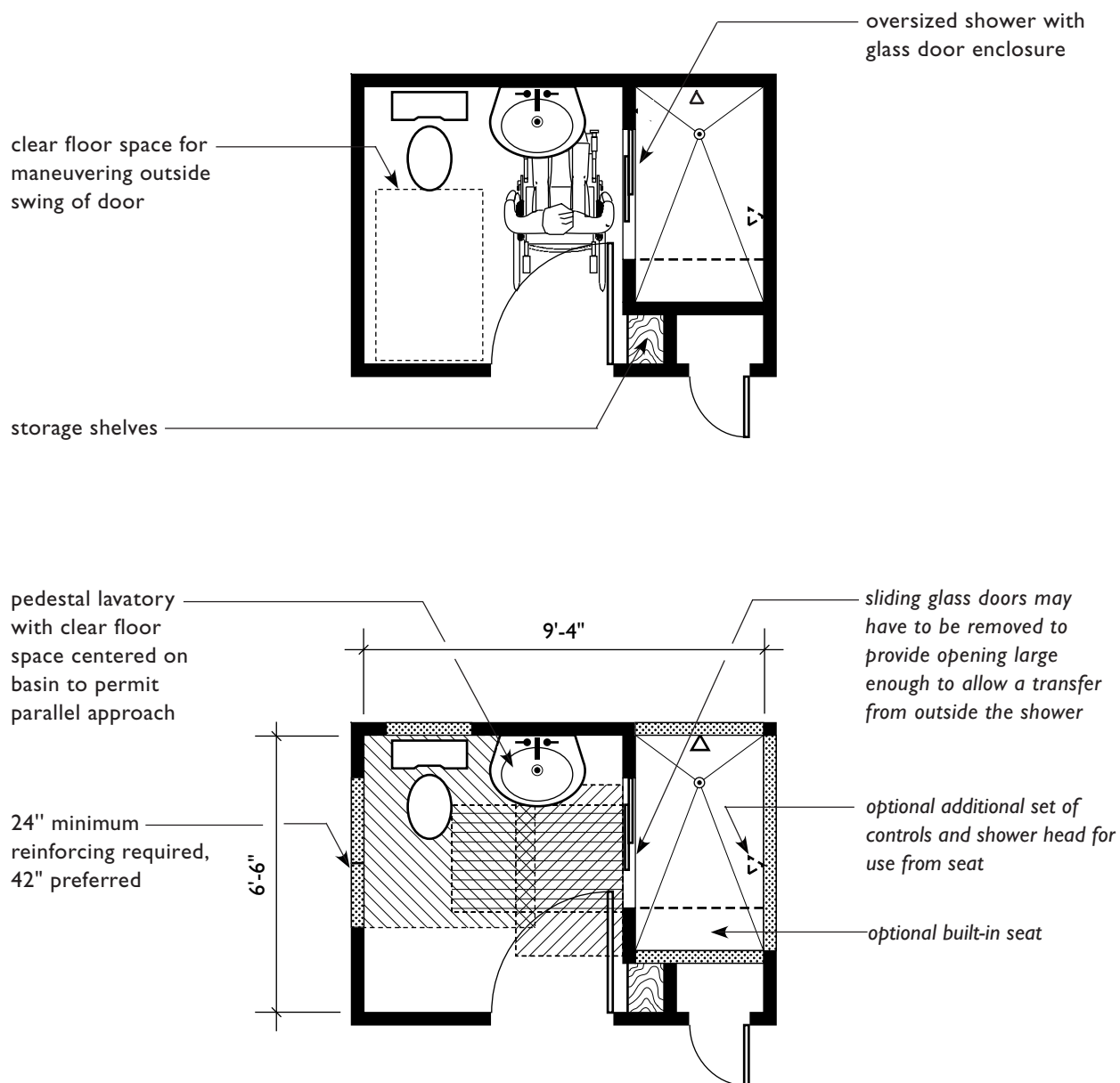
Legend:  reinforcing in walls or floors for grab bars  min. clear floor space at each fixture  min. clear floor space outside swing of door

“A” and “B” Bathroom with Shower






Legend: reinforcing in walls or floors for grab bars min. clear floor space at each fixture min. clear floor space outside swing of door

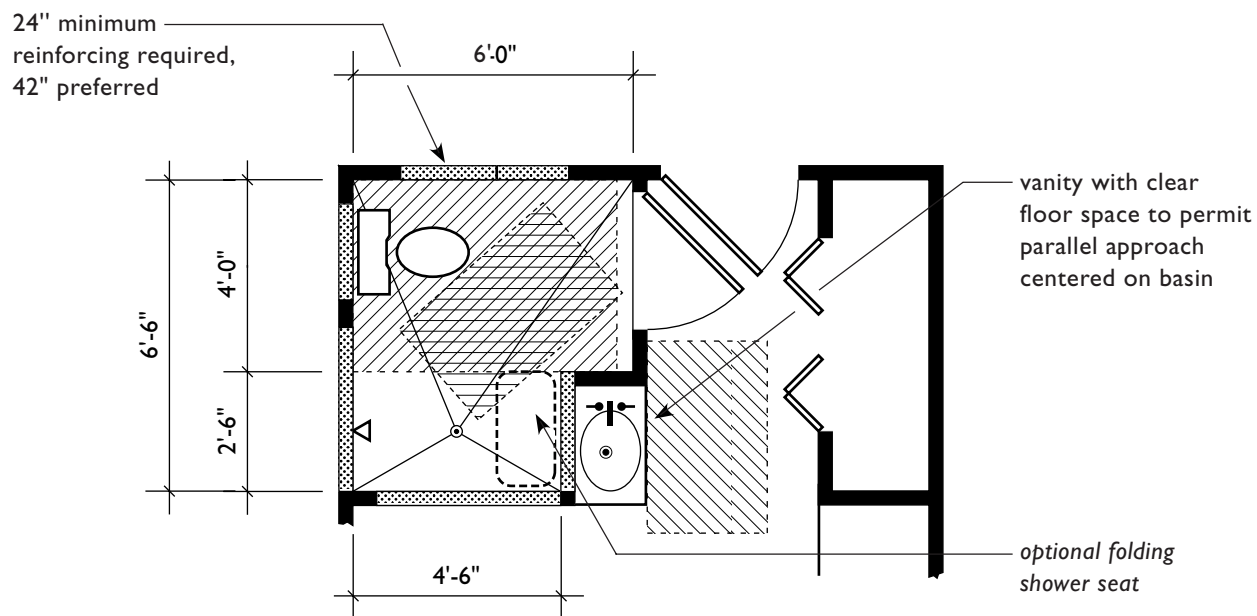
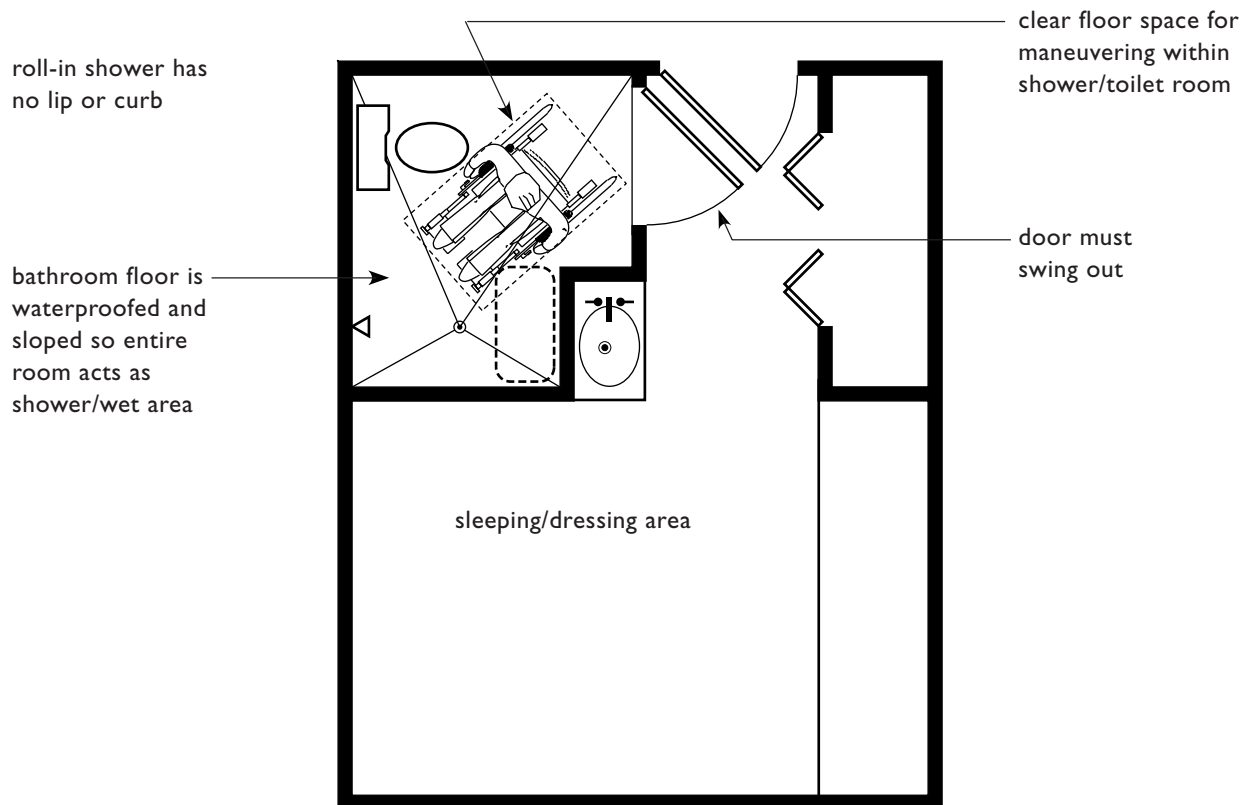
“A” Bathroom with Large Shower



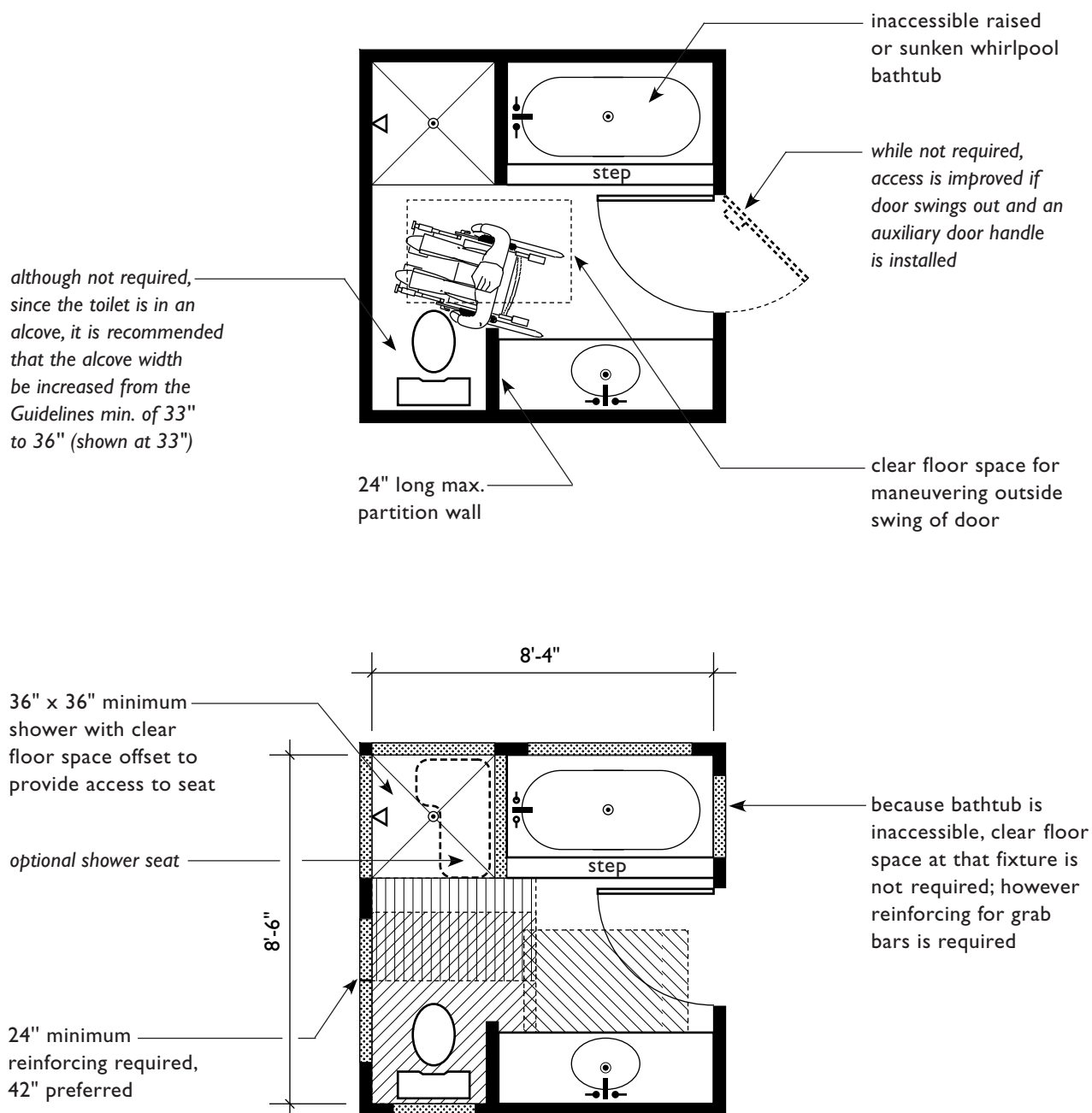
Legend:

	reinforcing in walls or floors for grab bars		min. clear floor space at each fixture		min. clear floor space outside swing of door
---	--	---	--	---	--

Single Room Occupancy Unit with Roll-In Shower



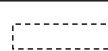
Legend:	reinforcing in walls or floors for grab bars	min. clear floor space at each fixture	min. clear floor space outside swing of door
----------------	--	--	--

BATHROOMS WITH TWO BATHING FIXTURES**“B” Bathroom with Two Bathing Fixtures
(Accessible Shower/Inaccessible Bathtub)****Legend:**

reinforcing in walls or floors for grab bars

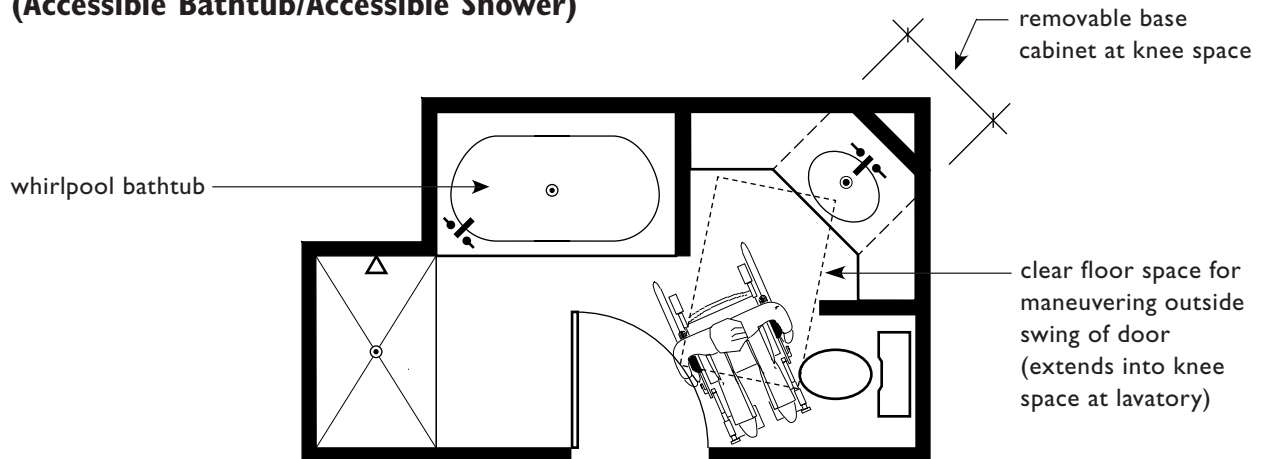


min. clear floor space at each fixture



min. clear floor space outside swing of door

“A” and “B” Bathroom with Two Bathing Fixtures (Accessible Bathtub/Accessible Shower)



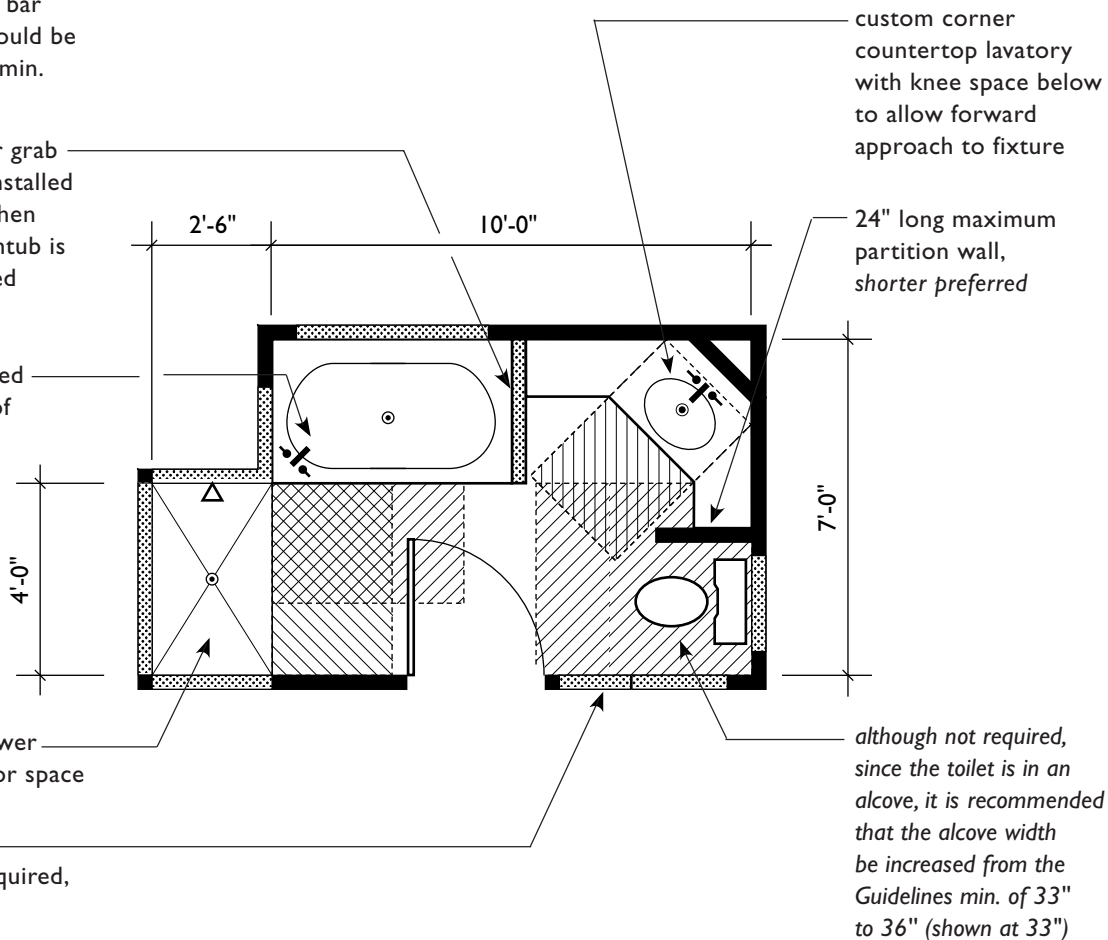
deck or floor-mounted grab bar reinforcing should be 6" to 8" wide min.

reinforcing for grab bars may be installed in the floor when whirlpool bathtub is not surrounded by walls

controls located within reach of seated user

30" x 48" shower with clear floor space

24" minimum reinforcing required, 42" preferred



Legend:	reinforcing in walls or floors for grab bars	min. clear floor space at each fixture	min. clear floor space outside swing of door
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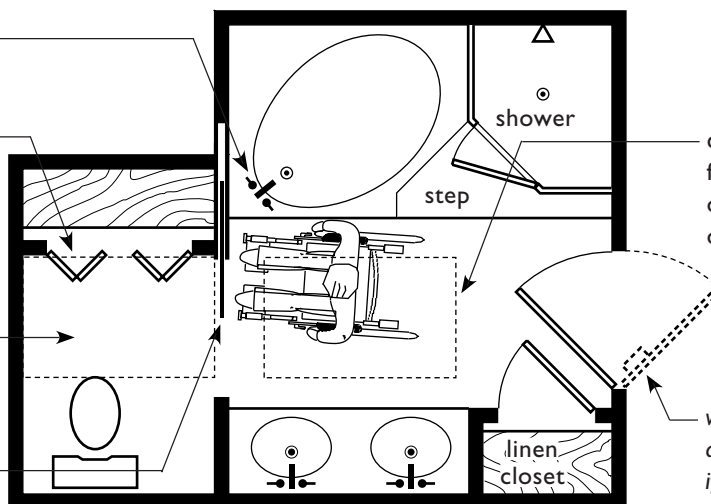
“B” Bathroom with Two Bathing Fixtures (Accessible Bathtub/Inaccessible Shower)

controls located within reach of seated user

linen closet doors may be less than 32" nominal clear width if user is not required to pass through the door to reach the contents

this room could be improved by omitting the closet to allow additional maneuvering space

some people using wheel-chairs will have to leave the sliding door open in order to position their chair to make a transfer onto toilet



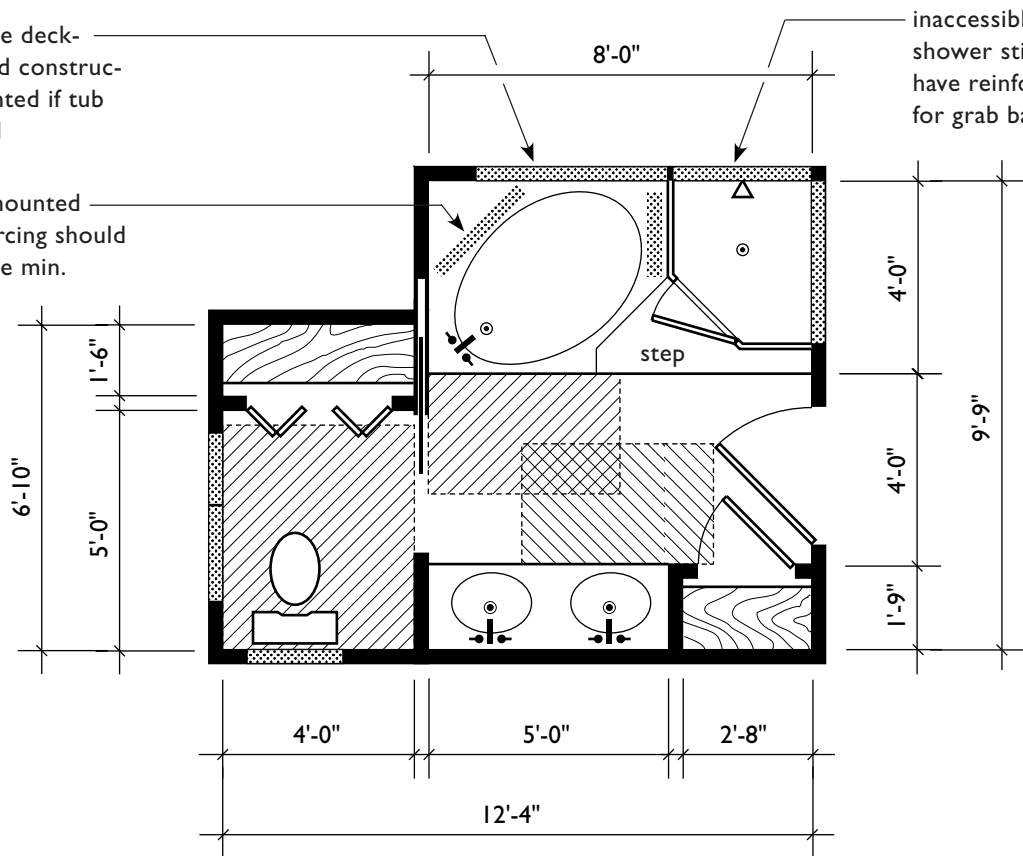
clear floor space for maneuvering outside swing of door

while not required, access is improved if door swings out and an auxiliary door handle is installed

grab bars can be deck-mounted if solid construction, wall-mounted if tub is prefabricated

deck or floor-mounted grab bar reinforcing should be 6" to 8" wide min.

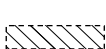
inaccessible shower still must have reinforcing for grab bars



Legend:



reinforcing in walls or floors for grab bars



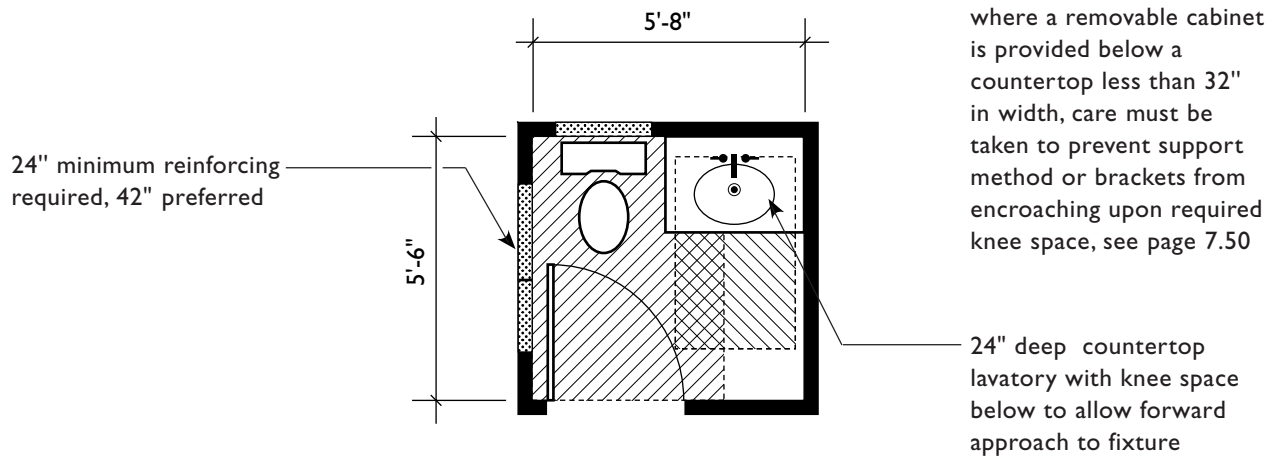
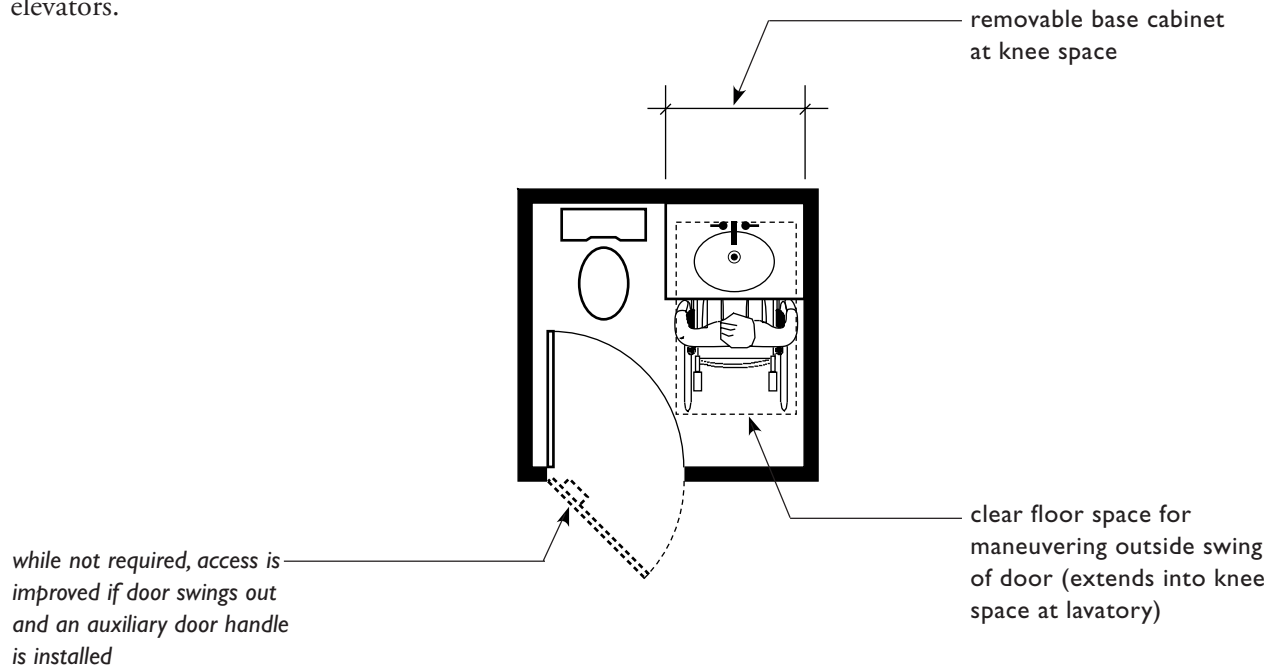
min. clear floor space at each fixture



min. clear floor space outside swing of door

POWDER ROOMS

Powder rooms must meet the requirements for clear floor space at fixtures and reinforcing in walls only when they are on the accessible level of multistory units in buildings having one or more elevators.

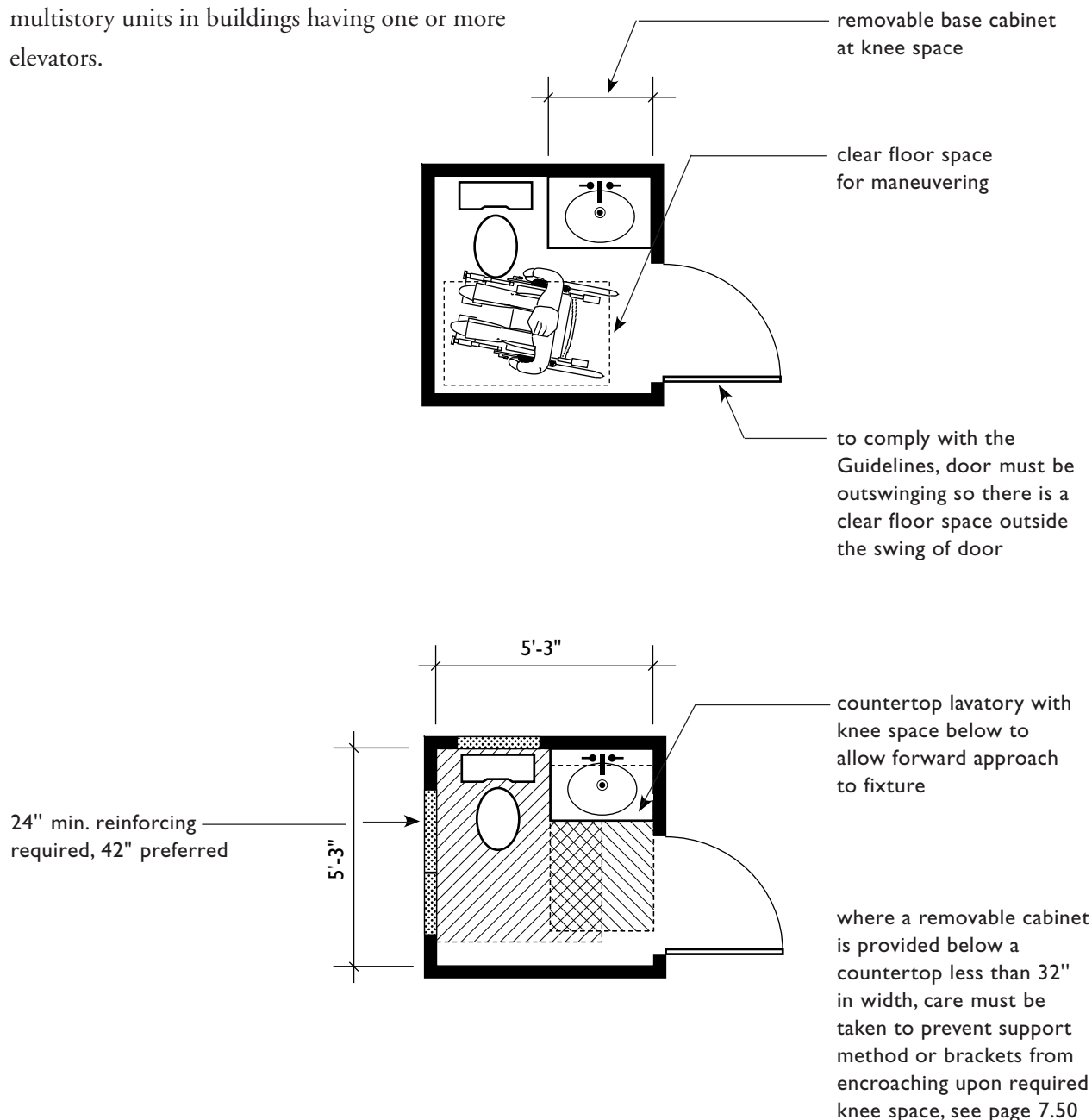


Legend:

	reinforcing in walls or floors for grab bars		min. clear floor space at each fixture		min. clear floor space outside swing of door
--	--	--	--	--	--

Powder Room

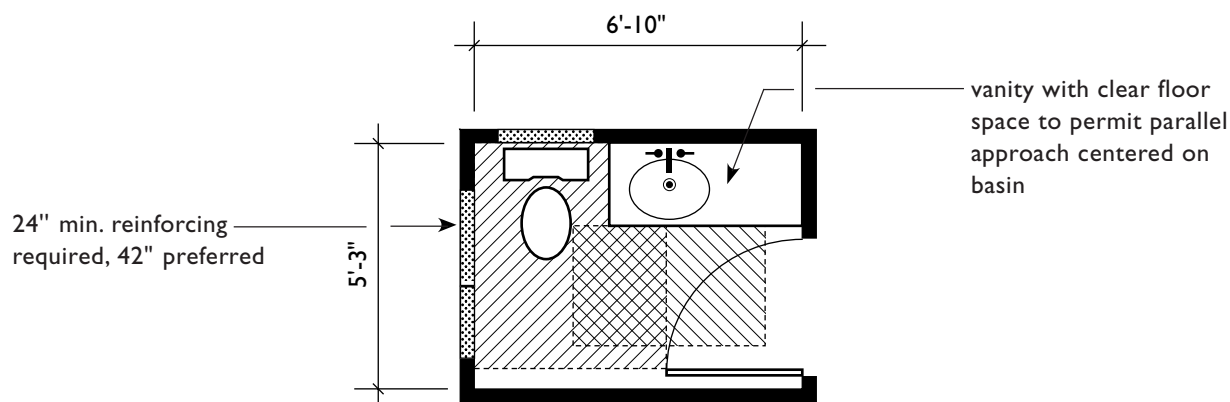
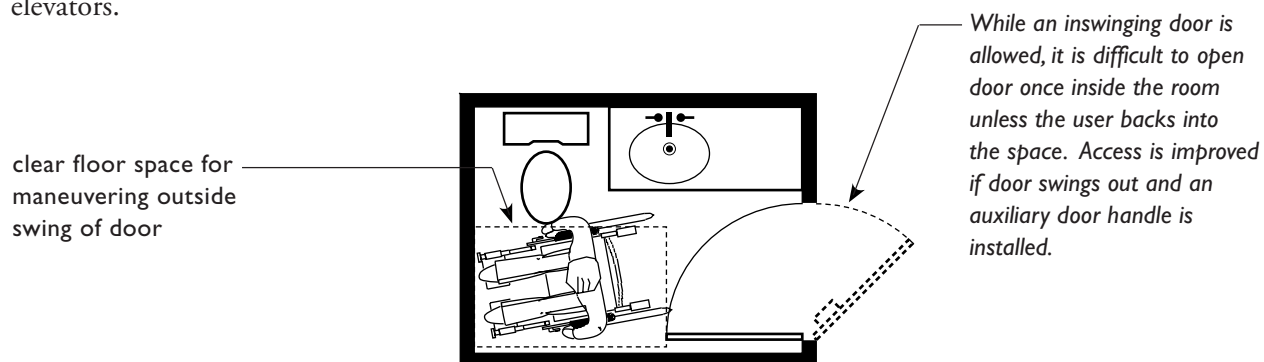
Powder rooms must meet the requirements for clear floor space at fixtures and reinforcing in walls only when they are on the accessible level of multistory units in buildings having one or more elevators.



Legend: reinforcing in walls or floors for grab bars min. clear floor space at each fixture min. clear floor space outside swing of door

Powder Room

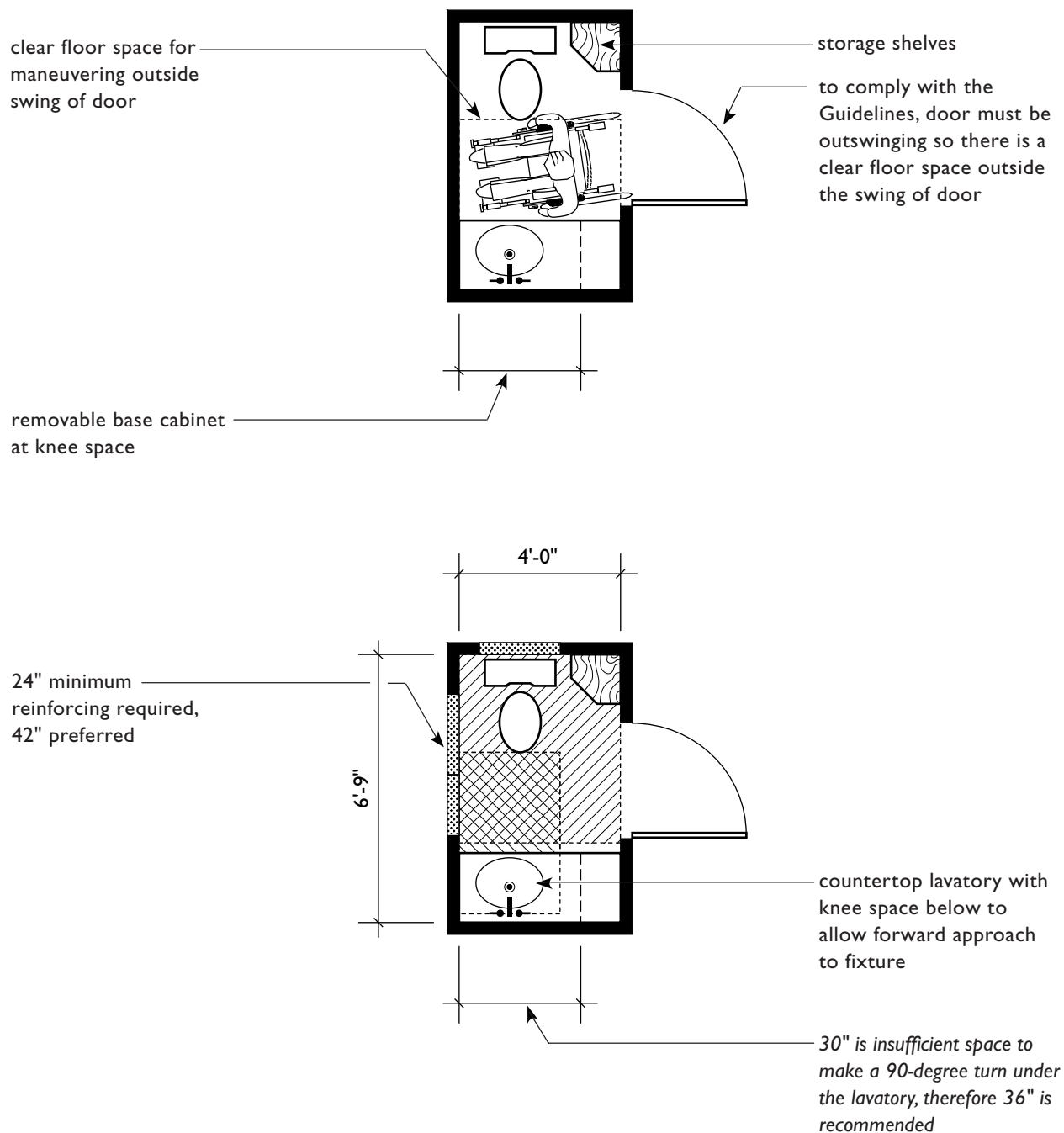
Powder rooms must meet the requirements for clear floor space at fixtures and reinforcing in walls only when they are on the accessible level of multistory units in buildings having one or more elevators.



Legend:	reinforcing in walls or floors for grab bars	min. clear floor space at each fixture	min. clear floor space outside swing of door
----------------	--	--	--

Powder Room

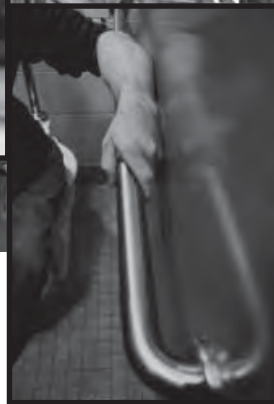
Powder rooms must meet the requirements for clear floor space at fixtures and reinforcing in walls only when they are on the accessible level of multistory units in buildings having one or more elevators.



Legend: reinforcing in walls or floors for grab bars min. clear floor space at each fixture min. clear floor space outside swing of door

Part Three

APPENDICES



- Appendix A** ■ Product Resources and Selected References
- Appendix B** ■ Fair Housing Accessibility Guidelines
- Appendix C** ■ Supplemental Notice: Fair Housing
Accessibility Guidelines: Questions and Answers
About the Guidelines

APPENDIX A

Product Resources
and Selected References

A



PRODUCT RESOURCES

The following list of products is provided to assist owners/builders and potential residents to adapt Fair Housing covered units to suit individual needs and requirements. They are examples only and the list is not complete; other products with similar features also are available. No endorsement of the products or recommendation for use of the products is given nor implied.

Other compilations of building products are available, but few if any specifically address the issues exclusive to compliance with the Fair Housing Accessibility Guidelines. Going beyond the requirements of the Guidelines, the National Association of Home Builders Research Center publishes a *Directory of Accessible Building Products* in an effort to increase accessible housing for people with disabilities. The *Directory* is available from the NAHB Research Center, 400 Prince George's Boulevard, Upper Marlboro, Maryland, 20772-8731, phone: (301) 249-4000.

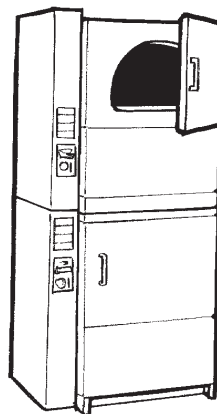
Few if any manufacturers presently offer “adaptable” or removable cabinets as part of their stock line. No individual cabinet manufacturers are cited in this product resource list; however, several have indicated that providing kitchen cabinets with removable fronts currently is possible using existing materials and methods.

PRODUCT RESOURCE LIST

APPLIANCES

G.E. Appliances
Appliance Park
Louisville, KY 40225
502-452-4311
(stacking front-loading coin operated residential
dryers with front-mounted controls)

Sears, Roebuck, and Company
Sears Tower
Chicago, IL 60684
312-875-3000
(under-counter front-loading washers and dryers
with front-mounted controls)



washers and dryers
with front-mounted
controls are more
usable for everyone

Stacked Coin Operated Dryers

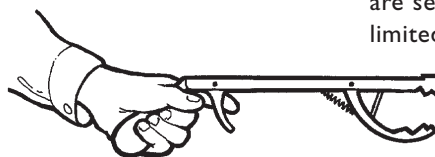
Note: Most companies have space saving and
stacking models with front-mounted controls.

ASSISTIVE DEVICES

adaptAbility
P.O. Box 515
Colchester, CT 06415-0515
1-800-243-9232

Maddak, Inc.
6 Industrial Road
Pequannock, NJ 07440
201-628-7600

Sears, Roebuck, and Company
Sears Tower
Chicago, IL 60684
1-800-948-8800



reachers and grab-
bers can increase the
reach for people who
are short in stature,
are seated, or have
limited reach range

Grabber/Reacher

BATHROOM PRODUCTS

Grab Bars

Bobrick Washroom Equipment, Inc.
Northway 10 Industrial Park
Clifton Park, NY 12065
518-877-7444
(folding grab bars and reinforcing)

Bradley Corporation
Washroom Accessories Division
804 East Gate Drive
Mt. Laurel, NJ 08054
609-235-7420
(grab bar reinforcing)

Dryad Jebron
Suite 202
249 Ayer Road
Harvard, MA 01451
1-800-445-5388
508-772-4167
(colored and folding grab bars)

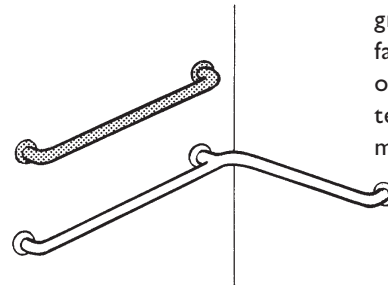
Elcoma Metal Fabricating Ltd.
1929-36 Street N.E.
Canton, Ohio 44705
216-588-8844
1-800-352-6625
(colored and folding grab bars and reinforcing)

Franklin Brass
Manufacturing Company
P.O. Box 5226
Culver City, CA 90231
213-306-5944
1-800-421-3375
(grab bar reinforcing)

Hewi, Inc.
6 Pearl Court
Allendale, NJ 07401
201-327-7202
(colored and folding grab bars)

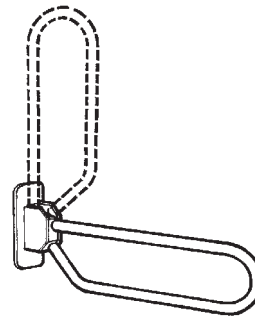
Normbau
P.O. Box 548
Shepherdsville, KY 40165
502-538-7388
1-800-358-2920
(colored and folding grab bars)

Pressalit Inc.
1259 Rt. 46, Bldg. 2
Parsippany, NJ 07054
1-800-346-2380
201-263-8533
(colored and folding grab bars)



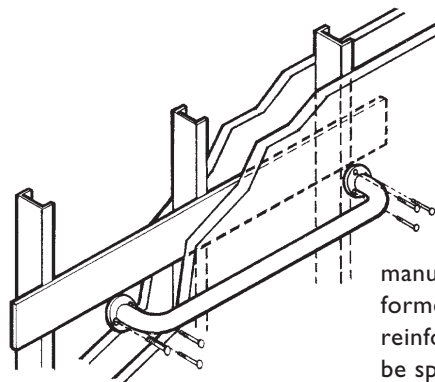
Standard Grab Bars

grab bars are manufactured in a variety of shapes, sizes, textures, colors, and metallic finishes



Folding Grab Bar

many folding grab bars also come in a variety of shapes, sizes, and colors



Reinforcing at Metal Studs

manufactured, formed metal reinforcing plate can be spot welded or screwed to studs

SafeTec International, Inc.
P.O. Box 23
Melbourne, FL 32902
407-952-1300
(colored grab bars)

Tubular Specialties Mfg., Inc.
13011 S. Spring Street
Los Angeles, CA 90061
1-800-421-2961
(colored and folding grab bars)

Lindo
1090 McCallie Avenue
Chattanooga, TN 37404
615-698-4200
(folding grab bars)

Hand-Held Shower Heads

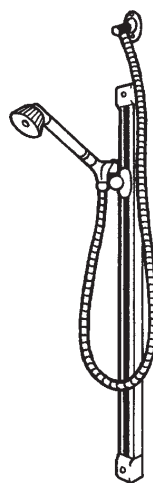
Brass-Craft Mfg. Co.
27700 Northwestern Highway
Southfield, MI 48034
313-827-1100

Alsons
525 E. Edna Place
P.O. Box 311
Covina, CA 91723
818-966-1668

Moen Incorporated
377 Woodland Avenue
Elyria, OH 44036-2111
216-232-3341

Oline
Division of Interbath, Inc.
427 N. Baldwin Park Boulevard
City of Industry, CA 91746
818-369-1841

Grohe America
900 Lively Boulevard
Wood Dale, IL 60191
708-350-2600



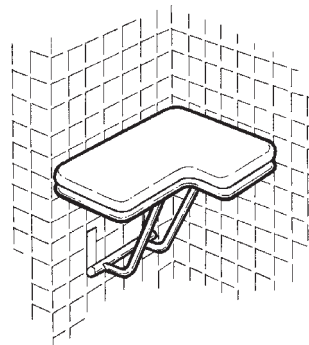
wall-mounted slide
bar allows hand-held
shower head to be
positioned at any
convenient height

**Hand-Held Shower Head
On a Slide-Bar Mount**

L-Shaped Shower Seats

Bobrick Washroom Equipment, Inc.
Northway 10 Industrial Park
Clifton Park, NY 12065
518-877-7444

Tubular Specialties Mfg., Inc.
13011 S. Spring Street
Los Angeles, CA 90061
1-800-421-2961



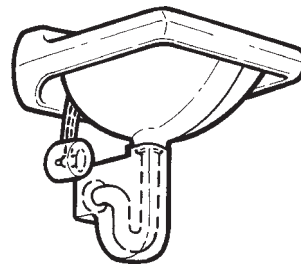
many L-shaped
shower seats fold up,
increasing available
space in showers

L-Shaped Shower Seat

Manufactured Pipe Protection

I & S Insulation Co., Inc.
1819 So. Central Avenue, 38
Kent, WA 98032
206-859-1830

Truebro Inc.
P.O. Box 429
Ellington, CT 06029
203-875-2868



insulated pipe
surround to protect
seated users from
burns and sharp edges

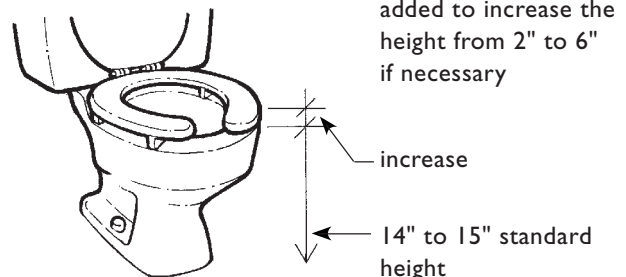
Manufactured Pipe Protection

Raised Toilet Seats

Beneke
P.O. Box 1367
Columbus, MS 39703
1-800-647-1042
601-328-4000

Church Seat Company
Sheboygan Falls, WI 53085
1-800-233-SEAT
414-467-2664

Olsonite
8801 Conant Avenue
Detroit, MI 48211
1-800-521-8266
313-075-5831



Raised Toilet Seat

DOORS AND DOOR HARDWARE

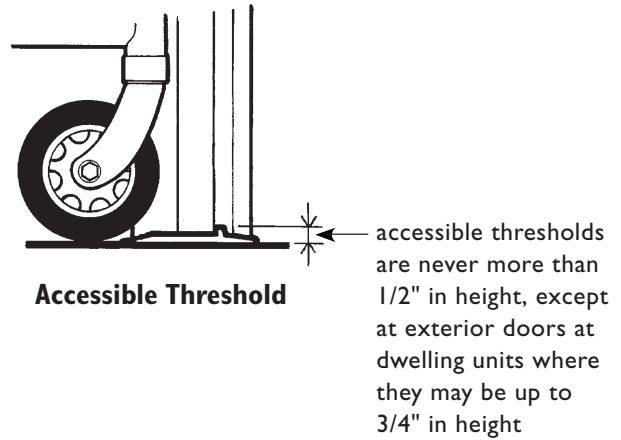
Accessible Thresholds

Stanley Hardware
P.O. Box 1840
New Britain, CT 06050
1-800-622-4393

National Guard Products, Inc.
540 North Parkway
P.O. Box 7353
Memphis, TN 38107
1-800-NGP-RUSH

Zero International, Inc.
415 Concord Avenue
Bronx, NY 10455-4898
1-800-635-5335
212-585-3230

Note: Most threshold companies have accessible thresholds.

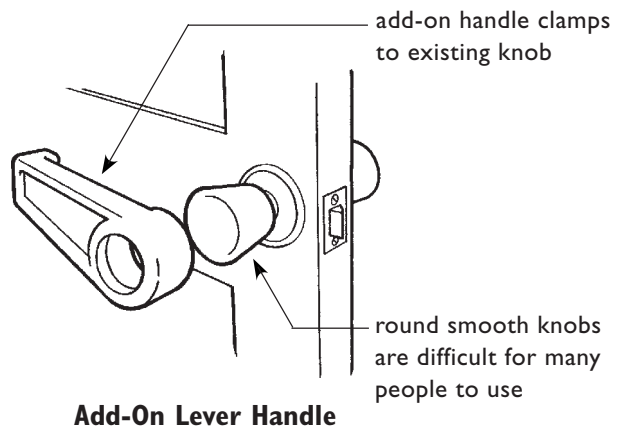


Add-On Lever Handles

Lindustries, Inc.
21 Shady Hill Road
Weston, MA 02193
617-235-5452

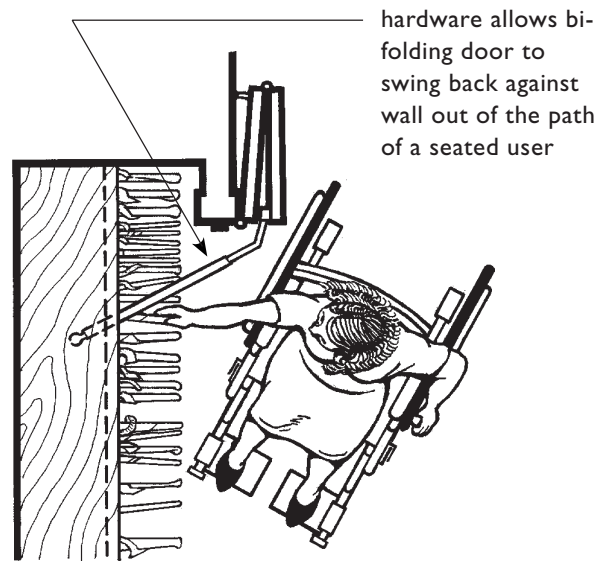
Extend Incorporated
P.O. Box 864
Moorhead, MN 56561-0864
218-236-9686

Schlage
2401 Bayshore Boulevard
San Francisco, CA 94134
415-467-1100



Bi-Fold Door Hardware

Ezyfold
The Kiwi Connection
82 Shelburne Center Road
Shelburne, MA 01370
413-625-2854



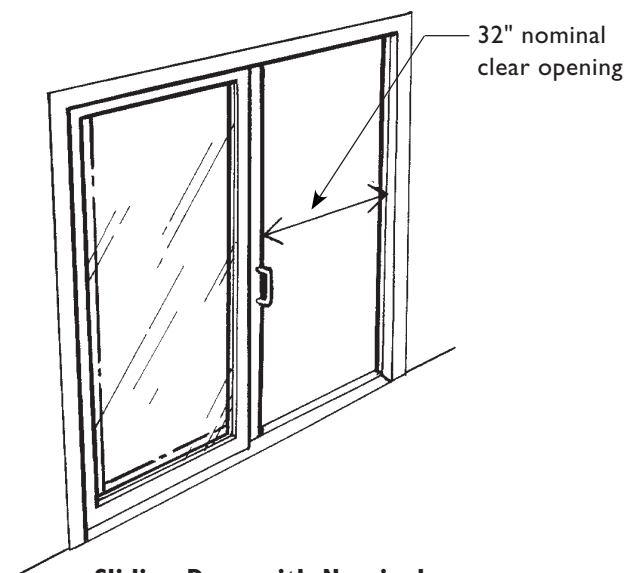
Bi-Fold Door Hardware

6'-0" Sliding Glass Doors with 32" Nominal Clear Opening

Bennings Building Products
210 Walser
Lexington, NC 27292
1-800-222-3861

Kolbe and Kolbe Millwork, Co., Inc.
1323 S. Eleventh Avenue
Wausau, WI 54401
715-842-5666
(no 6'-0" sliding door; do have 6'-6" door with
nominal 33" clear width opening)

Moss Supply Company
5001 North Graham St.
Charlotte, NC 28213
1-800-438-0770



**Sliding Door with Nominal
32" Clear Opening**

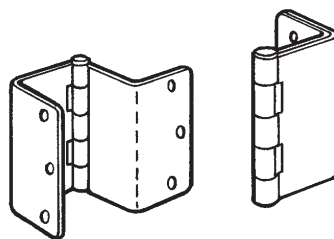
Note: While these doors provide the 32" nominal clear width, thresholds may need to be modified or altered to provide full access

Swing-Clear Hinges

Stanley Hardware
P.O. Box 1840
New Britain, CT 06050
1-800-622-4393

Ply Gems Barrier Free
Philon Corporation
6948 Frankford Avenue
Philadelphia, PA 19135
215-331-3434

Mont-Hard Inc.
2415 Lifehaus Drive
New Braunfels, TX 78130
512-625-7795



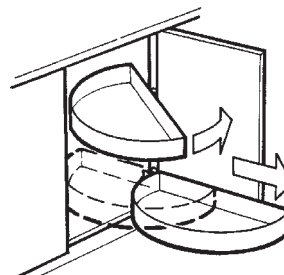
Swing-Clear Hinges

installation of swing-away hinges allows door to swing fully out of opening to increase the clear width of an existing door opening

KITCHEN STORAGE

Revolving/Extending Shelves

Hafele America
203 Feld Avenue
P.O. Box 1590
High Point, NC 27261
910-889-2322



Revolving/Extending Semicircular Shelves

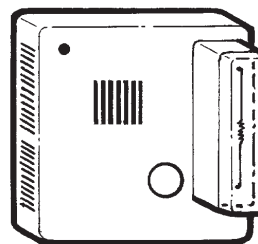
slide out shelves provide easy access for all users

VISUAL SIGNALS AND ALARMS

HITEC Group Int'l., Inc.
P.O. Box 187
Westmont, IL 60559
708-963-5588
1-800-288-8303

Nutone
Madison and Red Bank Roads
Cincinnati, OH 45227-1599
513-527-5100

Aiphone Corporation
1700 130th Avenue, N.E.
P.O. Box 90075
Bellevue, WA 98009
206-455-0510
(video door signal)



Visual and Audible Alarm

fire alarm with strobe light to alert people with hearing impairments

SELECTED REFERENCES

American National Standards Institute (1986). *American National Standard for Buildings and Facilities - Providing Accessibility and Usability for Physically Handicapped People* (ANSI A117.1-1986). New York, NY. *

American National Standards Institute (1992). *Accessible and Usable Buildings and Facilities* (ANSI/CABO A117.1-1992). New York, NY. *

Barrier Free Environments, Inc. (1987). *Adaptable Housing*. Washington, DC: U.S. Department of Housing and Urban Development, Office of Policy Development and Research. **

Barrier Free Environments, Inc. (1991). *The Accessible Housing Design File*. New York, NY: Van Nostrand Reinhold Company.

Center for Accessible Housing (1992). *Technical Design Bulletin #1, Fair Housing Accessibility Guidelines Requirement 1: Analyzing Site Impracticability on Difficult Sites*. Raleigh, NC.

Davies, Thomas D. Jr., and Kim A. Beasley (1992). *Fair Housing Design Guide for Accessibility*. Washington, DC: Paralyzed Veterans of America, National Association of Home Builders, National Multi-Housing Council, and the National Apartment Association.

* Available from the American National Standards Institute, 1430 Broadway, New York, NY 10018, telephone: 1-212-642-4900

** Available from HUD Distribution Center, 451 Seventh Street S.W., Washington, D.C. 20410; telephone: 1-800-767-7468

Leibrock, Cynthia, with Susan Behar (1992). *Beautiful Barrier-Free: A Visual Guide to Accessibility*. New York, NY: Van Nostrand Reinhold Company.

Raschko, Bettyann Boetticher (1982). *Housing Interiors for the Disabled and Elderly*. New York, NY: Van Nostrand Reinhold Company.

Salmen, John P. S. (1985). *The Do-Able Renewable Home*. Washington, DC: American Association of Retired Persons.

Steven Winter Associates, Inc., Tourbier and Walmsley, Inc., Edward Steinfeld, and Building Technology, Inc. (1993). *Cost of Accessible Housing*. Washington, DC: Department of Housing and Urban Development, Office of Policy Development and Research. ** ***

U.S. Department of Housing and Urban Development, Office of the Assistant Secretary for Fair Housing and Equal Opportunity. 24 Code of Federal Regulations (CFR) Chapter 1: Subchapter A.

Appendix I, *Final Fair Housing Regulations*, January 23, 1989.***

Appendix II, *Final Fair Housing Accessibility Guidelines*, March 6, 1991.***

Appendix III, *Preamble to the Final Fair Housing Accessibility Guidelines*, March 6, 1991.***

Appendix IV, *Fair Housing Accessibility Guidelines, Questions and Answers, Supplement to the Notice*, June 28, 1994. ***

U.S. Department of Housing and Urban Development, Office of the Assistant Secretary for Fair Housing and Equal Opportunity (1992). Washington, DC. *HUD Accessibility Seminars Workbook*.

Wylde, Margaret, Adrian Baron-Robbins, and Sam Clark (1994). *Building for a Lifetime: The Design and Construction of Fully Accessible Homes*. Newtown, CT: the Taunton Press.

**Available from HUD Distribution Center, 451 Seventh Street S.W., Washington, D.C. 20410; telephone: 1-800-767-7468

***Available from the Fair Housing Information Clearinghouse, P. O. Box 9146, McLean, VA 22102, telephone: 1-800-343-3442 (voice); 1-800-290-1617 (TTY).

APPENDIX B

Fair Housing Accessibility Guidelines

B



federal register

**Wednesday
March 6, 1991**

Part VI

Department of Housing and Urban Development

**Office of the Assistant Secretary for Fair
Housing and Equal Opportunity**

**24 CFR Chapter I
Final Fair Housing Accessibility
Guidelines**

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

Office of the Assistant Secretary for Fair Housing and Equal Opportunity

24 CFR Ch. I

[Docket No. H-91-2011; FR 2865-N-08]

Final Fair Housing Accessibility Guidelines

AGENCY: Office of the Assistant Secretary for Fair Housing and Equal Opportunity, HUD.

ACTION: Notice of Final Fair Housing Accessibility Guidelines.

SUMMARY: This document presents guidelines adopted by the Department of Housing and Urban Development to provide builders and developers with technical guidance on how to comply with the specific accessibility requirements of the Fair Housing Amendments Act of 1988. Issuance of this document follows consideration of public comment received on proposed accessibility guidelines published in the Federal Register on June 15, 1990. The guidelines presented in this document are intended to provide technical guidance only, and are not mandatory. The guidelines will be codified in the 1991 edition of the Code of Federal Regulations as Appendix II to the Fair Housing regulations (24 CFR Ch. I, Subch. A, App. II). The preamble to the guidelines will be codified in the 1991 edition of the Code of Federal Regulations as Appendix III to the Fair Housing regulations (24 CFR Ch. I, Subch. A, App. III).

EFFECTIVE DATE: March 6, 1991.

FOR FURTHER INFORMATION CONTACT: Merle Morrow, Office of HUD Program Compliance, room 5204, Department of Housing and Urban Development, 451 Seventh Street, SW., Washington, DC. 20410-0500, telephone (202) 708-2618 (voice) or (202) 708-0015 (TDD). (These are not toll-free numbers.)

SUPPLEMENTARY INFORMATION:

I. Adoption of Final Guidelines

The Department of Housing and Urban Development (Department) is adopting as its Fair Housing Accessibility Guidelines, the design and construction guidelines set forth in this notice (Guidelines). Issuance of this document follows consideration of public comments received in response to an advance notice of intention to develop and publish Fair Housing Accessibility Guidelines, published in the Federal Register on August 2, 1989 (54 FR 31866), and in response to

proposed accessibility guidelines published in the Federal Register on June 15, 1990 (55 FR 24730).

The Department is adopting as final Guidelines, the guidelines designated as Option One in the proposed guidelines published on June 15, 1990, with modifications to certain of the Option One design specifications. In developing the final Guidelines, the Department was cognizant of the need to provide technical guidance that appropriately implements the specific accessibility requirements of the Fair Housing Amendments Act of 1988, while avoiding design specifications that would impose an unreasonable burden on builders, and significantly increase the cost of new multifamily construction. The Department believes that the final Guidelines adopted by this notice (1) are consistent with the level of accessibility envisioned by Congress; (2) simplify compliance with the Fair Housing Amendments Act by providing guidance concerning what constitutes acceptable compliance with the Act; and (3) maintain the affordability of new multifamily construction by specifying reasonable design and construction methods.

The Option One design specifications substantially revised in the final Guidelines include the following:

(1) Site impracticality. The final Guidelines provide 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. Every dwelling unit on a floor served by an elevator must be on an accessible route, and must be made accessible in accordance with the Act's requirements for covered dwelling units.

For covered multifamily dwellings without elevators, the final Guidelines provide two alternative tests for determining site impracticality due to terrain. The first test is an individual building test which involves a two-step process: measurement of the slope of the undisturbed site between the planned entrance and all vehicular or pedestrian arrival points; and measurement of the slope of the planned finished grade between the entrance and all vehicular or pedestrian arrival points. The second test is a site analysis test which involves an analysis of the existing natural terrain (before grading) by topographic survey with 2 foot contour intervals, with slope determination made between each successive contour interval.

A site with a single building (without an elevator), having a common entrance for all units, may be analyzed only under the first test—the individual

building test. All other sites, including a site with a single building having multiple entrances serving either individual dwelling units or clusters of dwelling units, may be analyzed either under the first test or the second test. For sites for which either test is applicable (that is, all sites other than a site with a single nonelevator building having a common entrance for all units), the final Guidelines provide that regardless of which test is utilized by a builder or developer, at least 20% of the total ground floor units in nonelevator buildings, on any site, must comply with the Act's accessibility requirements.

(2) An accessible route into and through covered dwelling units. The final Guidelines distinguish between (i) single-story dwelling units, and (ii) multistory dwelling units in elevator buildings, and provide guidance on designing an accessible entrance into and through each of these two types of dwelling units.

(a) Single-story dwelling units. For single-story dwelling units, the final Guidelines specify the same design specification as presented in the proposed Option One guidelines, except that design features within the single-story dwelling units, such as a loft or a sunken living room, are exempt from the access specifications, subject to certain requirements. Lofts are exempt provided that all other space within the unit is on an accessible route. Sunken or raised functional areas, such as a sunken living room, are also exempt from access specifications, provided that such areas do not interrupt the accessible route through the remainder of the unit. However, split-level entries or areas will need ramps or other means of providing an accessible route.

(b) Multistory dwelling units in buildings with elevators. For multistory dwelling units in buildings with elevators, the final Guidelines specify that only the story served by the building elevator must comply with the accessible features for dwelling units required by the Fair Housing Act. The other stories of the multistory dwelling units are exempt from access specifications, provided that the story of the unit that is served by the building elevator (1) is the primary entry to the unit; (2) complies with Requirements 2 through 7 with respect to the rooms located on the entry/accessible level; and (3) contains a bathroom or powder room which complies with Requirement 7.

(c) Thresholds at patio, deck or balcony doors. The final Guidelines provide that exterior deck, patio, or balcony surfaces should be not more

than ¼ inch below the floor level of the interior of the dwelling unit, unless they are constructed of impervious materials such as concrete, brick or flagstone, in which case the surface should be no more than 4 inches below the floor level of the interior dwelling units, unless the local building code requires a lower drop. This provision and the following provision were included in order to minimize the possibility of interior water damage when exterior surfaces are constructed of impervious materials.

(d) Outside surface at entry door. The final Guidelines also provide that at the primary entry door to dwelling units with direct exterior access, outside landing surfaces constructed of impervious materials such as concrete, brick, or flagstone should be no more than ¼ inch below the interior of the dwelling unit. The Guidelines further provide that the finished surface of this area, located immediately outside the entry door, may be sloped for drainage, but the sloping may be no more than ¼ inch per foot.

(3) Usable bathrooms. The final Guidelines provide two alternative sets of specifications for making bathrooms accessible in accordance with the Act's requirements. The Act requires that an accessible or "usable" bathroom is one which provides sufficient space for an individual in a wheelchair to maneuver about. The two sets of specifications provide different approaches as to how compliance with this maneuvering space requirement may be achieved. The final Guidelines for usable bathrooms also provide that the usable bathroom specifications (either set of specifications) are applicable to powder rooms (i.e., a room with only a toilet and a sink) when the powder room is the only toilet facility on the accessible level of a covered multistory dwelling unit.

The details about, and the reasons for these modifications, and additional minor technical modifications made to certain design specifications of the Option One guidelines, are discussed more fully in the section-by-section analysis which appear later in this preamble.

Principal features of the Option One guidelines that were not changed in the final Guidelines include the following:

(1) Accessible entrance and an accessible route. The Option One guidelines for these two requirements remain unchanged in the final Guidelines.

(2) Accessible and usable public and common use areas. The Option One guidelines for public and common use areas remain unchanged in the final Guidelines.

(3) Door within individual dwelling units. The final Guidelines recommend that doors intended for user passage within individual dwelling units have a clear opening of at least 32 inches nominal width when the door is open 90 degrees.

(4) Doors to public and common use areas. The final Guidelines continued to provide that on accessible routes in public and common use areas, and for primary entry doors to covered units doors that comply with ANSI 4.13 meet the Act's requirement for "usable" doors.

(4) Thresholds at exterior doors. Subject to the exceptions for thresholds and changes in level at exterior areas constructed of impervious materials, the final Guidelines continue to specify that thresholds at exterior doors, including sliding door tracks, be no higher than ¼ inch.

(5) Reinforced walls for grab bars. The final Guidelines for bathroom wall reinforcement remains essentially unchanged from the Option One guidelines. The only change made to these guidelines has been to subject powder rooms to the reinforced wall requirement when the powder room is the only toilet facility on the accessible floor of a covered multistory dwelling unit.

The text of the final Guidelines follows the Preamble, which includes a discussion of the public comments received on the proposed guidelines, and the section-by-section analysis referenced above.

The design specification presented in the Fair Housing Accessibility Guidelines provide technical guidance to builders and developers in complying with the specific accessibility requirements of the Fair Housing Amendments Act of 1988. The Guidelines are intended to provide a safe harbor for compliance with the accessibility requirements of the Fair Housing Amendments Act, as implemented by 24 CFR 100.205 of the Department's Fair Housing regulations. The Guidelines are not mandatory. Additionally, the Guidelines do not prescribe specific requirements which must be met, and which, if not met, would constitute unlawful discrimination under the Fair Housing Amendments Act. Builders and developers may choose to depart from the Guidelines, and seek alternate ways to demonstrate that they have met the requirements of the Fair Housing Act.

II. Statutory and Regulatory Background

Title VIII of the Civil Rights Act of 1968 makes it unlawful to discriminate in any aspect relating to the sale, rental

or financing of dwellings, or in the provision of brokerage services or facilities in connection with the sale or rental of a dwelling, because of race, color, religion, sex or national origin. The Fair Housing Amendments Act of 1988 (Pub. L. 100-430, approved September 13, 1988) (Fair Housing Act or the Act) expanded coverage of title VIII (42 U.S.C. 3601-3620) to prohibit discriminatory housing practices based on handicap and familial status. As amended, section 804(f)(3)(C) of the Act provides that unlawful discrimination includes a failure to design and construct covered multifamily dwellings for first occupancy after March 13, 1991 (30 months after the date of enactment in accordance with certain accessibility requirements. The Act defines "covered multifamily dwellings" as "(a) buildings consisting of 4 or more units if such buildings have one or more elevators; and (b) ground floor units in other buildings consisting of 4 or more units" (42 U.S.C. 3604).

The Act makes it unlawful to fail to design and construct covered multifamily dwellings so that:

(1) Public use and common use portions of the dwellings are readily accessible to and usable by persons with handicaps;

(2) All doors within such dwellings which are designed to allow passage into and within the premises are sufficiently wide to allow passage by persons in wheelchairs; and

(3) All premises within such dwellings contain the following features of adaptive design:

(a) An accessible route into and through the dwelling;

(b) Light switches, electrical outlets, thermostats, and other environmental controls in accessible locations.

(c) Reinforcements in bathroom walls to allow later installation of grab bars; and

(d) Usable kitchens and bathrooms such that an individual in a wheelchair can maneuver about the space.

The Act provides that compliance with (1) the appropriate requirements of the American National Standard for Buildings and Facilities—Providing Accessibility and Usability for Physically Handicapped People (commonly cited as "ANSI A117.1"), or (2) with the laws of a State or unit of general local government, that has incorporated into such laws the accessibility requirements of the Act, shall be deemed to satisfy the accessibility requirements of the Act. (See section 804(f)(4) and (5)(A).) The Act also provides that the Secretary of the Department of Housing and Urban

Development shall provide technical assistance to States and units of local government and other persons to implement the accessibility requirements of the Act. (See section 804(f)(5)(C).)

Congress believed that the accessibility provisions of the Act would (1) facilitate the ability of persons with handicaps to enjoy full use of their homes without imposing unreasonable requirements on homebuilders, landlords and non-handicapped tenants; (2) be essential for equal access and to avoid future *de facto* exclusion of persons with handicaps; and (3) be easy to incorporate in housing design and construction. Congress predicted that compliance with these minimal accessibility design and construction standards would eliminate many of the barriers which discriminate against persons with disabilities in their attempts to obtain equal housing opportunities. (See H.R. Rep. No. 711, 100th Cong. 2d Sess. 27-28 (1988) ("House Report").)

The Fair Housing Act became effective on March 12, 1989. The Department implemented the Act by a final rule published January 23, 1989 (54 FR 3232), and which became effective on March 12, 1989. Section 100.205 of that rule incorporates the Act's design and construction requirements, including the requirement that multifamily dwellings for first occupancy after March 13, 1991 be designed and constructed in accordance with the Act's accessibility requirements. The final rule clarified which multifamily dwellings are subject to the Act's requirements. Section 100.205 provides, in paragraph (a), that covered multifamily dwellings shall be deemed to be designed and constructed for first occupancy on or before March 13, 1991, if they are occupied by that date, or if the last building permit or renewal thereof for the covered multifamily dwellings is issued by a State, County or local government on or before January 13, 1990. The Department selected the date of January 13, 1990 because it is fourteen months before March 13, 1991. Based on data contained in the Marshall Valuation Service, the Department found that fourteen months represented a reasonable median construction time for multifamily housing projects of all sizes. The Department chose the issuance of a building permit as the appropriate point in the building process because such permits are issued in writing by governmental authorities. The issuance of a building permit has the advantage of being a clear and objective standard. In addition, any project that actually

achieves first occupancy before March 13, 1991 will be judged to have met this standard even if the last building permit or renewal thereof was issued after January 13, 1990 (55 FR 3251).

Section 110.205 of the final rule also incorporates the Act's provisions that compliance with the appropriate requirements of ANSI A117.1, or with State or local laws that have incorporated the Act's accessibility requirements, suffices to satisfy the accessibility requirements of the Act as codified in § 100.205. In the preamble to the final rule, the Department stated that it would provide more specific guidance on the Act's accessibility requirements in a notice of proposed guidelines that would provide a reasonable period for public comment on the guidelines.

III. Proposed Accessibility Guidelines

On August 2, 1989, the Department published in the *Federal Register* an advance notice of intention to develop and publish Fair Housing Accessibility Guidelines (54 FR 31856). The purpose of this document was to solicit early comment from the public concerning the content of the Accessibility Guidelines, and to outline the Department's procedures for their development. To the extent practicable, the Department considered all public comments submitted in response to the August 2, 1989 advance notice in its preparation of the proposed accessibility guidelines.

On June 15, 1990, the Department published proposed Fair Housing Accessibility guidelines (55 FR 24370). The proposed guidelines presented, and requested public comment on, three options for accessible design:

(1) Option one (Option One) provided guidelines developed by the Department with the assistance of the Southern Building Code Congress International (SBCCI), and incorporated suggestions received in response to the August 2, 1989 advance notice;

(2) Option two (Option Two) offered guidelines developed by the National Association of Home Builders (NAHB) and the National Coordinating Council on Spinal Cord Injuries (NCCSCI); and

(3) Option three (Option Three) offered "adaptable accommodations" guidelines, an approach that provides for identification of certain features in dwelling units that could be made accessible to people with handicaps on a case-by-case basis.

In the June 15, 1990 notice of proposed guidelines, the Department recognized that projects then being designed, in advance of publication of the final Guidelines may not become available for occupancy until after March 13, 1991. The Department advised that efforts to

comply with the proposed guidelines. Option One, in the design of projects which would be completed before issuance of the final Guidelines, would be considered as evidence of compliance with the Act in connection with the Department's investigation of any complaints. Following publication of the June 15, 1990 notice, the Department received a number of inquiries concerning whether certain design and construction activities in connection with projects likely to be completed before issuance of final Guidelines would be considered by the Department to be in compliance with the Act.

In order to resolve these questions, the Department, on August 1, 1990, published in the *Federal Register* a supplementary notice to the proposed guidelines (55 FR 31191). In the supplementary notice, the Department advised that it only would consider efforts to comply with the proposed guidelines, Option One, as evidence of compliance with the Act. The Department stated that evidence of compliance with the Option One guidelines, under the circumstances described in the supplementary notice, would be a basis for determination that there is no reasonable cause to believe that a discriminatory housing practice under section 804(f)(3) has occurred, or is about to occur in connection with the investigation of complaints filed with the Department relating to covered multifamily dwellings. The circumstances described in the August 1, 1990 supplementary notice that the Department found would be in compliance with the Act, were limited to:

(1) Any covered multifamily dwellings which are designed in accordance with the Option One guidelines, and for which construction is completed before publication of the final Fair Housing Accessibility Guidelines; and

(2) Any covered multifamily dwellings which have been designed in accordance with the Option One guidelines, but for which construction is not completed by the date of publication of the final Guidelines provided:

(a) Construction begins before the final Guidelines are published; or

(b) A building permit is issued less than 60 days after the final Guidelines are published.

On September 7, 1990, the Department published for public comment a Preliminary Regulatory Impact Analysis on the Department's assessment of the economic impact of the Guidelines, as implemented by each of the three design options then under consideration (55 FR 37072-37129).

IV. Public Comments and Commenters

The proposed guidelines provided a 90-day period for the submission of comments by the public, ending September 13, 1990. The Department received 562 timely comments. In addition, a substantial number of comments were received by the Department after the September 13, 1990 deadline. Although those comments were not timely filed, they were reviewed to assure that any major issues raised had been adequately addressed in comments that were received by the deadline. Each of the timely comments was read, and a list of all significant issues raised by those comments was compiled. All these issues were considered in the development of the final Guidelines.

Of the 562 comments received, approximately 200 were from disability advocacy organizations, or units of State or local government concerned with disability issues. Sixty-eight (68) additional commenters identified themselves as members of the disability community; 61 commenters identified themselves as individuals who work with members of the disability community (e.g., vocational or physical therapists or counselors), or who have family members with disabilities; and 96 commenters were members of the building industry, including architects, developers, designers, design consultants, manufacturers of home building products, and rental managers. Approximately 292 commenters supported Option One without any recommendation for change. An additional 155 commenters supported Option One, but recommended changes to certain Option One design standards. Twenty-six (26) commenters supported Option Two, and 10 commenters supported Option Three. The remaining commenters submitted questions, comments and recommendations for changes on certain design features of one or more of the three options, but expressed no preference for any particular option, or, alternatively, recommended final guidelines that combine features from two or all three of the options.

The Commenters

The commenters included several national, State and local organizations and agencies, private firms, and individuals that have been involved in the development of State and local accessibility codes. These commenters offered valuable information, including copies of State and local accessibility codes, on accessibility design standards. These commenters included: the

Southern Building Code Congress International (SBCCI); the U.S. Architectural and Transportation Barriers Compliance Board (ATBCB); the Building Officials & Code Administrators International, Inc. (BOCA); the State of Washington Building Code Council; the Seattle Department of Construction and Land Use; the Barrier-free Subcode Committee of the New Jersey Uniform Construction Code Advisory Board; the Department of Community Planning, Housing and Department of Arlington County, Virginia; the City of Atlanta Department of Community Development, Bureau of Buildings; and members of the Department of Architecture, the State of University of New York at Buffalo. In addition to the foregoing organizations, a number of the commenters from the building industry submitted detailed comments on the proposed guidelines.

The commenters also included a number of disability organizations, several of which prepared detailed comments on the proposed guidelines. The comments of two disability organizations also were submitted as concurring comments by many individuals and other disability advocacy organizations. These two organizations are the Disability Rights Education & Defense Fund, and the Consortium for Citizens with Disabilities (CCD). The CCD represents the following organizations: the Association for Education and Rehabilitation of the Blind and Visually Impaired, Association for Retarded Citizens of the United States, International Association of Psychological Rehabilitation Facilities, National Alliance for the Mentally Ill, National Association of Protection and Advocacy Systems, National Association of Developmental Disabilities Councils, National Association of State Mental Health Program Directors, National Council of Community Mental Health Centers, National Head Injury Foundation, National Mental Health Association, United Cerebral Palsy Associations, Inc. Both the Disability Rights Education and Defense Fund and the CCD were strongly supportive of Option One.

A coalition of 20 organizations (Coalition), representing both the building industry and the disability community, also submitted detailed comments on the proposed guidelines. The members of the Coalition include: American Institute of Architects, American Paralysis Association, American Resort and Residential Development Association, American Society of Landscape Architects,

Apartment and Office Building Association, Association of Home Appliance Manufacturers, Bridge Housing Corporation, Marriott Corporation, Mortgage Bankers Association, National Apartment Association, National Assisted Housing Management Association, National Association of Home Builders (NAHB), National Association of Realtors, National Association of Senior Living Industries, National Conference of States on Building Codes and Standards, National Coordinating Council on Spinal Cord Injury (NCCSCI), National Leased Housing Association, National Multi Housing Council, National Organization on Disability, and the Paralyzed Veterans of America.

The commenters also included U.S. Representatives Don Edwards, Barney Frank and Hamilton Fish, Jr., who advised that they were the primary sponsors of the Fair Housing Act, and who expressed their support of Option One.

Comments on the Three Options

In addition to specific issues and questions raised about the design standards recommended by the proposed guidelines, a number of commenters simply submitted comments on their overall opinion of one or more of the options. Following is a summary of the opinions typically expressed on each of the options.

Option One. The Option One guidelines drew a strong reaction from commenters. Supporters stated that the Option One guidelines provided a faithful and clearly stated interpretation of the Act's intent. Opponents of Option One stated that its design standards would increase housing costs significantly—for everyone. Several commenters who supported some features of Option One were concerned that adoption of Option One in its entirety would escalate housing costs. Another frequent criticism was that Option One's design guidelines were too complex and cumbersome.

Option Two. Supporters of Option Two state that this option presented a reasonable compromise between Option One and Option Three. Supporters stated that the Option Two guidelines provided more design flexibility than the Option One guidelines, and that this flexibility would allow builders to deliver the required accessibility features at a lower cost. Opponents of Option Two stated that this option allowed builders to circumvent the Act's intent with respect to several essential accessibility features.

Option Three. Supporters of Option Three stated that Option Three presented the best method of achieving the accessibility objectives of the Act, at the lowest possible cost. Supporters stated that Option Three would contain housing costs, because design adaptation only would be made to those units which actually would be occupied by a disabled resident, and the adaptation would be tailored to the specific accessibility needs of the individual tenant. Opponents of Option Three stated that this option, with its "add-on" approach to accessibility, was contrary to the Act's intent, which, the commenter claimed, mandates accessible features at the time of construction.

Comments on the Costs of Implementation

In addition to the comments on the specific features of the three design options, one of the issues most widely commented upon was the cost of compliance with the Act's accessibility requirements, as implemented by the Guidelines. Several commenters disputed the Department's estimate of the cost of compliance, as presented in the Initial Regulatory Flexibility Analysis, published with the proposed guidelines on June 15, 1990 (55 FR 24384-24385), and in the Preliminary Regulatory Impact Analysis published on September 7, 1990 (55 FR 37972-37129). The Department's response to these comments is discussed in the Final Regulatory Impact Analysis, which is available for public inspection during regular business hours in the Office of the Rules Docket Clerk, room 10276, Department of Housing and Urban Development, 451 Seventh Street, SW., Washington, DC 20410-0500.

V. Discussion of Principal Public Comment Issues, and Section-by-Section Analysis of the Final Guidelines.

The following presents a discussion of the principal issues raised by the commenters, and the Department's response to each issue. This discussion includes a section-by-section analysis of the final Guidelines that addresses many of the specific concerns raised by the commenter, and highlights the differences between the proposed Option One guidelines and the final Guidelines. Comments related to issues outside the purview of the Guidelines, but related to the Act (e.g., enforcement procedures, statutory effective date), are discussed in the final section of the preamble under the preamble heading "Discussion of Comments on Related Fair Housing Issues".

1. Discussion of General Comments on the Guidelines

ANSI Standard

Comment. Many commenters expressed their support for the ANSI Standard as the basis for the Act's Guidelines, because ANSI is a familiar and accepted accessibility standard.

Response. In developing the proposed and final Guidelines, the Department was cognizant of the need for uniformity, and of the widespread application of the ANSI Standard. The original ANSI A117.1, adopted in 1961, formed the technical basis for the first accessibility standards adopted by the Federal Government, and most State governments. The 1980 edition of that standard was based on research funded by the Department, and became the basis for the Uniform Federal Accessibility Standards (UFAS), published in the Federal Register on August 4, 1984 (47 FR 33882). The 1980 edition also was generally accepted by the private sector, and was recommended for use in State and local building codes by the Council of American Building Officials. Additionally, Congress, in the Fair Housing Act, specifically referenced the ANSI Standard, thereby encouraging utilization of the ANSI Standard as guidance for compliance with the Act's accessibility requirements. Accordingly, in using the ANSI Standard as a reference point for the Fair Housing Act Accessibility Guidelines, the Department is issuing Guidelines based on existing and familiar design standards, and is promoting uniformity between Federal accessibility standards, and those commonly used in the private sector. However, the ANSI Standard and the final Guidelines have differing purposes and goals, and they are by no means identical. The purpose of the Guidelines is to describe minimum standards of compliance with the specific accessibility requirements of the Act.

Comment. Two commenters suggested that the Department adopt the ANSI Standard as the guidelines for the Fair Housing Act's accessibility requirements, and not issue new guidelines.

Response. The Department has incorporated in the Guidelines those technical provisions of the ANSI Standard that are consistent with the Act's accessibility requirements. However, with respect to certain of the Act's requirements, the applicable ANSI provisions impose more stringent design standards than required by the Act. (In the preamble to the proposed rule (55 FR 3251), and again in the preamble to the

proposed guidelines (55 FR 24370), the Department advised that a dwelling unit that complies fully with the ANSI Standard goes beyond what is required by the Fair Housing Act.) The Department has developed Guidelines for those requirements of the Act where departures from ANSI were appropriate.

Comment. A few commenters questioned whether the Department would revise the Guidelines to correspond to ANSI's periodic update of its standard.

Response. The ANSI Standard is reviewed at five-year intervals. As the ANSI Standard is revised in the future, the Department intends to review each version, and, if appropriate to make revisions to the Guidelines in accordance with any revisions made to the ANSI Standard. Modifications of the Guidelines, whether or not reflective of changes to the ANSI Standard, will be subject to notice and prior public comment.

Comment. A few commenters requested that the Department republish the ANSI Standard in its entirety in the final Guidelines.

Response. The American National Standards Institute (ANSI) is a private, national organization, and is not connected with the Federal Government. The Department received permission from ANSI to print the ANSI Standard in its entirety, as the time of publication of the proposed guidelines (55 FR 24404-24487), specifically for the purpose of assisting readers of the proposed guidelines in developing timely comments. In the preamble to the proposed guidelines, the Department stated that since it was printing the entire ANSI Standard, as an appendix to the proposed guidelines, the final notice of the Accessibility Guidelines would not include the complete text of the ANSI Standard (55 FR 24371). Copies of the ANSI Standard may be purchased from the American National Standards Institute, 1430 Broadway, New York, NY 10018.

Comment. Another commenter requested that the Department confirm that any ANSI provision not cited in the final Guidelines is not necessary for compliance with the Act.

Response. In the proposed guidelines, the Department stated that: "Where the guidelines rely on sections of the ANSI Standard, the ANSI sections are cited. * * * For those guidelines that differ from the ANSI Standard, recommended specifications are provided" (55 FR 24385). The final Guidelines include this statement, and further state that the ANSI sections not cited in the Guidelines have been determined by the

Department not to be necessary for compliance with the Act's requirements.

Bias Toward Wheelchair Users

Comment. Two commenters stated that the proposed guidelines were biased toward wheelchair users, and that the Department has erroneously assumed that the elderly and the physically disabled have similar needs. The commenters stated that the physical problems suffered by the elderly often involve arthritic and back problems, which make bending and stooping difficult.

Response. The proposed guidelines, and the final Guidelines, reflect the accessibility requirements contained in the Fair Housing Act. These requirements largely are directed toward individuals with mobility impairments, particularly those who require mobility aids, such as wheelchairs, walkers, or crutches. In two of the Act's accessibility requirements, specific reference is made to wheelchair users. The emphasis of the law and the Guidelines on design and construction standards that are compatible with the needs of wheelchair users is realistic because the requirements for wheelchair access (e.g., wider doorways) are met more easily at the construction stage. (See House Report at 27.) Individuals with nonmobility impairments more easily can be accommodated by later nonstructural adaptations to dwelling units. The Fair Housing Act and the Fair Housing regulations assure the right of these individuals to make such later adaptations. (See section 804(f)(3)(A) of the Act and 24 CFR 100.203 of the regulations. See also discussion of adaptations made to units in this preamble under the heading "Costs of Adaptation" in the section entitled "Discussion of Comments on Related Fair Housing Issues".)

Compliance Problems Due to Lack of Accessibility Guidelines

Comment. A number of commenters from the building industry attributed difficulty in meeting the Act's March 13, 1991 compliance deadline, in part, to the lack of accessibility guidelines. The commenters complained about the time that it has taken the Department to publish proposed guidelines, and the additional time it has taken to publish final Guidelines.

Response. The Department acknowledges that the development and issuance of final Fair Housing Accessibility Guidelines has been a time-consuming process. However, the building industry has not been without guidance on compliance with the Act's

accessibility requirements. The Fair Housing Act identifies the ANSI Standard as providing design standards that would achieve compliance with the Act's accessibility requirements. Additionally, in the preamble to both the proposed and final Fair Housing rule, and in the text of § 100.205, the Department provided examples of how certain of the Act's accessibility requirements may be met. (See 53 FR 45004-45005, 54 FR 3249-3252 (24 CFR Ch. I, Subch. A, App. I, at 583-586 (1990)). 24 CFR 100.205.)

The delay in publication of the final Guidelines has resulted, in part, because of the Department's pledge, at the time of publication of the final Fair Housing regulations, that the public would be provided an opportunity to comment on the Guidelines (54 FR 3251, 24 CFR Ch. I, Subch. A, at 585-586 (1990)). The delay in publication of the final Guidelines also is attributable in part to the Department's effort to develop Guidelines that would (1) ensure that persons with disabilities are afforded the degree of accessibility provided for in the Fair Housing Act, and (2) avoid the imposition of unreasonable requirements on builders.

Comment. Two commenters requested that interim accessibility guidelines should be adopted for projects "caught in the middle", i.e. those projects started before publication of the final Guidelines.

Response. The preamble to the June 15, 1990 proposed guidelines and the August 1, 1990 supplementary notice directly addressed this issue. In both documents, the Department recognized that projects being designed in advance of publication of the Guidelines may not become available for occupancy until after March 13, 1991. The Department advised that efforts to comply with the Option One guidelines, in the design of projects that would be completed before issuance of the final Guidelines, would be considered as evidence of compliance with the Act in connection with the Department's investigation of any complaints. The August 1, 1990 supplementary notice restated the Department's position on compliance with the Act's requirements prior to publication of the final Guidelines, and addressed what "evidence of compliance" will mean in a complaint situation.

Conflict with Historic Preservation Design Codes

Comment. Two commenters expressed concern about a possible conflict between the Act's accessibility requirements and local historic preservation codes (including

compatible design requirements). The commenters stated that their particular concerns are: (1) The conversion of warehouse and commercial space to dwelling units; and (2) new housing construction on vacant lots in historically designated neighborhoods.

Response. Existing facilities that are converted to dwelling units are not subject to the Act's accessibility requirements. Additionally, alteration, rehabilitation or repair of covered multifamily dwellings are not subject to the Act's accessibility requirements. The Act's accessibility requirements only apply to new construction. With respect to new construction in neighborhoods subject to historic codes, the Department believes that the Act's accessibility requirements should not conflict with, or preclude building designs compatible with historic preservation codes.

Conflict with Local Accessibility Codes

Comment. Several commenters inquired about the appropriate course of action to follow when confronted with a conflict between the Act's accessibility requirements and local accessibility requirements.

Response. Section 100.205(i) of the Fair Housing regulations implements section 804(f)(8) of the Act, which provides that the Act's accessibility requirements do not supplant or replace State or local laws that impose higher accessibility standards (53 FR 45005). For accessibility standards, as for other code requirements, the governing principle to follow when Federal and State (or local) codes differ is that the more stringent requirement applies.

This principle is equally applicable when multifamily dwellings are subject to more than one Federal law requiring accessibility for persons with physical disabilities. For example, a multifamily dwelling may be subject both to the Fair Housing Amendments Act and to section 504 of the Rehabilitation Act of 1973. Section 504 requires that 5% of units in a covered multifamily dwelling be fully accessible—thus imposing a stricter accessibility standard for those units than would be imposed by the Fair Housing Act. However, compliance only with the section 504 requirements would not satisfy the requirements of the Fair Housing Act. The remaining units in the covered multifamily dwelling would be required to meet the specific accessibility requirements of the Fair Housing Act.

Comment. One commenter, the Seattle Department of Construction and Land Use, presented an example of how a local accessibility code that is more

stringent with respect to some accessibility provisions may interact with the Act's accessibility requirements, where they are more stringent with respect to other provisions. The commenter pointed out that the State of Washington is very hilly, and that the State of Washington's accessibility code requires accessible buildings on sites that would be deemed impractical under the Option One guidelines. The commenter stated that the State of Washington's accessibility code may require installation of a ramp, and that the ramp may then create an accessible entrance for the ground floor, making it subject to the Act's accessibility requirements. The commenter asked that, since the project was not initially subject to the Act's requirements, whether the creation of an accessible ground floor in accordance with the State code provisions would require all units on the ground floor to be made accessible in accordance with the Fair Housing Act. (The State of Washington's accessibility code would require only a percentage of the units to be accessible.)

Response. The answer to the commenter's question is that a non-elevator building with an accessible entrance on an accessible route is required to have the ground floor units designed and constructed in compliance with the Act's accessibility requirements. This response is consistent with the principle that the stricter accessibility requirement applies.

Design Guidelines for Environmental Illness

Comment. Twenty-three (23) commenters advised the Department that many individuals are disabled because of severe allergic reactions to certain chemicals used in construction, and in construction materials. These commenters requested that the Department develop guidelines for constructing or renovating housing that are sensitive to the problems of individuals who suffer from these allergic reactions (commonly referred to as environmental illnesses). These commenters further advised that, as of February 1988, the Social Security Administration lists as a disability "Environmental Illness" (P.O.M.S. Manual No. 24515.065).

Response. The Guidelines developed by the Department are limited to providing guidance relating to the specific accessibility requirements of the Fair Housing Act. As discussed above, under the preamble heading "Bias Toward Wheelchair Users," the Act's requirements primarily are directed to

providing housing that is accessible to individuals with mobility impairments. There is no statutory authority for the Department to create the type of design and construction standards suggested by the commenters.

Design Guidelines for the Hearing and Visually-Impaired

Comment. Several commenters stated that the proposed guidelines failed to provide design features for people with hearing and visual impairments. These commenters stated that visual and auditory design features must be included in the final Guidelines.

Response. As noted in the response to the preceding comment, the Department is limited to providing Guidelines for the specific accessibility requirements of the Act. The Act does not require fully accessible individual dwelling units. For individual dwelling units, the Act requires the following: Doors sufficiently wide to allow passage by handicapped persons in wheelchairs; accessible route into and through the dwelling unit; light switches; electrical outlets, thermostats, and other environmental controls in accessible locations; reinforcements in bathroom walls to allow later installation of grab bars; and usable kitchens and bathrooms such that an individual in a wheelchair can maneuver about the space. To specify visual and auditory design features for individual dwelling units would be to recommend standards beyond those necessary for compliance with the Act. Such features were among those identified in Congressional statements discussing modifications that would be made by occupants.

The Act, however, requires public and common use portions of covered multifamily dwellings to be "readily accessible to and usable by handicapped persons." The more comprehensive accessibility requirement for public and common use areas of dwellings necessitates a more comprehensive accessibility standard for these areas. Accordingly, for public and common use areas, the final Guidelines recommend compliance with the appropriate provisions of the ANSI Standard. The ANSI Standard for public and common use areas specifies certain design features to accommodate people with hearing and visual impairments.

Guidelines as Minimum Requirements

Comment. A number of commenters requested that the Department categorize the final Guidelines as minimum requirements, and not as performance standards, because "recommended" guidelines are less effective in achieving the objectives of

the Act. Another commenter noted that a safe harbor provision becomes a *de facto* minimum requirement, and that it should therefore be referred to as a minimum requirement.

Response. The Department has not categorized the final Guidelines as either performance standards or minimum requirements. The minimum accessibility requirements are contained in the Act. The Guidelines adopted by the Department provide one way in which a builder or developer may achieve compliance with the Act's accessibility requirements. There are other ways to achieve compliance with the Act's accessibility requirements, as for example, full compliance with ANSI A117.1. Given this fact, it would be inappropriate on the part of the Department to constrain designers by presenting the Fair Housing Accessibility Guidelines as minimum requirements. Builders and developers should be free to use any reasonable design that obtains a result consistent with the Act's requirements. Accordingly, the design specifications presented in the final Guidelines are appropriately referred to as "recommended guidelines".

It is true, however, that compliance with the Fair Housing Accessibility Guidelines will provide builders with a safe harbor. Evidence of compliance with the Fair Housing Accessibility Guidelines adopted by this notice shall be a basis for a determination that there is no reasonable cause to believe that a discriminatory housing practice under section 804(f)(3) has occurred or is about to occur in connection with the investigation of complaints filed with the Department relating to covered multifamily dwellings.

National Accessibility Code

Comment. Several commenters stated that there are too many accessibility codes—ANSI, UFAS, and State and local accessibility codes. These commenters requested that the Department work with the individual States to arrive at one national uniform set of accessibility guidelines.

Response. There is no statutory authority to establish one nationally uniform set of accessibility standards. The Department is in agreement with the commenters' basic theme that increased uniformity in accessibility standards is desirable. In furtherance of this objective, the Department has relied upon the ANSI Standard as the design basis for the Fair Housing Accessibility Guidelines. The Department notes that the ANSI Standard also serves as the design basis for the Uniform Federal

Accessibility Standards (UFAS), the Minimum Guidelines and Requirements for Accessible Design (MGRAD) issued by the U.S. Architectural and Transportation Barriers Compliance Board, and many State and local government accessibility codes.

One Set of Design Standards

Comment. A number of commenters objected to the fact that the proposed guidelines included more than one set of design standards. The commenters stated that the final Guidelines should present only one set of design standards so as not to weaken the Act's accessibility requirements.

Response. The inclusion of options for accessibility design in the proposed guidelines was both to encourage a maximum range of public comment, and to illustrate that there may be several ways to achieve compliance with the Act's accessibility requirements. Congress made clear that compliance with the Act's accessibility standards did not require adherence to a single set of design specifications. In section 804(f)(4) of the Act, the Congress stated that compliance with the appropriate requirements of the ANSI Standard suffices to satisfy the accessibility requirements of the Act. In House Report No. 711, the Congress further stated as follows:

However this section (section 804(f)(4)) is not intended to require that designers follow this standard exclusively, for there may be other local or State standards with which compliance is required or there may be other creative methods of meeting these standards. (House Report at 27)

Similarly, the Department's Guidelines are not the exclusive standard for compliance with the Act's accessibility requirements. Since the Department's Guidelines are a safe harbor, and not minimum requirements, builders and developers may follow alternative standards that achieve compliance with the Act's accessibility requirements. This policy is consistent with the intent of Congress, which was to encourage creativity and flexibility in meeting the requirements of the Act.

Reliance on Preamble to Guidelines

Comment. One commenter asked whether the explanatory information in the background section of the final Guidelines may be relied upon, and deemed to have the same force and effect as the Guidelines themselves.

Response. The Fair Housing Accessibility Guidelines are—as the name indicates—only guidelines, not regulations or minimum requirements. The Guidelines consist of recommended design specifications for compliance

with the specific accessibility requirements of the Fair Housing Act. The final Guidelines provide builders with a safe harbor that, short of specifying all of the provisions of the ANSI Standard, illustrate acceptable methods of compliance with the Act. To the extent that the preamble to the Guidelines provide clarification on certain provisions of the Guidelines, or illustrates additional acceptable methods of compliance with the Act's requirements, the preamble may be relied upon as additional guidance. As noted in the "Summary" portion of this document, the preamble to the Guidelines will be codified in the 1991 edition of the Code of Federal Regulations as Appendix III to the Fair Housing regulations (24 CFR Ch. I, Subch. A, App. III).

"User Friendly" Guidelines

Comment. A number of commenters criticized the proposed guidelines for being too complicated, too ambiguous, and for requiring reference to a number of different sources. These commenters requested that the final Guidelines be clear, concise and "user friendly". One commenter requested that the final Guidelines use terms that conform to terms used by each of the three major building code organizations: the Building Officials and Code Administrators International, Inc. (BOCA); the International Conference of Building Officials (ICBO), and the Southern Building Code Congress International (SBCCI).

Response. The Department recognizes that the Accessibility Guidelines include several highly technical provisions. In drafting the final Guidelines, the Department has made every effort to explain these provisions as clearly as possible, to use technical and building terms consistent with the terms used by the major building code organizations, to define terms clearly, and to provide additional explanatory information on certain of the provisions of the Guidelines.

2. Section-by-Section Analysis of Final Guidelines

The following presents a section-by-section analysis of the final Guidelines. The text of the final Guidelines is organized into five sections. The first four sections of the Guidelines provide background and explanatory information on the Guidelines. Section 1, the Introduction, describes the purpose, scope and organization of the Guidelines. Section 2 defines relevant terms used. Section 3 reprints the text of 24 CFR 100.205, which implements the Fair Housing Act's accessibility

requirements, and Section 4 describes the application of the Guidelines. Section 5, the final section, presents the design specifications recommended by the Department for meeting the Act's accessibility requirements, as codified in 24 CFR 100.205. Section 5 is subdivided into seven areas, to address each of the seven areas of accessible design required by the Act.

The following section-by-section analysis discusses the comments received on each of the sections of the proposed Option One Guidelines, and the Department's response to these comments. Where no discussion of comments is provided under a section heading, no comments were received on this section.

Section 1. Introduction

Section 1, the Introduction, describes the purpose, scope and organization of the Fair Housing Accessibility Guidelines. This section also clarifies that the accessibility guidelines apply only to the design and construction requirements of 24 CFR 100.205, and do not relieve persons participating in a federal or federally-assisted program or activity from other requirements, such as those required by section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794), or the Architectural Barriers Act of 1968 (42 U.S.C. 4151-4157). (The design provisions for those laws are found at 24 CFR Part 8 and 24 CFR Part 40, respectively.) Additionally, section 1 explains that only those sections of the ANSI Standard cited in the Guidelines are required for compliance with the accessibility requirements of the Fair Housing Act. Revisions to section 1 reflect the Department's response to the request of several commenters for further clarification on the purpose and scope of the Guidelines.

Section 2. Definitions

This section incorporates appropriate definitions from § 100.201 of the Department's Fair Housing regulations, and provides additional definitions for terms used in the Guidelines. A number of comments were received on the definitions. Clarifications were made to certain definitions, and additional terms were defined. New terms defined in the final Guidelines include: *adaptable*, *assistive device*, *ground floor*, *loft*, *multistory dwelling unit*, *single-story dwelling unit*, and *story*. The inclusion of new definitions reflects the comments received, and also reflects new terms introduced by changes to certain of the Option One design specifications. In several instances, the clarifications of existing definitions, or the new terms

defined, were derived from definitions of certain terms used by one or more of the major building code organizations. Comments on specific definitions are discussed either below or in that portion of the preamble under the particular section heading of the Guidelines in which these terms appear.

Accessible

Comment. A number of commenters stated that the Department used the terms "accessible" and "adaptable" interchangeably, and requested clarification of the meaning of each. The commenters noted that, under several State building codes, these terms denote different standards for compliance. The commenters requested that if the Department intends these two terms to have the same meaning, this should be clearly stated in the final Guidelines, and, if the terms have different meanings, "adaptable" should also be defined.

Response. The Department's use of the terms "adaptable" and "accessible" in the preamble to the proposed guidelines generally reflected Congress' use of the terms in the text of the Act, and in the House and Senate conference reports. However, to respond to commenters' concerns about the distinctions between these terms, the Department has included a definition of "adaptable dwelling units" to clarify the meaning of this term, within the context of the Fair Housing Act. In the final Guidelines, "adaptable dwelling units", when used with respect to covered multifamily dwellings, means dwelling units that include features of adaptable design specified in 24 CFR 100.205(c) (2)-(3).

The Fair Housing Act refers to design features that include both the minimal "accessibility" features required to be built into the unit, and the "adaptable" feature of reinforcement for bathroom walls for the future installation of grab bars. Accordingly, under the Fair Housing Act, an "adaptable dwelling unit" is one that meets the minimal accessibility requirements specified in the Act (i.e., usable doors, an accessible route, accessible environmental controls, and usable kitchens and bathrooms) and the "adaptable" structural feature of reinforced bathroom walls for later installation of grab bars.

Assistive Device

Comment. Several commenters requested that we define the phrase "assistive device."

Response. "Assistive device" means an aid, tool, or instrument used by a person with disabilities to assist in

activities of daily living. Examples of assistive devices include tongs, knob turners, and oven rack pusher/pullers. A definition for "assistive device" has been included in the final Guidelines.

Bathroom

In response to the concern of several commenters, the Department has revised the definition of "bathroom" in the final Guidelines to clarify that a bathroom includes a "compartmented" bathroom. A compartmented bathroom is one in which the bathroom fixtures are distributed among interconnected rooms. The fact that bathroom facilities may be located in interconnecting rooms does not exempt this type of bathroom from the Act's accessibility requirements. This clarification, and minor editorial changes, were the only revisions made to the definition of "bathroom". Other comments on this term were as follows:

Comment. Several commenters requested that the Department reconsider its definition of "bathroom", to include powder rooms, i.e., rooms with only a toilet and sink. These commenters stated that persons with disabilities should have access to all bathrooms in their homes, not only full bathrooms. One commenter believed that, unless bathroom was redefined to include single- or two-fixture facilities, some developers will remove a bathtub or shower from a proposed second full bathroom to avoid having to make the second bathroom accessible. The commenter suggested that bathroom be redefined to include any room containing at least two of the possible bathroom fixtures (toilet, sink, bathtub or shower).

Response. In defining "bathroom" to include a water closet (toilet), lavatory (sink), and bathtub or shower, the Department has followed standard dictionary usage, as well as Congressional intent. Congressional statements emphasized that the Act's accessibility requirements were expected to have a minimal effect on the size and design of dwelling units. In a full-size bathroom, this can be achieved. To specify space for wheelchair maneuvering in a powder room would, in most cases, require enlarging the room significantly. However, a powder room would be subject to the Act's accessibility requirements if the powder room is the only toilet facility on the accessible level of a covered multifamily dwelling unit. Additionally, it should be noted that doors to powder rooms (regardless of the location of the powder room), like all doors within dwelling units, are required by the Act to be wide enough for wheelchair passage. Some

powder rooms may, in fact, be usable by persons in wheelchairs.

Comment. One commenter requested that the final Guidelines provide that a three-quarters bathroom (water closet, lavatory and shower) would not be subject to the accessibility requirements—specifically, the requirement for grab bar reinforcement.

Response. The Fair Housing Act requires reinforcements in bathroom walls to allow for later installation of grab bars at toilet, bathtub or shower, if provided. Accordingly, the Fair Housing regulations specifically require reinforcement in bathroom walls to allow later installation of grab bars around the shower, where showers are provided. (See 24 CFR 100.205(c)(3)(iii).)

Building

Comment. One commenter suggested that the Department use the term "structure" in lieu of "building". The commenter stated that, in the building industry, "building" is defined by exterior walls and fire walls, and that an apartment structure of four units could be subdivided into two separate buildings of two units each by inexpensive construction of a firewall. The commenter suggested that the final definition of "building" include the following language: "For the purpose of the Act, firewall separation does not define buildings."

Response. The term "building" is the term used in the Fair Housing Act. The Department uses this term in the Guidelines to be consistent with the Act. With respect to the comment on firewall separation, the Department believes that, within the context of the Fair Housing Act, the more appropriate place for the language on firewall separation is in the definition of "covered multifamily dwellings". Since many building codes in fact define "building" by exterior walls and firewalls, a definition of "building" in the Fair Housing Accessibility Guidelines that explicitly excludes firewalls as a means of identifying a building would place the Guidelines in conflict with local building codes. Accordingly, to avoid this conflict, the Department has clarified the definition of "covered multifamily dwelling" (which is discussed below) to address the issue of firewall separation.

Covered Multifamily Dwellings

The Department has revised the definition of "covered multifamily dwellings" to clarify that dwelling units within a single structure separated by firewalls do not, for purposes of these Guidelines, constitute separate buildings.

A number of questions and comments were received on what should, or should not, be considered a covered multifamily dwelling. Several of these comments requested clarification concerning "ground floor dwelling units". These comments generally concluded with a request that the Department define "ground floor" and "ground floor unit". The Department has included a definition of "ground floor" in the final Guidelines. The Department believes that this definition is sufficiently clear to identify ground floor units, and that therefore a separate definition for "ground floor unit" is unnecessary. Specific questions concerning ground floor units are discussed below under the heading "Ground Floor". Comments on other covered multifamily dwellings are as follows:

Comment. (Garden apartments) One commenter requested that the Department clarify whether single family attached dwelling units with all living space on one level (i.e. garden units) fall within the definition of covered multifamily dwellings.

Response. The Fair Housing Act and its regulations clearly define "covered multifamily dwellings" as buildings consisting of four or more dwelling units, if such buildings have one or more elevators, and ground floor dwelling units in other buildings consisting of four or more dwelling units. Garden apartments located in an elevator building of four or more units are subject to the Act's requirements. If the garden apartment is on the ground floor of a nonelevator building consisting of four or more apartments, and if all living space is on one level, then the apartment is subject to the Act's requirements (unless the building is exempt on the basis of site impracticability).

Comment. (Townhouses) Several commenters requested clarification concerning whether townhouses are covered multifamily dwellings.

Response. In the preamble to the Fair Housing regulations, the Department addressed this issue. Using an example of a single structure consisting of five two-story townhouses, the Department stated that such a structure is *not* a covered multifamily dwelling if the building does not have an elevator, because the entire dwelling unit is not on the ground floor. Thus, the first floor of a two-story townhouse in the example is not a ground floor unit, because the entire unit is not on the ground floor. In contrast, a structure consisting of five single-story townhouses would be a covered multifamily dwelling. (See 54 FR 3244; 24

CFR Ch. I, Subch. A, App. I at 575-576 (1990).)

Comment. (Units with basements) One commenter asked whether a unit that contains a basement, which provides additional living space, would be viewed as a townhouse, and therefore exempt from the Act's accessibility requirements. The commenter stated that basements are generally designed with the top of the basement, including the basement entrance, above finished grade, and that basement space cannot be made accessible without installation of an elevator or a lengthy ramp.

Response. If the basement is part of the finished living space of a dwelling unit, then the dwelling unit will be treated as a multistory unit, and application of the Act's accessibility requirements will be determined as provided in the Guidelines for Requirement 4. If the basement space is unfinished, then it would not be considered part of the living space of the unit, and the basement would not be subject to the Act's requirements. Attic space would be treated in the same manner.

Dwelling Unit

"Dwelling unit" is defined as a single unit of residence for a household of one or more persons. The definition provides a list of examples of dwelling units in order to clarify the types of units that may be covered by the Fair Housing Act. The examples include condominiums and apartment units in apartment buildings. Several commenters submitted questions on condominiums, and one commenter requested clarification on whether vacation time-sharing units are subject to the Act's requirements. Their specific comments are as follows:

Comment. (Condominiums) A few commenters requested that condominiums be excluded from covered dwelling units because condominiums are comparable to single family homes. The commenter stated that condominiums do not compete in the rental market, but compete in the sale market with single family homes, which are exempt from the Act's requirements.

Response. The Fair Housing Act requires all covered multifamily dwellings for first occupancy after March 13, 1991 to be designed and constructed in accordance with the Act's accessibility requirements. The Act does not distinguish between dwelling units in covered multifamily dwellings that are for sale, and dwelling units that are for rent. Condominium units in covered multifamily dwellings

must comply with the Act's accessibility requirements.

Comment. (Custom-designed condominium units) Two commenters stated that purchasers of condominium units often request their units to be custom designed. The commenters questioned whether custom-designed units must comply with the Act's accessibility requirements. Another commenter stated that the Department should exempt from compliance those condominium units which are pre-sold, but not yet constructed, and for which owners have expressly requested designs that are incompatible with the Act's accessibility requirements.

Response. The fact that a condominium unit is sold before the completion of construction does not exempt a developer from compliance with the Act's accessibility requirements. The Act imposes affirmative duties on builders and developers to design and construct covered multifamily dwellings for first occupancy after March 13, 1991 in accordance with the Act's accessibility requirements. These requirements are mandatory for covered multifamily dwellings for first occupancy after March 13, 1991, regardless of the ownership status of covered individual dwelling units. Thus, to the extent that the pre-sale or post-sale construction included features that are covered by the Act (such as framing for doors in pre-sale "shell" construction), they should be built accordingly.

Comment. (Vacation timeshare units) One commenter questioned whether vacation timeshare units were subject to the Act's requirements. The commenter stated that a timeshare unit may be owned by 2 to 51 individuals, each of whom owns, or has the right to use, the unit for a proportionate period of time equal to his or her ownership.

Response. Vacation timeshare units are subject to the Act's accessibility requirements, when the units are otherwise subject to the accessibility requirements. "Dwelling" is defined in 24 CFR 100.20 as "any building, structure, or portion thereof which is occupied as, or designed or intended for occupancy as, a residence by one or more families, and any vacant land which is offered for sale or lease for the construction or location thereon of any such building, structure or portion thereof". The preamble to the final Fair Housing rule states that the definition of "dwelling" is "broad enough to cover each of the types of dwellings enumerated in the proposed rule: mobile home parks, trailer courts, condominiums, cooperatives, and time-

sharing properties." (Emphasis added.) (See 54 FR 3238, 24 CFR Ch. I, Subch. A, App. I, at 507 (1990).) Accordingly, the fact of vacation timeshare ownership of units in a building does not affect whether the structure is subject to the Act's accessibility requirements.

Entrance

Comment. One commenter requested clarification on whether "entrance" refers to an entry door to a dwelling unit, or an entry door to the building.

Response. As used in the Guidelines, "entrance" refers to an exterior entry door. The definition of "entrance" has been revised in the final Guidelines to clarify this point, and the term "entry" is used instead of "entrance" when referring to the entry into a unit when it is interior to the building.

Ground Floor

As noted above, under the discussion of covered multifamily dwellings, several commenters requested clarification concerning "ground floor" and "ground floor dwelling unit". In response to these comments, the Department has included a definition for "ground floor" in the final Guidelines. The Department has incorporated the definition of "ground floor" found in the Fair Housing regulations (24 CFR 100.201), and has expanded this definition to address specific concerns related to implementation of the Guidelines. In the final Guidelines, "ground floor" is defined as follows:

"Ground floor" means 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.

Specific comments concerning ground floor units are as follows:

Comment. (Nonresidential ground floor units) Two commenters advised that, in many urban areas, buildings are constructed without an elevator and with no dwelling units on the ground floor. The ground floor contains either parking, retail shops, restaurants or offices. To bring these buildings into compliance with the Act, one of the commenters recommended that the Department adopt a proposal under consideration by the International Conference of Building Officials (ICBO). The commenter stated that the proposal provides that, in buildings with ground floors occupied by parking and other nonresidential uses, the lowest story containing residential units is considered the ground floor. Another commenter recommended that a

building should be exempt from compliance with the Act's requirements if the ground floor is occupied by a non-residential use (including parking). The commenter stated that if an elevator is to be provided to serve the upper residential floors, then the elevator should also serve the ground floor, and access be provided to all the dwelling units.

Response. The Department believes that the definition of "ground floor unit" incorporated in the final Guidelines addresses the concerns of the commenters.

Comment. (More than one ground floor) One commenter requested guidance on treatment of nonelevator garden apartments (i.e., apartment buildings that generally are built on slopes and contain two stories in the front of the building and three stories in the back). The commenter stated that these buildings arguably may be said to have two ground floors. The commenter requested that the Department clarify that, if a building has more than one ground floor, the developer must make one ground floor accessible—but not both—and the developer may choose which floor to make accessible. Another commenter suggested that, in a garden-type apartment building, the floor served by the primary entrance, and which is located at the parking lot level, is the floor which must be made accessible.

Response. In the preamble to the final Fair Housing rule, the Department addressed the issue of buildings with more than one ground floor. (See 54 FR 3244, 24 CFR Ch. I, Subch. A, App. I at 576 (1990).) The Department stated that if a covered building has more than one floor with a building entrance on an accessible route, then the units on each floor with an accessible building entrance must satisfy the Act's accessibility requirements. (See the discussion of townhouses in nonelevator buildings above.)

Handicap

Comment. Several commenters requested that the Department avoid use of the terms "handicap" and "handicapped persons", and replace them with the terms "disability" and "persons with disabilities".

Response. "Handicap" and "handicapped persons" are the terms used by the Fair Housing Act. These terms are used in Guidelines and regulations to be consistent with the statute.

Principle of Reasonableness and Cost

Comment. Four commenters noted that, in the preamble to the proposed guidelines, the Department indicated

that the Fair Housing Accessibility Guidelines were limited by a "principle of reasonableness and cost". The commenters requested that the Department define this phrase.

Response. In the preamble to the proposed guidelines, the Department stated in relevant part as follows: "These guidelines are intended to provide a safe harbor for compliance with respect to those issues they cover. . . . Where the ANSI Standard is not applicable, the language of the statute itself is the safest guide. The degree of scoping, accessibility, and the like are of course limited by a principle of reasonableness and cost." (55 FR 24371)

In House Report No. 711, the accessibility requirements of the Fair Housing Act were referred to by the Congress as "modest" (House Report at 25), "minimal" and "basic features of adaptability" (House Report at 25). In developing the Fair Housing Accessibility Guidelines, the Department was attentive to the fact that Congress viewed the Act's accessibility requirements as reasonable, and that the Guidelines for these requirements should conform to this "reasonableness" principle—that is, that the Guidelines should provide the level of reasonable accessibility envisioned by Congress, while maintaining the affordability of new multifamily construction. The Department believes that the final Guidelines conform to this principle of reasonableness and cost.

Slope

Comment. One commenter, the Building Officials & Code Administrators International, Inc. (BOCA), requested clarification of the term, "slope". The commenter stated the definition indicates that slope is calculated based on the distance and elevation between two points. The commenter stated that this is adequate when there is a uniform and reasonably consistent change in elevation between point (i.e., one point is at the top of a hill and the other is at the bottom), but the definition does not adequately address land where a valley, gorge, or swale occurs between two points. The commenter stated that the definition also does not adequately address conditions where there is an abrupt change in the rate of slope between the points (i.e. a sharp drop off within a short distance, with the remaining distance being flat or sloped much more gradually).

Response. Slope is measured from ground level at the entrance to all arrival points within 50 feet, and is

considered impractical only when it exceeds 10 percent between the entrance and all these points. Since multifamily dwellings typically have an arrival point fairly close to the building, a significant change such as a sharp drop would likely result in an impractical slope. Minor variations, such as a swale, if more than 5 percent, would be easily graded or ramped; a gorge would be bridged or filled, in any event, if it was on an entrance route.

Usable Door

Comment. One commenter stated that a clear definition of "usable door" is required.

Response. The Guidelines for Requirement 3 (usable doors) fully describe what is meant by "usable door" within the meaning of the Act.

Section 3. Fair Housing Act Design and Construction Requirements

This section reprints § 100.205 (Design and Construction Requirements) from the Department's final rule implementing the Fair Housing Act. A reprint of § 100.205 was included to provide easy reference to (1) the Act's accessibility requirements, as codified by § 100.205; and (2) the additional examples of methods of compliance with the Act's requirements that are presented in this regulation.

Section 4. Application of the Guidelines

This section states that the design specifications that comprise the final Guidelines apply to all "covered multifamily dwellings" as defined in Section 2 of the Guidelines. Section 4 also clarifies that the Guidelines are "recommended" for designing dwellings that comply with the requirements of the Fair Housing Amendments Act of 1988.

Under the discussion of Section 4 in the proposed guidelines, the Department requested comment on the Act's application to dwelling units with design features such as a loft or sunken living room (55 FR 24377). A number of comments were received on this issue. Since the Act's application to units with such features is relevant within the context of an accessible route into and through a dwelling unit, the comments and the Department's response to these comments are discussed in section 5, under the subheading, "Guidelines for Requirement 4".

Section 5. Guidelines

The Guidelines contained in this Section 5 are organized to follow the sequence of requirements as they are presented in the Fair Housing Act and in the regulation implementing these requirements, 24 CFR 100.205. There are

Guidelines for seven requirements: (1) An accessible entrance on an accessible route; (2) accessible and usable public common use areas; (3) doors usable by a person in a wheelchair; (4) accessible route into and through the covered dwelling unit; (5) light switches, electrical outlets and environmental controls in accessible locations; (6) bathroom walls reinforced for grab bars; and (7) usable kitchens and bathrooms.

For each of these seven requirements, the Department adopted the corresponding Option One guidelines, but changes were made to certain of the Option One design specifications. The following discussion describes the Guidelines for each of the seven requirements, and highlights the changes that have been made.

Guidelines for Requirement 1

The Guidelines for Requirement 1 present guidance on designing an accessible entrance on an accessible route, as required by § 100.205(a), and on determining when an accessible entrance is impractical because of terrain or unusual characteristics of the site.

The Department has adopted the Option One guidelines for Requirement 1, with substantial changes to the specifications for determining site impracticality. These changes, and the guidelines that remain unchanged for Requirement 1 are discussed below.

Site Impracticality Determinations. The Guidelines for Requirement 1 begin by presenting criteria for determining when terrain or unusual site characteristics would make an accessible entrance impractical. Section 100.205(a) recognizes that certain sites may have characteristics that make it impractical to provide an accessible route to a multifamily dwelling. This section states 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 the terrain or unusual characteristics of the site.

Comments. The Department received many comments on the site impracticality specifications presented in the proposed guidelines (55 FR 24377-24378). The majority of the members of the disability community who commented on this issue supported the Option One guidelines, and recommended no change. However, other commenters, including a few disability organizations, members of the building industry, State and local government agencies involved in the development and enforcement of accessibility codes, and some of the

major building code organizations, criticized one or more aspects of the Option One and Option Two guidelines for Requirement 1. Specific comments are noted below.

A few commenters suggested that the 10% slope criterion was too low, and easily will be met by a project site having a hilly terrain which could (and typically would) be made more level. These commenters recommended a higher slope criterion ranging anywhere from 12% to 30%. Other commenters stated that the slope criterion for the planned finished grade should not exceed 8.33%. The Congressional sponsors of the Act (U.S. Representatives Edwards, Fish, and Frank) stated that a limited exemption for slopes greater than 10% "was not contemplated by the Act"; but that they believed the Department has the discretion to develop such an exemption if it is "carefully crafted and narrowly tailored".

Several commenters stated that any evaluation of the undisturbed site should be done only on the percentage of land that is buildable. Several commenters stated that the final Guidelines should not require an evaluation of the undisturbed site between the planned entrance and the arrival points—that the only evaluation of the undisturbed site should be the initial threshold slope analysis.

There were a number of questions on arrival points, and requests that these points be more clearly defined. Several commenters presented specific examples of possible problems with the use of arrival points, as specified in the Option One guidelines. A few commenters stated that the individual building analysis should involve a measurement between the entrance and only one designated vehicular or pedestrian arrival point.

Other commenters stated that single buildings on a site should be subject to the same analysis as multiple buildings on a site.

A number of commenters criticized the Option One site impracticality analysis as being too cumbersome and confusing. A number of commenters objected to Option Two's requirement that covered multifamily dwellings with elevators must comply with the Act's accessibility requirements, regardless of site conditions or terrain.

Response. Following careful consideration of these comments, the Department has revised significantly the procedure for determining site impracticality, and its application to covered multifamily dwellings.

For covered multifamily dwellings with elevators, the final Guidelines would not exempt these dwellings from the Act's accessibility requirements. The final Guidelines provide 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. Every dwelling unit on a floor served by an elevator must be on an accessible route, and must be made accessible in accordance with the Act's requirements for covered dwelling units. The Department has excluded elevator buildings from any exemption from the Act's accessibility requirements because the Department believes that the type of site work that is performed in connection with the construction of a high rise elevator building generally results in a finished grade that would make the building accessible. The Department also notes that the majority of elevator buildings are designed with a primary building entrance and a passenger drop-off area which are easily made accessible to individuals with handicaps. Additionally, many elevator buildings have large, relatively level areas adjacent to the building entrances, which are normally provided for moving vans. These factors lead the Department to conclude that site impracticality considerations should not apply to multifamily elevator buildings.

For covered multifamily dwellings without elevators, the final Guidelines provide two alternative tests for determining site impracticality due to terrain. The first test is an individual building test which involves a two-step process: measurement of the slope of the undisturbed site between the planned entrance and all vehicular or pedestrian arrival points; and measurement of the slope of the planned finished grade between the entrance and all vehicular or pedestrian arrival points. The second test is a site analysis test which involves an analysis of the topography of the existing natural terrain.

A site with a single building, having a common entrance for all units, may be analyzed only under the first test—the individual building test.

All other sites, including a site with a single building having multiple entrances serving either individual dwelling units or clusters of dwelling units, may be analyzed either under the first test or the second test. For these sites for which either test is applicable, the final Guidelines provide that regardless of which test is utilized by a builder or developer, at least 20% of the total ground floor units in nonelevator

buildings, on any site, must comply with the Act's accessibility requirements.

The distinctive features of the two tests for determining site impracticality due to terrain, for nonelevator multifamily dwellings, are as follows:

1. *The individual building test.*

a. This test is applicable to all sites.

b. This test eliminates the slope analysis of the entire undisturbed site that was applicable only to multiple building sites, and, concomitantly, the table that specifies the minimum percentage of adaptable units required for every multiple building site. The only analysis for site impracticality will be the individual building analysis. This analysis will be applied to each building regardless of the number of buildings on the site.

c. The individual building analysis has been modified to provide for measurement of the slopes between the planned entrance and all vehicular or pedestrian arrival points within 50 feet of the planned entrance. The analysis further provides that if there are no vehicular or pedestrian arrival points within 50 feet of the planned entrance, then measurement will be made of the slope between the planned entrance and the closest vehicular or pedestrian arrival point. Additionally, the final Guidelines clarify how to measure the slope between the planned entrance and an arrival point.

d. The individual building analysis retains the evaluation of both the undisturbed site and the planned finished grade. Buildings would be exempt only if the slopes of both the original undisturbed site and the planned finished grade exceed 10 percent (1) as measured between the planned entrance and all vehicular or pedestrian arrival points within 50 feet of the planned entrance; or (2) if there are no vehicular or pedestrian arrival points within that 50 foot area, as measured between the planned entrance and the closest vehicular or pedestrian arrival point.

2. *The site analysis test.*

a. This test is only applicable to sites with multiple buildings, or to sites with a single building with multiple entrances.

b. This test involves an analysis of the existing natural terrain (before grading) of the buildable area of the site by topographic survey with 2 foot contour intervals, with slope determination made between each successive contour interval. The accuracy of the slope analysis is to be certified by a professional licensed engineer, landscape architect, architect or surveyor.

c. This test provides that the minimum number of ground floor units to be made accessible on a site must equal the percentage of the total buildable area (excluding floodplains, wetlands, or other restricted use areas) of the undisturbed site that has an existing natural grade of less than 10% slope.

The Department believes that both tests for determining site impracticality due to terrain present enforceable criteria for determining when terrain makes accessibility, as required by the Act, impractical. The Department also believes that by offering a choice of tests, the Department is providing builders and developers with greater flexibility in selecting the approach that is most appropriate, or least burdensome, for their development project, while assuring that accessible units are provided on every site. As noted earlier in this preamble, this policy is consistent with the intent of Congress which was to encourage creativity and flexibility in meeting the Act's requirements, and thus minimize the impact of these requirements on housing affordability.

With respect to determining site impracticality due to unusual characteristics of the site, the test in the final Guidelines is essentially the same as that provided in the Option One guidelines. This test has been modified to limit measurement of the finished grade elevation to that between the entrance and all vehicular or pedestrian arrival points within 50 feet of the planned entrance.

Finally, the final Guidelines for Requirement 1 contemplate that the site tests recommended by the Guidelines will be performed, generally, on "normal" soil. The Department solicits additional public comment only on the issue of the feasibility of the site tests on areas that have difficult soil, such as areas where expansive clay or hard granite is prevalent.

Additional specific comments on the site impracticality determination are as follows:

Comment. One commenter stated that the site impracticality determination seems to suggest that only the most direct path from the pedestrian or vehicular arrival points will be used to evaluate the ability to create an accessible route of travel to the building. The commenter stated that it may be possible to use natural or finished contours of the site to provide an accessible route other than a straight-line route.

Response. To be enforceable, the Guidelines must specify where the line is drawn; otherwise it is not possible to

specify what is "practical". Generally, developers provide relatively direct access from the entrance to the pedestrian and vehicular arrival points. If, in fact, the route as built was accessible, then the building would be expected to have an accessible entrance and otherwise comply with the Act.

Comment. Another commenter stated that the site impracticality determination does not take into account the many building types and unit arrangements. The commenter stated that some buildings have a common entrance with unit entrances off a common corridor, while others have individual, exterior entrances to the units. The commenter stated that if the Department is going to permit exemptions from the Act's requirements caused by terrain, the commenter did not understand why every entrance in a building containing individually-accessed apartments must comply with the Act's requirements, simply because they are in one building.

Response. The final Guidelines recognize (as did the proposed guidelines) the difference in building types. If there is a single entry point serving the entire building (or portions thereof), that entry point is considered the "entrance". If each unit has a separate exterior entrance, then each entrance is to be evaluated for the conditions at that entrance. Thus, a building with four entrances, each serving one of four units, might have only one accessible entrance, depending upon site conditions, or it might have any combination up to four.

Comment. Another commenter stated that the evaluation for unusual characteristics of the site only takes into account floodplains or high hazard coastal areas, and excludes other possible unique and unusual site characteristics.

Response. The provision for unusual characteristics of the site clearly provides that floodplains or high hazard coastal areas are only two examples of unusual site characteristics. The provision states that "unusual site characteristics" includes "sites subject to similar requirements of law or code."

Comment. A number of commenters expressed concern that the site impracticality determination of the Guidelines may conflict with local health, safety, environmental or zoning codes. A principal concern of one of the commenters was that the final Guidelines may require "massive grading" of a site in order to achieve compliance with the Act. The commenter was concerned that such grading may conflict with local laws directed at minimizing environmental

damage, or with zoning codes that severely limit substantial fill activities at a site.

Response. The Department believes that the site impracticality determination adopted in these final Guidelines will not conflict with local safety, health, environmental or zoning codes. The final Guidelines provide, as did the proposed guidelines, that the site planning involves consideration of all State and local requirements to which a site is subject, such as "density constraints, tree-save or wetlands ordinances and other factors impacting development choices" (55 FR 24378), and explicitly accept the site plan that results from balancing these and other factors affecting the development. The Guidelines would not require, for example, that a site be graded in violation of a tree-save ordinance. If, however, access is required based on the final site plan, then installation of a ramp for access, rather than grading, could be necessary in some cases so as not to disturb the trees. Where access is required, the method of providing access, whether grading or a ramp, will be decided by the developer, based on local ordinances and codes, and on business or aesthetic factors. It should be noted that these nonmandatory Guidelines do not purport to preempt conflicting State or local laws. However, where a State or local law contradicts a specification in the Guidelines, a builder must seek other reasonable cost-effective means, consistent with local law, to assure the accessibility of his or her units. The accessibility requirements of the Fair Housing Act remain applicable, and State and local laws must be in accord with those requirements.

Additional Design Specifications for Requirement 1. In addition to the site impracticality determinations, the final Guidelines for Requirement 1 specify that an accessible entrance on an accessible route is practical when (1) there is an elevator connecting the parking area with any floor on which dwelling units are located, and (2) an elevated walkway is planned between a building entrance and a vehicular or pedestrian arrival point, and the planned walkway has a slope no greater than 10 percent. The Guidelines also provide that (i) an accessible entrance that complies with ANSI 4.14, and (2) an accessible route that complies with ANSI 4.3, meets with the accessibility requirements of § 100.205(a). Finally, the Guidelines provide 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, 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. [These design specifications are unchanged from the proposed Option One guidelines for Requirement 1.]

Comment. Several comments were received on the additional design specifications for Requirement 1. The majority of commenters supported 8.33% as the slope criterion for the finished grade between covered multifamily dwellings and a public or common use facility. A few commenters stated that vehicular access was not an acceptable alternative to pedestrian access. Other commenters stated that the 10% slope criterion for the planned walkway was inconsistent with accessibility requirements that prohibit ramps from having a slope in excess of 8.33%.

Response. With respect to access via a vehicular route, the Department's expectation is that public and common use facilities generally will be on an accessible pedestrian route. The Department, however, recognizes that there may be situations in which an accessible pedestrian route simply is not practical, because of factors beyond the control of the owner. In those situations, vehicular access may be provided. With respect to the 10% slope criterion for planned elevated walkways, this is the criterion for determining whether it is practical to provide an accessible entrance. If the site is determined to be practical, then the slope of the walkway must be reduced to 8.33%.

Guidelines for Requirement 2

The Guidelines for Requirement 2 present design standards that will make public and common use areas readily accessible to and usable by handicapped persons, as required by § 100.205(c)(1).

The Department has adopted the Option One guidelines for Requirement 2, without change. The Guidelines for Requirement 2 identify components of public and common use areas that should be made accessible, reference the section or sections of the ANSI Standard which apply in each case, and describe the appropriate application of the design specifications. In some cases, the Guidelines for Requirement 2 describe variations from the basic ANSI provision that is referenced.

The basic components of public and common use areas covered by the Guidelines include, for example: accessible route(s); protruding objects; ground and floor surface treatments; parking and passenger loading zones;

curb ramps; ramps; stairs; elevator; platform lifts; drinking fountains and water coolers; toilet rooms and bathing facilities, including water closets, toilet rooms and stalls, urinals, lavatories and mirrors, bathtubs, shower stalls, and sinks; seating, tables or work surfaces; places of assembly; common-use spaces and facilities, including swimming pools, playgrounds, entrances, rental offices, lobbies, elevators, mailbox areas, lounges, halls and corridors and the like; and laundry rooms.

Specific comments on the Guidelines for Requirement 2 are as follows:

Comment. A number of comments were received on the various components listed in the Guidelines for Requirement 2, and the accessibility specifications for these components provided by both options One and Two. A few commenters, including the Granite State Independent Living Foundation, submitted detailed comments on the design standards for the listed components of public and common use areas, and, in many cases, recommended specifications different than those provided by either Option One or Option Two.

Response. Following careful consideration of the comments submitted on the design specifications of Requirement 2, the Department has decided not to adopt any of the commenters' proposals for change. The Department believes that application of the appropriate ANSI provisions to each of the basic components of public and common use areas, in the manner specified on the Option One chart, and with the limitations and modifications noted, remains the best approach to meeting the requirements of § 100.205(c)(1) for accessible and usable public and common use areas, both because Congress clearly intended that the ANSI Standard be used where appropriate, and because it is consistent with the Department's support for uniform standards to the greatest degree possible.

Comment. Other commenters requested that the ANSI provisions applicable to certain components in public and common use areas also should be applied to these components when they are part of individual dwelling units (for example, floor surface treatments, carpeting, and work surfaces).

Response. To require such application in individual dwelling units would exceed the requirements imposed by the Fair Housing Act. The Fair Housing Act does not require individual dwelling units to be fully accessible and usable by individuals with handicaps. For individual dwelling units, the Act limits

its requirements to specific features of accessible design.

Comment. A number of commenters indicated confusion concerning when the ANSI standard was applicable to stairs.

Response. Stairs are subject to the ANSI Standard only when they are located along an accessible route not served by an elevator. (Accessibility between the levels served by the stairs or steps would, under such circumstances, be provided by some other means such as a ramp or lift located with the stairs or steps.) For example, a ground floor entry might have three steps up to an elevator lobby, with a ramp located besides the steps. The steps in this case should meet the ANSI specification since they will be used by people with particular disabilities for whom steps are more usable than ramps.

In nonelevator buildings, stairs serving levels above or below the ground floor are not required to meet the ANSI standard, unless they are a part of an accessible route providing access to public or common use areas located on these levels. For example, mailboxes serving a covered multifamily dwelling in a nonelevator building might be located down three steps from the ground floor level, with a ramp located beside the steps. The steps in this case would be required to meet the ANSI specifications.

Comment. Other commenters indicated confusion concerning when handrails are required. A few commenters stated that the installation of handrails limits access to lawn areas.

Response. Handrails are required only on ramps that are on routes required to be accessible. Handrails are not required on any on-grade walks with slopes no greater than 5%. Only on those walks that exceed 5% slope, and that are parts of the required accessible route, would handrails be required.

Accordingly, walks from one building containing dwelling units to another, would not be affected even if slopes exceeded 5%, because the Guidelines do not require such walks as part of the accessible route. The Department believes that the benefits provided to persons with mobility impairments by the installation of handrails on required accessible routes outweigh any limitations on access to lawn areas.

Comment. A number of proposals for revisions were submitted on the final Guidelines for parking and passenger loading zones.

Response. The Department has not adopted any of these proposals. The Department has retained the applicable provisions of the ANSI Standard for

parking space. As noted previously in the preamble, the ANSI Standard is a familiar and widely accepted standard. The Department is reluctant to introduce a new or unfamiliar standard, or to specify parking specifications that exceed the minimal accessibility standards of the Act. However, if a local parking code requires greater accessibility features (e.g. wider aisles) with respect to parking and passenger loading zones, the appropriate provisions of the local code would prevail.

Comment. A number of commenters requested that the final Guidelines for parking specify minimum vertical clearance for garage parking. Other commenters suggested that the Department adopt ANSI's vertical height requirement at passenger loading zones as the minimal vertical clearance for garage parking.

Response. No national accessibility standards, including UFAS, require particular vertical clearances in parking garages. The Department did not consider it appropriate to exceed commonly accepted standards by including a minimum vertical clearance in the Fair Housing Accessibility Guidelines, in view of the minimal accessibility requirements of the Fair Housing Act.

Comment. Two commenters stated that parking spaces for condominiums is problematic because the parking spaces are typically deeded in ownership to the unit owner at the time of purchase, and it becomes extremely difficult to arrange for the subsequent provision of accessible parking. One of the commenters recommended that the Guidelines specify that a condominium development have two percent accessible visitor parking, and that these visitor accessible spaces be reassigned to residents with disabilities as needed.

Response. Condominiums subject to the requirements of the Act must provide accessible spaces for two percent of covered units. One approach to the particular situation presented by the commenters would be for condominium documents to include a provision that accessible spaces may be reassigned to residents with disabilities, in exchange for nonaccessible spaces that were initially assigned to units that were later purchased by persons with disabilities.

Comment. Several commenters stated that Option One's requirement of "sufficient accessible facilities" of each type of recreational facility is too vague. The commenters preferred option Two's guidelines on recreational facilities,

which provides that a minimum of 25% (or at least one of each type) of recreational facilities must be accessible.

Response. The Department decided to retain its more flexible approach to recreational facilities. The final Guidelines specify that where multiple recreational facilities are provided, accessibility is met under § 100.205(c)(1) if sufficient accessible facilities of each type are provided.

Comment. Several commenters suggested that all recreational facilities should be made accessible.

Response. To specify that all recreational facilities should be accessible would exceed the requirements of the Act. Congress stated that the Act did not require every feature and aspect of covered multifamily housing to be made accessible to individuals with handicaps. (See House Report at 26.)

Comment. Several commenters submitted detailed specifications on how various recreational facilities could be made accessible. These comments were submitted in response to the Department's request, in the proposed guidelines, for more specific guidance on making recreational facilities accessible to persons with handicaps (55 FR 24376). The Department specifically requested information about ways to provide access into pools.

Response. The Department appreciates all suggestions on recommended specifications for recreational facilities, and, in particular, for swimming pools. For the present, the Department has decided not to change the specifications for recreational facilities, including swimming pools, as provided by the Option One guidelines, since there are no generally accepted standards covering such facilities. Thus, access to the pool area of a swimming facility is expected, but not specialized features for access into the pool (e.g., hoists, or ramps into the water).

Comment. Several commenters criticized the chart in the Option One guidelines, stating that it was confusing and difficult to follow.

Response. The chart is adapted from ANSI's Table 2 pertaining to basic components for accessible sites, facilities and buildings. The ANSI chart is familiar to persons in the building industry. Accordingly, the Option One chart (and now part of the final Guidelines), which is a more limited version of ANSI's Table 2, is not a novel approach.

Guidelines for Requirement 3

The Guidelines for Requirement 3 present design standards for providing

doors that will be sufficiently wide to allow passage into and within all premises by handicapped persons in wheelchairs (usable doors) as required by § 100.20(c)(2).

The Department has adopted the Option One guidelines for Requirement 3 with minor editorial changes. No changes were made to the design specifications for "usable doors".

The Guidelines provide separate guidance for (1) doors that are part of an accessible route in the public and common use areas of multifamily dwellings, including entry doors to individual dwelling units; and (2) doors within individual dwelling units.

(1) For public and common use areas and entry doors to dwelling units, doors that comply with ANSI 4.13 would meet the requirements of § 100.205(c)(2).

(2) For doors within individual dwelling units, the Department has retained, in the final Guidelines, the design specification that a door with a clear opening of at least 32 inches nominal width when the door is open 90 degrees, as measured between the face of the door and the stop, would meet the requirements of § 100.205(c)(2).

Specific comments on the design specifications presented in the Guidelines for Requirement 3 are as follows:

Minimum Clear Opening

Comment. The issue of minimum clear opening for doors was one of the most widely commented-upon design features of the guidelines. The majority of commenters representing the disability community supported the Option One specification of a minimum clear opening of 32 inches. A few commenters advocated a wider clear opening. U.S. Representatives Edwards, Frank, and Fish expressed their support for the Option One specification on minimum clearance which is consistent with the ANSI Standard.

Commenters from the building industry were almost unanimous in their opposition to a minimum clear opening of 32 inches. Several builders noted that a 32-inch clear opening requires use of 36-inch doors. These commenters stated that a standard 2'10" door (34") provides only a 31 1/4 inch clear opening. The commenters therefore recommended amending the Guidelines to permit a "nominal" 32 inch clear space, allowing the use of a 2'10" door, which provides a 31 1/4 inch clear opening. Other commenters stated that, generally, door width should provide a 32-inch clear opening, but that this width can be reduced if sufficient maneuvering space is provided at the door. These commenters supported Option Two's

approach, which provided for clear width to be determined by the clear floor space available for maneuvering on both sides of the door, with the minimum width set at 29 1/4 inches. (See Option 2 chart and accompanying text at 55 FR 24382.)

Response. The Department considered the recommendations for both wider clear openings, and more narrow clear openings, and decided to maintain the design specification proposed in the Option One guidelines (a clear opening of at least 32 inches nominal width). The clear opening of at least 32 inches nominal width has been the accepted standard for accessibility since the issuance of the original ANSI Standard in 1961. While the Department recognizes that it may be possible to maneuver most wheelchairs through a doorway with a slightly more narrow opening, such doors do not permit ready access on the constant-use basis that is the reality of daily living within a home environment. The Department also recognizes that wider doorways may ensure easier passage for wheelchair users. However, by assuring that the minimum 36-inch hallway and 32-inch clear openings are provided, the Department believes that its recommended opening for doors should accommodate most people with disabilities. In the preamble to the proposed guidelines, the Department stated that the clear width provided by a standard 34-inch door would be acceptable under the Guidelines.

Maneuvering Space at Doors

Comment. Several commenters requested that the final Guidelines incorporate minimum maneuvering clearances at doors, as provided by the ANSI Standard. These commenters stated that maneuvering space on the latch side of the door is as important a feature as minimum door width. Other commenters stated that the maneuvering space was necessary to ensure safe egress in cases of emergency.

Response. The Department has carefully considered these comments, and has declined to adopt this approach. The Department believes that, by adhering to the standard 32-inch clear opening, it is possible to forego other accessibility requirements related to doors (e.g. door closing forces, maneuvering clearances, and hardware) without compromising the Congressional directive requiring doors to be "sufficiently wide to allow passage by handicapped persons in wheelchairs." However, as the Department noted in the preamble to the proposed guidelines, approaches to, and

maneuvering spaces at, the exterior side of the entrance door to an individual dwelling unit would be considered part of the public spaces, and therefore would be subject to the appropriate ANSI provisions. (See 55 FR 24380.)

Doors in a Series

Comment. A few commenters expressed concern that the Guidelines did not provide design specification for an entrance that consists of a series of more than one door. The commenters were concerned that, without adequate guidance, a disabled resident or tenant could be trapped between doors.

Response. Doors in a series are not typically part of an individual dwelling unit. Doors in a series generally are used in the entries to buildings, and are therefore part of public spaces. Section 4.13 of the ANSI Standard, which is applicable to doors in public and common use areas, provides design specifications for doors in a series. However, where doors in a series are provided as part of a dwelling unit, the Department notes that the requirements of an accessible route into and through the dwelling unit would apply.

Door Hardware

Comment. A few commenters requested that lever hardware be required on doors throughout dwelling units, not only at the entry door to the dwelling unit.

Response. For doors within individual dwelling units, the Fair Housing Act only requires that the doors be sufficiently wide to allow passage by handicapped persons in wheelchairs. Lever hardware is required for entry doors to the building and to individual dwelling units because these doors are part of the public and common use areas, and are, therefore, subject to the ANSI provisions for public and common use areas, which specify lever hardware. Installing lever hardware on doors is the type of adaptation that individual residents can make easily. The ANSI standard also recognizes this point. Under the ANSI Standard, only the entry door into an accessible dwelling unit is required to comply with the requirements for door hardware. (See ANSI section 4.13.9.)

Multiple Usable Entrances

Comment. Several commenters noted that the Guidelines do not provide more than one accessible entrance/exit, and that without a second means of egress, wheelchair users may find themselves in danger in an emergency situation.

Response. As stated previously, the Department is limited to providing Guidelines that are consistent with the

accessibility requirements of the Act. The Act requires "an accessible entrance", rather than requiring all entrances to be accessible. However, the requirements for usable doors and an accessible route to exterior spaces such as balconies and decks does respond to this concern.

Guidelines for Requirement 4

The Guidelines for Requirement 4 present design specifications for providing an accessible route into and through the covered dwelling unit, as required by § 100.205(c)(3)(i).

The Department has adopted the Option One guidelines for Requirement 4 with the following changes:

First, the Department has eliminated the specification for maneuvering space if a person in a wheelchair must make a T-turn.

Second, the Department has eliminated the specification for a minimum clear headroom of 80 inches.

Third, and most significantly, the Department has revised the design specifications for "changes in level" within a dwelling unit to include separate design specifications for: (a) single-story dwelling units, including single-story dwelling units with design features such as a loft or a sunken living room; and (b) multistory dwelling units in buildings with elevators.

Fourth, the Department has revised the specifications for changes in level at exterior patios, decks or balconies in certain circumstances, to minimize water damage. For the same reason, the final Guidelines also include separate specifications for changes in level at the primary entry doors of dwelling units in certain circumstances.

Specific comments on the Guidelines for Requirement 4, and the rationale for the changes made, are discussed below.

Minimum Clear Corridor Width

A few commenters from the disability community advocated a minimum clear corridor width of 48 inches. However, the majority of commenters on this issue had no objection to the minimum clear corridor width of 36 inches. The 36-inch minimum clear corridor width, which has been retained, is consistent with the ANSI Standard.

T-turn Maneuvering Space

Comment. Several commenters stated that this design specification was unclear in two respects. First, they stated that it was unclear when it is necessary for a designer to provide space for a T-turn. The commenters stated that it was difficult to envision circumstances where a wheelchair could be pulled into a position traveling

forward and then not be capable of backing out. Second, the commenters stated that the two descriptions of the T-turn provided by the Department were contradictory. The commenters stated that the preamble to the proposed guidelines provided one description of the T-turn (55 FR 24380), while Figure 2 of the guideline 4 (55 FR 24392), presented a different description of the T-turn.

Response. The Department has decided to delete the reference to the T-turn dimensions in the Guidelines for Requirement 4. The Guidelines adequately address the accessible route into and through the dwelling unit by the minimum corridor width and door width specifications, given typical apartment layouts. Should a designer find that a unique layout in a particular unit made a T-turn necessary for a wheelchair user, the specifications provided in the ANSI Standard sections referenced for public and common use areas could be used.

Minimum Clear Headroom

Comment. Several commenters from the building industry objected to the specification for a minimum clear headroom of 80 inches. The commenters stated that standard doors provide a height range from 75 to 79 inches, and that an 80-inch specification would considerably increase the cost of each door installed.

Response. The specification for minimum clear headroom of 80 inches was included in the proposed guidelines because it is a specification included in the major accessibility codes. This design specification was not expected to conflict with typical door heights. However, since the principal purpose of the requirement is to restrict obstructions such as overhanging signs in public walkways, the Department has determined that this specification is not needed for accessible routes within individual dwellings units, and has therefore deleted this standard from the final Guidelines for such routes. (The requirement, however, still applies in public and common use spaces.)

Changes in Level within a Dwelling Unit

In the preamble to the proposed guidelines, the Department advised that the Act appears to require that dwelling units with design features such as lofts or with more than one floor in elevator buildings be equipped with internal elevators, chair lifts, or other means of access to the upper levels (55 FR 24377). The Department stated that, although it is not clear that Congress intended this result, the Department's preliminary assessment was that the statute appears

to offer little flexibility in this regard. The Department noted that several commenters, including the NAHB and the NCCSCL, suggested that units with more than one floor in elevator buildings should be required to comply with the Act's accessibility requirements only on the floor that is served by the building elevator. (This was the position taken by Option Two.) The Department solicited comments on this issue, and received a number of responses opposing the Department's interpretation.

Comment. The commenters opposing the Department's interpretation stated that the Department's interpretation would place an undue burden on developers and needlessly increase housing costs for everyone; defeat the purpose of having multilevel units, which is to provide additional space at a lower cost; eliminate multilevel designs which may be desirable to disabled residents (e.g., to provide living accommodations for live-in attendants); and "create a backlash" against the Accessibility Guidelines.

Response. Following careful consideration of these comments, and a reexamination of the Act and its legislative history, the Department has determined that its previous interpretation of the Act's application to units with changes in level (whether lofts, or additional stories in elevator buildings), which would have required installation of chair lifts or internal elevators in such units, runs contrary to the purpose and intent of the Fair Housing Act, which is to place "modest accessibility requirements on covered multifamily dwellings." (See House Report at 25.)

In House Report No. 711, the Congress repeatedly emphasized that the accessibility requirements of the Fair Housing Act were minimal basic requirements of accessibility.

These modest requirements will be incorporated into the design of new buildings, resulting in features which do not look unusual and will not add significant additional costs. The bill does not require the installation of elevators or 'hospital-like' features, or the renovation of existing units." (House Report at 16)

Accessibility requirements can vary across a wide range. A standard of total accessibility would require that every entrance, doorway, bathroom, parking space, and portion of buildings and grounds be accessible. Many designers and builders have interpreted the term 'accessible' to mean this type of standard. The committee does not intend to impose such a standard. Rather, the committee intends to use a standard of 'adequately' design, a standard developed in recent years by the building industry and by advocates for handicapped individuals to

provide usable housing for handicapped persons without necessarily being significantly different from conventional housing." (House Report at 28)

The Department has determined that a requirement that units with lofts or multiple stories in elevator buildings be equipped with internal elevators, chair lifts, or other means of access to lofts or upper stories would make accessible housing under the Fair Housing Act significantly different from conventional housing, and would be inconsistent with the Act's "modest accessibility requirements". (See House Report at 25.)

The Department also has determined that a requirement that dwelling units with design features, such as sunken living rooms, must provide some means of access, such as ramps or lifts, as submitted in the proposed guidelines (55 FR 24380) is inconsistent with the Act's modest accessibility requirements. Sunken living rooms are not an uncommon design feature. To require a ramp or other means of access to such an area, at the time of construction, would reduce, perhaps significantly, the space provided by the area. The reduced space might interfere with the use and enjoyment of this area by a resident who is not disabled, or whose disability does not require access by means of a ramp or lift. The Department believes that had it maintained in the final Guidelines the access specifications for design features, such as sunken living rooms, as set forth in the proposed guidelines, the final Guidelines would have interfered unduly with a developer's choice of design, or would have eliminated a popular design choice. Accordingly, the final Guidelines provide that access is not required to design features, such as a sunken living room, provided that the area does not have the effect of interrupting the accessible route through the remainder of the unit.

The Department believes that the installation of a ramp or deck in order to make a sunken room accessible is the type of later adaptation that easily can be made by a tenant. The Department, however, does require that design features, such as a split-level entry, which is critical to providing an accessible route into and through the unit, must provide a ramp or other means of access to the accessible route.

In order to comply with the Act's requirement of an accessible route into and through covered dwelling units, the Department has revised the Guidelines for Requirement 4 to provide separate technical guidance for two types of dwelling units: (1) Single-story dwelling units, including single-story dwelling units with design features such as a loft

or a sunken living room; and (2) multistory dwelling units in elevator buildings. (Definitions for "single-story dwelling unit," "loft," "multistory dwelling unit" and "story" have been included in section 2 of the final Guidelines.)

"Single-story dwelling unit" is defined as a dwelling unit with all finished living space located on one floor.

"Loft" is defined as an intermediate level between the floor and ceiling of any story, located within a room or rooms of a dwelling.

"Multistory dwelling unit" is defined as a dwelling unit with finished living space located on one floor and the floor or floors immediately above or below it.

"Story" is defined as that portion of a dwelling unit between the upper surface of any floor and the upper surface of the floor next above, or the roof of the unit. Within the context of dwelling units, the terms "story" and "floor" are synonymous.

For single-story dwelling units and multistory dwelling units, the Guidelines for Requirement 4 are as follows:

(1) For single-story dwelling units, the design specifications for changes in level, are the same as proposed in the Option One guidelines. Changes in level within the dwelling unit with heights between $\frac{1}{4}$ inch and $\frac{1}{2}$ inch are beveled with a slope no greater than 1:2. Changes in level greater than $\frac{1}{2}$ inch (excluding changes in level resulting from design features such as a loft or a sunken living room) must be ramped or must provide other means of access. For example, split-level entries must be ramped or use other means of providing an accessible route into and through the dwelling unit.

For single-story dwelling units with design features such as a loft or a raised or sunken functional area, such as a sunken living room, the Guidelines specify that: (a) access to lofts is not required, provided that all spaces other than the loft are on an accessible route; and (b) design features such as a sunken living room are also exempt from the access specifications, provided that the sunken area does not interrupt the accessible route through the remainder of the unit.

(2) In multistory dwelling units in buildings with elevators, access to the additional story, or stories, is not required, provided that the story of the unit that is served by the building elevator (a) is the primary entry to the unit; (b) complies with Requirements 2 through 7 with respect to the rooms located on the entry/accessible level; and (3) contains a bathroom or powder room which complies with Requirement

7. (As previously noted, multistory units in buildings without elevators are not considered ground floor units, and therefore are exempt.)

The Department believes that the foregoing revisions to the Guidelines for Requirement 4 will provide individuals with handicaps the degree of accessibility intended by the Fair Housing Act, without increasing significantly the cost of multifamily housing.

Comment. Two commenters suggested that the same adaptability requirement that is applied to bathrooms should be applied to dwelling units with more than one story, or with lofts, i.e. that stairs, and the wall along the stairs, contain the appropriate reinforcement to provide for later installation of a wheelchair lift by a disabled resident, if so desired.

Response. The only blocking or wall reinforcement required by the Fair Housing Act is the reinforcement in bathroom walls for later installation of grab bars. As noted earlier in this preamble, the Fair Housing Act does not actually require that features in covered units be "adaptable", except for bathrooms. The adaptable feature is the reinforcement in bathroom walls which allows later installation of grab bars. Accordingly, the Department believes that a specification for reinforcement of the walls along stairs would exceed the Act's requirements, because the necessary reinforcement could vary by type of lift chosen, and more appropriately would be specified and installed as part of the installation of the lift.

Thresholds at Exterior Doors/ Thresholds to Balconies or Decks

Comment. A number of commenters from the building industry objected to the provision of the Option One guidelines that specified that an exterior deck, balcony, patio, or similar surface may be no more than $\frac{1}{4}$ inch below the adjacent threshold. Several commenters stated that, in many situations, this height is unworkable for balconies and decks because of waterproofing and safety concerns. This was a particular concern among commenters from the South Florida building industry, who stated that the $\frac{1}{4}$ inch height is ineffective for upper floors of high rise buildings in a coastal environment and invites water control problems. Others noted that the suggestion of a wooden decking insert, or the specification of a $\frac{1}{4}$ inch maximum change in level, in general, might conflict with fire codes.

Response. In response to these concerns, and mindful that Congress did not intend the accessibility requirements of the Act to override the need to protect

the physical integrity of multifamily housing, the Department has included two additional provisions for changes in level at thresholds leading to certain exterior surfaces, as a protective measure against possible water damage. The final Guidelines provide that exterior deck, patio or balcony surfaces should be no more than $\frac{1}{4}$ inch below the floor level of the interior of the dwelling unit, unless they are constructed of impervious material such as concrete, brick or flagstone. In such case, the surface should be no more than 4 inches below the floor level of the interior dwelling unit, unless the local code requires a lower drop. Additionally, the final Guidelines provide that at the primary entry doors to dwelling units with direct exterior access, outside landing surfaces constructed of impervious materials such as concrete, brick, or flagstone should be no more than $\frac{1}{4}$ inch below the floor level of the interior of the dwelling unit. The Guidelines further provide that the finished surface of this area, located immediately outside the entry door, may be sloped for drainage, but the sloping may be no more than $\frac{1}{4}$ inch per foot.

In response to commenters' concern that the Guidelines for an accessible route to balconies and decks may conflict with certain building codes that require higher thresholds, or balconies or decks lower than the $\frac{1}{4}$ inch specified by the Guidelines, the Department notes that the Guidelines are "recommended" design specifications, not building code "requirements". Accordingly, the Guidelines cannot preempt State or local law. However, the builder confronted with local requirements that thwart the particular means of providing accessibility suggested by the Guidelines is under a duty to take reasonable steps to provide for accessibility by other means consistent with local law constraints and considerations of cost-effectiveness, in order to provide dwelling units that meet the specific accessibility requirements of the Fair Housing Act.

Guidelines for Requirement 5

The Guidelines for Requirement 5 present design specifications for providing dwelling units that contain light switches, electrical outlets, thermostats, and other environmental controls in accessible locations, as required by § 100.205(c)(2)(ii).

The Department has adopted the Option One guidelines for Requirement 5 with minor technical changes. The final Guidelines clarify that to be in an accessible location within the meaning of the Act, the maximum height for an

environmental control, for which reach is over an obstruction, is 44 inches for forward approach (as was proposed in the Option One guidelines), or 48 inches for side approach, provided that the obstruction is no more than 24 inches in depth. The inclusion of this additional specification for side approach is consistent with the comparable provisions in the ANSI standard.

Specific comments on the Guidelines for Requirement 5 are as follows:

Comments. Three comments stated that lowered thermostats could pose a safety hazard for children. However, the majority of comments requested clarification as to what is meant by "other environmental controls". Several commenters from the disability community requested that circuit breakers be categorized as environmental controls. Other commenters asked whether light and fan switches on range hoods fall within the category of light switches and environmental controls.

Response. With regard to concerns about lowered thermostats, the Act specifically identifies "thermostats" as one of the controls that must be in accessible locations, and the mounting heights specified in the Guidelines are necessary for an accessible location. The only other environmental controls covered by the Guidelines for Requirement 5 would be heating, air conditioning or ventilation controls (e.g., ceiling fan controls). The Department interprets the Act's requirement of placing environmental controls in accessible locations as referring to those environmental controls that are used by residents or tenants on a daily or regular basis. Circuit breakers do not fall into this category, and therefore are not subject to accessible location specifications. Light and fan switches on range hoods are appliance controls and therefore are not covered by the Act.

Comment. Other commenters asked whether light switches and electrical outlets in the inside corners of kitchen counter areas, and floor outlets are permissible.

Response. Light switches and electrical outlets in the inside corners of kitchen counters, and floor outlets, are permissible, if they are not the only light switches and electrical outlets provided for the area.

Comment. Another commenter pointed out that some electrical outlets that are installed specifically to serve individual appliances, such as refrigerators or microwave ovens, cannot realistically be mounted in an accessible location.

Response. Electrical outlets installed to serve individual appliances, such as refrigerators or built-in microwave ovens, may be mounted in non-accessible locations. These are not the type of electrical outlets which a disabled resident or tenant would need access to on a regular or frequent basis.

Comment. One commenter stated that Figure 3 in the proposed guidelines (Figure 2 in the final Guidelines) specifies a reach requirement more stringent than the ANSI Standard.

Response. The ANSI Standard presents reach ranges for both forward and side approaches for two situations: (1) unobstructed; and (2) over an obstruction. The proposed guidelines specified only the heights for forward reach, because those heights also are usable in side approach. The diagram in Figure 2 (formerly Figure 3) showing forward reach is identical to that of Figure 5 in the ANSI Standard. The ANSI Standard also includes a figure (Figure 6) for side reach that permits higher placement. The reach range for forward approach was the only one referenced in the proposed guidelines for use in the dwelling unit, because it was considered simpler and easier to use a single specification that would work in all situations. The reach range for forward approach has been retained in the final Guidelines for situations where there is no built-in obstruction in order to ensure usability when the unit was furnished. However, the final Guidelines have added the specification for side reach over a built-in obstruction that is consistent with the ANSI requirement, and that permits placement two inches higher than forward reach.

Guidelines for Requirement 6

The Guidelines for Requirement 6 present design standards for installation of reinforcement in bathroom walls to allow for later installation of grab bars around the toilet, tub, shower stall and shower seat where such facilities are provided, as required by § 100.205(c)(3)(iii).

The Department adopted the Option One guidelines for Requirement 6 with two modifications. First, the final Guidelines provide that a powder room is subject to the requirement for reinforced walls for grab bars when the powder room is the only toilet facility located on the accessible level of a covered multistory dwelling unit. Second, the final Guidelines further clarify that reinforced bathroom walls will meet the accessibility requirement of § 100.205(c)(3)(iii), if reinforced areas are provided at least at those points where grab bars will be mounted.

Specific comments on this guideline were as follows:

Comment. A number of commenters requested that the Department specify the dimensions for grab bar reinforcement, and suggested that grab bar reinforcing material run horizontally throughout the entire length of the space given for grab bars, as provided by the ANSI Standard. These commenters stated that if this type of reinforcement was required, residents could locate more easily the studs for future grab bar installation, and have flexibility in the placement of grab bars for optimal use, and safety in bathrooms. One commenter noted that many grab bars are of such a length that they require an intermediate fastener, but the proposed standard does not permit intermediate fastening. Two commenters recommended that the final Guidelines follow ANSI and UFAS Standards for requirements for mounting grab bars. One commenter recommended the installation of panels of plywood behind bathroom walls because this would provide greater flexibility in the installation of grab bars.

Response. The illustrations of grab bar wall reinforcement accompanying the Guidelines for Requirement 6 are intended only to show where reinforcement for grab bars is needed. The illustrations are not intended to prescribe how the reinforcing should be provided, or that the bathtub or shower is required to be surrounded by three walls of reinforcement. The additional language added to the Guidelines is to clarify that the Act's accessibility requirement for grab bar reinforcement is met if reinforced areas are provided, at a minimum, at those points where grab bars will be mounted. The Department recognizes that reinforcing for grab bars may be accomplished in a variety of ways, such as by providing plywood panels in the areas illustrated, or by installing vertical reinforcement (in the form of double studs, for example) at the points noted on the figures accompanying the Guidelines.

Comment. Several commenters stated that the final Guidelines should incorporate Option Two's specification of reinforcement for shower seats when shower stalls are provided.

Response. The Fair Housing Act only requires reinforcement for later installation of grab bars. The Act does not cover reinforcement for shower seats; rather, it mentions shower seats (if provided) as an area where grab bar reinforcement would be needed. However, as will be discussed more fully in the following section concerning the Guidelines for Requirement 7

(Usable Bathrooms), reinforcement for shower seats would provide adaptability to increase usability of shower stalls, and is a design option available to builders and developers in designing "usable" bathrooms.

Comment. One commenter recommended that the final Guidelines incorporate Option Two's specification that prefabricated tub/shower enclosures would have to be fabricated with reinforcement for grab bar enclosures.

Response. The Department did not incorporate this specification in the final Guidelines. The Department believes that it is inappropriate to specify product design. A builder should have the flexibility to choose how reinforcement for grab bars will be provided.

Comment. Two commenters stated that half-baths should also contain grab-bar reinforcements.

Response. Half-baths are not considered "bathrooms", as this term is commonly used, and, therefore are not subject to the bathroom wall reinforcement requirement, unless a half-bath facility is the only restroom facility on the accessible level of a covered multistory dwelling unit.

Comment. One commenter requested that the final Guidelines incorporate language clearly to specify that the builder's responsibility is limited solely to wall reinforcement, and later installation is the responsibility of the resident or tenant.

Response. It is unnecessary to incorporate the suggested language in the final Guidelines. The Guidelines for Requirement 6 are solely directed to reinforcement. No guidelines are provided for the actual installation of grab bars. Accordingly, there should be no confusion on this issue.

Guidelines for Requirement 7

The Guidelines for Requirement 7 present design specifications for providing usable kitchens and bathrooms such that an individual in a wheelchair can maneuver about the space, as required by § 100.205(c)(3)(iv).

For usable kitchens, the Department adopted the Option One guidelines with one change. The Department has eliminated the specification that controls for ranges and cooktops be placed so that reaching across burners is not required.

For usable bathrooms, the final Guidelines provide two alternative sets of design specifications. The Fair Housing Act requires that an accessible or "usable" bathroom is one which provides sufficient space for an

individual in a wheelchair to maneuver about. The two sets of specifications provide different approaches as to how compliance with this maneuvering space requirement may be accomplished. The first set of specifications also includes size dimensions for shower stalls, but only when a shower stall is the only bathing facility provided in a dwelling unit. Additionally, either set of specifications is applicable to powder rooms, when a powder room is the only restroom facility on the accessible level of a covered multistory dwelling unit.

With the exception of the inclusion of shower stall dimensions, the first set of "usable bathroom" specifications remain the same as the Option One guidelines for usable bathrooms. The second set of "usable bathroom" specifications provide somewhat greater accessibility than the first set, but would be applicable only to one bathroom in a dwelling unit that has two or more bathrooms. The second set of specifications include clear space specifications for bathrooms with in-swinging doors and for bathrooms with out-swinging doors. This second set of specifications also provides that toilets must be located in a manner that permits a grab bar to be installed on one side of the fixture, and provides specifications on the installation of vanities and lavatories.

To meet the Act's requirements for usable bathrooms, the final Guidelines provide that (1) in a dwelling unit with a single bathroom, either set of specifications may be used; and (2) in a dwelling unit with more than one bathroom, all bathrooms in the unit must comply with the first set of specifications, or, alternatively, at least one bathroom must comply with the second set of specifications, and all other bathrooms must be on an accessible route, and must have a usable entry door in accordance with the guidelines for Requirements 3 and 4. However, in multistory dwelling units, only those bathrooms on the accessible level are subject to the Act's requirements for usable bathrooms. Where a powder room is the only restroom facility provided on the accessible level of a multistory dwelling unit, the powder room must meet either the first set of specifications or the second set of specifications. All bathrooms and powder rooms that are subject to Requirement 7, must have reinforcements for grab bars as provided in the Guideline for Requirement B.

In developing the final Guidelines for the usable bathroom requirement, the Department recognized that the Option One guidelines for usable bathrooms

presented the minimum specifications necessary to meet the Act's requirements. Accordingly, the Department believes that it is appropriate to provide a second set of specifications which provide somewhat different accessibility accommodations than the Option One guidelines. The Department believes that by offering two sets of specifications for usable bathrooms, the Department is providing builders and developers with more development choices in designing dwelling units that contain more than one bathroom; and it is providing individuals and families with more housing options. Builders and developers may design all bathrooms to meet the minimal specifications of the first set of specifications, or they may design only one bathroom to meet the somewhat greater accessibility specifications of the second set. Regardless of which set of usable bathroom specifications is selected by a builder or developer, all doors to bathrooms and powder rooms must meet the minimum door width specifications of Requirement 3.

The following presents a discussion of the specific comments received on usable kitchens and usable bathrooms.

Controls for Ranges and Cooktops

Comment. A few commenters stated that the Department lacks authority under the Fair Housing Act to impose design standards on appliances. The commenter stated that standards that specify certain design features for appliances in individual dwelling units exceed the scope of the Department's statutory authority. Other commenters objected to front range controls as a safety hazard for children. Commenters from the disability community were strongly supportive of this design specification.

Response. With respect to usable kitchens, the Act solely requires that kitchens have sufficient space such that an individual in a wheelchair can maneuver about. Accordingly, a specification that controls for ranges and cooktops be placed so that they can be used without reaching across burners is not consistent with the Act's requirement for usable kitchens.

In the proposed guidelines, the Option One guidelines for usable kitchens specified that controls should be located so as to be usable without reaching across burners. As the preamble to the proposed guidelines noted, many standard styles of ranges and cooktops meeting this specification (other than those with front controls) are available on the market. However, in reviewing the entire rulemaking history on the

design and construction requirements, the Department has concluded that the requirements of the Fair Housing Act did not cover any appliance controls. Accordingly, this specification was not included in the final Guidelines.

Maneuvering Space, Adjustable Cabinetry, Fixtures and Plumbing

Comment. A number of commenters from the disability community stated that it was important that the Guidelines for both kitchens and bathrooms specify a five-foot turning radius; adjustable cabinetry, fixtures and plumbing; and fixture controls that comply with the appropriate provisions of the ANSI Standard.

Response. The legislative history of the Fair Housing Act clearly indicates that Congress did not envision usable kitchens and bathrooms to be designed in accordance with the specifications suggested by the commenters. In House Report No. 711, the Congress stated as follows:

The fourth feature is that kitchens and bathrooms be usable such that an individual in a wheelchair can maneuver about the space. This provision is carefully worded to provide a living environment usable by all. Design of standard sized kitchens and bathrooms can be done in such a way as to assure usability by persons with disabilities without necessarily increasing the size of space. The Committee intends that such space be usable by handicapped persons, but this does not necessarily require that a turning radius be provided in every situation. This provision also does not require that fixtures, cabinetry or plumbing be of such design as to be adjustable. (House Report at 27)

Accordingly, the Department is unable to adopt any of the proposals suggested by the commenters. The Act's requirement for usable kitchens and bathrooms only specifies maneuverability for wheelchair users, and this maneuverability does not require the specification advocated by the commenters. (See previous discussion of this issue in the preamble to the proposed Fair Housing regulations at 53 FR 45005.)

Comment. Two commenters requested clarification concerning what is meant by "sufficient maneuvering space". One of the commenters recommended that this term be defined to include "such space as shall permit a person in a wheelchair to use the features and appliances of a room without having to leave the room to obtain an approach to an appliance, work surface, or cabinet".

Response. The Guidelines for Requirement 7 (usable kitchens and bathrooms) describe what constitutes sufficient maneuvering space in the

kitchen and the bathroom. Additionally, the preamble to the proposed guidelines explicitly states that sufficient maneuvering space for kitchens does not require a wheelchair turning radius (55 FR 24381). As noted in response to the preceding comment, a wheelchair turning radius also is not required for either usable kitchens or usable bathrooms. The Guidelines for usable bathroom state that sufficient maneuvering space is provided within the bathroom for a person using a wheelchair or other assistive device to enter and close the door, use the fixtures, reopen the door and exit. This specification was not changed in the final Guidelines.

Kitchen Work Surfaces

Comment. One commenter stated that "Element 12" in the chart accompanying the Guidelines for Requirement 2 (public and common use areas) seems to require a portion of the kitchen counters to be accessible since they are work surfaces. This commenter stated that if this interpretation is correct then it should be made clear in the Guidelines.

Response. The commenter's interpretation is not correct. The chart accompanying the Guidelines for Requirement 2 is only applicable to the public and common use areas, not to individual dwelling units.

Showers

Comments. Several commenters requested that the final Guidelines provide dimensions on the appropriate width and height of showers and shower doors. Another commenter asked whether showers were required to comply with dimensions specified by the ANSI Standard.

Response. The final Guidelines for usable bathrooms (the first set of specifications) specify size dimensions for shower stalls in only one situation—when the shower stall is the only bathing facility provided in a covered dwelling unit. The Department believes that, where a shower stall is the only bathing facility provided, size specification for the shower stall is consistent with the Act's requirement for usable bathrooms. However, if a shower stall is not the only bathing facility provided in the dwelling unit, then the only specification for showers, appropriate under the Act, concerns reinforced walls in showers. (The titles under the illustrations (figures) related to showers in the final Guidelines for Requirement 6 have been revised to make it clear that the figures are specifying only the different areas required to be reinforced in showers of

different sizes, not the required sizes of the shower stalls.)

In-swinging Bathroom Doors

Comment. One commenter stated that in-swinging bathroom doors generally are problematic, unless the bathroom is unusually large. The commenter noted that an in-swinging door makes it extremely difficult to enter and exit. The commenter recommended that in-swinging doors be prohibited unless there is sufficient internal bathroom space, exclusive of the swing of the door, which allows either a five foot turning radius or two mutually exclusive 30" x 48" wheelchair spaces. Another commenter stated that in-swinging bathroom doors create a serious obstacle for the wheelchair user.

Response. The Department declines to prohibit in-swinging bathroom doors. Adjusting an in-swinging door to swing out is the type of later adaptation that can be made fairly easily by a resident or tenant. Once a minimum door width is provided, a tenant who finds a bathroom not readily usable can have the door rehung as an outswinging door. Note, however, that the second set of guidelines for usable bathrooms specifies clear space for bathrooms with in-swinging doors.

Bathroom Design Illustrations

Comment. A number of commenters from the disability community stated that two of the six bathroom drawings in the preamble to the proposed guidelines (numbers 4 and 6 at 55 FR 24374-24375) did not allow for a parallel approach to the tub. These commenters requested that these drawings be removed from the final Guidelines. Other commenters stated that the Department's bathroom design illustrations at 55 FR 24374-24375 are not consistent with the Figure 8 bathroom design illustrations at 55 FR 24401.

Response. While a parallel approach to the tub would provide somewhat greater accessibility, the Department believes that to indicate, through the Guidelines, that a parallel approach to the tub is necessary to meet the Act's requirements, exceeds the Fair Housing Act's minimal design expectations for bathrooms. Accordingly, the first set of specifications for usable bathrooms does not specify a parallel approach to the tub. However, the second set of specifications provides for a clear access aisle adjacent to the tub that would permit a parallel approach to the tub. Either method would meet the Act's requirements. With respect to the comments on the bathroom design illustrations, these illustrations have been revised to make the clear floor

space requirements more readily understood. The illustrations are adapted from ANSI A117.1.

Number of Accessible Bathrooms

Comment. A number of comments were received on how many bathrooms in a dwelling unit should be subject to the Act's "usable" bathroom requirement. Many commenters recommended that all full bathrooms be made accessible. Other commenters recommended that only one full bathroom be required to be made accessible. A few commenters recommended that half-baths/powder rooms also be subject to the Act's requirement.

Response. In House Report No. 711, the Congress distinguished between "total accessibility" and the level of accessibility required by the Fair Housing Act. The report referred to standards requiring every aspect or portion of buildings to be totally accessible, and pointed out that this was not the level of accessibility required by the Act. The final Guidelines for bathrooms are consistent with the Act's usable bathroom requirement, and provide the level of accessibility intended by Congress. As discussed previously in this preamble, the final Guidelines for usable bathrooms provide two sets of specifications. The second set of specifications provides somewhat greater accessibility than the first set of specifications. In view of this fact, the final Guidelines provide that in a dwelling unit with a single bathroom, the bathroom may be designed in accordance with either set of specifications—the first set or the second set. However, in a dwelling unit with more than one bathroom, all bathrooms in the unit must comply with the first set of specifications, or a minimum of one bathroom must comply with the second set of specifications, and all other bathrooms must be on an accessible route, and must have a usable entry door in accordance with the guidelines for Requirements 3 and 4. Additionally, the final Guidelines provide that a powder room must comply with the Act's usable bathroom requirements when the powder room is the only restroom facility provided on the accessible level of a multi-story dwelling unit.

3. Discussion of Comments on Related Fair Housing Issues Compliance Deadline

Section 100.205 of the Fair Housing regulations incorporates the Act's design and construction requirements, including the requirement that

multifamily dwellings for first occupancy after March 13, 1991 be designed and constructed in accordance with the Act's accessibility requirements. Section 100.205(a) provides that covered multifamily dwellings shall be deemed to be designed and constructed for first occupancy on or before March 13, 1991 (and, therefore, exempt from Act's accessibility requirements), if they are occupied by that date, or if the last building permit or renewal thereof for the covered multifamily dwellings is issued by a State, County, or local government on or before January 13, 1990.

Comment. The Department received a number of comments on the March 13, 1991 compliance deadline, and on methods of achieving compliance. Many commenters objected to the March 13, 1991 compliance deadline on the basis that this deadline was unreasonable. Several commenters from the building industry stated that, in many cases, design plans for buildings now under construction were submitted over two years ago, and it would be very expensive to make changes to buildings near completion. Other commenters stated that it is unreasonable to impose additional requirements on a substantially completed project that unexpectedly has been delayed for occupancy beyond the March 13, 1991 effective date.

Response. Section 804(f)(3)(C) of the Fair Housing Act states that the design and construction standards will be applied to covered multifamily dwelling units for first occupancy after the date that is 30 months after the date of enactment of the Fair Housing Amendments Act. The Fair Housing Act was enacted on September 13, 1988. The date that is 30 months from that date is March 13, 1991. Accordingly, the inclusion of a March 13, 1991 compliance date in § 100.205 is a codification of the Act's compliance deadline. The Department has no authority to change that date. Only Congress may extend the March 13, 1991 deadline.

The Department, however, has been attentive to the concerns of the building industry, and has addressed these concerns, to the extent that it could, in prior published documents. In the preamble to the final Fair Housing rule, the Department addressed the objections of the building industry to the Department's reliance on "actual occupancy" as the sole basis for determining "first occupancy". (See 54 FR 3251; 24 CFR Ch. I, Subch. A, App. I at 585 (1990)). Commenters to the

proposed Fair Housing rule, like the commenters to the proposed guidelines, argued that coverage of the design and construction requirements must be determinable at the beginning of planning and development, and that projects delayed by unplanned and uncontrollable events (labor strikes, Acts of God, etc.) should not be subject to the Act.

In order to accommodate the "legitimate concerns on the part of the building industry" the Department expanded § 100.205 of the final rule to provide that covered multifamily dwellings would be deemed to be for first occupancy if the last building permit or renewal thereof was issued on or before January 13, 1990. A date of fourteen months before the March 13, 1991 deadline was selected because the median construction time for multifamily housing projects of all sizes was determined to be fourteen months, based on data provided by the Marshall Valuation Service.

More recently, the Department addressed similar concerns of the building industry in the preamble to the proposed accessibility guidelines. In the June 15, 1990 publication, the Department recognized that projects designed in advance of the publication of the final Guidelines, may not become available for first occupancy until after March 13, 1991. To provide some guidance, the Department stated in the June 15, 1990 notice that compliance with the Option One guidelines would be considered as evidence of compliance with the Act, in projects designed before the issuance of the final Guidelines. The Department restated its position on this issue in a supplementary notice published in the Federal Register on August 1, 1990 (55 FR 31181). The specific circumstances under which the Department would consider compliance with the Option One guidelines as compliance with the accessibility requirements of the Act were more fully addressed in the August 1, 1990 notice.

Comment. A number of commenters requested extending the date of issuance of the last building permit from January 13, 1990 to some other date, such as June 15, 1990, the date of publication of the proposed guidelines; August 1, 1990, the date of publication of the supplementary notice; or today's date, the date publication of the final Guidelines.

Response. The date of January 13, 1990 was not randomly selected by the Department. This date was selected because it was fourteen months before the compliance deadline of March 13, 1991. As previously noted in this

preamble, fourteen months was found to represent a reasonable median construction time for multifamily housing projects of all sizes, based on data contained in the Marshall Valuation Service. Builders have been on notice since January 23, 1989—the publication date of the final Fair Housing rule, that undertaking construction after January 13, 1990 without adequate attention to accessibility considerations would be at the builder's risk.

Comment. One commenter requested that the applicable building permit be the "primary" building permit for a particular building. Other commenters inquired about the status of building permits that are issued in stages, or about small modifications to building plans during construction which necessitate a reissued building permit.

Response. Following publication of the proposed Fair Housing regulation, and the many comments received at that time from the building industry expressing concern that "actual occupancy" was the only standard for determining "first occupancy", the Department gave careful consideration to the steps and stages involved in the building process. On the basis of this study, the Department determined that an appropriate standard to determine "first occupancy", other than actual occupancy, would be issuance of the last building permit on or before January 13, 1990. This additional standard was added to the final Fair Housing Act regulation. The Department believes that, aside from actual occupancy, issuance of the last building permit remains the appropriate standard.

Compliance Determinations by State and Local Jurisdictions

Comment. A few commenters questioned the role of States and units of local government in determining compliance with the Act's accessibility requirements. The commenters noted that (1) § 100.205(g) encourages States and units of general local government to include, in their existing procedures for the review and approval of newly constructed covered multifamily dwellings, determinations as to whether the design and construction of such dwellings are consistent with the Act's accessibility requirements; but (2) § 100.205(h) provides that determinations of compliance or noncompliance by a State or a unit of general local government are not conclusive in enforcement proceedings under the Fair Housing Act. These commenters stated that, unless determinations of compliance or

noncompliance by a State or unit of general local government are deemed to be conclusive, local jurisdictions will be discouraged from performing compliance reviews because they will not be able to provide a building permit applicant with a sense of finality that proposed design plans are in compliance with the Act.

Response. Sections 100.205 (g) and (h) of the Fair Housing regulations implement sections 804(f)(5) (B) and (C), and section 804(f)(6)(b) of the Fair Housing Act. The language of §§ 100.205 (g) and (h) is taken directly from these statutory provisions. The Congress, not the Department, made the decision that determinations of compliance or noncompliance with the Act by a State or unit of general local government shall not be conclusive in enforcement proceedings. The Department, however, agrees with the position taken in the statute. The Department believes that it would be inappropriate to accord particular "weight" to determinations made by a wide variety of State and local government agencies involving a new civil rights law, without first having the benefit of some experience reviewing the accuracy of the determinations made by State and local authorities under the Fair Housing Act.

Comment. Two commenters stated that local building departments, especially those in smaller urban areas and in rural areas, do not have the manpower or expert knowledge to assure a proper determination of compliance, particularly in "close call" situations. The commenters recommended that liability for any infractions exclude local building departments unless the Department is willing to provide qualified personnel from its local field office to attend staff reviews of every building permit request.

Response. The Department is reluctant to assume that State and local jurisdictions, by performing compliance reviews, will subject themselves to liability under the Fair Housing Act, particularly in light of section 804(f)(5)(C) of the Act, which encourages States and localities to make reviews for compliance with the statute; and the implicit recognition, under Section 804(f)(6)(B), that these reviews may not be correct.

Comment. With reference to a violation of the Act's requirements, several commenters questioned how violations of the Act would be determined, and what the penalty would be for a violation. The commenters asked whether a builder would be cited, and fined, for each violation per building, or for each violation per unit.

Response. If it is determined that a violation of the Act has occurred, a Federal District Court or an administrative law judge (ALJ) has the authority to award actual damages, including damages for humiliation and emotional distress; punitive damages (in court) or civil penalties (in ALJ proceedings); injunctive relief; attorneys fees (except to the United States); and any other equitable relief that may be considered appropriate. Whether a violation will be found for each violation per building, for each violation per unit, or on any other basis, is properly left to the courts and the ALJs.

Enforcement Mechanisms

In the proposed guidelines, the Department solicited public comment on effective enforcement mechanisms (55 FR 24383-24384). Specifically, the Department requested comment on the effectiveness of: annual surveys to assess the number of projects developed with accessible buildings; recordkeeping requirements; and a "second opinion" by an independent, licensed architect or engineer on the site impracticality issue. The Department stated that comments on these proposals would be considered in connection with forthcoming amendments to the Fair Housing regulation.

The Department appreciates all comments submitted on the proposed enforcement mechanisms, and the suggestions offered on other possible enforcement mechanisms, such as a preconstruction review process, certification by a licensed architect, engineer or other building professional that a project is in compliance with the Act, and certification of local accessibility codes by the Department. All these comments will be considered in connection with future amendments to the Fair Housing Act regulation.

First Occupancy

Comment. A number of commenters requested clarification of the determination of "first occupancy" after March 13, 1991. A few commenters referred to the Act's first occupancy requirement as that of "ready for occupancy" by March 13, 1991.

Response. The phrase "ready for occupancy" does not correctly describe the standard contained in the Fair Housing Act. The Act states that covered multifamily dwellings subject to the Act's accessibility requirements are those that are "for first occupancy" after March 13, 1991. The standard, "first occupancy," is based on actual occupancy of the covered multifamily dwelling, or on issuance of the last building permit, or building permit

renewal, on or before January 13, 1990. Where an individual is relying on a claim that a building was actually occupied on March 13, 1991, the Department, in making a determination of reasonable cause, will consider each situation on a case-by-case basis. As long as one dwelling unit in a covered multifamily dwelling is occupied, the one occupied dwelling unit is sufficient to meet the requirements for actual occupancy. However, the question of whether the occupancy was in compliance with State and local law (e.g., pursuant to a local occupancy permit, where one is required) will be a crucial factor in determining whether first occupancy has been achieved.

Comment. Several commenters requested clarification of "first occupancy", with respect to projects involving several buildings, or projects with extended build-out terms, such as planned communities with completion dates 5 to 10 years into the future.

Response. "First occupancy" is determined on a building-by-building basis, not on a project-by-project basis. For a project that involves several buildings, one building in the project could be built without reference to the accessibility requirements, while a building constructed next door might have to comply with the Act's requirements. The fact that one or more buildings in a multiple building project were occupied on March 13, 1991 will not be sufficient to afford an exemption from the Act's requirements for other buildings in the same project that are developed at a later time.

Costs of Adaptation

Comment. A few commenters requested clarification on who incurs the cost of making a unit adaptable for a disabled tenant.

Response. All costs associated with incorporating the new design and construction requirements of the Fair Housing Act are borne by the builder. There are, of course, situations where a tenant may need to make modifications to the dwelling unit which are necessary to make the unit accessible for that person's particular type of disability. The tenant would incur the cost of this type of modification—whether or not the dwelling unit is part of a multifamily dwelling exempt from the Act's accessibility requirements. For dwellings subject to the statute's accessibility requirements, the tenant's costs would be limited to those modifications that were not covered by the Act's design and construction requirements. (For example, the tenant would pay for the cost of purchasing

and installing grab bars.) For dwellings not subject to the accessibility requirements, the tenant would pay the cost of all modifications necessary to meet his or her needs. (Using the grab bar example, the tenant would pay both the cost of buying and installing the grab bars and the costs associated with adding bathroom wall reinforcement.)

Section 100.203 of the Fair Housing regulations provides that discrimination includes a refusal to permit, at the expense of a handicapped person, reasonable modifications of existing premises occupied or to be occupied by that person, if modifications are necessary to afford the person full enjoyment of the premises. In the case of a rental, the landlord may reasonably condition permission for a modification on the renter's agreeing to restore the interior of the unit to the condition that existed before its modification—reasonable wear and tear excepted. This regulatory section provides examples of reasonable modifications that a tenant may make to existing premises. The examples include bathroom wall reinforcement in House Report No. 711, the Congress provided additional examples of reasonable modifications that could be made to existing premises by persons with disabilities:

For example, persons who have a hearing disability could install a flashing light in order to "see" that someone is ringing the doorbell. Elderly individuals with severe arthritis may need to replace the doorknobs with lever handles. A person in a wheelchair may need to install fold-back hinges in order to be able to go through a door or may need to build a ramp to enter the unit. Any modifications protected under this section [section 804(f)(3)(A)] must be reasonable and must be made at the expense of the individual with handicaps. (House Report at 25)

Reasonable Modification

Comment. One commenter requested clarification concerning what is meant by "reasonable modification".

Response. What constitutes "reasonable modification" is discussed to some extent in the preceding section, "Costs of Adaptation", and also was discussed extensively in the preambles to both the proposed and final Fair Housing rules. (See 53 FR 45002-45003, 54 FR 3247-3248; 24 CFR Ch. I, Subch. A, App. I at 580-583 (1990).) Additionally, examples of reasonable modifications are provided in 24 CFR 100.203(c).

Scope of Coverage

Comment. A number of comments were received on the issue of which types of dwelling units should be subject to the Act's accessibility requirements, and the number or percentage of

dwelling units that must comply with the Act's requirements.

Response. The Department lacks the authority to adopt any of the proposals recommended by the commenters. The type of multifamily dwelling subject to the Fair Housing Act's accessibility requirements, and the number of individual dwelling units that must be made accessible were established by the Congress, not the Department. The Fair Housing Act defines "covered multifamily dwelling" to mean buildings consisting of four or more units if such buildings have one or more elevators; and ground floor units in other buildings consisting of four or more units." (See Section 804(f)(7) of the Act.) The Fair Housing Act requires that covered multifamily dwellings for first occupancy after March 13, 1991 be designed and constructed in accordance with the Act's accessibility requirements. The Act does not permit only a percentage of units in covered multifamily dwellings to be designed in accordance with the Act's requirements, nor does the Department have the authority so to provide by regulation.

VI. Other Matters

Codification of Guidelines. In order to assure the availability of the Guidelines, and the preamble to the Guidelines, to interested persons in the future, the Department has decided to codify both documents. The Guidelines will be codified in the 1991 edition of the Code of Federal Regulations as appendix II to the Fair Housing regulations (i.e., 24 CFR Ch. I, Subch. A, App. II), and the preamble to the Guidelines will be codified as appendix III (i.e., 24 CFR Ch. I, Subch. A, App. III).

Regulatory Impact Analysis. A Preliminary Impact Analysis was published in the Federal Register on September 7, 1990 (55 FR 37072-37129). A Final Regulatory Impact Analysis is available for public inspection during regular business hours in the Office of the Rules Docket Clerk, room 10276, Department of Housing and Urban Development, 451 Seventh Street, SW., Washington, DC 20410-0500.

Environmental Impact. A Finding of No Significant Impact with respect to the environment has been made in accordance with HUD regulations at 24 CFR part 50, which implement section 102(2)(C) of the National Environmental Policy Act of 1969. The Finding of No Significant Impact is available for public inspection during regular business hours in the Office of the Rules Docket Clerk, Office of the General Counsel, Department of Housing and Urban Development, room 10276, 451 Seventh Street, SW., Washington, DC 20410-0500.

Executive Order 12806, The Family.

The General Counsel, as the Designated Official under Executive Order No. 12806, The Family, has determined that this notice will likely have a significant beneficial impact on family formation, maintenance or well-being. Housing designed in accordance with the Guidelines will offer more housing choices for families with members who have disabilities. Housing designed in accordance with the Guidelines also may be beneficial to families that do not have members with disabilities. For example, accessible building entrances, as required by the Act and implemented by the Guidelines, may benefit parents with children in strollers, and also allow residents and visitors the convenience of using luggage or shopping carts easily. Additionally, with the aging of the population, and the increase in incidence of disability that accompanies aging, significant numbers of people will be able to remain in units designed in accordance with the Guidelines as the aging process advances. Compliance with these Guidelines may also increase the costs of developing a multifamily building, and, thus, may increase the cost of renting or purchasing homes. Such costs could negatively affect families' ability to obtain housing. However, the Department believes that the benefits provided to families by housing that is in compliance with the Fair Housing Amendments Act outweigh the possible increased costs of housing.

Executive Order 12811, Federalism.

The General Counsel, as the Designated Official under section 8(a) of Executive Order No. 12811, Federalism, has determined that this notice does not involve the preemption of State law by Federal statute or regulation and does not have federalism implications. The Guidelines only are recommended design specifications, not legal requirements. Accordingly, the Guidelines do not preempt State or local laws that address the same issues covered by the Guidelines.

Dated: February 27, 1991.

Gordon H. Mansfield,

Assistant Secretary for Fair Housing and Equal Opportunity.

Accordingly, the Department adds the Fair Housing Accessibility Guidelines as Appendix II and the text of the preamble to these final guidelines beginning at the heading "Adoption of Final Guidelines" and ending before "VI. Other Matters" as appendix III to 24 CFR, ch. I, subchapter A to read as follows:

Appendix II to Ch. I, subchapter A—Fair Housing Accessibility Guidelines

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U.S. Department of Housing and Urban Development
Office of Fair Housing and Urban Development



Fair Housing Accessibility Guidelines

Design Guidelines for Accessible/Adaptable Dwellings

Issued by the Department of Housing and Urban Development

NOTE: This is a reprint of the final Fair Housing Accessibility Guidelines published in the Federal Register on March 6, 1991, Vol. 56, No. 44, pages 9472-9515. This reprint incorporates corrections to the final Guidelines which were published in the Federal Register on June 24, 1991.

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Fair Housing Accessibility Guidelines

Section 1. Introduction

Authority

Section 804(f)(5)(C) of the Fair Housing Amendments Act of 1988 directs the Secretary of the Department of Housing and Urban Development to provide technical assistance to States, local governments, and other persons in implementing the accessibility requirements of the Fair Housing Act. These guidelines are issued under this statutory authority.

Purpose

The purpose of these guidelines is to provide technical guidance on designing dwelling units as required by the Fair Housing Amendments Act of 1988 (Fair Housing Act). These guidelines are not mandatory, nor do they prescribe specific requirements which must be met, and which, if not met, would constitute unlawful discrimination under the Fair Housing Act. Builders and developers may choose to depart from these guidelines and seek alternate ways to demonstrate that they have met the requirements of the Fair Housing Act. These guidelines are intended to provide a safe harbor for compliance with the accessibility requirements of the Fair Housing Act.

Scope

These guidelines apply only to the design and construction requirements of 24 CFR 100.205. Compliance with these guidelines do not relieve persons participating in a Federal or Federally-assisted program or activity from other requirements, such as those required by section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and the Architectural Barriers Act of 1968 (42 U.S.C. 4151-4157). Accessible design requirements for Section 504 are found at 24 CFR Part 8. Accessible design requirements for the Architectural Barriers Act are found at 24 CFR Part 40.

Organization of Guidelines

The design guidelines are incorporated in Section 5 of this document. Each guideline cites the appropriate paragraph of HUD's regulation at 24 CFR 100.205; quotes from the regulation to identify the required design features, and states recommended specifications for each design feature.

Generally, these guidelines rely on the American National Standards Institute (ANSI) A117.1-1986, American National Standard for Buildings and Facilities—Providing Accessibility and Usability for Physically Handicapped People (ANSI Standard). Where the guidelines rely on sections of the ANSI Standard, the ANSI sections are cited. Only those sections of the ANSI Standard cited in the guidelines are recommended for compliance with 24 CFR 100.205. For those guidelines that

differ from the ANSI Standard, recommended specifications are provided. The texts of cited ANSI sections are not reproduced in the guidelines. The complete text of the 1986 version of the ANSI A117.1 Standard may be purchased from the American National Standards Institute, 1430 Broadway, New York, NY 10018.

Section 2. Definitions

As used in these Guidelines:

"Accessible", when used with respect to the public and common use areas of a building containing covered multifamily dwellings, means that the public or common use areas of the building can be approached, entered, and used by individuals with physical handicaps. The phrase "readily accessible to and usable by" is synonymous with accessible. A public or common use area that complies with the appropriate requirements of ANSI A117.1-1986, a comparable standard or these guidelines is "accessible" within the meaning of this paragraph.

"Accessible route" means a continuous unobstructed path connecting accessible elements and spaces in a building or within a site that can be negotiated by a person with a severe disability using a wheelchair, and that is also safe for and usable by people with other disabilities. Interior accessible routes may include corridors, floors, ramps, elevators and lifts. Exterior accessible routes may include parking access aisles, curb ramps, walks, ramps and lifts. A route that complies with the appropriate requirements of ANSI A117.1-1986, a comparable standard, or Section 5, Requirement 1 of these guidelines is an "accessible route". In the circumstances described in Section 5, Requirements 1 and 2, "accessible route" may include access via a vehicular route.

"Adaptable dwelling units", when used with respect to covered multifamily dwellings, means dwelling units that include the features of adaptable design specified in 24 CFR 100.205(c) (2)-(3).

"ANSI A117.1-1986" means the 1986 edition of the American National Standard for buildings and facilities providing accessibility and usability for physically handicapped people.

"Assistive device" means an aid, tool, or instrument used by a person with disabilities to assist in activities of daily living. Examples of assistive devices include tongs, knob-turners, and oven-rack pushers/pullers.

"Bathroom" means a bathroom which includes a water closet (toilet), lavatory (sink), and bathtub or shower. It does not include single-fixture facilities or those with only a water closet and lavatory. It does include a compartmented bathroom. A

compartmented bathroom is one in which the fixtures are distributed among interconnected rooms. A compartmented bathroom is considered a single unit and is subject to the Act's requirements for bathrooms.

"Building" means a structure, facility or portion thereof that contains or serves one or more dwelling units.

"Building entrance on an accessible route" means an accessible entrance to a building that is connected by an accessible route to public transportation stops, to parking or passenger loading zones, or to public streets or sidewalks, if available. A building entrance that complies with ANSI A117.1-1986 (see Section 5, Requirement 1 of these guidelines) or a comparable standard complies with the requirements of this paragraph.

"Clear" means unobstructed.

"Common use areas" means rooms, spaces or elements inside or outside of a building that are made available for the use of residents of a building or the guests thereof. These areas include hallways, lounges, lobbies, laundry rooms, refuse rooms, mail rooms, recreational areas and passageways among and between buildings. See Section 5, Requirement 2 of these guidelines.

"Controlled substance" means any drug or other substance, or immediate precursor included in the definition in Section 102 of the Controlled Substances Act (21 U.S.C. 802).

"Covered multifamily dwellings" or "covered multifamily dwellings subject to the Fair Housing Amendments" means buildings consisting of four or more dwelling units if such buildings have one or more elevators; and ground floor dwelling units in other buildings consisting of four or more dwelling units. Dwelling units within a single structure separated by firewalls do not constitute separate buildings.

"Dwelling unit" means a single unit of residence for a household of one or more persons. Examples of dwelling units covered by these guidelines include: condominiums; an apartment unit within an apartment building; and 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. Examples of the latter include dormitory rooms and sleeping accommodations in shelters intended for occupancy as a residence for homeless persons.

"Entrance" means any exterior access point to a building or portion of a building used by residents for the purpose of entering. For purposes of these guidelines, an "entrance" does not include a door to a loading dock or a door used primarily as a service entrance, even if nonhandicapped residents occasionally use that door to enter.

"Finished grade" means the ground surface of the site after all construction, levelling, grading, and development has been completed.

"Ground floor" means 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.

"Handicap" means, with respect to a person, a physical or mental impairment which substantially limits one or more major life activities; a record of such an impairment; or being regarded as having such an impairment. This term does not include current, illegal use of or addiction to a controlled substance. For purposes of these guidelines, an individual shall not be considered to have a handicap solely because that individual is a transvestite.

As used in this definition:

(a) "Physical or mental impairment" includes:

- (1) Any physiological disorder or condition, cosmetic disfigurement, or anatomical loss affecting one or more of the following body systems: Neurological; musculoskeletal; special sense organs; respiratory, including speech organs; cardiovascular; reproductive; digestive; genitourinary; hemic and lymphatic; skin; and endocrine; or
- (2) Any mental or psychological disorder, such as mental retardation, organic brain syndrome, emotional or mental illness, and specific learning disabilities. The term "physical or mental impairment" includes, but is not limited to, such diseases and conditions as orthopedic, visual, speech and hearing impairments, cerebral palsy, autism, epilepsy, muscular dystrophy, multiple sclerosis, cancer, heart disease, diabetes, Human Immunodeficiency Virus infection, mental retardation, emotional illness, drug addiction (other than addiction caused by current, illegal use of a controlled substance) and alcoholism. These guidelines are designed to make units accessible or adaptable for people with physical handicaps.

(b) "Major life activities" means functions such as caring for one's self, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning and working.

(c) "Has a record of such an impairment" means has a history of, or has been misclassified as having, a mental or physical impairment that substantially limits one or more major life activities.

(d) "Is regarded as having an impairment" means:

- (1) Has a physical or mental impairment that does not substantially limit one or more major life activities but that is treated by another person as constituting such a limitation;
- (2) Has a physical or mental impairment that substantially limits one or more major life activities only as a result of the attitudes of others toward such impairment; or
- (3) Has none of the impairments defined in paragraph (a) of this definition but is treated by another person as having such an impairment.

"Loft" means an intermediate level between the floor and ceiling of any story, located within a room or rooms of a dwelling.

"Multistory dwelling unit" means a dwelling unit with finished living space located on one floor and the floor or floors immediately above or below it.

"Public use areas" means interior or exterior rooms or spaces of a building that are made available to the general public. Public use may be provided at a building that is privately or publicly owned.

"Single-story dwelling unit" means a dwelling unit with all finished living space located on one floor.

"Site" means a parcel of land bounded by a property line or a designated portion of a public right of way.

"Slope" means the relative steepness of the land between two points and is calculated as follows: The distance and elevation between the two points (e.g., an entrance and a passenger loading zone) are determined from a topographical map. The difference in elevation is divided by the distance and that fraction is multiplied by 100 to obtain a percentage slope figure. For example, if a principal entrance is ten feet from a

passenger loading zone, and the principal entrance is raised one foot higher than the passenger loading zone, then the slope is $1/10 \times 100 = 10\%$.

"Story" means that portion of a dwelling unit between the upper surface of any floor and the upper surface of the floor next above, or the roof of the unit. Within the context of dwelling units, the terms "story" and "floor" are synonymous.

"Undisturbed site" means the site before any construction, levelling, grading, or development associated with the current project.

"Vehicular or pedestrian arrival points" means public or resident parking areas, public transportation stops, passenger loading zones, and public streets or sidewalks.

"Vehicular route" means a route intended for vehicular traffic, such as a street, driveway or parking lot.

Section 3. Fair Housing Act Design and Construction Requirements

The regulations issued by the Department at 24 CFR 100.205 state:

§ 100.205 Design and construction requirements.

(a) Covered multifamily dwellings for first occupancy after March 13, 1991 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 the terrain or unusual characteristics of the site. For purposes of this section, a covered multifamily dwelling shall be deemed to be designed and constructed for first occupancy on or before March 13, 1991 if they are occupied by that date or if the last building permit or renewal thereof for the covered multifamily dwellings is issued by a State, County or local government on or before January 13, 1990. The burden of establishing impracticality because of terrain or unusual site characteristics is on the person or persons who designed or constructed the housing facility.

(b) The application of paragraph (a) of this section may be illustrated by the following examples:

Example (1): A real estate developer plans to construct six covered multifamily dwelling units on a site with a hilly terrain. Because of the terrain, it will be necessary to climb a long and steep stairway in order to enter the dwellings. Since there is no practical way to provide an accessible route to any of the dwellings, one need not be provided.

Example (2): A real estate developer plans to construct a building consisting of 10 units of multifamily housing on a waterfront site that floods frequently. Because of this unusual characteristic of the site, the builder plans to construct the building on stilts. It is customary for housing in the geographic area where the site is located to be built on stilts. The housing may lawfully be constructed on the proposed site on stilts even though this means that there will be no practical way to provide an accessible route to the building entrance.

Example (3): A real estate developer plans to construct a multifamily housing facility on a particular site. The developer would like the facility to be built on the site to contain as many units as possible. Because of the configuration and terrain of the site, it is possible to construct a building with 105 units on the site provided the site does not have an accessible route leading to the building entrance. It is also possible to construct a building on the site with an accessible route

leading to the building entrance. However, such a building would have no more than 100 dwelling units. The building to be constructed on the site must have a building entrance on an accessible route because it is not impractical to provide such an entrance because of the terrain or unusual characteristics of the site.

(c) All covered multifamily dwellings for first occupancy after March 13, 1991 with a building entrance on an accessible route shall be designed and constructed in such a manner that—

(1) The public and common use areas are readily accessible to and usable by handicapped persons;

(2) All the doors designed to allow passage into and within all premises are sufficiently wide to allow passage by handicapped persons in wheelchairs; and

(3) All premises within covered multifamily dwelling units contain the following features of adaptable design:

(i) An accessible route into and through the covered dwelling unit;

(ii) Light switches, electrical outlets, thermostats, and other environmental controls in accessible locations;

(iii) Reinforcements in bathroom walls to allow later installation of grab bars around the toilet, tub, shower, stall and shower seat, where such facilities are provided; and

(iv) Usable kitchens and bathrooms such that an individual in a wheelchair can maneuver about the space.

(d) The application of paragraph (c) of this section may be illustrated by the following examples:

Example (1): A developer plans to construct a 100 unit condominium apartment building with one elevator. In accordance with paragraph (a), the building has at least one accessible route leading to an accessible entrance. All 100 units are covered multifamily dwelling units and they all must be designed and constructed so that they comply with the accessibility requirements of paragraph (c) of this section.

Example (2): A developer plans to construct 30 garden apartments in a three story building. The building will not have an elevator. The building will have one accessible entrance which will be on the first floor. Since the building does not have an elevator, only the "ground floor" units are covered multifamily units. The "ground floor" is the first floor because that is the floor that has an accessible entrance. All of the dwelling units on the first floor must meet the accessibility requirements of paragraph (c) of this section and must have access to at least one of each type of public or common use area available for residents in the building.

(e) Compliance with the appropriate requirements of ANSI A117.1-1986 suffices to satisfy the requirements of paragraph (c)(3) of this section.

(f) Compliance with a duly enacted law of a State or unit of general local government that includes the requirements of paragraphs (a) and (c) of this section satisfies the requirements of paragraphs (a) and (c) of this section.

(g)(1) It is the policy of HUD to encourage States and units of general local government to include, in their existing procedures for the review and approval of newly constructed covered multifamily dwellings, determinations as to whether the design and construction of such dwellings are consistent with paragraphs (a) and (c) of this section.

(2) A State or unit of general local government may review and approve newly constructed multifamily dwellings for the purpose of making determinations as to whether the requirements of paragraphs (a) and (c) of this section are met.

(h) Determinations of compliance or noncompliance by a State or a unit of general local government under

paragraph (f) or (g) of this section are not conclusive in enforcement proceedings under the Fair Housing Amendments Act.

(i) This subpart does not invalidate or limit any law of a State or political subdivision of a State that requires dwellings to be designed and constructed in a manner that affords handicapped persons greater access than is required by this subpart.

Section 4. Application of the Guidelines

The design specifications (guidelines) presented in Section 5 apply to new construction of "covered multifamily dwellings", as defined in Section 2. These guidelines are recommended for designing dwellings that comply with the requirements of the Fair Housing Amendments Act of 1988.

Section 5. Guidelines

Requirement 1. Accessible building entrance on an accessible route.

Under section 100.205(a), 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.

Guideline

- (1) **Building entrance.** Each building on a site shall have at least one building entrance on an accessible route unless prohibited by the terrain, as provided in paragraphs (2)(a)(i) or (2)(a)(ii), or unusual characteristics of the site, as provided in paragraph (2)(b). This guideline applies both to a single building on a site and to multiple buildings on a site.

- (a) **Separate ground floor unit entrances.** When a ground floor unit of a building has a separate entrance, each such ground floor unit shall be served by an accessible route, except for any unit where the terrain or unusual characteristics of the site prohibit the provision of an accessible route to the entrance of that unit.
- (b) **Multiple entrances.** Only one entrance is required to be accessible to any one ground floor of a building, except in cases where an individual dwelling unit has a separate exterior entrance, or where the building contains clusters of dwelling units, with each cluster sharing a different exterior entrance. In these cases, more than one entrance may be required to be accessible, as determined by analysis of the site. In every case, the accessible entrance should be on an accessible route to the covered dwelling units it serves.

- (2) **Site impracticality.** 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. Covered multifamily dwellings without elevators shall be designed and constructed to provide at least one accessible entrance on an accessible route unless terrain or unusual characteristics of the site are such that the following conditions are found to exist:

- (a) **Site impracticality due to terrain.** There are two alternative tests for determining site impracticality due to terrain: the individual building test provided in paragraph (i), or the site analysis test provided in paragraph (ii). These tests may be used as follows.

A site with a single building having a common entrance for all units may be analyzed only as described in paragraph (i).

All other sites, including a site with a single building having multiple entrances serving either individual dwelling units or clusters of dwelling units, may be analyzed using the methodology in either paragraph (i) or paragraph (ii). For these sites for which either test is applicable, regardless of which test is selected, at least 20% of the total ground floor units in nonelevator buildings, on any site, must comply with the guidelines.

- (i) **Individual building test.** It is impractical to provide an accessible entrance served by an accessible route when the terrain of the site is such that:
- (A) the slopes of the undisturbed site measured between the planned entrance and all vehicular or pedestrian arrival points within 50 feet of the planned entrance exceed 10 percent; and
- (B) the slopes of the planned finished grade measured between the entrance and all vehicular or pedestrian arrival points within 50 feet of the planned entrance also exceed 10 percent.

If there are no vehicular or pedestrian arrival points within 50 feet of the planned entrance, the slope for the purposes of this paragraph (i) will be measured to the closest vehicular or pedestrian arrival point.

For purposes of these guidelines, vehicular or pedestrian arrival points include public or resident parking areas; public transportation stops; passenger loading zones; and public streets or sidewalks. To determine site impracticality, the slope would be measured at ground level from the point of the planned entrance on a straight line to (i) each vehicular or pedestrian arrival point that is within 50 feet of the planned entrance, or (ii) if there are no vehicular or pedestrian arrival points within that specified area, the vehicular or pedestrian arrival point closest to the planned entrance. In the case of sidewalks, the closest point to the entrance will be where a public sidewalk entering the site intersects with the sidewalk to the entrance. In the case of resident parking areas, the closest point to the planned entrance will be measured from the entry point to the parking area that is located closest to the planned entrance.

- (ii) **Site analysis test.** Alternatively, for a site having multiple buildings, or a site with a single building with multiple entrances, impracticality of providing

an accessible entrance served by an accessible route can be established by the following steps:

- (A) The percentage of the total buildable area of the undisturbed site with a natural grade less than 10% slope shall be calculated. The analysis of the existing slope (before grading) shall be done on a topographic survey with two foot (2') contour intervals with slope determination made between each successive interval. The accuracy of the slope analysis shall be certified by a professional licensed engineer, landscape architect, architect or surveyor.
- (B) To determine the practicality of providing accessibility to planned multifamily dwellings based on the topography of the existing natural terrain, the minimum percentage of ground floor units to be made accessible should equal the percentage of the total buildable area (not including floodplains, wetlands, or other restricted use areas) of the undisturbed site that has an existing natural grade of less than 10% slope.
- (C) In addition to the percentage established in paragraph (B), 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%
- (b) Site impracticality due to unusual characteristics. Unusual characteristics include sites located in a federally-designated floodplain or coastal high-hazard area and sites subject to other similar requirements of law or code that the lowest floor or the lowest structural member of the lowest floor must be raised to a specified level at or above the base flood elevation. An accessible route to a building entrance is impractical due to unusual characteristics of the site when:
 - (i) 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; or
 - (ii) if there are no vehicular or pedestrian arrival points within 50 feet of the planned entrance, the unusual characteristics result in a difference in finished grade elevation exceeding 30 inches and 10 percent measured between an entrance and the closest vehicular or pedestrian arrival point.
- (3) Exceptions to site impracticality. Regardless of site considerations described in paragraphs (1) and (2), an accessible entrance on an accessible route is practical when:

- (a) There is an elevator connecting the parking area with the dwelling units on a ground floor. (In this case, those dwelling units on the ground floor served by an elevator, and at least one of each type of public and common use areas, would be subject to these guidelines.) However:
 - (i) Where a building elevator is provided only as a means of creating an accessible route to dwelling units on a ground floor, the building is not considered an elevator building for purposes of these guidelines; hence, only the ground floor dwelling units would be covered.
 - (ii) If the building elevator is provided as a means of access to dwelling units other than dwelling units on a ground floor, then the building is an elevator building which is a covered multifamily dwelling, and the elevator in that building must provide accessibility to all dwelling units in the building, regardless of the slope of the natural terrain; or
- (b) An elevated walkway is planned between a building entrance and a vehicular or pedestrian arrival point and the planned walkway has a slope no greater than 10 percent.
- (4) Accessible entrance. An entrance that complies with ANSI 4.14 meets section 100.205(a).
- (5) Accessible route. An accessible route that complies with ANSI 4.3 would meet section 100.205(a). If the slope of the finished grade between covered multifamily dwellings and a public or common use facility (including parking) exceeds 8.33%, or where other physical barriers (natural or manmade) 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.

Requirement 2. Accessible and usable public and common use areas.

Section 100.205(c)(1) provides that covered multifamily dwellings with a building entrance on an accessible route shall be designed in such a manner that the public and common use areas are readily accessible to and usable by handicapped persons.

Guideline

The following chart identifies the public and common use areas that should be made accessible, cites the appropriate section of the ANSI Standard, and describes the appropriate application of the specifications, including modifications to the referenced Standard.

BASIC COMPONENTS FOR ACCESSIBLE AND USABLE PUBLIC AND COMMON USE AREAS OR FACILITIES

Accessible element or space	ANSI A117.1 section	Application
1. Accessible route(s)	4.3	Within the boundary of the site: (a) From public transportation stops, accessible parking spaces, accessible passenger loading zones, and public streets or sidewalks to accessible building entrances (subject to site considerations described in section 5). (b) Connecting accessible buildings, facilities, elements and spaces that are on the same site. On-grade walks or paths between separate buildings with covered multifamily dwellings, while not required, should be accessible unless the slope of finish grade exceeds 8.33% at any point along the route. Handrails are not required on these accessible walks. (c) Connecting accessible building or facility entrances with accessible spaces and elements within the building or facility, including adaptable dwelling units. (d) Where site or legal constraints prevent a route accessible to wheelchair users between covered multifamily dwellings and public or common-use facilities elsewhere on the site, an acceptable alternative is the provision of access via a vehicular route so long as there is accessible parking on an accessible route to at least 2% of covered dwelling units, and necessary site provisions such as parking and curb cuts are available at the public or common use facility.
2. Protruding objects	4.4	Accessible routes or maneuvering space including, but not limited to halls, corridors, passageways, or aisles.
3. Ground and floor surface treatments	4.5	Accessible routes, rooms, and spaces, including floors, walks, ramps, stairs, and curb ramps.
4. Parking and passenger-loading zones	4.6	If provided at the site, designated accessible parking at the dwelling unit on request of residents with handicaps, on the same terms and with the full range of choices (e.g., surface parking or garage) that are provided for other residents of the project, with accessible parking on a route accessible to wheelchairs for at least 2% of the covered dwelling units; accessible visitor parking sufficient to provide access to grade-level entrances of covered multifamily dwellings; and accessible parking at facilities (e.g., swimming pools) that serve accessible buildings.
5. Curb ramps	4.7	Accessible routes crossing curbs.
6. Ramps	4.8	Accessible routes with slopes greater than 1:20.
7. Stairs	4.9	Stairs on accessible routes connecting levels not connected by an elevator.
8. Elevator	4.10	If provided.
9. Platform lift	4.11	May be used in lieu of an elevator or ramp under certain conditions.
10. Drinking fountains and water coolers	4.15	Fifty percent of fountains and coolers on each floor, or at least one, if provided in the facility or at the site.
11. Toilet rooms and bathing facilities	4.22	Where provided in public-use and common-use facilities, at least one of each fixture provided per room.
(including water closets, toilet rooms and stalls, urinals, lavatories and mirrors, bathtubs, shower stalls, and sinks.)		
12. Seating, tables, or work surfaces	4.30	If provided in accessible spaces, at least one of each type provided.
13. Places of assembly	4.31	If provided in the facility or at the site.
14. Common-use spaces and facilities	4.1 through 4.30	If provided in the facility or at the site: (a) Where multiple recreational facilities (e.g., tennis courts) are provided sufficient accessible facilities of each type to assure equitable opportunity for use by persons with handicaps. (b) Where practical, access to all or a portion of nature trails and jogging paths.
(including swimming pools, playgrounds, entrances, rental offices, lobbies, elevators, mailbox areas, lounges, halls and corridors, and the like.)		
15. Laundry rooms	4.32.6	If provided in the facility or at the site, at least one of each type of appliance provided in each laundry area, except that laundry rooms serving covered multifamily dwellings would not be required to have front-loading washers in order to meet the requirements of § 100.205(c)(1). (Where front loading washers are not provided, management will be expected to provide assistive devices on request if necessary to permit a resident to use a top loading washer.)

Requirement 3. Usable doors.

Section 100.205(c)(2) provides that covered multifamily dwellings with a building entrance on an accessible route shall be designed in such a manner that all the doors designed to allow passage into and within all premises are sufficiently wide to allow passage by handicapped persons in wheelchairs.

Guideline

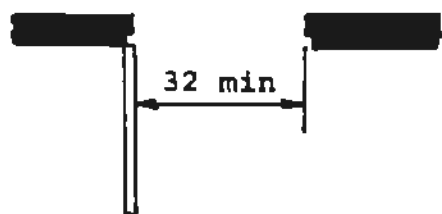
Section 100.205(c)(2) would apply to doors that are a part of an accessible route in the public and common use areas of multifamily dwellings and to doors into and within individual dwelling units.

- (1) On accessible routes in public and common use areas, and for primary entry doors to covered units, doors that comply with ANSI 4.13 would meet this requirement.

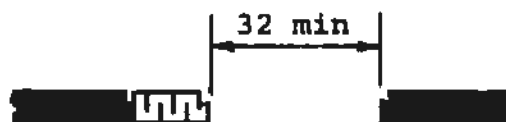
- (2) Within individual dwelling units, doors intended for user passage through the unit which have a clear opening of at least 32 inches nominal width when the door is open 90 degrees, measured between the face of the door and the stop, would meet this requirement. (See Fig. 1 (a), (b), and (c).) Openings more than 24 inches in depth are not considered doorways. (See Fig. 1 (d).)

Note:

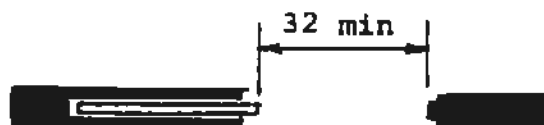
A 34-inch door, hung in the standard manner, provides an acceptable nominal 32-inch clear opening. This door can be adapted to provide a wider opening by using offset hinges, by removing lower portions of the door stop, or both. Pocket or sliding doors are acceptable doors in covered dwelling units and have the added advantage of not impinging on clear floor space in small rooms. The nominal 32-inch clear opening provided by a standard six-foot sliding patio door assembly is acceptable.



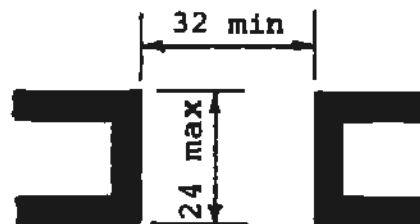
(a) Hinged Door



(b) Folding Door



(c) Sliding Door



(d) Maximum Doorway Depth

Fig. 1 Clear Doorway Width and Depth

Requirement 4. Accessible route into and through the covered dwelling unit.

Section 100.205(c)(3)(i) provides 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.

Guideline

Accessible routes into and through dwelling units would meet section 100.205(c)(3)(i) if:

- (1) A minimum clear width of 36 inches is provided.
- (2) In single-story dwelling units, changes in level within the dwelling unit with heights between 1/4 inch and 1/2 inch are beveled with a slope no greater than 1:2. Except for design features, such as a loft or an area on a different level within a room (e.g., a sunken living room), changes in level greater than 1/2 inch are ramped or have other means of access. Where a single story dwelling unit has special design features, all portions of the single-story unit, except the loft or the sunken or raised area, are on an accessible route; and
 - (a) In single-story dwelling units with lofts, all spaces other than the loft are on an accessible route.
 - (b) Design features such as sunken or raised functional areas do not interrupt the accessible route through the remainder of the dwelling unit.
- (3) In multistory dwelling units in buildings with elevators, the story of the unit that is served by the building elevator (a) is the primary entry to the unit, (b) complies with Requirements 2 through 7 with respect to the rooms located on the entry/accessible floor; and (c) contains a bathroom or powder room which complies with Requirement 7. (Note: multistory dwelling units in non-elevator buildings are not covered dwelling units because, in such cases, there is no ground floor unit.)
- (4) Except as provided in paragraphs (5) and (6) below, thresholds at exterior doors, including sliding door tracks, are no higher than 3/4 inch. Thresholds and changes in level at these locations are beveled with a slope no greater than 1:2.
- (5) Exterior deck, patio, or balcony surfaces are no more than 1/2 inch below the floor level of the interior of the dwelling unit, unless they are constructed of impervious material such as concrete, brick or flagstone. In such case, the surface is no more than 4 inches below the floor level of the interior of the dwelling unit, or lower if required by local building code.
- (6) At the primary entry door to dwelling units with direct exterior access, outside landing surfaces constructed of impervious materials such as concrete, brick or flagstone, are no more than 1/2 inch below the floor level of the interior of the dwelling unit. The finished surface of this area that is located immediately outside the entry may be sloped, up to 1/8 inch per foot (12 inches), for drainage.

Requirement 5. Light switches, electrical outlets, thermostats and other environmental controls in accessible locations.

Section 100.205(c)(3)(ii) requires 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 light switches, electrical outlets, thermostats, and other environmental controls in accessible locations.

Guideline

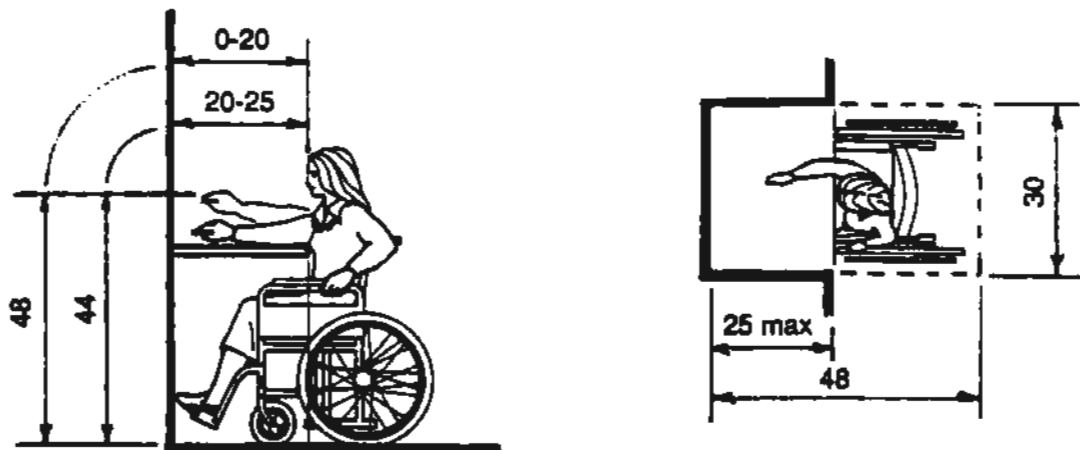
Light switches, electrical outlets, thermostats and other environmental controls would meet section 100.205(c)(3)(ii) if operable parts of the controls are located no higher than 48 inches, and no lower than 15 inches, above the floor. If the reach is over an obstruction (for example, an overhanging shelf) between 20 and 25 inches in depth, the maximum height is reduced to 44 inches for forward approach; or 46 inches for side approach, provided the obstruction (for example, a kitchen base cabinet) is no more than 24 inches in depth. Obstructions should not extend more than 25 inches from the wall beneath a control. (See Fig.2.)

Note

Controls or outlets that do not satisfy these specifications are acceptable provided that comparable controls or outlets (i.e., that perform the same functions) are provided within the same area and are accessible, in accordance with this guideline for Requirement 5.

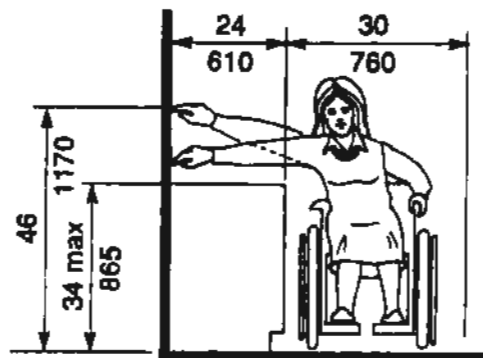


(a) Forward Reach Limit



NOTE: Clear knee space should be as deep as the reach distance.

(b) Maximum Forward Reach Over an Obstruction



(c) Maximum Side Reach Over Obstruction

Fig. 2 Reach Ranges

Requirement 6. Reinforced walls for grab bars.

Section 100.205(c)(3)(iii) requires that 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 reinforcements in bathroom walls to allow later installation of grab bars around toilet, tub, shower stall and shower seat, where such facilities are provided.

Guideline

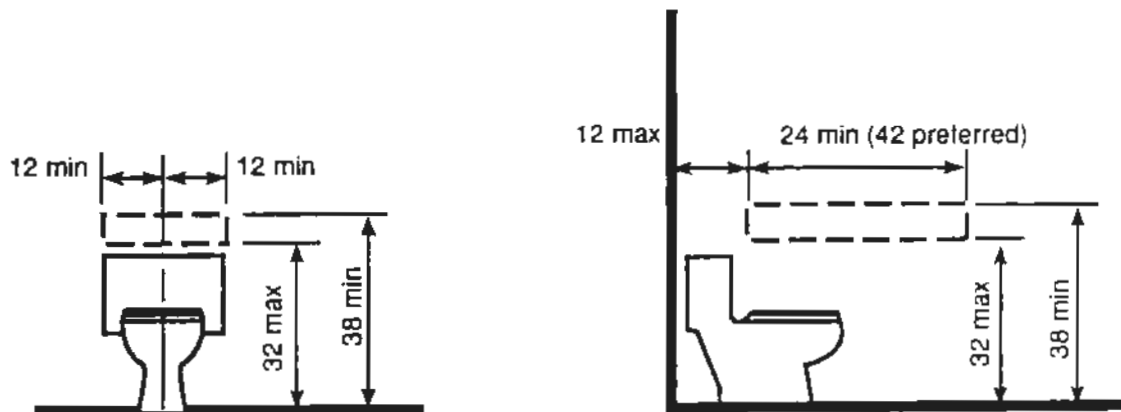
Reinforced bathroom walls to allow later installation of grab bars around the toilet, tub, shower stall and shower seat, where such facilities are provided, would meet section 100.205(c)(3)(iii) if reinforced areas are provided at least at those points where grab bars will be mounted. (For example, see Figs. 3, 4 and 5.) Where the toilet is not placed adjacent to a side wall, the bathroom would comply if provision was made for installation of floor mounted, foldaway or similar alternative grab bars. Where the

powder room (a room with a toilet and sink) is the only toilet facility located on an accessible level of a multistory dwelling unit, it must comply with this requirement for reinforced walls for grab bars.

Note:

Installation of bathtubs is not limited by the illustrative figures; a tub may have shelves or benches at either end; or a tub may be installed without surrounding walls, if there is provision for alternative mounting of grab bars. For example, a sunken tub placed away from walls could have reinforced areas for installation of floor-mounted grab bars. The same principle applies to shower stalls -- e.g., glass-walled stalls could be planned to allow floor-mounted grab bars to be installed later.

Reinforcement for grab bars may be provided in a variety of ways (for example, by plywood or wood blocking) so long as the necessary reinforcement is placed so as to permit later installation of appropriate grab bars.



Reinforced Areas for Installation
of Grab Bars

Fig. 3 Water Closets in Adaptable Bathrooms

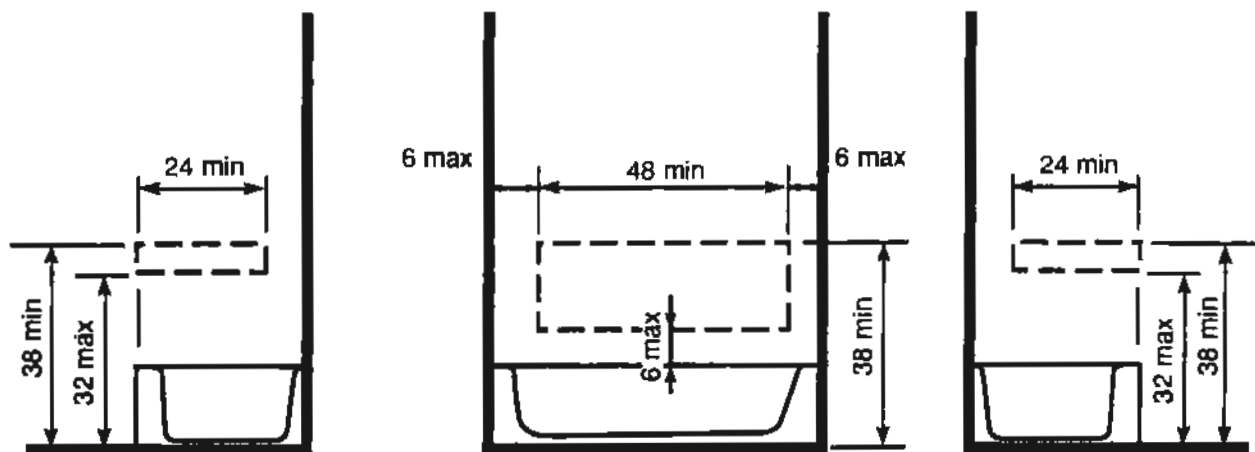


Fig. 4 Location of Grab Bar Reinforcements for Adaptable Bathtubs

NOTE: The areas outlined in dashed lines represent locations for future installation of grab bars for typical fixture configurations.

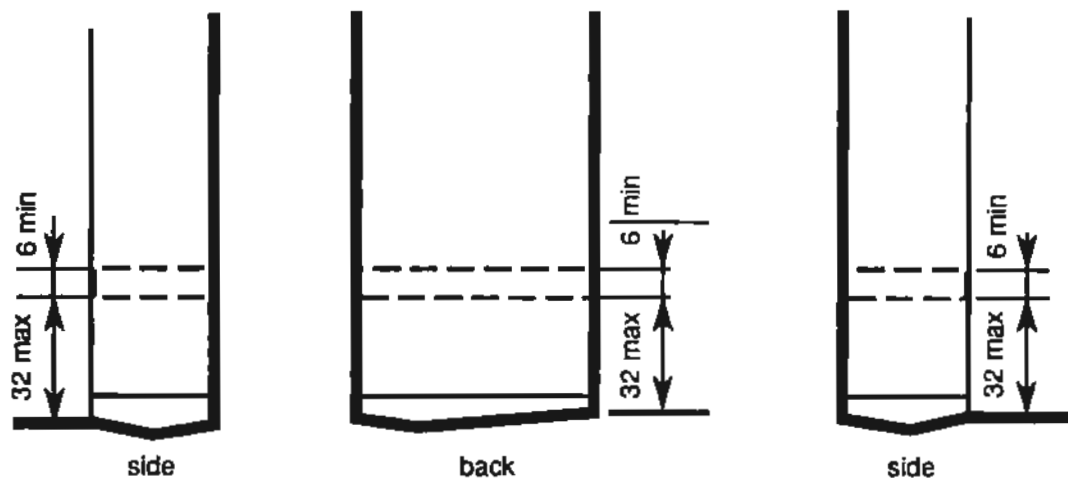


Fig. 5 Location of Grab Bar Reinforcements for Adaptable Showers

NOTE: The areas outlined in dashed lines represent locations for future installation of grab bars.

Requirement 7. Usable kitchens and bathrooms.

Section 100.205(c)(3)(iv) requires that 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 usable kitchens and bathrooms such that an individual in a wheelchair can maneuver about the space.

Guideline**(1) Usable kitchens.** Usable kitchens would meet section 100.205(c)(3)(iv) if:

- (a) A clear floor space at least 30 inches by 48 inches that allows a parallel approach by a person in a wheelchair is provided at the range or cooktop and sink, and either a parallel or forward approach is provided at oven, dish washer, refrigerator/freezer or trash compactor. (See Fig. 6)
- (b) Clearance between counters and all opposing base cabinets, countertops, appliances or walls is at least 40 inches.
- (c) In U-shaped kitchens with sink or range or cooktop at the base of the "U", a 60-inch turning radius is provided to allow parallel approach, or base cabinets are removable at that location to allow knee space for a forward approach.

(2) Usable bathrooms. To meet the requirements of section 100.205(c)(3)(iv) either:

All bathrooms in the dwelling unit comply with the provisions of paragraph (a); or

At least one bathroom in the dwelling unit complies with the provisions of paragraph (b), and all other bathrooms and powder rooms within the dwelling unit must be on an accessible route with usable entry doors in accordance with the guidelines for Requirements 3 and 4.

However, in multistory dwelling units, only those bathrooms on the accessible level are subject to the requirements of section 100.205(c)(3)(iv). Where a powder room is the only facility provided on the accessible level of a multistory dwelling unit, the powder room must comply with provisions of paragraph (a) or paragraph (b). Powder rooms that are subject to the requirements of section 100.205(c)(3)(iv) must have reinforcements for grab bars as provided in the guideline for Requirement 6.

- (a) Bathrooms that have reinforced walls for grab bars (see Requirement 6) would meet section 100.205(c)(3)(iv) if:

- (i) Sufficient maneuvering space is provided within the bathroom for a person using a wheelchair or other mobility aid to enter and close the door, use the fixtures, reopen the door and exit. Doors may swing into the clear floor space provided at any fixture if the maneuvering space is provided. Maneuvering spaces may include any kneespace or toespace available below bathroom fixtures.

- (ii) Clear floor space is provided at fixtures as shown in Fig. 7 (a), (b), (c) and (d). Clear floor space at fixtures may overlap.

- (iii) If the shower stall is the only bathing facility provided in the covered dwelling unit, the shower stall measures at least 36 inches x 36 inches.

Note:

Cabinets under lavatories are acceptable provided the bathroom has space to allow a parallel approach by a person in a wheelchair; if parallel approach is not possible within the space, any cabinets provided would have to be removable to afford the necessary knee clearance for forward approach.

- (b) Bathrooms that have reinforced walls for grab bars (see Requirement 6) would meet section 100.205(c)(3)(iv) if:

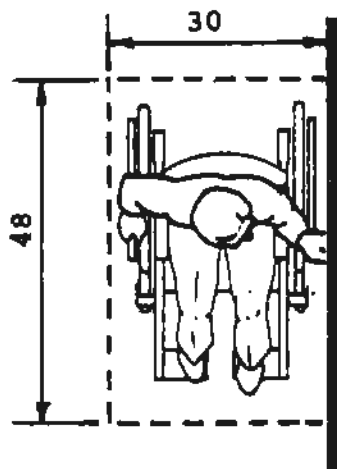
- (i) Where the door swings into the bathroom, there is a clear space (approximately, 2' 6" by 4'0") within the room to position a wheelchair or other mobility aid clear of the path of the door as it is closed and to permit use of fixtures. This clear space can include any kneespace and toespace available below bathroom fixtures.

- (ii) Where the door swings out, a clear space is provided within the bathroom for a person using a wheelchair or other mobility aid to position the wheelchair such that the person is allowed use of fixtures. There also shall be clear space to allow persons using wheelchairs to reopen the door to exit.

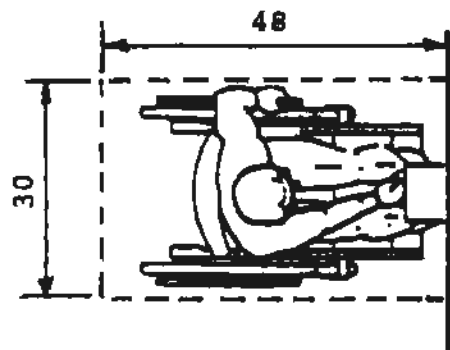
- (iii) When both tub and shower fixtures are provided in the bathroom, at least one is made accessible. When two or more lavatories in a bathroom are provided, at least one is made accessible.

- (iv) Toilets are located within bathrooms in a manner that permit a grab bar to be installed on one side of the fixture. In locations where toilets are adjacent to walls or bathtubs, the center line of the fixture is a minimum of 1'6" from the obstacle. The other (non-grab bar) side of the toilet fixture is a minimum of 1'3" from the finished surface of adjoining walls, vanities or from the edge of a lavatory. (See Figure 7(a).)

- (v) Vanities and lavatories are installed with the centerline of the fixture a minimum of 1'3" horizontally from an adjoining wall or fixture. The top of the fixture rim is a maximum height of 2'10" above the finished floor. If kneespace is provided below the vanity, the bottom of the apron is at least 2'3" above the floor. If provided, full kneespace (for front approach) is at least 1'5" deep. (See Figure 7(c).)
- (vi) Bathtubs and tub/showers located in the bathroom provide a clear access aisle adjacent to the lavatory that is at least 2'6" wide and extends for a length of 4'0" (measured from the foot of the bathtub). (See Figure 8.)
- (vii) Stall showers in the bathroom may be of any size or configuration. A minimum clear floor space 2'6" wide by 4'0" should be available outside the stall. (See Figure 7(d).) If the shower stall is the only bathing facility provided in the covered dwelling unit, or on the accessible level of a covered multistory unit, and measures a nominal 36 x 36, the shower stall must have reinforcing to allow for installation of an optional wall hung bench seat.

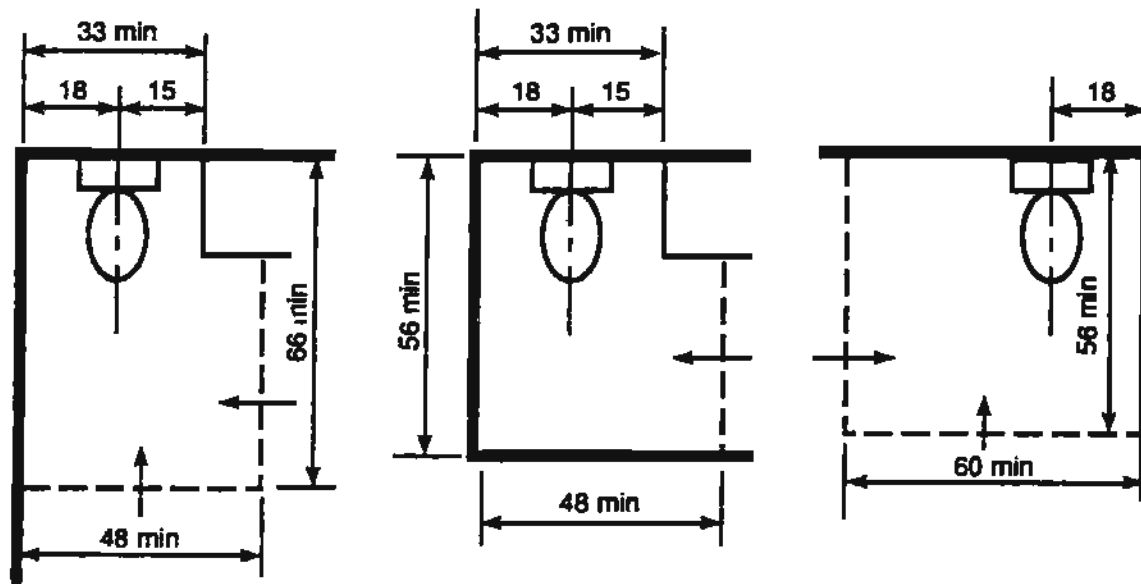


(a) Parallel Approach

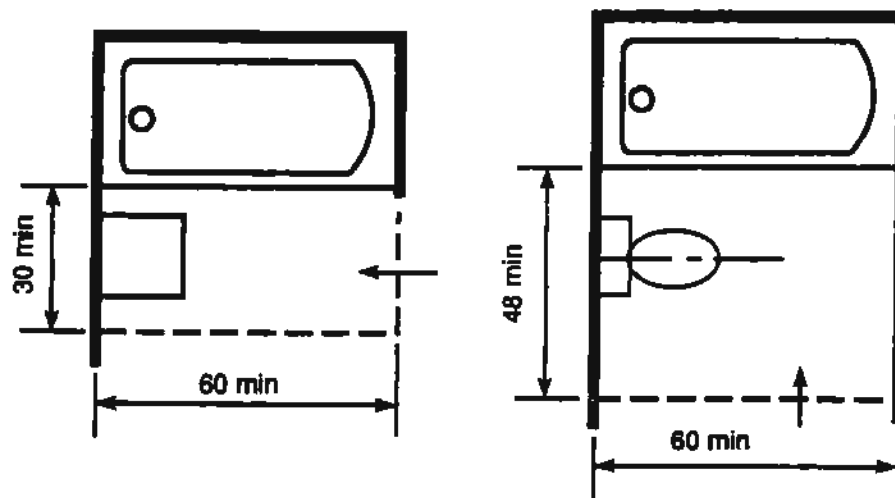


(b) Forward Approach

Fig. 6 Minimum Clear Floor Space for Wheelchairs

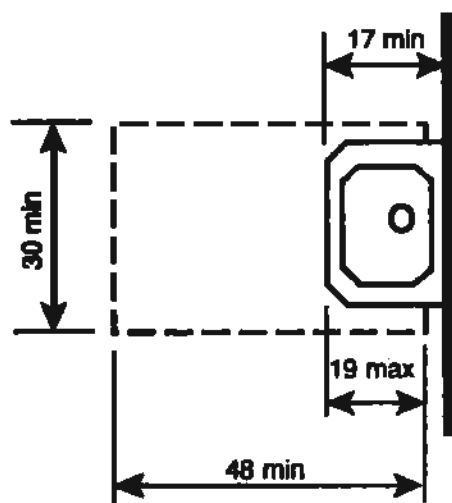


(a) Clear Floor Space for Water Closets

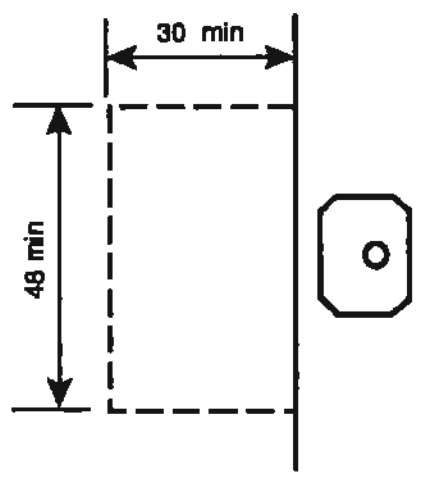


(b) Clear Floor Space at Bathtubs

Fig. 7 Clear Floor Space for Adaptable Bathrooms

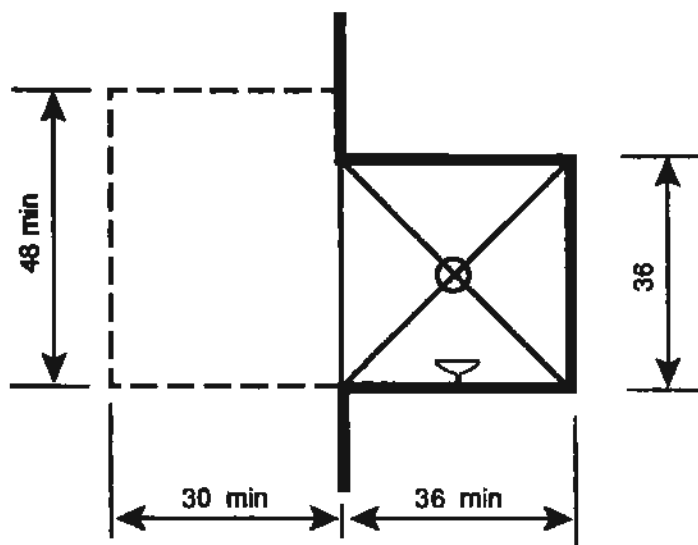


Lavatory With Knee Space



Lavatory Without Knee Space

(c) Clear Floor Space at Lavatories



(d) Clear Floor Space at Shower

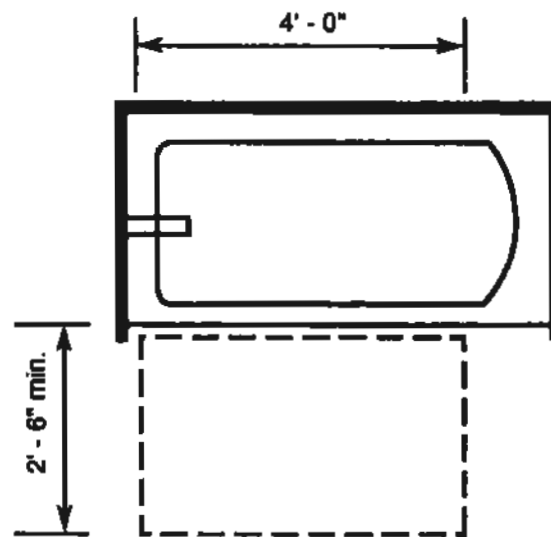


Fig. 8 Alternative Specification – Clear Floor Space at Bathtub

NOTE: Clear floor space beside tub may overlap with clear floor space beneath adjacent fixtures.

Appendix III to Ch. I, Subchapter A—
Preamble to Final Housing Accessibility
Guidelines (Published March 6, 1991).

[FR Doc. 91-5228 Filed 3-5-91; 8:45 am]

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APPENDIX C

Supplemental Notice Fair Housing Accessibility Guidelines: Questions and Answers about the Guidelines

C



Federal Register

Tuesday
June 28, 1994

Part III

Department of Housing and Urban Development

Office of the Assistant Secretary for Fair
Housing and Equal Opportunity

24 CFR Ch. I

Fair Housing: Accessibility Guidelines;
Questions and Answers; Supplement to
Notice

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT**Office of the Assistant Secretary for Fair Housing and Equal Opportunity****24 CFR Chapter I**

[Docket No. N-94-2011; FR-2665-N-09]

Supplement to Notice of Fair Housing Accessibility Guidelines: Questions and Answers About the Guidelines

AGENCY: Office of the Assistant Secretary for Fair Housing and Equal Opportunity, HUD.

ACTION: Supplement to notice of fair housing accessibility guidelines.

SUMMARY: On March 6, 1991, the Department published final Fair Housing Accessibility Guidelines (Guidelines) to provide builders and developers with technical guidance on how to comply with the accessibility requirements of the Fair Housing Amendments Act of 1988 (Fair Housing Act) that are applicable to certain multifamily dwellings designed and constructed for first occupancy after March 13, 1991. Since publication of the Guidelines, the Department has received many questions regarding the applicability of the technical specifications set forth in the Guidelines to certain types of new multifamily dwellings and certain types of units within covered multifamily dwellings. The Department also has received several questions concerning the types of new multifamily dwellings that are subject to the design and construction requirements of the Fair Housing Act.

This document reproduces the questions that have been most frequently asked by members of the public, and the Department's answers to these questions. The Department believes that the issues addressed by these questions and answers may be of interest and assistance to other members of the public who must comply with the design and construction requirements of the Fair Housing Act.

EFFECTIVE DATE: June 28, 1994.

FOR FURTHER INFORMATION CONTACT: Judith Keeler, Director, Office of Program Compliance and Disability Rights. For technical questions regarding this notice, contact Office of Fair Housing and Equal Opportunity, room 5112, Department of Housing and Urban Development, 451 Seventh Street, Washington, DC 20410, telephone 202-708-2618 (voice), 202-708-1734 TTY; for copies of this notice contact the Fair Housing Information Clearinghouse at 1-800-795-7915 (this is a toll-free

number), or 1-800-483-2209 (this is a toll-free TTY number).

SUPPLEMENTARY INFORMATION:**Background**

The Fair Housing Amendments Act of 1988 (Pub.L. 100-430, approved September 13, 1988) (the Fair Housing Amendments Act) amended title VIII of the Civil Rights Act of 1968 (Fair Housing Act or Act) to add prohibitions against discrimination in housing on the basis of disability and familial status. The Fair Housing Amendments Act also made it unlawful to design and construct certain multifamily dwellings for first occupancy after March 13, 1991, in a manner that makes them inaccessible to persons with disabilities, and established design and construction requirements to make these dwellings readily accessible to and usable by persons with disabilities.¹ Section 100.205 of the Department's regulations at 24 CFR part 100 implements the Fair Housing Act's design and construction requirements (also referred to as accessibility requirements).

On March 6, 1991 (56 FR 9472), the Department published final Fair Housing Accessibility Guidelines (Guidelines) to provide builders and developers with technical guidance on how to comply with the accessibility requirements of the Fair Housing Act. (The Guidelines are codified at 24 CFR Ch.I, Subch.A., App. II. The preamble to the Guidelines is codified at 24 CFR Ch.I, Subch.A., App.III.) The Guidelines are organized to follow the sequence of requirements as they are presented in the Fair Housing Act and in 24 CFR 100.205. The Guidelines provide technical guidance on the following seven requirements:

- Requirement 1. Accessible building entrance on an accessible route.
- Requirement 2. Accessible common and public use areas.
- Requirement 3. Usable doors (usable by a person in a wheelchair).
- Requirement 4. Accessible route into and through the dwelling unit.
- Requirement 5. Light switches, electrical outlets, thermostats and other environmental controls in accessible locations.
- Requirement 6. Reinforced walls for grab bars.
- Requirement 7. Usable kitchens and bathrooms.

The design specifications presented in the Guidelines are recommended guidelines only. Builders and

developers may choose to depart from these guidelines and seek alternate ways to demonstrate that they have met the requirements of the Fair Housing Act. The Fair Housing Act and the Department's implementing regulation provides, for example, for use of the appropriate requirements of the ANSI A117.1 standard. However, adherence to the Guidelines does constitute a safe harbor in the Department's administrative enforcement process for compliance with the Fair Housing Act's design and construction requirements.

Since publication of the Guidelines, the Department has received many questions regarding applicability of the design specifications set forth in the Guidelines to certain types of new multifamily dwellings and to certain types of interior housing designs. The Department also has received several questions concerning the types of new multifamily dwellings that are subject to compliance with the design and construction requirements of the Fair Housing Act. Given the wide variety in the types of multifamily dwellings and the types of dwelling units, and the continual introduction into the housing market of new building and interior designs, it was not possible for the Department to prepare accessibility guidelines that would address every housing type or housing design. Although the Guidelines cannot address every housing design, it is the Department's intention to assist the public in complying with the design and construction requirements of the Fair Housing Act through workshops and seminars, telephone assistance, written replies to written inquiries, and through the publication of documents such as this one. The Department has contracted for the preparation of a design manual that will further explain and illustrate the Fair Housing Act Accessibility Guidelines.

The questions and answers set forth in this notice address the issues most frequently raised by the public with respect to types of multifamily dwellings subject to the design and construction requirements of the Fair Housing Act, and the technical specifications contained in the Guidelines.

The question and answer format is divided into two sections. Section 1, entitled "Dwellings Subject to the New Construction Requirements of the Fair Housing Act" addresses the issues raised in connection with the types of multifamily dwellings (including portions of such dwellings) constructed for first occupancy after March 13, 1991, that must comply with the Act's design and construction requirements. Section

¹ Although this notice uses the terms "disability" and "disabilities," the terms used in the Fair Housing Amendments Act are "handicap" and "handicaps."

2, entitled "Accessibility Guidelines," addresses the issues raised in connection with the design and construction specifications set forth in the Guidelines.

Dated: March 23, 1994.

Roberta Achtenberg,

Assistant Secretary for Fair Housing and Equal Opportunity.

Accordingly, the Department adds the "Questions and Answers about the Fair Housing Accessibility Guidelines" as Appendix IV to 24 CFR Chapter I, Subchapter A to read as follows:



Supplement to Notice of Fair Housing Accessibility Guidelines: Questions and Answers about the Guidelines

24 CFR Ch.I

Appendix IV to Subchapter A—

Note: This is a reprint of the Supplement to Notice of Fair Housing Accessibility Guidelines: Questions and Answers About the Guidelines published in the Federal Register on June 28, 1994, Vol. 59, No. 123, pages 33362-33368.

Questions and Answers about the Fair Housing Accessibility Guidelines

Introduction

On March 6, 1991 (56 FR 9472), the Department published final Fair Housing Accessibility Guidelines (Guidelines). (The Guidelines are codified at 24 CFR Ch. I, Subch. A, App. II.) The Guidelines provide builders and developers with technical guidance on how to comply with the accessibility requirements of the Fair Housing Amendments Act of 1988 (Fair Housing Act) that are applicable to certain multifamily dwellings designed and constructed for first occupancy after March 13, 1991. Since publication of the Guidelines, the Department has received many questions regarding the applicability of the technical specifications set forth in the Guidelines to certain types of new multifamily dwellings and certain types of units within covered multifamily dwellings. The Department also has received several questions concerning the types of new multifamily dwellings that are subject to the design and construction requirements of the Fair Housing Act.

The questions and answers contained in this document address some of the issues most frequently raised by the public with respect to the types of multifamily dwellings subject to the design and construction requirements of the Fair Housing Act, and the technical specifications contained in the Guidelines.

The issues addressed in this document are addressed only with respect to the application of the Fair Housing Act and the Guidelines to dwellings which are "covered multifamily dwellings" under the Fair Housing Act. Certain of these dwellings, as well as certain public and common use areas of such dwellings, may also be covered by various other laws, such as section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794); the Architectural Barriers Act of 1968 (42 U.S.C. 4151-4157); and the Americans with Disabilities Act of 1990 (42 U.S.C. 12101-12213).

Section 504 applies to programs and activities receiving federal financial assistance. The Department's regulations for section 504 are found at 24 CFR part 8.

The Architectural Barriers Act applies to certain buildings financed in whole or in part with federal funds. The Department's regulations for the Architectural Barriers Act are found at 24 CFR parts 40 and 41.

The Americans with Disabilities Act (ADA) is a broad civil rights law guaranteeing equal opportunity for individuals with disabilities in employment, public accommodations, transportation, State and local government services, and telecommunications. The Department of Justice is the lead federal agency for implementation of the ADA and should be contacted for copies of relevant ADA regulations.

The Department has received a number of questions regarding applicability of the ADA to residential housing, particularly with respect to title III of the ADA, which addresses accessibility requirements for public accommodations. The Department has been asked, in particular, if public and common use areas of residential housing are covered by title III of the ADA. Strictly residential facilities are not considered places of public accommodation and therefore would not be subject to title III of the ADA, nor would amenities provided for the exclusive use of residents and their guests. However, common areas that function as one of the ADA's twelve categories of places of public accommodation within residential facilities are considered places of public accommodation if they are open to persons other than residents and their guests. Rental offices and sales office for residential housing, for example, are by their nature open to the public, and are places of public accommodation and must comply with the ADA requirements in addition to all applicable requirements of the Fair Housing Act. As stated above, the remainder of this notice addresses issues most frequently raised by the public with respect to the types of multifamily dwellings subject to the design and construction requirements of the Fair Housing Act, and the technical specifications contained in the Guidelines.

Section 1: Dwellings Subject to the New Construction Requirements of the Fair Housing Act.

The issues addressed in this section concern the types of multifamily dwellings (or portions of such dwellings) designed and constructed for first occupancy after March 13, 1991 that must comply with the design and construction requirements of the Fair Housing Act.

1. Townhouses

- (a) **Q.** Are townhouses in non-elevator buildings which have individual exterior entrances required to be accessible?
A. Yes, if they are single-story townhouses. If they are multistory townhouses, accessibility is not required. (See the discussion of townhouses in the preamble to the Guidelines under "Section 2--Definitions [Covered Multifamily Dwellings]" at 56 FR 9481, March 6, 1991, or 24 CFR Ch. I, Subch. A, App. III.)
- (b) **Q.** Does the Fair Housing Act cover four one-story dwelling units that share common walls and have individual entrances?
A. Yes. The Fair Housing Act applies to all units in buildings consisting of four or more dwelling units if such buildings have one or more elevators; and ground floor dwelling units in other buildings consisting of four or more dwelling units. This would include one-story homes, sometimes called "single-story townhouses," "villas," or "patio apartments," regardless of ownership, even though such homes may not be considered multifamily dwellings under various building codes.
- (c) **Q.** What if the single-story dwelling units are separated by firewalls?
A. The Fair Housing Act would still apply. The Guidelines define covered multifamily dwellings to include buildings having four or more units within a single structure separated by firewalls.

2. Commercial Space

Q. If a building includes three residential dwelling units and one or more commercial spaces, is the building a "covered multifamily dwelling" under the Fair Housing Act?

A. No. Covered multifamily dwellings are buildings consisting of four or more dwelling units, if such buildings have one or more elevators; and ground floor dwelling units in other buildings consisting of four or more dwelling units. Commercial space does not meet the definition of "dwelling unit." Note, however, that title III of the ADA applies to public accommodations and commercial facilities, therefore an independent determination should be made regarding applicability of the ADA to the commercial space in such a building (see the introduction to these questions and answers, which provides some background on the ADA).

3. Condominiums

- (a) **Q.** Are condominiums covered by the Fair Housing Act?
A. Yes. Condominiums in covered multifamily dwellings are covered by the Fair Housing Act. The Fair Housing Act makes no distinctions based on ownership.
- (b) **Q.** If a condominium is pre-sold as a shell and the interior is designed and constructed by the buyer, are the Guidelines applicable?
A. Yes. The Fair Housing Act applies to design and construction of covered multifamily dwellings, regardless of whether the person doing the design and construction is an architect, builder, or private individual. (See discussion of condominiums in the preamble to Guidelines under "Section 2--Definitions [Dwelling Units]" at 56 FR 9481, March 6, 1991, or 24 CFR Ch. I, Subch. A, App. III.)

4. Additions

- (a) **Q.** If an owner adds four or more dwelling units to an existing building, are those units covered by the Fair Housing Act?

A. Yes, provided that the units constitute a new addition to the building and not substantial rehabilitation of existing units.

- (b) **Q.** What if new public and common use spaces are also being added?

A. If new public and common use areas or buildings are also added, they are required to be accessible.

- (c) **Q.** If the only new construction is an addition consisting of four or more dwelling units, would the existing public and common use spaces have to be made accessible?

A. No, existing public and common use areas would not have to be made accessible. The Fair Housing Act applies to new construction of covered multifamily dwellings. (See section 804(f)(3)(C)(i) of the Act.) Existing public and common use facilities are not newly constructed portions of covered multifamily dwellings. However, reasonable modifications to the existing public and common use areas to provide access would have to be allowed, and the Americans with Disabilities Act (ADA) may apply to certain public and common use areas. An independent determination should be made regarding applicability of the ADA. (See the introduction to these questions and answers, which provides some background on the ADA.)

5. Units Over Parking

- (a) **Q.** Plans for a three-story building consist of a common parking area with assigned stalls on grade as the first story, and two stories of single-story dwelling units stacked over the parking. All of the stories above the parking level are to be accessed by stairways. There are no elevators planned to be in the building. Would the first story of single-story dwelling units over the parking level be

required to be accessible?

A. Yes. The Guidelines adopt and amplify the definition of "ground floor" found in HUD's regulation implementing the Fair Housing Act (see 24 CFR 100.201) to indicate that "...where the first floor containing dwelling units 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." (See definition of "ground floor" in the Guidelines at 24 CFR Ch. I, Subch. A, App. II, Section 2.) Where no dwelling units in a covered multifamily dwelling are located on grade, the first floor with dwelling units will be considered to be a ground floor, and must be served by a building entrance on an accessible route. However, the definition of "ground floor" does not require that there be more than one ground floor.

- (b) **Q.** If a building design contains a mix of single-story flats on grade and single-story flats located above grade over a public parking area, do the flats over the parking area have to be accessible?

A. No. In the example in the above question, because some single-story flats are situated on grade, these flats would be the ground floor dwelling units and would be required to be accessible. The definition of ground floor in the Guidelines states, in part, that "ground floor means a floor of a building with a building entrance on an accessible route. A building may have one or more ground floors. . ." Thus, the definition includes situations where the design plan is such that more than one floor of a building may be accessed by means of an accessible route (for an example, see Question 6, which follows). There is no requirement in the Department's regulations implementing the Fair Housing Act that there be more than one ground floor.

6. More Than One Ground Floor

Q. If a two or three story building is to be constructed on a slope, such that the lowest story can be accessed on grade on

one side of the building and the second story can be accessed on grade on the other side of the building, do the dwelling units on both the first and second stories have to be made accessible?

A. Yes. By defining "ground floor" to be any floor of a building with an accessible entrance on an accessible route, the Fair Housing Act regulations recognize that certain buildings, based on the site and the design plan, have more than one story which can be accessed at or near grade. In such cases, if more than one story can be designed to have an accessible entrance on an accessible route, then all such stories should be so designed. Each story becomes a ground floor and the dwelling units on that story must meet the accessibility requirements of the Act. (See the discussion on this issue in Question 12 of this document.)

7. Continuing Care Facilities

Q. Do the new construction requirements of the Fair Housing Act apply to continuing care facilities which incorporate housing, health care and other types of services?

A. The new construction requirements of the Fair Housing Act would apply to continuing care facilities if the facility includes at least one building with four or more dwelling units. Whether a facility is a "dwelling" under the Act depends on whether the facility is to be used as a residence for more than a brief period of time. As a result, the operation of each continuing care facility must be examined on a case-by-case basis to determine whether it contains dwellings. Factors that the Department will consider in making such an examination include, but are not limited to: (1) the length of time persons stay in the project; (2) whether policies are in effect at the project that are designed and intended to encourage or discourage occupants from forming an expectation and intent to continue to occupy space at the project; and (3) the nature of the services provided by or at the project.

8. Evidence of First Occupancy

Q. The Fair Housing Act applies to covered multifamily dwellings built for first occupancy after March 13, 1991. What is acceptable evidence of "first occupancy"?

A. The determination of first occupancy is made on a building by building basis. The Fair Housing Act regulations provide that "covered multifamily dwellings shall be deemed to be designed and constructed for first occupancy on or before March 13, 1991 (and therefore exempt from the Act's accessibility requirements) if they are occupied by that date or if the last building permit or renewal thereof for the covered multifamily dwellings is issued by a State, county or local government on or before June 15, 1990."

For buildings that did not obtain the final building permit on or before June 15, 1990, proof of the date of first occupancy consists of (1) a certificate of occupancy, and (2) a showing that at least one dwelling unit in the building actually was occupied by March 13, 1991. For example, a tenant has signed a lease and has taken possession of a unit. The tenant need not have moved into the unit, but the tenant must have taken possession so that, if desired, he or she could have moved into the building by March 13, 1991. For dwelling units that were for sale, this means that the new owner had completed settlement and taken possession of the dwelling unit by March 13, 1991. Once again, the new owner need not have moved in, but the owner must have been in possession of the unit and able to move in, if desired, on or before March 13, 1991. A certificate of occupancy alone would not be an acceptable means of establishing first occupancy, and units offered for sale, but not sold, would not meet the test for first occupancy.

9. Converted Buildings

Q. If a building was used previously for a nonresidential purpose, such as a ware-

house, office building, or school, and is being converted to a multifamily dwelling, must the building meet the requirements of the Fair Housing Act?

A. No, the Fair Housing Act applies to "covered multifamily dwellings for first occupancy after" March 13, 1991, and the Fair Housing Act regulation defines "first occupancy" as "a building that has never before been used for any purpose." (See 24 CFR 100.201, for the definition of "first occupancy," and also 24 CFR Ch. I, Subch. A, App. I.)

Section 2: Accessibility Guidelines.

The issues addressed in this section concern the technical specifications set forth in the Fair Housing Accessibility Guidelines.

Requirement 1 – Accessible Entrance on an Accessible Route

10. Accessible Routes to Garages

- (a) Q. Is it necessary to have an accessible path of travel from a subterranean garage to single-story covered multifamily dwellings built on top of the garage?
- A. Yes. The Fair Housing Act requires that there be an accessible building entrance on an accessible route. To satisfy Requirement 1 of the Guidelines, there would have to be an accessible route leading to grade level entrances serving the single-story dwelling units from a public street or sidewalk or other pedestrian arrival point. The below grade parking garage is a public and common use facility. Therefore, there must also be an accessible route from this parking area to the covered dwelling units. This may be provided either by a properly sloped ramp leading from the below grade parking to grade level, or by means of an elevator from the parking garage to the dwelling units.
- (b) Q. Does the route leading from inside a private attached garage to the dwelling unit have to be accessible?

A. No. Under Requirement 1 of the Guidelines, there must be an accessible entrance to the dwelling unit on an accessible route. However, this route and entrance need not originate inside the garage. Most units with attached garages have a separate main entry, and this would be the entrance required to be accessible. Thus, if there were one or two steps inside the garage leading into the unit, there would be no requirement to put a ramp in place of the steps. However, the door connecting the garage and dwelling unit would have to meet the requirements for usable doors.

11. Site Impracticability Tests

- (a) Q. Under the individual building test, how is the second step of the test performed, which involves measuring the slope of the finished grade between the entrance and applicable arrival points?
- A. The slope is measured at ground level from the entrance to the top of the pavement of all vehicular and pedestrian arrival points within 50 feet of the planned entrance, or, if there are none within 50 feet, the vehicular or pedestrian arrival point closest to the planned entrance.
- (b) Q. Under the individual building test, at what point of the planned entrance is the measurement taken?
- A. On a horizontal plane, the center of each individual doorway should be the point of measurement when measuring to an arrival point, whether the doorway is an entrance door to the building or an entrance door to a unit.
- (c) Q. The site analysis test calls for a calculation of the percentage of the buildable areas having slopes of less than 10 percent. What is the definition of "buildable areas"?
- A. The "buildable area" is any area of the lot or site where a building can be located in compliance with applicable codes and zoning regulations.

12. Second Ground Floors

- (a) **Q.** The Department's regulation for the Fair Housing Act provides that there can be more than one ground floor in a covered multifamily dwelling (such as a three-story building built on a slope with three stories at and above grade in front and two stories at grade in back). How is the individual building test performed for additional stories, to determine if those stories must also be treated as "ground floors"?

A. For purposes of determining whether a non-elevator building has more than one ground floor, the point of measurement for additional ground floors, after the first ground floor has been established, is at the center of the entrance (building entrance for buildings with one or more common entrance and each dwelling unit entrance for buildings with separate ground floor unit entrances) at floor level for that story.

- (b) **Q.** What happens if a builder deliberately manipulates the grade so that a second story, which also might have been treated as a ground floor, requires steps?

A. Deliberate manipulation of the height of the finished floor level to avoid the requirements of the Fair Housing Act would serve as a basis for the Department to determine that there is reasonable cause to believe that a discriminatory housing practice has occurred.

Requirement 2 -- Public and Common Use Areas

13. No Covered Dwellings

Q. Are the public and common use areas of a newly constructed development that consists entirely of buildings having four or more multistory townhouses, with no elevators, required to be accessible?

A. No. The Fair Housing Act applies only to new construction of covered multifamily dwellings. Multistory townhouses, provided that they meet the definition of "multistory" in the Guide-

lines, are not covered multifamily dwellings if the building does not have an elevator. (See discussion of townhouses in the preamble to the Guidelines under "Section 2--Definitions [Covered Multifamily Dwellings]" at 56 FR 9481, March 6, 1991, or 24 CFR Ch. I, Subch. A, App. III.) If there are no covered multifamily dwellings on a site, then the public and common use areas of the site are not required to be accessible. However, the Americans with Disabilities Act (ADA) may apply to certain public and common use areas. Again, an independent determination should be made regarding applicability of the ADA. (See the introduction to these questions and answers, which provides some background on the ADA.)

14. Parking Spaces and Garages

- (a) **Q.** How many resident parking spaces must be made accessible at the time of construction?

A. The Guidelines provide that a minimum of two percent of the parking spaces serving covered dwelling units be made accessible and located on an accessible route to wheelchair users. Also, if a resident requests an accessible space, additional accessible parking spaces would be necessary if the two percent are already reserved.

- (b) **Q.** If both open and covered parking spaces are provided, how many of each type must be accessible?

A. The Guidelines require that accessible parking be provided for residents with disabilities on the same terms and with the full range of choices, e.g., surface parking or garage, that are provided for other residents of the project. Thus, if a project provides different types of parking such as surface parking, garage, or covered spaces, some of each must be made accessible. While the total parking spaces required to be accessible is only two percent, at least one space for each type of parking should be made accessible even if this number exceeds two percent.

- (c) **Q.** If a project having covered multifamily dwellings provides parking garages where there are several individual 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, are there any requirements for the inside dimensions of these individual parking garages?

A. Yes. These garages would be public and common use space, even though the individual garages may be assigned to a particular dwelling unit. Therefore, at least two percent of the garages should be at least 14' 2" wide and the vehicular door should be at least 10'-0" wide.

- (d) **Q.** If a covered multifamily dwelling has a below grade common use parking garage, is there a requirement for a vertical clearance to allow vans to park?

A. This issue was addressed in the preamble to the Guidelines, but continues to be a frequently asked question. (See the preamble to the Guidelines under the discussion of "Section 5--Guidelines for Requirement 2" at 56 FR 9486, March 6, 1991, or 24 CFR Ch. I, Subch. A, App. III.) In response to comments from the public that the Guidelines for parking specify minimum vertical clearance for garage parking, the Department responded: No national accessibility standards, including UFAS, require particular vertical clearances in parking garages. The Department did not consider it appropriate to exceed commonly accepted standards by including a minimum vertical clearance in the Fair Housing Accessibility Guidelines, in view of the minimal accessibility requirements of the Fair Housing Act.

Since the Guidelines refer to ANSI A117.1 1986 for the standards to follow for public and common use areas, and since the ANSI does not include a vertical clearance for garage parking, the Guidelines likewise do not. (Note: UFAS is the Uniform Federal Accessibility Standard.)

15. Public Telephones

Q. If a covered multifamily dwelling has public telephones in the lobby, what are the requirements for accessibility for these telephones?

A. The requirements governing public telephones are found in Item #14, "Common use spaces and facilities," in the chart under Requirement 2 of the Guidelines. While the chart does not address the quantity of accessible public telephones, at a minimum, at least one accessible telephone per bank of telephones would be required. The specifications at ANSI 4.29 would apply.

Requirement 3 -- Usable Doors

16. Required Width

Q. Will a standard hung 32-inch door provide sufficient clear width to meet the requirements of the Fair Housing Act?

A. No, a 32-inch door would not provide a sufficient clear opening to meet the requirement for usable doors. A notation in the Guidelines for Requirement 3 indicates that a 34-inch door, hung in the standard manner, provides an acceptable nominal 32-inch clear opening.

17. Maneuvering Clearances and Hardware

Q. Is it correct that only the exterior side of the main entry door of covered multifamily dwellings must meet the ANSI requirements?

A. Yes. The exterior side of the main entry door is part of the public and common use areas and therefore must meet ANSI A117.1 1986 specifications for doors. These specifications include necessary maneuvering clearances and accessible door hardware. The interior of the main entry door is part of the dwelling unit and only needs to meet the requirements for usable doors within the dwelling intended for user passage, i.e., at least 32 inches

nominal clear width, with no requirements for maneuvering clearances and hardware. (See 56 FR 9487-9488, March 6, 1991, or 24 CFR Ch. I, Subch. A, App. III.)

18. Doors to Inaccessible Areas

Q. Is it necessary to provide usable doors when the door leads to an area of the dwelling that is not accessible, such as the door leading down to an unfinished basement, or the door connecting a single-story dwelling with an attached garage? (In the latter case, there is a separate entrance door to the unit which is accessible.)

A. Yes. Within the dwelling unit, doors intended for user passage through the unit must meet the requirements for usable doors. Such doors would have to provide at least 32 inches nominal clear width when the door is open 90 degrees, measured between the face of the door and the stop. This will ensure that, if a wheelchair user occupying the dwelling unit chooses to modify the unit to provide accessibility to these areas, such as installing a ramp from the dwelling unit into the garage, the door will be sufficiently wide to allow passage. It also will allow passage for people using walkers or crutches.

Requirement 4 -- Accessible Route Into and Through the Unit

19. Sliding Door

Q. If a sliding door track has a threshold of 3/4", does this trigger requirements for ramps?

A. No. The Guidelines at Requirement 4 provide that thresholds at doors, including sliding door tracks, may be no higher than 3/4" and must be beveled with a slope no greater than 1:2.

20. Private Attached Garages

- (a) **Q.** If a covered multifamily dwelling has an individual, private garage which is attached to and serves only that dwelling,

does the garage have to be accessible in terms of width and length?

A. Garages attached to and which serve only one covered multifamily dwelling are part of that dwelling unit, and are not covered by Requirement 2 of the Guidelines, which addresses accessible and usable public and common use space. Because such individual garages attached to and serving only one covered multifamily dwelling typically are not finished living space, the garage is not required to be accessible in terms of width or length. The answer to this question should be distinguished from the answer to Question 14(c). Question 14(c) addresses parking garages where there are several garages or stalls located together, either in a separate, detached building, or in a central area of the building, such as at one end. These types of garages are not attached to, and do not serve, only one unit and are therefore considered public and common use garages.

21. Split-Level Entry

Q. Is a dwelling unit that has a split entry foyer, with the foyer and living room on an accessible route and the remainder of the unit down two steps, required to be accessible if it is a ground floor unit in a covered multifamily dwelling?

A. Yes. Under Requirement 4, there must be an accessible route into and through the dwelling unit. This would preclude a split level foyer, unless a properly sloped ramp can be provided.

Requirement 5 -- Environmental Controls

22. Range Hood Fans

Q. Must the switches on range hood kitchen ventilation fans be in accessible locations?

A. No. Kitchen ventilation fans located on a range hood are considered to be part of the appliance. The Fair Housing Act has no requirements for appliances in the interiors of dwelling units, or the switches

that operate them. (See "Guidelines for Requirement 5" and "Controls for Ranges and Cooktops" at 56 FR 9490 and 9492, March 6, 1991, or 24 CFR Ch. I, Subch. A, App. III.)

Requirement 6 -- Reinforced Walls for Grab Bars

23. Type of Reinforcement

Q. What type of reinforcement should be used to reinforce bathroom walls for the later installation of grab bars?

A. The Guidelines do not prescribe the type of material to use or method of providing reinforcement for bathroom walls. The Guidelines recognize that grab bar reinforcing may be accomplished in a variety of ways, such as by providing plywood panels in the areas illustrated in the Guidelines under Requirement 6, or by installing vertical reinforcement in the form of double studs at the points noted on the figures in the Guidelines. The builder/owners should maintain records that reflect the placement of the reinforcing material, for later reference by a resident who wishes to install a grab bar.

24. Type of Grab Bar

Q. What types of grab bars should the reinforcement be designed to accommodate and what types may be used if the builder elects to install grab bars in some units at the time of construction?

A. The Guidelines do not prescribe the type of product for grab bars, or the structural strength for grab bars. The Guidelines only state that the necessary reinforcement must be placed "so as to permit later installation of appropriate grab bars." (Emphasis added.) In determining what is an appropriate grab bar, builders are encouraged to look to the 1986 ANSI A117.1 standard, the standard cited in the Fair Housing Act. Builders also may follow State or local standards in planning for or selecting appropriate grab bars.

Requirement 7 -- Usable Kitchens and Bathrooms

25. Counters and Vanities

Q. It appears from Figure 2(c) of the Guidelines (under Requirement 5) that there is a 34 inch height requirement for kitchen counters and vanities. Is this true?

A. No. Requirement 7 addresses the requirement for usable kitchens and bathrooms so that a person in a wheelchair can maneuver about the space. The legislative history of the Fair Housing Act makes it clear that the Congress intended that the Act affect ability to maneuver within the space of the kitchen and bathroom, but not to require fixtures, cabinetry or plumbing of adjustable design. Figure 2(c) of the Guidelines is illustrating the maximum side reach range over an obstruction. Because the picture was taken directly from the ANSI A117.1 1986 standard, the diagram also shows the height of the obstruction, which, in this picture, is a countertop. This 34 inch height, however, should not be regarded as a requirement.

26. Showers

Q. Is a parallel approach required at the shower, as shown in Figure 7(d) of the Guidelines?

A. Yes. For a 36" x 36" shower, as shown in Figure 7(d), a person in a wheelchair would typically add a wall hung seat. Thus the parallel approach as shown in Figure 7(d) is essential in order to be able to transfer from the wheelchair to the shower seat.

27. Tub Controls

Q. Do the Guidelines set any requirements for the type or location of bathtub controls?

A. No, except where the specifications in Requirement 7(2)(b) are used. In that case, while the type of control is not

specified, the control must be located as shown in Figure 8 of the Guidelines.

28. Paragraph (b) Bathrooms

Q. If an architect or builder chooses to follow the bathroom specifications in Requirement 7, Guideline 2, paragraph (b), where at least one bathroom is designed to comply with the provisions of paragraph (b), are the other bathrooms in the dwelling unit required to have reinforced walls for grab bars?

A. Yes. Requirement 6 of the Guidelines requires reinforced walls in bathrooms for later installation of grab bars. Even though Requirement 6 was not repeated under Requirement 7--Guideline 2, it is a separate requirement which must be met in all bathrooms. The same would be true for other Requirements in the Guidelines, such as Requirement 5, which applies to usable light switches, electrical outlets, thermostats and other environmental controls; Requirement 4 for accessible route; and Requirement 3 for usable doors.

29. Bathroom Clear Floor Space

Q. Is it acceptable to design a bathroom with an in-swinging 2'10" door which can be retrofitted to swing out in order to provide the necessary clear floor space in the bathroom?

A. No. The requirements in the Guidelines must be included at the time of construction. Thus, for a bathroom, there must be sufficient maneuvering space and clear floor space so that a person using a wheelchair or other mobility aid can enter and close the door, use the fixtures and exit.

30. Lavatories

Q. Would it be acceptable to use removable base cabinets beneath a wall-hung

lavatory where a parallel approach is not possible?

A. Yes. The space under and around the cabinet should be finished prior to installation. For example, the tile or other floor finish must extend under the removable base cabinet.

31. Wing Walls

Q. Can a water closet (toilet) be located in an alcove with a wing wall?

A. Yes, as long as the necessary clear floor space shown in Figure 7(a) is provided. This would mean that the wing wall could not extend beyond the front edge of a lavatory located on the other side of the wall from the water closet.

32. Penalties

Q. What types of penalties or monetary damages will be assessed if covered multifamily dwellings are found not to be in compliance with the Fair Housing Act?

A. Under the Fair Housing Act, if an administrative law judge finds that a respondent has engaged in or is about to engage in a discriminatory housing practice, the administrative law judge will order appropriate relief. Such relief may include actual and compensatory damages, injunctive or other equitable relief, attorney's fees and costs, and may also include civil penalties ranging from \$10,000 for the first offense to \$50,000 for repeated offenses. In addition, in the case of buildings which have been completed, structural changes could be ordered, and an escrow fund might be required to finance future changes.

Further, a Federal district court judge can order similar relief plus punitive damages as well as civil penalties for up to \$100,000 in an action brought by a private individual or by the U.S. Department of Justice.



U. S. Department of Housing and Urban Development
Washington, D. C. 20410-0500

December 16, 1991

OFFICE OF GENERAL COUNSEL

MEMORANDUM FOR: Gordon Mansfield, Assistant Secretary for Fair
Housing and Equal Opportunity, E

FROM: Frank Keating, General Counsel, G

SUBJECT: Carriage House Units

You have inquired about the application of the accessibility requirements under the Fair Housing Amendments Act ("Act") to carriage house unit designs.

In the examples which you provided, stacked housing units are designed to incorporate parking for each unit into the dwelling unit design in non-elevator buildings. Specifically, you have indicated that the garage footprint is used as the footprint for the remaining floor or floors of the units.

Since these carriage houses are located in buildings without elevators, the remaining question is whether they are ground floor units. See Section 804(f)(7) of the Act.

The Preamble to the regulations implementing the Act discusses the applicability of the Act to townhouses. Because the accessibility provisions of the Act "extend only to ground floor units in buildings without elevators," and a townhouse of more than one story is not a ground floor unit, multistory townhouses were not required to be made accessible in buildings where there was no elevator. 24 CFR Ch. 1, Subch. A., App. 1, P. 702 (1991).

Because this carriage house design does not include the entire dwelling unit on the ground floor, it is not a covered multifamily dwelling within the meaning of the Act.

Revised April 1998
HUD.





**Homes and
Community Renewal**



DesignGuidelines

JUNE 2021

Andrew M. Cuomo, Governor
RuthAnne Visnauskas, Commissioner/CEO



Purple text is used to indicated substantive revisions incorporated since the July 2020 (Addendum Revision 11.05.2020) edition of the Design Guidelines.

Design, Construction & Environmental Unit

Vacant, Vice President

641 Lexington Avenue
New York, NY 10022

Downstate Design Unit

641 Lexington Avenue
New York, NY 10022
Vacant, Director
Interim Contact: kristy.whitcher@nyshcr.org

Upstate Design Unit

38-40 State Street
Albany, NY 12207
Kristy Whitcher, Director
kristy.whitcher@nyshcr.org

Construction Services Unit

641 Lexington Avenue
New York, NY 10022
Joseph Lindicy, Director
joey.lindicy@nyshcr.org

Environmental Unit

38-40 State Street
Albany, NY 12207
Heather Spitzberg, Director
heather.spitzberg@nyshcr.org

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Design Guideline Goals and Objectives

Intent of the Design Guidelines

The criteria for these Guidelines have been developed to ensure minimum standards of quality, function and durability of projects funded by the Agency. The goals and objectives of the Design Guidelines are to aid applicants and architects in producing functional, safe, durable, and cost-effective housing that adds value to communities, pride amongst occupants, and promotes healthy living.

Projects should utilize standard materials and construction practices which will yield an attractive and appealing design that can be efficiently built at a reasonable cost. Projects should also be operated and maintained with routine and proactive maintenance.

The Guidelines do not exclude compliance with other criteria that may be required by the project funding source(s) or required by applicable codes, laws or regulations.

Application of the Design Guidelines

The Design Guidelines apply to all projects applying for funding administered by HCR-HFA (4% Tax -Exempt Bonds and Subsidies) or following the Multifamily Finance 9% Competitive Process. The Guidelines apply to new construction, and to the greatest degree practical, substantial rehabilitation projects and historic rehabilitation projects, including historic adaptive reuse projects. For moderate rehabilitation projects, see Appendix A.

All projects covered by these Design Guidelines are required to comply with the Energy & Green Building Requirements of Appendix F, as applicable.

These Guidelines are written primarily for residential occupancies. Nonresidential occupancies shall comply as applicable unless specifically indicated otherwise.

Minor deviations from these requirements will be allowed via Design Waiver Request if necessary to avoid costly structural changes in rehabilitation projects or if they result in a superior design solution. Requests to waive a requirement will be reviewed on a case-by-case basis by the Vice President of the Design Construction & Environmental Unit (DC&E) and/or the respective DC&E Unit Director. Other offices of the Agency will be consulted when relevant. Evaluations of waiver requests will include the appropriateness of the proposed alternative with emphasis on:

- Impact to the residents
- Cost-effectiveness

- Functional appropriateness
- Durability and operating appropriateness
- Impacts on operating costs/efficiency

All waiver requests must be submitted via the Design Waiver Request Form and must be received 30 calendar days prior to each required submission. The Design Waiver Request Form can be obtained online at <http://www.hcr.ny.gov>.

To ensure that the design is coordinated with other applicable submission criteria and program requirements, project applicants and architects should also refer to publications applicable to the funding sources for the project. HCR publications can be obtained online at <http://www.hcr.ny.gov> or from applicable program staff.

Potential applicants and design professionals needing technical assistance on the Guidelines in this manual may contact the Design, Construction & Environmental Unit, or the program managers of the applicable funding sources.

A project's design and construction shall comply with and may not vary from what is represented in the application for funding unless a change is specifically directed or recommended by the Agency. Constructed projects shall not be diminished in quality, including aesthetics, choice of materials, or systems from that proposed and represented in the application for funding unless specifically altered by the Agency at award.

If selected for an award, the applicant is responsible for ensuring that the project's scope of work, as represented by the plans, specifications and other pertinent documents, including any changes agreed to or directed by the Agency, are well defined and coordinated with the cost estimate.

HCR Project Sign:

All funded projects must provide project signage complying with the HCR Project Sign Specifications and Templates. All guidance can be found online at <https://hcr.ny.gov/hcr-project-sign-guidance>.

Projects with NYC HPD Involvement:

All projects located within New York City that involve the City of New York Department of Housing Preservation and Development (HPD) funding, site control or approval may comply with HPD criteria for building layout, design, and components in lieu of HCR's Design Guidelines. All Design Guideline criteria that was not met due to conflicts with the HPD criteria, must be presented to and approved by the Agency as a waiver request. This exception does not apply to program threshold, financing or contractual requirements.

Common Regulations, Laws and Guidelines

One or more of the following laws, codes, standards, and other requirements listed below may be applicable to a single project. The applicant is responsible for determining the applicability of each and for complying with all requirements, including standards and guidelines referenced by all applicable building codes and regulations.

Approved variances from applicable requirements obtained from governmental bodies must be provided to HCR in writing upon their receipt.

- NYS Uniform Fire Prevention and Building Code (NYSBC)
- New York City Building Code (NYCBC)
- Energy Conservation Construction Code of New York State
- Energy Conservation Code of New York City
- Multiple Dwelling Law
- [U.S. Department of Housing and Urban Development \(HUD\) Federal Housing Trust Fund Requirement \(24 CFR § 93.301 - Property standards\)](#)
- U.S. Department of Housing and Urban Development (HUD) Fair Housing Act Design and Construction Requirements (24 CFR § 100.205)
- U.S. Department of Housing and Urban Development (HUD) Section 504 Regulations (24 C.F.R. part 8)
- U.S. Department of Justice Americans with Disabilities Act (ADA) 2010 Standards for State and Local Government Facilities
 - See Federal Register 79 FR 29671, 5/23/14 for further HUD guidance
- Federal Labor Standards regulatory requirements (Davis-Bacon Related Acts)
- New York State Labor Law, Industrial Code Rule 56.
- Evaluation and Control of Lead-Based-Paint Hazards in Housing (HUD-1539-LBP, Current Edition and 24 CFR Part 35)
- EPA Renovation, Repair and Painting Rule (40 CFR Part 745)
- New York State Department of Labor Mold Program
- New York City "Guidelines on Assessment and Remediation of Fungi in Indoor Environments"
- US Environmental Protection Agency Mold Prevention in Schools and Commercial Buildings
- US-EPA Current Radon Standards of Practice
 - Soil Gas Control Systems in New Construction of Buildings (CC-1000 2018)
 - Radon Mitigation Standards for Multi-family Buildings (RMS-MF 2018)
 - Reducing Radon in New Construction of 1 & 2 Family Dwellings and Townhouses (CCAH 2013)
 - Radon Mitigation Standards for Schools and Large Buildings (RMS-LB 2018)
- Phase I Environmental Site Assessment ASTM E1527-13, or most current edition.
- NYS Smart Growth Public Policy Act.
- NYSDEC Prohibited and Regulated Invasive Species, 6 NYCRR Part 575.

Accessibility Requirements, Building Codes and Standards

The following section is intended to provide general guidance on various accessibility criteria that may be applicable to a project. This guidance shall not be relied upon as a substitute to applicable codes, regulations or standards.

Depending on the size, type and funding sources of a project, differing federal, state and local accessibility requirements may apply. These laws and regulations include, but may not be limited to, Section 504 of the Rehabilitation Act of 1973, the Fair Housing Act, Chapter 11 of the New York State Uniform Fire Prevention and Building Code (NYSBC), Chapter 11 of the New York City Building Code (NYCBC), and Americans with Disabilities Act (ADA).

Accessible Residential Areas, Terminology and Related Regulations

Accessibility requirements cited in the NYSBC and the NYCBC are based on the International Building Code (IBC) and its referenced accessibility standard, ICC A117.1 Accessible and Usable Buildings and Facilities. Although both New York State and New York City use similar terms, they have requirements that exceed the minimum requirements of the IBC and ICC/A117.1. The IBC and ICC/A117.1 contain specifications for five types of units: Accessible units, Type A units, Type B units, Type C units, and units with Communication Features. The information below provides general descriptions of the differences between the various types of units. See specific codes and regulations for actual requirements.

Accessible units

Accessible units represent the highest level of accessibility required by model codes and standards. Accessible units are required in certain residential occupancies that are primarily transient in nature and also in certain institutional occupancies. All required features are put in place and ready for use. Individuals with mobility disabilities should be able to use the spaces and elements within an accessible unit with little or no modification. Accessible units are not generally required under these Design Guidelines, or in multifamily facilities occupied as a residence and one- and two-family residences constructed in accordance with NYSBC or NYCBC. Accessible units defined by ICC/A117.1 differ from Fully Accessible and Adapted, Move-In Ready Units for mobility-impaired residents utilized by some programs administered by HCR. See the definition in the applicable program funding announcement and as described below.

Type A units

Type A dwelling units are accessible units that are designed to accommodate most persons with mobility disabilities without the need for extensive modification. Most spaces within the unit are accessible and usable. The criteria for Type A dwelling units is very similar to the accessibility requirements for housing in the Uniform Federal Accessibility Standards (UFAS). Type A units are generally not required in multifamily facilities occupied as a residence and one- and two-family residences constructed in accordance with NYSBC or NYCBC. Type A dwelling units which have been fully adapted are incentivized by certain programs administered by HCR (Fully Accessible

and Adapted, Move-In Ready Units for mobility-impaired residents). See the definition in the applicable program funding announcement and as described below.

Type B Units

These requirements are modeled after the U.S. Department of Housing and Urban Development (HUD) Fair Housing Act Design and Construction Requirements (24 CFR § 100.205), specifically the Fair Housing Accessibility Guidelines. Type B dwelling units are minimally accessible. In some instances, the applicable building codes require features and provisions to comply with Type A unit criteria. In some situations, substantial changes may be required to accommodate the disability-related needs of the resident.

Type C (Visitable) Units

Although ICC/A117.1 contains provisions for Type C dwelling units, they are not currently required by the NYSBC and NYCBC. HCR requires certain units to be Visitable under criteria established by the Agency which differs from the criteria in the ICC/A117.1. See “visitable units” description in the additional HCR accessibility requirements section below.

Units with Communication Features

Requirements of ICC/A117.1 are similar to the requirements in the 2010 ADA Standards for units with communication features. For residents who are hard-of-hearing or deaf, the standards address unit smoke detection and building-wide fire alarms; unit entries with a means for visually identifying visitors without opening the unit door; and, where provided, entry systems that are capable of connecting to TTY’s used for sending messages between a visitor at the building entry and an occupant within the unit.

Although UFAS does not contain many requirements for communication features, HUD Section 504 regulations require two percent of units to be accessible to persons who have hearing impairments or vision impairments. Similarly, the 2010 ADA Standards require two percent of the units to provide communication features. Unlike UFAS or the ICC/A117.1 requirement for units with communication features, the 2010 ADA Standards require the visible alarm appliances within the dwelling unit to be put in place and ready for use.

Fully Accessible and Adapted, Move-In Ready Units for hearing or visually impaired residents, utilized by some programs administered by HCR, are based on units with communication features. See the definition in the applicable program funding announcement and as described below.

Adaptable Features

Type B dwelling units provide minimal accessibility. Occupants of Type B dwelling units may need significant changes, including moving walls and fixtures, to meet their disability-related needs. Type A dwelling units and their counterparts in UFAS and the 2010 ADA Standards allow for certain elements to be installed or made available when occupants need them. These features are sometimes called “adaptable”.

Public Use Spaces and Places of Public Accommodation

The ADA Standards require all new and altered places of public accommodations located on residential sites to be accessible. Public accommodations include, but are not limited to, rental and sales offices, retail and food establishments, recreation facilities open to the public, and parking serving these spaces. For a definition of “place of public accommodation”, see the U.S. Department of Justice ADA Title III regulations (28 CFR 36.104).

Common Use Areas

Common use areas are shared spaces located outside dwelling units that are provided for the exclusive use of residents and their guests. Examples include, but are not limited to, hallways and corridors that service dwelling units; laundry rooms, party rooms, mailboxes, swimming pools, playgrounds and other recreation and exercise facilities, toilet rooms, trash depositories, and parking for residents and their guests.

In non-elevator buildings, UFAS requires at least one of each type of common use space to be accessible and to be located on an accessible floor. Similarly, the 2010 ADA Standards require only those common use areas serving accessible units to be accessible. However, HUD’s Fair Housing Act Design and Construction Requirements (24 CFR § 100.205) require common use areas to be accessible in facilities with covered multi-family units.

Accessible Routes

An accessible route is a continuous, unobstructed path of travel that is usable by persons using wheelchairs and other mobility devices, such as walkers and scooters. With few exceptions, all accessibility standards require a network of accessible routes to be provided within a facility to connect together all elements and spaces required to be accessible, including common use areas, and to provide access to site arrival points such as accessible parking, bus stops, the public right-of-way. See applicable codes and regulations for components and criteria requirements for accessible routes.

Additional HCR Accessibility Requirements

Assurances

Project architects, general contractors, and owners must certify to HCR that each project complies with all applicable State, local, and Federal government Accessibility requirements. Submit the “New York State Homes and Community Renewal Affidavit of Project Compliance with Accessibility Requirements” at the time of the construction loan closing.

Equitable Distribution

Accessible units (as required by Section 504 of the Rehabilitation Act) and HCR Adapted Units (Fully Accessible and Adapted, Move-in Ready Units) to the maximum extent feasible and subject to reasonable health and safety requirements, shall be distributed throughout buildings and sites and shall be available in a sufficient range of sizes and amenities so that a qualified individual with disabilities’ choice of living arrangements is, as a whole, comparable to that of other persons eligible for housing assistance under the same program. However, this requirement shall not be construed to require provision of an elevator in any multifamily housing project solely for the purpose of permitting location of accessible units above or below the accessible grade level.

Visitable Units

All dwelling units connected to an elevator and all first-floor dwelling units in newly constructed buildings without elevator service shall include the criteria listed below. Buildings undergoing adaptive reuse or rehabilitation shall comply to the maximum extent feasible with each of the measures below:

- a. an Accessible Route circulation path to the unit without relying on ramps, unless unavoidable due to existing conditions that are impractical to change.
- b. at least one 36-inch wide unit entrance or a unit entrance meeting Building Code Type B unit entrance criteria.
- c. at least one 36-inch wide interior circulation path, or an accessible route meeting the criteria of ICC A117.1-2009, to all habitable rooms, kitchens and bathrooms on the grade-level floor.
- d. at least one half-bath that contains at least a clear floor space of 48-inches minimum long and 30-inches minimum wide positioned outside the door swing and blocking for at least two safety grab bars.

Fully Accessible and Adapted, Move-in Ready Units

Fully accessible and adapted, move-in ready units are utilized by certain programs administered by the Agency. See program information and announcements for information on where to include these units and the quantity to be provided.

Units for mobility impaired residents:

At the time of initial occupancy, dwelling units shall be fully accessible and fully adapted to Type A Dwelling Standards in accordance with New York State or New York City Building Code reference standards, as applicable. In projects that must meet Federal Section 504 of the

Rehabilitation Act of 1973, the applicable proportion of dwelling units shall be fully accessible and fully adaptive in accordance with Section 504 criteria.

All such dwelling units shall include a fully accessible bathroom with a fully accessible roll-in shower with an attached seat or a fully accessible bathtub with an optional seat. The accessible bathtub shall be designed and built in such a way that the layout and plumbing will readily accommodate the future conversion to a fully accessible roll-in shower with an attached seat. The determination of whether the roll-in shower or bathtub option is selected will be dependent on satisfactory documentation of need, per applicable program requirements. Building owners will be required to convert to the bathtub or shower option in these dwelling units as a reasonable accommodation at no cost to the tenant, if requested by the tenant. In all cases, these dwelling units shall be move-in ready, with the installation of all grab bars, cabinet pulls, appliances, thresholds, etc., to meet fully adapted standards at the time of initial occupancy. Exceptions permitted in the building code for Type A adaptability (e.g., removable cabinet base) are not permitted at the time of occupancy in HCR's Fully Accessible and Adapted, Move-in Ready Units.

Units for hearing or visual impaired residents:

At the time of initial occupancy, dwelling units shall be fully accessible and fully adapted for the hearing and visually impaired in compliance with the 2010 ADA for Units with Communication Features and include additional devices in accordance with the Agency's design standards. Fully accessible and fully adapted shall mean that all devices, components and features are fully installed and operational. Exceptions in the 2010 ADA for existing units do not apply. In projects that must meet Federal Section 504 of the Rehabilitation Act of 1973, the applicable proportion of dwelling units shall be fully accessible and fully adapted in accordance with Section 504 criteria.

Environmental Review

The Environmental Unit is responsible for conducting environmental reviews for all HCR agencies. In accordance with requirements of 6 NYCRR Part 617, the State Environmental Quality Review Act (SEQRA), the Environmental Unit will conduct an environmental review of all HTFC Multifamily Finance 9% Competitive Process projects that are given a preliminary funding award and all HFA project applications upon notification from program staff. In addition, any projects that receive federal funding through HCR, for example, the U.S. Department of Housing and Urban Development (HUD), shall also be reviewed under the requirements of 24 CFR Part 58, the National Environmental Policy Act (NEPA), or other relevant federal environmental review standards.

Independent of SEQRA compliance, all projects shall comply with:

- Section 14.09 of the Parks, Recreation, and Historic Preservation Law (or federal equivalent)
- Floodplain Management Criteria for State Projects (6 NYCRR Part 502)
- Section 305(4) of the Agriculture and Markets Law
- NYS Coastal Zone Management regulations (19 NYCRR Part 600)
- Smart Growth Public Infrastructure Policy Act (NYS Environmental Conservation Law, Article 6).

All project sponsors will be required to submit a Phase I Environmental Site Assessment (ESA) report which shall meet, at a minimum, the American Society for Testing and Materials standard for site assessment (ASTM E 1527-13) dated within the time limits required by the project funding

source(s). For projects following the Multifamily Finance 9% Competitive Process, this time limit is one year prior to the application for funding. For HFA projects, this time limit is within six months of the award of funding.

The Phase I ESA shall include an acceptable vapor intrusion screen. An update to an older Phase I report will be accepted. For rehabilitations, the scope of the investigation shall include visual examination for mold contamination. If recommended by the Phase I ESA or otherwise required, additional studies and mitigation plans shall be submitted prior to project clearance. If a project is being remediated under the jurisdiction of a state or municipal agency (such as NYSDEC or NYCOER), the Environmental Unit will not clear the project until that agency has approved, at a minimum, site characterization studies; however, it is expected that these projects would be closer to the remedial plan stage.

The applicant will be responsible for submitting additional studies, documentation and further investigations as requested. HCR will require any significant environmental impacts identified in their review to be mitigated as a condition for proceeding with project construction. Awardees are hereby advised that the project, including site acquisition, contracts for services, and any site disturbance beyond investigation or testing activities, shall not commence prior to the completion of the environmental review.

Environmental site suitability must be demonstrated with an environmental justice and mitigation narrative that follows the instructions located in the 9% RFP application (E-6) and the 4% application attachment available at: [hcr-site-suitability-standards.pdf \(ny.gov\)](https://www.hcr.ny.gov/sites/default/files/2021-06/hcr-site-suitability-standards.pdf)

Applicants may be asked to submit documentation that demonstrates that the project complies with the other state and federal entities which may have jurisdiction over the project. Although not exhaustive, a list of these entities might include:

- NYS Office of Parks, Recreation and Historic Preservation (OPRHP)
- NYS Department of Environmental Conservation (DEC)
- NYS Department of State (Waterfront Revitalization and Coastal Resources Act)
- NYS Department of Labor (DOL)
- NYS Natural Heritage Program (Endangered Species)
- NYS Department of Health (DOH)
- New York City (including CEQR)
- NYS Department of Agriculture and Markets (Agricultural Districts)
- Adirondack Park Agency (APA)
- U.S. Fish and Wildlife Service (Endangered Species)
- U.S. Department of Housing and Urban Development (HUD)
- U.S. Environmental Protection Agency (EPA)
- U.S. Army Corps of Engineers (Wetlands)
- U.S. Occupational Safety and Health Administration (OSHA)

Applicants are hereby advised that the project, including site acquisition, contracts for services, and any site disturbance beyond investigation or testing activities, shall not commence prior to the completion of the environmental review and receipt of an environmental clearance letter from the Environmental Unit.

Lead Hazards

All work including rehabilitation, renovation, repair, etc. at buildings constructed prior to 1978 (or earlier if other regulations apply) shall address lead-based paint in accordance with these guidelines, unless more restrictive regulations apply. HCR shall have access to affected work areas early in the construction process; therefore, the process and methods to allow non-protected workers and personnel into these work areas shall occur in a timely manner.

Residential occupancies (regardless of the age of the occupants) and child-occupied facilities, such as daycare centers and facilities providing programs or services for pregnant women, shall comply with HUD rules and guidance for testing and abatement of lead-based paint. Refer to Guidelines for the Evaluation and Control of Lead-Based-Paint Hazards in Housing (Second Edition, July 2012, HUD Lead Safe Housing Rule 24 CFR Part 35) and the EPA Renovation, Repair and Painting Rule (40 CFR Part 745). Provide certified third-party clearance examination reports for the following:

1. At each work area during construction, to demonstrate that the hazard reduction activities are complete and that the work area is safe for non-protected workers.
2. At the completion of the project, but prior to occupancy, to demonstrate that no soil-lead hazards or settled dust-lead hazards exist.

Other nonresidential occupancies shall comply with all applicable regulations for the removal of lead-based paint hazards, the safety of workers and the safety of persons who will occupy the building(s) after renovations. During construction activities, HCR must be notified when work areas are considered safe for non-protected workers in accordance with the applicable regulations. At this time, the expectation will be that affected work areas will be suitably vacuumed and otherwise cleaned of all hazardous dust.

Existing domestic water supply and distribution systems that are to remain must be tested for lead content in accordance with applicable drinking water regulations and guidelines or per HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing (where municipal regulations do not exist). Where results for lead content meet or exceed the applicable action levels, domestic water supply piping and fixtures shall be removed and replaced with lead-free plumbing.

Mold

Where pervasive mold conditions are identified prior to, or during the construction or rehabilitation of any project, such conditions shall be remediated in accordance with applicable protocols established by the New York State Department of Labor Mold Program.

Mold occurring in isolated locations, as a result of the construction activities, shall be fully abated by removal of the affected material whenever possible, and the contributing condition(s) shall be corrected.

When mold conditions occurred during the construction of a project, the project closeout shall be conditioned upon certification from a certified mold assessor that mold and the conditions contributing to mold growth were eliminated. Final certification from other professionals recognized by the Department of Labor Mold Program is acceptable for fully abated isolated conditions where the conditions contributing to mold growth were a temporary condition due to construction activities.

Other references or guidance that may be useful include: the New York City “Guidelines on Assessment and Remediation of Fungi in Indoor Environments”, as published by the New York City Department of Health and Mental Hygiene, US Environmental Protection Agency Mold Prevention in Schools and Commercial Buildings.

Radon

All newly constructed and renovated buildings funded by the Agency and located in EPA Zone 1 or 2 shall address radon in accordance with the EPA Current Radon Standard of Practice for the applicable building type and in accordance with this section. The most common Standards of Practice, published by the American National Standards Institute and the Association of Radon Scientists and Technologists (ANSI/AARST), are listed in the “Common Regulations Laws and Guidelines” section of this document.

New and substantial rehabilitation low-rise residential projects shall install a passive radon mitigation system in accordance with the applicable Standard of Practice, including collectors below the slab and a vent pipe through the roof. Vertical vent pipes shall run at the interior of buildings to avoid frosting inside the vent stack during cold weather. Include electrical junction box(es) above the highest occupied floor level for future system activation.

Moderate rehabilitation low-rise residential projects shall install active radon-reduction measures in accordance with the applicable Standard of Practice should testing at the completion of the rehabilitation confirm the presence of radon gas in the building exceeding the EPA action level. It is highly advisable to include radon reduction measures in the base scope of work to avoid costly retrofits should elevated radon levels be discovered after rehabilitation has been completed.

Mid-rise/high-rise residential projects and non-residential facilities shall incorporate the methods described above or other radon mitigation measures recognized by the applicable Standard of Practice.

Nonresidential facilities with a limited period of occupancy may omit these methods and measures if it is established by a third party with radon expertise that the limited period of occupancy does not warrant the need for mitigation.

Radon testing in all new and rehabilitation projects shall be conducted at the completion of construction or rehabilitation work, prior to occupancy/re-occupancy. A radon professional shall oversee testing as per the applicable Standard of Practice meeting US-EPA short-term, closed-building testing protocols. Testing prior to rehabilitation work is not recommended because it will not provide an accurate representation of the conditions post-renovation due to increased efficiency in the building envelope and systems (i.e., increasing insulation levels, reducing air infiltration, replacing windows, changes to the HVAC system, etc.).

Passive radon-reduction systems shall be activated should tests confirm the presence of radon gas in the building exceeding the EPA defined action level of 4pCi/L. If the test results indicate radon concentrations between 2pCi/L. and 4pCi/L., consider activation of the system based on EPA recommendations.

Design Guideline Criteria

The criteria in these Guidelines have been developed to ensure minimum standards of quality, function and durability of projects funded by the Agency.

Site Development

The following criteria shall be included where applicable or specifically stated as required. These criteria are intended to enhance neighborhoods and community pride, contribute to economical development and operations of site facilities, improve quality of life for residents, promote Accessible design, and provide for the safety of the residents and the general public.

Design and Context Criteria [Site]

1. Site development should be compatible with the project surroundings, e.g.:
 - a. Neighborhood scale should be maintained.
 - b. New and existing setbacks should be compatible.
 - c. Building heights and bulk, as seen from the street, should be respected.
 - d. Building materials should be compatible with the neighborhood context.
2. Neighborhood traffic patterns should be respected, e.g.:
 - a. Internal roads should relate to existing and planned alignments of abutting neighborhood roads and should discourage through-traffic and speeding.
 - b. Intersections should generally be at right angles and avoid offsets.
 - c. Site development should enhance and continue any existing pedestrian or bike trail systems whenever possible.
 - d. Building massing and pedestrian pathways should enhance connections to nearby parks, plazas, and open spaces.
3. Interesting and enjoyable views should be afforded from dwellings, indoor common areas, and outdoor sitting areas.
4. Community facilities should be located for convenience to dwelling units.



Covered entrance with seating



Screening for mechanical equipment

5. Building and open spaces should be oriented to benefit from environmental conditions.
6. Building entrances should provide shelter from sun, wind, and precipitation.
7. Existing trees should be maintained, where possible.
8. Provide landscaping that enhances the building, including indigenous shrubs, berms, decorative fencing, special lighting, and signage. Shade trees are encouraged wherever possible, especially to shade seating areas and building(s).
9. Provide screening for all exterior mechanical equipment, meters, dumpsters, etc.
10. It is encouraged, where possible, to install exterior lights that utilize solar photovoltaics (PV) to power the fixtures.
11. Provide at least one Level 2 electric vehicle (EV) charging station for every twenty parking spaces provided in a project. EV charging stations shall be equitably distributed throughout the project to allow residents equal convenience in accessing the EV charging stations.
 - a. Projects shall not be required to provide more than five EV charging stations in total.
 - b. Projects that do not provide parking in a lot are exempt from this requirement.

Accessibility/Visitability Criteria [Site]

1. Access to buildings, facilities and site amenities within the project site shall include Accessible Routes in compliance with the applicable building code, Fair Housing Act and other applicable regulations, such as Section 504 of the 1973 Rehabilitation Act.
2. When a parking area abuts an Accessible Route (sidewalk), sidewalks shall be widened, and wheel-stops or a curb must be provided to prevent vehicles from overhanging the sidewalk and obstructing the Accessible Route.
3. Accessible Routes shall connect all community facilities, common use areas and dwelling units.
4. All portions of a pedestrian system should be passable in poor weather, i.e., capable of being easily cleared of snow, sheltered from sweeping winds, and well-drained to prevent flooding and icing. Exterior ramps and stairs, along with their respective approaches, must be designed to prevent water and snow accumulation. The maximum permitted landing slope (2%) should be used to allow for drainage.



Parking with wheel-stops or curbs at sidewalks

5. Whenever possible, provide building and unit entries/exits at grade. To minimize costs, avoid using elevated ramps but, if provided, each ramp run should have the least possible slope and must have compliant top and bottom landings, handrails, handrail extensions, and edge protection.
6. Provide ramps, where possible, in place of or in addition to stairways or steps. Consider providing stairs and ramps in the same vicinity to accommodate the widest possible range of users. Many people who have difficulty walking, find stairs easier to use than steep ramps. Ramps at main entrances shall be decorative and finished to enhance the entry.
7. Handrails and railings shall be constructed of durable, weather-resistant materials that will not warp, crack, chip or peel under normal use. Avoid pressure-treated lumber as it has a tendency to warp and may not hold paint over time.

Quality of Life Criteria [Site]

1. In projects where the number of bedrooms can accommodate 20 children or more (including multi-site projects or portions thereof located on contiguous sites), provide play equipment in children's play areas. Play equipment shall be selected to promote physical activity and use for all age groups, from toddlers to adolescents. The quantity and variety of play equipment shall be proportional to the number of children that may reside in the project. Children's defined play areas should be designed and located for safety and to limit disturbance to other residents. Include the following criteria to achieve these objectives:
 - a. Locate play areas to allow easy supervision.
 - b. Locate play areas for younger children to avoid crossing vehicular paths.
 - Play areas should only be located adjacent to a drive or parking lot if protected by physical barriers capable of stopping a moving car.
 - c. Provide separate areas for toddlers/preschoolers and teenagers.
 - d. Provide safety surfaces at play equipment in conformance with U.S. Product Safety Commission guidelines, latest edition. Materials that are not manufactured as a cohesive finished surface or remain unbound in a non-permanent state, such as gravel, wood chips and rubber chips/beads, are not acceptable. These types of materials require constant maintenance to meet Accessibility criteria and may harbor vermin and other unhealthy and unsafe substances.



Safety surface and equipment at play area



Enclosed play area with benches

- e. Enclose play areas with fencing to provide safety and protection to children.
 - f. Locate play areas on Accessible Routes to allow access for wheelchair users.
 - g. Select play equipment to provide equivalent play experiences and opportunities for children with disabilities.
2. Equipment and areas for adult fitness are encouraged. For projects with play areas, it's recommended to place adult fitness adjacent to children's play areas.
 3. Bicycle storage facilities shall be secure and easily accessible to encourage transportation and recreational use by bicycle. Sheltered bicycle storage facilities are recommended.
 4. Provide seating areas with benches at multifamily projects. Benches in senior projects shall have backs. Exterior seating must be of durable, low maintenance materials. Exterior seating and other amenities must be permanently anchored in place.
 5. Projects with Accessible dwelling units or other Accessible uses must include paved Accessible wheelchair areas with adjoining benches.
-
- Low-maintenance seating areas with trees*
6. Open space should be useful and accommodating, e.g.:
 - a. Provisions should be made to accommodate both social interaction and privacy for residents.
 - b. Sitting areas and walkways should be arranged to facilitate conversation, casual interaction, social contact, etc.
 - c. A clear separation between public and private space should be provided.
 - d. Outdoor space and public sidewalks should be shaded and made attractive by the inclusion of trees. **Where possible, use solar panels as a successful means of shading.**
 - e. Picnic facilities are encouraged to promote family and social activities.
 - f. Outdoor spaces that contain flower and vegetable gardens suitable for both adults and children are encouraged. Where provided in projects with Accessible/Adaptable dwelling units, raised garden planters shall be compliant with Accessibility criteria.

Security and Resident Safety Criteria [Site]

1. Common project space should be secure. Public ways and exterior spaces should be visible from dwelling units and interior common spaces, e.g.:
 - a. Avoid recessed or hidden spaces.
 - b. Public spaces should permit easy supervision by security personnel.
 - c. Security cameras that cover the exterior grounds of the site may be included in projects with heightened security concerns.

- d. The area surrounding points of exit from the building should be visible without obstructions or dark areas where intruders could hide.
- e. Stairways should exit into well-lit areas that are visible to the public and nearby dwellings.
- f. In projects with individual dwelling unit entrances, parking areas should be close in proximity to dwellings to allow supervision of space and one's own car.



Open space to promote social interaction



Raised garden planters

2. As a safety precaution, ornamental fences shall have horizontal top bars with no pickets projecting above the bar. Wood picket fences are to have flattened tops or a horizontal cap above the pickets. Exceptions may be made where such fencing is necessary for a heightened degree of security.
3. Stormwater management areas shall be fenced or provided with other recognized design measures, such as aquatic benches designed to NYS DEC standards, to ensure safety for children and other residents of the project or the surrounding neighborhood.
4. Provide lighting levels meeting Illuminating Engineering Society recommendations. Locate lighting to thoroughly illuminate pedestrian walkways from parking spaces and public sidewalks to building entrances. Distribute lighting to ensure safety and minimize security concerns.
5. Projects are encouraged to include passive and active resiliency features, such as generators **or battery storage for solar**, where appropriate **and approved by local code**. Additionally, generators should be considered at all senior projects.

Operational Efficiency and Durability Criteria [Site]

1. Trees at streetscapes must be at least 2-½ inch caliper. Other trees on site must be at least 1-½ inch caliper.
2. All plantings shall comply with New York State Departments of Environmental Conservation and Agriculture and Markets regulations concerning invasive species.
3. Plantings **should** be selected to minimize water usage. **Consider xeriscaping or naturally occurring landscaping plants and materials.**

4. Provide lawns with at least 3" of well-screened topsoil. Lawns are to be maintained no less than weekly during the construction phase until 98% established.
5. Paved areas should be high quality, durable, easily maintained, stable, and have a non-slip texture. All primary walkways, sidewalks from parking areas, sidewalks to secondary entrances, and all Accessible Routes shall be reinforced concrete or other suitable material with similar qualities noted above. Unstable installations, such as asphalt pavement or interlocking paver blocks over a granular base, are not acceptable. Plaza pavers selected for aesthetics shall be a heavy-duty installation designed and constructed to ensure Accessibility and durability.



Paved areas for Accessibility and durability



Entrance enhanced by landscaping

6. All concrete exposed to weather must have a minimum ultimate design strength of 4,000 psi and contain an air entrainment admixture.
7. Walking surfaces shall have a minimum 4-inch base of compacted, sound, granular and durable materials that are free from organic matter.
8. Asphalt paving for parking and drive surfaces shall be compacted 2-inch base course and 1½" top course over a 6" aggregate base. Provide positive drainage of all driveways, parking areas, ramps, and walkways to prevent standing water.
9. Exterior lifts shall be protected from the elements with an adequate roof or other covering. Lifts that are located in areas susceptible to weathering from elements are not permitted.
10. Site development, including utility and infrastructure work, shall be limited to that required for the subject project. The cost of site development work that benefits other projects, existing or future, shall be equitably prorated between the projects. Future developments may be required to reimburse site development costs if the future development benefits from the original project development. An exception will be allowed for work required by the local jurisdiction for expanding existing infrastructure to the subject project. Refer to the program requirements of the funding source for more information on shared development costs.

Building Envelope, Structure and Utilities

The following criteria shall be included where applicable or specifically stated as required. Building envelope criteria include considerations for the durability and longevity of the exterior enclosure systems in addition to energy efficiency measures. The criteria are intended to promote building designs that are aesthetically and architecturally compatible with the context of the area. This section also focuses on creating a durable and energy-efficient building core, including the building structure, utilities and interior finishes, to promote a safe and healthy environment for the residents.

Design and Context Criteria [Building]

1. The building design, material selections and detailing must consider the following:
 - a. Compatibility to enhance the neighborhood context and natural environment.
 - b. **Well sealed, highly efficient building envelopes and systems** to reduce operational costs.
 - c. Durability of material systems to minimize routine maintenance.
2. Building facades that face the street or have a prominent exposure to other public areas shall include design measures that increase the building's aesthetic appeal to enhance and reinforce existing design qualities found in the neighborhood. Examples of such measures include:
 - a. Articulation of the building façade by incorporating elements such as porches, terraces, bay windows, dormers, pilasters, or other building setbacks.
 - b. Architectural details such as brackets, banding, railings, chimneys, entry columns, or window shutters designed to be compatible with the architectural qualities of prominent buildings in the neighborhood.
 - c. Roof shapes and articulations that are visually appealing and compatible with prominent buildings in the neighborhood.
Examples include varying roof slopes or heights, hips, articulated gables, cupolas for pitched roofs, articulated parapets, prominent copings, and cornices for low slope roofs.
 - d. On projects with multiple buildings on the same site, it is recommended to provide variation amongst the buildings for identification or wayfinding purposes.
3. The primary exterior material for buildings located in densely populated urban areas shall be masonry; however, durable alternatives such as high-performance panels may be utilized.
 - a. At locations where the immediate neighborhood context is masonry, provide masonry for the full building height at all elevations exposed to public view or other elevation areas subject to abuse.
 - b. In all other urban areas, provide masonry at all grade level stories.



Architectural detailing and façade articulation

4. Where pitched roofs are proposed on non-urban units and low-rise multi-dwelling buildings (2-3 stories, i.e., rowhouses, garden apartments), the minimum roof pitch should be 5/12 or greater to match those of existing surrounding residential structures.
5. Buildings with lengthy corridors should be avoided, especially in non-urban settings. Wherever possible, configure family housing as low-rise buildings utilizing individual exterior dwelling unit entries, or buildings with clustered/central core dwelling unit entries.
6. Noise mitigation measures shall be provided if outside ambient noise levels are higher than 65 decibels.



Cornice articulation on low-slope roofs



Maintaining neighborhood aesthetics

Accessibility / Visitability Criteria [Building]

1. Elevators
 - a. General Requirements
 - Where provided, elevators must comply with applicable safety standards and accessibility requirements: ASME A17.1/CSA B44-: Safety Code for Elevators and Escalators and Chapter 4 of the ICC/A117.1, latest editions adapted by the applicable building code.
 - Destination oriented elevators shall not be used due to reported difficulties in use by the elderly and persons with disabilities.
 - b. Minimum Number
 - Buildings with more than 6 stories shall have at least two elevators.
 - Buildings with dwelling units for seniors located above or below the level of exit discharge shall have at least one elevator.
 - c. Demand Response Time

Elevators shall be provided in a sufficient number and size to meet demand response times complying with this section. Calculations shall assume a minimum of 3 square feet (0.28 mm²) per person.

 - Multifamily Facilities: Elevator service shall accommodate approximately 6% to 7% of occupants in a five-minute demand with waiting times no greater than 50 – 90 seconds. Calculate the anticipated population as 2 occupants per bedroom unless a higher population is known.

- Multifamily Facilities with Seniors: Elevator service shall accommodate approximately 5% to 6% of occupants in a five-minute demand with waiting times no greater than 50 – 90 seconds. Calculate the anticipated population as 1.25 to 1.5 occupants per bedroom.
- d. Size Requirement
- All elevator cars shall be of a size and arrangement to accommodate ambulance stretchers meeting criteria established in the elevator requirements of the applicable building code. Elevators shall be identified by the international symbol for emergency medical services (star of life) placed in a location complying with applicable building code.
- e. Finishes
- Finishes shall be the following materials, equivalent, or better:
- Flooring shall be heavy-duty, wear-resistant vinyl tile.
 - Wall and ceiling panels shall be plastic laminate.
 - Handrails shall be stainless steel.
 - Lighting shall be ENERGY STAR labeled, or equivalent.
 - Shatterproof mirror mounted on one upper corner of the car to allow over-view of the car before entry and to facilitate backing out of the elevator by wheelchair users.
- f. Manufacturer Guarantee
- A written manufacturer guarantee shall be provided and shall, at a minimum, cover parts and components for a period of one year after the date of final acceptance by the owner. Repairs or replacements made under the guarantee must be guaranteed for an additional one-year period.
- g. Elevator Contractor Provided Service Contract
- The elevator contractor shall provide a service contract to cover maintenance and callback service not covered by the manufacturer guarantee for a period of one year after the date of final acceptance by the owner. Coverage shall include regular and systematic examination, adjustment, lubrication, and repair or replacement of equipment due to normal elevator usage.
- h. Owner Provided Service Contract
- Upon expiration of the service contract provided by the elevator contractor, owners shall provide for a continuation of the coverage at the same level for the entire time of the regulatory period.

Health and Safety Criteria [Building]

1. Spray foam insulation shall be applied by applicators certified by the manufacturer, the American Chemistry Council, or other recognized industry standards. The application of spray foam shall be in accordance with such certification to limit harmful off-gassing after the curing period. Scheduling of spray foam applications shall be done in a manner that allows sufficient ventilation to occur to dissipate any residual off-gassing prior to the spray foam insulation becoming enclosed by other materials.

Security and Resident Safety Criteria [Building]

1. All windows must have a locking device that is tamperproof from the exterior.
2. Provide child guards (i.e., fall protection) or window opening control devices in accordance with the NYS Building Code, NYS Residential Code and NYC Housing Maintenance Code, as applicable.
3. Provide vision panels at common entry doors. It is preferable to maximize the size of the vision panels at main entrances.



Large vision panels at common entry doors

Operational Efficiency and Durability Criteria [Building]

1. All interior concrete must have a minimum ultimate design strength of 3,000 psi.
2. Exposed, interior concrete at walkable surfaces are to be finished with chemical hardeners, sealers, or suitable floor paint to prevent dusting.
3. All wood exposed to the weather and wood blocking used in roofing must be pressure treated, or other suitable rot-resistant species or material.
4. Pressure treated wood for areas such as balcony **decking** and railings are discouraged from use due to the tendency of the wood to warp, split and chip.
5. Exterior building materials:

- a. Masonry (brick, stone, concrete block):
Select for aesthetic appeal and with grades that ensure durability and longevity. Brick and concrete block shall be full dimension modular units with a minimum of four inches nominal thickness. Design and installation shall comply with industry best practices for prevention of water infiltration and to maintain structural stability.

Manufactured stone veneer shall be two inches or greater in thickness, set in mortar beds and carry a 50-year product warranty. The use of manufactured stone veneer is limited to building accents and as a base condition at grade.

Thin brick veneer systems shall not be used on exterior surfaces.



Not allowed—thin brick on exterior

- b. Exterior insulation finish systems (EIFS):
Select for aesthetic appeal and advanced thermal envelope performance for energy efficiency considerations. Aesthetics should provide a variety of surfaces and geometries, avoiding large, flat, non-articulated areas. Provide special, manufacturer approved detailing to ensure durability and to prevent water infiltration, especially at horizontal projections and other areas with increased susceptibility to water infiltration. EIFS shall not be used at grade level stories. All system components shall carry a min. 10-year manufacturer's warranty.
 - c. Vinyl siding:
Solid vinyl siding manufactured without fillers with a minimum thickness of .044 inch.
 - d. Wood clapboard siding:
Free and clear of knots, checks, and other defects.
 - e. Fiber cement board siding:
Field painted or prefinished and carrying a minimum manufacturer's finish warranty of 15 years.
 - f. Other exterior building materials:
The above list represents the most common exterior materials utilized on projects funded by the Agency. Other materials may be acceptable. Considerations for the selection of other materials are aesthetics, durability, longevity, warranty, maintenance and energy efficiency. Design and installation shall comply with industry best practices for prevention of water infiltration and maintaining structural stability. Provide special detailing to ensure durability, especially at areas with increased susceptibility to water infiltration. Materials prone to damage by children playing, lawn equipment, etc., shall not be used on grade level stories.
6. For all new construction projects, provide R and U values that comply with or exceed the Energy Conservation Construction Code of New York State or Energy Conservation Code of New York City, latest edition, as applicable. Substantial/gut rehabilitation projects shall comply with criteria applicable to new construction, unless technically infeasible. All projects are required to comply with the applicable energy and green building criteria indicated in Appendix F.
7. Roof and floor sheathing shall have an exposure 1 classification constructed of structural veneer plywood or non-plywood, high-performance structural panels. Where roof structural members are spaced a maximum of 24 inches on center, roof sheathing shall have a minimum nominal thickness of 5/8 inch to minimize deflection between structural members. H-clips must be used for square edge profiles with unsupported edges. Floor sheathing must be tongue and groove panels with a minimum nominal thickness of 3/4 inch. Non-plywood, high-performance structural roof or floor sheathing panels shall comply with the following:
- a. Carry a limited lifetime warranty.
 - b. Include a 500-day no-sanding guarantee that covers delamination and excessive swelling.
 - c. Maintain moisture resistance throughout each panel and at all edges when cut into smaller panels.

Non-plywood, high-performance structural roof sheathing panels with an integrated moisture barrier are acceptable if provided with a manufacturer's 30-year system warranty.

8. Underlayment must be in conformance with the floor finish manufacturer's acceptable standards.
9. New roofing systems are required on all projects, with the exception of existing roofs in good condition with no history of leaks that will carry a 15-year or longer warranty at the time of substantial completion for the funded project or building.
10. Low slope roofs shall use industry-standard roof membranes from a reliable manufacturer that carry a minimum of a 20-year, full systems manufacturer's warranty for labor and materials with no dollar limit. In addition, the roofing contractor is to provide a minimum two-year labor warranty for all roofing and sheet-metal work.
11. Shingle roofing shall carry a minimum manufacturer's warranty of 30 years and a two-year roofing contractor's labor warranty for all roofing and sheet-metal work.
12. Metal roofing shall carry a minimum 30-year finish warranty, a minimum 25-year material warranty, and a 2-year roofing contractor's labor warranty for all work. The finish warranty shall state, at a minimum, that the finish will not fade, chalk, crack, check, or peel. The material warranty shall state, at a minimum, that the material will not rupture, fail structurally or perforate under normal atmospheric conditions.
13. All flashing material must be of non-corrosive weather-resistant materials and consist of a minimum of .019 inches aluminum or a membrane flashing in compliance with the roofing system requirements.
14. Exterior window units are to be tested and labeled as complying with AAMA/WDMA/CSA 101/I.S.2/A440-11 (North American Fenestration Standard/Specification for windows, doors, and skylights) or AAMA/NWWDA 101/I.S.2-97 (Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors). The label shall state the name of the manufacturer, the labeling agency, and the product designation. Windows shall meet or exceed the Performance Class/Performance Grade designations indicated below:
 - a. Wood, fiberglass, and composite windows:
 - LC-PG30.
 - b. Vinyl and aluminum windows:
 - Buildings with occupied stories above three stories in height: CW-PG50, C-PG50.
 - Buildings three stories or less in height: LC-PG50.
 - c. The performance class/grade shall be increased if required for structural performance, as required by the applicable building code. In such cases, the consultant may be asked to justify the grade specified with structural calculations based upon the building code reference standard, Minimum Design Loads for Buildings and Other Structures, ASCE 7- (latest edition).

- d. Mulled units and combination units shall meet the same designation as required for single window units.
 - e. All windows in a project shall meet the same performance class/performance grade designation.
 - f. All operable windows are to be hung (vertical sliding— single or double hung) or projecting hinged type (awning, casement, etc.). Horizontal sliding windows shall not be used.
 - g. All operable windows shall be provided with mesh screens covering the full open area.
 - h. Wood windows shall include low/no maintenance exterior cladding except as may be required in historic preservation projects.
15. For rehabilitation projects where original primary windows are remaining, provide exterior mounted aluminum triple track storm/screen windows and permanently affixed (mechanically fastened) metal weather-stripping at all edges of operable sashes, including interlocking weather stripping at meeting rails.
16. Plumbing
- a. All water supply and heating piping shall be Type K soft temper copper for below grade exterior lines, Type L hard temper copper for interior domestic water lines, Type M for hydronic heating lines, or cross-linked polyethylene (PEX) piping. Copper piping must be installed with soldered joints using lead-free solder or with mechanical press connections. PEX piping shall be installed to limit the number of connections to the greatest extent possible. Connections to boilers, pumps, etc. for space heating and domestic hot water heating shall be with copper piping. All PEX piping installations are to be pressure tested to 100 psi for a minimum of 4 hours.
 - b. Mechanical Press Fittings for Types K, L, or M copper pipe, as applicable:
 - Bronze or copper conforming to ASME B16.51, IAPMO PS 117 and NSF 61/NSF 372 (Zero Lead Compliance).
 - Fittings ½-inch through 4-inch for use with ASTM B88 copper tube and ½ -inch through 1-1/4-inch for use with annealed copper tube.
 - Fittings are to have an O-ring sealing element and a feature that guarantees the identification of an un-pressed fitting.
 - Fittings shall be installed in conformance with the manufacturer’s instructions/ specifications for approved applications.
 - c. Superior installations are encouraged to meet the following criteria:
 - PEX piping for hydronic heating:
 - All systems installed to meet requirements of the pipe and connector manufacturer.
 - Heating units piped as “home-runs” from the header/manifold to each heating unit or as a continuous loop from heating unit to heating unit with no intervening connections, unions, or splices, etc.
 - PEX piping is avoided at supplies to or piping at mechanical equipment, boilers, hot water heaters, etc.
 - All pipe, fittings and crimp rings are non-metallic and part of one manufacturer’s system.

- Systems utilizing PEX-b or PEX-c piping:

- Dwelling units are to be supplied with a single copper pipe to a copper or brass manifold with an integral shut-off valve. Manifolds are to be part of the manufacturer's system meeting ASTM F877. At the manifold, individual shut-off valves are to be provided on each fixture branch line, or a common shut-off is provided on the copper dwelling unit supply line. Shut-off valves and manifolds are to be accessible within the apartment or immediately outside the apartment in a common corridor at a concealed location.



PEX System Manifold

- All plumbing fixtures are to be piped with fixture branch lines directly from the dwelling unit's manifold, or directly below in a basement with individual line penetrations. Fixture branch lines are to be "home-runs" with no connectors, union, or splices, etc. between the manifold and the termination stub-out at each fixture. Each fixture stub-out is to be a copper pipe secured to the building framing with compatible, heavy-duty support plates that fastens the support stub-out securely in place.
- Pipe, fittings and crimp rings are to be part of a single manufacturer's system.
- Connectors are to be brass or bronze with full circle brass, copper or stainless steel crimp ring connectors that utilize crimping tools meeting the manufacturer's specifications.
- All piping shall carry a 25-year manufacturer's warranty.
- Connectors shall carry a 2-year manufacturer's warranty.
- The installing contractor shall provide an installation warranty of 2 years.
- Systems utilizing PEX-a piping:
 - Main building supply/return lines may be PEX-a if the installation meets building code requirements, including requirements for penetrations into fire-rated assemblies. Main building supply and return lines are to utilize metallic fittings.
 - Dwelling units are to be supplied by a single dwelling unit supply line piped from the main building supply line to a supply manifold meeting the pipe system manufacturer's requirements. Shut-off valves for each dwelling unit supply line are to be accessible within the apartment or immediately outside the apartment in a common corridor at a concealed location.
 - Manifolds are to be accessible within the dwelling unit. Manifolds with shut-off valves are to be properly supported as necessary for valve operation. Manifolds without shut-offs are to have main branch line shut-offs on supply lines to the manifolds.

- Within dwelling units, fixtures are to be piped with fixture branch lines directly from the dwelling unit's manifold. Fixture branch lines are to be "home-runs" with no connectors, union, or splices, etc. between the manifold and the termination stub-out at each fixture. Each fixture stub-out is to be a copper pipe secured to the building framing with compatible, heavy-duty support plates that fastens the support stub-out securely in place.
- A multiple line branch tee may be provided to feed multiple fixtures within immediate proximity of each other.
- All piping is to be PEX-a piping from one manufacturer meeting ASTM F876 and F877 certification standards.
- All fittings shall meet ASTM F1960 standards.
- The number of fittings on PEX-a runs are to be kept to a minimum.
- The entire system shall carry a manufacturer's 25-year warranty and is installed by plumbers trained in accordance with the manufacturer's requirements.
- The installing contractor shall provide an installation warranty of 2 years.
- d. Provide drain pans for all hot water tanks, washing machines, etc.
- e. Plumbing vent stacks shall extend above the roof surface. When allowed by the applicable building code, individual fixture vents are acceptable at locations where full-height walls available to run vents are not within code compliant pipe lengths, such as sinks at peninsula counters.
- f. All sprinkler piping shall run in concealed spaces. At top floors, piping shall be protected from freezing by utilizing side wall sprinkler heads at interior partitions or by running piping in dropped soffits that are completely enclosed on all four sides below the thermal envelope.

17. Mechanical

- a. Design of HVAC systems shall consider building orientation and exposure.
- b. High-efficiency electric heating systems and domestic hot water systems should be considered in place of fossil-fuel sourced appliances, except when:
 - Sufficient electrical service is not available and cannot be made available by the utility company in a reasonable time, or at a reasonable cost.
 - There is not sufficient equipment for the size of the project available on the market.
- c. Lower efficiency electric heating components should only be considered in limited quantities in areas such as vestibules and stair towers when the equipment is allowed by the energy efficiency program selected for the project (as listed in Appendix F). Remote wall thermostats in a locked enclosure are to be provided to prevent running the heat at excessive temperatures.
- d. Provide mechanical ventilation at all bathrooms and kitchens. Vent each to the exterior or capture to an ERV/HRV system. Filtered range hoods are permitted in kitchens served by a central exhaust system.
- e. Through-the-wall air conditioning unit sleeves are not permitted.
- f. Mechanical ventilation in attics is encouraged to reduce cooling loads on top floors of buildings due to heat stacking effects.

- g. All forced air, heating and cooling system ductwork shall run within the building thermal envelope. For example, ducts shall not run in exterior walls, unheated attics, above the thermal/insulation, or in unheated crawl spaces.
- h. To avoid loose fibers in conditioned air ducts, ductwork shall be rigid metal with a smooth interior surface and sealed airtight. Insulated ductwork shall have insulation jackets or covers placed over the exterior surface of the duct surround.
- i. Non-metallic flexible duct shall not be used.
- j. Packaged Terminal Air Conditioning (PTAC) units are acceptable when part of a central heating system that meets ENERGY STAR standards, or the equivalent, and are superior in air leakage resistance and noise transmission.
- k. Variable refrigerant flow with heat recovery (VRF-HR) and electric heat pump HVAC Systems:
 - System shall utilize compressor inverter technology efficiently at temperatures at/ or above 0 degrees Fahrenheit, without reliance on electric resistance heat.
 - Electric backup heat required at temperatures below 0 degrees Fahrenheit shall be tied to the VRF-HR system to limit operation above 0 degrees Fahrenheit.
 - Surface mounted units are to be located in an inconspicuous area, out of primary sightlines in the dwelling unit.
 - Exterior mounted condensers shall be placed in a suitable inconspicuous location that does not interfere with exiting path used by the residents and is not directly visible through windows of dwelling units. If the condensers are roof mounted, the installation shall be such that it does not damage the roofing system nor detract from the exterior view of the building.
 - The VRF-HR fan coil/evaporator unit within the dwelling unit must be ducted to each habitable space within the dwelling unit.
 - VRF Multi-Split Air Conditioner and Heat Pump equipment must be Air Conditioning, Heating and Refrigeration Institute (AHRI) certified with the AHRI label affixed to the equipment.
- l. As energy efficiency increases, projects are advised to include a balanced ventilation system by utilizing Energy Recovery Ventilation (ERV) or Heat Recovery Ventilation (HRV) equipment. Balanced ventilation systems are to be integrated into the HVAC system.
- m. Equipment installed at grade (i.e., interior slabs on grade, exterior locations) shall be supported on a level concrete slab elevated above the adjoining grade. Equipment at exterior locations shall be permanently anchored to the concrete slab.
- n. Provide vibration and sound-absorbing bases or support for equipment subject to motion, which could transmit vibration or noise to the structure.

18. Electrical

- a. It is preferred that master metering is avoided. Dwelling units should be directly metered to the electric utility company. Submetering may be appropriate for solar electric installations.

Interior Shared Common Space

The following criteria shall be included where applicable or specifically stated as required. The intent of these criteria are to promote efficient building designs while providing services and amenities for the residents. The criteria provide guidance on creating a balance between enhancing the quality of life for residents and maintaining affordability. Additionally, the criteria focus on measures that promote the safety and security of the residents.

Interior shared residential common space is defined as all areas in the residential project not within or dedicated to dwelling units (i.e., hallways, lobbies, utility rooms, manager's office, laundry rooms, community rooms, etc.).

Nonresidential space is defined as areas for the use or benefit of occupants that are not residents of the project; such as, civic space, commercial space, daycare centers, business offices, training rooms, counseling offices, etc., including utility and other auxiliary spaces that serve the nonresidential areas.

Design and Context Criteria [Interior Common]

1. Developments that include nonresidential space as defined above, must comply with the following provisions:
 - a. Utility costs for residential and nonresidential spaces must be separated; examples include separate HVAC systems, separate electrical systems, separate domestic hot water systems, etc., with separate utility meters or other measuring equipment acceptable to the Agency to determine usage attributable to nonresidential spaces. Exceptions will be allowed for water service metering where the local utility limits the water service and metering to the building and where a method of sub-metering is accepted by the Agency.
 - b. The general public must be able to access the nonresidential space without passing through the residential portion of the project.
 - c. For the security of the residents, uncontrolled access between the residential and nonresidential space is not allowable.
 - d. The construction costs for nonresidential space must be funded by nonresidential funding sources and must include prorated portions of the shared systems such as the foundation, roof system, structure, utilities, etc.
2. Residential shared common space must be **no more** than 25% of the total residential space.
 - a. Adaptive reuse projects with buildings designated as historic by local, State or Federal authorities may include residential common space up to 35% of the total residential space when necessary to comply with historic preservation requirements. In each case, the design architect must work with the Design, Construction and Environmental Unit (DC&E) to obtain the most efficient plan possible for the project.
 - b. Waiver requests for increases above the maximum allowable percentage of shared common space shall show proof of sufficient funding for development of the excess space. In addition, the application documentation must document that the project operations can support the excess space within an acceptable rent and building operation

plan. HCR will evaluate the impact of the excess common space on the long-term operations of the project and may impose additional requirements for maintaining the space; including, the provision of an operational guarantee or additional design requirements to mitigate the impact of the excess space on the affordability of the residential project.

3. Floor systems, in new construction and those reconstructed in rehabilitation projects, shall generally comply with a maximum tolerance from true level of 1:128 for hard surface flooring, or 1:64 for carpeted areas. Floor systems to remain in existing buildings or areas undergoing a substantial rehabilitation shall be leveled to nominally meet these criteria when existing slopes generally exceed a tolerance of 1:48 for hard surface floors and 1:32 for carpeted areas. Continuous slopes in all areas (new or existing) shall be limited to a differential of 2-inches in height in any room or combined rooms within a dwelling unit and limited to 6-inches in common area spaces, including corridors. In no case shall maximum floor slopes exceed that allowable for maneuverable areas and clear floor space requirements established by Accessibility standards in all spaces served by or on an Accessible Route.
4. Laundry Requirements:
 - a. Centrally located laundry rooms are required in all rental projects. Laundry facilities shall be available for extended hours. When located in detached facilities, an exterior covered entry with 24-hour keyed access for residents is preferred. All laundry facilities shall be located on an Accessible Route and include a fixed counter, meeting Accessibility standards, for folding clothes.
 - b. Minimum appliance requirements:
 - Commercial grade energy efficient, ENERGY STAR where available.
 - 5% shall be front loading appliances meeting Accessibility criteria unless there are no Accessible/Adaptable dwelling units in the project.
 - The lesser of:
 - One washer and one dryer for every twenty bedrooms.
 - One washer and one dryer for every ten dwelling units.
 - The total number of appliances may be reduced by one half where all dwelling units are provided with laundry hook-ups in a side-by-side arrangement.
 - Centralized laundry rooms may be eliminated in scattered, multi-site projects consisting of one and two-family buildings or townhouses when individual dwelling units are provided with laundry hook-ups in a side-by-side arrangement.
 - Central laundry room appliances may be provided as part of the project or supplied by a vendor.
 - Project funding shall not be used for appliances in dwelling units except for Fully Accessible and Adapted, Move-in Ready Units where other Accessible facilities are not available.
5. Parking levels located within buildings are allowable when there is limited availability on site to meet the requirements of the local zoning and planning boards.

6. Detached garages and carports are not allowed. An exception is permitted for carports constructed for solar array installations.
7. Provide finished ceilings in all spaces that may be accessed by residents.
8. The main entrance and community space should be in a centralized location.
9. Community spaces should be functionally and visually related to the circulation pattern of the building(s) and on an Accessible Route. Include adjacent outdoor areas as an extension of indoor community space, whenever possible.
10. Common areas should be convenient and Accessible.
11. Mail collection areas should not be located in an area that may block a circulation path.
12. Elevator lobbies should have a waiting area with wall indicators that clearly display the position of the elevator.
13. Corridors should be a minimum of five feet in width at all points.
14. Projects with 20 or More Dwelling Units:

- a. Provide a community room based upon 15 square feet per dwelling unit. Projects with more than 50 units shall not be required to provide a community room larger than 750 SF. Community rooms exceeding this requirement are acceptable provided that the total maximum allowable residential shared common space area ratio is not exceeded. Each community room shall include additional space for an Accessible kitchenette with cabinets, counter top, refrigerator, sink and an optional residential-style kitchen range. All community room facilities shall provide reasonable hours of access for all residents.



Inviting community room for residents

Community room facilities shall be optional at scattered-site developments where there are less than 20 dwelling units on contiguous sites. If a subsequent phase(s) is developed that results in a total of 20 or more dwelling units on contiguous sites in all phases, the subsequent phase shall include a community room facility to serve all phases.

- b. Provide a maintenance closet on every floor of buildings with corridors serving more than 8 dwelling units. Include service sinks at each of these corridor areas or community facilities. Floor finish materials shall be hard-surfaced and water-resistant for ease of cleaning.

- c. Provide a trash collection/recycling room on every floor of buildings with corridors serving more than 8 dwelling units. Include trash chutes and trash compaction systems where appropriate.
- d. Provide adequate bicycle storage facilities that are secure, visible, and conveniently accessible. Although outdoor bicycle racks are acceptable, indoor or sheltered facilities are preferred; these should be easily accessible from the outdoors to minimize the movement of bicycles through the building's lobby and elevators.



Easily accessible bicycle storage

15. Senior housing projects (for persons 55 years of age or older) must include:
- a. Comprehensible circulation/pathway systems, such as loop corridors and orienting central spaces.
 - b. Circulation systems that allow for a preview of the route ahead.
 - c. Windows that enhance residents' inside/outside reference points to facilitate navigation and spatial orientation.
 - d. Latent cues that provide visually distinctive landmarks or reference points, such as planter groupings, fish tanks, artwork, curtains, wallpaper, or personal décor. Specialized furnishing, features, or program areas should also be considered. Examples include a piano, a beauty shop, elevators, etc.
 - e. Design considerations that incorporate varied finish treatments and colors per floor or wing to distinguish a sense of place and enhance wayfinding.
 - f. Reference symbols or signage to identify features such as elevators, dining halls, etc. should be located so that they are visible from both direct and lateral approaches to the space.



Recessed entry and shelf providing a reference point for residents

Accessibility / Visitability Criteria [Interior Common]

- 1. Laundry facilities must be located, equipped and configured for accessibility.
- 2. Provide mailboxes in accordance with USPS standards. Utilize labels with contrasting colors and large font characters that can be easily read by persons with low vision.

Quality of Life Criteria [Interior Common]

1. All projects are encouraged to provide activity spaces furnished with exercise equipment to accommodate diverse occupant groups.
2. Senior housing projects (for persons 55 years of age or older) must include:
 - a. A communal gathering area that provides privacy from the main building entrance.
 - b. Common areas with sufficient *preview* areas or windows, so a resident can choose to join present participants or bypass activities.
 - c. Common areas should be designed to accommodate flexible multi-purpose uses while providing an intimate atmosphere for socialization.
3. Stairways located near the building's entrance are recommended to encourage stair usage. Integrate the stairs into principal areas and travel paths. Stairs must be accessible, visible, attractive, and well-lit. Consider stair signage next to elevators to encourage stair use.
4. Building common areas shall incorporate criteria for high-speed broadband services as outlined on page 50 of these Guidelines.



Multi-purpose common areas for residents

Health and Safety Criteria [Interior Common]

1. Provide high contrast, non-slip nosings at public stairways.
2. Senior housing projects (for persons 55 years of age or older) must include:
 - a. Wall-mounted handrails on each side of corridors in multi-unit buildings with common corridors.
 - b. Contrasting colors/surfaces on steps or landings for edge cues.
 - c. Graduated changes in the level of illumination (including daylighting) to accommodate a slower dark/light adaptation rate.
 - d. Lighting should be indirect, to avoid glare and evenly distributed, to reduce shadows. Increases in the number of lighting fixtures in dwelling units to provide more even light distribution to compensate for age-related vision loss.



Handrails integrated into design for seniors

- e. Signage colors that are not pastel tones, dark shades, greens, blues, and violets which are difficult to differentiate as eyes yellow with age.
- f. Large, tactile, contrasting-colored numerals and signs used in elevators, on appliances, at doors, etc. to compensate for declining ability to distinguish edges, small details, and certain colors.
- g. Alarm/warning systems that are available to include both visual and audible signals.
- h. Visual signals available to augment doorbells.

Security and Resident Safety Criteria [Interior Common]

- 1. Provide vision panels in all doors located in the path of egress and in common use areas such as laundry and community rooms.
- 2. Provide safe and secure interior public circulation, including areas such as elevators and stairwells.
- 3. Security cameras may be included in interior public spaces, including hallways, stairways, and community rooms at projects with heightened security concerns.
- 4. For projects in areas with security concerns, provide a security alarm at all exterior door units.

Operational Efficiency and Durability Criteria [Interior Common]

- 1. In family multiple dwelling unit rental projects, public corridors and stairways shall have vinyl composition flooring, other heavy-duty hard-surface flooring, or heavy-duty commercial grade carpet tile. Selection of materials and patterns shall consider aesthetic appeal appropriate for residential occupancy.
- 2. Slip-resistant ceramic or quarry tile applications may be provided at entrances, lobbies or vestibules where durability or water protection is a concern.
- 3. Common-use exterior doors (main and secondary) and high-use, common and maintenance doors (including exterior laundry, trash and activity room doors) shall include:
 - a. Grade 1 mortise locksets with a one-inch throw deadbolt, or heavy-duty/grade 1 electronic hardware.
 - b. Lever handles on doors not receiving panic hardware.
 - c. Master keyed or programmable electronic locking device.
 - d. Closer at all exterior doors, and where appropriate elsewhere.
 - e. Door stops/bumpers, as appropriate.
- 4. Occupancy sensor lighting controls are highly encouraged at common use/utility spaces.

Dwelling Unit Space

The following criteria shall be included where applicable or specifically stated as required. These criteria have been created to provide a basic framework for the design of dwelling units and are intended to promote efficient use of space and functional floor plans with considerations for Universal and Accessible design, where appropriate. Related considerations are the durability of materials, finishes, systems, etc. and maintaining affordability for tenants.

Design and Context Criteria [Dwelling Unit]

1. Dwelling Unit Definitions

- a. A dwelling unit is defined as the private space provided for the exclusive rights of a tenant or homeowner. Dwelling unit space includes all spaces within a dwelling unit, such as living, dining, kitchen, bedroom, bath, storage/closet, and circulation spaces. This shall include any mechanical closets and chases that serve the dwelling unit. Remote bulk storage shall be included as part of the dwelling unit space up to the areas listed in the bulk storage table in the HCR Design Guidelines.
- b. The area of the dwelling unit is defined as the square footage measured from the interior finish surface of the exterior wall to the centerline of common wall(s) separating adjacent common space or other dwelling unit(s).
- c. Unit occupancy is based upon two persons per bedroom **when determining occupancy for HCR design requirements.**

2. Dwelling units shall comply with the dwelling unit area ranges listed below:

Dwelling Unit Area Ranges

Dwelling Unit Type	Minimum Area	Maximum Area	Maximum Area including Bulk Storage
0 bedroom/Studio-	400 sq. ft.	550 sq. ft.	560 sq. ft.
1-Bedroom-	600 sq. ft.	725 sq. ft.	745 sq. ft.
2-Bedrooms-	750 sq. ft.	950 sq. ft.	970 sq. ft.
3-Bedrooms-w/additional one-half bath	900 sq. ft.	1,150 sq. ft.	1,175 sq. ft.
4-Bedrooms-w/ additional full bath	1,050 sq. ft.	1,300 sq. ft.	1,325 sq. ft.
5-Bedrooms-w/ additional full bath	1,200 sq. ft.	1,450 sq. ft.	1,475 sq. ft.

As noted in the Design Guideline Goals and Objectives, projects in New York City with HPD involvement may utilize HPD criteria for dwelling unit size. Projects in New York City without

HPD involvement may decrease the minimum area by 50 sq. ft. per dwelling unit type. The minimum area permitted for dwelling unit sizes shall exclude bulk storage area.

Dwelling unit sizes may exceed the maximums indicated in the table under these conditions:

- a. To meet current market demands in mixed-income projects with market-rate units.
 - b. In non-historic substantial rehabilitation projects, to comply with existing conditions, increases are limited to a 100 square foot increase per dwelling unit.
 - c. In historic renovation/adaptive reuse projects constricted by existing historic characteristics, any dwelling units that exceed the maximum permitted area by 100 square feet shall be submitted to DC&E for review of reasonableness.
 - d. By 50 square feet in multi-level, dwelling units to accommodate the additional half bath required for Visitability.
 - e. Dwelling units located on more than one level; up to 60 square feet per floor to account for stairs.
3. Mixed-income projects shall equally and proportionally distribute dwelling units with varied levels of affordability throughout the project and buildings with respect to location, size and access to amenities. Affordable units shall not be isolated to a specific floors, or specific areas in the project based on their level of affordability.
 4. Dwelling units are to comply with floor level tolerances indicated in Interior Shared Common Space section of these Guidelines.
 5. Unit Entries
 - a. Entries at the living/dining room should be screened or separated from the living space, and circulation into the unit should avoid traversing through the furniture area.
 - b. Unit entries at kitchens should avoid direct circulation through the kitchen proper.
 - c. Entries from the exterior shall have a hard-surfaced and water-resistant floor finish area for ease of cleaning. The size of this area and transition to other flooring shall comply with Accessible Route criteria where applicable.
 6. Kitchen/Kitchenette
 - a. Kitchens shall be equipped with base and wall cabinets, a thirty-inch wide range/oven, lighted range hood, vented exhaust fan, refrigerator and a minimum 24-inch wide kitchen sink.
 - Kitchens shall be sized to accommodate the maximum number of residents who may reside in the dwelling unit, including cabinetry and shelving.
 - Ranges and cooktops should not be placed against side walls.
 - In zero, one, and two-bedroom units, provide a 14-cubic foot, two-door, frost-free refrigerator with freezer compartment.
 - In three bedrooms or larger units, provide an 18-cubic foot, two-door, frost free refrigerator with freezer compartment.
 - The size of kitchen sinks shall be increased and include double bowl sinks for larger family units, as appropriate.

- b. Kitchens should have natural light or be open to the living room/dining room via a pass-thru window arrangement.
- c. Provide a 12-inch dropped header to minimize false smoke alarm detection and premature staining of paint in other rooms. Where this would result in a soffit less than 6'-8" above the finished floor, provide a dropped header as deep as possible without encroaching on the minimum clear height required by the applicable building code.
- d. When range hoods are ducted through the overhead wall cabinet, the duct must be "boxed in" with a finished wood enclosure, **with the remainder of the wall cabinet space usable, or the cabinet doors shall be secured to prevent access.** Range hood ductwork located above the wall cabinets must be concealed, such as in a soffit.



Boxed-in duct through range hood cabinet



Dropped header at kitchen

7. Living Room/Dining Room

- a. Living and dining rooms should be sized to accommodate the maximum resident occupancy of the unit and anticipated furniture placement.
- b. Living Room/Dining Room areas should have windows that allow for viewing the exterior when seated.
- c. A minimum of one wall, preferably two, should be provided with no fenestration or interfering doorways to allow for adequate furniture placement.

8. Bedrooms

- a. The primary bedroom is to have 100 square feet of usable area with preference to 10 feet by 10 feet.
- b. Secondary bedrooms shall be a minimum of 80 square feet with the smallest dimension compliant with usable furniture arrangements.
- c. The layout of the bedrooms must be of sufficient size to accommodate a bed, storage chest, night table, chair, and circulation space. Accessible/Adaptable rooms shall be sized to accommodate wheelchair maneuverability.
- d. All bedrooms shall have a 2'-8" or larger door unit with a privacy lockset.
- e. Bedrooms should be located for privacy (visible and audible) and security.
- f. Bedrooms should be grouped together and located away from the living/dining/kitchen.
- g. Every bedroom shall have a two-foot deep by four-foot or wider, closet with a shelf, closet rod, and a door.
- h. Closets should be used to provide a sound barrier between bedrooms.

9. Bathrooms

- a. All zero bedroom and larger units shall have a bathroom containing a nominal 30"x60" bathtub unit with a showerhead, a vanity sink, a 30" tall mirrored medicine cabinet, and a toilet. A nominal 33"x63" shower unit may be provided in lieu of a bathtub unit to meet the needs of mobility-impaired residents. Bathroom hardware shall include a shower curtain rod permanently anchored to the wall, toilet paper holder, two towel bars, and robe hook(s). Three-bedroom units shall have an additional half bathroom containing a sink, mirror, and toilet. Every four-bedroom and larger unit shall have a second full bathroom containing a bathtub as noted above or a 36"x36" or larger shower unit.
- b. All bathtubs/shower units must be provided with a safety grab bar (to grab onto in the event of a fall) and a soap dish in the tub/shower unit.
- c. Bathrooms and showers shall have a slip-resistant finish.
- d. Provide wall reinforcement/blocking for mounting future grab bars at all Accessible, Adaptable and Visitable locations.
- e. All bathrooms shall have a 2'-6" or larger door unit with a privacy lockset.
- f. All bathrooms shall be mechanically ventilated.
- g. Windows shall not be located within the tub/shower surround.
- h. Bathrooms should be located in an area convenient to bedrooms. Primary bathrooms should be located outside of, but adjacent to bedrooms.
- i. Whirlpool baths or spas and similar luxuries are not allowed unless specifically agreed to by the program manager of the funding source being sought.
- j. Vanities shall be provided with all lavatory sinks. See building code requirements for removable cabinet criteria. Accessible shelving or a base cabinet shall be provided immediately adjacent to the sink in Accessible/Adapted, Move-in Ready dwelling units.
- k. In buildings designed specifically for the occupancy of seniors and/or special-needs occupants with mobility impairments, at least one code compliant grab bar shall be installed in every tub and/or shower unit.
- l. All pre-manufactured tubs/shower units are to be at a minimum made of a seamless one-piece molded construction. Existing units may utilize multi-piece tubs when one-piece tubs cannot be delivered in place due to limitations of the remaining construction.



Lavatory and bathtub/shower

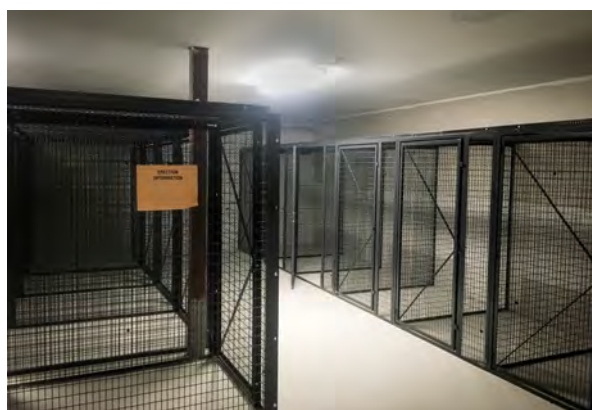
10. Storage Areas

- a. Dwelling units shall include closets near main entries for outerwear and bulk storage rooms within the dwelling unit or in common storage rooms, as listed below:

Storage Area Chart—Minimum required areas

Dwelling Unit Type	Entry Area Storage Closet	Bulk Storage
0 bedroom/Studio	6 sq. ft.	10 sq. ft.
1 and 2 Bedroom	8 sq. ft.	20 sq. ft.
3-Bedroom	10 sq. ft.	25 sq. ft.
4-Bedroom	12 sq. ft.	25 sq. ft.
5-Bedroom and larger	14 sq. ft.	25 sq. ft.

- b. Every dwelling unit must contain a storage closet for linens with 6 linear feet of shelving with minimum dimensions of 1 foot, 6 inches deep and 2 feet, 0 inches wide.
- c. Bulk storage located in basements or other areas subjected to high ambient moisture or humidity shall be waterproofed, ventilated, and dehumidified to prevent damage to stored items.
- d. Bulk storage may be omitted in areas where basements cannot be provided due to high water tables, poor soil conditions, or rock that cannot be cost-effectively excavated and are governed by a zoning ordinance floor area ratio, or other local zoning restrictions that would result in the loss of dwelling units as a result of complying with this storage requirement. In such cases, alternative storage facilities, such as negotiated discounts to nearby commercial facilities, are encouraged.
- e. Dwelling unit sizes may be increased up to the minimum areas listed in the bulk storage table above, to accommodate bulk storage space located within the dwelling unit, or in remote storage areas.
- f. All bulk storage closets or bins outside of dwelling units must have doors with locking hardware.
- g. Walk-in storage closets should be provided with a light and wall switch.



Fully enclosed remote bulk storage including top

11. Dwelling Units for Seniors

The following criteria are considered superior design solutions for senior apartments (for 55 years and older residents):

- a. Complete apartments that include a kitchen, bathroom(s), living room, dining area, and bedroom(s), rather than studio/efficiency units.
- b. Design elements that allow for unique treatment of apartment entryways to facilitate wayfinding, reduce an institutional appearance and promote personalization.
- c. Window sill heights that are no greater than 32 inches above the finished floor to allow viewing of the outside from a seated position.
- d. Pantry cabinetry in lieu of wall cabinets over the stove, refrigerators, and sinks.

- e. Switches and other operable devices no more than 48 inches above the finished floor height and mount electrical outlets between 18-24 inches above the finished floor.
- f. Lever faucet controls for the kitchen sink and bathroom lavatory.
- g. A hand-held shower head with at least 5 feet of hose on an adjustable bracket.

12. Floor Finishes

The following acceptable floor finishes should be selected to enhance the residential appearance of the dwelling unit and not result in an institutional overtone in the space:

- a. A minimum of 26 oz., level-loop, commercial grade carpet or a minimum 26 oz. residential cut-loop carpet.
- b. Resilient vinyl flooring with a minimum thickness of 0.080"
- c. Vinyl composition tile with a minimum thickness of 1/8"
- d. Superior grade flooring products such as:
 - luxury vinyl tile
 - water resistant laminate flooring
 - 5/8" solid bamboo flooring
 - 3/4" tongue and groove hardwood flooring.

Provide waterproof assemblies for floor systems in laundry rooms, bathrooms, or similar spaces prone to water damage. Extend waterproofing four inches or more above the floor. Waterproofing may be accomplished with the finish flooring by utilizing sheet vinyl flooring and a fully caulked vinyl base to ensure a watertight installation, or ceramic tile with an integral 4" base.



Resilient flooring



Ceramic/porcelain tile floor with base

Accessibility / Visitability Criteria [Dwelling Unit]

1. All dwelling units shall meet the Agency Visitability criteria.
2. Modifications to adapt an element for accessibility must be accomplished without structural changes or damage to adjacent elements and surfaces.
3. Porches, balconies, and patios associated with Accessible/Adaptable and Visitable dwelling units must be on an Accessible Route, in compliance with applicable Accessibility standards and meet HCR Visitability standards.

4. Large windows, such as those at historic renovation projects, shall include window hardware which eases window operation for senior residents and residents with physical disabilities.
5. Removable base cabinets shall be comprised of a removable front panel(s) that can be easily removed without damage to countertops, sinks, and lavatories and their supporting structure.
6. Cabinet handles are preferred, but at a minimum, finger pulls must be provided on all base and wall cabinets provided that handles are provided when requested by the tenant. For senior units and dwelling units adapted for residents with physical disabilities, provide loop or D shape handles on cabinet doors and drawers.
7. Kitchen ranges, cooktops, and ovens at Accessible and fully adapted locations and in all dwelling units for seniors shall be provided with front controls. Kitchen ranges, cooktops, and ovens in dwelling units adapted for hearing or vision impaired persons shall have front controls knobs with directional indicators or have other means or creating set points with textured/tactile feedback or automation.
8. Controls for range hoods provided in Fully Accessible, Move-In Ready units for mobility-impaired residents and adaptable units (per building code and/or Section 504), shall be provided with wall switches to control fans and lights unless prohibited by the manufacturer due to the electronics in the unit. Wall switches should comply with requirements for operable parts in applicable accessibility standards.
9. Avoid dark color countertops, cabinets, and appliances in dwelling units for seniors or other residents who may have vision impairments.
10. Pre-manufactured bathtub and shower units in Adaptable dwelling units shall be factory reinforced to accept grab bars meeting applicable Accessibility requirements. Pre-manufactured bathtub and shower units in Accessible/Fully-Adapted locations shall be factory equipped with all required grab bars.
11. When grab bars and shower seats are installed by housing providers, installers shall ensure that materials used, including mounting brackets and other hardware, are appropriate for the installation, will not deteriorate as a result of the use of dissimilar metals or water infiltration, and are securely attached to wall reinforcement.
12. Circuit breakers and electrical panel door latches shall be located within an Accessible height reach range in Accessible and Adaptable dwelling units.
13. Dwelling units designed as serving residents with hearing or vision impairments, are to include at a minimum, the following audible/visual (A/V) features:
 - a. Hardwired unit entry doorbell with A/V features. Locate the doorbell with A/V features in the living room and bedrooms. Include a control to allow the tenant to deactivate the bedroom visual feature. Audible sound of the doorbell shall be a chime. Doorbell sounds that can be confused with a fire, smoke or carbon monoxide (CO) alarm shall not be used.

- b. Where intercoms are provided, include a system with A/V features.
- c. Smoke detectors with A/V features.
- d. Carbon Monoxide detectors with an A/V notification.
- e. Building fire alarm with A/V notification in the living room and bedrooms.
- f. Building fire alarm with a visual strobe feature only in the bathroom. Audible alarms are to be avoided to prevent undue startling of the occupant; accordingly, audible alarms in the dwelling shall be at a decibel to be readily audible in bathrooms.



Fire alarm/smoke and CO detector strobe



Intercom, doorbell, and phone with A/V features

Quality of Life Criteria [Dwelling Unit]

1. Provide mini-blinds at all dwelling unit windows and doors with vision panels.
2. Provide central heat to all habitable rooms. If kitchens and bathrooms are not heated by the dwelling units HVAC system, these rooms shall be conditioned with suitable supplemental heating units contained within the same space or borrowed from the adjacent space.
3. All apartments shall be treated as individual heating zones controlled by a wall-mounted thermostat in each apartment. For dwelling unit heating systems, provide a programmable thermostat capable of maintaining different temperature set points at different times of the day. In buildings with common heating systems, provide either programmable thermostats in each apartment or building system set-back controls, as allowable by the applicable building codes.
4. Provide wall sconces or ceiling fixtures controlled by a wall switch in each room and corridors of all dwelling units. Separate fixtures shall be provided in the living and dining areas of dwelling units. Due to the tendency to trap and collect insects and debris, ceiling fixtures shall be a pendant type fixture with the lamp exposed on the bottom, have a glass enclosure that completely surrounds the lamp, or shall be designed in such a manner as to not trap foreign matter. Ceiling fixtures that have a glass plate suspended below the lamp are not acceptable. Do not use recessed light fixtures at insulated ceiling areas.
5. Provide increased lighting levels in senior projects to account for age related decreases in vision.

Health and Safety Criteria [Dwelling Unit]

1. All habitable rooms shall have natural light equal to or greater than 8% of the floor area and natural ventilation equal to or greater than 4% of the floor area.
2. Tub/shower fixture handles must be a paddle handle type, single-mixing valve with a scald-proof feature.
3. All tub and shower units are to be provided with a slip-resistant finish.
4. In senior **projects**, provide an emergency call system in **resident common area bathrooms and in each** dwelling unit's bedroom and bathroom that is connected to a central station and an annunciator panel in the lobby or vestibule. Provide a toggle switch activated in a downward direction and pull cord dropping to within 4 inches above the floor. Provide indicator lights over each dwelling unit entry door. Hardwired systems connected by wireless signals are acceptable if the pull stations are manufactured to be permanent built-in fixtures and the system activates a central station. Emergency call systems shall be provided at no charge to the tenant.

Security and Resident Safety Criteria [Dwelling Unit]

1. Provide a security peephole on all dwelling unit entry doors.
2. Doors located on patios and balconies shall include hardware and thresholds that meet Accessible standards or are capable of being adapted to provide reasonable accommodations. Patio doors shall be fabricated from fiberglass, insulated steel or solid wood with aluminum or vinyl cladding.
3. Doors located on patios and balconies shall be capable of providing security in closed and vented positions. Patios located within two stories of grade or accessible from an adjacent apartment or other areas shall comply with one of the following security options:
 - a. Swing door with a grade 2 deadbolt and small venting sidelights.
 - b. Swing door with a grade 2 deadbolt, locking heavy-duty door screen panel, and an adjacent window that locks in the vented position.
 - c. Sliding patio door with a heavy-duty door lock comparable to a grade 2 deadbolt such as a floor level heavy-duty deadbolt that securely locks in the closed and vented positions, and heavy-duty screen panel frame.
 - d. Sliding patio door with a heavy-duty door lock comparable to a grade 2 deadbolt, such as an attached hinged telescoping rod with heavy duty bolts for fixing the door securely in the closed and vented positions, and heavy-duty screen panel frame.
4. For multiple dwelling unit projects located in areas with security concerns, provide decorative security grilles at windows and doors with glass lights accessible from the exterior. Security grilles must be constructed of expanded metal or wrought iron and secured in place with hardware that is not removable from the exterior. Security grilles must be operable when required for emergency egress.

5. Provide a doorbell system for all exterior dwelling main entry doors.
6. Provide an intercom system for multiple dwelling projects where unit entry doors are not accessible directly to the exterior.

Operational Efficiency and Durability Criteria [Dwelling Unit]

1. Dwelling unit entry door units that are accessed from a common corridor are to be made of reinforced hollow metal conforming to Steel Door Institute Standards, or solid core wood.
2. Interior room doors are to be at a minimum molded hardboard construction.
3. Dwelling unit entry doors (main and secondary) including townhouses and single-family buildings shall include:
 - a. Grade 2 lockset and one-inch throw deadbolt.
 - b. Grade 2 or better locksets with lever handles at senior and Accessible/Adaptable units.
 - c. An Accessible threshold at exterior doors for VISIBLE and Accessible/Adaptable units.
 - d. Master keyed or programmable electronic locking devices.
 - e. A mechanical doorbell or a decorative door knocker which includes a permanent apartment identity label at interior dwelling unit entry doors.
 - f. Self-closing devices at dwelling unit entries that open onto interior common space/corridor.
 - g. Door stops/bumpers, as appropriate.
4. Windows are to be provided with sash handles or integral levers at operable sashes.
5. Provide one coat of primer and one coat of paint to all interior walls and ceilings except in the bathroom, kitchen, shared common space walls, and all trim where one coat of primer and two coats of semi-gloss or eggshell-gloss paint must be provided.
6. Gypsum board walls shall be equivalent to a smooth level four finish in compliance with Gypsum Association standards. Dwelling unit ceiling finishes must be smooth finished, rolled, sprayed, or uniformly textured painted gypsum board. Suspended ceiling tiles are not acceptable.
7. Provide moisture-resistant gypsum wallboard on all walls of bathrooms with bathtubs or showers.
8. For ceramic tile applications, provide thin-set mortar over cementitious backer board. Ceramic tile bathtub and shower surrounds shall receive solid wood blocking for the installation of grab bars.
9. Provide a finished base at all exposed walls and cabinetry, toe kicks, and exposed side panels.
10. Provide ENERGY STAR labeled refrigerators and other appliances, when commonly available.
11. Kitchen and bathroom cabinets shall be ANSI/KCMA A161.1 certified. Additionally, all cabinet doors, drawer panels, and face frames shall be of natural wood or with a high-pressure

decorative laminate (HPDL) finish constructed of combination core plywood (MDF and veneer plywood core only).

12. Provide adjustable hinges at all cabinet doors, i.e. European hinge type or similar.
13. In all family dwelling units, countertops and backsplashes must be exterior grade plywood or other equally water-resistant panels with a high-pressure decorative laminate (HPDL) finish. Standard particleboard countertops and backsplashes are permitted in senior dwelling units. Higher grade countertops are discouraged but may be permissible in projects with market-rate units in the context of providing affordable units with equivalent amenities and finishes.
15. Provide a minimum of one prewired telephone jack in the living area of each dwelling unit. The entire telephone system is to be prewired. Cables are to be concealed within walls, ceilings, floors, chases, etc.
16. Nontraditional telephone service, such as internet telephone service, may be provided when all of the following are met: the building fire, smoke, emergency call, and security alarm systems are compatible with the nontraditional system; the nontraditional system is compatible with the area's 911 emergency system, if available; service features are, at a minimum, equivalent to the traditional basic service; the base service is more economical for the residents than the traditional basic service.
17. Provide a minimum of one prewired cable TV outlet in the living area. Cable systems are to be prewired at no cost to the tenants. Cables are to be concealed within walls, ceilings, floors, chases, etc.
18. Projects shall provide high-speed broadband services for all residents as a part of their lease contract and at no additional cost to the tenant. At a minimum, high-speed broadband services shall meet the following criteria:
 - a. Wireless internet service throughout each dwelling unit.
 - b. At least one hard-wired internet outlet in the living room.
 - c. Individual secured accounts for access in each dwelling unit.
 - d. Minimum of 100 megabits per second wired download speed per dwelling unit.
 - e. Flexibility for each tenant to enhance their service at their own cost.
 - f. Data cables are to be concealed within walls, ceilings, floors, chases, etc.
 - g. Wireless internet in residential common areas such as lobbies, community rooms, computer rooms and outdoor common areas that is provided via common secured wi-fi or individual secured wi-fi accounts.
 - h. Bulk purchasing should be utilized, where feasible.
19. Projects should consider providing flexibility in the high-speed broadband infrastructure to accommodate future use and capacity demand, as well as future service improvements. It is recommended that projects retain ownership of the high-speed broadband infrastructure within the building and consider a managed system with a third-party internet service provider (ISP) that include customer service, network diagnostics, billing and other services to benefit the end-users.

Appendix A - Preservation Standards

For Moderate Rehabilitation Projects proposing to renovate occupied affordable housing buildings, the following standards shall apply:

1. All existing conditions, components and systems shall be evaluated utilizing the Fannie Mae Property Condition Assessment Base PCA format or the Integrated Physical Needs Assessment (IPNA) format. Assessments shall include life expectancy values in accordance with the assessment format and account for local conditions, which may reduce life expectancies due to unique situations and project-specific conditions. Architects and engineers currently registered in New York State with three years of experience in the renovation of existing affordable housing projects, and firms specializing in physical need assessments meeting the requirements of the assessment format may prepare physical need, property condition and other similar assessments of the physical condition of buildings and grounds for project submissions to HCR. Additional certifications required for an Integrated Physical Needs Assessment are still applicable. **PCAs and IPNAs shall be completed within two years of the date of the project application.**
2. All new work and components shall meet the requirements of these Guidelines for new and substantial rehabilitation projects to the greatest extent feasible.
3. All projects must replace or repair components, finishes and systems which have less than a 15-year lifespan per the following criteria:
 - a. Components, systems and finishes that will have a useful life of 5 years or less at the completion of the rehabilitation work shall be replaced as part of the project scope.
 - b. Replacement of components systems and finishes that will have a useful life of 5-10 years at the completion of the rehabilitation work is strongly recommended.
 - c. Other systems may be replaced within the 15-year period if it is documented that there will be sufficient replacement reserves available when these replacements are anticipated.
 - d. **Exceptions for equipment that is in good working condition and can be verified as such by a third-party inspector may be permitted with approval from DC&E.**
4. The work scope shall include hazardous material evaluation and mitigation.
 - a. Provide a lead assessment survey and develop a lead-based paint work plan for projects constructed prior to 1978, in accordance with the current HUD Guidelines. Refer to *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* (HUD-1539-LBP); and the *EPA Renovation, Repair and Painting Rule* (40 CFR Part 745).
 - b. Conduct an asbestos survey and corresponding asbestos removal plan for projects which have not undergone an asbestos removal plan, do not have a current asbestos survey, or otherwise are suspected to contain asbestos containing materials which were not previously addressed. Asbestos surveys (and removal plans) shall include testing for gypsum board and associated joint compound. All such asbestos containing materials discovered in the work areas shall be abated. Asbestos containing materials that are intact

and unlikely to be disturbed in senior citizen dwelling units may remain in place if controls are established to eliminate disturbance of the material. This shall include tenant notification and acknowledgment of the potential hazard.

- c. Provide a survey to determine if hazardous mold exists in the building. Where mold is identified, it must be addressed in accordance with the provisions stated elsewhere in this document.
 - d. Radon mitigation shall be addressed as described in the “Radon” section of “Common Regulations, Laws and Guidelines” of this document.
 - e. Assess other readily observable hazardous materials such as leaking oil tanks, stored hazardous materials, and fluorescent light ballasts containing PCBs.
- 5. Regrade as necessary to provide positive drainage away from buildings.
 - 6. Correct deficiencies of the exterior Accessible Route unless technically infeasible. Include work such as repaving sidewalks along Accessible Routes, adding or repairing curb cuts, restriping parking lots and adding signage at Accessible parking aisles.
 - 7. Common areas shall be made Accessible to the greatest degree feasible.
 - 8. Relocate laundry facilities for Accessibility, when feasible.
 - 9. Include handrails that are easy to grasp on each side of corridors in senior housing projects.
 - 10. Test all elevators and include all necessary repairs in the proposed work scope.
 - a. Add wall indicators at the entry-level elevator lobby.
 - b. Upgrade elevator controls and alarms to current Accessibility standards.
 - 11. Provide new window treatments at all dwelling unit windows meeting these Guidelines.
 - 12. Provide decorative security grilles for all windows accessible from the exterior at multiple dwelling unit buildings located in areas with safety concerns. Where possible, locate security grilles at the exterior. Provide at least one security grille in each habitable room which can be opened in an emergency from within the apartment.
 - 13. Provide locks that are tamperproof from the exterior for all windows that are accessible from the exterior.
 - 14. Repaint all dwelling units and interior public spaces, unless recently repainted and will remain in a freshly painted condition after the renovations are completed.
 - 15. Replace all existing carpeting with new, unless recently replaced and in like-new condition after the renovations are completed. Existing carpeting shall be thoroughly cleaned and fumigated.
 - 16. Provide a noncombustible wall surface where existing kitchen ranges abut sidewalls.
 - 17. Provide a safety grab bar at all bathtubs and shower units, if none currently exist.

18. Provide safety guards or decorative heavy-duty wire mesh as necessary to prevent a 4" sphere from passing through balcony and stair railings.
19. Incorporate integrated pest management within the areas undergoing the renovation work that includes sealing openings, cracks and joints to limit the infestation of insect and vermin from entering the building or migrating from one apartment or common area to another.
20. Test all fire alarm systems and sprinkler system alarms. Include all necessary repairs in the work scope.
21. Test all emergency and exit lights. Replace fixtures accordingly.
22. Provide fire alarm systems meeting the current requirements of the applicable building code, if none currently exist.
23. Provide new hardwired smoke alarms and CO detectors in dwelling units meeting current requirements of the applicable building code for new buildings, if none currently exist.
24. Replace all existing smoke alarm, CO alarm and fire alarm detector heads throughout the building.
25. Provide fire extinguishers in cabinets as required by the applicable building code.
26. Balance and commission all HVAC systems.
27. Upgrade existing electric heating and electric hot water heaters where utility charges have negatively affected the affordability of the project. High-efficiency electric heating systems and domestic hot water systems should be considered in place of fossil-fuel sourced appliances, except when:
 - Sufficient electrical service is not available and cannot be made available by the utility company in a reasonable time, or at a reasonable cost.
 - There is not sufficient equipment for the size of the project available on the market.
28. Replace all light bulbs with ENERGY STAR, LED, or equivalent luminaire lamps. Where fixtures are replaced, light fixtures shall be ENERGY STAR rated or provide the equivalent in energy savings or quality.
29. Submit documentation of any existing Building Code violations or other noncompliance conditions. Include the correction of these conditions in the work scope.

For Moderate Rehabilitation Projects that utilize federal Housing Trust Fund (FHTF) as a funding source, the project must also comply with the U.S. Department of Housing and Urban Development (HUD) Federal Housing Trust Fund Requirement 24 CFR § 93.301 (b) - Property standards for rehabilitation projects and meet the following requirements:

1. Be decent, safe, sanitary, and in good repair as described in 24 CFR 5.703.
2. Where relevant, be improved to mitigate the impact of potential disasters (e.g. earthquake, hurricanes, flooding, and wildfires) in accordance with State and local codes, ordinances, and requirements, or such other requirements as HUD may establish.
3. Provide for installation of broadband infrastructure, as this term is also defined in 24 CFR 5.100, except where determined and documented by New York State Homes and Community Renewal in accordance with 24 CFR 93.407(a)(2)(iv) that:
 - a. The location of the substantial rehabilitation makes installation of broadband infrastructure infeasible;
 - b. The cost of installing broadband infrastructure would result in a fundamental alteration in the nature of the project or in an undue financial burden; or
 - c. The structure of the housing to be substantially rehabilitated makes installation of broadband infrastructure infeasible.
4. If the remaining useful life of one or more major system is less than the project's period of affordability (at least 30 years), a replacement reserve with monthly payments of adequate size must be established to repair and replace systems as needed.

Appendix B - Submission Requirements

The following submission requirements apply to projects applying for and awarded funding under the HCR Multifamily Finance 9% Competitive Process. All submissions referenced in this section, from preliminary design documentation at the project application to the final construction contract documents, shall be the responsibility of a single licensed design professional or firm.

Application Submission

Neighborhood Plan

Provide a neighborhood plan(s) to identify the location of the subject site(s) in context to the greater neighborhood.

1. Orient the plan by utilizing a north arrow.
2. Identify all sites and buildings with the same designations used on other plans in the submission.
3. Provide a plan large enough to sufficiently identify all of the properties and land uses that have an impact on the subject site(s).
4. For multi-site projects, separate neighborhood plans may be used where the subject sites are located in separate geographical areas.
5. Identify the uses of surrounding properties.
6. Identify abandoned buildings and vacant properties.
7. Identify major buildings and land uses by name.
8. Indicate parks, schools, recreational areas and commercial districts.
9. Indicate major roads, highways, railroads, waterways, etc.
10. Indicate the approximate boundaries of wetlands, floodplains, and floodways.

Site Plan(s)

1. Orient site plan(s) and floor plans in the same direction by utilizing a north arrow.
2. Indicate existing locations of building(s), roadway(s), parking area(s), utilities, plantings, etc.
3. Indicate existing site restrictions including setbacks, rights-of-ways, boundary lines, property lines, etc.
4. Indicate all proposed changes to building(s), roadway(s), parking, utilities, plantings, etc.
5. Indicate zoning classification.
6. Provide zoning calculations for projects located in New York City.
7. Indicate notations of all new and existing materials.
8. Indicate existing and proposed site slopes and approximate grade elevations.
9. Indicate boundaries of any unusual site features, i.e., 100-year flood plain, wetlands, bedrock outcroppings, retaining walls, etc.
10. Indicate Accessible Routes in accordance with applicable Accessibility requirements.

Floor Plan(s)

1. Orient floor plans and site plan in the same direction by utilizing a north arrow.
2. Indicate all proposed changes to building components identifying removals and new construction.
3. Indicate room/space designations and typical furniture layouts (for preliminary document submission only).
4. Provide a building code analysis indicating:
 - a. Applicable code with chapters/sections as appropriate.
 - b. Occupancy classification
 - c. Construction type
 - d. Required setbacks
 - e. Area and height requirements
 - f. Fire separation requirements
 - g. Exiting requirements, including exit distances.
 - h. Fire protection systems
 - i. Fire area allowances
5. Indicate any deviations that were allowed by an official code variance.
6. Indicate fire-rated assemblies.
7. Indicate gross building square footage, including subdivisions between residential and nonresidential uses in mixed-use buildings.
8. Indicate interior gross building square footage and interior gross dwelling unit square footage.
9. Provide general notes identifying all new and existing materials.
10. Provide overall building plans and apartment plan types. These may be combined when it can be provided in a legible manner.
11. Label all rooms and floor levels.
12. Identify Viable dwelling units.
13. Identify fully Accessible, move-in ready dwelling units for mobility and hearing/visually impaired residents.

Appendix C - Area Calculations

1. Include area calculation diagrams in the set of drawings.
2. The area calculation diagrams shall correspond to the Area Calculations Form submitted in the HCR Multifamily Finance 9% Application. Detailed information on this submission can be found in Appendix C of this document.

Exterior Building Elevations

1. Provide elevations of all sides of buildings. One drawing may be provided for multiple identical elevations. Label such drawings accordingly.
2. Provide existing condition elevations for renovation projects.
3. Provide all proposed new conditions for building renovations.
4. Provide general notes identifying all existing and new materials.
5. Indicate overall building heights.

6. Indicate finished floor heights/elevations.
7. Indicate finish grade elevation.

Exterior Wall Section(s)

1. Indicate construction system(s), including building enclosure systems (walls, roof, foundations, etc.)
2. Indicate floor systems, heights and elevations of floors, grade elevations, ceilings, structure, windows elements, etc.
3. Indicate overall building heights and dimensions.
4. Indicate insulation R values and other energy conservation components.
5. Indicate HVAC components and systems.

Building Rendering(s) – optional:

This drawing is not required but strongly recommended to allow the applicant to show the intended building design and how it relates to the surrounding neighborhood.

Outline Specifications

Provide outline specifications utilizing the forms provided in the application. The specifications shall sufficiently detail the components and systems proposed for the project.

Construction Cost Estimate

Provide a construction cost estimate prepared by a builder or construction estimator utilizing the forms provided in the application.

Cost estimates shall provide costs of each line item indicating the quantity, unit costs and total cost of each line in sufficient detail to fully represent the construction budget. Lump sums are not acceptable. Include detailed information on all items budgeted as General Conditions and General Requirements in compliance with the Capital Programs Manual. Failure to provide sufficient detail may result in adjustments in funding due to a lack of justification of costs.

Post Award Submission

Construction Documents

Submission of 100% complete construction document drawings and project manuals with specifications shall be provided according to the timetable issued by the funding program managers. Drawings shall be limited to a maximum of 24 inches by 36 inches whenever possible. The construction document submission shall include the criteria noted above and, at a minimum, the following:

1. Site Plan(s)

- a. Indicate topography, all drainage structures, and utilities.
- b. Indicate Accessible Routes, Accessible parking, curb cuts, parking area striping, etc.

- c. Provide details of all new construction including sidewalks, paving, retaining walls, landscaping and plantings, utilities, fences, etc.
- d. Indicate stormwater management criteria.
- e. Indicate boundaries of flood plains, wetlands, easements, and other land restrictions.
- f. If public utilities are not available and a well and/or leach field are proposed, provide a test well report showing: gallons per minute (GPM), potability, local authority review and approval, and a soils percolation test report.

2. Architectural Floor Plan(s)

- a. Indicate all existing areas, demolition and new construction work in sufficient detail or with references to detailed plans provided elsewhere in the drawing set.
- b. Indicate all approach and maneuvering clearances in accordance with applicable Accessibility requirements.

3. Roof Plan(s) and Details

- a. Indicate all roof structures. Note their material, type, and fire rating classification.
- b. Indicate roof drains, hatches, smoke vents, parapets, vent pipes, ventilators, intake/exhaust shafts, chimneys, skylights, etc.
- c. Indicate roof pitch or slope.
- d. Detail roof components including all roof surfaces, flashing details of roof system components, and details including all penetrations, equipment, terminations, flashings, copings, etc.

4. Exterior Elevations

- a. Indicate all proposed grade elevations at building lines.
- b. Indicate foundation walls and footings below grade.
- c. Indicate window operation (if operable).
- d. Indicate all light fixtures, service connections, HVAC louvers or fan units and hydrants.

5. Building Sections/Wall Sections

- a. Indicate all wall, floor, ceiling, foundation, and roof components including structural members, fire-rated assemblies, plumbing, HVAC, and specialty equipment.
- b. Indicate all dimensional heights indicating floor heights, ceiling heights, window and door openings, wall component dimensions, etc.
- c. Indicate the R values of all insulation materials, methods of air sealing, etc.
- d. Indicate methods for integrated pest management.

6. Stair Plan(s), Sections, and Details

- a. Provide a detailed section through the stair shaft showing all wall assemblies, floor assemblies, and roof assembly.
- b. Provide details of stair landings, risers, treads, handrails, etc.; dimensions of overall floor to floor heights, stair landings, risers, treads, handrails, etc.; notations of all materials; and fire ratings of all assemblies and smoke vent(s).

7. Elevator Plans, Sections, and Details

- a. Provide details of foundations, conditions at each floor level and conditions at the roof level.
- b. Indicate all fire stopping, fire-rated construction, and flashing.
- c. Provide elevator sump pit details and provide notations for all materials and components.

8. Interior Elevations

- a. Indicate all major components, including cabinets, soffits, sinks, appliances, countertops, lighting, and any special features.
- b. Provide dimensions for all critical heights.
- c. Indicate special details, such as Accessibility requirements.

9. Door Schedule, Type, and Details

- a. Provide a door schedule(s) that is coordinated with a hardware schedule(s).
- b. Indicate door height, width, thickness, material, door type, louvers, glazing, frame type, frame material and fire rating, as applicable.
- c. Indicate door types, dimensioning all locations of louvers and/or glass panels.
- d. Detail all door type conditions at head, jamb, and sill.

10. Window Schedule, Types, and Details

- a. Provide sufficient detailing to indicate window types, heights, unit dimensions and rough opening/masonry opening dimensions.
- b. Provide details of all window type conditions at heads, jambs, and sills.
- c. Indicate minimum opening dimensions for emergency escape and rescue openings.
- d. Indicate window opening fall protection and window opening control devices where applicable.

11. Finish Schedule

Provide a finish schedule of spaces to indicate:

- a. Base material and floor finish material.
- b. Wall material and finish.
- c. Ceiling material, finish and height.

12. Miscellaneous Details

Provide all details, notations, reference standards, etc. required to sufficiently direct the construction of the project.

13. Structural Plans and Details

- a. Provide structural plans/layout for all building levels and foundation.
- b. Provide details of all connections at wall assemblies, floor assemblies and roof assemblies. Include notations of materials, dimensions, etc.
- c. Indicate loading and performance standards required for the project including seismic, wind loads, live and dead loads, snow loads, soil bearing capacity, etc.

14. Heating, Ventilating and Air Conditional (HVAC)

- a. Provide floor plans to indicate locations of all HVAC equipment including exhaust fans, grilles, registers, furnace/boilers, heating and air conditioning elements, ducts, piping, fire dampers, valves, tanks, service connections, etc. Identify and coordinate all components with a drawing symbols legend.
- b. Provide schedules of HVAC equipment.
- c. Provide riser diagrams for heat system piping.
- d. Provide ductwork layouts and detailing. Indicate performance standards for the project.

15. Plumbing

- a. Provide floor plans to indicate locations of all plumbing equipment including plumbing fixtures, supply and return piping, valves, gates, tanks, heaters, connections to service mains, etc. Identify and coordinate all components with a drawing symbols legend.
- b. Provide riser diagram(s) as necessary to show all piping connections, vent pipes, water and sewer connections, fixture connections, traps, valves, etc.
- c. Provide plumbing fixture schedules.
- d. Provide plans, detail notations and performance standards for fire suppression systems. Drawings may be included within the plumbing series or in a separate Fire Protection drawing series.

16. Electrical

- a. Provide floor plans to indicate locations of lighting, power, wiring connections, panel boxes, telephone and data connections, transformers, etc. Identify and coordinate all components in a symbols legend.
- b. Provide site plans that indicate locations of all exterior lighting, outside outlets, pad mounted or buried transformers, generators, pull boxes, wiring, connections to existing utilities, etc.
- c. Provide equipment and lighting schedules.
- d. Provide plans, details, notations and performance standards for fire detection and alarm systems. Drawings may be included within the electrical series or in a separate Fire Alarm drawing series.

17. Project Manuals

In addition to the construction drawings, all pertinent information regarding the construction of a project must be bound together into a Project Manual. The project architect must prepare a manual containing the following information:

- a. At a minimum, the Project Manual must contain the following Front End Documents:
 - Bidding information, if applicable.
 - Applicable regulatory requirements of federal labor standards (Davis-Bacon Related Acts), clauses for labor standards required for the program and applicable proposed wage rates.
 - Proposed AIA Owner/Contractor Agreement including the provisions outlined in this document and the HTFC Legal Documents Manual.

- Include subsurface investigation results to ascertain the subsurface conditions where foundations, utilities and other major excavations will occur. Bid and construction documents shall include the results of this investigation. The construction contract shall reference and include work required as a result of this investigation.
- b. The technical specification sections must contain a descriptive detailed account of all products and work to be performed, as indicated elsewhere in the construction documents. Organize all information using a 3-part, Construction Specification Institute (CSI) section format:
 - Part 1, General: Defines specific administrative and procedural requirements, performance standards and warranty requirements.
 - Part 2, Products: Describes in detail the quality of items and products for the project.
 - Part 3, Execution: Describes in detail preparatory actions, installation procedures, etc.
- c. Project manuals shall include a title page with the following information:
 - Name of applicant/owner.
 - Name and location of project site.
 - HCR (SHARS ID) number.
 - Name and contact information of the architectural firm.

Cost Estimate

Provide an updated construction cost estimate to reflect the current scope of work costs.

Government and Environmental Approvals

1. Submit documentation from the State Historic Preservation Office and National Park Service, as applicable, indicating the final determination/conditions for the project, if not previously submitted.
2. Submit State Environmental Quality Review Act determinations when performed by the local municipality.
3. Submit any Federal, State or local permits or other approvals required to comply with environmental or other applicable regulations.
4. Submit documentation and written approval of any variances from the applicable building code.

Bid Documents

Before projects choose to utilize a competitive bidding process, project applicants are required to submit bid documents to HCR. Bid documents are to be accepted by HCR. Bid documents shall include all documentation necessary for a potential bidder to fully evaluate the proposed project. The specific due date for this submission will be established by the funding program managers.

Project applicants choosing to apply for funding with a builder as part of their development team shall include a guaranteed, fixed price contract that is set for the total development cost of the

project. This fixed price contract is submitted at the time of application for funding. Bid documents are not necessary when the builder is pre-selected as part of the development team at application.

Contract Documents

Prior to a construction loan closing, submit the contract documents, which include the construction documents to HCR for acceptance. The specific due date for this submission will be established with the funding commitment. The following contract documents are required:

1. All projects:
 - a. Two complete sets of the final construction documents, if not previously submitted.
 - b. An enumeration of documents, that includes all drawings, specifications and addenda with the most current revision date.
 - c. A copy of the Owner/Contractor agreement that references the above enumeration of documents once accepted by HCR architects.
 - d. Documentation that the contract meets the construction contracting requirements of the applicable program(s) funding the project. For example, projects funded by or following the Multifamily Finance 9% Competitive Process shall meet requirements in the Capital Programs Manual that limits profits and other builder's fees. Minimum documentation shall include a payment breakdown of the contract amount while identifying major subcontractors and suppliers for each major trade as outlined by the specification, or by each subcontractor and supplier.
2. Projects utilizing Agency funds for construction financing shall also include:
 - a. Provisions outlined in the Appendix.
 - b. A copy of the contractor's 100% Payment and Performance Bond.
 - c. Proof of all required insurances in accordance with the applicable program(s) funding the project.
3. Projects without a pre-selected builder shall also include:
 - a. A bid tabulation with at least three qualified bids for the project.
 - b. Identification of the proposed selected bidder for the contract award. If the proposed contractor is not the apparent low bidder, written justification for such a selection must accompany the submission.
4. Two paper copies of the building permit for the project, or an electronic PDF file.

Certifications

The project architect, general contractor and owner shall certify to the Agency that the project complies with local government, State and Federal Accessibility requirements by submitting the "New York State Homes and Community Renewal Affidavit of Project Compliance with Accessibility Requirements" at the time of the construction loan closing.

Construction Administration

Change Orders

Change orders are to be prepared on form AIA G701, or equivalent alternative. Change orders are to be submitted in a timely manner to allow HCR to properly analyze the change and review conditions in the field. Change orders are subject to the maximum builder fees allowed by the program funding. For work scope performed by subcontractors, builders may only charge up to 6% to cover additional general conditions (as defined in the Capital Programs Manual), insurance and bonds.

The owner should not sign a change order until it has been accepted by HCR, otherwise, the use of contingency or other funds for this work may be in jeopardy. Change orders should be submitted to the HCR construction monitor and architect for review and acceptance prior to the builder performing the work. Performing the work of a change order prior to HCR acceptance is at the risk of the owner and builder. HCR will not be responsible for costs or additional work resulting from proceeding prior to HCR acceptance. HCR will not recognize change orders for work that is first brought to the attention of the Agency after Substantial Completion, or a Temporary or Permanent Certificate of Occupancy has been issued.

Change order submissions shall include the following:

1. A completed change order form containing the number of the change order, date and detailed description of the work.
2. The cost of the work (credit, debit, or no cost).
3. Estimated time extension to the contract, if applicable.
4. The builder's written proposal for the cost of the work, including labor and materials broken-down, in sufficient detail to be evaluated for cost reasonableness.
5. The signatures of the project architect and builder.
6. Drawing(s) of the proposed change, if applicable.
7. Photographs of the affected areas, if appropriate.
8. A narrative from the project architect describing the change and a justification for the change, including an analysis of the proposed costs.

Emergency Change Orders

HCR recognizes that occasionally there are emergency circumstances where immediate action is needed much sooner than the standard timeframe for processing change orders. Such emergency change orders are those circumstances that would force a shutdown of the work for an unreasonable amount of time or create a life safety hazard. The owner must obtain the

builder's maximum price for the work, which must be agreed upon by the owner/awardee and project architect. The owner, or designee, must notify the HCR construction monitor immediately of the need to proceed with an emergency change order and provide the agreed-upon cost. The construction monitor will endeavor to conduct a site visit as soon as possible and will confer with the HCR architect. Once the emergency has been addressed, a change order in accordance with the standard change order process shall be submitted.

Project Closeout Submission

1. Final as-built drawings must comply with the following:
 - a. Final submission of electronic as-built drawing files shall be submitted in PDF format on two USB flash drives.
 - b. Each copy shall be labeled with the project name, SHARS # and contents. Flash drives may be labeled directly on the drive cover or with an attached key ring label.
 - c. A preliminary submission of the final drawings printed on bond paper *may* be submitted for review before producing the final electronic as-built set.
 - d. Include a PDF file that explains the contents on the USB flash drives.
 - e. Save electronic drawing files in folders and with names that correlate to the construction documents.
 - f. Drawing files shall be a reproduction of the complete construction drawings that are updated to reflect changes made during the construction of the project and with added information, as necessary, to explain aspects of the project in further detail.
 - g. Label all sheets with an as-built drawing title and final date. Any sheets with no changes shall state that no changes have been made from the construction document set.
 - h. Include information relevant to each drawing and exclude extraneous information and details not related to the construction document or as-built conditions.
 - i. Provide any details added to the contract set of drawings issued during construction by the project architect for change orders and supplementary instructions.
 - j. Add sheets which include shop drawings, manufacturer's data, or details from product submissions issued during construction when these documents explain this information in better detail. (Boilers, schematics of controls, and piping are good examples.)
 - k. Update the drawing index to indicate changes made by adding or deleting drawings from the original contract drawings.
 - l. Ensure that special attention is given to explain locations along with dimensions of buried utilities and structures, utility valves and shut-offs, electrical controls, and other maintenance devices.
 - m. The as-built submission shall include a cover memo from the project architect stating they have reviewed the submission and are satisfied that it is complete, well-coordinated, contains no unclear duplications, and that they are not aware of inaccuracies.

2. Photographic documentation that provides a full record of the “as-built” conditions may be utilized as an alternative to as-built record drawings if the system utilized meets or exceeds the following criteria:
 - a. Photographic documentation and related services are provided by an independent third-party service that specializes in construction photography of as-built conditions.
 - b. Photographs are keyed to the construction documents.
 - c. Photographs are taken at a suitable frequency at each location and include individual rooms (generally three times each) to record the following conditions: buried utilities, foundations, rough-in utilities, framing and superstructure, systems and controls, special features, and finished construction.
 - d. The documentation includes product and warranty information of building systems, components, and finishes. Sufficient documentation of building products and warranties will satisfy the warranty submission below.
 - e. The documentation includes training video sessions of HVAC and other building systems for the use of maintenance staff.
 - f. The documentation includes a letter from the firm responsible for the service stating that the final submission includes a complete record of the as-built conditions.
 - g. The documentation is a PDF file suitable for archiving purposes and submitted on two USB flash drives.
 - h. Provide a full set of the most recent version of the construction documents with change orders and supplemental drawings issued during construction as PDF files included on two USB flash drives to accompany the photographic documentation.
3. Warranties shall comply with the following:
 - a. Have a minimum one-year materials and labor warranty on all components and building systems.
 - b. Include all product warranties referenced in these Guidelines and all others required in the project with a warranty period of more than one year.
The following warranties, while not inclusive, must be submitted: roofing system, doors, door hardware and accessories, windows, flooring, specialties, mechanical systems, electrical systems, and plumbing systems.
 - c. Include properly labeled PDF files of each warranty organized in subfolders in a separate warranty folder. Submit on the two USB flash drives that contain the as-built drawing files.
4. Other Submissions:
In addition to the above, provide copies of the following at construction completion and prior to project closeout:
 - a. Applicable third-party clearance reports and testing result summaries for hazardous material mitigation, such as:
 - Closed building radon testing performed prior to occupancy.
 - Asbestos clearance report(s).
 - Lead-based paint clearance or abatement report(s).
 - Other mitigated hazardous conditions, such as mold mitigation, removal of underground petroleum or other hazardous material storage tanks, etc.

- b. Final Certificate(s) of Occupancy.
 - c. Project architect's Certificate of Substantial Completion (AIA G704).
 - d. Contractor's final application for payment (AIA G702/703) certified by the project architect.
 - e. Contractor's Affidavit of Release of Liens (AIA G706A).
 - f. Contractor's Affidavit Payment of Debts and Claims (AIA G706).
 - g. Final summary report by the energy consultant.
 - h. Certification from the energy efficiency program, if applicable.
 - i. Final summary report by the green building consultant, if applicable.
 - j. Certification from the green building program, if applicable.
5. Building Systems:
- It is strongly recommended to record and provide videos of training sessions for HVAC systems and other building systems for the benefit of building maintenance staff.

Appendix C - Area Calculations

Application

The area calculations outlined in this Appendix are to be used for all buildings in the project to provide a consistent format for determining the area of residential buildings and any nonresidential space in mixed-use buildings.

Area calculations should be categorized for all spaces of buildings into three predefined categories; **Dwelling Unit Space**, **Residential Common Area** and, when applicable, **Nonresidential Space**. Any spaces within buildings that are shared between residential and nonresidential uses, such as a common lobby, shall be prorated by the total area affiliated with each use as a percentage of the total building area. Any alternative method to prorate the impact of each use may be acceptable if it can be justified that the alternative is a more accurate methodology. Alternate means of prorating the impact of mixed-use shared spaces shall be presented to HCR Design, Construction & Environmental Unit for consideration. See the *Sample Area Calculation Diagrams* in this Appendix for further clarification.

Definitions / Method of Measurement

Dwelling Unit Space is defined as all spaces that are inclusive in a dwelling unit such as living, dining, kitchen, bedroom, bath, storage/closet, and circulation spaces. This shall include any mechanical closets and chases that serve the dwelling unit. Remote bulk storage shall be included as part of the Dwelling Unit Space up to the areas listed in the bulk storage table in the HCR Design Guidelines.

Residential Common Area is defined as all spaces of the building, other than those defined as Dwelling Unit Space. In a residential building, all areas, other than the dwelling unit area shall be considered Residential Common Area. In a mixed-use building, areas that are provided for the exclusive use and/or benefit of the residents shall be considered Residential Common Area. This includes, but is not limited to, hallways, stairways, lobby, mechanical rooms, mailroom, manager's office, laundry room, janitor closet, community room, etc. Chases that serve Residential Common Areas shall be considered as part of the Residential Common Area.

For new construction projects with a basement, the entire basement area shall be included. Basement space(s) may be excluded in existing buildings where the space(s) are not being renovated and are only occupied by incidental uses that are off-limits to the residents, such as mechanical and trash areas.

Nonresidential Space is defined as any space that is not for the exclusive use and/or benefit of the residents. Examples of Nonresidential Space include civic space, commercial space, public day-care centers or other Community Service Facilities, organizational offices, training rooms, counseling offices, etc.

Interior gross area of any space is defined as the area measured from the interior face of the interior finish of exterior walls to the centerline of common wall(s) separating adjacent common space or dwelling unit(s). Walls and partitions within these boundaries are to be included in the interior gross area.

Gross area of a space is defined as the area of a space including exterior walls and to the centerline of common wall(s) separating adjacent common space or dwelling unit(s). The total gross area of all spaces shall equal the total gross building area.

Balconies, decks, patios and other exterior areas (covered or non-covered) are to be excluded from building area calculations.

Instructions

General:

1. Create unique names for dwelling unit types (i.e., A1-1 bedroom, A2-1 bedroom), and include all dwelling types in the table. If similar dwelling unit types have different interior gross areas, create unique names. Do not indicate the averages of these dwelling unit types.
2. Include the applicable tables and diagrams in the project's drawing set.

Area Calculation Diagrams:

1. Create a diagrammatic floor plan that clearly conveys the pre-defined space categories at each floor (Dwelling Unit Space, Residential Common Area and Nonresidential Space).
2. Include tags for each type of space that includes the space or dwelling unit name, the number of bedrooms (for dwelling units), the gross interior area for that space, and any remote bulk storage that is included in the dwelling unit interior gross area.
3. Plan diagrams shall be color-coded with distinct light/translucent colors to ensure legibility. Utilize the following colors for the diagram:
 - Dwelling Unit Space – White/No Color
 - Residential Common Area – Yellow
 - Nonresidential Space – Muted Orange or Red
 - Shared Spaces – Blue
4. Transcribe all areas into the Area Calculations tables.

Area Calculations Form/Tabulations:

1. A copy of this form is available with the application documents.
2. Fill-in the building identification on the top of Table One under the "Total Residential Area" tab. The building identification will auto-populate onto all of the other tables under the other tabs. The building identification shall match that on the plans.
3. Fill-in the tables on each tab as necessary to identify the areas of all spaces in the project. The identification of all spaces shall match that on the plans.
4. Use the blank spaces provided in the tables for adding alternate or additional room types.
5. Include one file for each building or building type in the project.
6. One file may be used for multiple identical building types. Indicate the number of identical buildings and fill in the total number of identical room types (the total of all identical buildings) in the tables.
7. For projects with multiple buildings that are not identical, provide a separate file that includes a table to summarize the residential and nonresidential spaces in a manner that is consistent with the tables on this form. This file shall indicate the total interior gross areas and the total gross areas that includes exterior walls as an aggregate total for all buildings in the project.
8. If the project is more complex than allowed for in these tables, provide an equivalent substitution.

SAMPLE AREA CALCULATION DIAGRAM

GROUND FLOOR INTERIOR GROSS AREA; MIXED-USE

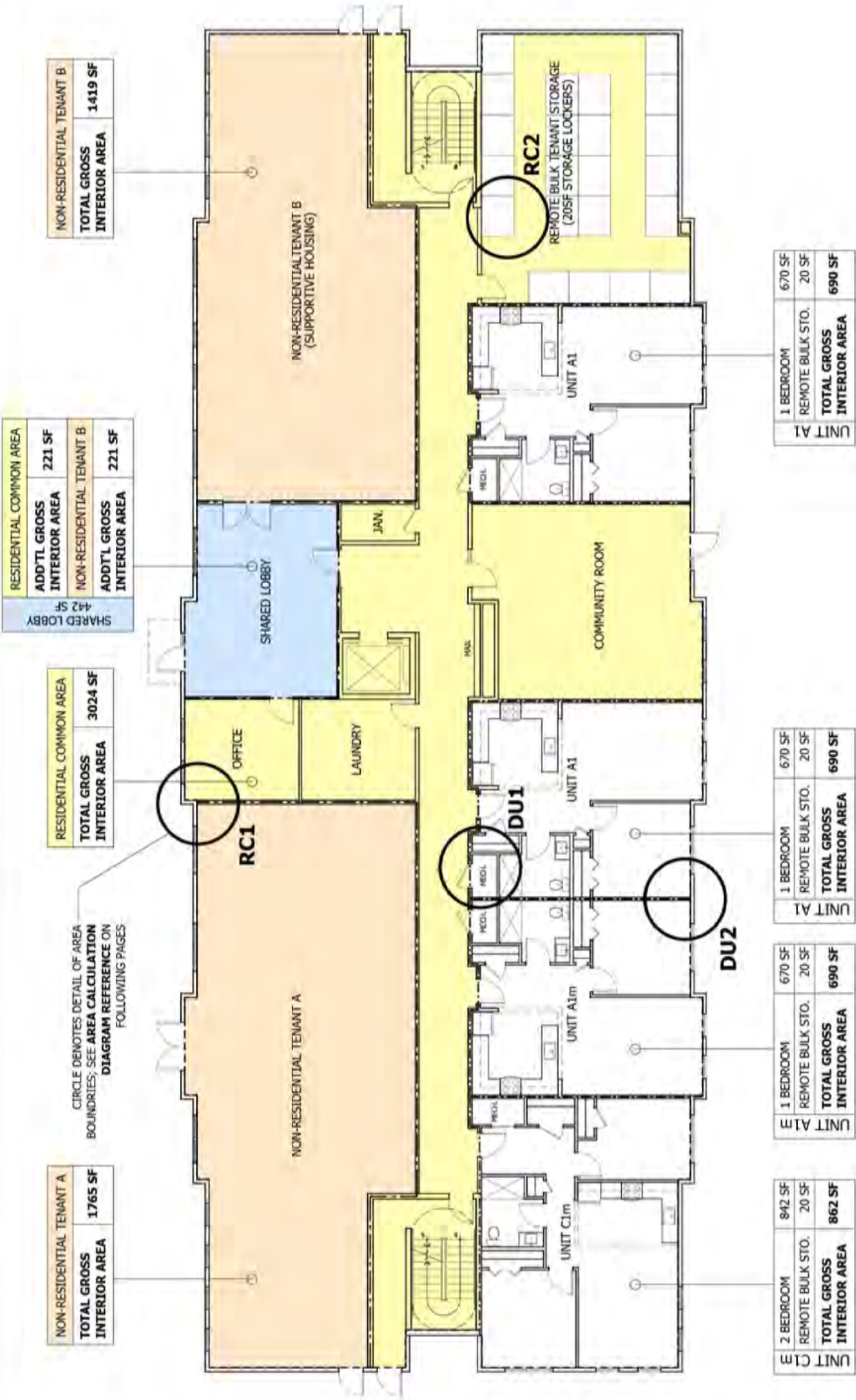
NOTE: PLANS SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. THE INTENT OF THIS DIAGRAM IS TO ILLUSTRATE AN ACCEPTABLE MEANS OF DEMONSTRATING THE INTERIOR GROSS AREA MEASUREMENTS OUTLINED IN THE HCR DESIGN GUIDELINES. IT IS IN NO WAY INTENDED TO BE A REPRESENTATION OF A RESIDENTIAL BUILDING DESIGN THAT MEETS ALL OF THE HCR DESIGN GUIDELINE REQUIREMENTS AND RECOMMENDATIONS.

DIAGRAMS SHOULD CONVEY THE FOLLOWING INFORMATION:

- INTERIOR GROSS AREA FOR EACH DWELLING UNIT, INCLUDING ANY REMOTE BULK STORAGE
- ALL RESIDENTIAL COMMON SPACE
- ALL NON-RESIDENTIAL SPACE
- ANY SPACES SHARED BY RESIDENTIAL AND NON-RESIDENTIAL PROGRAMS AND THE APPLICABLE AMOUNT OF AREA ATTRIBUTED TO EACH TYPE OF SPACE

NOTES:

- CALCULATIONS FOR INTERIOR GROSS AREA SHALL BE PER THE INSTRUCTIONS IN APPENDIX C OF THE HCR DESIGN GUIDELINES
- DWELLING UNIT SIZES MAY ONLY BE INCREASED TO INCLUDE REMOTE BULK STORAGE UP TO THE AREAS LISTED IN THE BULK STORAGE TABLE OF THE HCR DESIGN GUIDELINES
- THE AREA OF CHASES THAT SERVE DIRECTLY TO DWELLING UNITS SHALL BE INCLUDED IN THE DWELLING UNIT AREA. THE AREA OF CHASES THAT SERVE RESIDENTIAL COMMON SPACES SHALL BE INCLUDED IN RESIDENTIAL COMMON AREA. THE AREA OF CHASES THAT SERVE NON-RESIDENTIAL SPACES SHALL BE INCLUDED IN THE NON-RESIDENTIAL AREA.
- NAMES FOR DWELLING UNIT TYPES SHOULD BE CARRIED TO APPENDIX C TABULATIONS



SAMPLE AREA CALCULATION DIAGRAM

RESIDENTIAL FLOOR INTERIOR GROSS AREA

NOTE: PLANS SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. THE INTENT OF THIS DIAGRAM IS TO ILLUSTRATE AN ACCEPTABLE MEANS OF DEMONSTRATING THE INTERIOR GROSS AREA MEASUREMENTS OUTLINED IN THE HCR DESIGN GUIDELINES. IT IS IN NO WAY INTENDED TO BE A REPRESENTATION OF A RESIDENTIAL BUILDING DESIGN THAT MEETS ALL OF THE HCR DESIGN GUIDELINE REQUIREMENTS AND RECOMMENDATIONS.

DIAGRAMS SHOULD CONVEY THE FOLLOWING INFORMATION:

- INTERIOR GROSS AREA FOR EACH DWELLING UNIT, INCLUDING ANY REMOTE BULK STORAGE
- ALL RESIDENTIAL COMMON SPACE
- ALL NON-RESIDENTIAL SPACE
- ANY SPACES SHARED BY RESIDENTIAL AND NON-RESIDENTIAL PROGRAMS AND THE APPLICABLE AMOUNT OF AREA ATTRIBUTED TO EACH TYPE OF SPACE

NOTES:

- CALCULATIONS FOR INTERIOR GROSS AREA SHALL BE PER THE INSTRUCTIONS IN APPENDIX C OF THE HCR DESIGN GUIDELINES
- DWELLING UNIT SIZES MAY ONLY BE INCREASED TO INCLUDE REMOTE BULK STORAGE UP TO THE AREAS LISTED IN THE BULK STORAGE TABLE OF THE HCR DESIGN GUIDELINES
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- NAMES FOR DWELLING UNIT TYPES SHOULD BE CARRIED TO APPENDIX C TABULATIONS

UNIT C1	2 BEDROOM	842 SF
	REMOTE BULK STO.	20 SF
	TOTAL GROSS	862 SF
	INTERIOR AREA	

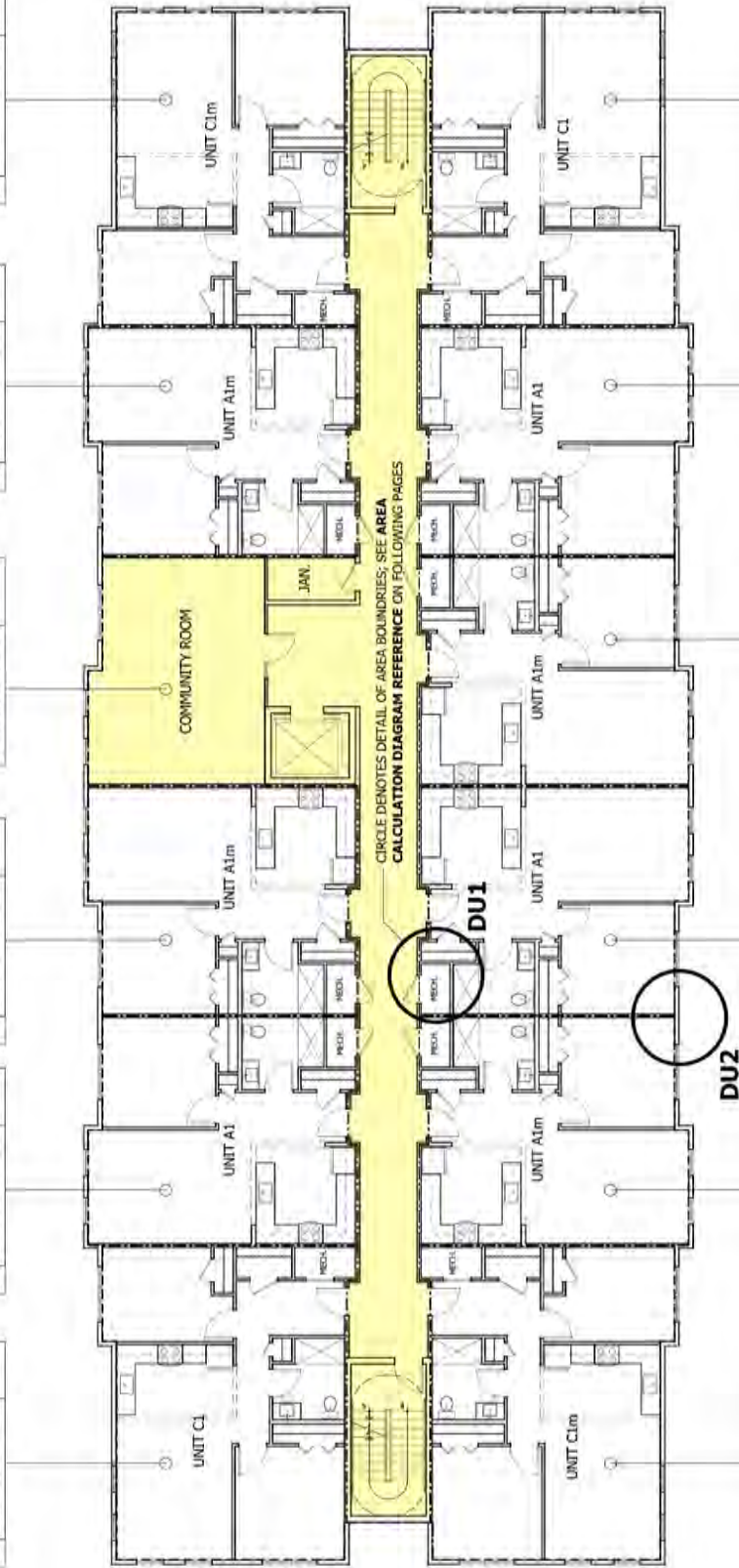
UNIT A1	1 BEDROOM	670 SF
	REMOTE BULK STO.	20 SF
	TOTAL GROSS	690 SF
	INTERIOR AREA	

RESIDENTIAL COMMON AREA		
TOTAL GROSS	INTERIOR AREA	1875 SF

UNIT A1	1 BEDROOM	670 SF
	REMOTE BULK STO.	20 SF
	TOTAL GROSS	690 SF
	INTERIOR AREA	

UNIT A1	1 BEDROOM	670 SF
	REMOTE BULK STO.	20 SF
	TOTAL GROSS	690 SF
	INTERIOR AREA	

UNIT C1	2 BEDROOM	842 SF
	REMOTE BULK STO.	20 SF
	TOTAL GROSS	862 SF
	INTERIOR AREA	



UNIT C1	2 BEDROOM	842 SF
	REMOTE BULK STO.	20 SF
	TOTAL GROSS	862 SF
	INTERIOR AREA	

UNIT A1	1 BEDROOM	670 SF
	REMOTE BULK STO.	20 SF
	TOTAL GROSS	690 SF
	INTERIOR AREA	

UNIT A1	1 BEDROOM	670 SF
	REMOTE BULK STO.	20 SF
	TOTAL GROSS	690 SF
	INTERIOR AREA	

UNIT A1	1 BEDROOM	670 SF
	REMOTE BULK STO.	20 SF
	TOTAL GROSS	690 SF
	INTERIOR AREA	

UNIT A1	1 BEDROOM	670 SF
	REMOTE BULK STO.	20 SF
	TOTAL GROSS	690 SF
	INTERIOR AREA	

UNIT C1	2 BEDROOM	842 SF
	REMOTE BULK STO.	20 SF
	TOTAL GROSS	862 SF
	INTERIOR AREA	

AREA CALCULATION DIAGRAM REFERENCE

MEASUREMENT DETAILS; INTERIOR GROSS AREA

NOTE: PLANS SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. THE INTENT OF THIS DIAGRAM IS TO ILLUSTRATE AN ACCEPTABLE MEANS OF DEMONSTRATING THE INTERIOR GROSS AREA MEASUREMENTS OUTLINED IN THE HCR DESIGN GUIDELINES. IT IS IN NO WAY INTENDED TO BE A REPRESENTATION OF A RESIDENTIAL BUILDING DESIGN THAT MEETS ALL OF THE HCR DESIGN GUIDELINE REQUIREMENTS AND RECOMMENDATIONS.

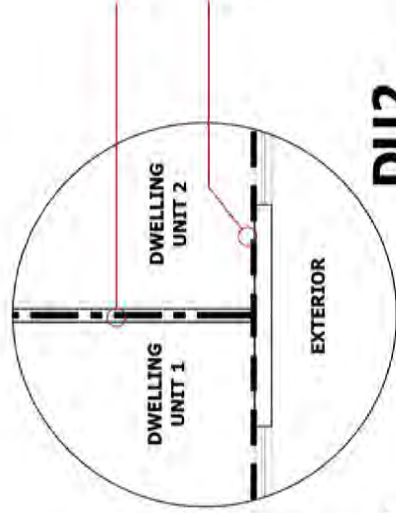
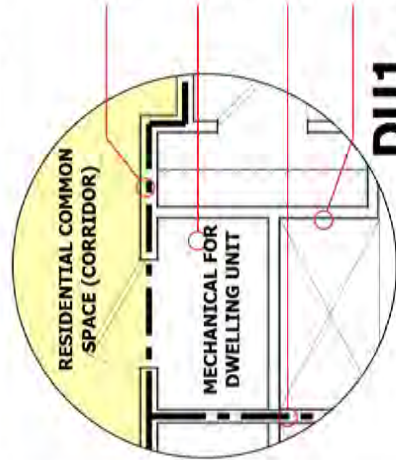
DIAGRAMS SHOULD CONVEY THE FOLLOWING INFORMATION:

- INTERIOR GROSS AREA FOR EACH DWELLING UNIT, INCLUDING ANY REMOTE BULK STORAGE
- ALL RESIDENTIAL COMMON SPACE
- ALL NON-RESIDENTIAL SPACE
- ANY SPACES SHARED BY RESIDENTIAL AND NON-RESIDENTIAL PROGRAMS AND THE APPLICABLE AMOUNT OF AREA ATTRIBUTED TO EACH TYPE OF SPACE

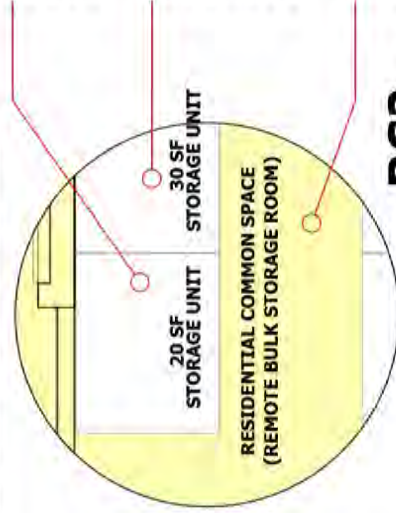
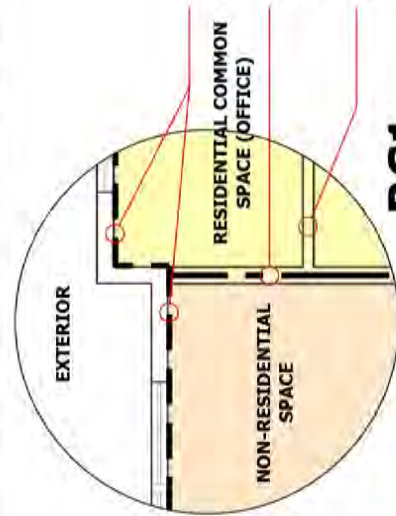
NOTES:

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- DWELLING UNIT SIZES MAY ONLY BE INCREASED TO INCLUDE REMOTE BULK STORAGE UP TO THE AREAS LISTED IN THE BULK STORAGE TABLE OF THE HCR DESIGN GUIDELINES
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- NAMES FOR DWELLING UNIT TYPES SHOULD BE CARRIED TO APPENDIX C TABULATIONS

INTERIOR GROSS AREA AT DWELLING UNITS:



INTERIOR GROSS AREA AT NON-RESIDENTIAL SPACE AND RESIDENTIAL COMMON SPACE:



An Excel version of the Area Calculations Form is available as in the Multifamily Finance 9% Application.

1. Refer to the *Appendix C - Area Calculations* document on the HCR website for detailed instructions on how to complete this form.
2. Complete Tables 1-3 for each building or building type. If there is more than one building type, unhide Rows K:CV as necessary.
3. The building identification (Building __ of __) must match that on the plans.
4. Fill in the tables to identify the areas of all spaces in the project. The identification of all spaces must match that on the plans.
5. Use the blank spaces provided for adding alternate or additional room types. If additional lines are needed, unhide the rows above the "Totals" lines.
6. One set of tables may be used for multiple identical building types. Indicate the number of identical buildings and fill in the total number of identical room types across all the identical buildings.
7. For projects with multiple buildings that are not identical, also complete Table 6.
8. Area Calculation Diagrams that correspond with the tables below must be submitted in PDF format as part of Tab J-4, Preliminary Plans.

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Table 2: Residential Common Space

Building 0 of 0					
Residential Common Space	Number of Each Space	Interior Gross Area Each Space	Total Interior Gross Area	Gross Area Including Exterior Walls Each Space	Total Gross Area Including Exterior Walls
Lobby & Vestibules			0		0
Corridors & Stairs			0		0
Laundry(ies)			0		0
Mechanical Room(s)			0		0
Office Space(s)			0		0
Community Room(s)			0		0
Community Kitchen			0		0
			0		0
			0		0
			0		0
			0		0
			0		0
			0		0
			0		0
			0		0
			0		0
			0		0
			0		0
			0		0
			0		0
			0		0
			0		0
Totals	0		0		0

Table 3: Non-Residential Space

Building 0 of 0					
Non-Residential Space	Number of Each Space	Interior Gross Area Each Space	Total Interior Gross Area	Gross Area Including Exterior Walls Each Space	Total Gross Area Including Exterior Walls
			0		0
			0		0
			0		0
			0		0
			0		0
			0		0
			0		0
			0		0
			0		0
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			0		0
			0		0
			0		0
			0		0
			0		0
			0		0
			0		0
			0		0
Totals	0		0		0

Table 4: Total Residential Interior Gross Area Percentages		
Building	0 of	0
Total Residential Space	Total Interior Gross Area	Percent of Total Interior Residential Gross Area
Residential Dwelling Unit Space	0	
Residential Common Space	0	
Totals	0	

Table 5: Total Building Gross Area		
Building	0 of	0
Building Totals	Total Interior Gross Area	Total Gross Area Including Exterior Walls
Residential Dwelling Unit Space	0	0
Residential Common Space	0	0
Non-Residential Space	0	0
Totals	0	0

For projects with multiple building types, unhide Columns K:CV as necessary. If there are more than 10 building types, copy and paste additional tables to the right as necessary.

For projects with multiple building types, also complete Table 6 below.

Table 6: Summary of Multiple, Non-Identical Buildings		
Project Totals	Total Interior Gross Area	Total Gross Area Including Exterior Walls
Residential Dwelling Unit Space		
Residential Common Space		
Non-Residential Space		
Totals	0	0

Appendix D - Owner/Architect Contract Provisions

For projects following the construction loan process, if the AIA Document *B101™ – Standard Form of Agreement Between Owner and Architect* is used, the following information shall be included as referenced below. If any other Owner-Architect agreement documents are used, include equivalent provisions in the appropriate sections. Any agreement document other than an AIA B Series document must be approved by HCR prior to its implementation.

1. *Architect's Responsibilities*

- a. The Architect shall use his/her best efforts to assure the Contractor's compliance with the Contract Documents.

2. *Scope of Architect's Basic Services*

- a. In addition to the Basic Services listed in the AIA B Series document, the Architect shall provide the following Supplemental Services as part of Basic Services Compensation:
 - As-constructed record drawing services (Note that the Owner is responsible for providing as-constructed record drawings to HCR. It is at the Owner's discretion how these drawings will be produced; however, the Architect must, at a minimum, review the as-constructed record drawings and provide a formal letter of acceptance of the drawings to HCR.)
- b. *Construction Phase Services* - The Architect's contract shall terminate after:
 - The correction and completion of punch list items by the Contractor.
 - After the Architect issues the final certificate for payment.
 - Satisfactory completion of the closeout submissions that the Architect is responsible for.
- c. *Evaluations of the Work* - The Architect shall keep the Owner informed of the progress and quality of the work by performing site visits at a minimum interval of twice per month or as appropriate for the progress of the work.
- d. *Changes in the Work* - All proposed changes in the work must be accepted by HCR.

3. *Copyrights and Licenses*

- a. If this agreement is terminated before the completion of the Architect's services, the Owner may use the drawings, specifications, and other documents prepared by the Architect to retain another licensed Architect. The newly retained Architect may utilize any or all of these documents but would assume professional liability.

4. *Compensation*

- a. Compensation for the Architect's services shall be a stipulated sum or fixed fee amount. All expenses of the Architect are to be included in the Basic Compensation.
- b. Compensation for Additional Services of the Architect's consultants shall be computed as a multiple of 1.10.
- c. A design professional's percentage of fee should generally comply with the following schedule of phases:

- Preliminary phase < 15% fee.
 - Design Development phase < 20% fee.
 - Construction Documents < 40% fee.
 - Bidding/Negotiating < 5% fee.
 - Construction Monitoring > 20% fee.
- d. *Compensation for Reimbursable Expenses* - Reimbursable expenses shall be computed as a multiple of 1.00 and shall be identified as a stipulated amount or a not to exceed dollar amount.
5. Provide insurance as required by the applicable funding source.
6. The Architect shall be responsible for coordinating the work of all sub-consultants and other consultants hired by the Owner that are providing building design services necessary for the project.

Appendix E - Construction Contracting Requirements

At the time of application, the applicant must identify one of two options available to secure a construction contractor. The first option is for the applicant to seek construction bids through a publicized, competitive process. The second option is for the applicant to identify and select a builder at the time of the application submission. The requirements for both options are explained below.

Publicized, Competitive Bidding Process

Applicants electing to publicly and competitively bid the construction portion of their project must indicate this elective at the time of the application submission.

This method of contractor selection requires the applicant to openly advertise in a well-known local newspaper for a period of four days and have a minimum bidding period of four weeks before bids are received. MBE/WBE outreach requirements will be part of the bidding process. Upon receipt of bids, the applicant and the architect must notify HCR of the bidding results. The contractor's schedule of values must also be submitted to HCR at that time. HCR reserves the right to require that the project be rebid or negotiated to reduce the scope of work if all bids received are higher than the project's estimated total construction cost.

If no contractor has been selected at the time of application submission, the applicant must ensure that the terms of the Owner/Architect Agreement include a provision for a detailed construction cost estimate based upon the preliminary drawings and specifications prepared by a cost estimator.

Pre-selected Builder Requirements

Applicants who elect to include a builder (general contractor or construction manager (CM) as constructor) with their application for funding will be required to indicate the builder's previous professional experience in producing low income housing units and the role that the builder will play during the development and construction phases of the project.

In addition, a pre-selected builder will be responsible for providing a detailed cost estimate of the construction work based upon the preliminary drawings, specifications, other project criteria, and existing conditions with the application submission. The construction cost estimate must include all builder's fees such as general conditions and general requirements, builder's overhead, and builder's profit. Criteria that are special conditions such as security, impact fees, etc. to a project should be detailed on a separate itemized listing.

All MBE/WBE requirements applicable to the pre-selected contractor must be documented through the contractor's selection process for sub-contractors and suppliers.

In addition to the criteria outlined in these Guidelines, refer to the applicable program requirements for builder's fees, MBE/WBE requirements, selection and contracting requirements for the builder, bonding requirements along with other criteria applicable to the builder's contract and obligations.

General Construction Contracting Requirements

Owner/Contractor Contract Provisions

For projects following the Construction Loan process, the following information shall be included in the standard Form of Agreement between Owner and Contractor or Construction Manager as constructor:

1. *The Work of This Contract*
 - a. The validity of this construction contract is contingent upon execution of agreements from all construction financing sources.
2. *Progress Payments*
 - a. Progress payments shall be for work satisfactorily completed to date and certified by the project architect.
 - b. A 10% retainage shall be applied to all work until the project reaches Substantial Completion.
 - c. Payments are contingent upon HCR review and approval.
3. *Substantial Completion*
 - a. Upon Substantial Completion of the construction contract, the retainage released by HCR will be calculated based upon whichever of the following results in a greater remaining retainage:
 - A reduction in retainage from 10% to 5%, or
 - The value of incomplete work, as determined by the architect and HCR, multiplied by 2.5.
4. Provide 100% payment and performance bonds and builder's insurance as required by the applicable funding source.

Manufactured Housing Requirements

Applicants electing to produce housing through the use of a manufactured housing company may choose either of the options above for construction contracting. However, the purchase contract and supervision of such housing must be done as a subcontract to the builder's contract.

Federal Labor Standards

See the applicable program requirements and reference material for specific information concerning federal labor standards.

Appendix F – Energy & Green Building Requirements

The following Energy & Green Building Requirements are part of the Agency’s continued effort to promote safe, healthy, and efficient living environments. [HCR is committed to helping all new and existing affordable housing projects](#) meet the Governor’s greenhouse gas (GHG) emission reduction limits set forth in the Climate Leadership and Community Protection Act (40 percent of 1990 levels by 2030; and 85 percent of the 1990 levels by 2050). Projects receiving HCR financing must adhere to applicable national [and state energy efficiency standards](#), [in addition to the energy efficiency and green building criteria outlined in this Appendix](#).

Mandatory Agency-wide Standards

[HCR Mandatory Green Building Practices](#)

All projects awarded funding through HCR must [comply with](#) the applicable HCR Mandatory Green Building Practices listed below. Conformance with any of these practices does not replace or substitute compliance with other HCR program funding standards or requirements.

Limiting Lead Exposure

Include lead-safe work practices and procedures in the rehabilitation of buildings constructed prior to 1978. Residential occupancies (regardless of the age of the occupants), child-occupied facilities, and facilities that provide services for pregnant women shall comply with the most current editions of the HUD Guidelines for the Evaluation and the Control of Lead-Based Paint in Housing, and the EPA Renovation, Repair and Painting Rule. Other nonresidential occupancies or facilities shall comply with all applicable regulations for the removal of lead-based paint hazards. See the “Lead Hazards” section in “Common Regulations Laws and Guidelines” of this document for additional guidance.

[Existing domestic water supply and distribution systems that are to remain must be tested for lead content in accordance with applicable drinking water regulations and guidelines or per HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing \(where municipal regulations do not exist\). Where results for lead content meet or exceed the applicable action levels, domestic water supply piping and fixtures shall be removed and replaced with lead-free plumbing.](#)

Radon Mitigation

All newly constructed and renovated buildings funded by the Agency and located in EPA Zone 1 or 2 shall address radon in accordance with the EPA Current Radon Standard of Practice for the applicable building type and in accordance with this section. The most common Standards of Practice, published by the American National Standards Institute and the Association of Radon Scientists and Technologists (ANSI/AARST), are listed in the “Common Regulations Laws and Guidelines” section of this document.

New and substantial rehabilitation low-rise residential projects shall install a passive radon mitigation system in accordance with the applicable Standard of Practice, including collectors below the slab and a vent pipe through the roof. Vertical vent pipes shall run at the interior of buildings to avoid frosting inside the vent stack during cold weather. Include electrical junction box(es) above the highest occupied floor level for future system activation.

Moderate rehabilitation low-rise residential projects shall install active radon-reduction measures in accordance with the applicable Standard of Practice should testing at the completion of the rehabilitation confirm the presence of radon gas in the building exceeding the EPA action level. It is highly advisable to include radon reduction measures in the base scope of work to avoid costly retrofits should elevated radon levels be discovered after rehabilitation has been completed.

Mid-rise/high-rise residential projects and nonresidential facilities shall incorporate the methods described above or other radon mitigation measures recognized by the applicable Standard of Practice.

Nonresidential facilities with a limited period of occupancy may omit these methods and measures if it is established by a third party with radon expertise that the limited period of occupancy does not warrant the need for mitigation.

Radon testing in all new and rehabilitation projects shall be conducted at the completion of construction or rehabilitation work, prior to occupancy/re-occupancy. A radon professional shall oversee testing as per the applicable Standard of Practice meeting US-EPA short-term, closed-building testing protocols. Testing prior to rehabilitation work is not recommended because it will not provide an accurate representation of the conditions post-renovation due to increased efficiency in the building envelope and systems. (i.e., increasing insulation levels, reducing air infiltration, replacing windows, changes to the HVAC system, etc.)

Passive radon-reduction systems shall be activated should tests confirm the presence of radon gas in the building exceeding the EPA defined action level of 4pCi/L. If the test results indicate radon concentrations between 2pCi/L. and 4pCi/L., consider activation of the system based on EPA recommendations.

Low-VOC Building Materials

Building materials that have the potential to negatively affect indoor air quality, such as paints, applied finishes, adhesives, and sealants, shall at a minimum meet Green Seal, or an equivalent, low-VOC standard.

Integrated Pest Management

All projects are to incorporate integrated pest management during construction that includes sealing all openings, cracks and joints to prevent the infestation of insect and animal pests from entering the building or migrating from one apartment or common area to another. After occupancy, the building management shall incorporate environmentally friendly pest management strategies and extermination practices that are safe for the health of the residents and the environment. [A service contract or documentation should be provided as part of the project close out binder.](#)

HCR Mandatory Energy Efficiency Practices

All projects awarded funding through HCR must **comply with** the applicable HCR Mandatory Energy Efficiency Practices listed below. Conformance with any of these practices does not replace or substitute for compliance with other HCR program funding standards or requirements.

ENERGY STAR Appliances

All refrigerators, dishwashers, and clothes washer included in the project or supplied by vendors shall be ENERGY STAR rated. Commercial washing machines may be non-ENERGY STAR rated provided they meet or exceed the energy efficiency, quality, and reduced operational costs associated with ENERGY STAR rated appliances.

Electric Appliances

In all New Construction and Substantial Rehab Projects: All ranges, cooktops, ovens, and clothes dryers included in the project or supplied by vendors shall be electric.

In all Moderate Rehab Projects: Include electric ranges, cooktops, ovens, and clothes dryers except where replacement of those appliances is not included in the scope of work, or the cost to install upgraded code-compliant electric panels in dwelling units is cost prohibitive due to existing conditions.

ENERGY STAR Equipment

All heating and air conditioning equipment shall be ENERGY STAR rated or provide the equivalent in energy savings, quality and operational cost. Equipment shall be considered to meet this requirement where the equipment is deemed to comply with any **NYSERDA or EPA ENERGY STAR program that the project has committed to certify under**, excluding the NYSERDA Multifamily Performance Program for Existing Buildings.

ENERGY STAR Lighting

All lighting shall be ENERGY STAR rated or provide the equivalent in energy savings and quality. Interior lighting and exterior building lighting shall incorporate ENERGY STAR fixtures or high efficacy lamps. Exterior site lighting shall utilize high efficiency **and Dark Sky approved, or equal** fixtures. All exterior building and site lighting shall include either daylight sensors or timers to minimize daytime electrical usage.

Water conserving plumbing fixture requirements

All water fixtures listed below must be WaterSense certified, or equal, and no more than the following water flow rates by fixture type:

- a. Toilets – **1.28 GPF, or dual flush (dual flush discouraged in senior housing)**
- b. Showerheads – **2.0 GPM**
- c. Kitchen faucets – **1.5 GPM, or dual flow 1.0 GPM/2.2 GPM**
- d. Bathroom lavatory faucets and all other fixtures in dwelling units – **1.5 GPM**

Tax-Exempt Bond and Subsidy Applications (4% LIHTC) Green and Energy Efficiency Requirements

Climate Bond or Green Bond Certification through CBI

All **new construction** projects seeking HCR financing resources through Tax-Exempt Bond and Subsidy Applications (4% LIHTC Projects) administered through HFA are required to adhere to the standards established by the Climate Bond Initiative (CBI). The U. S. Environmental Protection Agency (EPA) Energy Star programs serve as a proxy to meet the CBI low carbon performance criteria. Complying with these standards will enable projects to have their bonds certified as Climate Bond or Green Bonds. Projects must comply with one of the Energy Star Programs defined below.

Existing buildings undergoing substantial or gut rehabilitation are to be treated as new construction, and they must adhere to the sustainability standards for new construction to the fullest extent possible. **Historic or adaptive reuse projects** that cannot fully adhere to all of the requirements may request a waiver. The applicant should identify specific areas of noncompliance with the selected standard and provide sufficient documentation for consideration of a waiver.

EPA ENERGY STAR Multifamily New Construction Program:

The U.S. Environmental Protection Agency (EPA) ENERGY STAR Multifamily New Construction (MFNC) program is the current program available for all multifamily residential projects. Projects may qualify following either the performance or prescriptive paths, as currently published by the EPA (ERI, ASHRAE, or Prescriptive paths) **and must be verified by an approved Field Rater.**

The application for funding shall include a signed contract with an EPA approved Certified Rater or energy modeler to provide services required for certification under the EPA Multifamily New Construction Program. The contract must explain the methodology utilized to ensure compliance and final certification and must be signed by both the applicant and the Certified Rater, or energy modeler. In their contract, the energy consultant must explicitly confirm that the Energy Star standard will meet the CBI low carbon criteria for certification as CBI green bonds or 'climate bonds'.

EPA ENERGY STAR Certified Homes:

Projects **not covered under EPA ENERGY STAR Multifamily New Construction Program** should utilize ENERGY STAR Certified Homes Version 3.1, or current program based on the current building code in effect at the time of project's bond financing closing. To meet the standards of CBI, projects must perform 9% more efficiently than Version 3.1 of Energy Star Certified Homes, Revision 09.

The application must include an executed contract between the applicant and a RESNET certified HERS rater which explains the methodology utilized to ensure compliance with the applicable standard. In their contract, the energy consultant must explicitly confirm that the Energy Star standard will meet the CBI low carbon criteria for certification as CBI green bonds or ‘climate bonds’. In lieu of an executed contract, HCR will accept a HERS-based plan review completed by a qualified HERS rater to affirm the project design will meet the high efficiency guidelines of the applicable standard and will meet the CBI low carbon criteria for certification as CBI green bonds or ‘climate bonds’.

(See additional [Energy Efficiency and Green Building Requirements](#) below for alternate compliance options for CBI Certified Climate Bonds / Green Bonds)

Energy Efficiency and Green Building Program Requirements

All new construction projects seeking HCR financing resources Tax-Exempt Bond and Subsidy Applications (4% LIHTC Projects) administered through HFA must select **one or more** of the programs listed below. Since the Energy Star protocol is also used for some of their energy assessment, **those programs can be coordinated to satisfy the CBI requirement** where applicable, as well as to achieve additional sustainability measures.

NYSERDA New Construction – Housing Program (NC-H):

Projects may qualify through participation in the New York State Energy Research and Development Authority (NYSERDA) New Construction – Housing Program (NC-H), and meeting the requirements for ENERGY STAR Certified Homes or the Multifamily New Construction program, as applicable. Projects are encouraged to achieve the highest potential level of energy efficiency and building performance by participating in higher tiers. Please be advised that the level of performance achieved may substantially affect the incentives that can be received from NYSERDA, and any changes in building or energy codes may affect the program version applicable to a project.

The application for funding must include a contract with a NYSERDA qualified Primary Energy Consultant to oversee the design and construction as necessary to meet the program requirements. In their contract, the energy consultant must explicitly confirm that the Energy Star based standard will meet the CBI low carbon criteria for certification as CBI green bonds or ‘climate bonds’.

Applicant are encouraged to consider additional programs and funding opportunities available through NYSERDA as they work towards designing high-efficiency projects with scopes that may include all electric appliances, high-efficiency electric HVAC and domestic hot water systems, carbon-neutral or carbon-neutral ready buildings, solar arrays, and highly efficient building envelopes. These resources can be considered in addition to the incentives available in the New Construction-Housing Program (NC-H), however, all resources must be disclosed in the project’s application for funding.

Historic Rehabilitation & Adaptive Re-Use:

Projects with buildings designated as historic by local, state or federal authorities undergoing a substantial rehabilitation or adaptive re-use, that cannot fully implement one of the other standards described below without negatively affecting the historic building characteristics, shall enroll in the New Construction – Housing Program (NC-H) to achieve the New York Energy Smart or equivalent designation offered by participating in one of those programs. The applicant's development team shall work with NYSERDA and HCR to implement the applicable provisions of these programs.

The application must include an executed contract as noted above for the applicable NYSERDA program. In their contract, the energy consultant must explicitly confirm that the Energy Star based standard will meet the CBI low carbon criteria for certification as CBI green bonds or 'climate bonds' or request a waiver from this requirement when infeasible. The applicant should identify specific areas of noncompliance with the selected standard and provide sufficient documentation for consideration of a waiver.

2020 Enterprise Green Communities Criteria

Projects may qualify by participating in 2020 Enterprise Green Communities Criteria. *Projects in New York City shall utilize the New York City - Enterprise Green Communities overlay.* Choosing this strategy requires full participation in Enterprise Green Communities Criteria, utilizing EPA ENERGY STAR certified Homes Version 3.1, or the EPA Multifamily New Construction program as applicable for the building type.

HCR encourages applicants to consider pursuing Enterprise Green communities Certification Plus if possible when using Enterprise Green Communities as a compliance pathway. The new "Plus" level of certification recognizes significant achievement for projects that meet all certification requirements and have invested in deep levels of energy efficiency, a critical strategy in our changing climate.

The applicant must submit an executed contract with a licensed professional energy consultant to monitor the design and construction as necessary to meet the program requirements of Enterprise Green Communities Criteria and to comply with the mandatory Energy Star criteria. In their contract, the energy consultant must explicitly confirm that the Energy Star based standard will meet the CBI low carbon criteria for certification as CBI green bonds or 'climate bonds'.

National Sustainability Standards

As an alternative or addition to the above standards, HCR may choose to approve projects that prefer to implement deeper sustainability standards set by other nationally recognized leaders in the sustainability and energy efficiency industry. Projects must still demonstrate that they will qualify to be certified as CBI compliant for low carbon performance. Appropriate documentation demonstrating compliance with both the selected alternate program and CBI standards must be submitted to HCR for approval prior to HCR Credit Committee approval in order to participate in one of the alternate programs listed below.

Leadership in Energy and Environmental Design (LEED):

US Green Building Council (USGBC) LEED Rating System. At a minimum, projects shall comply with the current, or newer, criteria for LEED version 4 BD+C Homes or LEED version 4 BD+C Multifamily Midrise. If the housing type proposed is not recognized under either of these LEED rating systems, an equivalent LEED rating system may be substituted upon agreement by HCR. The applicant shall submit an executed letter of agreement with a LEED Green Rater to monitor the design and construction as necessary for LEED certification.

Passive House Institute US (PHIUS) or Passive House Institute (PHI):

Projects may utilize either PHIUS or PHI programs. Certification shall be obtained under PHIUS+ 2015 Passive Building Standard – North America, or newer, based on the construction timeframe, or certified under PHI protocols. The applicant shall submit a form of a receipt from PHIUS or PHI that the project was accepted into their program, or submit an executed letter of agreement between the applicant and a PHIUS or PHI certified Passive House consultant or designer (CPHC or CPHD) that includes monitoring of the design and construction as necessary for pre - certification and final certification.

Additional information may be found at the following websites:

<http://www.phius.org/home-page>

<http://www.passiv.de/en/index.php>

National Green Building Standard:

Current ICC 700 National Green Building Standard. The applicant shall submit an executed letter of agreement with a Verifier accredited by Home Innovation Research Labs to monitor the design and construction as necessary for final certification to the **Gold**, or higher level.

Multifamily Finance 9% Competitive Process

Mandatory Energy Efficiency Strategies

All projects awarded funding through the Multifamily Finance 9% Competitive Process must participate in **at least one of the energy efficiency strategies described below**. All recommended practices applicable to the construction systems planned for the building must be incorporated. However, the recommended practices shall be secondary where conflicts exist between building codes or HCR standards and requirements, unless a waiver is granted from HCR standards or requirements.

Nonresidential projects shall incorporate comparable energy efficiency strategies as those required for residential projects to achieve similar energy savings.

Please be advised that energy code requirements and the corresponding energy efficiency strategy must be considered when planning the project development schedule. Projects will be responsible, without any additional cost to HCR programs, to comply with the applicable energy efficiency standard and all energy code requirements that the building permit issued for the project is based on.

HCR requires that all projects pursuing solar energy, any other alternative energy sources, or any energy efficiency strategies or green building practices must incorporate the design, operating cost and development cost assumptions associated with those measures into the project by the time an application is submitted for funding. Any changes to the energy efficiency strategy or green building practices after application submission will not be allowed.

NYSERDA New Construction—Housing Program (NC-H)

Projects may qualify through participation in the New York State Energy Research and Development Authority (NYSERDA) New Construction – Housing Program (NC-H), by committing to meet **Tier 2**, or higher, and meeting the requirements for ENERGY STAR Certified Homes or the Multifamily New Construction program, as applicable. Projects are encouraged to achieve the highest potential level of energy efficiency and building performance by participating in higher tiers. Please be advised that the level of performance achieved may substantially affect the incentives that can be received from NYSERDA, and any changes in building or energy codes may affect the program version applicable to a project.

The application for funding must include a contract with a NYSERDA qualified Primary Energy Consultant to oversee the design and construction as necessary to meet the program requirements. The contract must be signed by both the applicant and the Primary Energy Consultant. HCR will accept a HERS-based plan review, completed by a HERS rater recognized by NYSERDA for projects participating under ENERGY STAR Certified Homes that affirms the project design will meet the high efficiency guidelines of the program. Final closeout of the project shall be contingent upon certification from NYSERDA that the project meets the program requirements.

Applicants are encouraged to consider additional programs and funding opportunities available through NYSEDA as they work towards designing high-efficiency projects with scopes that may include all electric appliances, high-efficiency electric HVAC and domestic hot water systems, carbon-neutral or carbon-neutral ready buildings, solar arrays, and highly efficient building envelopes. These resources can be considered in addition to the incentives available in the New Construction-Housing Program (NC-H), however, all resources must be disclosed in the project's application for funding.

EPA ENERGY STAR Multifamily New Construction Program

Projects may qualify following either the performance or prescriptive paths, as currently published by the EPA (ERI, ASHRAE, or Prescriptive paths). The application for funding shall include a signed contract with an EPA approved Certified Rater or energy modeler to provide services required for certification under the EPA Multifamily New Construction program. The contract must explain the methodology utilized to ensure compliance and final certification and must be signed by both the applicant and the Certified Rater, or energy modeler. Final closeout of the project shall be contingent upon certification from EPA that the project meets the program requirements.

EPA ENERGY STAR Certified Homes:

Projects **not covered under EPA ENERGY STAR Multifamily New Construction Program** may qualify by utilizing ENERGY STAR Certified Homes Version 3.1, or newer based on the current building code in effect at the commencement of the construction of a project or otherwise determined by EPA.

The application for funding is to include a contract with a certified Home Energy Rater recognized under the ENERGY STAR Certified Homes program, which explains the methodology to be utilized to ensure compliance and final certification. The contract must be signed by both the applicant and the certified Home Energy Rater. In lieu of a signed contract, HCR will accept a HERS -based plan review completed by a qualified HERS rater to affirm the project design will meet the high efficiency guidelines of the program. Final closeout of the project shall be contingent upon certification from EPA that the project meets the program requirements.

2020 Enterprise Green Communities Criteria

Projects may qualify by participating in 2020 Enterprise Green Communities Criteria. Projects in New York City shall utilize the New York City - Enterprise Green Communities overlay. Choosing this strategy requires full participation in Enterprise Green Communities Criteria, utilizing EPA ENERGY STAR certified Homes Version 3.1, or the EPA Multifamily New Construction program as applicable for the building type.

HCR encourages applicants to consider pursuing Enterprise Green communities Certification Plus if possible when using Enterprise Green Communities as a compliance pathway. The new "Plus" level of certification recognizes significant achievement for projects that meet all certification requirements and have invested in deep levels of energy efficiency, a critical strategy in our changing climate.

The applicant must submit a letter indicating that they are selecting Enterprise Green Communities Criteria as means of compliance with both the mandatory energy efficiency strategies along with a Prebuild application to Enterprise Green Communities (or a letter of agreement with an architect, engineer, or energy consultant that includes oversight of the design and construction as necessary for certification). Final closeout of the project shall be contingent upon certification from Enterprise Green Communities that the standard was met.

Alternate Compliance for Rehabilitation Projects

Rehabilitation projects that are not eligible to participate in NYSERDA programs:

Rehabilitation projects that are not eligible to participate in NYSERDA programs due to the location of the project and cannot feasibly comply due to existing conditions with the above energy efficiency standards of Enterprise Green Communities Criteria, or any of the other options in this RFP, may be allowed to participate in another energy efficiency standard in Enterprise Green Communities Criteria upon agreement of HCR. Applicants must request that HCR allow the alternate energy efficiency strategy a minimum of 30 days prior to the application submission.

Historic Rehabilitation & Adaptive Reuse:

Projects with buildings designated as historic by local, state or federal authorities undergoing a substantial rehabilitation or adaptive reuse, that cannot fully implement one of the first three standards described above without negatively affecting the historic building fabric, shall enroll in the New Construction – Housing Program (NC-H) to achieve the New York Energy Smart or equivalent designation offered by NYSERDA. The applicant's development team shall work with NYSERDA and HCR to implement the applicable provisions. The application must include a signed contract, as noted above, for the NYSERDA program. Final closeout of the project shall be contingent upon certification from NYSERDA that the project meets the program requirements.

Moderate Rehabilitation:

Applicants may: 1) bring existing building(s) that do not meet the current energy code up to the energy code standard for comparable new construction building(s) in effect on the date the building permit will be issued for the project; or 2) demonstrate that the renovated building(s) will reduce overall energy usage by 20%, as compared to average energy usage for the last two years of operation. Proposals for bringing a building to current energy code standards must include a code analysis that is submitted in the application and is prepared by an architect or engineer licensed in the State of New York. Proposals for reducing energy usage by 20% must be demonstrated by either: 1) submitting an energy analysis by an architect or engineer licensed in the State of New York, or RESNET certified HERS Rater, with the application; or 2) by submitting an approved MPP application, or a signed contract with a MPP Multifamily Building Solutions Provider to reduce energy consumption by 20% in accordance with the criteria of the NYSERDA Multifamily Performance Program for Existing Buildings. The contract must be signed by the applicant and the MPP Multifamily Building Solutions Provider. Final closeout of the project shall be contingent upon a final analysis and report, including results of required energy code testing, that certifies that the project meets the chosen goal. Projects participating under MPP shall submit final certification from NYSERDA indicating that the project met the objective of reducing energy by 20%.



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**HONORABLE BOARD OF LEGISLATORS
THE COUNTY OF WESTCHESTER**

Your Committee recommends passage of an Act requiring the inclusion of universal design features in any new construction of fair and affordable residential housing that receive support from Westchester County fair and affordable housing programs and all entities seeking to improve new residential housing units with support from Westchester County fair and affordable housing programs. Through funding programs such as the New Homes Land Acquisition and the Housing Infrastructure Fund, and stewardship of the federal grant HOME and CDBG programs, the County has been a primary force in the development and maintenance of fair and affordable housing, both ownership and rental. The level of financial support offered to developers and municipalities encourages the creation of housing the County desperately needs and gives the County a strong voice in the longevity of fair and affordable housing projects, their financial stability and environmental standards.

Your Committee believes that this Act encourages the development of livable communities for all residents including the elderly, the disabled and the injured, and provides them with the opportunity to remain in their homes and communities rather than require costly institutionalized living.

Universal Design is about creating living spaces that are more comfortable, convenient, safer and easier to use for everyone. By promoting and encouraging the addition of the features of Universal Design to new construction and renovation projects where county funding is involved, the County increases the ability of people to find affordable, accessible housing and continue a good quality of life at home.

Your Committee is informed that in the design and planning of new constructions, the addition of universal design features such as no-step entry, one story living, wider doorways and hallways, turn-around floor space, grab bars, removable cabinets and reachable switches and controls are relatively inexpensive. Such features are usable by people of all ages and abilities without adaptation or specialized design. Renovation projects can also include installation of low-cost features that can add to residents' comfort, safety and ability to afford and maintain their living arrangements. Just as we have begun to add "green" considerations to county-funded projects, the County should include universal design standards to our current requirements for funding.

Your Committee hereby finds and declares that the availability of accessible, affordable, and integrated multi-generational housing options is critical to promoting and sustaining independence and successful aging in our communities and removing another barrier to fair and affordable decent housing in the county. Even if their needs and conditions change, most people prefer to remain in their homes rather than move to other facilities. However, structural barriers can trap older adults and people with mobility disabilities in their homes preventing them from participating fully in their communities, as well as depriving them of meaningful, supportive, economic and social opportunities. Such barriers can also prevent people who have mobility disabilities from visiting the homes of friends and relatives thereby limiting important life-enriching interactions.

Inclusive design features, a subset of universal design features, specifically make a home easier to visit and live in at least temporarily by people who have trouble with steps or who use wheelchairs, walkers, or other assistive devices. These features are equally welcome by people

pushing young children in strollers or pulling a wheeled suitcase or cart making them marketable to people of all ages whether or not disabled. Inclusive design features provide access to the home by incorporating key features such as a step-free entrance, wide doorways and hallways, and accessible toilet facilities. Incorporating such features makes housing available to and safer for people throughout their lifespan, thereby providing long-term benefits to society and promoting healthy, independent aging.

Your Committee therefore declares that this Act is an appropriate public purpose in the public interest for Westchester County to exercise its powers to require inclusive design features to be included in the design and construction of new residential housing types that receive County funds and/or subsidies. The standards established by this Act are consistent with this public purpose. In addition to the accessibility provisions promulgated in the building code of New York State, Section 504 of the Rehabilitation Act of 1973 and the Federal Fair Housing Act, policies that encourage the adoption of universal design features and visitability criteria can ensure that homes not covered by existing federal law are accessible to people of all physical abilities.

Your Committee further declares that the design standards which have been established by the American National Standards Institute (ANSI), ANSI 117.1-2003, are well recognized and respected and therefore provide the primary standards for the inclusive design features for residential housing types covered by this Act.

The Act requires Universal Design features in not less than fifty percent of new construction of residential housing units built with assistance from Westchester County fair and affordable housing programs. In addition, the County Board in consultation with the Commissioner of Planning shall review this Act five years from its effective date to evaluate its requirements and implementation.

Attachment: Act-Affordable Housing Universal Design Inclusion-as received & adopted (ACT-2011-93)

requirements of the State Environmental Quality Review Act ("SEQRA"). The Department of Planning has advised that this proposed Act is an unlisted action that will not have a significant effect on the environment. Your Committee concurs in this conclusion.

Likewise, the Budget Department has advised that, based on its review, this Act is determined to not have an appreciable impact. Your Committee has reviewed the annexed FIS and concurs with its conclusion.

In light of all the foregoing, your Committee recommends the adoption of this Act to Promote the construction of residences incorporating universal design features that will benefit the disable and aging populations of Westchester County.

Dated: . 2011
White Plains, New York

Bernice Speechman WOP

[Signature]

Wanda B...

COMMITTEE ON HOUSING, PLANNING
AND OPERATIONS

[Signature]

Bernice Speechman WOP
Wanda B...

Seahant WOP

[Signature]

COMMITTEE ON GENERATIONAL
CULTURAL AND ETHNIC DIVERSITY

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Seahant WOP

1004.5.2.2 Thresholds. Thresholds shall comply with Section 303.

EXCEPTION: Thresholds at exterior sliding doors shall be permitted to be $\frac{3}{4}$ inch (19 mm) maximum in height, provided they are beveled with a slope not steeper than 1:2.

1004.5.2.3 Automatic Doors. Automatic doors shall comply with Section 404.3.

1004.5.2.4 Double Leaf Doorways. Where an inactive leaf with operable parts higher than 48 inches (1220 mm) or lower than 15 inches (380 mm) above the floor is provided, the active leaf shall provide the clearance required by Section 1004.5.2.1.

1004.6 Ramps. Ramps shall comply with Section 405.

1004.7 Elevators. Elevators within the unit shall comply with Section 407, 408, or 409.

1004.8 Platform Lifts. Platform lifts within the unit shall comply with Section 410.

1004.9 Operable Parts. Lighting controls, electrical switches and receptacle outlets, environmental controls, and user controls for security or intercom systems shall comply with Sections 309.2 and 309.3.

EXCEPTIONS:

1. Receptacle outlets serving a dedicated use.
2. One receptacle outlet is not required to comply with Sections 309.2 and 309.3 where all of the following conditions are met:
 - (a) the receptacle outlet is above a length of countertop that is uninterrupted by a sink or appliance; and
 - (b) at least one receptacle outlet complying with Section 1004.9 is provided for that length of countertop; and
 - (c) all other receptacle outlets provided for that length of countertop comply with Section 1004.9.
1. Floor receptacle outlets.
3. HVAC diffusers.
3. Controls mounted on ceiling fans.
5. Controls or switches mounted on appliances.
7. Plumbing fixture controls.

1004.10 Laundry Equipment. Washing machines and clothes dryers shall comply with Section 1004.10.

1004.10.1 Clear Floor Space. A clear floor space complying with Section 305.3 positioned for parallel approach shall be provided. The clear floor space shall be centered on the appliance.

1004.11 Toilet and Bathing Facilities. Toilet and bathing fixtures shall comply with Section 1004.11.

EXCEPTION: Fixtures on levels not required to be accessible.

1004.11.1 Clear Floor Space. Clear floor space required by Section 1004.11.3.1 or 1004.11.3.2 shall comply with Sections 1004.11.1 and 305.3.

1004.11.1.1 Doors. Doors shall not swing into the clear floor space for any fixture.

EXCEPTION: Where a clear floor space complying with Section 305.3, excluding knee and toe clearances under elements, is provided within the room beyond the arc of the door swing.

1004.11.1.2 Knee and Toe Clearance. Clear floor space at fixtures shall be permitted to include knee and toe clearances complying with Section 306.

1004.11.1.3 Overlap. Clear floor spaces shall be permitted to overlap.

1004.11.2 Reinforcement. Reinforcement shall be provided for the future installation of grab bars and shower seats at water closets, bathtubs, and shower compartments. Where walls are located to permit the installation of grab bars and seats complying with Sections 604.5, 607.4, 608.3 and 608.4, reinforcement shall be provided for the future installation of grab bars and seats meeting those requirements.

EXCEPTION: Reinforcement is not required in a room containing only a lavatory and a water closet, provided the room does not contain the only lavatory or water closet on the accessible level of the unit.

1004.11.3 Toilet and Bathing Rooms. Either all toilet and bathing rooms provided shall comply with Section 1004.11.3.1 (Option A), or one toilet and bathing room shall comply with Section 1004.11.3.2 (Option B).

1004.11.3.1 Option A. Each fixture provided shall comply with Section 1004.11.3.1.

EXCEPTION: A lavatory and a water closet in a room containing only a lavatory and

water closet, provided the room does not contain the only lavatory or water closet on the accessible level of the unit.

1004.11.3.1.1 Lavatory. A clear floor space complying with Section 305.3 positioned for a parallel approach, shall be provided. The clear floor space shall be centered on the lavatory.

EXCEPTIONS:

1. A lavatory complying with Section 608.
2. Cabinetry shall be permitted under the lavatory provided such cabinetry can be removed without removal or replacement of the lavatory, and the floor finish extends under such cabinetry.

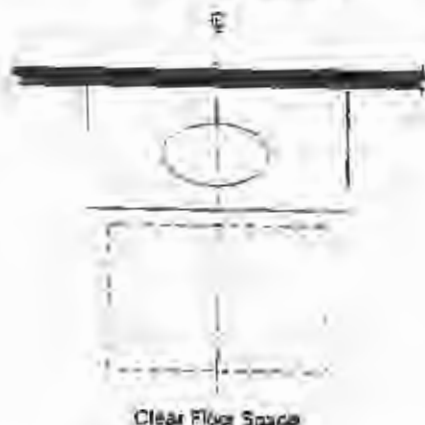


Fig. 1004.11.3.1.1
Lavatory in Type B Units—
Option A Bathrooms

1004.11.3.1.2 Water Closet. The lateral distance from the centerline of the water closet to a bathtub or lavatory shall be 10 inches (455 mm) minimum on the side opposite the direction of approach and 15 inches (380 mm) minimum on the other side. The lateral distance from the centerline of the water closet to an adjacent wall shall be 18 inches (455 mm). The lateral distance from the centerline of the water closet to a lavatory or bathtub shall be 15 inches (380 mm) minimum. The water closet shall be positioned to allow for future installation of a grab bar on the side with 18 inches (455 mm) clearance. Clearance

around the water closet shall comply with Section 1004.11.3.1.2.1, 1004.11.3.1.2.2, or 1004.11.3.1.2.3.

1004.11.3.1.2.1 Parallel Approach. A clearance 56 inches (1420 mm) minimum measured from the wall behind the water closet, and 48 inches (1220 mm) minimum measured from a point 18 inches (455 mm) from the centerline of the water closet on the side designated for future installation of grab bars shall be provided. Vanities or lavatories on the wall behind the water closet are permitted to overlap the clearance.

1004.11.3.1.2.2 Forward Approach. A clearance 66 inches (1675 mm) minimum measured from the wall behind the water closet, and 48 inches (1220 mm) minimum measured from a point 18 inches (455 mm) from the centerline of the water closet on the side designated for future installation of grab bars shall be provided. Vanities or lavatories on the wall behind the water closet are permitted to overlap the clearance.

1004.11.3.1.2.3 Parallel or Forward Approach. A clearance 56 inches (1420 mm) minimum measured from the wall behind the water closet, and 42 inches (1065 mm) minimum measured from the centerline of the water closet shall be provided.

1004.11.3.1.3 Bathing Facilities. Where a bathtub or shower compartment is provided it shall conform with Section 1004.11.3.1.3.1, 1004.11.3.1.3.2, or 1004.11.3.1.3.3.

1004.11.3.1.3.1 Parallel Approach Bathtubs. A clearance 60 inches (1525 mm) minimum in length and 30 inches (760 mm) minimum in width shall be provided in front of bathtubs with a parallel approach. Lavatories complying with Section 608 shall be permitted in the clearance. A lavatory complying with Section 1004.11.3.1.1 shall be permitted at the control end of the bathtub if a clearance 48 inches (1220 mm) minimum in length and 30 inches (760 mm) minimum in width for a parallel approach is provided in front of the bathtub.

1004.11.3.1.3.2 Forward Approach Bathtubs. A clearance 80 inches (1525 mm) minimum in length and 48 inches (1220 mm) minimum in width shall be

provided in front of bathtubs with a forward approach. A water closet shall be permitted in the clearance at the control end of the bathtub.

1004.11.3.1.3.3 Shower Compartment. If a shower compartment is the only bathing facility, the shower compartment shall have dimensions of 36 inches (915 mm) minimum in width and 36 inches (915 mm) minimum in depth. A clearance of 48 inches (1220 mm) minimum in length, measured perpendicular from the shower head wall, and 30 inches (760 mm) minimum in depth, measured from the face of the shower

compartment, shall be provided. Reinforcing for a shower seat is not required in shower compartments larger than 36 inches (915 mm) in width and 36 inches (915 mm) in depth.

1004.11.3.2 Option B. One of each type of fixture provided shall comply with Section 1004.11.3.2. The accessible fixtures shall be in a single toilet/bathing area, such that travel between fixtures does not require travel through other parts of the unit.

1004.11.3.2.1 Lavatory. Lavatories shall comply with Section 1004.11.3.2.1.

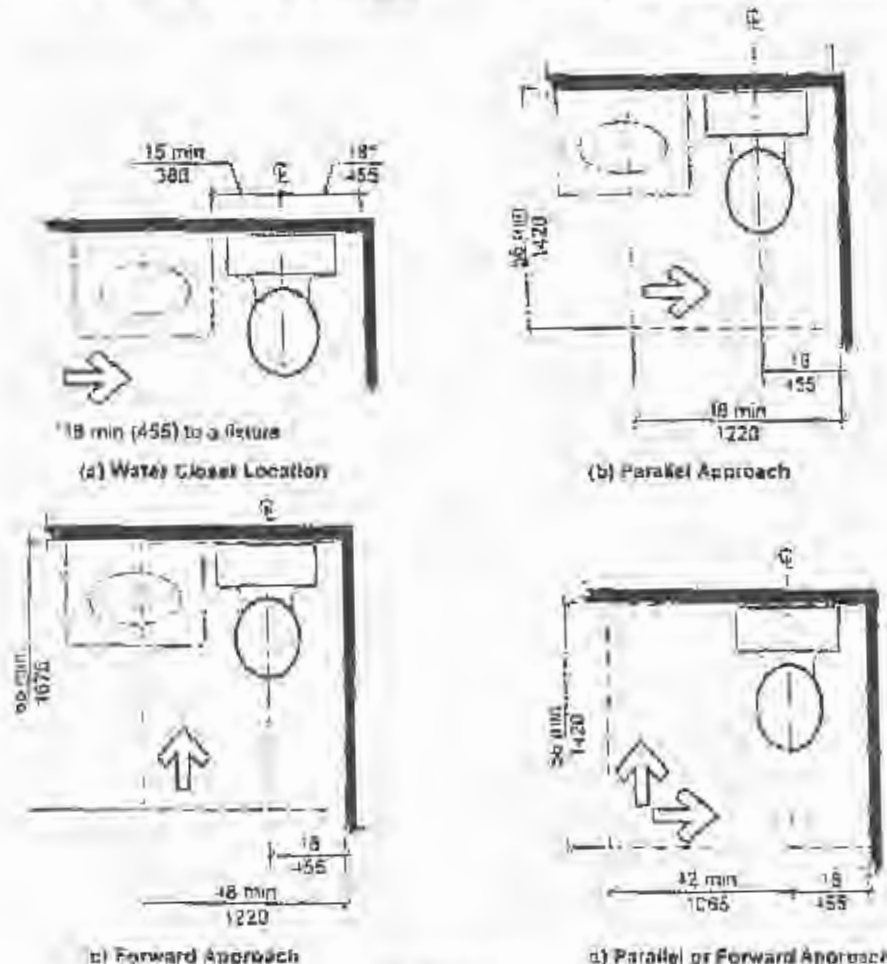


Fig. 1004.11.3.1.2
Water Closets in Type B Units

1004.11.3.2.1.1 Clear Floor Space. A clear floor space complying with Section 305.3, positioned for a parallel approach, shall be provided.

EXCEPTIONS:

1. A lavatory complying with Section 606.
2. Cabinetry shall be permitted under the lavatory, provided such cabinetry can be removed without removal or replacement

of the lavatory, and the floor finish extends under such lavatory.

1004.11.3.2.1.2 Position. The clear floor space shall be centered on the lavatory.

1004.11.3.2.1.3 Height. The front of the lavatory shall be 34 inches (865 mm) maximum above the floor, measured to the higher of the fixture rim or counter surface.

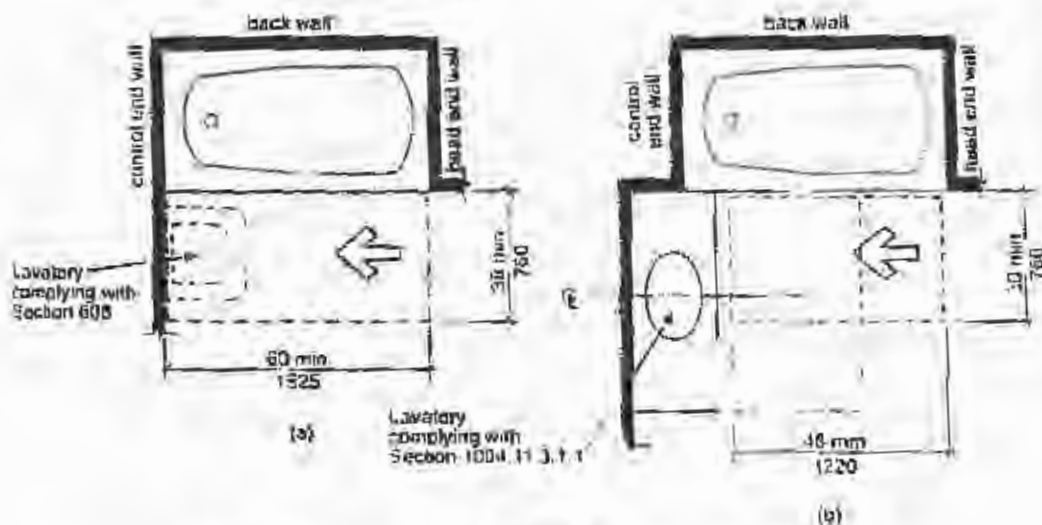


Fig. 1004.11.3.1.3.1
Parallel Approach Bathroom in Type B Units—Option A Bathroom

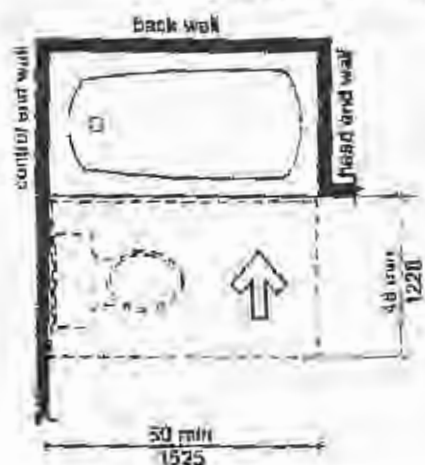


Fig. 1004.11.3.1.3.2
Forward Approach Bathroom in Type B Units—
Option A Bathroom

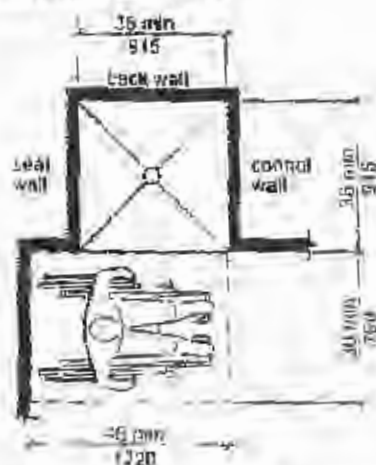


Fig. 1004.11.3.1.3.3
Transfer-Type Shower Compartment in
Type B Units

ICC/ANSI A117.1-2003

Chapter 10. Dwelling Units and Sleeping Units

1004.11.3.2.2 **Water Closet.** The water closet shall comply with Section 1004.11.3.1.2.

1004.11.3.2.3 **Bathing Facilities.** Where either a bathtub or shower compartment is provided, it shall conform with Section 1004.11.3.2.3.1 or 1004.11.3.2.3.2.

1004.11.3.2.3.1 **Bathtub.** A clearance of 48 inches (1220 mm) minimum in length measured perpendicular from the control end of the bathtub, and 30 inches (760 mm) minimum in width shall be provided in front of bathtubs.

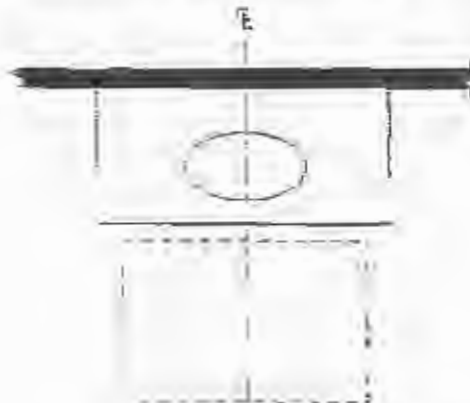
1004.11.3.2.3.2 **Shower Compartment.** A shower compartment shall comply with Section 1004.11.3.1.3.3.

1004.12 **Kitchens.** Kitchens shall comply with Section 1004.12.

1004.12.1 **Clearance.** Clearance complying with Section 1004.12.1 shall be provided.

1004.12.1.1 **Minimum Clearance.** Clearance between all opposing base cabinets, counter tops, appliances, or walls within kitchen work areas shall be 40 inches (1015 mm) minimum.

1004.12.1.2 **U-Shaped Kitchens.** In kitchens with counters, appliances, or cabinets on three contiguous sides, clearance between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas shall be 60 inches (1525 mm) minimum.



(a) Clear Floor Space

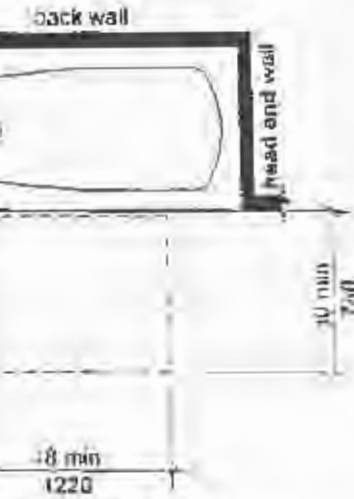
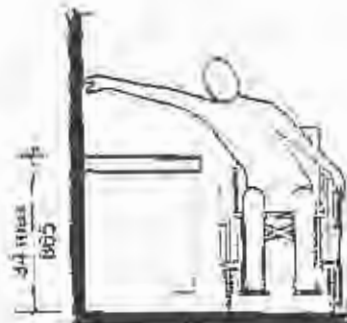


Fig. 1004.11.3.2.3.1
Bathroom Clearance in Type B Units—
Option B Bathrooms



(b) Height

Fig. 1004.11.3.2.1
Lavatory in Type B Units—Option B Bathrooms

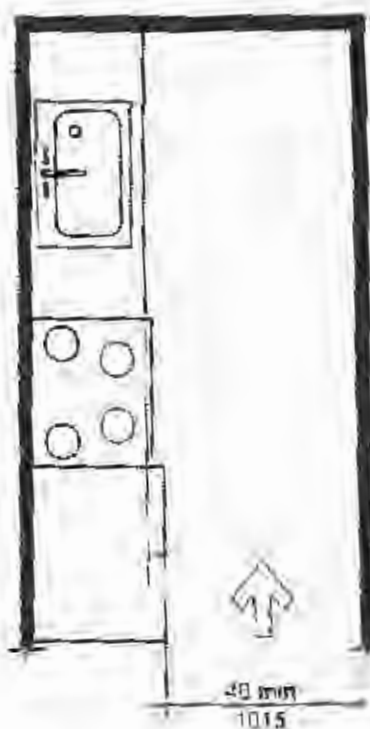
1004.12.2.2 Dishwasher. A clear floor space, positioned for a parallel or forward approach to the dishwasher, shall be provided. The clear floor space shall be positioned beyond the swing of the dishwasher door.

1004.12.2.3 Cooktop. A clear floor space, positioned for a parallel or forward approach to the cooktop, shall be provided. The centerline of the clear floor space shall align with the centerline of the cooktop. Where the clear floor space is positioned for a forward approach, knee and toe clearance complying with Section 306 shall be provided. Where knee and toe space is provided, the underside of the range or cooktop shall be insulated or otherwise configured to prevent burns, abrasions, or electrical shock.

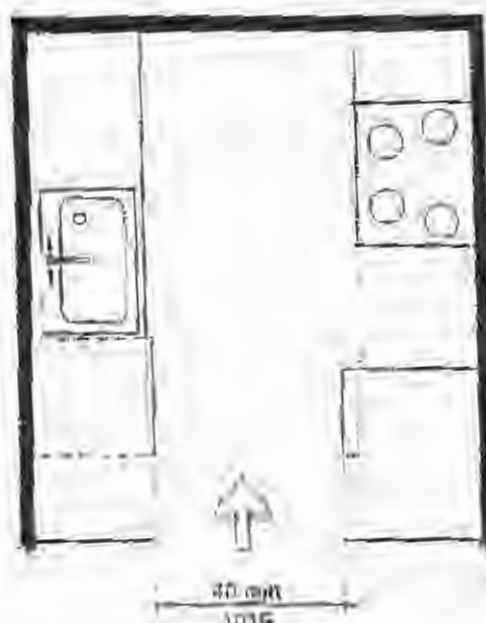
1004.12.2.4 Oven. A clear floor space, positioned for a parallel or forward approach to the oven, shall be provided.



Fig. 1004.12.1.2
U-Shaped Kitchen Clearance in Type B Units



(a)



(b)

Fig. 1004.12.1.1
Minimum Kitchen Clearance in Type B Units

ICC/ANSI A117.1-2003

Chapter 10. Dwelling Units and Sleeping Units

1004.12.2.5 Refrigerator/Freezer. A clear floor space, positioned for a parallel or forward approach to the refrigerator/freezer, shall be provided.

1004.12.2.6 Trash Compactor. A clear floor space, positioned for a parallel or forward approach to the trash compactor, shall be provided.

1005 Units with Accessible Communication Features

1005.1 General. Units required to have accessible communication features shall comply with Section 1005.

1005.2 Unit Smoke Detection. Where provided, unit smoke detection shall include audible notification complying with NFPA 72 listed in Section 105.2.2.

1005.3 Building Fire Alarm System. Where a building fire alarm system is provided, the system wiring shall be extended to a point within the unit in the vicinity of the unit smoke detection system.

1005.4 Visible Notification Appliances. Visible notification appliances, where provided within the unit as part of the unit smoke detection system or the building fire alarm system, shall comply with Section 1005.4.

1005.4.1 Appliance. Visible notification appliances shall comply with Section 702.

1005.4.2 Activation. All visible notification appliances provided within the unit for smoke detection notification shall be activated upon smoke detection. All visible notification appliances provided within the unit for building fire alarm notification shall be activated upon activation of the building fire alarm in the portion of the building containing the unit.

1005.4.3 Interconnection. The same visible notification appliances shall be permitted to provide notification of unit smoke detection and building fire alarm activation.

1005.4.4 Prohibited Use. Visible notification appliances used to indicate unit smoke detection or building fire alarm activation shall not be used for any other purpose within the unit.

1005.5 Unit Primary Entrance. Communication features shall be provided at the unit primary entrance complying with Section 1005.5.

1005.5.1 Notification. A hard-wired electric doorbell shall be provided. A button or switch shall be provided on the public side of the unit pri-

mary entrance. Activation of the button or switch shall initiate an audible tone within the unit.

1005.5.2 Identification. A means for visually identifying a visitor without opening the unit entry door shall be provided. Peepholes, where used, shall provide a minimum 180-degree range of view.

1005.6 Site, Building, or Floor Entrance. Where a system permitting voice communication between a visitor and the occupant of the unit is provided, at a location other than the unit entry door, the system shall comply with Section 1005.6.

1005.6.1 Public or Common-Use Interface. The public or common-use system interface shall include the capability of supporting voice and TTY communication with the unit interface.

1005.6.2 Unit Interface. The unit system interface shall include a telephone jack capable of supporting voice and TTY communication with the public or common-use system interface.

1005.7 Closed-Circuit Communication Systems. Where a closed-circuit communication system is provided, the public or common-use system interface shall comply with Section 1005.6.1, and the unit system interface in units required to have accessible communication features shall comply with Section 1005.6.2.

ACT NO. 2011

AN ACT authorizing the County of Westchester to require inclusive design features in not less than fifty percent of new construction of residential housing built with assistance from Westchester County fair and affordable housing programs.

BE IT ENACTED by the Board of Legislators of the County of Westchester as follows:

Section 1. Unless otherwise provided for herein, all entities seeking to build new residential housing units upon property purchased with support from Westchester County fair and affordable housing programs and all entities seeking to improve new residential housing units with support from Westchester County fair and affordable housing programs shall certify to the Commissioner of Planning that not less than fifty percent of such new residential housing units will be constructed so as to incorporate Universal Design features consistent with the following requirements:

1. **Universal Design Features.** Sites, buildings and units shall be constructed in accordance with the provisions of ANSI 117.1-2003, unless otherwise noted, so as to incorporate the Universal Design features set forth below:
 - a. **Accessible Entrance and Route.** An accessible, no-step entrance shall be provided that is accessible via a continuous, unobstructed path at least thirty-six (36) inches wide connecting the interior with exterior elements such as parking and sidewalks.
 - b. **Accessible Route Within Unit.** All floor layouts shall be designed to provide an accessible route on each floor of the dwelling unit pursuant to Type B Unit requirements. All interior doors providing passage within the unit shall be 36" wide (nominal).
 - c. **Accessible Bathrooms.** Each bathroom, full or half, shall be designed, at a minimum, for accessibility pursuant to Type B Unit requirements. If the unit design provides for habitable space on any level, that level shall be served by a full bathroom.

- d. **Accessible Kitchen.** All unit kitchens shall be designed, at a minimum, for accessibility pursuant to Type B Unit requirements.
- e. **Receptacles and Controls.** All receptacles, switches and environmental controls shall be installed in accordance with Type B Unit requirements.

§2. Any corporate, municipal or private entity, seeking an exemption from the requirements set forth in Section "I" of this Act must state good cause for the same in an application subject to the approval of the Commissioner of Planning. For the purposes of this Section, "good cause" shall include, but not be limited to, the land rising or falling so steeply that required access cannot be achieved without extensive grading; the characteristics of the intended occupants; limitations on unit and building design and layout or significant compliance costs. The Commissioner of Planning shall take all actions necessary to ensure compliance with the requirements of this Act.

§3. If any word, phrase, clause, sentence, paragraph, section or part of this Act shall be adjudged by any court of competent jurisdiction to be invalid, such judgment shall not affect, impair or invalidate the remainder thereof, but shall be confined in its operation to the word, phrase, clause, sentence, paragraph, section or part thereof directly involved in the controversy in which such judgment shall have been rendered.

§4. This Act shall be reviewed by the County Board in consultation with the Commissioner of Planning five years from its effective date to evaluate its requirements and implementation.

§5. This Act shall take effect immediately but shall not apply to any funding requests pending before the Commissioner of Planning on its effective date.

DRAFT Model Ordinance

Senior Housing Floating Zone

Westchester County Department of Planning,

August 2021

The following Senior Housing Floating Zone model ordinance is intended to supplement existing municipal zoning codes in Westchester County municipalities for the purposes of: (1) ensuring the provision and promotion of housing development for seniors; (2) allowing seniors to age-in-place within their homes and within their communities; and (3) promoting fair and affordable housing opportunities.

In addition to the use of tools such as Senior Housing Floating Zones, municipalities should also recognize that most seniors do not live in age-restricted housing. Therefore, municipalities should also adopt community-wide strategies that promote visitability and universal design in all zoning districts, and allow for flexible housing options (such as accessory dwelling units, smaller homes, and intergenerational housing) that can help meet the evolving needs of the burgeoning older-adult population.

Section 1: Purpose and Intent

Senior Housing Floating Zones, which permit planned residential developments for seniors, known as Adult Living Communities, are encouraged for the following purposes:

1. Establishing senior housing districts serves an important inclusionary purpose in addressing the need for senior housing.
2. Housing for seniors, properly located near services, shopping, transportation and support networks, is beneficial to the general welfare and health of seniors and the public.
3. Encouraging the development of market-priced and affordable multiple-dwelling units for seniors provides a range of housing choices that can enable seniors of various abilities and income levels to live there without leaving established networks of nearby family and friends.
4. Adult Living Communities, for the purposes of this ordinance, are unlike an Assisted Living Facility, a Residential Health Care Facility or a Continuing Care Retirement Facilities which provide resident care and are regulated separately under New York State Law.
5. Providing, within the boundary of the project, social, recreational and other facilities, contributes to the independence and well-being of seniors.

6. The safety and convenience of residents will be enhanced through site and housing unit design requirements which consider:
 - a. The special physical and social needs of seniors; and
 - b. The physical characteristics of the project site.
7. A Senior Housing District may involve renovating or adding residential space to an existing building, allowing mixed uses, such as medical offices, retail, entertainment and services on the first floor of residential buildings. Such mix of uses is compatible with the senior housing district, will encourage the continued use of existing structures, preserve the historic characteristics of the village/urban areas, promote social interaction, encourage integration of the senior housing district into the existing neighborhood, and encourage the design of new construction to be compatible with existing buildings.
8. Creating a floating zone which can be mapped in certain areas provides flexibility in designing, on a large or small scale, senior housing opportunities that will be integrated into the existing fabric of the community.

Section 2: Definitions

As used in this local law, the following terms shall have the meanings indicated:

ADULT DAY CARE CENTER - A facility which provides therapeutic programs of social and health services as well as activities for adults who have functional impairments in a protective environment that provides as non-institutional an environment as possible. Participants use services for less than 24 hours a day.

ADULT LIVING COMMUNITY - A planned residential development, with or without mixed uses, consisting of a building or group of buildings for seniors. These buildings may contain multifamily dwelling units, two family duplex dwelling units, single-family cottages, or a mixture of these dwelling unit types, offering universal design features and adaptability for all physical abilities.

Accessory retail uses may be located on the first floor of residential buildings. The Adult Living Community can be designed as an Independent Living Facility and/or Congregate Housing, but shall not include Residential Health Care Facilities, Assisted Living Facilities or Continuing Care Retirement Facilities which are separately regulated by New York State.

AFFORDABLE AFFIRMATIVELY FURTHERING FAIR HOUSING (AFFH) UNIT- Affordable AFFH units available in an Adult Living Community are those which have:

1. A *sales price* within the means of a household whose income does not exceed 80% of the area median income (AMI) for Westchester as defined annually by the U.S. Department of Housing and Urban Development (HUD) and for which the annual housing cost of a unit including common charges, principal, interest, taxes and insurance (PITI) does not exceed 33% of 80% AMI, adjusted for family size and that is marketed in accordance with the Westchester County Fair & Affordable Housing Affirmative Marketing Plan.; or

2. A *rental price* within the means of a household whose income does not exceed 60% AMI and for which the annual housing cost of the unit, defined as rent plus any tenant paid utilities, does not exceed 30% of 60% AMI adjusted for family size and that is marketed in accordance with the Westchester County Fair & Affordable Housing Affirmative Marketing Plan.

APPLICANT - Any person, corporation or other entity applying for a Senior Housing District designation.

ASSISTED LIVING FACILITY - A facility that blends residential, on-site monitoring and personal services and/or home care services, in a home-like setting, to five or more adult residents unrelated to the assisted living provider and constructed, operated, and providing oversight pursuant to Article 46-B of New York State Public Health Law (Assisted Living Reform Act of 2004), NYCRR Title 10, Section 4662, Part 1001.

CONGREGATE HOUSING - A facility consisting of a building, or a group of buildings in a neighborhood setting, which serves as a residence for seniors who can live independently, but where meals may be available in a dining room setting. Residents may be offered a variety of housing choices such as a stand-alone cottage/house, townhouse, apartment or accommodations with shared common areas and a variety of price ranges. In congregate housing developments, services provided may include food service, social service and referral consultation, housekeeping assistance and central laundry. No licensed professional medical care or related services are directly provided by on-site staff. Congregate Housing shall not include Residential Health Care Facilities, Assisted Living Facilities or Continuing Care Retirement Facilities which are separately regulated by New York State.

CONTINUING CARE RETIREMENT FACILITY - A facility or facilities that provide a comprehensive, cohesive living arrangement for the elderly, oriented to enhance the quality of life. It provides independent living units, and provides a meal plan, a range of health care and social services, and access to health services, prescription drugs, and rehabilitation services. These facilities are constructed, operated, and overseen pursuant to Article 46 of New York State Public Health Law.

GREEN BUILDING - Structures that incorporate the principles of sustainable design in which the impact of a building on the environment will be minimal over the lifetime of that building. Green buildings incorporate principles of energy and resource efficiency, practical application of waste reduction and pollution prevention, good indoor air quality, natural light to promote occupant health, and efficiency in design and construction.

INDEPENDENT LIVING FACILITY - A building, portion of a building or group of buildings containing dwelling units with full kitchens and bathrooms specially designed for use and occupancy by seniors.

MIXED USE STRUCTURES - Buildings that blend, as a unified complementary whole, a mixture of residential uses and accessory business and retail uses in a single structure. By incorporating retail space on the first floor of residential buildings, mixed-use developments allow residents to conduct their daily affairs on site and without the need for a vehicle, and also provide additional

retail areas for the public.

OPEN SPACE - Any area of land essentially unimproved and set aside, dedicated, designated or reserved for recreation or conservation or left in its natural state.

RESIDENTIAL HEALTH CARE FACILITY - Residential facilities providing rooms, supportive assistance, health care, skilled nursing care, and therapies. These facilities are constructed, operated, and overseen pursuant to Article 28 of New York State Public Health Law and 10 NYCRR § 86.2.

SENIOR - An individual who is at least 55 years of age.

SITE PLAN - A written schematic prepared to specifications, showing the arrangement, layout and design of the proposed development including the location of proposed buildings, streets and sidewalks on the site. For purposes of this local law, site plan review will be conducted by the municipality in accordance with Town/Village/City law.

UNIVERSAL DESIGN - The design of buildings and installation with fixtures and equipment that are accessible to, and usable by, people of all ages without the need for special adaptation or specialized design. The goal for universal design is to create a safer, more comfortable and user-friendly place to live by incorporating accessible and barrier-free design into buildings.

VISITABILITY - Construction standards that allow people with mobility impairments to live and visit, featuring wide doorways, at least one half-bath on main floors, accessible placement of electrical controls, and one zero-step entrance to buildings.

Section 3: General Provisions

- A. The Senior Housing District is established in the zoning regulations. The Senior Housing District is a floating zone, unmapped at initial adoption, and created by amendment to the official zoning map through exercise of the [Town Board/Village Board of Trustees/City or Common Council]'s legislative authority.
- B. Before amending the zoning map to create a Senior Housing District, the [Town Board/Village Board of Trustees/City or Common Council] shall consider, on a case-by-case basis, an applicant's site plans to develop an Adult Living Community in appropriate locations and in a manner that complies with the requisites of this law.

Section 4: Site Selection

- A. Senior Housing Districts may be approved in any district that allows residential uses. Such district shall be affixed to the official zoning map where such district is approved.
- B. Sites must be located in areas suitable for residential purposes, preferably a topographically flat area with minimal grade separation between the facility and the surrounding area.
- C. Sites must be reasonably free of industrial odors, noise, dust, air pollution, incompatible land uses, steep slopes, wetlands and other environmental or physical constraints.

- D. Sites should be located within close proximity (approximately 600 feet) to public transportation or, in the alternative, designed for future routing of buses, shuttle buses or other transportation service at the site.

Section 5: Permitted Uses

- A. In a Senior Housing District, all buildings or premises shall be used as an Adult Living Community, including where approved mixed use structures are part of the district (See Section 7 (C.), below). The dwelling units shall be available for sale or lease, designed to provide living, recreational and dining accommodations for seniors.
- B. At least 80 percent of the occupied units in a Senior Housing District must be occupied by at least one person 55 years of age or older per unit. A lower percentage of units below 80% must receive a waiver from Human Rights Commission.
- C. Within all Senior Housing Districts with 10 or more housing units, no less than 10% of the total number of units must be created as affordable AFFH units. In residential developments of five to nine units, at least one affordable AFFH unit shall be created.
- D. Mixed use buildings, with accessory uses such as those set forth in Section 8A, will be allowed if compatible with the Adult Living Community development and the surrounding village or urban setting. Uses open to the public shall be located on the first floor and shall have an exterior entrance. Mixed use occupancy shall be limited to uses that offer services/support for seniors. These services also offer services/support to the general public.

Section 6: Accessory Uses

- A. Mixed Uses - Senior Housing Districts may provide for accessory uses on the first floor of residential buildings, which are accessible to residents and the public alike. Among the accessory uses are:
1. Medical/health/dental office
 2. Pharmacy
 3. Café/restaurant
 4. Market/convenience store
 5. Salon/spa/barber shop
 6. Gift shop
 7. Bookstore
- B. Senior Housing Districts may provide for some or all accessory uses that are customarily incidental and subordinate to the primary uses, which are limited to use by residents, their guests and employees. Among the accessory uses are:
1. Adult day care center
 2. Community meeting rooms
 3. Library
 4. Group dining rooms; casual dining options
 5. Social service delivery offices, limited to use by residents, with no visible

- sign announcing their presence
6. Physical therapy, sauna/spa whirlpool, Jacuzzi and exercise rooms, limited to use by residents
 7. Outdoor active and passive recreation space, outdoor sitting areas, walking trails or other similar outdoor recreation or leisure facilities
 8. Art and music studios
 9. Clubhouses
 10. Computer rooms
 11. Wellness center
 12. Indoor and/or outdoor swimming pools
 13. Tennis, paddleball, pickleball and handball facilities
 14. Shuffle board and basketball courts
 15. Indoor recreation or leisure facilities, including game rooms, movie theaters and concert halls
 16. On-site storage areas
 17. Inter-faith chapel
 18. Guest suites for overnight visitors
 19. Self-service laundries (washers and dryers)
 20. Group-service laundry facilities necessary to operate the housekeeping services and dining facilities of the Adult Living Community

Section 7: Area and Density Regulations

The following area and density requirements shall apply to Adult Living Community projects within a Senior Housing District:

- A. Tracts which are 2 acres or larger shall be eligible for Senior Housing District designation. Smaller sites in village and urban settings may also be eligible to encourage creative re-use of existing buildings/infill sites and to take advantage of nearby services, amenities, and infrastructure.
- B. The Adult Living Community shall have a maximum density of 10 dwelling units per gross acre, or up to 40 dwelling units per gross acre in dense, urban settings. A density bonus may be permitted pursuant to paragraph E to increase the density. Maximum density must reflect available infrastructure such as sanitary sewer and water utilities.
- C. No building or structure shall hereafter be erected or altered to exceed 90 feet in height, or the maximum permitted height in the underlying zone where mapped, whichever is greater.
- D. An area or areas for outdoor recreational purposes shall be set aside exclusively for the use of the occupants and their guests unless the site is located in a downtown area or public recreation is provided within 200 feet. This land shall be exclusive of any land area used primarily for vehicular modes of transportation, including roads, parking areas, garages and other features. A minimum of 10 square feet per dwelling unit of indoor recreation must be provided. Such area shall not be used for storage or any such similar purpose and shall be available to all occupants and their guests.

- E. Affordable AFFH Unit Density Bonus. Developers who propose to include affordable AFFH units are entitled to pursue an increase in the density of the permitted number of units by as much as 25% of the units which could be permitted if the land were developed into lots or units conforming to all the normally applicable requirements of this section. For every two approved affordable AFFH housing units, the developer shall be entitled to build one additional market-rate unit, up to a maximum unit count of 25% above the permitted number of units.

Section 8: Certification of Adequate Water and Sewer Facilities

The applicant must provide certification by the Westchester County Department of Health that the water supply and sewage disposal facilities are adequate for the projected number of residents.

Section 9: Application Procedure

The applicant must conform to all project submission, review, and fee requirements of the [City, Town, or Village].

Section 10: Building Design Standards

- A. Developers must ensure that proposed Adult Living Communities are planned as a cohesive unit with a comprehensive site plan and exhibit creativity and variety in design features, circulation and utility service. Architectural styles must be compatible and attain a high standard of design. These guidelines shall be applicable to all proposed Adult Living Communities.

1. Buildings in the Adult Living Community should be grouped together to create an attractive and engaging streetscape.
2. Buildings that face the street should relate to the street through interesting façades, entranceways and window treatment.
3. Building design should reflect elements of traditionally styled local architecture, appear as a comprehensive sequence in size and shape, be compatible with adjacent buildings and positively contribute to the architectural theme of the Adult Living Community.
4. Each building and living unit shall exhibit superior universal design, quality of construction, appearance and operational standards.
5. New construction should feature elements such as open or enclosed porches, parks, courtyards or plazas and landscape amenities that are at a human scale.
6. Creative use of gables, dormers, and other roofline elements to highlight entrances and bring a sense of architectural distinction are encouraged.
7. Longer buildings should provide fluctuations in the roofline, designed to break up the monotony of the façade and make entryways more prominent. The maximum length of an uninterrupted building façade facing streets shall be thirty (30) feet.
8. Antennas, satellite dishes, air-handling units and other mechanical equipment placed on a roof should not be visible from the street, with the exception of solar collectors.
9. A separate drop-off and pickup area shall be required adjacent to the main building entrance, located in a manner that will not create congestion on the sidewalk or crosswalk.
10. Green building design and alternative energy measures are strongly encouraged, including:
 - a. Green roofs/walls - to reduce energy cost, reduce stormwater runoff, extend the life

- of the roof and filter dust particles.
 - b. Geothermal energy – geothermal heat pumps to provide heat and cooling to the building.
 - c. Solar panels - to generate heat or electricity.
 - d. Bioretention system – to process and remove contaminants and sedimentation from stormwater runoff by collecting stormwater into a treatment area or rain garden consisting of a grass buffer strip, sand bed, ponding area, organic or mulch layer, planting soil, and plants.
 - e. Permeable pavement - use sustainable materials and techniques for permeable pavements with a base and subbase that allow the movement of stormwater through the surface, to reduce runoff, trap suspended solids and filters pollutants.
 - f. Onsite stormwater harvest and reuse – collect rainwater in rain barrels or cisterns and use for irrigation or for non-potable activities.
11. Supply broadband connections to all units to the extent practicable.

B. Independent living facilities may be designed and constructed as multi-story apartment buildings, duplexes, cottage-style living, and/or mixed-use buildings in a walkable, neighborhood-like setting. The building design standards stated above shall govern the layout and design of the buildings in the community.

Section 11: Dwelling Unit Requirements

- A. Unit size. The minimum permitted floor area shall be 450 square feet for an efficiency unit. The minimum permitted floor area shall be 675 square feet for a one bedroom unit. The minimum permitted floor area shall be 750 square feet for two-bedroom units. The minimum gross floor area per affordable AFFH unit shall not be less than 80% of the average floor area of non-restricted housing units in the development.
- B. Unit amenities. All dwelling units shall be designed for independent living and shall:
- 1. Contain full kitchen facilities, including but not limited to a sink, refrigerator, stove, range or combined unit.
 - 2. Include universal design in 50% of the units to ensure spaces that everyone, regardless of age, size, or ability, can live in or visit.
 - 3. Contain:
 - a. Doorways that are a minimum of three feet wide to accommodate wheelchairs.
 - b. Lever-type doors, handles and faucets.
 - c. Nonskid floors.
 - d. Ramps in addition to steps.
 - e. Door thresholds that are flush with the floor.
 - f. One no-step entrance on an accessible path.
 - g. Electric outlets located a minimum of 24 inches above the floor.
 - h. Luminous light switches in bedrooms, bathrooms, and corridors located no higher than 48 inches above the floor.
 - i. A bathroom on the main level of each unit with enough space to accommodate wheelchair. Each bathroom shall have a toilet, and a bathtub or shower stall with a built-in bench or room for a bath stool. All bathrooms shall:

- 1) be constructed without sharp surfaces and with non-slip floor surfaces;
- 2) provide backing for full grab-bar installation around showers and tub areas;
- 3) have doors that open out;
- 4) have one-handed control of water taps; and
- 5) have direct access to bedrooms and living room.
- j. Mechanical ventilation, whenever natural ventilation is not adequate for comfort and health and whenever kitchens and bathrooms do not have windows on an exterior wall.
- k. Air conditioning with an individually controlled thermostat.
- l. Adequate heating system with a designed capacity to maintain 78° F. in all bathrooms and 75° F. in all habitable rooms, with an individually controlled thermostat.
- m. Electric outlets located a minimum of 24 inches above the floor.
- n. Broadband connection should be available in every unit, to the extent practicable.
- o. Corridor of a length and design to facilitate wayfinding, including a route on visitable floor that has a clear minimum width opening of 32 inches.
- p. Elevators for access to all units above the first story.

Section 12: Sidewalks and Walkways

Adult Living Communities shall emphasize pedestrian circulation and provide a safe and reasonable system of vehicular circulation and parking conveniently accessible to all occupants. Sidewalks shall follow streets and link buildings, parking areas, transit stops and adjacent properties. Roads shall be designed to calm vehicular traffic on streets and roads within the Adult Living Community to ensure pedestrian and bicycle friendly design and traffic safety. Benches shall be provided at appropriate intervals.

- A. Continuous pedestrian sidewalks or walkways shall be provided along roads and streets and include connections to the entrance of all buildings on the site. Walkways shall connect pedestrians to transit stops, street crossings, buildings and store entry points, and central features and community spaces on the site.
- B. Slopes in excess of 1:3 shall be avoided. Where exceeded, handrails shall be provided and set at a minimum of 3.5 feet in height.
- C. Sidewalks shall incorporate universal access standards for individuals with developmental disabilities where appropriate and necessary.
- D. To encourage pedestrian and bicycle circulation, amenities such as benches, bicycle parking racks, and appropriate signage shall be provided near all building entrances and appropriately spaced along sidewalks.
- E. Trash bins shall be conveniently located and shall be covered and screened using similar design and materials to the primary building.
- F. Passenger drop-off shall be located near entrance and elevator halls of buildings.

Section 13: Street Design Standards and Traffic Calming

A well-defined streetscape creates an attractive environment with clearly defined pedestrian, vehicular, and shared or overlapping zones. At intersections, at crossings and in parking lots where pedestrian traffic is likely, traffic-calming mechanisms shall be utilized. The [City/Town/Village] should consider:

- A. The alignment of intersections for clear visual observation.
- B. Traffic calming strategies to slow traffic and to increase the safety of pedestrians.
- C. Narrower street widths, with a minimum width of ten (10) feet.
- D. Speed tables or bumps at the edges of pick-up/drop-off zones in front of building entrances.
- E. Construction of sidewalks, curbs and curb bump-outs or extensions.
- F. Use of street trees and planted medians.
- G. On-street parking.
- H. Traffic calming techniques of the Institute of Traffic Engineers, sponsored and funded by the Federal Highway Administration <http://www.ite.org/traffic/tcdevices.asp>.

Section 14: Street Trees and Vegetation

- A. Streets within the Adult Living Community shall be bordered on both sides by shade trees.
- B. Shade trees shall be drought-tolerant, native or on-invasive species, upward branching so as to limit the need for irrigation and obstruction of sidewalks. Trees shall have a caliper of no less than three inches when planted. Planting of trees susceptible to insect damage should be avoided.
- C. Trees shall be located no more than thirty-five (35) feet apart.
- D. Trees may be planted individually or clustered. Clumping is permitted, using both sides of the sidewalk for tree planting, in order to frame or enhance a view. The center of the tree should be four feet from pavement or curbs.
- E. Trees should be located so as to avoid obvious obstruction of visibility to drivers and so that branches do not protrude into the pedestrian path of travel, and to avoid interference between root systems and utilities.
- F. Trees must survive one year after planting prior to the release of performance guarantees.
- G. Each existing healthy, mature deciduous shade tree, with a caliper of three inches or greater, preserved within the required planting area may be substituted for planting one required

street tree.

Section 15: Parking

- A. The minimum residential off-street parking requirements shall be 1 space per unit or the number of parking spaces required in the underlying zoning district, whichever is less. There shall be not less than one additional off-street parking space for each on-duty staff member plus one space for each 10 persons dwelling therein to be designated as visitor parking. If, as part of the site plan approval process, it is determined that less than the required number of parking spaces will satisfy the intent of this chapter, the [Town Board/Village Board of Trustees/City or Common Council] may waive the improvement of not more than 50% of the required spaces.
- B. Parking shall be located behind buildings whenever possible. If circumstances somehow prohibit rear of building parking, front or side of building parking will be permitted as determined necessary by the [Town Board/Village Board of Trustees/City or Common Council].
- C. Where rear of building parking is provided, an entrance shall be provided in the rear of the building that is accessible from the parking lot, in addition to an entrance provided at the front or side of the building.
- D. Parking lots shall be designed to allow pedestrians to safely move from their vehicles to the building.
- E. An accessible path of travel must be provided directly from van-accessible parking space(s) to a sidewalk.
- F. Curb ramps (or curb cuts) with detectable warnings must be provided wherever a curb is part of a path of travel and must be incorporated into the path of pedestrian or vehicular travel to/from crosswalks, when provided.
- G. The parking spaces may be sited in a parking garage located within 500 feet of the dwelling units.

Village of Ossining, NY
Monday, July 19, 2021

Chapter 62. Affordable Housing

Article I. Requirements for Affordable Housing; General Provisions

§ 62-3. Inclusion of affordable dwelling units in rental housing required.

- A. Each residential development application which proposes the construction or substantial rehabilitation of six or more dwelling units of rental housing shall provide a set-aside of 10% affordable housing units, rounded up to the nearest whole number.
- B. Affordable housing units shall:
 - (1) Be generally distributed throughout the rental housing;
 - (2) Not be distinguished as a class from the Market-Rate rental housing;
 - (3) Be distributed among one-, two- and three-bedroom units, etc., in the same proportion as the dwelling units in the market-rate rental housing; and
 - (4) Each have a floor area of not less than 80% of the average floor area of the dwelling units in the market-rate rental housing.
- C. Affordable housing units shall only be rerented to individuals or families who qualify for such affordable housing at the time of such rerental, and the rent for such rerental shall not exceed the rent as described in the restrictive covenant.
- D. In lieu of providing all or a part of on-site affordable housing units in the rental housing as provided herein, the residential development application may request and, upon a showing of an undue burden of financial hardship to the project satisfactory to the Village, the Village Board may permit a developer to create affordable housing units at another location in the Village or contribute to the affordable housing fund buyout fee. Amounts of such buyout fee and uses for same will be as determined by the Village Board and shall be set forth in the affordable housing rules and regulations.
- E. Density bonus and additional density bonus.
 - (1) Those residential developments that will contain affordable housing units in the rental housing pursuant to this section shall qualify for increased density, permitting the maximum unit count of the rental housing in the residential development, as permitted under its zoning district, to be adjusted as follows:
 - (a) For rental housing in which at least 10% of the market-rate unit count, rounded up to the nearest whole number, is devoted to affordable housing units, applicants may have a density bonus of a unit count which equals the number of units of affordable housing being proposed and agreed upon by the Planning Board.

- (b) For rental housing in which at least 10% of the unit count, rounded up to the nearest whole number, is devoted to low-income housing units, applicants may have an additional density bonus of a unit count which equals 5% of the market-rate residential units being proposed and agreed upon by the Planning Board, rounded up to the nearest whole number. If the applicant is proposing the inclusion of low-income housing units, those units shall follow the general requirements as set forth in this section for affordable housing units.
 - (2) The addition of density bonus or additional density bonus unit count to a residential development involved in a subdivision of single- or two-family dwellings shall not be permitted to increase the height or lot coverage as defined in Appendix B of Chapter **270**, Zoning, beyond that permitted in such district.
- F. Each residential development application for rental housing containing affordable housing units and low-income housing units shall include a draft declaration of restrictive covenants in recordable form acceptable to the Corporation Counsel of the Village which shall set forth and particularize the requirements set forth in this section and, upon approval, shall be recorded against the property containing the affordable housing units prior to the issuance of the building permit for the residential development. Such restrictive covenants shall run in perpetuity against the property in which such units are located. The declaration shall include rules and regulations for insuring compliance with the restrictive covenants, and all rules and regulations in the declaration must follow the affordable housing rules and regulations.

Select Language | ▼

§ 162-19. Space requirements.

- A. Occupancy. One occupant per room having floor area of at least 50 but less than 120 square feet, two occupants per room having floor area of at least 120 but less than 180 square feet, and three occupants per room having floor area of 180 or more square feet.
- B. Clubs, dormitories, etc. In buildings occupied as clubs, dormitories, sororities or fraternity houses and providing sleeping accommodations for more than five persons, the maximum number of occupants so accommodated in any habitable room shall be limited to the number determined on the basis of the floor area, in square feet, of the room divided by 50 square feet per occupant.
- C. Required space in sleeping rooms.
 - (1) In every dwelling unit of two or more habitable rooms, every room occupied for sleeping purposes by one occupant shall have a minimum gross floor area of at least 70 square feet. Every room occupied for sleeping purposes by more than one occupant shall have a minimum gross floor area of 50 square feet per occupant thereof.
 - (2) In the case of children under six years of age, the requirements shall be 35 square feet per child for two or more children. Every room used for sleeping purposes shall have a minimum width of seven feet. Kitchens shall not be used for sleeping purposes.
- D. Required space in rooming units. Rooms let to one or more persons shall contain a minimum gross floor area for sleeping purposes of 90 square feet for a single occupant, and every such room, occupied by more than one occupant shall contain a minimum gross floor area of 70 square feet per occupant thereof.
- E. Minimum ceiling height and square feet of area.
 - (1) Habitable space shall have a minimum ceiling height (measured from finish floor to finish ceiling) of seven feet six inches and where a ceiling is sloping, the floor area where the ceiling height is less than five feet clear from finish floor to finish ceiling shall not be considered in computing the habitable floor area.
 - (2) A dwelling unit shall contain at least one habitable room having a minimum of 150 square feet of floor area and a minimum horizontal dimension of 10 feet.
- F. Access into commercial use. No habitable room, bathroom or water closet compartment which is accessory to a dwelling unit shall open directly into or be used in conjunction with any commercial use.
- G. Location of bathrooms and sleeping rooms. No dwelling unit containing two or more sleeping rooms shall have a room arrangement which requires the passage of the occupants of one sleeping room to pass through another sleeping room for access to a bathroom or water closet, nor shall the room arrangement be such that

access to a sleeping room can be had only by going through another sleeping room or bathroom or water closet.

- H. Below grade units. No dwelling units are allowed in a cellar and a dwelling unit located in a basement shall meet the requirements of the building code used by the Village.

Village of Ossining, NY
Monday, July 19, 2021

Chapter 270. Zoning

Article IV. Use Regulations

§ 270-14. NC-1 and NC-2 Neighborhood Center Districts.

A. Purpose.

- (1) To provide locations for neighborhood-serving businesses in close proximity to residential districts to minimize the need for travel to run daily errands and to protect and promote the health, safety and welfare of Village residents.
- (2) To encourage neighborhood-serving businesses to cluster along designated corridors within the Village to promote business corridor identity and facilitate comparison shopping.
- (3) To provide for a diverse range of housing types within neighborhood centers while retaining businesses as the main uses in NC Districts.
- (4) To aid in the implementation of a parking strategy for each NC district to minimize the impacts of vehicular traffic in and around residential districts.

B. Uses. Permitted principal, accessory, conditional and special permit uses in the NC Districts shall be as provided in Appendix A.^[1]

[1] *Editor's Note: Appendix A, Use Tables, is included at the end of this chapter.*

C. Conditional uses. Residential dwelling units uses which are permitted as conditional uses shall be subject to the applicable requirements set forth in §§ **270-26** and **270-51** and as set forth below:

- (1) Residential dwelling units shall only be permitted above nonresidential uses. No part of any residential unit shall be located on the ground floor, partially below ground or in a basement.
- (2) Residential dwelling uses shall have a main entrance to the outside that is separate from any entrance used for nonresidential uses.
- (3) The minimum habitable floor area for each dwelling unit shall be 450 square feet for an efficiency or studio unit, 600 square feet for a one-bedroom unit, 750 square feet for a two-bedroom unit and 250 additional square feet for each additional bedroom in units with three or more bedrooms.

D. Accessory uses. In addition to the requirements found in § **270-26**, the following permitted accessory uses shall be subject to the following requirements: Applications for drive-through facilities, outdoor dining, outdoor storage or outdoor displays must present a plan to be approved by the Planning Board as part of the site plan review process for the location, lighting, appropriate screening and hours of operation for such uses.

E. Bulk requirements. Bulk requirements in the NC Districts shall be as provided in Appendix B^[2] and subject to the additional requirements specified in this section and elsewhere in this chapter.

[2] *Editor's Note: Appendix B, Bulk Requirements, is included at the end of this chapter.*

- F. Parking requirements. Parking requirements in the NC Districts shall be as provided in Appendix C^[3] and subject to requirements specified elsewhere in this chapter.
[3] *Editor's Note: Appendix C, Parking Requirements, is included at the end of this chapter.*
- G. Affordable housing. An applicant for a residential use in the NC-1 or NC-2 Districts must provide affordable housing pursuant to the Affordable Housing Law of the Village of Ossining, Chapter **62**, Affordable Housing.

Select Language | ▼

Local Law 7-2021

A local law amending Chapter 270 (Zoning) of the Village of Ossining Code to establish the Downtown and Croton Avenue Overlay Districts in the VC (village center) and NC-2 (neighborhood center) zoning districts and provide regulations for uses and development within such districts; revise certain setback requirements in the S-75 (single family) and T (two family) zoning districts; and revise the Use Tables whereby two family attached or two family detached dwellings are permitted uses in the T (two family) zoning district.

BE IT ENACTED by the Board of Trustees of the Village of Ossining as follows:

Section 1. Chapter 270 (Zoning) is amended with new matter underlined by adding a new section 270-15A **Downtown and Croton Avenue Overlay Districts**.

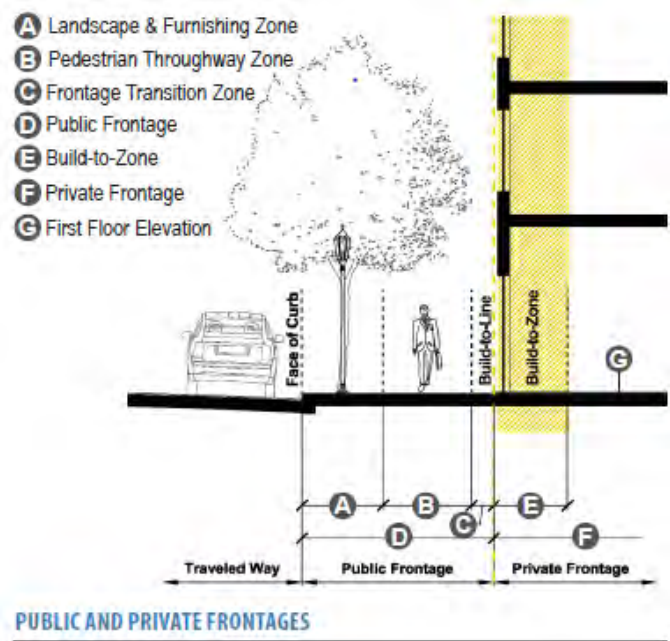
Section 270-15A (A). Purposes. The Downtown Overlay District and Croton Ave Overlay District provide an option to developers that is intended to:

- (1) Encourage new traditional mixed-use downtown development and redevelopment to occur within the downtown area that is consistent with historic village development patterns and provides a scale and mix of uses appropriate for the Village of Ossining;
- (2) Encourage mixed-use real estate development that results in active sidewalks and civic spaces and economically sustainable development;
- (3) Promote well-integrated residential, commercial, office and civic development in close proximity to the primary retail district that have an urban village scale development pattern;
- (4) Support new development that includes diverse pedestrian-compatible, higher density designs and expands economic development opportunities and minimizes distances between destinations by requiring linked sidewalks and pedestrian-oriented access;
- (5) Provide incentives for the creation of mixed uses in keeping with the character, scale and architecture of the downtown and surrounding neighborhoods, while using development design guidelines to promote compatibility of uses and stimulate pedestrian activity;
- (6) Promote the livability and identity of the district and neighborhoods by providing for dwellings, shops and workplaces in close proximity to each other;

- (7) Enhance the visual character and physical comfort of the district by minimizing pedestrian and vehicular conflicts and encouraging the renovation and erection of buildings and storefronts that provide direct connections to the street and sidewalk;
- (8) Discourage the dependence on automobile use, thereby reducing traffic congestion and promoting alternative modes of transportation;
- (9) Encourage the development of shared parking and attractive, convenient off-street parking facilities to reduce on-street congestion and facilitate vehicular and pedestrian circulation; and
- (10) Provide for efficient pedestrian, bicycle and vehicular circulation, with an emphasis on avoiding automobile-centric sprawling commercial development.

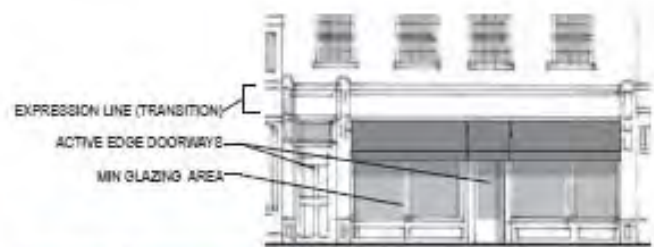
Section 270-15A (B) DEFINITIONS

- (1) Active Edge: A private frontage requiring a minimum glazing area and a minimum average frequency of doorways to promote visibility and activity along certain Lot Frontage Types.
- (2) Build-To-Line: A line defining the portion of the Build-To-Zone closest to a street or civic space which is typically parallel to the street right-of-way.
- (3) Build-To-Zone: The area of a lot facing a Public Frontage where a portion of the front building façade is required to be located, between the Build-To-Line and a line parallel to the Build-To-Line.
- (4) Civic Space: An area of open space accessible to the public, immediately adjacent and contiguous with a Public Frontage in the form of a Square, Green or Courtyard.
- (5) Downtown Overlay District and Croton Ave Overlay District Development: A development of land that conforms to 270-15A and is located within the Downtown Overlay District or Croton Ave Overlay District zones.
- (6) First Floor Elevation: The vertical distance measured from the sidewalk closest to the Principal Entrance of a building to the first floor above grade.

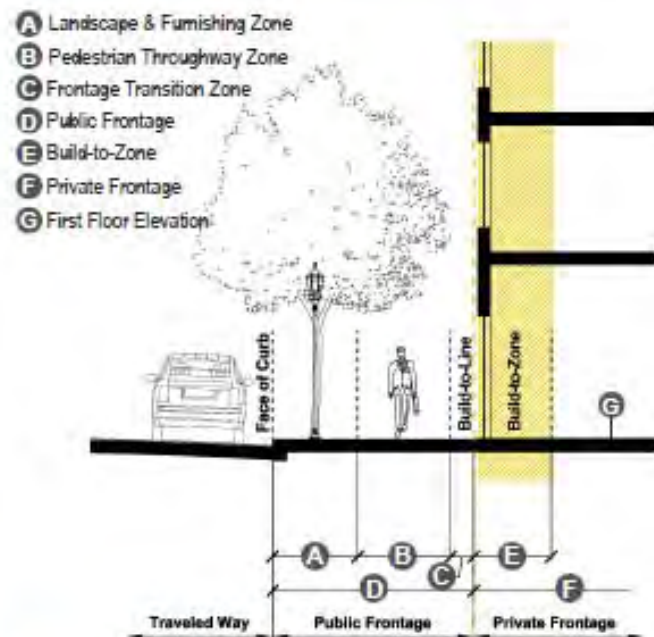


- (7) **Frontage Type, Lot: A designated set of standards controlling the placement of buildings along a public frontage as defined by the Street Frontage Type.**
- (8) **Frontage Type, Street: A set of standards, designated on the Regulating Plan, defining a range of permitted Lot Frontage Types for those portions of a lot facing a Public Frontage.**
- (9) **Frontage Occupancy: A defined area within Site Frontage that must be occupied by a building façade for a specified minimum height and built within the Build-To-Zone.**
- (10) **Frontage, Primary: The portion of a lot facing the street type with the highest volume of vehicular traffic.**
- (11) **Frontage, Private: The area within a lot between the Build-To-Line and a line parallel to it that is 20 feet behind the Build-To-Line.**
- (12) **Frontage, Public: The area located between the face of curb and the Build-To-Line as defined by the Regulating Plan and corresponding street type or civic space designations. The public frontage is comprised of Sidewalk Zones termed Landscape and Furnishing Zone, Pedestrian Throughway Zone and Frontage Transition Zone.**

- (13) **Frontage, Site:** The total length of a site fronting on each street, measured in linear feet at the Build-To-Line.
- (14) **Frontage Transition Zone:** The portion of the public frontage between the Build-To-Line and the Pedestrian Throughway, allowing for building fixtures (e.g. lighting, signage, projected architectural moldings), movable planters, movable furnishings and displays and signage boards.
- (15) **Landscape and Furnishing Zone:** The area of sidewalk between the curb and sidewalk throughway designated as the primary location for street trees, street furniture and light standards.
- (16) **Liner Building:** A building designed to screen the view of a parking lot or parking structure from a Build-To-Zone, street or civic space.
- (17) **Live-Work:** A building which includes a combination of dwelling units and retail and/or artisan production facilities in excess of what is allowed as a home-based business.
- (18) **Mixed-Use:** A building or site designed for and containing more than one of the uses permitted on the site.
- (19) **Parapet Line:** A continuous horizontal projection for most of a façade. The parapet, like the eave line, can be a designated location for measure of building height.
- (20) **Parking Structure:** A building containing one or more stories of parking above grade.
- (21) **Pedestrian Throughway:** An area within the sidewalk that must remain clear of obstructions to allow public passage.



STOREFRONT DESIGN STANDARDS



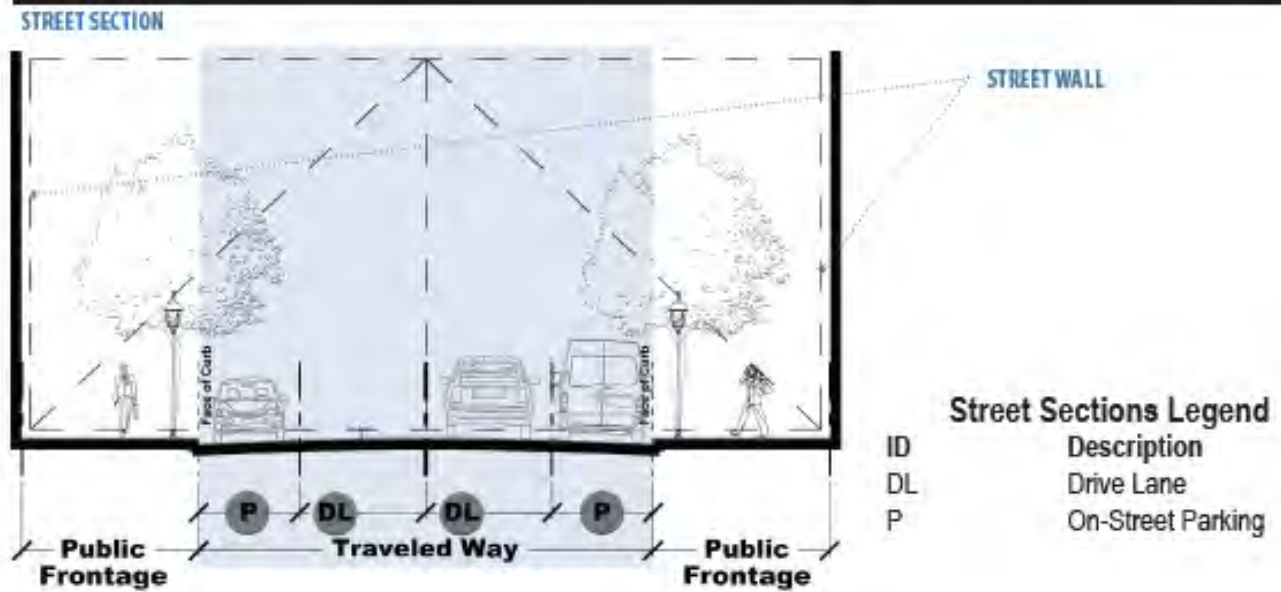
PUBLIC AND PRIVATE FRONTAGES



CIVIC SPACE

- (22) **Pedestrian Way:** A pedestrian walkway providing common access between buildings, streets, civic spaces and parking areas, which may be open or roofed.
- (23) **Principal Building:** The primary and largest building on a Lot, usually located toward the primary frontage.
- (24) **Principal Entrance:** The main point of access for pedestrians into a building.
- (25) **Private Frontage:** See Frontage, Private.
- (26) **Public Frontage:** See Frontage, Public
- (27) **Stepback:** A portion of a building set back above the Street Wall before the total height of the building is achieved. The position of the stepback is controlled by a specified distance from the Street Wall.
- (28) **Storefront:** A private frontage type primarily for retail use, with substantial glazing, wherein the facade is aligned close to the front lot line with the building entrance at sidewalk grade.
- (29) **Street Frontage:** The lot line facing a street right-of-way which may be designated with a Street Frontage Type on the Regulating Plan.
- (30) **Street Frontage Type:** see Frontage Type, Street
- (31) **Street Furniture:** Public amenities such as benches, bike racks, trash cans, clocks and bollards, when located in and adjacent to the public sidewalks, improve pedestrian comfort, convenience and safety.
- (32) **Street Wall:** The building wall or walls aligned along a sidewalk at a specified minimum height, facing a street to form a pedestrian experience with sidewalks and street enclosures.
- (33) **Traveled Way:** The portion of a street between the curbs and available for use by vehicles, bicycles and other forms of transportation.





Section 270-15A (C) OVERLAY DISTRICT

- (1) **Overlay Districts.** The Downtown Overlay District and Croton Ave Overlay District shall be overlay zoning districts to the existing zoning districts. The Downtown Overlay District overlays the existing VC District and the Croton Ave Overlay District overlays the NC-2 District along Croton Avenue. An alternative set of dimensional, use, and regulatory standards shall apply to the Downtown Overlay District and Croton Ave Overlay District developments providing design, site layout, and general performance standards for new development that allows better market flexibility. If an applicant chooses to utilize these optional standards, then all of the requirements of this §270-15A shall apply. All of the provisions of the underlying zoning districts shall remain in full force, except where modified by the Downtown and Croton Avenue Overlay Districts' provisions, procedures and requirements.
- (2) **Form Based Development.** Site plan approval shall be granted for a form-based development only if the applicant proves that the following minimum requirements will be met, in addition to other applicable Village Code requirements. The Planning Board may grant a modification from any of these requirements to facilitate good design and accommodate specific site conditions. For example, the setback from the curb on a Primary Commercial Street Frontage is listed as 15 feet, the Planning Board might modify this to conform to the setback of adjacent buildings.
- (3) **Site Platting.** All existing and proposed buildings will be platted with their own lot for planning and dimensional compliance purposes regardless of the final structure of ownership. Rights-of-way shall be shown for all streets and alleys created as part of a Downtown Overlay District or Croton Ave Overlay District development whether or not said streets are intended for public dedication. Condominium form of ownership and multiple building uses are permitted, but each individual lot shall be laid out so that the dimensional requirements are met. However, the actual lot lines do not need to be legally established.
- (4) **Street standards.** The Planning Board shall have the authority to grant variances and waivers to the standards of Chapter 233 - Subdivision of Land, which may include reduced street cartway widths, street right-of-way widths and street curve radii, when properly justified by the applicant and to result in a development that is pedestrian-oriented and that promotes low-speed traffic.
- (5) **Access controls.** As part of the site plan approval process, the applicant shall prove that the development involves a fully coordinated interior traffic access system that minimizes the number of streets and driveways entering onto a State or Village-owned road.

(6) General Development Standards.

(a) General Principles and Intent.

- [1] The development standards shall be used to define the edges of the public realm and guide the placement of buildings and thoroughfares to create connected networks of streets, sidewalks, civic spaces and pedestrian ways. The Regulating Plan establishes frontage standards along streets and civic spaces and these frontage standards are used to reinforce existing and to create new walkable mixed-use urban environments.**
- [2] Buildings and landscaping should be designed to create a sense of enclosure for both streets and civic spaces as places for pedestrian experiences at the human scale.**
- [3] Building frontages should be designed with the pedestrian in mind to integrate traveled ways, on-street parking, a landscape and furnishing zone, a pedestrian thoroughway and a transition zone to meet active building frontages that typically include signage, seating areas, and storefronts.**
- [4] Development should be designed to accommodate automobiles while respecting the pedestrian and spatial form of civic places.**

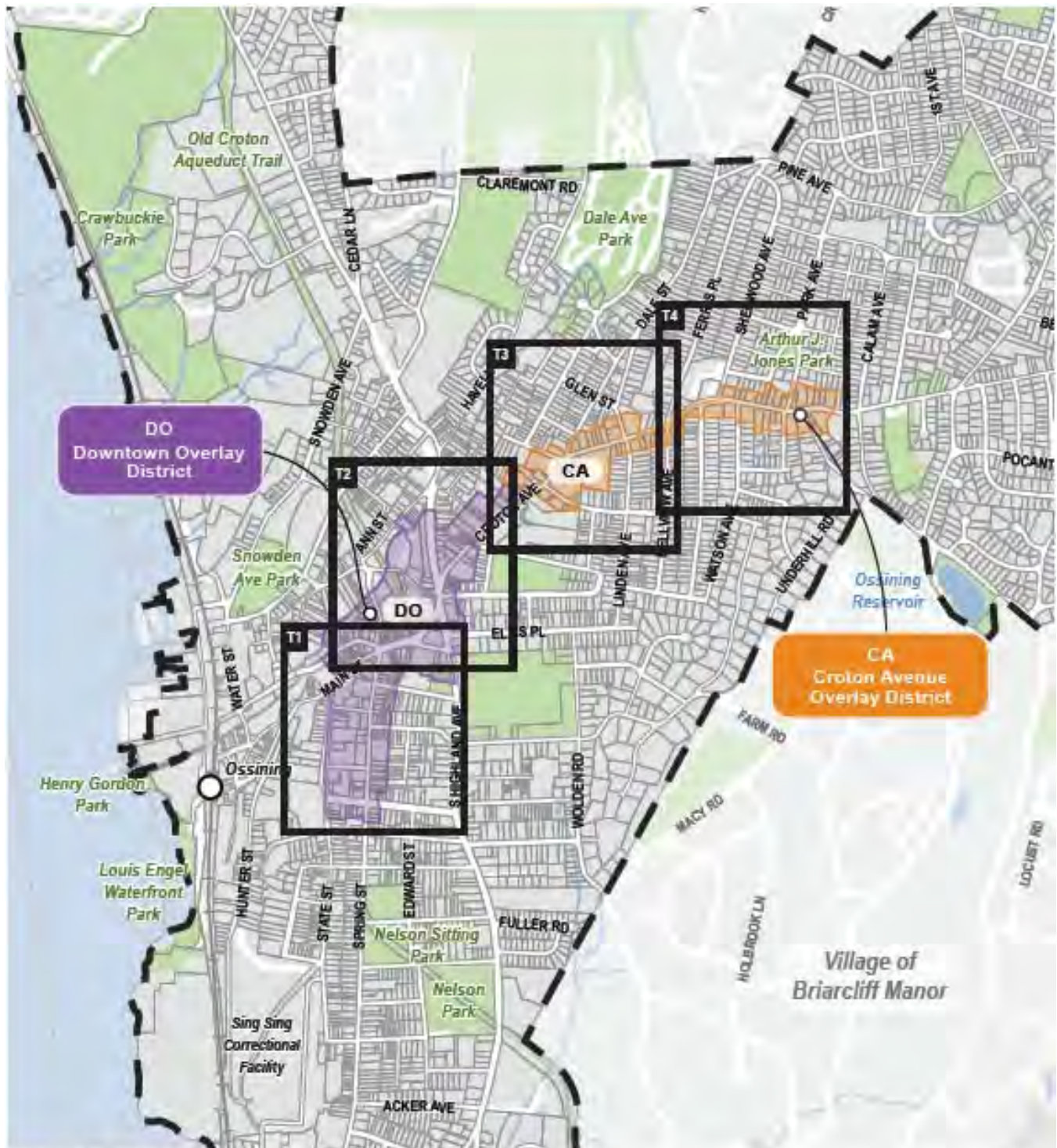
Section 270-15A (D) LOCATION MAP AND REGULATING PLAN



Location Map for Downtown Overlay District and Croton Ave Overlay District



270-15A (D) (1) LOCATION MAP WITH TILES



Location Map for Downtown and Croton Ave Overlay Districts

270-15A (D) (2) DOWNTOWN OVERLAY DISTRICT REGULATING PLAN

(1) The Regulating Plan defines the important sub-areas within the overlay district and specifies performance and dimensional standards relating to building form and use to achieve the purposes of this chapter. The Regulating Plan adopted herewith shall have the same force and effect as the overall Village of Ossining Zoning Map as it applies to overlay district areas. The Regulating Plan creates the following Street Frontage Types:

- (a) Primary Commercial Street Frontage
- (b) Secondary Commercial Street Frontage
- (c) Neighborhood Commercial Street Frontage
- (d) Neighborhood Street Frontage
- (e) Service Street Frontage
- (f) Greenway Street Frontage



- (2) **Boundaries of Regulating Plan Areas. To enable flexibility and good site design, buildings constructed as part of a Downtown and Croton Ave Overlay Districts' development may be built across the boundaries of the regulating plan areas providing that they comply with the design, dimensional and form standards of the area where that portion of the building is located.**

Legend	
	Primary Commercial Street Frontage
	Secondary Commercial Street Frontage
	Neighborhood Commercial Street Frontage
	Neighborhood Street Frontage
	Service Street Frontage
	Greenway Street Frontage
	DO - Downtown Overlay District
	Designated location for Civic Space compliant with Section 270-15A.H.1.b.4
	Civic Space within the DO District
	DO - Downtown Overlay District Boundary
	Zoning District Boundary
	Property Line

Section 270-15A (D) (3) CROTON AVENUE OVERLAY DISTRICT REGULATING PLAN

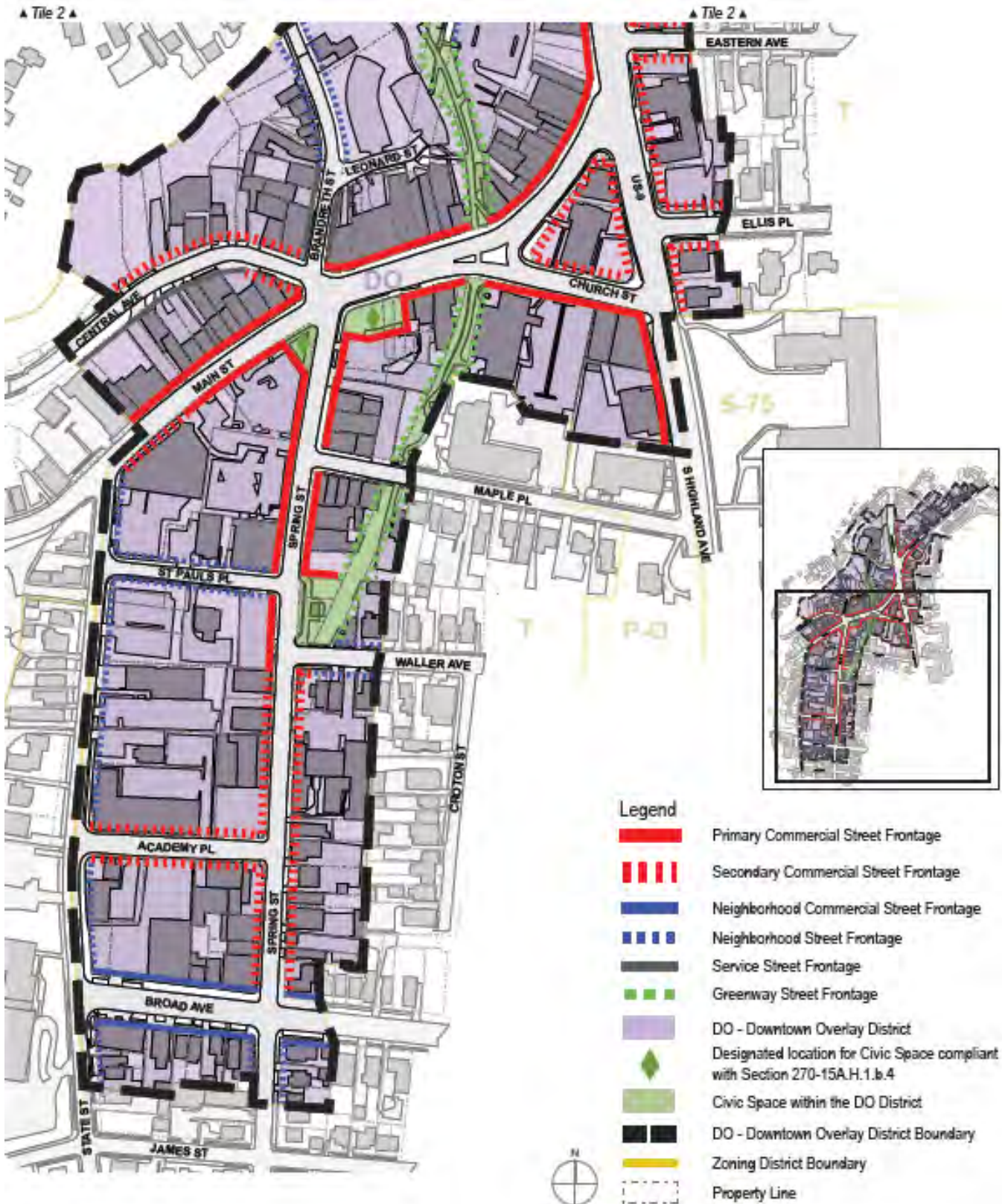


Regulating Plan for CA Downtown Overlay District

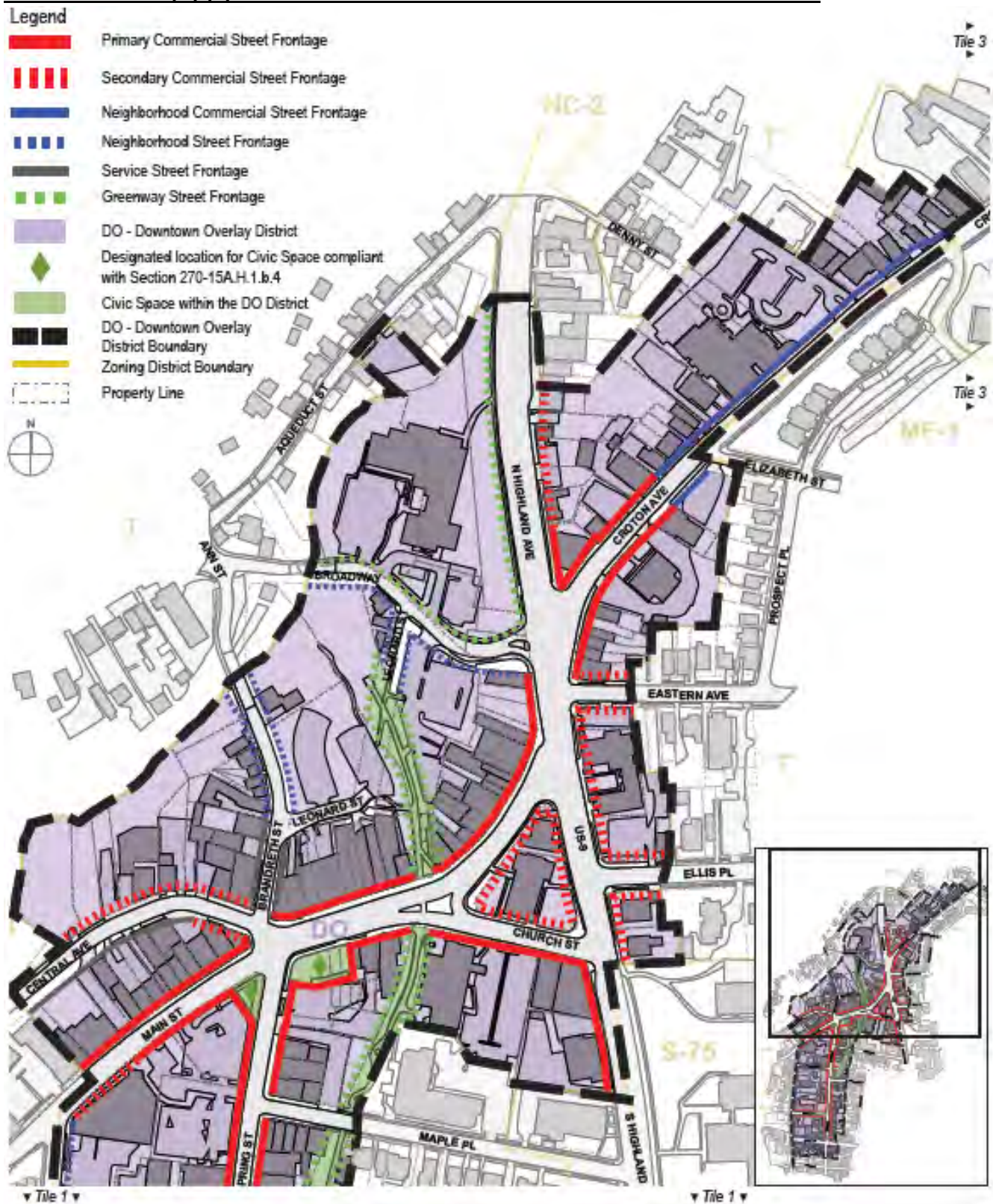
Legend

-  Neighborhood Commercial Street Frontage
-  Neighborhood Street Frontage
-  CA - Croton Avenue District
-  CA - Croton Avenue District Boundary
-  Zoning District Boundary
-  Property Line

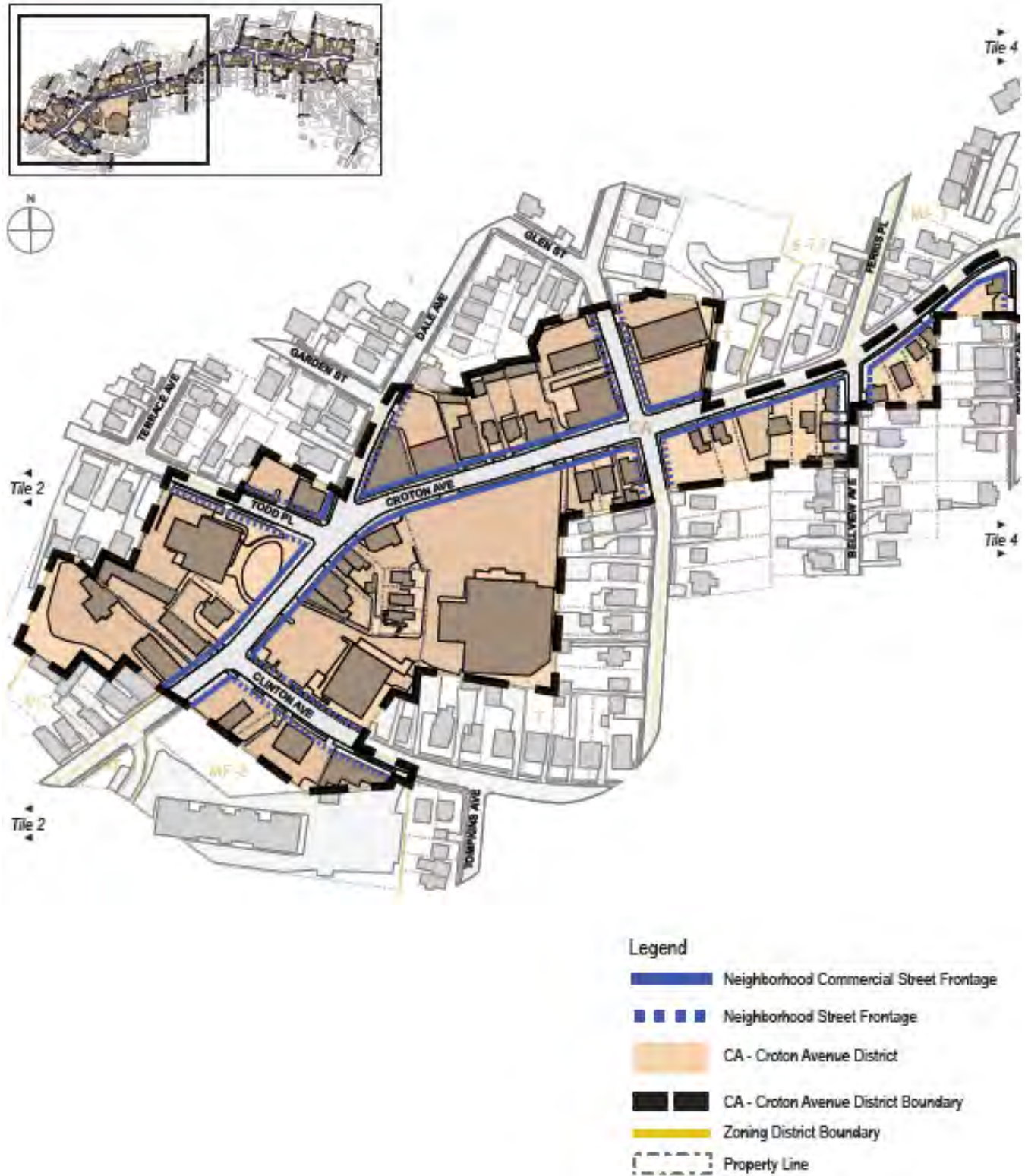
Section 270-15A (D) (4) DOWNTOWN OVERLAY DISTRICT REGULATING PLAN AREA TILE 1



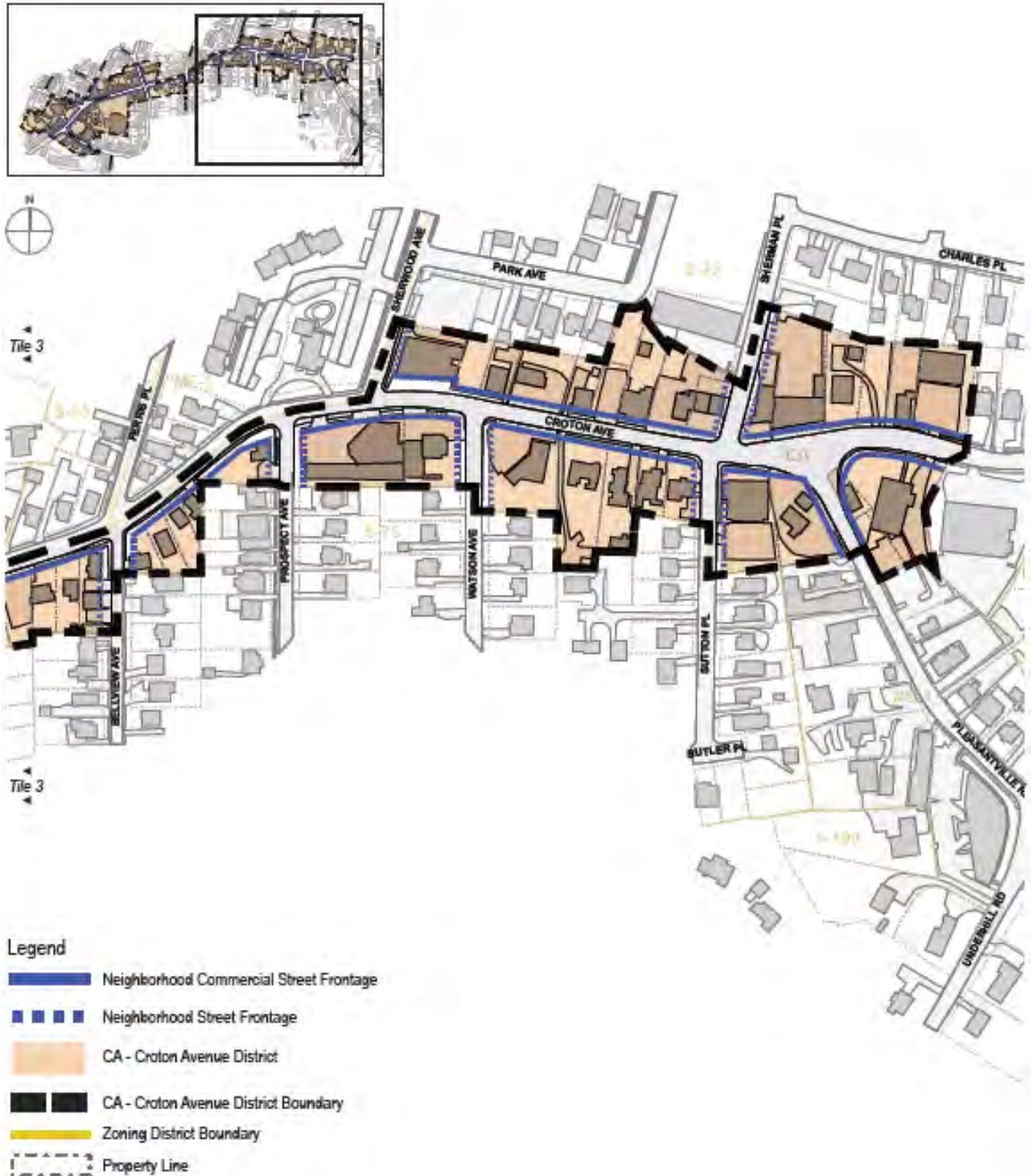
Section 270-15A (D) (5) DOWNTOWN OVERLAY DISTRICT REGULATING PLAN TILE 2



Section 270-15A (D) (6) CROTON AVENUE OVERLAY DISTRICT REGULATING PLAN TILE 3

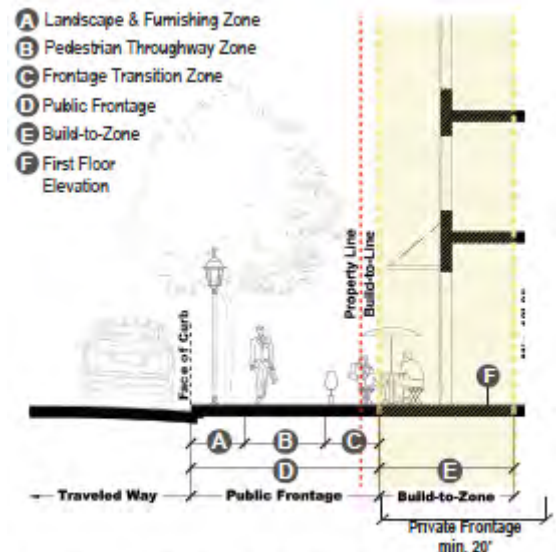


270-15A (D) (7) CROTON AVENUE OVERLAY DISTRICT REGULATING PLAN TILE 4



Section 270-15A (E) (1) BUILDING FRONTAGE STANDARDS

- (a) **Frontage Elements.** The combination of the Private Frontage, Public Frontage, the Traveled Way, and the associated Edging Elements, defines the character of the street. The character of the Private Frontage is defined by the architectural treatment and use of the ground floor, dimensional depth of the visible yard and the combination of the Frontage Edging Elements. The private frontage provisions of this section regulate both form and use.
- (b) **Build-To-Line.** The Build-To-Line defines the portion of the Build-To-Zone closest to a Street, and therefore regulates the frontage standards.
- (c) **Regulating Plan.** The Regulating Plan establishes Build-To-Lines and Build-To-Zones to establish and maintain a continuous street wall and promote a sense of enclosure that is so critical for realizing memorable and pedestrian scaled places in downtown mixed-use and commercial areas such as the areas regulated by these Overlay Districts.
- (d) **Build-To-Line Placement.** The Build-To Line shall be set parallel to the Property Line for a distance regulated by the Street Frontage Type in Sec. 270-15A (E) (2), as designated by the Downtown and Croton Ave Overlay Districts Regulating Plans in Sec. 270-15A (D).
- (e) **Front Building Wall.** All new buildings located with Downtown and Croton Ave Overlay Districts shall place the front building wall within the Build-To-Zone for a minimum distance and height as defined by the Frontage Occupancy, but no closer to the street than the Build-To-Line, except where a civic space is designated to permit a greater setback along a portion of the frontage. The Build-To-Line shall be no more than 20 feet from the face of curb unless a civic space is approved by the Planning Board.
- (f) **Building Facade Variation.** The Build-To-Zone allows building entrance alcoves and expanded sidewalk area for outdoor dining, building facade articulation, inclusion of projected and/or recessed building elements, and building alignment with existing neighboring buildings.
- (g) **Private Frontage Depth.** The Private Frontage shall extend 20 feet into the site from the Build-To-Line. The Private Frontage may, in certain circumstances, limit the placement of residential uses on the street level and may limit the placement of parking structures on a site.



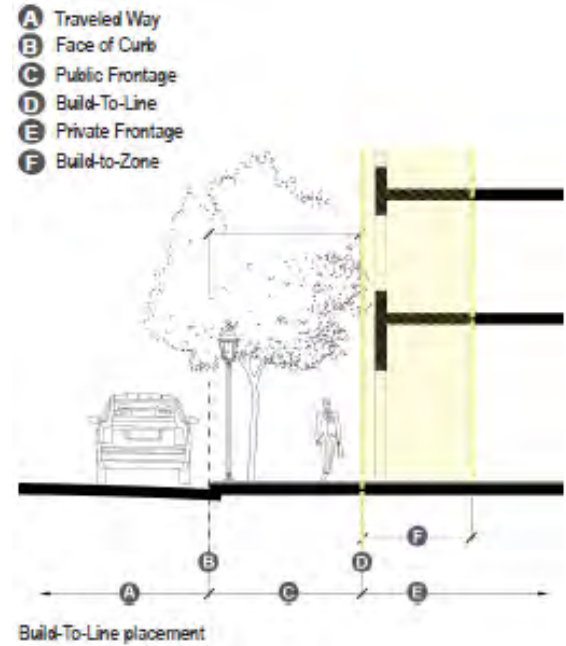
The Build-To-Zone is the designated area where front building facades shall be placed to create a continuity of street wall.

- (h) Storefront Depth. Storefronts, when provided, shall occupy the full depth of the private frontage and, when located on corner site, the storefront shall wrap the corner onto the side street for a minimum of 20 feet.

Section 270-15A (E) (2) BUILDING PLACEMENT STANDARDS

- (a) **Build-To-Line Placement:**
- i. **A Build-To-Line shall be designated on all lots.**
 - ii. **The Build-To-Line shall be parallel to the front property line and no closer to the curb than the standards defined in Table E (2) Build-To-Lines and Sidewalks.**
- (b) **Sidewalk and Streetscape Requirements. The applicant shall provide sidewalk and streetscape elements as required in Chapter 233 Article VI Design Standards, Sections 233-16 to 233-21. Sidewalks shall be provided along Street Frontages for the minimum width defined on Table E (2) Build-To-Lines and Sidewalks. Sidewalks shall be constructed of concrete, brick or stone. Asphalt shall be prohibited for sidewalks along streets.**
- (c) **Pedestrian Way. Pedestrian ways are pedestrian and bicycle only connections through properties. Where provided a walking surface of at least six feet in width shall be provided along with other streetscape elements such as site furniture and pedestrian-scaled lighting. When a secondary building is proposed at the rear of a lot on a street, a Pedestrian Way must be provided to connect sidewalks through lots to each other and with parking areas.**
- (d) **Front Wall Placement. Structural elements of a front building facade shall be located within the Build-To-Zone.**
- (e) **Primary Facade and Entry. Primary building façade and primary entrance shall address the street of higher importance, with Primary Commercial Street Frontages as the highest and Greenway Street Frontage as the lowest according to Table E (2), as approved by the Planning Board.**

Table E (2) - Build-To-Line and Sidewalks		
Street Frontage Types	Build-To-Line shall be no closer to the curb than:	Min. sidewalk width
Primary Commercial Street Frontage	15'-0"	10'-0"
Secondary Commercial Street Frontage	10'-0"	8'-0"
Neighborhood Commercial Street Frontage	15'-0"	8'-0"
Neighborhood Street Frontage	15'-0"	5'-0"
Greenway Street Frontage	Not Applicable	8'-0"



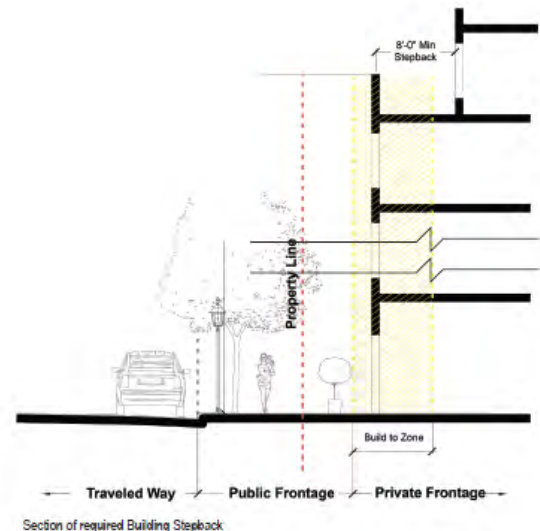
Section 270-15A (E) (3) BUILDING HEIGHT STANDARDS

- (a) **Height Standards. Sites and buildings shall comply with the minimum and maximum standards designated on the table below.**

TABLE E (3) - BUILDING HEIGHT STANDARDS				
	Min Building Height, when a building is present	Max Building Height (Whichever is the lesser of the two)	Max Building Height with Density Bonus*	Stepback required**
DO - Downtown Overlay District	2 stories	4 stories, or 48 feet	5 stories, or 58 feet	Building height 48 feet max. at Build-To-Zone with 8 ft. stepback
CA - Croton Avenue Overlay District	1 story	3 stories, or 36 feet	None	None
<p>* A Density Bonus in the Downtown Overlay District may be granted to permit additional Building Height up to the maximums shown if the development complies with the applicable Overlay District Standards and a fee is paid to a Community Benefit Fund to support the needs for parking, civic space or schools within the Village.</p> <p>** See 270-15A (E) (4) for building stepback requirements.</p>				

Section 270-15A (E) (4) BUILDING STEPBACK

- (a) **Building Stepback.** Where buildings are permitted to be greater than 48 feet in the Downtown Overlay District, the building shall, within those portions of the building within the Build-To-Zone, be limited to 48 feet and provide a building stepback of at least 8'-0" within the Build-To-Zone, however all remaining areas of the site may occupy the area up to the maximum building height permitted in that District.



Section 270-15A (E) (5) PERMITTED USES AND SITE DEVELOPMENT STANDARDS

- (a) **Uses Allowed within the Downtown and Croton Avenue Overlay Districts. The following additional uses are permitted within the Downtown and Croton Avenue Overlay Districts. All Permitted Uses, Conditional Uses and Special Permit Uses remain as per the underlying zoning districts with the following exceptions:**
- (1) **Residential Use shall be allowed as a Permitted Use at the following locations: 1) on the upper floors above non-residential and residential uses and 2) on those portions of the first floor 40 feet or greater from the front wall of buildings facing a street where the Street Frontage Type designated on the Regulating Plan is one of the following types:**
- [1] **Primary Commercial Street Frontage**
- [2] **Secondary Commercial Street Frontage**
- (2) **Residential Use shall be allowed on all floors as a Permitted Use where the Street Frontage Type designated on the Regulating Plan is one of the following types:**
- [1] **Neighborhood Commercial Street Frontage**
- [2] **Neighborhood Street Frontage**
- [3] **Greenway Street Frontage**
- [4] **Service Street Frontage**
- (b) **Development Regulations. The following site development requirements take precedence over those in the underlying zoning districts.**
- (1) **Downtown Overlay District:**
- [1] **Maximum building coverage: 80%**
- [2] **Maximum lot impervious coverage: 90%**
- [3] **Minimum building setbacks:**
- [a] **Front yard: front building walls shall be located within the Build-To-Zone according to the minimum Frontage Occupancy required.**

- [b] Rear yard: 20 feet minimum from lot lines or other buildings. Each lot shall have a maximum of one rear yard, typically located furthest from a street, as determined by the Zoning Officer.
- [c] Side yard: no side yard setback is required, provided that all building code separation requirements are met.

(2) Croton Ave Overlay District:

- [1] Maximum building coverage: 50%
- [2] Maximum lot impervious coverage: 80%
- [3] Minimum building setbacks:
 - [a] Front yard: front building walls shall be located within the Build-To-Zone according to the minimum Frontage Occupancy required.
 - [b] Rear yard: 20 feet minimum from lot lines or other buildings. Each lot shall have a maximum of one rear yard, typically located furthest from a street, as determined by the Zoning Officer.
 - [c] Side yard: no side yard setback is required, provided that all building code separation requirements are met.

(c) Density Bonus.

Where an applicant seeks the Density Bonus described in Table E (3), the Village Board of Trustees may grant a Density Bonus by special permit provided that the applicant demonstrates compliance with the standards defined in Section 270-15A and the required fee is paid to the Community Benefit Fund. The Village Board of Trustees shall set the fee required for the Density Bonus which fee shall be published in the Village's annual fee schedule. The Community Benefit Fund may support the needs of the Village to support parking, civic spaces, schools or other legitimate public purposes as defined by the Village. The density bonus shall not be granted if it would result in the demolition of a building that is considered a contributing building to the Downtown Ossining Historic Architectural and Design District.

270-15A (E) (6) PARKING REQUIREMENTS

(a) **Permitted uses shall provide the minimum required parking as specified in Section 270-30.**

(b) **Location and Setback:**

- [1] **No above grade off-street parking shall be located closer than 4'-0" setback from the Build-To-Line.**
- [2] **No parking structure shall be located within the Private Frontage at the street level along a Primary Commercial Street Frontage, however below grade and/ or upper floor parking shall be permitted within the Private Frontage provided it is entirely below the sidewalk elevation.**
- [3] **All off-street parking shall be screened by landscaping compliant with 270-15A (H) (2) or lined by buildings.**
- [4] **No off-street parking shall be allowed closer to the street than the closest building along that Street Frontage and within the Build-To-Zone.**



Section 270-15A (F) PRIVATE FRONTAGE TYPES

270-15A (F) (1) PERMITTED PRIVATE FRONTAGE TYPES

- (a) Where the Regulating Plan Map in Section 15A (D) designates one or more Street Frontage Types, those portions of buildings facing Streets, Civic Spaces or Pedestrian Passages shall comply with the Permitted Lot Frontage Type standards designated on Table F (1) Permitted Lot Frontage Types. The Lot Frontage Types are defined in greater detail in this Section.
- (b) The Build-To-Line for each frontage shall be parallel to the street and located within a lot at the greater of the two standards on at a minimum distance between a curb line and Build-To-Line as designated on a) Table E (2) Build-To-Lines and Sidewalks and b) Table F (1) - Permitted Lot Frontage Types, except as permitted in Section 270-15A (H) (1) Civic Space Design Standards.

Table F (1) - Permitted Lot Frontage Types										
Street Frontage Types	Permitted Lot Frontage Types									
	Storefront	Professional	Park	Service	Forecourt	Hillside	Neighborhood Storefront	Stoop	Porch	Yard
	FR-1	FR-2	FR-3	FR-4	FR-5	FR-6	FR-7	FR-8	FR-9	FR-10
Primary Commercial Street Frontage	P	P	X	X	X	X	X	X	X	X
Secondary Commercial Street Frontage	P	P	X	X	P	P*	X	P	P	X
Neighborhood Commercial Street Frontage	X	X	X	X	P	P*	P	P	P	P**
Neighborhood Street Frontage	X	X	X	X	P	P*	X	P	P	P**
Greenway Street Frontage	P	P	P	X	P	P*	X	P	P	P**
Service Street Frontage	P	P	P	P	P	P	P	P	P	P**
Required distance from Front Lot Line to the Build-To-Line (except as modified by E.1(b))	0'-0"		None Req'd	None Req'd	10'-0"	10'-0"	10'-0"	10'-0"		20'-0"
The depth of the Build-To-Zone, as measured from the Build-To-Line, where the required portion of the Front Building Wall shall be placed	5'-0"		None Req'd	None Req'd	10'-0"	20'-0"	10'-0"	10'-0"		10'-0"
P	Permitted									

p*	Permitted only when topography exceeds standards defined in FR-6 Hillside (a)
p**	Permitted, provided that one or more of the adjacent lots has a front yard with landscaping of at least 20 feet in depth from the front lot line

Section 270-15A (F) (2) BUILD-TO-ZONE FOR COMMERCIAL FRONTAGES



- (a) **Minimum Frontage Occupancy. All buildings facing Streets or Public Frontages shall occupy a minimum Frontage Occupancy percentage within the Build-To-Zone according to 270-15A (F) (4) for each frontage.**

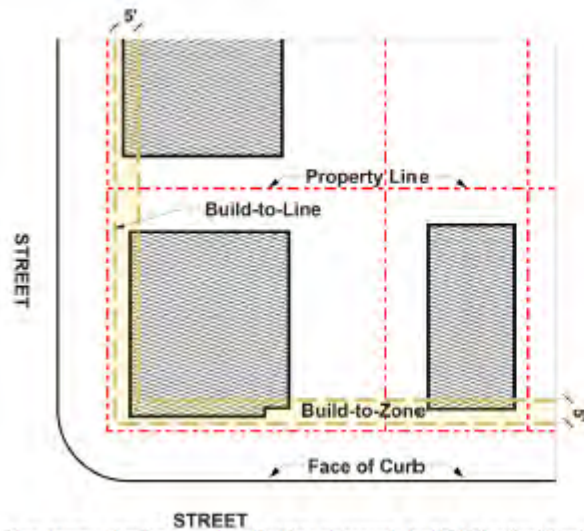
DOWNTOWN AND CROTON AVENUE OVERLAY DISTRICTS

Village of Ossining

FRONTAGE TYPES

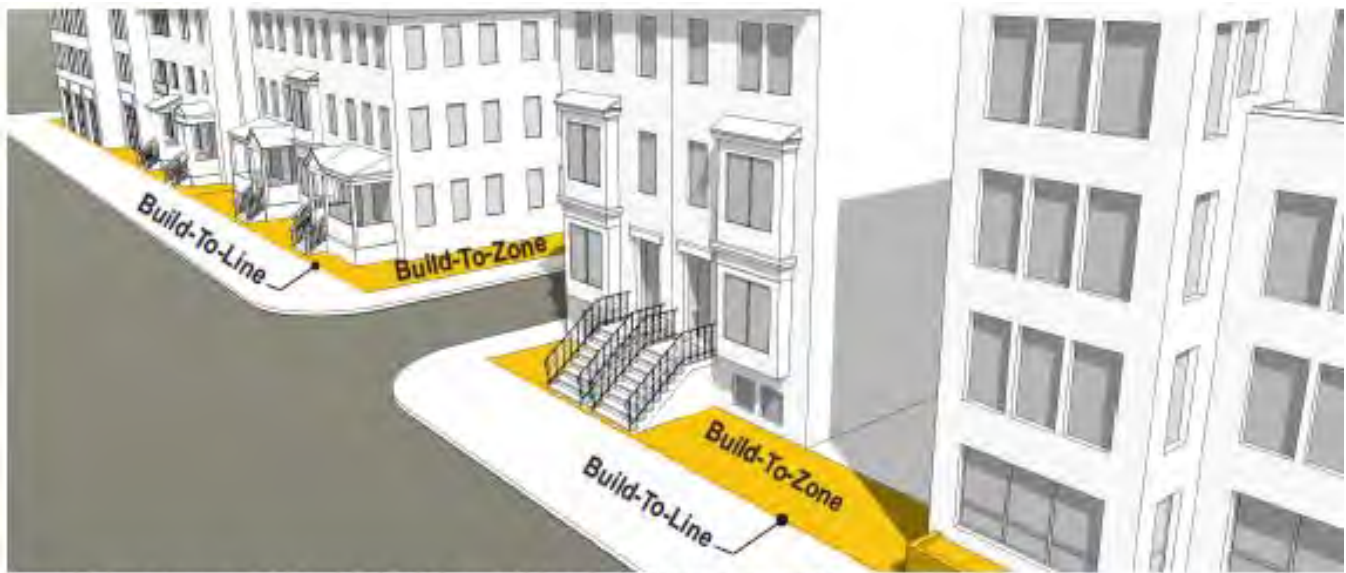
BUILD-TO-ZONE

Section 270 15A.F

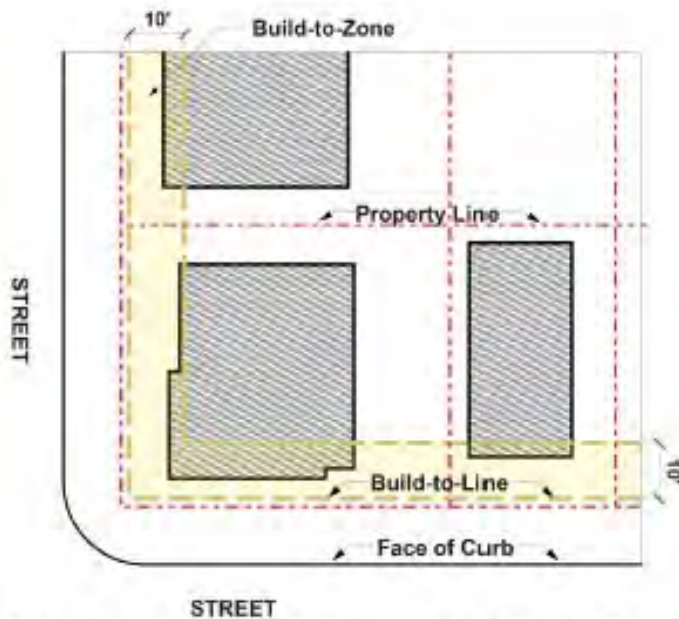


STREET
Plan diagram showing examples of building placements for FR-1 Storefront Frontage and FR-2 Professional Frontage with a Five Foot Build-To-Zone

Section 270-15A (F) (3) BUILD-TO-ZONE FOR RESIDENTIAL FRONTAGES



Street Frontages showing a typical Ten Foot Build-To-Zone for FR-4 Stoop, FR-5 Porch, and FR-6 Forecourt Frontages



Plan diagram showing examples of building placements for FR-4 Stoop, FR-5 Porch, and FR-6 Forecourt Frontages with a Ten Foot Build-To-Zone

Section 270-15A (F) (4) MINIMUM FRONTAGE OCCUPANCY

- (a) **Minimum Frontage Occupancy.** The face of the building for the required minimum building height and building length shall occupy the Build-To-Zone for a minimum percentage, as defined by Table F (4), of the total width of the Site Frontage facing each Street. Compliance shall be determined by measuring the building face located within the Build-To-Zone divided by the Site Frontage for each Street Frontage.
- (b) **Corner sites shall have two private frontages, one facing each street.**

Table F (4) - Frontage Occupancy Requirements	
Street Frontage Types	Minimum Frontage Occupancy Required
Primary Commercial Street Frontage	60%
Secondary Commercial Street Frontage	40%
Neighborhood Commercial Street Frontage	40%
Neighborhood Street Frontage	30%
Greenway Street Frontage	None required
Service Street Frontage	None required



Section 270-15A (F) (5) STOREFRONT FRONTAGE: FR-1

- (a) **Storefront Frontage FR-1 defines a commercial frontage with high visibility to first floor commerce and an at grade entrance. The ground plane within the Build-To-Zone should be a hardscape continuation of the sidewalk.**

PRIVATE FRONTAGE

- (b) **Active Edge Required - Average door separation distance along the frontage shall be no greater than 50 feet**

- (c) **Allowed frontage edging elements**

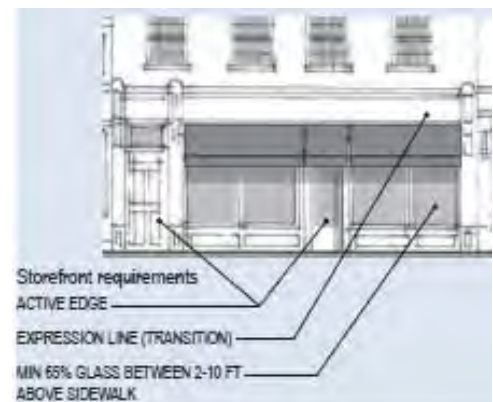
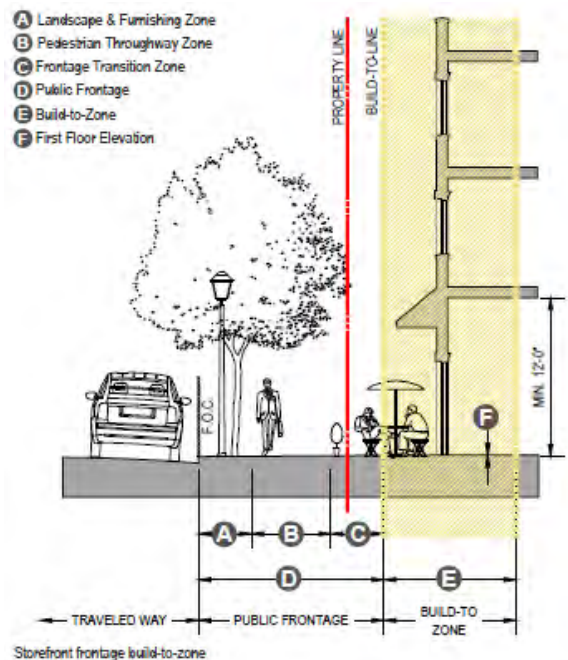
- (1) **EE-1**
- (2) **EE-2**
- (3) **EE-3**
- (4) **EE-6**
- (5) **EE-7**

- (d) **Glazing Requirement:**

- (1) **A minimum of 65% of the street-level, street facing building area located between 2' & 10' above the sidewalk shall provide clear, non-reflective glass.**

- (e) **Function of the Build-to-Zone**

- (1) **Allows for entrance alcoves and expanded sidewalk area for outdoor dining.**
- (2) **Allows for facade articulation and inclusion of recessed building elements.**
- (3) **Allows for alignment with existing neighboring buildings.**
- (4) **Prohibits garage doors within the Build-To-Zone for individual private garages**



- (5) First Floor Elevation at the primary entrance shall be at the same grade as the sidewalk or provide an ADA compliant accessible route to that entrance

Section 270-15A (F) (6) PROFESSIONAL FRONTAGE: FR-2

- (a) Professional Frontage FR-2 defines commercial frontages with an at grade entrance. The ground plane within the Build-To-Zone should be a hardscape continuation of the sidewalk.

PRIVATE FRONTAGE

- (b) Active Edge Required - Average door separation distance along the frontage shall be no greater than 50 feet

- (c) Allowed frontage edging elements

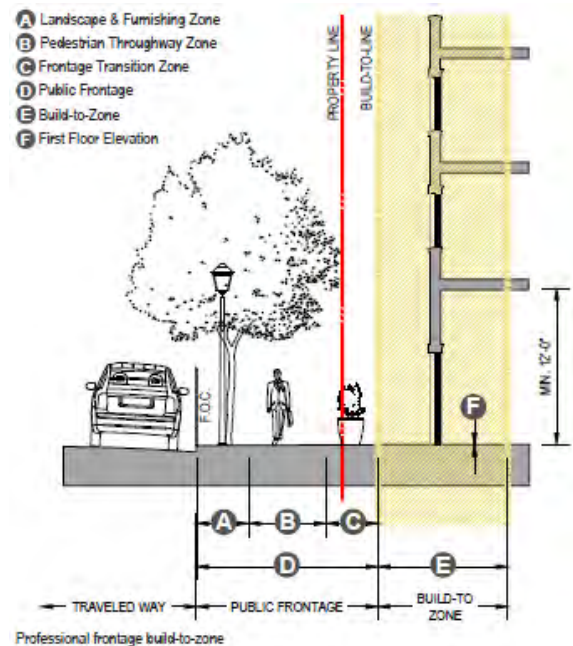
- (1) EE-1
- (2) EE-2
- (3) EE-3
- (4) EE-6
- (5) EE-7

- (d) Glazing Requirement:

- (1) A minimum of 40% of the street-level, street facing building area located between 2' & 10' above the sidewalk shall provide clear, non-reflective glass.

- (e) Function of the Build-to-Zone

- (1) Allows for entrance alcoves.
- (2) Allows for facade articulation and inclusion of recessed building elements.
- (3) Allows for alignment with existing neighboring buildings.
- (4) Prohibits garage doors within the Build-To-Zone for individual private garages
- (5) First Floor Elevation at the primary entrance shall be at the same grade as the sidewalk or provide an ADA compliant accessible route to that entrance.



Section 270-15A (F) (7) PARK FRONTAGE: FR-3

- (a) Park Frontage FR-3 defines the edge of greenway areas by placing landscaping, furnishings, pedestrian ways and lighting as a transition to parking lots and buildings.

PRIVATE FRONTAGE

- (b) Active Edge Required - None

- (c) Allowed frontage edging elements

(1) EE-1

(2) EE-2

(3) EE-3

(4) EE-4

(5) EE-5

(6) EE-6

(7) EE-7

- (d) Park frontage clearway requirement

(1) A sidewalk or trail of at least 8' wide shall be provided to create a linear park experience.

(2) The park frontage line shall be located within 20' of the areas designated on the Regulating Plan.

- (e) Glazing requirement

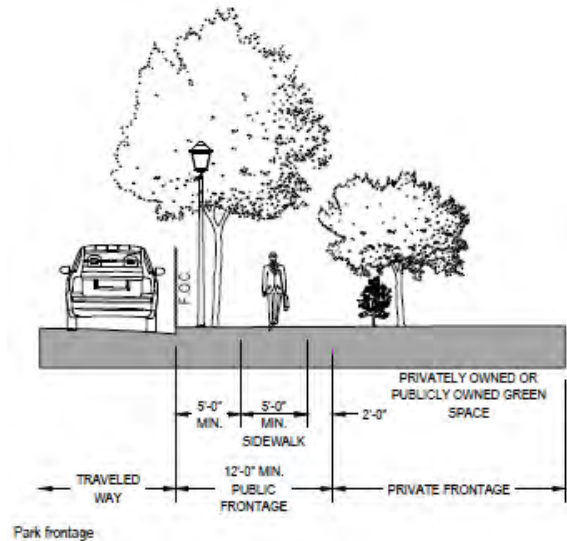
(1) None

- (f) Function of the Build-to-Zone

(1) Park Frontage line shall be set by the Regulating Plan to create a continuous greenway pedestrian experience while aligning with adjacent walkways and greenways.

(2) Park Frontages do not have required Build-To-Zones

(3) Park Frontages shall provide lawns, landscape areas, and/or low plantings.



Section 270-15A (F) (8) SERVICE FRONTAGE: FR-4

- (a) **Service Frontage FR-4 defines a frontage in which the service functions of a building can be placed along a street.**

PRIVATE FRONTAGE

- (b) **Permitted frontage edging elements**

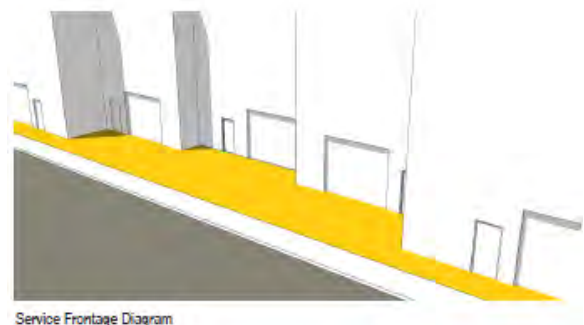
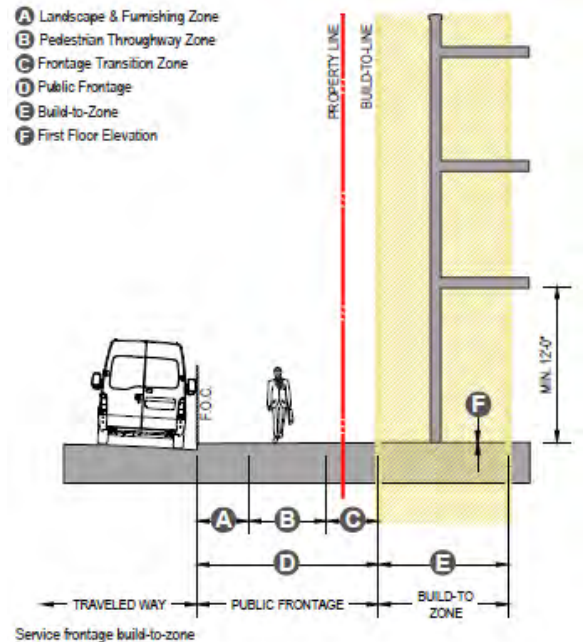
- (1) **EE-1**
- (2) **EE-2**
- (3) **EE-3**
- (4) **EE-4**
- (5) **EE-6**
- (6) **EE-7**

- (c) **Glazing requirement**

- (1) **None**

- (d) **Function of the Build-to-Zone**

- (1) **Allows for entrance alcoves.**
- (2) **Allows for facade articulation and inclusion of recessed building elements.**
- (3) **Allows for alignment with existing neighboring buildings.**
- (4) **Allows garage doors within the Build-To-Zone for individual private garages and loading docks.**
- (5) **Allows parking or loading within the frontage, provided a landscaped hedge or low fence is constructed to shield the view of parking between the street and parking area.**



Section 270-15A (F) (9) FORECOURT FRONTAGE: FR-5

- (a) Forecourt frontage FR-5 permits front courtyard areas for lawns, gardens and plazas.

PRIVATE FRONTAGE

- (b) Active edge required – Average door separation distance along the frontage shall be no greater than 80 feet.

- (c) Permitted frontage edging elements

(1) EE-1

(2) EE-2

(3) EE-3

(4) EE-4

(5) EE-6

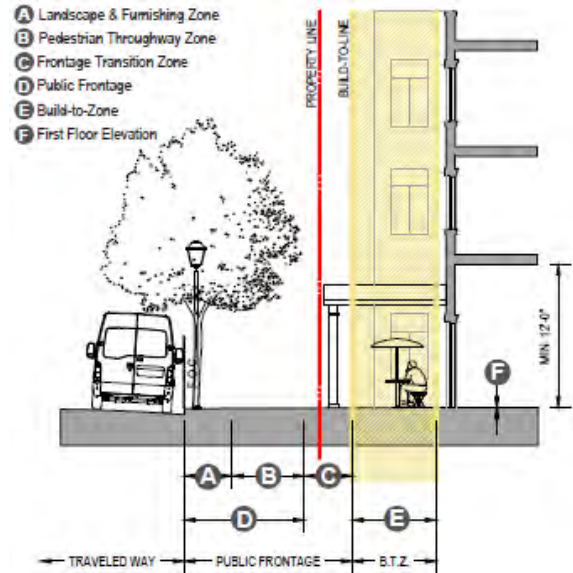
(6) EE-7

- (d) Glazing requirement

- (1) A minimum of 30% of the street-level, street facing building area located between 3' & 13' above the first floor elevation shall provide clear, non-reflective glass

- (e) Function of the Build-to-Zone

- (1) Allows for entrance alcoves.
- (2) Allows for facade articulation and inclusion of recessed building elements.
- (3) Allows for alignment with existing neighboring buildings.
- (4) Prohibits garage doors within the Build-To-Zone for individual private garages.



Forecourt frontage build-to-zone



Forecourt Frontage Diagram

Section 270-15A (F) (10) HILLSIDE FRONTAGE: FR-6

- (a) Hillside Frontage FR-6 is only permitted where the first floor elevation is greater than or equal to a 5'0" vertical grade change from the street to the primary entrance. These frontages allow additional setbacks from the streets required for site access. The frontage transition zone permits up to three stair risers, the ground plane within the Build-to-Zone can be a hardscape continuation of the sidewalk or landscaped.

PRIVATE FRONTAGE

- (b) Active edge required – Average door separation distance along the frontage shall be no greater than 80 feet.

- (c) Permitted frontage edging elements

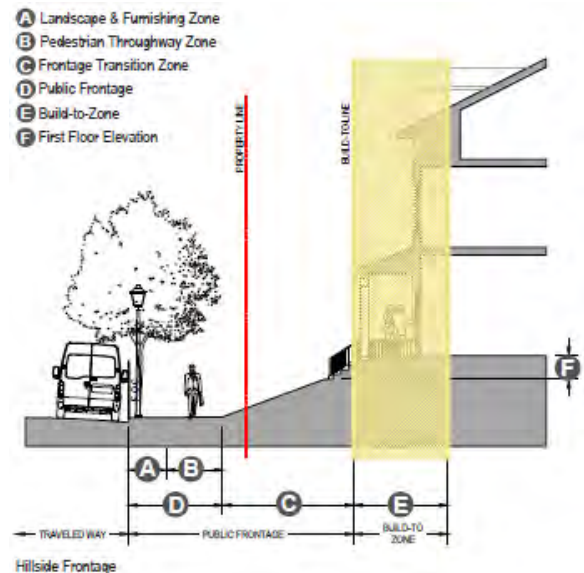
- (1) EE-1
- (2) EE-2
- (3) EE-3
- (4) EE-4
- (5) EE-6
- (6) EE-7

- (d) Glazing requirement

- (1) A minimum of 30% of the street-level, street facing building area located between 3' & 13' above the first floor elevation shall provide clear, non-reflective glass

- (e) Function of the Build-to-Zone

- (1) Allows for entrance alcoves.
- (2) Allows for facade articulation and inclusion of recessed building elements.
- (3) Allows for alignment with existing neighboring buildings.
- (4) Prohibits garage doors within the Build-To-Zone for individual private garages.



270-15A (F) (11) NEIGHBORHOOD STOREFRONT FRONTAGE: FR-7

- (a) Neighborhood Storefront Frontage FR-7 defines commercial frontages with high visibility to first floor commerce and an at grade entrance. The ground plane within the Build-To-Zone can be a hardscape continuation of the sidewalk or landscaped (e.g. rain gardens).

PRIVATE FRONTAGE

- (b) Active edge required – Average door separation distance along the frontage shall be no greater than 50 feet.

- (c) Permitted frontage edging elements

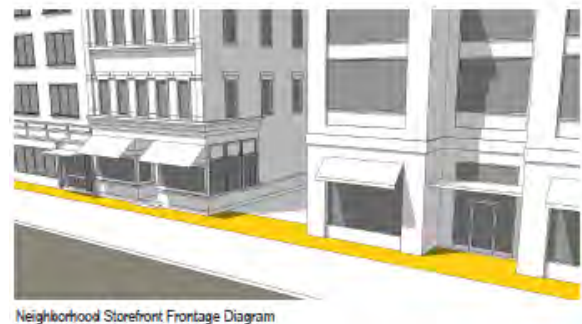
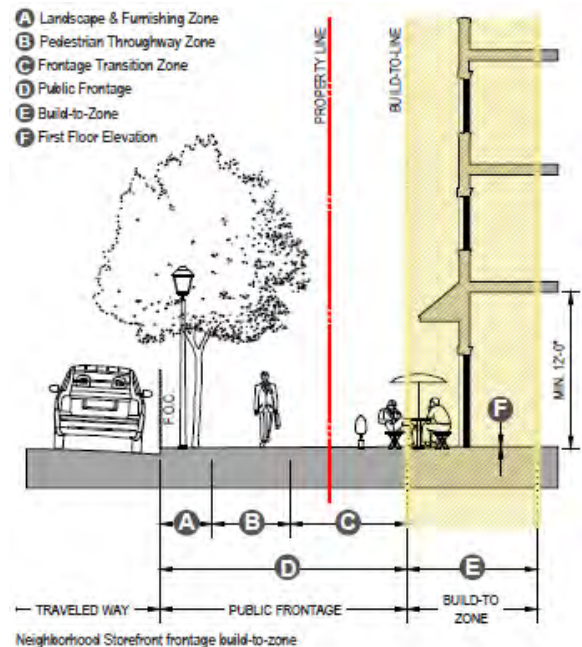
- (1) EE-1
- (2) EE-2
- (3) EE-3
- (4) EE-6
- (5) EE-7

- (d) Glazing requirement

- (1) A minimum of 60% of the street-level, street facing building area located between 2' & 10' above the sidewalk shall provide clear, non-reflective glass

- (e) Function of the Build-to-Zone

- (1) Allows for entrance alcoves.
- (2) Allows for facade articulation and inclusion of recessed building elements.
- (3) Allows for alignment with existing neighboring buildings.
- (4) Prohibits garage doors within the Build-To-Zone for individual private garages.



270-15A (F) (12) STOOP FRONTAGE: FR-8

- (a) Stoop Frontage FR-8 defines frontages with an elevated entrance to provide additional privacy to the first floor occupants. The frontage transition zone permits up to three stair risers, the ground plane within the Build-To-Zone can be a hardscape continuation of the sidewalk or landscaped.

PRIVATE FRONTAGE

- (b) Active edge required – Average door separation distance along the frontage shall be no greater than 80 feet.

- (c) Permitted frontage edging elements

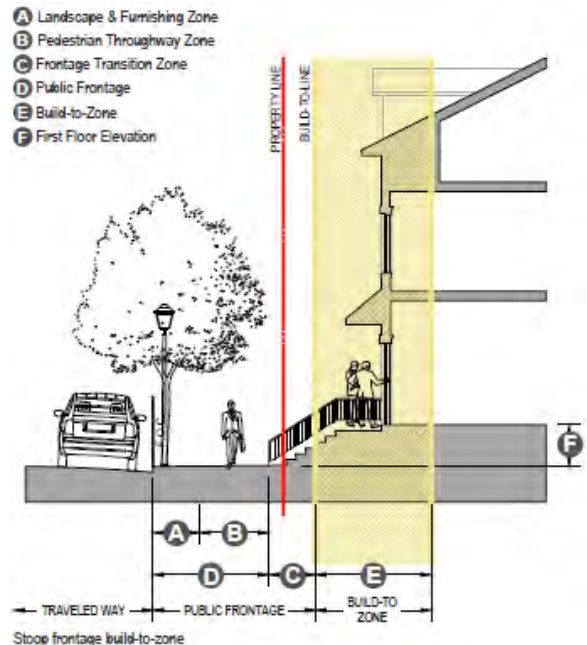
- (1) EE-1
- (2) EE-2
- (3) EE-3
- (4) EE-4
- (5) EE-6
- (6) EE-7

- (d) Glazing requirement

- (1) A minimum of 30% of the street-level, Private Frontage facing building area located between 2' & 10' above the first floor elevation shall provide clear, non-reflective glass.

- (e) Function of the Build-to-Zone

- (1) Allows for entrance alcoves.
- (2) Allows for facade articulation and inclusion of pronounced and/or recessed building elements.
- (3) Allows for alignment with existing neighboring buildings.
- (4) Prohibits garage doors within the Build-To-Zone for individual private garages.



270-15A (F) (13) PORCH FRONTAGE: FR-9

- (a) Porch Frontage FR-9 permits a frontage with a semi-public porch and an elevated entrance providing a greater degree of privacy from the street. The frontage transition zone permits up to three stair risers, the ground plane within the Build-To-Zone can be a hardscape continuation of the sidewalk or landscaped.

PRIVATE FRONTAGE

- (b) Active edge required – Average door separation distance along the frontage shall be no greater than 80 feet.

- (c) Permitted frontage edging elements

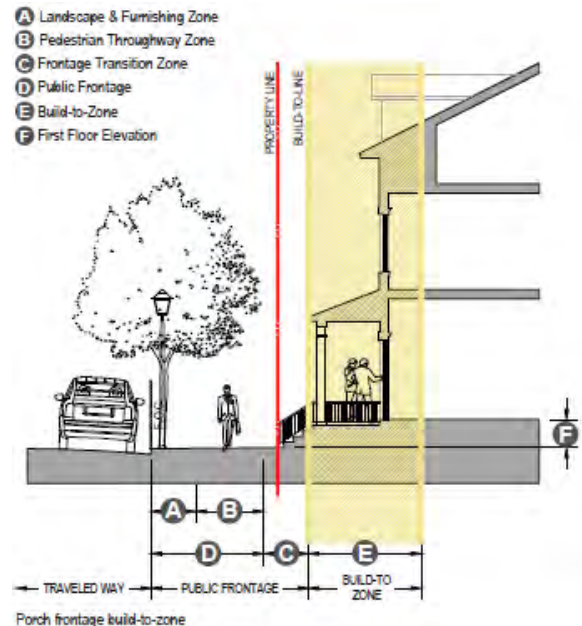
- (1) EE-1
- (2) EE-2
- (3) EE-3
- (4) EE-4
- (5) EE-6
- (6) EE-7

- (d) Glazing requirement

- (1) A minimum of 30% of the street-level, Private Frontage facing building area located between 2' & 10' above the first floor elevation shall provide clear, non-reflective glass.

- (e) Function of the Build-to-Zone

- (1) Allows for entrance alcoves and expanded sidewalk area for outdoor dining.
- (2) Allows for facade articulation and inclusion of pronounced and/or recessed building elements.
- (3) Allows for alignment with existing neighboring buildings.
- (4) Prohibits garage doors within the Build-To-Zone for individual private garages.



270-15A (F) (14) YARD FRONTAGE: FR-10

- (a) Yard Frontage FR-10 defines a frontage with a landscaped front yard and an elevated entrance. Up to three stair risers can be placed within transition zone, and the ground plane within the Build-To-Zone can be hardscape continuation of sidewalk or landscaped (e.g. rain gardens).

PRIVATE FRONTAGE

- (b) Active edge required – Average door separation distance along the frontage shall be no greater than 80 feet.

- (c) Frontage edging elements allowed

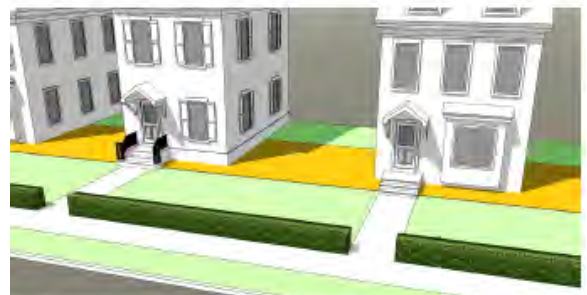
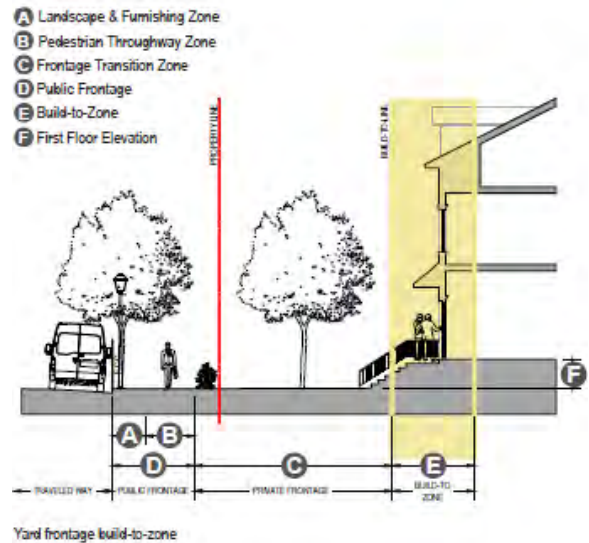
- (1) EE-1
- (2) EE-2
- (3) EE-3
- (4) EE-4
- (5) EE-6
- (6) EE-7

- (d) Glazing requirement

- (1) A minimum of 30% of the street-level, Private Frontage facing building area located between 2' & 10' above the first floor elevation shall provide clear, non-reflective glass.

- (e) Function of the Build-to-Zone

- (1) Allows for entrance alcoves.
- (2) Allows for facade articulation and inclusion of recessed building elements.
- (3) Allows for alignment with existing neighboring buildings.
- (4) Prohibits garage doors within the Build-To-Zone for individual private garages.



Section 270-15A (G) EDGING ELEMENT STANDARDS

Permitted Edging Elements. For all Private Frontages or Park Frontages as designated on the Downtown and Croton Ave Overlay Districts Regulating Plans, one or more of the following permitted Edging Elements shall be provided according to the table below and the corresponding Edging Element Standards in Section 270-15A (G).

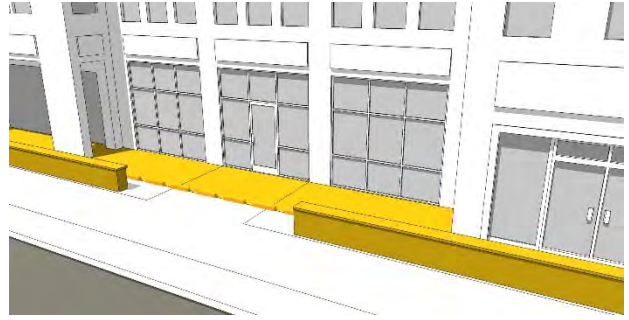
Table G (1) - Edging Elements								
Lot Frontage Types		Low Wall	Raised Edge*	Stairs*	Ornamental Fence	Privacy Fence	Planters	Landscaped Edge
		EE-1	EE-2	EE-3	EE-4	EE-5	EE-6	EE-7
Storefront	FR-1	P	P	P	X	X	P	P
Professional	FR-2	P	P	P	X	X	P	P
Park	FR-3	P	P	P	P	P**	P	P
Service	FR-4	P	P	P	P	P**	P	P
Forecourt	FR-5	P	P	P	P	X	P	P
Hillside*	FR-6	P	P	P	P	X	P	P
Neighborhood Storefront	FR-7	P	P	P	X	X	P	P
Stoop*	FR-8	P	P	P	P	X	P	P
Porch*	FR-9	P	P	P	P	X	P	P
Yard*	FR-10	P	P	P	P	X	P	P

* Additional building standards for railing may apply.

** Privacy fences shall be used for screening of utility and service areas and shall be no taller than 6'-6".

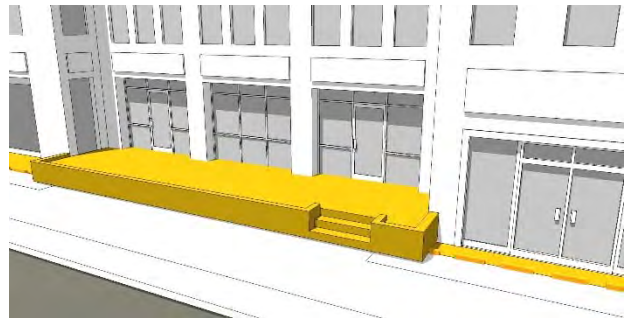
270-15A (G) (1) LOW WALL: EE-1

Masonry wall, maximum 48" in height (brick, concrete, stone), provided that at least 50% of the area above 48" is transparent to allow for visibility to the first floor windows.



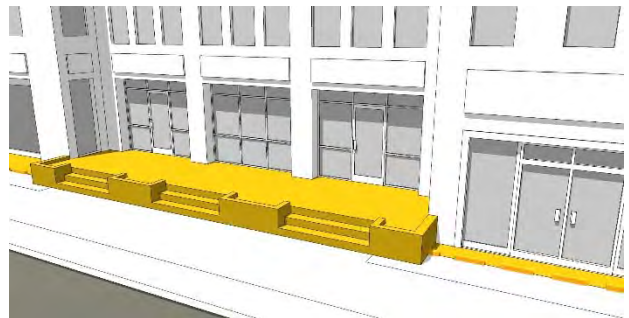
270-15A (G) (2) RAISED EDGE: EE-2

The intent is to separate areas with different intensity of use with up to 48" of difference in floor planes, provided that at least 50% of the area above 48" is transparent to allow for visibility to the first floor windows.



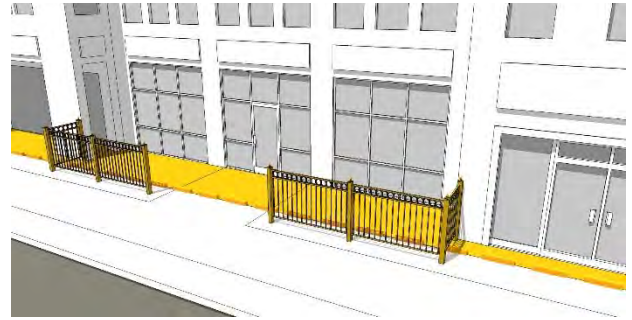
270-15A (G) (3) STAIRS: EE-3

The intent is to separate areas with different intensity of use with up to 48" of difference in floor planes provided that at least 50% of the area above 48" is transparent to allow for visibility to the first floor windows.



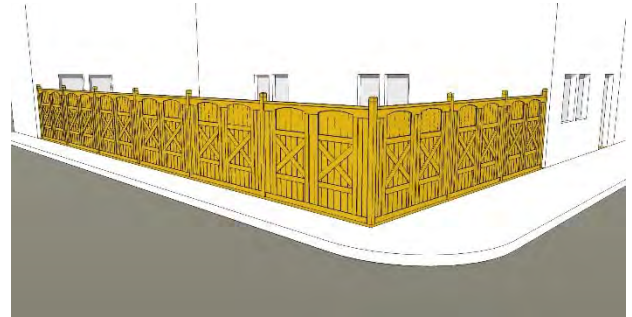
270-15A (G) (4) ORNAMENTAL FENCE: EE-4

A transparent ornamental fence, not chain link, with a maximum height of 42".



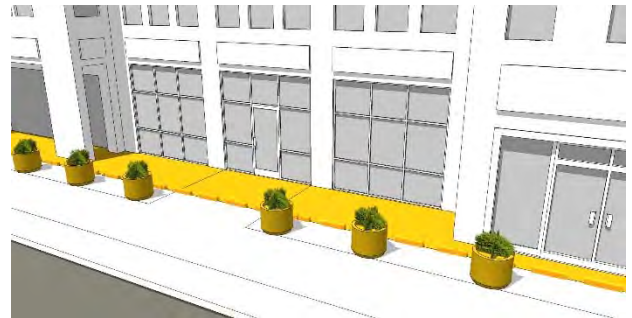
270-15A (G) (5) PRIVACY FENCE: EE-5

A privacy fence with a maximum height of six feet six inches. Fences facing public frontages shall not be constructed of chain link, barbed wire or similar materials.



270-15A (G) (6) PLANTERS: EE-6

Planters no higher than 42" in height, provided that at least 50% of the area above 42" is transparent to allow for visibility to the first floor windows.



270-15A (G) (7) LANDSCAPED EDGE: EE-7

A landscaped edge of flowers, plants or a hedge, provided that at least 50% of the area is transparent to allow for visibility to the first floor windows.



Section 270-15A (H) DESIGN STANDARDS

(1) Civic Space Design Standards

- (a) **Civic Space Design. The Planning Board shall consider the following criteria during its site plan review process to determine whether a civic space design is acceptable.**

Civic Spaces:
Shown below are examples of Civic Spaces.

(b) **Required Civic Spaces Area**

- [1] **For sites greater than 10,000 SF within the Downtown Overlay District, a minimum of 7.5% of the total lot area of the development tract shall be permanently preserved as Civic Space that conforms to the standards of this Section.**



Courtyard - A civic space with active frontages on at least three sides



Green - A civic space with active frontages on at least two sides

- [2] **Fee in Lieu of Civic Space. The Village Board of Trustees shall set a Fee in Lieu of Civic Space for each 1,000 SF, or portion thereof, of a required Civic Space and may amend this amount as it deems appropriate. An applicant for a Downtown Overlay District Development may choose to either construct the Civic Space as required or pay the Fee in Lieu of Civic Space.**



Square - A civic space with active frontages on at least one side.

- [3] **The ongoing maintenance and operation of Civic Spaces shall be the responsibility of the applicant unless the Village or another entity agrees to assume these responsibilities according to terms that are acceptable to the Village.**

- [4] Main Street and Spring Street Civic Spaces: If the applicant does not want to provide civic space in locations shown on the Regulating Plan, the applicant may propose an alternate configuration on-site with approval of the Planning Board.

(c) Civic Space Form and Access

- [1] The required civic space(s) shall be provided in the form of courtyards, greens, squares or pedestrian passages and these spaces shall be placed along and connect to one or more the public frontages on pedestrian passages.
- [2] All civic spaces shall provide pedestrian access from a public sidewalk via a publicly accessible pedestrian way or a private walkway open to the public at least 16 hours per day.
- [3] A civic space must provide active or passive uses designed to bring regular pedestrian, civic and/or commercial activity to the Site.
- [4] Above grade stormwater management basins, drainage channels and required buffers shall not be used to meet the minimum civic space requirements.
- [5] The civic spaces shall include landscaping, pathways and street furniture and may contain artwork and/or fountains. Pathways should include decorative paving materials such as brick, stone, paving block or patterned concrete.
- [a] Where a civic space is proposed on a development site adjacent to an existing building not controlled by the Applicant, the Applicant shall provide Edging Elements as defined in Section 270-15A (G) and landscaping to buffer any adjacent areas of blank walls or service uses.
- [b] A civic space may include buildings provided that they are designed to activate the civic use of the space and provide public access. Buildings and temporary structures within civic spaces may be as low as one story in height.
- [6] Civic Space Frontage Occupancy
- [a] Civic spaces shall be mapped and measured on the site plan to designate a Build-To-Zone with a total linear length along the edges of the proposed civic space excluding the length of the edge along the street and/or the length of the pedestrian way conforming to its Frontage Occupancy requirements.

[b] Civic spaces shall provide a minimum 60% frontage occupancy along its edges, unless the Planning Board determines that a lower standard is permitted.

[c] All Private and Public Frontage requirements required on the Regulating Plan along the street or greenway will also be required along at least an equivalent length of the Civic Space Private Frontage set back away from the street or public way.

[d] The Build-To-Line and corresponding Build-To-Zone approved by the Planning Board for a civic space may be parallel to or at any angle to the street.

[7] New buildings contiguous to a civic space shall provide Build-To-Zone(s) and Street Wall(s) as required by the Street Type designated on the nearest Street on the Regulating Plan Map. Where existing buildings front onto a civic space, the Planning Board shall determine the minimum standards for civic space frontage occupancy consistent with the intent of 270-15A (H) (1), while recognizing the challenges of retrofitting existing buildings.

(2) Landscaping and Buffering Guidelines

Chapter 9 - Land Forms of the Architectural Design Guidelines for the Village of Ossining shall serve as a reference source for the Planning Board to consider when evaluating the landscape design of developments within the Downtown Overlay District or Croton Avenue Overlay District. In addition to these guidelines, the Planning Board shall consider the following landscape design guidelines during its review process. The requirements of §270-34 General landscaping and environmental requirements; steep slopes shall be applicable to all projects within the Downtown and Croton Ave Overlay Districts. Where space permits, each site should incorporate a combination of trees, shrubs, groundcovers, and potted plants into landscaping plans with emphasis on use of native plants. Monocultures should be avoided.

(a) Street Trees.

[1] Shade trees, a minimum of 2" in caliper, should be provided at an average rate of one tree per 40 feet of street frontage. The trees should be positioned to correspond with parallel parking striping to allow for vehicle door swings.

[2] If a sidewalk is too narrow to provide a verge wide enough for street trees, then a combination of potted plants, window boxes and/or hanging baskets should be provided in lieu of the trees.

- (b) **Parking Lot Planting. Portions of off-street parking areas that are visible from street frontages should be landscaped with a combination of evergreen shrubs, low walls or fences and shade or ornamental trees.**
- [1] **A 3 foot wide buffer strip should be provided between a parking lot and a street, civic space, sidewalk or pedestrian way. A buffer strip may be comprised of a landscape buffer and/or a low wall or ornamental fence.**
 - [2] **Landscape buffer strips should contain a continuous hedge of 3-foot tall evergreen or dense deciduous shrubs, and one 2" caliper shade or ornamental tree per 30 linear feet of frontage.**
 - [3] **If a wall or ornamental fence is proposed, low-growing shrubs and/or perennial plantings should also be provided on the street frontage side. Shade trees should be provided in adjacent interior islands at the above rate.**
 - [4] **Interior parking lot planting should include one 2" caliper shade tree for every 20 parking spaces. Parking lots with 25 or more spaces should be divided by planting islands, planted with trees and shrubs. Additional plantings may include low-growing shrubs or ornamental grasses and/or stormwater management feature gardens.**
 - [5] **The non-street frontage perimeters of parking lots, where buffer plantings are not recommended, should be planted with a combination of shrubs, trees and perennials to soften their appearance from adjacent uses.**
- (c) **Fences, Walls and Screens. Where permitted by the Edging Elements for the designated and permitted Frontage Types and Pedestrian Passages, fences and walls may be used to define street walls, provide privacy, and screen views. For those locations not facing Streets or Pedestrian Passages, fences, walls and screens should be controlled by this section. The finished side should face the street or adjacent property.**
- [1] **Fences and walls should be located within the Build-To-Zone, alongside and adjacent to rear property lines, unless the fences and walls are being used for privacy or visual screening of utilitarian areas. They should not impede clear sight distances at intersections or driveways.**
 - [2] **Fences, walls and hedges should be counted as street walls for up to 20% of the recommended minimum frontage.**

- [3] Recommended maximum fence and wall heights:
 - [a] Fences and walls along street frontages and public sidewalks: 48 inches.
 - [b] Fences and walls along lot lines or for privacy or screening: 6 1/2 feet.
- [4] Approved fence and wall materials:
 - [a] Fence and gate materials may include wood, wood composites, iron and metal, including decorative perforated sheet metal. Sharp-pointed or spear-headed pickets of less than one-half inch in diameter are discouraged. Chain link, woven wire, barbed wire and vinyl fences are strongly discouraged.
 - [b] Wall and pier materials include whole or veneer brick or stone, cultured stone, stucco over masonry, and finished concrete. Unfinished concrete block and glass block is discouraged.
 - [c] Fences, walls and piers may be used in combination to reflect the development's architectural character.
 - [d] Pedestals and gates. Blocks or pedestals for fence posts should not project into or above the surface of an adjacent sidewalk. All gates should swing inwardly; and no gate should swing outwardly over any sidewalk, avenue, street, or road.

(3) Architectural Guidelines

The Architectural Design Guidelines for the Village of Ossining shall serve as the primary source for the Planning Board to consider when evaluating the architectural design of developments within the Downtown Overlay District or Croton Avenue Overlay District. In addition to these guidelines, the Planning Board shall consider the following architectural design guidelines during its review process for buildings, site walls and parking structures.

- (a) The buildings in the Downtown and Croton Ave Overlay Districts should relate to the context and fabric of existing places in the Village of Ossining and typically found within the older downtown building types in New York villages. The size, mix proportion and form of buildings should emulate the heritage character of these traditional downtown areas while avoiding historicism or copying. All buildings should have vertical and horizontal

modulation and articulation reflecting the traditional streetscape building spacing and dimensional variations of typical New York villages, including:

(b) Horizontal building modulation: Building facades should conform to the following standards:

- [1] The maximum width (as measured horizontally along the building exterior) without building modulation should be 60 feet.**
- [2] The minimum depth of modulation should be two feet. The minimum width of modulation should be 15 feet. When the principal use of the building is for the parking of motor vehicles, the depth of such modulation should be a minimum of 3 1/2 feet. No modulations are recommended on a wall of a parking facility which does not front on a public street or pedestrian way.**
- [3] Roof decks or balconies may be used as all or part of the building modulation.**
- [4] The requirements of the horizontal building modulation subsection should be considered satisfied if existing building facades of existing adjacent structures are preserved and incorporated into the proposed building.**

(c) Modulated roofline: Roofs are a design element and should relate to the building facade articulations. The roofline of all facades visible from a street or public park, or open space should be modulated according to the following standards:

- [1] For flat roofs or facades with a horizontal eave, fascia, or parapet: change roofline so that no unmodulated segment of roof exceeds 60 feet. Minimum vertical dimension of roofline modulation is the greater of two feet or 0.1 multiplied by the wall height (finish grade to top of wall).**
- [2] For gable, hipped, or shed roofs: a minimum slope of 5 feet vertical to 12 feet horizontal.**
- [3] Other roof forms, such as arched, vaulted, dormer, or saw-toothed, may satisfy this design principle if the individual segments of the roof with no change in slope or discontinuity are less than 60 feet in width (measured horizontally).**

(d) Building articulation should be accomplished with design elements such as the following, so long as the articulation interval does not exceed 60 feet.

- [1] Repeating distinctive window patterns at intervals less than the articulation interval.
 - [2] Providing a balcony or bay window for each articulation interval.
 - [3] Changing the roofline by alternating dormers, stepped roofs, gables, or other roof elements to reinforce the modulation or articulation interval.
 - [4] Changing materials with a change in building plane.
- (e) Vertical articulation: To moderate the vertical scale of buildings, the design should include techniques to clearly define the building's top, middle and bottom. The following techniques are suggested methods of achieving vertical articulation:
- [1] Top: sloped roofs, strong eave lines, cornice treatments, horizontal trellises, etc.
 - [2] Middle: windows, balconies, material changes, railings and similar treatments that unify the building design.
 - [3] Bottom: pedestrian-oriented fronts, pedestrian scale building details and awnings.
 - [4] Where appropriate, the applicant should coordinate the horizontal elements (i.e., cornices, window lines, arcades, etc.) in a pattern and height to reflect similar elements on neighboring buildings that exhibit the Village's desired scale and character.
- (f) Materials: Building exteriors should be constructed from high quality, durable materials. Building materials should not change at the corners closest to the street, but instead should change at internal corners furthest from the street or at least 4 feet from the outside corners. Preferred exterior building materials that reflect the Village's desired traditional downtown street character are as follows:
- [1] Masonry, including brick and stone.
 - [2] Cast stone or tile.
 - [3] Wood or cementitious ("Hardiplank" or equal) horizontal clapboard or vertical board and batten siding. Vinyl or other artificial siding materials are discouraged along street frontages and public ways, but may be permitted by the Planning Board on a case by case basis on architecturally subordinate facades.

- [4] All other materials subject to approval by the Planning Board.
- [5] If concrete or concrete blocks (concrete masonry units) are used for walls that are visible from a street, public park or open space or pedestrian way, then the concrete or concrete block construction should be architecturally treated in one or more of following ways:
 - [a] Use of textured surfaces such as split face or grooved.
 - [b] Use of other masonry types such as brick, glass block, or tile in conjunction with the concrete or concrete blocks.
 - [c] Use of decorative coursing to break up blank wall areas.
- (g) Fenestration. The arrangement, proportion and design of windows and doors (fenestration) should conform to the following:
 - [1] The height to width ratio of single openings and group openings are to be proportionately scaled to the wall.
 - [2] Door and window details and trim suitably scaled to the wall.
 - [3] Reduce large expanses of glass used in windows and doors to smaller component windows reminiscent of traditional main street vernacular when adjacent to existing buildings, sidewalks or pedestrian ways.
 - [4] The total square footage of windows along a facade facing a street should be a minimum of 15% of the square footage of the facade.
- (h) Blank walls should be discouraged along any exterior wall facing a street, parking area or pedestrian way. Exterior walls in these locations should have architectural treatments that are the same as the front facade, including consistent style, materials, fenestration and details.
- (i) Roofs.
 - [1] Slope: Roof pitches and overhangs should vary as necessitated by good architectural design and modulation requirements of the previous sections. However, flat roofs are discouraged as major architectural elements visible from a public street. A 5/12 roof slope or greater is the minimum standard for roofs visible from a public way. Mansard roofs, when constructed in the traditional form with appropriate step back from the exterior building wall line are discouraged. The upper roof of a Mansard may be flat or low pitch, providing it is not visible from ground level. Shed roofs, dormers, secondary roof forms, and roofs for porches may have a lower pitch,

but in no case will the pitch be lower than 3.75 in 12. Significant roof overhangs are recommended to provide architectural interest, to create shadow lines, and to protect wall and siding from water and sun. Roof overhangs are highly recommended to provide passive energy conservation where possible.

- [2] Penetrations: All roof stacks, flashings, vents or protrusions from the roof should be painted the same color as the roof. Roof stacks and plumbing vents should be placed on rear slopes of the roofs where possible.
- [3] Solar: Photovoltaic and hot water heating panels are encouraged providing that on sloped roofs visible from a public street or right-of-way they should be installed flush on the roof plane and should not project above the roof surface by more than 6 inches. On flat roofs not plainly visible from ground level of a public way, solar panels may be mounted on brackets, providing they are no higher than 6 feet above the roof surface that they are mounted on.
- [4] Materials: Roofs that are visible from ground level should be architectural dimensional composite shingles, wood shingles or shakes, slate, tile, or prefinished metal standing or box seam. Combinations of roofing are encouraged when appropriate to the desired architectural character. Roofs not visible from a ground level should be white or light colored roofing material to provide improved energy efficiency.

(j) Parking Structures.

- [1] The design of parking structures should focus on screening views of cars at the street level, especially those parking structures facing Primary Commercial Street Frontages and Secondary Commercial Street Frontages and Neighborhood Commercial Street Frontages. Parking shall be prohibited at the street level, within 40 feet of the Street Wall along Primary Commercial Street Frontages so that an active use faces the street on the ground floor.

Section 2. Chapter 270, section 30 (Zoning, Parking and Loading Requirements) is amended with new matter underlined and deleted matter in [brackets].

§ 270-30. Parking and loading regulations.

- A. Off-street parking. Off-street parking spaces, open or enclosed, are subject to the following provisions:

- (1) Off-street parking requirements for each District shall be as provided in Appendix C. For uses which do not fall within the categories listed in Appendix C, the Planning Board will determine the necessary parking needed to prevent frequent parking on the street by persons visiting or connected with each such use.
- (2) Areas computed as parking spaces. Areas which may be computed as open or enclosed off-street parking spaces include any private garage, carport or other area available for parking, other than a street. Each space shall be independently accessible with the exception that one space behind each garage or carport space may be counted as a parking space to meet parking requirements. Otherwise, tandem parking with access from only one direction shall be computed as one space.
- (3) All driveways, blacktop or loading docks must be at least four feet away from the property line in **the following** residential districts (S-50, **[S-75]**, S-100, S-125, **[T]**, MF-1, MF-2, PRD), **[and] all driveways, blacktop or loading docks must be at least two feet away from the property line in the following residential districts (S-75, T)**, and all driveways, blacktop or loading docks must be at least two feet away from the property line in nonresidential districts (PW-a, PW-b, PW-c, SP-N, SP-S, CDD, RDD, IR, O-R, VC, PC, NC-1, NC-2, GB and P-O) unless otherwise noted in Appendix B.

Section 3. Chapter 270 (Zoning), Appendix A (Use Tables), Table A-3 (Permitted, Conditional and Special Uses in Residential Districts) is amended as follows with new matter **in bold** and deleted matter in **[brackets]**.

USE	DISTRICT				
	S-125, S-100, S-75, S-50	T	MF-1, MF-2	PO	PRD
Residential Use Group					
Dwellings, single-family detached	p	p	p	p	p
Dwellings, single-family attached	np	np	p	p	p
Dwellings, two-family detached	np	[c] p	p	c	p
Dwellings, two-family attached	np	[np]p	p	c	p
Dwellings, multifamily	np	np	p	c	np
Commercial Use Group					
Adult entertainment uses	np	np	np	np	np
Animal-related uses, general	np	np	np	np	np
Animal-related uses, intensive	np	np	np	np	np
Bars or tavern uses	np	np	np	np	np
Cemeteries	c	c	c	c	c
Entertainment or recreation uses, indoor	np	np	np	np	np
Entertainment or recreation uses, outdoor	np	np	np	np	np
Lodging uses, bed-and-breakfasts	np	np	np	c	np
Lodging uses, hotels	np	np	np	np	np

DOWNTOWN AND CROTON AVENUE OVERLAY DISTRICTS USES AND DEVELOPMENT STANDARDS

Village of Ossining

EDGING ELEMENTS

Section 270 15A.G

Office uses, general	np	np	np	p	np
Office uses, live-work	np	np	np	c	np
Office uses, medical and dental	np	np	np	p	np
Parking uses, nonaccessory	np	c	c	c	np
Funeral parlors, taxidermists, mortuaries and crematoriums	np	np	np	p	np
Restaurants	np	np	np	np	np
Retail sales and service uses, sales oriented	np	np	np	np	np
Retail sales and service uses, personal service oriented	np	np	np	np	np
Retail sales and service uses, repair oriented	np	np	np	np	np
Retail sales and service uses, outdoor sales oriented	np	np	np	np	np
Vehicle-related uses, general	np	np	np	np	np
Vehicle-related uses, general plus	np	np	np	np	np
Vehicle-related uses, intensive	np	np	np	np	np

NOTE: The column under each zoning classification indicates whether the use is permitted (p), not permitted (np), conditionally permitted (c) or permitted as a special use (sp).

Section 4. Chapter 270 (Zoning), Appendix B (Bulk Requirements), Table B-2 (Bulk Requirements in Single-Family and Two- Family Residence Districts) is amended as follows with new matter in **bold** and deleted matter in **[brackets]**.

REQUIREMENT	DISTRICT					
	S-125	S-100	S-75	S-50	T*	P-O
Minimum lot area (sq. ft.)	15,000	10,000	7,500	5,000	7,500	10,000
Minimum lot width (ft.)	125	100	75	50	75	100
Minimum front yard (ft.)	45	30	30	30	30	25
Minimum side yard (one) (ft.)	30	20	[12] 8	8	[12] 8	10
Minimum side yard (both) (ft.)	60	45	[28] 20	18	[28] 20	20
Lots with widths greater than the minimum	Lots with a greater width than the minimum lot width must have both side yard setbacks equal to 40% of the lot width with each side yard equaling a minimum of 45% of both side yard setbacks.					
Minimum rear yard (ft.)	45	40	30	30	30	20
Minimum livable floor area per dwelling unit (sq. ft.)	1,000	900	850	800	800	800
Maximum building height (stories/ ft.), whichever is less	2.5/35	2.5/35	2.5/35	2.5/35	2.5/35	2.5/35
Maximum impervious coverage (percent)	30	35	40	40	40	35
Maximum building coverage (percent)	20	25	30	30	30	25

*NOTE: The above bulk requirements may be waived in the T Two-Family District only by the Planning Board in the case of existing buildings being repurposed or reused for educational uses, primary and secondary educational uses, higher learning or places of worship as listed under Table A-3, Permitted, Conditional, and Special Permit Principal Uses in Residential Districts, upon a showing by the applicant of no significant impact on nearby properties. Minimum lot size for conditional uses is controlled by § 270-10C(1)(a) and shall not be waived.

Section 5. Effective Date.

This local law shall become effective upon filing with the Secretary of State pursuant to the Municipal Home Rule Law.

DOWNTOWN AND CROTON AVENUE OVERLAY DISTRICTS

Village of Ossining

Attachment B

Village of Ossining

Downtown and Croton Ave Overlay Districts

AMENDMENTS TO THE CODE OF THE Village of Ossining, NY

1. REVISE ZONING MAP TO ADD:

Downtown and Croton Ave Overlay Districts

The current Zoning Map of the Village of Ossining, NY shall be amended to add a hatch pattern to the area of the downtown as shown the proposed 270-15A.D Regulating Plan as Downtown and Croton Ave Overlay Districts Boundary.

In the legend of the Zoning Map add the words "Downtown and Croton Ave Overlay Districts" and a corresponding hatch pattern.



ARCHITECTURAL DESIGN GUIDELINES

The Village Of Ossining, New York



ARCHITECTURAL DESIGN GUIDELINES

for

The Village Of Ossining, New York

May 1, 2011

Acknowledgements

Village of Ossining Board of Trustees

Mayor William R. Hanauer
Janis Castaldi
Marlene Cheatham
Michael Curry
Susanne Donnelly
Village Manager Richard Leins

Village of Ossining Department of Planning

Valerie Monastra, AICP, Village Planner
James Rather, Assistant Planner

Village of Ossining Architectural Guidelines Committee

James Bowen, Chair, Zoning Board of Appeals
Joseph Clarke, Chair, Planning Board
Janis Castaldi, Village Board
James Rather, Assistant Planner
Joanne Tall, Chair, Historic Preservation Commission

Village of Ossining Historic Preservation Commission

Joanne Tall, Chair
Miguel Hernandez
Manuel Quezada
Frederick Roberts
Eric Schatz
Alan Stahl
Deborah Van Steen

Village of Ossining Planning Board

Joseph Clarke, Chair
Michael Beldotti
Reginald Bush
John Fry, AIA
Barbara Klapkowski
Walter Ludlum
Penny Markowitz-Moses

Village of Ossining Zoning Board of Appeals

James Bowen, Chair
Betsy Brown
George Behling
Marcus Hyacinthe
Mike Masullo

In cooperation with:

Stephen Tilly Architect, Inc.

Stephen Tilly, AIA, LEED AP
Elizabeth Martin
Allyson Mehley
Laura Forst

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- Village role p. 3

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- Sparta Historic District p. 6
- Downtown Historic District p. 8
- Adjacent Neighborhoods p. 14
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3 The Importance of Landscape in All Areas **p. 26**

Look here for general guidance for your property and its landscape.

4 Sustainability **p. 27**

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5 Core principles for Historic Districts **p. 30**

- Tax Credits

Find a statement of the principles governing historic districts.

6 Planning Your Project **p.31**

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Look here for advice on preparing a successful submission.

7 Architectural Styles

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Review a brief statement on the uses and limits of the idea of “styles”.

8 Building Elements

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Look for specific advice and requirements for landscape improvements.

Appendices

Note: the appendices are not afterthoughts. They offer references in depth for the topics in the text.

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• Horticultural information	
• Tree selection, protections and pruning	
• Summary of Village of Ossining Tree Ordinance	
• Deer	
• Water management	
• Outdoor lighting.	

When you consider plans for your property, and before consulting this document, learn the Village land use requirements described in the Zoning Code, A link to the code can be found at www.Villageofossining.org.

This is the body of law governing land use. Study the appropriate sections and confirm what you learn with the Planning and Building Departments.

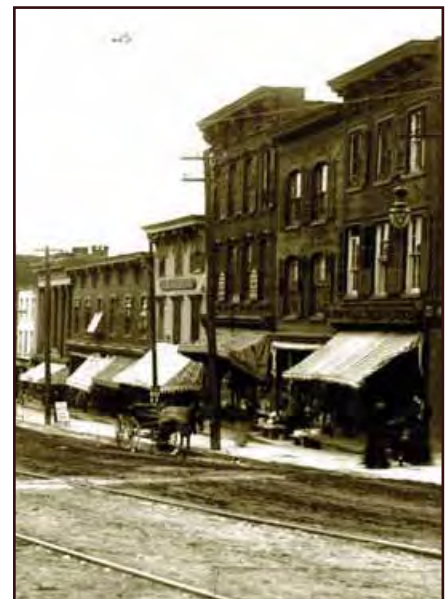


1 Guidelines: The Village of Ossining

Ossining is an outstanding river Village. Its greatest strengths are the River, the hills sloping down to it, a dynamic history expressed in the variety of streets, parks, and architecture left by past residents - and the diversity and enterprise of its present residents.

Ossining's architecture displays great variety, not a uniform style from a particular era. It expresses an evolution, with strong examples of eras of settlement and growth through over three centuries. In addition to Sparta Historic and Architectural Design District and the Downtown Historic District, many parts of the Village contribute to its unique appeal.

While no set of regulations and recommendations can fully address Ossining's rich diversity, **this document offers a framework for project planning.** It is not intended to frustrate design creativity but rather to provide a context for



thoughtful and constructive changes to the buildings, sites and streetscapes within the Village. By providing consistency in process and results, guidelines can encourage investment. They can promote stable property values and reduce the opportunity for disputes that might otherwise waste residents' and builders' time and money. And finally, they can suggest ways in which building conservation, properly done, means energy conservation and can help slow climate change.

Preservation of the unique strengths of Ossining

- Attracts like-minded and visionary investors
- Enriches experience for residents and visitors
- Maintains property values
- Protects against unplanned, disruptive change
- Encourages cohesive neighborhoods
- Conserves energy

Reasons for this guide

This guide has two purposes:

1. For residents, developers and visitors, to describe community patterns and celebrate community strengths that can be the building blocks for future community development.
2. To assist Village residents, developers, volunteer boards and staff to plan change within the Village in a way that will preserve and intensify its unique character in environmentally responsible ways.

Readers will find three levels of guidance:

1. **Assistance** for owners and builders looking for information on historic styles and practices, sensible preservation and energy conserving techniques, and land and garden planning. Websites in the appendices will connect you with useful expertise.
2. **Recommendations** of sound architectural practice for districts covered in these guidelines.
3. **Regulations** which must be followed for plan approval in Historic Districts and Landmarks.

How to Read the Guidelines:

The guidelines recommend baseline approaches to building and site improvements applicable in historic districts, adjacent neighborhoods and commercial arteries.

- If your project is located on a commercial artery or in an adjacent neighborhood you should follow “**all properties**” recommendations as noted throughout the Guidelines.
- If your project is in a HADD district see the “**all properties**” headings and then move on to the “**Historic Districts**” headings for the particular requirements of your neighborhood.

See **Section 2** for the neighborhoods covered in this document.

Village Role

A responsive structure to sustain the core Village character is in place in Ossining. It guides inevitable change in the community. Caretakers of Ossining's architectural and neighborhood character are professionals at the Village Building and Planning Departments and two boards composed of dedicated volunteers: the **Board of Architectural Review and the Historic Preservation Commission**.

Village REVIEW BOARDS

The Board of Architectural Review (BAR)

The seven-member Planning Board serves as the Board of Architectural Review. The Planning Board/BAR is charged with the review of all new construction and all exterior alterations to existing structures requiring a building permit. During its review, the BAR evaluates the proposed alteration(s) or new construction for the degree of similarity, dissimilarity, and compatibility of the proposed new work with the architectural character of the neighborhood.

Appointed by the Village Manager for five year terms, the BAR meets monthly. Chapter 270, Sections 270-56 through 270-58 of the Village of Ossining Zoning Code specify the BAR/Planning Board responsibilities.

The Historic Preservation Commission (HPC)

Appointed by the Village Manager, the seven-member Historic Preservation Commission is comprised of Village residents with demonstrated interest or expertise in the fields of architecture, planning or history. The HPC meets monthly. Chapter 270, Section 270-25 of the Village of Ossining Zoning Code lists the duties and powers of the HPC.

Both local and nationally recognized Historic Districts and Historic Landmarks are categorized as "Historic Architecture" by the Village. As such, if exterior changes are planned for these properties, the proposed alterations are reviewed by the Historic Preservation Commission.

The Commission grants **Certificates of Appropriateness (COA)** for compatible exterior alterations to designated historic landmarks as well as compatible exterior alterations to existing structures and new construction within locally-designated historic districts.

In addition, the HPC advises the Planning Board/Board of Architectural Review and the Building Department in matters affecting the character of historic landmarks within the Village. Non-locally landmarked properties beyond the limits of historic districts may be referred to the HPC by the BAR for an advisory opinion if the BAR so wishes.

The HPC can initiate or hear applications for designation of historic landmarks and historic districts and make recommendations for such designation to the Village Board of Trustees. The Commission surveys Village resources to identify structures and districts of cultural, architectural and/or historic significance meriting landmark designation. It promotes and presents public education programs to raise public awareness of the value of historic, cultural and architectural preservation.

Applicants can apply for relief from a Commission denial, but have to meet very strict standards on the basis of hardship. They can file an appeal within 30 days to the Zoning Board of Appeals.

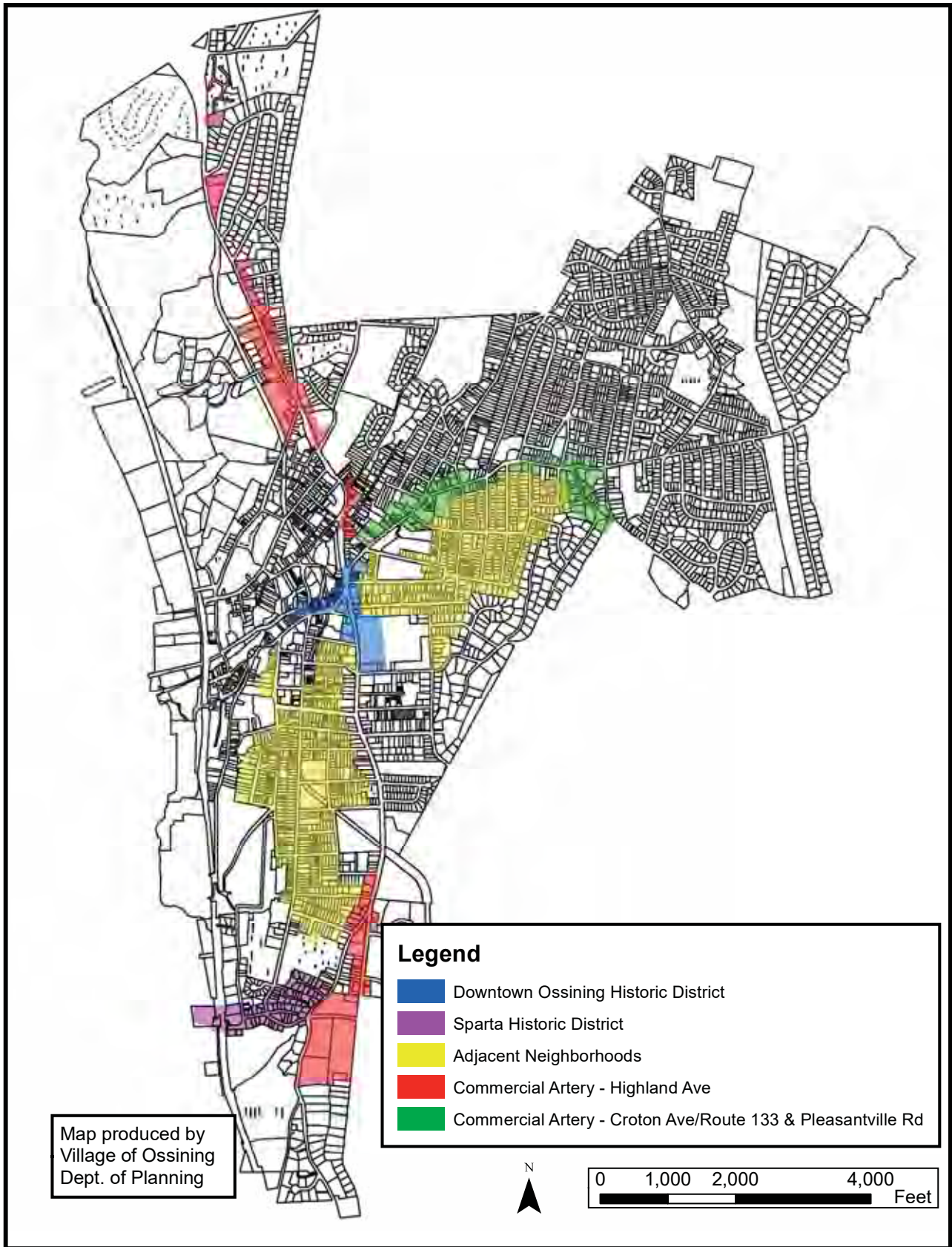
2 Guideline Subject Areas: Descriptions and Special Considerations

The *Village of Ossining: Architectural Design Guidelines* treat three key areas of architectural review in the Village: **Historic Districts and Architecture** (blue and purple facing pages), **Neighborhoods Adjacent to Historic Districts** (yellow), and **Commercial Districts** (green and orange).

To determine which guidelines apply to your property, consult the map. Owners of properties in HADD districts must be granted a COA from the HPC before undertaking changes. Owners of properties in adjacent districts will follow the standard Village approval process. Historic guidelines for these properties are recommendations—not pre-approval requirements. However, they will be considered by the BAR in evaluating proposed construction. On occasion, the Planning Board/BAR refers projects of historic interest to the HPC for review. The more an owner follows these recommendations in his/her project, the more likely approval will be granted promptly.

Ossining’s two **Historic Districts** are Sparta HADD and the Downtown Historic District. The Village of Ossining defines “Historic Architecture” as a district, individual building, structure, or site that has been designated as having historical significance and whose character communicates a distinctive architectural and cultural heritage. Historic Districts are concentrations of buildings and sites that are united by a common historic plan, development, and architectural significance. While the majority of properties within a Historic District may hold historic significance, the historic significance for all properties is not equal. In this case, properties within a Historic District are designated as “contributing” and “non-contributing”.

- **Contributing:** Buildings and sites that have been identified as a fundamental part of the historic fabric of the Historic District. These properties are architecturally significant or date from a common historical period.
- **Non-contributing:** Properties that are not architecturally or historically significant. In many cases, they are structures that were built in a later time period than the Historic District’s “contributing” properties; in some cases, old buildings have been so altered over time that they no longer meet standards of contributing structures.





Sparta Historic District

Most historic architecture in Sparta dates from the 19th and early 20th century, representing the two significant development periods of the district. Many of the buildings were originally built for utilitarian functions—not as style statements. Building forms and massing are generally simple with decorative elements from varying architectural styles. As the needs of homeowners evolved over time and older architectural fashions became dated, many Sparta buildings evolved with their owners’ tastes. Often, new materials were introduced, original decorative features were encased or replaced, exteriors were painted and the original forms were expanded upon and updated. As a result, most of the buildings reflect renovation campaigns, and few buildings are pure examples of a building style.

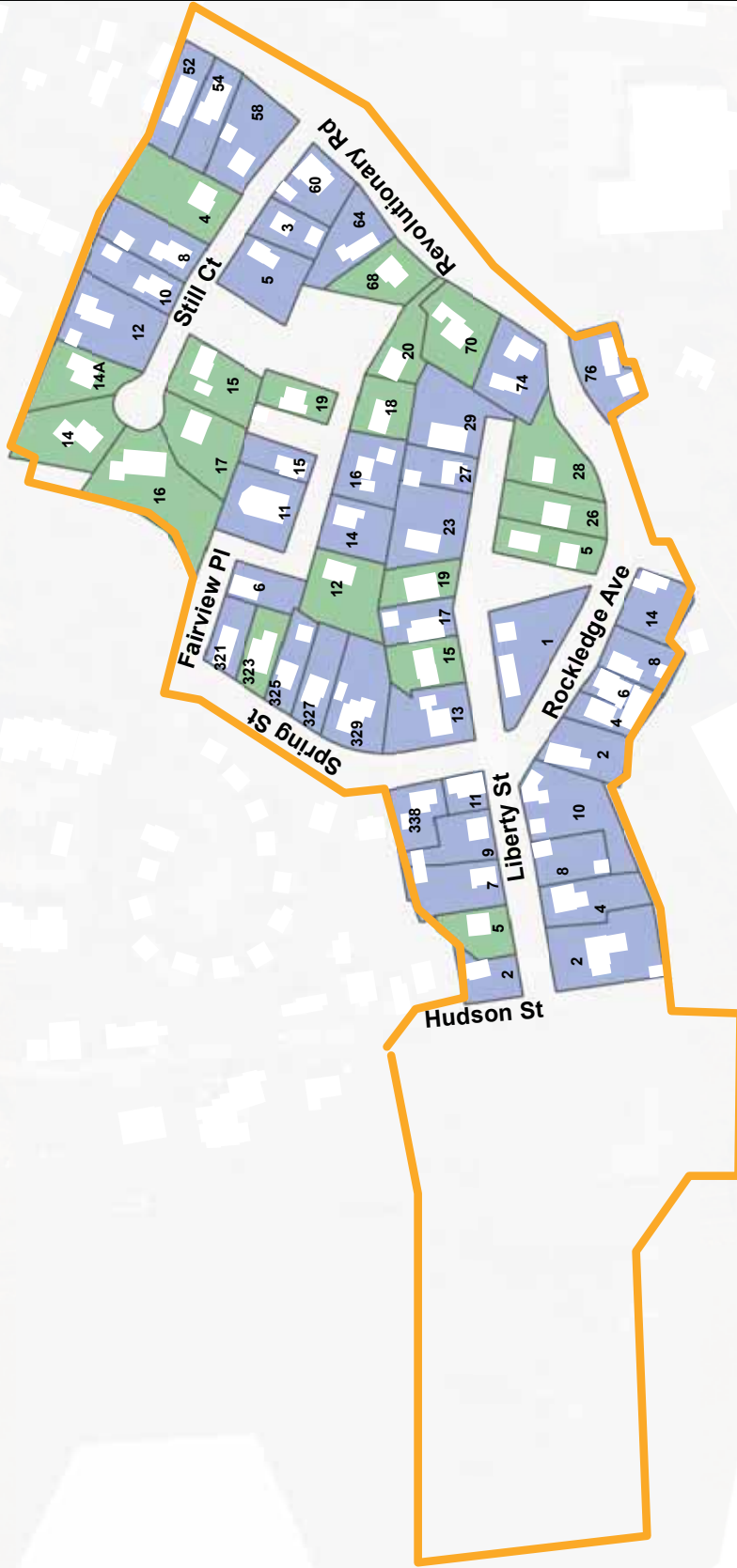
The historic buildings of Sparta are characteristically freestanding, two and three stories high and either wood framed or brick. The irregular topography of the district has shaped aspects of the building’s designs. The street grid has bends that result from the topography, and on individual lots, buildings have been slid or twisted on the site to accommodate the slope. Front entrances tend to be oriented to the prominent street and commonly accented by a front porch or portico and stairs. Columns with or without brackets with varying levels of detail support porch roofs. Almost all the streets within the district have sidewalks, and walkways lead from sidewalks to main house entrances. Driveways run either alongside or behind the homes, and almost all properties have front and back yards, and in most cases, side yards as well.

Design Considerations: Sparta Historic District

The architectural and landscape diversity of the Sparta District means that one guideline does *not* fit all cases with respect to roof shapes or entry forms or the siting of additions and new structures. Sparta in particular has significant structures and portions of structures that have survived from its history of change and redevelopment. It has not in previous centuries been frozen in time and has a heterogeneous character that can tolerate a moderately wide range of modifications.

That diversity should not mean that all the existing conditions should be used as precedents by applicants and reviewers. They will have to keep in mind the underlying intent of the guidelines, which is to ensure that proposed changes are consistent with the identity, cohesiveness and architectural integrity of the overall district. In Sparta, this may mean using applications to guide the district in a path that enhances its best historic buildings and landscape features. Attempts to create typical suburban or “flat yard” improvements should be resisted in a district characterized by diverse structures nestled around hilly winding streets. The scale of buildings and site elements should be kept small and differentiated, not large or monolithic.

Sparta HADD



Map Produced by
Village Of Ossining
Department of
Planning



Sparta HADD
Significance of Structures

- Noncontributing
- Contributing
- District Boundary

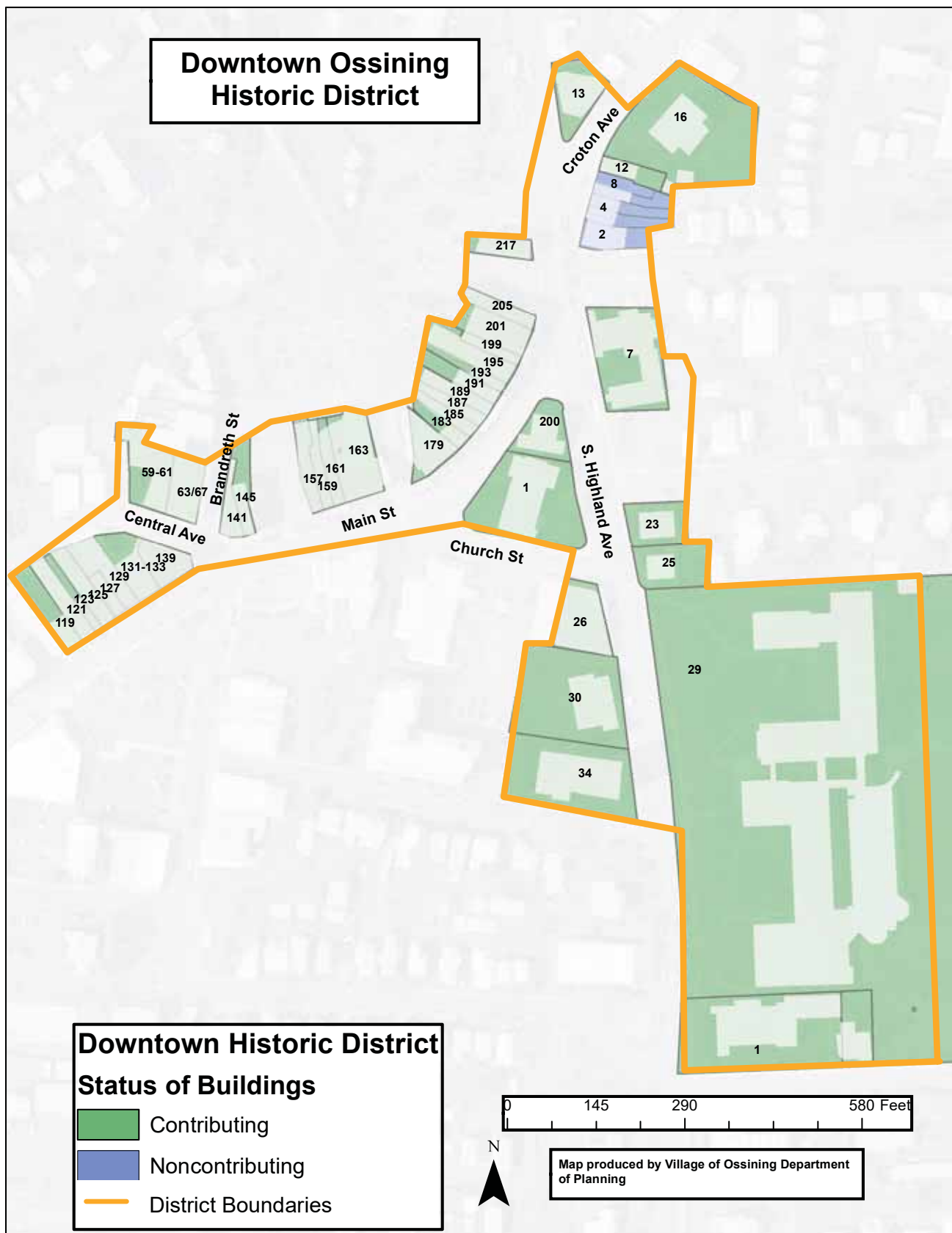


A row of vintage facades is visible from a vantage point on the property of the 1874 First Baptist Church

Downtown Ossining Historic District

The Downtown Ossining Historic District, commonly referred to as the Downtown Crescent, is located in the heart of the Village of Ossining at the intersection of Highland Avenue (Route 9), Main Street and Croton Avenue. Throughout the mid-to-late 19th century and into the early 20th century, the Downtown Crescent served as the civic, religious and historic core of the Village. The district is situated on the main thoroughfare between Highland Avenue (Route 9A) and the waterfront. With Main Street extending to the west, the district follows the inclining topography of the land to include Church Street, the southern end of Main Street and properties lining both sides of Highland Avenue south to Emwilton Place and north to the base of Croton Avenue.

The district is a largely intact group of buildings built in the popular styles of the second half of the 19th century and first decades of the 20th century: Italianate, Greek Revival, High Victorian, Gothic, Neo-Gothic Revival, Renaissance Revival, Beaux Arts, Collegiate Gothic, Art Deco, and the Neo-Renaissance and Neoclassical Styles. They represent the commercial development and burgeoning prosperity of Ossining. Most dating from 1870-1933, the buildings retain much of their original scale and architectural character.





Downtown facades have distinct top, middle and bottom sections.



Prominent eclectic "retail detail".



The 1870 First Presbyterian Church.

The district is a mix of two, three and four story predominantly masonry structures. The Crescent, an almost intact series of handsome masonry buildings on the north side of curving Main Street, is a showpiece of late 19th century mercantile architecture. The imposing buildings with decorated facades facing a wide sidewalk following the street's curve make Ossining a special place, outstanding among River Villages.

Buildings are uniformly set back from the street and abut each other with no room for side yards or alleys. Most have commercial space on the first floor with housing above. Ground floors share common commercial features: large windows, sheltered entrances, awnings and signage. Many buildings share Italianate architectural features, including symmetrical facades, dominant stone window hoods and sills, segmented arch windows, ornate wood and cast metal cornices, weighty brackets, and flat roofs.

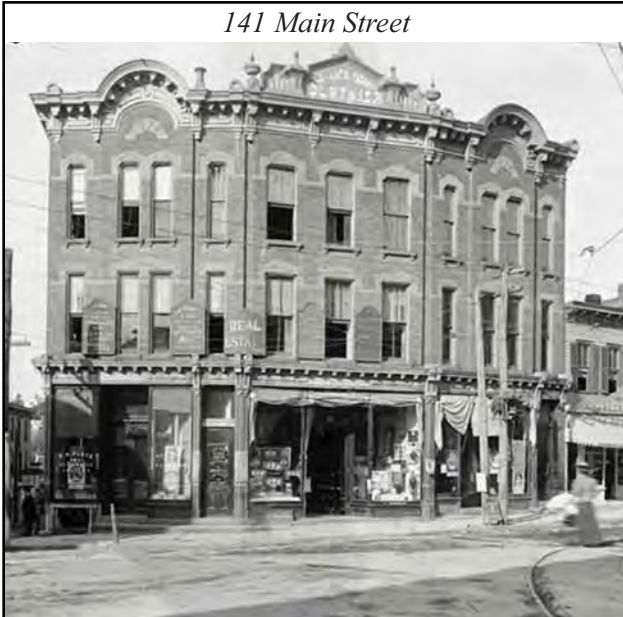
Together the surviving downtown buildings have a cohesiveness of massing, style and materials. They have the classic "faces" of American retail districts, with distinct articulated tops creating a varied profile, a solid middle with punched windows for the apartments or offices on upper levels and an open glassy bottom to show retail wares at street level to pedestrians and vehicles passing by.

The larger civic and religious buildings along Croton and Highland Avenues are freestanding, situated with a variety of angles and differing setbacks. The four churches within the district were constructed before the turn of the 20th century and possess Gothic style architectural elements commonly found in American church construction throughout the third quarter of the 20th century. The civic, banking and educational structures built after the turn of the 20th century within the district represent a variety of styles including Art Deco, Beaux Arts and Renaissance Revival. (See appendices for more on the history of the Downtown).

Then and Now

Comparing the 19th Century photographs of Downtown Ossining to the contemporary image below is not only fun, but it displays the developments and alterations to a building over time. Both 141 Main Street and Ossining National Bank buildings have had small alterations in the time between the images, such as the removal of signage features and replacement windows. Yet key architectural features, including building mass, window and door openings sizes, and materials, are the character defining features of Downtown Ossining and provide a tangible connection to the past.

141 Main Street



1873 Ossining National Bank Building





looking west down Main Street from the First Baptist Church grounds

Design Considerations: Downtown Ossining Historic District

The “Crescent,” adjacent vintage commercial buildings and neighboring landmarks including historic churches establish a clear scale and architectural patterns that renovations, additions and new construction must take into account.

This does not mean that there is not a place for new or innovative contemporary architecture in or near the downtown. The best way to pay homage to historic buildings is with a design effort that is equal to the architectural and building craft traditions that produced the original structures. Respect for the scale, form and materials of the older buildings can infuse the design of an addition or infill building without dictating that it become an imitation. Copycat structures are inappropriate.

To reinforce the dense urban retail core, new structures can take their cue from the older buildings. However, taking inspiration from the past does not mean cherry-picking architectural gestures from disparate sources to “historicize” a new structure.

Urban renewal left its mark on this district, leaving the north side of Main Street intact while leveling the south side and altering the scale of the overall ensemble. Development of the south side of Main Street deserves the highest scrutiny. The exceptional nature of the north side calls for architecture and construction across the street of an excellence that does not compete with or distract from Ossining’s treasured historic core.



ABOVE: Density, similar heights, richly detailed roof cornices and unifying sign entablatures contribute to a streetscape that is both coherent and interestingly varied.



LEFT: The L-shape of this mid - 20th century building bears little relation to the aligned front-ages across the street. A dense hedge prevents the open space created from relating to the Aqueduct Trail it overlooks to the right.



LEFT: Anachronistic and insensitive details such as brick piers, wrought iron railings, and white gutters compound the problems created by trying to fit a massive new element such as this covered walkway into an historic context.



ABOVE: On the south side of Main Street, a clearly modern design approach is one way of highlighting, even literally reflecting, the integrity of historic architecture across the street.



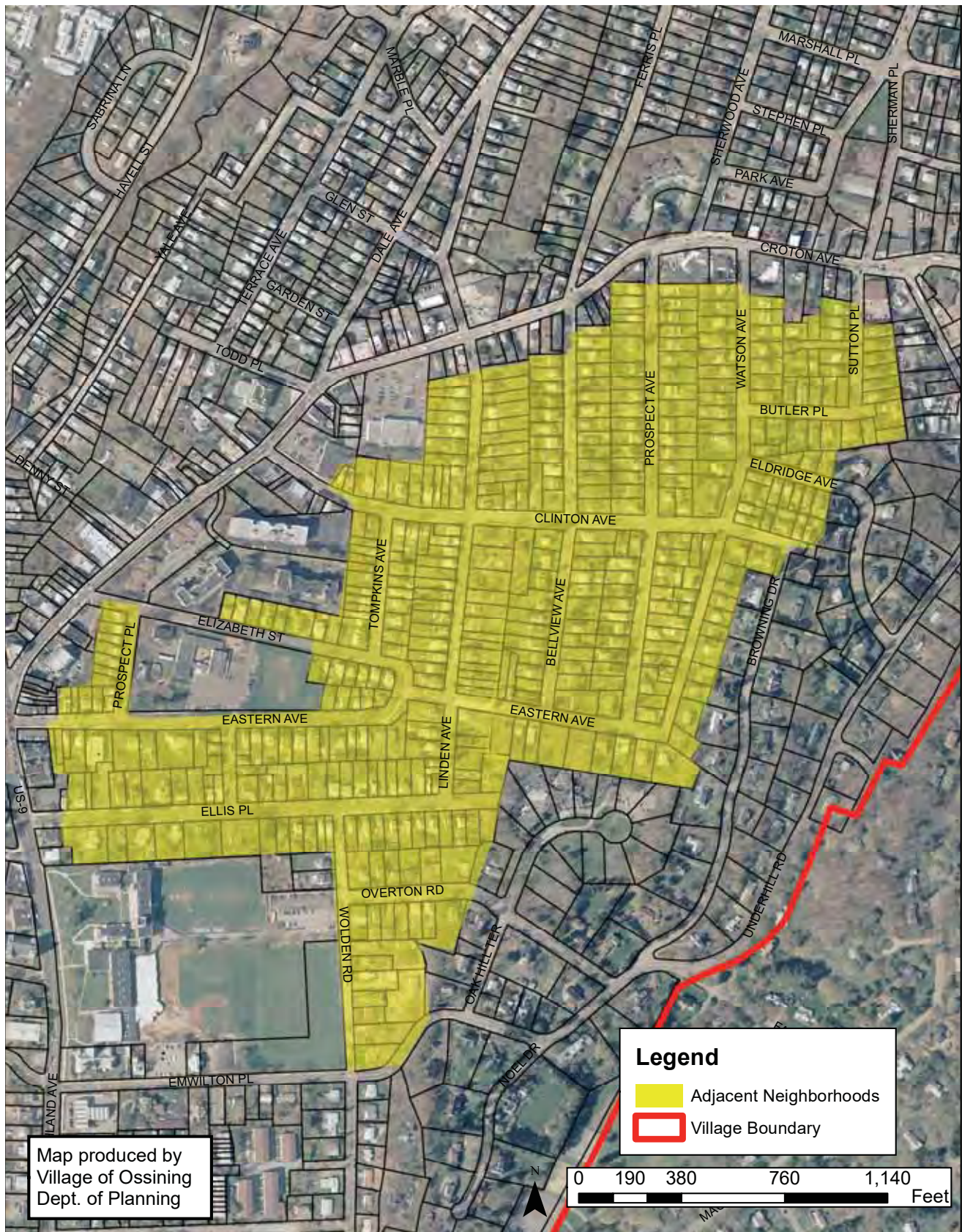
Neighborhoods adjacent to the historic districts contain a great diversity of housing types. This important collection demonstrates ways of making good-looking low rise, medium density housing from extended frontages (LEFT) to two and three family houses (RIGHT).

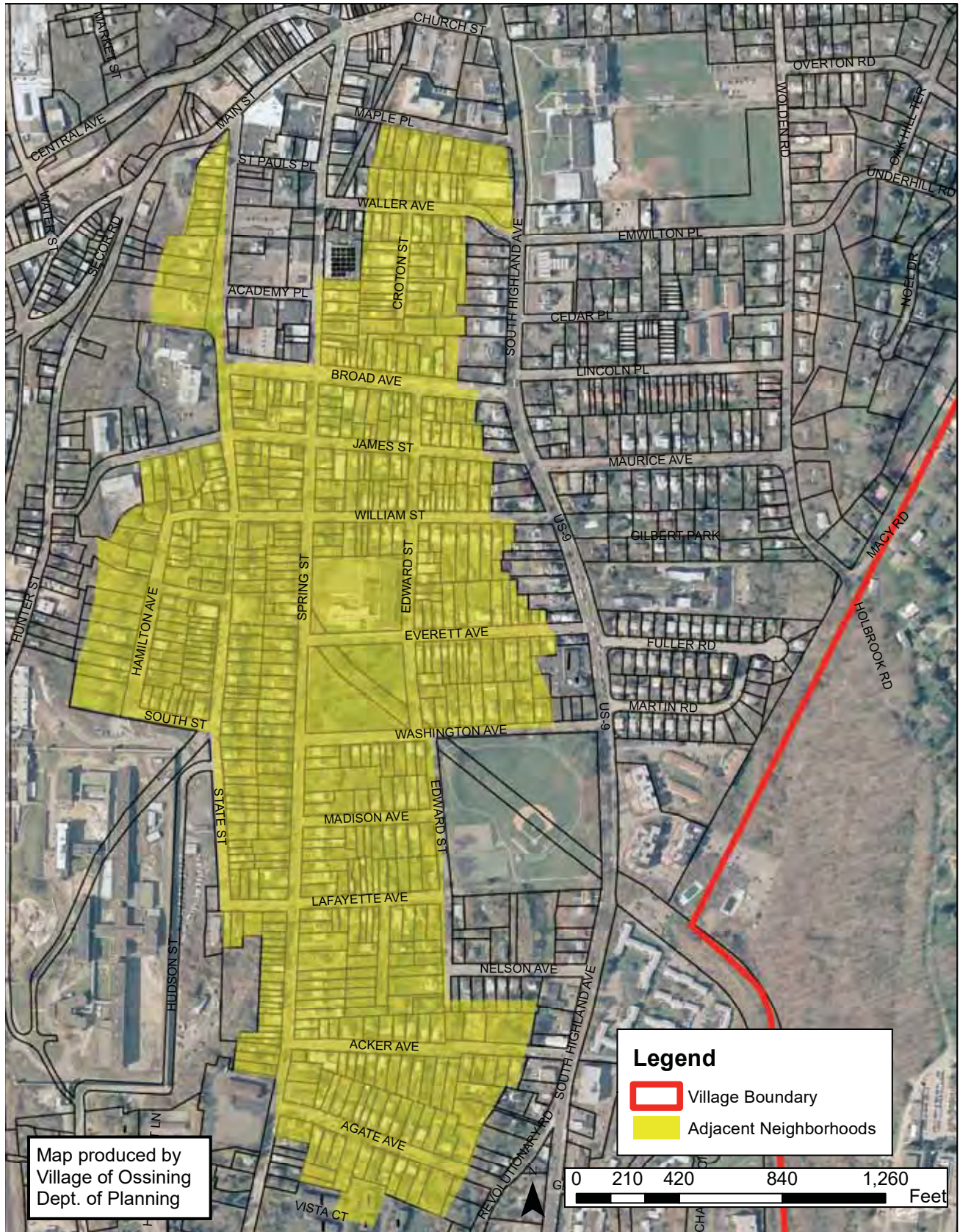
Adjacent Neighborhoods

A number of streets adjacent to the historic districts contain significant collections of well-preserved mid-19th-early 20th century building stock. South of the Downtown Historic District, these areas include the residential portions of Spring Street and State Street, Hamilton Avenue, and a number of nearby side streets west of Route 9 such as William Street, Washington Avenue, Waller Avenue and Agate Avenue. It also includes areas east of the Downtown Historic District centered on the Ellis Place neighborhood as well as nearby streets immediately to the east and northeast of this neighborhood that are of a similar visual character, such as Bellevue Avenue, Linden Avenue, and Watson Avenue. Please see the map of Adjacent Neighborhoods for additional information.

Within these areas, the original patterns of development are largely uninterrupted. Similar building forms, arranged in parallel placement and close proximity give the neighborhoods a cohesive identity. Large swaths of housing stock in the Adjacent Neighborhoods retain the scale, form and character of their construction era in the late 1800s and early 1900s. This collection is unique in the Hudson River Villages and the region and is one of the remarkable urban design assets of the Village of Ossining.

While there are a few buildings that garner attention as vintage structures of note, it is the procession of front porches, of simply decorated gable ends and of slightly modeled roof shapes that create an assemblage of note. While many alterations have been made and “skins” of many houses are now of non-historic materials, renovation and new construction in these neighborhoods deserve thoughtful planning and review.





Adjacent Neighborhood West of Highland Avenue

Design Considerations: Adjacent Neighborhoods

Ossining's remarkable collection of repetitive housing stock, built for a growing workforce, is viable housing today. The repeated forms, each with personal touches, can add up to successful neighborhoods. For this reason it is worth paying attention to incremental changes that may affect the larger assemblage. Most importantly, wholesale demolition or interruptions of scale (the "Big House" or "McMansion" phenomenon) should be discouraged or prohibited. Fortress landscaping in which a property is heavily fenced and cut off from the street and neighbors reduces the potential for community cohesion. Approval reviews, public policies and publicly disseminated information should encourage the migration of exterior treatments back to original materials or to contemporary sustainable and code compliant equivalents. The integrity of the larger collection is an asset for each property, one that can enhance each owner's equity as well as the intangible benefits of "neighborhood".



Subtle changes, porch enclosures, small additions, new siding, create diversity from buildings which were built from similar plans.



Scale, porches, alignment and detailing promote coherent identity.



Left and right symmetry, varied column detailing, the retention of original elements like lattice create successful pairs and groupings.



The skills of 19th and 20th century local builders are still on display.



Automobile uses have transformed Croton Avenue.



Commercial uses now occupy many front yards.

Commercial Arteries

Two commercial arteries into and through Ossining introduce many people to the Village: **Croton Avenue** and **Highland Avenue**.

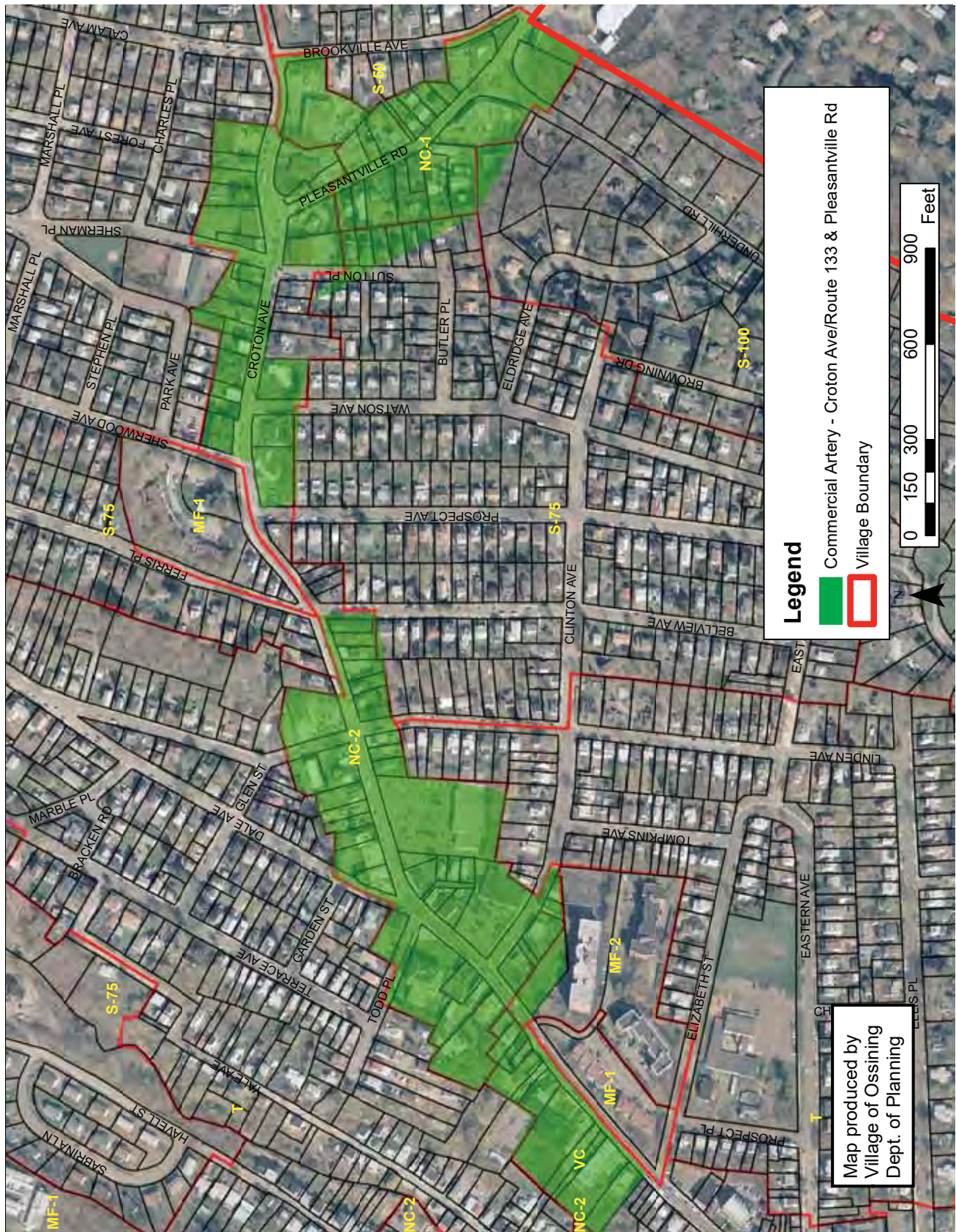
On its path from Brookville Avenue to Highland Avenue/Route 9, the **Croton Avenue/ Route 133 and Pleasantville Road** area is a compendium of land use patterns, building types and functions, and architectural styles and eras. The placement and orientation of surviving late 19th-early 20th century houses on Croton Avenue tell us that once the road served both vehicles and people walking along the sidewalks. In the first half of the 20th century some of these houses were converted to commercial use with rectangular block additions in front and display windows on the street. Early to mid-20th century apartment buildings arranged along the sidewalk with parking in the rear continued this walker-friendly pattern. Later trends brought mini-malls with strip buildings set back and parallel to traffic flow with parking in front, separating the pedestrian from the storefronts. Some mid to late 20th century corporate and bank developments played a variation on this pattern. The buildings are placed at various distances and angles to traffic flow with parking and landscaping in the leftover space. Walls and windows are often blank, and large signage and/or logos recognizable to car traffic identify the buildings. These drive-in/drive by buildings offer no interesting detail to pedestrians.



Strip malls interrupt the earlier development pattern.



Leftover spaces between different construction eras.



Croton Avenue Commercial Artery

Design Considerations: Croton Avenue

Public policies and approval reviews of proposed changes along Croton Avenue must take into account the great diversity of siting, parking forms, and architectural styles that have resulted from succeeding eras of development. New buildings and additions should reinforce the continuity along the Avenue and attempt to screen or conceal parking without making it difficult to park, following the pattern of *some* of the earlier development. The low rise scale should be maintained, and because of the variety, the scale of abutting neighbors should influence the scale of proposed changes. Design should not consist of simply filling out the bulk allowed by the underlying zoning regulations.

Careful control of the retail overlay—signs, lights, entrances, display windows—on formerly fully residential buildings can improve the visual appeal of the neighborhood as well as long term property values. Such a strategy can preserve and acknowledge residential uses on the upper floors rather than losing them in an unconstrained proliferation of commercial development. While there are important destination retail establishments on Croton Avenue, its value as a neighborhood should also be recognized. Residents can reinforce pedestrian uses, sustain local business, provide 24 hour surveillance and security and help create a healthy, diverse margin for local businesses.

Signage and ground floor improvements especially should offer interesting detail to pedestrians, encouraging foot traffic on both sides of the street that is important for long term economic health.



Low key commercial overlays help retain the neighborhood's residential character.



Destination uses have been inserted in places along Croton Avenue and should be treated as exceptions.



Scale shifts are abrupt along Croton Avenue; continuity at street level should be promoted.



Signage ranges from chain store monotony to vibrant hand done efforts; there is room for improvement.



The apartment house is a background contributor; its residents provide street life and security.



This commercial addition does harm to the context.



Highland Avenue

Highland Avenue (Route 9) is Ossining's segment of the old post road that linked New York with Albany. It and the railroad are the threads that string the River Villages together. Twenty-first Century Highland Avenue, glancing by neighborhoods of major historic significance, landmark churches and grand houses, is bordered by strip mall and apartment building architecture interspersed with small strings of late 19th early 20th century houses.

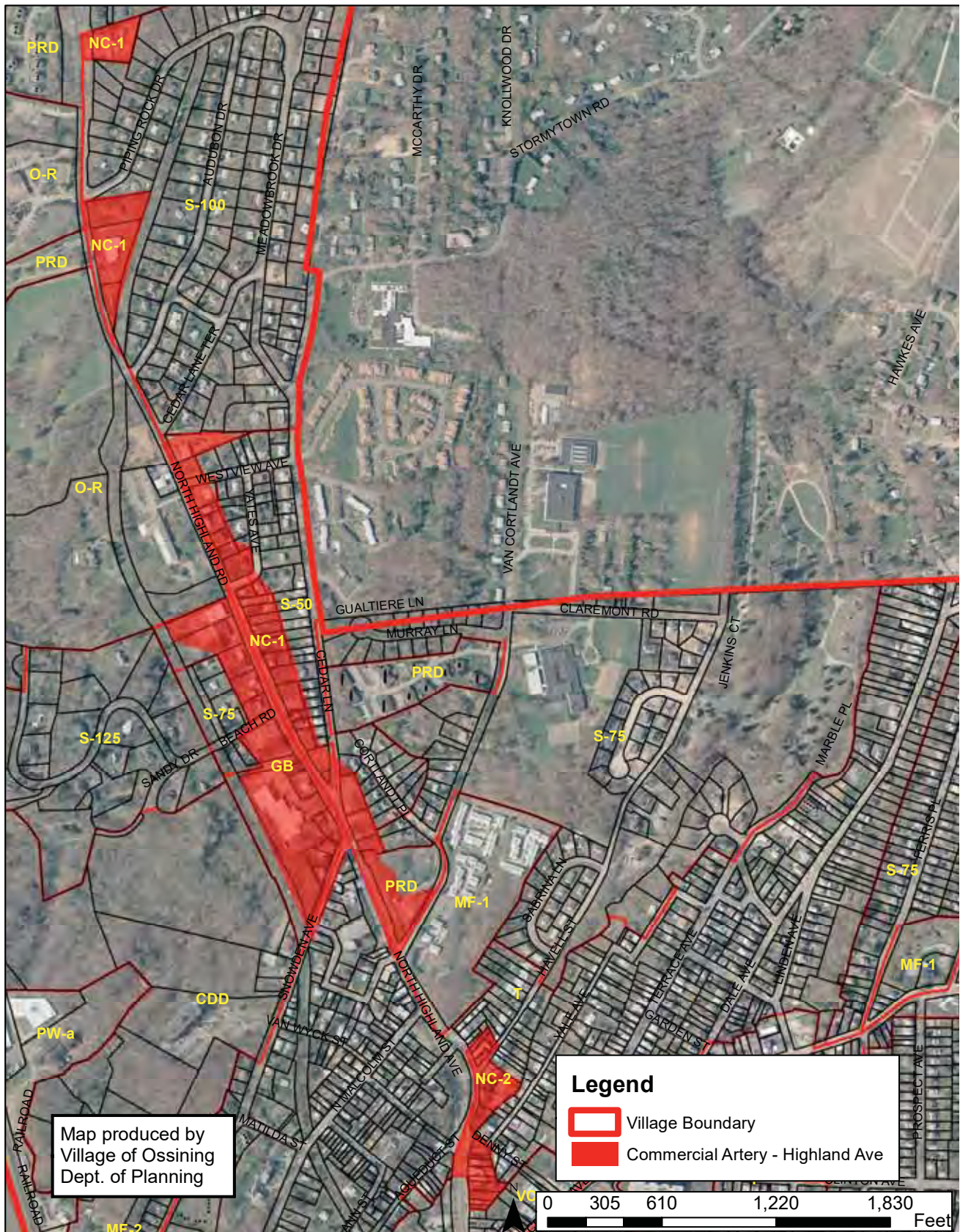
Highland Avenue is divided by the downtown district into two zones, North Highland and South Highland.

Big signs, legible from a car moving above the speed limit, announce food and services to meet practical needs. The Arcadian Shopping Center south of Village center is an auto oriented shopping plaza with a shared parking area in front of and behind commercial buildings. North of the Arcadian Center and across Highland Avenue from it, are individual enterprises or small professional buildings, each with prominent signs, separate parking in front and/or behind, and one or two curb cuts.

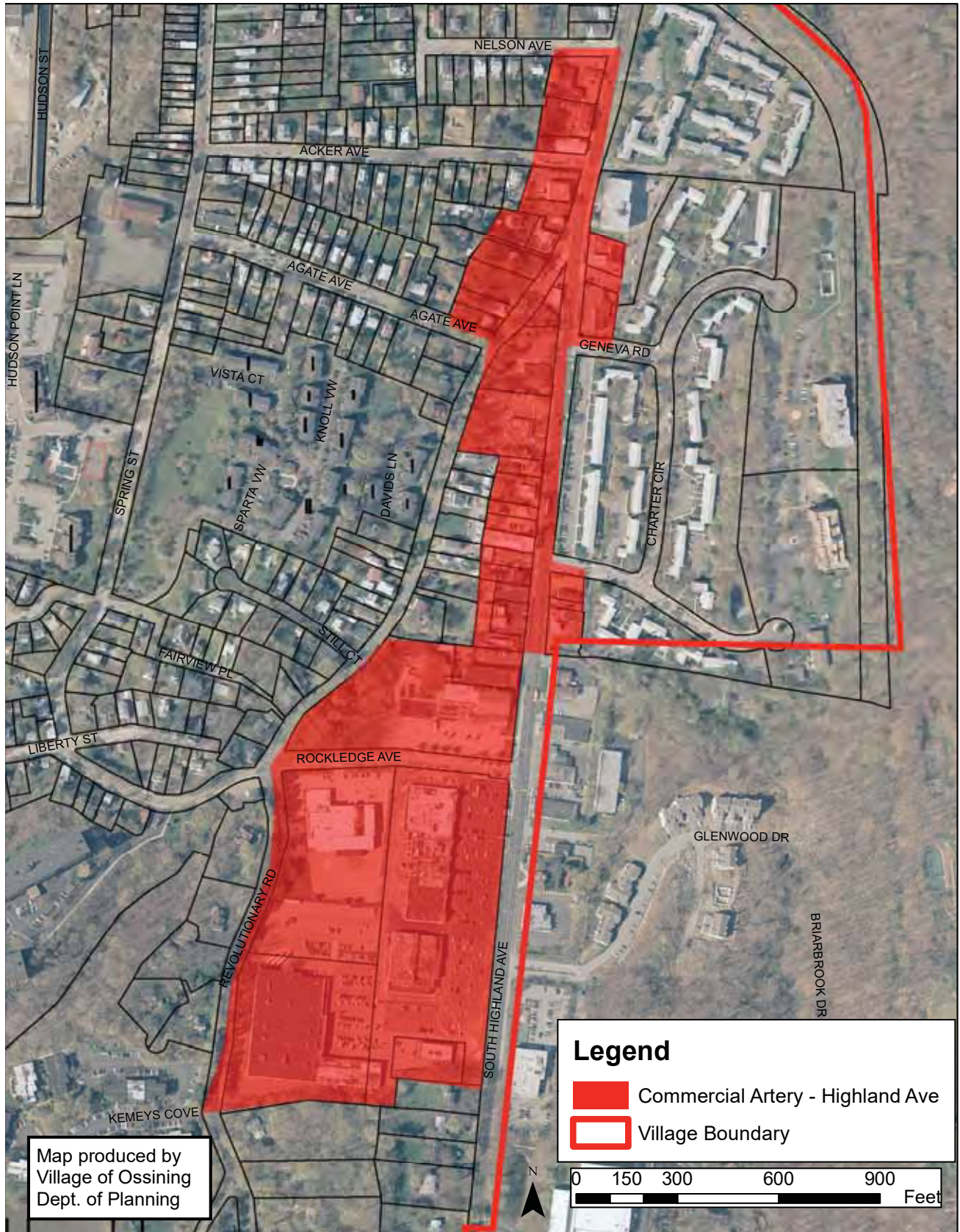
Given the importance of the artery for inter-Village traffic and the commercial "ecosystem" well established along this corridor, change in this area should address its livability rather than attempt a wholesale stylistic makeover. The remaining vintage single family residences hold their own in this busy environment when they are well-maintained with historic features intact.



Note the importance of this location on the N.Y. Albany route.



North Highland Avenue Commercial Artery



South Highland Avenue Commercial Artery

Design Considerations: Highland Avenue Urban design decisions will be more important than purely architectural ones to the visual, architectural and economic improvement of the commercial portions of Highland Avenue. Streetscape improvements that create a pedestrian scale, including traffic calming, crosswalks, plantings, sidewalks and benches, are part of the solution. Signage controls have to take into account a merchant's needs to make his location known and, for those businesses truly dependent on traffic, to reach potential customers passing in cars.

It does not seem likely that a single style or pattern could be successfully imposed on Highland Avenue businesses, so continuity may depend on the amenities provided at the street edge, such as street trees, sidewalks, bollards and signage. The number of signs per property can be limited, as well as their size. Site plans can limit the amount of paved surface to the minimum, yielding both visual and environmental benefits. While new buildings should not mimic antique designs on this strip, architecture on Highland Avenue should measure up to the venerable Albany Post Road—one of New York's oldest trade and mail routes.



North Highland Avenue is one-sided in this stretch, looking south towards downtown.



Asphalt devoted to automobile related uses should not be allowed to expand beyond the bare minimum.



Sidewalk & plantings provide minimal relief



Not a hospitable place for pedestrians.



3 The Importance of Landscape in All Areas

The land around your building is not just left over space. It can be useful, it can be beautiful to look at from inside and from the street, it can help you green Ossining and it can set the tone of your neighborhood. Community satisfaction grows when an area is comfortably walkable, when in summer it is well shaded, at night adequately (but not overly) lit, when buildings and yards are interesting to look at and unappealing functional elements are well screened. The way landscape is managed can either knit a neighborhood together or create a characterless array of isolated elements.

Open space and vacant lots are candidates for development. A well-considered landscape plan can integrate new construction into existing neighborhoods. Openness and shared views can coexist with strategic screening. With Village sanction, left over space can morph into community gardens or micro-parks with seating for dog walkers and people waiting for the school bus. Whatever the use, the landscape is the connective tissue of the neighborhood.

While structures survive, much of the historic landscape has vanished. We know that the land around Ossining was cleared for agriculture. Most trees in the early Village settlements and emerging suburban clusters were smaller than the mature trees shading many Ossining residential areas now. In the middle of the 19th century, homeowners were moving away from a utilitarian agricultural style to a “union between the house and grounds” in the words of Andrew Jackson Downing whose book, *Landscape Gardening and Rural Architecture*, made him the Martha Stewart of his day. He wrote, “...we have...a large class of independent landholders, who are able to assemble around them, not only the useful and convenient, but the agreeable and beautiful, in country life.” Downing set a course for land use that continues to influence landscape patterns to this day.

That old landscapes have disappeared increases detective work for Sparta homeowners seeking to develop their grounds in keeping with their houses. For properties in historic districts and historic landmarks, unless you have an image of your property dating from the era in which your structure was built, changes you intend should be guided by records of land planning and planting trends of the period. The Ossining Historical Society is a good start for your inquiry. Appendices offer sources of excellent information on both historic landscape patterns and on contemporary best practices for environmentally responsible land management.

4 Sustainability

The preservation and repair of existing buildings is a sustainable activity. Demolition followed by new construction adds not only to the waste stream the Village has to deal with, but also to the greenhouse gases heating the planet. The preservation mantra of “retain, repair, replace” complements the sustainability trio of “reduce, reuse, recycle”.

Many of the older buildings in Ossining were built before the era of cheap energy and have (or had) “green” features such as porches or large overhangs shading the interior, shade trees, operable windows and shutters, and wind driven attic ventilators. Preserving or restoring these features is equally or more sustainable than adding solar collectors or geothermal systems, which require large amounts of energy for their manufacture and installation.

The most cost-effective green strategies such as insulation and air sealing do not dictate architectural style or prevent new buildings from fitting their context.

These guidelines, therefore, are designed to help chart a sustainable future for Ossining. You will find recommendations for sustainable approaches imbedded in the guidelines for the rehabilitation of old and historic structures and landscapes in the Village. Before undertaking improvements on your building, it is smart to commission an Energy Audit so you understand what energy conserving measures you can include in the work you are contemplating. Benefits to the planet and to your pocketbook can be substantial. Information is available from your utility supplier and state agencies such as the New York State Energy Research and Development Authority (see appendices for contact).



New techniques like infra-red photography highlight heat leaks and help builders make old and historic buildings energy efficient while retaining character.



Sparta: porch shades the house, saving energy for cooling. Porous paving reduces runoff & recharges the aquifer.



Rain Garden conserves water



Exuberant wood detailing and surfaces require skilled repairs.



Historic masonry needs special care. See masonry section & appendices



Wasp nests & biological growth compound the damaging scars of amateur repairs, wasp nests, and weather.

Maintenance

A requisite for sustainable preservation is maintenance. All building materials, new or old, will deteriorate over time and will require repairs during the life of a building. Seasons, weather, insects and vegetation eat away at buildings.

Maintaining materials and mechanical systems significantly slows this deterioration process; extends the life of your building; and can save money and energy over time. With “good housekeeping,” you preserve the architectural integrity of your building and its property value. Vigilant upkeep protects you from costly repairs resulting from deferred maintenance. Take time to understand the chain of impacts a single delayed repair may produce. For example, a clogged gutter results in water staining and removing paint on the face of a building, water overflowing the gutter close to the building seeps through foundation walls, leading to a wet basement, rotting interior wood, termites and mold.

A maintenance plan will not be the same for each building, and each program should be tailored to the overall size, shape, function, and usage patterns of the individual property. Character defining forms, details and materials should be identified and routinely inspected and repaired. Building assemblies and systems that protect quality of life for occupants should receive routine attention. These include but are not limited to roofs, gutters, window and door weather stripping, railings, and exterior step surfaces. Equipment should be regularly inspected and serviced.

When developing a maintenance plan for your property, refer to the guidelines outlined in Secretary of the Interior Standards for Historic Preservation (See Appendices). These guidelines are recognized as the national standards for the treatment of historic properties and are used in countless preservation projects throughout the country. The standards are divided into four treatment categories: preservation, restoration, rehabilitation and reconstruction. Each treatment addresses technical, philosophical and practical issues that arise during work on historic properties and can assist you as you determine the proper techniques for repairing your building. (see appendices for maintenance references).

Summary

Neighborhood enrichment starts with understanding, respecting and maintaining what survives from the past. Before contemplating changes, adopt a robust program of maintenance for your building and grounds. A face-lift of a vintage building—even if no *change* is intended—should advance from protection and maintenance, through low-impact repair, to replacement with exact replication *if* a significant building element is conclusively beyond repair. The landscape context should complement the strengths of the buildings. New construction should grow from the existing built and unbuilt landscape. Minimizing its environmental footprint, new construction can be both respectful of the neighborhood and its history, and true to its own time.



5 Core Principles Underlying the Guidelines for Historic Buildings

Guiding Principles

The Secretary of the Interior Standards for Historic Preservation are the national standards for the treatment of historic properties and govern countless preservation projects throughout the country (see links and a copy of the ten standards in the Appendices). The standards are supplemented by *Guidelines for Rehabilitating Historic Buildings* which provides useful advice for owners and professionals working on historic properties. The guidelines cover common materials, features and assemblies, as well as energy conservation, maintenance and accessibility. While the *Standards* address historic buildings primarily, they provide advice generally useful for the rehabilitation of American building stock. The Guidelines suggest a model approach to all projects which is followed by increasingly intense levels of intervention that may be required to achieve rehabilitation goals.

Identify, Retain and Preserve

This capsule phrase describes the initial process of determining the qualities, features or components of a site or structure that are most important to determining its historic character. Once that identification has been made, it is then possible to look at the levels of treatment that are required to retain and preserve those character-defining elements.

Protect and Maintain

Protection involves the least degree of intervention and is often a preventive measure. Maintenance can include rust removal, caulking, re-application of protective coatings, painting, cleaning of roof and gutter systems, and installation of safety equipment. These types of repairs should be included in any maintenance plan and regularly executed.

Repair

When additional work is required, repair is recommended. Repair work should begin with the least amount of intervention possible, such as piecing in, splicing, consolidating or otherwise reinforcing or upgrading accordingly. Repairs can also include in-kind replacement or with comparable substitute materials of extensively deteriorated elements.

Replace

Replacement should only be undertaken when an entire character defining feature has failed. The replacement should use the same or comparable materials and match the existing in shape, dimensions and finishes. Do not replace an exterior feature that could be paired or preserved with reasonable effort and cost.

Tax credits

Federal and state tax credits may be available for various categories of substantial rehabilitation of properties in an historic district or on the National Register of Historic Places. This financing can provide critical funding for commercial and residential rehabilitations of historic properties. For more information consult the Office of Historic Preservation at the NY State Office of Parks, Recreation and Historic Preservation. (see appendices)

6 Planning your Project

Think of the architecture of the Village as testimony—an exact and unique expression of the life and economy of the region. Just as you would not rephrase or ornament the United States Constitution or your great-grandmother’s handwritten letter, you should not willfully alter the original architectural expression of Ossining’s past. Historic architecture should speak truthfully.

At the same time, historic architecture cannot simply be a relic frozen in time. It now houses modern families and activities and must accommodate new technologies. The challenge for all of us inhabiting historic buildings and living or working in historic districts and transitional areas is to preserve the strongest statements of the past while living 21st century lives.

How to submit a good application

For HADD districts, the applicant must submit an application to the Historic Preservation Commission. In other districts applications are reviewed by the Planning Board/Board of Architectural Review.

To speed the process toward approval, read the Zoning Code and then study the *Architectural Design Guidelines* at the outset. Understanding the *Guidelines* and following the recommended steps will prevent surprises, time-consuming detours and dead ends. Applicants should have a developed and clearly documented project before submitting an application for Board and Committee approval. Consult with Village staff to learn what types of documentation will best explain your proposed project—e.g. drawings, architectural plans, current photographs of your property and that of immediate neighbors, historic photographs of your property or illustrations of features you seek to incorporate in your own project and learn what material samples may be required. To be heard, your application must be complete. If you have questions about your project and application, you should contact the Planning Department.

Know Your Building

To identify what form and attributes to preserve and reinforce in your buildings:

- Try to discover the original construction date and dates of later major changes to the building. This dating will tell you what styles were *likely* to have been used by the original builder and later renovator(s). The Planning Department may be able to help you date your building.
- Observe the shape—massing—of your building. Look at the footprint, the roof line(s), the proportions floor to floor, porch to façade, window to window. Look for clues to the original overall approach to materials: were they simple or varied and decorative? Sometimes this involves peeking under the more recent layers of materials to see the older ones. Finally, focus on individual features, such as windows, doors, porches, trim, chimneys, etc. These are all clues for identifying the character of your building.
- Influential architects during the 19th century such as Andrew Jackson Downing and Alexander Jackson Davis were adapting common architectural forms from England into patterns books where design elements were accessible to a bustling nation. Their pattern books (see bibliography A7 primary source) are still useful guides for owners of properties built in the 19th century.
- Consult an architect or contractor trained in historic preservation to study the evidence of building campaigns in your structure. Types and sizes of wood, nails, and joinery techniques are all clues to the era of construction.
- Use the Appendices of these Guidelines as a reference source prior to beginning your project. Resources in the appendices include links to architectural field guides, a glossary of architectural terms, and contact information for technical building resources.



This historic photo shows rooflines and massing, siding and roofing, porch trim, railings and lattice, garden design and window awnings probably added at a later date.

A Resource:

Detailed information about many notable local properties can be found in *Village of Ossining, New York: The Significant Sites and Structures Guide*. This publication, prepared by the Village, Ossining Historical Society, and local volunteers, is available through the Village web site or by contacting the Planning Department.

To identify the style(s) of your building, get help from the Planning Department, Building Department, Historical Commission, or Historical Society. A Preservation Architect or Architectural Historian can assist you in distinguishing the key character defining features of your property. Reference materials listed in the Appendices will help you zero in on the architectural trends that shaped your building.

How to Read these Guidelines:

The guidelines recommend baseline approaches to building and site improvements applicable in historic districts, adjacent neighborhoods and commercial arteries. Projects on the commercial arteries and adjacent neighborhoods should follow “**all properties**” recommendations as noted throughout the Guidelines. Particular requirements for projects in HADD districts are specified under the “**Historic Districts**” headings following those for “**all properties**”.

7 Architectural Styles

Ossining's early settlement, its economic growth during the 19th century and the early decades of the 20th leaves us with today's wealth and variety of historic architecture. Few of Ossining's buildings neatly fall into a single style category today. Architectural trends overlap and evolve.

Buildings change as time passes, needs and fashions change, owners' finances shift and new building technologies become available. Many of Ossining's buildings have been incrementally modified over time.

As a rule, Ossining's houses are simple, solid examples of 19th and 20th century American building craft, not exceptional examples of an individual style. Nevertheless, it is helpful to understand architectural styles to evaluate your own building before embarking on changes, so that the new work reinforces the style or blend of stylistic elements particular to your structure and neighborhood.

To understand unfamiliar terms, see the glossary in A7. See Appendices for style references.



Public buildings like this Beaux Arts "Jewel Box" bank adopted more formal styles.



The First Baptist Church is rendered in a "Stick Style" variation of Gothic Revival that is strongly related to other house carpentry in the Village (see below).



8 Building Elements

Roofs

A wide variety of roof forms is visible throughout the Village of Ossining. Gable roofs predominate, but a survey of local historic structures reveals a range of forms including Beaux Arts buildings with pyramidal hipped roofs, Victorians with complex cross gables, and commercial buildings with flat roofs and decorative parapets. Roof shape and pitch play a major part in defining the mass and style of a building. Chimneys, dormers, gutters and downspouts are roof elements integral to the character of the building. Additional paraphernalia on a roof detracts from that building character.

Most historic buildings have lost their original roofing materials and today have contemporary asphalt roofs. Some wood shingle, slate, metal and ceramic tile roofs can still be found, although in diminishing numbers, throughout the Village. Some owners have preserved original roofing or replaced it with historically appropriate materials.

Reroofing materials are the most common change made to historic roofs. Weigh alternatives carefully when planning to re-roof. Besides the strong visual appeal and look of authenticity of historically appropriate materials, when maintained, these roofs can last up to 100 years—much longer than the standard 20 to 30 year lifespan of contemporary asphalt roofing.

The reroofing process presents an opportunity to improve energy performance as well as appearance. It may be possible, for example, to add a thin layer of insulation under the new roof without noticeably affecting appearance. That insulation will help reduce heating and cooling bills and prolong the life of the roofing materials by reducing stress from temperature swings. Lighter color roofing materials also tend to have a longer life and reflect more heat away from the building in summer.



The original pattern & scale of roof materials enhanced the roof forms. Substitute materials like the “shadow” shingles above should be judged case by case. Studies show that original materials like slate and copper are the LEAST expensive on a life cycle basis.



The retention of the tile roof on a pivotal structure adds value and durability, and positively impacts the entire downtown district.



The coated metal substitute on the First Baptist Church roof differs from the original slate but has texture, shadow and a long life.



The retention of the arched insets and base flashing are good. The metal cap should be smaller.



This traditional gable dormer has a good scale; the valley and sidewall flashings should be improved.



Gutters and leaders should be tidy and match siding and trim colors and conditions.

Roof Features

Chimneys

Original chimneys were built in keeping with the building use and style. Many chimneys are made of brick or stone. A waterproof and stable chimney must have sound mortar joints suitable for the historic masonry units it is made of. For re-pointing an existing chimney, select mortar to match the historic mortar in strength (softer than modern mortar, as it contains lime) and color. A mason experienced with historic buildings will know how to match the mortar not only in strength, cement color and sand granule size and color, but also in joint spacing and profile as well.

Dormers

A dormer is a volume projecting from a sloped roof. A dormer window is a vertical window in that projection. The size, number and shape of dormers have a major impact on the appearance of the structure. With a repair, the dormer's outer walls should match the exterior walls of the building. Do not wrap roofing material around dormer walls.

Gutters and downspouts

Early gutters were made of such materials as wood, copper and galvanized metals. More recent gutters are often made of aluminum and vinyl. Proper water management is crucial to the life of a building. Keeping gutters and leaders leaf-free and intact protects the walls of the building from water-scouring, reduces water migrating into the basement and storm washout of soil around the building. Copper and stainless steel have the longest useful life, as much as 100 years, or more. Galvanized steel can last for 50 years or more with proper care, and its lifetime can be longer if it is kept painted. Plastic, aluminum and vinyl gutters have a shorter lifetime, partly because they are generally more easily distorted or damaged. New non-lead bearing coatings are available to substitute for such historic materials as lead-coated copper or lead/tin flashing and solders.

Dissimilar metals may damage each other through a process known as galvanic action. Charts like the following are available that indicate which metals can be used together in specific applications.

Dissimilar Metals Galvanic corrosion potential between common construction metals									
	Aluminum	Brass	Bronze	Copper	Galvanized Steel	Iron/Steel	Lead	Stainless Steel	Zinc
Aluminum		1	1	1	3	2	2	3	3
Copper	1	2	2		2	1	2	1	1
Galvanized steel (zinc)	3	2	2	2	3	3		2	3
Lead	2	2	2	2	3	3		2	3
Stainless steel*	3	1	1	1	2	2	2		1
Zinc	3	1	1	1	3	1	3	1	
1. Galvanic action will occur with direct contact. 2. Galvanic action may occur. 3. Galvanic action is insignificant between these metals.									

This chart provides guidance when combining metals, such as copper and aluminum.

Flashing

The material used for flashing will often determine the lifetime of a roof system, especially an historic one. Tile or slate, for example, might well outlast galvanized flashing. Care in the selection and the craft of flashing is fundamental to all roofing projects, whether or not located in an historic district.

Roof Ventilation

Roofs will last longer if they stay cool and can dry out. There are old-fashioned as well as contemporary techniques for keeping roofs cool and dry. The traditional techniques are ventilation of the attic under the roof or the use of spacers under the roofing to allow air to move under the material, drying it out and keeping it cooler. With the advent of unvented attics that tighten the building envelope and save energy, the spacer technique must be used, employing spacers or “smart” bumpy membranes that allow air movement under roofing. On pitched roofs, the air must exit through vents at the ridge. These vents should be installed to minimize their visual impact. Some vents allow the outlet to be on one side, so they can be facing away from the most important view.

Rooftop Equipment

There is a variety of kinds of equipment that tend to clutter the exteriors of buildings, including the roofs. They include plumbing vents, fan outlets, air conditioning condensers, TV antennas, satellite dishes, electrical service boxes and more recently, renewable energy features such as solar panels or



Traditional roof furring provides ventilation for shingles above.



Antennae create clutter and can provide entrance points for water.



Mechanical systems should be concealed to the extent possible



laminated solar panels integral to roof (above) reduce visual impact by comparison to panels (below)



Equipment placement could be better integrated with the building.



Original sunburst & special dormer details still carry the day in spite of roofing gaps and the reduced glass openings of replacement windows.

wind turbines. It is important to understand the function of each item to successfully minimize the negative impact it has on appearance. It is sometimes possible to eliminate features, or to negotiate an alternative installation with the service provider or installer. Careful placement is the first step, followed by various techniques for screening and camouflaging the equipment, minimizing the exposure from the most likely vantage points affecting neighbors or the public.

Roofs and Roof features

all properties

do:

- Understand the nature of the existing roof sheathing and roof ventilation before replacing the roofing system.
- Preserve the original roof form including shape, pitch, line, overhang and integral functional or decorative features.
- Use appropriate repair techniques to maintain, protect and repair historic features, materials and details.
- Replace in kind materials damaged or deteriorated beyond repair. If possible, limit replacement to the area needing repair.
- Select a flashing material compatible with existing roofing materials.
- Use new roof materials that match historic materials as closely as possible in design, composition, dimension, pattern, texture, color and detail.
- Look at mockups or samples of the proposed roofing materials in place where they will ultimately be installed.
- Design new dormers to match existing dormers in style, shape, materials and trim detailing.
- Keep the scale of new dormers subordinate to the larger roof form.
- If a roof must be entirely replaced, select materials and installation appropriate in material, scale and texture to the period of the structure.
- Lengthen the life of the roof and building through regular inspection and maintenance: clean gutters and downspouts, repair flashing, repaint trim, maintain ventilation, fix leaks promptly.
- Place new paraphernalia such as an air conditioning unit, satellite dish or solar panel on the roof(s) least visible to the public way; use building-integrated features (for example photovoltaic systems integrated into roofing material or solar cells imbedded in glass windows or skylights).

don't

- Change distinctive roofs, dormers and chimneys that are important to the character of your building.
- Extend dormers so they obliterate the original roof boundaries or edges.
- Remove and discard sound historic material.
- Delay repairs on roof and roof features.
- Substitute materials notably different in appearance from surviving or known original roof materials.
- Use dissimilar metals that promote galvanic action (e.g. copper and aluminum in contact).
- Permanently remove a roof feature (such as chimney or dormer).
- Replace a roof feature with a new feature notably different in appearance from the original (such as replacing copper gutters with white aluminum, a masonry chimney with metal).

Historic Districts

do

- Use probes to determine existence and nature of original underlying materials before specifying or ordering new materials.
- Retain and preserve surviving viable original roof cladding materials and detailing.
- Use replacement materials identical to original or that match in color, size, exposure, thickness and texture the materials in place during the building's period of significance.
- Base replacement of missing roof features or details on accurate documentation of the original if available or upon a new design consistent with the historic character of the building and similar neighboring buildings.
- Site or install equipment on the side of the building most shielded from public view; provide a model, computer simulation or on-site mockup satisfactory to the review board.

don't

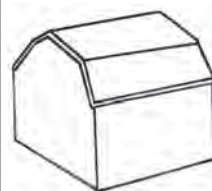
- Install "woven" shingle valleys or follow other contemporary roofing shortcuts.
- Use imitation materials with grain, color, thickness or sheen different from the original.



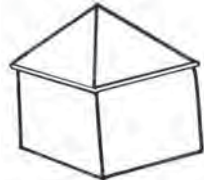
Ossining has many distinctive roofs.



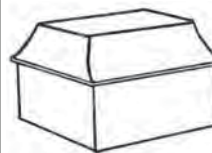
**SOME POPULAR HISTORIC
ROOF FORMS IN OSSINING**



GAMBREL



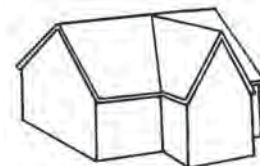
PYRAMID



MANSARD



GABLE FRONT



CROSS GABLE



The exterior surface treatment must work together with lighting and window details.



Natural color shingles pick up colors in the stone below; paint colors complement both.



Commercial buildings often have a durable palette of natural & cast stone, terra cotta, hardwood and metals which nevertheless require specialized maintenance.

Exterior Walls and Trim

Exterior wall surfaces define a historic building's massing and form. In Ossining, historic buildings are commonly clad in wood, brick, and stucco. Residential, commercial and institutional buildings also display attractive stone, terra cotta, and metal surface materials - appropriately expressing the variety of styles and tastes incorporated into 18th, 19th, and early 20th century architectural designs. Surface materials, details, textures, and finishes provide tangible clues to a building's historic authenticity.

Consideration of texture, pattern, scale, and detail of original exterior wall and trim material is appropriate when preparing to repair or replace damaged or deteriorated exterior walls and trim work. In most cases, selective replacement is all that is necessary. Owners are encouraged to match the historic characteristics of the original material such as the distinct bonding pattern of a brick wall, the texture and depth of wood siding, and the three dimensional quality of wood molding.

Replacing or covering up historic wall materials with artificial sidings (vinyl, aluminum), concrete board, faux stone or brick, stucco-like coatings, or other non-compatible materials is not appropriate as it diminishes the architectural integrity of the historic building. Installation of these materials often means removing or concealing valuable historic architectural trim and details. Although frequently advertised as "maintenance free" or "low maintenance" many contemporary siding products prove to not be as durable as the original materials, and their recent production makes them less environmentally-friendly.

all properties

do

- Match the structure's original materials in all dimensions (thickness, exposure and profile) and texture.
- Retain and preserve walls that contribute to the overall historic character and form of a historic building, including their functional and decorative features and details.
- Maintain and repair the material surfaces and details of exterior walls using maintenance and methods appropriate to the specific material.

- Replace in kind any portion of an exterior wall that is damaged or deteriorated beyond repair. Match the original in design, material, dimension, texture, pattern, detail, and color. Replacement should be limited to the repair area only. If it is not feasible to replace in kind, substitution should be compatible and historically sensitive.
- Replace a missing exterior wall feature with a new feature or detail that is based upon accurate documentation (photographs, written records, etc.) of the original; new designs should match historic elements in scale, material, and detail.

don't

- Install materials that differ from the original materials in thickness, exposure, or texture when replacing or repairing siding.
- Introduce or remove windows, doors, chimneys, bays, or other features on character-defining exterior walls.
- Install conjectural designs not based on evidence.
- Paint or coat historically unpainted brick walls; coatings can slow down masonry's ability to dry out, trapping moisture that can freeze and damage the assembly.
- Sandblast or strip with harsh chemicals painted masonry known to have been painted early in the building's existence.

Historic Districts

do

- Conserve original materials.
- Replace with identical materials at the end of the feature's useful life.

don't

- Replace or cover historic exterior wall materials such as clapboards, brick, stone, or stucco with contemporary non-compatible materials such as vinyl, aluminum, or reinforced siding; this applies also to features, or details such as corner boards, brackets, cornices, and other trim work.



Well tended historic shingling and a carefully executed color scheme work together-note gutters and leaders painted to match siding & trim.



Visible history: it's worth looking for original clapboards still lurking under the more recent aluminum and asbestos layers.



When re-siding try to create an air space under the siding with a smart air barrier to prolong siding life.

Wood

With proper and consistent maintenance, original wood features (siding, shingles, and trim) can last for hundreds of years. Old growth wood used for those features is much harder and rot resistant than most wood available on the market today. Unfortunately though, neglect can lead to deterioration due to water, fungus, mold, and insects.

Most of Ossining's building stock is wood-framed and wood-clad. Wood clapboard, board and batten, and shingles are present in Historic Districts and buffer neighborhoods alike. Clapboard siding is the most common wood material used on exterior wall surfaces.

Wood trim serves both a decorative and functional purpose. It serves as a transition to decorative elements such as doors, windows, cornices, and porches while also sealing siding and shingles at joints, corners, and openings – protecting the building from water infiltration. If your building has been insulated it is especially important to prevent water from finding its way into crevices in the exterior. Wet walls promote mold growth. Uninsulated walls are dried out by interior heat so mold is deterred, though at great expense of energy and money.

Historic siding, cornices, brackets, window architraves and pediments are valuable and often irreplaceable. Duplication of these elements requires expensive custom shaping. It is imperative to avoid situations where water can stand on flat surfaces or accumulate on decorative features.

Keep painted wood surfaces painted and clean. Paint protects historic wood from moisture and ultraviolet light. If you need to remove paint, use the most gentle means possible (such as gentle hand-scraping, hand-sanding or peel-off paint removers) to preserve historic wood for the years ahead. New wood should be back-primed and coatings should be applied to all cut ends. Follow EPA guidelines when dealing with materials painted before 1973, which may contain lead.

Repair wood features by patching, consolidation, and other supported preservation methods, and when repair is not possible, replace in kind. Replacement of an entire wood feature (such as a cornice) in kind should be supported by historic documentation - such as physical evidence (original parts of the wood cornice) or images (historic photos, drawings).

Masonry

Architecture throughout the Village of Ossining is constructed with a variety of masonry types including brick, stone, terra cotta, stucco, and mortar. With good maintenance and proper repairs, these materials can last for centuries. As with all materials though, improper maintenance and poorly executed repairs lead to problems. Masonry can also deteriorate as a result of water infiltration, and abrasive cleaning. When preparing for a historic masonry project, identify masonry features that are key to the building's overall historic character. It is important to notice and document masonry unit type and size, masonry color, bonding patterns, mortar joint type and size, and coatings. Observe and record, for example, the range of brick colors on your building. It often takes a blend of three or more brick colors to match the overall visual effect of the existing masonry; they are seldom uniform and homogeneous.

Repair historic masonry by reusing existing historic bricks or stones whenever possible. Match colors, textures, sizes, shapes, bonding pattern and compressive strength of historic material with new replacement masonry units and stucco. Repoint deteriorated historic mortar with a mortar compatible in strength, color, and joint profile. Softer, high lime mortars were used in historic buildings and give them the ability to expand and contract without cracking or doing damage to softer masonry elements. Mortar available at the local hardware store is generally too hard (it is primarily Portland Cement) and in a generic color. The texture and color of the sand aggregate is often key to the success of a match.

Spend time researching and choosing a contractor with appropriate training and experience working with historic masonry and stucco. It will make a dramatic difference in the results and longevity of the restoration. If ivy and other vegetation cover masonry walls, carefully probe to see if they are concealing or contributing to any underlying deterioration. Vegetation does not automatically produce such damage, however, and can be on occasion an important character defining element. Ivy can help insulate your building. If you determine that vines are penetrating cracks in masonry, cut the vine stems low, allow it to brown and die, and then remove it so you do the least damage possible.

Clean masonry using the gentlest means possible. It is best to avoid harsh chemicals that can permanently damage masonry; many effective methods for cleaning masonry involve water only. Sandblasting or using harsh chemicals to clean masonry, for example, can permanently damage historic masonry by removing their original protective finish and making them susceptible to rapid weathering.

Paint Colors

Paint colors should be appropriate to the style and setting of the building. Color selection should not only enhance the building being painted but also complement surrounding buildings.

Simple color schemes for walls and decorative features are preferable. The colors selected for the storefront portion of the building should be used throughout the painted exterior of the overall building. This unifies the upper and lower portions of the building's façade. 19th and early 20th century color schemes often employ 4 or more colors to distinguish body (siding) and 3 other elements, often including doors, window sash and trim. There are numerous publications that illustrate approaches to historic paint colors (see bibliography).

A paint analysis can pay great dividends in identifying the history of the building. Using carefully removed paint chips or "bullets", a trained conservator can microscopically identify the colors and paint types used on the exterior or the interior in different eras.

Assume that paint layers placed before 1973 contain lead. Any work that involves those layers must follow the Environmental Protection Agency's rules. See appendices for contact information.



Paint sampling in the final location can ensure that the colors work as intended in day-light, which tends to make colors look lighter and often cooler than on small paint chips.



Skylights

A skylight is a two-edged sword. It can bring welcome light into a building's interior. At the same time, it can create uncomfortable conditions in the interior in summer and winter by virtue of heat gain or heat loss; and it can disrupt an old or historic building's appearance.

In old buildings, adding skylights is a common strategy for making use of previously unused spaces such as attics. Their insertion, however, should be carefully designed, and they should be no larger than absolutely necessary. From a sustainability point of view, while daylight can reduce artificial lighting, the increase in air-conditioning loads from an inappropriately designed skylight would more than wipe out the potential energy savings. Where historic skylights exist, they can often be repaired or carefully reglazed with contemporary glass.

all properties

do

- Look for ways to introduce light from vertical windows or clerestories rather than skylights.
- Use flat, low profile skylights following the roof slope.
- Install moveable shading underneath to reduce heat gain.
- Match the skylight frame to the roofing color.
- Make skylights as small as possible.
- Locate new skylights away from the primary public view.

don't

- Install bubble skylights or skylights built up on high curbs.
- Install skylights near the eaves or overhang at the lower edge of a roof.
- Use reflective glass.

Historic Districts

do

- Restore original glazing and frame materials.
- Retain "lay lights" and other features associated with historic skylights.

don't

- Replace historic skylights with a different shape, profile or color.



do

retain & restore original materials

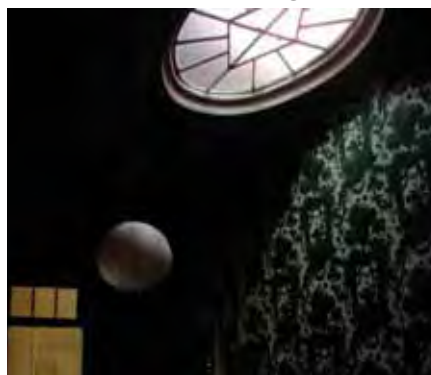


don't

use frames that contrast with roof color

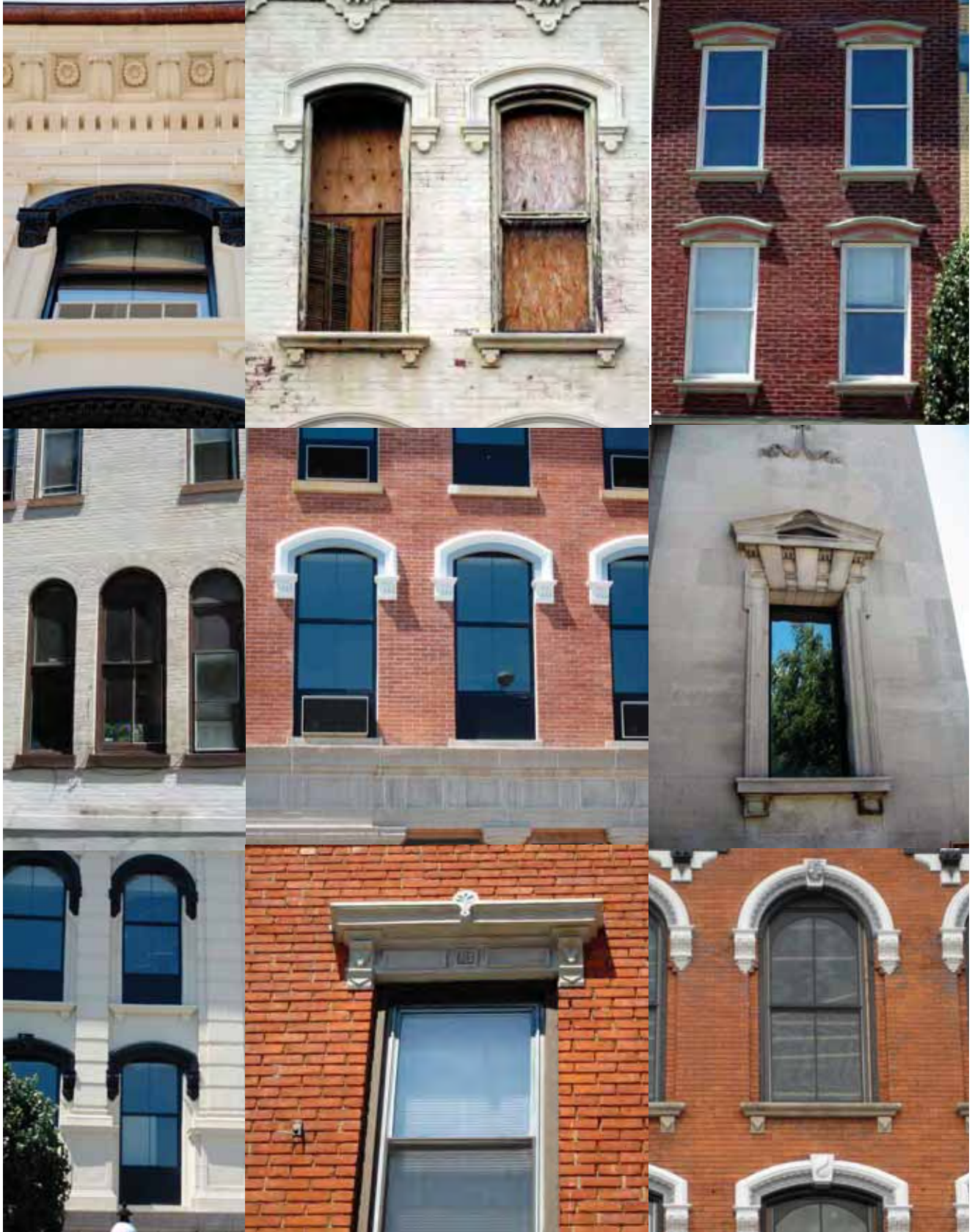


do *allow clearances for drainage--this case is a little too tight*



do

retain & restore original assemblies





THE WINDOWS OF OSSINING

The variety of window hood molds illustrates the richness of Ossining downtown architecture.





Historic windows often were shaped to a gable end like the above.



There are many historic round-top windows, but they have been over-used in renovations.



A hood or surround can add grace to a simple double hung window.

Windows

- Install new skylights visible from street level

Windows add depth and variety to historic building facades and can be critical in determining a building's character. In Ossining, one finds many window styles: double hung, casement, tilting, awning and fixed. The wood double-hung window is most common in residential buildings, and can be found in houses of a variety of architectural types.

Windows provided daylight and ventilation before electric lighting and air conditioning systems. Know your building's period of construction and style before planning changes to your windows. This will help you choose appropriate measures and materials.

If your property has original wood windows, retain and repair them. The cost of repair may be as great as replacement, but it is usually less. Repair is less disruptive to the existing building's fabric. Replacement also normally requires compromises in appearance. Common conditions such as flaking paint, broken glass, failing putty or jammed hardware are easily repaired and do not require replacement. If a window component is beyond repair, replace *in kind* only the deteriorated element while keeping the rest of the window. Matching key features, such as muntin profiles, rail and stile proportions and glazing patterns is important to preserving the character of your building. New windows in contemporary materials and proportions change a façade's depth and profile and compromise the character of the building.

Historic windows can achieve a high level of energy efficiency if care is taken. Make sure the interior and exterior trim is tight and well caulked around the window unit. Re-putty around glass panes, install weather stripping around the sash, install pulley seals, and repair or rehabilitate sash locks so meeting rails meet and can be pulled together tightly to eliminate drafts. Add interior or exterior storm windows for additional winter protection. By rehabilitating historic windows, you are preserving historic character and conserving energy that would otherwise be spent in the demolition of old and manufacture of new windows.

all properties

do

- Retain historic materials and repair existing windows
- Match original materials, dimensions, glazing and trim when replacing units.
- Follow EPA lead paint precautions.
- Install storm windows or screens that do not obscure the original windows; for double-hung windows, for example, align the horizontal bar or rail with the original meeting window rail; install wood or aluminum storm and screen windows in colors that match the original window casing or paint them accordingly.
- Implement a regular maintenance plan.
- Install true divided-light windows rather than snap-in or flat muntin grids.
- Plan size and location to match the window vocabulary and patterns already evident in the building.
- Pay attention to the energy performance of your window system.
- Install shutters sized to match the adjacent windows.
- Match shutter style (for example louvered or recessed paneled) to original.

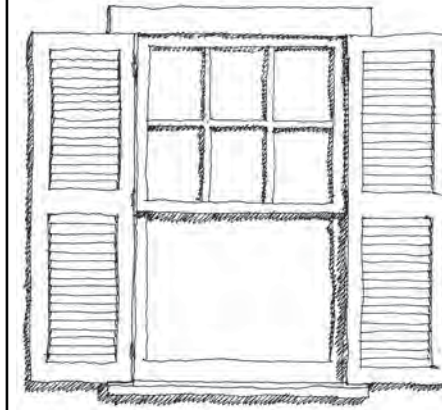
don't

- Replace historic materials with contemporary products such as fiberglass, vinyl or metal.
- Enlarge or shrink window openings on public sides of buildings.
- Change opening sizes or shape to accommodate standard window sizes.
- Conceal original windows.



Above: a well-proportioned traditional double hung window, with head flashing, casing and sill.

shutter width= 1/2 window width
shutter height=window height



Shutters should follow the proportions in the diagram above, as in the example below.





Above: correct installation of shutter and storm window; below: incorrect shutters.



Historic Districts

do

- Match original muntin widths and profiles.
- “Simulated” divided lights, or double glazing with internal non-reflective spacer bars and surface projecting muntins may be permitted in historic districts on a case by case basis—for example where a “true” divided light would require a muntin width not in keeping with the original conditions or pattern.
- Windows may be added in building walls not visible to the public street on a case by case basis.

don’t

- Enlarge or shrink window openings.
- Remove window hoods, hardware, ornament or shutter hardware.
- Insert stained or etched glass without evidence that you are restoring a lost element from your building .
- Add shutters where none existed in the past.
- Install shutters that do not match the window dimensions.



high performance historic double hung window rehabilitation:

- remove stops (note pre-drilled grommet holes at left)
- remove excess paint on window sash
- replace chains or ropes
- install interlocking weatherstripping all sides of sash and jambs
- install pulley seals over pulleys
- lubricate runners on jambs
- install high quality storm window (metal triple track version shown at left)

Doors

Doors throughout Ossining vary in size, shape, ornamentation and color. Wood paneled doors are prevalent, and levels of ornamentation and glazing vary according to architectural style.

Doors are among the most heavily used building elements, subject to intense wear and tear. A cyclical maintenance routine should include regular inspection, careful repair, and painting. Avoid replacing an original door unless the door has deteriorated beyond repair. Use the original material if available.

Contemporary materials, such as vinyl and aluminum, are inappropriate. Match key features, such as glazing, rail and stile proportions, and panel sizes, as closely as possible in order to retain the character and architectural integrity. Decorative trim, entablatures, sidelights and transoms dating from the original installation are as significant as the door. These key features should not be altered; retain original door opening sizes.

Whether you are adding storm/screen doors, or replacing worn out units, you will find that the new installation, properly weatherstripped, can increase energy efficiency in your building. Storm/screen doors should be constructed of wood and should be as transparent as possible, providing maximum visibility of the historic door. Avoid installing any storm/screen with vertical stiles, inappropriate ornamentation, or of an incompatible material.

Door Hardware

Door hardware is found in a diversity of sizes, shapes, materials, finishes and details. Individual hardware components vary with the size of the door and the style of the building. Larger doors require heftier hinges. High-style buildings commonly have heavily ornamented pieces while an early 20th century residence might retain original stock hardware from a contemporaneous mail-order catalog. Historic hardware provides a level of architectural detail that can be lost when an insensitive replacement is installed. Original pieces, including knobs, rosettes, hinges, locks and backplates, should be retained and repaired. Hardware components can often become built up with layers of paint and not operate efficiently. Removing the paint, cleaning, and polishing will restore the finish and make the hardware operate more smoothly.



Successful historic entries consist of an assembly of elements including railing, step, molded surround and finally the doors themselves.



Original hardware adds to historic character.



The door as the centerpiece of a welcoming entry sequence.



Original detailing can survive with good maintenance.



New garage doors (below) can approximate original doors though operation may have changed.



all properties

do

- Match the original door type and overall configuration of glass, panels and detail.
- Use appropriate repair techniques to maintain, protect and repair historic features, materials and details
- Install a wood storm or screen door to increase energy efficiency
- Select a unit that provides maximum visibility of the historic door
- Use colors that are compatible with the door and trim paint schemes
- Install weatherstripping and caulking to decrease energy loss
- Retain door surrounds, trim and details, such as decorative entablatures, moldings, pilasters, sidelights, and transoms
- Regularly paint or varnish exterior door
- Retain original hardware, recondition if needed

don't

- Alter door opening size, dimensions and proportions
- Remove or conceal original door molding
- Replace historic wood door with a contemporary material, such as vinyl or aluminum
- Construct a new opening in front façade
- Purchase doors made of non-sustainably harvested tropical hardwoods

Historic Districts

do

- Repair and restore original doors, using epoxy consolidants or Dutchmen (exact material patches) as required.
- Use materials identical or equivalent to those available when the building was originally constructed.
- Conceal contemporary equipment and security apparatus.

don't

- Strip doors to wood finish that were originally painted
- Use undocumented excessively plain or ornamented designs

Ornamentation and Details

Exterior decoration of 18th century buildings followed local builders' craftsmanship traditions. In the 19th century, pattern books offered a wealth of design ideas to builders, and many ornamental features were mass produced offering a wide array of decoration to middle class customers. With this information and these materials available, builders and their customers explored styles as they never had before. This leaves present property owners with intriguing puzzles to solve.

Understand the style(s) of your property and recognize common ornamental features before you consider any repair work. Note surface materials, textures, and finishes that determine the character of a decorative feature. Retain and recondition all surviving original exterior details. Many decorative elements can be easily repaired through securing loose components, cleaning and painting. Extremely deteriorated features can be replaced to match the existing. In some cases, missing or severely deteriorated ornamentation on the front façade of a building can be replaced with ornament from a wall less visible to the public. If exact replication of a failed or missing element is not possible, a replacement should be fabricated with the same size, scale, texture, and three-dimensionality of the missing feature. If a building has lost much of its original detail, new decoration should be designed based on historic images or documentation. Avoid installing features borrowed from other styles and historic periods.

Most exterior decorative elements are exposed to weather and subject to deterioration. As with all historic architecture, routine inspections will identify key features that require special attention and upkeep. Following a maintenance plan will preserve original materials and features, prevent costly repairs or replacement, and retain a building's architectural integrity.



Ornament often celebrates the functions of architectural elements.



Surviving columns and cornice hold their own amid later accumulated clutter and railing.



Ornament often has a dressier side (rt. above) facing the major street.



The rhythm of original detailing animates facades(above) and records history (below).



*Sisters under the Skin:
The building on the right probably has the original eaves bracket detailing hidden--and well preserved--under the blank aluminum soffit.*



Ossining has numerous examples of tour de force ornamental carpentry.

all properties

do

- Develop an understanding of a building's architectural style and typical decorative elements before repairing, altering, removing or adding exterior ornamentation.
- Follow a routine inspection and maintenance plan.
- Retain and preserve surviving original decorative elements
- Replace extremely deteriorated ornamentation to match the existing in scale, size finish and overall style.
- If a decorative element is missing, use existing fabric or historic photographs when designing replacement features.
- Save removed components to use as templates for replacement.

don't

- Add new decoration for which you have no documentation.
- Conceal ornamentation or, aside from exceptional circumstances, replace it with substitute materials.
- Fabricate a new feature in a different style.

Historic Districts

do

- Find and supply photographs or other documentation for proposed details.
- Install new elements using the same material as the historic element; in special cases, such as high cornices or for column bases, where long term maintenance is unlikely to occur or is not sustainable, substitute materials may be permitted on a case by case basis, so long as they produce the same texture and finish as the original and are not detectable from ground level as substitutes.

don't

- Substitute stock elements that visibly vary from the original.
- Introduce new ornamentation that is either more elaborate or more plain than the original.
- Cover original wooden features with contemporary materials such as vinyl or aluminum which can trap moisture and conceal and accelerate the deterioration of the building.

Porches and Porticos

Porches, porticos and front entrances are prominent elements of a building façade and play a major role in defining a building's character. The particulars of these entrance features are indicators of the era and style of the building. As significant features of the “face” of a building, porches and porch details should be preserved and retained through ongoing maintenance and prompt repair. Character defining elements include overall size and proportion, columns, brackets, railings, balustrades, balusters, steps and lattice (see glossary in appendices).

Historically, porches were outdoor living spaces where residents could gather and observe and greet passersby. Porches and porticos shelter people from the weather as they arrive and leave the building. The overhang of porches facing south and west shaded front windows and cooled the building, and they were often located to receive prevailing breezes. Porch floors were usually finished with tongue and groove, painted pine boards oriented perpendicular to the building and sloping from the building face to the porch exterior. They were often built on piers, with latticework between the piers to improve the appearance and deter animals from entering and nesting under the porch. These features present special challenges to those planning to renovate. Ideally porches should remain as open rooms and should not be enclosed.

In the years following original construction, many residents have enclosed porches—some adding screens against insects, some creating sun rooms with an array of either seasonal or permanent windows. Some have fully enclosed their porches with solid materials and few windows.

New work on enclosed porches not original to the building should attempt to restore the articulation and transparency of the previous porch by spacing, recessing and enlarging windows and door(s) to obey the original porch pattern.



Welcoming entry porches will shed water away from the arrival path.



Replacement of a missing porch should be based on physical evidence (e.g. ghosts of old framing, relic foundations and post holes) and pictorial documentation (e.g. old photos of your house or photos of a twin house in your neighborhood with an extant porch, or examples of similar houses in historic pattern books). Match the original location of the porch. Most importantly, the facade should remain proportionally and stylistically balanced.

If there is a compelling reason to enclose a porch, it should be done in keeping with the overall scale, materials, and detailing of the building. The new porch should be made as transparent as possible, retaining and highlighting original porch proportions and features if feasible. Standards for success are especially high for porches at the front façade.

An unheated seasonal enclosure is most sustainable, and reversible in the future. Elements overlaid on an historic building, such as storm windows, storm doors or porch enclosures, can be acceptable if in the future they could be cleanly removed to reveal the original form and materials. That quality is called “reversibility” and is a basic tenet of good preservation practice. If the enclosure is to be heated or cooled, special care should be taken to insulate ceiling, walls and floor of the room and to weatherize the new construction because of its exposure to the climate.

If a porch element is beyond repair, a new component should be purchased or fabricated that matches the material. Replacements for missing elements should be sensitively installed to complement the building’s overall character and scale.



The sustainable tradition of breezy, shaded porches goes back to the Village’s earliest structures.



Sensitive enclosures (above) exist; more expedient ones (note comparison below) are more common.



all properties

do

- Retain original scale and proportions of porch.
- Retain and preserve surviving columns, railing and balusters.
- Provide in-kind decorative element replacements where needed.
- Paint the wooden elements of the porch.
- Maintain a gentle outward pitch on flooring of open porches.

don't

- Replace railing with a different pattern or spacing.
- Add porch ornamentation for which you have no documentation or evidence.
- Enclose a porch at the front of the building without compelling reasons, artful design and high energy performance.
- Add columns or brackets where none historically existed.
- Replace wood steps, flooring, and framing with concrete or tile.
- Replace old tongue and groove flooring with decking.

Historic Districts

do

- Research and restore original colors and finishes.
- Reconstruct missing features using solid physical or documentary evidence.

don't

- Use imitation replacement materials—with the exception of painted fiberglass column bases matching existing.



Porches with original scale and materials march up and down Village streets (above) and occasionally wrap impressively around corners (below).



An otherwise successful portico entry is marred by the inappropriate use of masonry cheek walls where there should be a railing.

Lattice

Lattice was often used on the exterior of buildings as a decorative and screening element. The form of lattice that is most easily obtained today is quite different from lattice originally used on buildings in Ossining. Lattice commonly available today is comprised of wider strips with larger open spaces, and it is laid out diagonally in 4 X 8 sheets. While there are exceptions, most original lattice had a denser pattern of closed and open spaces and was installed in a vertical and horizontal grid. A close look at the few surviving fragments of original lattice around the Village should bear out this pattern.

Lattice was sometimes installed with a shadow color to accentuate the recess under a porch. It was housed in a thick frame attached to porch piers or pillars and subdivided into relatively small framed segments held only a few inches above ground level. It was often clipped or otherwise attached so that it was removable to allow access to the crawl space. Occasionally it was mounted as a decorative element on the side of a building or between the railing and porch roof to provide privacy or a framework for vines without cutting out visibility completely.

There are now sources that once again supply lattice in a variety of materials and sizes suitable for old and historic buildings.

all properties

do

- Retain and preserve surviving original lattice.
- Retain original scale and proportions of lattice.
- Install lattice in framed sections.
- Use solid body stain to match original colors.
- Make sections removable or hinged for access and repairs.
- Orient lattice vertically and horizontally unless there is strong evidence of an original diagonal arrangement.
-

don't

- Remove original lattice and framing.
- Change lattice orientation.
- Staple lattice sheets directly to framing.

Historic Districts

do

- Use wood.
- Follow neighborhood patterns in reconstructing missing lattice.

don't

- Install plastic lattice or framing.



A careful search of older Village structures and documentary sources is rewarded with examples (above) of original lattice patterns: organized on a horizontal and vertical grid, densely spaced and in framed panels.



Another search also finds examples (left and right) of how not to treat lattice: not framed in panels, diagonal layout, more open than closed.



Lattice is best employed on buildings in a framed panel as at left, not as architectural wallpaper as at right.



Storefronts



Storefronts are the welcoming face of commercial districts and a key element in building facades. Attractive storefronts encourage pedestrians or passersby in vehicles to slow down, linger and shop.

Ossining boasts a notable collection of 19th century and early 20th century commercial buildings in its downtown as well as in other commercial areas. Many of the buildings' facades have survived intact and continue to reflect popular architectural styles of their original construction period. Most are 3-4 story mixed-use buildings with commercial space on the first floor and residential above. Masonry façades frame recessed entryways and showcase large plate glass display windows. Storefronts connect buildings directly with the pedestrian world. This streetscape has great continuity in the downtown, where the most important collection of historic commercial buildings exists.

Increasing appreciation of historic downtowns and commercial districts is based on their architectural character and the economic dynamism they provide. Most commercial district success stories have had historic preservation as a major component. Thoughtful changes and careful rehabilitations can increase business for owners, increase property values, and attract visitors.

Storefronts are frequently altered by changes in use and to express contemporary tastes, and in the process buildings risk an erosion of their historic character. Maintaining, preserving, and restoring historic storefronts is especially important to downtown character. Well preserved buildings provide enduring “packages” for the changing contents of a retail zone. Alterations that replace or conceal original details (wood, brick, glass, etc) detract from a building's inherent character, as do replacement materials such as vinyl, fiberglass, or aluminum. Alterations that change the size of the storefront opening or display window area also diminish its historic character.



*LEFT:
A traditional commercial building has a clear top, middle and a storefront at the bottom.*

*RIGHT:
A recent door (and the AC unit overhead) is a jarring note in this solid historic storefront housing a variety of useful services.*



do

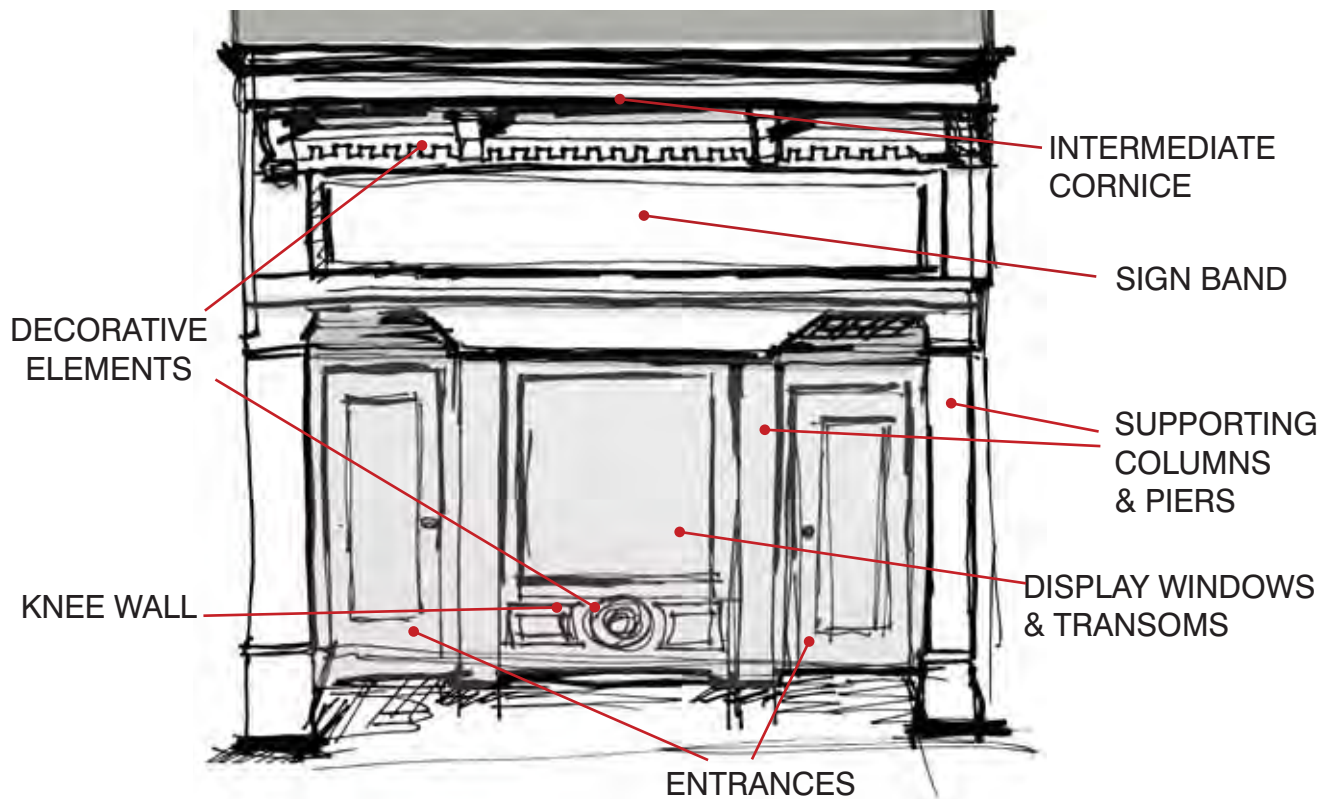
- Take cues for new work from the surrounding context and reinforce its character.
- Retain and preserve storefronts and elements sympathetic to surrounding commercial buildings and districts including overall materials, dimensions, colors, signage types, and special features including display windows, transoms, mid-cornices and lighting.
- Develop an understanding of the building's style prior to making changes and identify the type of storefront that would be characteristic of that style's design; if conjecture or adaptation to current retail needs is necessary, err on the side of simplicity rather than ornateness.
- Retain original inset entries.
- Use storefront contents to provide interest to passersby .
- Light storefront interiors to provide interest and security at street level in the evening.

•

don't

- Let signage accumulate into distracting clutter.
- Install features whose size, color, operating mode, or shape are significantly at variance from the pattern of surrounding buildings and businesses.

Traditional Storefront Features





This great example celebrates its origins at the top and its contemporary uses at the bottom.



Inviting traditional recessed entries provide shelter and increase display frontage.

Historic Districts

do

- Preserve and restore any surviving elements, such as stained or specialty glass, transoms, tin ceilings, window frames and signage.
- Remove soffits or dropped ceilings that conceal original elements.
- Search for historic documentation of the building's configuration before making changes. Reconstruct faithfully using identical materials.
- Maintain and rehabilitate the features, materials surfaces, and details using repair methods appropriate to the storefront material.
- Replace in kind any portion of a storefront that is damaged or has deteriorated beyond repair. Match distinctive historic storefront materials in design, material, dimension, pattern, texture, color, and detail; limit replacement to the damaged area if feasible and consider installing substitute material only if it is not technically feasible to replace the damaged storefront materials in kind.

•

don't

- Depart from the particular character defining pattern of the individual building or historic district, such as a repeated cornice design, repeated materials palette, or arrangement of storefront glass to sign cornice above.
- Use replacement materials that were unavailable when the building was originally constructed.
- Install features lacking historical, pictorial, or physical documentation.

Signage

Historically during the 19th and early 20th century, signs were a key feature of storefronts and continue today to shape the character of a business district. Within the Downtown Historic District, signage should be compatible in design with the historic character of the district and should be installed in a manner that does not diminish or damage important architectural features. Size, materials, graphics, and legibility of the typeface, color, and method of attachment must be considered when designing new signage for the historic commercial area.

In the commercial arteries signage is often multiplied by merchants' perceptions that more signs and bigger signs will improve their business. In fact legibility is often improved by sign controls that reduce the visual clutter and "noise" in the vicinity of the store. Limiting letter size and the number of signs permitted per establishment can further these goals.

On South Highland especially signage is directed at people in vehicles moving at higher speeds than in the downtown or on Croton Avenue. Many of the signs are independent pole signs rather than signs on buildings. Larger letter sizes should be permissible there. Illuminated signs should emphasize stencil cut illuminated letters rather than backlit solid lettering, since that will reduce stray light, glare and clutter, while enhancing the message going to people passing by.

Smaller signs are appropriate on Croton Avenue, since it is a mixed use neighborhood. Signs should be exclusively on buildings themselves rather than on separate sign standards or poles, though small (less than 6 sf) signs may be acceptable in front yards if required for identification.

all commercial districts

do

- Install signs in scale with the whole building as well as the storefront.
- Make signs compatible with the graphics, colors and style of the building and its neighbors.
- Locate signs on the traditional sign cornice over the first story on older commercial buildings.



Standoff lettering is effective and reinforces the architecture.



The original punched transoms strengthen the sign panel above and send daylight further into the space.



Storefront and signage can provide a contemporary feeling while reinforcing traditional architecture.



Handmade signs could be effective if better located and with less clutter



Different sign types can co-exist on the same building without obscuring the architecture.



Signage can be an important part of an overall facade treatment and color scheme.

- Respect neighboring signs and buildings with placement and size.
- Pick up on existing horizontals and reinforce architectural features with sign placement.
- Use stencil cut letters rather than solid letters on a backlit field.
- Use cool energy efficient light sources on timers for illuminated signage.
- Limit signage on Highland Avenue to one flag or pole sign attractor and one confirming identifier on the building.

don't

- Use signs covering or obscuring significant architectural features or obscuring visibility through the windows.
- Multiply signage on the same property or business.

Historic Districts

do

- Use pin-up individual letters or hand-painted signs.
- Choose historic mounting method (e.g. hanging or building mounted) where known.
- Mount signs following current codes.
- Illuminate signs from the exterior rather than interior, if lighting is required.

don't

- Install animated signs or strobes.
- Employ plastic or vinyl box signs.
- Use plastic letters.
- Use foam signs.
- Use cardboard or posters, except in poster boxes.

Awnings

Awnings made of canvas, and various other types of materials, often shaded storefronts during the 19th century. The installation of awnings can shelter pedestrians from inclement weather and harsh sunlight, reduce glare, and also conserve energy by controlling the amount of sunlight shining onto storefront windows.

If an awning is desired, select one made of soft canvas or vinyl coated canvas. Install it so that it does not damage the building or obscure distinctive architectural features.

all properties

do

- Use shapes and styles that reinforce the pattern of adjacent businesses
- Use materials that reinforce the pattern of adjacent businesses
- Maintain dimensions that reinforce the building character

don't

- Obscure visibility
- Use fixed awnings with cedar or plastic shakes
- Use aluminum canopies
- Use glossy or leatherette finished vinyl

Historic Districts

do

- Use traditional operable straight eave awnings in documented historic patterns
- Use canvas, vinyl coated canvas or matte finish polyester
- Match exactly the width of the display window below

don't

- Cover up existing sign cornices or any historic features
- Use waterfall or other fixed contemporary awning types



Over storefronts, operable awnings over storefronts are a flexible, traditional solution.



The signage and business front are fighting the architecture in this case.



"Afterthought" signs can detract from a store's image.

Additions and New Construction

Additions and new construction can quickly change neighborhood character. Guidelines can reinforce those aspects of character that the community considers most positive, such as residential scale, street side articulation, appropriate building placement on the property, ratio of built to unbuilt area on the site and architectural style. The guidelines should communicate shared goals that challenge rather than limit the creativity of designers and builders.

All building projects are renovations, depending on the perspective from which you see them. As you zoom out from the most minor changes proposed for an existing building to the insertion of a new building in a neighborhood, the scale of renovation, of the object whose character will change, enlarges from the building to the larger lot and its neighbors to the entire neighborhood. The guidance at each scale comes from the best aspects of the style of the building, the feeling of the adjoining buildings and the overall character of the larger neighborhood.

Scale and placement are the most important characteristics to control for new buildings; stylistic details are secondary. Fresh, creative architectural approaches should not be discouraged if they represent a level of effort and excellence that meets the historic or neighborhood standard. The best buildings that have survived from previous eras do not have to be surrounded by half-hearted facsimiles of themselves; they may benefit more from the best efforts of our own era. In some cases quiet “background” buildings may be the best approach, rather than aggressive structures that call attention to themselves or upstage historic landmarks.



*LEFT:
Comfortable scale,
material and a few
simple details can
help new build-
ings relate to their
context.*



*RIGHT:
Introducing rustic
materials like the
stone quoining on
the right, where
they don't otherwise
exist, can strike a
false note.*

Additions:

An acute observer of an addition to an intact historic building should be able to distinguish the new work from the original. The addition can use materials and proportions of the original, or it can be a distinct, contemporary design. In either case, the addition should not overpower the original and should sit well in its larger context

all properties

do

- Site additions so they are less prominent than the existing building, which in general means located to the side or rear.
- Size additions so they are subordinate in scale to the existing building and its neighbors.
- Study approaches that create connectors to independent volumes rather than additions that “fatten up” and distort the original volume.
- Offset rather than align additions with the planes of the existing building.
- Meld small changes into the existing architectural composition.
- Adopt a clear design approach to the relationship between existing and new construction. In general detailing similar to but discernably different from existing historic patterns is recommended. Use a connector or “hyphen” between the original structure and an addition in a different style or form and distinguish clearly between them.
- Harmonize materials on new additions with existing.
- Undertake new additions and adjacent or related new construction so that, if removed in the future, the essential form and integrity of the existing property and its environment will be intact.
- Protect significant existing landscape features during construction. (See Trees, page 89)

don't

- Obscure or remove the best or character-defining elements of the existing structure.
- Align the plane of new work with existing and thereby erase the outline or shape of the original building.
- Juxtapose natural materials with imitation materials.
- Overwhelm the original or neighboring buildings with the size or shape of the addition.

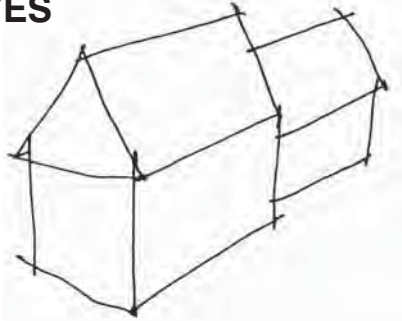


Connecting main structure and addition with a “hyphen” (see above and below) can help maintain an appropriate scale.



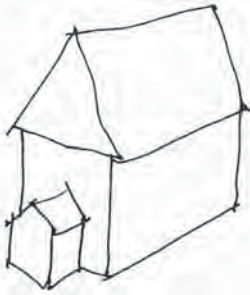
Unsympathetic additions can result in an unattractive hodge-podge of volumes and styles.

YES



*additions are best to the rear
(above) NOT in front (below)*

NO



Historic Districts

do

- Distinguish between existing and new construction.
- Review and follow the Secretary of the Interior Standards for Rehabilitation (see appendices) .
- Pay special attention to material type, profiles, ornament, exposure and texture .
- Harmonize new work with existing patterns of solid (siding) and void (windows).

don't

- Move historic structures around on the site or to another site unless it is the final remaining way of saving the structure.
- Deconstruct and rebuild existing buildings unless it is the only method of securing the structure.
- Locate new work where it impacts historic fabric.
- Create pseudo-historic additions.



Filling Out the Envelope:

You can see the result of the push to expand all over Ossining. The first direction is into porches, attics and basements. While getting more use out of the footprint can be positive, additions that are not carefully designed can disfigure the building and have a negative impact on the neighborhood.



all properties

do

- Site new buildings and their landscape elements so they follow the neighborhood patterns of lot placement with similar setbacks.
- Size new structures so they are sympathetic in scale to existing buildings.
- Site accessory structures behind the primary one .
- Use materials compatible with the context.
- Respect the façade designs and rhythms of nearby structures.
- Protect significant existing landscape features during construction. (See “Trees” in landscape section p. 87-88)

don't

- create artificial mounds or land forms under or around new structures; ground floor level should relate to the existing grade in a manner similar to neighboring buildings.
- Mirror or closely copy an adjacent existing building.
- Overwhelm the neighboring buildings with out of scale construction.



The Secretary of the Interior's standards say: “The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.” Successful small additions like the one above can employ materials and details similar to the original and still differentiate themselves.

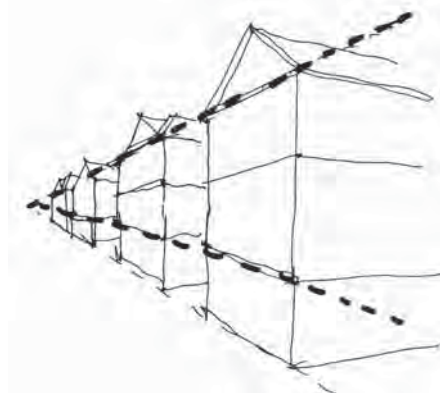
Historic Districts

do

- Use materials consistent with the neighborhood's character-defining palette (for example, clapboards and shingles, or stone and stucco).
- Adopt and acknowledge established district patterns and motifs.
- Use contemporary building techniques, including sustainable methods and materials.

don't

- Position a new principal or accessory structure to disrupt important local views or settlement patterns.
- Use imitation materials in an historic district.
- Use conjecture to design in an imitative style or building form inconsistent with the current or historic context.



Infill construction should reinforce alignments--cornice lines, height, porch lines, floor elevations--from the neighboring buildings.



new construction should reinforce the rhythms and spacings of the existing neighborhood



Land Form: Issues and Opportunities

The hilly topography of Ossining enlivens the landscape. As buildings climb up and down the slopes, each has a different slice of sun and wind and view. This produces a dynamic visual mingling; different types of neighborhoods, properties and uses see each other. One person's back yard looms over another's side porch; a homeowner's view out to the River oversees a commercial parking lot. A front yard is often not the only part of the property the public sees. As strip mall and supermarket shopping have become more popular, parking lots—at first necessary bleak expanses of paving—are on the way to becoming public plazas. Regulations and recommendations for land use must deal with these challenges and opportunities. Careful landscape planning can soften the impact of change and improve relationships between dissimilar uses.

Issues and Opportunities

all districts

do

- Screen between commercial and institutional parking lots and residential neighbors: screening can be dense evergreen trees and shrubs in ample planting areas and/or fencing of style, materials and construction compatible with the character of the adjoining neighborhoods.
- Place tree islands within parking lots to cool and beautify.
- Between and within parking areas, locate clear, comfortable, accessible pedestrian walkways enhanced by low level lighting if necessary and shaded by trees.
- For proposed changes to properties within clear view of a retail “plaza” and unable to be screened, carefully consider the impact of these changes on the plaza experience. This is a case where Ossining's hills put more property on public view and require more careful treatment.

don't

- Plan changes that will have a negative effect on pedestrians and neighbors.
- Erect property line visual barriers where adjacent uses are compatible and do not require separation for security or privacy.



Screening would reduce the impact of commercial parking and loading zone off S. Highland on a residential neighborhood to the west.



Back yards in view from a Sparta public street.



View from Four Seasons Marketplace parking lot.



Residential porches overlook unscreened parking lot.



River view above Croton Avenue.



A timeless garden element enhances a shady yard.



Garbage shed belongs in non-public area.



Locate drying away from public view.

Things in the yard

For all districts, the goal should be to “furnish” your yard in keeping with the character of the neighborhood. Proposed changes and additions to your property should harmonize with the character of your house and the character of similar neighboring properties. The Planning Department can advise you which of the items listed below call for Village review.

Items include but are not limited to:

- Air conditioning equipment
- Back up generator
- Clothes-drying structure or ropes
- Compost pile or container
- Dog house
- Garage
- Garden house
- Gazebo, pergola, arbor
- Ornamental garden pool or water feature
- Permanent barbeque installation or fire pit
- Permanent built-in outdoor furniture
- Play equipment
- Propane tank
- Rain barrel
- Solar panels secured to ground
- Splash block
- Sports paraphernalia—basketball hoop, soccer goal etc.
- Storage structure/tool shed
- Trash and recycling containers
- Vegetable garden
- Wading or swimming pool, spa and pool equipment

The Do’s and Don’t’s to follow apply principally to the Sparta Historic District and suggest an approach that homeowners in that District should contemplate. They are useful advice for all residents wishing to enhance the appearance of their properties.

General directive for the Sparta Historic District: if the new element in your yard *might* have existed when the house was young—such as an outbuilding or arbor—and if it will be visible to the public, design and paint it to harmonize with the house. If the new element obviously is of recent origin and serves a modern use, hide it.

all properties

do

- For historic yard elements needing repair: repair, rehabilitate, replace in kind existing elements. Take your material and color cues from the existing primary and accessory buildings on the property so they have a family resemblance.
- For new structures: use materials, construction methods and forms familiar in the period of your house.
- Locate at the back or side of the house, where they are least visible to the public, modern elements such as air conditioning and pool equipment, play structures, wading pools, garbage sheds etc.
- Screen modern elements from public view with dense, period appropriate fencing and/or evergreen vegetation.
- If elements such as rain barrels and splash blocks must be at the front corners of the house, screen them.

don't

- For structures: fabricate an “old-fashioned look” from another historic period.
- For historic structures especially: mimic the construction of your house so perfectly that house and outbuilding appear to have been built by the same builder at the same time. This is part of keeping the historic record straight.



Screening would reduce the impact of this boat parked in Sparta.



Unscreened splash block.



Subtle colors of this play structure reduce its visual impact.



Low dry-laid wall provides excellent drainage for garden bed.



This 20th c. masonry wall was a favorite in the Hudson valley suburbs.



Weep holes at base of large retaining wall relieve water pressure.

Retaining walls, steps and grade changes

Shaping land well makes for livable landscapes. The hills of Ossining call for careful design and engineering, sound construction and clever water management. Residents have devised dramatic overlooks, impressive terracing and ingenious step sequences—all contributing to the Village's appeal.

all properties

do

- Make sure you have the appropriate level of professional help when shaping your land. Consult an engineer or landscape architect to assess the safety and aesthetics of a proposed change. If appropriate, commission professional drawings to ensure that storm water issues are addressed and the work meets standards for health and safety.
- Consult the Ossining Building Department to learn what kind of professional services you will need to design and file your work.
- If your property has trees, and if you are considering a grade change, consult an arborist about what measures you need to take to protect vegetation. You may learn that your proposed construction will affect a tree's root system so seriously that the tree may die or be too dangerous to keep on your property.
- Recognize the impact your changes may have on properties above and below you. Changes may affect views, available sunshine and drainage patterns.
- Use sound proven materials for new masonry work.
- Follow guidance and requirements from the Building Department on storm water management during construction to minimize impact on neighbors.

don't

- Undertake a project on your own without thorough mastery of earthworks issues and techniques on sloping sites.
- Allow your land form changes to alter drainage patterns and affect your neighbors.

Sparta Historic District

Changes should be in keeping with historic site improvement patterns in the district. Early landowners worked with the lay of the land, accepting natural slopes and using modest terracing to provide level areas; they did not employ our current engineering technology that allows radical changes in topography.

do

- Repair and maintain existing walls and steps from both original site work and from eras later than your house's construction date unless these elements are beyond repair or no longer useful. Repairs should be consistent with the construction era of the site element; match stone or brick and mortar color and construction details.
- For newer site elements *beyond* repair, build new features based on documentation of the original site features that predated the intermediate failed elements.
- If no documentation can be found, follow masonry conventions from the period of house construction. These may include dry laid stone walls, mortared stone walls, or concrete walls with stone veneer, brick walls or concrete walls with brick veneer.

•

don't

- Build high retaining walls to support oversized flat areas that lack precedent in your neighborhood.
- Place in public view fanciful landscape embellishments from masonry traditions uncommon in the Hudson Valley.
- Use contemporary interlocking concrete blocks and timber construction (so-called railroad ties.)

(see appendices for information sources on masonry construction)



For a new retaining wall complementing a c. 1910 property, the mason pieced together three kinds of brick and mixed shaped stone. A mockup with sample mortar was reviewed for compatibility with existing masonry before construction.



Masonry in good condition, though from a later period than the historic house, should be kept.



Regular maintenance will prolong the life of this connecting stairway.



This highly successful gate is period appropriate for the house, suits the informal path and can screen non-historic elements in the side and back yards.



Chain link fence does not improve the neighborhood.



Fences

all properties

Fences are useful to enclose pets, constrain toddlers and protect gardens from deer and wandering neighbors. Opaque fences afford privacy and screen clutter from public view. High fences at the perimeter of a property and especially at the front property line are unwelcoming and isolate the property from the community. Fencing should serve necessary practical purposes while contributing to the appeal of the neighborhood. Fencing around parcels in transition awaiting development should be designed and *maintained* not to detract from the character of the neighborhood.

Sparta Historic District

Front yard fencing was discouraged by 19th century tastemakers. The design and detailing of suburban fencing was part of the builder's craft so when fencing *was* used, it often coordinated well with the house.

do

- If a fence is required, it should be low so the house behind it is visible from the street.
- Use wood and dark metal (wrought iron or similar); avoid plastic and chain link fencing.
- If you cannot find documentation of an original fence to replicate, select a form known to have been used in the period of your house.
- Paint or stain a wooden fence to complement the colors of your house. Raw wood fences were put up in rural areas in the time-span of the District, but they were uncommon in suburbanizing communities like Sparta.
- For a metal fence, assume a simple iron picket fence to be appropriate unless you have specific documentation of a more elaborate wrought iron fence on your property.
- To keep pets and children in the front yard, attach dark-colored vinyl coated wire mesh *behind* a traditional wood slat or board fence.

- If needed to hide non-historic elements from public view, build board or lattice privacy panels in traditional forms. Each panel should have a wooden frame. Unless you have historic images from your property showing the lattice grid in a diagonal orientation, the lattice grid should be installed on vertical/horizontal axes. Lattice should be stained or painted to harmonize with the colors of your house. Locate these enclosures toward the rear of the property. See Lattice.

don't

- Build a fence that will hide your house and front yard.
- Install fences along side property lines unless there is a definite practical need.



Regular repainting or restaining will protect this appropriate picket fence.



This iron picket fence provides a see-through frame for the gardens beyond.



Neighborhood character and the appeal of these undeveloped properties would increase with attractive, well-maintained fencing.



Electrified sconces have become a convention for exterior lighting of vintage houses. They are embellishments that post-date many historic structures.



Exterior Lighting

Exterior lighting was minimal during most of Ossining's development. In the 20th century, a porch light or sconce at the door showed the way to the front entrance. Street lights if any were widely spaced. Heavy use of landscape lighting on residential properties only took hold in the middle of the 20th century. Today we are accustomed to much more outdoor illumination and depend on it for security. New understandings about the environmental and cost-benefits of reduced landscape lighting have produced the Dark Sky initiative (see appendices). This innovative approach to exterior lighting dovetails with efforts to approximate the character of historic Ossining.

Understanding night vision will help you plan appropriate exterior lighting. Eyes adapt to low light levels. The glare of a direct light source overrides that adaptation, and blinds the eyes to potential hazards in darker areas that would otherwise be visible.

all residential districts

do

- Increase the general visibility on your property by reducing glare in outdoor lighting.
- Light your own property so it contributes to the safety and continuity in your neighborhood.
- For way-finding—e.g. the paths to the front door, garbage enclosure and garage—and lighting for outdoor recreation areas, use inconspicuous contemporary “dark sky” fixtures that conceal the light source while illuminating paths, drives, and patios.
- If desired, use illumination without spill to light your street address.
- Adopt ways to reduce electricity use such as timers, light or motion sensors and fluorescent or LED lamps.

•

don't

- Allow light to trespass from your property to that of your neighbors.
- Have outdoor lights on longer than functionally necessary.

Sparta Historic District

do

- Choose porch and front door lights consistent with the period of your house.
- If your house pre-dates pumped gas or electrification, choose new lighting in the form of the earliest fixtures that might have been added to your property; later houses probably have also lived through a succession of owners and technologies, and today's residents should select fixtures for porch and front door that suit the scale, materials and style of their structure's character defining elements; new energy thrifty sources are available for many styles.
- Minimize landscape lighting to low levels for safety and way-finding; use inconspicuous contemporary "dark sky" fixtures. Choosing dark sky fixtures prevents light pollution and avoids false historicity.

don't

- Choose generic old-fashioned fixtures such as nautical lanterns and colonial lamplights unless you know they were used by original owners of your property.
- Throw light on facades, trees and shrubs.

Commercial districts and Downtown Historic District

do

- Light store interiors for visibility.
- Use energy efficient lighting techniques.
- Install dimmers or other variable controls.
- Adopt "Dark Sky" lighting fixtures and placement to minimize glare and stray light.
- Design individual lighting with adjacent street and retail lighting in mind.
- Envision the color of the light source .
- Conceal wires to light sources.
-

don't

- Use unshielded exterior floodlights.
- Allow visibility of light sources upward or sideways from off your property.
- Install animated and tracer lighting.



Graceful early to mid-20th c. garage downlight is relatively glare free and relates to the early days of motoring.



Like the garage light above, these simple fixtures have for a hundred years been a good looking and effective solution for sign lighting.



Spotlight should be deeply shielded and mounted high to prevent glare that can endanger motorists.



A combined drive might benefit both properties above, as in the example below.



Informal parking tracks allow more green-and less paving-on the property.

Cars

By far the most striking change in the landscape since earlier days in Ossining is the vast increase in numbers of cars, the loss of green space to paving for the storage of cars and the widening and hardening of road and path surfaces. Sacrifice of lawn and garden space in the front yard for supplementary parking compromises the property's character. The appearance of a twenty-first century car in the yard of a carefully restored 19th century house is the elephant in the room.

Large, unshaded parking lots are bald patches in otherwise leafy Village terrain. Sun-baked pavements become heat islands, uncomfortable to walk in and increasing the air conditioning demands of neighboring buildings.

As has been described elsewhere, many residential areas *not* in designated historic districts are rich with vintage houses and mid-sized yards and deserve as much green space as a homeowner can manage. All recommendations for Historic Districts should be contemplated when dealing with parking in these districts.

all residential districts

do

- Use existing garages to store cars when they are not in use.
- Locate supplementary open air parking at the back of the property if feasible.
- Screen supplementary open air parking with vegetation or fencing.
- Reduce the paved drive and parking area as much as possible.
- For a single family household, rather than building a double-wide parking bay, try tandem parking.
- Consider a combined drive with your next door neighbor. With shared maintenance and plowing, individual costs are lower, storm water runoff is reduced and plants in the additional unpaved area will lower ambient temperatures in summer while taking up CO₂.
- Consider open grid pavement if you anticipate *infrequent and temporary* need for additional drive area and off-street parking. This honeycomb structure, inter-planted with grass, can give the impression of continuous lawn while being structured to hold the weight of a car. Cars parked for long periods of time will shade out and kill the grass. Heavy traffic will kill the grass.

- Attempt to contain storm water running off your pavement in a slow-percolating swale or rain garden.

don't

- Pave where you don't have to.
- Park cars in front of your house in your front yard.
- Select paving materials incompatible with the character of your house and neighborhood.

Sparta Historic District

do

- Screen supplementary open air parking with vegetation or historically appropriate fencing.
- Use gravel as a drive surface if the slope is not so great that *only* a hard continuous surface will be practical. Gravel predates asphalt and concrete; it allows rainwater to percolate into the ground, reducing runoff. It is both historically and environmentally sound.
- Consider double ribbon paving strips in grass leading to rear parking. This driveway form was popular in the 1920's.

commercial areas

do

- Plan layout and circulation paths for the comfort of pedestrians.
- Plan tree and vegetation strips and islands in and around the paved area.
- Consider porous paving for parking surfaces and for swales collecting water on the site.
- Consider a rain garden to collect, clean and meter out stormwater.
- Consider roof-shaded parking; light colored roofs can have high reflectance compared to asphalt, reducing heat absorption; they can support photovoltaic panels to generate electricity; they can be planted green roofs, again, cooler than asphalt, filtering stormwater and reducing and slowing its discharge into storm drains.
- Try to connect your parking area with adjacent parking lots for pedestrian traffic if appropriate.

don't

- Pave more than you have to.
- Light more than necessary for safety.



Open grid paving supports grass & stays green if use is light.



Trees, shade, and pedestrian paths would improve this parking lot.



This little strip makes it hard to walk to the shopping center.



Inappropriate front yard use.



Bluestone paths on stone dust and gravel bed are often appropriate for older properties



Stepping stones (above & below) form attractive paths and allow maximum water absorption



Paths

Paths should be safe and comfortable to navigate. As with drives, residents should try to minimize storm water runoff from impervious surfaces.

all residential districts

do

- Use porous paving if feasible: gravel, step stones, concrete or severe weather brick pavers well-laid on a compacted pervious gravel bed.
- Pave no more than necessary for safe, comfortable walking.
- With efforts to contain water run-off, concrete and asphalt surfaces are acceptable in non-historic districts.

Historic Districts

- Use porous paving if feasible: gravel, step stones, or severe weather brick pavers well-laid on a compacted pervious gravel bed. Concrete pavers on a gravel base may be acceptable if they are inconspicuous or are indistinguishable from brick.
- Avoid obviously fake simulated stone and paving in ornamental patterns inconsistent with the style and era of your house.
- If your property already has non-historic paving or cement steps where once there would have been stone or brick, make repairs to these elements with materials consistent with *their* period of origin. If they are beyond repair, rebuild with materials contemporary with your building.
- In areas out of public view, consider porous paving to reduce storm-water runoff.

Paths for handicap access into the house must have an 8.3% (or shallower) slope with flattened landings at designated intervals; a handrail is required if the slope is greater than 5%. (Please consult the Building Department for any additional local regulations.)

All property owners should attempt to integrate accommodations for wheelchair access into the overall design of the property, and try to keep the principal public face of the building unencumbered. The house should continue to follow the patterns of the neighborhood.

all residential districts

do

- For private houses requiring handicap access, if feasible, try to place the ramp leading to the front entrance along the side of the house or in another less visible location.
- Provide a smooth wheelchair travel surface.
- Consider low plantings to screen the sloping face of the ramp.

Sparta Historic District

do

- If a handrail along the ramp is necessary, select a design that will be least conspicuous and can be easily screened. If the handrail *must* be visible, select a railing consistent in material and color with your porch rail or other trim on the house.
- Provide a smooth wheelchair travel surface. A gravel/stone dust surface well-compacted is preferable to gravel alone. For wheelchairs, paving units should have tight joints to minimize bumps. A relaxation of strict historic standards can be considered for travel surfaces.
- Screen the non-historic sloping line of the ramp with low plantings.

commercial accessibility

do

- Review accessibility requirements and applicable codes with professional and building code officials.
- Implement least complicated and intrusive code compliant measures.



Especially suitable for vintage properties, drylaid paving brick (above as a border and below as a path) permits some water infiltration into the soil.



This tidy arrangement of strip edging may lack historic precedent. Garden research may suggest a more period appropriate approach.

Garden Planning

In the 19th century, Downing and his disciples counseled the swelling ranks of suburban residents on how to manage and enjoy their small pieces of land. He discouraged fences and plantings blocking views of the front of the house. New contraptions to cut grass (early mowers) allowed homeowners to grow lawns, features strongly promoted by Downing and other tastemakers. Ideally, front lawns of individual properties were to run together so neighbors would share views of long expanses of lawn up and down the street. Not everyone followed these directives, but the lawn “fashion” as a suburban feature endures. Some recent trends replace much of the yard area devoted to lawn with shrubs, perennials and grasses to increase plant diversity and reduce watering, mowing, fertilizer and pesticide use.

Foundation plantings became customary only after the First World War when building construction included exposed masonry foundations made of utilitarian materials that needed to be concealed. Before that, building and porch fronts were on view, often punctuated by a select few ornamental shrubs carefully placed.



Study old photos to get a sense of old landscape choices.



yes



no



Merged lawns unify the neighborhood and enlarge the sense of space.



Plant selection

From first European settlement, there was an exchange of seeds and plants between the new and old worlds. American gardeners relished plants imported from Europe and the Orient, so a faithful reconstruction of an historic Ossining garden might include so-called “exotic” plants used when the house was built. Today, while many exotics coexist with native plants as good neighbors, some imported plants have proved invasive and threaten our native ecosystems. Present day gardening favors the use of native plants. In many Westchester neighborhoods, deer limit plant selection to a few “least likely to be eaten” plants.

Watering

Historic gardens did not have automatic sprinkler systems. Plants—whether native or exotic—should not require supplementary watering after an establishment period unless there is a severe drought. Selecting water-thrifty plants is both historically faithful and environmentally sensible.

all properties

do

- Inventory and analyze the strengths and weaknesses of your property.
- Understand the limits of the landscape materials you are working with. For example, don’t try to make a row of trees in a tight shady spot do what a fence can do better. Don’t use a fence (or just a fence) if there is generous room and sunlight for a hedge.
- Follow informed advice on plant selection for your needs, soil, sun exposure, slope and level of maintenance. Landscape changes should be guided by best horticultural practices.
- Select water thrifty plants.
- If you must irrigate, use drip irrigation and moisture sensors, so you consume as little water as possible.
- Maximize absorption of water on your property: e.g. porous paving, French drains, cross slope swales, rain gardens, well-tended mulch.
- Avoid using plants known to be invasive in our region
- Avoid construction producing radical grade changes to your property unless there is a compelling need.
- Consider the impact your property has on your neighbors and on the character of the street.



Drought tolerant plants predominate in this Sparta cottage garden.



Old-time sustainable watering method.



The foreground barberry hedge was popular throughout the 20th century. Barberry is highly invasive and should not be planted today.



Low plantings in the 19th c. manner reveal house & porch details.



Trees are important “architectural” features framing river views.

Historic Districts

do

- Include some lawn in the front yard.
- Use foundation plantings only if your house was built after 1918.
- Consult references on 18th and 19th century gardening if your house calls for an earlier garden style.
- To select plants for a new historic garden carefully, first consult references showing what was planted in this region in your property’s time period.
- Then check to see if any of the then-popular plants have turned out to be a threat to our ecosystem (as, for example, Japanese barberry, winged euonymus or Norway maple).
- And finally, learn what safe substitutions can be found that mimic the visual character of the harmful exotic plants.

don’t

- Fence or hedge in such a way that you hide the front of your house.
- Introduce old-fashioned garden styles from eras unrelated to your house.
- Plant species unavailable in the period of your house.
- Plant a garden that will require irrigation in periods of normal intermittent rainfall.

Trees

Mature trees now grace many older Hudson Valley suburbs. Trees impart a sense of history while cooling our communities, reducing pollution and taking up CO₂. Trees are character-builders in a neighborhood, some rising to informal landmark status.

If you are considering removing a tree to make way for a new feature on your property, assess what the loss of shade will do to the temperature of your house and your air conditioning bills, and of your neighbors’, if the tree shades your neighbor’s house. Think about the impact of your shade tree on the comfort of the public way by your property.

The Village requires a tree permit for tree removal in most cases (see appendices).

Construction impact on trees

If you are contemplating changes to your property—such as garden terracing, a new structure or house addition or a new driveway, understand that the root system of a mature tree extends well beyond its drip line (see next page). Most of its roots are found in the top 6 to 24 inches of soil. Changes in grade—either digging and cutting roots, or adding soil and smothering roots—have a profound, enduring negative effect on the health of the tree. Instead of trenching, use an auger or air spade to install underground piping and utilities. Plan your changes with this in mind. See link to *Healthy Roots and Healthy Trees* in the appendices as well as more on trees and construction.

all properties

do

- Inventory your trees and assess the “jobs” they are doing on your property for screening, shade and beauty as well as the problems they may be creating such as buckling walkways, moisture capture near the house, branch drop, root competition etc.
- If you see your trees as important assets to your property, establish a schedule for regular tree inspections by a certified arborist and follow recommendations for maintaining their health and safety.
- Plan grade changes and construction activity mindful of the fragility of tree root systems. Consult a certified arborist for best ways of protecting trees you want to enjoy in the future.

don't

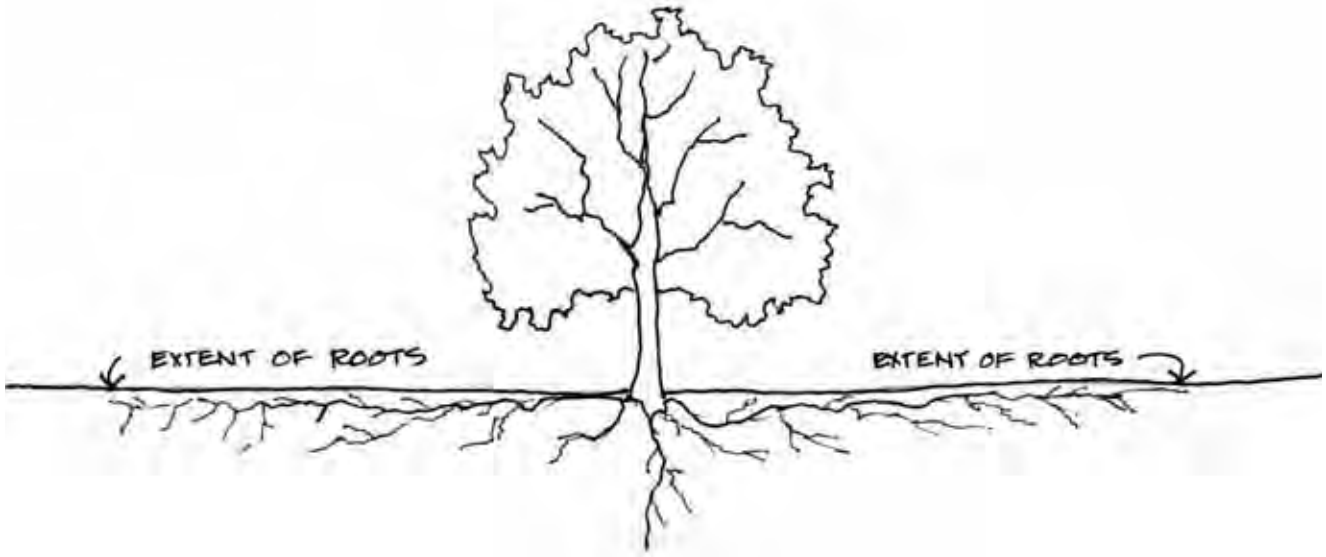
- Put new parking areas (causing soil compaction) under old trees you want healthy.
- Allow construction activity, materials storage and soil stockpiling on the root systems of trees you want to keep that are beyond the minimum zone necessary for construction.
- Top trees. The issues are well discussed in sources on the web (see appendices).



Some magnificent specimen trees anchor Ossining neighborhoods, providing welcome shade and a sense of scale.



Two years later three trees shown above were dead.



Most fine roots supporting tree life grow in the top 6 inches of soil.

Tree Root Area Rule of Thumb

young trees

- Measure diameter of trunk at 4 ½ feet above grade
- Multiply results by 0.75.
-

So 9" diameter young tree should have a circle of undisturbed soil with a radius of 6.75 feet—total diameter of 13.5 feet.

mid-aged trees

- 1.0 times trunk diameter at 4 ½ feet above grade

old trees

- 1.25 to 1.5 times trunk diameter at 4 ½ feet above grade
-

So a 40 inch diameter tree should have a circle of undisturbed soil with a radius of 60 feet—total diameter of 120 feet.

The materials below are arranged in the sequence of the chapters of this manual. Of course, many topics and references extend beyond the chapter assigned to them here.

APPENDICES

www.villageofossining.org, the Village of Ossining website, is the place to start when seeking procedural information.

A1 Introduction

<http://www.heritagepreservation.org/>. This national organization addresses the preservation of artifacts and collections. It is useful for general information about the conservation of materials and can be one tool for raising consciousness about saving relics of our cultural heritage.

A2 Guideline Subject Areas

Sparta: Brief history

The following historic summary was adapted from *Village of Ossining, New York Significant Sites and Structures Guide (2010)*.

Sparta was designated a Historic and Architectural Design District (HAAD) by the Village of Ossining in the 1970s as an area of building stock both historically and architecturally significant to the Village. The district, with its winding and undulating streets, spans roughly 200 acres at the southern tip of Ossining and includes 62 structures. The district is bordered by Revolutionary Road to the east and includes Liberty Street, Fairview Place, Still Court, Rockledge Avenue, and portions of Hudson Street and Spring Street.

Sparta was established in 1790 as an independent hamlet within the Town of Mount Pleasant. Originally part of the 30,000 acre Philipsburg Manor, twenty-nine acres of the estate was purchased by English immigrant Peter Drowley after the Revolutionary War, and the land was subdivided into 300-square foot parcels. Dutch, English and French Huguenot families settled on the land, and Sparta residents benefited from a direct access point to the river and the waterfront industry. The success of river commerce quickly became the livelihood of Sparta as the hamlet emerged as a thriving waterfront community at the beginning of the 19th century.

As the 19th century progressed and the neighboring villages of Sing Sing and Scarborough prospered, Sparta's growth was quickly stemmed. As a result, little economic and physical development occurred during the mid-to-late 19th century, leaving much of the building stock intact. At the close of the 19th century, Sparta was annexed by Sing Sing Village and thus incorporated into the present day Village of Ossining.

In the early 20th century, entrepreneur Frank A. Vanderlip purchased several dozen of the Sparta properties with a vision of developing and marketing the neighborhood for the 1920s professionals seeking to "flee New York City confines." Buildings that were considered historically or

architecturally significant were renovated, and severely dilapidated properties were demolished. Between 1919 and 1922, the building stock was updated, infrastructure upgrades completed, and Sparta's appearance was freshened to accommodate the expectations of the marketed new residents. Today, the layers of developments and alterations are illustrated in the varied building styles and materials found in the Sparta Historic and Architectural Design District.

The following historic information is based on the *Village of Ossining, New York Significant Sites and Structures Guide, 2010* and the *National Register of Historic Places Registration Form for Downtown Ossining Historic District (August 25, 1988)*.

Downtown Ossining Historic District: Brief History

Like Sparta, the twenty-nine acre Downtown Ossining Historic District was originally part of Frederick Phillipse's vast Philipsburg Manor Estate. Following the Revolutionary War, the land was subdivided and bought by private owners, and Ossining began to emerge as a prominent waterfront settlement. Since the Village's 1813 incorporation, the downtown rose to prominence over the course of the 19th century, peaking during the industrial heyday in the last quarter of the 19th century. The physical development of the downtown between 1840 and 1933 paralleled the Village's growth and prosperity as a transfer hub for industrial goods between New York City and northern Westchester.

A series of fires in the 1870s destroyed much of the downtown leaving few historic buildings intact from the early development period. Most of the buildings in the district today were erected after the fires during the late 19th - early 20th century. Masonry construction replaced earlier wood frame buildings following the fire.

Since the mid 20th century, the Village has undergone a number of economic and physical changes. During 1970's urban renewal, many historic buildings on the south side of Main Street were razed. Many historic buildings were preserved, and in 1988, the Downtown Historic District was added to the National Register of Historic Places with thirty-five contributing buildings and two contributing structures. The First Baptist Church and the Old Croton Aqueduct are individually listed on the National Register of Historic Places.

A3 The Importance of Landscape in All Areas

<http://tclf.org/> The Cultural Landscape Foundation produces a newsletter and conferences throughout the country. It advocates passionately to save vanishing landscapes with an emphasis on landscapes by notable designers. Articles are interesting and accessible.

A4 Sustainability: Maintenance.

See Chapter 8 Appendix for more on sustainability and the landscape

<http://www.conedsolutions.com/>

<http://www.nyserda.org/programs/>

Guidance on energy economies from Con Edison and the New York State Energy Research Development Authority.

Carroon, Jean. *Sustainable Preservation: Greening Existing Buildings*. Hoboken, NJ. John Wiley & Sons, Inc. 2010. This thoughtful book weaves advanced preservation and environmental thinking.

Environmental Building News presents carefully edited articles on both time-tested and innovative environmentally sensible building practices. It is an invaluable source of information on this fast developing field. <http://www.buildinggreen.com/>

Consumer Reports is a time-honored reference evaluating quality and performance of consumer items. The publication places emphasis on energy conservation, noting Energy Star ratings where applicable. www.consumerreports.org

Fine Homebuilding <http://www.finehomebuilding.com> is information rich on construction methods with excellent commentary on problem-solving.

The Journal of Light Construction is aimed at contractors and hands-on homeowners working in residential construction. Advice is current and detailed and illustrations are clear. www.jlconline.com

The U.S. Green Building Council is responsible for LEED—Leadership in Energy and Environmental Design—a rating system with protocols to improve building sustainability. Until recently, LEED has targeted new construction, though it is now dealing with existing buildings and LEED ND—neighborhood design—which considers sustainable factors in community planning.

http://www.cityofbeaufort.org/client_resources/beaufort%20preservation%20manual.pdf

Sort through this detailed southern manual for clear explanations and illustrations of historic building patterns, restoration and maintenance approaches.

A5 Core Principles Underlying the Guidelines for Historic Districts

<http://www.nps.gov/history/hps/tps/tax/rhb/stand.htm> directs you to information regarding appropriate treatments for preserving a historic property. The National Park Service hard copy publications are *The Secretary of the Interior Standards for Rehabilitation* and *The Secretary of the Interior's Guidelines for Rehabilitating Historic Buildings*.

www.preservationbooks.org is the publications website for the National Trust for Historic Preservation. Books deal with the underlying philosophies of historic preservation, economics of preservation; tax advantages; preservation of particular building types; design reviews and regulations; architectural elements; neighborhood protections and Main Street revitalization, to sample from their list. The publications list represents the collected thinking of preservationists (and activists for community development) from across the country.

Rypkema, Donovan. *Economics of Historic Preservation: A Community Leader's Guide*. Washington, D.C.: National Trust for Historic Preservation, 2005. This vigorously argued book provides a solid economic rationale for community historic preservation. It is a valuable tool for board members asserting the benefits of appropriate controls.

Tax Credits

<http://nysparks.state.ny.us/shpo/tax-credit-programs/>. New York State historic tax credit information.

A6 Planning Your Project: How to Submit a Good Application

Current application forms are available from the Village of Ossining's Planning and Building Departments or from www.villageofossining.org; on the home page, look for Forms and Permits.

A7 Architectural Styles

Glossary of Common Architectural Terms

Some definitions shown below are quoted from Cyril M. Harris. *Dictionary of Architecture & Construction*. New York: McGraw-Hill, Inc., 1993. Some are quoted from Baker H. Morrow. *A Dictionary of Landscape Architecture*. Albuquerque: University of New Mexico Press, 1987.

arch – a curved structure designed to support weight above. Arches can also be used as a decorative element on an exterior facade. Types of arches can include round, pointed, segmental, and Tudor.

architrave – in Classical architecture, the top portion of an entablature, consisting of a decorative, engraved horizontal molding.

backplate – a flat piece of wood or metal on a wall or ceiling to which fixtures or fittings are attached.

back prime – to apply paint or stain on the reverse or hidden side of an object, usually for protection against the weather; with wood, to provide protection from moisture so wood does not cup or become distorted.

baluster – a short, vertically-oriented member designed to support a handrail. A row of repeating balusters form a *balustrade*.

bay – a vertical opening on the exterior façade of a structure. This term is commonly used to describe a building's exterior dimensions. For example: *4 bays wide, 5 bays deep*.

bay window – a window in a protruded bay, or the bay itself.

board and batten – a type of wall cladding for wood-frame houses; closely spaced, applied boards or sheets of plywood, the joints of which are covered by narrow wood strips.

bonding pattern – a repeated pattern of masonry units in a planar surface.

brace – a stiffener in a wall assembly, often diagonal.

bracket – any overhanging member projecting from a wall to support a weight (such as a cornice) acting outside the wall.

cheek wall – a narrow, upright section of wall, often forming the side of a masonry element such as a porch or stoop; in landscape construction, a wall built alongside a series of steps to retain abutting earth.

clapboard – a type of house siding consisting of horizontal beveled pieces of wood that are thinner at the top than the bottom.

column – a vertically-oriented structural support. In Classical architecture, the appearance and configuration of columns on a given structure was based upon three schools of design known as *Doric*, *Ionian*, and *Corinthian*.

compressive strength – the maximum compressive stress which a material is capable of sustaining.

consolidation – binding wood fibers or other fragments together with a material such as epoxy to achieve an intact, durable form.

corbel – a Classical architectural element consisting of a decorative molding extending from a wall for structural support, decorative purposes, or both; usually masonry.

corner board – a board which is used as trim on the external corner of a wood-frame structure and against which the ends of the siding are fitted.

cornice – a molded horizontal projection or mold that crowns or finishes the top of a mall, façade, building or storefront; the uppermost and most prominent part of a Classical entablature.

course – a layer of masonry units running horizontally, sometimes as a decorative band.

crenellation – a decorative roof element designed to lend the appearance of a Medieval castle that consists of a series of vertical cutouts made into a parapet. Utilized at times in Gothic Revival architecture and various subtypes, such as Collegiate Gothic.

dentil – small, tooth-like moldings, usually found on a structure's cornice.

dormer – a structure projecting from a sloping roof that usually has a vertical window or vent.

double hung window – a window with two sashes, one of which slides over the other.

downspout – a vertical pipe, often of sheet metal, used to conduct water from a roof-drain or gutter to the ground, subsurface pipe, splash block or cistern.

dutchman – a small piece or wedge inserted as filler to stop an opening, or, a small piece of material used to cover a defect, to hide a badly made joint etc.

eave – on a roof, the underside of the portion of the roof that projects beyond the edge of a wall.

entablature – in Classical architecture, beams or horizontal band (molds) supported by columns.

façade – the exterior face of a building which is the architectural front, sometimes distinguished from the other faces by elaboration of architectural or ornamental details.

fanlight – a semicircular window opening over a doorway. See also *Transom*.

flashing – a thin impervious material placed in construction (e.g. in mortar joints and through air spaces in masonry) to prevent water penetration or to provide water drainage, especially between a roof and wall, and over exterior door openings and windows.

frieze – the central portion of a Classical entablature, located between the architrave below and the cornice above, also horizontal trim connecting the siding and cornice at the top of a façade (exterior) or wall (interior).

gable roof – a type of roof containing a triangle-shaped vertical surface between a roof’s ridge and eaves.

galvanic action – an electrochemical action which takes place when dissimilar metals are in contact in the presence of an electrolyte, resulting in corrosion.

http://www.pemnet.com/design_info/galvanic.html gives a basic description of the phenomenon.

galvanized metal – galvanized iron sheet metal of iron coated with zinc to prevent rusting; used extensively for flashings, roof gutter, gravel stops, flexible metal roofing, etc.

gambrel roof – a type of roof in which each of its sides has two different slopes between the central ridge and the eaves; commonly found on Dutch Colonial structures.

glazing – setting glass in an opening; the glass surface of a glazed opening.

glazing bar – one of the vertical or horizontal bars within a window frame which hold the panes of glass; a muntin.

half-timbering – the use of exposed wood framing on exterior of a structure. Originally used on Medieval-era structures in Europe, it is commonly associated with Tudor Revival structures in the United States and is often false half-timbering, purely a decorative element.

hipped (hip) roof – a roof which slopes upwards from the adjoining sides of a building, requiring “hip” rafters at the corners.

keystone – on an arch, the stone located at the highest point, defining the position of the other stones that make up the rest of the arch.

knee wall – a low wall that is less than one story tall and normally meets a sloping roof or ceiling

lancet window – also known as a pointed arch window, these are narrow, tall windows in which the top of the opening is curved, with the two vertical sides meeting at a point; common on Gothic Revival structures.

lattice – a network, often diagonal, of strips, rods, bars, laths, or straps of metal or wood, used as protection, screening or for airy, ornamental constructions.

laylight – a glazed opening in a ceiling to admit light (either natural or artificial) to a room below.

leader – a vertical pipe, often of sheet metal, used to conduct water from a roof-drain or gutter to the ground, subsurface pipe, splash block or cistern.

lime mortar – a mortar made by mixing lime putty and sand; often used in historic masonry because of its flexibility and compatibility with softer masonry units.

lintel – a horizontal member located above a window or other opening.

louver – an assembly of sloping, overlapping blades or slats; may be fixed or adjustable; designed to admit air and/or light in varying degrees and to exclude rain and snow; esp. used in doors, windows and the intake and discharge of mechanical ventilation systems.

medallion – a decorative circular or oval shaped ornament.

meeting rail – in a double-hung window, the horizontal member at the top of the lower sash, or the horizontal member at the bottom of the upper sash.

modillion – a horizontal bracket or block at the underside of a cornice.

molding – a member of construction or decoration so treated as to introduce varieties of outline or contour in edges or surfaces...as on cornices, capitals, bases, door and window jambs and heads, etc. may be of any building material, but almost all derive from wood or stone prototypes.

muntin – a secondary framing member to hold panes within a window, window wall or glazed door; also called a glazing bar, sash bar, window bar, or division bar.

oculus - a circular window or opening, often placed in a central location on a structure's façade.

parapet – a wall at the edge of a roofline, often extending beyond it, that defines the end of the structure's façade and the beginning of the roof.

pediment – the triangular surface of a gable roof, or a similarly-styled triangular molding surrounding a window or entryway.

pilaster – an engaged column or pier; a simulated pillar that projects slightly from the wall, often with capital and base.

plumbing vent – or stack vent or soil vent pipe; a pipe penetrating the roof that vents sewer gasses from household drains.

portico – a porch or covered walk consisting of a roof supported by columns, often at a structure's entry.

profile – in architecture, the outline of a built assembly.

quoins – decorative brickwork or stonework utilized at the corners of a structure's exterior walls.

rail – a horizontal piece in a frame or paneling as a door rail, or in the framework of a window sash.

ridge – line at the intersection of upper edges of two sloping roof surfaces

rosette – a round pattern with a carved or painted conventionalized floral motif; a circular or oval decorative wood plaque used in joinery, such as one applied to a wall to receive the end of a stair rail; an ornamental nailhead or screwhead.

sandblast – to use sand, propelled by an air blast on metal, masonry, concrete, etc., to remove dirt, rust, or paint, or to decorate the surface with a rough texture.

sash – a frame that encloses a window's glass surface.

sheathing – the covering (usually wood boards, plywood, or composite boards) placed over exterior studding or rafters of a building; provides a base for the application of wall or roof cladding.

shingle – a roofing unit of wood, asphaltic material, slate, tile, concrete, asbestos cement, or other material cut to stock lengths, widths, and thickness; used as an exterior covering on sloping roofs and side walls; applied in an overlapping fashion.

side light – a framed area of fixed glass at the side of a door or window.

sill – the lowest horizontal component of a window opening.

skylight – in a roof, an opening which is glazed with a transparent or translucent material; used to admit diffused light to the space below.

soffit – the exposed undersurface of any overhead component of a building, such as an arch, balcony, beam, cornice, lintel, or vault.

spacer bar – a metal or plastic element used to separate layers of architectural glass.

splash block – a small masonry block laid on the ground below a downspout to carry roof drainage away from a building and to prevent soil erosion.

springer – the lowest stone on each side of an arch.

stile – one of the upright structural members of a frame, as at the outer edge of a door or a window sash.

terra-cotta – hard, unglazed fired clay; used for ornamental work and roof and floor tile.

tongue and groove flooring - wood flooring boards joined by the insertion of the tongue of one board into the corresponding groove of the adjacent board.

transom – a glazed area or window located above a doorway or other opening.

valley – the trough or gutter formed by the intersection of two inclined planes of a roof.

voussoir – a wedge-shaped stone used in the construction of an arch.

waterfall awning – rigid curved metal framework with a stretched awning cover.

window hood – a projected architectural element over a window opening; also called a hood mold or label.

References—Architectural Styles

Baker, John Milnes. *American House Styles A Concise Guide*. New York: W.W. Norton & Company, 1994. This guide includes many styles and breaks them down into more specific groups than most. Entries are shorter than those in other books.

Blumenson, John J. G. and Nikolaus Pevsner. *Identifying American Architecture: A Pictorial Guide to Styles and Terms: 1600-1945*. New York: W.W. Norton & Company, 1978.

Harris, Cyril M. *American Architecture: An Illustrated Encyclopedia*. New York and London. W.W. Norton and Co., Inc.: 1995. Thorough, definitive and accessible guide to the built environment.

Howard, Hugh, *How Old Is This House?* New York: The Noonday Press, Farrar Strauss and Giroux, 1989. A user-friendly guide to dating houses by their construction techniques and hardware. Includes brief descriptions of historic styles.

Jeffrey Howe, Editor. *The Houses We Live In: An Identification Guide to the History and Style of American Domestic Architecture*. San Diego: Thunder Bay Press, 2002. Exhaustive! Detailed descriptions, explanatory line drawings and diagrams, and color photographs explain and illustrate a plethora of architectural styles.

McAlester, Virginia and Lee. *A Field Guide to American Houses*. New York: Alfred A. Knopf, 1986. One of the better summaries, including both diagrams and photographs, of historic architectural “styles” in America.

Mitchell, Eugene, Ed. *American Victoriana: Floor Plans and Renderings from the Gilded Age*. San Francisco. Chronicle Books, 1979.

Poppeliers, John C., S. Allen Chambers, Jr., and Nancy B. Schwartz. *What Style is It? A Guide to American Architecture*. New York: John Wiley & Sons, 2003. A brief, concise style guide.

Schweitzer, Robert A., and Michael W.R. Davis. *America’s Favorite Homes: Mail-Order Catalogues As a Guide to Popular Early 20th-Century Houses*. Detroit: Wayne State University Press, 1990.

Primary sources guiding 19th century house construction; guides include floor plans and elevations of recommended styles.

Cleaveland and Backus. *Village and Farm Cottages*. Watkins Glen, NY, American Life Foundation, 1982.

Reprint of 1856 publication. User-friendly guidance for construction of modest houses.

Downing, A.J. *The Architecture of Country Houses*. New York, Dover, 1969.

Republication of original 1850 edition.

Downing, A.J. *Victorian Cottage Residences*. New York, Dover, 1981.

Reprint of 1873 fifth edition of Downing's 1842 work.

Read, S.B. *Village and Country Residences*. New York, The Lyons Press, 2000.

Reprint of 1878 Orange Judd publication.

Sloan, Samuel. *Sloan's Victorian Buildings*. New York, Dover, 1980.

Circa 1850 pattern book from a popular Philadelphia architect.

Vaux, Calvert. *Villas and Cottages: The Great Architectural Style Book of the Hudson River School*. New York, Dover, 1970.

Reprint of the 1863 2nd Edition.

Web Sources

Antique Home available at <http://www.antiquehome.org/House-Plans/> Extensive collection of period house plans from the end of the 19th century through mid-20th.

Architectural Styles from Old House Journal available at <http://www.oldhouseweb.com/architecture-and-design/architectural-housing-styles/> Well illustrated thumbnail descriptions of common American house styles.

NYC Landmarks Commission Rowhouse Styles available at <http://www.nyc.gov/html/lpc/downloads/pdf/pubs/rowhouse.pdf>

Architectural Styles from Tiny Timbers available at <http://tinytimbers.com/buildingstyles.htm>

State of PA Style Guide available at http://www.portal.state.pa.us/portal/server.pt/community/architectural_field_guide/2370 ; http://www.portal.state.pa.us/portal/server.pt/community/suburbs_field_guide/5905

Sears Roebuck has a web archive of house plans from 1908-1940. Images, descriptions and prices give an excellent picture of the tastes and means of the construction periods.

<http://www.searsarchives.com/homes/index.htm>

A8 Building Elements: Restoration Information

Periodicals of general interest

www.oldhouseonline.com opens to an array of Old House periodicals and more.

Old House Journal Magazine, Old-House Interiors, Early Homes

Old House Journal is full of useful articles for owners of historic houses. Published 6 times a year.

Many articles are also available online at www.oldhousejournal.com

Traditional Building

An excellent resource for locating manufacturers and tradesmen.

www.traditionalbuilding.com

Books

Foulks, William G. *Historic Building Facades. The Manual for Maintenance and Rehabilitation*. New York: John Wiley and Sons, Inc., 1997. Although this book is targeted at urban buildings, homeowners will find the chapters on inspection, mortar, stone, and brick helpful. More technical than the other sources.

Poore, Patricia. *The Old House Journal Guide to Restoration*. New York: Penguin Books, 1992. An excellent, thorough and user-friendly guide to caring for your historic house.

Taylor, Julie, ed. *Northeast Preservation Sourcebook*. Vienna, VA: Preservation Publications, LLC, 1999. A directory of 6,500 regional preservation suppliers, including manufacturers, contractors, and design professionals. Updated frequently.

<http://www.preservationnation.org/issues/> The National Trust for Historic Preservation offers useful guidance for owners of vintage buildings on such subjects as weatherization and lead paint. A visit to their website links you to countrywide efforts to maintain America's legacy.

National Park Service (NPS)/Department of the Interior offers restoration standards, design guidelines and useful technical information including the entire preservation briefs and tech notes series. An easy to use, detailed and illustrated guide to the Secretary of the Interior's Standards for Rehabilitation is available at www.nps.gov/history/hps/tps/standguide/

Preservation Briefs provide guidance on preserving, rehabilitating and restoring historic buildings. While the site is slow to open, it is well worth the wait. Study the Table of Contents to find material relevant to your property. <http://www.nps.gov/history/hps/tps/briefs/presbhom.htm>

Tech Notes (also slow to open) are similar to Preservation briefs and offer case studies of restoration problems and solutions. They are available at: <http://www.nps.gov/history/hps/tps/technotes/tnhome.htm>

Historic New England

Historic New England offers information on subjects such as historic paint colors, funding sources, finding contractors, and more. See especially their Preservation and Publications listings.

www.historicnewengland.org

Roofing Information

Jenkins, Joseph. *The Slate Roof Bible: Understanding, Installing and Restoring the World's Finest Roof*. Joseph Jenkins, Inc., 2003.

<http://www.nps.gov/history/hps/tps/roofingexhibit/introduction.htm>

“From Asbestos to Zinc: Roofing for Historic Buildings.”

This site is an electronic version of an exhibit prepared for roofing professionals attending the 1999 Roofing Conference and Exposition for Historic Buildings in Philadelphia, Pennsylvania. With good illustrations, it includes information on different types of historic roofing and gutters and modern variations.

“Preservation Brief No. 4: Roofing for Historic Buildings.”

available at <http://www.nps.gov/history/hps/tps/briefs/brief04.htm>

“Preservation Brief 19: The Repair and Replacement of Historic Wooden Shingle Roofs.”

available at www.nps.gov/history/hps/tps/briefs/brief19.htm

“Preservation Brief 29: The Repair, Replacement, and Maintenance of Historic Slate Roofs.”

Available at <http://www.nps.gov/history/hps/tps/briefs/brief29.htm>

“Preservation Brief 30: The Preservation and Repair of Historic Clay Tile Roofs.”

Available at <http://www.nps.gov/history/hps/tps/briefs/brief30.htm>

Slate Roof Stand-Ins: A buyer's guide to man-made substitutes for natural stone.

Available at www.oldhousejournal.com/magazine/2002/july/slate.shtml

“Standing Seam Metal Roof” *Old House Journal*, July/August 2002

Masonry information

London, Mark. *Masonry: How to Care for Old and Historic Brick and Stone*.

Washington, D.C.: The Preservation Press, 1988.

“Brick by Brick” *Old House Journal*, May/June 1994.

Includes a glossary of brick types and masonry materials to aid in matching.

“Mastering Brick Maintenance,” *Old House Journal*, May June 1994.

Good guide to maintaining brick exteriors.

“Preservation Brief 01: Assessing Cleaning and Water-Repellent Treatments for Historic Masonry Buildings,”

Available at <http://www.nps.gov/history/hps/tps/briefs/brief01.htm>

“Preservation Brief 02: Repointing Mortar Joints in Historic Masonry Buildings.”

Available at <http://www.nps.gov/history/hps/tps/briefs/brief02.htm>

“Preservation Brief 22: The Preservation and Repair of Historic Stucco.”

Available at <http://www.nps.gov/history/hps/tps/briefs/brief22.htm>

Paint: Lead and safety

www.epa.gov/getleadsafe This site describes the risks of lead paint and the new certification program for dealing with lead paint.

Go to nps_hps-info@nps.gov to order a hard copy of *Appropriate Methods for Reducing Lead-Paint Hazards in Historic Housing*.

Delany, Marc and Livingston, Dennis. *Maintaining a Lead Safe Home: A Do-It-Yourself Manual for Home Owners and Property Managers* paper, 1997.

Mantenga Su Casa Segura sin Plomo is the Spanish version.

Paint schemes

Rossiter, E.K. and F. A. Wright. *Authentic Color Schemes for Victorian Houses: Comstock's Modern House Painting 1883*. Mineola, NY: Dover Publications, Inc. 2001

An unabridged reproduction of an 1883 painting guide with many color plates showing authentic color schemes for Queen Anne houses.

Moss, Roger. *Century of Color: Exterior Decoration for American Buildings, 1820-1920*. Watkins Glen, NY: The American Life Foundation, 1981.

Includes many historic color plates of Four Squares, Colonial Revival, and Queen Anne style houses and an architectural glossary.

Moss, Roger W. (Editor). *Paint in America: The Colors of Historic Buildings*. Washington, D.C.: The National Trust for Historic Preservation, 1994.

A more technical guide that includes chapters on paint analysis techniques, paint technology, and painting techniques.

Moss, Roger W. and Winkler, Gail Caskey, *Victorian Exterior Decoration. How to Paint Your Nineteenth Century American House Historically*. New York: Henry Holt and Co., 1992.

A clearly written guide to paint treatments and shifts in fashion through the 19th century including advice on how to achieve historic colors with currently available products.

Schweitzer, Robert. *Bungalow Colors – Exteriors*. Salt Lake City. Gibbs-Smith, 2002.

This possibly out-of-print book is worth hunting down if you are dealing with a bungalow. It offers a thorough, fully illustrated analysis of the development of bungalow color ways.

Bock, Gordon. “Colorful Issues in Choosing Exterior Paint,” article available at www.oldhousejournal.com/magazine/2001/march_april/exterior_paint/default.shtml

<http://www.welshcolor.com/index.html> Website of company that does paint analysis. Their promotional materials explain the testing process.

“Preservation Brief 10: Exterior Paint Problems” <http://www.nps.gov/history/hps/tps/briefs/brief10.htm> Good leads on proper preparation, application, paint selection.

“Preservation Brief 28: Painting Historic Interiors.” <http://www.nps.gov/history/hps/tps/briefs/brief28.htm> Although this article is about interior paints, it includes useful sections on paint investigation, paint formulations, and surface preparation.

The entire National Trust Historic Color paint collection listing colors in all National Trust Properties is found at this site.

<http://www.preservationnation.org/about-us/partners/corporate-partners/valspar/paint.html>

An associated link,

<http://www.valsparpaint.com/en/explore-colors/color-selector/index.html#> offers an extensive array of colors to help you with paint selection.

Shutters

http://www.oldhousejournal.com/magazine/2002/august/shutters_dos_donts.shtml

Brief clear article on shutters.

Additions and New Construction

Byard, Paul. *The Architecture of Additions: Design and Regulation*. New York: W.W. Norton, 1999. A thoughtful architect/lawyer examines significant and often controversial additions through history. Must reading for Ossining board members.

Shirley, Frank. *New Rooms for Old Houses*. Newton, CT: Taunton Press, 2007. The architect author helps readers work comfortably within American house styles to meet new space needs. Illustrated with examples of successful alterations/additions.

A9 Land Form: Issues and Opportunities

Historic properties

“Preservation Brief 36: Protecting Cultural Landscapes: Planning, Treatment and Management of Historic Landscapes.” Available at <http://www.nps.gov/history/hps/tps/briefs/brief36.htm>

<http://www.nps.gov/history/hps/tps/briefs/brief32.htm> This Preservation Brief provides excellent grounding in making historic properties accessible.

Adams, Denise Wiles, *Restoring American Gardens: An Encyclopedia of Heirloom Ornamental Plants*. Portland, Cambridge: Timber Press, 2004.

Well illustrated, inclusive, clear overview of the development of American garden tastes and plant selections. Especially useful for those interested in middle class garden habits.

Doell, M. Christine Klim, *Gardens of the Gilded Age*. Syracuse, New York: Syracuse University Press, 1986. An apt and excellent overview of garden design and practice on prosperous properties in the 19th century.

Downing, Andrew Jackson, *Landscape Gardening and Rural Architecture*. New York. Dover Publications, 1991 reprint of 1865 7th edition.

A primary source. Inspiration and advice from America’s tastemaker on home and grounds. Downing’s works launched a Hudson Valley landscape style that spread across the country.

Favretti, Rudy J., *For Every House A Garden: A Guide for Reproducing Period Gardens*. Chester, Connecticut: Pequot Press, 1977.

Thumbnail descriptions of period-appropriate gardens.

Favretti; Rudy J., and Putnam, Joy. *Landscapes and Gardens for Historic Buildings*. Nashville: American Association for State and Local History, 1978.

Leighton, Ann. *American Gardens in the Eighteenth Century “For Use or for Delight”*. Amherst: University of Massachusetts Press, 1986.

Leighton is an excellent first reference for information on plant usage.

Leighton, Ann, *American Gardens of the Nineteenth Century “For Comfort and Affluence”*. Amherst: University of Massachusetts Press, 1987. Leighton has culled contemporary garden writers, and plant catalogs to provide a bountiful overview of 19th century gardening.

Scott, Frank, *Victorian Gardens: The Art of Beautifying Suburban Home Grounds*. New York: D. Appleton and Co., 1879 (reprint) Watkins Glen: American Life Foundation.

A Downing disciple, Scott offers detailed instruction on landscape construction and plants and gives guidance on planning village improvements.

Sternberg, Guy. “Living History” *Old House Journal*, November/December 2002, pages 31-35.

Sustainable Landscape Planning: Glossary of Green Building Terms

Definitions culled from a glossary from a LEED (Leadership in Energy and Environmental Design of the U.S. Green Building Council) publication for New Construction can help you manage your property in environmentally desirable ways.

biodiversity - the variety of life in all forms, levels and combinations, including ecosystem diversity, species diversity, and genetic diversity.

drip irrigation - a high-efficiency irrigation method in which water is delivered at low pressure through buried mains and sub-mains. From the sub-mains, water is distributed to the soil from a network of perforated tubes or emitters. Drip irrigation is a type of micro-irrigation.

ENERGY STAR rating - the rating a building earns using the ENERGY STAR Portfolio Manager to compare building energy performance to similar buildings in similar climates. A score of 50 represents average building performance.

erosion -- a combination of processes in which materials of the earth's surface are loosened, dissolved or worn away, and transported from one place to another by natural agents (such as water, wind or gravity).

graywater (also spelled greywater and gray water) - defined by the Uniform Plumbing Code (UPC) in its Appendix G, titled "Graywater Systems for Single-Family Dwellings," as "untreated household wastewater which has not come into contact with toilet waste. Graywater includes used water from bathtubs, showers, bathroom wash basins, and water from clothes-washer and laundry tubs. It shall not include wastewater from kitchen sinks or dishwashers."

The International Plumbing Code (IPC) defines graywater in its Appendix C, titled "Graywater Recycling Systems," as "wastewater discharged from lavatories, bathtubs, showers, clothes washers, and laundry sinks."

Some state and local authorities allow kitchen sink wastewater to be included in graywater. Other differences with the UPC and UOC definitions can probably be found in state and local codes. Project teams should comply with the graywater definitions as established by the authority having jurisdiction in their areas.

greenhouse gases - gases such as carbon dioxide, methane and CFCs that are relatively transparent to the higher-energy sunlight, but trap lower-energy infrared radiation.

heat island effect - occurs when warmer temperatures are experienced in urban landscapes compared to adjacent rural areas as a result of solar energy retention on constructed surfaces. Principal surfaces that contribute to the heat island effect include streets, sidewalks parking lots and buildings.

impervious surfaces - surfaces that promote runoff of precipitation volumes instead of infiltration into the subsurface. The imperviousness or degree of runoff potential can be estimated for different surface materials.

invasive plants - both indigenous and non-indigenous species or strains that are characteristically adaptable, aggressive, have a high reproductive capacity and tend to overrun the ecosystems in which they inhabit. Collectively they are one of the great threats to biodiversity and ecosystem stability.

light pollution - waste light from building sites that produces glare, is directed upward to the sky or is directed off the site.

native (indigenous) plants - plants that have adapted to a given area during a defined time period and are not invasive. In America, the term often refers to plants growing in a region prior to the time of settlement by people of European descent.

open-grid pavement - defined for LEED purposes as pavement that is less than 50% impervious and contains vegetation in the open cells.

perviousness - the percent of the surface area of a paving material that is open and allows moisture to pass through the material and soak into the earth below the paving system.

regionally extracted materials - for LEED for New Construction purposes, projects must have their sources for materials within a designated radius of the project site.

remediation - the process of cleaning up a contaminated site by physical, chemical or biological means. Remediation processes are typically applied to contaminated soil and groundwater.

stormwater runoff - water volumes that are created during precipitation events and that flow over surfaces into sewer systems or receiving waters. All precipitation waters that leave project site boundaries on the surface are considered to be stormwater runoff volumes.

sustainable forestry - the practice of managing forest resources to meet the long-term forest product needs of humans while maintaining the biodiversity of forested landscapes. The primary goal is to restore, enhance and sustain a full range of forest values—economic, social and ecological.

wetland vegetation - plants that require saturated soils to survive as well as certain tree and other plant species that can tolerate prolonged wet soil conditions.

References for Sustainable Landscapes

Thompson, J. William and Sorvig, Kim, *Sustainable Landscape Construction: A Guide to Green Building Outdoors*. Washington, D.C., Island Press, 2000.

Authoritative discussion of environmentally progressive landscape planning and construction approaches. Excellent guidance on water use, energy conservation, sustainable maintenance.

Horticultural information

There are countless excellent contemporary how-to gardening books and references about classes of plants. Googling a topic will yield both authoritative information from experts and anecdotal lore from devoted gardeners. Some books listed below explore the benefits of native plants.

Dirr Michael A., *Dirr's Hardy Trees and Shrubs: An Illustrated Encyclopedia*. Portland, Oregon. Timber Press, 1997. This is an unparalleled basic reference.

Summers, Carolyn. *Designing Gardens With Flora Of The American East*. New Brunswick, New Jersey and London. Rutgers University Press, 2010.

Attractive volume by a Hudson Valley writer describing the benefits and uses of native plants.

Tallamy, Douglas W., *Bringing Nature Home*. Portland, Oregon. Timber Press. 2007.
Informed advocacy for use of native plants to promote ecosystems.

Westchester's Native Plant Center with a display garden at Westchester Community College, www.nativeplantcenter.org, offers programs, trips and an annual native plant sale. The organization promotes increased use of native plants.

Cornell University is a leader in horticultural research and teaching. The University offers excellent downloadable publications on plantings and especially useful planting recommendations for developed areas. <http://hort.cals.cornell.edu/cals/hort/extension/publications.cfm>

Westchester County's Cornell Cooperative Extension is at 26 Legion Drive, Valhalla (914-285-4620) <http://counties.cce.cornell.edu/westchester> Reach the local agent at westchester@cornell.edu. The local Coop Extension offers programs and answers questions about gardening.

[Don't plant these!](#) is an excellent pdf created by the Village of Irvington Tree Commission showing the most serious invasive plants and best substitutes.

Tree selection, protection, pruning

<http://hort.cals.cornell.edu/cals/hort/extension/publications.cfm>

Cornell's DVD and online publications can help you select size- and culture- appropriate trees for your property. "Tough Trees for Tough Sites" (DVD) and "Recommended Urban Trees" (downloadable) are especially useful.

<http://www.ext.colostate.edu/pubs/garden/02926.html> Clear discussion of the importance of root health for tree survival; issues to address during construction.

Two authoritative pieces on tree topping problems.

<http://www.utextension.utk.edu/publications/spfiles/sp549.pdf>

<http://www.extension.iastate.edu/publications/sul7.pdf>

Village of Ossining Tree Ordinance

Permits for tree cutting are now required in the following example circumstances:

- If a tree is 10 inches or greater in diameter at breast height
- Any tree 6 inches or greater on slopes over 25% or on any unimproved lot.
- Significant or protected trees.
- Clear cutting: Removal of ten trees on one acre of land with a six (6) inch DBH or greater or any proportion of 10 trees on one acre depending on the lot size rounded up to the nearest whole number within any twelve-month period.
- Property owner filing for a subdivision or site plan approval requiring removal of trees on the property

Copies of the complete Tree Ordinance are available at Village of Ossining Building and Planning Departments, and online at www.VillageofOssining.org.

Deer

The Cooperative Extension, many local nurseries, websites of neighboring state horticultural groups and of mail-order nurseries all have lists of plants more or less likely to be eaten by deer. Talk to your neighbors about the food preferences of your local herd.

Water management

http://www.epa.gov/oaintrnt/stormwater/best_practices.htm

This is a very thorough and complete source of information on storm water management.

<http://www.villageofossining.org/Cit-e-Access/webpage.cfm?TID=24&TPID=10918>

This site offers highly practical information on the impact of homeowner grounds keeping on the region's healthy water supply and guidance for best practices.

Outdoor lighting

<http://www.darksky.org/mc/page.do?sitePageId=58881> Recommendations from the International Dark Sky Association explain objectives and economies of modified lighting.

